# GOOSE PROJECT

## 2025 ANNUAL REPORT FOR WATER LICENCE 2AM-BRP1831

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# GOOSE PROJECT

## 2025 ANNUAL REPORT

**In compliance with:**

Water Licence 2AM-BRP1831 (Amendment No.1)

**Prepared by:**

RainCoast Environmental Services Ltd.

**Submitted to:**

Nunavut Water Board (NWB)

**B2GOLD BACK RIVER CORP.**
Suite 3400, Park Place, 666 Burrard Street
Vancouver, British Columbia, Canada, V6C 2X8
Telephone: +1 604 681 8371
www.b2gold.com

# EXECUTIVE SUMMARY

This report summarizes the activities and monitoring undertaken by B2Gold Back River Corp. (B2Gold Nunavut) at the Goose Project (the Project) in 2025 relevant to Water Licence No. 2AM-BRP1831 (Amendment No.1) (the Licence).

Key activities included, but were not limited to, completing construction of the process plant and mill—the first gold pour was achieved on June 30, 2025, and commercial production began on October 4, 2025. Mining of Echo Pit was completed May 12, 2025, with the pit now serving as a Tailings Facility.

Freshwater from Goose Lake was used in the mill, process plant, underground, and batch plant; for dust control and other miscellaneous activities (e.g., washing vehicles); and to supply potable water to the Goose Main Accommodations Complex. Llama, Umwelt, and associated waterbodies (i.e., Round Lake) were dewatered. Water used from Goose Lake and for dewatering were within Licence allotments. Water was also used from various sources proximal to the Winter Ice Road (WIR). WIR water use was less than the cumulative Licence allotment per kilometer of road and within calculated withdrawal capacities presented in the 2025 WIR Technical Memorandum, except for Lake 997 where the available capacity was inadvertently exceeded. Approximately 1,900 $m^3$ of water used for the WIR was also withdrawn from unknown sources. B2Gold Nunavut has implemented measures to address these errors in WIR water withdrawal for the 2025/26 WIR season.

Waste management included the backhaul of hazardous wastes to KBL Environmental in Yellowknife and incineration, open burning, and landfilling of non-hazardous wastes in accordance with approved Project plans. Both the Echo and Umwelt Waste Rock Storage Area (WRSA) landfills were used in 2025. Sewage was discharged from the Goose Sewage Treatment Plant, and greywater was discharged from the Marine Laydown Area (MLA) Accommodations Complex, Goose Forward Camp, and MLA Forward Camp. The processing of stockpiled ore began in June and tailings slurry was subsequently deposited in the Echo Tailings Facility (i.e. the mined-out Echo Pit).

Waste rock was used for construction or placed in the Echo and Umwelt WRSAs. Only rock classified as non-acid generating and non-metal leaching was used for construction. All other rock was managed in a manner that minimizes potential environmental effects and aligns with Project authorizations.

There were 14 reportable spills in 2025. Thirteen of the 14 spills were cleaned up, with contaminated materials incinerated, backhauled offsite, or temporarily stored in containment for treatment. One diesel spill was located in a planned blast pattern in Umwelt Pit; the spilled diesel was considered unrecoverable and is anticipated to be combusted during planned blasting activities.

Water quality monitoring included monitoring of site runoff to Goose Lake, seeps, dewatering, sewage discharge, containment ponds (Primary Pond, Ore Stockpile Pond), non-contact water, Bathurst Inlet desalination intake and discharge, water in the MLA Fuel Tank Farm containment, and discharge from the MLA Temporary Fuel Storage Facility. Some exceedances of effluent quality limits were observed in site runoff, namely low pH and one instance of elevated total suspended solids (TSS) during freshet. In response to the elevated TSS, spring berms were installed and TSS concentrations were confirmed to be well below the effluent quality limit when next sampled, approximately a week later. Large rain events combined with snowmelt likely contributed to the low pHs. Water quality at the dewatering discharge point to Goose Lake (BRP-01) was within discharge criteria during dewatering. Discharge from the MLA

Temporary Fuel Storage Facility also met discharge criteria. Goose sewage treatment plant discharge was largely compliant, with one exceedance of the effluent quality limit for pH, as well as a potential exceedance for fecal coliform (total coliforms exceeded the fecal coliform effluent quality limit and is a conservative comparison). Fecal coliforms were measured beginning in August and were lower than the effluent quality limit.

No progressive reclamation activities have been undertaken to date. B2Gold Nunavut anticipates that these activities will commence once areas are determined to be no longer in use and subject to further impact.

The Inspector conducted three Project inspections in 2025 (March, July, and October). All actions identified in the March inspection have been completed. No actions were identified during the July inspection. Work is ongoing to address actions required based on the October inspection.

B2Gold Nunavut conducted community engagement throughout 2025, and in 2026 anticipates attending the Kitikmeot tradeshow in February, quarterly Kitikmeot Inuit Association (KIA) Board meetings, and the KIA Annual General Meeting in October. Additionally, B2Gold Nunavut is planning an annual community tour of Kitikmeot communities in June, and various Project site visits. Meetings of the Inuit Impact Benefit Agreement Implementation Committee, Inuit Employment Working Group, Kitikmeot Socio-Economic Monitoring Committee, and Inuit Environmental Advisory Committee, amongst others, are also anticipated to be held in 2026.

The plans, reports, and studies appended to this report include the 2025 Annual Geotechnical Inspection Report, 2025 Site-wide Ground Thermal Monitoring memorandum, 2025 Aquatic Effects Monitoring Report, and Ground Thermal Monitoring Plan.

# ᓇᐃᓇᖅᓯᒪᔪᖅ

ᑕᕆᓇ ᐅᓂᒃᑲᖅ ᓇᐃᒡᓗᑎᐊᖅᓯᒪᔪᒥᒃ ᐅᖅᑕᐅᔪᖅᑐᖅ ᐱᓕᕆᐊᖓᓪᓚᐅᖅᑐᓂᓂᒃ ᓇᐅᑦᑎᐊᓯᔪᓂᓂᕐᓗ ᐱᓕᕆᐊᖓᓪᓚᐅᖅᑐᓂᓂᒃ B2Gold Back River Corp.-ᑯᓘᓂᑦ (B2Gold ᓄᓇᕗᑦ) ᔪᓐ ᐱᓕᕆᐊᖓᔪᒥ (ᑕᕆᓇ ᐱᓕᕆᐊᖓᔪᖅ) 2025-ᒥ ᐊᒃᑐᐊᓂᓕᖓᑦ ᐃᒪᖏᑦ ᓪᓚᕐᔪᓯᑦ ᓇᓴᐅᑕ 2AM-BRP1831 (ᐊᓯᔾᔨᕆᐊᖅᑕᐅᔪᖅ ᓇᓴᐅᑕ 1) (ᐱᔪᓇᐅᑎ).

ᐱᓕᕆᐊᒃᓴᓪᓚᐊᑕᑦ ᐃᓕᖅᑲᓕᐅᖅᑐᑦ, ᑭᓯᐊᓂ ᑭᓴᓕᖅᑐᓴᓪᓚᑎᒃ ᐅᑯᓇᖅᓴᒃ, ᐱᐊᓂᒃᓯᓂᖅ ᓴᓇᔨᐅᓂᒃᓴᖅᓴᒃ ᐱᓕᕆᓭᓴᓪᓚᐊᖏᓐᓂ ᐊᒻᒪ ᓯᖅᓴᓕᕆᑎᖏᓐᓂ – ᓯᓗᓴᓕᖅᕿᖅ ᔪᓚᒥᒃ ᑯᑦᑐᐱᓐᓂᖏᓐᓂ ᐅᐊᓂᒃᑕᐅᓕᐅᖅᑐᖅ ᔨᓂ 30, 2025-ᒥ, ᐊᒻᒪ ᑭᓇᐅᔨᓕᐅᕆᓯᓂᖓᓪᓗᑦ ᓴᖅᑭᑎᑕᑎᓭᓴᓪᓚᐊᓕᖅᓴᓕᒃ ᐅᑐᐱᓗ 4, 2025-ᒥ. ᐅᓴᕆᓂᓂᐊᕆᓂᖅ ᐃᑯ ᐅᓴᕆᓂᓂᐊᕆᖏᓐᓂ ᐱᐊᓂᒃᑕᐅᓕᐅᖅᑐᖅ ᒪᐃ 12, 2025-ᒥ, ᐅᓴᕆᓂᓂᐊᕆᖏᒃ ᐃᓕᓇ ᐊᑐᖅᑕᐅᓕᓕᖅᓴᓂ ᐊᒥᐊᓂᑯᖅᖏᐃᐅᓕᓂᓂᓂ.

ᐃᒪᓕᑎᐊᓭᒃ ᔪᓐ ᑕᓯᕆᒥ ᐊᑐᖅᑕᐅᓕᐅᖅᑐᖅ ᓯᖅᓕᓕᑎᓴᓪᓚᑎᒃ, ᐱᓕᕆᓭᓕᓕᐊᖏᓐᓂ, ᓄᓇᐅᐳ ᐊᑕᓂᑐᑎᒥᒃ, ᐊᒻᒪ ᑲᑎᖅᓯᓯᒪᔪᒥᒃ ᓴᓇᖏᓐᓂ; ᐳᔨᓗᐊᕐᓴᐃᒃᑯᑎᓂᓕᐳ ᐊᓯᓂᓪᓂᓕᓗ ᑭᓯᑐᐃᓪᓕᖅᓂᓕᐳ ᐱᓕᕆᐊᒃᓴᓂᓕᐳ (ᓯᓚᖅᓗ ᓄᓇᓯᐅᑎᓂᒃ ᐅᐊᓴᖅᓂᖅ); ᐊᒻᒪ ᐃᒥᑲᒃᓴᒥᒃ ᐃᓕᖏᖅᑎᑕᑎᓂᒃ ᔪᓐ ᑐᔨᒥᐃᓴᓕᓗᑕᖓᓂ. ᓈᒪ, ᐅᓪᓗᓕᑦ, ᐊᒻᒪ ᐊᒃᑐᐊᓂᓕᑦ ᐃᒪᑦ (ᓯᓚᖅᓗ, Round Lake) ᐃᓕᖏᑭᓚᖅᑎᑕᐅᓕᐅᖅᑐᑦ. ᐃᓕᖅ ᐊᑐᖅᑕᐅᔨᖅ ᔪᓐ ᑕᓯᕆᑦ ᐊᒻᒪ ᐃᓕᕆᒃ ᐊᓴᐃᓂᓪᓗᑦ ᓕᐃᓴᓵᓯᐳᓴ ᓴᓂᓪᓓᑕᐅᓯᒪᔪᖓᑕ ᐃᓗᐊᓇᓕᐅᖅᑐᑦ. ᐃᓕᖅ ᐊᑐᖅᑕᐅᓕᐅᑎᓇᓂᖅ ᓇᑭᖓᓗᑐᐃᓕᖅᑐᓂᒃ ᐅᑭᐅᒃᓇᓂ ᐊᖏᓂᒃᑕᐅᓕᐅᖅᑐᓗᑦ ᐅᓂᒃᑲᐅᓯᐅᓕᐅᖅᑐᐃᓗᑦ 2025-ᒥ WIR ᐱᓕᕆᔨᐊᑎᓇᑦ ᑎᑎᕐᓯᒪᔪᓂᓂ, ᑭᓯᐊᓂ ᑕᓯᖅ 997 ᐱᓴᖅᓇᑕᐅᖖᑦᑕᒃᓇᑦ ᖃᐅᖅᐅᑎᓕᐅᕐᓂᖓᓇᓄᑦ. ᐃᓕᒪᖃᒃ 1,900 m3 ᐃᓕᖅ ᐊᑐᖅᑕᐅᔨᖅ WIR ᐋᓴᖅᑕᐅᓕᓕᐅᕐᓕᔨᖅ ᖃᐅᔨᒪᓴᐅᖖᑦᑕᑐᓂᓂ ᐱᖏᐅᔨᓐᓇᖅᑐᓂᓂ. B2Gold ᓄᓇᕗᑦ ᐊᑐᓕᖅᑎᑎᓯᒪᓕᖅᑐᑦ ᑕᑯᓇᓂᖓ ᑕᓪᓕᖅᓯᒪᔪᓂᒃ WIR ᐃᓕᕆᒃ ᐋᖅᓯᓂᕐᒃ 2025/26 WIR ᐊᖏᕐᕕᒋᓂᖓ.

ᐊᒃᑕᑯᓂᒃ ᐊᐅᓪᓚᑎᓂᖅ ᐃᓕᖅᑲᓕᐅᖅᑐᖅ ᐅᓯᔾᐅᒃᑲᓂᓂᓂᕐᒃ ᖁᓇᐊᖅᓱᖏᓪᓕᖅᑐᓂᒃ ᐊᒃᑕᑯᓂᒃ KBL-ᓯᓚᓂᑦ ᓴᓗᓇᐃᖏᓐᓗᓂ ᐃᓯᐊᓪᓚᑎᓚᑎᓂᕐᓗᑦ, ᓴᖅᑭᕐᓴᖅᑐᑎᑦ ᐃᑭᑎᑕᑎᓂᓂᕐᒃ, ᓄᓇᒪᐊᖅᑎᑎᓚᑎᓂᕐᓗᑦ ᖁᓇᐊᖅᓱᖏᓪᓕᖅᑐᓂᒃ ᐊᒃᑕᑯᓂᒃ ᒪᓕᒃᑐᖅᑲᓂᓂ ᐊᖏᕐᕋᖅᑕᐅᔨᓕᐅᖅᑐᒃ. ᐱᓕᕆᐊᒃᓴᓂᑦ ᐱᓇᐅᖏᓐᓂᒃ ᐱᓇᓱᖅᑕᐅᔨᓕᐅᖅᑐᒃ. ᑕᒪᕆᐊᒃ ᐃᓯ ᐊᒻᒪ ᐅᓪᓗᓕᑦ ᐊᒃᑕᑯᓂᑦ ᐊᒃᑕᑯᓂᒃᑕᐅᓕᐅᖅᑐᖅ 2025-ᒥ. ᑭᓇᐅᒃ ᐃᓯᓕᖅᑐᖅᑕᐅᓕᐅᖅᑐᖅ ᔪᓐ ᑭᓇᐅᔨᓕᐅᖅᑐᖅᑕᐅᓕᐅᖅᑐᖅ ᐃᓯᓕ

ᐃᒪᐅᐸ ᐱᐅᓂᖓᓂᐅ ᓇᐅᑦᑎᖅᓯᓯᓂᖅ ᐃᓕᖅᓕᐅᖅᑐᖅ ᓇᐅᑦᑎᖅᓯᓯᓂᖏᑐ ᐃᓂᒥ ᑯᓂᖓᓂᐅ ᔪᑦ, ᑕᑦᓯᖅᐸᑦᓕᐊᓂᖓᓂᓪᓂᐅ, ᐃᒪᖏᑐ ᐱᔪᐃᓂᖏᑐ, ᑭᓇᓗᓂ ᑯᐊᑎᑦ, ᑯᐊᑎᑦᑎᑎᓕᐊᓂᖏᑐ ᑕᓯᕋᖅᓂᓂᐅ (ᑕᓯᑦᓗᐊᑕᖅ, ᓴᐃᕋᔨᓴᖅᑕᖅᕋᖅᐃᔨ ᑕᓯᕋᖅᔨ), ᐊᐅᑐᖅᓯᓂᖏᑦᓴᓗᓂ ᐃᒪᖏᑐ, ᑕᖓᓴᐅᑦᒥ ᑕᓗᐅᖓᔪᓂᓂᖅᑐᖅᑎᑦᑕᓂᐊᑦᑦᓯᑦᓗᓂᐅᓂᐸᑦᑐᖅᑐᖅ ᐱᔨᐅᓂᓕᓂᐊᓂᐸᑦᑐᖅ ᑯᑎᐊᑦᑐᖅᑐᖅ, ᐃᒪᖏ MLA ᐅᖅᓯᐊᓗᖅᐅᑎᖅᕋᒪᔨᐅᐅᔪᒥ, ᑯᐊᑎᑕᐅᓂᖓᓗ MLA ᐅᖅᓯᐊᓗᖅᐅᑎᖅᕋᒪᔨᐅᓕᐅᑲᑦᑐᒥᑦ. ᐃᓕᖓᑦ ᖃᖓᑦᐅᑎᓯᒪᔪᑦ ᑯᐊᑎᑕᐅᔪᑦ ᖃᓄᐃᓕᓂᖓᓪᓂᓄᑦ ᑭᓪᓕᖓᑦ ᖃᐅᔨᔨᐅᓕᐅᖅᑐᑦ ᐃᓂᐅᔪᒥᑦ ᑯᑭᓐᓂᒥᑦ, ᐱᓗᐊᖅᑐᒥᑦ ᐊᑦᑎᑦᑐᒥᑦ pH-ᒥᑦ ᐊᑦᒪᓗ ᐊᑕᐅᓯᖏᑦ ᖃᑯᕐᕋᓯᑐᒥᑦ ᑲᑎᒪᔨᑦ ᑕᒪᓐᓂᒥᑦ ᑕᑎᓂᖅᑐᒥᑦ (TSS) ᐊᐅᑦᐸᑦᓪᓕᐊᑎᓪᓕᐊᔪ. ᑭᐅᔪᒪᓪᓕᐊᔪ ᖃᑯᕐᕋᓯᖓᓂᖓ TSS, ᐅᐱᖃᓐᓇᑲᑯᑦ ᐊᕐᓇᓪᓕᖅᑕᐅᓕᐅᖅᑐᒥᑦ ᐊᑦᒪᓗ TSS ᑲᑎᑎᓯᒪᔪᑦ ᓇᓪᓕᐊᐃᖅᑕᐅᓕᐅᖅᑐᒥᑦ ᐊᑕᓱᖓᓂᖓᓪᓂᖅᑐᖅ ᑯᐊᑎᑕᐅᔪᑦ ᐱᐅᓂᖓᓂᐅ ᑭᓚᓂᖓᓂ ᑭᖓᔪᓪᓂᒥᑦ ᖃᐅᔨᓴᖅᑕᐅᖅᑐᖅᓯᓂᓕᖅᑐᓪᓚᓪᓕᔪ, ᐱᓇᓯᐊᑭᓯᓪᓕᐊᖅ ᐊᐅᔪᖅᑎᓪᓕᔪ. ᒪᑦᔨᔪᐊᑦᓴᐅᔨᔪᒪ ᐃᓕᖅᖃᖅᑐᒥ pH-ᒥ. ᐃᒪᐅᐸ ᖃᓄᐃᓕᓂᖓᓪᓂᒪ ᑯᐊᑎᑕᑎᐃᓪᓂᒪᓂ ᔪᑦ ᑕᓯᔭᒥ (BRP-01) ᑯᐊᑎᑕᐅᓂᖓᓪᓂᒪᑕ ᐃᓗᐊᓂᓕᐅᖅᑐᑦ ᐃᒪᖏᑕᐅᓂᖓᓪᓂᖅᑐᑦᑎᓪᓕᔪ. ᑯᐊᔨᖅ ᒪᓕᓪᓕᐅᖅᑎᑎᐅᐸ ᐅᑦᔨᐊᓗᖅᑐᖅᑎᑦᓴᐃᓕᓕᐅᑎᓂᓕᐅᓕᖅᑐᓪᓚᓪᓕᓂᑐᑦ. ᔪᑦ ᑭᓇᓗᖅᑐᖅ ᑯᐊᑎᑕᐅᓂᖓᓪᓂᒪ ᒪᓕᓪᓕᐅᖅᑐᒥᑦ, ᖃᐅᔨᓴᖅᑕᐅᓂᖓᓪᓂᖅᑐᖅᑐᑦ ᑯᐊᑎᑕᐅᔪᑦ ᐱᐅᓂᖓᓂᐅ ᑭᓚᓂᖅᑐᒥᑦ ᐃᓕᖅᖃᖅᑐᒥᑦ pH-ᒧᑦ, ᐊᒪᓗᓗ ᖃᓄᐃᓕᓂᖓᓂᐊᓚᐅᖅᑐᓪᓚᓪᓕᔪ ᐊᓇᓐᑦ ᑯᑯᐱᐊᑦᓴᐅᓐᑦ (ᑲᑎᓪᓕᔪᑦ ᑯᑯᐱᐊᑦᓴᐅᓐᑦ ᖃᓄᐃᓕᓂᖓᓪᓂᓕᐅᖅᑐᑦ ᐊᓇᓐᑦ ᑯᑯᐱᐊᑦᓴᐅᓐᑦ ᑯᑯᐱᐊᑦᓴᐅᓐᑦ ᐃᓕᖅᖃᖅᑐᒥᑦ ᐱᐅᓂᖓᓂᐅ ᑭᓚᓂᖅᑐᒥᑦ ᐱᐅᓂᖓᓂᐅ ᐱᐅᖅᓯᐊᑕᐅᓪᓚᓪᓕᔪ). ᐊᓇᐃᑦ ᑯᑯᐱᐊᑦᓴᐅᓐᑦ ᐅᖅᑐᑦᑎᐅᓕᐅᖅᑐᑦ ᐊᐅᔪᖅᑎᑎᐅᐸ ᐊᑦᑎᖓᓂᖅᓴᐅᓕᐅᖅᓱᑎᓗ ᐃᓕᖅᖃᖅᑐᒥᑦ ᐱᐅᓂᖓᓪᓂᖅᑐᖅᑐᑦ ᑭᓇᓗᖅᑐᖅ ᑯᐊᑎᑕᐅᓂᖓᓪᓂᖅᑐᖅᑐᑦ.

ᐅᓪᓚᒥᑦ ᑎᑭᓱᔪᔪ ᐅᑎᖅᑎᑦᑎᓯᓪᓕᐊᓂᖓᓪᓕᐊᑦ ᐱᓪᓕᔨᖅᑲᓕᒫᑦᑕᑐᑦᑐᖅ. B2Gold ᓄᓇᕗᑦ ᓂᓕᐅᑎᓴᖅᑲᖅᓯᑦ ᑕᒪᐃᓄᐊ ᐱᓪᓕᐊᖏᔨᑦ ᐱᑎᐊᖅᓂᐊᖅᓂᖓᓪᓂᖅᑐᖅᑐᑦ ᐃᓂᐅᑦᑕ ᖃᐅᔨᓴᐅᖅᑐᑕ ᐊᑐᖅᑕᐅᕐᓴᐅᓂᖓᓪᓂᖅᑐᖅᑐᑦ ᐊᐅᖅᑐᑦᑎᐅᓕᐅᖅᑐᒥᑦ ᐱᐅᓂᖓᓂᐅ ᐃᓕᖅᖃᖅᑐᒥᑦ ᐊᐅᖅᑐᑦᑎᐅᓕᐅᖅᑐᒥᑦ.

ᖃᐅᔨᓴᖅᑎᑦ ᐱᓪᓕᐊᖅᑲᓕᒫᑦᑕᑐᑦᑐᖅ ᐱᖓᓱᓂ ᐱᓪᓕᐊᖏᔨᓂ ᖃᐅᔨᓴᖅᑲᓂᓂ 2025–ᒥ (ᐃᓕᓴᓂ, ᔨᓪᓕᐃ, ᐊᒪᒪ ᐅᑐᐱᓐᓇ). ᑕᒪᑎᑦᑎᓐᓇᖅ ᐱᓪᓕᐊᖅᑲᓕᒫᓪᓕᐊᓂᖓᓪᓕᐊᑦ ᐃᓗᓐᓇᒥ ᖃᐅᔨᓴᖅᓂᓚᖅᐅᔨᒥ ᐱᓴᓵᖅᑕᐅᔨᓪᓚᓪᓕᖅᑐᑦ. ᖃᓄᐃᓕᓂᐅᓕᐅᖅᑐᓪᓚᓪᓕᖅᑐᑦᑐᖅᓱᑎᓗ ᔨᓪᓕᐃ ᖃᐅᔨᓴᖅᑎᓪᓕᔪᑦ. ᐱᓪᓕᐊᓯᓪᓕᐊᑎᓂᓪᓕᐊᓚᖅᑐᖅ ᐅᑐᐱᓐᓇ ᖃᐅᔨᓴᖅᓂᐅᓕᐅᖅᑐᓪᓚᓪᓕᔪ.

B2Gold ᓄᓇᕗᑦ ᑲᔪᓂᑎᑦᑕᐅᖅᑐᑦ ᓄᓇᓕᖓ ᐃᓕᐅᑎᑦᑎᓂᓯᑦᑎᑦ 2025–ᒥ, 2026–ᒥᓗ ᓂᓚᐅᑎᓴᖅᑲᖅᑐᑦ ᐃᓕᐅᓪᓕᐊᓪᓚᓪᓕᔪ ᖃᑎᑎᐅᓂ ᐃᖅᑲᓇᐃᔨᓚᔨᐅᔪᓂᖅ ᑕᔪᐱᓴᖅᑎᑦᑎᓂᓂᔨᖅᓯᑦ ᓇᐅᕐᓇᒥ, ᑎᑦᓚᐃᖅᑲᓂᓕᖅᑐᑦᑎᓂᓂᐅ ᑲᑎᑎᐅᓂ ᑲᑎᑎᓕᐅᖅᑐᒥᑦ ᓄᓇᓕᖓ ᐃᓄᐃᑦ ᑲᑎᑎᐅᓂ (KIA–ᔪᑦ) ᑲᑎᒪᔨᑦ ᑲᑎᒪᓕᖅᑐᑦ, ᑭᓚᓪᓕᐊᓂᖓᓪᓕᐊᓂᖓᓪᓕᐊᓂᖓ

# AULAPKAIYINI NAITTUQ

Una uniudjut naittumik titiraqhimayut hulidjutit uvalu munagidjutit havaktauyut hapkunanga B2Gold Back River Corpkunin (B2Gold Nunavut) uvani Goose Havaaq (Havaaghaq) uvani 2025 ihuaqtut haffumunga Imakkut Laisia No. 2AM-BRP1831 (Ihuaqhaqtauyuq Napaa 1) (Laisi).

Hulidjutiluat ilauyut, kihimi kikliqangitut haffumunga, iniqtiqhugit havaktauyut havauhiit pauwaqarviit uvalu uyarakhiuqviit—hivuliq kuulmik kuviraqtauyuq uvani Imaruqtirvia 30, 2025, nanminiqaqtut aularutiyut uvani Tattiarnaqhilirvia 4, 2025. Uyararhiurniq Echo Uyararhiuqvianni iniqtauyuq May 12, 2025 mi, uyararhiuqvik hadja Uyararhiuqviupluni.

Imaq Goose Lake-mit atuqtauyuq uyarakhiuqvikmi, havauhiqmi, nunap ataani, batch-milu havakvikmi; pujuulaitkutikhainnik imaalu aallatqiinik hulipkaidjutikhanik (e.g., uaqhinirmik akhaluutinik); uvalu imigahamik imarmik haffumunga Goose Hiniktaqviluamun. Llama, Umwelt, ilagiyailu immavaluit (naunaipkutariplugu, Round Tahiq) imaiyaqtauyut. Imaq atuqtauyuq hamanga Goose Lakemin uvalu imaiyaqnikkut iluaniitut Laisikkut tuniyauyut. Imaq atuqtauyuqlu aalakiinin ikayuutinin haniani Ukiumi Hikumi Apqut (WIR). WIR imarmik aturninnga mikitqiyauyuq uumannga angikliyuumiqtuq Laisinik tuniyauyuq atauhiqmut kilometer-mut apqutimik iluanilu naunaiyaqhimayuq piiyaqtauniq aktikkulaanga tuniyauyuq uumani 2025 WIR Ayurnaqtunut Titiraq, kihimi Tahiq 997 talvani piinarialaqihimayuq aktikkulaanga qaangiutiyuq. Naamavyaktuq 1,900 m3 imaq atuqtauyuq haffumunga WIR unguvaqtauyuqlu ilihimayaungitunin imaqarvingnin. B2Gold Nunavut atuliqtitiyut aktilaanginik uqautigiyaangani hapkua ihuinaarutit uvani WIR imarmik unguvaqtirnirit haffumani 2025/26 WIR ukiungani.

Iqakunik munagidjutit ilauyut agyaqtaublutik hivuuganaqtut iqakut hapkununga KBL Avatiliqiyiinun Yalunaimi uvalu ikualativikni, hilami ikualatiblutik, uvalu nunamun iqakuuqhugit hivuuganangitut iqakut malikhugit angiqtauhimayut Havaktakhatigut upalungaiyautit. Tamangnik Echo unalu Umwelt Iqqakunik Uyaqqanik Tutquumaviit (WRSA) nunat atuqtauhimayut 2025-mi. Anaqtautit kuvigaqtauyut hamanga Goose Anaqtautit Halumaqhivianin, uvalu qingnariktuq imaq kuvigaqtauyuq hamanga Tariumi Iliuraqviit Nayugaani (MLA) Hiniktaqviit, Goose Forward Camp, unalu MLA Forward Camp. Hanaqidjutait katitiqhimayut uyaraktaakhat aulagutiyut uvani Imaruqtirvia uvalu halumailguit kuviyut iliugaqtauyut hamunga Echo Tailings Igluqpaanun (imaa uyarakhiuqtut Echo Uyarakhiuqvik).

Iqqakuq uyaqat atuqtauyut hanayauyaagani iliyauvlutikluniit Echo-mi Umwelt-milu WRSA-ni. Uyaqainait naunaipkutiqaqtut acid-gitunik aulajutinik havivaluungituniklu kuviraqviuyunik atuqtauhimayut hanayaunigani. Tamaita aalat uyaqqat munariyauyut pihimayumik mikhivaaliriagani avatauyumi aktuqniqaqniginik nalaumaniginiklu Havaap agiqtaunigini.

Piqaqtuq 14nik uniudjutauyunik kuvinikkut uvani 2025mi. 13-nguyut 14-nit kuvihimayut halummaqtauyut, halumailruqaqtut ikualapkaqtauyut, agyaqtauplutiklu ahinut, tutquqtaullakhimayulluuniit halummaqtiqtauyaamik. Attauhiq uqhuqyuaq kuviyuq paqitauyuq upalungaiyaqhimayumi qagaqtautilugu uvani Umwelt Uyarakhiuqvikmi; Kuvihimayuq uqhuqyuaq ihumagiyauyuq piyaulimaituq uvalu niriuktauyuq ikualaniaqtuq upalungaiyaqtautilugit qagaqtitinikkut hulidjutit.

Imaq qanuginia munagidjutit ilauyut munagiblugit nayugait kuuknigit hamunga Goose Lakemun, kuviviit, imaiyaqniit, anaqtautit kuvigaqniit, hiamittailidjutait tahiraat (Hivuliq Tahiraq, Uyaraktaakhat

Katitiqhimayut Tahiraq), kahagangitut imaq, Kingautmi taariuqhinikkut itiqtiqniit uvalu kuvigaqniit, imaq uvani MLA Uqhuqyuaqaqviit Nayugaani, uvalu kuvigaqniit hamanga MLA Tadjakaffuk Uqhuqyuaqaqviit Tutquumavianin. Ilangit qaangiutiyut iqqakunik qanurittaakhaanik kiklingit takuyauyut talvani nayugangani kuviraqtuq, unalluaq mikivallaaqtumik pH-mik atauhiqmiklu qulvaqtiqtuq atauttimut nutqangayuq naptuyut (TSS) mahaktilirangat. Upijutigivlugu qulvaqtiqniganik TSS-guyuq, upingami hapukulaitkutikhat iliyauhimayut TSS-lu katitiqnigit naunaiqhimayut mikitqiyauniginik iqakuvaluit qanuriniginik kikligiyainit aipaani naunaiyaqtaunigani, qanituani atauhiq saniuniqmi. Nipalukpalaarniq ilaupluni aput mahaktilirangat pidjutaujungnaqhijuq mikitqijaanut pHs. Imaq qanuginia imaiqtiqviani hamunga Goose Lakemun (BRP-01) iluaniituq kuvinikkut qanuginiit imaiyaqtautilugit. Kuviraqtauyuq MLA Atukaffuktauyuq Urhuqyuaq Tutquumavinga ihuaqtuqlu kuviyuq maliktakhangit. Tingmiat anaqtautit halumaqtirutait kuvigaqviit angiyumik maliguaqtut, attauhiqmik avatqutugu halumailguq qanuginia kiklia haffumunga pH, imaalu avatqutugu anait coliform (attautimun coliforms avatqumayut anait halumailgut qanuginiit kikliit uvalu ihuangnikkut aadjiliugutit). Anait coliforms aktilaaqtauyut atulihaaliqtilugu Niqiliqivik uvalu mikitqiat iqakut qanuginiitigut kikliit.

Piqangituq ihuaqtumik pinnirhainikkut hulidjutinik havaktauhimangitut ublumimun. B2Gold Nunavut niriuktut hapkua hulidjutit aularutiniaqtut nayugait naunaiyaqtaukpata atuqtauhuiqlutik pidjutiqaqlutiklu hivumut hulaqutinun.

Ihivgiuqti havaktait pingahut Havaaghat ihivgiuqhugit uvani 2025 (Qiqaijalirvia, Taaqhivalirvia, Tattiarnaqhilirvialu). Tamaita hanaqidjutikhangit ilitagiyauhimayut talvuuna Qiqaiyalirvia ihivriudjutikharnik iniqtiqhimaliqtun. Qanuriliuqtuqangittuq talvani Taaqhivalirvia ihivriuqniqmi. Havaktauhimmaaqtut ihuaqhautikhanik qanuriliurutikhanik pitqujauhimajunik naunaijautigiplugit Tattiarnaqhilirvia ihivriuqhidjutanit.

B2Gold Nunavut aulatitivakhimayut nunalaani ilaulukaarutikharnik talvuuna 2025mi, 2026milu nigiukhimayut ilauyukharnik talvani Kitikmeotmi qunngiaktitiyunik havaanganik Iidjirurviami, hitamahuiqtukhutik ukiunganik Kitikmeot Inuit Katidjutiqatigiingit (KIA) Katimayiit katimadjutaingit, unalu KIAngit Ukiuk Tamaat Katimayuarutmi Tattiarnaqtuqmi. Ilauyukharnik, B2Gold Nunavut upalungaikhimaliqtun ukiuk tamaat nunalaani pulaaqataqtukharnik Kitikmeoni nunalaangit Imaruqtirviami, allatqiinguyutlu Havaaqhangit nayugainun pulaaqtaqtukharnik. Katimadjutit hapkua Inuit Aktuumattaaqtunit Ikayuutikhanut Angirut Atulirnikhanut Katimayiit, Inuit Havalirianginni Havaqatigiiktut, Kitikmeot Inungnut-Ikajuutikhangit Munaqtiunikhainnut Katimayiit, ukuallu Inuit Avatiliqinikkut Uqaudjit Katimayiit, aallallu, katimaniarunaqhiyut 2026-mi.

Upalungaiyautit, uniudjutit, ihivriurutillu ilaliutihimayut haffumunga uniudjutinun ilauyut 2025 Ukiuq tamaat Nunatigut Ihivriuqhinikkut Uniudjutit, 2025 Nayugaani Nunami Uunaqutikkut Munaridjutikkut Titiraqhimayut, 2025 Imarmiutat Hulaqutinun Munaridjutikkut Uniudjutit, uvalu Nunap Uunaqutikkut Munaridjutikkut Upalungaiyautit.

# RÉSUMÉ EXÉCUTIF

Ce rapport résume les activités et le suivi menés par B2Gold Back River Corp. (B2Gold Nunavut) lors du projet Goose (le projet) en 2025, en lien avec la licence d'eau no 2AM-BRP1831 (amendement no 1) (la licence).

Les activités clés comprenaient, sans s'y limiter, l'achèvement de la construction de l'usine de procédé et du moulin — le premier coulage d'or a eu lieu le 30 juin 2025, et la production commerciale a commencé le 4 octobre 2025. L'exploitation de l'Echo Pit a été complétée le 12 mai 2025, la mine servant maintenant d'installation de résidus.

L'eau douce de Goose Lake était utilisée dans le moulin, l'usine de procédé, le souterrain et l'usine de traitement par lots; pour le contrôle de la poussière et d'autres activités diverses (par exemple, lavage de véhicules); et fournir de l'eau potable au complexe principal d'hébergement Goose. Llama, Umwelt et les plans d'eau associés (c'est-à-dire Round Lake) ont été déshydratés. L'eau utilisée du lac Goose et pour le déshydratation faisait partie des attributions de licence. L'eau était aussi utilisée de diverses sources proches de la Winter Ice Road (WIR). La consommation d'eau de WIR était inférieure à l'allocation cumulative de permis par kilomètre de route et dans les capacités de prélèvement calculées prévues dans le mémorandum technique WIR 2025, sauf pour le lac 997 où la capacité disponible a été dépassée par inadvertance. Environ 1 900 m3 d'eau utilisée pour le WIR ont également été prélevés de sources inconnues. B2Gold Nunavut a mis en place des mesures pour corriger ces erreurs dans le prélèvement d'eau WIR pour la saison WIR 2025/26.

La gestion des déchets comprenait le transport de déchets dangereux vers KBL Environmental à Yellowknife ainsi que l'incinération, le brûlage à ciel ouvert et le mise en décharge des déchets non dangereux conformément aux plans approuvés du projet. Les sites d'enfouissement de la zone de stockage de roches usées d'Echo et d'Umwelt (WRSA) ont tous deux été utilisés en 2025. Les eaux usées ont été déversées de l'usine d'épuration Goose, et des eaux grises ont été déversées du complexe d'hébergement de la zone de dépose marine (MLA), du camp Goose Forward et du camp MLA Forward. Le traitement du minerai stocké a commencé en juin et la boue de résidus a ensuite été déposée dans l'installation de résidus Echo (c'est-à-dire la fosse Echo exploitée).

Des déchets de roche étaient utilisés pour la construction ou placés dans les WRSA Echo et Umwelt. Seule la roche classée comme non génératrice d'acide et sans lixiviation métallique a été utilisée pour la construction. Toutes les autres roches ont été gérées de manière à minimiser les effets environnementaux potentiels et à respecter les autorisations du projet.

Il y a eu 14 déversements à déclarer en 2025. Treize des 14 marées noires ont été nettoyées, avec des matériaux contaminés incinérés, transportés hors site ou temporairement entreposés en confinement pour traitement. Un déversement de diesel a été localisé dans un motif d'explosion prévu à Umwelt Pit; Le diesel renversé était considéré comme irrécupérable et devrait être brûlé lors des activités de détonation prévues.

La surveillance de la qualité de l'eau comprenait la surveillance du ruissellement du site vers Goose Lake, des suintements, de la déshydratation, de l'évacuation des eaux usées, des bassins de confinement (étang primaire, étang de stockage de minerai), de l'eau sans contact, de l'admission et de la décharge de la

désalinisation de l'entrée Bathurst, de l'eau dans le confinement de la station-service de stockage temporaire de carburant de la MLA, ainsi que le rejet de l'installation temporaire de stockage de combustible de la MLA. Quelques dépassements des limites de qualité des effluents ont été observés dans le ruissellement du site, notamment un pH bas et un cas d'élévation totale des solides en suspension (TSS) lors de la recrue. En réponse à l'élévation du TSS, des talus de ressort ont été installés et les concentrations de TSS ont été confirmées bien en dessous de la limite de qualité des effluents lors du prochain échantillonnage, environ une semaine plus tard. De fortes pluies combinées à la fonte des neiges ont probablement contribué au pH bas. La qualité de l'eau au point de désagrément vers Goose Lake (BRP-01) respectait les critères de dépollution lors de l'évacuation. Le rejet de l'installation temporaire de stockage de combustible de la MLA répondait également aux critères de décharge. Le rejet de l'usine d'épuration des eaux usées de l'oie était en grande partie conforme, avec un dépassement de la limite de qualité des effluents pour le pH, ainsi qu'un dépassement potentiel pour les coliformes fécaux (le total des coliformes dépassait la limite de qualité des effluents fécaux et constitue une comparaison conservatrice). Les coliformes fécaux ont été mesurés à partir d'août et étaient inférieurs à la limite de qualité des effluents.

Aucune activité progressive de remise en état n'a été entreprise à ce jour. B2Gold Nunavut prévoit que ces activités commenceront une fois que les zones seront déterminées comme n'étant plus utilisées et sujettes à d'autres impacts.

L'inspecteur a effectué trois inspections du projet en 2025 (mars, juillet et octobre). Toutes les actions identifiées lors de l'inspection de mars ont été complétées. Aucune action n'a été identifiée lors de l'inspection de juillet. Des travaux sont en cours pour répondre aux mesures requises en raison de l'inspection d'octobre.

B2Gold Nunavut a mené de l'engagement communautaire tout au long de 2025, et en 2026, il prévoit d'assister au salon de Kitikmeot en février, aux réunions trimestrielles du conseil d'administration de l'Association inuite de Kitikmeot (KIA), ainsi qu'à l'assemblée générale annuelle de la KIA en octobre. De plus, B2Gold Nunavut prévoit une visite communautaire annuelle des communautés de Kitikmeot en juin, ainsi que diverses visites de sites du projet. Des réunions du Comité de mise en œuvre de l'Accord d'impact sur les bénéfices inuits, du Groupe de travail sur l'emploi inuit, du Comité de surveillance socio-économique de Kitikmeot et du Comité consultatif environnemental inuit, entre autres, sont également prévues en 2026.

Les plans, rapports et études annexés à ce rapport comprennent le Rapport annuel d'inspection géotechnique 2025, le mémorandum de surveillance thermique au sol à l'échelle du site 2025, le Rapport de surveillance des effets aquatiques 2025 et le Plan de surveillance thermique du sol.

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# ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| ABA | Acid/base accounting |
| AGI | Annual Geotechnical Inspection |
| AP | Acid production potential |
| B2Gold Nunavut | B2Gold Back River Corp., known as B2Gold Nunavut, a subsidiary of B2Gold Corp. |
| the Board/NWB | Nunavut Water Board |
| the Goose Mine | Refers to the mining operation being developed within the Goose Claims Group, and includes the open pits, the underground mine, and the on-site infrastructure such as the WRSAs, tailings storage facilities, power infrastructure, and process plant |
| the Goose Project | Encompasses the Goose Claims Group, Goose Mine, the WIR and the MLA |
| Inspector | CIRNAC Inspector |
| KIA | Kitikmeot Inuit Association |
| the Licence | Water Licence 2AM-BRP1831 (Amendment No.1) |
| MLA | Marine Laydown Area |
| NAG | Non-acid generating |
| NP | Neutralization potential |
| NPR | Neutralization potential ratio |
| PAG | Potentially acid generating |
| the Project | Goose Project |
| PRWP | Progressive Reclamation Work Plan |
| STP | Sewage Treatment Plant |
| TSS | Total suspended solids |
| WIR | Winter Ice Road |
| WRSA | Waste Rock Storage Area |

# 1. INTRODUCTION

This report to the Nunavut Water Board (NWB; the Board) summarizes activities and monitoring undertaken at B2Gold Back River Corporation's (B2Gold Nunavut's) Goose Project (the Project) in accordance with Part B, Item 2 of Water Licence 2AM-BRP1831 (Amendment No.1), also referred to as the Licence. This Licence was issued on September 21, 2018, and will expire on December 31, 2031.

The Project is a gold mining project located within the western 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 (Kingaok), and 520 km northeast of Yellowknife, Northwest Territories, as illustrated in Figure 1. The Project is located predominantly within the Queen Maud Gulf Watershed.

The Project is comprised of two main areas; the Marine Laydown Area (MLA) situated along the western shore of southern Bathurst Inlet and the Goose Mine south of the MLA where the gold deposits are located. These areas are connected seasonally by an approximately 160 km long winter ice road (WIR). The majority of annual resupply is brought in by sealift to the MLA and necessary materials are transferred via the WIR to the Goose Mine.

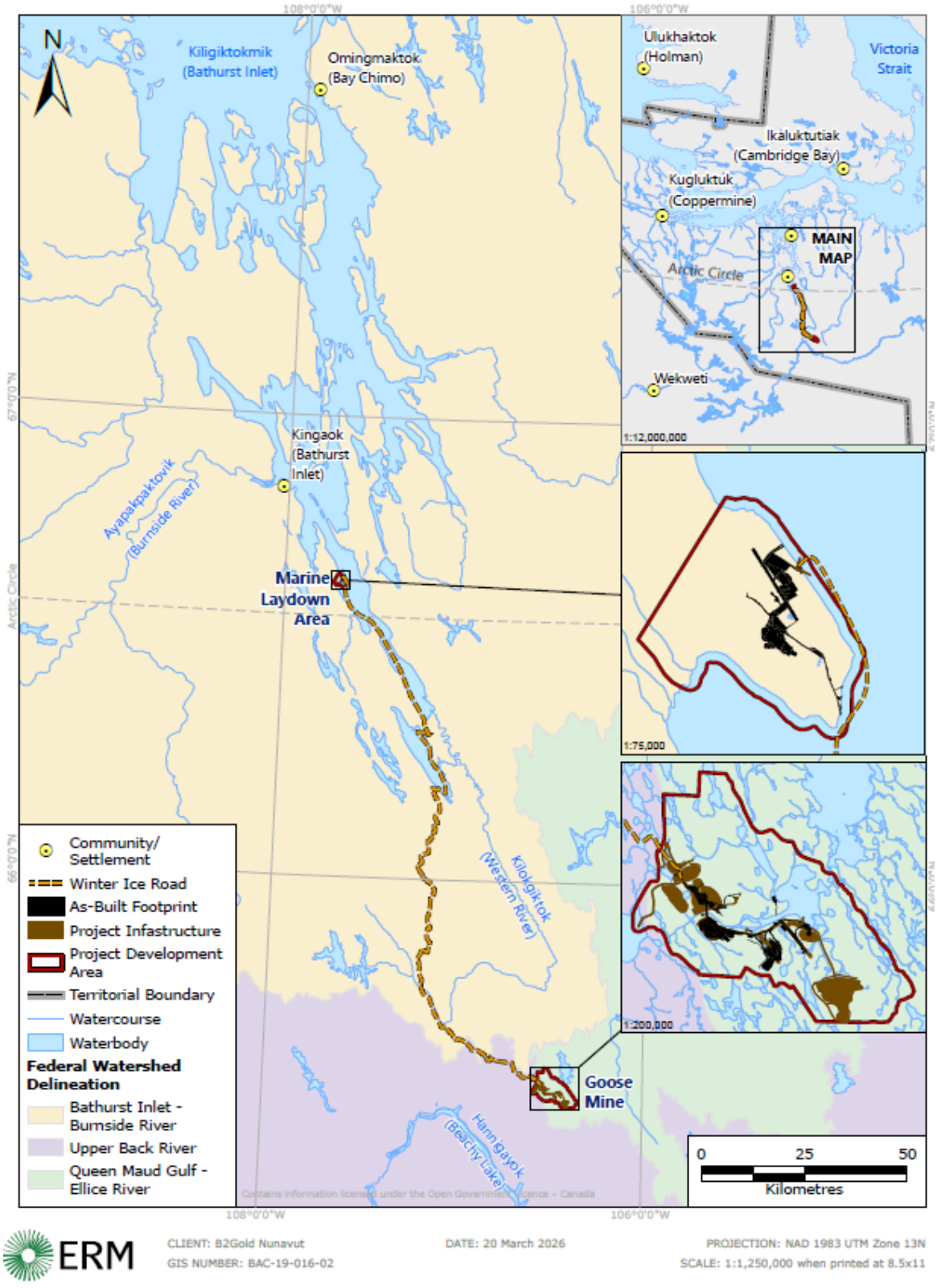
Project development works, which began in 2018 and continued through 2024, included the construction of pad areas, all-weather access roads, and an airstrip at the MLA; as well as the construction of a tent camp, bulk fuel tank and containment area, and barge off-loading area for the receipt, storage, and transfer of materials necessary to support construction activities via sealift and WIR. Development at the Goose Mine through 2024 included the construction of pads, all-weather roads, and bulk fuel storage; an upgrade to the Rascal Stream crossing to accommodate haul traffic; earthworks to extend the Goose airstrip to 5,000 feet; Phase 1 and 2 of the accommodations complex, expanding the camp to approximately 600 beds; commissioning of the sewage treatment plant (STP), concrete batch plant, and fully automated rebar cutting and bending machines; ongoing construction of the plant site, mill, truck shop, Primary Pond, and vault underground decline; initiating construction of the process plant and pre-stripping of Umwelt Pit; and completion of pre-stripping in Echo Pit. Mining of Echo Pit commenced in 2024. See the 2018 and 2019 Annual Reports for Water Licence 2BC-BRP1819 and the 2020 through 2024 Annual Reports for Water Licence 2AM-BRP1831 for further details.

The following sections describe the activities completed in 2025 and key challenges encountered:

- Completed the process plant, mill and truck shop at the Goose Mine.
- Poured 100% of all needed concrete to support steady state operations.
- Achieved first gold pour on June 30, 2025 and commenced commercial production on October 4$^{th}$, 2025.
- Hauled over 4,000 loads during the 2025 WIR campaign, including fuel, freight and equipment for the commissioning and early operations phase of the Project.
- Ensured safe navigation of a total of eight vessels to the MLA with essential cargo to support operations through to the first quarter of 2027.
- Ensured majority of Goose Site process plant structures cladded to allow heated indoor work through the winter, mechanical and structural were well advanced, and the ball mill installation was completed ahead of schedule.

- Completed the new tent structure ahead of schedule to accommodate the Grand Opening, which will be converted into Goose Mine's new gym.
- Completed construction of the Primary Pond at the Goose Mine.
- Concluded open pit mining of the Echo deposit on May 12th and commenced use of the Echo Pit as Goose Mine's Tailings Facility
- Significantly ramped-up the Umwelt Pit development in the second quarter of 2025 as well as the underground workings with the first stope mined in the fourth quarter of 2025.
- Continued advancement of the Vault Underground decline.
- Conducted environmental monitoring and baseline programs including atmospheric, water quality, fisheries, wildlife, geochemical/ geotechnical, and vegetation programs.
- Experienced some challenges including mechanical issues with the process plant and primary crusher. Developed optimization plans to address these issues which will continue into 2026.
- Elevated concentrations of trace metals and nitrites, relative to baseline studies, were detected in Goose Lake. Concentrations were reported to not have an adverse effect on aquatic health. Additional monitoring and a full Aquatics Effects Monitoring Program and Environmental Effects Study are planned for 2026.
- Experienced issues with the primary crusher which resulted in fugitive dust emissions around the plant site.

The construction of mine waste or water management facilities will be documented as they are completed in construction reports filed with the NWB, as required by the Licence. As these facilities are developed and put into use, appropriate additional information will be included in this Annual Report. For 2025, use of exploration waste and water management facilities are reported in the Annual Report for Water Licence 2BE-GOO2028, and use of mine-related water and waste facilities are reported in this report.




ERM

CLIENT: B2Gold Nunavut
GIS NUMBER: BAC-19-016-02

DATE: 20 March 2026

PROJECTION: NAD 1983 UTM Zone 13N
SCALE: 1:1,250,000 when printed at 8.5x11

**Figure 1 Goose Project Overview**

# 2. REGULATORY REQUIREMENTS AND STATUS

As per Part B, Condition 2, the Licensee shall file an Annual Report with the Board no later than March 31st in the year following the calendar year being reported. The Annual Report shall be developed in accordance with Schedule B of the Licence.

This report is submitted to meet the requirement of Part B, Item 2. The following sections provide information on Schedule B requirements.

## 2.1 Schedule B - Construction

**Condition:**

1. For the dikes, dams and structures constructed to withhold water or waste:

a) An overview of methods and frequency used to monitor deformations, Seepage and geothermal responses;

b) A comparison of measured versus predicted performance;

c) A discussion of any unanticipated observations including changes in risk and mitigation measures implemented to reduce risk;

d) As-built drawings of all mitigation works undertaken;

e) Any changes in the design and/or as-built condition and respective consequences of any changes to safety, Water balance and Water quality;

f) Data collected from instrumentation used to monitor earthworks and an interpretation of that data;

g) A summary of maintenance work undertaken as a result of settlement or deformation of dikes and dams; and

h) The monthly and annual quantities of Seepage from dikes and dams in cubic metres.

**Compliance Status:**

Please see the Annual Geotechnical Inspection (AGI) Report (Appendix A) and the Ground Thermal Monitoring memorandum (Appendix B) for information addressing these conditions.

The primary dike or dam structure currently on site is the Primary Pond dam, which was still under construction during the 2025 AGI. As a result, the first annual dam safety inspection would only be initiated in 2026 and there is limited data to report at this time as the pond is currently near empty. There is, however, a robust monitoring system in place for the Primary Pond dam (including thermal and deformation monitoring, frequent visual inspections, and water level monitoring). B2Gold Nunavut conducts limited monitoring (visual comparison or year-to year-surveys) of most of the other infrastructure on site and relevant information is documented in the AGI.

No as-built drawings of mitigation works are provided as no facility mitigations were undertaken in 2025. There were also no changes in the consequence classification of design and/or as-built condition of the Primary Pond nor any maintenance work conducted on this dam in 2025. First maintenance activities on

this dam are anticipated to occur around freshet 2026. The Primary Pond dam only temporarily had water in it before being drawn down for winter 2025/2026; no seepage has been noted to date.

## 2.2 Schedule B - Water

**Conditions:**

2. Monthly and annual volume of fresh Water obtained from all sources.
3. Summary of Interconnection Winter Ice Road plans implemented in accordance with Part E, Item 13.
4. Summary of Dewatering Plans implemented in accordance with Part E, Item 14.
5. Summary update to the Water and Load Balance results, if any, including an annual comparison of measured groundwater inflow rates to model predictions.

**Compliance Status:**

Water use allotments under the Licence are 992,450 $m^3$ annually for the Goose Property, with up to 608,700 $m^3$ of this to be from Goose Lake and up to 273,750 $m^3$ from Big Lake. An additional 1,400,000 $m^3$ annually is allowed for dewatering; 110,000 $m^3$ annually is allowed to be obtained from MLA Pond S1, Pond S2, Lake 3, and Lake 4; and 2,025 $m^3$/km per year is allowed for WIR development and maintenance.

The following is to comply with Schedule B, Condition 2. Details on freshwater use, including annual, monthly, and per kilometre (for the WIR) totals are provided below for the Goose Mine and WIR. In 2025, no freshwater was used at the MLA. Water for MLA use was instead supplied by the desalination of seawater from Bathurst Inlet. Please refer to the 2025 Annual Report for 2BE-GOO2028 for more detail on water usage related to the Goose Exploration Camp and project.

Goose Mine Water Use

In 2025, water was used for the following purposes at the Goose Mine:

- To supply potable water for the Goose Main Accommodations Complex,
- For the mill and process plant,
- To support underground activities,
- Batch plant operations,
- Dust control,
- Dewatering of Llama, Umwelt, and associated waterbodies (i.e., Round Lake), and
- Other miscellaneous activities (e.g., washing vehicles).

All water used at the Goose Mine was withdrawn from Goose Lake or the lakes being dewatered in 2025 (i.e. Llama Lake, Umwelt Lake, and the upstream Round Lake). Following the cessation of dewatering, remaining water in Llama Lake was used to support geotechnical drilling. Total water use by month in 2025 is provided in Table 2.2-1. Total water use from Goose Lake in 2025 was 365,614 $m^3$, which did not exceed the Licence allotment of 992,450 $m^3$. The total dewatering volume from Llama (including water used for geotechnical drilling), Umwelt, and Round lakes was 958,895 $m^3$, which did not exceed the 1,400,000 $m^3$ Licence allotment. Additional details regarding the dewatering program are provided below.

**Table 2.2-1 Monthly and Annual Freshwater Water Use for Goose Mine, 2025**

| Month | Goose Lake ($m^3$) | Llama Lake ($m^3$) | Umwelt Lake ($m^3$) | Round Lake ($m^3$) |
|---|---|---|---|---|
| January | 4,618 | 0 | 0 | 0 |
| February | 4,426 | 0 | 0 | 0 |
| March | 4,919 | 0 | 0 | 0 |
| April | 4,443 | 0 | 0 | 0 |
| May | 4,227 | 0 | 0 | 0 |
| June | 32,963* | 0 | 0 | 0 |
| July | 55,112* | 162,289 | 101,759 | 0 |
| August | 54,826* | 336,548 | 164,006 | 37,993 |
| September | 51,038* | 104,991 | 0 | 0 |
| October | 48,357* | 49,000† | 0 | 0 |
| November | 21,122 | 1,520† | 0 | 0 |
| December | 79,563 | 789† | 0 | 0 |
| **Total** | **365,614** | **655,137** | **265,765** | **37,993** |

**Note:**

* Monthly volume calculated from an estimate of process plant water use from June 15 to October 15 + metered monthly water use for other Goose Mine purposes. Process plant water use was metered beginning October 15.

† Following the cessation of dewatering a total of 2,980 $m^3$ of water from Llama Lake was used to support geotechnical drilling from October through December 2025. All other water withdrawn from Llama Lake under this Licence was completed as part of the dewatering program.

WIR Water Use

Table 2.2-2 presents the monthly and annual volume of fresh water used for the WIR for the 2024/2025 winter season; this includes water use at the MLA and Goose forward camps. Appendix C provides monthly and annual water use by water source including a comparison to the available water capacity of each source.

Total WIR water use per kilometre during the 2024/2025 winter season averaged 1,027 $m^3$/km; well within the cumulative Licence allotment of 2,025 $m^3$/km. The cumulative volume of water withdrawn by individual lakes over the entire WIR season (December 2024 through April 2025) was also within the calculated withdrawal capacities presented in the 2025 WIR Technical Memorandum, except for Lake 997 where the available capacity was inadvertently exceeded. A cumulative volume of 1,884 $m^3$ water was also withdrawn from unknown water sources this WIR season. The 2025 WIR Technical Memorandum presented the calculated volume of water that could be withdrawn from 55 area lakes over a full WIR season while maintaining nil risk of habitat loss. This volume ranged from 683 to 32,516,148 $m^3$ depending on the size of the water source. As less than 1,900 $m^3$ has been withdrawn in total from all unknown water sources used this season it is unlikely these withdrawals would have posed an environmental risk to these unknown waterbodies. However, B2Gold Nunavut has implemented extensive measures to address these errors for the 2025/26 WIR season. These include posting clear signage at each authorized WIR water source, updating the water tracking spreadsheets, requiring more regular review of water usage against limits, requiring withdrawal from depth in deeper lake areas to avoid taking more oxygenated surface water to reduce risks associated with potential over withdrawal.

**Table 2.2-2 Monthly and Annual Freshwater Water Use for 2024/2025 Winter Ice Road**

| Month | Freshwater Volume Used ($m^3$) |
|---|---|
| December 2024 | 48,001 |
| January 2025 | 40,922 |
| February 2025 | 30,612 |
| March 2025 | 37,087 |
| April 2025 | 7,687 |
| **2024/2025 Total** | **164,309 $m^3$** |
| **2024/2025 Total per km** | **1,027 $m^3$/km** |

The following is to comply with Schedule B, Condition 3 and Part E, Item 13. B2Gold Nunavut submitted the WIR Technical Memorandum to the Board for review prior to the construction of the 2024/2025 WIR. The memorandum described the projected WIR routing and schedule (subject to changes year to year based on construction and operational conditions), as well as the plan for construction, operations, and closure of the WIR, including potential water use (i.e., bathymetry, depth, potential locations of possible water withdrawal, proposed volumes to be extracted [including for the WIR service/emergency camps], and anticipated water level decreases). No significant route deviations or alterations were made over the 2024/2025 WIR season relative to that described in the memorandum. More than 4,000 loads were transported on the 2025 WIR haul campaign.

The following is to comply with Schedule B, Condition 4. A Dewatering Plan was provided to the NWB on February 23, 2024, in accordance with Part E Item 14 of the Licence, which requires a dewatering plan be provided at least 60 days prior to initiation of dewatering. Based on review comments, the Dewatering Plan was subsequently revised and resubmitted on April 12, 2024 (Version 1.1). The NWB approved this plan on May 22, 2024.

Dewatering of Llama Lake commenced on July 12, 2025, and ceased on October 5, 2025, with a total of 652,157 $m^3$ of lake water dewatered. Approximately 501,448 $m^3$ was discharged to Goose Lake between July 12 and September 1, 2025. Between September 2 to September 19, 2025, Llama Lake water was directed to the Primary Pond due to elevated total suspended solids (TSS) concentrations and in alignment with Dewatering Plan protocols. Approximately 54,967 $m^3$ was dewatered to the Primary Pond from September 2 to September 19, 2025. From September 20 to October 5, 2025, an additional 95,742 $m^3$ of water meeting dewatering criteria was discharged to Goose Lake, at which time the Llama Lake dewatering program concluded.

Dewatering of Umwelt Lake commenced on July 14 and ceased on August 25, 2025. A total of 265,765 $m^3$ was dewatered and discharged to the Primary Pond. A total of 37,993 $m^3$ was also dewatered from Round Lake (an upstream tributary to Umwelt Lake) from August 27 to 31, 2025. Approximately 27,000 $m^3$ was discharged to the Goose Lake receiving environment and the remaining water was discharged to the Primary Pond.

The following is to comply with Schedule B, Condition 5. B2Gold Nunavut provided an updated Water and Load Balance Model Report and Hydrodynamic Model to the NWB on August 31, 2022.

## 2.3 Schedule B - Waste

**Conditions:**

6. Geochemical monitoring results including:

a) Operational acid/base accounting (ABA) and associated test work used for Waste Rock designation as potentially acid generating (PAG) or non-acid generating (NAG) rock;

b) As-built volumes of Waste Rock used in construction and placed in the Waste Rock Storage Areas with estimated balance of acid generation to acid neutralization capacity in a given sample, as well as metal toxicity;

c) All monitoring data with respect to geochemical analyses on site and related to roads and quarries;

d) Any leaching observations and tests collected on pit slope and dike exposure; and

e) Any geochemical outcomes or observations that could imply or lead to environmental impact.

7. Volumes of ore stockpiled.

8. Summary of quantities and analysis of Seepage and runoff monitoring from the Tailings Storage Facility, Waste Rock Storage Areas, Landfill(s) and associated dikes/berms.

9. A summary report of all general Waste disposal activities including monthly and annual quantities in cubic metres of Waste generated and location of disposal.

10. Reporting of Incinerator test results including the materials burned and the efficiency of the Incinerator in relation to effects on Water and the potential Deposit of Waste into Water.

**Compliance Status:**

The following is to comply with Schedule B, Condition 6(a). The Waste Rock Management Plan requires the collection of eight samples per 100,000 tonnes of blasted rock for NAG/PAG classification, which is then used to determine the appropriate application of the material (e.g., storage or construction). In 2025, the geology department collected 1,658 samples from production blast-hole drilling for NAG/PAG determination, equivalent to 16 samples per 100,000 tonnes of blasted rock.

For each sample, approximately 1,500 grams of material was collected and sent to B2Gold Nunavut's inhouse lab for assay. The samples followed a Modified Sobek analysis to obtain the neutralization potential ratio (NPR) and testing for total sulphur and sulphide sulphur.

To determine if the sample is NAG or PAG, calculations are as follows:

1. Calculate the acid production potential (AP) of the sample using the following formula:
    a. AP = Total Sulphur * 31.35
2. Calculate the neutralization potential (NP) of the sample from the Modified Sobek leach test.
3. Calculate the NPR of the sample using the following formula:
    a. NPR = NP / AP

Once the NPR is calculated, the sample is classified as either NAG or PAG using the following site-specific criteria developed during the baseline geochemical assessment (Sabina 2022):

- An NPR >= 3 or S <= 0.15% is classified as NAG.
- An NPR < 3 and S > 0.15% is classified as PAG.

NAG and PAG classifications for each waste rock sample are presented in Appendix D, Table D-1. Site overburden is classified as NAG with negligible metal leaching/acid rock drainage potential (Sabina 2017). Therefore, laboratory analyses were not undertaken on overburden material in 2025.

The following is to comply with Schedule B, Condition 6(b). In 2025, waste rock was segregated into NAG and PAG categories based on geochemical criteria developed from baseline geochemical assessment work, as described in the approved Waste Rock Management Plan and summarized above in response to Schedule B, Condition 6(a). Additional details, including the estimated balance of acid generation to acid neutralization capacity for each sample, are provided in Appendix D Table D-1.

Appendix D, Tables D-2 through D-5 summarize the 2025 monthly as-built quantities of NAG and PAG waste rock used in construction and placed in Waste Rock Storage Areas (WRSAs) as well as quantities and placement of overburden. In 2025, a total of 646,512 $m^3$ of construction-suitable waste rock was used for site wide construction projects, 791,858 cubic metres ($m^3$) of waste rock was added to the Echo WRSA, 1,887,590 $m^3$ to the Umwelt WRSA and 486,807 $m^3$ to the Umwelt Overburden Stockpile.

The following is to comply with Schedule B, Condition 6(c). All 2025 waste rock geochemical monitoring data are presented in Appendix D, Table D-1. Appendix D, Tables D-2 through D-5 indicate the locations of waste rock and overburden placement or use in 2025. Appendix D, Table D-5 outlines the NAG waste rock used for construction. No construction material was sourced from quarries or other sources in 2025. No separate road geochemical characterization is made as all construction material, including that used on roads from either quarries or waste rock, is characterized prior to use.

The following is to comply with Schedule B, Condition 6(d). Any leaching or seepage that does not report to a water management structure or is not otherwise contained is monitored and reported in the below response to Schedule B, Condition.

The following is to comply with Schedule B, Condition 6(e). Geochemical data is regularly reviewed for potential environmental impacts. Geochemical results are within the range anticipated and are being successfully managed in accordance with the relevant approved management plans. Only rock classified as NAG and non-ML is used for construction. All other rock is managed in a manner that minimizes potential environmental effects and aligns with Project authorizations. 2025 geochemical analyses did not identify any concerns with the ongoing ability to successfully manage these wastes based on their geochemical composition.

The following is to comply with Schedule B, Condition 7. In 2025, a total of 2,273,490 $m^3$ of ore was stockpiled. Table 2.3-1 presents the volumes of ore stockpiled by month.

**Table 2.3-1 Volumes of Ore Stockpiled at the Goose Mine, 2025**

| Month | Ore Volume ($m^3$) |
|---|---|
| January | 141,645 |
| February | 158,263 |

| Month | Ore Volume ($m^3$) |
|---|---|
| March | 176,236 |
| April | 197,876 |
| May | 214,820 |
| June | 226,089 |
| July | 210,588 |
| August | 196,990 |
| September | 175,221 |
| October | 160,361 |
| November | 181,836 |
| December | 233,565 |
| **Total** | **2,273,490** |

The following is to comply with Schedule B, Condition 8. In 2025, three seeps were observed at the Goose Mine (BRP-S-01, BRP-S-02, and BRP-S-03). Section 2.6.2 and Appendix E, Table E-2a provide further information on the 2025 seeps.

The following is to comply with Schedule B, Condition 9. Quantities and types of wastes backhauled from the Goose and MLA properties to KBL Environmental in Yellowknife are provided in Appendix F (Tables F-1 and F-2, respectively). These backhauled wastes are categorized as dangerous goods or non-regulated goods. KBL Environmental provides waste management services and transfer of Project wastes to approved disposal facilities outside of Nunavut.

Wastes incinerated and open burned at the Goose and MLA properties are also provided in Appendix F (Tables F-3 to F-4, respectively).

Non-hazardous wastes identified as being suitable for landfilling on site per the Project's Landfill and Waste Management Plan were sent to the Echo and Umwelt WRSA landfills (Appendix F, Table F-5). A total volume of 7,412 $m^3$ was placed in the Echo WRSA landfill and 3,071 $m^3$ was placed in the Umwelt WRSA landfill in 2025.

A summary of treated sewage effluent discharge from the Goose Sewage Treatment Plant (STP) and estimated greywater discharge from the MLA Accommodations Complex, Goose Forward Camp, and MLA Forward Camp is provided in Appendix F, Table F-6. Total treated sewage effluent discharged from the Goose STP to the tundra was 49,996 $m^3$. Total greywater discharged from the MLA Accommodations Complex to the tundra was estimated as 8,064 $m^3$. Further information on STP discharge and MLA greywater discharge are provided in sections 2.6.8 and 2.6.15, respectively. Greywater from the Goose and MLA forward camps was estimated as 100% of the freshwater supplied to the camp. In alignment with the Licence Part F, Item 23, greywater from WIR/Service/Emergency camps is discharged to a location at least 31 m from the ordinary high-water mark where direct flow into a water body is not possible and no additional impact is created.

A summary of waste rock and overburden placed by month at the Echo and Umwelt WRSAs is provided in Appendix D, Tables D-2 to D-4. For geochemical results please refer information provided in relation to Schedule B, Condition 6, above.

A summary of deposition to the Echo Tailings Facility is provided in Appendix F, Table F-7.

Additional information can be found in Section 2.6 of this report, which reports on the monitoring undertaken in accordance with Schedule I of Licence.

The following is to comply with Schedule B, Condition 10. Information on the wastes incinerated can be found in Appendix F, Tables F-3 and F-4. No information on incinerator efficiency is currently available, as incinerator testing has not yet been conducted at the Goose Project. However, the incinerators used by B2Gold Nunavut at both the Goose Mine and MLA are dual chambered forced air incinerators considered suitable for the effective incineration of the waste types being incinerated at the Project.

## 2.4 Schedule B - Spills

**Condition:**

11. A list and description of all unauthorized discharges including volumes, spill report line identification number and summaries of follow-up action taken.

**Compliance Status:**

All spills are recorded for adaptive management purposes at the Project. Appendix G presents the externally reportable spills that occurred in relation to the Licence in 2025.

There were 14 reportable spills in 2025. Thirteen of the 14 spills were cleaned up, with contaminated materials incinerated, backhauled offsite, or temporarily stored in containment for treatment. One diesel spill was located in a planned blast pattern in Umwelt Pit; the spilled diesel was considered unrecoverable and anticipated to combust during planned blasting activities.

## 2.5 Schedule B - Modifications

**Condition:**

12. A summary of Modifications and/or major maintenance work carried out on all Water and Waste-related structures and facilities.

**Compliance Status:**

In 2025, B2Gold Nunavut modified the Tote Storage Facility, in alignment with the Goose Lake Tote Storage Facility Design & Construction Summary Memo submitted to the NWB in late 2024.

## 2.6 Schedule B - Monitoring

**Conditions:**

13. The results and interpretation of the Monitoring Program in accordance with Part I and Schedule I.

14. The results of monitoring related to the General and Aquatic Effects Monitoring Program in accordance with Part I Item 1.

**Compliance Status:**

The following is to comply with Schedule B, Condition 13. A high-level monitoring summary outlining activity related to each monitoring station indicated in Part I and Schedule I of the Licence is provided in Appendix H along with maps depicting sampling locations. Monitoring details are provided below for monitoring stations that were active in 2025. Results are interpreted, where applicable, in comparison to Licence discharge criteria.

Water use and waste deposition related to operation of the Goose Exploration Camp is reported in the 2BE-GOO2028 annual report.

### 2.6.1 BRP-G General Site Runoff

In 2025 runoff was observed flowing towards Goose Lake from May to September, with flows generally diminishing through the open-water season. BRP-G-01, BRP-G-02, and BRP-G-04 were observed flowing during freshet (late May to late June/early July), BRP-G-05 and BRP-G-06 were observed flowing from late May through early August, and BRP-G-03 was observed flowing throughout the open-water season (late May through September). Flow volumes were not quantified in 2025. Sampling locations are provided in Figure H-1 of Appendix H and the full set of analytical results is provided in Appendix E, Tables E-1a to E-1d.

No sheen on the water was noted during sample collection and most sample parameters met effluent quality limits for Project related surface runoff (Tables 2.6-1 to 2.6-6), except for:

- TSS at BRP-G-03 on May 19. TSS was elevated (140 mg/L compared to the maximum grab sample limit of 100 mg/L) in freshet runoff on May 19 at BRP-G-03. Spring berms were subsequently installed and TSS concentrations were confirmed to be well below effluent quality limits by the next sampling event on May 27 (8.5 mg/L);
- pH at BRP-G-02 and BRP-G-04 on May 27 and June 27 (pHs ranged from 5.03 to 5.18). There were large rain events prior to sampling on these dates, which, combined with snow melt (particularly during May), led to heavy flows and may have contributed to the reduction in pH observed in site runoff at these sites; and
- pH at BRP-G-05 on August 1, which had a pH slightly lower than the effluent quality limit (5.97 compared to lower limit of 6.0).

**Table 2.6-1 Water Quality Data for BRP-G-01 Compared to Effluent Quality Limits**

| Parameter | Unit | Effluent Quality Limit | | 27-May-25 | 27-Jun-25 | 01-Jul-25 |
|---|---|---|---|---|---|---|
| | | Maximum Average Concentration | Maximum Concentration of Any Grab Sample | | | |
| pH | pH units | 6 - 9.5 | 6 - 9.5 | 6.23 | 6.42 | 6.3 |
| Total Suspended Solids | mg/L | 50 | 100 | 2 | 2 | 2 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Total Oil and Grease | mg/L | No visible sheen | No visible sheen | <2.0 | 6 | <2 |

**Note:**
Field examination for visible sheen indicated no sheen in any samples.

## Table 2.6-2 Water Quality Data for BRP-G-02 Compared to Effluent Quality Limits

| Parameter | Unit | Effluent Quality Limit | | 22-May-25 | 27-May-25 | 27-Jun-25 |
|---|---|---|---|---|---|---|
| | | Maximum Average Concentration | Maximum Concentration of Any Grab Sample | | | |
| pH | pH units | 6 - 9.5 | 6 - 9.5 | 6.1 | 5.03 | 5.18 |
| Total Suspended Solids | mg/L | 50 | 100 | 39 | 6.3 | 1.6 |
| Total Oil and Grease | mg/L | No visible sheen | No visible sheen | 3 | <2.0 | 6 |

**Notes:**
Shaded cells indicate values were outside of effluent quality limits.
Field examination for visible sheen indicated no sheen in any samples.

## Table 2.6-3 Water Quality Data for BRP-G-03 Compared to Effluent Quality Limits

| Parameter | Unit | Effluent Quality Limit | | 19-May-25 | 27-May-25 | 04-Jun-25 | 12-Jun-25 | 18-Jun-25 | 24-Jun-25 | 27-Jun-25 | 01-Jul-25 | 08-Jul-25 | 17-Jul-25 | 22-Jul-25 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Maximum Average Concentration | Maximum Concentration of Any Grab Sample | | | | | | | | | | | |
| pH | pH units | 6 - 9.5 | 6 - 9.5 | 6.31 | 6.56 | 6.46 | 6.41 | 6.7 | 6.59 | 6.61 | 6.56 | 6.61 | 6.76 | 6.57 |
| Total Suspended Solids | mg/L | 50 | 100 | 140 | 8.5 | <0.97 | 1.3 | 1.1 | 4.8 | 2.5 | <1 | 1.9 | 83 | 34 |
| Total Oil and Grease | mg/L | No visible sheen | No visible sheen | 3 | 3 | <2.0 | <2.0 | <2.0 | 3 | <2.0 | <2 | <2 | <2 | 4 |
| **Parameter** | **Unit** | **Effluent Quality Limit** | | **29-Jul-25** | **01-Aug-25** | **06-Aug-25** | **13-Aug-25** | **19-Aug-25** | **26-Aug-25** | **01-Sep-25** | **09-Sep-25** | **16-Sep-25** | **23-Sep-25** | **30-Sep-25** |
| | | **Maximum Average Concentration** | **Maximum Concentration of Any Grab Sample** | | | | | | | | | | | |
| pH | pH units | 6 - 9.5 | 6 - 9.5 | 6.32 | 6.49 | 6.57 | 6.48 | 6.34 | 6.39 | 6.28 | 6.69 | 6.28 | 6.33 | 6.06 |
| Total Suspended Solids | mg/L | 50 | 100 | 11 | 13 | 2.5 | <1 | 1.1 | 2.8 | <1.0 | 12 | 2.1 | <0.99 | 1.3 |
| Total Oil and Grease | mg/L | No visible sheen | No visible sheen | <2 | 3 | 3 | <2 | <2 | 3 | <2 | <2 | 3 | <2 | <2 |

**Notes:**

Shaded cells indicate values were outside of effluent quality limits.

Field examination for visible sheen indicated no sheen in any samples.

**Table 2.6-4 Water Quality Data for BRP-G-04 Compared to Effluent Quality Limits**

| Parameter | Unit | Effluent Quality Limit | | 22-May-25 | 27-May-25 | 27-Jun-25 |
|---|---|---|---|---|---|---|
| | | Maximum Average Concentration | Maximum Concentration of Any Grab Sample | | | |
| pH | pH units | 6 - 9.5 | 6 - 9.5 | 6.02 | 5.05 | 5.12 |
| Total Suspended Solids | mg/L | 50 | 100 | 53 | 4 | <1 |
| Total Oil and Grease | mg/L | No visible sheen | No visible sheen | 4 | 4 | 7 |

**Notes:**
Shaded cells indicate values were outside of effluent quality limits.
Field examination for visible sheen indicated no sheen in any samples.

**Table 2.6-5 Water Quality Data for BRP-G-05 Compared to Effluent Quality Limits**

| Parameter | Unit | Effluent Quality Limit | | 27-Jun-25 | 01-Jul-25 | 01-Aug-25 |
|---|---|---|---|---|---|---|
| | | Maximum Average Concentration | Maximum Concentration of Any Grab Sample | | | |
| pH | pH units | 6 - 9.5 | 6 - 9.5 | 6.31 | 6.2 | 5.97 |
| Total Suspended Solids | mg/L | 50 | 100 | 49 | 2 | 15 |
| Total Oil and Grease | mg/L | No visible sheen | No visible sheen | 4 | 3 | <2 |

**Notes:**
Shaded cells indicate values were outside of effluent quality limits.
Field examination for visible sheen indicated no sheen in any samples.

**Table 2.6-6 Water Quality Data for BRP-G-06 Compared to Effluent Quality Limits**

| Parameter | Unit | Effluent Quality Limit | | 27-Jun-25 | 01-Jul-25 | 01-Aug-25 |
|---|---|---|---|---|---|---|
| | | Maximum Average Concentration | Maximum Concentration of Any Grab Sample | | | |
| pH | pH units | 6 - 9.5 | 6 - 9.5 | 6.45 | 6.37 | 6.24 |
| Total Suspended Solids | mg/L | 50 | 100 | 3 | 1.8 | 4 |
| Total Oil and Grease | mg/L | No visible sheen | No visible sheen | <2.0 | <2 | <2 |

**Note:**
Field examination for visible sheen indicated no sheen in any samples.

### 2.6.2 BRP-S General Seeps

In 2025, three seeps were observed (BRP-S-01, BRP-S-02, and BRP-S-03; Table 2.6-7). Results are provided in Appendix E, Table E-2a. Flow was low, discontinuous, and too small to be measured or quantified.

**Table 2.6-7 Seep Locations and Sample Timing**

| Seep | Location | Months Flow Observed |
|---|---|---|
| BRP-S-01 | Northeast side of Quarry | June, July, August |
| BRP-S-02 | Southern toe of Umwelt overburden stockpile | August |

| | | |
|---|---|---|
| BRP-S-03 | Road intersection across from Umwelt Pit (seepage originating from Umwelt overburden stockpile and possibly Umwelt WRSA) | September |

### 2.6.3 BRP-01 Goose Lake Discharge

Dewatering occurred between July 12 and October 5, 2025, details are provided in Section 2.2. The discharge of effluent from dewatering into Goose Lake is monitored at BRP-01. Eight samples were collected from BRP-01 during dewatering. Effluent met the effluent quality limits outlined in Part D, Item 26 of the Licence (Table 2.6-8, Appendix E, Table E-1e).

### 2.6.4 BRP-02 Llama Lake

Dewatering of Llama Lake occurred from July 12 to October 5. One sample was collected from Llama Lake on July 8 prior to discharge and three samples were collected after discharge began; results are provided in Appendix E, Table E-2b. The Licence requires weekly sampling during dewatering if water treatment is required. Water treatment was not necessary; therefore, weekly sampling was not required.

### 2.6.5 BRP-06 Umwelt Lake

Dewatering of Umwelt Lake occurred from July 14 to August 25. One sample was collected during dewatering in August; results are provided in Appendix E, Table E-2b. The Licence requires weekly sampling during dewatering if water treatment is required. Water treatment was not necessary; therefore, weekly sampling was not required.

### 2.6.6 BRP-10 Primary Pond

Eight samples were collected at BRP-10 from June to October, results are provided in Appendix E, Table E-3. Approximately 59,247 $m^3$ of water from the Primary Pond was transferred to the Echo Tailings Facility from October to November. Water from the Primary Pond was also used as reclaim water for the process plant. No water from the Primary Pond was discharged to the environment in 2025.

### 2.6.7 BRP-13 Ore Stockpile Pond

Two samples were collected at BRP-13, results are provided in Appendix E, Table E-3. No water from the Ore Stockpile Pond was discharged to the environment in 2025.

### 2.6.8 BRP-17 Goose Property Sewage Treatment Plant

The Goose Property STP was put into use in August of 2023 with treated effluent being discharged to land in a manner allowing over land treatment of the effluent prior to entering the freshwater receiving environment. Plant commissioning and calibration continued into 2024, with changes made to the treated effluent tundra discharge point, in discussion with the Inspector, to maximize over-land treatment benefits. Approximately 49,996 $m^3$ of treated sewage effluent was discharged to the tundra during 2025 (Appendix F, Table F-6). Water was not available for sampling during the frozen winter months (January through mid-May and October through December). Water quality data collected downslope of the treated effluent discharge point and immediately prior to entry of effluent into the freshwater receiving

environment at BRP-17 are provided in Table 2.6-9 for parameters with effluent quality limits. Tables indicating results for all parameters analysed are provided in Appendix E, Table E-1f.

No sheen on the water was noted during sample collection and sample parameters met effluent quality limits for STP discharge (Table 2.6-9), except for pH on June 23, which was lower than the effluent quality limit (5.28 vs Licence lower limit of 6). The low pH resolved and pH met the compliance requirement by the subsequent sampling event.

In addition, total coliforms rather than fecal coliform were accidentally measured in samples collected at BRP-17 from May to July. On July 14, concentrations of total coliforms exceeded the effluent quality limit for fecal coliforms but were below the limit during all preceding and subsequent sampling events. Total coliforms are a conservative comparison to the effluent quality limit, which is based on a subset of total coliforms; fecal coliforms. It is therefore not possible to definitively determine if concentrations exceeded the fecal coliform effluent quality limit on July 14. Fecal coliforms were measured beginning in August, and all values were well below the fecal coliform effluent quality limit and values previously measured for total coliforms.

### 2.6.9 BRP-18 Llama Watershed Outflow

Ten samples were collected from BRP-18 from May to September for use in water and load balance calculations. Sample results are provided in Appendix E, Table E-2c.

### 2.6.10 BRP-19 Echo Outflow

Seven samples were collected from BRP-19 from May to September for use in water and load balance calculations. Sample results are provided in Appendix E, Table E-2d.

### 2.6.11 BRP-23 Gander Pond Outflow

Eight samples were collected from BRP-23 from May to October for use in water and load balance calculations. Sample results are provided in Appendix E, Table E-2e.

### 2.6.12 BRP-24 Goose Lake Intake

Flow at the Goose Lake intake point for potable and industrial water withdrawal is continuously metered. Prior to May 29 a portion of water withdrawal from Goose Lake was separately tracked by truckload, however, as of May 29 all water withdrawal is continuously metered. The total monthly volume withdrawn from Goose Lake under this Licence is reported in Section 2.2.

### 2.6.13 BRP-30 Goose Southeast Inflow

Six samples were collected from BRP-30 from May to September for use in water and load balance calculations. Sample results are provided in Appendix E, E-2f.

## Table 2.6-8 Water Quality Data for BRP-01 Compared to Effluent Quality Limits

| Parameter | Unit | Effluent Quality Limit | | 13-Jul-25 | 20-Jul-25 | 28-Jul-25 | 03-Aug-25 | 10-Aug-25 | 19-Aug-25 | 25-Aug-25 | 02-Sep-25 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Maximum Average Concentration | Maximum Concentration of Any Grab Sample | | | | | | | | |
| pH | pH units | 6 - 9.5 | 6 - 9.5 | 6.13 | 6.73 | 6.41 | 6.4 | 6.92 | 6.25 | 6.22 | 6.16 |
| Total Suspended Solids | mg/L | 15 | 30 | 1 | 5 | <1 | <1 | <1 | <1 | 2 | 9 |
| Turbidity | NTU | 15 | 30 | 2.9 | 3.4 | 0.2 | 0.1 | 1.7 | 0.2 | 2.0 | 5.2 |
| Total Aluminum | mg/L | 1.5 | 3.9 | 0.015 | 0.125 | 0.013 | 0.018 | 0.036 | 0.041 | 0.071 | 0.143 |

## Table 2.6-9 Water Quality Data for BRP-17 Compared to Effluent Quality Limits

| Parameter | Unit | Effluent Quality Limit | | 28-May-2025 | 12-Jun-2025 | 23-Jun-2025 | 24-Jun-2025 | 29-Jun-2025 | 03-Jul-2025 | 14-Jul-2025 | 27-Jul-2025 | 10-Aug-2025 | 25-Aug-2025 | 07-Sep-2025 | 21-Sep-2025 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Maximum Average Concentration | Maximum Concentration of Any Grab Sample | | | | | | | | | | | | |
| $BOD_5$ | mg/L | 30 | - | <2 | 3 | <2 | - | <2 | <2 | <2 | <2 | <2 | <2 | 4 | 7 |
| Total Suspended Solids | mg/L | 35 | - | 4.3 | 20 | 7.6 | - | <1.0 | <1 | 3.5 | 1.3 | 11 | 4 | 10 | 1 |
| Fecal Coliform | CFU/100 mL | 1,000 | - | 114* | 82* | - | 276* | 272* | 260* | 1,990* | 770* | <1 | 18 | 14 | 10 |
| Ammonia ($NH_3$-N) | mg/L | 4 | 8 | <0.0005 | 0.0045 | <0.0005 | - | <0.0005 | <0.0005 | 0.0008 | 0.0015 | <0.0005 | 0.052 | 0.011 | 0.078 |
| Phosphorus | mg/L | 4 | 8 | 0.037 | 0.06 | 0.044 | - | 0.007 | 0.003 | 0.012 | 0.006 | 0.042 | 0.013 | 0.023 | 0.34 |
| Total Oil and Grease | - | No visible sheen | - | <2 | <2 | 4 | - | <2 | <2 | <2 | <2 | 3 | 5 | <2 | <2 |
| pH | - | 6 – 9.5 | - | 6.66 | 6.01 | 5.28 | - | 6.57 | 6.56 | 6.26 | 6.82 | 6.4 | 6.64 | 7.37 | 7.19 |

**Notes:**

Shaded cells indicate values were outside of effluent quality limits.

Field examination for visible sheen indicated no sheen in any samples.

*Effluent quality limit is for fecal coliforms (CFU/100 mL), data for May to July are for total coliforms (MPN/100 mL) and are a conservative comparison to the effluent quality limit.

### 2.6.14 BRP-40 and 41 MLA Bathurst Inlet Desalination Intake and Discharge

Nine samples were collected from BRP-40 between January and November and seven samples were collected from BRP-41 between February and November, results are provided in Appendix E, Tables E-2g and E-2h. Desalination water sampling results are analysed in the Marine Monitoring Report included in B2Gold Nunavut's Annual Reports to the Nunavut Impact Review Board.

### 2.6.15 BRP-42 MLA Greywater

Approximately 8,064 $m^3$ of greywater was calculated to have been discharged to the tundra from the MLA Accommodations Complex, based on a daily rate of 200 litres per person (Appendix F, Table F-6). No flow or water was available for sampling downstream of the discharge point (i.e., at BRP-42), likely due to the limited daily volumes discharged combined with the long over-land transit and uptake of this water between the discharge point and its drainage point into Bathurst Inlet and/or frozen conditions during winter.

### 2.6.16 BRP-43 MLA Fuel Tank Farm

On May 25 water from snow melt that had accumulated in the fuel tank farm was pumped over the berm to the instaberm; water quality results for the transferred water are presented in Appendix E, Table E-1g. No water was released to the environment.

### 2.6.17 BRP-49 MLA Temporary Fuel Storage Facility

Approximately 25 $m^3$ of treated effluent was discharged from Temporary Fuel Storage Facility MLA-IB1 this month. No visible sheen was presented on the water. Pre-discharge water quality met the effluent quality limits outlined in Part F, item 12 of the Licence (Table 2.6-10, Appendix E, Table E-1g). Effluent was discharged to the adjacent pad allowing natural percolation through the pad to the tundra and preventing scouring of the tundra.

**Table 2.6-10 Water Quality Data (Treated) for BRP-49-MLA-IB1 Compared to Effluent Quality Limits**

| Parameter | Unit | Effluent Quality Limit | | 3-October-2025 |
|---|---|---|---|---|
| | | Maximum Average Concentration | Maximum Concentration of Any Grab Sample | |
| pH | pH units | 6 - 9.5 | 6 - 9.5 | 8.89 |
| Total Suspended Solids | mg/L | 15 | 30 | 8.5 |
| Total Oil and Grease | mg/L | 5, no visible sheen | 5, no visible sheen | <2 |
| Benzene | mg/L | 0.370 | 0.370 | <0.0004 |
| Toluene | mg/L | 0.002 | 0.002 | <0.0004 |
| Ethylbenzene | mg/L | 0.09 | 0.09 | <0.0004 |
| Lead | mg/L | 0.1 | 0.1 | <0.0002 |

### 2.6.18 BRP-I Interconnection Winter Ice Road Proximal Water Bodies

Appendix C presents the volumes of fresh water used from each water body for the WIR during the 2024/2025 winter season. See also Section 2.2.

The following is to comply with Schedule B, Condition 14. The 2025 Aquatic Effects Monitoring Report is provided in Appendix I.

## 2.7 Schedule B - Closure

**Conditions:**

15. A summary of any progressive Closure and Reclamation work undertaken, including photographic records of site conditions before and after completion of operations, and an outline of any work anticipated for the next year, including any changes to implementation and scheduling.
16. In the event of a short term closure or period of Care and Maintenance referred to in Part J, Item 3, the Licensee shall, within 30 days of notifying the Board, provide a Status Report on all planned Progressive Reclamation activities undertaken to date. The Report will identify those activities that remain incomplete due to the closure. The Status Report will be filed in addition to the Care and Maintenance Plan referred to in Part J, Item 4 and will include details on site conditions at the cessation of operations as outlined in Schedule J.
17. An updated estimate of the current reclamation liability based on Project development monitoring, results of restoration research and any changes or modifications to the Appurtenant Undertaking.
18. Progressive Reclamation Work Plan (PRWP), one (1) year following the commencement of operations. The PRWP will provide a breakdown of the progressive reclamation activities planned to be completed that year in accordance with the criteria set in Schedule J.

**Compliance Status:**

The following is to comply with Schedule B, Condition 15. Photographic records of pre-construction site conditions have been taken and are maintained by B2Gold Nunavut for comparison with photos to be taken after completion of Operations. No progressive reclamation activities have been undertaken to date. B2Gold Nunavut anticipates that these activities will commence once areas are determined to be no longer in use and subject to further impact.

The following is to comply with Schedule B, Condition 16. No short-term closure or period of care and maintenance occurred in 2025, and none are currently planned.

The following is to comply with Schedule B, Condition 17. No updates were made to the reclamation liability estimates for the approved Project in 2025.

The following is to comply with Schedule B, Condition 18. The operations phase commenced in July 2025 with gold first poured June 30, 2025. A PRWP will be submitted in 2026, as required by the Licence.

## 2.8 Schedule B - Plans/Reports/Studies

**Conditions:**

19. A summary of any studies requested by the Board that relate to Water use, Waste disposal or Progressive or Final reclamation, and a brief description of any future studies planned.
20. Where applicable, revisions as Addenda, with an indication of where changes have been made, for plans, reports, and manuals.
21. An executive summary in English, Inuktitut, Inuinnaqtun and French of all plans, reports, or studies conducted under this Licence.

**Compliance Status:**

The following is to comply with Schedule B, Condition 19. No studies related to water use were requested by the Board in 2025. Reports applicable to this Licence and appended to this report include: a 2025 Aquatic Effects Monitoring Report (Appendix I), a 2025 Annual Geotechnical Inspection Report (Appendix A) and a 2025 Ground Thermal Monitoring memorandum (Appendix B).

The following is to comply with Schedule B, Condition 20. Plans applicable to this Licence submitted to the NWB in 2025 or included with this report are summarized in Table 2.8-1.

**Table 2.8-1 Plans Submitted to NWB in 2025 or as an Appendix to this Report**

| Plan | Plan Date | NWB Approval |
|---|---|---|
| Ground Thermal Monitoring Plan | March 2026; See Appendix J of this Report | Pending |
| Landfill and Waste Management Plan | March 2025 | Approved |
| Tailings Management Plan Version 3.0 | April 2025 | Approved |

The following is to comply with Schedule B, Condition 21. Executive summaries of this report are provided in Inuktitut, Inuinnaqtun, English, and French at the start of this report.

## 2.9 Schedule B - General

**Condition:**

22. A summary of actions taken to address concerns or deficiencies listed in the inspection reports and/or compliance reports filed by an Inspector.

**Compliance Status:**

An inspection of the Goose Mine, MLA, WIR, and Goose and MLA forward camps was conducted from March 18 to 20, 2025. Six actions were identified by the Inspector, requiring completion by June 1, 2025. These actions were all completed to the satisfaction of the Inspector. A second inspection of the Goose Mine was conducted on July 1, 2025, no actions were identified. A third inspection of the Goose Mine was conducted on October 21 and 22, 2025, with five actions identified as requiring completion; an update on these five items is provided below. All inspection reports are available on the NWB public registry.

Items identified during the October 21 and 22, 2025, inspection included:

- The need for adequate secondary containment measures for all small waste management areas throughout the site.
    - Secondary containment was subsequently added with photos provided to the Inspector on December 5, 2025, and improvements continue to be made.
- The requirement to submit a document outlining the installation and management of secondary containment for refuelling areas as part of the 2025 Annual Report for the Licence (this report).
    - B2Gold Nunavut continues to examine options for secondary containment and their management at site.
- The requirement to enter discussions with regulatory agencies regarding management of surface contact water generated by mining operations, specifically runoff from the main site of operations including the ore stockpiles and mill area as well as storage of hazardous materials inside marine shipping containers not inside secondary containment. B2Gold Nunavut was required to submit a report documenting these discussions and including a timeframe for any required construction with the 2025 Annual Report for the Licence (this report).
    - B2Gold Nunavut has initiated these discussions with the NWB and NIRB and has secured the assistance of an engineering firm to address the management of surface contact water.
- The requirement to enter discussions with regulatory agencies regarding the continued use of waste oil furnaces.
    - B2Gold Nunavut has confirmed the ability continue use of waste oil furnaces.
- Install signs notifying public of water supply and waste disposal facilities.
    - B2Gold Nunavut ordered signage for site water supply and waste disposal facilities.

## 2.10 Schedule B - Other

**Conditions:**

23. A summary of public consultation and participation with local organizations and the residents of the nearby communities, including a schedule of upcoming community events and information sessions.
24. Any other details on Water use or Waste disposal requested by the Board by November 1 of the year being reported.

**Compliance Status:**

The following is to comply with Schedule B, Condition 23. B2Gold Nunavut's 2025 engagement record is provided in Appendix K. In 2026, B2Gold Nunavut anticipates attending the Kitikmeot tradeshow in February, quarterly KIA Board meetings, and KIA Annual General Meeting in October. Additionally, B2Gold Nunavut is planning an annual community tour of Kitikmeot communities in June; and various Project site visits throughout the year, including a renaming ceremony at the MLA to acknowledge a community member of significance to the Goose Mine. Meetings of the Inuit Impact Benefit Agreement

Implementation Committee, Inuit Employment Working Group, Kitikmeot Socio-Economic Monitoring Committee, and Inuit Environmental Advisory Committee, amongst others, are also anticipated to be held in 2026.

The following is to comply with Schedule B, Condition 24. No additional sampling or details on water use or waste disposal activities related to this Licence was requested by the Board in by November 1 of 2025.

# 3. REFERENCES

Sabina. 2017. Revised Type A Water Licence Application for Sabina Gold & Silver Corp. Back River Project. Submitted to the Nunavut Water Board. October 4, 2017.

Sabina. 2022. Back River Project Waste Rock Management Plan.

# APPENDIX A ANNUAL GEOTECHNICAL INSPECTION REPORT

# Goose & MLA Project Sites – 2025 Annual Geotechnical Inspection

Back River Project, Nunavut, Canada

B2Gold Back River Corp.



SRK Consulting (Canada) Inc. ■ CAPR004312 ■ March 2026

srk consulting

# Goose & MLA Project Sites – 2025 Annual Geotechnical Inspection

Back River Project, Nunavut, Canada

**Prepared for:**
B2Gold Back River Corp.
666 Burrard Street, Suite 3400
Vancouver, BC, V6C 2X8
Canada

+1 604 681 8371
www.b2gold.com

**Prepared by:**
SRK Consulting (Canada) Inc.
320 Granville Street, Suite 2600
Vancouver, BC V6C 1S9
Canada

+1 604 681 4196
www.srk.com

**Lead Author:** Anna Timchenko, PhD **Initials:** AT
**Reviewer:** John Kurylo, MSc, PEng **Initials:** JBK

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**Cover Image:**
Aerial stitched drone photographs of the Goose Plant and Camp sites, taken July 2025.

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The opinions expressed in this document have been based on the information available to SRK at the time of preparation. SRK has exercised all due care in reviewing information supplied by others for use on this project. While SRK has compared key supplied data with expected values, the accuracy of the results and conclusions from the review are entirely reliant on the accuracy and completeness of the supplied data. SRK does not accept responsibility for any errors or omissions in the supplied information, except to the extent that SRK was hired to verify the data.

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# Executive Summary

In Q2 2025, the Back River Project completed its construction phase, achieved first gold production around June 2025, and declared commercial production in October 2025. As a result, most of the pads, roads, water conveyance (culvert), storage facilities and Primary Pond, were completed or near completion by the time of the 2025 Annual Geotechnical Inspection (AGI). The mine site, however, is still in active development, and several critical infrastructure (for example much of the planned water management infrastructure) were still either in detailed design stages or at an interim construction phase in 2025.

Assuming the in-progress infrastructure and earthworks construction are completed according to the available designs, significant issues were not expected with the current infrastructure at this time. All of the site's current operational procedures, which were not known or reviewed by SRK in detail as part of this inspection, are expected to further manage and mitigate infrastructure risks on site.

Observations of the interim state of the construction have been made in an attempt to allow for the site to improve or optimize the final configuration of the earthworks and water management infrastructure, aiming to prevent notable permafrost degradation and aiming to reduce ongoing maintenance requirements.

Figures 1 and 2 show recent earthwork progress at the Goose site, and Figures 10 and 11 show progress at the MLA site. These figures provide a high-level overview and comparison of the 2025 state of work to the planned design footprints and working areas. These figures also highlight some of the ongoing projects that B2Gold Back River Corp. is undertaking as Goose transitions from the development to the operational stage, and as the MLA continues to evolve as a port, laydown, and fuel storage and transfer location.

The top five priorities, noted in the 2025 AGI, for site to consider or address in 2026 are:

1. **Goose and MLA – Airstrips** - *Monitor and evaluate long-term water management strategies to address flow impediments at the airstrips*. Ponding water and areas of anticipated ice-rich ground have been observed near or intersecting both site airstrips. These locations require careful monitoring, and ongoing maintenance should be anticipated. Some maintenance was completed at the Airstrip in 2025. Specifically, around freshet the airstrip will have to be closely monitored and active water management (including the use of pumping or diverting water around the S end of the airstrip) should be expected.
   - Goose Airstrip – SSE end – The design of the Rascal Diversion Berm should be updated to reflect current site conditions, including the new airstrip lighting pads. It is understood that this is on B2Gold's radar, and they are currently reviewing this with other consultants.
2. **Goose Neck – Culverts** – *finish the updated Goose Neck culvert crossing installations before freshet or remove the road fill material in the way of downstream flow.*
   - In early 2025, the western side of the Goose Neck Crossing all-weather road was widened from 15 m to 30 m. As part of this work the Goose Neck culverts started to be updated. This included the installation of twinned 600 mm along with a 1200 mm diameter circular corrugated steel culvert. Twinned 900 mm culverts still remained to be installed. These final culvert

sections should be installed in 2026 if possible. So, this area has been improved, and further improvements (to meet full design requirements) are still planned by B2Gold.

3. **Goose – Echo Diversion** – *Revisit the constructed berm layout and thicknesses* – identify sections that are below grade or require adjustments to align with the design intent. Complete additional construction as required (increase fill thickness or adjust the current field alignment of the toe of this diversion) to improve the function and performance of the existing Echo Diversion.
4. **Goose and MLA – Tank Farm** – *Repair the liner damage and erosion to some of the tank pedestals noted at both of these tank farm locations.* Some smaller tears and rips were noted at both tank farms. These areas of damaged liner should be revisited and repaired. Any exposed HDPE liner is still suggested to be covered (covered as per the original designs) with protective engineering fill. Area where some of the tank installation measures (specifically apparent where 'jacking' was done below the tanks) have created low points which now are accelerating erosion of the tank pedestals should be repaired.
5. **Goose MSE Walls** – *A formal monitoring program should be established, and deformation surveys (at least monthly) should be completed at the MSE walls.* These structures (at the mill crusher and dome locations) are higher risk and more critical structure and should have more detailed monitoring and frequent inspections carried out to ensure they perform as designed. The design engineers should be consulted to assist with setting monitoring triggers.

Many additional, typically secondary, or best practice comments, observations, and suggestions were made as part of the 2025 AGI. These observations are summarized in the following report text (specifically in Table 3 and Table 4) and additional details are shown in the appendices.

# 1 Introduction

SRK Consulting (Canada) Inc. (SRK) was retained by B2Gold Back River Corp. (B2Gold) to conduct a geotechnical site inspection for the active development areas at the Back River Project (Project). The Project is a gold mine project that recently finished the transition from the early construction to production stage (Sabina 2021). The Goose site is licensed to conduct mining, milling, and associated water and waste management activities.

The site is located in the Kitikmeot Region of Nunavut, about 525 km northeast of Yellowknife. The current areas of active development are the Goose project site (Goose), located approximately 160 km south of Bathurst Inlet (Figures 1 and 2), and the Marine Laydown Area (MLA or port area), located on the southern portion of Bathurst Inlet (Figures 7 and 8).

The Project has just started (in the second half of 2025) the operation phase; however, many of the licensed infrastructure components are still under active construction, as illustrated in Figures 1 and 2. The primary construction activities for the Project started in 2018 and are expected to continue through and beyond 2026. A high-level overview of the Back River project development for the Goose and MLA sites is shown in Figures 4, 5, 6 and Figures 10, 11 and 12, respectively.

# 2 Background

Annual geotechnical inspections (AGI) at Back River have been carried out since 2021, with all previous inspections having been conducted by SRK. The AGI is conducted in accordance with Part 1, Item 10 of Water License 2AM-BRP1831 – Amendment No. 1, issued by the Nunavut Water Board (NWB) on October 15, 2021. The objective of the inspection is to confirm that the project's surface infrastructure is performing as intended from a geotechnical perspective and within the context of site operations. Given the project's location in a continuous permafrost region in Nunavut, the AGI places particular emphasis on maintaining permafrost integrity, reviewing water management practices, and assessing geotechnical and civil earthworks.

The site commenced operations on June 30, 2025. While many structures have been constructed, additional facilities and infrastructure remain in various stages of design and in different states of construction (some in active construction). Accordingly, the AGI evaluates both existing infrastructure performance and ongoing development to support safe and compliant operations.

SRK conducted the on-site physical component of the annual geotechnical inspection between September 5$^{th}$ and 11$^{th}$, 2025. A site geotechnical inspection of the engineered infrastructure at the Back River Project was completed with a focus on the earthwork infrastructure components located on the surface at the Goose site (Figures 1 and 2) and the Marine Laydown Area (MLA) (Figures 7 and 8).

One of the primary purposes of the 2025 AGI was to document the physical condition of these structures based on visual observations, to provide a geotechnical assessment, and to provide suggestions for improvement. The physical inspection focused on noting potential signs of physical instability, such as erosion, differential settlement, cracking, sloughing, or bulging of material, thermal degradation, seepage, etc. All operational procures and all active or planned work scopes, which may have been in place or being implemented soon on site, were not known to SRK at the time of the inspection and therefore may not have been fully factored in this AGI. SRK has attempted to comment on and consider all the information that was available to them for this report.

The AGI walk over and aerial inspection is documented in the photographic compilation provided in Appendix A for Goose and Appendix B for the MLA. The primary purposes of the photolog are to show the site progress and development at the time of the inspection and to summarize the conditions observed during the site inspection. A review of the available monitoring and instrumentation data associated with these structures is also discussed further in Section 5.1. The end of this report then summarizes observations based on the 2025 AGI site visit and data review.

# 3 2025 Annual Geotechnical Inspection

The Back River Project commenced operations at the end of June 2025. Since the previous inspection in 2024, numerous structures have been constructed or brought closer to their final configuration; however, additional facilities and infrastructure remain in various stages of design and construction. Accordingly, the 2025 AGI evaluates both the performance of existing infrastructure and ongoing development works to support safe and compliant operations. Observations of interim and active construction conditions are documented to assist in optimizing final earthworks and water management configurations, with the objective of preserving permafrost integrity and minimizing long-term maintenance requirements.

## 3.1 Overview

A site visit was carried out as part of the 2025 AGI. The site visit was carried out by John Kurylo, MSc, PEng, and Anna Timchenko, PhD, E.I.T., from SRK Consulting, between September 5th and September 11th, 2025. John and Anna first arrived in Goose where they spent two days (September 5th and September 6th). Partly through the day of September 6th, they flew to the MLA, where they spent an additional two days (September 6th and September 7th). Finally, they went back to the Goose site around noon on September 7th and continued and finished the remainder of the Goose site inspection. SRK ended their site visit at the Goose site, from September 7th to September 11th. Access to the site for all inspections was fly-in / fly-out (via plane) based on the remote location. A trip from Goose to MLA was done by helicopter. Weather conditions during the inspection were overcast and cool, with periods of light wind and precipitation at the Goose site. No rain was noted during the inspection of the MLA. A photo logs showing an overview of the September 2025 inspection are provided in Appendix A for Goose and in Appendix B for the MLA.

At the Goose site, the inspections were focused on the water management infrastructure, the camp pad, tank farm, MSE walls and processing plant site. The portal and decline area as well as the rock pit slopes (at Echo and Umwelt) and waste rock storage areas (WRSAs) were outside the scope of this inspection (inspection did not focus on any direct mining elements) and were not looked at or included as part of this AGI. The surface infrastructure that was inspected is shown in Figure 3. The inspection of the Airstrip, Exploration Camp, Echo Pit Overburden Slopes, Umwelt Pit Overburden, Echo Diversion and edges of the Echo WRSA, Echo Tailings Facility (TF) and tailings pipeline, culverts, access roads, tank farm, emulsion plant and processing plant site foundations, Camp Contact Water Pond and Primary Pond Dam footprints were carried out by pickup truck. Frequent stops were made for physical (on foot) inspections. A series of site images, including drone imagery, was available at the time of these inspections.

At the MLA, the inspections were focused on the access roads, pads, airstrip, and tank farm (Figure 9). All inspections at the MLA were completed on foot (the entire site was walked over).

In addition to the physical inspections, discussions with B2Gold Back River staff while on site, and review of monitoring data were used to supplement site observation and are part of this 2025 AGI.

Prior to the site visit, B2Gold provided aerial images and survey data of the Goose and MLA infrastructure, which were also reviewed as part of the 2025 AGI. The list of data that was provided by B2Gold is presented below:

For Goose:

- High-resolution satellite image of the Goose Site from August 16, 2025.
- LiDAR survey from September 1st, 2025

For MLA:

- Drone survey of the MLA site (compiled), survey completed on September 6, 2025.
- Drone survey of the Lower Laydown Area, survey completed on August 25, 2025.
- Drone survey of the Old Quarry and Tank Farm, survey compiled on August 16, 2025
- Drone survey of the MLA Airstrip, survey was compiled on September 5, 2025
- High-resolution satellite image of the MLA site from August 2, 2025

This document provides a summary of the conditions observed and resulting inspection observations. Table 1 and Table 2 provide a summary of the inspected components for the Goose and MLA sites, respectively.

**Table 1: List of Inspection Components at Goose**

| Component | Inspection Item | Photo Reference (Appendix A, C, and D) |
|---|---|---|
| Instrumentation | Primary Pond Dam GTCs[1)] | N/A |
| | Previously installed GTCs (no data collected starting 2017) | N/A |
| Mining Infrastructure | Goose Quarry | Appendix A, Figures 34 to 37 |
| | Umwelt Pit [2)] | Appendix A, Figure 150 |
| Containment Structures | Echo Tailings Facility [2)] | Appendix A, Figures 38 to 42 |
| | Echo Overburden Stockpile | Appendix A, Figures 43 to 44 |
| | Echo Waste Rock Facility | Appendix A, Figures 45 to 46 |
| | Echo Crusher Stockpile | Appendix A, Figures 43 to 44 |
| | Llama Crusher Stockpile | Appendix A, Figures 171 to 174 |
| | Goose Tank Farm | Appendix A, Figures 110 to 124 |
| | Camp Pad and Ore Stockpile Pond | Appendix A, Figures 75 to 79 |
| | Tote Storage Facility | Appendix A, Figures 70 to 70.2 |
| | Umwelt Overburden Stockpile[2)] | Appendix A, Figures 133 to 137 |
| | Umwelt Waste Rock Facility | Appendix A, Figures 138 to 142 |
| | ROM Pad and Ore Stockpile | Appendix A, Figures 71 to 74 |

| Component | Inspection Item | Photo Reference (Appendix A, C, and D) |
|---|---|---|
| | Saline Water Pond and Access Road[2)] | Appendix A, Figures 150 to 154 |
| | Former Echo Treatment Plant | Appendix A, Figures 49 to 54 |
| Infrastructure | Primary Pond Dam | Appendix A, Figures 155 to 168 and Appendix D, Figures D.2 to D.7 |
| | All-Weather Road:<br>■ Goose Neck Crossing [2)]<br>■ Echo Crossing<br>■ Gander Crossing | Appendix A, Figures 80 to 85; and 169 to 170<br>Appendix A, Figures 130 to 132<br>Appendix A, Figures 28 to 33<br>Appendix A, Figures 9 to 11 |
| | Echo Diversion | Appendix A, Figures 47 to 48 |
| | Echo Haul Road | Appendix A, Figures 55 to 58 |
| | Echo Tailings Pipeline | Appendix A, Figures 179 to 184 |
| | Goose Barge Access Road | Appendix A, Figures 59 to 62 |
| | Camp Pad and Camp Pad Extension | Appendix A, Figures 86 to 91 |
| | Winter Ice Road Laydown Area<br>South Pad<br>North Pad | <br>Appendix A, Figures 125 to 127<br>Appendix A, Figures 128 to 130 |
| | Mining Operations Pad | Appendix A, Figures 63 to 70 |
| | Main Crusher MSE Wall | Appendix A, Figures 106 to 109 |
| | Dome MSE wall | Appendix A, Figures 102 to 105 |
| | Processing Plant Pad | Appendix A, Figures 92 to 101 |
| | Airstrip and access road | Appendix A, Figures 12 to 28, and Appendix C |
| | Explosives Access Road and Emulsion Plant Pad | Appendix A, Figures 143 to 149 and Appendix D, Figure D.1 |
| | Exploration Camp | Appendix A, Figures 2 to 8 |
| | Access Roads and Pads at Llama Lake | Appendix A, Figures 175 to 178 |

Notes:

[1] GTCs – Ground Temperature Cables.

[2] Under construction during the time of the 2025 AGI.

**Table 2: List of inspection Components at the MLA**

| Facility | Inspection Item | Photo Reference (Appendix B) |
|---|---|---|
| Instrumentation | Previously installed GTCs (no data collected starting from 2017)<br>GTS cables at MLA Tank Farm | N/A |
| Containment Structures | MLA Quarry Tank Farm<br>Fuel Offload pad (Fireball)<br><br>Former Temporary Fuel Containment | Appendix B, Figures 47 to 65<br>Appendix B, Figures 47, 51 to 53, 57 to 60<br>Appendix B, Figures 40 to 42 |
| Infrastructure | Shoreline Pad<br><br>Freight Storage Pad<br><br>Camp Pad and Camp Pad Extension [2)]<br>Roadways (Former Explosives Storage Access Road)<br>MLA Airstrip and Airstrip Extension (NW end) [3)]<br>Anchor Pads<br>Fuel Offload Access Road | Appendix B, Figures 2, 6 to 8<br>Appendix B, Figures 2 to 6, 8 to 14<br>Appendix B, Figures 15 to 21<br>Appendix B, Figures 43 to 46<br><br>Appendix B, Figures 22 to 39<br>Appendix B, Figures 77 to 81<br>Appendix B, Figures 73 to 76 |
| Mining Infrastructure | Sand Borrow Pit<br>MLA Quarry | Appendix B, Figures 54 to 55<br>Appendix B, Figures 66 to 72 |

Notes:

[1] GTCs – Ground Temperature Cables

[2] Under construction during the time of the 2025 AGI

[3] Construction was paused in 2024

## 3.2 Limitations

The annual geotechnical inspection completed by SRK (as part of this scope of work / memo) includes only engineered infrastructure on surface; a geotechnical inspection of the underground mine and associated underground infrastructure was planned to be completed by other consultants and is outside the scope of this report. Further, the Echo and Umwelt Pits and associated WRSA were inspected separately by the Design Engineer and Engineer of Record (or representative of), and those mining elements are reported on in a separate document generated by others (outside SRK's scope).

SRK's review does not include an assessment of the structural integrity of any buildings, larger culverts (no bridges were apparent in 2025 inspection), or the structural elements of the MSE walls. SRK would highlight potential structural concerns based on observations during the AGI if they were immediately apparent; however, an assessment of structural integrity would need to be completed by a suitably qualified structural engineer if / as required. Thus, the focus on the observations in this report are primarily around water management (specifically looking at the infrastructure), thermal, and geotechnical infrastructure performance (focus more on the earthwork related elements).

# 4 Design and Operation Considerations

Back River Project is located within a zone of continuous permafrost with the permafrost being up to 570 m below ground surface (bgs). The active layer depth ranges from approximately 1 to 4 m bgs (with an average thickness around the site of approx.1.5 m bgs), with the greatest active layer depths occurring in areas with thin soil veneers above bedrock. Due to the presence of salinity in some surficial groundwater, the active layer can take up to 60 days to freeze in some areas from the time when the mean average air temperature drops below 0°C.

In general, overburden soils are frozen from mid-October to the beginning of June. Overburden reaches its maximum (warmest) seasonal temperature between the middle of August and the middle of September, at which point the average air temperature starts to decrease and freeze up begins (SRK 2019).

Prior to detailing the specific observations (as outlined in Sections 5 and 6), SRK would like to reiterate several overarching design and operating principles as they relate to geotechnical stability, design and performance while specifically focusing on maintaining permafrost integrity at the project site. Note that many of these comments were noted in the 2023 and 2024 AGI as well so this is a simplified list. The 2023 AGI and 2024 AGI reports should be consulted for a more detailed description and discussion on these points (SRK 2024b, SRK 2025b).

- **Underbuilt (lower fill thickness) Pads and Roads**
  - Minimizing Permafrost Degradation: Pads and roads are designed to protect permafrost using specific thermal criteria. Insufficient fill thickness can lead to thermal erosion, requiring costly maintenance or remediation. Less trafficked areas or areas with stable ground (absence of ground ice) may need minimal coverage and may be ok in the current configuration.
  - Current Status: Most new roadways have been built to minimum design thicknesses (often in the 1.5 to 2 m thick ranges). However, most historic (pre 2025 roadways) are partially built, with fill thicknesses ranging from 0.5 m to 1 m. Some areas are nearing design thickness, especially around the MLA Tank Farm, Echo Pit, and Goose Camp. Maintenance needs will depend on underlying ground conditions.
  - Thermal Monitoring: A thermal monitoring plan was updated and submitted for 2025. Areas near surface water flow paths and infrastructure edges require closer attention and monitoring to ensure that any massive ground ice in the foundation is not being degraded.
- **Consideration of Heated Building on Rockfill Pads**
  - Heat Impact on Permafrost: Heated buildings can deepen the active layer, potentially degrading ice-rich permafrost and causing settlement. Designs should account for heat transfer to the ground.
  - Mitigation Measures: Options include situating buildings on bedrock, elevating them for airflow, adding insulation, or using thermosyphons in extreme cases. Current practices, such as elevating camp buildings on wood cribbing, align with these recommendations. Typically, at Goose for larger or critical infrastructure (specifically around the plant site) it was seen that the

approach to place foundations on engineered fill constructed over bedrock was typically deployed on site.

- Monitoring Needs: Structures near pad edges (5–7 m) require careful monitoring. Most critical infrastructure is built on bedrock, but areas with frozen overburden in the foundation would typically be expected to need additional attention and monitoring.

- **Consideration of Seasonal Active Layer Fluctuations**
  - Vulnerability in Summer: The active layer is deepest in August, making road and pad shoulders more prone to tension cracks and softening. Heavy vehicle traffic should be limited within 1-3 m of shoulders during this period.
- **Consideration of Construction Within the Talik Zones**
  - Challenges: Talik zones (unfrozen ground near lakes or surface water) have lower bearing capacities and higher chance and rates of seepage. This may pose increased risks of settlement or foundation failure or complicated water management. Solutions include overbuilding (thermal cladding), using geosynthetics, driving piles into bedrock, or utilizing thermosyphons in the foundation.
  - Current Observations: No notable construction in talik zones has been observed to date. Around the future Saline Water Pond (Umwelt Dam) location thermosyphons in the foundation key trench have been incorporated into the designs to assist with improving thermal performance and to attempt to minimize future thermal mitigation and maintenance.
- **Consideration of the Impacts of Surface Water Flow Paths**
  - Monitoring: Routine inspections, especially during thawing seasons, are critical for roads, pads, and airstrips.
  - Water Management: Redirecting or pumping ponded water away from infrastructure can help preserve permafrost and reduce maintenance.

Additional specific considerations are highlighted in the summary recommendation tables at the end of this report (Table 3 and Table 4)

# 5 Site Inspection

## 5.1 Instrumentation

### Background

According to the Project Certificate Condition, No.12 B2Gold must monitor and mitigate impacts from the Project on permafrost conditions relative to project infrastructure, including associated roads, waste rock stockpiles, trails, and quarries. In cases where permafrost degradation has been observed, B2Gold shall report on measures implemented to restore and promote the reestablishment of permafrost integrity in the surrounding area. During construction, B2Gold shall, on an annual basis, provide information regarding the results of monitoring and identifying any mitigation measures undertaken in fulfillment of this Term and Condition; in B2Gold's annual report to the Nunavut Impact Review Board (Sabina 2021). Subsequently, once monitoring has demonstrated that the area(s) assessed are stable, B2Gold has to provide information regarding monitoring results and any updates to mitigation measures every 2 (two) years in the Proponent's annual report to the Nunavut Impact Review Board.

B2Gold has made progress in this area, developing an initial revision of a thermal monitoring plan in 2023 and 2024. In 2025, with contributions from SRK, B2Gold continued refining the site-wide ground thermal monitoring plan to align with the terms and conditions outlined in the project certificate. This plan is an evolving and active document (ongoing revisions) that establishes a framework for ongoing monitoring of both background and infrastructure sites, supporting effective management of operational risks associated with permafrost thaw due to climate change and mine development. An update to the site-wide thermal monitoring plan was completed in 2025 to early 2026. The thermal monitoring plan is a stand-alone document and the details of this plan are therefore not included in this AGI report. This noted, a high-level overview of some of the recent GTCs are overviewed below:

- There were forty-two previously installed Ground Temperature Cables (GTCs) at Goose Property and MLA (SRK 2026a, b). The installation of the monitoring GTCs was performed between 2012 and 2017. The last reading for most of the ground temperature cables was from 2017 or earlier. Based on the site inspection performed in 2024 (please refer to the 2024 AGI), six historical thermistors at Goose and historical thermistors at MLA were compromised (typically removed as part of ongoing site development over these areas) and were removed from the site thermal monitoring plans.
- As part of the Primary Pond design, a detailed monitoring system has been designed and included. A set of vertical and horizontal GTCs was installed in the dam key trench at Primary Pond during the 2023 and 2024 construction seasons. The set of horizontal and vertical GTCs was also installed in April 2025 to complete the designed requirements. A telemetry system with data acquisition every six hours was activated in May 2025 for all GTCs installed at the Primary Pond Dam. In addition, two ground temperature cables were installed in 2023 at the Camp Pad area. Since summer 2024, ground temperature data have been collected from a deep vertical GTC

monitoring station installed in the Umwelt Pit. These cables are also included in the site thermal monitoring program.

- Two vertical ground temperature monitoring stations were installed at the MLA tank farm in the summer of 2024, and data collection began in July 2024. These monitoring cables were also incorporated into the site's thermal monitoring plans.

Beyond the thermal monitoring, B2Gold conducts limited monitoring (visual comparison or year-to-year surveys) of most of the other infrastructure on site

### Observations

B2Gold, in collaboration with SRK, have developed an initial revision of a site-specific thermal monitoring plan. In 2025 B2Gold continued developing the plan. This plan along with the annual report are provided as a standalone report and included as part of the 2025 annual reporting.

During the 2025 AGI, some of the historic Goose thermistor sites were visited and their condition was documented. The initial phase of the instrumentation audit identified several locations where historic GTCs had been removed or are likely damaged beyond repair. A review of the historic dataloggers also indicated that no additional data (typically from 2017 to present) could be retrieved, as most units had no power supply, depleted batteries, and no recoverable stored memory. Troubleshooting and potential data recovery from these sites are planned to continue in 2026.

In addition to the existing ground temperature monitoring network, seven shallow site-wide thermistors are planned for installation across the Goose Property.

In addition to the thermal monitoring program, a comprehensive set of instrumentation, including surficial, fixed, and deep monitoring points, has been installed at the Primary Pond Dam. Installation of the monitoring system was partially ongoing during the 2025 site visit; however, the data collected to date were reviewed as part of the 2025 AGI.

The monitoring dataset includes surficial measurements (e.g., surface settlement and lateral movement), fixed reference points for survey control, and deep instrumentation (e.g., inclinometers and settlement systems) to assess subsurface deformation. Review of the available data indicates stable performance of the dam, with no measurable movement or concerning trends observed to date.

Aside from the GTC / thermal monitoring and set of monitoring points at Primary Pond there is no other geotechnical monitoring data to review, as part of this AGI (beyond monitoring data at the pits that was out of scope to review). Beyond the thermal data, the primary source of additional information is the comparison between ongoing site earthwork and drone surveys (which were reviewed as part of this AGI) and site operational observations and records. It is SRK's understanding and as it was mentioned above in 2026 B2Gold plans to establish additional site-wide thermal monitoring locations, as well as physical survey monitoring locations (survey pins or markers) at the tank farm and MSE wall locations. Any additional monitoring information that becomes available will be reviewed as part of the 2026 AGI.

## 5.2 Goose Property

The Goose property has been in a state of active development since around 2018. Construction activities ramped up over the last couple years to get infrastructure in place for the mill start-up and first gold in 2025. Figure 1 and 2 shows a plan view of the Goose site and some of the roads and infrastructure that were constructed or expanded in 2025. Figure 3 shows some points highlighting more specific locations that were visited as part of the inspection. Please refer to the Appendix A photolog for photos pertaining to the Goose Property inspection. Figures 4, 5 and 6 provide a high-level overview of Sentinel-2 satellite images showing the development of the Goose property from 2016 to 2025.

The primary summary of the Goose AGI observations and recommendations are presented in Table 3.

At the Goose site the following primary locations were visited:

1. Goose Quarry
2. Echo Pit and Echo Waste Rock Storage Area (WRSA)
   - Focus on Echo Pit as tailings deposition was just starting at site around the time of the AGI site visit
3. Echo Overburden Stockpile
4. Echo Diversion
5. Echo Haul Road
6. Goose Tank Farm
   Former Echo Treatment Ponds
   Ore Stockpile / Camp Pad Pond
7. ROM Pad and Ore Stockpile
8. Primary Pond Dam
   - This area was still in construction at the time of inspection
9. All-Weather Roads
10. Goose Neck and Echo Crossings
11. Gander Crossing
12. Camp Pad and Camp Pad Extension
13. Processing Plant Pad
    - Notable development in this area as construction and assembly of the mill and plant completed in 2025
14. Mining Operations Pad
15. Tote Storage Area
    - New area in 2025 – lined containment constructed for tote storage

16. Goose Airstrip and Access Road
    - No further expansion of the airstrip since the 2024 AGI – length remained as per 2024)
17. Goose Fresh Water Barge Access Road
18. Explosive Access and Emulsion Plant Road
    - New area constructed in 2025
19. Exploration Camp
20. Umwelt Overburden Stockpile
21. Access Roads and Pads near Llama Lake

Additional background information on the general development of these locations is overviewed in more detail in the SRK 2024 AGI (SRK 2025b).

Although SRK went by the Echo and Umwelt Pits and WRSA these areas were not part of their scope of work, and therefore not inspected in detail; and SRK is unfamiliar with the latest designs and plans for these areas. General observations around the pits and WRSAs were passed on to site staff. The pits and WRSA have separate inspections and annual reporting. These Pit and WRSA inspections are completed by the engineer of record, or representative of, for the pits and dumps. SRK understands that the engineer for the waste rock and pits is Terracon Geotechnique who works in close collaboration with the B2Gold Back River site Technical Services, and Mining departments.

The primary dike or dam structure, currently on site, is the Primary Pond dam, which was still under final stages of construction during the 2025 AGI. As a result, the first Annual Dam Safety Inspection (DSI) would only be initiated in 2026, and there is limited data to report at this time. The Primary Pond dam only temporarily had water in it in 2025 before being drawn down for winter 2026; very low water level by the end of November 2025.

There is a robust monitoring system in place for the Primary Pond dam (including thermal and deformation monitoring and frequent visual inspections and water level monitoring), and data collection has begun. Some general comments on the Primary Pond are presented as part of this AGI. Those comments were deemed high priority and were mostly addressed immediately (at or shortly after the AGI inspection). For the 2026 annual reporting a separate and standalone DSI will be completed for the Primary Pond, including a full review of all the available monitoring data, and the Primary Pond structure will be removed from the future overall AGI reports (as similar to the pits and WRSAs this structure will have an independent and more detailed annual inspection report).

## 5.3 MLA Site

The MLA property began development in 2017. All infrastructure, including the airstrip, roadways, and pads, was constructed using Run-Of-Quarry (ROQ) material sourced from the MLA Quarry Area (currently the MLA Tank Farm area). This blasted material typically contains significant sand content, which creates a more tightly packed top surface. However, due to its finer, sand-rich gradation, the material is more prone to settlement over the project's lifespan and is more vulnerable to erosion.

The area continues to evolve as a port location used to bring in supporting equipment, supplies, and buildings for the Back River project. Similar to the Goose area, many of the findings in the Annual Geotechnical Inspection focus on aspects that should be continuously monitored.

Figures 7 and 8 show a plan view of the MLA site and some of the roads, pads and infrastructure that were constructed or expanded in 2025. Figure 9 shows some points highlighting more specific locations that were visited as part of the inspection. Please refer to the Appendix A photolog for photos pertaining to the MLA inspection. Figures 10, 11 and 12 provide a high-level overview of Sentinel-2 satellite images showing the development of the MLA site from 2017 to 2025.

The primary summary of the MLA AGI observations and recommendations are presented in Table 4.

At the MLA site the following primary locations were visited:

1. MLA Quarry Tank Farm
2. Former Temporary Fuel Containment Area
   - Partially remediated - all tanks in area now relocated or removed.
3. Shoreline Pad
4. Freight Storage Pad
5. Camp Pad and Camp Pad Extension
6. Fuel Offload Pipeline Rad
7. MLA Airstrip
8. Roadways (including former explosives storage access road)
9. Anchor Pads

# 6 Primary Observations

Based on the observations from the site visit, the following recommendations were developed. Overview figures of the site are provided in Figures 1 to 6 for Goose and in Figure 7 to 12 for the MLA. Photographs of the site are provided in Appendix A (Goose) and Appendix B (MLA).

## 6.1 Goose Property

The primary observation from previous inspections (2022 - 2024) and the 2025 Annual Geotechnical Inspections (AGI) for the Goose area was that, due to the site's transitional phase, many pads, roads, and water conveyance structures, such as culverts, were either underbuilt or in an interim state. The newer / more recently constructed infrastructure generally had a higher standard with some of the older historic infrastructure still requiring ongoing maintenance; the latter which was done more typically when equipment was in any given area completing other earthworks (done more opportunistically when equipment in the area). As the site transitions from exploration now to an operational stage many comments in the AGI pertain to items that require ongoing monitoring or considerations for key water management areas that need to be addressed as site infrastructure construction progresses. Table 3 summarizes the main recommendations for the Goose Property.

SRK is unaware of the current or future plans for the exploration camp area. There were some improvements noted in the area of the Exploration camp pad since the 2024 AGI. It is expected that longer term mitigation of this area (specifically the areas east and southeast of the main camp area) may be required. For this report only general observations around the exploration camp have been presented and specific recommendations for this area have not been included in the summary and recommendation tables.

**Table 3: Summary of 2025 AGI Observations and Recommendations (Goose Property)**

| Infrastructure | Observations | Recommendations and Comments | Recommendation ID |
|---|---|---|---|
| Goose Airstrip and Aprons | ▪ Airstrip has been undergoing increased grading maintenance which has greatly reduced visible cracking on the surfacing material of the runway.<br><br>*Site staff have confirmed that at the Goose and MLA that they carry out daily strip checks to ensure integrity of the airstrip surface and surrounding area.*<br><br>*These checks constitute a portion of the information relayed to the airline companies prior to every landing.* | ▪ Prior to landing any aircraft on the runway, the aircraft operators should conduct their own assessment of the runway conditions (in terms of functionality). Ultimately it will be at the discretion of the aircraft operators if the airstrip surface is acceptable for their aircraft. | General maintenance/ monitoring |
| | | ▪ Any observations at the airstrip shoulder, any areas of larger undulations or settlements that require ongoing maintenance should be noted and records kept to assist with long term performance monitoring. This will also assist to see if items such as degradation of ice in the foundation (specifically for the southern extents) of the airstrip are apparent and being adequately addressed through routine maintenance (such as just adding more fill to the top surface). | General maintenance/ monitoring |
| | | ▪ A full topographic ground survey of the airstrip should be completed, and this survey should be compared against the expected ground conditions (from geomorphological interpretations). Ideally, a survey of the airstrip would be completed at least once in the summer to assist with ongoing monitoring. In addition, a drone survey should be performed each spring around freshet time and at the end of summer (likely late August or early September), when the active layer thickness is at its maximum. The area of most interest at this time is the southern end of the airstrip where the most ponded water was observed adjacent to the toes. This also was outlined in the 2024 AGI notes and recommended to continue in 2025.<br><br>*A topographic survey was completed in 2025. In 2026 it is suggested that at least two surveys be completed. One after snow melt and another near the end of summer (likely late September) before snowfalls result on site.* | General maintenance/ monitoring |
| | | ▪ Based on the visual inspection, the runway appears to be in satisfactory condition; however, visual inspection cannot rule out the formation of sinkholes in the future (through thermal erosion areas with massive ice). The site may strategically consider performing a ground penetrating radar survey within the next couple years to identify or rule out the possibility of potential voids within the airstrip fill or foundation. | 2025-AGI-G-1 |

| Infrastructure | Observations | Recommendations and Comments | Recommendation ID |
|---|---|---|---|
| | ▪ Similar to inspections since 2022, tension cracks parallel to the crest of the airstrip embankment were observed along the shoulders of the airstrip, outside the main running surface (outside of the airstrip lighting). More cracking was observed in areas where the toe of the airstrip was wet or the airstrip slope was steep. | ▪ The crest of the airstrip embankment should be carefully monitored, and ongoing maintenance should be expected. Permafrost degradation at the Goose airstrip is suggested to continue to be visually monitored each year during the annual geotechnical inspection. Ground-level photographs, measurements, and aerial drone imagery should again be collected in 2026 to assist with ongoing monitoring. | General maintenance/ monitoring |
| | ▪ The northeast end of the airstrip has been over-steepened. Erosion gullies previously identified during the 2024 AGI have further progressed at the crest and along the slope. The erosion has extended to the runway edge lights, resulting in exposure of the electrical cables. | ▪ The over-steepened slope should be regraded. Eroded areas should be backfilled and compacted with suitable material to restore slope geometry. The site should consider implementing erosion control measures, such as the placement of erosion-resistant armoring (e.g., riprap), to help prevent further degradation. Exposed electrical cables should be reburied at the appropriate depth and protected with suitable cover material. Ongoing monitoring should be conducted to confirm the effectiveness of the remedial measures.<br><br>*It is understood from discussions with site personnel that all required earthworks at the Northern face of the airstrip have been completed in October 2025. This included cleaning out some of the crush material in that area and adding in additional coarser fil and then cleaning and resloping the slopes. No field notes and photos were provided.* | 2025-AGI-G-2 |
| | ▪ Similar to the 2023 and 2024 inspections, water was observed flowing along the south end of the airstrip and ponding at the toe of the embankment, predominantly at the northeast corner and the south-southwest end near the new airstrip lighting locations. Ponded water and areas of anticipated ice-rich ground were noted adjacent to, and in some locations intersecting, both site airstrips. The new apron constructed on the southeast side of the airstrip (new observation for the 2025 AGI) appears to be impeding surface water flow between the airstrip embankment and the apron pad, resulting in increased water accumulation in this area. | ▪ Consideration should be given to redirecting or attempting to move any ponded water away from the toes of the airstrip. Pumping out or removing ponded water at the toes of the airstrip in the fall, before winter freeze-up, would enhance the transfer of cold ambient air and ground heat. This could help mitigate permafrost degradation by reducing thawing rates and slowing the deepening of the active layer. Improved water management of this nature may contribute to a decrease in both short and long-term maintenance activities.<br>▪ These areas should also be considered in more detail as part of the site thermal monitoring plans. | Carried over from 2024 AGI<br>2024 & 2025-AGI-1 |
| | ▪ A series of erosion channels were observed at the crest of the current aircraft parking pad. The erosion has impacted the radar tower foundation, and a significant portion of the concrete slab has become exposed. | ▪ A detailed geotechnical and structural assessment of the affected area should be conducted to evaluate the extent of erosion and its impact on the radar tower foundation. The eroded areas should be backfilled and compacted with suitable engineered material to restore support around the foundation. Surface regrading should be performed to divert runoff away from the crest. Site also should consider | 2025-AGI-G-3 |

| Infrastructure | Observations | Recommendations and Comments | Recommendation ID |
|---|---|---|---|
| | | armouring the area with the riprap to prevent further degradation and maintain long-term stability. | |
| | ▪ Temporary access area/ roadway embankment thickness is underbuilt (in most of the areas less than 1 m, reducing to less than 0.5 m in some sections). This also was outlined since the 2022-2024 AGI notes. | ▪ Temporary access area / roadway to the airstrip to be expanded (thicker) if the site decided to keep that access as an additional / emergency access to the airstrip<br><br>*It is understood from discussions with site staff that this access road will be used as a secondary access after the permanent access point is constructed. The current access road was constructed as part of the initial exploration activities and ongoing and yearly maintenance of this road is expected until the permanent access roadway is established.* | General maintenance<br>Carried over from 2024 AGI<br>2024 & 2025-AGI-2 |
| | ▪ Higher priority – Southern end of the airstrip (operated since November 2023).<br>As it was outlined in the 2024 inspection, airstrip extends to the south intersects some more notable surface water flow pathways / ephemeral streams. The South end of the extended Goose Airstrip is an area that should be closely monitored and more permanent long-term water conveyance through portions of the airstrip is expected to be required.<br>▪ Fish species in the streams were observed during the 2025 AGI at the southern end of the airstrip. | ▪ Special attention should be given to the SSW end of the airstrip. Softer shoulder conditions continue to be noted during walk-around inspections of the airstrip perimeter. Additional and ongoing settlement is anticipated, particularly at the southern end. As outlined in the 2024 inspection report, the design of the Rascal Diversion Berm should be updated to reflect current site conditions, including the presence of fish species in the stream, the existing airstrip lighting system, and associated pads. It should be noted that the initial Rascal Diversion design focused solely on fish passage and did not consider the southern airstrip extension or the diversion of all water flows originating from the Rascal Lake catchment area.<br><br>*This comment was acknowledged and it is understood from discussions with site personnel they are currently reviewing the Rascal Diversion designs with other consultants.*<br><br>▪ In the event of above-average rainfall or freshet conditions, portions of the existing airstrip – in the absence of a permanent long-term water conveyance system – may experience significant erosion and potential overtopping of the airstrip surface, which may restrict use of the SSW end of the airstrip. Over time, this may also contribute to continued thermal degradation in the area.<br>▪ Plans for additional water management and conveyance at the southern end of the airstrip should be finalized prior to freshet. Alternatively, consideration should be given to operating a shortened airstrip during the summer months to mitigate potential safety risks associated with voids or | Carried over from 2024 AGI<br>2024 & 2025-AGI-3 |

| Infrastructure | Observations | Recommendations and Comments | Recommendation ID |
|---|---|---|---|
| | | excessive settlement beneath the southern portion of the airstrip. | |
| | | ▪ The south end of the airstrip should be closely monitored during and around freshet, as well as during periods of significant rainfall. Airstrip operators should continue to be consulted to obtain their input and exercise their discretion regarding the suitability of the airstrip surface for various aircraft types.<br>▪ Visual inspections and drone-based monitoring should continue. Given the critical and higher-risk nature of the Goose airstrip, drone imagery and ground-level photographs should be collected again in the summer of 2026 and compared with data gathered between 2022 and 2025. Collection of orthorectified drone imagery in summer 2026 is recommended for inclusion in the 2026 AGI and to support improved long-term monitoring, tracking, and assessment. | General maintenance/ monitoring |
| Goose Tank Farm and Fuel Offload Area (Fireball) | ▪ Construction of the Goose Tank Farm was completed by the time of the 2025 inspection. The Phase 1 HDPE liner was observed to be protected with geotextile; however, in most areas it had not yet been covered with a sufficient thickness of fill material, and sections of the liner and geotextile remained exposed. The Phase 2 and Phase 3 HDPE liners were found to be covered with fill material. | ▪ A survey of the base and the inner slopes of the tank farm should be done to verify the fill thickness. This will ensure that there is an adequate fill material on top of the HDPE liner, allowing for the safe operation of smaller equipment within the containment area. | Carried over from 2023 and 2024 AGI<br>2024 & 2025-AGI-1 |
| | | ▪ Continued routine inspections of containment areas are recommended to ensure liner integrity and adequate freeboard capacity. | General maintenance/ monitoring |
| | ▪ The HDPE liner was found to be not properly anchored along the southern and western berm crests of the Phase 1 tank farm containment. The liner on the inner slopes of Phase 1 berms appears to be under tension, which may increase the risk of damage or tearing, particularly as it has remained uncovered and being exposed to solar radiation for several years. This condition has been noted since 2023 AGI. | ▪ The anchoring of the HDPE liner along the southern and western berm crests should be reviewed and corrected to ensure the liner is properly secured. Prior to the placement of the engineering fill, perform survey pick-ups with special attention to the liner seam and patch locations (as-built or as-constructed pick-ups). | Carried over from 2024 AGI<br>2024 & 2025-AGI-2 |
| | | ▪ The site should consider reworking those areas where the liner is under tension to relieve stress, which may include re-anchoring the liner, adjusting its placement, or providing additional slack where required. | 2025-AGI-G-4 |
| | | ▪ Containment volume checks should be completed on the as-built arrangement of the existing tank farm. | Carried over from 2023 AGI<br>2024 & 2025-AGI-4 |

| Infrastructure | Observations | Recommendations and Comments | Recommendation ID |
|---|---|---|---|
| | | *B2Gold has indicated that this is planned to be completed once the tank farm construction is complete. Design for the Goose Tank Farm by others (appeared to be by Sacré Davey).* | |
| | ■ No pumps were observed within the Phase 1 tank farm containment area. Ponding water was noted at the western low point of the containment, near Tank #4. This condition was also identified in the 2024 AGI.<br>■ A sump location was observed within the Phase 3 containment facility.<br>■ The berm between Phase 1 and Phase 2 includes an emergency spillway located approximately 0.5 m below the berm crest. Inspection of the spillway identified liner gaps along both sides of the spillway, likely associated with welding activities. Note that unlined areas observed below the spillway crest elevation. | ■ Develop and implement operating procedures outlining the management and removal of ponded water within the containment areas. The procedures should ensure that adequate containment capacity is maintained at all times in accordance with design requirements. Installation of a permanent or temporary pumping system in Phase 1 should be considered to facilitate water management.<br>■ The HDPE liner at the spillway between Phase 1 and Phase 2 should be surveyed and inspected, including all seams and welds. Any liner gaps or unlined areas should be repaired. Following confirmation of as-built conditions, the containment volume should be reassessed and updated as necessary to reflect the actual constructed configuration. | Carried over from 2024 AGI<br>2024 & 2025-AGI-5 |
| | ■ Several wooden stair bridges were installed along the tank farm berms to provide personnel access to the containment areas. All wooden bridges within Phase 1 containment were installed directly on the exposed liner. The wooden supports bearing directly on the exposed liner may, over time, result in puncturing or tearing of the liner. | ■ The wooden bridges should monitored and consideration of appropriate and more long term protection between the supports and the liner should be considered. A suitable protective layer (e.g., additional geotextile, protective boards, or a granular protection layer of adequate thickness) could be placed beneath all supports to prevent direct contact with the liner. Any areas where the liner may have been damaged should be inspected and repaired in accordance with project specifications. Ongoing inspections should be conducted to ensure that the access structures do not compromise liner integrity. | ■ 2025-AGI-G-5 |
| | ■ All five tank pedestals were inspected. A series of shallow erosion gullies was observed along the pedestal crests; however, the overall condition of the pedestals is considered satisfactory. | ■ The identified erosion gullies should be repaired by regrading and backfilling with suitable compacted material to restore the original crest geometry and prevent further deterioration.<br>■ For the long-term pedestals stability buttressing should also be considered<br>■ Routine inspections and ongoing maintenance should continue to monitor for additional erosion and ensure the long-term stability and integrity of the tank pedestals. | ■ 2025-AGI-G-6 |
| | ■ During a walkover inspection of the containment area, a damaged HDPE liner was observed at the toe of the northern berm of Phase 2 containment area. | ■ The damaged liner should be exposed and inspected to assess the full extent of the tear. Repairs should be completed in accordance with project specifications and applicable liner repair procedures. Following repair, the area should be re-protected with the engineering fill material for protection | ■ 2025-AGI-G-7 |

| Infrastructure | Observations | Recommendations and Comments | Recommendation ID |
|---|---|---|---|
| | ■ During the 2025 inspection, the Fuel Offload Area (Fireball) was under construction. The concrete pad and sump were inspected.<br>■ Minor cracks were observed at the pad curbs, and several voids were noted between concrete sections. In some locations, expansion joint filler was missing at the slab joints.<br>■ No liner was observed between the tank farm containment area and the Fireball during the inspection. As the facility was still under construction at the time, a final inspection will be conducted as part of the 2026 AGI. | ■ The concrete joints should be reviewed to confirm proper finishing and protections installed in accordance with the design specifications.<br>■ Minor curb cracks should be assessed and sealed as required to prevent moisture ingress and long-term degradation (such as from freeze-thaw). | General maintenance/ monitoring<br>■ 2025-AGI-G-8 |
| | ■ The PVC pipe at the sump location was observed to extend above the concrete pad elevation. | ■ The final pipe elevation should be verified to ensure it is consistent with the design intent and allows for adequate drainage capacity. | ■ 2025-AGI-G-9 |
| Explosives Access Road and Emulsion Plant Pad | ■ The access road thickness appears thinnest along the northern side of the Umwelt overburden stockpile. A similar observation was noted in the 2024 AGI.<br>■ Ponding water and soil accumulation were observed in areas where the access road runs along the overburden stockpile.<br>■ A series of smaller depressions ranging from 0.3 to 0.5 m deep were observed in some sections of the access road primarily associated with the areas where the road fill thickness is less than 0.5 m. | ■ Consider expanding and increasing the thickness of the access road leading to the emulsion plant pad. This recommendation applies only if longer-term monitoring indicates that the active layer is deepening or becoming unstable.<br>■ The site team has indicated that the current access road is temporary and has plans to upgrade it in 2025.<br>■ Access road to the emulsion plant pad to potentially be expanded (thicker). This comment is only applicable where longer term monitoring shows the active layer is deepening or unstable. | ■ 2025-AGI-G-10 |
| | ■ No culverts or drains have been installed to promote the surface water flow at the location where the access road intersects the natural creek flow. This was also noted in the 2024 inspection. | ■ Consider installing culverts or constructing French drains (coarser and cleaner rockfill) at the points where the road intersects seasonal (ephemeral) creek flow | ■ Carried over from 2024 AGI<br>■ 2024 & 2025-AGI-6 |
| | ■ The slopes of the road fill are oversteepened, which can lead to the fill material cracking close to the road edges | ■ Consider re-slope, shallowing, the side slopes of this road or placing signage at the start of the road (as it is infrequently trafficked) to highlight that care should be taken to avoid driving near the shoulders of the road. | ■ Carried over from 2024 AGI<br>■ 2024 & 2025-AGI-7 |
| | ■ A crack approximately 6 cm wide and a sloughing failure were observed at the SE corner of the pad. The crack extends toward the SE corner of the building's concrete slab. Differential settlement of the pad is anticipated to continue. The observed distress may be associated with thawing of the overburden material used during pad construction. Fans of eroded silt and fine-grained material were observed at the toe of the pad in the area of the sloughing failure | ■ Consider placing additional armouring material and compacting it in the sloughing area to restore slope stability.<br>■ Monitor the crack width and settlement progression at the SE corner on a regular basis (e.g., seasonal inspections), particularly during thaw periods. Survey the pad elevation periodically to quantify differential settlement and assess whether movement is ongoing. Improve surface drainage around the affected area to prevent water infiltration, which may further accelerate thawing and erosion. | ■ 2025-AGI-G-11 |

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| | | ■ If monitoring indicates continued movement or increasing crack width, a geotechnical assessment should be completed to evaluate the need for remedial measures (e.g., pad reconstruction, insulation layer installation, or thermosyphon support, if applicable).<br><br>*Site Civil/Earthwork crew performed all required earwork at the SE corner of the pad, the slopes of the pad were regraded, and a safety berm was built. Photos of the completed work provided by B2Gold can be found in Appendix D* | |
| | ■ Some sections of the road were constructed of overburden or high overburden-rich bulk material. This also has been outlined in the 2024 inspection | ■ Overburden rich material could benefit from be encapsulated by placing a thin layer (at least one lift) of compacted Run-of-Quarry (ROQ) rock fill over this material. This will help with ongoing erosion control and for improved thermal protection. | ■ Carried over from 2024 AGI<br>■ 2024 & 2025-AGI-8 |
| Ore Stockpile Pond (OSP) | ■ Little change from the previous year, the perimeter berms were made higher due to the construction of the tailings pipeline road at the SSW side of the pond. | ■ Completed inspection before freshet to determine a maximum temporary operating level. This maximum level should be based on observations of the top liner elevation and the liner seam elevations (below the elevation of any current damage). | ■ Carried over from 2023 and 2024 AGI<br>■ 2024 & 2025-AGI-9 |
| | ■ Most of the HDPE liner is uncovered/exposed; liner damage was observed in several spots around the inspected area (specifically along the back / southern end where the liner tie-in to the tundra and toe of the ore stockpile pad and access road). | ■ Cover outside exposed edges of the HDPE liner so that it is not damaged and so it is anchored and not lifted up, ripped, or damaged by the wind. Perform the assessment of the liner panels and seams. After the liner inspection, repairs should be undertaken to prevent seepage through the liner. All panels should be welded in areas of repair. A proper liner tie in should be also performed. | ■ Carried over from 2023 and 2024 AGI<br>■ 2024 & 2025-AGI-10 |
| | ■ No culverts or other drainage systems to convey the contact water from the ROM pad to the OSP were identified during the inspection. | ■ Improve the water flow management at the upstream portion of the pond to better convey the contact water from the ROM pad to the OSP. | ■ Carried over from 2024<br>■ 2024 & 2025-AGI-11 |
| | ■ Some ponding and slow flowing (trickle) water was observed at several locations along the northern toe of the all-weather road at the Goose Neck. | ■ Investigate the source and drainage pathways during peak flow conditions on the downstream areas of the road (potential seep sample)<br>■ Continue monitoring seepage areas for signs of embankment softening or erosion.<br>■ Collect seep sample at these locations to determine they originate from the upstream camp pad, ore stockpile or other locations. | ■ 2025-AGI-G-12 |

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| Processing Plant Area | ■ The mill and most facilities at the Processing Plant site were completed at the time of inspection; however, several components remain under construction (e.g., the secondary crusher MSE wall, the dome, the arctic corridor, and other minor structures). Construction materials and equipment were present throughout the site and are expected to be removed upon completion of construction.<br>■ Overall, the Processing Plant site was observed to be in good condition, with no areas of concern identified during the 2025 Annual Geotechnical Inspection (AGI). The site will be revisited during the 2026 AGI. | ■ Overall Processing Plant site appears in satisfactory condition, and nothing more than routine maintenance was noted.<br><br>*Site staff noted that they are currently revisiting flow pathways between buildings and completing some additional grading and maintenance to further improve this area.* | ■ General maintenance/ monitoring |
| Main Crusher MSE Wall | ■ Construction of the MSE wall and associated access road was completed in spring 2025.<br>■ The inspected MSE wall exhibited minor gaps within some of the wire baskets. In several areas, cobbles were protruding from the wall face, and localized minor convex deformation was observed. | ■ Develop and implement a monitoring plan for the MSE wall, including periodic visual inspections and survey monitoring to detect potential deformation, wall deflection or movement over time.<br>■ Complete routine inspections and consult the design engineers for input and monitoring considerations and triggers. | ■ 2025-AGI-G-13 |
| Dome MSE Wall | ■ The construction of the Dome MSE wall was in progress during the 2025 inspection; therefore, only limited sections of the wall were available for review. The facility will be inspected during the 2026 annual geotechnical inspection. | ■ A final inspection would be suggested to be completed by design engineer once construction of the MSE wall and Dome is finalized to confirm that the works were completed in accordance with the design intent and specifications.<br>■ A displacement monitoring program should be implemented for the MSE wall to confirm that wall movements remain within acceptable limits during operation.<br>■ The condition of the MSE wall components, including baskets and metal tie elements, should be periodically inspected to ensure proper separation, alignment, and overall structural integrity. | ■ 2025-AGI-G-14 |
| Camp Pad and Camp Pad Extension | ■ Overall, the main camp pad area and slopes are in good condition. Some ‘pockets’ of overburden material were observed in the camp pad extension pad, but most of these overburden areas appear to be encapsulated with the rock material (ROQ/ROM). | ■ Ongoing visual inspection of the slopes and crest of the pad is recommended. Any Voids or depressions on the pad should be addressed and backfilled with the engineering fill | General maintenance/ monitoring |
| | ■ The slopes of the camp pad extension were observed to be over-steepened. As noted in the 2024 AGI, the camp pad extension was constructed using overburden material (silty sand and sandy silt placed 3 to 3.5 m in height), which is susceptible to significant settlement and cracking.<br>■ The overburden material is encapsulated with more than 2 m of ROQ/ROM material. | ■ Given that the camp pad extension exceeds 2 m in height, the side slopes should be regraded to a maximum slope of 2H:1V to improve long-term stability.<br>■ Implement a monitoring program for foundations and buildings within this area to assess potential differential settlement, as overburden material is prone to settlement, particularly if | ■ 2025-AGI-G-15 |

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| | | sufficient thermal protection has not been provided to limit thaw settlement.<br>■ Surface drainage should also be maintained to prevent water infiltration, which could further contribute to thaw-related settlement and slope instability. | |
| All-Weather Road (General) | ■ The main all-weather road (section from Primary Pond to Airstrip) has been thickened in 2025. The thickness of the road is observed to be typically around 1 to 1.5 m. The side slopes of the road embankment are typically at 1.5H:1V. | ■ Monitor the road shoulders especially in August-September when the active layer is the deepest. Avoid driving and parking any equipment closer to the edge, specifically in areas where slopes are steeper than 1.5H:1V. | General maintenance/ monitoring |
| | | ■ The ponding water locations should be monitored as they are more likely to result in surface / tundra degradation; due to the thermal loading imposed from the ponding water, and in the winter how these ponds limit the freezing back of the active layer (energy goes into freezing the water and not into freezing the ground).<br>■ In areas around or adjacent to critical infrastructure, consideration should be given to: dewatering these areas before winter freeze-up, or widening the road can be considered. | General maintenance/ monitoring |
| Goose Neck Crossing | ■ The Goose Neck Crossing Road is generally in good condition. The road widening from 15 m to 30 m, completed in Q1 2025, required the installation of additional culverts. Replacement of five single 600 mm culverts, which were originally installed without engineering oversight, was initiated in Q1 2025; however, the work had not been completed at the time of inspection. | ■ The newly installed culverts should be monitored during the 2026 freshet to confirm proper hydraulic performance. Attention should be given to ensure that all inlets and outlets remain free of debris, erosion, and blockages.<br>■ A post-freshet inspection should be conducted to assess culvert performance, embankment stability, and any signs of scour or settlement. | General maintenance/ monitoring |
| | ■ At the time of inspection, single 1200 mm culvert and one twinned 600 mm culvert had been installed. A second 600mm culvert was later installed. Installation of the remaining twinned 900 mm culvert is anticipated to be completed in Q2 2026. | ■ Two remaining 900 mm culverts still to be installed<br><br>*SRK understands that the remaining 900mmm twinned culverts have now been procured and are planned to be installed in the 2026 low flow season.* | 2025-AGI-G-16 |
| Echo Crossing | ■ Echo Crossing access road and installed culvert were inspected during the 2025 AGI. Based on the visual inspection, no fill material was observed around the installed culverts. No improvements were observed since the 2024 AGI. | ■ The fill cover thickness over the culvert pipes should be checked to ensure that the fill thickness is sufficient for the largest equipment using on that road. This would be done to avoid damage or compression of the underlying culverts and to ensure that the culvert design cross-sections are maintained.<br><br>*B2Gold has indicated that during the construction of the Echo CWP dam, the area will be improved.* | Carried over from 2024 AGI 2024&2023-AGI-12 |

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| | ▪ Culvert inlets on the east side of Echo haul road are blocked with the rock material used for the road construction. Culvert inlets on the eastern side of Echo Pit haul road are partly blocked. Two culverts on the eastern side are elevated by approx. 0.5 m from the toe of the road embankment. No fine material around the culvert was observed. This condition was also identified in the 2024 AGI. | ▪ Unblock the existing inlets. Culverts that appear to be damaged or elevated from the toe of the road embankment are required to be replaced (site to determine after visual inspections before and around freshet).<br><br>*B2Gold has indicated that during the construction of the Echo CWP dam the damaged culverts will be replaced.* | Carried over from 2024 AGI<br>2024 & 2025-AGI-13 |
| Gander Crossing | ▪ Gander Crossing culverts were inspected during the 2025 AGI. Culvers were found to be in good condition. Minor improvements are suggested. | ▪ The condition of the metal components should be routinely monitored. If additional deterioration is observed, corrective measures should be implemented, such as increasing the cover (fill material) above the culverts to provide added protection. | General maintenance/ monitoring |
| | ▪ Surface flow was observed entering the center of the large arches. This condition was also identified in the 2024 AGI. | ▪ Consider constructing a small berm between the twin culverts to properly channel surface flow into the culvert inlets. The berm should be properly compacted and graded to prevent bypass flow and minimize erosion.<br>▪ | Carried over from 2024 AGI<br>2024 & 2025-AGI-14 |
| General comments for all culverts installed on site | | ▪ B2Gold should have as-built survey for all of the culverts on site. Continuous monitoring of all culverts should also be conducted to track progressive permafrost degradation. It is particularly important to prioritize monitoring during the freshet period and in August and September when the active layer reaches its maximum depth.<br>▪ To mitigate the tundra degradation, from the culvert construction activities, it may be necessary to extend the culvert fill cover around the area. Or consider implementation of the erosion control or further maintenance (coco matting or similar) may be required in the spring to prevent erosion from the exposed overburden. | General maintenance/ monitoring |
| Llama Crusher Pad and Haul Truck Laydown Area | ▪ Overall, both pads are in a good condition | ▪ No concerns observed | General maintenance/ monitoring |
| Primary Pond | *At the time of the 2025 AGI inspection the Primary Pond construction was not complete. As the Primary Pond is now done construction it will be removed from the 2026 AGI report and will be the subject of its own report (done as a formal Dam Safety Inspection as per its dam safety classification and as typical as per Mining Association of Canada and Canadian am Association approaches.* | ▪ Site should conduct routine visual inspections to identify signs of distress, erosion, or seepage; survey settlement monitoring points regularly to confirm dam performance; collect and review instrumentation data (inclinometers, deep monitoring stations) in accordance with the monitoring plan; and perform regular ground temperature monitoring and review results against established trigger thresholds. | General maintenance/ monitoring |

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| | ■ Construction of the Primary Pond Dam was substantially completed in May 2025. The remaining instrumentation, including inclinometers and deep monitoring stations, was installed in September 2025, after the site inspection was conducted. At the time of inspection, the eastern wing of the dam was still under construction; it was subsequently completed in October 2025. | | |
| | ■ The post-construction inspection of the facility revealed several concerns most of which were addressed by B2Gold immediately:<br>– Unapproved water spigot discharge locations were identified near the upstream toe of the dam. This condition may accelerate permafrost degradation, particularly thawing of ice lenses identified during key trench construction. | ■ Waste spigot / discharge points near the upstream toe of the dam must be relocated, and appropriate surface water management measures (e.g., controlled drainage pathways or collection systems) to prevent uncontrolled flow and infiltration should be implemented. Site also should conduct an assessment of potential permafrost degradation in the affected area, with particular attention to previously identified ice lenses. Increase monitoring of ground temperature and seepage conditions at the upstream toe to detect early signs of thaw settlement or loss of ground stability.<br><br>*While SRK were on site, B2Gold was notified about the potential risk that could cause the end of pipe discharge at the current spots, and the site immediately stopped discharging form the pipeline at the upstream of the Primary Pond dam. The disturbed tundra and depression developed due to water erosion was backfilled with low-permeability material. A new discharge point was picked to minimize thermal impacts to permafrost and ice-rich zones. B2Gold confirmed that moving forward, they will use only designated spots or will confirm the location with EOR prior to discharging activities. Photos of the completed work provided by B2Gold can be found in Appendix D* | 2025-AGI-G-17 |
| | – Multiple sinkholes, voids and depressions of varying sizes were observed along the upstream slope. It should be noted that any of the installed settlement monitoring points did not indicate any displacement trends. Areas of concern were marked, surveyed, and will become additional monitoring points.<br>– The upstream thermal protection barrier, affected by extensive thawing of the overburden material, exhibited several sinkholes and significant depressions. | ■ Continue regular monitoring of identified sinkholes and depressions along the upstream slope and thermal protection barrier. Areas exhibiting progression should be surveyed and outlined in the inspection report; EoR should be notified immediately. A geotechnical assessment should be conducted to evaluate the extent of thaw-related settlement.<br><br>*B2Gold immediately addressed the issues, and all the voids and depressions were backfilled with the proper engineering fill. The thermal protection barrier was leveled to the designed elevation.* | |

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| | – An unpermitted culvert installed at the downstream toe may pose an additional risk to the dam foundation due to potential thawing and thermal erosion. | ■ Remove or properly decommission the unpermitted downstream culverts. If drainage is required at this location, install a designed and approved structure that mitigates thermal and erosion risks to the dam foundation. | |
| | – Pipes installed along the upstream crest are obstructing access to instrumentation at the eastern end of the dam. | ■ Relocate or modify crest piping to restore safe and unobstructed access to all dam instrumentation. Ensure that instrumentation remains accessible for inspection, maintenance, and emergency response. | |
| | – Causeway surfacing material was placed on the ROQ, resulting in the formation of a number of sinkholes and 5-7 m of the relaxation zone at the front side of the causeway, where the seacan with the pumping system is installed. These voids may compromise the foundation of the seacan and lead to differential settlement of the facility. | ■ Using appropriate engineering fill, repair affected areas of the causeway crest. Regrade, backfill, and compact sinkholes and sloughed sections with suitable engineered fill to restore stability and prevent differential settlement beneath the seacan. Consider conducting a stability review of the pumping platform foundation. | |
| | – Rocks were observed obstructing access to the spillway. | ■ Remove rocks and debris obstructing spillway access to ensure safe operation and maintenance. | |
| | – Insufficient cladding thickness was noted at the crest and along the slopes of the spillway. | ■ Increase the cladding thickness at the spillway crest and slopes to meet design specifications and improve erosion protection and long-term durability.<br>■ Conduct a follow-up inspection after remedial works are completed to confirm stability, drainage performance, and thermal protection effectiveness. | |
| | ■ Most of the sections with the exposed Tundra at the downstream toe observed during the 2024 AGI were covered with rock material. The section of the exposed Tundra at the downstream toe was found at the northern edge of the Civil Laydon area at the eastern end. | ■ Mitigate thermal degradation along the downstream side of the dam, where construction is currently ongoing. As part of the 2024/2025 construction activities, remediation of thermal degradation that occurred due to the construction will be necessary. This may include covering exposed/damaged tundra with a minimum 2-meter-thick layer of insulating fill. | 2025-AGI-G-18 |
| | ■ Large rocks were observed sporadically placed at the eastern end of the spillway, which may obstruct flow conveyance. | ■ Consider removing the rocks to maintain a clear flow path and ensure unobstructed spillway performance. | 2025-AGI-G-19 |
| Primary Pond Reclaim Pipeline Embankment | ■ The reclaim pipeline embankment is found to be overall in a satisfactory condition. Some soft edges were observed. | ■ Location of the pipes (active/inactive) should be outlined in the Primary Pond inspection form<br>■ Site should monitor the soft edges and address the stability concerns if needed. | General maintenance/ monitoring |

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| Tote Storage Facility | ▪ Construction of the containment facility was finished in August 2025 prior to the site inspection. The design and record drawings were performed by SRK.<br>▪ Tote storage facility appears in good condition | ▪ No concerns observed<br>▪ Place the totes inside the facility at a sufficient distance from the inner berm toe to allow access for snow removal and routine maintenance. | General maintenance/ monitoring |
| Concrete Storage Pad | ▪ Construction of the pad was completed in spring 2025. No major concerns were observed.<br>▪ The totes found to be placed at the edge of the pad | ▪ The pad is in satisfactory condition. The pad area should continue to be periodically inspected to ensure proper housekeeping and safe storage practices are maintained.<br>▪ Totes should be stored away from the pad edge to maintain adequate clearance for safe access, snow removal, and routine maintenance activities. | General maintenance/ monitoring |
| Technical Services and Maintenance Pad and Adjusted Laydown Area | ▪ No changes from the 2024 AGI.<br>▪ The northern face of the laydown area appears to be oversteepened. Several oversized rocks were observed on the slope, which may pose a risk of falling and potentially obstructing the section of the all-weather road located at the toe of the laydown area. | ▪ The northern slope of the laydown area should be periodically monitored for signs of instability or rock displacement.<br>▪ Oversized rocks located on the slope should be removed or stabilized to reduce the risk of rockfall and potential blockage of the adjacent all-weather road | General maintenance/ monitoring |
| Echo Tailings Facility | ▪ The in-pit tailings facility was found to be in a generally good conditions at the time of the inspection. A reclaim barge had not yet been constructed.<br><br>*Update: The reclaim barge was established on site around November 2025*<br><br>*Similar to the completed Primary Pond dam the Echo Tailings Facility will be reported on separately in 2026 (not in the 2026 AGI as its own geotechnical inspection by the EoR or representative of the EOR for the in-pit tailings facility). Note that a standalone Operation Maintenance and Surveillance (OMS) document now exists for the Echo TF.* | ▪ The in-pit tailings facility should be frequently inspected by site personnel during regular operations, with findings documented in formal inspection reports. Daily inspections should include visual assessment of overall facility conditions, confirmation of water levels and tailings discharge at the Echo TF, identification of pipeline leaks or breakages, detection of potential pump or reclaim barge issues, and verification of the condition of tailings spigot points. | General maintenance/ monitoring |
| | | ▪ Comprehensive visual inspections should be conducted weekly to identify potential or developing issues. Weekly inspections should include review of pit walls and slopes, pit ramps, pipelines, pond level, and seepage. Identified deficiencies should be addressed as soon as practicable. | General maintenance/ monitoring |
| | | ▪ The closure plan should be advanced over the next couple years outlining the methodology for placement of waste rock from the Main Pit WRSA over the in-pit tailings facility, including sequencing, stability considerations, drainage management, and monitoring requirements. Note that at this time the tailings and water levels are not close (well below) the pit rim (top) elevation (well contained within the pit). | 2025-AGI-G-20 |
| | ▪ A similar comment was noted during the 2024 inspection of the Echo Pit: the SSW wall slope was found to be approx. 2.5H:1V, with overburden wall heights ranging from about 8 m | ▪ The Echo TF EOR has been engaged to take a closer look at if there are ways for additional thermal cladding or tailings deposition plans to be modified to allow for additional thermal | 2025-AGI-G-21 |

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| | to 15 m. Portions of the slope had been covered with run-of-quarry rock cladding, varying in thickness from approximately 0.5 m to 1.0 m; however, no cladding was present at the pit crest. The cladding is intended to mitigate thermal erosion and degradation of the overburden material, thereby reducing the potential for gully formation.<br>■ Now that the pit has been converted into a tailings facility, the stability and adequacy of the overburden bench cladding need to be looked at in closer detail. | cover over overburden portions of the slopes. This would be done to help enhance long-term slope stability, mitigate thermal degradation. | |
| Echo Tailings Pipeline Road /Embankment | ■ The tailings pipeline embankment was inspected on foot, as vehicle access was not possible. The designated maintenance access route is obstructed by the pipeline, which may complicate required daily inspections, snow cleaning, and maintenance activities | ■ The tailings pipeline embankment was inspected on foot, as vehicle access was not possible. The designated maintenance access route is obstructed by the pipeline, which may complicate future inspection and maintenance activities.<br><br>*Site has indicated that plans are in place to do maintenance on the pipeline road / embankment to help fix grades in spring to summer 2026.* | 2025-AGI-G-22 |
| | ■ The embankment surface is uneven and contains several significant depressions, up to approximately 0.6 m deep, which may increase the risk of pipeline stress or damage. | ■ The embankment surface is uneven and contains several significant depressions, up to approximately 0.6 m deep, which may increase the risk of pipeline stress or damage | 2025-AGI-G-23 |
| | ■ The overall embankment grade is inconsistent and does not appear to meet the design criteria. In some sections, the pipeline alignment and grading may not allow tailings to flow by gravity to the tailings facility as intended in the design. | ■ In some sections, the pipeline alignment and grading may require maintenance and additional material or blocks(dunnage) to better allow tailings to flow by gravity to the tailings facility (in the event of a pipeline shutdown). | 2025-AGI-G-24 |
| Former Echo Treatment Ponds | ■ No improvements have been made since the 2024 inspection. Visual inspection indicates that no treatment system has been installed, and the lined ponds are not functioning as a treatment facility. Instead, the area is being used as lined storage for contaminated soils and water.<br>■ The liner is damaged, with multiple tie-in rips observed at the top of the berms. The far north cell has a liner cut extending from the top of the berm to the bottom of the facility. This damaged cell contains bulk material, and totes filled with soils and rocks. | ■ The facility should be decommissioned, and all contaminated soils and water should be relocated to a designated, compliant containment facility.<br>■ Soil and water sampling should be conducted in and around the former facility to confirm that contamination has not spread beyond the liner.<br>■ Following removal, the area should be rehabilitated according to site closure and environmental management requirements, including liner replacement or soil remediation as needed. | 2025-AGI-G-25 |
| Echo Diversion Berm | ■ No changes from the 2024 inspection. Echo diversion berm is found to be primarily constructed from a bulk fill rich in overburden. The thickness of the diversion berm typically varies from 0.8 m to 1.5 m; i.e. not yet at design thickness in all areas. The insufficient thickness of the embankment, | ■ B2Gold should revisit the constructed berm and identify sections that are below grade or require adjustments to align with the design intent and complete construction. Particular attention should be given to areas where the upstream toe | Carried over from 2024 AGI 2024&2025-AGI-15 |

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| | combined with the use of overburden-rich material for construction, has resulted in thermal erosion of the diversion berm (e.g., tension cracking and thaw settlement)<br>▪ A comparison of the designed and as-constructed drawings of the Echo Diversion Berm revealed discrepancies between the two, resulting in ponding water and ineffective water diversion. | slopes are shallower than initially designed to prevent ponding and ensure that the design berm crest is maintained | |
| Echo Haul Road and Former Mining Equipment Laydown | ▪ No significant changes were observed compared to the 2024 AGI.<br>▪ Ponding water continued to be observed on both sides of the road embankment. Elongated cracks were noted along the crest of the embankment in areas where water had accumulated.<br>▪ The laydown area appears to obstruct natural drainage pathways at the northeast corner, resulting in water accumulation at the toe of the pad and beneath the fill material. | ▪ The affected areas of the road embankment should continue to be regularly monitored for signs of cracking, settlement, or soft ground conditions.<br>▪ Access and equipment operation should be restricted near the softened edges of the embankment to reduce the risk of localized instability. | General maintenance/ monitoring |
| Echo WRSA | ▪ Construction of the Echo WRSA was completed in May 2025.<br>*The EOR for the Pits and WRSA (or the site technical services and mining group) have a separate inspection report that covers the Pits and WRSA (these mining elements are outside the scope of this AGI report).* | ▪ General comments that were passed on included:<br>– Consider ponded water at toes.<br>– Ensure encapsulate landfill material within the central portion of the WRSA using appropriate waste rock buttressing. Remove any material placed outside the approved WRSA footprint to maintain the intended dump geometry and reduce the risk of global instability. | - |
| Former Echo Crusher Pad | ▪ No significant changes were observed compared to the 2024 Annual Geotechnical Inspection (AGI).<br>▪ The pad appears to be generally well maintained; however, the NEE side of the pad was observed to be locally oversteepened. | ▪ The slopes along the NEE side of the pad should be periodically monitored for signs of instability or erosion.<br>▪ Equipment operation should be restricted near the edge of the pad to reduce the risk of localized slope failure or edge sloughing. If signs of instability develop, the affected slopes should be regraded to a more stable configuration.<br>*B2Gold has indicated that during the construction of the Echo Tailings Dike dam, this area will be revisited and improved.* | General maintenance/ monitoring |
| Echo Overburden Stockpile | ▪ The overburden stockpile is generally in satisfactory condition. Minor erosion features, including small rills and gullies, were observed on the overburden pile. | ▪ The slopes of the overburden stockpile should continue to be monitored and may require localized regrading to maintain overall slope stability.<br>▪ Consider implementing progressive reclamation of the Echo WRSA using suitable overburden material from the stockpile. | General maintenance/ monitoring |

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| Goose Quarry | ■ No active mining was observed in the quarry during the inspection. The quarry floor appeared to be partially backfilled with bulk material, potentially as part of future closure activities.<br>■ No evidence of large-scale global slope instability was observed in the areas of the quarry slopes that were visible during the inspection.<br>■ Ponding water and landfill were observed at the base of the quarry. | ■ Similar to the comment outlined in the 2024 inspection report, a water management plan should be developed to address ponding water on the quarry floor and to control runoff and potential infiltration.<br>■ A quarry closure plan should be prepared outlining the long-term strategy for backfilling, drainage management, and final landform configuration.<br>■ Periodic visual inspections of the quarry slopes should be carried out to monitor any signs of localized instability or erosion. | General maintenance/ monitoring |
| Umwelt Pit | ■ The Umwelt Pit was under active development at the time of the AGI inspection:<br><br>*The EOR for the Pits and WRSA (or the site technical services and mining group) have a separate inspection report that covers the Pits and WRSA (these mining elements are outside the scope of this AGI report). .* | - | - |
| Umwelt WRSA | ■ The facility appeared to be in reasonable condition at the time of inspection. Localized ponding water was observed at the SSW and NW toes of the facility. The facility was actively being developed at the time of the AGI site visit.<br><br>*The EOR for the Pits and WRSA (or the site technical services and mining group) have a separate inspection report that covers the Pits and WRSA (these mining elements are outside the scope of this AGI report). .* | - | - |
| Umwelt Overburden Stockpile | ■ During the 2025 AGI, a number of sinkholes, surface undulations and depressions, sediment erosion fans at the toe, tension cracks at the crest, minor sloughing along the slopes, and ponding water at the toe of the facility. These conditions indicate ongoing surface instability and erosion processes. | ■ Consider implementing a sediment management and monitoring program in coordination with the Environmental Team.<br>■ Evaluate and construct downstream sediment control measures (e.g., diversion berms or containment structures) to limit migration of fine materials and total suspended solids (TSS) toward the receiving waterbody (Goose Neck).<br>■ Regrade affected areas as necessary to improve surface drainage and reduce ponding and erosion potential. | 2025-AGI-G-26 |
| Exploration Camp | ■ No changes from the 2024 inspection. | ■ Continue visual monitoring and implement permanent remediation if deterioration becomes significant.<br>■ A detailed closure plan should be developed for the exploration camp area, addressing long-term stability, erosion control, and water management in the disturbed area. The plan should | General maintenance/ monitoring |

| Infrastructure | Observations | Recommendations and Comments | Recommendation ID |
|---|---|---|---|
| | | include timelines, remediation methods, and monitoring requirements to ensure sustainable site rehabilitation. | |
| | ▪ The temporary fuel and tote storage lined area was repaired. Inspection indicated that the containment area is lined with an HDPE liner, anchored at the top of the perimeter berm. No design or construction documentation, photos, or as-built survey data were available for review during the inspection. | ▪ Verify the containment volume using available construction notes and any liner survey data. | 2025-AGI-G-27 |

## 6.2 MLA Site

Similar to the 2022 to 2024 AGI, the primary 2025 observation was that the MLA area remained functional but was also still in a transitional or developing phase. With the tank farm further expanded the main developments were more around the Camp Extension and more minor modifications or expansions to other pads and roads. The site continues to evolve as a port location, serving to bring in supporting equipment, supplies, and buildings essential for the Back River project operations. Analogous to the Goose area of the site, many of the comments in the Annual Geotechnical Inspection pertain to matters that require ongoing monitoring or attention, such as addressing water ponding issues and enhancing thermal protection for permafrost, particularly as port construction and associated infrastructure progress. A summary of the 2025 AGI recommendations for the MLA area is presented in Table 4.

**Table 4: Summary of 2025 AGI Observations and Recommendations (MLA Property)**

| Infrastructure | Observations | Recommendations and Comments | Recommendation ID |
|---|---|---|---|
| MLA Quarry Tank Farm | ▪ Construction of the MLA Tank Farm was completed in Spring 2025, SRK performed the final QA inspection and AGI in September 2026, after the construction was completed. Exposed geotextile was observed in the containment area. This also has been observed during the 2022, 2023, and 2024 AGIs. | ▪ As-built checks were performed to confirm the overliner thicknesses. Based on the visual inspection and as-built checks it was observed that the thickness of the overliner material in most of the areas at the base of the facility is sufficient for equipment to travel over the liner. NW and SW inner toes and N and W slopes of the containment area haven't been backfilled to the designed thickness.<br>▪ In many areas the nonwoven geotextile that covered the HDPE liner was still exposed on the slopes. The NE side of the Phase 2 containment facility has an exposed HDPE liner, not covered with geotextile and not covered with the fill material. The liner should be protected with the fill material. | ▪ Carried over from 2024 AGI<br>▪ 2024 & 2025-AGI-M-1 |
| | ▪ An access road for fuel trucks runs along the western berm of the containment facility. The closest approach of the road to the crest of the lined berm occurs at the southwest corner. It was observed that the thickness of the overliner fill material in this area may be insufficient for frequent heavy traffic. Although the berm has been widened, there remains a risk that a truck tire could travel directly above the buried liner. | ▪ The edge of the buried liner should be clearly identified based on as-built survey information and marked in the field. Delineators or physical barriers should be installed to prevent vehicle encroachment over areas with limited liner cover. In addition, the overliner fill thickness along the designated travel path should be reviewed and, if necessary, increased to provide adequate protection for ongoing fuel truck traffic. | ▪ 2025-AGI-M-1 |
| | ▪ During the inspection there was water accumulated at the base of the containment area. The presence of ponding water in the northwest, northeast, and southwest corners of the bunded area was also outlined in the 2022, 2023, and 2024 Inspection reports. | ▪ It is suggested that in the summer of 2026, when all water is removed from the tank farm base, that a visual inspection be done around the design sump areas to check the liner integrity. This was unable to be inspected at the time of the AGI. This could be done by B2Gold site staff and photographs taken to document the current tank farm base conditions in that area. This is suggested as areas where water pool and water level fluctuate are typically more prone to erosion of overliner material. | ▪ Carried over from 2024 AGI<br>▪ 2024 & 2025-AGI-M-2 |
| | ▪ The drainage pipe positioned at the northeast corner may not be able to collect all accumulated water effectively due to the bottom elevation of the pipe within the Tank Farm area. | ▪ During months when ambient air temperatures are consistently above -5°C this area should be closely monitored and frequent pumping should be required as part of ongoing operations and maintenance activities in spring to fall months. | ▪ General maintenance / monitoring |
| | ▪ No settlement monitoring system was implemented to monitor settlement of the tank pedestals by the time of the 2025 AGI. | ▪ Settlement monitoring is suggested (e.g., monitoring of survey monuments and fixed settlement points, survey markers on the tanks for total station surveys) on and around the tanks and pedestals. This will help to track the performance of the tank pedestal and the underlying foundation. This additional monitoring could be incorporated into the site monitoring | ▪ Carried over from 2024 AGI<br>▪ 2024 & 2025-AGI-M-3 |

| Infrastructure | Observations | Recommendations and Comments | Recommendation ID |
|---|---|---|---|
| | | programs and could be used for early warning and to help plan future maintenance (if / as required). | |
| | ▪ Damaged HDPE liner was observed at the toe of the Phase 3 eastern berm. | ▪ A damaged HDPE liner should be exposed and patched. The repaired HDPE liner should be surveyed and backfilled for protection. | ▪ 2025-AGI-M-2 |
| | ▪ Folded HDPE liner was observed at the toe of the western berm in the area where the fuel offload pad (Fireball) ties in. The folds may have resulted from pushing fill material downslope from the crest during placement. | ▪ A detailed liner inspection should be conducted to assess the extent of folding and confirm overall liner integrity. The affected area should be carefully exposed, and the liner evaluated for stress, stretching, or damage. If the liner integrity has been compromised, the impacted section should be repaired. Following repair, the liner should be properly re-laid, anchored as required, surveyed if applicable, and backfilled with fill material using placement methods that prevent further displacement or damage. | ▪ 2025-AGI-M-3 |
| | ▪ There was evidence that caribou are entering the tank farm area; therefore, there is a risk of animals slipping on the slopes and potentially disturbing the containment materials. | ▪ During periods of caribou presence, the containment area should be regularly inspected. If sloughing of fill material due to wildlife activity is observed, any exposed HDPE liner should be promptly covered with suitable protective material to prevent damage | ▪ General maintenance / monitoring |
| Fireball Pad | ▪ During the visual inspection, it was observed that the fireball pad is graded toward the western edge, away from the tank farm containment area. No berm has been constructed along the western side of the fireball pad, resulting in a lack of containment capacity for the fireball area. | ▪ An updated as-built survey should be completed to confirm the current pad grades. Based on the survey results, the fireball pad should be regraded as necessary and appropriate berms constructed to provide the required containment volume. | ▪ 2025-AGI-M-4 |
| Batch Plant | ▪ The batch plant deck does not have adequate structural support at the truck loading area and is not anchored. A sandstone joint (fault) is present in the foundation rock at the base of the deck. | ▪ The deck should be properly anchored to the foundation. In addition, construction of a buttress or other appropriate stabilization measures should be evaluated to mitigate the risk of failure associated with the sandstone joint at the base of the deck. | ▪ 2025-AGI-M-5 |
| Former Temporary Fuel Storage Depot Area | ▪ A landfill dump has been established at the location previously occupied by multiple Enviro Tanks (fuel storage tanks). Evidence of permafrost degradation and ponded water was observed in the area, which may increase the risk of soil contamination from the deposited waste. | ▪ The area should be assessed to confirm ground conditions and evaluate the extent of permafrost degradation. Measures should be implemented to improve drainage and prevent further ponding. Consideration should also be given to relocating the landfill to a properly prepared and thermally stable area, or implementing ground protection measures to minimize the risk of contamination. | ▪ 2025-AGI-M-6 |

| Infrastructure | Observations | Recommendations and Comments | Recommendation ID |
|---|---|---|---|
| | ▪ As the tanks in this area were placed on very thin fill, and or on the tundra, and as this low-lying area appears to have had more surface water accumulation and natural ground ice in the foundation soils, increased ponding and degradation of the permafrost was noted as part of the AGI. This was also observed during the 2022, 2023 and 2024 Inspections. | ▪ Perform ongoing monitoring of this to track the permafrost degradation in this area to assist with the development of long-term remediation plans (for this former temporary fuel storage depot area). | ▪ General maintenance / monitoring |
| Shoreline Pad | ▪ The North side of the Shoreline Pad was visually inspected during the 2025 AGI. The inspected side of the pad was found overstepped (more in the 1H:1V range based on visual inspections). These steeper slopes appear to have been constructed to allow the barges to dock closer to the fill material. | ▪ It is suggested to inspect the pad before the 2026 sealift to determine if additional maintenance is needed. This may include placing additional riprap or coarser rockfill along the upstream slope (in or near the water) or implementing erosion mitigation measures, such as blast mats over the front edge of the pad. These strategies would help minimize erosion and maintain pad stability. | ▪ General maintenance / monitoring |
| | ▪ Evidence of erosion is present along the upstream slope, including surface water stream paths and a steepened slope angle near the seawater level. | ▪ The pad toes should be carefully monitored to prevent erosion-related undercutting or oversteepening, which could lead to slope instability. | ▪ General maintenance / monitoring |
| Freight Storage Pad | ▪ The thickness of the pad varied from 0.1 m (SW corner of the pad) to 2.8 m (NE corner of the pad). This was also observed during the 2024 Inspections. | ▪ The pad should be surveyed and the thickness reviewed and compared against the long thermal closure commitments for these pads. | ▪ Carried over from 2024 AGI<br>▪ 2024 & 2025-AGI-M-4 |
| | ▪ Stored materials were placed less than 1 m from the pad crest in some areas. This was also observed during the 2024 Inspections. | ▪ It is recommended to maintain a storage-free zone at the crest of the pad, with a minimum width of 1 m. | ▪ Carried over from 2024 AGI<br>▪ 2024 & 2025-AGI-M-5 |
| | ▪ Several pipelines were observed to be placed directly on the tundra, and that in the long term can increase the risk of permafrost degradation due to heat transfer, potentially leading to differential settlement and subsequent damage to the pipelines. | ▪ Consider relocating the pipelines onto prepared pads or supporting them on elevated pipe racks to eliminate direct contact with the tundra. Elevating the pipelines to allow air circulation beneath them would help reduce heat transfer to the ground surface and minimize the potential for permafrost degradation and differential settlement. | ▪ 2025-AGI-M-7 |
| | ▪ Exposed and damaged HDPE liner was observed at the temporary fuel and lubricants storage facility northwest of the maintenance shop area. The liner panels were not welded together and were not properly anchored. In addition, no berms had been constructed around the facility, resulting in a lack of secondary containment. | ▪ The temporary storage facility should be upgraded to provide proper secondary containment, including installation of welded HDPE liner panels that are adequately anchored, construction of perimeter berms to achieve the required containment capacity, and repair or replacement of all damaged liner sections to ensure system integrity. | ▪ 2025-AGI-M-8 |
| Cam Pad | ▪ Pad maintenance was performed and the thickness of the pad was increased since the 2024 AGI inspection, and many depressions were backfilled, however the pad thickness is still quite thin (in some areas 1 m or less). | ▪ Ongoing maintenance is expected to be required for the camp pad. Care should be given for loads or equipment not to be storage to close to the edges of the pad (specifically where | ▪ General maintenance / monitoring |

| Infrastructure | Observations | Recommendations and Comments | Recommendation ID |
|---|---|---|---|
| | | any tension cracking has been observed or where the thickness of the pad is less than 1.5m). | |
| | ▪ The northern slope of the camp pad extension was observed to be over-steepened. Seepage was noted along the toe of the slope, which may increase the risk of localized instability or sloughing of the fill material. This risk is compounded by the natural ground gradient (approximately 5% to 8.5%) and the placement of fill directly over exposed tundra. | ▪ It is recommended that the side slopes of the camp pad extension be regraded to 2.5H:1V to improve the overall stability and to reduce the potential for erosion and sloughing. In addition, drainage conditions along the toe should be reviewed and managed to limit seepage-related instability. | ▪ 2025-AGI-M-9 |
| | ▪ The concrete slab at the northwest corner was constructed too close to the pad crest. As a result of slope erosion and over-steepening, the northwest corner of the slab appears partially unsupported, giving the impression that it is “floating” above the underlying fill. | ▪ It is recommended that the northwest corner of the pad be regraded to provide adequate support and a stable side slope. Additional engineered fill should be placed and properly compacted, as required, to restore slope stability and ensure full bearing support beneath the slab. Consideration should also be given to maintaining a minimum 2 m setback from the pad crest for future structural foundations to reduce the risk of edge instability and erosion-related support loss. | ▪ 2025-AGI-M-10 |
| Fuel Pipeline Road | ▪ The Fuel Offload access road thickness is quite thin (in many areas, 0.8 m or less). Insufficient thickness of the road embankment can lead to thermal erosion and differential settlements in the road foundation, potentially resulting in damage to the fuel pipe. This was also observed during the 2024 Inspections. | ▪ The road embankment especially at the edges, as well as the fuel transfer conduit integrity should be inspected each year before use for fuel offloading.<br><br>*Site noted that when the pipeline is being used / active that daily inspections of the liner are being completed.* | ▪ General maintenance / monitoring |
| Roadways | ▪ No change to prior (2022, 2023, and 2024) recommendations: The general observation is that the road thickness is quite thin (in many areas, 1 m or less), and settlement and ongoing maintenance should be expected. | ▪ Ongoing monitoring and potential maintenance of the roadways should be done. More regularly the roadways should be inspected during the warm months. | ▪ General maintenance / monitoring |
| | | ▪ Similar to the recommendations given for roads built at Goose property, compilation and update of as-built pick-up of the roads and infrastructure at the MLA should be done. | ▪ General maintenance / monitoring |
| MLA Airstrip | ▪ General maintenance of the airstrip (grading the surfacing material) was performed at the airstrip during the inspection. | ▪ Prior to landing any aircraft on the runway, the aircraft operators should conduct their own assessment of the runway conditions (in terms of functionality). Ultimately, it will be at the discretion of the aircraft operators if the airstrip surface is acceptable for their aircraft. | ▪ General maintenance/ monitoring |

| Infrastructure | Observations | Recommendations and Comments | Recommendation ID |
|---|---|---|---|
| | | ▪ Any observations at the airstrip shoulder, any areas of larger undulations or settlements that require ongoing maintenance should be noted and records kept to assist with long-term performance monitoring. This will also help determine if items such as degradation of ice in the foundation (specifically for the southern extents) of the airstrip are apparent and being adequately addressed through routine maintenance (such as just adding more fill to the top surface). | ▪ General maintenance/ monitoring |
| | | ▪ A full topographic ground survey of the airstrip should be completed, and compared against the expected ground conditions (from geomorphological interpretations). | ▪ General maintenance/ monitoring |
| | ▪ Distress of the airstrip embankment, mainly near the immediate edges / shoulders, was identified as a series of linear tension cracks or depressions, inferred to be caused by permafrost degradation in the underlying foundation. | ▪ B2Gold should monitor the airstrip edges and avoid placing the lights close to the crest, and / or the slide slopes of the airstrip should be re-sloped (to shallower overall slopes). This was more relevant for the southwest and southern ends of the MLA airstrip. | ▪ General maintenance/ monitoring |
| | ▪ Some sections of the airstrip were found to be underbuilt (with thickness less than 1 m) and with the side slopes steeper than 1.5H:1V. This was also observed during the 2024 Inspections | ▪ To decrease the risk of the thermal degradation of the airstrip foundation, B2Gold should consider increasing the embankment thickness. Additionally, the side slopes of the pad should be regraded to achieve a 2H:1V slope. | ▪ Carried over from 2024 AGI<br>▪ 2024 & 2025-AGI-M-6 |
| | ▪ Similar to the 2023 and 2024 inspection observations, ponding water was observed at the airstrip toe. This ponding is most prevalent near the south and southwestern portions (specifically near the edges) of the airstrip. A series of tension cracks along the southwestern crest was observed during the inspection. | ▪ Watch these areas (specifically as temperatures annually warm-up at site from winter to spring and to summer conditions). Consideration should be given to redirecting or trying to push any ponding water further away from the toes of the existing MLA airstrip. Pumping down / removal of any ponded water at the toes of the airstrip in the fall (before winter freeze-up) would increase the cold ambient air and ground heat transfer to help slow down permafrost degradation (reduce thawing rates and slow deepening of the active layer). This increased water management may help reduce overall short and long-term maintenance activities. | ▪ Carried over from 2024 AGI<br>▪ 2024 & 2025-AGI-7 |
| | ▪ As noted in previous inspections, the cracking observed along the slopes of the airstrip is expected to be due to thaw settlement. | ▪ Limit any disturbance to the permafrost on either side of the airstrip and take steps to reduce the water flowing or ponding along the airstrip will likely reduce the required maintenance. | ▪ General maintenance/ monitoring |
| | ▪ A tension crack approximately 3 m in length, with an opening of about 1 -1.5 inches, was observed ~ 5 m from the airstrip crest toward the runway. The crack location aligns with the area of ponded water observed at the southwestern toe of the airstrip embankment. | ▪ It is recommended that the ponded water be pumped out and that the runway condition be closely monitored. During the winter season (January 2026), when the ground is frozen, placement of additional fill at the western toe of the airstrip – particularly in areas where ponding was observed – should be | ▪ 2025-AGI-M-11 |

| Infrastructure | Observations | Recommendations and Comments | Recommendation ID |
|---|---|---|---|
| | | considered to reduce permafrost degradation and push surface water away from the embankment toe. | |
| Anchor Pads | ▪ Upstream toe of the pads was found to be impacted by the water erosion, that led to a crack development at the crest of the anchor pad. This was also observed during the 2024 Inspections. | ▪ The crest and toe of the pad should be regularly monitored for progression of the existing crack or development of additional tension cracks. If cracking persists or expands, construction of a stabilization buttress at the affected area should be undertaken to restore slope stability. | ▪ Carried over from 2024 AGI<br>▪ 2024&2025-AGI-8 |
| | ▪ One of the anchor pads is obstructing the existing stream channel, resulting in ponded water accumulating on the northern side of the pad. This condition was also observed during the 2024 inspection. The extent of ponding at the toe of the pad has increased since the 2024 inspection. | | |
| | ▪ Erosion due to the waves of the northern slope of the pads was observed during the inspection. | ▪ Monitor the slopes and consider strategic placement of riprap at the toe of the pads along the shoreline to prevent the erosion. | ▪ 2025-AGI-M-12 |

# 7 Final Remarks

Despite the observations and comments provided in this AGI (refer to Table 3 and Table 4), the Back River site is reasonably aligning with the expected geotechnical standards. The main observations from the 2025 AGI were quite similar to those from the 2023 and 2024 AGIs. The site is now in operation but continues to be in more of a transitional stage as additional surface, civil, mining, water and waste management infrastructure continually is being constructed to build out the infrastructure to the planned configurations and ultimate sizes. There has been an increased focus on monitoring, water management, and enhancing fill thicknesses for better thermal protection with the recent construction and designs but these areas should still be further expanded on as ongoing construction and operations continue.

This report includes observations of the interim construction state in various areas to facilitate improvements in the final configuration of the earthworks and water management infrastructure as construction progresses. It also suggests proactively implementing management or other engineering controls to help reduce long-term maintenance requirements.

For completeness, additional comments and observations are provided in Figures 1 to 12 and Appendix A to Appendix D.

The executive summary at the beginning of this document presented five of the top priorities that are suggested to be further addressed and prioritized for consideration in 2026.

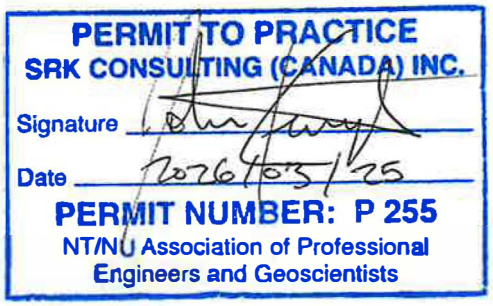
# Closure

This report, Goose & MLA Project Sites – 2025 Annual Geotechnical Inspection, was prepared by

Anna Timchenko, PhD, EIT
Senior Consultant




John Kurylo, MSc, PEng
Principal Consultant (Geotechnical / Civil)




All data used as source material plus the text, tables, figures, and attachments of this document have been reviewed and prepared in accordance with generally accepted professional engineering and environmental practices.

# References

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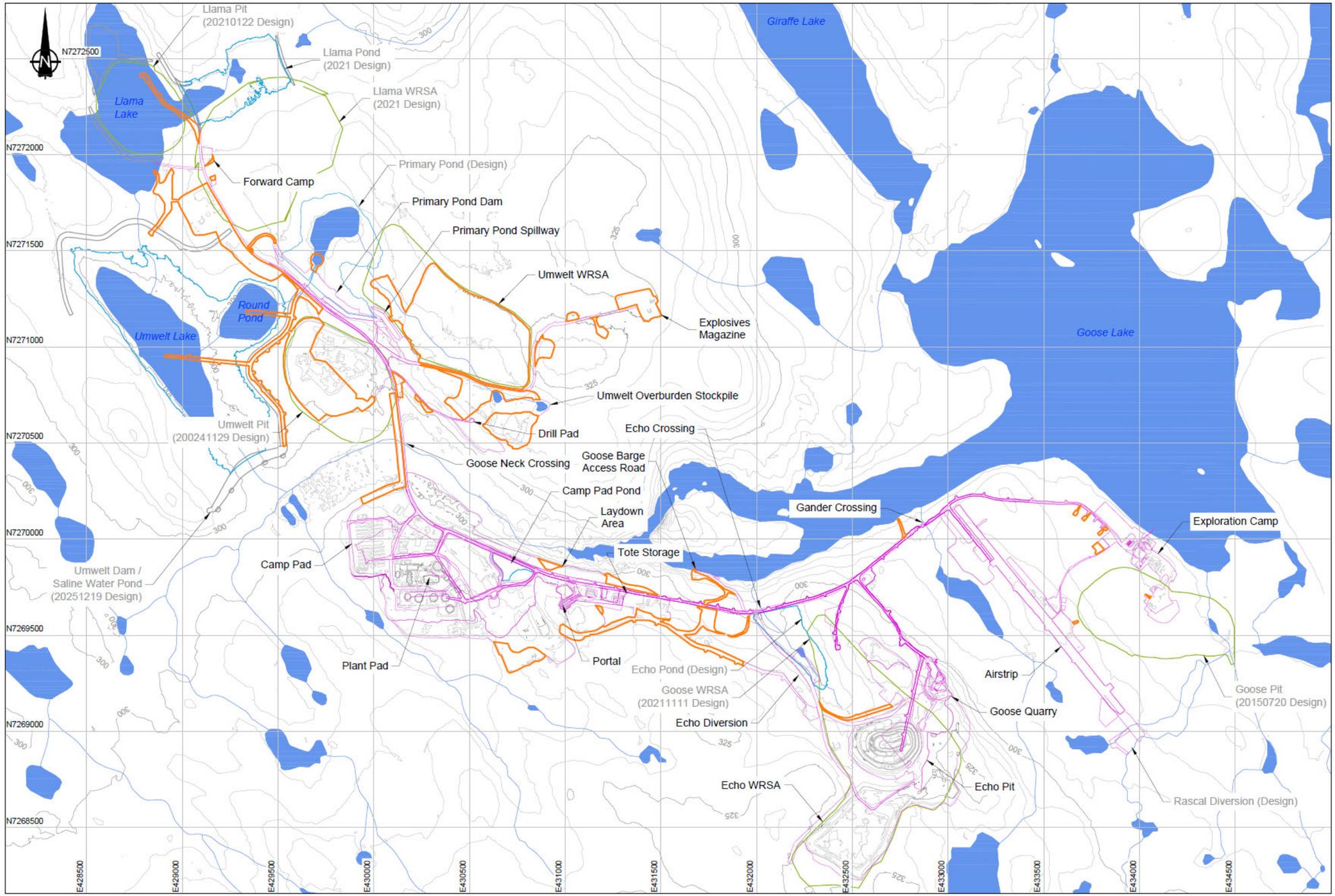
SRK (2026b). Back River Project: 2025 Site-wide Ground Thermal Monitoring – Annual Reporting. Revision 01. Prepared for B2Gold Back River Corp. Project CAPR004313. March 2026.

# Figures




**LEGEND**

- Design Pit and Dump Infrastructure
- Design Infrastructure
- Previous As-Constructed Infrastructure
- 2025 As-Constructed Infrastructure

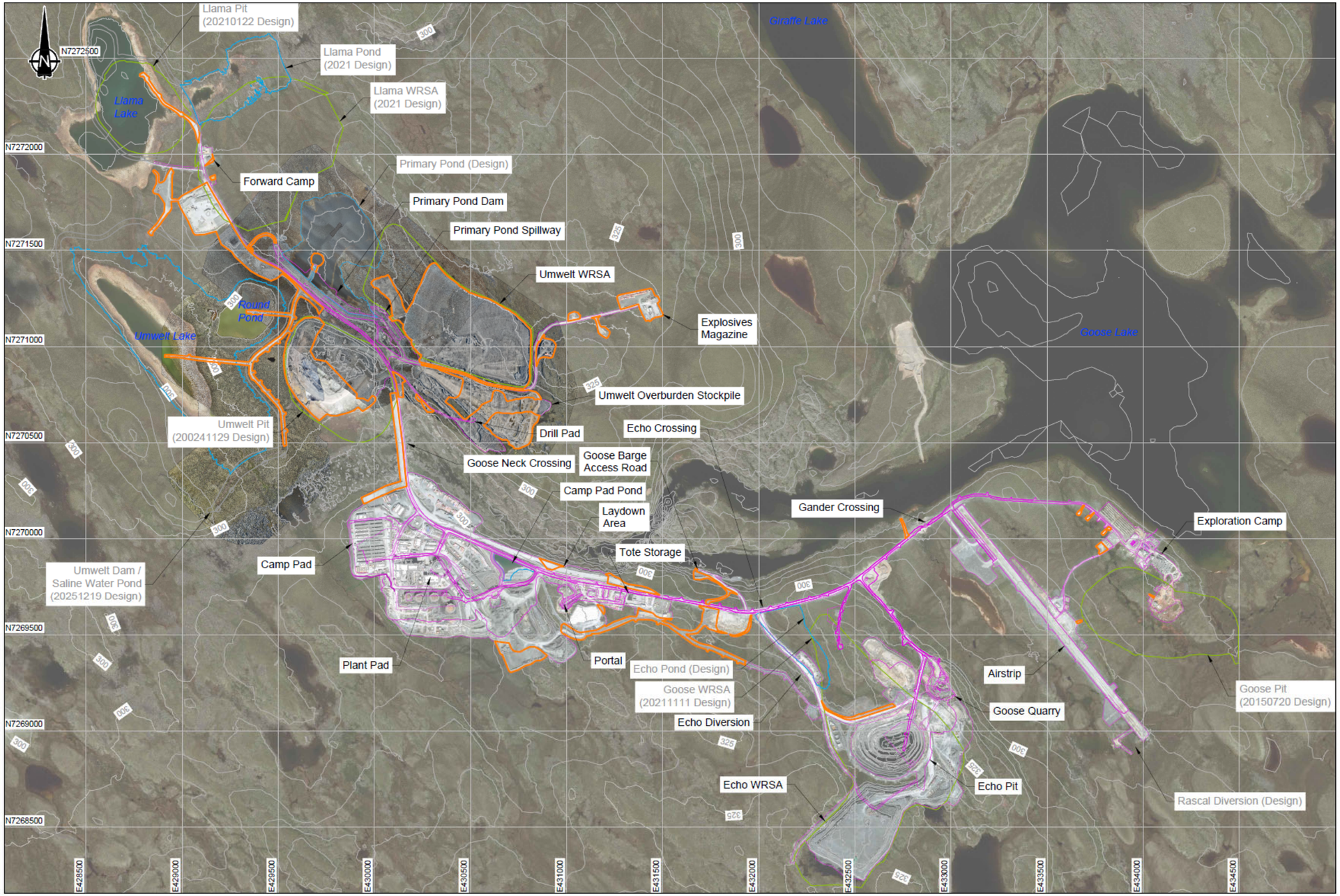
**NOTES**

1. All units are in meters unless otherwise specified.
2. Contours are shown at 5.0 m intervals.

**REFERENCES**

NAD83 UTM Zone 13.

| | | |
|---|---|---|
| srk consulting | B2GOLD NUNAVUT | 2025 Annual Geotechnical Inspection |
| Job No: CAPR004312<br>Filename: BackRiver_MLA&Goose_2025AGI_Figures..pdf | Back River Project | **Goose Lake Site Plan View** |
| | | Date: 2026-03-06 \| Approved: JBK \| Figure: 1 |




**LEGEND**

- Design Pit and Dump Infrastructure
- Design Infrastructure
- Previous As-Constructed Infrastructure
- 2025 As-Constructed Infrastructure

**NOTES**

1. All units are in meters unless otherwise specified.
2. Contours are shown at 5.0 m intervals.

**REFERENCES**

NAD83 UTM Zone 13.
Aerial Imagery is compiled from:

- 20250816 Aerial Photo
- 20250817 Aerial Photo
- 20250909 Aerial Photo

srk consulting

Job No: CAPR004312
Filename: BackRiver_MLA&Goose_2025AGI_Figures..pdf

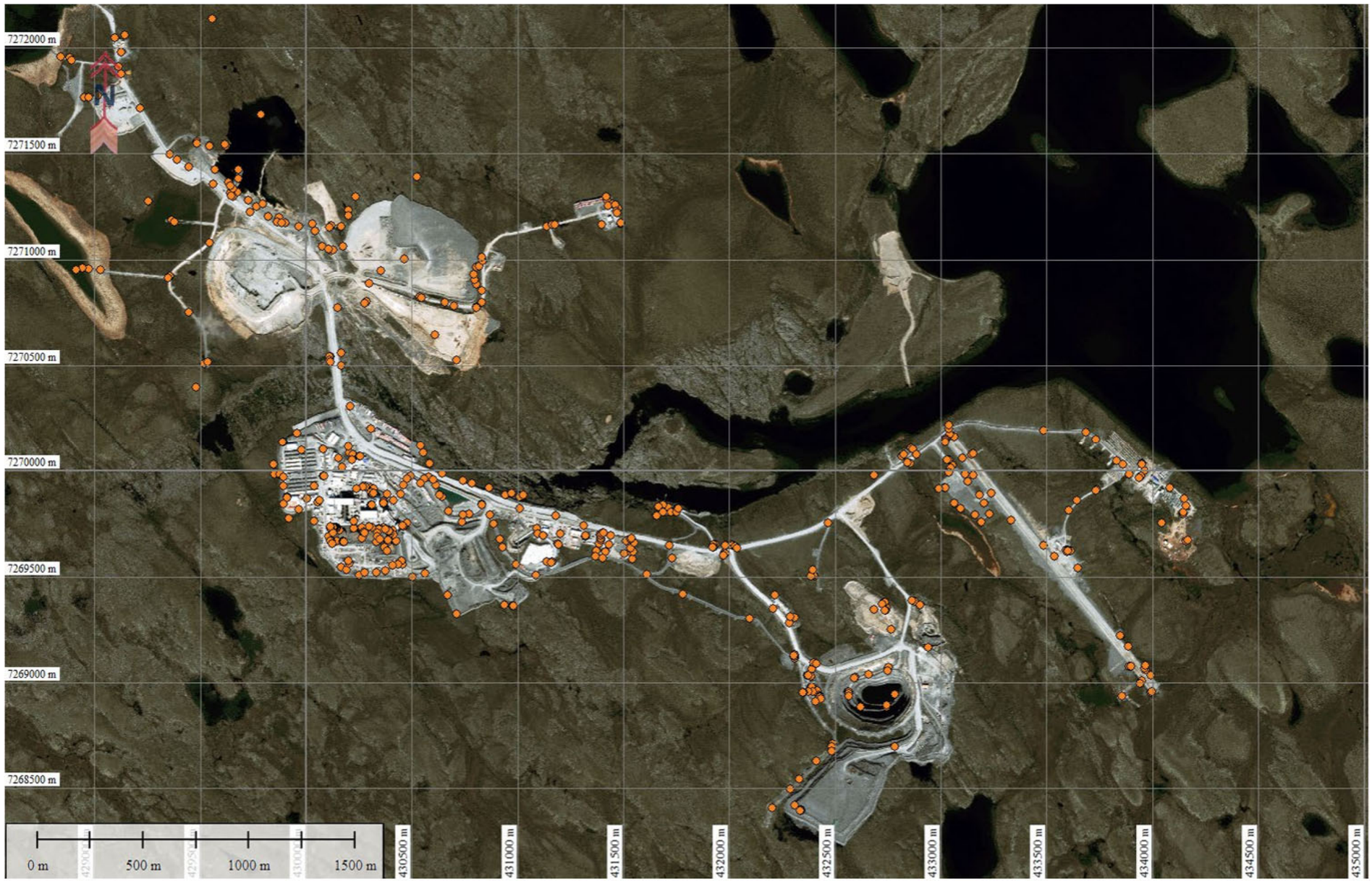
B2GOLD NUNAVUT

Back River Project

2025 Annual Geotechnical Inspection

**Goose Lake Site Plan View with Imagery**

Date: 2026-03-06
Approved: JBK
Figure: **2**




**LEGEND:**

- Points Along the 2025 Inspection Track

Notes:

1. Drone Images were provided by B2Gold in August 2025.

| | | |
|---|---|---|
| srk consulting | B2GOLD NUNAVUT | 2025 Annual Geotechnical Inspection |
| Job No: CAPR004312<br>Filename: BackRiver_MLA&Goose_2025AGI_Figures..pdf | Back River Project | **Goose Site Inspection Areas**<br>Date: 2026-03-06 \| Approved: JBK \| Figure: **3** |




Dataset; Sentinel-2 L1C
Date: 2016-07-07




Dataset; Sentinel-2 L1C
Date: 2017-07-09




Dataset; Sentinel-2 L1C
Date: 2018-07-11




Dataset; Sentinel-2 L1C
Date: 2019-07-24

Notes:

1. All images from free Sentinel-2 L1C satellite data.

| | | |
|---|---|---|
| srk consulting | B2GOLD NUNAVUT | 2025 Annual Geotechnical Inspection |
| Job No: CAPR004312<br>Filename: BackRiver_MLA&Goose_2025AGI_Figures..pdf | Back River Project | **Goose Site**<br>**Satellite Image Review – 1 of 3** |
| | | Date: 2026-03-06 / Approved: JBK / Figure: **4** |










Dataset; Sentinel-2 L1C
Date: 2022-07-06




Dataset; Sentinel-2 L1C
Date: 2023-07-24

Notes:

1. All images from free Sentinel-2 L1C satellite data.

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|---|---|---|
| srk consulting | B2GOLD NUNAVUT | 2025 Annual Geotechnical Inspection |
| Job No: CAPR004312<br>Filename: BackRiver_MLA&Goose_2025AGI_Figures..pdf | Back River Project | **Goose Site**<br>**Satellite Image Review – 2 of 3** |
| | | Date: 2026-03-06 / Approved: JBK / Figure: **5** |




Dataset; Sentinel-2 L1C
Date: 2024-07-14



Dataset: PlanetScope Scene
Date: 2025-07-15

Notes:

1. All images from free Sentinel-2 L1C and PlanetScope Scene satellite data.

srk consulting

Job No: CAPR004312
Filename: BackRiver_MLA&Goose_2025AGI_Figures..pdf

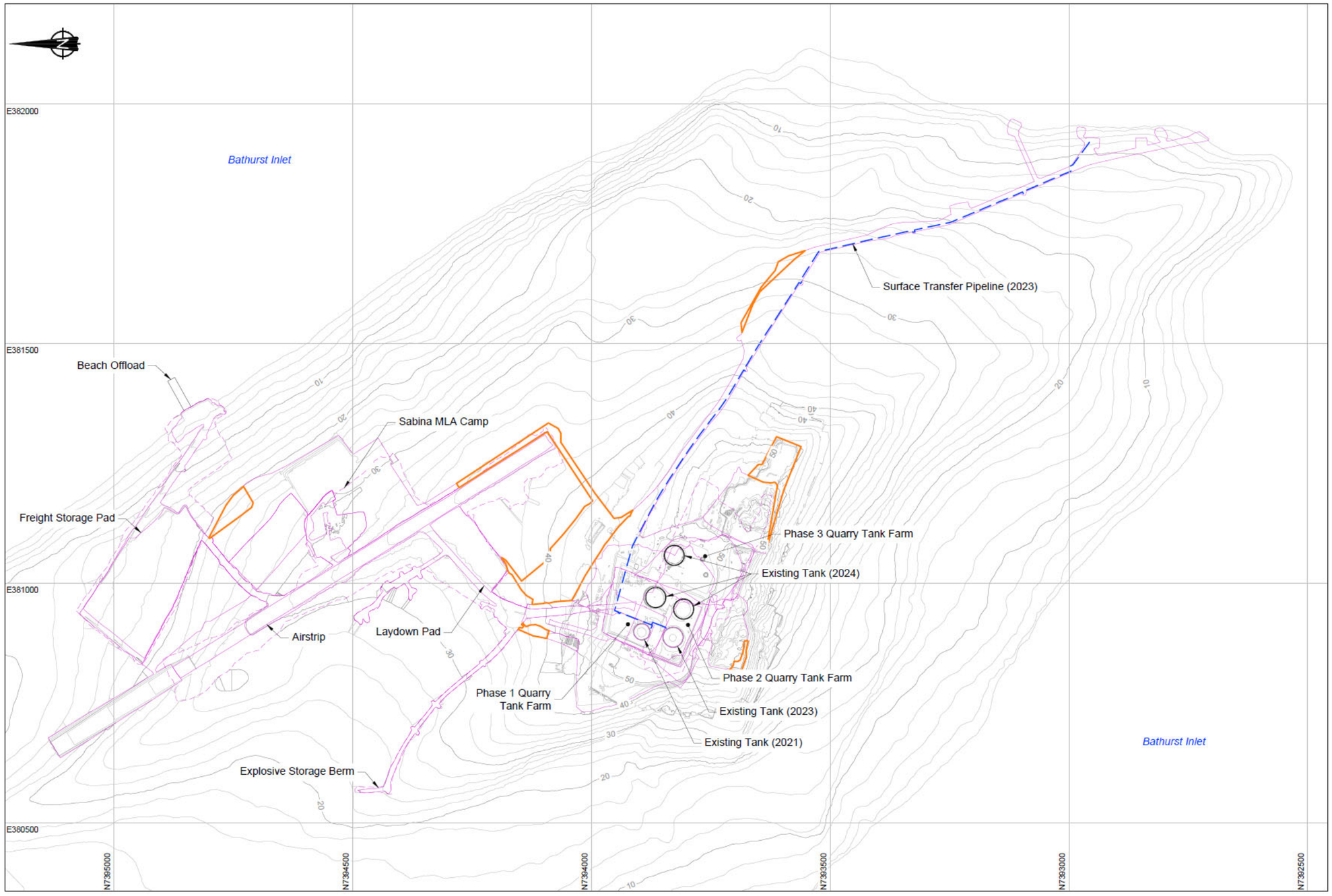
B2GOLD NUNAVUT

Back River Project

2025 Annual Geotechnical Inspection

**Goose Site**
**Satellite Image Review – 3 of 3**

Date: 2026-03-06 | Approved: JBK | Figure: **6**




**LEGEND**

- 2018 Initial Survey
- Previous As-Constructed Infrastructure
- 2025 As-Constructed Infrastructure

**NOTES**

1. All units are in meters unless otherwise specified.
2. Contours are shown at 2.0 m intervals.

**REFERENCES**

NAD83 UTM Zone 13.

0m 100 200 300

srk consulting

Job No: CAPR004312
Filename: BackRiver_MLA&Goose_2025AGI_Figures..pdf

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Back River Project

2025 Annual Geotechnical Inspection

**Marine Laydown Area Plan View**

| Date: | Approved: | Figure: |
|---|---|---|
| 2026-03-06 | JBK | 7 |




**LEGEND**

- 2018 Initial Survey
- Previous As-Constructed Infrastructure
- 2025 As-Constructed Infrastructure

**NOTES**

1. All units are in meters unless otherwise specified.
2. Contours are shown at 2.0 m intervals.

**REFERENCES**

NAD83 UTM Zone 13.
Aerial Imagery is compiled from:

- 20250802 Aerial Photo
- 20250816 Aerial Photo

0m 100 200 300

srk consulting

Job No: CAPR004312
Filename: BackRiver_MLA&Goose_2025AGI_Figures..pdf

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**Marine Laydown Area Plan View with Imagery**

Date: 2026-03-06 | Approved: JBK | Figure: **8**



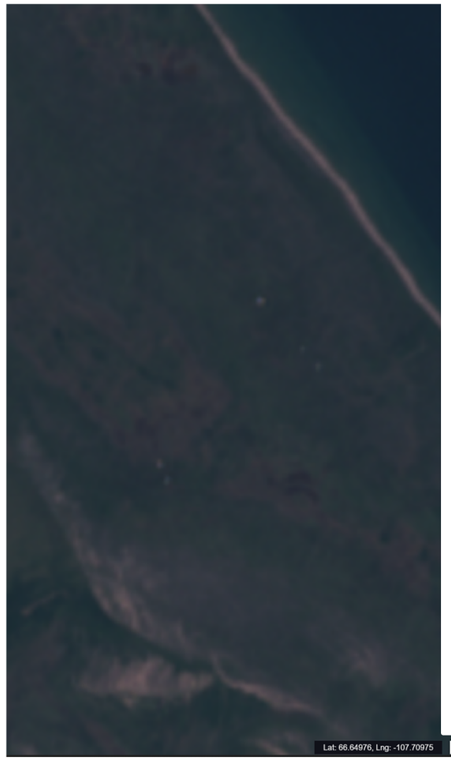

**LEGEND:**

- Points Along the 2025 Inspection Track

Notes:

1. Aerial image for MLA was provided by B2Gold on August 9, 2025
2. Serial images for MLA laydowns, tank farm, camp pad, fuel pipeline road and other infrastructure were provided by B2Gold in September 2025

| | | |
|---|---|---|
| srk consulting | B2GOLD | 2024 Annual Geotechnical Inspection |
| | | **Marine Laydown Area Inspection Areas** |
| Job No: CAPR003105<br>Filename: BackRiver_MLA&Goose_2024AGI_Figure.pdf | Back River Project | Date: 2025-03-11 \| Approved: JBK \| Figure: **12** |




Dataset: Sentinel-2 L1C
Date: 2017-07-10




Dataset: Sentinel-2 L1C
Date: 2018-06-27




Dataset: Sentinel-2 L1C
Date: 2019-06-27




Dataset: Sentinel-2 L1C
Date: 2020-07-01

Notes:

1. All images from free Sentinel-2 L1C satellite data.

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| srk consulting | B2GOLD NUNAVUT | 2025 Annual Geotechnical Inspection |
| Job No: CAPR004312<br>Filename: BackRiver_MLA&Goose_2025AGI_Figures..pdf | Back River Project | **Marine Laydown Area**<br>**Satellite Image Review – 1 of 3** |
| | | Date: 2026-03-06 / Approved: JBK / Figure: **10** |













Notes:

1. All images from free Sentinel-2 L1C satellite data.

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| Job No: CAPR004312<br>Filename: BackRiver_MLA&Goose_2025AGI_Figures..pdf | Back River Project | **Marine Laydown Area**<br>**Satellite Image Review – 2 of 3** |
| | | Date: 2026-03-06 / Approved: JBK / Figure: **11** |



Dataset: PlanetScope Scene
Date: 2025-07-15

Notes:

1. All images from PlanetScope Scene satellite data.

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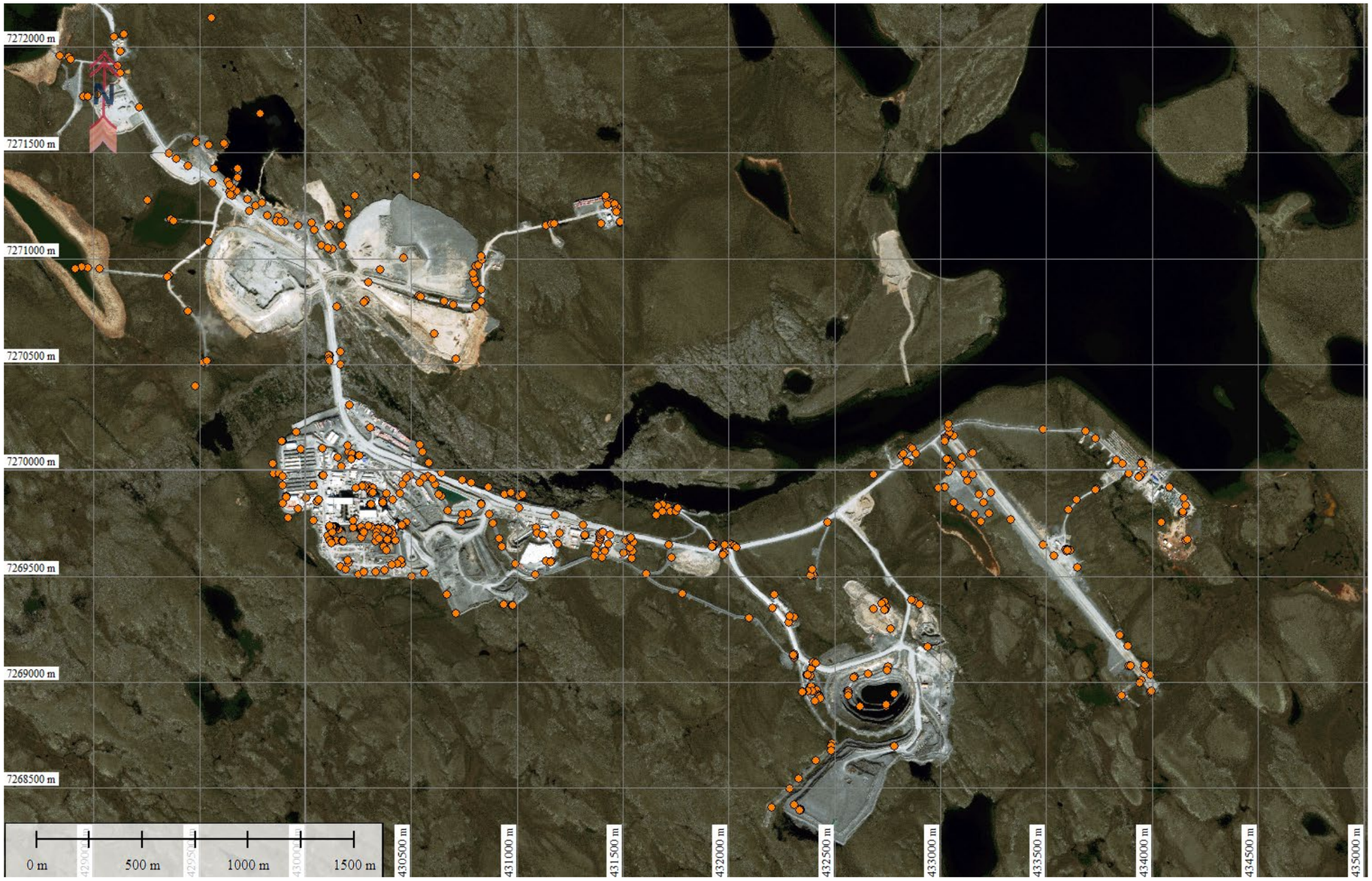
| | | **Marine Laydown Area**<br>**Satellite Image Review – 3 of 3** |
| Job No: CAPR004312<br>Filename: BackRiver_MLA&Goose_2025AGI_Figures..pdf | Back River Project | Date: 2026-03-06 \| Approved: JBK \| Figure: **12** |

# Appendix A Photolog from 2025 Site Visit – Goose

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|---|---|---|
| srk consulting | B2GOLD NUNAVUT | 2025 Annual Geotechnical Inspection |
| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | **Goose Inspected Areas** |
| | | Date: February 2026 / Approved: JBK / Figure: 1 |




| | | |
|---|---|---|
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| | | **Exploration Camp** |
| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | Date: February 2026 / Approved: JBK / Figure: 2 |



G-1: Exploration camp laydown area, looking SW



G-2: Exploration camp laydown area looking towards the airstrip access road



G-3: Historic ponded water areas near exploration camp - in future main pit footprint, looking NE



G-4: Historic ponded water areas near exploration camp – in future main pit footprint looking SE

| | | |
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| | | **Exploration Camp** |
| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | Date: February 2026 / Approved: JBK / Figure: 3 |



G-5: Ponding water north of pond in main pit footprint




G-6: Temporary fuel storage, looking SE




G-7: Incinerator, looking NE



G-8: Exploration camp, looking N

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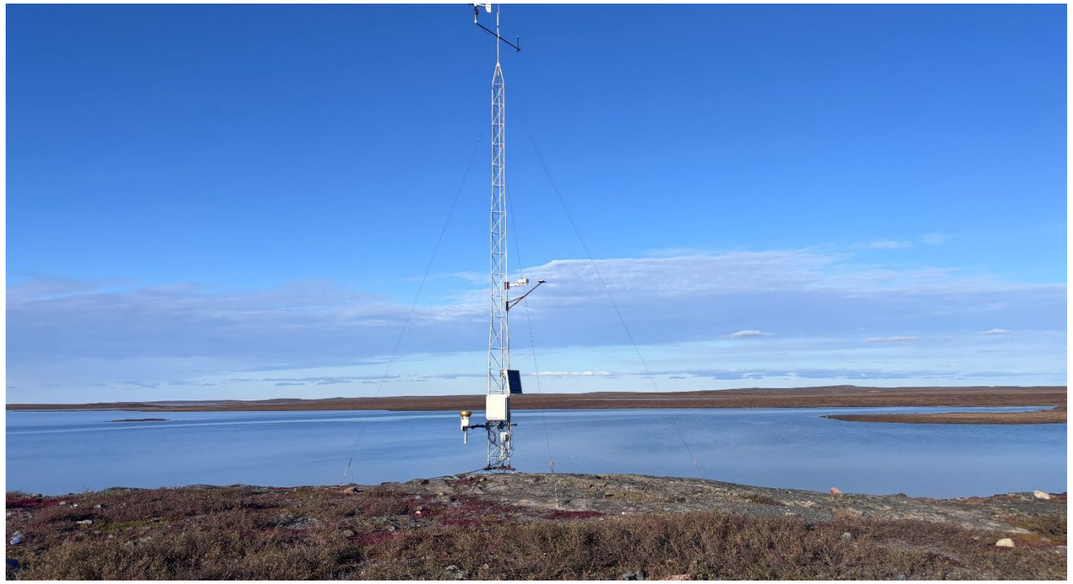
| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | Date: February 2026 / Approved: JBK / Figure: 4 |



G-9: Temporary fuel storage facility and incinerator, looking S



G-10: Goose Lake and tower viewed from exploration camp




G-11: Exploration camp, looking N



G-12: Exploration camp tote storage and berm

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| | | **Exploration Camp** |
| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | Date: February 2026 / Approved: JBK / Figure: 5 |



G-13: Tote storage area and berm



G-14: Tote storage area and berm



G-15: Exploration camp core storage on degraded tundra, looking NW



G-16: Exploration camp tote storage and Quonset, looking SE

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| | | **Exploration Camp** |
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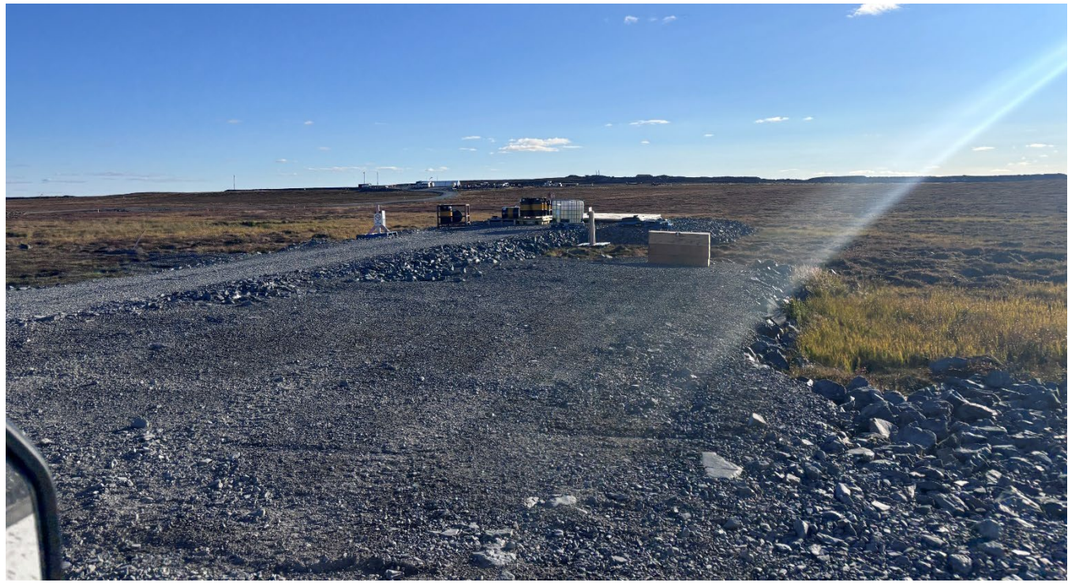
G-17: Laydown, looking S towards airstrip



G-18: Helipad



G-19: Helipad



G-20: Exploration camp road, looking E

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| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | Date: February 2026 / Approved: JBK / Figure: 7 |



G-21: Culverts under the airstrip access road, looking N



G-22: Exploration camp viewed from airstrip access road



G-23: Airstrip Road, looking towards exploration camp



G-24: Tundra N of airstrip access road – Note thickness of road rockfill

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| | | **Exploration Camp** |
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| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | **Gander Crossing – Culverts** |
| | | Date: February 2026 / Approved: JBK / Figure: 9 |



G-25: North side of road rockfill above twin culverts, looking E



G-26: Downstream (N) side of twin culverts, looking E



G-27: Downstream (N) side of eastern culvert

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| | | **Gander Crossing – Culverts** |
| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | Date: February 2026 / Approved: JBK / Figure: 10 |



G-28: Interior of eastern culvert, looking upstream



G-29: South side road rockfill, looking SW



G-30: Upstream (S) side of twin culverts



G-31: Upstream (S) side of twin culverts, looking NE

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| | | **Gander Crossing – Culverts** |
| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | Date: February 2026 / Approved: JBK / Figure: 11 |




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| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | **Goose Airstrip** |
| | | Date: February 2026 / Approved: JBK / Figure: 12 |



G-32: SW slope of SW airstrip apron, looking SE



G-33: Slope of SW apron, looking NW



G-34: SW apron at W corner



G-35: Slope face of SW apron

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G-36: Below SW apron toe, looking NE



G-37: S corner of SW apron, looking NW



G-38: SW apron, looking NE

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| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | Date: February 2026 / Approved: JBK / Figure: 14 |



G-39: SE rockfill of SW apron, looking SW – Some larger boulders notes near edges



G-40: Looking NE towards runway from SW apron



G-41: Airstrip rockfill, looking NW



G-42: Smaller sinkhole in SW apron (expected from crush material migration in to voids of larger material)

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G-43: SW side of runway, looking SE



G-44: Looking N across runway



G-45: Airstrip runway access road rockfill, looking NW



G-46: Airstrip runway access road settlement, looking NW

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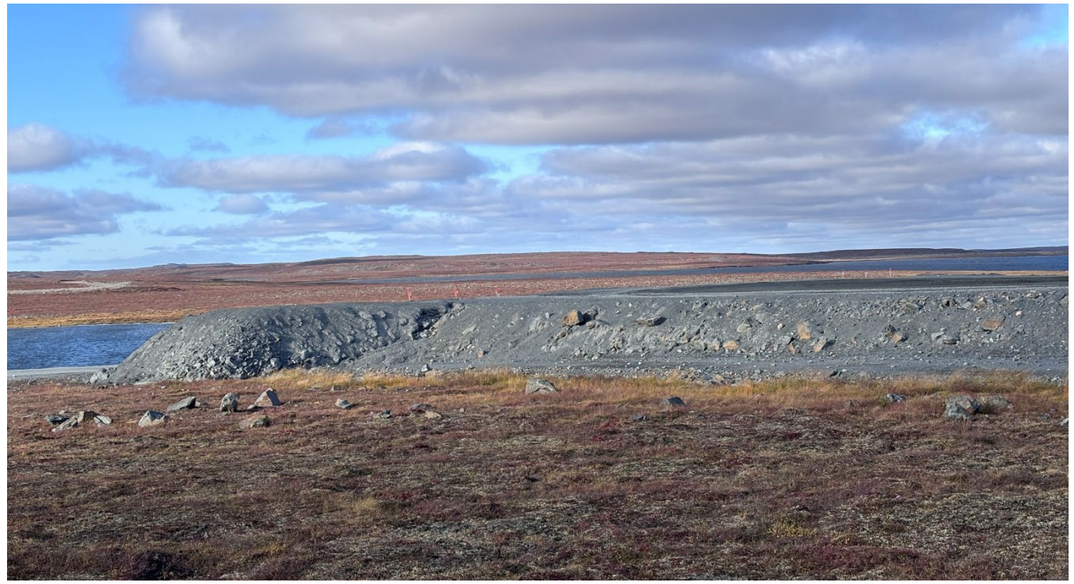
| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | Date: February 2026 / Approved: JBK / Figure: 16 |



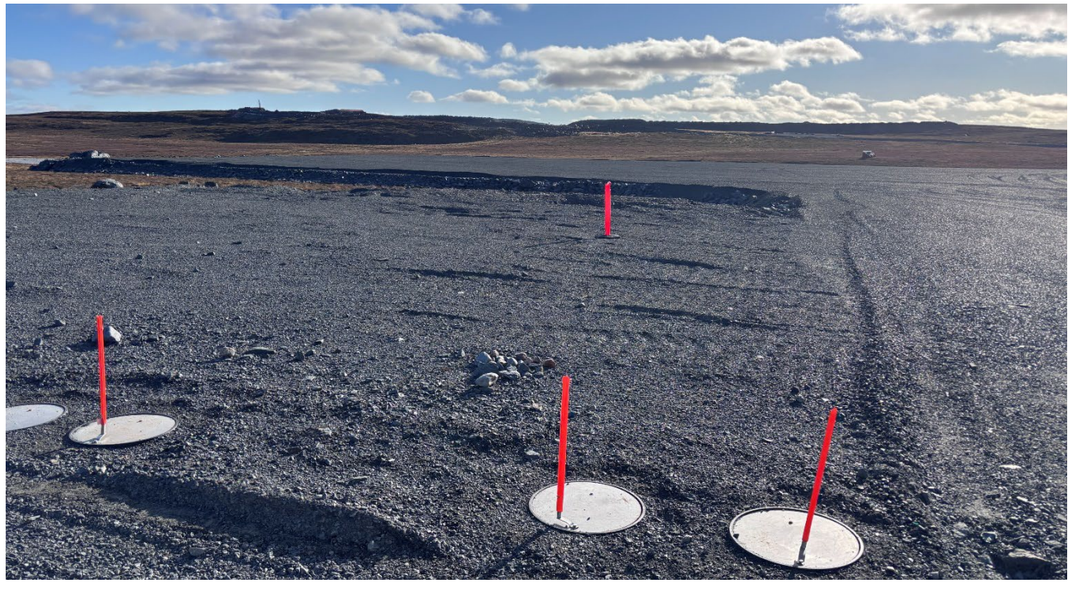
G-47: Airstrip rockfills at NW end of runway



G-48: SW airstrip apron, looking SE



G-49: SW apron, looking SW.



G-50: South side of SW airstrip apron, viewed from runway

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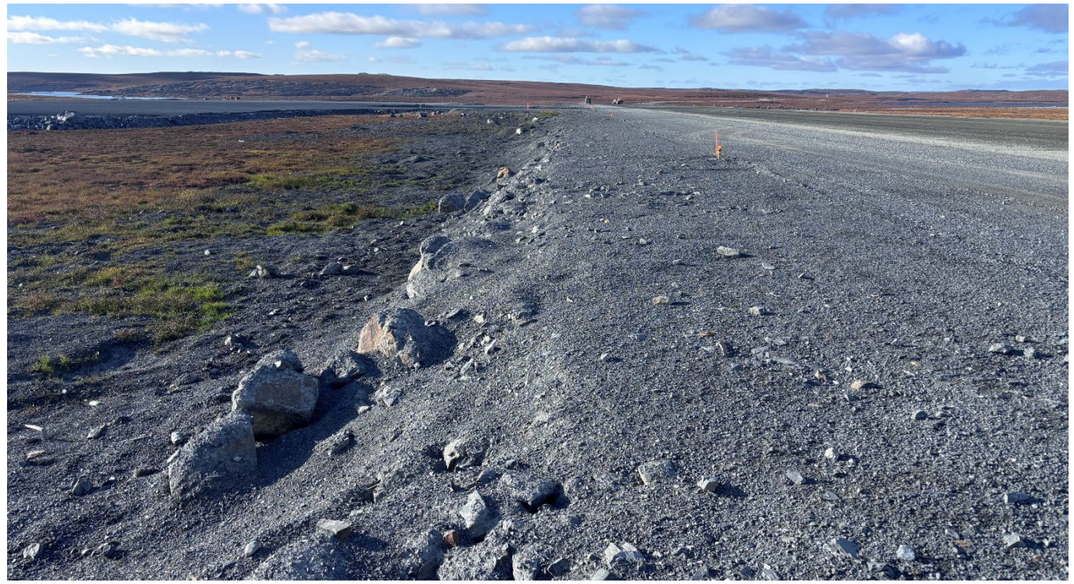
| | | Date: February 2026 / Approved: JBK / Figure: 17 |



G-51: SW runway rockfill, looking NW



G-52: SW runway rockfill, looking SE – Undefined edge in area



G-53: View towards exploration camp from airstrip



G-54: Ponding water at SE end of airstrip

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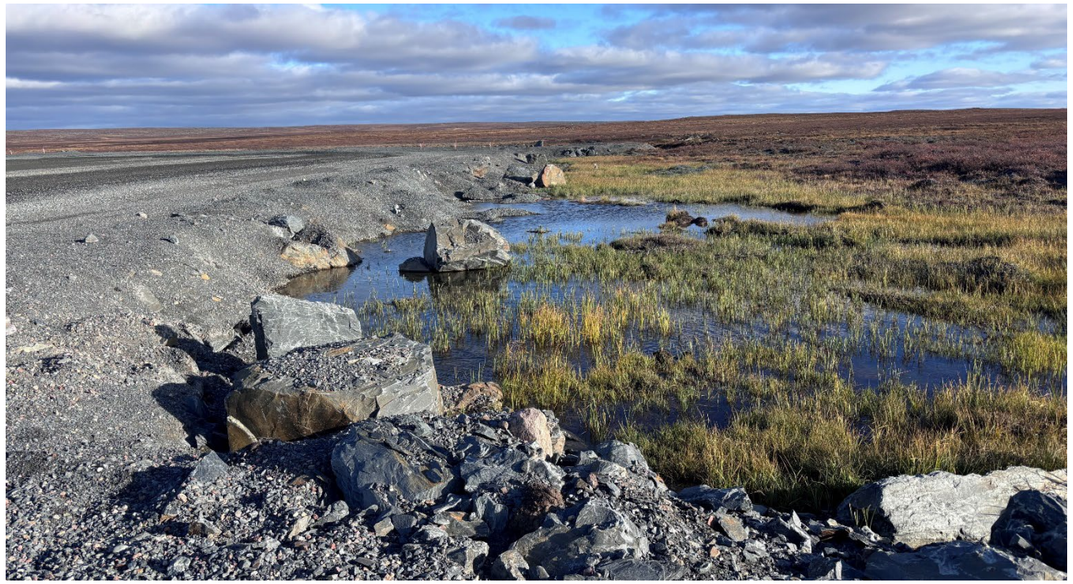
G-55: View towards airstrip lighting apron, looking W – Exposed geotextile visible



G-56: Ponding at SE end of runway, looking SE



G-57: Ponding at SE end of runway, looking E



G-58: Pond beside unconstructed ‘Rascal Diversion” area, looking NW

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G-59: Stream beside SE end of runway, looking NE – lower pad thickness in area, ongoing settlement



G-60: Stream beside SE end of runway, looking NE



G-61: Culvert under SE end of runway



G-62: NE side of airstrip – Looking NE at the shoulder

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| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | **Goose Airstrip** |
| | | Date: February 2026 / Approved: JBK / Figure: 20 |



G-63: Erosion pathway on NE side of airstrip – Looking SE



G-64: Airstrip runway, looking NW



G-65: Erosion pathways on NE side of runway



G-66: Erosion pathways and ponding on NE side of runway

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| | | **Goose Airstrip** |
| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | Date: February 2026 / Approved: JBK / Figure: 21 |



G-67: View towards exploration camp from NE apron



G-68: Slopes of NE apron south of laydown area



G-69: Erosion on NE apron, looking SE



G-70: Erosion NE apron, facing N

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G-71: Erosion pathway on NE apron



G-72: Shipping container near edge of pad



G-73: Airstrip laydown area and runway, looking NW



G-74: Erosion beside laydown area

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G-75: Typical runway slope, looking SE



G-76: Unfinished construction of airstrip lights



G-77: Erosion pathway at NW end of runway



G-78: Slopes between All-Weather Road and NW end of runway

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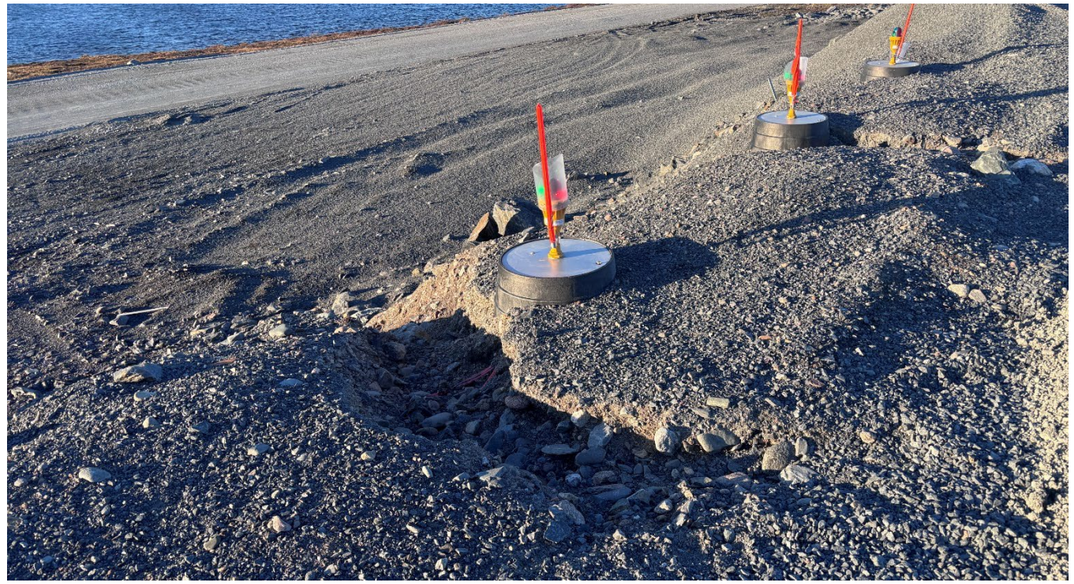
Filename: Back River_Goose_2025_AGI_Photolog.pdf

Back River Project

2025 Annual Geotechnical Inspection

**Goose Airstrip**

| Date: | Approved: | Figure: |
|---|---|---|
| February 2026 | JBK | 24 |



G-79: Erosion at NW end of runway, above All-Weather Road



G-80: : Erosion at NW end of runway – exposed cables



G-81: Erosion pathway at NW end of airstrip



G-82: Erosion pathway at NW end of airstrip

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| | | **Goose Airstrip** |
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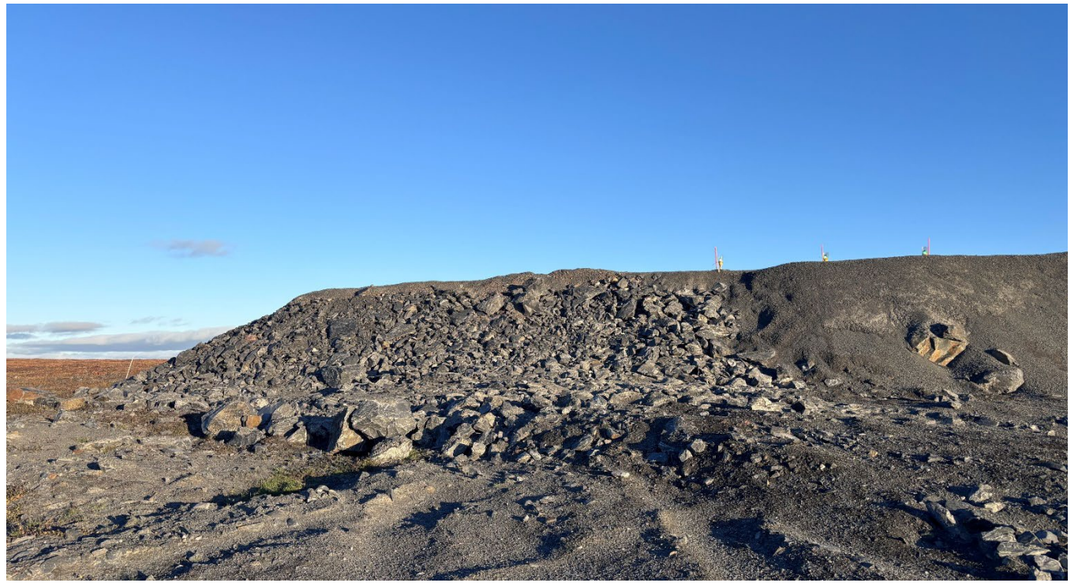
G-83: Erosion at NW end of airstrip



G-84: Erosion pathways at NW end of airstrip beside airstrip lights



G-85: NW end of runway



G-86: Typical rockfill of All-Weather Road beside airstrip

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| | | **Goose Airstrip** |
| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | Date: February 2026 / Approved: JBK / Figure: 26 |



G-87: Airstrip and SW apron, looking N

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| | | **Goose Airstrip** |
| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | Date: February 2026 / Approved: JBK / Figure: 27 |



G-88: Airstrip and SW apron, looking W

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| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | **Goose Airstrip** |
| | | Date: February 2026 / Approved: JBK / Figure: 28 |




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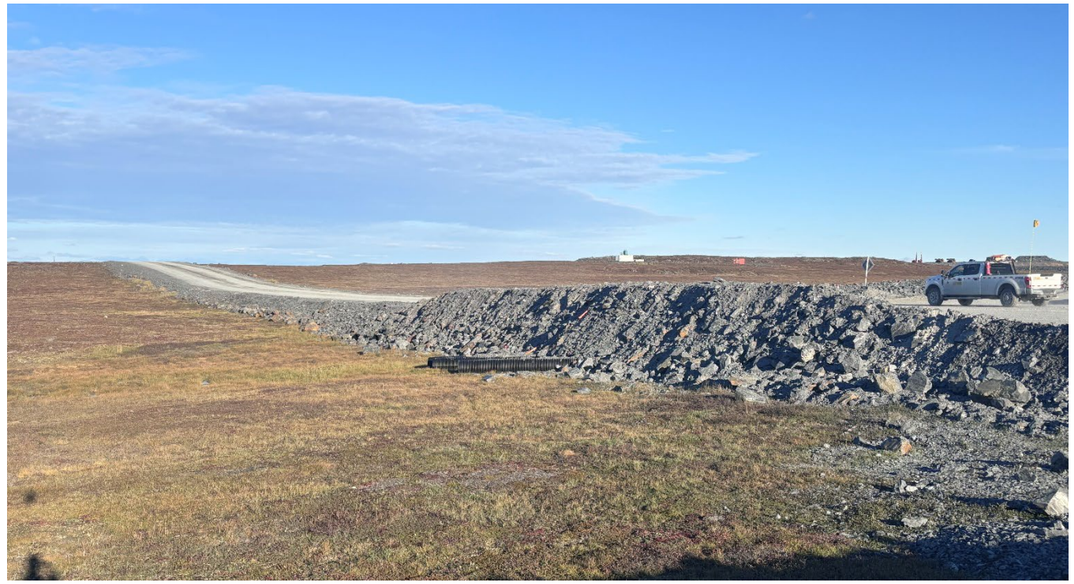
| | | **Echo Crossing** |
| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | Date: February 2026 / Approved: JBK / Figure: 29 |



G-89: N rockfill of All-Weather Road looking towards echo crossing culverts



G-90A: Downstream (N) end of western culverts



G-90B: Downstream (N) end of western culverts



G-91: Downstream (N) end of eastern culvert

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| | | **Echo Crossing** |
| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | Date: February 2026 / Approved: JBK / Figure: 30 |



G-92: Downstream (N) end of dry culvert



G-93: All-Weather Road N rockfill, looking E



G-94: Ponding on SE corner of junction between the All-Weather Road and Echo Pit Haul Road



G-95: Upstream (S) end of western culverts

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| | | **Echo Crossing** |
| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | Date: February 2026 / Approved: JBK / Figure: 31 |



G-96: Echo Pit Haul Road W rockfill



G-97: Upstream (S) side of western culverts – Two culverts raised approximately 0.5m from the toe rockfill



G-98: W rockfill of barge area access road, looking NW



G-99: N side of All-Weather Road – lower road thickness in area

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| | | **Echo Crossing** |
| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | Date: February 2026 / Approved: JBK / Figure: 32 |



G-100: E rockfill of access road to Goose barge area, looking N

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| | | **Goose Airstrip** | | |
| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | Date: February 2026 | Approved: JBK | Figure: 33 |




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| srk consulting | B2GOLD NUNAVUT | 2025 Annual Geotechnical Inspection |
| | | **Old Explosive Storage and Echo Rock Quarry** |
| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | Date: February 2026 / Approved: JBK / Figure: 34 |



G-101: Road to old explosive storage, looking SW – Thin access road



G-102: Looking SW towards former “Fountain Tire” pad



G-103: Seacan at end of old explosive storage access road – thin access road



G-104: Pad toe, slope and erosion beside Seacan

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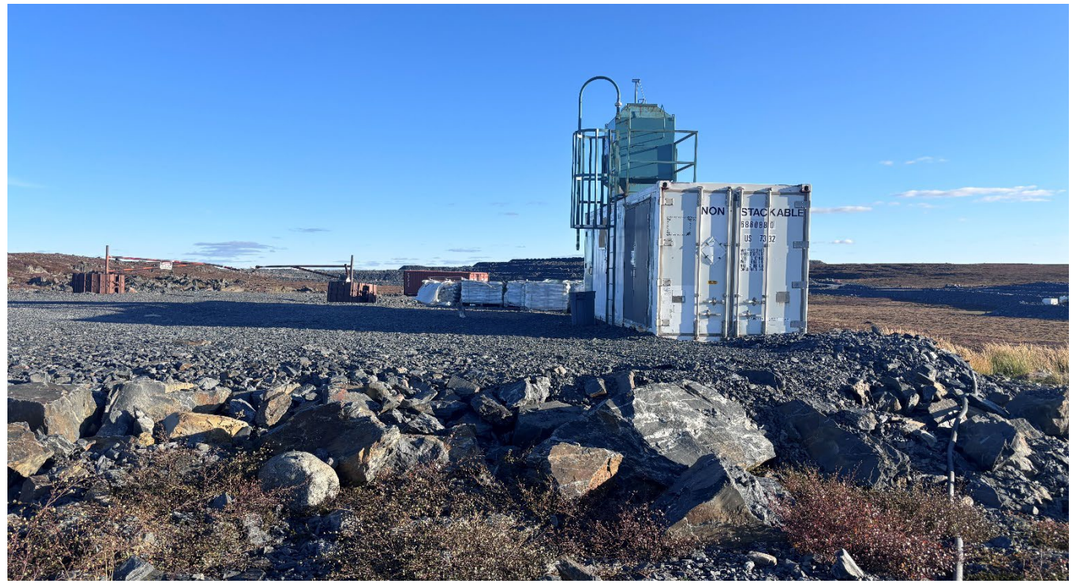
| | | **Old Explosive Storage** |
| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | Date: February 2026 / Approved: JBK / Figure: 35 |



G-105: Old explosive storage pad and laydown, looking N




G-106: Old explosive storage pad, looking S

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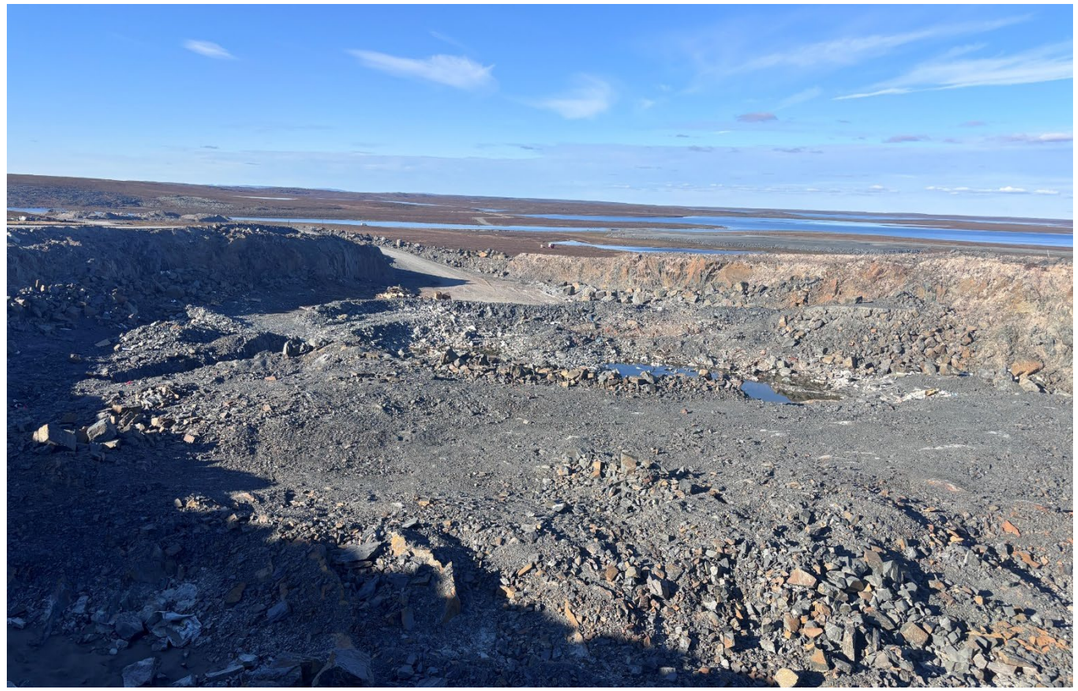

G-107: Rock quarry, looking N



G-109: Rock quarry, looking S



G-108: Entrance to rock quarry, looking SE




G-110: Entrance to rock quarry

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| | | **Echo Rock Quarry** | |
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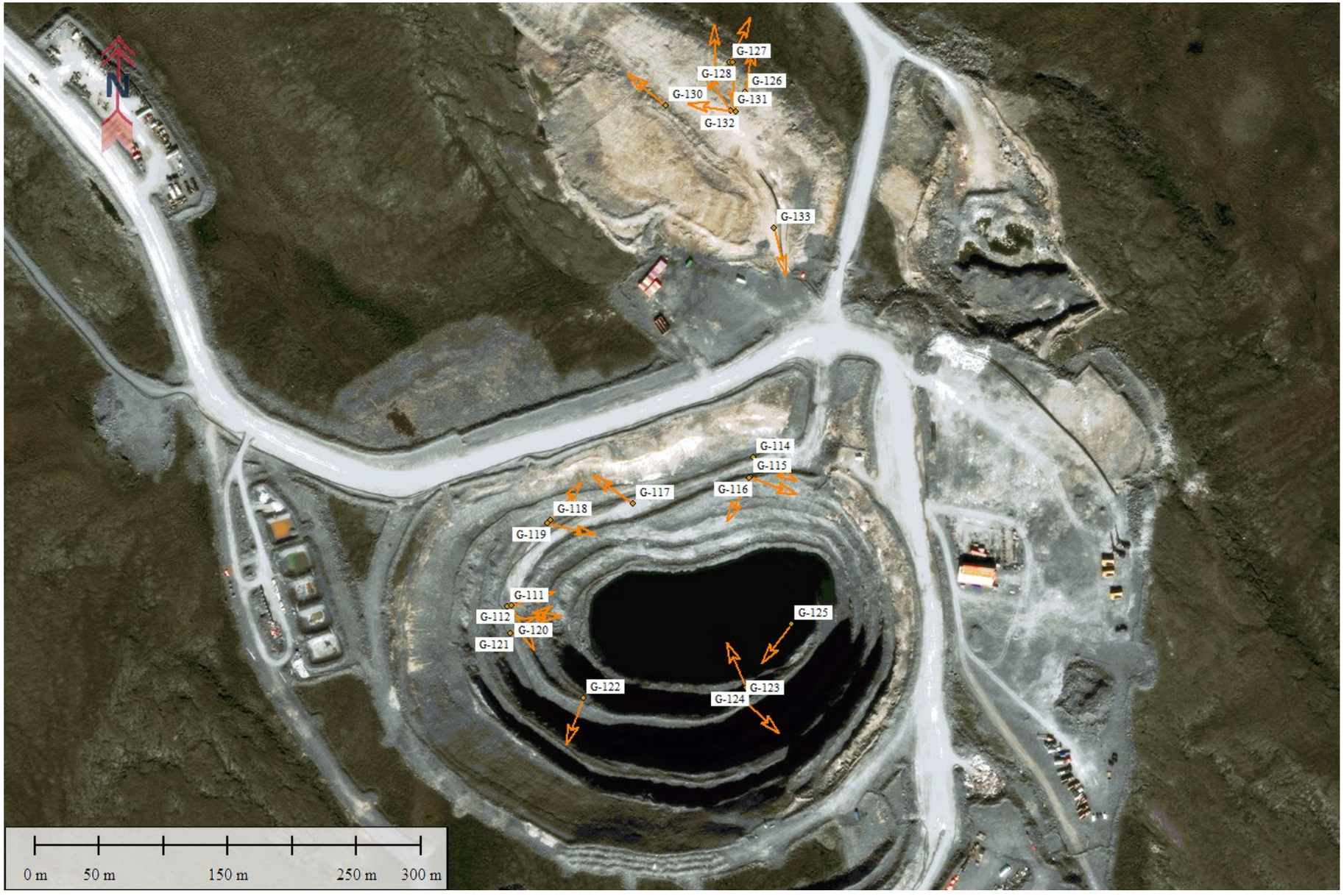


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**Echo TF and Overburden Stockpile**

Job No: CAPR004312

Filename: Back River_Goose_2025_AGI_Photolog.pdf

Back River Project

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|---|---|---|
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G-111: Northern highwall, looking E



G-112: Western wall, looking S + tailings pipeline in place




G-113: Entrance to Echo TF, looking W



G-114: Tailings  pipeline at entrance to Echo TF

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**Echo Tailings Facility**

Job No: CAPR004312

Filename: Back River_Goose_2025_AGI_Photolog.pdf

Back River Project

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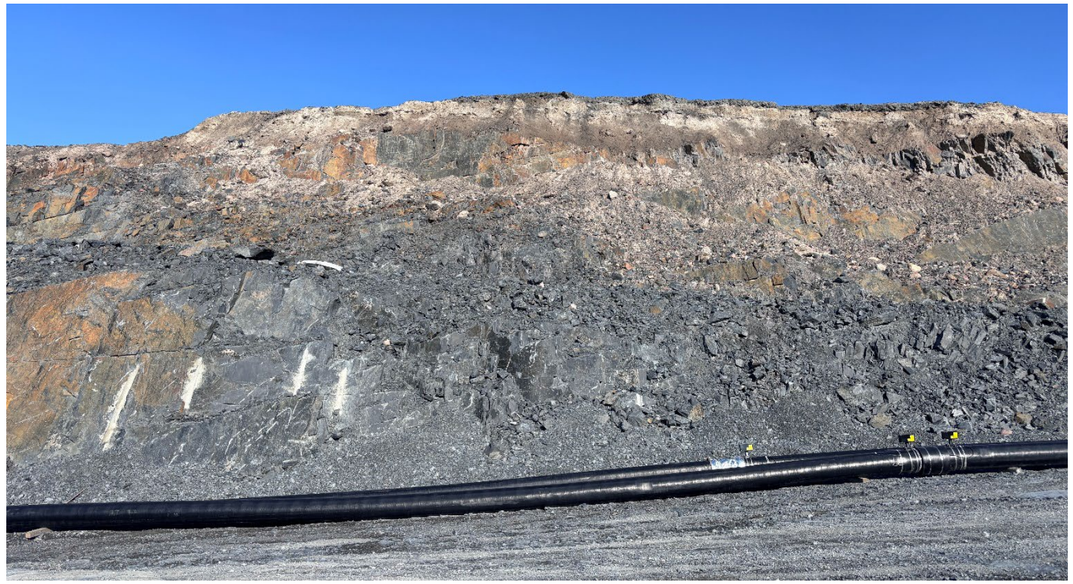
G-115: Overall view of Echo TF



G-116: Echo TF, looking S



G-117: Northern highwall above tailings pipeline



G-118: tailings pipeline, looking E

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G-119: Typical tailings pipeline connection



G-120: Tailings deposition pipeline end, looking E



G-121: Tailings deposition pipeline end, looking NE



G-122: Tailings pipeline, eastern highwall

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G-123: Eastern wall above pit pond



G-124: Tailings deposition pipeline entrance into pond, looking N



G-125: Southern wall and tailings pipeline, looking W

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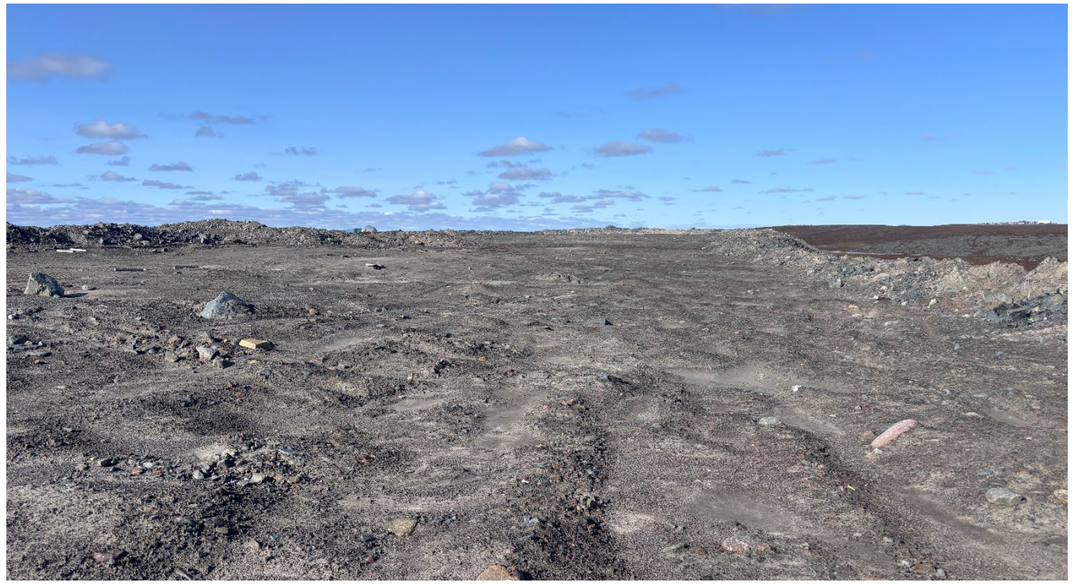
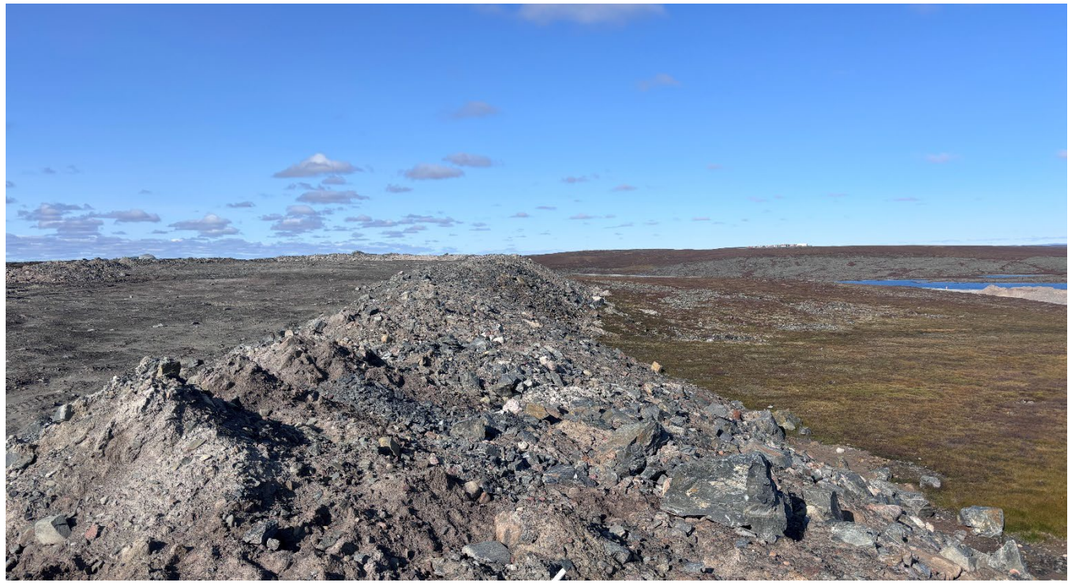


G-126: Echo overburden stockpile - general surface conditions, looking N



G-127: Echo overburden stockpile – eastern slope, looking N



G-128: Pad slope, looking S



G-129: Tension cracks in overburden stockpile pad (from settlement and melt – no large scale stability concerns)

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G-130: Echo Overburden Stockpile – Central part



G-131: Example of the sinkhole in eastern side of the overburden stockpile



G-132: Example of sinkhole in the eastern side of the stockpile



G-133: Looking towards laydown area S of stockpile from stockpile entrance

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| | | **Echo Waste Rock Storage Area and Echo Diversion** |
| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | Date: February 2026 / Approved: JBK / Figure: 45 |



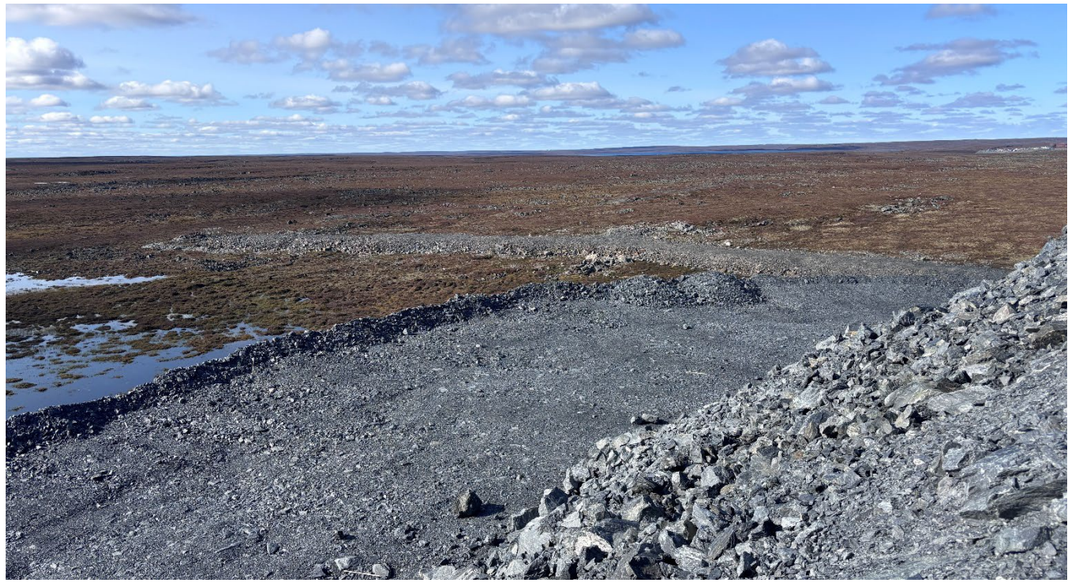
G-134: Entrance road to Echo WRSA, looking SW – Garbage in upper windrow



G-135: Looking SE along berm



G-136: Top of berm, looking SE – Ponding water beside waste rock area



G-137: Looking SW towards Echo Diversion from waste rock storage area - ponding water on SSW end

*Note: Photos from September 2025*

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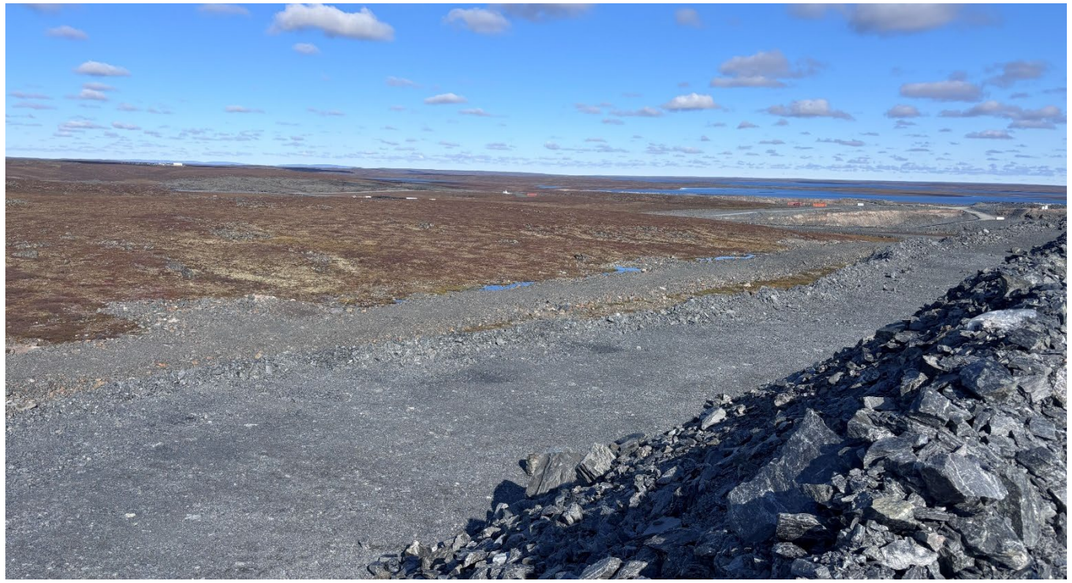
| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | Date: February 2026 · Approved: JBK · Figure: 46 |



G-138: Looking N towards Echo Diversion from waste rock storage area – ponding water beside diversion and steep slope of waste rock dump



G-139: Beginning of diversion, looking SW – some poinding water



G-140: Tension / settlement crack in diversion



G-141: Diversion, looking SW – dump slopes abutting to diversion

*Note: Photos from September 2025*

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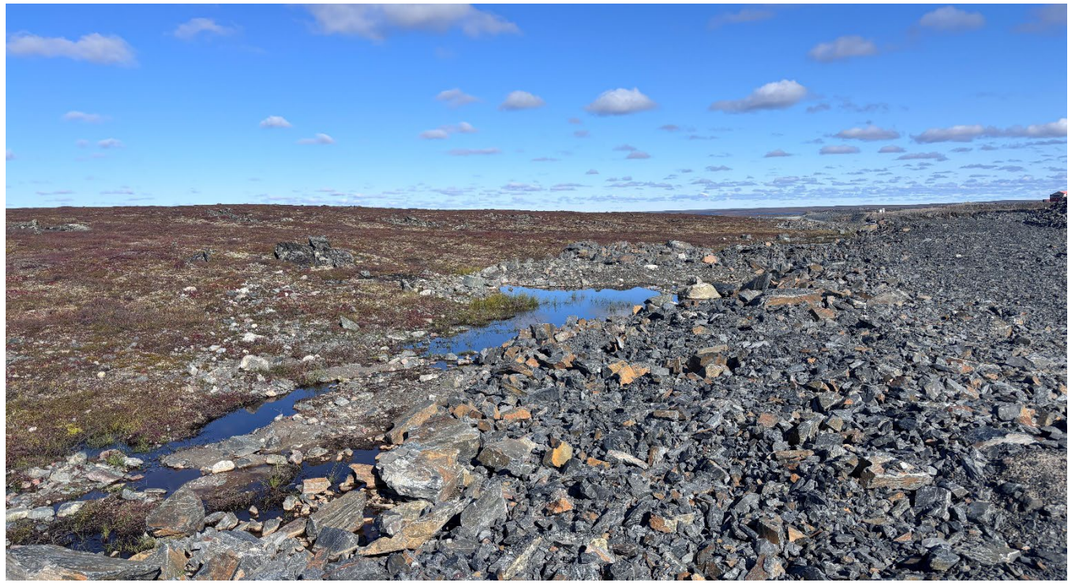
G-142: Ponding water beside diversion, looking SW – thin rockfill placements in area



G-143: Ponding water beside diversion, looking N – undefined edge of diversion slope



G-144: Waste rock dump in pond, as seen from diversion – Steeper slopes into ponded area



G-145: Echo diversion, looking NE

*Note: Photos from September 2025*

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**Former Echo Water Treatment Plant**

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G-146: Treatment pond



G-147: Treatment pond



G-148: Puncture in treatment pond liner



G-149: Gap in treatment pond liner – higher elevation

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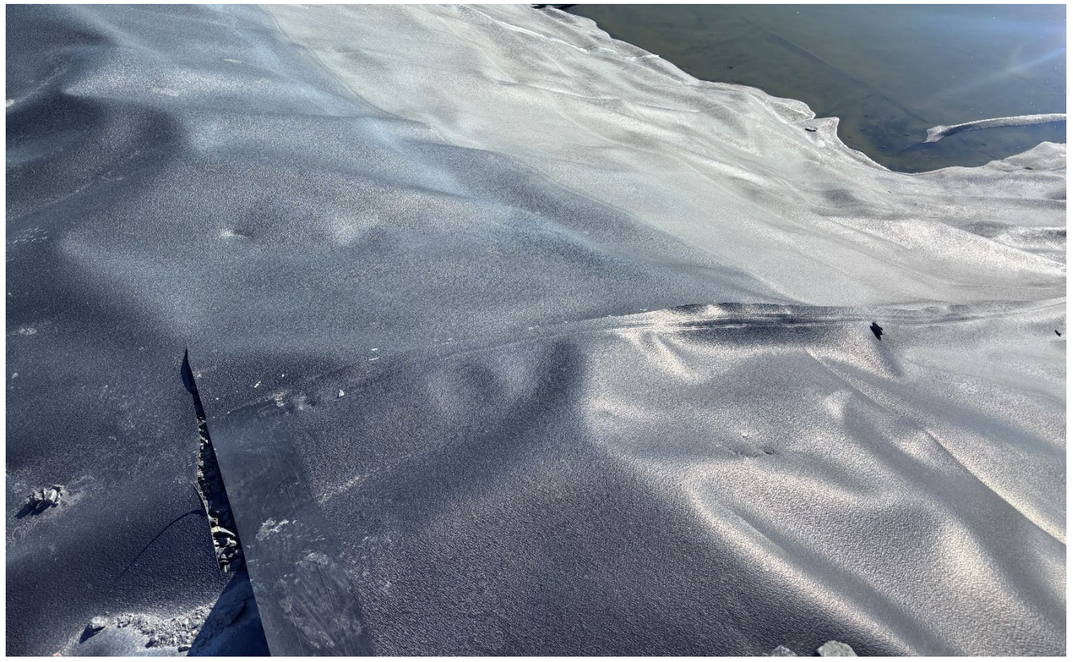
G-150: Treatment pond cell



G-151: Treatment pond liner damage above / top of slope

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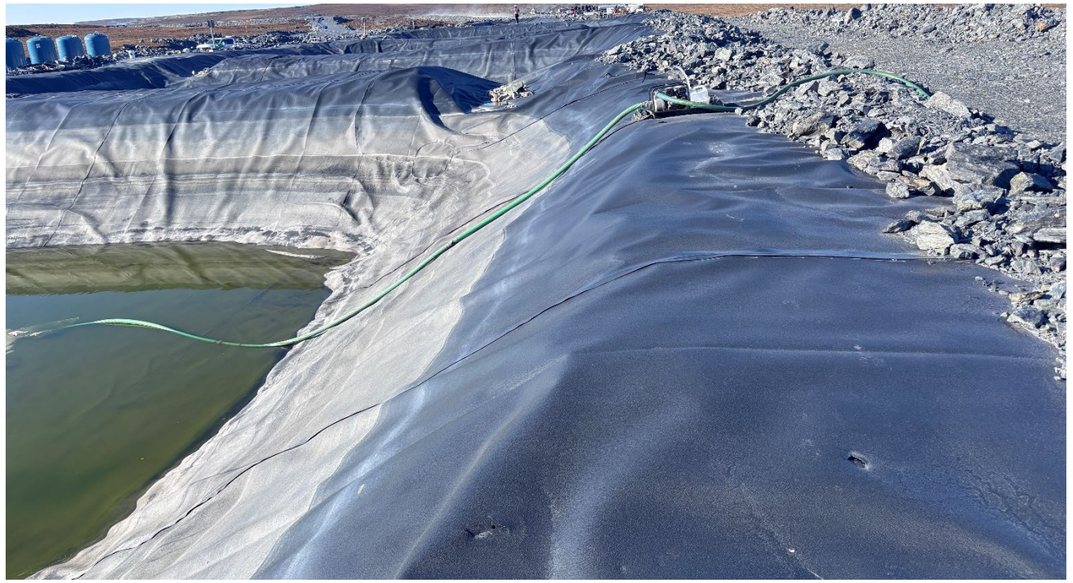
G-152: Exampke liner damage beside southernmost pond



G-153: Treatment pond oversteepened slope and liner damage



G-154: Coarse over-liner material



G-155: Coarse over-liner material

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G-156: Looking SE towards Echo WRSA and diversion from treatment ponds



G-157: Culvert underneath pad



G-158: Downstream of small culvert, looking W



G-159: Downstream of culvert – Some damage to pipe

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G-160: Northernmost treatment pond with rock over liner




G-161: Inconsistent liner and damage to northernmost pond - – low potential containment volume in area



G-162: Liner damage on northernmost pond



G-163: Inconsistent liner placement underneath rock fill

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**Echo Pit Haul Road**

Job No: CAPR004312

Filename: Back River_Goose_2025_AGI_Photolog.pdf

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G-164: tailings pipeline along road beside water treatment plant



G-165: tailings pipeline along road beside water treatment plant, looking SE



G-166: Road beside water treatment plant, looking NW



G-167: Acces road, looking NE

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| | | **Echo Pit Haul Road** |
| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | Date: February 2026 · Approved: JBK · Figure: 56 |



G-168: Pad beside All-Weather Road and Echo Pit Haul Road



G-169: Laydown area and Echo Pit Haul Road, facing S



G-170: Berm at edge of pad, facing SW



G-171: Echo “Fountain Tire” Pad overall view

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G-172: Tire pad and road rockfill, facing W – minor ephemeral stream flow



G-173: Berm on W side of road, facing S

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**Goose Barge Area**

Job No: CAPR004312

Filename: Back River_Goose_2025_AGI_Photolog.pdf

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G-174: Barge access dock, facing NW



G-175: Barge access dock and pad slope above lake



G-176: Slope above barge access road and pipeline, looking S



G-177: Barge access road, looking E – Note ponding water

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G-178: Middle pad above barge access road, looking SE



G-179: Highest pad above barge access road – pad approximately daylighting into slope



G-180: Access road to highest pad and trailer



G-181: Barge area pipeline, looking SE

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| | | **Goose Barge Area** |
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G-182: Barge area access road, looking SE



G-183: Typical slope above Goose Lake

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| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | **Maintenance Laydown, Tote Storage, Sandvik, and Operations Area** |
| | | Date: February 2026 / Approved: JBK / Figure: 63 |



G-184: Parking pad slope above operations area access road, looking S



G-185: Junction between All-Weather Road and operations area access road, looking E



G-186: Parking pad slope above access road, looking N




G-187: Historic discard core and laydown, looking NE

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G-188: Berm beside laydown pad, looking S



G-189: Pad, looking W




G-190: Laydown area and Sandvik, looking E



G-191: Berm between laydown area and tailings pipeline, looking E

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G-192: Tailings pipeline road rockfill above laydown, looking N



G-193: Laydown area N of Sandvik



G-194: Laydown area N of Sandvik



G-195: Pad slope beside Sandvik, looking N

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G-196: Slope besides laydown area, looking NW



G-197: Slope beside Sandvik, looking SW



G-198: Slope beside laydown, facing W – Note differential settlement of northernmost seacan




G-199: Differential settlement of northernmost seacan in Sandvik laydown area

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| | | Date: February 2026 / Approved: JBK / Figure: 67 |



G-200: Differential settlement of seacan, looking E



G-201: Maintenance laydown, looking S




G-202: Underground portal, looking SW



G-203: Maintenance laydown, with cemented rockfill laydown and pad slope behind, looking SW

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G-204: Access road to cemented rockfill laydown and ROM stockpile



G-205: Road rockfill – culvert inlet behind pad (outlet in pad rockfill)



G-206: Tundra, looking SE towards tailings pipeline road rockfill and culverts




G-207: Maintenance warehouse laydown – pad daylighting into tundra / slope

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G-208: Maintenance warehouse and laydown



G-209: Tote Storage Facility: Southern berm



G-210: Tote Storage Facility: Crest of the southern berm, looking NW



G-211: Tote Storage Facility: SE corner

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G-212: Tote Storage Facility: sump



G-213: Tote Storage Facility: Toe of the eastern berm, looking E



G-214: Tote Storage Facility: Crest and side of the northern berm, looking NW



G-215: Tote Storage Facility: Northern berm, looking N form the berm crest

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G-216: Tote Storage Facility: Toe of the eastern berm



G-217: Tote Storage Facility, looking E



G-218: Tote Storage Facility: Western berm, looking N

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| | | Date: February 2026 / Approved: JBK / Figure: 71 |



G-219: ROM stockpile typical slope above road



G-220: Edge of ROM area, looking W towards main plant



G-221: ROM stockpiles as seen from W side, looking E



G-222: ROM stockpile slopes

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G-223: ROM stockpiles, looking N



G-224: Edge of S side of pad, looking E



G-225: Typical stockpile pad surface condition



G-226: ROM stockpile SE end – daylighting into tundra

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G-227: Typical stockpiles, looking N



G-228: Stockpiles and berm at S end

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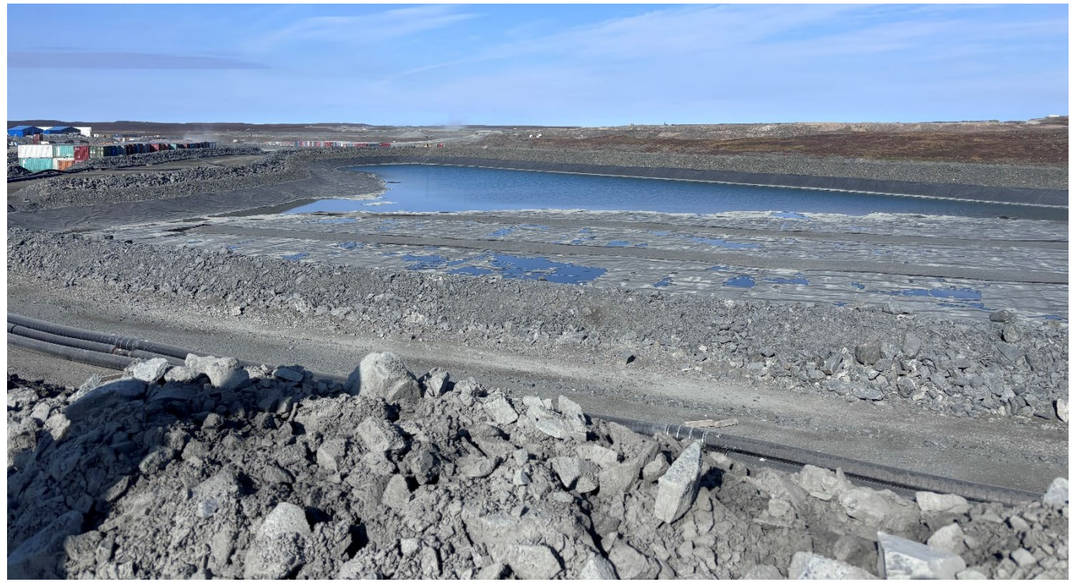
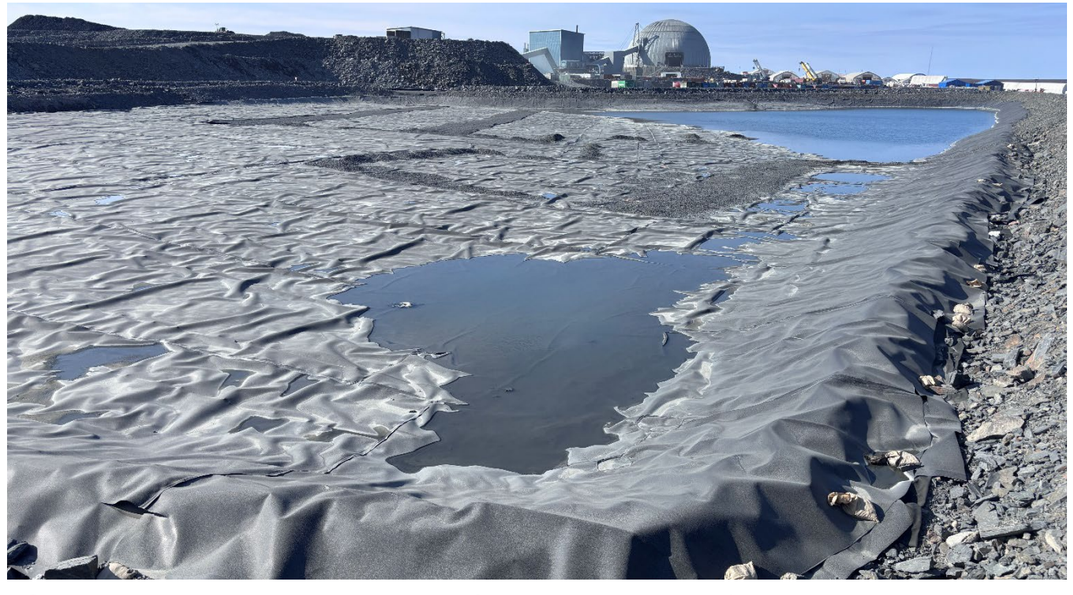
| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | **Camp Pad Contact Water Pond** |
| | | Date: February 2026 / Approved: JBK / Figure: 75 |



G-229: Contact water pond, looking NW



G-230: Contact water pond, looking NE



G-231: Looking E along northern edge of pond – minimal tie-in / anchoring



G-232: Eastern pond slope, looking S

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| | | Date: February 2026 / Approved: JBK / Figure: 76 |



G-233: Typical S edge of liner condition, looking E – liner daylightling / laid ont tundra at this edge



G-234: Ponding water at S edge of pond, looking E – Note varying crest of liner



G-235: Typical liner surface conditions, looking NE

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G-236: Edge of main Camp Pad pond at the time of the inspection, looking NW



G-237: Rock material directly on liner, looking SE



G-238: Liner at NW end of pond

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G-239A: Overall pond view from NW corner



G-239B: Overall pond view from NE corner

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**Camp Pad Contact Water Pond**

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G-240: Underground laydown area as seen from All-Weather Road



G-241: Entrance to tote storage and operations area – Looking S from All-Weather Road



G-242: Pipeline crossing under road, looking S



G-243: All-Weather Road slope below Sandvik laydown, looking W

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G-244: All-Weather Road, looking W



G-245: Entrance to camp pad contact water pond, looking E



G-246: Laydown area and tailings pipeline W of contact water pond



G-247: Berm between tailings pipeline road and seacan laydown area, looking E

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G-248: All-Weather Road N rockfill, looking E



G-249: All-Weather Road N rockfill, looking W



G-250: Downsteam slope of All-Weather Road N rockfill



G-251: Downstream slope of All-weather road. Area marked where some drainage through roickfill or slope relaxations and some coarser material roll out previously noted

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G-252: Damage to tundra due to rockfall from oversteepened slope of All-Weather Road N rockfill – water seepage noted through / below rockfill



G-253: Tundra near toe or rock fill – settlement to be expected near toes



G-254: Silt fencing on N side of road – Looking W



G-255: Road rockfill, looking E – Historic silt fencing at toe

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G-256: Water seepage from road rockfill



G-257: Water seepage from road rockfill

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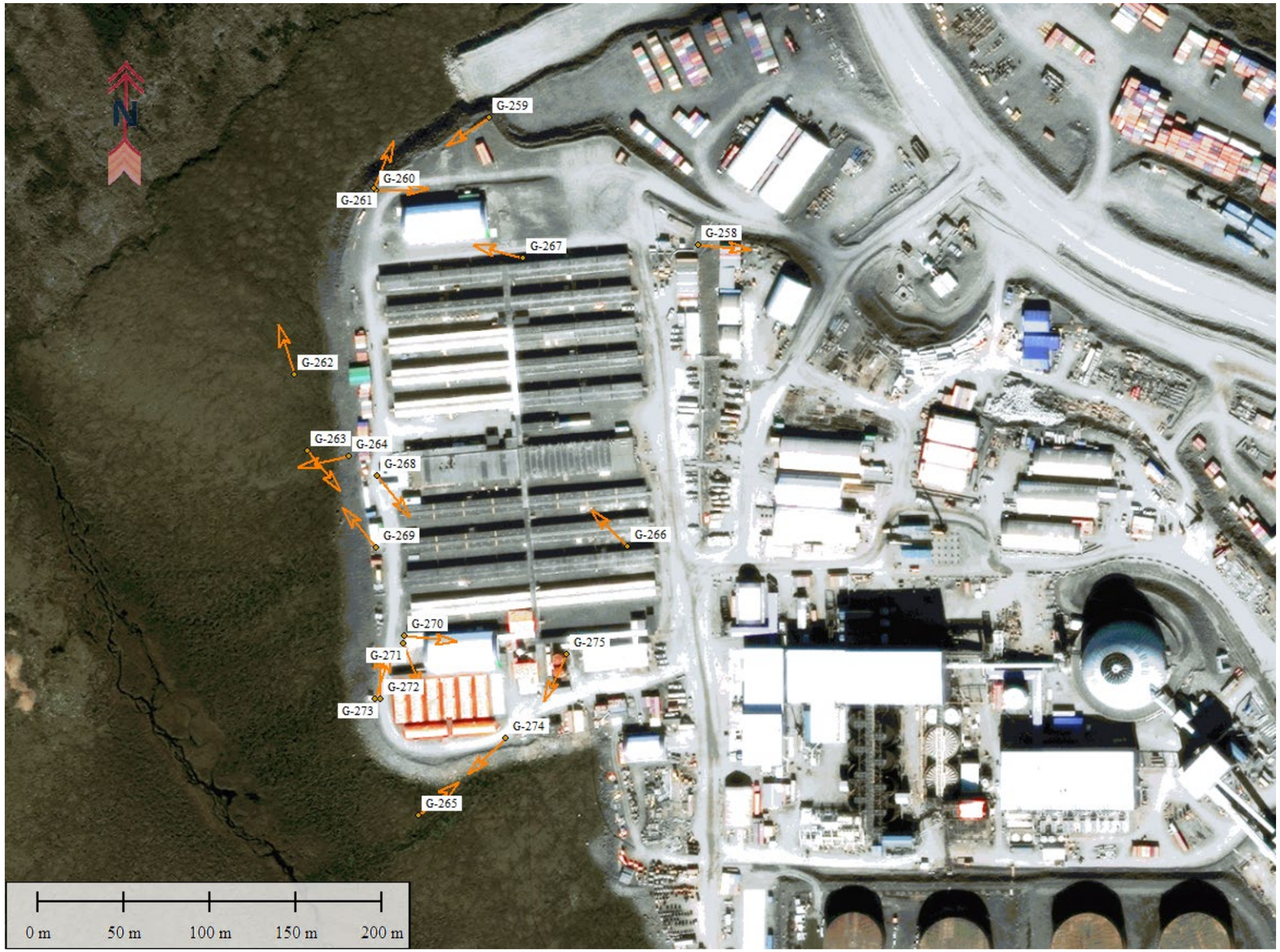


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| | | Date: February 2026 / Approved: JBK / Figure: 86 |



G-258: View towards site services area from camp pad, looking E



G-259: Berm between main camp and main warehouse



G-260: North end of main camp area, looking E



G-261: Camp pad NW slope, looking NE

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G-262: Camp pad W slope, looking N




G-263: Camp pad W slope, looking SE



G-264: Camp pad W slope, looking W

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G-265: S edge of camp pad, looking E – downstream of post (grey water) treatment discharge



G-266: Camp pad area, looking W



G-267: Berm at N end of camp pad, looking W



G-268: Camp pad, example support below ancillary structures (beyond main camp trailers / accommodation). Watch for planning maintenance

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G-269: Seacans close to W camp pad edge



G-270: Surface water flow path / erosion under infrastructure foundation



G-271: Typical foundation slab height above pad surface



G-272: Storage container close to western pad edge, looking NW – settlement noted in area

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G-273: Storage container close to western pad edge, looking N – settlement and gap beneath container noted



G-274: Camp pad southern side, looking W



G-275: Tanks at south end of camp pad

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**Goose Main Plant Area**

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G-276: Storage area S of main camp, looking S



G-277: Laydown S of main camp, looking W



G-278: Pad slope beside laydown on western pad edge



G-279: Ground access from pad, looking SW

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G-280: Laydown S of tank farm, looking NE



G-281: Laydown area and road S of tank farm, looking E



G-282: Laydown area, looking NE



G-283: Southern pad slope, looking W – pipeline on tundra beyond toe

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G-284: Laydown, looking E




G-285: Settlement of laydown area near edge of seacan



G-286: Looking NE from laydown area towards tank farm and ROM stockpile



G-287: Settlement in laydown area

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G-288: Slab construction W of tank farm



G-289: Overall view towards ore dome and plant area from the berm between the All-Weather Road and contact water pond



G-290: Berm between tailings pipeline road and seacan laydown area, looking SE



G-291: Seacan laydown area surface conditions, looking S

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G-292: Laydown area, looking NW



G-293: Laydown area berm, looking SE




G-294: Entrance to plant area



G-295: View towards crusher from road, looking S – area under construction at time of inspection

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G-296: Typical slope below ore dome



G-297: View towards ore dome from road, looking SE



G-298: View towards process plant from road, looking S



G-299: Assay lab typical construction

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G-300: Laydown area E of main camp, looking N




G-301: Laydown area E of main camp, looking S at erosion to slope



G-302: Vent raise, looking NE



G-303: Laydown area beside vent raise

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G-304: Toe of slope beside vent raise, looking SW



G-305: Looking S towards scaffolders and ironworkers area



G-306: Looking W towards vent raise, laydown, All-Weather Road, and tailings pipeline



G-307: Rebar laydown N of pipefitters building

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G-308: Laydown area beside site services, looking E



G-309: Vent raise, looking SE

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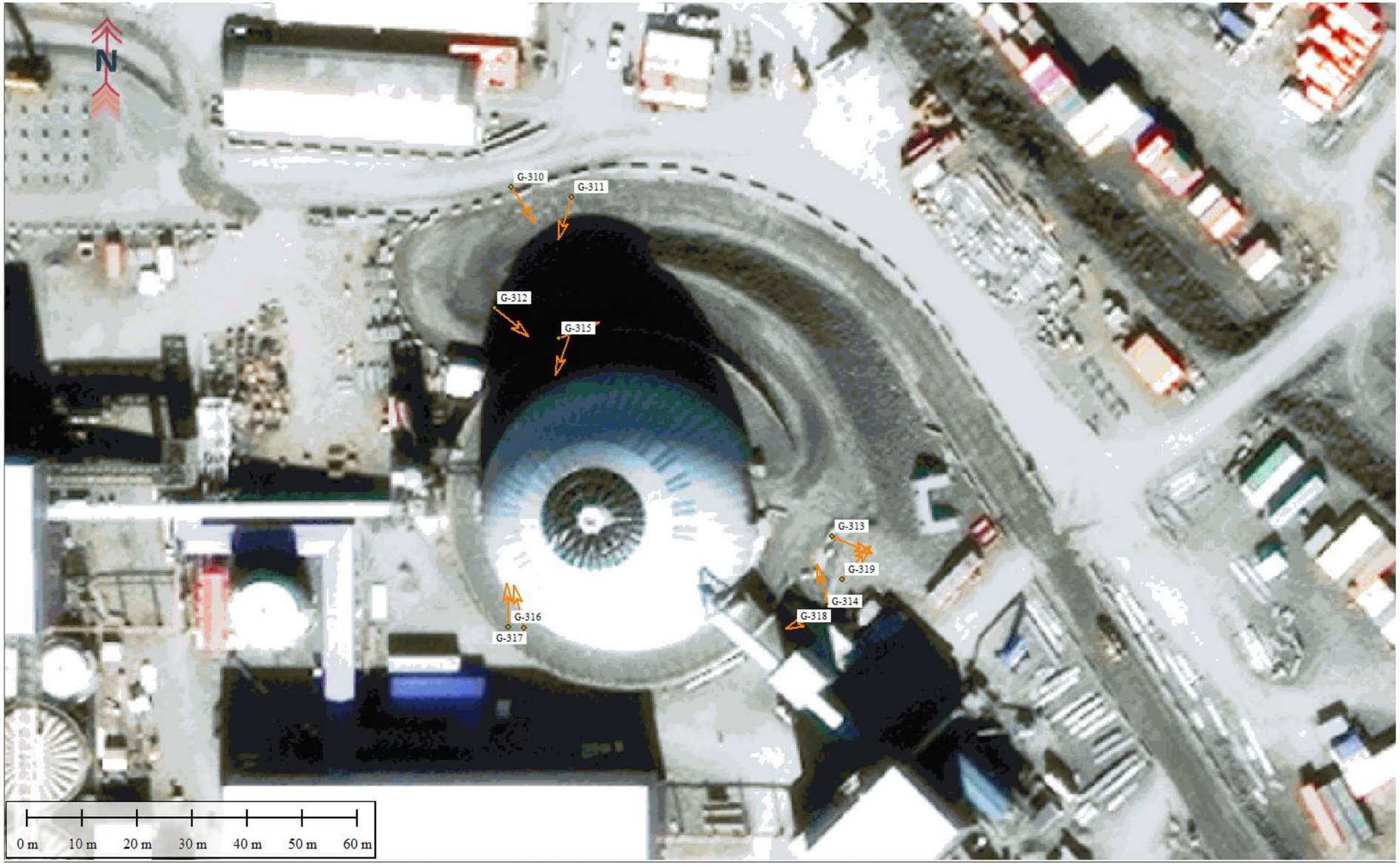


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**Ore Dome MSE Wall**

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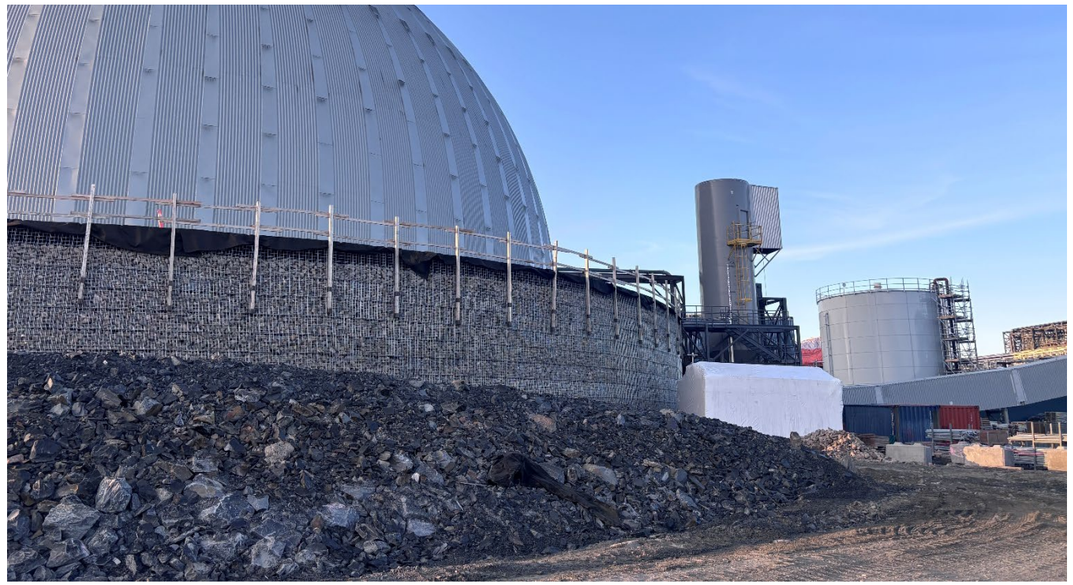
G-310: Ore dome MSE wall, looking S



G-311: Ore dome MSE wall, looking SW



G-312: Typical MSE wall construction

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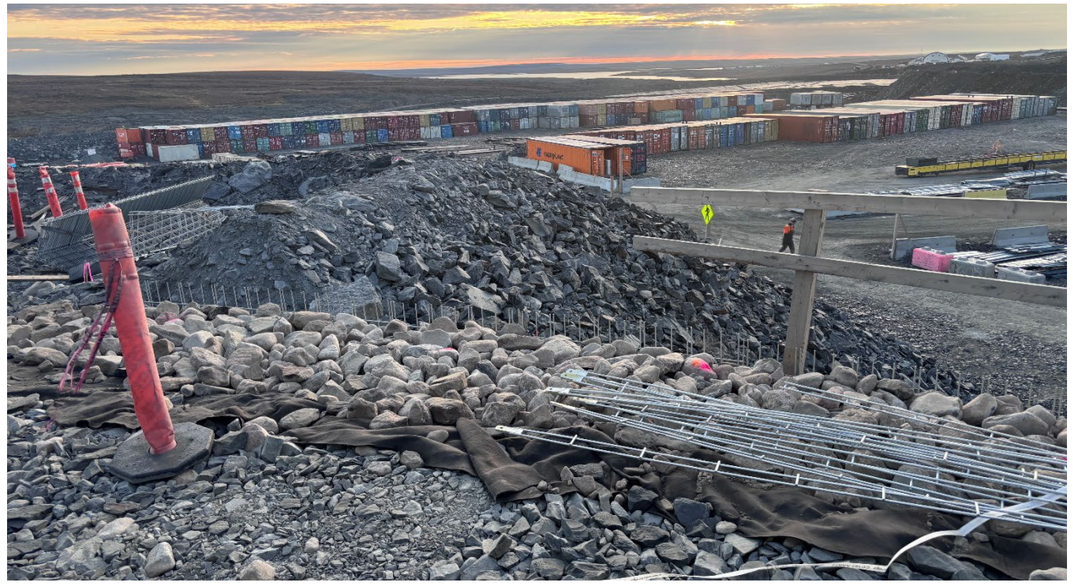

G-313: Top of MSE wall under construction, looking NE



G-314: MSE wall SE side, looking S



G-315: Typical MSE wall finished construction – construction in progress



G-316: MSE wall reinforcing example – construction in porogress

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G-317: MSE wall reinforcing



G-318: MSE wall E corner, looking N



G-320: Typical MSE wall construction




G-319: View SE towards crusher from MSE wall

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G-321: Slope approaching MSE wall, looking N



G-322: MSE wall and slope, looking N



G-323: MSE wall W corner, looking E



G-324: MSE wall W corner and slope, looking SE

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G-325: MSE wall eastern side and crusher, looking W



G-326: MSE wall and crusher tie-in, looking SW



G-329: MSE wall and approach road, looking N from laydown area

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G-327: MSE wall N corner, looking SW between wall and crusher



G-328: Typical MSE wall construction and tie-in with eastern slope

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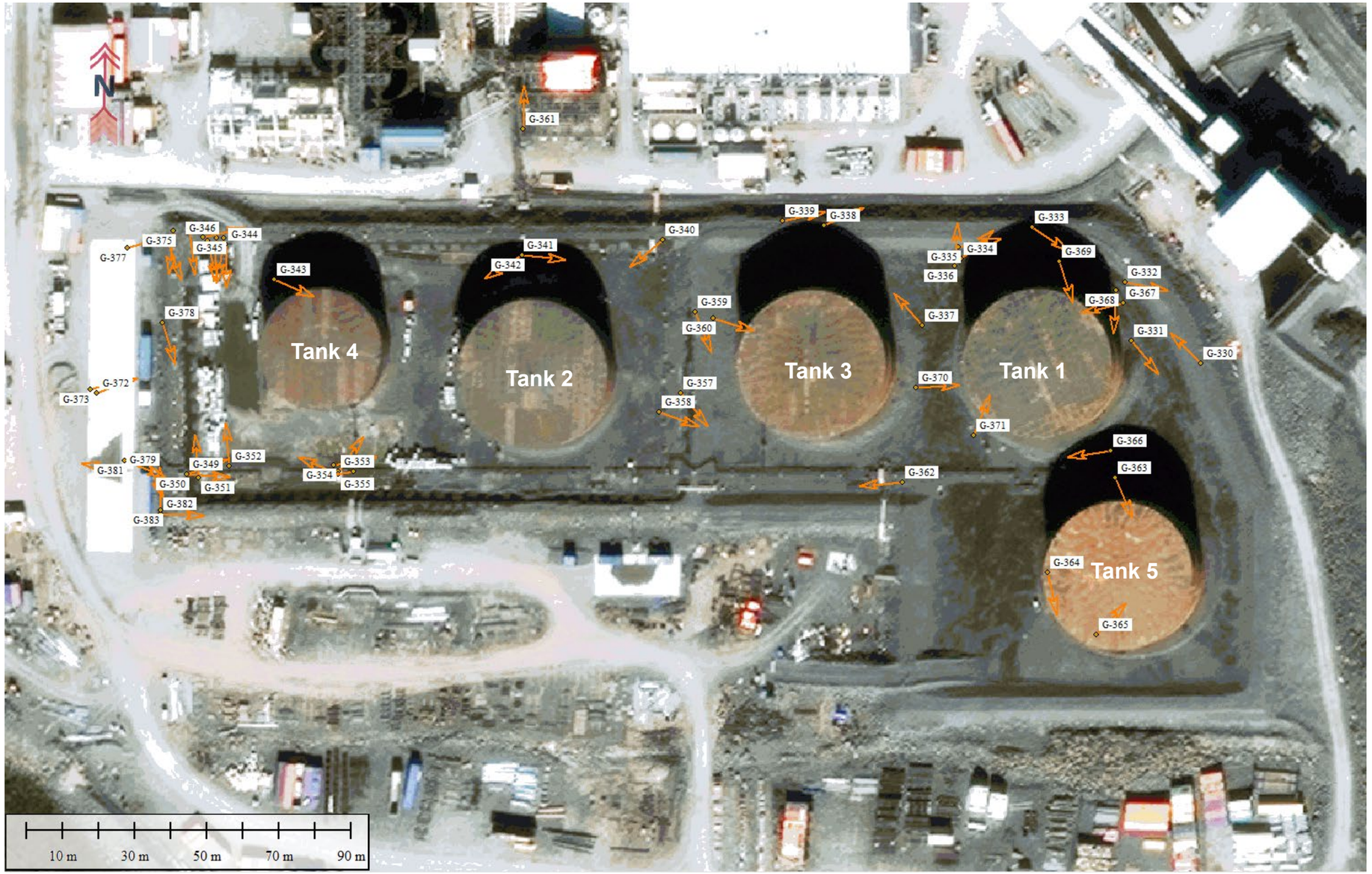


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| | | **Tank Farm and fuel transfer / refueling** |
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G-330: Exposed liner and degredation to overliner cover tank farm berm



G-331: Tank pedestal slope




G-332: Slope across from crusher MSE wall



G-333: View E towards crusher MSE wall from tank farm

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G-334: Exposed and damaged liner on tank farm northern berm slope



G-335: Exposed and damaged liner on tank farm northern berm slope



G-336: Exposed and damaged liner on tank farm northern berm slope



G-337: Exposed and damaged liner on tank farm northern berm slope

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G-338: Exposed liner on northern berm, looking E



G-339: Exposed liner on northern berm, looking E



G-340: Exposed liner on tank farm northern N berm slope, looking W



G-341: Exposed liner on tank farm northern berm slope, looking W

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G-342: Exposed liner on tank farm northern berm slope, looking E



G-343: Exposed liner on tank farm northern berm slope, looking E



G-344: Fallen barrier on western berm liner, looking E



G-345: Ponding in tote storage area, looking S

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G-346: Tote storage area below northern berm



G-347: Tote storage area and western berm, exposed geotextile



G-348: Access road crossing northern berm



G-349: Exposed geotextile on southern berm – ponding at toe of slope, undulating liner anchoring

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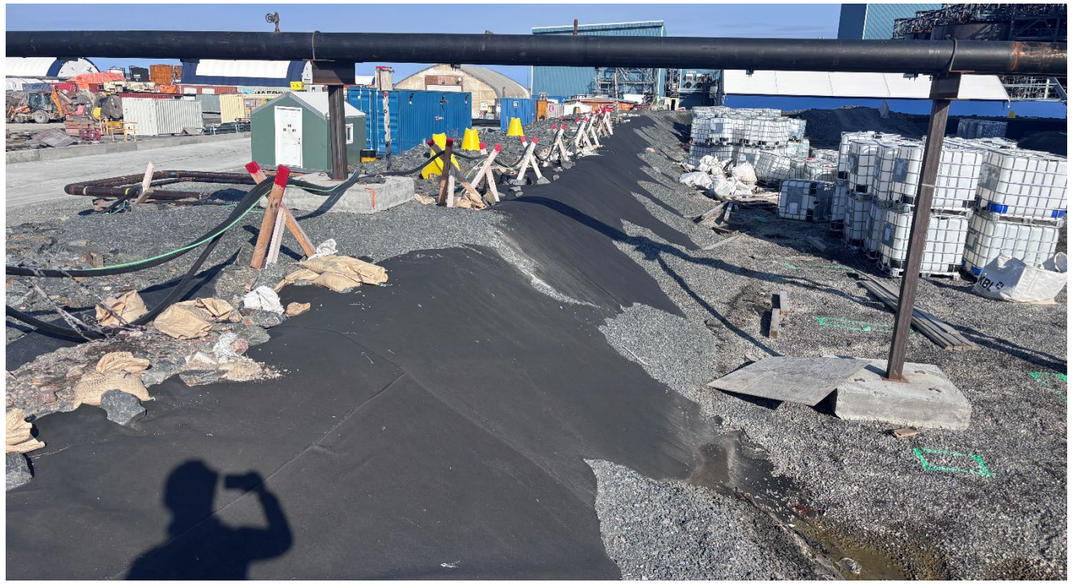
G-350: SW corner of tank farm (Phase 1)



G-351: Western berm, looking N – exposed geotextile and ponding at toe



G-352: Tote storage and ponding, looking N



G-353: Stairs over southern berm, looking N. Stairs installed on top of the exposed geotextile.

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G-354: Wooden stairwell supports on exposed geotextile



G-355: Southern berm, looking W – exposed liner



G-356: Ponding at toe of southern berm, looking W



G-357: Sand bag noted below geotextile near crest of berm

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G-358: Exposed liner on slope berm between Tank 2 and Tank 3, looking N



G-360: A berm between central tanks, looking S – the mark indicates the edge of the liner approximately at the elevation governing the containment volume – areas revisited with site staff during visit



G-359: Exposed geotextile and HDPE liner on slope berm between Tank 2 and Tank 3, looking S

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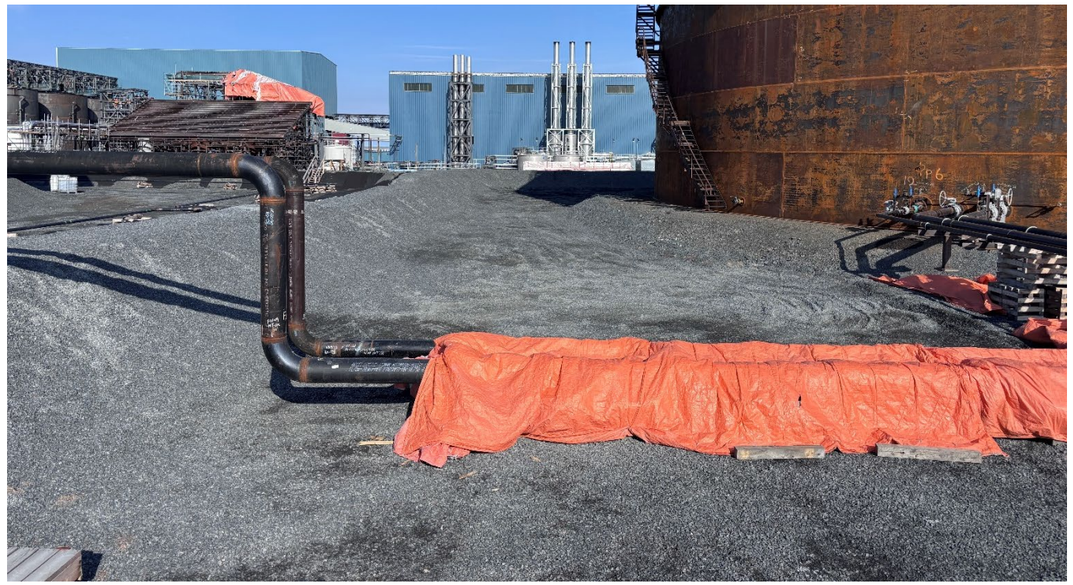

G-361: Tank farm central berm, looking N



G-362: Southern berm, looking W



G-363: A gap between pedestal and base of Tank 5 – former installation jack location based on tank marks



G-364: A gap between pedestal and base of Tank 5

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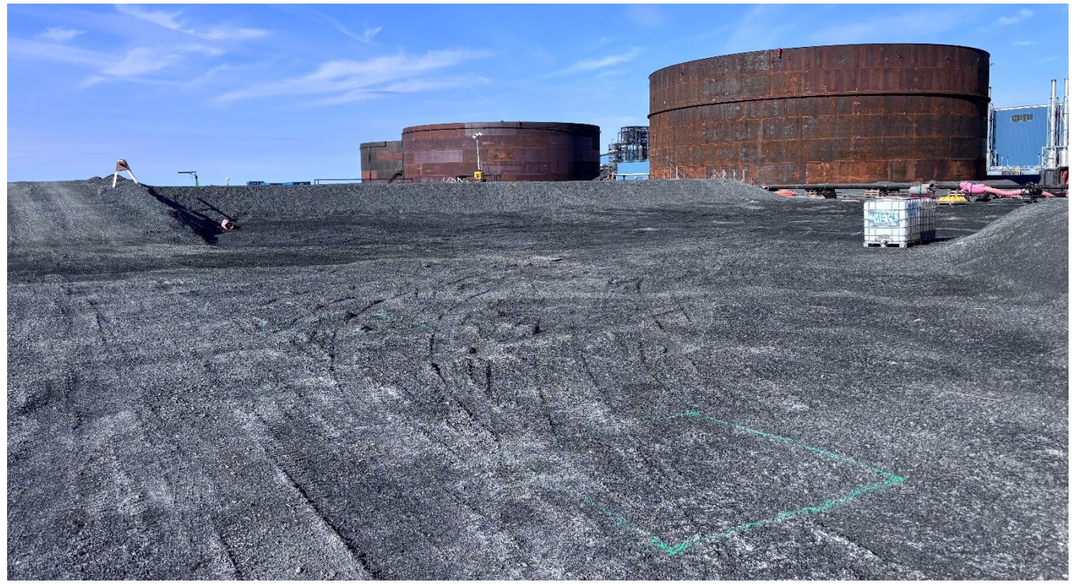
| | | **Tank Farm** | | |
| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | Date: February 2026 | Approved: JBK | Figure: 119 |



G-365: Tank farm surface conditions at southeastern end, looking NW



G-366: Erosion pathways starting on on slope beside northeastern tank



G-367: Tank farm access road, looking NW



G-368: Northeastern tank slope

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G-369: Pedestal for Tank 1 erosion tracking



G-370: Slope beside western tanks, looking E



G-371: Pedestal for Tank 1 erosion tracking

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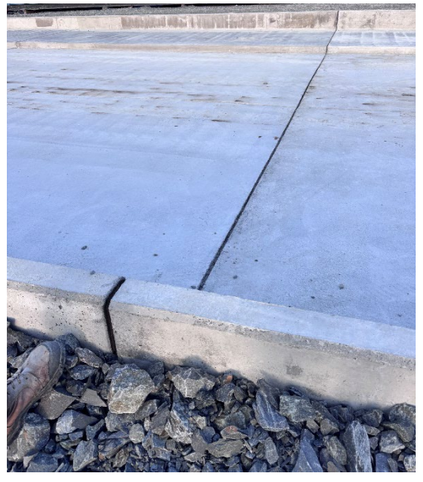
G-374: Berm between fuel transfer / refueling area fand tank farm tote storage, looking S



G-375: Fuel transfer area overview, looking SW



G-376: Looking S along toe of berm between fuel transfer / refueling and tank farm



G-372: Fuel transfer / refueling concrete pad Seam



G-373: Close-up view of fuel transfer / refueling concrete pad seam

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G-377: Fuel transfer / refueling  concrete pad seam



G-378: fuel transfer / refueling  pipe connection to seacan



G-380: Fuel transfer / refueling  sump access hatch



G-379: Fuel transfer / refueling  sump

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| | | **Goose fuel transfer / refueling** |
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G-381: Fuel transfer / refueling  sump, looking N



G-382: Laydown area S of tank farm, looking E from fuel transfer / refueling



G-383: Looking N along toe of berm between fuel transfer / refueling  and tank farm

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| | | **Goose fuel transfer / refueling** |
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| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | **WIR Laydown - South** |
| | | Date: February 2026 / Approved: JBK / Figure: 125 |



G-384: View towards main plant from laydown area, looking S



G-385: Laydown area NE pad slope, looking NW



G-386: Laydown area SE pad slope, looking SW



G-387: Laydown area overview, looking W

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| | | **WIR Laydown - South** |
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G-388: Laydown pad western corner, looking NW



G-389: Laydown area, looking SE

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| | | **WIR Laydown - South** |
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**WIR Laydown - North**

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G-390A: North WIR laydown northern pad edge, looking E – Seacans near edge of thinner pad



G-390B: Edge of North WIR Laydown pad, looking N



G-390C: Edge of North WIR Laydown pad, looking SE

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| Job No: CAPR004312<br>Filename: Back River_Goose_2025_AGI_Photolog.pdf | Back River Project | **Gooseneck Crossing – Culverts** |
| | | Date: February 2026 / Approved: JBK / Figure: 130 |



G-391: Northern culvert inlet, facing NW



G-392: View towards twin culverts inlet, looking S along road rockfill



G-393: Northern culvert inlet, looking N



G-394: Twin (southern) culverts inlet

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| | | **Gooseneck Crossing – Culverts** |
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G-395: Twin culverts inlet



G-396: Twin culverts outlet



G-397: Northern culvert outlet

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**Umwelt Overburden Stockpile**

| Date: | Approved: | Figure: |
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G-398: Typical overburden stockpile surface conditions



G-399: Example of settlement cracks (expected) in overburden stockpile surface



G-400: Stockpile, looking N – cracking closer to top crest near slopes



G-401: Umwelt rock storage, looking N from overburden stockpile

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G-402: Ponding on overburden stockpile surface, looking S



G-403: Looking SE from S corner of stockpile – ponding and water from thaw of stockpiled overburden material



G-404: Ponding between road and N slope of stockpile pad, looking W



G-405: Ponding between road and N slope of stockpile pad, looking E

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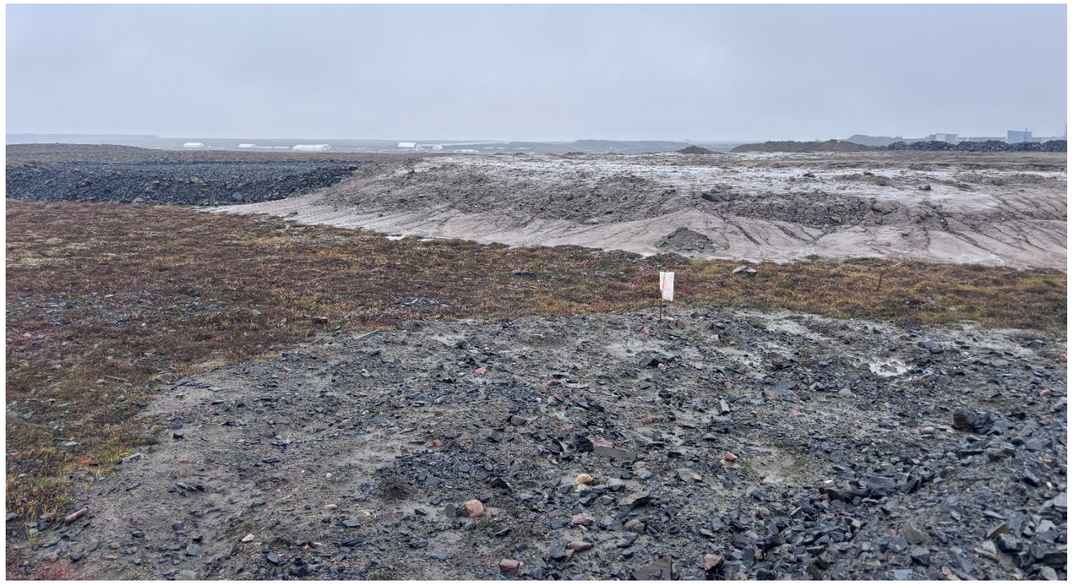
G-406: Ponding between road and N slope of stockpile pad, looking W – thinner rockfill road in area



G-407: Overburden stockpile, looking S from road – some erosion from surface water noted on slopes



G-408: Stockpile beside road corner and northern pad slope thaw and erosion of overburden material (expected with this type of material when left exposes)



G-409: Stockpile beside road corner

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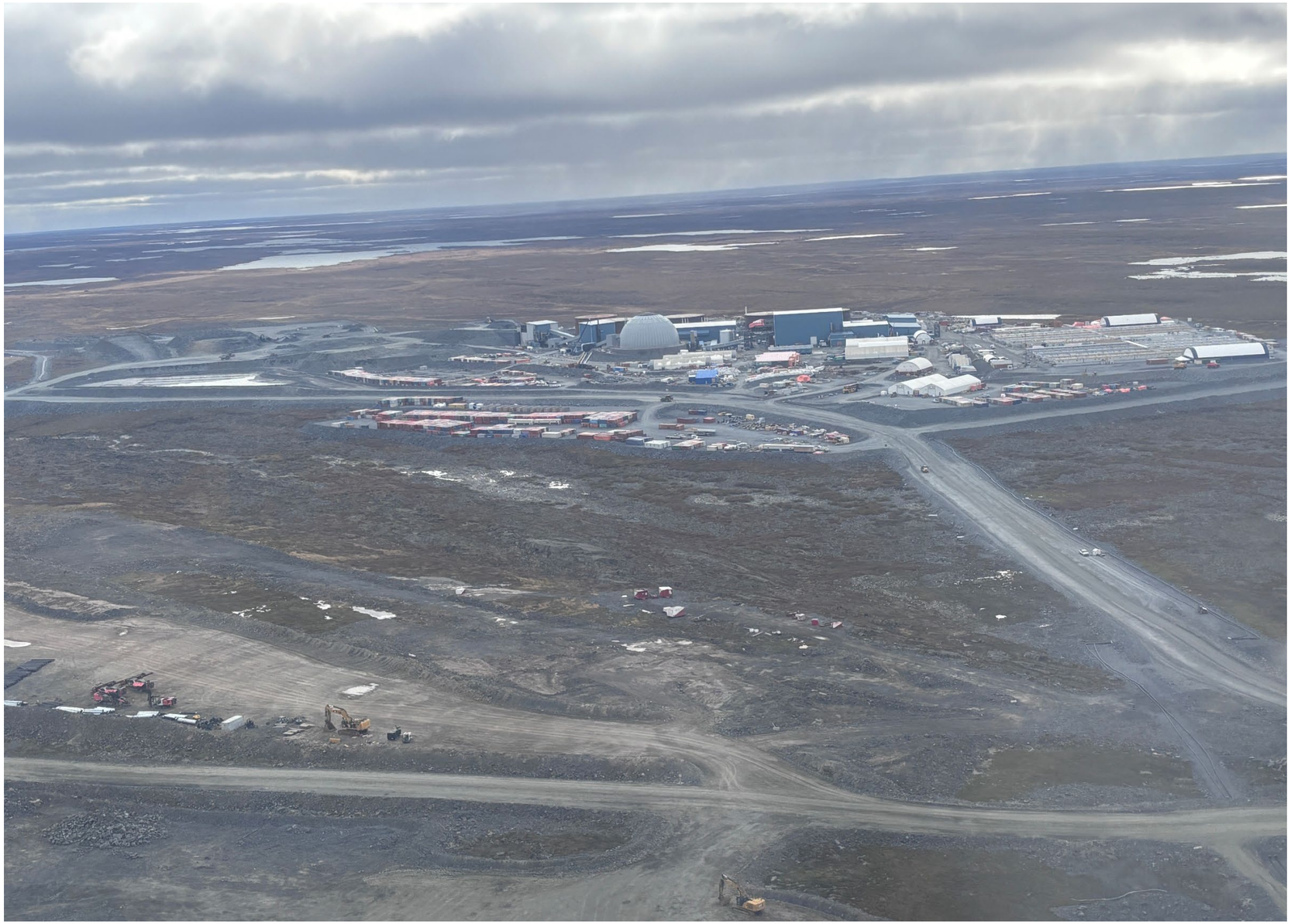

Heli Photo 8: Umwelt overburden stockpile and main plant area, looking S

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**Umwelt WRSA**

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G-410: Rock storage area eastern pad slope, looking W



G-411: Eastern pad slope, facing S



G-412: Rock storage eastern side, looking SW



G-413: Rock storage eastern side, looking N

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G-410: Explosives storage area, looking NE from rock storage area



G-411: Sinkhole in storage area pad surface



G-412: Toe of rock storage area eastern slope, looking E



G-413: Rock storage area eastern slope, looking N

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G-418: Toe of rock storage area eastern slope, looking S



G-419: Ponding at toe of southern pad slope, looking NW



G-420: Garbage disposal area in center of waste rock storage area



G-421: Rock storage area western pad slope, looking N

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G-422: Typical rock storage area surface conditions, looking S

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**Emulsion Plant and Explosives Facility Access Road**

Job No: CAPR004312

Filename: Back River_Goose_2025_AGI_Photolog.pdf

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G-423A: Explosives area access road, looking N



G-423B: Explosives area access road, looking S



G-424A: Amfo / explosives area access



G-424B: Slope below explosives storage area, looking S

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G-425: Access road, looking S



G-426: Emulsion plant access road, looking S



G-427: Ponding beside access road, looking E




G-428: Seacan laydown area, looking W

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**Emulsion Plant and Explosives Facility Access Road**

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G-429: Northern slope of laydown pad, looking W



G-430: Western pad slope



G-431: Emulsion plant general view, looking S



G-432: Berms between emulsion plant and laydown pads, looking E

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G-433: Eastern slope of emulsion plant pad, looking S



G-434: Silt fencing at SE corner of pad




G-435: Eastern pad slope, looking N



G-436: Emulsion plant berm, looking W

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G-437: Building foundation, looking W



G-439: Settlement of pad near building, looking N



G-438: Large tension crack near building foundation

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Heli Photo 2: Emulsion Plant and access road, looking E

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| | | **Umwelt Pit, Saline Water Pond and Access Roads** |
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G-440: Exposed culvert on Saline Water Pond Access Road, looking W



G-441: Exposed culvert, looking N (noting location for consideration when advancing Phase w of SWP)



G-442: Typical surface conditions of dewatered SWP area (former Umwelt Lake), looking N



G-443: Typical surface conditions of dewatered SWP area, looking NW (former Umwelt Lake)

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G-444: Culvert under SWP Dam Access Road, looking NW



G-445: SWP Dam Access Road



G-446: Unfinished piping along SWP Dam Access Road, looking N



G-447: Pad and berm around future SWP Dam area

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G-448: Culvert under access road to Umwelt Pit from SWP Access Road, looking NE



G-449: Northeastern pond (Round Pond) dewatering, looking N



G-450: Looking E along road rockfill from northeastern pond (Round Pond)



G-451: Pond dewatering waterline, looking NW

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G-452: Northeast pond (Round Pond) access road, looking W



G-453: Mostly dewatered pond (Round Pond), looking SE

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G-454: Primary Pond access road, looking N



G-455: Large blast rocks at end of spillway, looking S



G-456: Southern end of spillway, looking N



G-457: Spillway: western berm, looking S, thin rock cladding thickness in areas

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G-458: Looking W towards downstream (SE) end of spillway



G-459: Western edge of spillway, looking SE



G-460: Spillway, looking SE



G-461: Upstream (NW) end up spillway, looking NW

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G-462: Pipeline pad north of Primary Pond



G-463: View SE towards Primary Pond, some disturbance to tundra noted downstream of dam in aerea



G-464: Discharge into N side of primary pond at unfavourable locations (in terms of increased potential for thermal degradation within pond footpint), looking SW (this was corrected / moved)



G-465: Pipe end at N side of Primary Pond

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G-466: Upstream side of dam, looking NW



G-468: Upstream crest and upstream slope of the dam, looking NW



G-467: Upstream side of dam, looking SE

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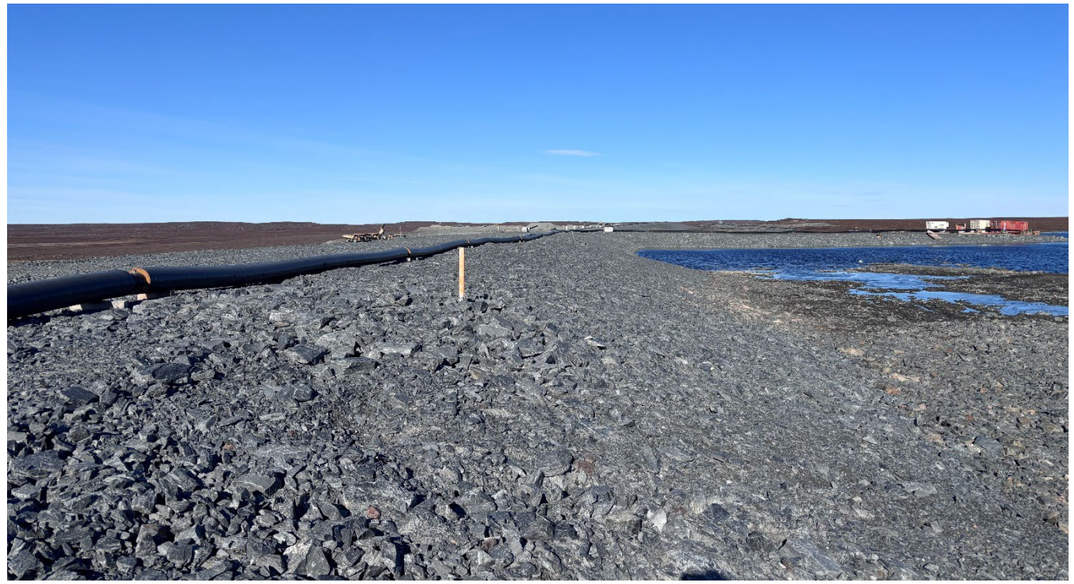

G-469: Crest of dam on upstream side, looking NW



G-470: Upstream thermal protection barrier and upstream slope of the dam: southern end of pond



G-471: Downstream side typical dam slope, looking NE from All-Season Road



G-472: Downstream dam slope, looking towards crest at Reclaim Pipeline Access Road junction.

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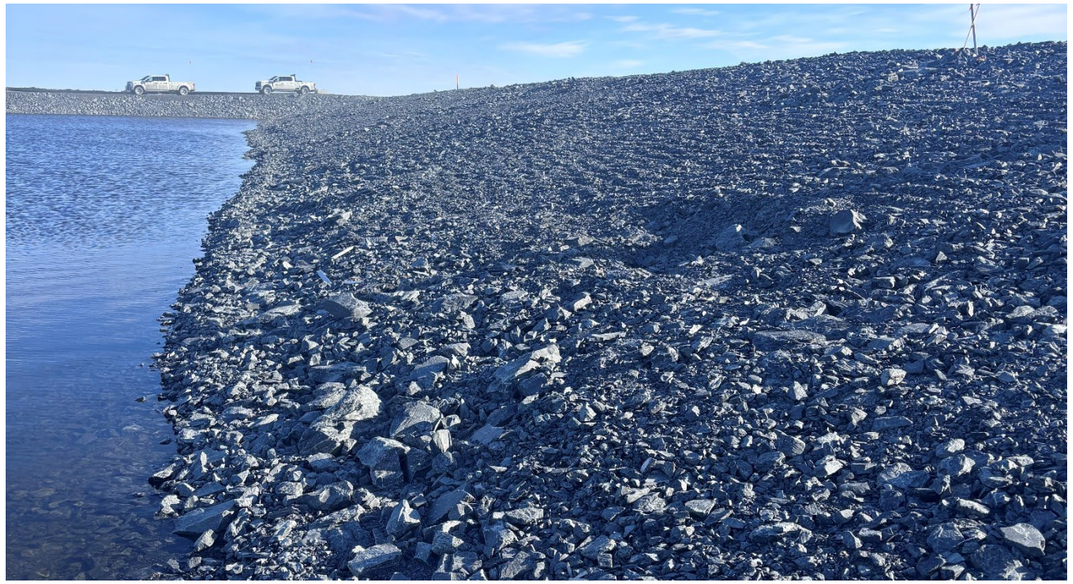
G-473: Unused pipes on downstream slope



G-475: Upstream dam toe of slope, looking SE towards Reclaim Pipeline Access Road. The “depression” areas were inspected, surveyed and backfilled with the engineering fill.



G-474: Downstream slope, looking NW

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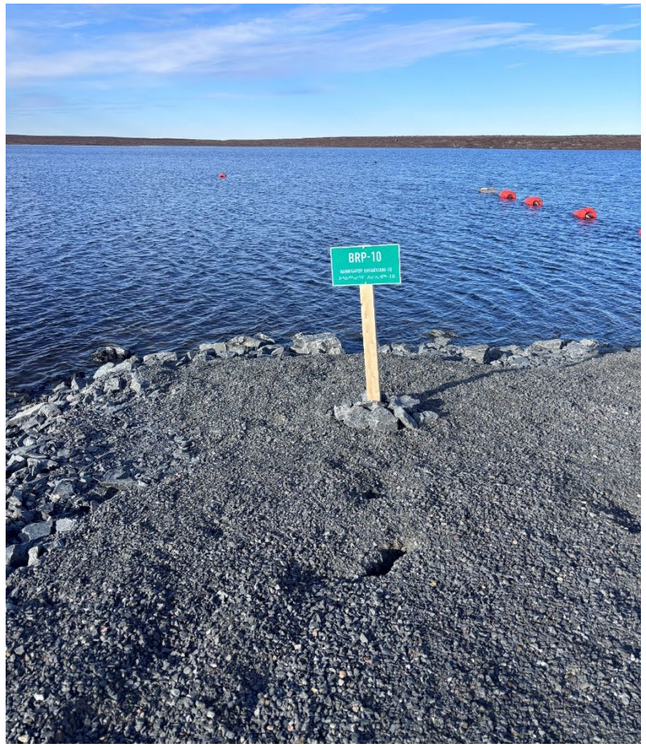
G-476: Upstream dam slope and thermal protection barrier, looking SE from southern end of pond



G-477: Reclaim Pipeline access road and pad




G-478: Sinkholes in the reclaim pipeline access road pad, looking northeast. A series of sinkholes developed due to the placement of surfacing material directly over the ROQ without placement of Transition layer in some areas (ie crush migration into voids in coarser rockfill). Note this area is upstream (not structurally connected) to the main Primary Pond dam structure (so less of a technical concern at this time).

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G-479: Reclaim Pipeline Access Road NW slope, looking SW



G-480: Upstream crest of dam, looking N



G-481: Discharge point the N of Primary Pond : Note that the disturbed area was backfilled with the low permeability material and the discharge point was moved while SRK was on site.

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G-482: Pipe discharge into pond, looking S



G-483: Dam crest southern end, looking N



G-484: Pipeline entering water at southern end of pond

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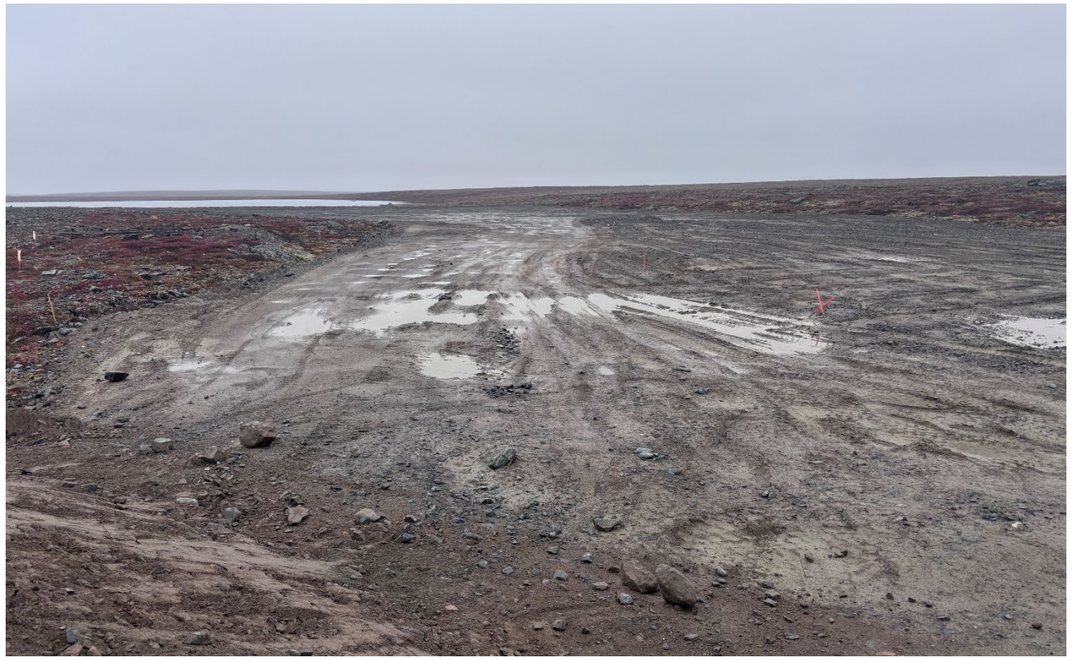
G-485: Southern end of dam and upstream thermal protection barrier, looking NW



G-486: Overburden fill S of pond, looking N



G-487: Ponding water beside overburden fill at Umwelt WRSA. The ponded water was filled to minimize future ponding in area.

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G-488: Typical water reclaim pipeline layout, looking SE



G-489: Overburden fill at northern edge of rock storage area, looking N



G-490: Ponding south of overburden fill



G-491: Pond south of the Primary Pond and east wing

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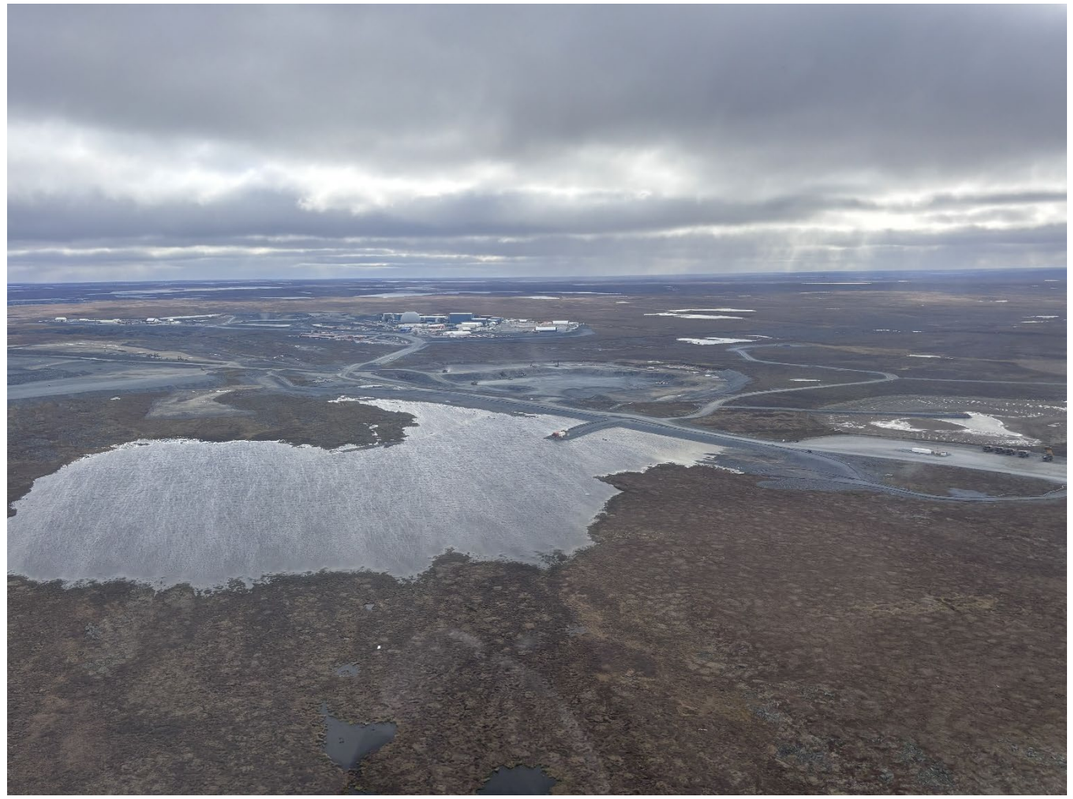

Heli Photo 3: Primary Pond and dam, looking S



Heli Photo 4: Northern end of dam and pond, looking SW

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Heli Photo 5: Primary Pond, dam, and spillway, looking NW

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G-492: Truck laydown, looking S



G-493: Trucks in truck laydown



G-494: Laydown trailer, looking SW



G-495: Truck laydown pad slope, looking W

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**Llama Crusher Pad**

Job No: CAPR004312

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G-496: Llama crusher pad southern slope, looking SE



G-497: Pad S of Llama crusher pad, looking SW



G-498: Access road typical rockfill



G-499: Overburden stockpile in Llama crusher pad

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G-500A: Stockpiles on Llama crusher pad, looking SW from the All-Season Road



G-500B: Southern end of the Llama crusher pad, looking W from the All-Season Road

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Heli Photo: Llama Lake and crusher pad, looking N – lake dewatering in progress

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G-501A: Llama Lake from access road, looking N



G-501B: Llama Lake from access road, looking NW



G-502: Unconnected pipeline to Llama Lake, looking W



G-503A: Seacan beside access road, looking E

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G-503B: Laydown and seacan beside access road, looking W some items directly on tundra



G-504: Pad slopes beside access road, looking S



G-505A: Major drilling “pond” (unengineered) as seen from All-Weather Road, looking E



G-505B: Llama Lake access road, looking NW

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Heli Photo 6: Llama Lake southern access road, looking NW



Heli Photo 7: Llama Lake northern access road, looking N



G-506: Culvert under northern access road to Primary Pond, looking E from the All-Season Road

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**Tailings Pipeline Corridor**

Job No: CAPR004312

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G-507: Tailings pipeline crossing under ROM stockpile western access road, looking SW



G-508: Tailings pipelines, looking NW



G-509: Depression in tailings pipeline road, piping suspended in smaller sections



G-510: Typical tailings pipeline corridor layout, looking NW

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G-511: Tailings pipeline connection, looking SW towards ROM stockpile



G-512: Cement and pipe laydown



G-513: Pipe laydown beside tailings corridor



G-514: Cement laydown area access, looking NE

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G-515: Tailings pipelines crossing under ROM stockpile eastern access road, looking W



G-516: Tailings pipeline corridor, looking NW towards Sandvik



G-517: Tailings pipeline along southern rockfill, looking W



G-518: Tailings pipeline along southern rockfill, looking W

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G-519: Pad on S side of tailings pipeline corridor beside Echo Pit Haul Road, looking S



G-520: Culvert inlets (S side) under tailings corridor



G-521: Tailings pipeline crossing under Water Treatment Plant access road, looking SE



G-522: Echo Pit Haul Road rockfill, looking N from tailings corridor

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G-523:  Triple culvert outlets (N side) under tailings pipeline corridor



G-524: Western culvert outlet



G-525: Eastern and central culvert outlets

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# Appendix B Photolog from 2025 Site Visit – MLA




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M-1: Laydown beside camp pad, looking E



M-2: Voids in pad slope beside airstrip




M-3: General laydown area, looking N from toe of airstrip embankment. Note pipe installed on the exposed tundra



M-4: Freight storage area buildings, looking SE. Note pipe is installed on the exposed tundra

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M-5: Laydown area beside airstrip – Note thickness of pad is too thin




M-6: NW corner of laydown pad, beside airstrip embankment




M-7: Northern side of pad, looking E from airstrip. Pipe on tundra



M-8: Cemented rockfill laydown at N side of pad. Temporary bag placement close to pad slope

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M-9: General laydown area, looking E from airstrip. Pipe placed on the exposed tundra




M-10: Eastern pad slope, looking N




M-11: Eastern pad slope, looking SE



M-12: Laydown area typical surface conditions

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M-13: Laydown area surface conditions, looking N



M-14: Northeastern pad slope, looking NW



M-15: Shoreline pad access road embankment, looking SE



M-16: Shoreline pad access road embankment, looking NW

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M-17: Shoreline pad access road embankment, looking NW




M-18: Shoreline pad



M-19: Shoreline pad – seacan near edge of thin pad



M-20: Shoreline pad laydown area and barge access

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M-21: Barge access and tie off



M-22: Shoreline pad slope above water



M-23: Shoreline pad access road embankment




M-24: Northeastern freight storage pad slope

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M-25: Erosion channel on NE pad slope



M-26: Stacked seacans beside pad slope




M-27: Pad slope, looking SE



M-28: Pad slope, looking NW towards temporary cement bag storage / laydown

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M-29: Freight storage pad surface conditions



M-30: Bag placement at top of slope, looking SW



M-31: Bag placement beside edge of pad, looking NE

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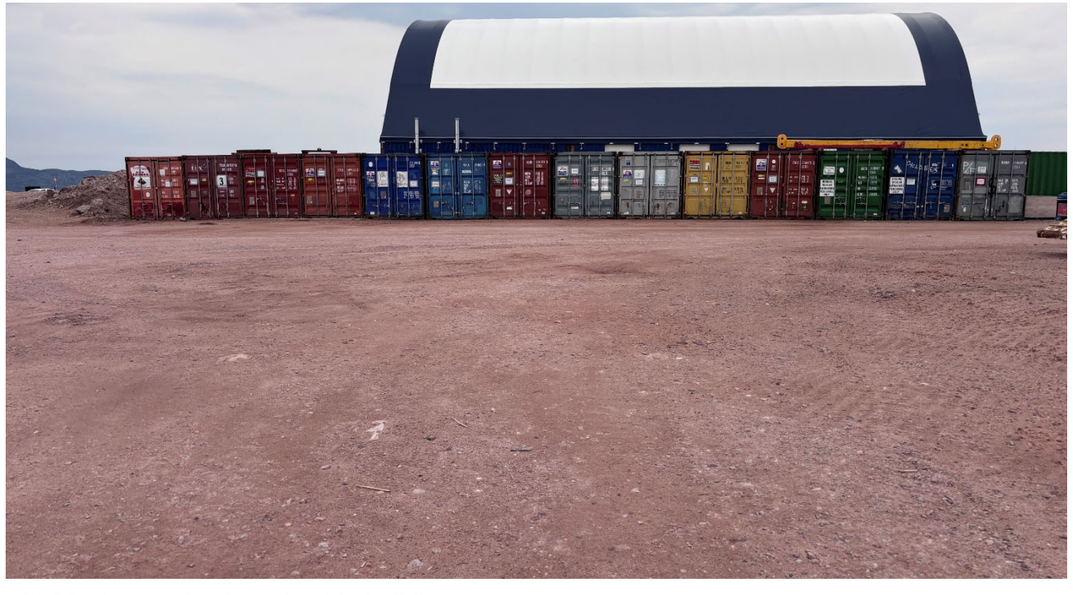
M-32: Damage to pad on northern side



M-33: General view of pad, looking SE



M-34: Broken bags on W side of pad



M-35: Seacan laydown beside building

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M-36: Maintenance shop area - Laydown beside building, SW




M-37: Maintenance shop area - Entrance to building and concrete pad



M-38: Edge of pad, looking NE – Note eroding pad slope



M-39: Pipe between camp pad and freight storage pad, looking SW

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M-40: Stacked seacans in main laydown area



M-41: Temporary fuel storage, looking W

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M-42: Temporary fuel storage – Note exposed liner



M-43: Exposed liner in pad slope beside fuel storage




M-44: Temporary fuel storage - Damaged liner

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**Camp Pad**

Job No: CAPR004312

Filename: Back River_MLA_2025_AGI_Photolog.pdf

Back River Project

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M-45: Southern pad slope – Note oversteepened slope and laydown beside edge of pad



M-46: Undefined edge of pad at SE corner



M-47: Laydown area beside pad slope at SE corner of pad



M-48: Eastern corner of main camp pad

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M-50: Water seepage from eastern pad slope



M-49: Eastern pad slope, looking NW



M-51: Eastern pad slope, looking S

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M-52: Camp pad extension, looking NW



M-53: Camp pad, looking S




M-54: Eroding slope of camp pad extension, looking NE




M-55: Camp pad N slope, looking NE

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M-56: Erosion under concrete pad at N corner of camp pad, looking E



M-57: Concrete slab is located <1m from the crest of the pad, looking N



M-58: Camp pad, north corner. Note the NW corner of the concrete slab located too close to the crest of the pad



M-59: View of shoreline pad from camp pad

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M-61: Eastern pad slope typical condition



M-60: Camp pad surface conditions



M-62: Undefined edge of slope beside laydown at SE corner of pad

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M-63: Camp pad housing



M-64: Camp pad housing and surface conditions, looking NW

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M-65: Pad between airstrip and camp pad – Note thickness of pad



M-66: Airstrip embankment, looking SE – Note erosion



M-67: Airstrip embankment, looking NW



M-68: Airstrip surface conditions, looking NW

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M-69: Airstrip surface conditions, looking SE



M-70: Airstrip embankment, looking NW



M-71: Airstrip embankment – Note erosion



M-72: N corner of airstrip and freight storage pad access road

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M-73: Eastern airstrip embankment



M-74: Eastern airstrip embankment erosion

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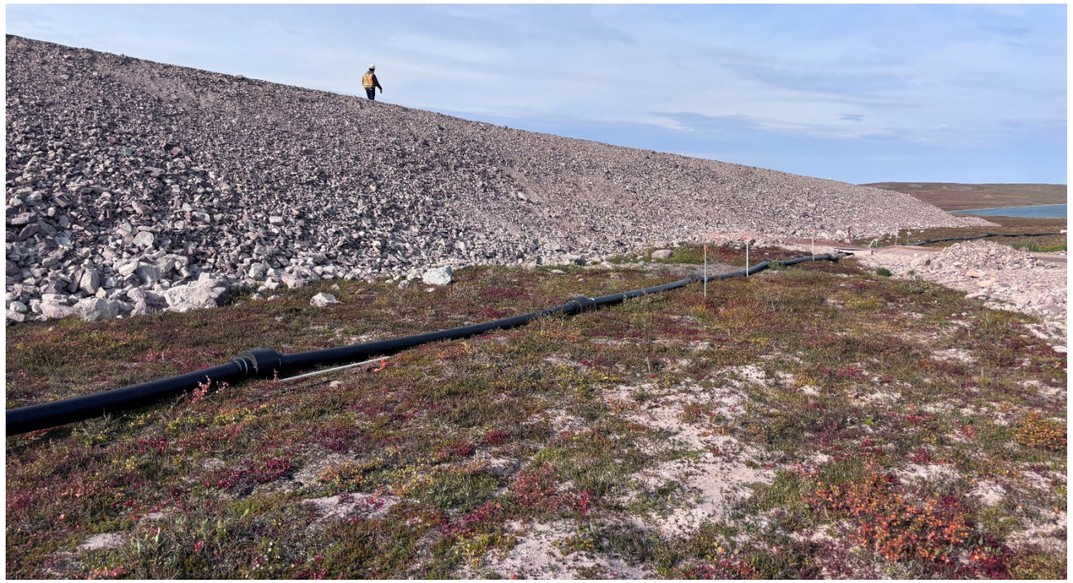
M-75: Eastern airstrip embankment erosion



M-76: Eastern airstrip embankment



M-77: Typical embankment conditions



M-78: Eastern airstrip embankment beside N end of freight storage pad

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M-79: Eastern airstrip embankment tie-in to freight storage pad



M-80: Airstrip extension, looking NW



M-81: Slope between airstrip and extension, looking W

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M-82: Airstrip extension placed in lifts



M-83: Airstrip extension, looking SE



M-84: Airstrip extension, looking SE



M-85: Western airstrip embankment, looking NW

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M-86: Undefined edge of airstrip embankment, looking SE



M-87: Western airstrip embankment, looking NW



M-88: Western airstrip embankment, looking SE – Note erosion

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M-89: Tension cracks in western embankment



M-90: Erosion pathways in western embankment



M-91: Tension cracks in western embankment

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M-92: Airstrip junction with road to tank farm



M-93: Road to tank farm



M-94: Access road to camp pad



M-95: Airstrip junction with camp pad access road

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M-96: Airstrip, looking NW



M-97: Western airstrip embankment, looking SE – Note ponding water



M-98: Ponding water below western airstrip embankment

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M-99: Tension cracks in airstrip surface, looking NW




M-100: Typical tension crack width

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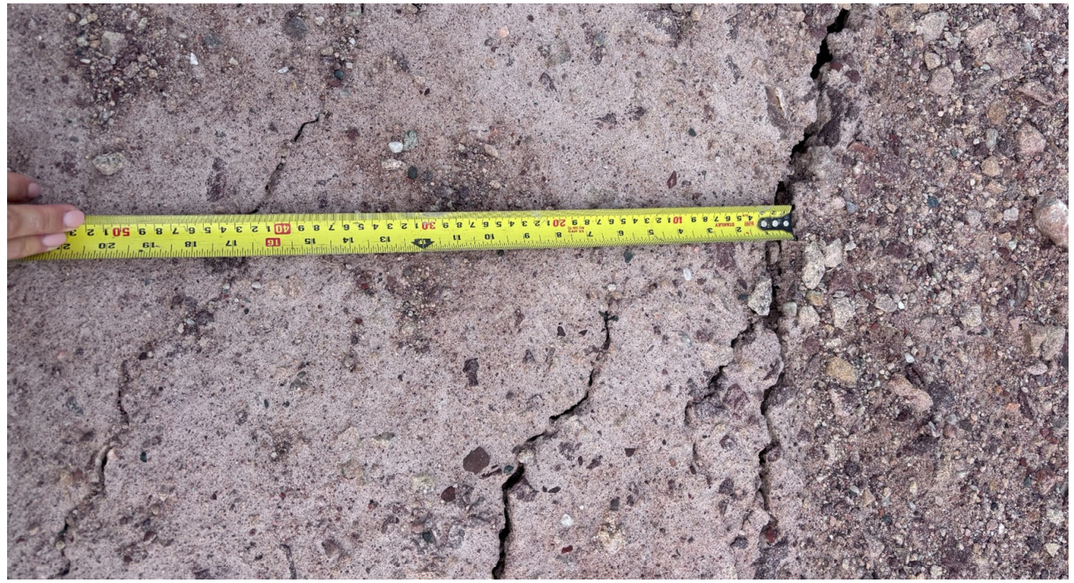

M-101: Tension cracks in airstrip surface



M-102: Tension crack in airstrip surface



M-103: Tension cracks in airstrip surface, looking NW

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M-104: Tension crack in airstrip surface



M-105: Settlement of western embankment at SE end of airstrip

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M-106: Ponding beside SE end of airstrip



M-107: Slope at SE end of airstrip



M-108: Airstrip and camp pad access road



M-109: Ponding at SE end of airstrip

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M-111: Tension crack in airstrip access road embankement, beside culvert inlet under road



M-110: Culvert outlet under airstrip access road, beside SE end of airstrip



M-112: Access road embankment, looking SE

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M-113: Access road embankment, looking NW



M-114: Tension crack in access road embankment, looking NW



M-115: Camp pad laydown access road viewed from airstrip

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M-116: Airstrip eastern embankment




M-117: Airstrip eastern embankment, looking SE

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**Former Temporary Fuel Containment**

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M-118: Undefined N edge of pad, looking W



M-119: Former temporary fuel containment area, looking S



M-120: Former temporary fuel containment area, viewed from Airstrip



M-121: Laydown, looking NW

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M-122: Ponding underneath seacan in laydown area




M-123: Ponding in laydown area



M-124: Laydown, looking SW



M-125: Laydown directly on tundra, looking SE

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**Roadways (Former Explosives Storage Access Road)**

| Date: | Approved: | Figure: |
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M-126: Undefined S edge of pad between airstrip and tank farm



M-127: Pad between airstrip and tank farm, looking W



M-128: Former explosives storage access road, looking SE – Note fill is too thin



M-129: Ponding beside former explosives storage access road, looking SE

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M-130: Old seacan on pad beside former explosives storage access road



M-131: Former explosives storage access road, looking NW



M-132: Rock pile on road



M-133: Former explosives storage access road, looking SE

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M-134: Northern end of former explosives storage access road



M-135: Laydown area between airstrip and tank farm



M-136: Laydown area between airstrip and tank farm

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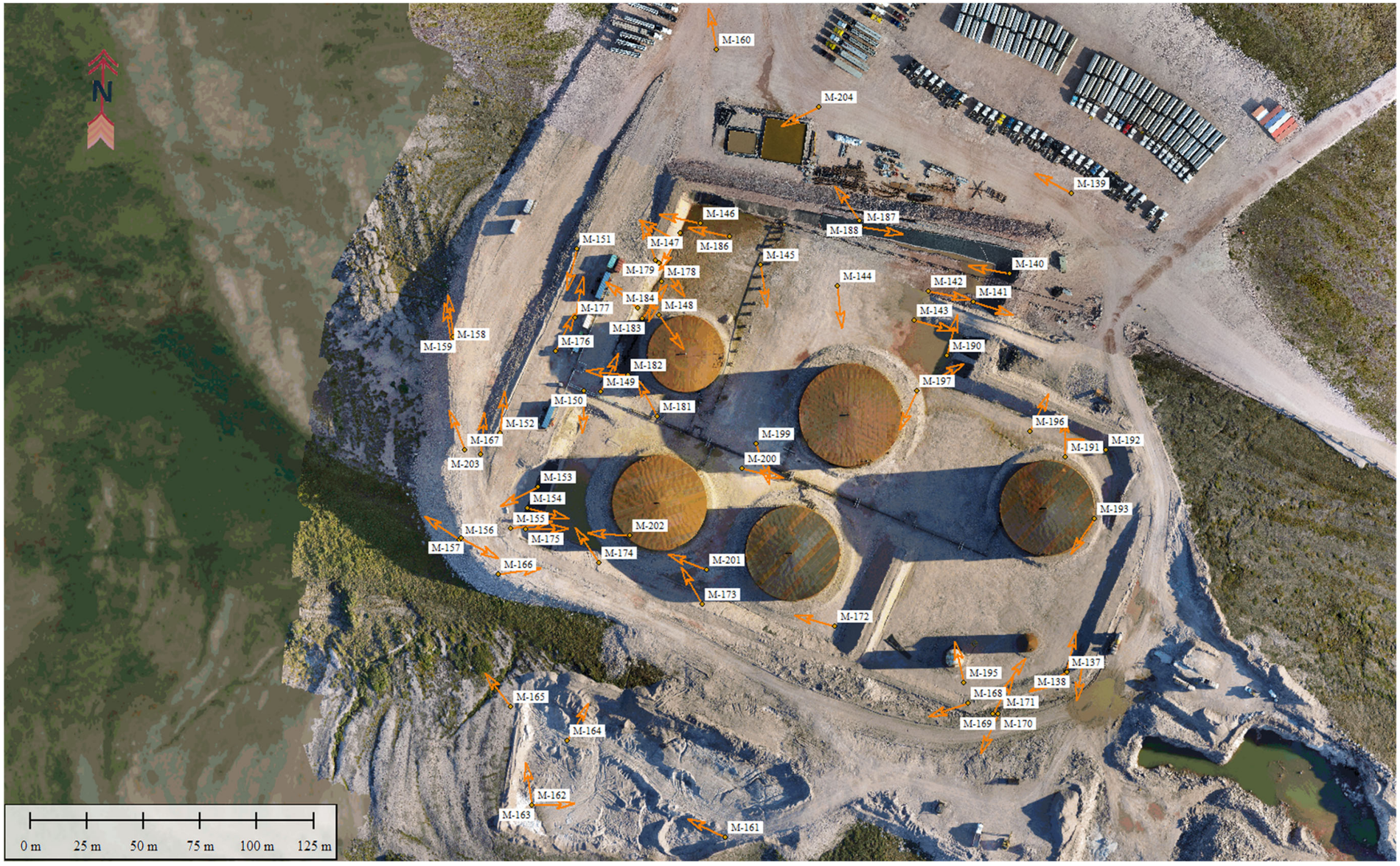


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M-137: Tank farm eastern berm, looking N



M-138: Tank farm southeastern berm, looking SW



M-139: Truck laydown typical surface conditions



M-140: Ponding water along toe of berm at NE corner of tank farm

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M-141: Exposed liner beside entrance to tank farm



M-142: Northern embankment of entrance to tank farm



M-143: Southern embankment of entrance to tank farm



M-144: View of central tank, looking S

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M-145: Typical pipe supports in tank farm



M-146: Ponding water at NW corner of tank farm



M-147: Toe of western berm, looking S



M-148: SW corner of the tank farm. Note areas with exposed liner

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M-149: Western berm, looking N



M-150: Western berm, looking S – Note exposed liner



M-151: Berm at edge of fireball pad, looking S



M-152: Fireball pad, looking N

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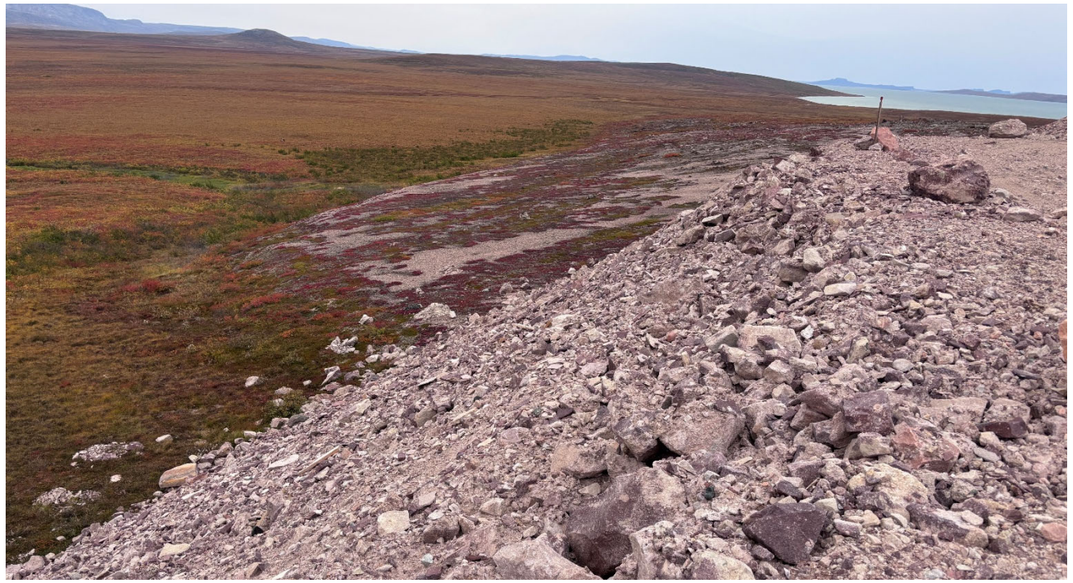
M-153: Ponding water and exposed liner at SW corner of tank farm



M-154: Sluffing of the fill material at SW corner of tank farm



M-155: Entrance to fireball pad. Note ground temperature monitoring station installed in the area



M-156: Tank farm pad slope at SW corner – Note oversteepened slope

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M-157: Access road for the fuel trucks at the SW corner of the tank farm, looking SE



M-158: Fireball Pad, looking S



M-159: Fireball Pad - Typical tension crack above western pad slope

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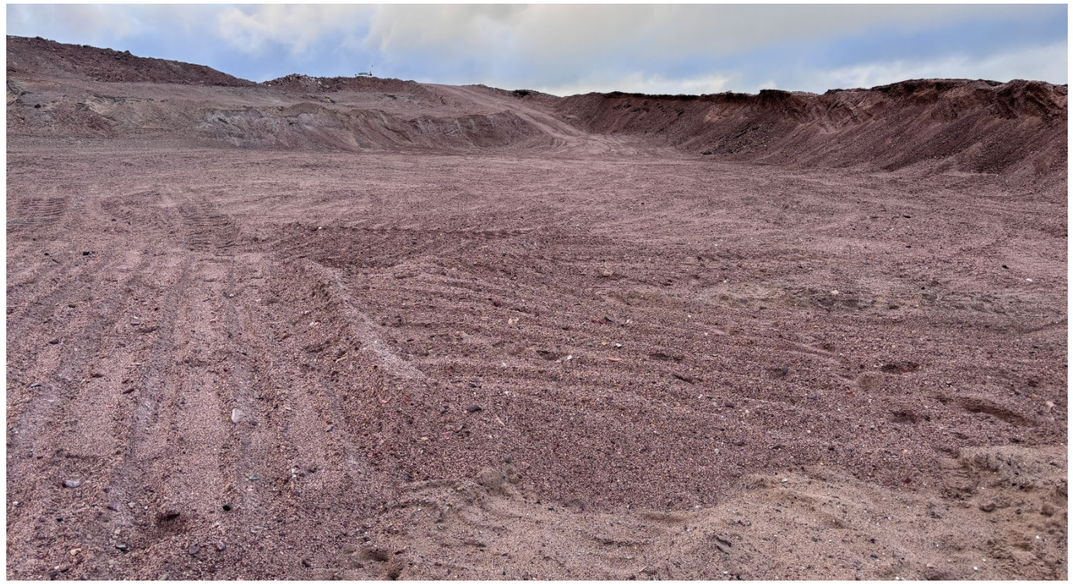
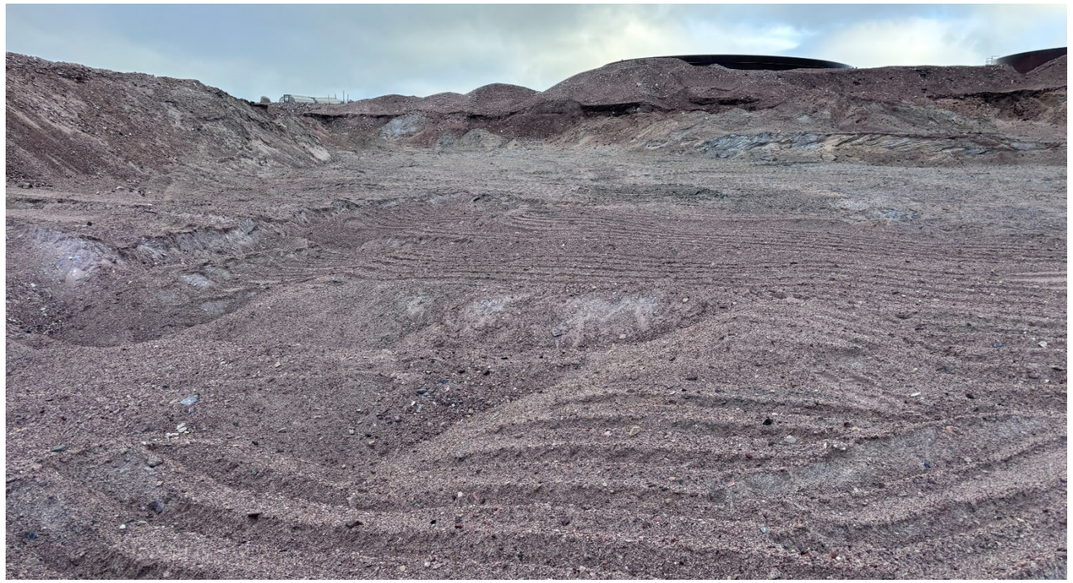
M-160: Truck laydown area north of the tank farm, looking N.



M-161: Sand borrow pit S of tank farm, looking W



M-162: Sand borrow pit S of tank farm, looking E



M-163: Sand borrow pit S of tank farm, looking N

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M-164: Sand borrow pit, looking SE



M-166: Toe of road embankment S of tank farm, looking E



M-165: Tank farm pad NW corner, looking NE

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M-167: Oversteepened road embankment, looking N



M-168: Tank farm southern berm



M-169: Sinkhole in southern berm



M-170: Sinkholes in southern berm

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M-171: Southeastern berm, looking NE



M-172: Exposed liner on southern berm



M-173: Ponding water between tanks, looking NW



M-174: Ponding water and exposed liner below fireball

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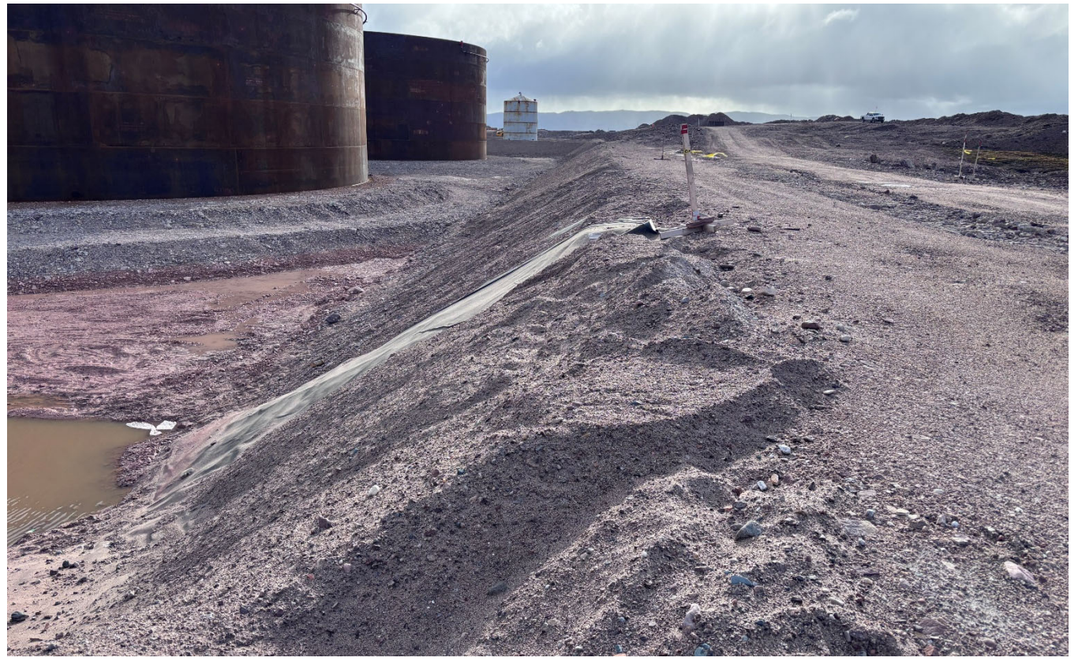

M-175: Ponding water below southern berm, looking E



M-176: Fireball pad surface conditions, looking N



M-177: Typical size of ponding water on fireball pad

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M-179: Tension cracks - crest of western berm



M-178: Pad between fireball and tank farm, looking SW



M-180: Erosion of slope below fireball

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M-181: Pad slope between fireball and tank farm, looking N



M-182: Exposed liner on slope between fireball and tank farm



M-183: Western berm, looking N



M-184: Exposed liner on slope between fireball and tank farm

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M-185: Ponding and exposed liner below western berm



M-186: Ponding and exposed liner at NW corner of tank farm



M-187: Exposed liner beneath fill at toe of northern berm, looking E



M-188: Exposed liner beneath fill at toe of northern berm, looking W

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M-189: Ponding water along toe of northern berm



M-190: Exposed liner beside access to tank farm



M-191:Exposed liner and ponding beside access road to tank farm



M-192: Damaged liner on eastern berm

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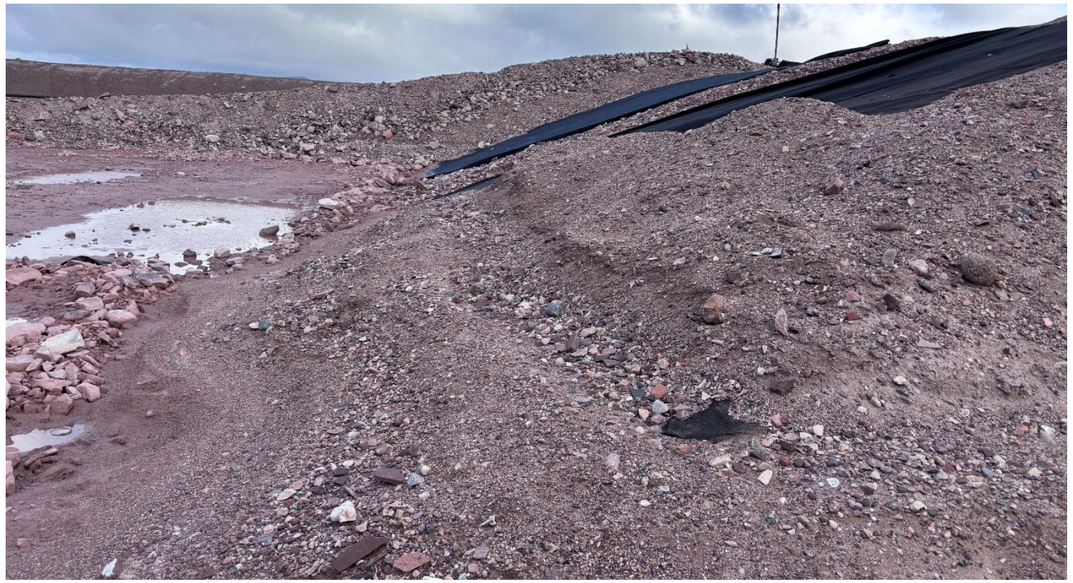
M-193: Erosion pathways beside eastern tank



M-194: Southeastern berm, looking SW



M-195: Tank farm view from SE corner



M-196: Ponding water and exposed liner on northeastern berm

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M-197: Slope beside central tank



M-198: Entrance road to tank farm, looking NE



M-199: Typical piping layout



M-200: Typical piping layout and surface conditions – Note ponding water

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M-201: Ponding water beside SW tank and southern berm



M-202: Ponding water at SW corner of tank farm, looking W



M-203: Slope between road and fireball pad, looking N



M-204: Ponds north of tank farm, looking SW

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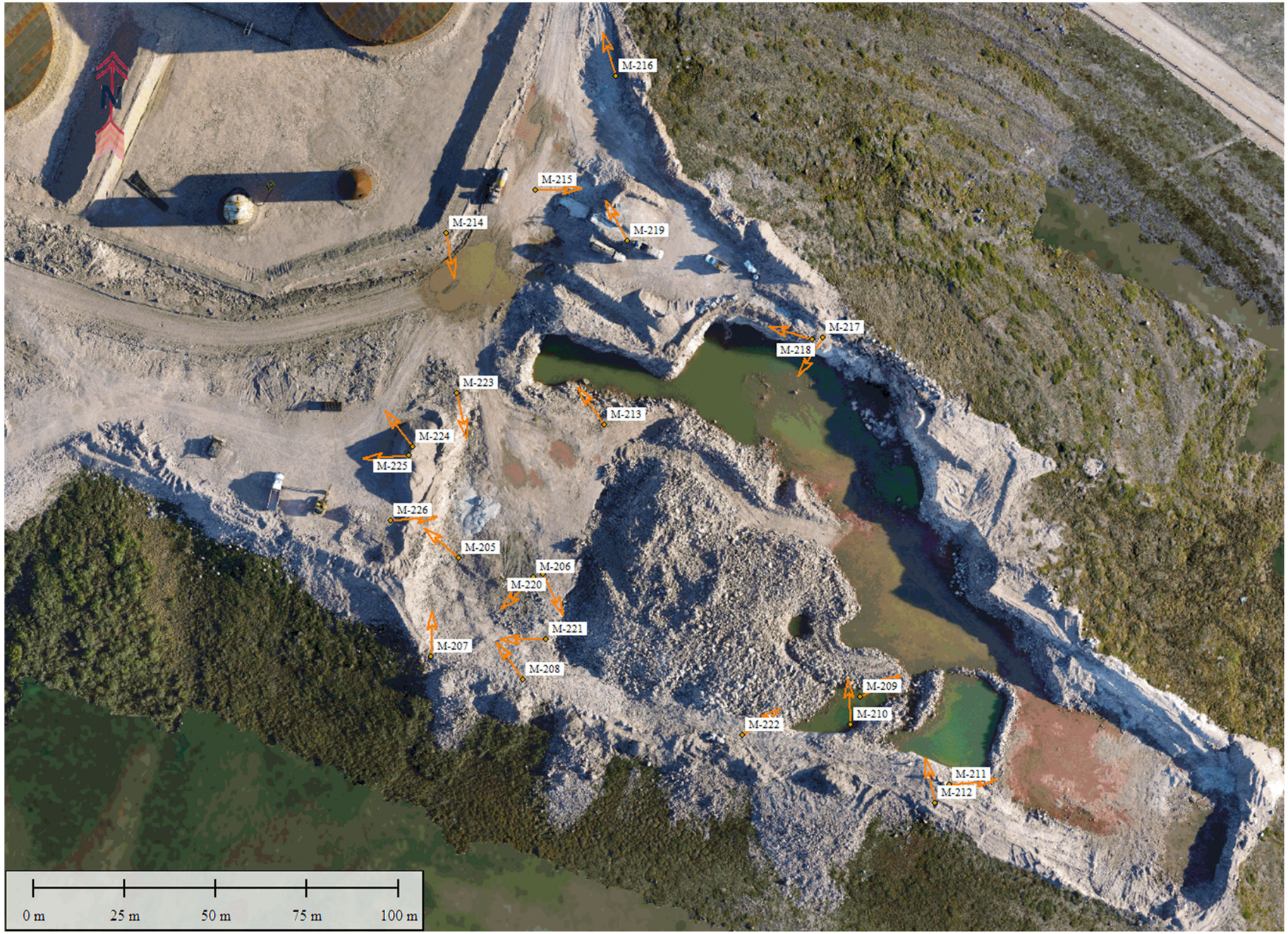


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**MLA Quarry**

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M-205: W side of quarry



M-206: Looking SE



M-207: Looking N



M-208: Looking NW

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M-209: Quarry ponds, looking NE



M-210: Quarry ponds, looking N



M-211: Quarry, looking E



M-212: Quarry ponds, looking NW

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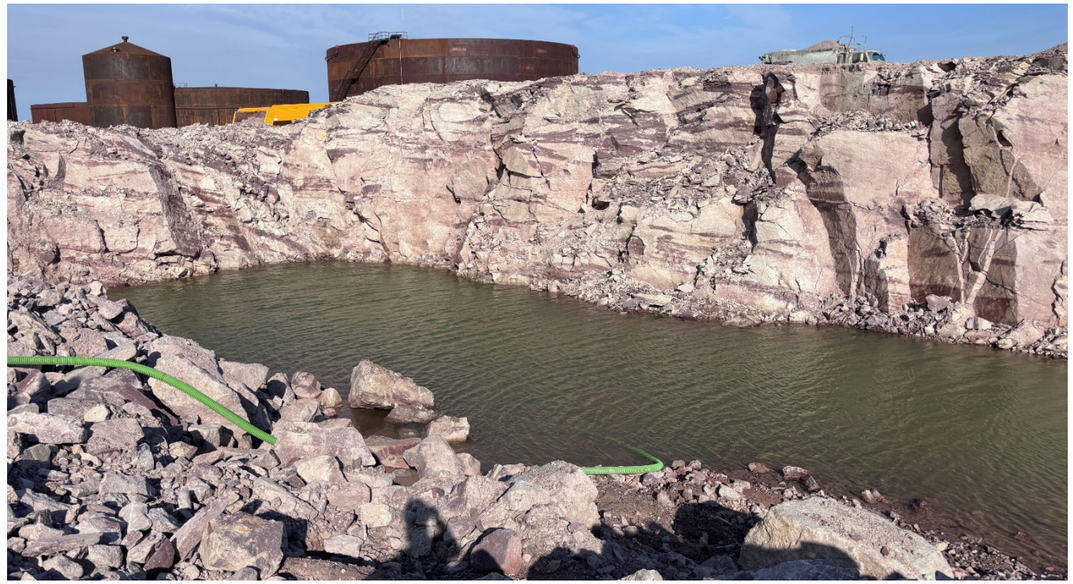

M-213: Looking E



M-214: Quarry entrance, looking S



M-215: Batch plant east to the quarry. Note the deck doesn’t have support




M-216: Batch plant east to the quarry. Note the deck is not anchored

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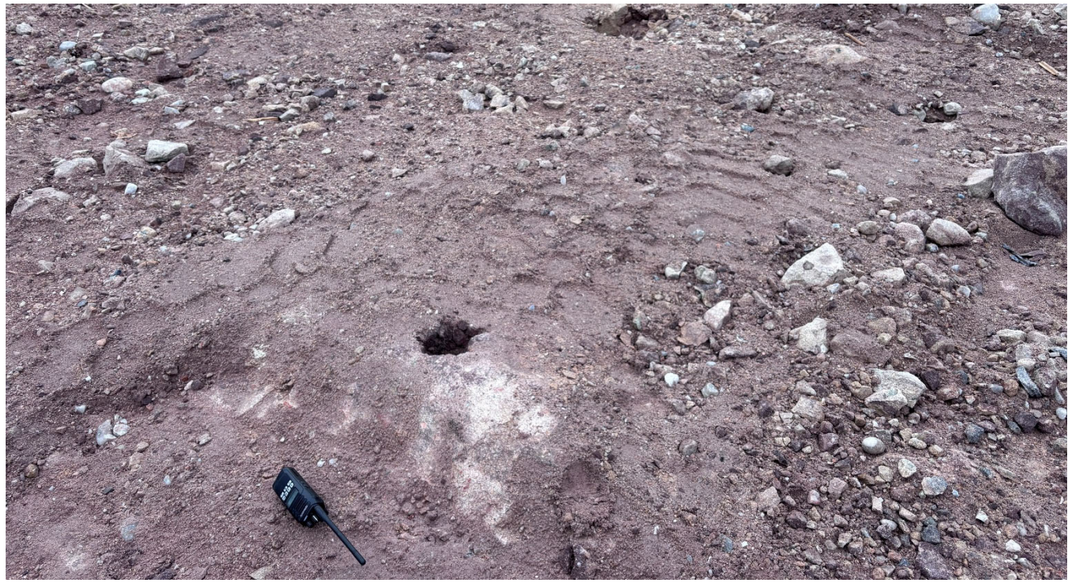
M-217: Quarry ponds, looking SE



M-218: Quarry pond, looking S



M-219: Batch plant east to the quarry. Note the sandstone joint, which may have contributed to the failure of one concrete block.



M-220: Holes that were drilled in the area but not blasted

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M-221: Looking W



M-222: Looking NE



M-223: Looking S



M-224: Tank farm viewed from quarry

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M-225: Rock pile W of quarry



M-226: Quarry, looking E

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**Fuel Offload Access Road**

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M-227: Edge of truck laydown pad, looking SE



M-228: Edge of truck laydown pad, looking NW



M-229: Typical pipeline configuration along edge of road embankment, looking S



M-230: Typical bracing

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| | | **Fuel Offload Access Road** |
| Job No: CAPR004312<br>Filename: Back River_MLA_2025_AGI_Photolog.pdf | Back River Project | Date: February 2026 / Approved: JBK / Figure: 74 |



M-231: Truck parking at edge of pad beside fuel offload access road



M-232: Piping, looking NW



M-233: Ponding water beside piping

| | | |
|---|---|---|
| srk consulting | B2GOLD NUNAVUT | 2025 Annual Geotechnical Inspection |
| | | **Fuel Offload Access Road** |
| Job No: CAPR004312<br>Filename: Back River_MLA_2025_AGI_Photolog.pdf | Back River Project | Date: February 2026 \| Approved: JBK \| Figure: 75 |



M-234: Pipe bracing supported by rocks

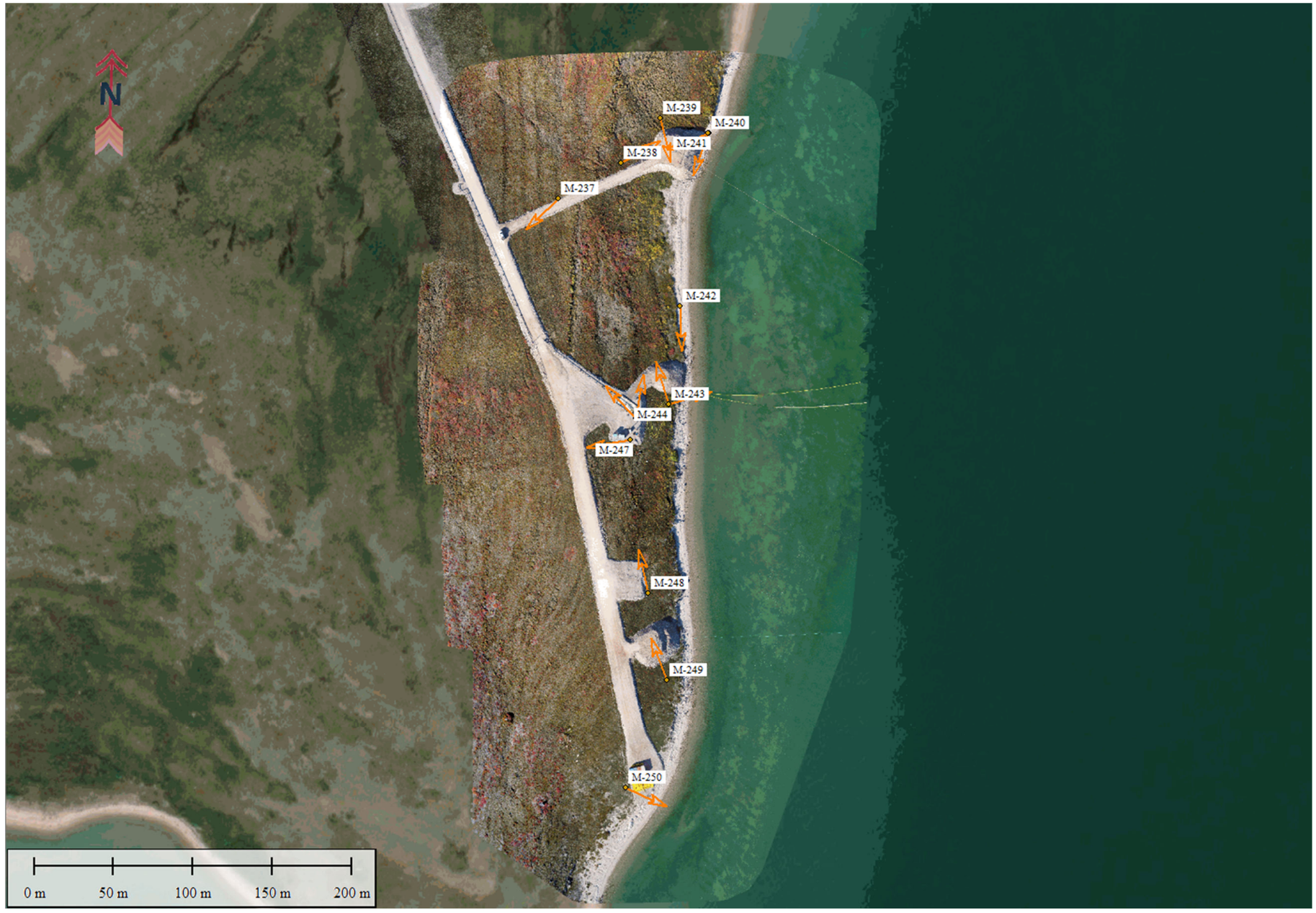


M-235: Piping, looking S towards anchor pad area



M-236: Typical road embankment, looking S

| | | |
|---|---|---|
| srk consulting | B2GOLD NUNAVUT | 2025 Annual Geotechnical Inspection |
| | | **Fuel Offload Access Road** |
| Job No: CAPR004312<br>Filename: Back River_MLA_2025_AGI_Photolog.pdf | Back River Project | Date: February 2026 / Approved: JBK / Figure: 76 |




| | | |
|---|---|---|
| srk consulting | B2GOLD NUNAVUT | 2025 Annual Geotechnical Inspection |
| | | **Anchor Pads** |
| Job No: CAPR004312<br>Filename: Back River_MLA_2025_AGI_Photolog.pdf | Back River Project | Date: February 2026 / Approved: JBK / Figure: 77 |



M-237: North anchor pad access road – Note pad thickness too thin



M-238: North pad, looking E



M-239: North pad, looking S – Note corner flow paths



M-240: North pad, looking W from shoreline

| | | |
|---|---|---|
| srk consulting | B2GOLD NUNAVUT | 2025 Annual Geotechnical Inspection |
| Job No: CAPR004312<br>Filename: Back River_MLA_2025_AGI_Photolog.pdf | Back River Project | **Anchor Pads** |
| | | Date: February 2026 / Approved: JBK / Figure: 78 |



M-241: North pad slope along shoreline – Note oversteepened slope



M-242: Middle anchor pad, looking S – Note shore erosion

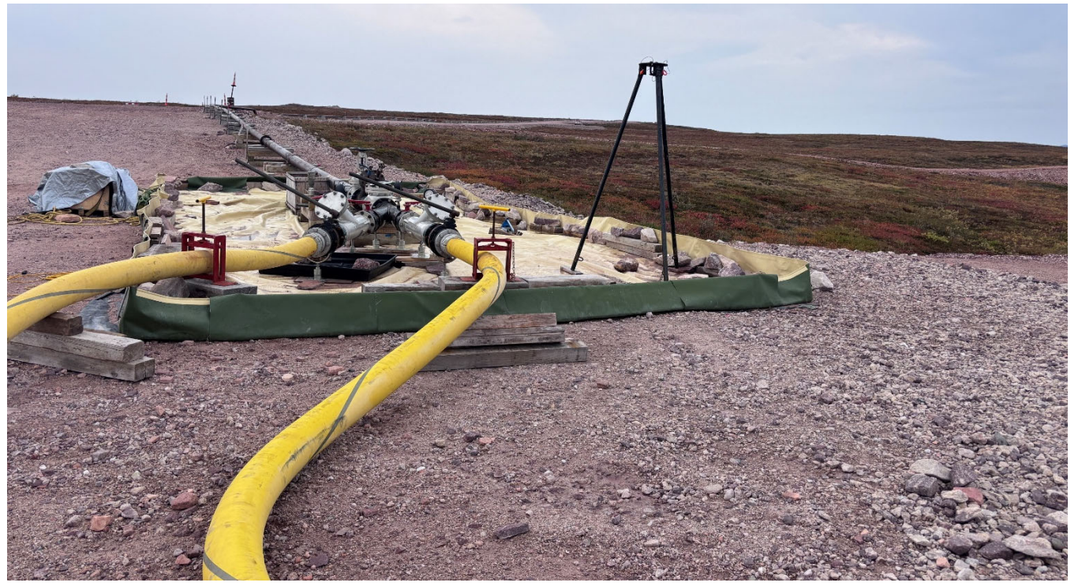


M-243: Middle pad, looking N



M-244: Fuel offload area

| | | |
|---|---|---|
| srk consulting | B2GOLD NUNAVUT | 2025 Annual Geotechnical Inspection |
| Job No: CAPR004312<br>Filename: Back River_MLA_2025_AGI_Photolog.pdf | Back River Project | **Anchor Pads** |
| | | Date: February 2026 / Approved: JBK / Figure: 79 |



M-245: Fuel offload area piping



M-246: Middle pad, looking N



M-247: Fuel offload area trailer beside edge of pad



M-248: Erosion of pad slope, looking N

| | | |
|---|---|---|
| srk consulting | B2GOLD NUNAVUT | 2025 Annual Geotechnical Inspection |
| | | **Anchor Pads** |
| Job No: CAPR004312<br>Filename: Back River_MLA_2025_AGI_Photolog.pdf | Back River Project | Date: February 2026 / Approved: JBK / Figure: 80 |



M-249: South anchor pad, looking N – Note steep slope




M-250: Laydown/offload area beside shore

| | | |
|---|---|---|
| srk consulting | B2GOLD NUNAVUT | 2025 Annual Geotechnical Inspection |
| Job No: CAPR004312<br>Filename: Back River_MLA_2025_AGI_Photolog.pdf | Back River Project | **Anchor Pads** |
| | | Date: February 2026 / Approved: JBK / Figure: 81 |

# Appendix C Airstrip: Aerial Images




Figure 1 – Aerial Image from 2025-08-16 (provided by B2Gold)

| | | |
|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction |
| | | **General View 2025-08-16** |
| Job No: CAPR004085 | Back River Project | Date: March 2026 / Approved: AT / Figure: **C.1** |




Figure 2 – Aerial Image from 2023-08-10 (provided by B2Gold)

| | | |
|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction |
| | | **General View Construction Progress August 2023** |
| Job No: CAPR004085 | Back River Project | Date: March 2026 / Approved: AT / Figure: **C.2** |




Figure 4 - Aerial image of Goose Airstrip: Above SE end, looking NW

| | | |
|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction |
| | | **Construction progress Aerial Image from 2023-09-10** |
| Job No: CAPR004085 | Back River Project | Date: March 2026 / Approved: AT / Figure: **C.3** |




Figure 5 - Aerial image of Goose Airstrip: Above center of airstrip, looking at the NE apron

| | | |
|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction |
| | | **Construction progress Aerial Image from 2023-09-10** |
| Job No: CAPR004085 | Back River Project | Date: March 2026 / Approved: AT / Figure: **C.4** |




Figure 6 - Aerial image of Goose Airstrip: Above NW end, looking SE

| | | |
|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction |
| | | **Construction progress Aerial Image from 2023-09-14** |
| Job No: CAPR004085 | Back River Project | Date: March 2026 / Approved: AT / Figure: **C.5** |




Figure 3 – Aerial Images from 2023-08-10 and 2023-10-11 (provided by B2Gold)

| | | |
|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction |
| | | **General View Construction Progress September 2023** |
| Job No: CAPR004085 | Back River Project | Date: March 2026 / Approved: AT / Figure: **C.6** |

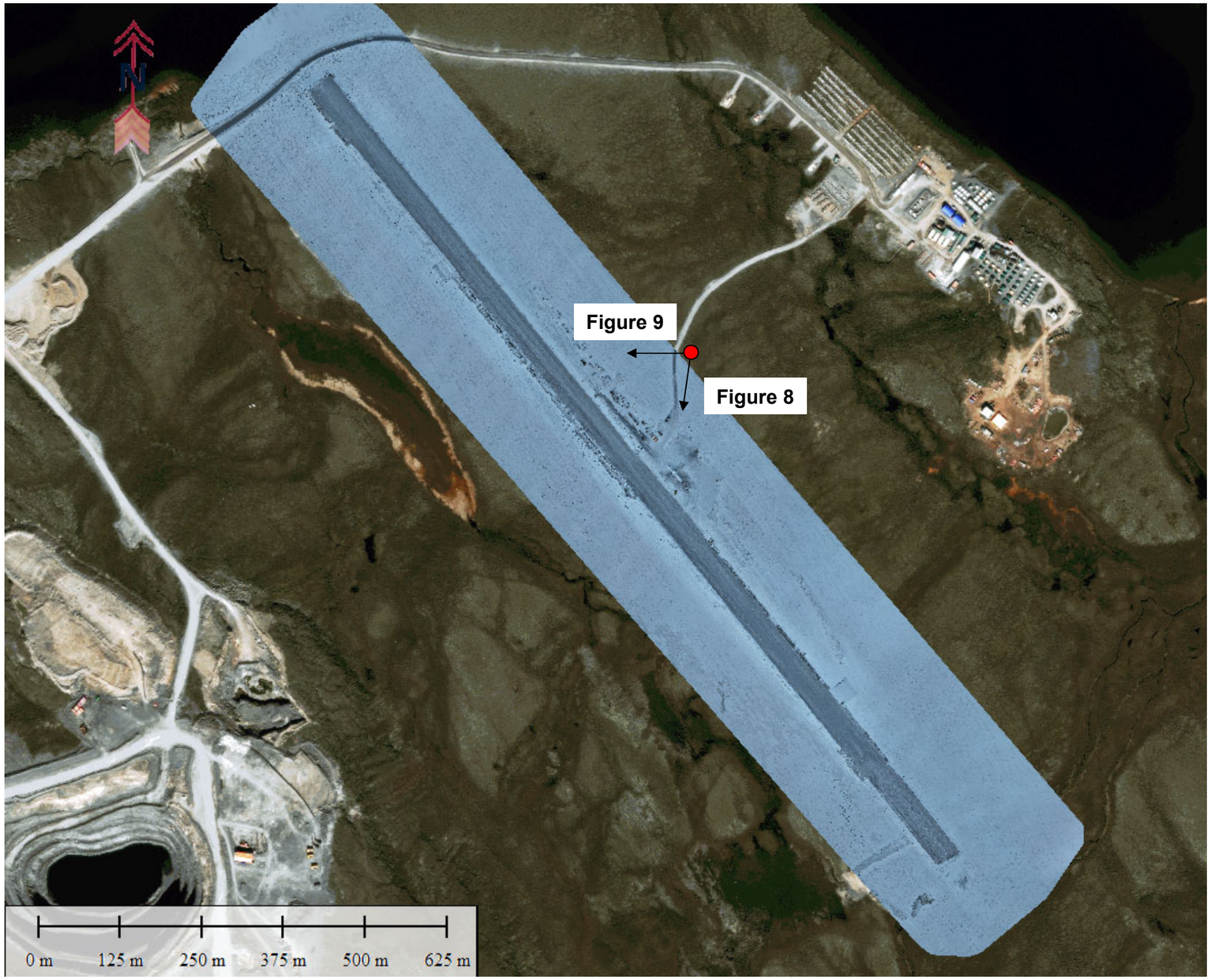



Figure 7 – Aerial Image from 2023-11-06 (provided by B2Gold)

| | | |
|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction |
| Job No: CAPR004085 | Back River Project | **General View Construction Progress February 2024** |
| | | Date: March 2026 / Approved: AT / Figure: **C.7** |




Figure 8 - Aerial image of Goose Airstrip: SE end of Airstrip

| | | | |
|---|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction | |
| | | **Construction progress Aerial Image from 2024-02-29** | |
| Job No: CAPR004085 | Back River Project | Date: March 2026 | Approved: AT | Figure: **C.8** |




Figure 9 - Aerial image of Goose Airstrip: NW end of Airstrip

| | | |
|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction |
| | | **Construction progress Aerial Image from 2024-02-29** |
| Job No: CAPR004085 | Back River Project | Date: March 2026 / Approved: AT / Figure: **C.9** |

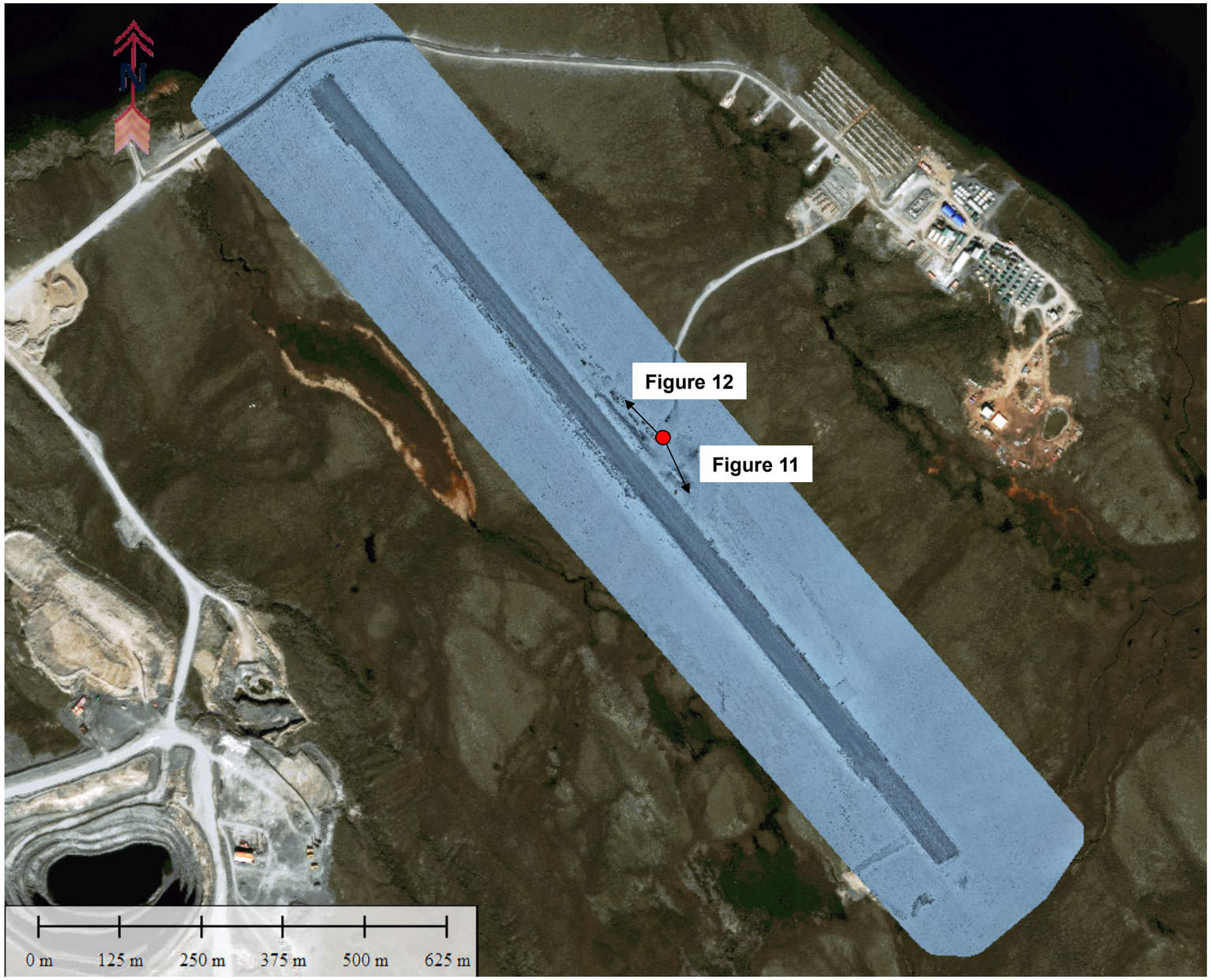



Figure 10 – Aerial Image from 2023-11-06 (provided by B2Gold)

| | | |
|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction |
| | | **General View Construction Progress April 2024** |
| Job No: CAPR004085 | Back River Project | Date: March 2026 / Approved: AT / Figure: **C.10** |




Figure 11 - Aerial image of Goose Airstrip: SE end of Airstrip

| | | | | |
|---|---|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction | | |
| | | **Construction progress Aerial Image from 2024-04-26** | | |
| Job No: CAPR004085 | Back River Project | Date: March 2026 | Approved: AT | Figure: **C.11** |




Figure 12 - Aerial image of Goose Airstrip: NW end of Airstrip

| | | |
|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction |
| | | **Construction progress Aerial Image from 2024-04-26** |
| Job No: CAPR004085 | Back River Project | Date: March 2026 / Approved: AT / Figure: **C.12** |




Figure 13 – Aerial Image from 2024-09-15 (provided by B2Gold)

| | | |
|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction |
| | | **General View Construction Progress August 2024** |
| Job No: CAPR004085 | Back River Project | Date: March 2026 / Approved: AT / Figure: **C.13** |




Figure 14 - Aerial image of Goose Airstrip: SW apron construction

| | | |
|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction |
| | | **Construction progress Aerial Image from 2024-08-06** |
| Job No: CAPR004085 | Back River Project | Date: March 2026 / Approved: AT / Figure: **C.14** |




Figure 15 - Aerial image of Goose Airstrip: Looking N from southern end of airstrip

| | | |
|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction |
| | | **Construction progress Aerial Image from 2024-08-12** |
| Job No: CAPR004085 | Back River Project | Date: March 2026 / Approved: AT / Figure: **C.15** |




Figure 16 - Aerial image of Goose Airstrip: SW apron construction, looking N

| | | |
|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction |
| | | **Construction progress Aerial Image from 2024-08-26** |
| Job No: CAPR004085 | Back River Project | Date: March 2026 / Approved: AT / Figure: **C.16** |




Figure 17 - Aerial image of Goose Airstrip: SW apron construction, looking SE

| | | |
|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction |
| Job No: CAPR004085 | Back River Project | **Construction progress Aerial Image from 2024-08-26** |
| | | Date: March 2026 / Approved: AT / Figure: **C.17** |

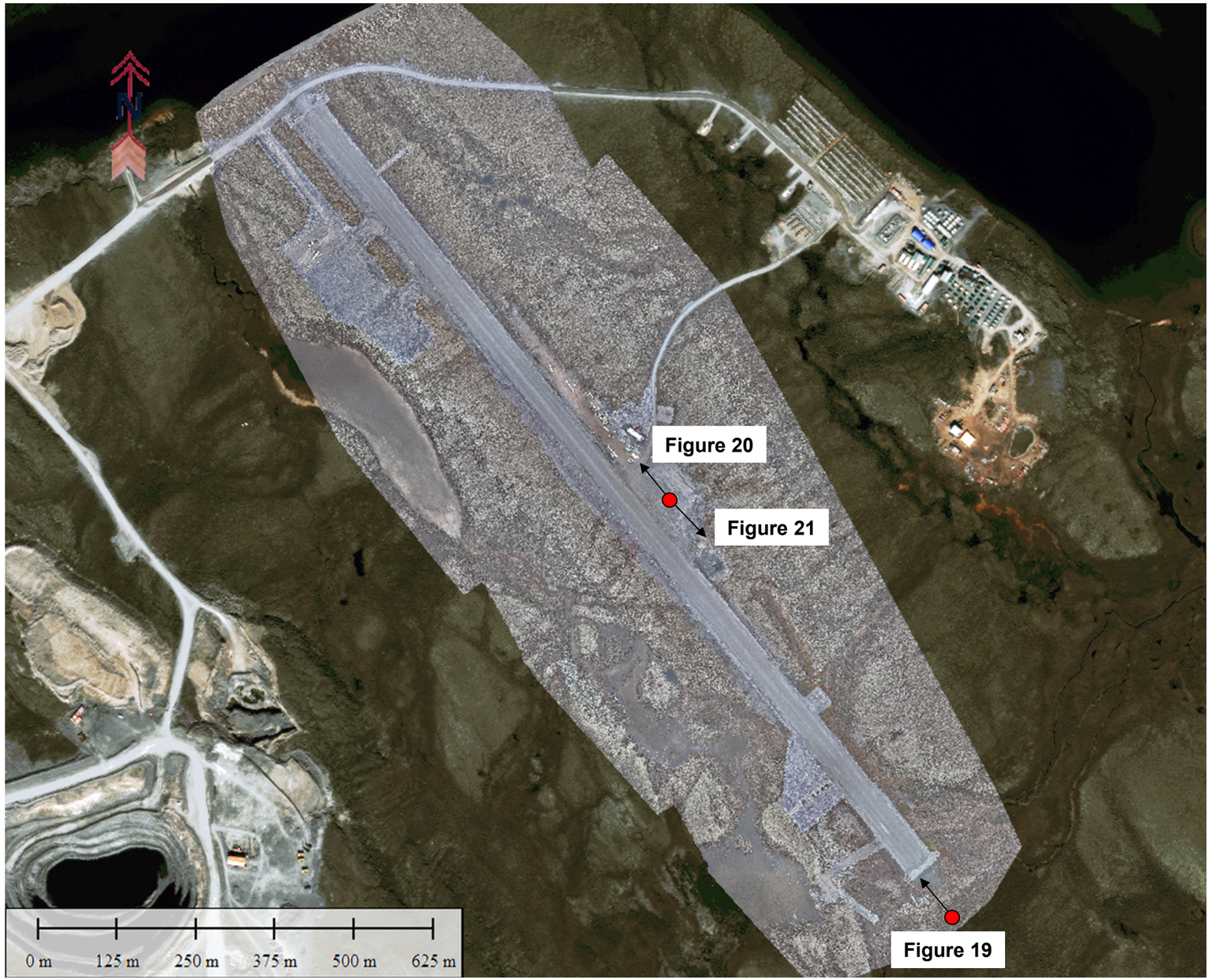



Figure 18 – Aerial Image from 2024-09-15 (provided by B2Gold)

| | | |
|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction |
| | | **General View Construction Progress October 2024** |
| Job No: CAPR004085 | Back River Project | Date: March 2026 / Approved: AT / Figure: **C.18** |




Figure 19 - Aerial image of Goose Airstrip: Looking NW from SE end of Airstrip

| | | |
|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction |
| | | **Construction progress Aerial Image from 2024-10-05** |
| Job No: CAPR004085 | Back River Project | Date: March 2026 / Approved: AT / Figure: **C.19** |




Figure 20 - Aerial image of Goose Airstrip: Looking NW from center of Airstrip

| | | |
|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction |
| | | **Construction progress Aerial Image from 2024-10-27** |
| Job No: CAPR004085 | Back River Project | Date: March 2026 / Approved: AT / Figure: **C.20** |




Figure 21 - Aerial image of Goose Airstrip: Looking SE from center of Airstrip

| | | |
|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction |
| | | **Construction progress Aerial Image from 2024-10-27** |
| Job No: CAPR004085 | Back River Project | Date: March 2026 / Approved: AT / Figure: **C.21** |




Figure 22 – Aerial Image from 2025-08-16 (provided by B2Gold)

| | | |
|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction |
| Job No: CAPR004085 | Back River Project | **General View Construction Progress March 2025** |
| | | Date: March 2026 / Approved: AT / Figure: **C.22** |




Figure 23 - Aerial image of Goose Airstrip: Looking towards the NW end of the Airstrip

| | | |
|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction |
| | | **Construction progress Aerial Image from 2025-03-16** |
| Job No: CAPR004085 | Back River Project | Date: March 2026 / Approved: AT / Figure: **C.23** |




Figure 24 - Aerial image of Goose Airstrip: Looking towards the SE end of the Airstrip

| | | |
|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction |
| | | **Construction progress Aerial Image from 2025-03-16** |
| Job No: CAPR004085 | Back River Project | Date: March 2026 / Approved: AT / Figure: **C.24** |




Figure 25 – Aerial Image from 2025-08-16 (provided by B2Gold)

| | | |
|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction |
| | | **General View Construction Progress July 2025** |
| Job No: CAPR004085 | Back River Project | Date: March 2026 / Approved: AT / Figure: **C.25** |




Figure 26 - Aerial image of Goose Airstrip: SW Apron, looking NE

| | | |
|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction |
| | | **Construction progress Aerial Image from 2025-07-23** |
| Job No: CAPR004085 | Back River Project | Date: March 2026 / Approved: AT / Figure: **C.26** |




Figure 27 – Aerial Image from 2025-08-16 (provided by B2Gold)

| | | |
|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction |
| | | **General View Construction Progress October 2025** |
| Job No: CAPR004085 | Back River Project | Date: March 2026 / Approved: AT / Figure: **C.27** |




Figure 28 - Aerial image of Goose Airstrip: SE end of Airstrip, looking NW

| | | |
|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction |
| | | **Construction progress Aerial Image from 2025-10-05** |
| Job No: CAPR004085 | Back River Project | Date: March 2026 / Approved: AT / Figure: **C.28** |




Figure 29 - Aerial image of Goose Airstrip: Airstrip laydown apron, looking N

| | | |
|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction |
| | | **Construction progress Aerial Image from 2025-10-05** |
| Job No: CAPR004085 | Back River Project | Date: March 2026 / Approved: AT / Figure: **C.29** |




Figure 30 - Aerial image of Goose Airstrip: SW apron, looking SW

| | | |
|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction |
| | | **Construction progress Aerial Image from 2025-10-05** |
| Job No: CAPR004085 | Back River Project | Date: March 2026 / Approved: AT / Figure: **C.30** |




Figure 31 – Aerial Image from 2025-08-16 (provided by B2Gold)

| | | |
|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction |
| Job No: CAPR004085 | Back River Project | **General View Construction Progress January 2026** |
| | | Date: March 2026 / Approved: AT / Figure: **C.31** |




Figure 32 - Aerial image of Goose Airstrip: Looking W at the NW side of the Airstrip

| | | |
|---|---|---|
| srk consulting | B2GOLD | Goose Airstrip Construction |
| | | **Construction progress Aerial Image from 2026-01-08** |
| Job No: CAPR004085 | Back River Project | Date: March 2026 / Approved: AT / Figure: **C.32** |

# Appendix D B2Gold's Repairs









*Documentation of repairs on site – most photos provided by site staff*

| | | |
|---|---|---|
| srk consulting | B2GOLD NUNAVUT | 2025 Annual Geotechnical Inspection |
| Job No: CAPR004312<br>Filename: BackRiver_MLA&Goose_2025AGI_AppendixD..pdf | Back River Project | **Emulsion Plant Pad** |
| | | Date: 2026-03-05 \| Approved: JBK \| Figure: **D.1** |










*Documentation of repairs on site – most photos provided by site staff*

| | | |
|---|---|---|
| srk consulting | B2GOLD NUNAVUT | 2025 Annual Geotechnical Inspection |
| Job No: CAPR004312<br>Filename: BackRiver_MLA&Goose_2025AGI_AppendixD..pdf | Back River Project | **Primary Pond Dam.**<br>**Thermal Protection Barrier** |
| | | Date: 2026-03-05 \| Approved: JBK \| Figure: **D.2** |

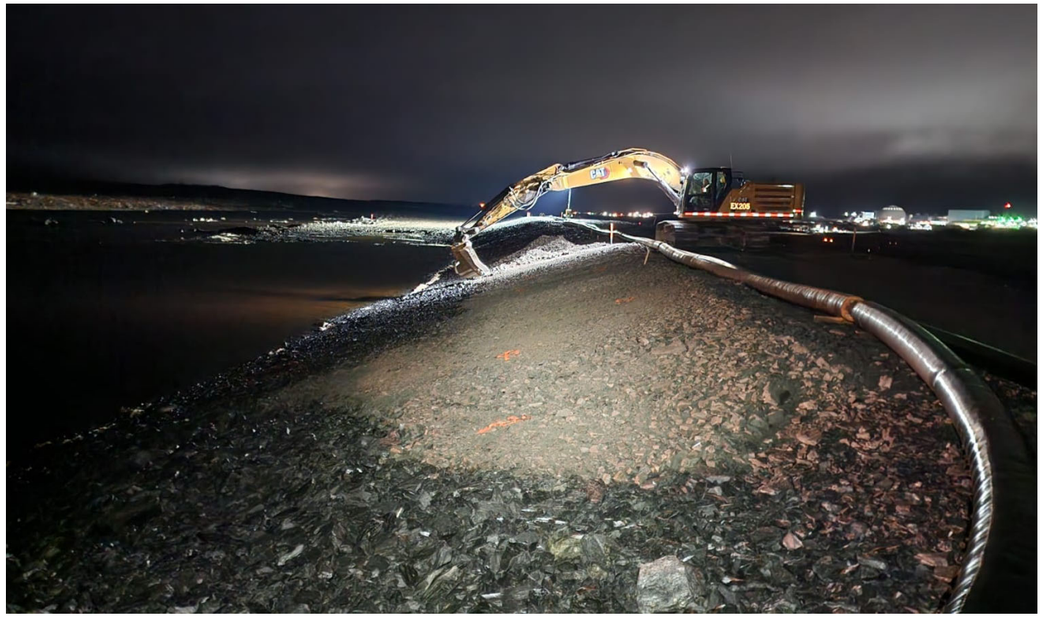






*Documentation of repairs on site – most photos provided by site staff*

| | | |
|---|---|---|
| srk consulting | B2GOLD NUNAVUT | 2025 Annual Geotechnical Inspection |
| Job No: CAPR004312<br>Filename: BackRiver_MLA&Goose_2025AGI_AppendixD..pdf | Back River Project | **Primary Pond Dam.<br>Thermal Protection Barrier** |
| | | Date: 2026-03-05 \| Approved: JBK \| Figure: **D.3** |









*Documentation of repairs on site – most photos provided by site staff*

| | | |
|---|---|---|
| srk consulting | B2GOLD NUNAVUT | 2025 Annual Geotechnical Inspection |
| | | **Primary Pond Dam. Upstream Slope and Crest** |
| Job No: CAPR004312<br>Filename: BackRiver_MLA&Goose_2025AGI_AppendixD..pdf | Back River Project | Date: 2026-03-05 \| Approved: JBK \| Figure: **D.4** |









*Documentation of repairs on site – most photos provided by site staff*

| | | |
|---|---|---|
| srk consulting | B2GOLD NUNAVUT | 2025 Annual Geotechnical Inspection |
| | | **Primary Pond Dam. Upstream Slope and Crest** |
| Job No: CAPR004312<br>Filename: BackRiver_MLA&Goose_2025AGI_AppendixD..pdf | Back River Project | Date: 2026-03-05 \| Approved: JBK \| Figure: **D.5** |







*Documentation of repairs on site – most photos provided by site staff*

| | | |
|---|---|---|
| srk consulting | B2GOLD NUNAVUT | 2025 Annual Geotechnical Inspection |
| | | **Primary Pond Dam. Upstream Slope and Crest** |
| Job No: CAPR004312<br>Filename: BackRiver_MLA&Goose_2025AGI_AppendixD..pdf | Back River Project | Date: 2026-03-05 / Approved: JBK / Figure: **D.6** |





*Documentation of repairs on site – most photos provided by site staff*

| | | |
|---|---|---|
| srk consulting | B2GOLD NUNAVUT | 2025 Annual Geotechnical Inspection |
| Job No: CAPR004312<br>Filename: BackRiver_MLA&Goose_2025AGI_AppendixD..pdf | Back River Project | **Primary Pond Dam. Discharge Spot** |
| | | Date: 2026-03-05 \| Approved: JBK \| Figure: **D.7** |

# APPENDIX B GROUND THERMAL MONITORING MEMORANDUM

srk consulting

SRK Consulting (Canada) Inc.
320 Granville Street, Suite 2600
Vancouver, BC V6C 1S9
Canada

+1 604 681 4196 office
+1 778 508 3584 fax
vancouver@srk.com
www.srk.com

# Memo

| | | | |
|---|---|---|---|
| **To** | Macoura Kone, PhD, PGeol., PGeo.<br>Tanner Shapton, PEng | **Client** | B2Gold Back River Corp |
| **From** | Christopher Stevens, PhD | **Project** | CAPR004313 |
| **Reviewed** | John Kurylo, MSc PEng | **Date** | March 20, 2026 |

**Subject** Back River Project: 2025 Site-wide Ground Thermal Monitoring – Annual Reporting

**File name:** BackRiverProject 2025_GroundThermal Monitoring_CAPR004313_Rev01_20260320.docx

# 1 Introduction

The Back River project (the Project) is an open pit and underground gold mining project in the West Kitikmeot region of Nunavut, approximately 520 km northeast of Yellowknife and 75 km south of Bathurst Inlet. The mine will consist of a Marine Laydown Area (MLA) at Bathurst Inlet and the mine located at the Goose property. The MLA serves as the primary resupply point for the mine. B2Gold Corporation (B2Gold) have been advancing construction at the Goose Property and MLA under their site Water License 2AM-BRP1831 – Amendment No. 1, issued by the Nunavut Water Board (NWB) on October 15, 2021.

Ground thermal monitoring of background and infrastructure is conducted to meet the terms and conditions agreed to in the project certificate. In particular, the Project Certificate Terms and Conditions #11 states that “During construction, the Proponent shall, on an annual basis, provide additional permafrost mapping information documented in fulfillment of this Term and Condition in the Proponent’s annual report to the Nunavut Impact Review Board.” This memorandum provides ground thermal monitoring that has been completed in 2024 and 2025.

# 2 Monitoring Program

## 2.1 Monitoring Plan

The site-wide ground thermal monitoring plan (the plan) is designed to ensure the effective collection, management, and reporting of ground temperature data from long-term monitoring stations (SRK 2026).

The ground temperature monitoring objectives include:

- Identifying natural climate-driven changes to the ground thermal regime and permafrost at background sites located outside of direct influence of mining activities; and

- Identifying changes to the ground thermal regime and permafrost from the mine infrastructure.

Key elements of the plan include planning for consistent ground temperature data collection to track permafrost conditions, data management to maintain quality and accuracy of the collected information, annual instrument inspection and maintenance at monitoring sites, and annual reporting to document the above-mentioned information and data findings to support decision-making related to permafrost monitoring at the project site.

## 2.2 Annual Reporting

An annual ground temperature monitoring report is issued with the annual geotechnical inspection report for the site.

The report is developed to:

- Report data collection for the year;
- Describe instrument maintenance or replacement that has occurred;
- Update graphical plots of the historic and recent measurements for the monitoring sites;
- Analysis of the ground temperature to identify changes in permafrost and long-term trends;
- Analysis of relevant climate parameters to support understanding of changes in permafrost; and
- Action plan for instrument repair or replacement for the upcoming year, as needed.

This annual report further examines archived drillhole datasets that characterize ground ice conditions at the site.

# 3 Site Conditions

## 3.1 Climate

The region around the Back River project is characterized by long dark winters, shorter summers and generally gently rolling topography. Typically, the ground is covered in snow from October (and as early as September) to June (sometimes snow melting earlier in mid to late may). Back River is subject to very cold weather and at times persistent Arctic winds, similar to other Northern Canadian sites.

In the winter the lakes and sea are covered with ice that can be greater than 2 m in thickness. This can allow for on-ice activities such as diamond drilling, winter ice road, and airstrip construction and use. The mean annual air temperature (MAAT) is around -10°C at the Goose Station. The mean annual precipitation ranges from around 270 to 430 mm (SRK 2021)

Meteorological data has been collected at the Goose Station (Lat. 65.54, Long. -106.41, Elev. 277 masl) since August 2004 and at the MLA Station (Lat. 66.65, Long. -107.69, Elev. 11 masl) since 2012. The stations are equipped with gauges to monitor air temperature, precipitation as rainfall and snowfall, solar radiation, wind speed, and wind direction (SRK 2021, Rescan 2014). Meteorological data

collected at these two stations will be used to support understanding of changes in ground temperature and permafrost.

## 3.2 Surficial and Bedrock Geology

Goose Property is characterized by low relief terrain with undulating or rolling landscapes, presented as a sequence of smooth, non-linear rises and hollows that are largely formed by glacial drumlines. Frost boils form micro-relief at the ground surface and have developed from repeated freeze thaw cycle at the site. Drainage is variable from well to poorly drained ground depending on local topography, surficial material, and permafrost. The MLA is located near sea level and characterized by gentle slopes and level plains that drain toward Bathurst Inlet.

Surficial geology at the project site is largely a reflection of the last advance of the North American Laurentide ice sheet during the Wisconsin Glaciation. The maximum extent of the continental glacier occurred approximately 21,000 years ago and began withdrawing from the Kitikmeot Region approximately 10,000 years ago.

The landscape is striated with overburden materials characteristic of a post-glacial environment. At the Goose property, the common surficial deposits include glacial till and drumlines. Glacial till consists of sand and variable amounts of silt and gravel. Drumlines also coarse sand, silt, and gravel compositions and are often associated with kettle lakes.  Organic veneers (less than 1 m in depth) are also common, resulting from the accumulation of very slowly decomposing vegetation, typically in the wet lowlands.

The majority of the Goose Property is underlain by clastic meta-sedimentary rock types consisting of turbidites (greywacke and mudstone) of the Slave Province (Rescan 2013) Vol 5 EIS). This sequence is cut by felsic dikes and gabbroic dikes. From oldest to youngest, the sequence is composed of central greywacke, lower iron formation, middle mudstone, upper iron formation, and upper sediments. Exposed bedrock can be found throughout the Goose Property or immediately below a thin veneer of glacial sediments.

At the MLA, the surficial deposits include marine and morainal deposits. Marine and moraine deposits consist mainly of coarse sands. Poorly drained areas with accumulated organics may also have fine-grained soils and higher amounts of ground ice.

## 3.3 Ground Thermal Regime

Back River is located within a zone of Continuous permafrost, with an estimated 90 to 100% of the land area underlain by permafrost. Permafrost temperature has been measured to range from -4.7°C to -7.5°C at the Goose Property, with an average of -6.3°C (SRK 2015a). The seasonally thawed active layer ranges from approximately 1 to 4 m bgs. The greatest active layer depth occurs in areas with thin soil veneers above bedrock. The base of permafrost is estimated to range from 490 to 570 m bgs using the 0°C isotherm, with a reported geothermal gradient of 0.013 to 0.014°Cm (SRK 2015a). The local groundwater chemistry results in a freezing point depression and unfrozen taliks at the base of permafrost, also referred to as basal cryopegs.

# 4 Ground Thermal Monitoring

## 4.1 Overview

The site wide ground thermal monitoring plan provides the historic and recent ground temperature cables (GTCs) installed at the Goose Property and MLA (SRK 2025). Figure 1 shows the general arrangement of constructed and planned infrastructure at the Goose Property. This area has been instrumented with GTCs to characterize the ground thermal regime at “historic site” (installed prior to 2023) and “recent sites” (2023-present) (Figure 2). The status (function) of the GTCs at the Goose Property is shown in Figures 3. Several additional GTCs have historically been installed at the MLA and their current status is shown in Figures 4 and 5, respective.

At the time of reporting, the historic sites are inactive with unknown instrument function, and no recent measurements have been made from the sites (Figures 3 and 5). Phase 1 audit of the instruments was completed by SRK in 2023. The Phase 1 audit included visual inspection the instrumentation (cable leads and data loggers) for damage at the Goose Property. The information was advanced to Campbell Scientific who is the instrument manufacturer for most of the historic instruments. Campbell Scientific concluded that historic measurements and programing would no longer be store on the data loggers due to depletion of the primary and secondary batteries. Ultimately it was determined that no salvageable stored memory was available in the historic dataloggers and any updates or repairs to these data loggers would be to collect new and forward-looking data only. The historic data that is available for each of the sites is provided in the *Back River Project: Site-wide Ground Thermal Monitoring Plan (Revision 01)* (SRK 2026).

Phase 2 of the instrument audit: B2Gold is in the process requesting proposals to install new background GTC and / or to confirm cable functionality and to repair or replace historic data loggers at a select number of accessible sites. B2Gold will review the proposals and develop a plan to install new suitable data collection at the Goose site. These sites will characterize the deep ground thermal regime to establish long-term changes in permafrost. The instruments are not well suited for monitoring the shallow ground thermal regime, active layer depth, and change in shallow permafrost temperature, due to the original purpose of the instruments. New background sites are therefore planned for installation to characterize the shallow ground thermal regime at background locations outside of the influence of mining infrastructure.

## 4.2 Monitoring Program Sites

A summary of the background and infrastructure monitoring sites that have been included in the site-wide ground thermal monitoring program is provided in Table 1. The monitoring sites represent a subset of the active GTCs that are used to monitoring geotechnical performance of the constructed infrastructure. The GTC sites that are included in the monitoring program will be expanded as additional mine infrastructure is constructed and following the 2025 instrument audit of the historic sites.

One recent monitoring site (24-GSE-678B) is active at the Goose Property nearby the Umwelt Pit and Underground (Figures 3 and 6). Ground temperature is measured and recorded every four hours using a data logger. The site will be used to monitoring the thermal influence of pit and underground mine on immediately surrounding permafrost. The surface extent of the GTC is not expected to provide background conditions due to thermal disturbance from surface activities at the site. Additional background monitoring sites will be located further from surface activities to provide a better indication of background changes in ground temperature and permafrost.

An additional five infrastructure monitoring sites have been included as part of annual monitoring at the Goose Property (Table 1). The infrastructure monitoring sites include three sites at the Primary Pond Dam (PP-VTC-550-US, PP-VTC-550-DS, PP-VTC-550-KT) which are located at Station 550 beneath the Upstream (US), Downstream (DS), and Key Trench (KT). The three sites are used to monitor the influence of the dam on the underlying permafrost foundation. Note that there is additional instrumentation installed at the Primary Pond Dam. A full overview of all monitoring data from the instrumentation in that dam, including the remaining GTCs, will be overviewed / reported in the annual Dam Safety Inspection (DSI) reports that will commence in 2026; note that Primary Pond Dam finished construction at the end of 2025 so the first DSI to occur in 2026. One additional infrastructure monitoring site is located at the Camp Pad (SRK-23-CPI-DH1) (Figure 3). The ground temperature cable is used to monitor ground temperature in the rock pad and permafrost foundation. The cable is manual measured at a specified minimum frequency of once each quarter.

At MLA, two infrastructure monitoring sites (MLA-TF-GTC-1 and MLA-TF-GTC-2) at the fuel tank pad (Figure 5). The sites are included in the monitoring program and are used to monitor temperature through the rock pad and permafrost foundation (Table 1, Figure 5). MLA-TF-GTC-1 is installed through the tank farm berm and foundation on the southwest side of the facility, where the berm is constructed on overburden. The second GTC (MLA-TF-GTC-2) is installed on the north edge of pad at Tank 5 and extends into the foundation.

**Table 1: Ground Thermal Monitoring Sites**

| Location | Area | Site ID | Year | Northing | Easting | Status | Monitoring Type | GTC Length [m] (Approx.) |
|---|---|---|---|---|---|---|---|---|
| Goose Property | Umwelt Pit Area | 24-GSE-678B | 2024 | 7270839 | 430150 | Active | Background | |
| | Primary Pond Dam | PP-VTC-550-US | 2023 | 7271204 | 429848 | Active | Infrastructure | 15.5 |
| | | PP-VTC-550-KT | 2023 | 7271180 | 429830 | Active | Infrastructure | 15.5 |
| | | PP-VTC-550-DS | 2023 | 7271168 | 429821 | Active | Infrastructure | 15.5 |
| | Camp Pad | SRK-23-CPI-DH1 | 2023 | 7270012 | 429952 | Active | Infrastructure | 13.4 |
| MLA Property | Tank Farm | MLA-TF-GTC-1 | 2024 | 7393818 | 380820 | Active | Infrastructure | 21.0 |
| | | MLA-TF-GTC-2 | 2024 | 7393854 | 381065 | Active | Infrastructure | 15.3 |

## 4.3 Data Collection

Ground temperature data collection was completed using data loggers dedicated to each site or manual measurement periodically measured using a similar data logger (Table 2). The data is uploaded to the project site-wide ground thermal monitoring database, along with meteorological data collected at the Goose and MLA stations.

Attachment 2 provides the record of data collection for monitoring sites since their installation. The measurements are discussed in Section 5.

**Table 2: Monitoring Site Type, Data Collection Method, and Measurement Frequency**

| Site ID | Year | Monitoring Type | Collection Method | Measurement Frequency |
|---|---|---|---|---|
| 24-GSE-678B | 2024 | Background | Data Logger | Every 6 hrs |
| PP-VTC-550-US | 2023 | Infrastructure | Manual | Once a Quarter |
| PP-VTC-550-KT | 2023 | Infrastructure | Manual | Once a Quarter |
| PP-VTC-550-DS | 2023 | Infrastructure | Manual | Once a Quarter |
| SRK-23-CPI-DH1 | 2023 | Infrastructure | Manual | Once a Quarter |
| MLA-TF-GTC-1 | 2024 | Infrastructure | Data Logger | Every 6 hrs |
| MLA-TF-GTC-2 | 2024 | Infrastructure | Data Logger | Every 6 hrs |

Notes:
1. Year indicates the year of installation of the site
2. Background sites are expected to be influenced by natural changes
3. Infrastructure sites are expected to be influenced directly by infrastructure
4. Measurement frequency indicates the minimum required collection of data per the monitoring plan
5. Data logger installation planned for sites PP-VTC-550-US, PP-VTC-550-DS, and PP-VTC-550-KT after completion of dam

## 4.4 Instrument Performance and Data Quality

The data was reviewed to identify anomalous measurements. All data collected is included in the site-wide ground thermal database. Anomalous readings are then qualified in the database using our professional judgement and experience related to the ground thermal regime and permafrost. Abnormal readings are flagged within the database and not included in the annual analysis.

Table 3 summarizes the status of the instruments and data quality, and completeness based on the required measurement frequency. The status (function) of the sites is based on the following definitions.

**Monitoring Site Status:**

- Active – GTC is functional at time of reporting
- Inactive – GTC function is unknown at time of reporting
- Compromised (Repair) – GTC is not functional at time of reporting and requires repair
- Compromised – GTC is not functional and damaged beyond repair or not accessible

The overall quality of the data is determined using the following criteria:

**Good Data Quality:**

- Consistent and Reliable Readings: Temperature sensors provide stable and repeatable measurements over time.
- Minimal Data Gaps: The dataset has continuous records following the required measurement frequency with few or no missing values.

**Poor Data Quality:**

- Erratic or Unstable Readings: Temperature values fluctuate abnormally without justification.
- Significant Data Gaps: Large portions of the dataset are missing following the required measurement frequency.
- Instrumentation failure: The instrument (data logger or cable) experienced failure during year

**Table 3: Monitoring Site Status and Data Quality and Completeness**

| Site ID | Status | Data Quality | Data Completeness |
|---|---|---|---|
| 24-GSE-678B | Active | Good | Complete |
| PP-VTC-550-US | Active | Good | Complete |
| PP-VTC-550-KT | Active | Good | Complete |
| PP-VTC-550-DS | Active | Good | Complete |
| SRK-23-CPI-DH1 | Active | Good | Complete |
| MLA-TF-GTC-1 | Compromised (Repair) | Good | Incomplete |
| MLA-TF-GTC-2 | Active | Good | Complete |

Note:
1. Data completeness evaluated based on the minimum measurement frequency stated in the Monitoring Plan (SRK 2026).

# 5 Data Analysis

SRK has analyzed ground temperature data to meet the primary reporting described in the monitoring plan (SRK 2026). The analysis will be expanded as additional data is collected and additional sites are included in the monitoring program. The planned activities to improve and expand the monitoring program are described in Section 7.

## 5.1 Climate Data

B2Gold is in the process of aligning historic and recent meteorological station data that will be reported in the next annual monitoring report.

## 5.2 Goose Property

### Umwelt Pit Area

Monitoring site 24-GSE-678B was installed as a background site near the Umwelt Pit. The ground temperature is monitored to evaluate changes to background permafrost nearby the pit and underground area. The location of site 24-GSE-678B and other recent (22-UMU004B) and historic (13-GSE-288, 13-GSE-279, 12-GSE-233C) sites is shown in Figure 6. Several of the sites have poor data quality that is not considered (Figure 7).

Figure 8 shows a comparison (correlation) of ground temperature measured at 24-GSE-678B with other nearby sites with good data quality. Site 24-GSE-678B has relatively similar ground temperature and depth to the base of permafrost when compared to historic measurements from site 13-GSE-279. There is notable difference in ground temperature with the upper 150 m which likely reflects long-term differences in the ground thermal regime between the two sites.

An attempt will be made to collect recent measurements from site 13-GSE-279. More recent measurements would be used to evaluate climate induced changes to permafrost between 2014 and present. Site 24-GSE-678B will be used for long-term monitoring of ground temperature adjacent to the pit. The lower portion of the GTC may be impacted by future underground mining, however, this is not expected to have an impact on the overall function of the cable at a shallower depth.

### Primary Pond Dam (PP-VTC-550-US, PP-VTC-550-KT, PP-VTC-550-DS)

The Primary Pond Dam GTCs (PP-VTC-550-US, PP-VTC-550-KT, PP-VTC-550-DS) are vertically installed beneath the upstream (US), key trench (KT), and downstream (DS) (Figure 9). The cables extend into the foundation to monitor thermal influence of the structure on the underlying permafrost. Ground temperature is expected to vary across the three locations due to differences in thermal forcing from the upstream to downstream position of the dam.

Figure 9 shows the minimum and maximum annual ground temperature at the three monitoring sites. Ground temperature is variable between the sites as a function of the influence of dam fill and disturbance induced by ongoing construction of the dam. Permafrost temperature at an elevation of approximately 296 m varies from -4.2 to -5.3°C.

The upstream site (PP-VTC-550-US) shows the expected annual ground thermal regime beneath the toe, prior to retention of water. Over time, permafrost warming and thaw can be expected in response to the thermal influence of water in the pond. The downstream site (PP-VTC-550-DS) shows minimal annual change in ground temperature (minimal change in sensible heat). The limited amount of heat loss in the winter at this location may be due to snow accumulation and piling. This inference is based on our field observations. At site PP-VTC-550-KT, there is minor change in sensible heat beneath the key trench which is due to the overlying fill. Seasonal variation in ground temperature is limited to the fill material at this location. Longer term changes in temperature would be expected over time.

**Camp Pad**

The camp pad GTCs (SRK-23-CPI-DH1 & SRK-23-CPI-DH2) are vertically installed through the pad rock fill and underlying permafrost foundation (Figure 10). Permafrost is influenced by both the rock pad and surface infrastructure. Figure 10 shows the minimum and maximum temperature measured at the sites in 2024. Permafrost temperature is measured to be -6.8°C from lowermost sensor installed at 13.4 m bgs. The active layer depth is approximately 1.85 m bgs which is above the base of the rock pad.

## 5.3 MLA Property

At MLA, monitoring sites MLA-TF-GTC-1 and MLA-TF-GTC-2 have been installed to monitor temperature through the rock pad and permafrost foundation. At the time of reporting MLA-TF-GTC-1 is inactive and requires repair. Permafrost temperature is measured to be -4.3°C and -6.1°C at approximately 15 m bgs for MLA-TF-GTC-1 and MLA-TF-GTC-2, respectively.

# 6 Ground Ice

The following section has been included in the Annual Monitoring Report to summarize ground ice conditions at the Goose Property and MLA.

## 6.1 Drillhole Database

Geotechnical investigations to recover frozen overburden have included diamond drilling with brine and shallow split spoon sampling. These drilling methods have allowed for visual description of frozen soil to characterize ground ice type and content at the Goose Property and MLA. Three geotechnical investigations completed at the Goose Property (SRK 2015b; SRK 2018; SRK 2022) and an additional investigation at the MLA (SRK 2015c) are considered. Drillhole logs were compiled and analyzed to assess the variability in ground ice content and type.

Soil descriptions have been based on geotechnical logging of the recovered soil core using ASTM D2488-17 (ASTM 2017). Field descriptions of the material type have been confirmed with particle size distribution results completed on select samples in the laboratory. Ground ice type and visible estimation of excess ground ice content were based on ASTM D4083 (ASTM 2016).

Ground ice within overburden soil and bedrock is naturally heterogenous due to difference in material type, moisture content, and past and current thermal gradient of the ground. In general, fine-grained silt and clay are frost susceptible and favorable to ice segregation resulting from in-situ formation of ground ice. In contrast, coarse-grained sand and gravel deposits are less conducive to ice segregation; however, ground ice can still be present. Massive ground ice (ICE or ICE+Soil) may also be present in either fine or coarse-grained material due to burial of glacial ice, burial and recrystallization of snow patches, ice-wedges formed in thermal contraction cracks, or injection ice formed from pressurized groundwater.

## 6.2 Goose Property

### Ground Ice Distribution

Drillholes with ground ice logs is shown in Figure 12. Ground ice content and type is spatially and stratigraphically variable at the property. Figure 13 shows ground ice content for all drillholes as a function of depth. The first one meter below the surface is typically lower ice content overburden within the active layer. A majority of the drillholes report ground ice content within the active layer to be 0 to 10%, however several are logged to be 20 to 30 percent. This lower ice content zone transitions to ice-rich overburden at the top of permafrost. Ice-rich overburden between 20 and 100% (ICE) is commonly logged from the top of permafrost to approximately 5 m at the site. Drillhole intervals below approximately 5 m are commonly characterized by ground ice content less than 15%. This does not exclude the possibility of deep-seated ground ice including massive ground ice (ICE or ICE+Soil) (Figure 14).

Massive ground ice that is logged as ICE or ICE+Soil may occur in the form of segregated ice lenses, ice wedges, injection ice, or buried glacial ice or snow patch ice. Figure 15 shows drillhole locations with massive ground ice. Massive ground ice thickness is variable over the depths sampled (Figure 14). The thickest bodies of massive ground ice have been intercepted from approximately 1.0 and 4.0 m bgs. The massive ice observed within this depth interval is commonly up to 1 m thick (Figure 14). Massive ice logged between approximately 4.0 to 5.5 m bgs was observed to be 0.5 m thick or less.

A histogram of the occurrence (number of intervals) of massive ice as a function of its thickness is shown in Figure 14. The highest occurrence intervals consist of massive ice less than 0.25 m thick, followed by similar occurrence of massive ice that is between 0.25 and 0.75 m thick (Figure 14). There are several drillholes with massive ground ice bodies that are between 0.75 and 1.0 m thick. Drillholes SRK-18-DH10 and SRK-21-DH03-PP located at the Primary Pond Dam have intersected massive ground ice that is approximately 2.5 and 3.5 thick, respectively.

The average ground ice content for each drillhole is provided in Figure 13. The average ice content has been weighted by interval thickness which reduces bias from one or more thin interval of very high ice content or thick interval of low ice content may have on the average value. The weighted average ice content is a more representative indication of drillholes with ice-rich vs. ice-poor overburden.

Figures 16 through 19 provide weighted average ice content for drillholes across the property. Several areas of the Property are described in greater detail below.

### Primary Pond Area

The Primary Pond Dam extends across exposed bedrock, bedrock with thin overburden, and several bedrock depressions with relatively thick overburden soil. The three geotechnical investigations also confirmed that the foundation is characterized by relatively thin organics that are typically underlain by coarse-grained sand and gravel with intervals of boulders, followed by silt above the top of bedrock (Figure 20). Figure 21 provides the ground ice logs for the Primary Pond Area and nearby Saline Pond Area.

Visible ground ice more than 60% by volume has been observed to occur within the overburden soil. Relatively high ground ice content is associated with Vs, ICE, and ICE w/ Soil. There is not a clear association of ice content with primary material type (Figure 20). Additional ground ice logs for the Camp Pad Area and Umwelt Pit Area are provided in Figure 22., followed by the Goose Pit Area and Echo Pit Area (Figure 22).

### Former Tailings Storage Facility Area

The former tailings storage facility area was primarily drilled in 2018 along the proposed dam alignment (Figure 19). Although this facility is no longer included in the current mine design, the relatively high density of drillholes, similar to those at the Primary Pond Dam, offers insight into the stratigraphic variations and spatial distribution of primary material types, as well as the type and content of ground ice. The overburden primarily consists of sand with intervals of gravel, cobbles, and silt. The highest ice content soil occurs within the upper 4-6 meters, which does not directly correlate with a particular soil type. Ice-rich overburden is common to areas that are relatively lower in elevation and poorly drained with organics (Figures 19 and 24). Figure 25 provides the ground ice logs for the west side and east side of the form facility dam alignment.

## 6.3 Marine Laydown Area

In 2015, a geotechnical investigation of the MLA area was completed using a portable Pionjar drill with split spoon sampler (SRK 2015c). foundation conditions were assessed using 11 shallow drill holes that allowed for continuous core recovery and subsequent sample collection for geotechnical characterization. A total of 11 drill holes were completed within the MLA at the four main infrastructure areas: Freight Storage Area, Fuel Storage Area, Camp Area, and Laydown Area. The maximum depth of drilling was 3.07 meters below ground surface (mbgs).

The field investigation was completed during summer conditions, so the active layer was at its maximum depth. Intact permafrost soils and massive ice were recovered beneath the active layer at the camp and laydown areas. The permafrost was observed to be stratified with random ice formations at these locations, including some massive ice within silty sand and lean clay soils.

At the MLA camp and laydown areas, the overburden soils were predominantly silty sands with lean clays (SM-CL). At the Freight Storage area by the shoreline, most of the overburden soils were well-graded silty sand with gravel (SM). The overburden soils at the fuel tank farm were found to consist mostly of coarse-grained materials such as silty sands with gravel (SW-SM).

Permafrost was observed to be stratified and random ice formations (Vs and Vr) predominantly in silty sand with lean clay soils. Some massive ice, with soil inclusions, was also recovered with the thickness of the massive ice varying between 0.05 m and 0.76 m.

# 7 Planned Future Activities

## 7.1 Future Planned Activities

The following section describes future activities that SRK understand are planned for the monitoring program at Back River Project.

- Installation of data loggers at sites SRK-23-CPI-DH1 (Goose camp site) to allow for changes in maximum thaw depth and permafrost temperature to be consistently monitored over time.
- A review of historic and recent meteorological station data should be completed for the Goose and MLA stations, followed by climate data analysis to support the future annual reporting.
- Phase 2 audit of the historic GTC sites closed out to confirm if any of the historic locations are salvageable (cable function and need for repair or replacement of data loggers). Although no historic data is available on the data loggers (this has been confirmed), the Phase 2 audit should consider to be completed by the instrument manufacturer (likely Campbell Scientific or RST) to confirm GTC function and if repair or replacement of the data loggers is possible. A select number of sites will be audited to determine the level of success with reestablishing the historic sites. If successful, additional GTCs will be visited and a portion of the historic site could potentially be used for long-term ground thermal monitoring.
- New background sites will be installed at the Goose Property and MLA to characterize the shallow ground thermal regime. New background monitoring sites would be located at representative locations to monitor changes to active layer and permafrost temperature over time. The new sites will be located a minimum of 30 m from planned or constructed infrastructure in small diameter PVC pipes. Each site would likely include a dedicated data logger to record temperature every 6 hrs.
- Development of an instrument standard operating procedures (SOPs) to ensure consistent and complete data collection.

# 8 Closure

The annual site wide ground thermal monitoring report has been developed in fulfillment of the Project Certificate Terms and Conditions #11. This annual report is accompanied by an update to the *Back River Project: Site-wide Ground Thermal Monitoring Plan (Revision 01)* (SRK 2026).

Regards,
SRK Consulting (Canada) Inc.

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J.B. KURYLO
LICENSEE
2026/03/25
NT/NU

Christopher Stevens, PhD
Associate (Permafrost and Infrastructure)

John Kurylo, MSc, PEng
Principal Consultant (Geotechnical and Civil)

## Attachments:

Attachment 1 Figures
Attachment 2 Ground Temperature Data

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The opinions expressed in this document have been based on the information available to SRK at the time of preparation. SRK has exercised all due care in reviewing information supplied by others for use on this project. While SRK has compared key supplied data with expected values, the accuracy of the results and conclusions from the review are entirely reliant on the accuracy and completeness of the supplied data. SRK does not accept responsibility for any errors or omissions in the supplied information, except to the extent that SRK was hired to verify the data.

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Signature
Date 2026/03/25
PERMIT NUMBER: P 255
NT/NU Association of Professional Engineers and Geoscientists

# References

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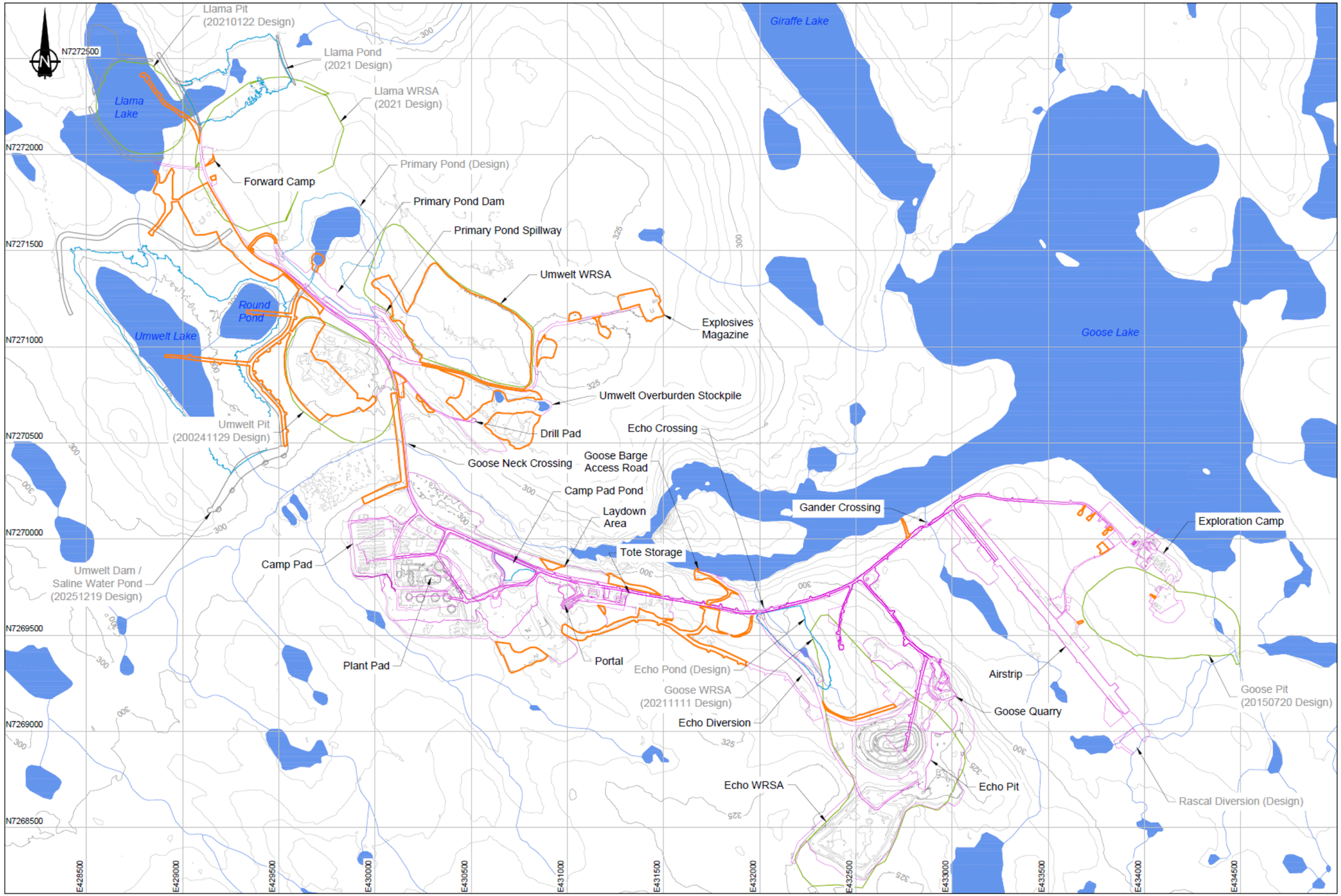
SRK Consulting (Canada) Inc. 2026. Back River Project: Site-wide Ground Thermal Monitoring Plan (Revision 01). Dated March 2026. Report submitted to B2Gold Corporation. Project No. NACAPR004313

# Attachment 1 Figures




**LEGEND**

- Design Pit and Dump Infrastructure
- Design Infrastructure
- Previous As-Constructed Infrastructure
- 2025 As-Constructed Infrastructure

**NOTES**

1. All units are in meters unless otherwise specified.
2. Contours are shown at 5.0 m intervals.

**REFERENCES**

NAD83 UTM Zone 13.

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Job No: CAPR004313

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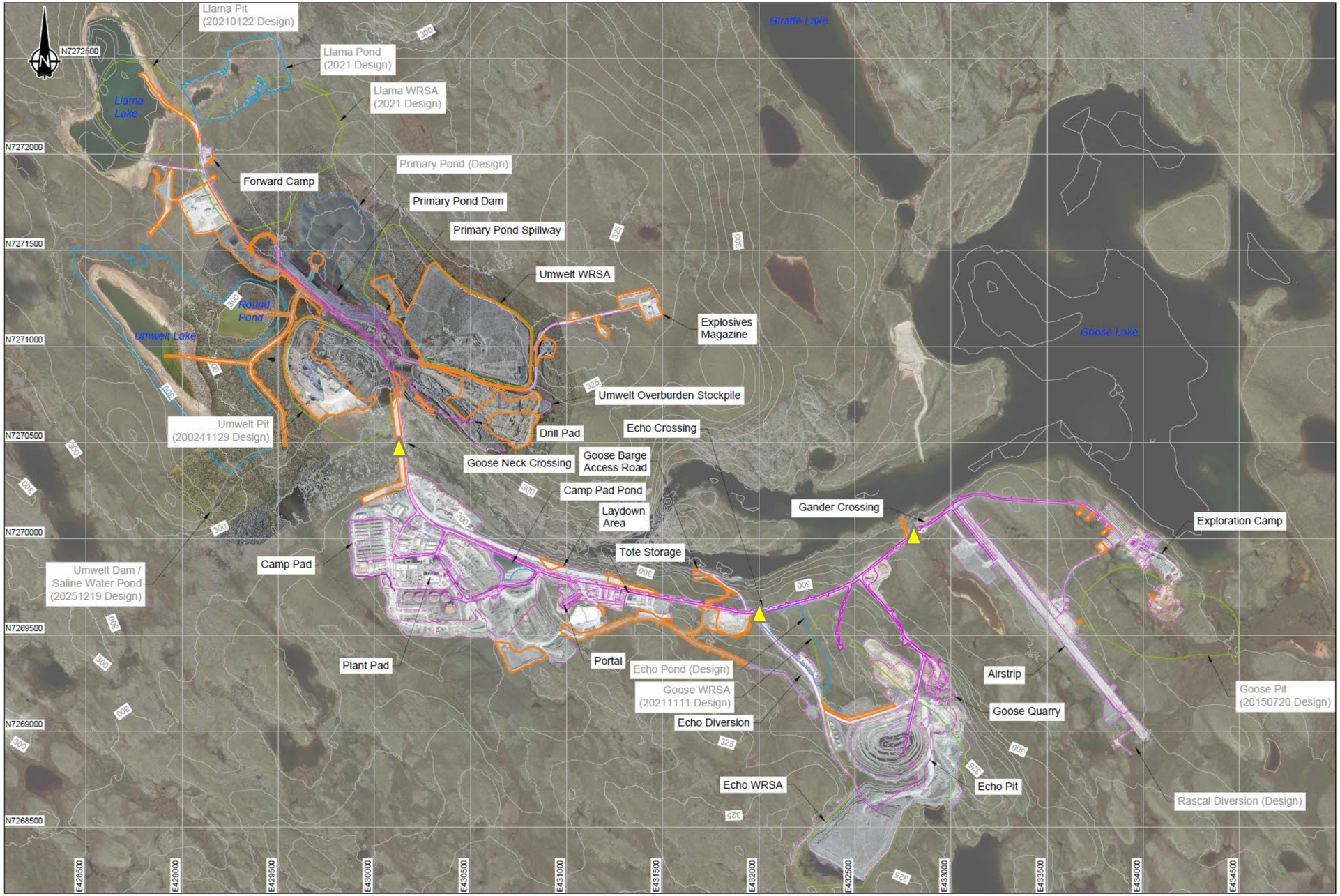
Back River Project

2025 Ground Thermal Monitoring Report

**Goose Lake Site Plan View**

| Date: | Approved: | Figure: |
|---|---|---|
| 2026-03-19 | JBK | 1 |




**LEGEND**

- Design Pit and Dump Infrastructure
- Design Infrastructure
- Previous As-Constructed Infrastructure
- 2025 As-Constructed Infrastructure

**NOTES**

1. All units are in meters unless otherwise specified.
2. Contours are shown at 5.0 m intervals.

**REFERENCES**

NAD83 UTM Zone 13.
Aerial Imagery is compiled from:

- 20250816 Aerial Photo
- 20250817 Aerial Photo
- 20250909 Aerial Photo

△ Culvert Locations

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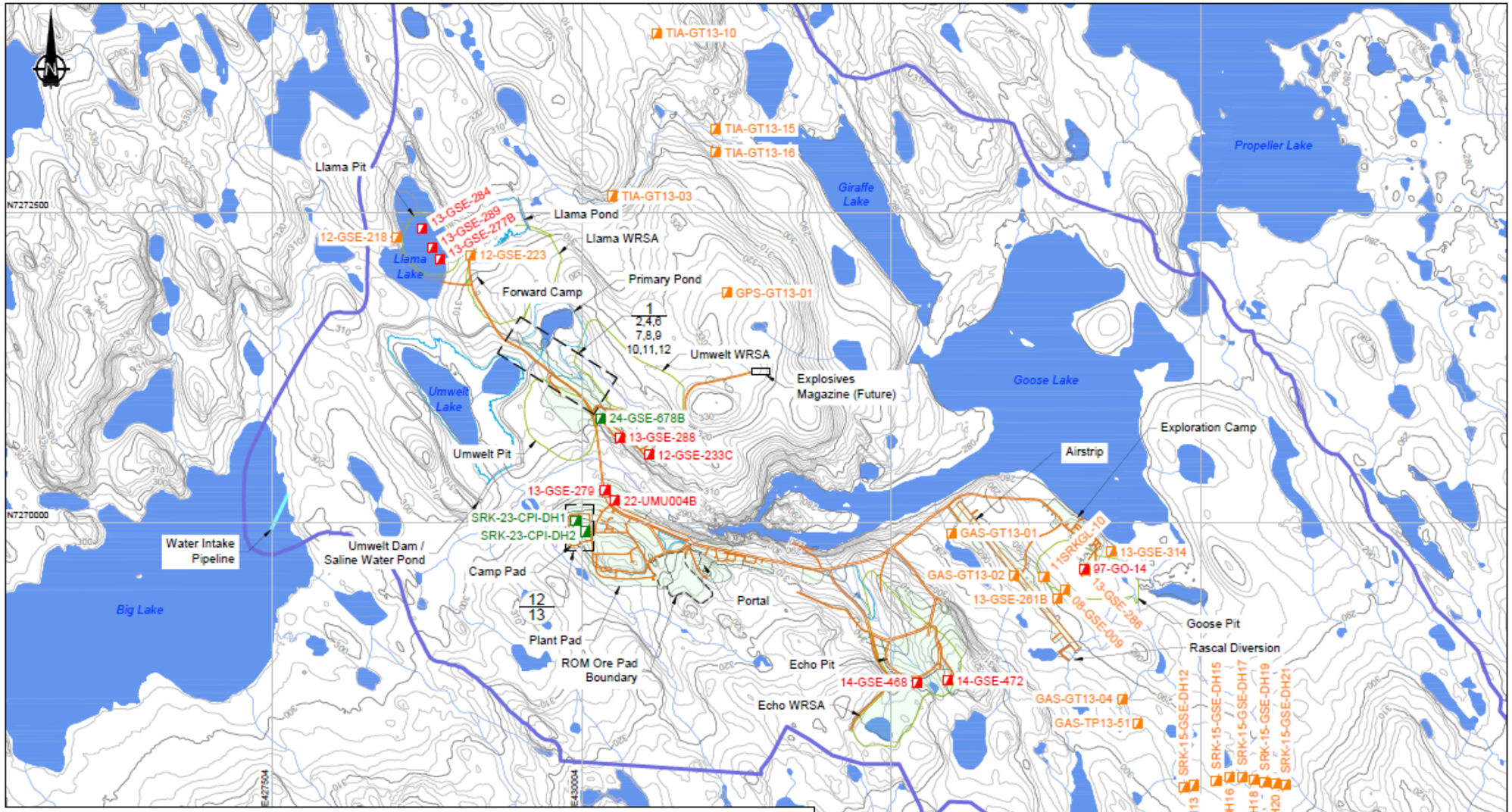
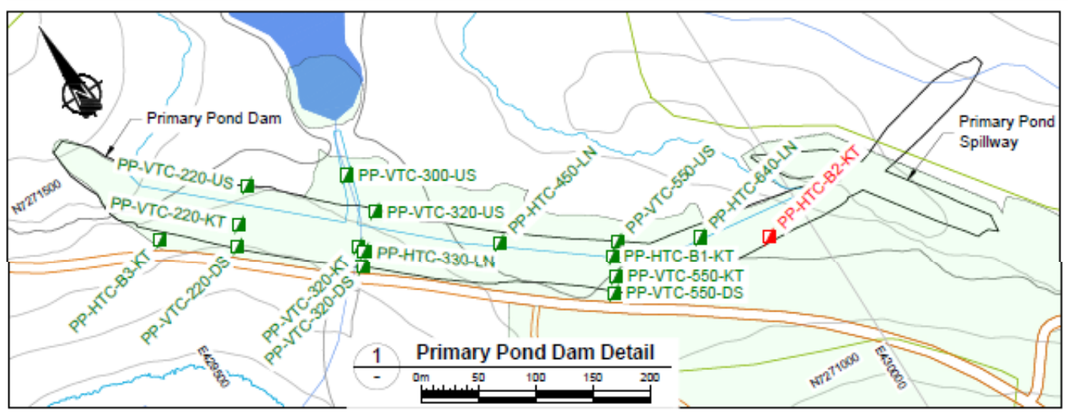
Back River Project

2025 Ground Thermal Monitoring Report

**Goose Lake Site Plan View with Imagery**

Date: 2026-03-19 | Approved: JBK | Figure: **2**




**LEGEND**

- Active GTC
- Inactive GTC
- Compromised GTC
- Design Pit and Dump Infrastructure
- Design Infrastructure
- Road
- Waterbody
- Facility Area
- Project Boundary

**NOTES**

1. All units are in meters unless otherwise specified.
2. Contours are shown at 2.0 m intervals.
3. Active refers to a GTC that is functional at the time of reporting.
4. Inactive refers to a GTC whose function is unknown at the time of reporting.
5. Compromised (Repair) refers to a GTC that is not functioning at time of reporting and required repair.
6. Compromised refers to a GTC that is not functioning at time of reporting, and is damaged beyond repair or not accessible.

**REFERENCES**

NAD83 UTM Zone 13.

srk consulting

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Job No: CAPR004313

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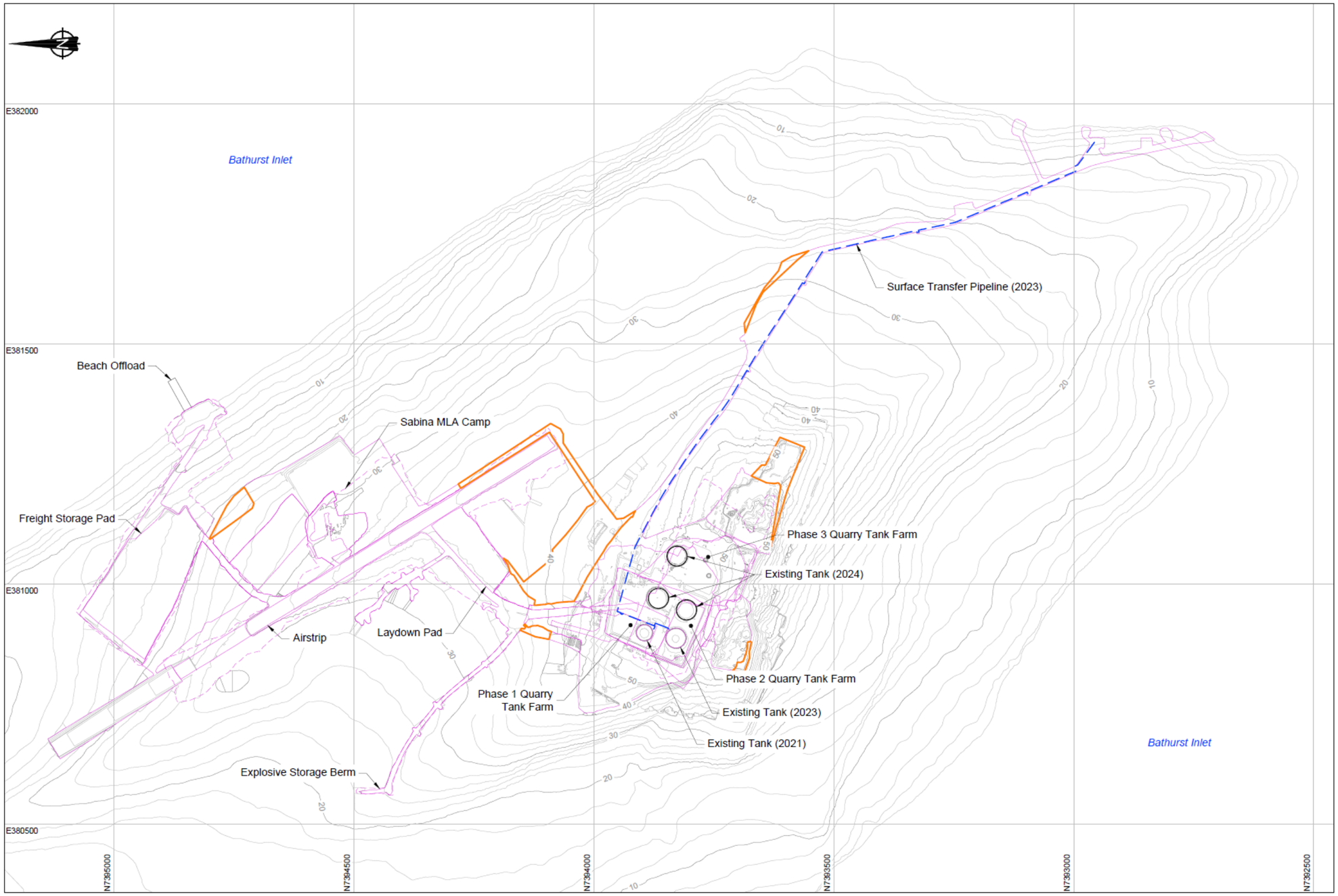
Back River Project

2025 Ground Thermal Monitoring Report

**Ground Temperature Cable Status**

| Date: | Approved: | Figure: |
|---|---|---|
| 2026-03-19 | JBK | 3 |




**LEGEND**

- 2018 Initial Survey
- Previous As-Constructed Infrastructure
- 2025 As-Constructed Infrastructure

**NOTES**

1. All units are in meters unless otherwise specified.
2. Contours are shown at 2.0 m intervals.

**REFERENCES**

NAD83 UTM Zone 13.

srk consulting

B2GOLD NUNAVUT

Job No: CAPR004313
Filename: GroundThermalMonitoring_2025_Figures..pdf

Back River Project

2025 Ground Thermal Monitoring Report

**Marine Laydown Area Plan View**

| Date: | Approved: | Figure: |
|---|---|---|
| 2026-03-19 | JBK | 7 |




**LEGEND**

- 2018 Initial Survey
- Previous As-Constructed Infrastructure
- 2025 As-Constructed Infrastructure

**NOTES**

1. All units are in meters unless otherwise specified.
2. Contours are shown at 2.0 m intervals.

**REFERENCES**

NAD83 UTM Zone 13.
Aerial Imagery is compiled from:

- 20250802 Aerial Photo
- 20250816 Aerial Photo

0m 100 200 300

srk consulting

Job No: CAPR004313
Filename: GroundThermalMonitoring_2025_Figures..pdf

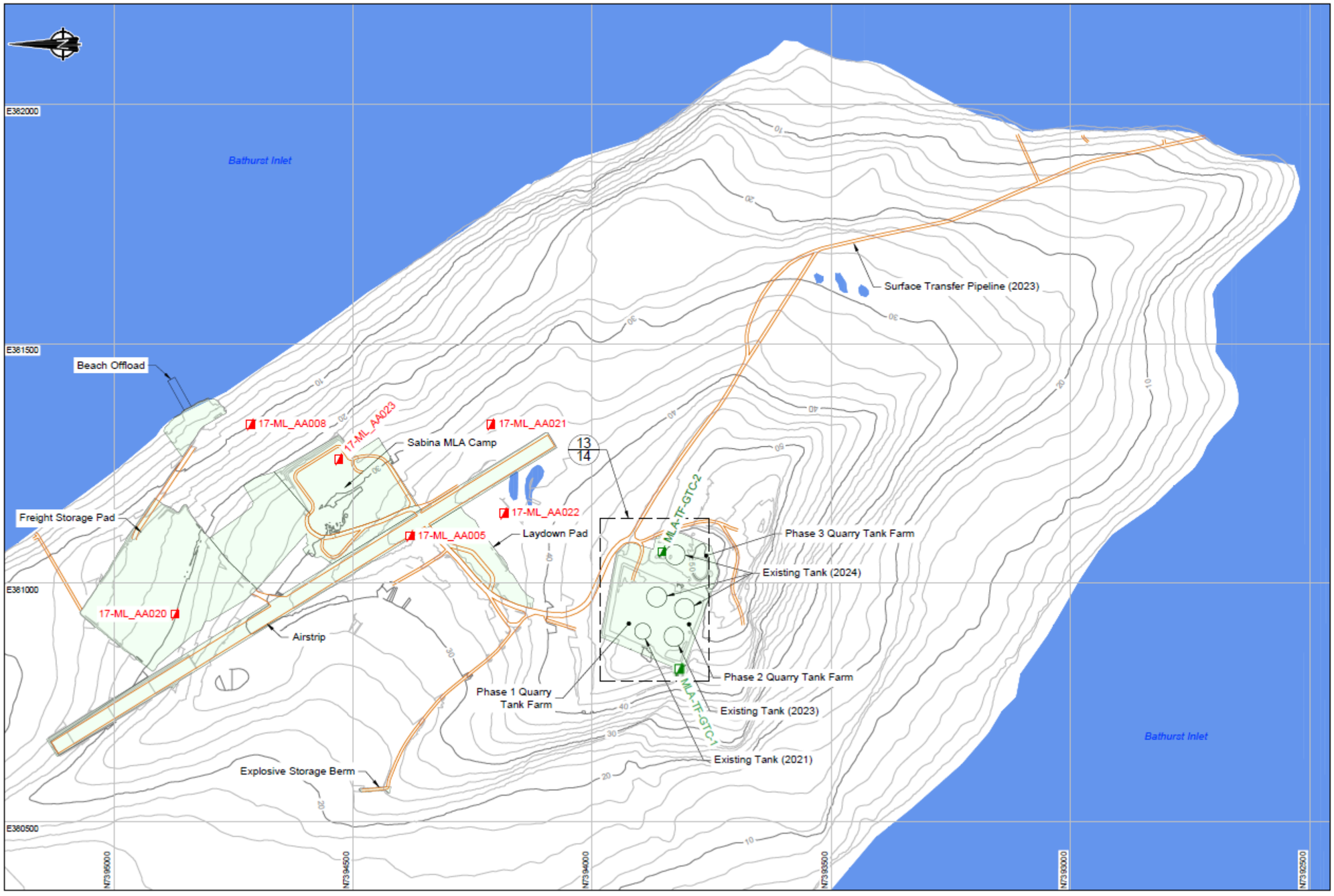
B2GOLD NUNAVUT

Back River Project

2025 Ground Thermal Monitoring Report

**Marine Laydown Area Plan View with Imagery**

| Date: | Approved: | Figure: |
|---|---|---|
| 2026-03-19 | JBK | 8 |




**LEGEND**

- Active GTC
- Compromised (Repair) GTC
- Compromised GTC
- Design Infrastructure
- Road
- Waterbody
- Facility Area

**NOTES**

1. All units are in meters unless otherwise specified.
2. Contours are shown at 2.0 m intervals.
3. Active refers to a GTC that is functional at the time of reporting.
4. Inactive refers to a GTC whose function is unknown at the time of reporting.
5. Compromised (Repair) refers to a GTC that is not functioning at time of reporting and required repair.
6. Compromised refers to a GTC that is not functioning at time of reporting, and is damaged beyond repair or not accessible.

**REFERENCES**

NAD83 UTM Zone 13.

0m 100 200 300

srk consulting

B2GOLD NUNAVUT

Job No: CAPR004313

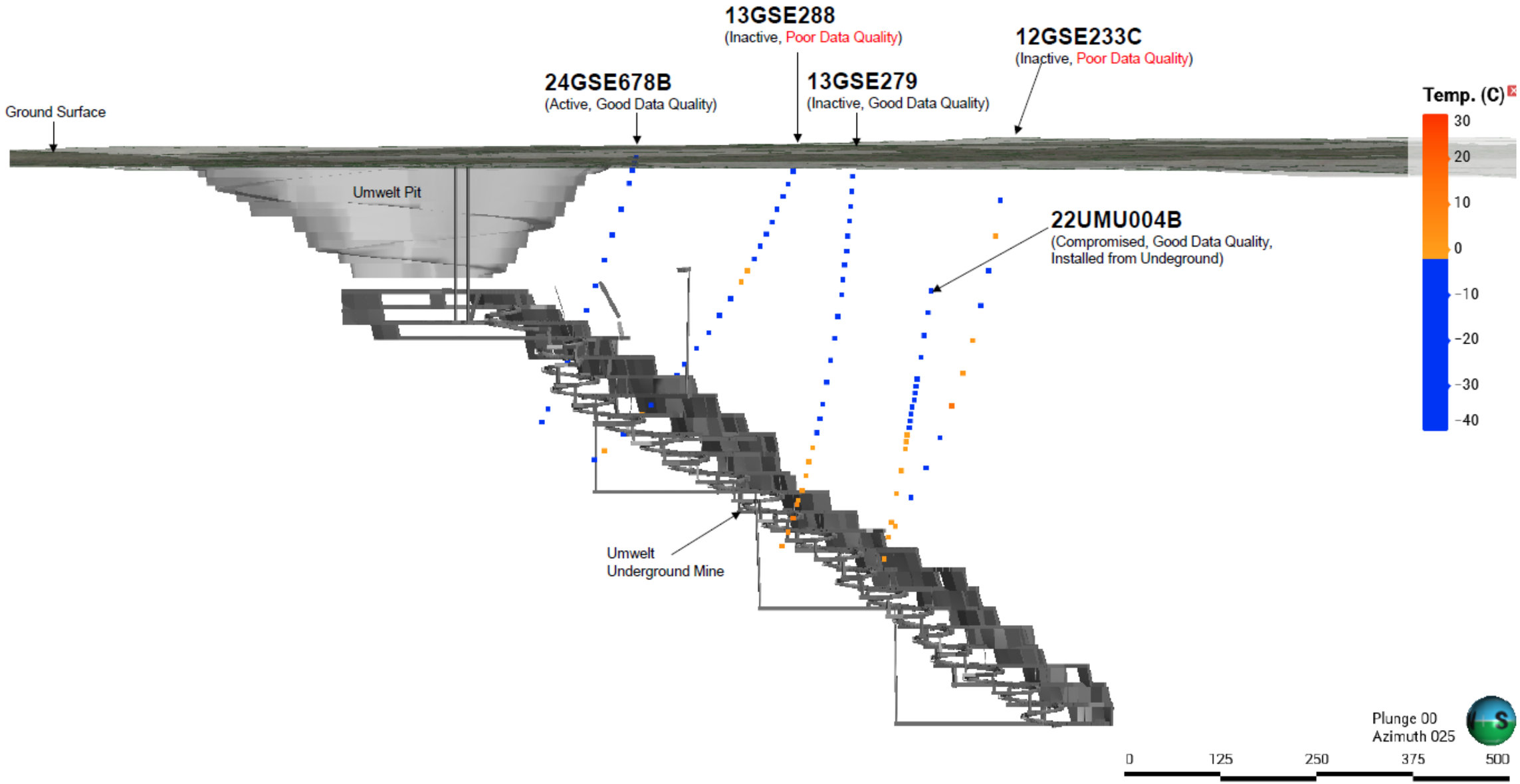
Filename: GroundThermalMonitoring_2025_Figures..pdf

Back River Project

2025 Ground Thermal Monitoring Report

**Marine Laydown Area (MLA)GCround Temperature Cables Status**

| Date: | Approved: | Figure: |
|---|---|---|
| 2026-03-19 | JBK | 6 |

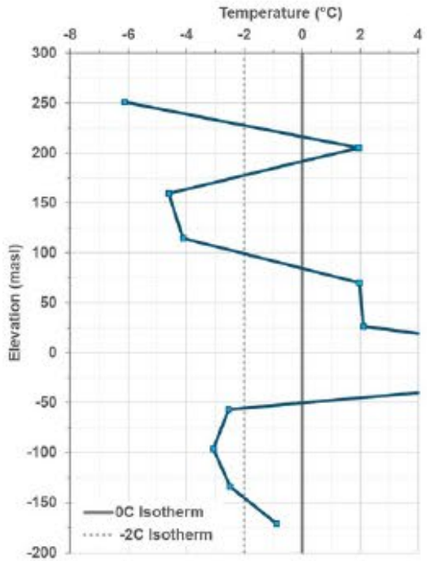



Notes:
1. Ground temperature sensors indicated with color squares
2. Blue representing temperature values -2°C or less.
3. Temperature values warming than -2°C are assumed to be unfrozen based on the groundwater freezing point depression.

| | | |
|---|---|---|
| srk consulting | B2GOLD NUNAVUT | 2025 Ground Thermal Monitoring Report |
| | | **Umwelt Pit and Underground Area - Historic and Recent GTCs** |
| Job No: CAPR004313<br>Filename: GroundThermalMonitoring_2025_Figures..pdf | Back River Project | Date: 2026-03-19 / Approved: JBK / Figure: **7** |

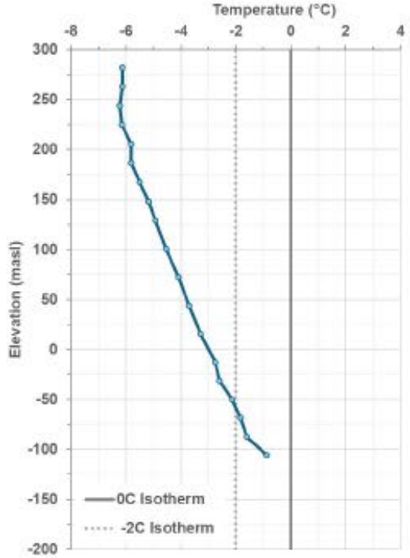
## 12-GSE-233C

*Poor Data Quality*



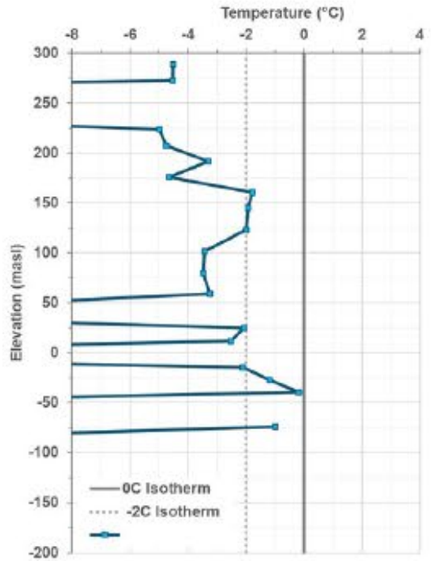

## 13-GSE-279

*Good Data Quality*
*(Used in Analysis)*



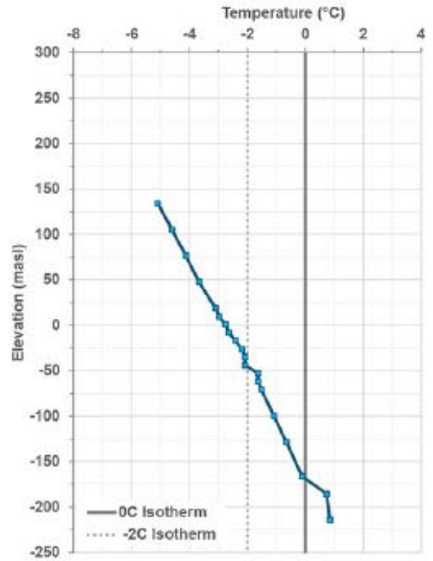

## 13-GSE-288

*Poor Data Quality*



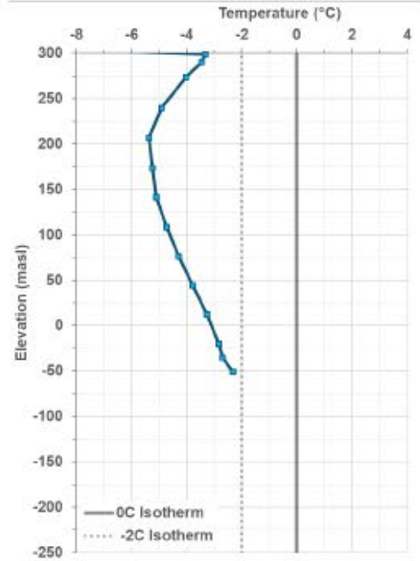

## 22-UMU004B

*Good Data Quality*
*(Used in Analysis)*



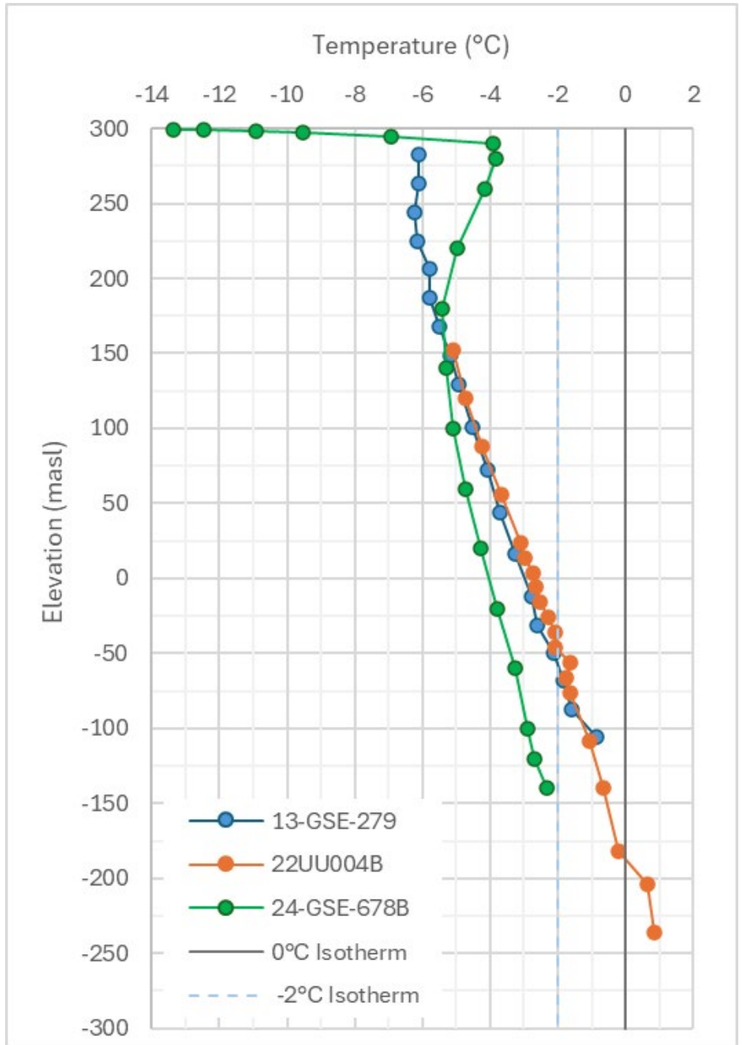

## 24-GSE-678B

*Good Data Quality*
*(Used in Analysis)*




Notes:
1. Location of ground temperature cable sites shown on Figure 7.

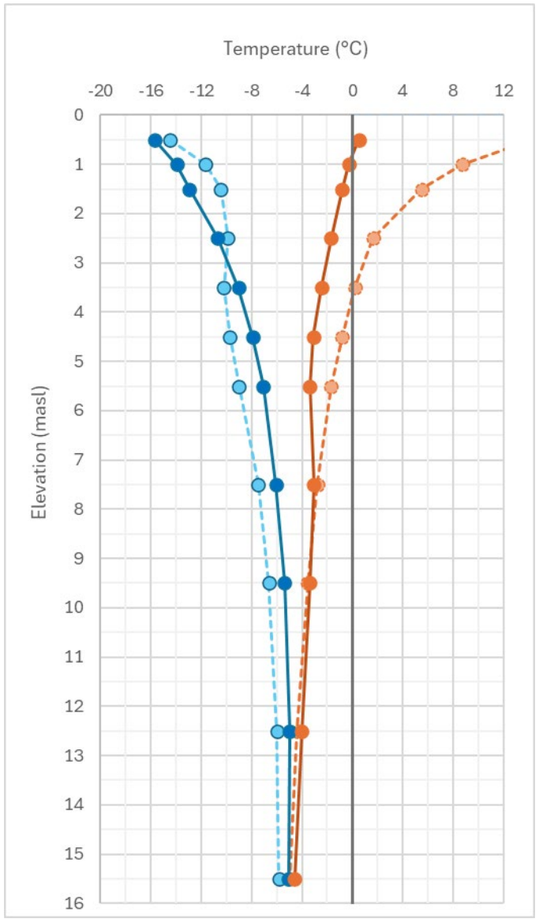
| | | |
|---|---|---|
| srk consulting | B2GOLD NUNAVUT | 2025 Ground Thermal Monitoring Report |
| | | **Umwelt Pit and Underground Area – Historic and Recent Ground Temperature Data** |
| Job No: CAPR004313<br>Filename: GroundThermalMonitoring_2025_Figures..pdf | Back River Project | Date: 2026-03-19 \| Approved: JBK \| Figure: **8** |



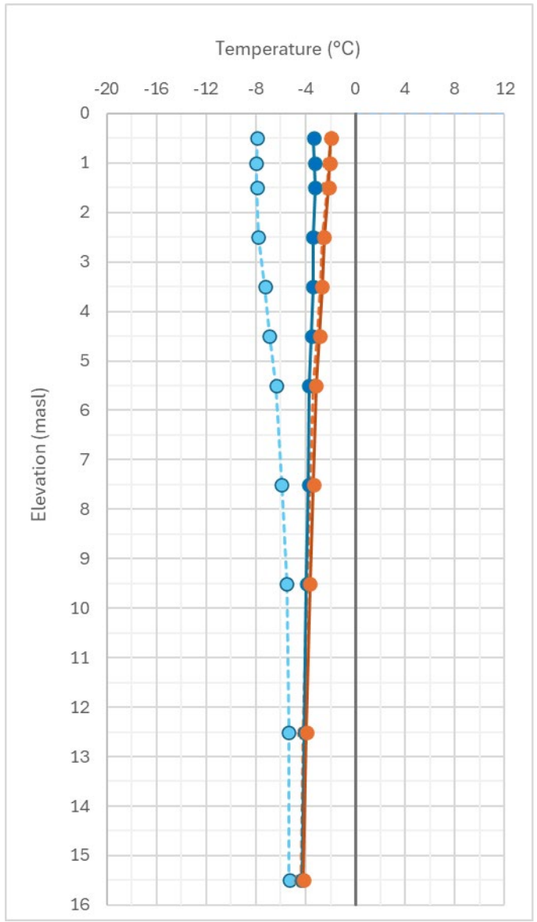

Notes:
1. Comparison of historic and recent ground temperature measurements collected near Umwelt Pit
2. Ground temperature at site 13-GSE-279 measured on Dec. 10, 2014, at 22-UMU004B measured on June 28, 2023, and at 24-GSE-678B measured on March 20, 2026.

| | | |
|---|---|---|
| srk consulting | B2GOLD NUNAVUT | 2025 Ground Thermal Monitoring Report |
| | | **Umwelt Pit and Underground Area – Comparison of Historic and Recent Ground Temperature** |
| Job No: CAPR004313<br>Filename: GroundThermalMonitoring_2025_Figures..pdf | Back River Project | Date: 2026-03-19 \| Approved: JBK \| Figure: **9** |

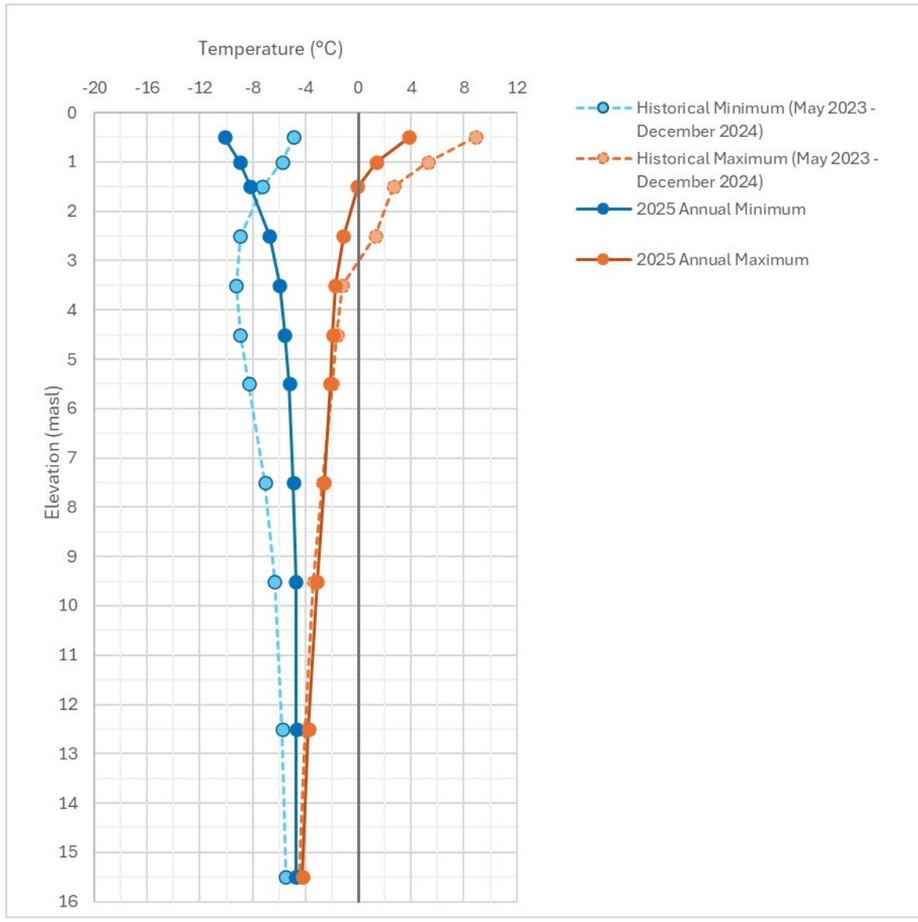
**PP-VTC-550-US**
(Upstream Toe)

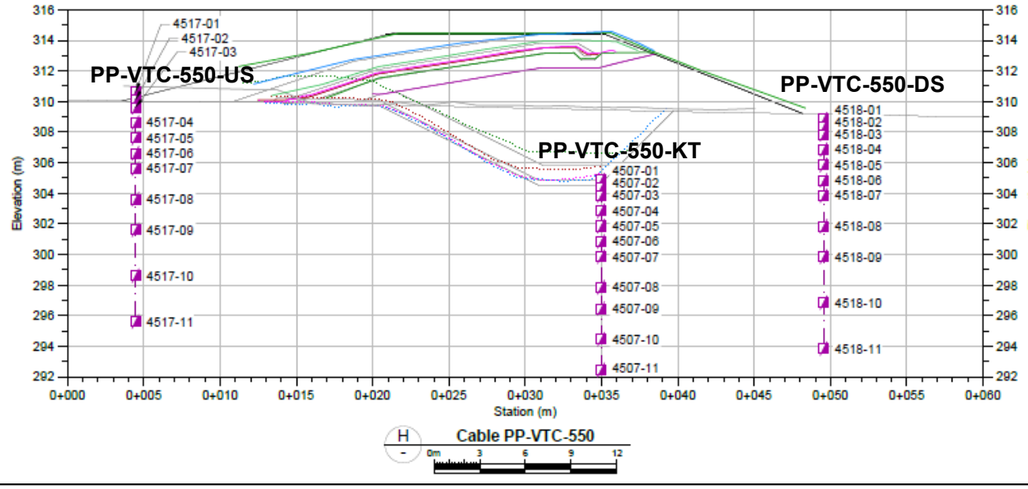



**PP-VTC-550-KT**
(Key Trench)



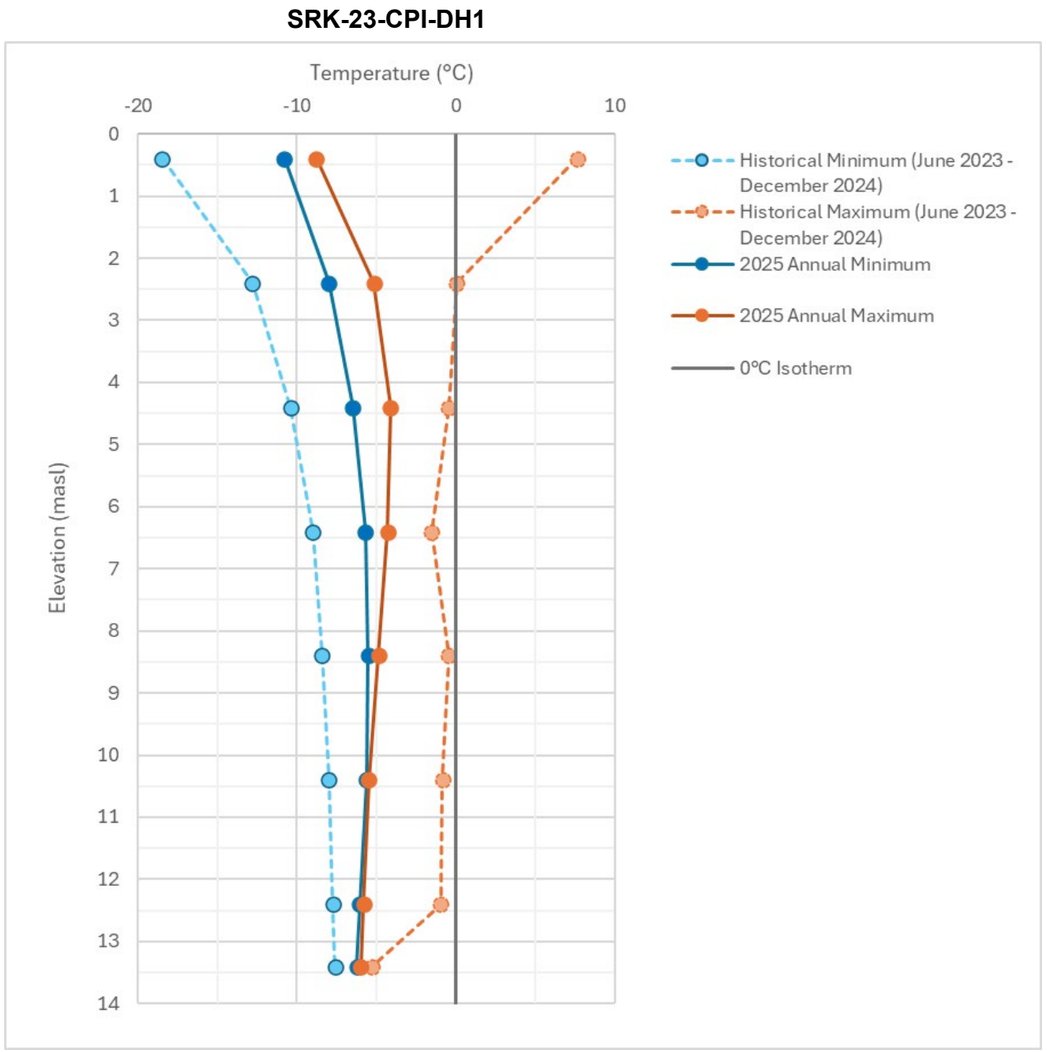

**PP-VTC-550-DS**
(Downstream Toe)

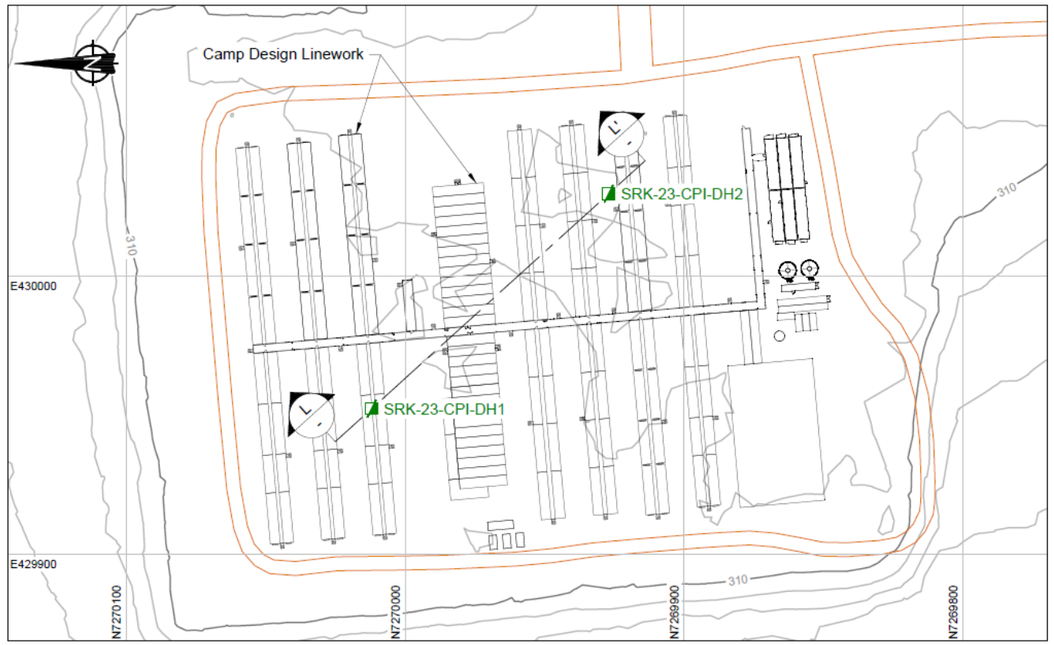


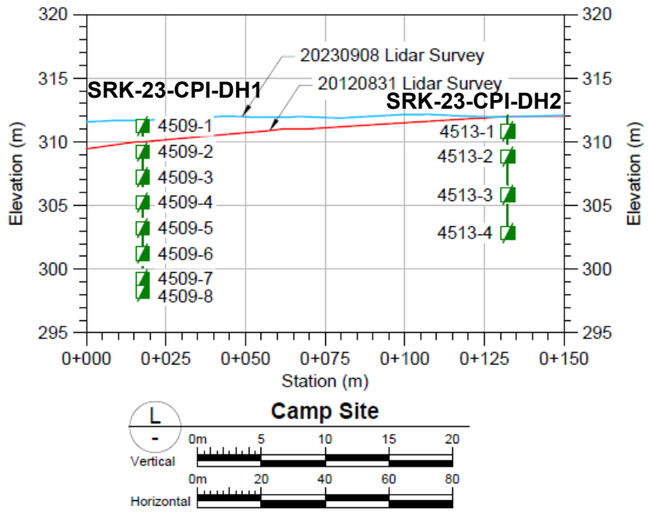




Notes:
1. Ground temperature measured in the foundation at the Primary Pond Dam upstream toe, key trench, and downstream toe.
2. Minimum and maximum annual ground temperature reported for 2025 and compared with historical measurements.
3. 2025 annual minimum and maximum are presented for period from January 2025 to March 2026

| | | |
|---|---|---|
| srk consulting | B2GOLD NUNAVUT | 2025 Ground Thermal Monitoring Report |
| Job No: CAPR004313<br>Filename: GroundThermalMonitoring_2025_Figures..pdf | Back River Project | **Primary Pond Dam – Infrastructure Ground Temperature** |
| | | Date: 2026-03-19 \| Approved: JBK \| Figure: **10** |



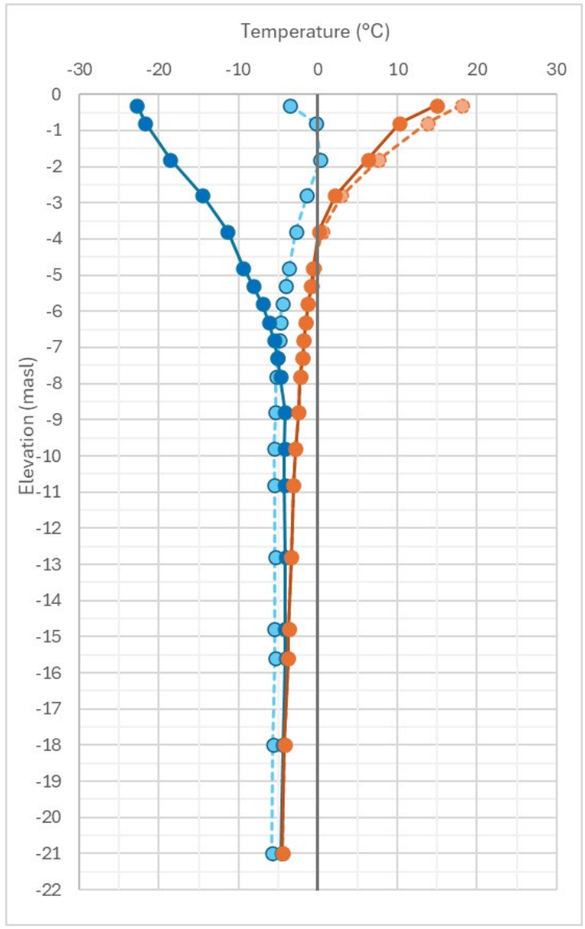



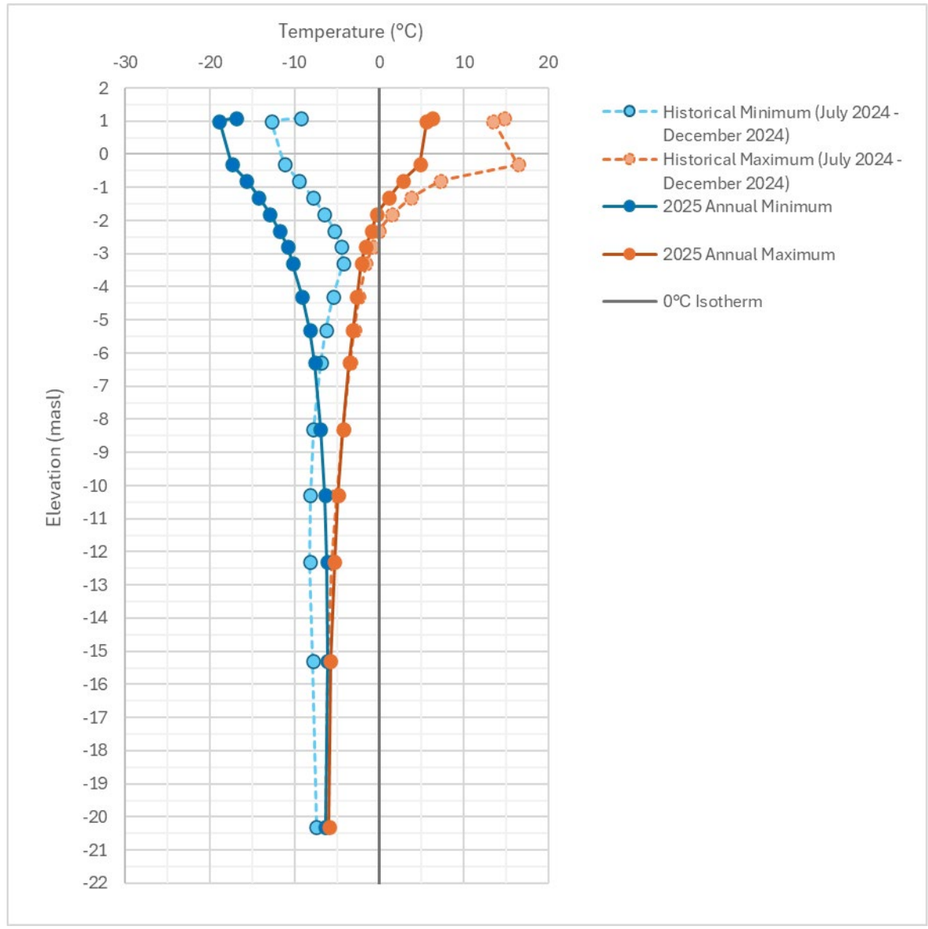

Notes:
1. Ground temperature measured in the rock pad and foundation at the Camp Pad.
2. Minimum and maximum annual ground temperature reported for 2025 and compared with historical measurements.
3. 2025 data were collected from January 25 to March 28 only

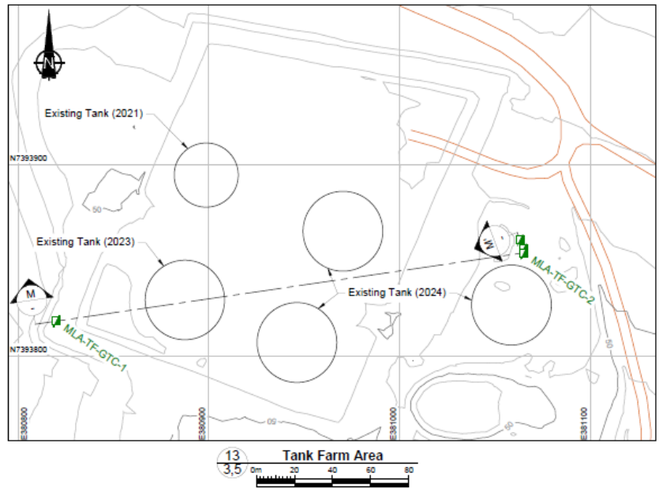
| | | |
|---|---|---|
| srk consulting | B2GOLD NUNAVUT | 2025 Ground Thermal Monitoring Report |
| Job No: CAPR004313<br>Filename: GroundThermalMonitoring_2025_Figures..pdf | Back River Project | **Goose Camp Pad – Infrastructure Ground Temperature**<br>Date: 2026-03-19 · Approved: JBK · Figure: **11** |

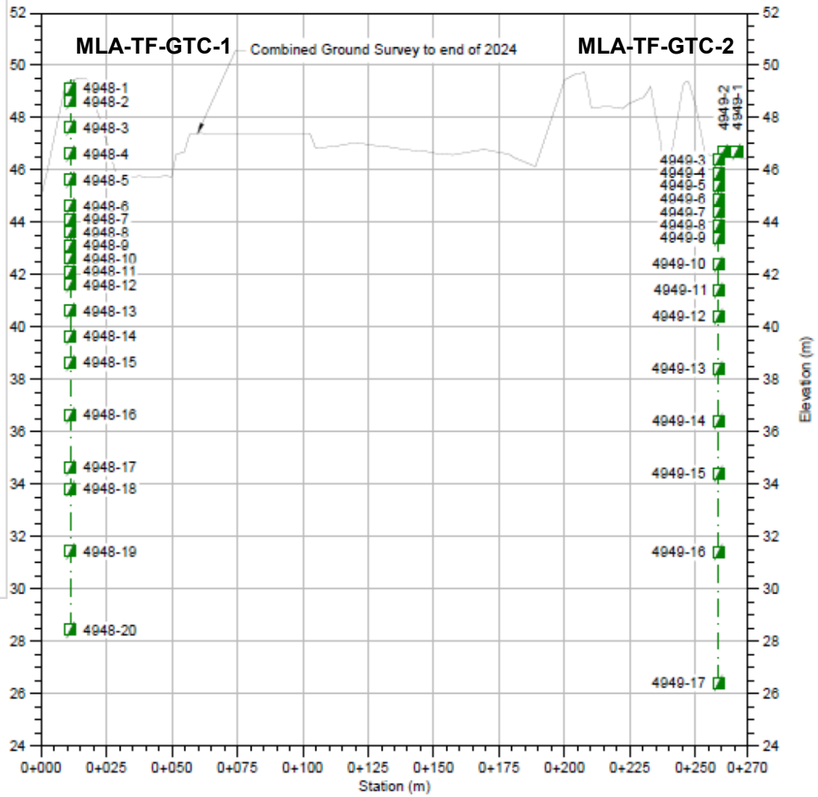
## MLA-TF-GTC-1




## MLA-TF-GTC-2




Notes:
1. Ground temperature measured in the foundation at the Marine Laydown Area fuel tank pad
2. Minimum and maximum annual ground temperature reported for 2025 and compared with historical measurements.
3. 2025 annual minimum and maximum are presented for period from January 2025 to March 2026

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2025 Ground Thermal Monitoring Report

**Fuel Tank Pad – Infrastructure Ground Temperature**

Job No: CAPR004313
Filename: GroundThermalMonitoring_2025_Figures..pdf

Back River Project

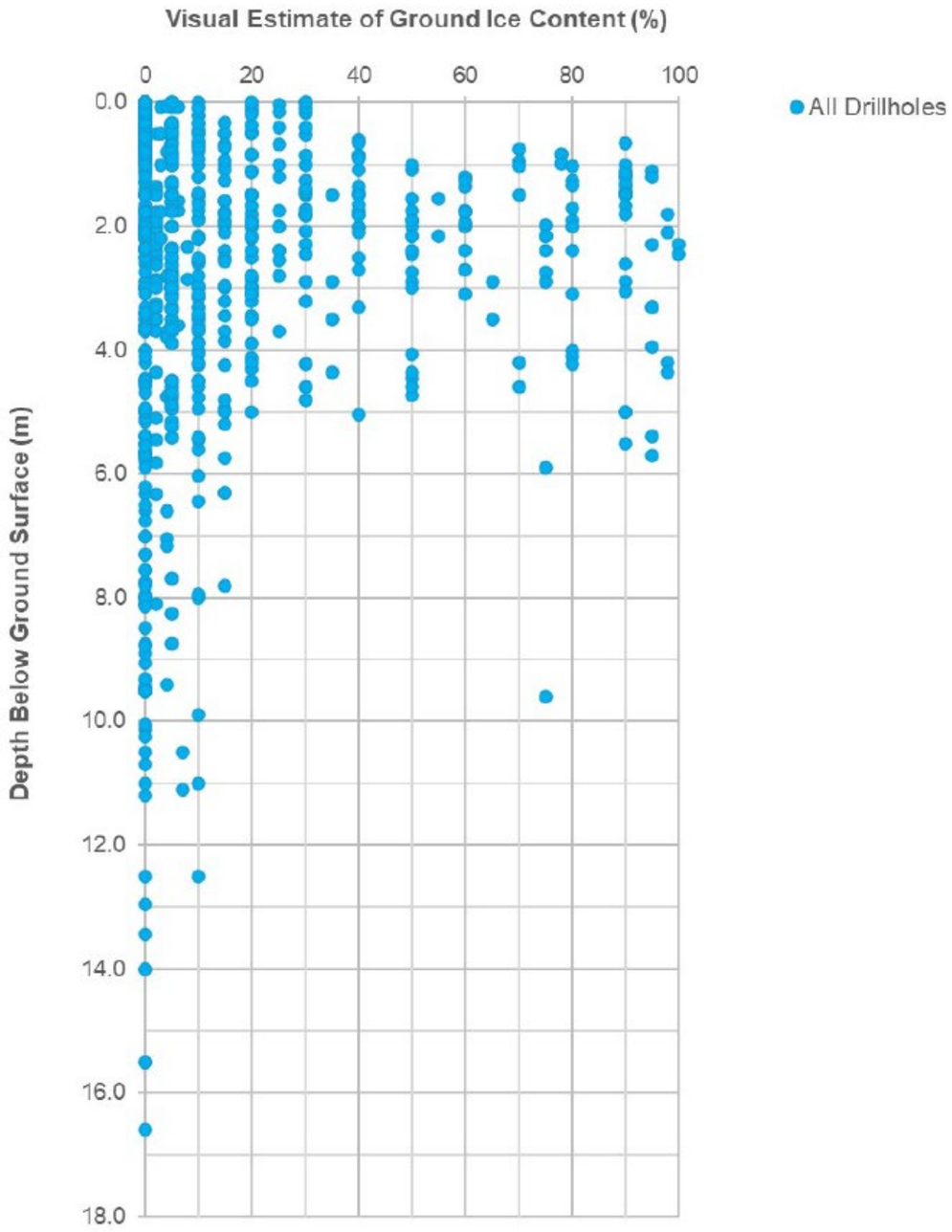
Date: 2026-03-19 | Approved: JBK | Figure: **12**

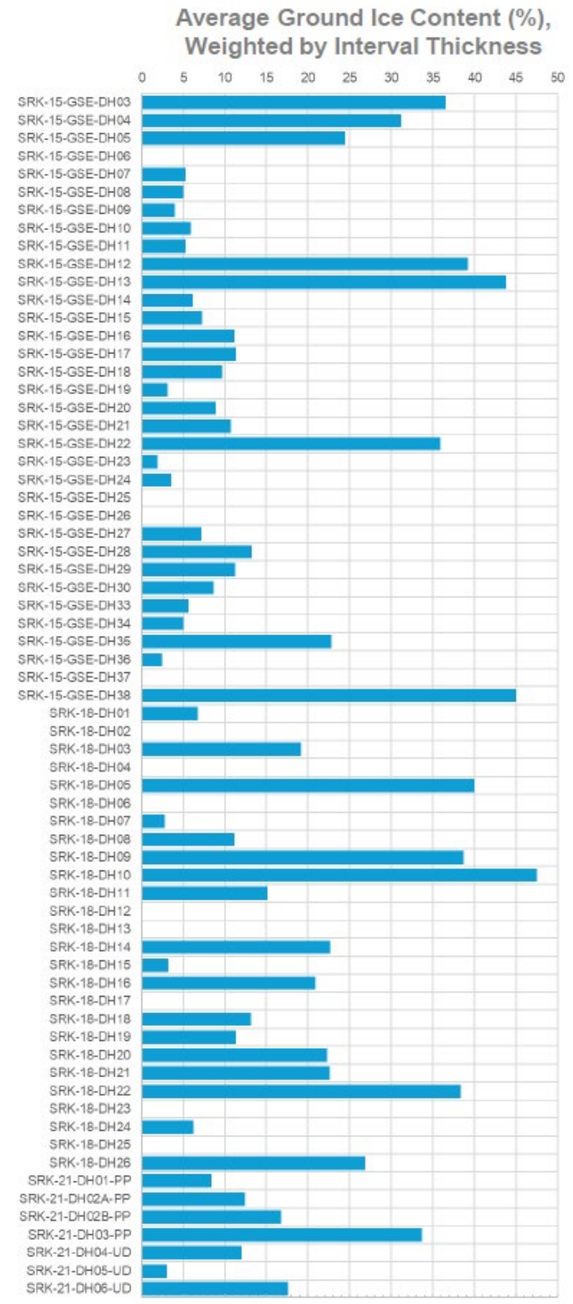



Drillhole Locations with Ground Ice Log (SRK 2015, 2018, 2022)

Notes:
1. Aerial image of Goose infrastructure as of September 2024

| | | |
|---|---|---|
| srk consulting | B2GOLD NUNAVUT | 2025 Ground Thermal Monitoring Report |
| | | **Historical Drillhole Locations with Ground Ice Logging** |
| Job No: CAPR004313<br>Filename: GroundThermalMonitoring_2025_Figures..pdf | Back River Project | Date: 2026-03-19 · Approved: JBK · Figure: **13** |




Notes:
1. Ground ice content based on visual estimate from frozen core.
2. Average ground ice content weighted by interval thickness for each site

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2025 Ground Thermal Monitoring Report

**Ground Ice Content for All Drillholes (SRK 2015, 2018, 2022)**

Job No: CAPR004313

Filename: GroundThermalMonitoring_2025_Figures..pdf

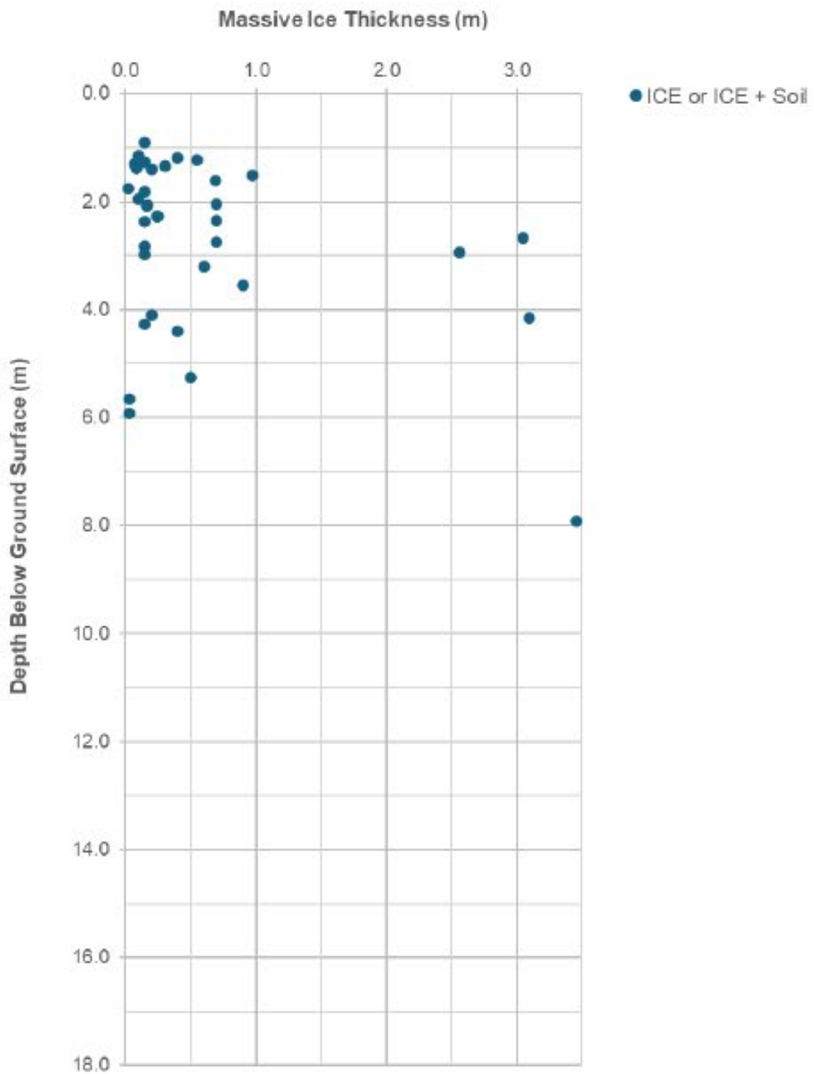
Back River Project

Date: 2026-03-19

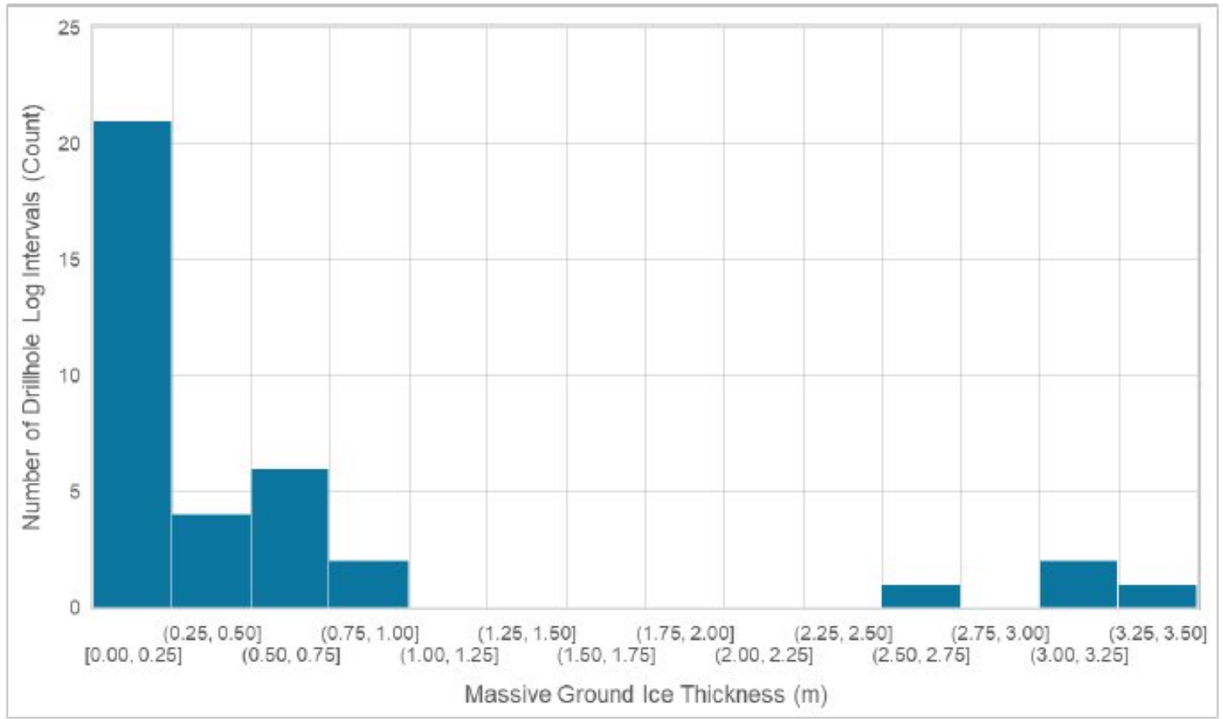
Approved: JBK

Figure: **14**

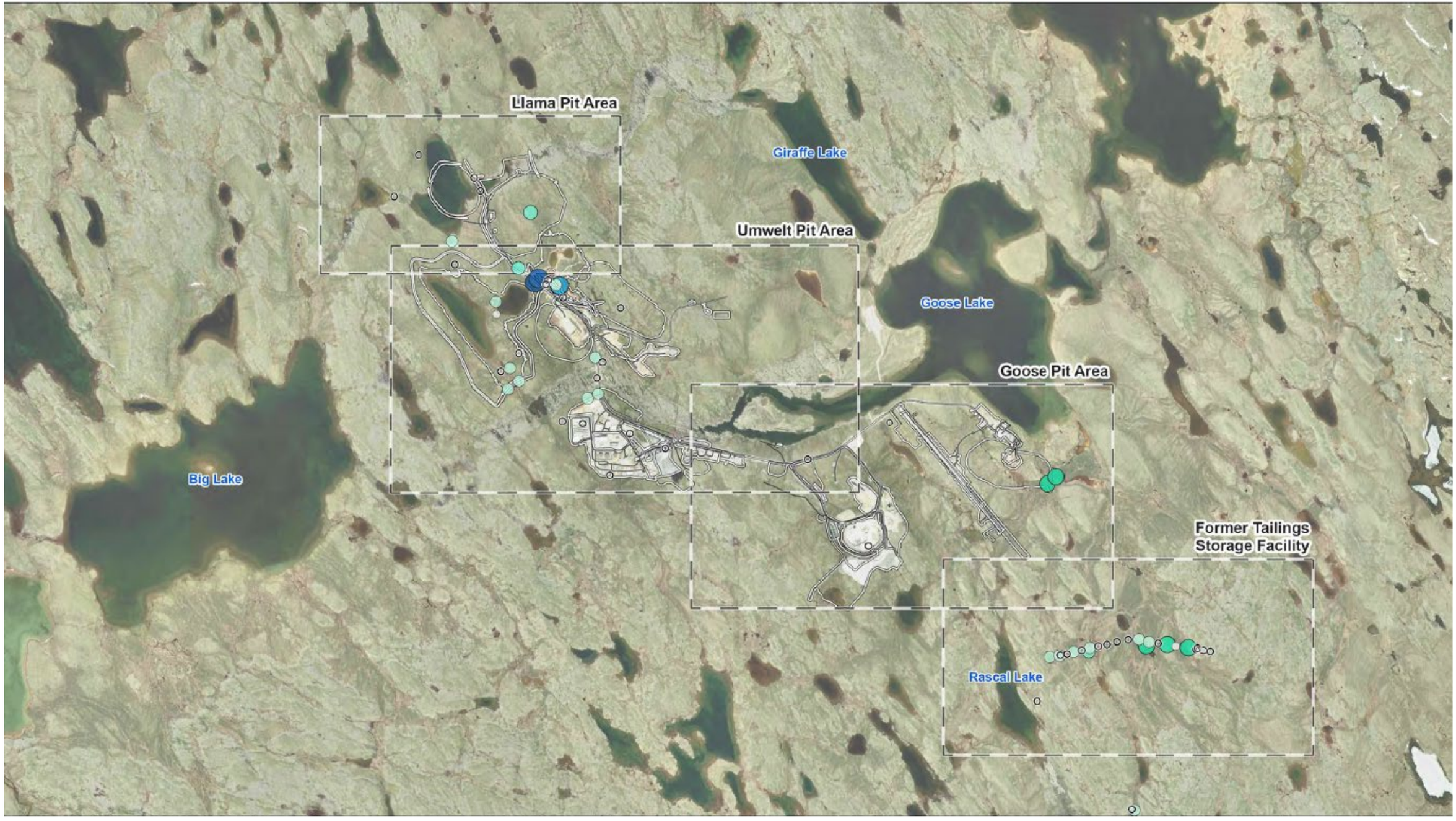
## Massive Ground Ice Thickness




## Interval Occurrence of Massive Ground by Ice Thickness




| | | |
|---|---|---|
| srk consulting | B2GOLD NUNAVUT | 2025 Ground Thermal Monitoring Report |
| | | **Massive Ground Ice** |
| Job No: CAPR004313<br>Filename: GroundThermalMonitoring_2025_Figures..pdf | Back River Project | Date: 2026-03-19 \| Approved: JBK \| Figure: **15** |




**Legend**

Mapbook

Designed Footprint

Massive Ground Ice Thickness

- > 2.5m
- 1.1 - 2.5m
- 1.0 - 0.50m
- 0.49 - 0.25m
- 0.24 - 0.1m
- < 0.1m
- Drillholes without Massive Ice

Notes:
1. Aerial image of Goose infrastructure as of September 2024

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Job No: CAPR004313

Filename: GroundThermalMonitoring_2025_Figures..pdf

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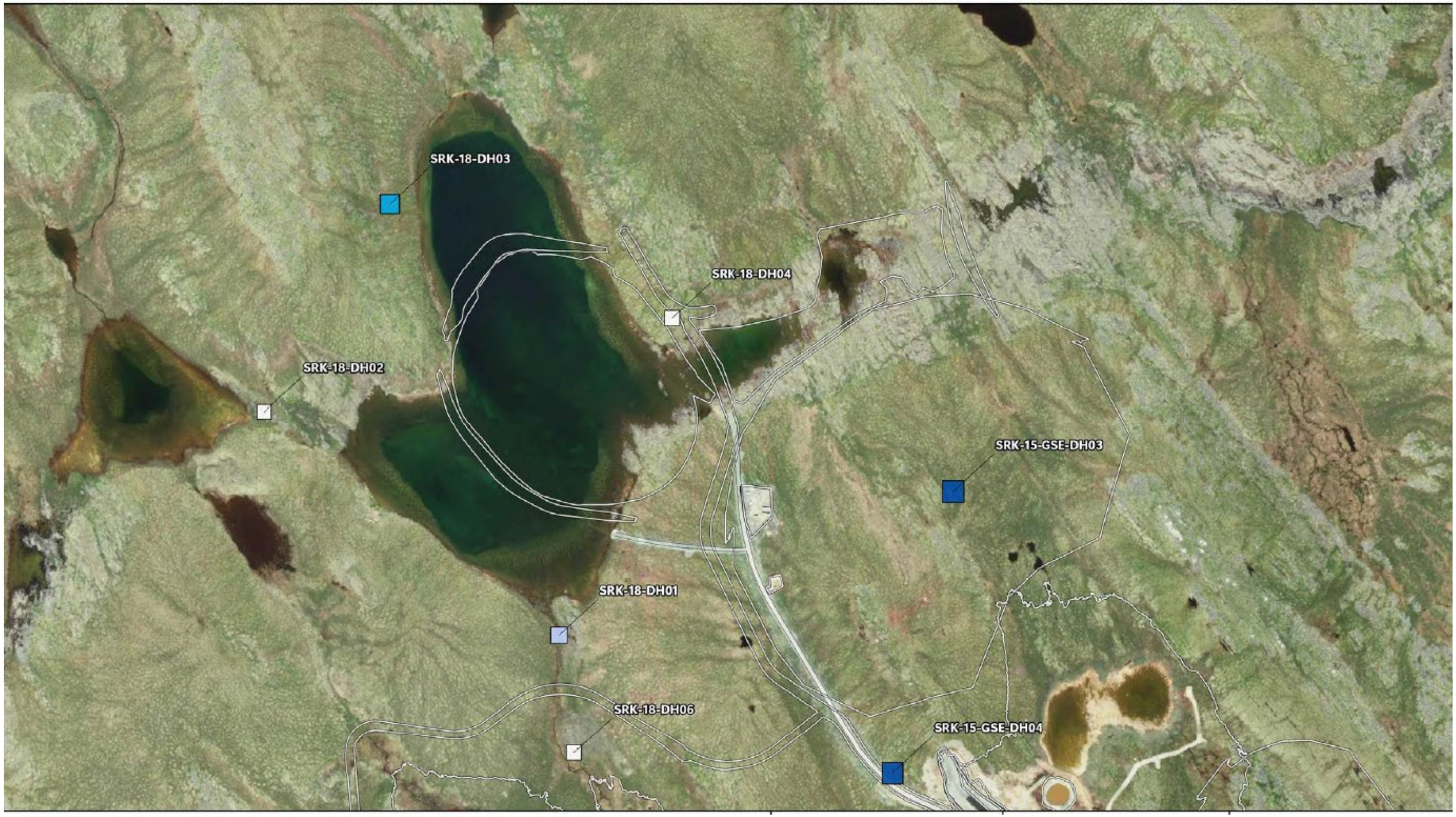
Back River Project

2025 Ground Thermal Monitoring Report

**Historic Drillhole Locations with Massive Ground Ice**

| Date: | Approved: | Figure: |
|---|---|---|
| 2026-03-19 | JBK | **16** |




**Legend**

Weighted Average Ground Ice Content %

| | | | |
|---|---|---|---|
| 0-5% | > 10-15% | > 20-30% | > 40-50% |
| > 5-10% | > 15-20% | > 30-40% | |

Notes:
1. Aerial image of Goose infrastructure as of September 2024

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Job No: CAPR004313
Filename: GroundThermalMonitoring_2025_Figures..pdf

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Back River Project

2025 Ground Thermal Monitoring Report

**Ground Ice Content – Llama Pit Area**

| Date: | Approved: | Figure: |
|---|---|---|
| 2026-03-19 | JBK | **17** |




**Legend**

Weighted Average Ground Ice Content %

- 0-5%
- > 5-10%
- > 10-15%
- > 15-20%
- > 20-30%
- > 30-40%
- > 40-50%

Notes:
1. Aerial image of Goose infrastructure as of September 2024

srk consulting

Job No: CAPR004313
Filename: GroundThermalMonitoring_2025_Figures..pdf

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Back River Project

2025 Ground Thermal Monitoring Report

**Ground Ice Content – Umwelt Pit Area**

| Date: | Approved: | Figure: |
|---|---|---|
| 2026-03-19 | JBK | **18** |



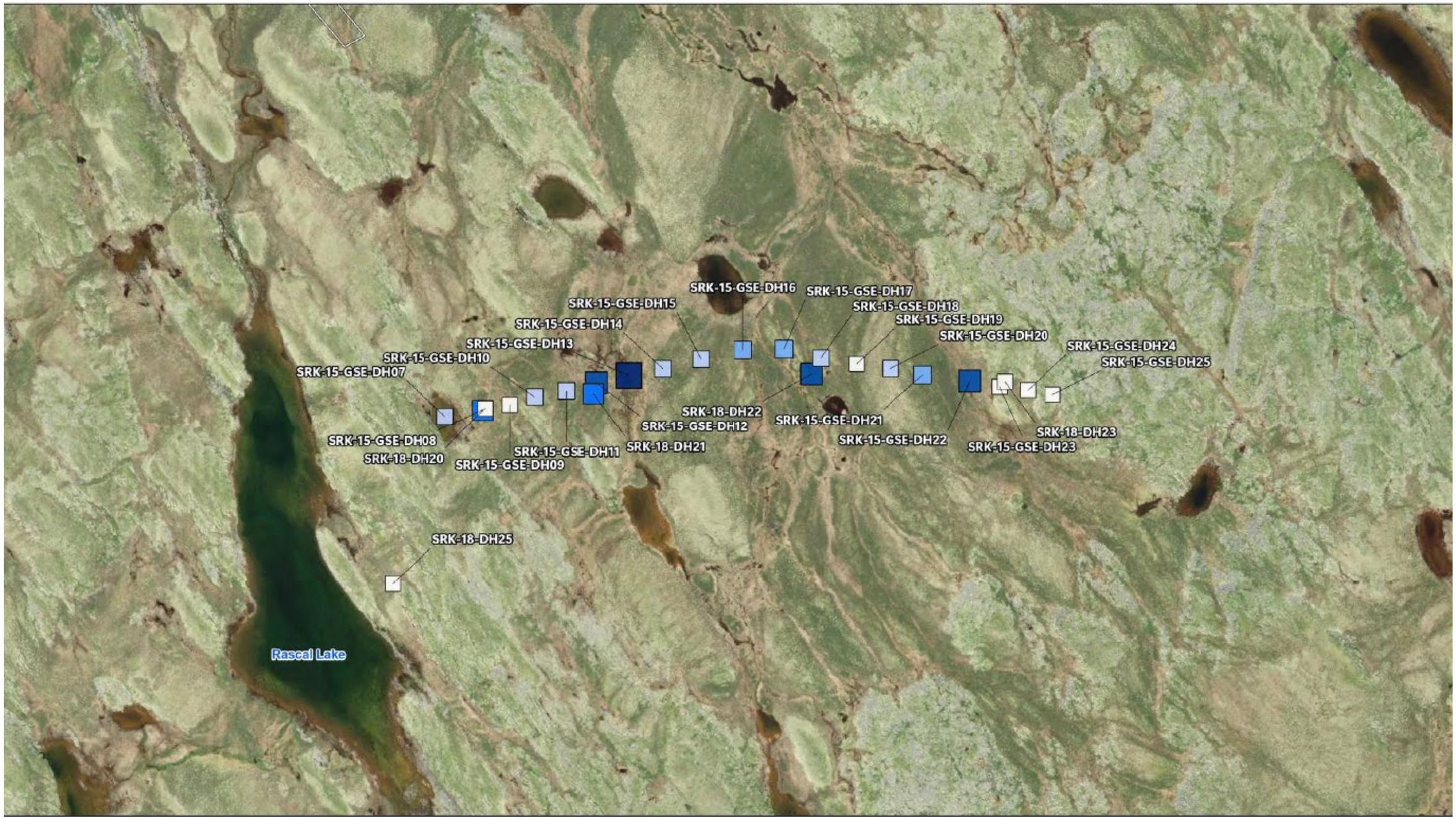

**Legend**

Weighted Average Ground Ice Content %

- 0-5%
- > 5-10%
- > 10-15%
- > 15-20%
- > 20-30%
- > 30-40%
- > 40-50%

Notes:
1. Aerial image of Goose infrastructure as of September 2024

| | | |
|---|---|---|
| srk consulting | B2GOLD NUNAVUT | 2025 Ground Thermal Monitoring Report |
| | | **Ground Ice Content – Goose Pit Area** |
| Job No: CAPR004313<br>Filename: GroundThermalMonitoring_2025_Figures..pdf | Back River Project | Date: 2026-03-19 \| Approved: JBK \| Figure: **19** |




**Legend**

Weighted Average Ground Ice Content %

0-5%
> 5-10%
> 10-15%
> 15-20%
> 20-30%
> 30-40%
> 40-50%

Notes:
1. Aerial image of Goose infrastructure as of September 2024

srk consulting

Job No: CAPR004313
Filename: GroundThermalMonitoring_2025_Figures..pdf

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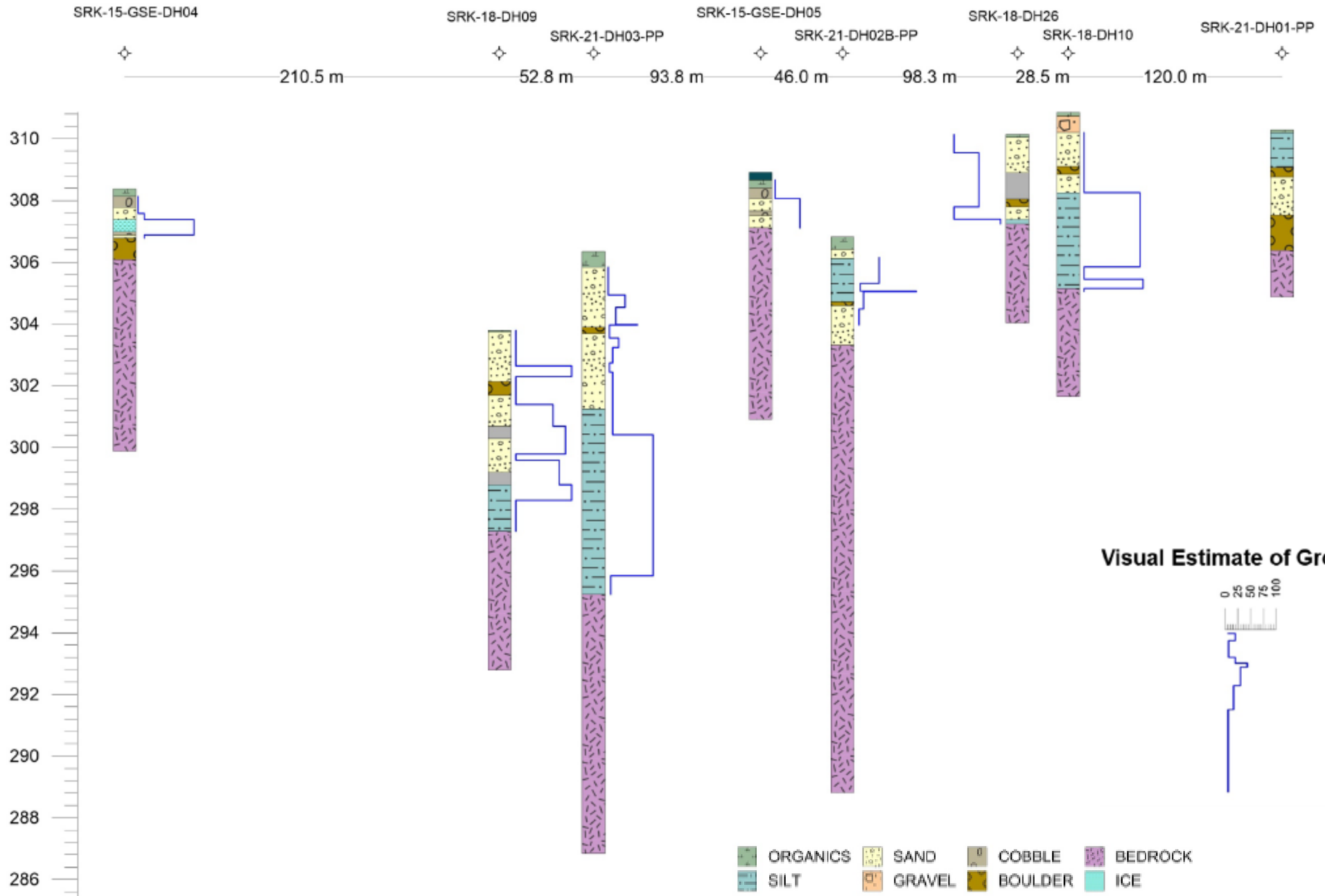
Back River Project

2025 Ground Thermal Monitoring Report

**Ground Ice Content – Former Tailings Storage Facility**

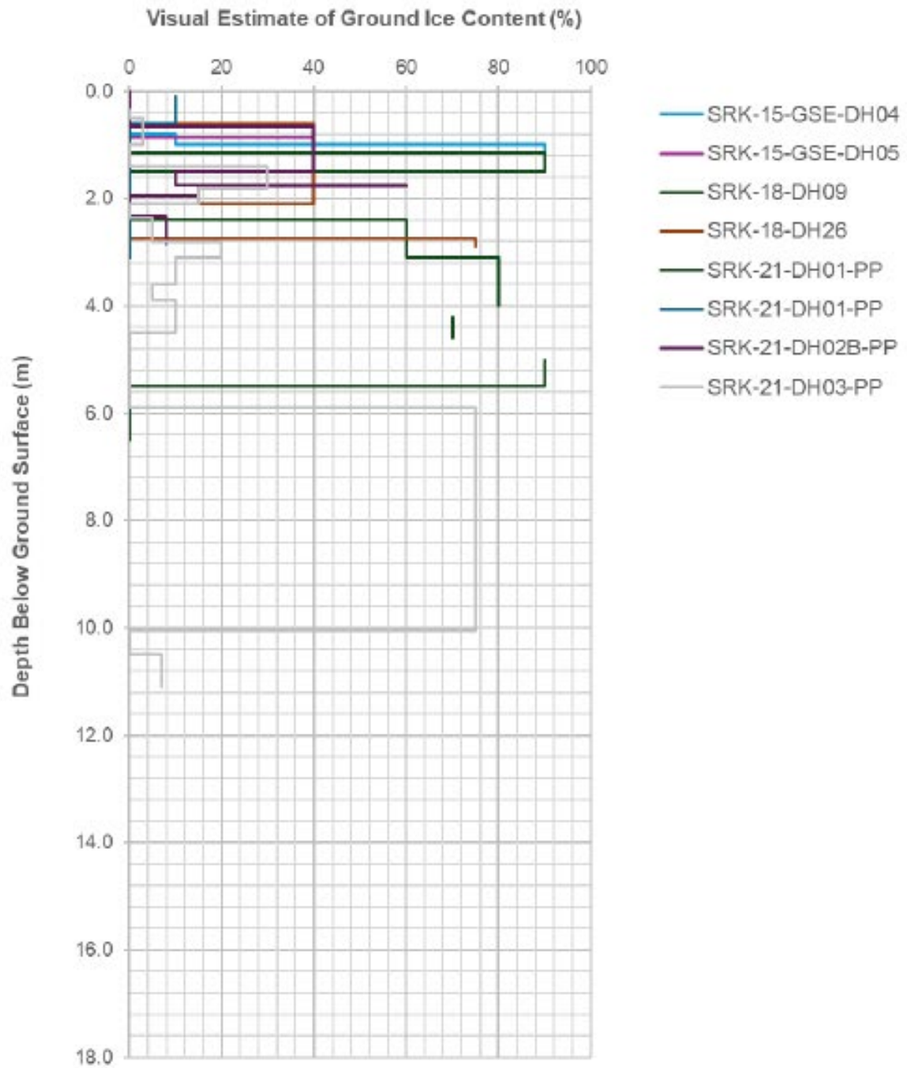
| Date: | Approved: | Figure: |
|---|---|---|
| 2026-03-19 | JBK | **20** |



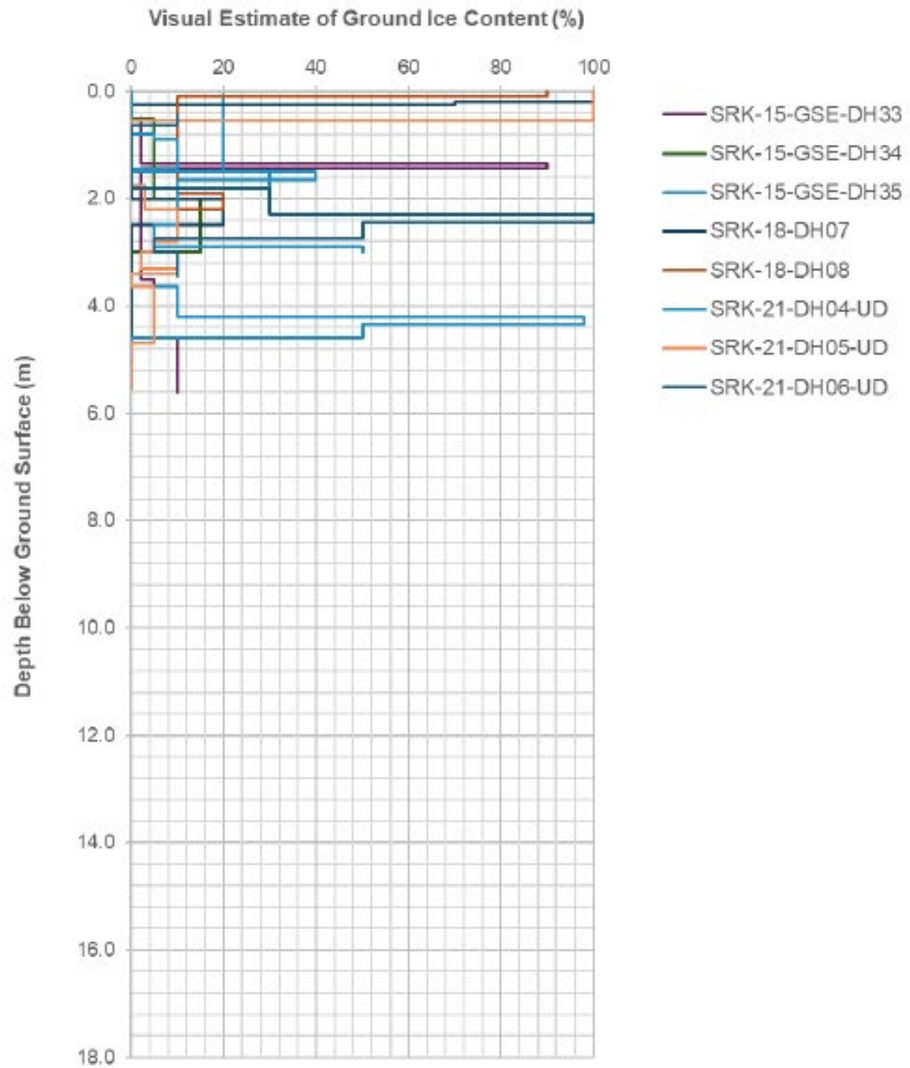

Notes:
1. Drillholes completed at Primary Pond Dam prior to construction.
2. Vertical scale indicates elevation above sea level.
3. Solid blue line represents ground ice content based on visual estimate.

| | | |
|---|---|---|
| srk consulting | B2GOLD NUNAVUT | 2025 Ground Thermal Monitoring Report |
| | | **Primary Pond Area – Cross Section** |
| Job No: CAPR004313<br>Filename: GroundThermalMonitoring_2025_Figures..pdf | Back River Project | Date: 2026-03-19 \| Approved: JBK \| Figure: **21** |

## Primary Pond Area




## Saline Pond Area




Notes:
1. Ground ice content based on visual estimates.

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2025 Ground Thermal Monitoring Report

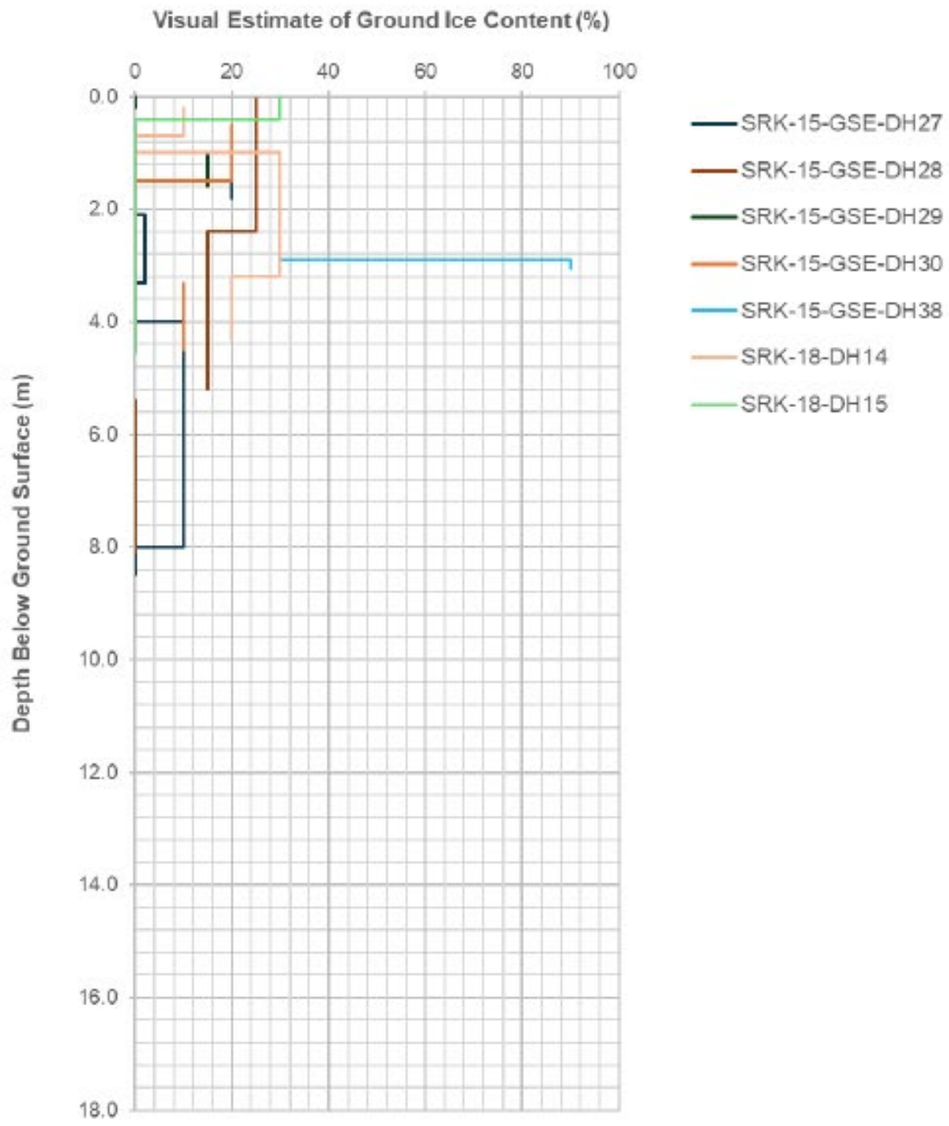
**Ground Ice Logs – Primary Pond Area & Saline Pond Area**

Job No: CAPR004313
Filename: GroundThermalMonitoring_2025_Figures..pdf

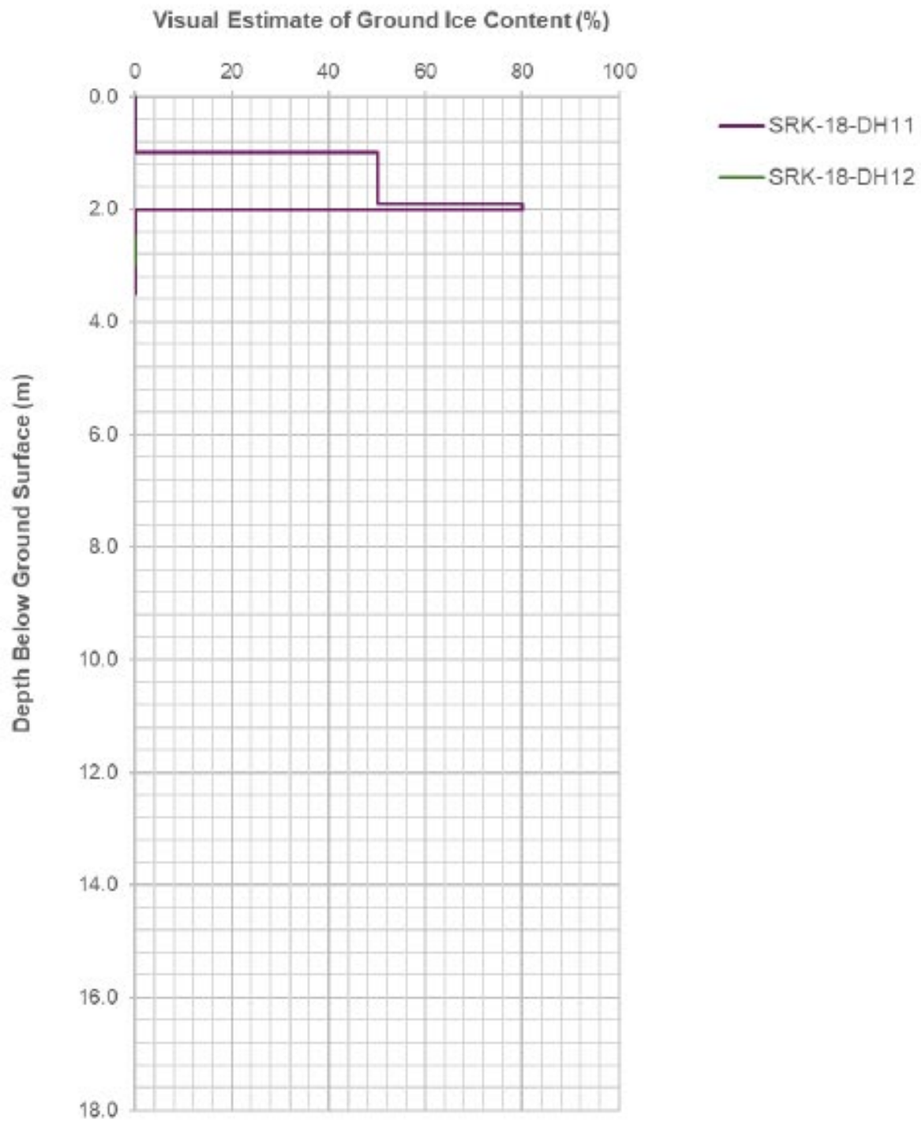
Back River Project

Date: 2026-03-19
Approved: JBK
Figure: **22**

## Camp Pad Area



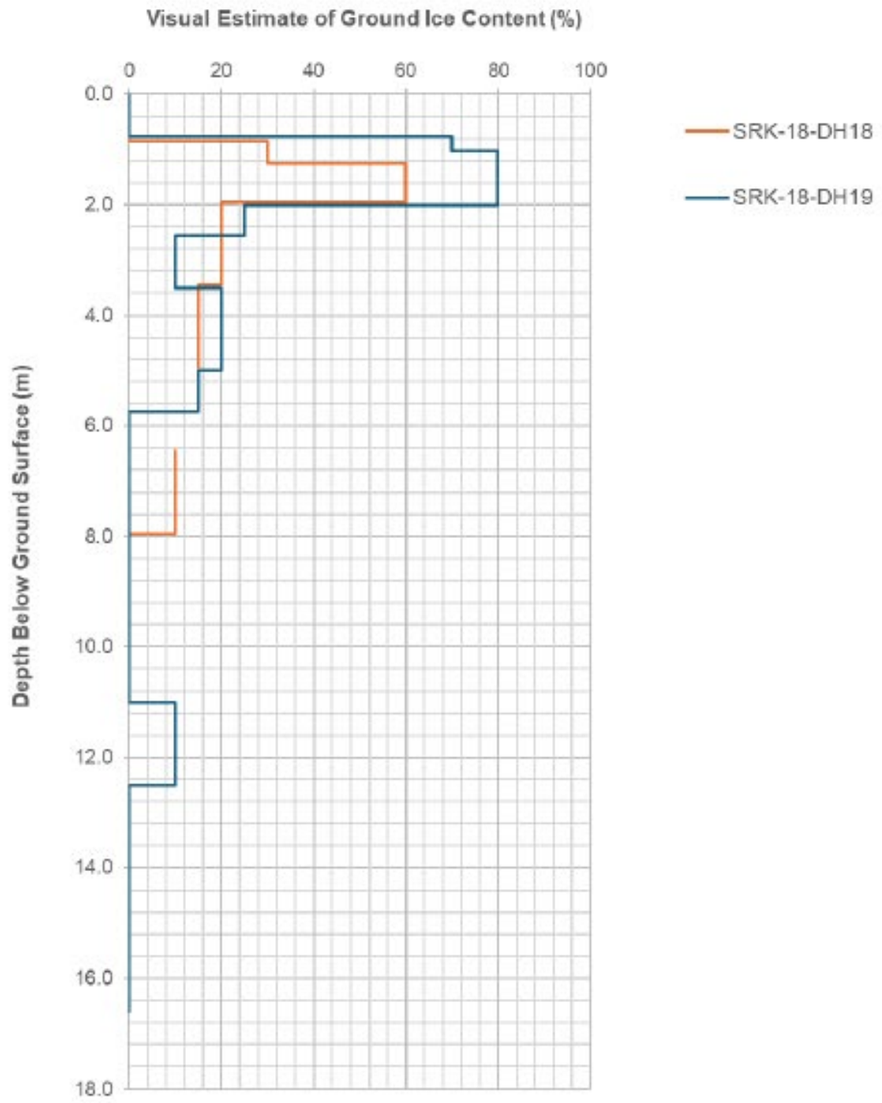

## Umwelt Pit Area



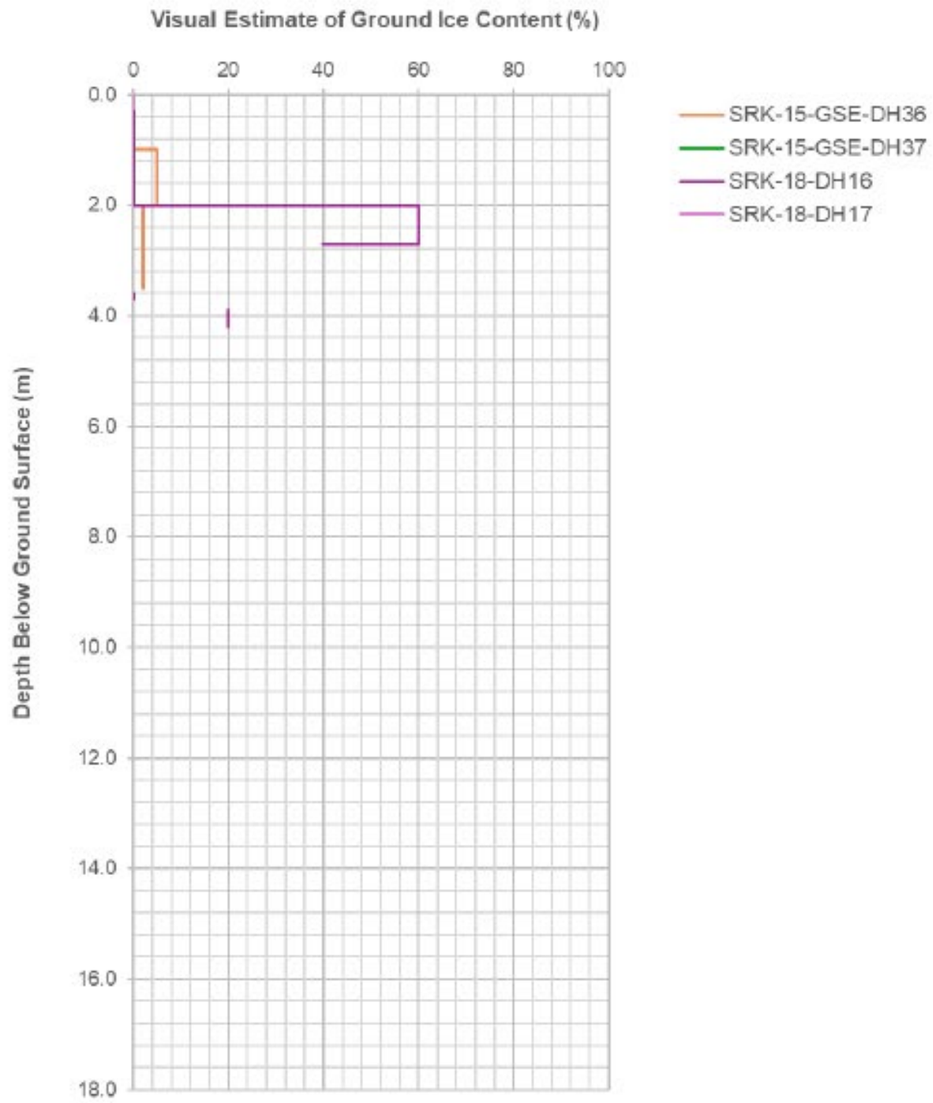

Notes:
1. Ground ice content based on visual estimates.

| | | |
|---|---|---|
| srk consulting | B2GOLD NUNAVUT | 2025 Ground Thermal Monitoring Report |
| | | **Ground Ice Logs – Camp Pad Area & Umwelt Pit Area** |
| Job No: CAPR004313<br>Filename: GroundThermalMonitoring_2025_Figures..pdf | Back River Project | Date: 2026-03-19 / Approved: JBK / Figure: **23** |

## Goose Pit Area

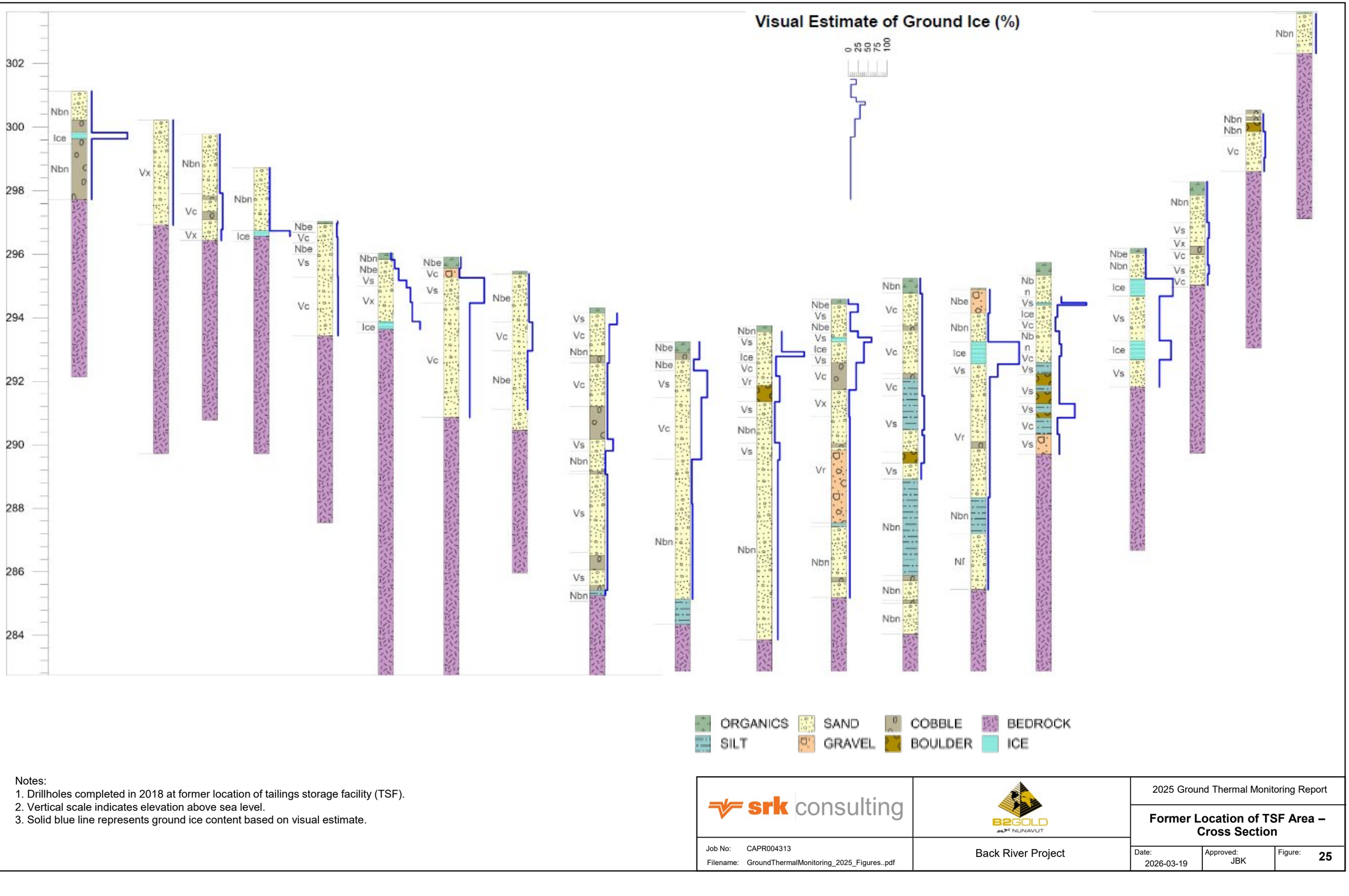



## Echo Pit Area




Notes:
1. Ground ice content based on visual estimates.

| | | |
|---|---|---|
| srk consulting | B2GOLD NUNAVUT | 2025 Ground Thermal Monitoring Report |
| | | **Ground Ice Logs – Goose Pit Area and Echo Pit Area** |
| Job No: CAPR004313<br>Filename: GroundThermalMonitoring_2025_Figures..pdf | Back River Project | Date: 2026-03-19 \| Approved: JBK \| Figure: **24** |




Notes:
1. Drillholes completed in 2018 at former location of tailings storage facility (TSF).
2. Vertical scale indicates elevation above sea level.
3. Solid blue line represents ground ice content based on visual estimate.

srk consulting

Job No: CAPR004313
Filename: GroundThermalMonitoring_2025_Figures..pdf

B2GOLD NUNAVUT

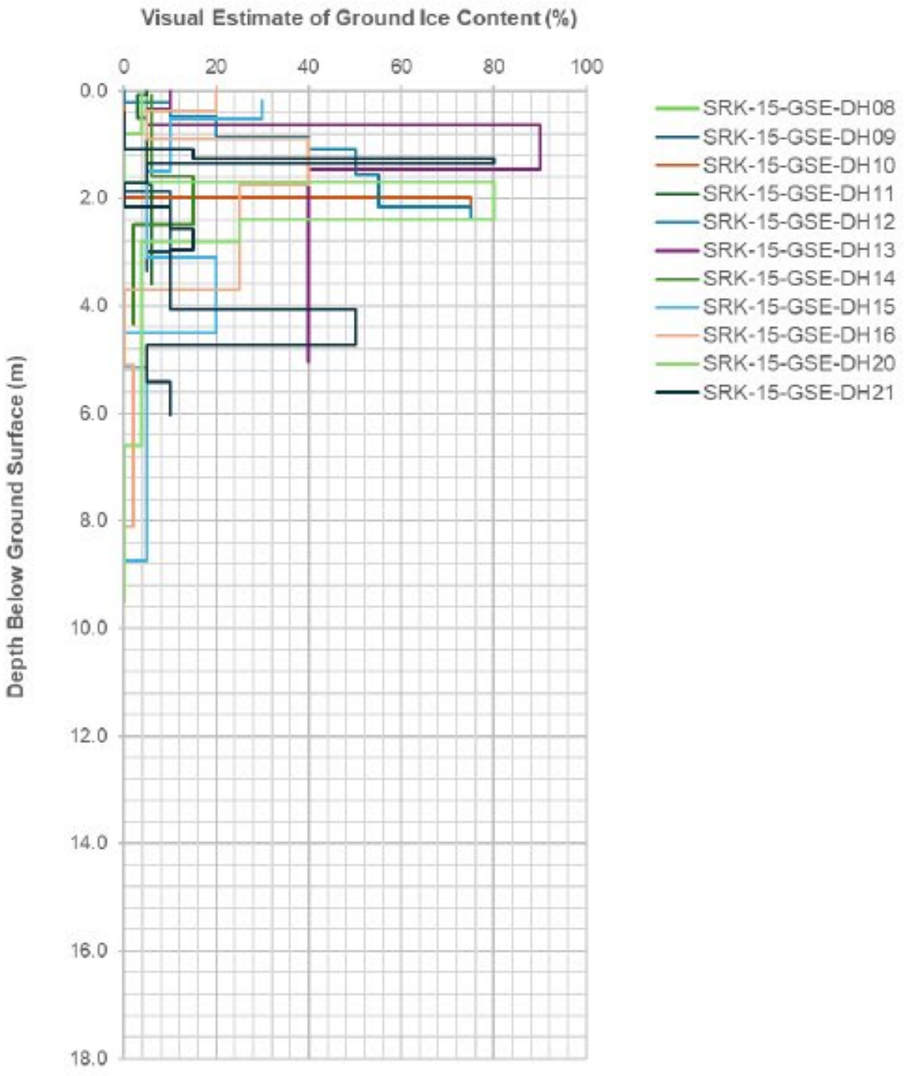
Back River Project

2025 Ground Thermal Monitoring Report

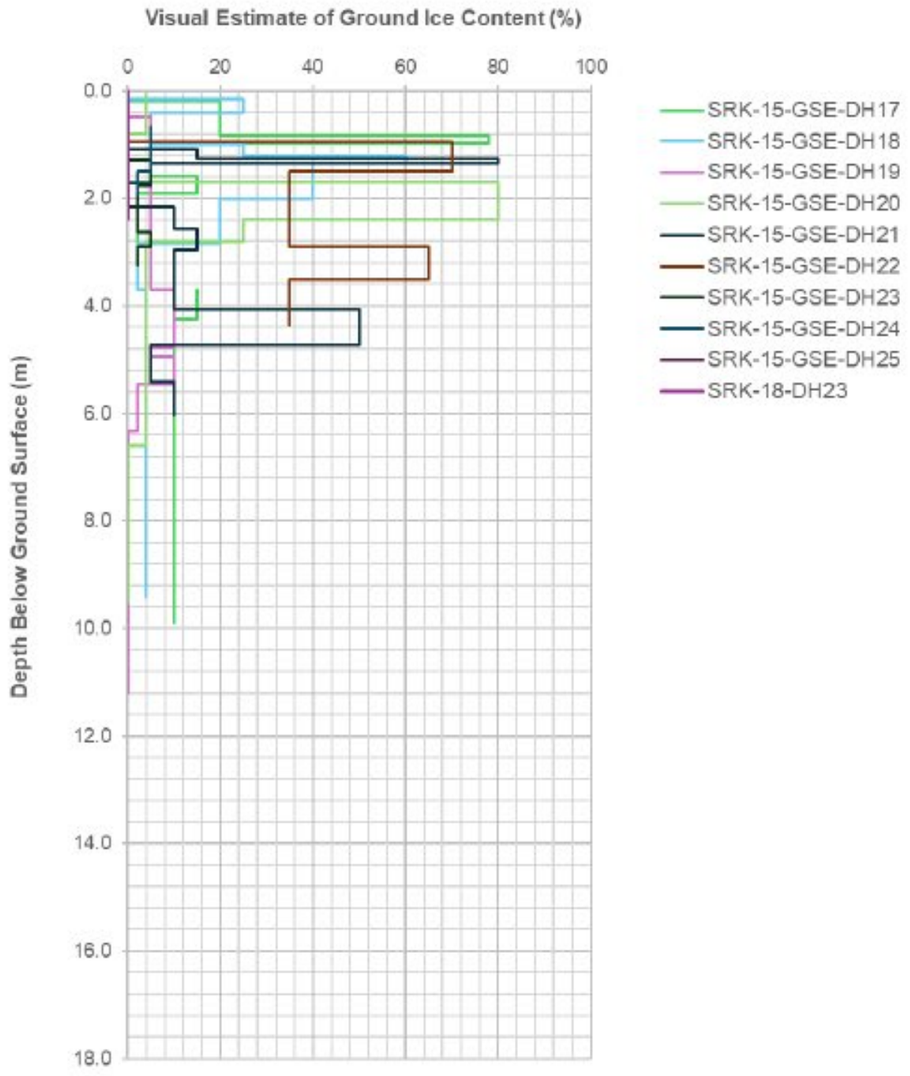
**Former Location of TSF Area – Cross Section**

| Date: | Approved: | Figure: |
|---|---|---|
| 2026-03-19 | JBK | **25** |

## Former TSF Dam Alignment (West Side)



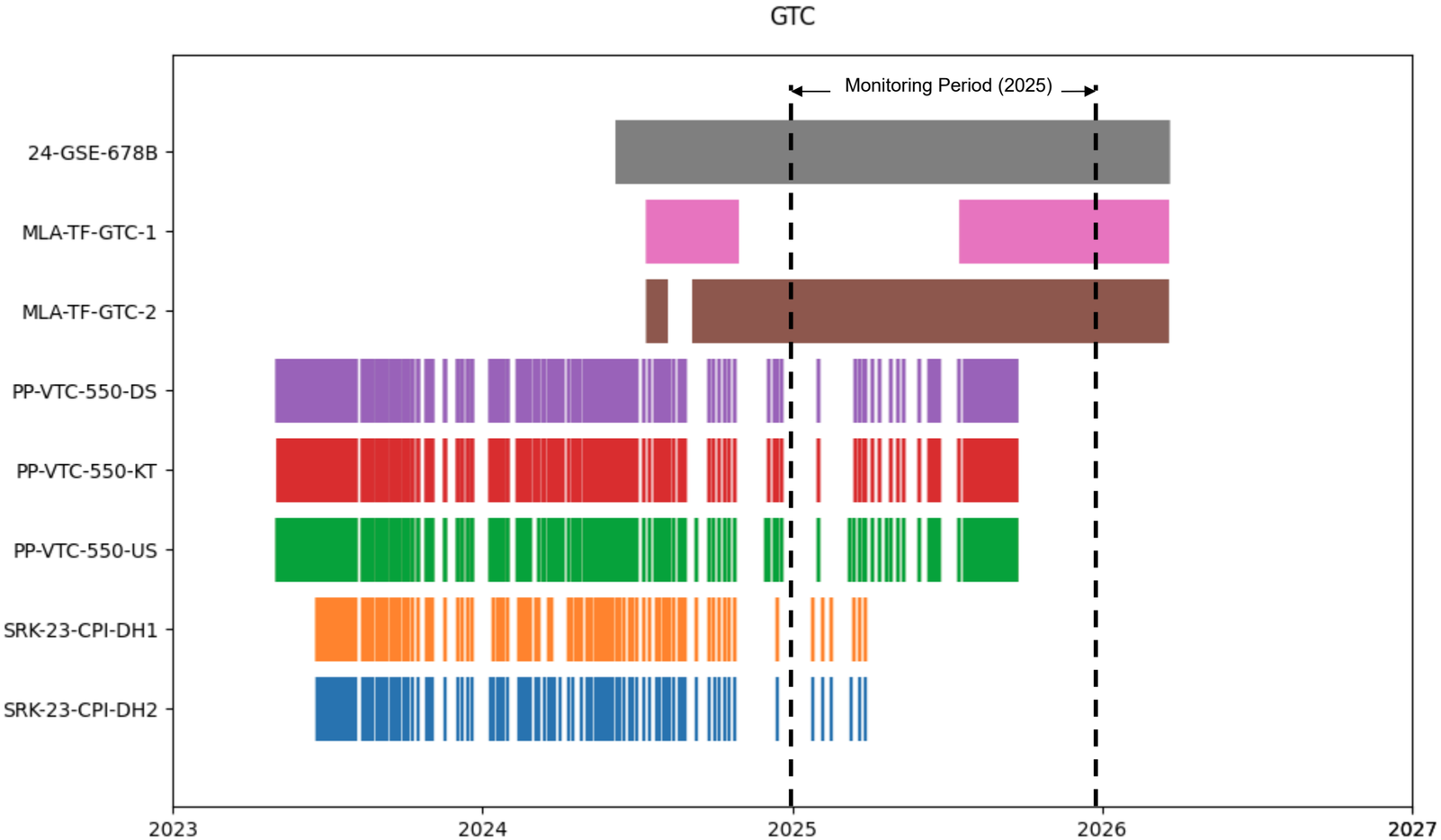

## Former TSF Dam Alignment (East Side)



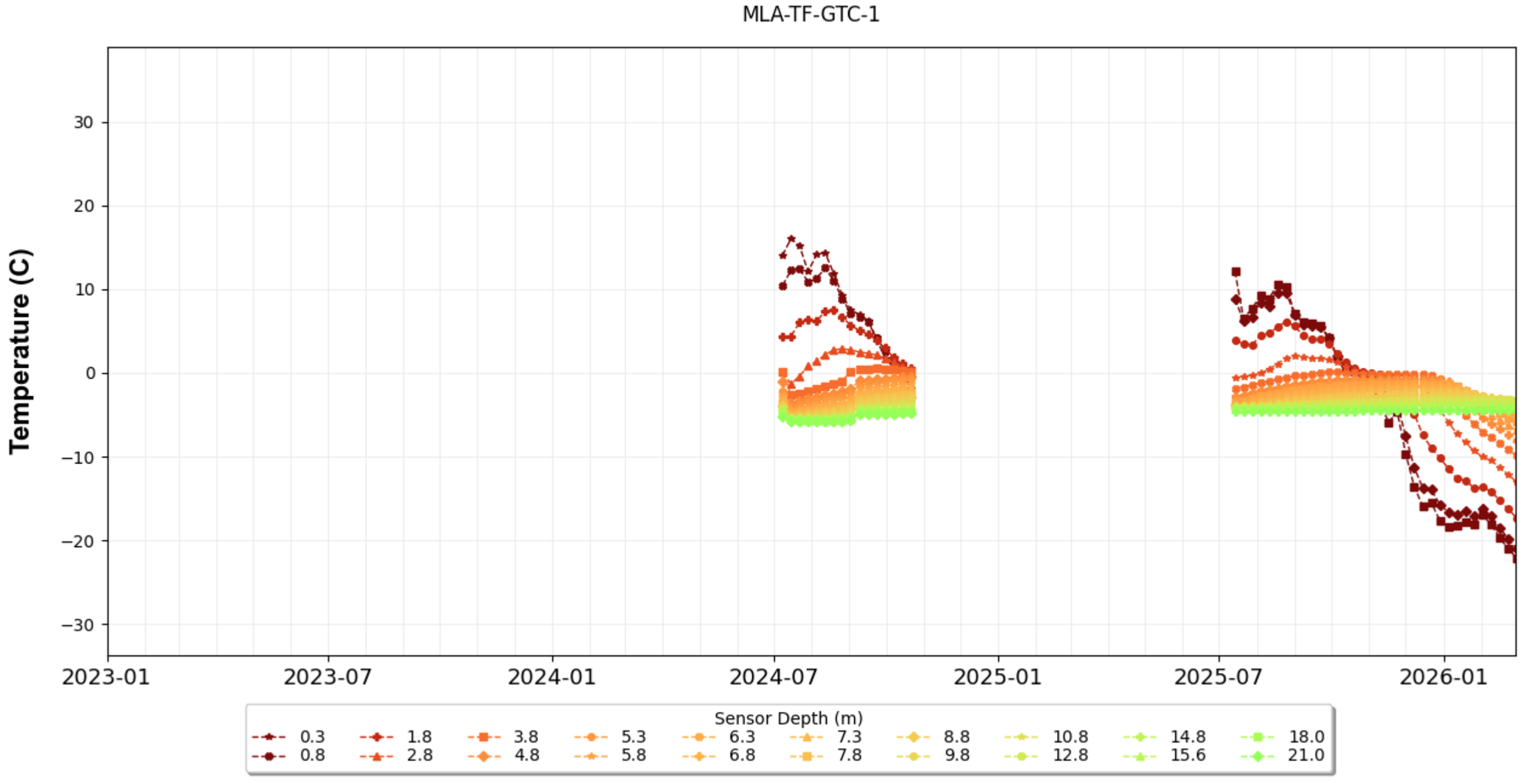

Notes:
1. Ground ice content based on visual estimates.

| | | |
|---|---|---|
| srk consulting | B2GOLD NUNAVUT | 2025 Ground Thermal Monitoring Report |
| | | **Ground Ice Logs – Former TSF Dam Alignment** |
| Job No: CAPR004313<br>Filename: GroundThermalMonitoring_2025_Figures..pdf | Back River Project | Date: 2026-03-19 \| Approved: JBK \| Figure: **26** |

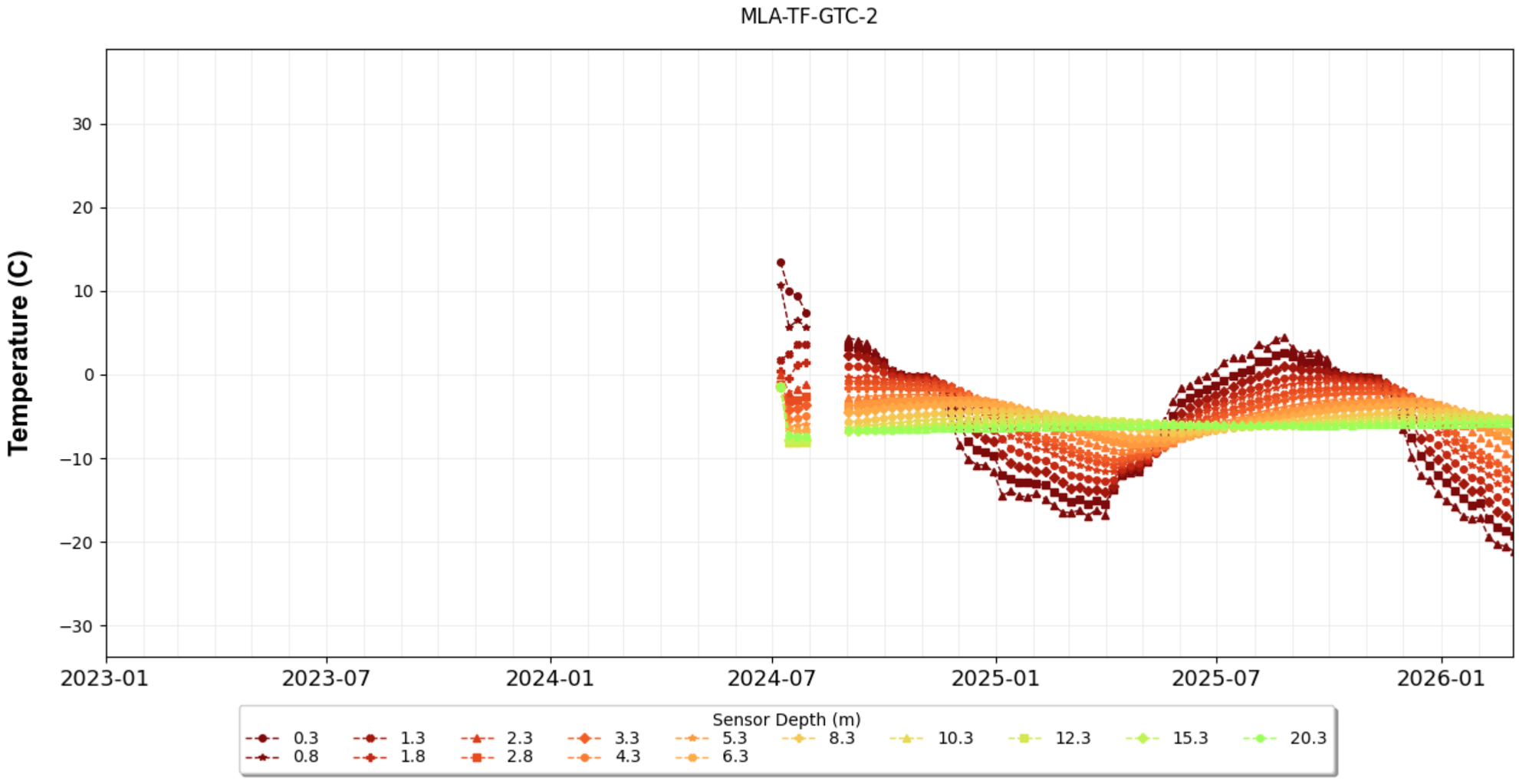
# Attachment 2 Ground Temperature Data



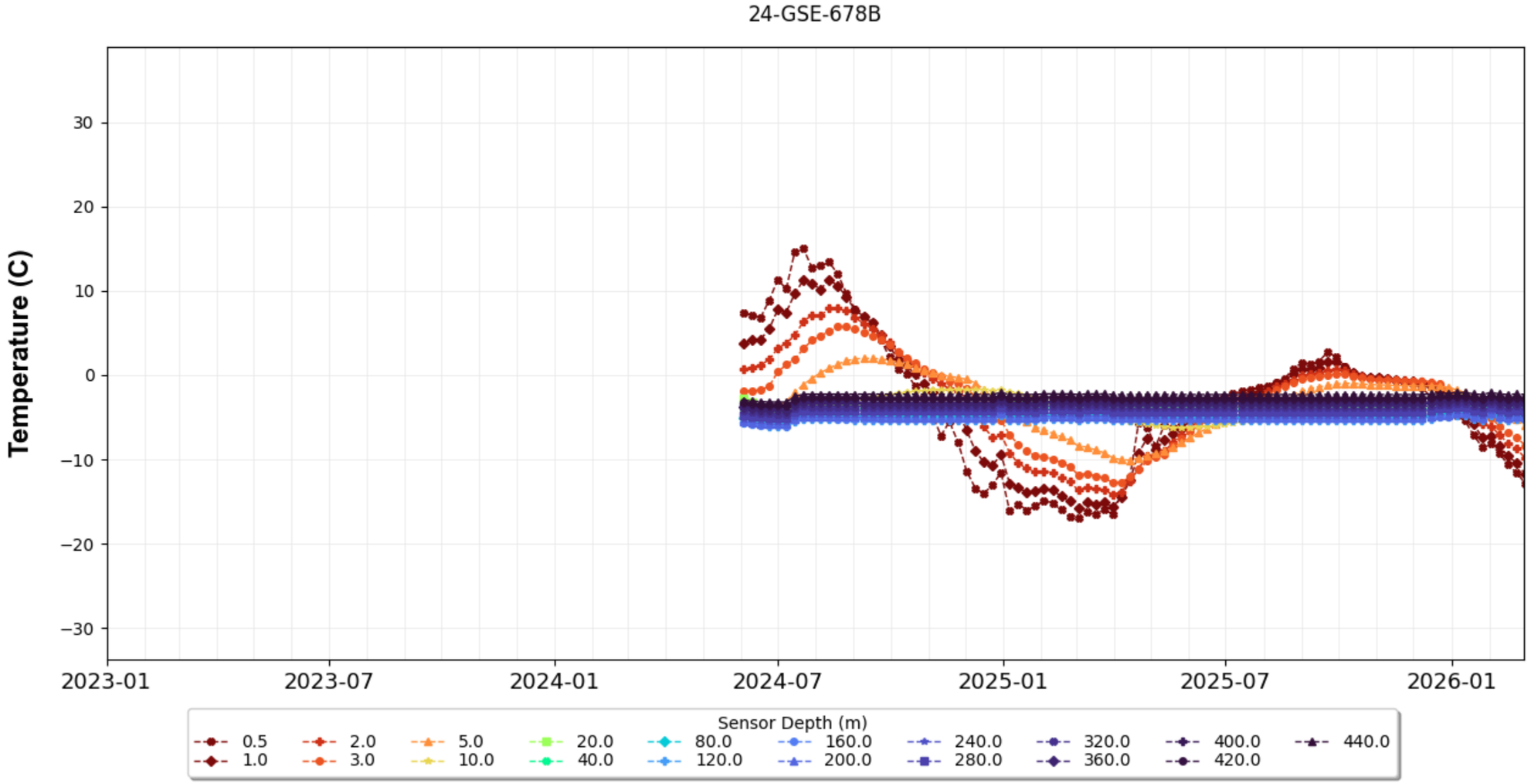

| | | |
|---|---|---|
| srk consulting | B2GOLD | 2025 Ground Thermal Monitoring Report |
| | | Monitoring Sites – Data Record |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 · Approved: JBK · Figure: **A-1** |



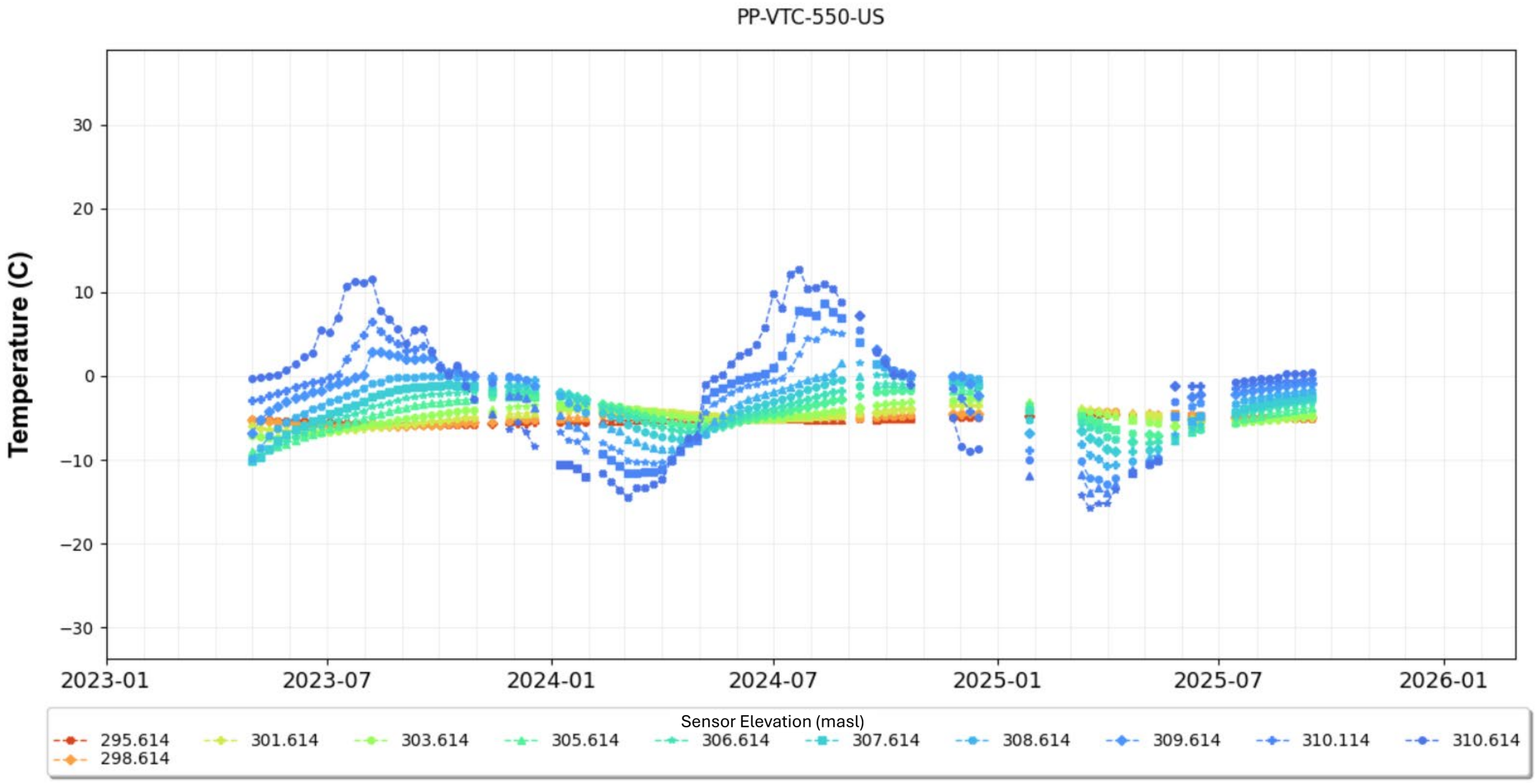

| | | |
|---|---|---|
| srk consulting | B2GOLD | 2025 Ground Thermal Monitoring Report |
| | | Recent Ground Temperature Site – MLA-TF-GTC-1 |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 · Approved: JBK · Figure: **A-2** |



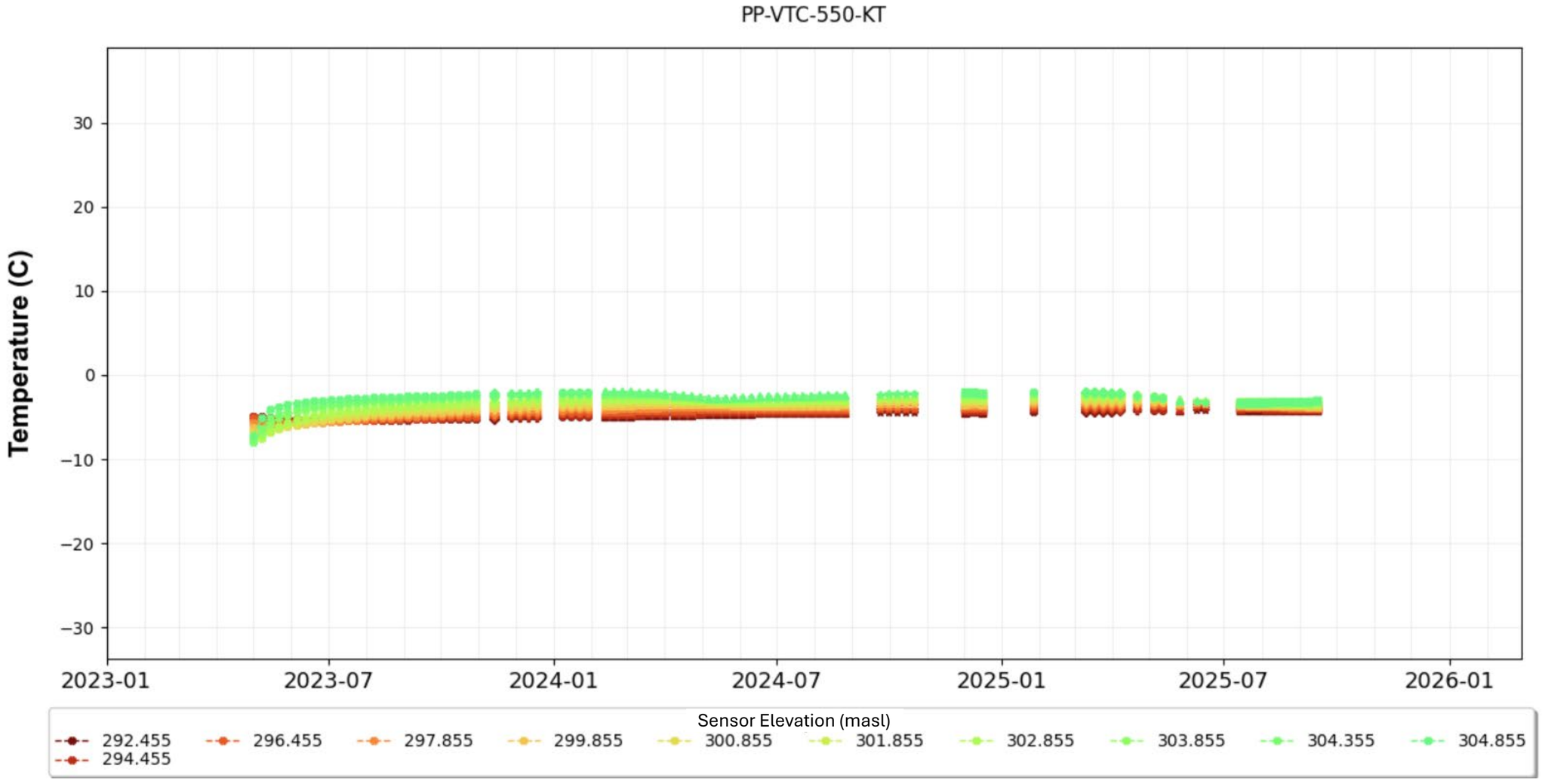

| | | |
|---|---|---|
| srk consulting | B2GOLD | 2025 Ground Thermal Monitoring Report |
| | | Recent Ground Temperature Site – MLA-TF-GTC-2 |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 · Approved: JBK · Figure: A-3 |



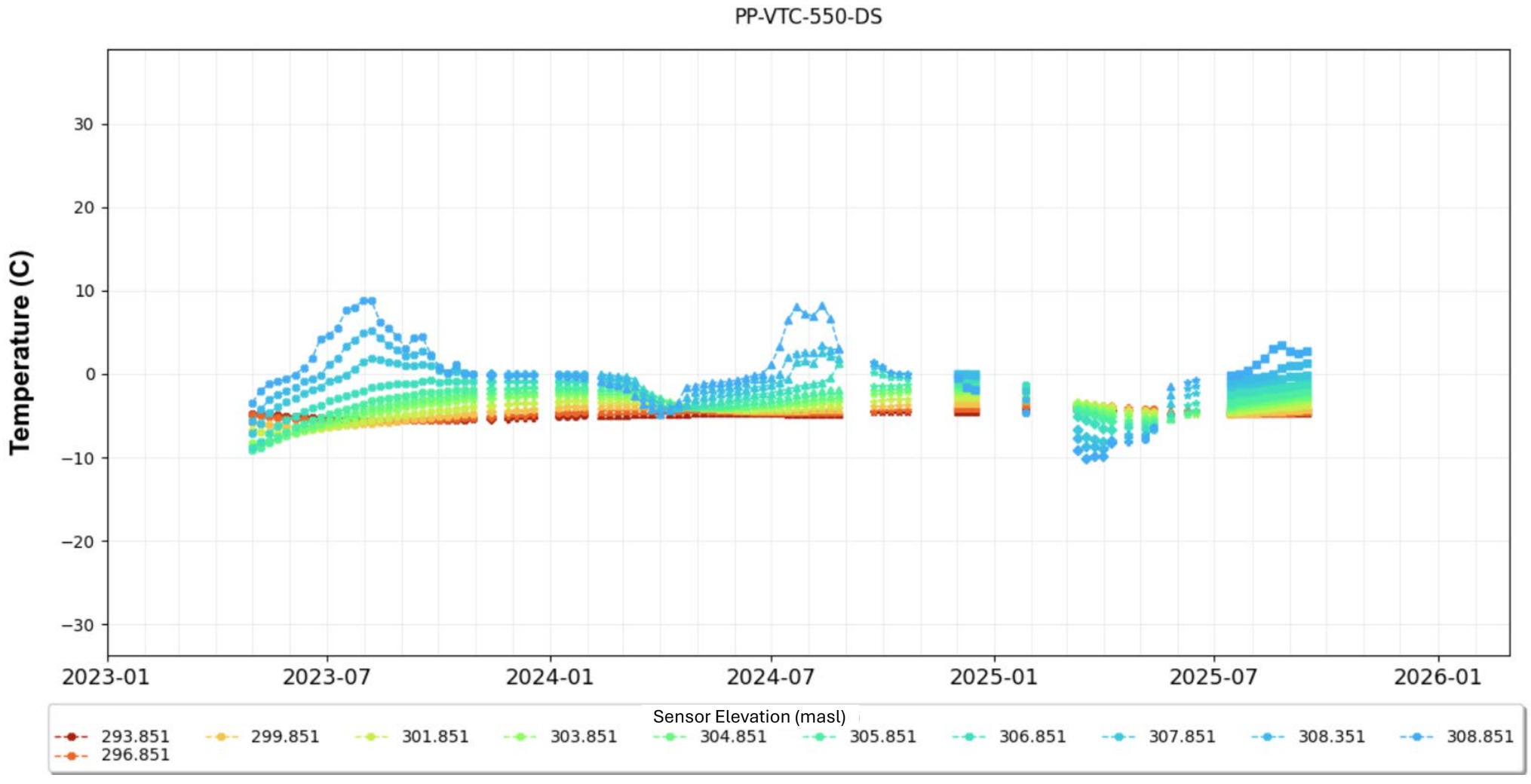

| | | |
|---|---|---|
| srk consulting | B2GOLD | 2025 Ground Thermal Monitoring Report |
| | | Recent Ground Temperature Site – 24-GSE-678B |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 · Approved: JBK · Figure: **A-4** |



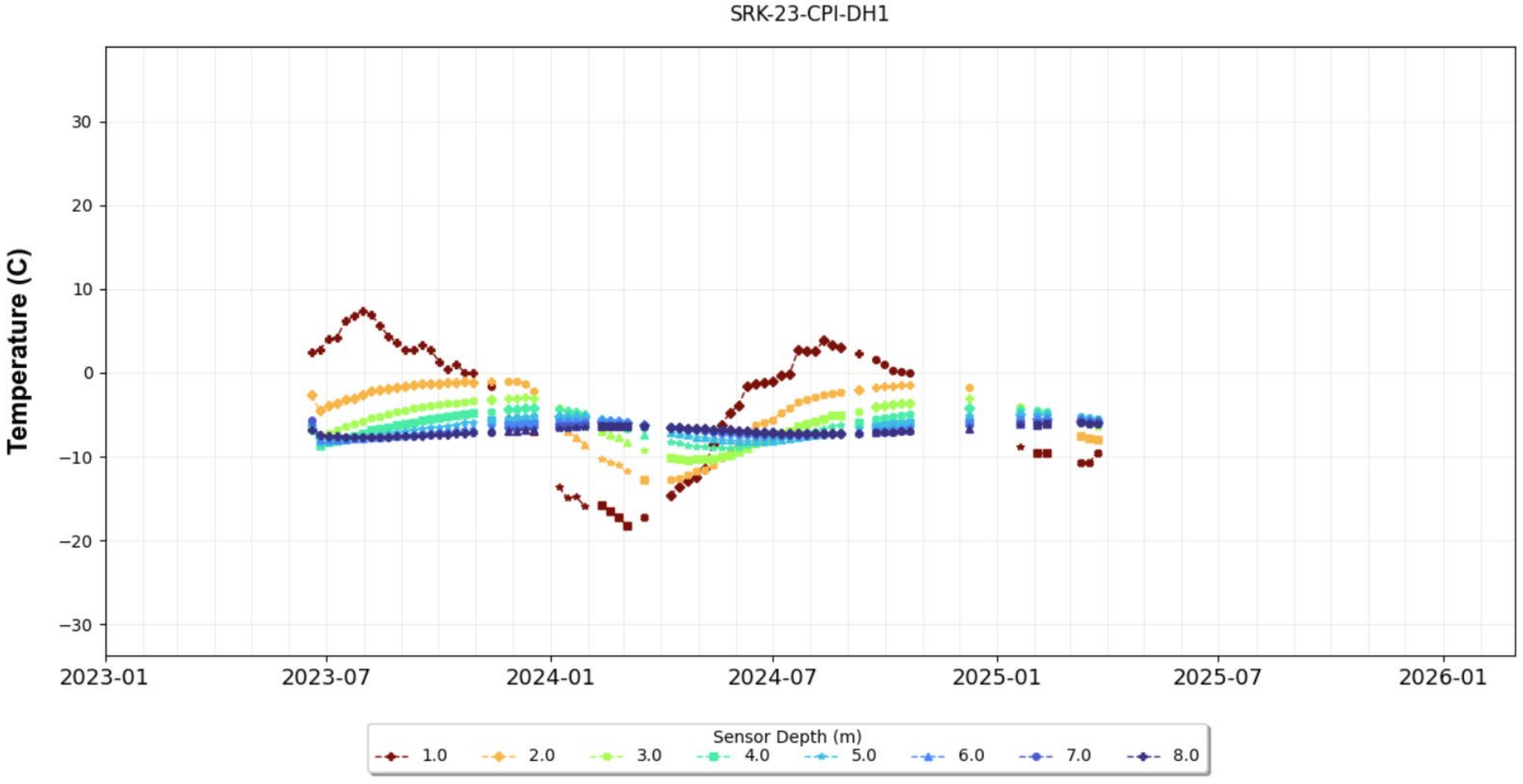

| | | |
|---|---|---|
| srk consulting | B2GOLD | 2025 Ground Thermal Monitoring Report |
| | | Recent Ground Temperature Site – PP-VTC-550-US |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 · Approved: JBK · Figure: **A-5** |



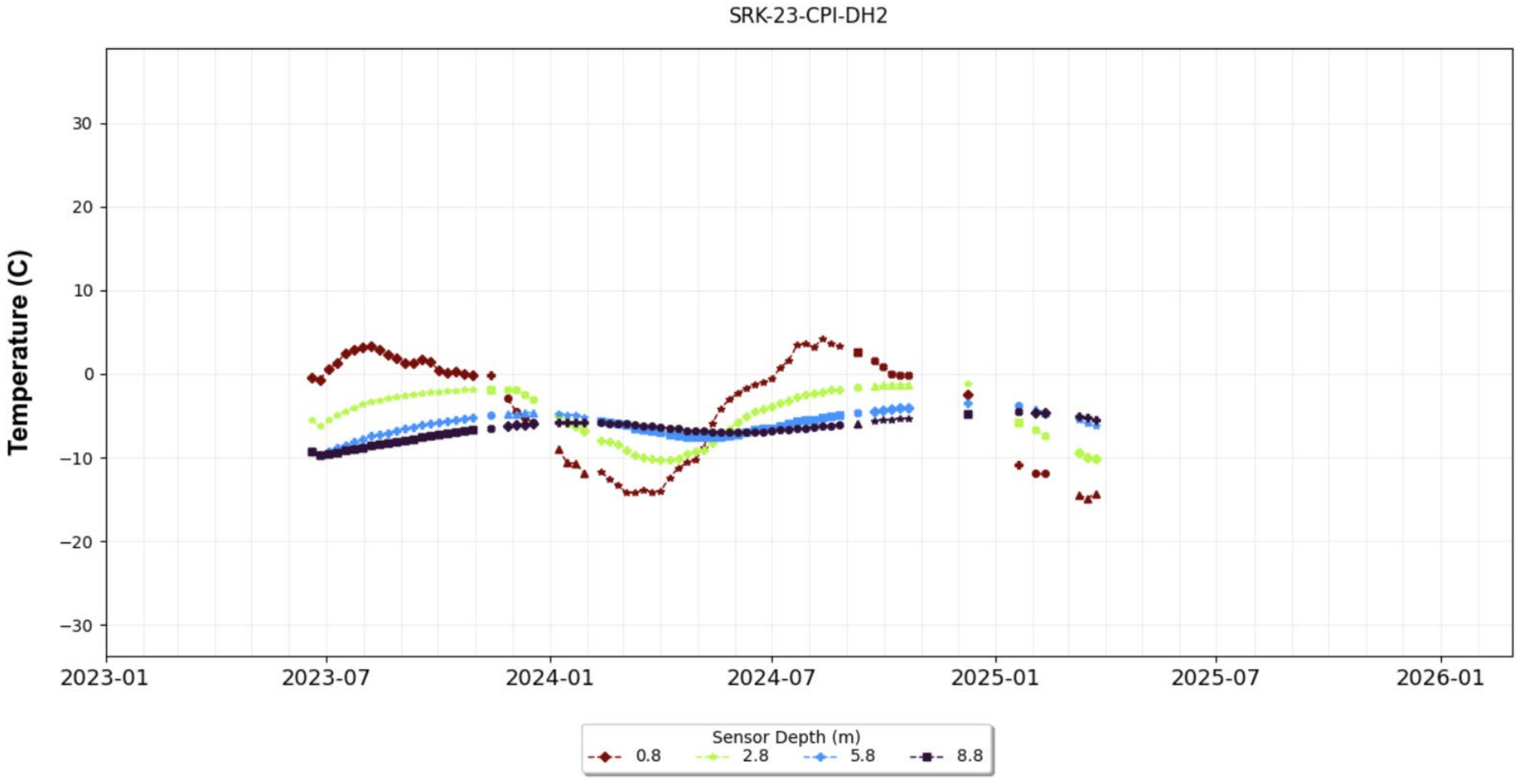

| | | |
|---|---|---|
| srk consulting | B2GOLD | 2025 Ground Thermal Monitoring Report |
| | | Recent Ground Temperature Site – PP-VTC-550-KT |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 · Approved: JBK · Figure: **A-6** |




| | | |
|---|---|---|
| srk consulting | B2GOLD | 2025 Ground Thermal Monitoring Report |
| | | Recent Ground Temperature Site – PP-VTC-550-DS |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 · Approved: JBK · Figure: A-7 |




| | | |
|---|---|---|
| srk consulting | B2GOLD | 2025 Ground Thermal Monitoring Report |
| | | Recent Ground Temperature Site – SRK-23-CPI-DH1 |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 · Approved: JBK · Figure: **A-8** |




| | | |
|---|---|---|
| srk consulting | B2GOLD | 2025 Ground Thermal Monitoring Report |
| | | Recent Ground Temperature Site – SRK-23-CPI-DH2 |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 · Approved: JBK · Figure: **A-9** |

# APPENDIX C WINTER ICE ROAD WATER USE

## Table C-1 Winter Ice Road Water Use by Lake and Month for 2024/2025 WIR Season

| Water Source Lake ID | 2024 | 2025 | | | | Total Use ($m^3$) | Available Capacity ($m^3$) |
|---|---|---|---|---|---|---|---|
| | December | January | February | March | April | | |
| Bathurst Inlet | 0 | 28 | 154 | 2,744 | 0 | 2,926 | 32,516,148 |
| Goose Lake* | 497 | 0 | 0 | 224 | 0 | 721 | 608,700 |
| Lake 1-0 | 2093 | 105 | 0 | 84 | 0 | 2,282 | 39,603 |
| Lake 2-0 | 3493 | 0 | 0 | 70 | 0 | 3,563 | 53,507 |
| Lake 3-0 | 3640 | 0 | 378 | 308 | 168 | 4,494 | 79,375 |
| Lake 4-0 | 826 | 0 | 0 | 238 | 0 | 1,064 | 19,379 |
| Lake 6-0 | 1848 | 0 | 0 | 504 | 42 | 2,394 | 25,362 |
| Lake 7-0 | 2674 | 0 | 0 | 980 | 56 | 3,710 | 424,972 |
| Lake 9-0 | 5247 | 672 | 0 | 364 | 210 | 6,493 | 53,703 |
| Lake 11-0 | 3776 | 753 | 147 | 1,134 | 294 | 6,104 | 98,188 |
| Lake 13-0a | 522 | 3,157 | 0 | 574 | 0 | 4,253 | 15,112 |
| Lake 14-0a | 0 | 1,943 | 399 | 938 | 0 | 3,280 | 359,780 |
| Lake 14-1 | 0 | 1,320 | 210 | 574 | 308 | 2,412 | 88,191 |
| Lake 15-0 | 0 | 2,863 | 308 | 756 | 742 | 4,669 | 237,327 |
| Lake 16-0 | 0 | 3,910 | 1,176 | 1,913 | 602 | 7,601 | 447,685 |
| Lake 17-0 | 0 | 56 | 2,100 | 2,717 | 210 | 5,083 | 1,239,167 |
| Lake 18-0 | 0 | 0 | 658 | 112 | 0 | 770 | 128,478 |
| Lake 18-1 | 0 | 0 | 1,049 | 70 | 0 | 1,119 | 15,059 |
| Lake 19-0 | 0 | 0 | 2,619 | 2,171 | 0 | 4,790 | 9,827 |
| Lake 20-0 | 0 | 0 | 3,717 | 1,275 | 448 | 5,440 | 1,060,454 |
| Lake 23-0 | 0 | 0 | 1,097 | 126 | 0 | 1,223 | 39,637 |
| Lake 24-0 | 0 | 126 | 1,990 | 462 | 0 | 2,578 | 59,995 |
| Lake 984 | 0 | 0 | 1,353 | 368 | 0 | 1,721 | 7,174 |
| Lake 994 | 0 | 2,431 | 1,820 | 210 | 0 | 4,461 | 6,103 |
| Lake 25-0 | 0 | 7,619 | 616 | 1,143 | 352 | 9,730 | 80,746 |
| Lake 26-0 | 0 | 5,415 | 28 | 758 | 399 | 6,600 | 6,992 |
| Lake 995 | 0 | 0 | 0 | 0 | 207 | 207 | 7,597 |
| Lake 997 | 573 | 3,790 | 2,377 | 42 | 0 | 6,782 | 1,512 |
| Lake 28-0 | 2527 | 2,149 | 266 | 364 | 28 | 5,334 | 23,951 |
| Lake 29-0 | 3851 | 280 | 2,467 | 418 | 392 | 7,408 | 211,044 |
| Lake 998 | 0 | 0 | 0 | 0 | 126 | 126 | 5,334 |
| Lake 30-0 | 7939 | 571 | 1,165 | 1,675 | 237 | 11,587 | 56,674 |
| Lake 31-0 | 7600 | 3,509 | 4,672 | 16,081 | 2,564 | 34,426 | 17,010,361 |
| Unknown | 895 | 253 | 0 | 434 | 302 | 1,884 | N/A |
| **Total Freshwater Use** | **48001** | **40922** | **30612** | **37087** | **7687** | **164309** | |

**Notes:**
Capacity shown for Goose Lake is the total allowable water use for all purposes as defined in the Licence.
N/A = available capacities could not be calculated because the location and surface area of the waterbody could not be verified.
For all other lakes available capacity was that outlined in the WIR Technical Memorandum.

# APPENDIX D GEOCHEMICAL MONITORING RESULTS

## Table D-1: 2025 Acid Base Accounting Results from B2Gold Site Laboratory*

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| EPBH250R10F | 1/1/2025 | EP250R10 | Echo | 250 | 0.178 | 5.24 | 6.49 | 1.24 | PAG |
| EPBH250R129F | 1/1/2025 | EP250R129 | Echo | 250 | 0.190 | 5.29 | 8.97 | 1.70 | PAG |
| EPBH250R65F | 1/1/2025 | EP250R65 | Echo | 250 | 0.067 | 2.08 | 7.50 | 3.61 | NAG |
| EPBH250R47F | 1/1/2025 | EP250R47 | Echo | 250 | 0.120 | 3.68 | 7.36 | 2.00 | NAG |
| EPBH250R49F | 1/1/2025 | EP250R49 | Echo | 250 | 0.138 | 4.05 | 6.50 | 1.60 | NAG |
| EPBH250R52F | 1/1/2025 | EP250R52 | Echo | 250 | 0.174 | 4.14 | 7.24 | 1.75 | PAG |
| EPBH250R12F | 1/1/2025 | EP250R12 | Echo | 250 | 0.212 | 5.78 | 5.25 | 0.91 | PAG |
| EPBH250R123F | 1/2/2025 | EP250R123 | Echo | 250 | 0.328 | 10.07 | 6.51 | 0.65 | PAG |
| EPBH250R58F | 1/2/2025 | EP250R58 | Echo | 250 | 0.332 | 10.36 | 6.75 | 0.65 | PAG |
| EPBH250R60F | 1/2/2025 | EP250R60 | Echo | 250 | 0.212 | 5.83 | 7.24 | 1.24 | PAG |
| EPBH250R69F | 1/2/2025 | EP250R69 | Echo | 250 | 0.108 | 2.99 | 6.99 | 2.34 | NAG |
| EPBH250R112F | 1/2/2025 | EP250R112 | Echo | 250 | 0.185 | 5.52 | 6.73 | 1.22 | PAG |
| EPBH250R116F | 1/2/2025 | EP250R116 | Echo | 250 | 0.119 | 3.71 | 6.87 | 1.85 | NAG |
| EPBH250R119F | 1/2/2025 | EP250R119 | Echo | 250 | 0.236 | 4.14 | 5.98 | 1.44 | PAG |
| EPBH250R175F | 1/2/2025 | EP250R175 | Echo | 250 | 0.127 | 2.61 | 9.74 | 3.73 | NAG |
| EPBH250R179F | 1/2/2025 | EP250R179 | Echo | 250 | 0.130 | 4.06 | 8.22 | 2.02 | NAG |
| EPBH250R181F | 1/2/2025 | EP250R181 | Echo | 250 | 0.142 | 4.44 | 6.48 | 1.46 | NAG |
| EPBH250R185F | 1/2/2025 | EP250R185 | Echo | 250 | 0.162 | 5.06 | 8.74 | 1.73 | PAG |
| EPBH250R190F | 1/2/2025 | EP250R190 | Echo | 250 | 0.171 | 5.34 | 8.50 | 1.59 | PAG |
| EPBH250R199F | 1/3/2025 | EP250R199 | Echo | 250 | 0.145 | 4.28 | 8.04 | 1.88 | NAG |
| EPBH250R201F | 1/3/2025 | EP250R201 | Echo | 250 | 0.133 | 3.79 | 7.10 | 1.87 | NAG |
| EPBH250R22F | 1/3/2025 | EP250R22 | Echo | 250 | 0.140 | 4.09 | 6.72 | 1.64 | NAG |
| EPBH250R24F | 1/3/2025 | EP250R24 | Echo | 250 | 0.154 | 4.64 | 9.17 | 1.98 | PAG |
| EPBH250R28F | 1/3/2025 | EP250R28 | Echo | 250 | 0.166 | 4.92 | 7.40 | 1.50 | PAG |
| EPBH250R31F | 1/3/2025 | EP250R31 | Echo | 250 | 0.104 | 3.24 | 7.00 | 2.16 | NAG |
| EPBH250R109F | 1/3/2025 | EP250R109 | Echo | 250 | 0.136 | 4.03 | 6.45 | 1.60 | NAG |
| EPBH250R152F | 1/3/2025 | EP250R152 | Echo | 250 | 0.096 | 2.67 | 5.61 | 2.10 | NAG |
| EPBH250R155F | 1/3/2025 | EP250R155 | Echo | 250 | 0.103 | 3.12 | 6.27 | 2.01 | NAG |
| EPBH250R169F | 1/3/2025 | EP250R169 | Echo | 250 | 0.117 | 3.42 | 7.43 | 2.17 | NAG |
| EPBH250R89F | 1/3/2025 | EP250R89 | Echo | 250 | 0.139 | 3.98 | 7.78 | 1.96 | NAG |
| EPBH250R93F | 1/3/2025 | EP250R93 | Echo | 250 | 0.179 | 5.57 | 6.27 | 1.12 | PAG |
| EPBH250R99F | 1/3/2025 | EP250R99 | Echo | 250 | 0.113 | 3.55 | 7.09 | 2.00 | NAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| EPBH25001P74F | 1/5/2025 | EP25001P74 | Echo | 250 | 0.387 | 11.92 | 6.72 | 0.56 | PAG |
| EPBH25001P99F | 1/5/2025 | EP25001P99 | Echo | 250 | 0.358 | 10.82 | 6.55 | 0.61 | PAG |
| EPBH25001P101F | 1/5/2025 | EP25001P101 | Echo | 250 | 0.291 | 9.10 | 6.51 | 0.72 | PAG |
| EPBH25001P147F | 1/6/2025 | EP25001P147 | Echo | 250 | 0.131 | 3.76 | 8.98 | 2.39 | NAG |
| EPBH25001P19F | 1/6/2025 | EP25001P19 | Echo | 250 | 0.104 | 2.80 | 7.10 | 2.54 | NAG |
| EPBH25001P25F | 1/6/2025 | EP25001P25 | Echo | 250 | 0.122 | 2.97 | 7.30 | 2.46 | NAG |
| EPBH25001P45F | 1/6/2025 | EP25001P45 | Echo | 250 | 0.202 | 6.30 | 7.00 | 1.11 | PAG |
| EPBH25001P51F | 1/6/2025 | EP25001P51 | Echo | 250 | 0.221 | 6.24 | 6.83 | 1.10 | PAG |
| EPBH25001P66F | 1/8/2025 | EP25001P66 | Echo | 250 | 0.249 | 7.77 | 7.75 | 1.00 | PAG |
| EPBH25001P40F | 1/8/2025 | EP25001P40 | Echo | 250 | 0.164 | 5.01 | 7.74 | 1.54 | PAG |
| EPBH25001P15F | 1/8/2025 | EP25001P15 | Echo | 250 | 0.152 | 4.63 | 7.75 | 1.68 | PAG |
| EPBH25001P111F | 1/8/2025 | EP25001P111 | Echo | 250 | 0.233 | 7.28 | 8.11 | 1.11 | PAG |
| EPBH25001P113F | 1/8/2025 | EP25001P113 | Echo | 250 | 0.253 | 7.37 | 7.86 | 1.07 | PAG |
| EPBH25001P93F | 1/8/2025 | EP25001P93 | Echo | 250 | 0.178 | 5.55 | 7.25 | 1.31 | PAG |
| EPBH25002P124 | 1/10/2025 | EP25002P124 | Echo | 250 | 0.033 | 1.02 | 6.00 | 5.87 | NAG |
| EPBH25002P158 | 1/10/2025 | EP25002P158 | Echo | 250 | - | - | 8.86 | - | NAG |
| EPBH25002P159 | 1/10/2025 | EP25002P159 | Echo | 250 | 0.304 | 9.50 | 6.50 | 0.68 | PAG |
| EPBH25002P161 | 1/10/2025 | EP25002P161 | Echo | 250 | 0.121 | 3.48 | 6.13 | 1.76 | NAG |
| EPBH25002P128 | 1/10/2025 | EP25002P128 | Echo | 250 | 0.087 | 2.60 | 6.24 | 2.41 | NAG |
| EPBH25001P118 | 1/10/2025 | EP25001P118 | Echo | 250 | 0.109 | 3.26 | 9.25 | 2.84 | NAG |
| EPBH25001P159 | 1/10/2025 | EP25001P159 | Echo | 250 | 0.116 | 3.63 | 7.73 | 2.13 | NAG |
| EPBH260-10P-11 | 1/12/2025 | EP26010P11 | Echo | 260 | 0.092 | 2.89 | 17.09 | 5.92 | NAG |
| EPBH260-10P-12 | 1/12/2025 | EP26010P12 | Echo | 260 | 0.081 | 2.53 | 6.63 | 2.62 | NAG |
| EPBH260-10P-31 | 1/12/2025 | EP26010P31 | Echo | 260 | 0.106 | 3.31 | 6.90 | 2.08 | NAG |
| EPBH260-10P-48 | 1/12/2025 | EP26010P48 | Echo | 260 | 0.137 | 4.08 | 6.64 | 1.63 | NAG |
| EPBH260-10P-79 | 1/12/2025 | EP26010P79 | Echo | 260 | 0.121 | 3.64 | 7.01 | 1.93 | NAG |
| EPBH260-10P-96 | 1/12/2025 | EP26010P96 | Echo | 260 | 0.136 | 4.25 | 6.96 | 1.64 | NAG |
| EPBH25002P129F | 1/14/2025 | EP25002P129 | Echo | 250 | 1.139 | 34.81 | 20.05 | 0.58 | PAG |
| EPBH25002P15F | 1/14/2025 | EP25002P15 | Echo | 250 | 0.930 | 29.06 | 36.56 | 1.26 | PAG |
| EPBH25002P127F | 1/14/2025 | EP25002P127 | Echo | 250 | 0.048 | 1.50 | 4.87 | 3.26 | NAG |
| EPBH25002P21F | 1/14/2025 | EP25002P21 | Echo | 250 | 0.331 | 10.35 | 13.32 | 1.29 | PAG |
| EPBH25002P39F | 1/14/2025 | EP25002P39 | Echo | 250 | 0.102 | 3.02 | 5.53 | 1.83 | NAG |
| EPBH25002P45F | 1/14/2025 | EP25002P45 | Echo | 250 | 1.617 | 47.84 | 19.65 | 0.41 | PAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| EPBH25002P70F | 1/14/2025 | EP25002P70 | Echo | 250 | 0.411 | 12.68 | 7.05 | 0.56 | PAG |
| EPBH25002P74F | 1/14/2025 | EP25002P74 | Echo | 250 | 0.189 | 5.90 | 8.98 | 1.52 | PAG |
| EPBH25002P77F | 1/14/2025 | EP25002P77 | Echo | 250 | 0.165 | 4.87 | 8.36 | 1.72 | PAG |
| EPBH25002P169F | 1/16/2025 | EP25002P169 | Echo | 250 | 0.219 | 6.22 | 7.37 | 1.19 | PAG |
| EPBH25003B03F | 1/17/2025 | EP25003B03 | Echo | 250 | 0.159 | 4.95 | 8.24 | 1.66 | PAG |
| EPBH25003B07F | 1/17/2025 | EP25003B07 | Echo | 250 | 0.182 | 5.05 | 6.49 | 1.29 | PAG |
| EPBH25003B10F | 1/17/2025 | EP25003B10 | Echo | 250 | 0.244 | 7.61 | 7.60 | 1.00 | PAG |
| EPBH25003P19F | 1/17/2025 | EP25003P19 | Echo | 250 | 0.158 | 4.93 | 8.96 | 1.82 | PAG |
| EPBH25003P22F | 1/17/2025 | EP25003P22 | Echo | 250 | 0.067 | 2.09 | 5.86 | 2.81 | NAG |
| EPBH25003P25F | 1/17/2025 | EP25003P25 | Echo | 250 | 0.104 | 3.12 | 7.58 | 2.43 | NAG |
| EPBH25003P71F | 1/17/2025 | EP25003P71 | Echo | 250 | 0.211 | 6.60 | 7.48 | 1.13 | PAG |
| EPBH25003P45F | 1/17/2025 | EP25003P45 | Echo | 250 | - | - | 7.47 | - | NAG |
| EPBH25003P51F | 1/18/2025 | EP25003P51 | Echo | 250 | 0.182 | 5.70 | 8.62 | 1.51 | PAG |
| EPBH25003P36F | 1/18/2025 | EP25003P36 | Echo | 250 | 0.292 | 9.11 | 10.04 | 1.10 | PAG |
| EPBH25003P122F | 1/18/2025 | EP25003P122 | Echo | 250 | 0.032 | 0.88 | 10.52 | 11.95 | NAG |
| EPBH25003P16F | 1/18/2025 | EP25003P16 | Echo | 250 | 0.147 | 4.01 | 11.23 | 2.80 | NAG |
| UPBH29702P73C | 1/18/2025 | UP29702P73 | Umwelt | 297 | 0.142 | 4.31 | 7.02 | 1.63 | NAG |
| UPBH29702P81C | 1/18/2025 | UP29702P81 | Umwelt | 297 | 0.038 | 1.20 | 7.72 | 6.43 | NAG |
| UPBH29702P130C | 1/19/2025 | UP29702P130 | Umwelt | 297 | 0.012 | 0.20 | 6.57 | 33.17 | NAG |
| UPBH29702P133C | 1/19/2025 | UP29702P133 | Umwelt | 297 | 0.266 | 7.03 | 5.85 | 0.83 | PAG |
| UPBH29702P136C | 1/19/2025 | UP29702P136 | Umwelt | 297 | 0.216 | 6.74 | 7.02 | 1.04 | PAG |
| EPBH25003P81F | 1/19/2025 | EP25003P81 | Echo | 250 | 0.143 | 3.90 | 9.52 | 2.44 | NAG |
| EPBH25003P84F | 1/19/2025 | EP25003P84 | Echo | 250 | 0.076 | 2.38 | 8.67 | 3.65 | NAG |
| EPBH25003P114F | 1/19/2025 | EP25003P114 | Echo | 250 | 0.273 | 8.52 | 9.67 | 1.14 | PAG |
| UPBH29702P153C | 1/20/2025 | UP29702P153 | Umwelt | 297 | 0.048 | 1.42 | 6.64 | 4.66 | NAG |
| UPBH29702P158C | 1/20/2025 | UP29702P158 | Umwelt | 297 | - | - | 3.88 | N/A | NAG |
| UPBH29702P188C | 1/20/2025 | UP29702P188 | Umwelt | 297 | 0.025 | 0.79 | 5.33 | 6.71 | NAG |
| UPBH29703P58C | 1/22/2025 | UP29703P58 | Umwelt | 297 | - | - | 7.13 | N/A | NAG |
| UPBH29703P63C | 1/22/2025 | UP29703P63 | Umwelt | 297 | 0.250 | 7.81 | 6.63 | 0.85 | PAG |
| UPBH29703P66C | 1/22/2025 | UP29703P66 | Umwelt | 297 | 0.050 | 1.56 | 7.84 | 5.02 | NAG |
| UPBH29703P70C | 1/22/2025 | UP29703P70 | Umwelt | 297 | 0.130 | 3.75 | 7.00 | 1.87 | NAG |
| UPBH29703P73C | 1/22/2025 | UP29703P73 | Umwelt | 297 | 0.110 | 3.13 | 6.13 | 1.96 | NAG |
| UPBH29703P117C | 1/23/2025 | UP29703P117 | Umwelt | 297 | 0.600 | 17.81 | 11.90 | 0.67 | PAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29703P122C | 1/23/2025 | UP29703P122 | Umwelt | 297 | 0.050 | 1.56 | 7.78 | 4.98 | NAG |
| UPBH29703P131C | 1/23/2025 | UP29703P131 | Umwelt | 297 | 2.310 | 70.00 | 15.38 | 0.22 | PAG |
| UPBH29703P140C | 1/23/2025 | UP29703P140 | Umwelt | 297 | 0.340 | 9.38 | 7.78 | 0.83 | PAG |
| EPBH25004P24F | 1/23/2025 | EP25004P24 | Echo | 250 | 0.010 | 0.31 | 6.87 | 21.98 | NAG |
| EPBH25004P26F | 1/23/2025 | EP25004P26 | Echo | 250 | 0.020 | 0.63 | 6.52 | 10.43 | NAG |
| EPBH25004P78F | 1/23/2025 | EP25004P78 | Echo | 250 | 0.090 | 2.81 | 7.75 | 2.75 | NAG |
| EPBH25004P55F | 1/26/2025 | EP25004P55 | Echo | 250 | 1.230 | 37.50 | 5.65 | 0.15 | PAG |
| EPBH25004P144F | 1/27/2025 | EP25004P144 | Echo | 250 | 0.120 | 2.81 | 15.64 | 5.56 | NAG |
| EPBH25004P149F | 1/27/2025 | EP25004P149 | Echo | 250 | 0.040 | 1.25 | 10.31 | 8.25 | NAG |
| EPBH25004P200F | 1/27/2025 | EP25004P200 | Echo | 250 | 0.180 | 5.63 | 12.75 | 2.27 | PAG |
| EPBH25004P219F | 1/28/2025 | EP25004P219 | Echo | 250 | 0.350 | 10.94 | 6.51 | 0.60 | PAG |
| EPBH25004P157F | 1/28/2025 | EP25004P157 | Echo | 250 | 0.250 | 7.81 | 12.06 | 1.54 | PAG |
| EPBH25004P10F | 1/28/2025 | EP25004P10 | Echo | 250 | - | - | 6.60 | N/A | NAG |
| EPBH25004P60F | 1/28/2025 | EP25004P60 | Echo | 250 | 0.610 | 18.44 | 6.99 | 0.38 | PAG |
| EPBH25005P102F | 1/31/2025 | EP25005P102 | Echo | 250 | 0.010 | - | 5.53 | N/A | NAG |
| EPBH25005P35F | 1/31/2025 | EP25005P35 | Echo | 250 | 0.080 | 2.50 | 9.13 | 3.65 | NAG |
| EPBH25005P40F | 1/31/2025 | EP25005P40 | Echo | 250 | 0.290 | 8.13 | 14.00 | 1.72 | PAG |
| EPBH25005P49F | 1/31/2025 | EP25005P49 | Echo | 250 | 0.140 | 3.44 | 10.79 | 3.14 | NAG |
| EPBH25005P71F | 1/31/2025 | EP25005P71 | Echo | 250 | 0.770 | 24.06 | 13.32 | 0.55 | PAG |
| EPBH25005P73F | 2/1/2025 | EP25005P73 | Echo | 250 | 0.290 | 8.44 | 7.67 | 0.91 | PAG |
| EPBH25005P53F | 2/1/2025 | EP25005P53 | Echo | 250 | 0.250 | 6.56 | 10.21 | 1.56 | PAG |
| EPBH25005P170F | 2/1/2025 | EP25005P170 | Echo | 250 | 0.130 | 4.06 | 7.66 | 1.88 | NAG |
| EPBH25005P172F | 2/1/2025 | EP25005P172 | Echo | 250 | 0.150 | 4.38 | 14.61 | 3.34 | NAG |
| EPBH25005P191F | 2/1/2025 | EP25005P191 | Echo | 250 | 0.310 | 9.69 | 4.43 | 0.46 | PAG |
| EPBH25005P203F | 2/1/2025 | EP25005P203 | Echo | 250 | 0.180 | 5.31 | 9.58 | 1.80 | PAG |
| EPBH25005P22F | 2/1/2025 | EP25005P22 | Echo | 250 | 0.200 | 5.94 | 10.26 | 1.73 | PAG |
| EPBH25005P31F | 2/1/2025 | EP25005P31 | Echo | 250 | 0.620 | 19.06 | 11.03 | 0.58 | PAG |
| EPBH25005P184F | 2/2/2025 | EP25005P184 | Echo | 250 | 0.170 | 5.00 | 11.86 | 2.37 | PAG |
| EPBH25005P188F | 2/2/2025 | EP25005P188 | Echo | 250 | 0.160 | 4.06 | 13.86 | 3.41 | NAG |
| EPBH25005P136F | 2/2/2025 | EP25005P136 | Echo | 250 | 0.170 | 4.38 | 13.75 | 3.14 | NAG |
| EPBH25005P139F | 2/2/2025 | EP25005P139 | Echo | 250 | 0.190 | 5.94 | 7.09 | 1.19 | PAG |
| EPBH25005P165F | 2/2/2025 | EP25005P165 | Echo | 250 | 0.120 | 3.44 | 9.22 | 2.68 | NAG |
| EPBH25005P56F | 2/2/2025 | EP25005P56 | Echo | 250 | 0.330 | 8.44 | 7.57 | 0.90 | PAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| EPBH25005P82F | 2/2/2025 | EP25005P82 | Echo | 250 | 0.520 | 15.00 | 20.57 | 1.37 | PAG |
| EPBH25005P91F | 2/2/2025 | EP25005P91 | Echo | 250 | 0.100 | 2.81 | 7.53 | 2.68 | NAG |
| EPBH25006P108F | 2/5/2025 | EP25006P108 | Echo | 250 | 0.140 | 4.38 | 8.67 | 1.98 | NAG |
| EPBH25006P11F | 2/5/2025 | EP25006P11 | Echo | 250 | 0.280 | 8.75 | 7.78 | 0.89 | PAG |
| EPBH25006P139F | 2/5/2025 | EP25006P139 | Echo | 250 | 0.100 | 3.13 | 8.12 | 2.60 | NAG |
| EPBH25006P45F | 2/5/2025 | EP25006P45 | Echo | 250 | 0.110 | 3.44 | 8.71 | 2.53 | NAG |
| EPBH25006P85F | 2/5/2025 | EP25006P85 | Echo | 250 | 0.120 | 3.75 | 9.13 | 2.43 | NAG |
| EPBH25006P93F | 2/8/2025 | EP25006P93 | Echo | 250 | 0.140 | 4.06 | 6.13 | 1.51 | NAG |
| EPBH25006P95F | 2/8/2025 | EP25006P95 | Echo | 250 | 0.150 | 4.38 | 7.06 | 1.61 | NAG |
| EPBH25006P50F | 2/8/2025 | EP25006P50 | Echo | 250 | 0.250 | 7.81 | 5.66 | 0.72 | PAG |
| EPBH25006P54F | 2/8/2025 | EP25006P54 | Echo | 250 | 0.140 | 4.38 | 5.87 | 1.34 | NAG |
| EPBH25006P61F | 2/8/2025 | EP25006P61 | Echo | 250 | 0.130 | 3.75 | 7.28 | 1.94 | NAG |
| EPBH25006P75F | 2/8/2025 | EP25006P75 | Echo | 250 | 0.120 | 3.13 | 7.70 | 2.46 | NAG |
| EPBH25006P144F | 2/8/2025 | EP25006P144 | Echo | 250 | 0.110 | 3.13 | 15.38 | 4.92 | NAG |
| EPBH25006P31F | 2/8/2025 | EP25006P31 | Echo | 250 | 0.270 | 7.81 | 5.29 | 0.68 | PAG |
| EPBH25006P33F | 2/8/2025 | EP25006P33 | Echo | 250 | 0.110 | 3.44 | 6.93 | 2.02 | NAG |
| EPBH25006P135F | 2/8/2025 | EP25006P135 | Echo | 250 | 0.100 | 3.13 | 14.16 | 4.53 | NAG |
| EPBH25007B12F | 2/11/2025 | EP25007B12 | Echo | 250 | 0.120 | 3.75 | 9.85 | 2.63 | NAG |
| EPBH25007P12F | 2/11/2025 | EP25007P12 | Echo | 250 | 0.220 | 6.25 | 4.73 | 0.76 | PAG |
| EPBH25007B14F | 2/11/2025 | EP25007B14 | Echo | 250 | 0.100 | 3.13 | 8.71 | 2.79 | NAG |
| EPBH25007P14F | 2/11/2025 | EP25007P14 | Echo | 250 | 0.140 | 4.38 | 8.98 | 2.05 | NAG |
| EPBH25007P16F | 2/11/2025 | EP25007P16 | Echo | 250 | 0.080 | 2.19 | 9.36 | 4.28 | NAG |
| EPBH25007P32F | 2/11/2025 | EP25007P32 | Echo | 250 | 0.430 | 13.44 | 7.31 | 0.54 | PAG |
| EPBH25007P34F | 2/11/2025 | EP25007P34 | Echo | 250 | 0.100 | 3.13 | 6.72 | 2.15 | NAG |
| EPBH25007P52F | 2/11/2025 | EP25007P52 | Echo | 250 | 0.120 | 3.44 | 6.70 | 1.95 | NAG |
| EPBH25007P56F | 2/11/2025 | EP25007P56 | Echo | 250 | 0.140 | 4.06 | 6.86 | 1.69 | NAG |
| EPBH25007P63F | 2/12/2025 | EP25007P63 | Echo | 250 | 0.087 | 2.54 | 7.53 | 2.97 | NAG |
| EPBH25007P76F | 2/12/2025 | EP25007P76 | Echo | 250 | 0.392 | 10.70 | 8.61 | 0.80 | PAG |
| EPBH25007P88F | 2/12/2025 | EP25007P88 | Echo | 250 | 0.298 | 9.15 | 5.98 | 0.65 | PAG |
| EPBH25007P94F | 2/12/2025 | EP25007P94 | Echo | 250 | 0.209 | 6.53 | 6.51 | 1.00 | PAG |
| EPBH25007P96F | 2/12/2025 | EP25007P96 | Echo | 250 | 0.243 | 6.81 | 6.98 | 1.03 | PAG |
| EPBH25007P42F | 2/12/2025 | EP25007P42 | Echo | 250 | 0.093 | 2.87 | 7.79 | 2.71 | NAG |
| EPBH25007P124F | 2/12/2025 | EP25007P124 | Echo | 250 | 0.222 | 6.95 | 5.51 | 0.79 | PAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| EPBH25007P107F | 2/12/2025 | EP25007P107 | Echo | 250 | 0.167 | 5.23 | 5.78 | 1.10 | PAG |
| EPBH25007P111F | 2/12/2025 | EP25007P111 | Echo | 250 | 0.240 | 7.45 | 7.31 | 0.98 | PAG |
| EPBH25007P114F | 2/12/2025 | EP25007P114 | Echo | 250 | 0.164 | 5.13 | 6.94 | 1.35 | PAG |
| UPBH29703P160C | 2/13/2025 | UP29703P160 | Umwelt | 297 | 0.445 | 13.07 | 3.39 | 0.26 | PAG |
| UPBH29703P176C | 2/13/2025 | UP29703P176 | Umwelt | 297 | 0.573 | 16.55 | 5.58 | 0.34 | PAG |
| UPBH29703P182C | 2/13/2025 | UP29703P182 | Umwelt | 297 | 4.042 | 126.31 | 5.61 | 0.04 | PAG |
| UPBH29703P197C | 2/13/2025 | UP29703P197 | Umwelt | 297 | 0.151 | 4.31 | 5.12 | 1.19 | PAG |
| EPBH240R62F | 2/18/2025 | EP240R62 | Echo | 240 | 0.362 | 10.09 | 8.85 | 0.88 | PAG |
| EPBH240R8F | 2/18/2025 | EP240R8 | Echo | 240 | 0.143 | 4.47 | 5.11 | 1.14 | NAG |
| EPBH240R82F | 2/18/2025 | EP240R82 | Echo | 240 | 0.333 | 10.40 | 8.22 | 0.79 | PAG |
| EPBH240R84F | 2/18/2025 | EP240R84 | Echo | 240 | 0.150 | 4.70 | 7.81 | 1.66 | PAG |
| EPBH240R87F | 2/18/2025 | EP240R87 | Echo | 240 | 0.089 | 2.78 | 5.74 | 2.07 | NAG |
| EPBH240R90F | 2/18/2025 | EP240R90 | Echo | 240 | 0.092 | 2.87 | 7.48 | 2.61 | NAG |
| EPBH240R10F | 2/18/2025 | EP240R10 | Echo | 240 | 0.272 | 7.79 | 8.87 | 1.14 | PAG |
| EPBH240R12F | 2/18/2025 | EP240R12 | Echo | 240 | 0.299 | 9.06 | 8.47 | 0.93 | PAG |
| EPBH240R14F | 2/18/2025 | EP240R14 | Echo | 240 | 1.068 | 33.36 | 20.17 | 0.60 | PAG |
| EPBH240P17F | 2/19/2025 | EP240P17 | Echo | 240 | 0.208 | 6.17 | 7.36 | 1.19 | PAG |
| EPBH240B29F | 2/19/2025 | EP240B29 | Echo | 240 | 0.016 | 0.41 | 8.10 | 19.90 | NAG |
| EPBH240P35F | 2/19/2025 | EP240P35 | Echo | 240 | 0.224 | 6.22 | 7.75 | 1.25 | PAG |
| EPBH240R5F | 2/19/2025 | EP240R5 | Echo | 240 | 0.152 | 4.54 | 8.19 | 1.81 | PAG |
| EPBH240P51 | 2/21/2025 | EP240P51 | Echo | 240 | 0.664 | 20.07 | 14.54 | 0.72 | PAG |
| EPBH240P10 | 2/21/2025 | EP240P10 | Echo | 240 | 0.168 | 5.25 | 9.22 | 1.76 | PAG |
| EPBH240P40 | 2/21/2025 | EP240P40 | Echo | 240 | 0.361 | 11.29 | 9.09 | 0.81 | PAG |
| EPBH240P46 | 2/21/2025 | EP240P46 | Echo | 240 | 0.190 | 5.33 | 9.24 | 1.73 | PAG |
| EPBH240P23 | 2/21/2025 | EP240P23 | Echo | 240 | 0.155 | 4.31 | 9.47 | 2.20 | PAG |
| EPBH240P67 | 2/21/2025 | EP240P67 | Echo | 240 | 0.300 | 9.29 | 9.36 | 1.01 | PAG |
| EPBH24001P06F | 2/25/2025 | EP24001P06 | Echo | 240 | 0.165 | 5.08 | 9.12 | 1.80 | PAG |
| EPBH24001P33F | 2/25/2025 | EP24001P33 | Echo | 240 | 0.348 | 10.86 | 8.10 | 0.75 | PAG |
| EPBH24001P42F | 2/25/2025 | EP24001P42 | Echo | 240 | 0.124 | 3.81 | 10.00 | 2.63 | NAG |
| EPBH24001P56F | 2/25/2025 | EP24001P56 | Echo | 240 | 0.312 | 8.66 | 9.62 | 1.11 | PAG |
| EPBH24001P67F | 2/25/2025 | EP24001P67 | Echo | 240 | 4.708 | 147.13 | 46.52 | 0.32 | PAG |
| EPBH24001P97F | 2/25/2025 | EP24001P97 | Echo | 240 | - | - | 5.36 | - | NAG |
| UPBH29704P101 | 2/27/2025 | UP29704P101 | Umwelt | 297 | 0.192 | 5.34 | 9.45 | 1.77 | PAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29704P108 | 2/27/2025 | UP29704P108 | Umwelt | 297 | 0.104 | 2.51 | 13.16 | 5.23 | NAG |
| UPBH29704P41 | 2/27/2025 | UP29704P41 | Umwelt | 297 | 0.224 | 6.15 | 7.98 | 1.30 | PAG |
| EPBH24003A05 | 3/3/2025 | EP24003A05 | Echo | 240 | 0.447 | 13.60 | 8.72 | 0.64 | PAG |
| EPBH24003P127F | 3/3/2025 | EP24003P127 | Echo | 240 | 0.128 | 4.01 | 8.86 | 2.21 | NAG |
| EPBH24003P162F | 3/3/2025 | EP24003P162 | Echo | 240 | 0.340 | 10.25 | 9.11 | 0.89 | PAG |
| EPBH24003P164F | 3/3/2025 | EP24003P164 | Echo | 240 | 0.046 | 1.45 | 11.00 | 7.59 | NAG |
| EPBH24003P55F | 3/5/2025 | EP24003P55 | Echo | 240 | 0.240 | 7.50 | 10.24 | 1.37 | PAG |
| EPBH24003P73F | 3/5/2025 | EP24003P73 | Echo | 240 | 0.230 | 6.88 | 9.48 | 1.38 | PAG |
| EPBH24003P87F | 3/5/2025 | EP24003P87 | Echo | 240 | 0.150 | 4.69 | 9.49 | 2.02 | NAG |
| EPBH24003P93F | 3/5/2025 | EP24003P93 | Echo | 240 | 1.200 | 36.56 | 5.38 | 0.15 | PAG |
| EPBH24003P152F | 3/5/2025 | EP24003P152 | Echo | 240 | 0.350 | 10.94 | 20.99 | 1.92 | PAG |
| EPBH24003P154F | 3/5/2025 | EP24003P154 | Echo | 240 | 0.350 | 10.94 | 15.34 | 1.40 | PAG |
| EPBH24003P119F | 3/5/2025 | EP24003P119 | Echo | 240 | 0.200 | 5.63 | 12.59 | 2.24 | PAG |
| EPBH24003B08F | 3/5/2025 | EP24003B08 | Echo | 240 | 0.200 | 5.63 | 8.37 | 1.49 | PAG |
| UPBH29705P108C | 3/6/2025 | UP29705P108 | Umwelt | 297 | - | - | 5.06 | N/A | NAG |
| UPBH29705P25C | 3/6/2025 | UP29705P25 | Umwelt | 297 | - | - | 5.48 | N/A | NAG |
| UPBH29705P28C | 3/6/2025 | UP29705P28 | Umwelt | 297 | - | - | 5.08 | N/A | NAG |
| UPBH29705P31C | 3/6/2025 | UP29705P31 | Umwelt | 297 | 0.030 | 0.63 | 5.28 | 8.44 | NAG |
| UPBH29705P138C | 3/6/2025 | UP29705P138 | Umwelt | 297 | 0.020 | 0.31 | 3.96 | 12.68 | NAG |
| UPBH29705P154C | 3/6/2025 | UP29705P154 | Umwelt | 297 | - | - | 3.90 | N/A | NAG |
| UPBH29705P160C | 3/6/2025 | UP29705P160 | Umwelt | 297 | - | - | 4.83 | N/A | NAG |
| UPBH29705P164C | 3/6/2025 | UP29705P164 | Umwelt | 297 | 0.110 | 2.81 | 6.19 | 2.20 | NAG |
| UPBH29705P21C | 3/9/2025 | UP29705P21 | Umwelt | 297 | - | - | 5.35 | N/A | NAG |
| UPBH29705P59C | 3/9/2025 | UP29705P59 | Umwelt | 297 | 0.150 | 4.69 | 6.10 | 1.30 | NAG |
| UPBH29705P80C | 3/9/2025 | UP29705P80 | Umwelt | 297 | 0.190 | 5.94 | 8.34 | 1.40 | PAG |
| UPBH29705P86C | 3/9/2025 | UP29705P86 | Umwelt | 297 | 0.100 | 3.13 | 8.04 | 2.57 | NAG |
| UPBH29705P11C | 3/9/2025 | UP29705P11 | Umwelt | 297 | 1.450 | 43.13 | 6.27 | 0.15 | PAG |
| UPBH29705P02C | 3/9/2025 | UP29705P02 | Umwelt | 297 | 0.190 | 5.31 | 6.48 | 1.22 | PAG |
| UPBH29705P07C | 3/9/2025 | UP29705P07 | Umwelt | 297 | - | - | 6.77 | N/A | NAG |
| EPBH24003P04 | 3/9/2025 | EP24003P04 | Echo | 240 | 0.180 | 5.63 | 9.49 | 1.69 | PAG |
| EPBH24004P49 | 3/9/2025 | EP24004P49 | Echo | 240 | 0.210 | 5.94 | 7.45 | 1.26 | PAG |
| EPBH24003B27 | 3/9/2025 | EP24003B27 | Echo | 240 | 0.150 | 4.06 | 8.98 | 2.21 | NAG |
| EPBH24003B34 | 3/9/2025 | EP24003B34 | Echo | 240 | 0.140 | 3.75 | 8.42 | 2.25 | NAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| EPBH24003B37 | 3/9/2025 | EP24003B37 | Echo | 240 | 0.200 | 6.25 | 9.09 | 1.46 | PAG |
| EPBH24004P67 | 3/9/2025 | EP24004P67 | Echo | 240 | 0.420 | 13.13 | 9.62 | 0.73 | PAG |
| EPBH24004P78 | 3/9/2025 | EP24004P78 | Echo | 240 | 0.200 | 5.31 | 12.31 | 2.32 | PAG |
| EPBH24004P97 | 3/9/2025 | EP24004P97 | Echo | 240 | 0.100 | 3.13 | 12.94 | 4.14 | NAG |
| EPBH24004P81F | 3/13/2025 | EP24004P81 | Echo | 240 | 0.078 | 2.32 | 10.15 | 4.39 | NAG |
| EPBH24003P50F | 3/13/2025 | EH24003P50 | Echo | 240 | 0.122 | 3.44 | 9.09 | 2.64 | NAG |
| EPBH24004P64F | 3/13/2025 | EP24004P64 | Echo | 240 | 0.180 | 5.63 | 8.34 | 1.48 | PAG |
| EPBH24004P26F | 3/13/2025 | EP24004P26 | Echo | 240 | 0.323 | 10.11 | 9.19 | 0.91 | PAG |
| EPBH24004P32F | 3/13/2025 | EP24004P32 | Echo | 240 | 0.196 | 5.94 | 9.44 | 1.59 | PAG |
| EPBH24004P47F | 3/13/2025 | EP24004P47 | Echo | 240 | 0.323 | 10.08 | 8.91 | 0.88 | PAG |
| EPBH24004P17F | 3/13/2025 | EP24004P17 | Echo | 240 | 0.281 | 8.71 | 10.18 | 1.17 | PAG |
| EPBH24003P110F | 3/13/2025 | EP24003P110 | Echo | 240 | 0.149 | 4.08 | 10.31 | 2.53 | NAG |
| EPBH24003P149F | 3/13/2025 | EP24003P149 | Echo | 240 | 0.233 | 7.14 | 10.05 | 1.41 | PAG |
| EPBH24004A25F | 3/14/2025 | EP24004A25 | Echo | 240 | 0.230 | 5.94 | 9.35 | 1.57 | PAG |
| EPBH24004P104F | 3/14/2025 | EP24004P104 | Echo | 240 | - | - | 7.49 | N/A | NAG |
| EPBH24004P91F | 3/14/2025 | EP24004P91 | Echo | 240 | 0.120 | 3.75 | 6.09 | 1.62 | NAG |
| EPBH24004P106F | 3/14/2025 | EP24004P106 | Echo | 250 | 0.070 | 2.19 | 12.37 | 5.66 | NAG |
| UPBH29707P183C | 3/15/2025 | UP29707P183 | Umwelt | 297 | 0.020 | 0.31 | 3.72 | 11.91 | NAG |
| UPBH29707P227C | 3/15/2025 | UP29707P227 | Umwelt | 297 | 0.480 | 14.38 | 7.80 | 0.54 | PAG |
| UPBH29707P229C | 3/15/2025 | UP29707P229 | Umwelt | 297 | 0.400 | 11.25 | 6.56 | 0.58 | PAG |
| UPBH29707P132C | 3/16/2025 | UP29707P132 | Umwelt | 297 | 0.135 | 3.80 | 5.21 | 1.37 | NAG |
| UPBH29707P134C | 3/16/2025 | UP29707P134 | Umwelt | 297 | 0.605 | 18.32 | 5.24 | 0.29 | PAG |
| UPBH29707P27C | 3/16/2025 | UP29707P27 | Umwelt | 297 | - | - | 6.03 | N/A | NAG |
| UPBH29707P30C | 3/16/2025 | UP29707P30 | Umwelt | 297 | - | - | 8.89 | N/A | NAG |
| UPBH29707P33C | 3/16/2025 | UP29707P33 | Umwelt | 297 | 0.060 | 1.75 | 8.21 | 4.68 | NAG |
| UPBH29707P36C | 3/16/2025 | UP29707P36 | Umwelt | 297 | - | - | 6.79 | N/A | NAG |
| UPBH29707P39C | 3/16/2025 | UP29707P39 | Umwelt | 297 | - | - | 3.23 | N/A | NAG |
| UPBH29707P42C | 3/16/2025 | UP29707P42 | Umwelt | 297 | 0.933 | 29.17 | 7.00 | 0.24 | PAG |
| UPBH29707P86C | 3/16/2025 | UP29707P86 | Umwelt | 297 | - | - | 3.54 | N/A | NAG |
| UPBH29707P88C | 3/16/2025 | UP29707P88 | Umwelt | 297 | 0.169 | 5.19 | 16.29 | 3.14 | NAG |
| UPBH29707P181C | 3/16/2025 | UP29707P181 | Umwelt | 297 | 0.290 | 8.75 | 3.95 | 0.45 | PAG |
| UPBH29707P79C | 3/17/2025 | UP29707P79 | Umwelt | 297 | 0.024 | 0.74 | 4.32 | 5.84 | NAG |
| UPBH29707P82C | 3/17/2025 | UP29707P82 | Umwelt | 297 | 0.467 | 14.13 | 5.39 | 0.38 | PAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29707P173C | 3/17/2025 | UP29707P173 | Umwelt | 297 | 0.150 | 4.39 | 4.13 | 0.94 | NAG |
| UPBH29707P175C | 3/17/2025 | UP29707P175 | Umwelt | 297 | 0.031 | 0.84 | 5.10 | 6.05 | NAG |
| UPBH29707P217C | 3/17/2025 | UP29707P217 | Umwelt | 297 | 0.146 | 4.36 | 6.19 | 1.42 | NAG |
| UPBH29707P219C | 3/17/2025 | UP29707P219 | Umwelt | 297 | 0.348 | 10.71 | 5.81 | 0.54 | PAG |
| UPBH29707P221C | 3/17/2025 | UP29707P221 | Umwelt | 297 | 0.304 | 8.75 | 5.77 | 0.66 | PAG |
| UPBH29707P125C | 3/17/2025 | UP29707P125 | Umwelt | 297 | - | - | 5.94 | N/A | NAG |
| UPBH29707P128C | 3/17/2025 | UP29707P128 | Umwelt | 297 | 0.350 | 9.92 | 5.11 | 0.52 | PAG |
| EPBH230R69F | 3/17/2025 | EP230R69 | Echo | 230 | 0.162 | 4.78 | 8.02 | 1.68 | PAG |
| EPBH230R71F | 3/17/2025 | EP230R71 | Echo | 230 | - | - | 4.88 | N/A | NAG |
| EPBH230R21F | 3/17/2025 | EP230R21 | Echo | 230 | 0.064 | 1.81 | 6.26 | 3.45 | NAG |
| EPBH230R24F | 3/17/2025 | EP230R24 | Echo | 230 | 0.001 | 0.03 | 6.64 | 236.02 | NAG |
| EPBH230R27F | 3/17/2025 | EP230R27 | Echo | 230 | 0.085 | 2.51 | 5.36 | 2.14 | NAG |
| EPBH230R29F | 3/17/2025 | EP230R29 | Echo | 230 | 0.292 | 8.91 | 5.65 | 0.63 | PAG |
| EPBH230R65F | 3/18/2025 | EP230R65 | Echo | 230 | 0.205 | 6.23 | 19.57 | 3.14 | NAG |
| EPBH230P11F | 3/18/2025 | EP230P11 | Echo | 230 | 0.347 | 10.83 | 9.91 | 0.91 | PAG |
| UPBH29707P73C | 3/18/2025 | UP29707P73 | Umwelt | 297 | 0.652 | 19.89 | 2.73 | 0.14 | PAG |
| UPBH29707P242C | 3/19/2025 | UP29707P242 | Umwelt | 297 | 0.740 | 21.88 | 5.62 | 0.26 | PAG |
| UPBH29707P245C | 3/19/2025 | UP29707P245 | Umwelt | 297 | - | - | 6.79 | N/A | NAG |
| EPBH230R12F | 3/19/2025 | EP230R12 | Echo | 230 | 0.040 | 1.25 | 8.55 | 6.84 | NAG |
| EPBH230R16F | 3/19/2025 | EP230R16 | Echo | 230 | - | - | 25.75 | N/A | NAG |
| EPBH230P2F | 3/19/2025 | EP230P2 | Echo | 230 | 0.050 | 1.25 | 7.28 | 5.82 | NAG |
| EPBH230R10F | 3/19/2025 | EP230R10 | Echo | 230 | 0.430 | 12.81 | 7.41 | 0.58 | PAG |
| EPBH230R8F | 3/19/2025 | EP230R8 | Echo | 230 | 0.240 | 7.50 | 6.03 | 0.80 | PAG |
| EPBH230R42F | 3/19/2025 | EP230R42 | Echo | 230 | 0.180 | 5.46 | 12.38 | 2.27 | PAG |
| EPBH230R45F | 3/19/2025 | EP230R45 | Echo | 230 | - | - | 7.79 | N/A | NAG |
| UPBH29708P110C | 3/20/2025 | UP29708P110 | Umwelt | 297 | - | - | 5.81 | N/A | NAG |
| UPBH29708P125C | 3/20/2025 | UP29708P125 | Umwelt | 297 | 0.480 | 12.81 | 9.70 | 0.76 | PAG |
| UPBH29708P141C | 3/20/2025 | UP29708P141 | Umwelt | 297 | 0.190 | 5.00 | 8.17 | 1.63 | PAG |
| UPBH29708P150C | 3/20/2025 | UP29708P150 | Umwelt | 297 | 0.260 | 7.50 | 15.36 | 2.05 | PAG |
| UPBH29708P152C | 3/20/2025 | UP29708P152 | Umwelt | 297 | 0.080 | 2.19 | 7.79 | 3.56 | NAG |
| UPBH29708P75C | 3/20/2025 | UP29708P75 | Umwelt | 297 | 0.030 | 0.63 | 7.60 | 12.16 | NAG |
| UPBH29708P98C | 3/20/2025 | UP29708P98 | Umwelt | 297 | 0.110 | 2.19 | 6.44 | 2.95 | NAG |
| UPBH29708P92C | 3/21/2025 | UP29708P92 | Umwelt | 297 | 0.130 | 3.13 | 8.09 | 2.59 | NAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29708P65C | 3/21/2025 | UP29708P65 | Umwelt | 297 | - | - | 6.93 | N/A | NAG |
| UPBH29708P176C | 3/21/2025 | UP29708P176 | Umwelt | 297 | - | - | 6.89 | N/A | NAG |
| UPBH29708P179C | 3/21/2025 | UP29708P179 | Umwelt | 297 | 0.180 | 4.69 | 5.21 | 1.11 | PAG |
| UPBH29708P182C | 3/21/2025 | UP29708P182 | Umwelt | 297 | 0.430 | 12.19 | 6.10 | 0.50 | PAG |
| UPBH29708P41C | 3/21/2025 | UP29708P41 | Umwelt | 297 | 0.210 | 5.63 | 8.21 | 1.46 | PAG |
| UPBH29708P154C | 3/21/2025 | UP29708P154 | Umwelt | 297 | - | - | 5.81 | N/A | NAG |
| UPBH29708P17C | 3/21/2025 | UP29708P17 | Umwelt | 297 | 0.080 | 1.56 | 7.58 | 4.85 | NAG |
| UPBH29708P170C | 3/21/2025 | UP29708P170 | Umwelt | 297 | 0.070 | 1.25 | 8.87 | 7.10 | NAG |
| UPBH29708P142C | 3/21/2025 | UP29708P142 | Umwelt | 297 | - | - | 7.08 | N/A | NAG |
| UPBH29708P133C | 3/21/2025 | UP29708P133 | Umwelt | 297 | 0.040 | 0.63 | 8.47 | 13.55 | NAG |
| UPBH29708P108C | 3/21/2025 | UP29708P108 | Umwelt | 297 | - | - | 5.39 | N/A | NAG |
| UPBH29708P173C | 3/22/2025 | UP29708P173 | Umwelt | 297 | - | - | 9.85 | N/A | NAG |
| UPBH29708P55C | 3/22/2025 | UP29708P55 | Umwelt | 297 | 0.560 | 16.88 | 9.86 | 0.58 | PAG |
| UPBH29708P70C | 3/22/2025 | UP29708P70 | Umwelt | 297 | 0.060 | 1.88 | 11.10 | 5.92 | NAG |
| UPBH29708P72C | 3/22/2025 | UP29708P72 | Umwelt | 297 | 0.070 | 1.88 | 11.04 | 5.89 | NAG |
| EPBH22501P93F | 3/23/2025 | EP22501P93 | Echo | 225 | 0.710 | 22.19 | 9.87 | 0.44 | PAG |
| EPBH22501P98F | 3/23/2025 | EP22501P98 | Echo | 225 | 0.220 | 6.56 | 9.61 | 1.46 | PAG |
| EPBH22501P38F | 3/23/2025 | EP22501P38 | Echo | 225 | 0.210 | 6.56 | 8.17 | 1.24 | PAG |
| EPBH22501P45F | 3/23/2025 | EP22501P45 | Echo | 225 | 0.140 | 4.38 | 5.93 | 1.36 | NAG |
| EPBH22501P10F | 3/24/2025 | EP22501P10 | Echo | 225 | 0.180 | 5.63 | 8.47 | 1.50 | PAG |
| EPBH22501P73F | 3/25/2025 | EP22501P73 | Echo | 225 | 0.180 | 5.63 | 8.55 | 1.52 | PAG |
| EPBH22501P89F | 3/25/2025 | EP22501P89 | Echo | 225 | 0.120 | 3.44 | 13.54 | 3.94 | NAG |
| EPBH22501P59F | 3/25/2025 | EP22501P59 | Echo | 225 | 0.170 | 5.31 | 8.72 | 1.64 | PAG |
| EPBH22501P61F | 3/25/2025 | EP22501P61 | Echo | 225 | 0.170 | 5.00 | 8.05 | 1.61 | PAG |
| EPBH22501P18F | 3/25/2025 | EP22501P18 | Echo | 225 | 0.270 | 7.81 | 9.19 | 1.18 | PAG |
| EPBH22501P22F | 3/25/2025 | EP22501P22 | Echo | 225 | 0.160 | 5.00 | 8.05 | 1.61 | PAG |
| EPBH22501P27F | 3/25/2025 | EP22501P27 | Echo | 225 | 0.130 | 4.06 | 8.50 | 2.09 | NAG |
| EPBH22501P35F | 3/25/2025 | EP22501P35 | Echo | 225 | 0.140 | 4.38 | 11.35 | 2.59 | NAG |
| EPBH22501P135F | 3/25/2025 | EP22501P135 | Echo | 225 | 0.080 | 2.50 | 7.01 | 2.80 | NAG |
| EPBH22501P15F | 3/25/2025 | EP22501P15 | Echo | 225 | 0.210 | 5.94 | 10.82 | 1.82 | PAG |
| EPBH22501P155F | 3/25/2025 | EP22501P155 | Echo | 225 | 0.190 | 5.31 | 10.10 | 1.90 | PAG |
| EPBH22501P157F | 3/25/2025 | EP22501P157 | Echo | 225 | - | - | 7.11 | N/A | NAG |
| EPBH22501P168F | 3/26/2025 | EP22501P168 | Echo | 225 | 0.203 | 5.73 | 7.90 | 1.38 | PAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| EPBH22501P71F | 3/26/2025 | EP22501P71 | Echo | 225 | 0.145 | 4.21 | 13.70 | 3.25 | NAG |
| EPBH22501P120F | 3/26/2025 | EP22501P120 | Echo | 225 | 0.644 | 19.69 | 12.04 | 0.61 | PAG |
| EPBH22501P122F | 3/26/2025 | EP22501P122 | Echo | 225 | 0.245 | 7.56 | 17.09 | 2.26 | PAG |
| EPBH22502P4F | 3/30/2025 | EP22502P4 | Echo | 225 | 0.240 | 7.46 | 7.63 | 1.02 | PAG |
| EPBH22502P6F | 3/30/2025 | EP22502P6 | Echo | 225 | 0.254 | 7.76 | 8.86 | 1.14 | PAG |
| EPBH22502P8F | 3/30/2025 | EP22502P8 | Echo | 225 | 0.472 | 14.38 | 6.99 | 0.49 | PAG |
| EPBH22502P10F | 3/30/2025 | EP22502P10 | Echo | 225 | 0.414 | 12.85 | 5.62 | 0.44 | PAG |
| EPBH22502P13F | 3/30/2025 | EP22502P13 | Echo | 225 | 0.518 | 16.20 | 5.63 | 0.35 | PAG |
| EPBH22502P20F | 3/30/2025 | EP22502P20 | Echo | 225 | 0.388 | 12.14 | 5.98 | 0.49 | PAG |
| EPBH22502P42F | 3/30/2025 | EP22502P42 | Echo | 225 | 0.173 | 4.92 | 6.49 | 1.32 | PAG |
| EPBH22502P45F | 3/30/2025 | EP22502P45 | Echo | 225 | 0.354 | 11.06 | 5.99 | 0.54 | PAG |
| EPBH22502P47F | 3/30/2025 | EP22502P47 | Echo | 225 | 0.522 | 15.81 | 9.47 | 0.60 | PAG |
| EPBH22502P49F | 3/30/2025 | EP22502P49 | Echo | 225 | 0.306 | 9.09 | 6.37 | 0.70 | PAG |
| EPBH22502P54F | 3/30/2025 | EP22502P54 | Echo | 225 | 0.288 | 8.99 | 7.00 | 0.78 | PAG |
| EPBH22502P58F | 3/30/2025 | EP22502P58 | Echo | 225 | 0.312 | 9.76 | 5.38 | 0.55 | PAG |
| EPBH22502P79F | 3/30/2025 | EP22502P79 | Echo | 225 | 0.257 | 8.02 | 10.61 | 1.32 | PAG |
| EPBH22502P89F | 3/30/2025 | EP22502P89 | Echo | 225 | 0.255 | 7.51 | 9.98 | 1.33 | PAG |
| EPBH22502P91F | 3/30/2025 | EP22502P91 | Echo | 225 | 0.156 | 4.55 | 5.75 | 1.26 | PAG |
| EPBH22502P97F | 3/30/2025 | EP22502P97 | Echo | 225 | 0.151 | 4.71 | 5.49 | 1.17 | PAG |
| EPBH22502P1F | 3/31/2025 | EP22502P1 | Echo | 225 | 0.272 | 8.50 | 7.75 | 0.91 | PAG |
| EPBH22502P100F | 3/31/2025 | EP22502P100 | Echo | 225 | 0.268 | 7.82 | 15.70 | 2.01 | PAG |
| EPBH22503V2P34F | 4/5/2025 | EP22503V2P34 | Echo | 225 | 0.260 | 7.50 | 8.75 | 1.17 | PAG |
| EPBH22503V2P73F | 4/5/2025 | EP22503V2P73 | Echo | 225 | 0.400 | 12.38 | 8.24 | 0.67 | PAG |
| EPBH22503V2P89F | 4/6/2025 | EP22503V2P89 | Echo | 225 | 0.330 | 9.39 | 11.98 | 1.28 | PAG |
| EPBH22503V2P142F | 4/6/2025 | EP22503V2P142 | Echo | 225 | 0.280 | 8.62 | 10.11 | 1.17 | PAG |
| UPBH29710P34C | 4/6/2025 | UP29710P34 | Umwelt | 297 | 0.970 | 29.68 | 22.80 | 0.77 | PAG |
| UPBH29710P37C | 4/6/2025 | UP29710P37 | Umwelt | 297 | 5.200 | 159.13 | 7.50 | 0.05 | PAG |
| UPBH29710P40C | 4/6/2025 | UP29710P40 | Umwelt | 297 | 0.380 | 11.80 | 7.74 | 0.66 | PAG |
| UPBH29710P43C | 4/6/2025 | UP29710P43 | Umwelt | 297 | 0.440 | 13.31 | 3.67 | 0.28 | PAG |
| UPBH29711P78C | 4/7/2025 | UP29711P78 | Umwelt | 297 | - | - | 5.88 | - | NAG |
| UPBH29711P82C | 4/7/2025 | UP29711P82 | Umwelt | 297 | - | - | 5.98 | - | NAG |
| UPBH29711P119C | 4/7/2025 | UP29711P119 | Umwelt | 297 | 0.090 | 2.75 | 5.38 | 1.95 | NAG |
| UPBH29711P148C | 4/7/2025 | UP29711P148 | Umwelt | 297 | 0.270 | 7.83 | 7.38 | 0.94 | PAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29711P37C | 4/7/2025 | UP29711P37 | Umwelt | 297 | - | - | 5.75 | - | NAG |
| UPBH29710P118C | 4/8/2025 | UP29710P118 | Umwelt | 297 | 0.930 | 28.27 | 5.51 | 0.19 | PAG |
| UPBH29710P124C | 4/8/2025 | UP29710P124 | Umwelt | 297 | 0.030 | 0.82 | 6.98 | 8.49 | NAG |
| UPBH29710P135C | 4/8/2025 | UP29710P135 | Umwelt | 297 | 0.950 | 27.71 | 5.00 | 0.18 | PAG |
| UPBH29710P70C | 4/8/2025 | UP29710P70 | Umwelt | 297 | 0.020 | - | 5.37 | - | NAG |
| UPBH29710P73C | 4/8/2025 | UP29710P73 | Umwelt | 297 | 0.050 | 0.99 | 5.75 | 5.82 | NAG |
| UPBH29710P76C | 4/8/2025 | UP29710P76 | Umwelt | 297 | - | - | 6.23 | - | NAG |
| UPBH29710P80C | 4/8/2025 | UP29710P80 | Umwelt | 297 | - | - | 5.75 | - | NAG |
| UPBH29710P84C | 4/8/2025 | UP29710P84 | Umwelt | 297 | - | - | 5.24 | - | NAG |
| UPBH29710P88C | 4/8/2025 | UP29710P88 | Umwelt | 297 | - | - | 3.25 | - | NAG |
| UPBH29710P92C | 4/8/2025 | UP29710P92 | Umwelt | 297 | - | - | 4.00 | - | NAG |
| UPBH29710P236C | 4/9/2025 | UP29710P236 | Umwelt | 297 | 0.200 | 5.82 | 13.49 | 2.32 | PAG |
| UPBH29710P245C | 4/9/2025 | UP29710P245 | Umwelt | 297 | 0.040 | 1.16 | 6.75 | 5.79 | NAG |
| UPBH29710P253C | 4/9/2025 | UP29710P253 | Umwelt | 297 | 0.070 | 1.80 | 3.88 | 2.15 | NAG |
| UPBH29711P236C | 4/9/2025 | UP29711P236 | Umwelt | 297 | 0.080 | 2.37 | 5.00 | 2.10 | NAG |
| UPBH29711P89C | 4/9/2025 | UP29711P89 | Umwelt | 297 | 0.340 | 9.73 | 6.01 | 0.62 | PAG |
| UPBH29711P267C | 4/10/2025 | UP29711P267 | Umwelt | 297 | - | - | 4.24 | - | NAG |
| UPBH29711P294C | 4/10/2025 | UP29711P294 | Umwelt | 297 | 0.003 | - | 4.61 | - | NAG |
| UPBH29711P214C | 4/10/2025 | UP29711P214 | Umwelt | 297 | 0.102 | 1.07 | 5.75 | 5.38 | NAG |
| UPBH29711P417C | 4/11/2025 | UP29711P417 | Umwelt | 297 | - | - | 3.97 | N/A | NAG |
| UPBH29711P302C | 4/11/2025 | UP29711P302 | Umwelt | 297 | 0.073 | 2.12 | 6.79 | 3.21 | NAG |
| UPBH29711P350C | 4/11/2025 | UP29711P350 | Umwelt | 297 | 0.049 | 1.42 | 5.28 | 3.73 | NAG |
| UPBH29711P358C | 4/11/2025 | UP29711P358 | Umwelt | 297 | 0.078 | 1.92 | 6.15 | 3.21 | NAG |
| UPBH29712P11F | 4/14/2025 | UP29712P11 | Umwelt | 297 | - | - | 3.98 | N/A | NAG |
| UPBH29712P117F | 4/14/2025 | UP29712P117 | Umwelt | 297 | - | - | 4.68 | N/A | NAG |
| UPBH29712P240F | 4/14/2025 | UP29712P240 | Umwelt | 297 | 0.029 | 0.75 | 3.51 | 4.70 | NAG |
| UPBH29712P245F | 4/14/2025 | UP29712P245 | Umwelt | 297 | 0.228 | 6.09 | 4.53 | 0.74 | PAG |
| UPBH29712P41F | 4/14/2025 | UP29712P41 | Umwelt | 297 | 0.105 | 2.95 | 4.12 | 1.40 | NAG |
| UPBH29712P349C | 4/15/2025 | UP29712P349 | Umwelt | 297 | 0.009 | 0.27 | 3.00 | 10.99 | NAG |
| UPBH29712P293C | 4/16/2025 | UP29712P293 | Umwelt | 297 | 0.070 | 1.88 | 5.60 | 2.99 | NAG |
| UPBH29713P31C | 4/17/2025 | UP29713P31 | Umwelt | 297 | - | - | 3.51 | N/A | NAG |
| UPBH29713P19C | 4/17/2025 | UP29713P19 | Umwelt | 297 | 0.150 | 4.38 | 4.58 | 1.05 | NAG |
| UPBH29713P09C | 4/17/2025 | UP29713P09 | Umwelt | 297 | 0.220 | 6.25 | 7.28 | 1.16 | PAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29713P75C | 4/17/2025 | UP29713P75 | Umwelt | 297 | 0.420 | 10.94 | 10.00 | 0.91 | PAG |
| UPBH29713P81C | 4/17/2025 | UP29713P81 | Umwelt | 297 | 0.160 | 4.69 | 6.38 | 1.36 | PAG |
| UPBH29713P43C | 4/18/2025 | UP29713P43 | Umwelt | 297 | 0.070 | 2.19 | 3.70 | 1.69 | NAG |
| UPBH29713P130C | 4/18/2025 | UP29713P130 | Umwelt | 297 | - | - | 2.87 | N/A | NAG |
| UPBH29713P134C | 4/18/2025 | UP29713P134 | Umwelt | 297 | 0.100 | 2.81 | 3.54 | 1.26 | NAG |
| UPBH29713P201C | 4/20/2025 | UP29713P201 | Umwelt | 297 | 0.210 | 6.56 | 6.13 | 0.93 | PAG |
| UPBH29713P206C | 4/20/2025 | UP29713P206 | Umwelt | 297 | 0.050 | 1.56 | 5.03 | 3.22 | NAG |
| UPBH29713P222C | 4/20/2025 | UP29713P222 | Umwelt | 297 | - | - | 4.76 | N/A | NAG |
| UPBH29713P256C | 4/20/2025 | UP29713P256 | Umwelt | 297 | 0.770 | 24.06 | 12.81 | 0.53 | PAG |
| UPBH29713P312C | 4/20/2025 | UP29713P312 | Umwelt | 297 | 0.320 | 10.00 | 3.76 | 0.38 | PAG |
| UPBH29713P352C | 4/21/2025 | UP29713P352 | Umwelt | 297 | 0.100 | 3.13 | 4.93 | 1.58 | NAG |
| UPBH29713P488C | 4/21/2025 | UP29713P488 | Umwelt | 297 | - | - | 9.15 | N/A | NAG |
| UPBH29713P505C | 4/22/2025 | UP29713P505 | Umwelt | 297 | - | - | 6.10 | N/A | NAG |
| UPBH29713P515C | 4/22/2025 | UP29713P515 | Umwelt | 297 | 0.060 | 1.88 | 5.19 | 2.77 | NAG |
| UPBH29713P583C | 4/22/2025 | UP29713P583 | Umwelt | 297 | - | - | 2.86 | N/A | NAG |
| UPBH29714P105C | 4/23/2025 | UP29714P105 | Umwelt | 297 | - | - | 3.99 | N/A | NAG |
| UPBH29714P123C | 4/23/2025 | UP29714P123 | Umwelt | 297 | 0.340 | 10.63 | 4.60 | 0.43 | PAG |
| UPBH29714P128C | 4/23/2025 | UP29714P128 | Umwelt | 297 | 0.030 | 0.63 | 4.11 | 6.58 | NAG |
| UPBH29714P59C | 4/23/2025 | UP29714P59 | Umwelt | 297 | 1.600 | 50.00 | 28.74 | 0.57 | PAG |
| UPBH29714P63C | 4/23/2025 | UP29714P63 | Umwelt | 297 | 0.070 | 2.19 | 7.29 | 3.33 | NAG |
| UPBH29714P67C | 4/23/2025 | UP29714P67 | Umwelt | 297 | 1.010 | 31.56 | 10.18 | 0.32 | PAG |
| UPBH29714P97 | 4/24/2025 | UP29714P97 | Umwelt | 297 | 0.100 | 2.19 | 4.24 | 1.94 | NAG |
| UPBH29714P141 | 4/24/2025 | UP29714P141 | Umwelt | 297 | 0.120 | 2.81 | 6.77 | 2.41 | NAG |
| UPBH29714P147 | 4/24/2025 | UP29714P147 | Umwelt | 297 | 0.310 | 9.69 | 4.60 | 0.47 | PAG |
| UPBH29714P151 | 4/24/2025 | UP29714P151 | Umwelt | 297 | 0.320 | 9.69 | 20.60 | 2.13 | PAG |
| UPBH29714P101 | 4/24/2025 | UP29714P101 | Umwelt | 297 | - | - | 3.58 | N/A | NAG |
| UPBH29714P44 | 4/24/2025 | UP29714P44 | Umwelt | 297 | 0.140 | 3.44 | 2.82 | 0.82 | NAG |
| UPBH29714P47 | 4/24/2025 | UP29714P47 | Umwelt | 297 | 1.100 | 34.06 | 14.79 | 0.43 | PAG |
| UPBH29714P52 | 4/24/2025 | UP29714P52 | Umwelt | 297 | 0.280 | 8.75 | 10.28 | 1.17 | PAG |
| UPBH29714P192 | 4/25/2025 | UP29714P192 | Umwelt | 297 | - | - | 3.42 | N/A | NAG |
| UPBH29714P195 | 4/25/2025 | UP29714P195 | Umwelt | 297 | - | - | 5.73 | N/A | NAG |
| UPBH29714P198 | 4/25/2025 | UP29714P198 | Umwelt | 297 | 0.980 | 29.38 | 4.93 | 0.17 | PAG |
| EPBH210P08 | 4/26/2025 | EP210P08 | Echo | 210 | 0.200 | 4.38 | 5.62 | 1.28 | PAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| EPBH210P126 | 4/26/2025 | EP210P126 | Echo | 210 | 0.590 | 18.44 | 6.89 | 0.37 | PAG |
| EPBH210P19 | 4/26/2025 | EP210P19 | Echo | 210 | 0.440 | 11.25 | 19.77 | 1.76 | PAG |
| EPBH210P214 | 4/26/2025 | EP210P214 | Echo | 210 | 0.310 | 8.75 | 11.48 | 1.31 | PAG |
| EPBH210P218 | 4/26/2025 | EP210P218 | Echo | 210 | 0.140 | 3.75 | 6.66 | 1.78 | NAG |
| EPBH210P56 | 4/26/2025 | EP210P56 | Echo | 210 | 1.310 | 40.63 | 13.60 | 0.33 | PAG |
| EPBH210P81 | 4/26/2025 | EP210P81 | Echo | 210 | 0.660 | 20.00 | 21.61 | 1.08 | PAG |
| EPBH210B85 | 4/26/2025 | EP210B85 | Echo | 210 | - | - | 4.34 | N/A | NAG |
| EPBH210B88 | 4/26/2025 | EP210B88 | Echo | 210 | 0.480 | 14.06 | 13.47 | 0.96 | PAG |
| UPBH29715P160 | 4/29/2025 | UP29715P160 | Umwelt | 297 | - | - | 2.55 | N/A | NAG |
| UPBH29715P165 | 4/29/2025 | UP29715P165 | Umwelt | 297 | 0.280 | 8.13 | 6.96 | 0.86 | PAG |
| UPBH29715P170 | 4/29/2025 | UP29715P170 | Umwelt | 297 | - | - | 4.76 | N/A | NAG |
| UPBH29715P175 | 4/29/2025 | UP29715P175 | Umwelt | 297 | - | - | 3.33 | N/A | NAG |
| UPBH29715P75 | 4/29/2025 | UP29715P75 | Umwelt | 297 | 0.230 | 6.56 | 6.16 | 0.94 | PAG |
| UPBH29715P80 | 4/29/2025 | UP29715P80 | Umwelt | 297 | 0.400 | 11.25 | 11.48 | 1.02 | PAG |
| UPBH29715P85 | 4/29/2025 | UP29715P85 | Umwelt | 297 | - | - | 3.34 | N/A | NAG |
| UPBH29715P310 | 4/30/2025 | UP29715P310 | Umwelt | 297 | 0.110 | 2.81 | 3.41 | 1.21 | NAG |
| UPBH29715P315 | 4/30/2025 | UP29715P315 | Umwelt | 297 | 0.080 | 2.19 | 3.20 | 1.46 | NAG |
| UPBH29715P320 | 4/30/2025 | UP29715P320 | Umwelt | 297 | 0.010 | - | 3.18 | N/A | NAG |
| UPBH29715P325 | 4/30/2025 | UP29715P325 | Umwelt | 297 | 0.050 | 1.56 | 1.79 | 1.14 | NAG |
| UPBH29715P70 | 4/30/2025 | UP29715P70 | Umwelt | 297 | 0.030 | 0.31 | 3.36 | 10.75 | NAG |
| UPBH29714P244 | 5/1/2025 | UP29714P244 | Umwelt | 297 | 0.080 | 2.19 | 4.52 | 2.07 | NAG |
| UPBH29714P255 | 5/1/2025 | UP29714P255 | Umwelt | 297 | 0.060 | 1.88 | 6.84 | 3.65 | NAG |
| UPBH29714P278 | 5/1/2025 | UP29714P278 | Umwelt | 297 | 0.350 | 10.94 | 11.23 | 1.03 | PAG |
| UPBH29714P291 | 5/1/2025 | UP29714P291 | Umwelt | 297 | 0.060 | 1.88 | 3.76 | 2.00 | NAG |
| UPBH29715P400 | 5/1/2025 | UP29715P400 | Umwelt | 297 | 0.060 | 0.94 | 4.70 | 5.02 | NAG |
| UPBH29715P405 | 5/1/2025 | UP29715P405 | Umwelt | 297 | 0.040 | 0.63 | 4.66 | 7.45 | NAG |
| UPBH29715P410 | 5/1/2025 | UP29715P410 | Umwelt | 297 | 0.050 | 0.94 | 5.29 | 5.64 | NAG |
| UPBH29715P415 | 5/1/2025 | UP29715P415 | Umwelt | 297 | - | - | 3.04 | N/A | NAG |
| UPBH29715P431 | 5/1/2025 | UP29715P431 | Umwelt | 297 | 0.010 | 0.31 | 3.33 | 10.64 | NAG |
| UPBH29715P442 | 5/1/2025 | UP29715P442 | Umwelt | 297 | 0.040 | 0.94 | 4.93 | 5.26 | NAG |
| UPBH29715P468 | 5/1/2025 | UP29715P468 | Umwelt | 297 | 0.020 | 0.63 | 5.66 | 9.06 | NAG |
| UPBH29715P478 | 5/1/2025 | UP29715P478 | Umwelt | 297 | - | - | 4.58 | N/A | NAG |
| UPBH29716P350 | 5/2/2025 | UP29716P350 | Umwelt | 297 | 0.119 | 3.73 | 4.53 | 1.21 | NAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29716P183 | 5/2/2025 | UP29716P183 | Umwelt | 297 | 0.001 | - | 3.53 | N/A | NAG |
| UPBH29716P198 | 5/2/2025 | UP29716P198 | Umwelt | 297 | - | - | 4.00 | N/A | NAG |
| UPBH29716P221 | 5/2/2025 | UP29716P221 | Umwelt | 297 | 0.039 | 1.21 | 4.37 | 3.61 | NAG |
| UPBH29716P257 | 5/2/2025 | UP29716P257 | Umwelt | 297 | 0.103 | 3.21 | 4.07 | 1.27 | NAG |
| UPBH29716P261 | 5/2/2025 | UP29716P261 | Umwelt | 297 | - | - | 2.98 | N/A | NAG |
| UPBH29716P265 | 5/2/2025 | UP29716P265 | Umwelt | 297 | 0.060 | 1.88 | 4.46 | 2.37 | NAG |
| UPBH29716P338 | 5/2/2025 | UP29716P338 | Umwelt | 297 | 0.019 | 0.61 | 5.39 | 8.89 | NAG |
| UPBH29716P342 | 5/2/2025 | UP29716P342 | Umwelt | 297 | - | - | 3.60 | N/A | NAG |
| UPBH29716P346 | 5/2/2025 | UP29716P346 | Umwelt | 297 | - | - | 4.65 | N/A | NAG |
| UPBH29716P419 | 5/2/2025 | UP29716P419 | Umwelt | 297 | - | - | 4.53 | N/A | NAG |
| UPBH29716P423 | 5/2/2025 | UP29716P423 | Umwelt | 297 | 0.836 | 26.11 | 9.20 | 0.35 | PAG |
| UPBH29716P427 | 5/2/2025 | UP29716P427 | Umwelt | 297 | 0.001 | 0.03 | 3.44 | 109.92 | NAG |
| UPBH29716P431 | 5/2/2025 | UP29716P431 | Umwelt | 297 | - | - | 2.86 | N/A | NAG |
| UPBH29716P435 | 5/2/2025 | UP29716P435 | Umwelt | 297 | - | - | 3.98 | N/A | NAG |
| UPBH29716P511 | 5/2/2025 | UP29716P511 | Umwelt | 297 | 0.020 | 0.63 | 3.04 | 4.79 | NAG |
| UPBH29716P515 | 5/2/2025 | UP29716P515 | Umwelt | 297 | - | - | 3.28 | N/A | NAG |
| UPBH29716P519 | 5/2/2025 | UP29716P519 | Umwelt | 297 | - | - | 3.47 | N/A | NAG |
| UPBH29716P523 | 5/2/2025 | UP29716P523 | Umwelt | 297 | 0.065 | 2.03 | 4.09 | 2.02 | NAG |
| UPBH29716P527 | 5/2/2025 | UP29716P527 | Umwelt | 297 | 0.018 | 0.56 | 3.44 | 6.18 | NAG |
| UPBH29715P462 | 5/3/2025 | UP29715P462 | Umwelt | 297 | 0.033 | 1.04 | 3.82 | 3.67 | NAG |
| UPBH29715P226 | 5/3/2025 | UP29715P226 | Umwelt | 297 | 0.186 | 4.59 | 4.34 | 0.95 | PAG |
| UPBH29715P231 | 5/3/2025 | UP29715P231 | Umwelt | 297 | 0.067 | 1.72 | 3.83 | 2.23 | NAG |
| UPBH29715P236 | 5/3/2025 | UP29715P236 | Umwelt | 297 | 0.058 | 1.82 | 3.09 | 1.70 | NAG |
| UPBH29715P241 | 5/3/2025 | UP29715P241 | Umwelt | 297 | 1.109 | 34.61 | 13.47 | 0.39 | PAG |
| UPBH29715P329 | 5/3/2025 | UP29715P329 | Umwelt | 297 | 0.045 | 1.40 | 3.60 | 2.56 | NAG |
| UPBH29715P376 | 5/3/2025 | UP29715P376 | Umwelt | 297 | 0.090 | 2.81 | 3.54 | 1.26 | NAG |
| UPBH29716P35 | 5/4/2025 | UP29716P35 | Umwelt | 297 | - | - | 4.11 | N/A | NAG |
| UPBH29716P77 | 5/4/2025 | UP29716P77 | Umwelt | 297 | - | - | 3.81 | N/A | NAG |
| UPBH29716P81 | 5/4/2025 | UP29716P81 | Umwelt | 297 | 1.352 | 42.25 | 4.20 | 0.10 | PAG |
| UPBH29716P85 | 5/4/2025 | UP29716P85 | Umwelt | 297 | - | - | 3.13 | N/A | NAG |
| UPBH29716P39 | 5/4/2025 | UP29716P39 | Umwelt | 297 | 0.032 | 1.00 | 3.70 | 3.69 | NAG |
| UPBH29716P13 | 5/4/2025 | UP29716P13 | Umwelt | 297 | 0.106 | 2.80 | 8.84 | 3.16 | NAG |
| UPBH29716P131 | 5/4/2025 | UP29716P131 | Umwelt | 297 | 0.154 | 3.73 | 5.13 | 1.38 | PAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29716P136 | 5/4/2025 | UP29716P136 | Umwelt | 297 | 0.051 | 1.59 | 3.76 | 2.36 | NAG |
| UPBH29716P140 | 5/4/2025 | UP29716P140 | Umwelt | 297 | - | - | 4.09 | N/A | NAG |
| UPBH29716P16 | 5/4/2025 | UP29716P16 | Umwelt | 297 | 0.056 | 1.36 | 5.01 | 3.68 | NAG |
| UPBH29717P145C | 5/10/2025 | UP29717P145 | Umwelt | 297 | 0.082 | 0.75 | 5.11 | 6.85 | NAG |
| UPBH29717P149C | 5/10/2025 | UP29717P149 | Umwelt | 297 | 0.191 | 5.87 | 4.75 | 0.81 | PAG |
| UPBH29717P153C | 5/10/2025 | UP29717P153 | Umwelt | 297 | - | - | 3.25 | N/A | NAG |
| UPBH29717P157C | 5/10/2025 | UP29717P157 | Umwelt | 297 | 0.052 | 1.63 | 4.00 | 2.45 | NAG |
| UPBH29717P226C | 5/10/2025 | UP29717P226 | Umwelt | 297 | 0.052 | 1.54 | 4.51 | 2.92 | NAG |
| UPBH29717P230C | 5/10/2025 | UP29717P230 | Umwelt | 297 | 0.032 | 1.01 | 3.00 | 2.98 | NAG |
| UPBH29717P234C | 5/10/2025 | UP29717P234 | Umwelt | 297 | 0.033 | 0.14 | 4.88 | 34.48 | NAG |
| UPBH29717P285C | 5/10/2025 | UP29717P285 | Umwelt | 297 | 0.182 | 4.64 | 4.51 | 0.97 | PAG |
| UPBH29717P289C | 5/10/2025 | UP29717P289 | Umwelt | 297 | 0.337 | 9.76 | 3.75 | 0.38 | PAG |
| UPBH29717P294C | 5/10/2025 | UP29717P294 | Umwelt | 297 | 0.065 | 2.02 | 3.75 | 1.86 | NAG |
| UPBH29717P84C | 5/10/2025 | UP29717P84 | Umwelt | 297 | 0.025 | 0.57 | 5.62 | 9.94 | NAG |
| UPBH29717P87C | 5/10/2025 | UP29717P87 | Umwelt | 297 | - | - | 4.98 | N/A | NAG |
| UPBH29717P90C | 5/10/2025 | UP29717P90 | Umwelt | 297 | 0.006 | 0.20 | 3.88 | 19.43 | NAG |
| UPBH29717P94C | 5/10/2025 | UP29717P94 | Umwelt | 297 | 0.009 | 0.27 | 4.87 | 18.34 | NAG |
| UPBH29717P373C | 5/11/2025 | UP29717P373 | Umwelt | 297 | - | - | 4.51 | N/A | NAG |
| UPBH29717P378C | 5/11/2025 | UP29717P378 | Umwelt | 297 | 0.182 | 5.67 | 3.76 | 0.66 | PAG |
| UPBH29717P381C | 5/11/2025 | UP29717P381 | Umwelt | 297 | 0.121 | 3.63 | 5.63 | 1.55 | NAG |
| UPBH29717P458C | 5/11/2025 | UP29717P458 | Umwelt | 297 | 0.132 | 4.02 | 3.88 | 0.96 | NAG |
| UPBH29717P463C | 5/11/2025 | UP29717P463 | Umwelt | 297 | 0.120 | 3.32 | 4.51 | 1.36 | NAG |
| UPBH29717P467C | 5/11/2025 | UP29717P467 | Umwelt | 297 | 0.322 | 8.87 | 6.50 | 0.73 | PAG |
| UPBH29717P474C | 5/13/2025 | UP29717P474 | Umwelt | 297 | 0.050 | 1.49 | 4.13 | 2.78 | NAG |
| UPBH29717P527C | 5/13/2025 | UP29717P527 | Umwelt | 297 | 0.169 | 4.89 | 4.25 | 0.87 | PAG |
| UPBH29717P570C | 5/13/2025 | UP29717P570 | Umwelt | 297 | 0.034 | 0.82 | 3.50 | 4.25 | NAG |
| UPBH29717P582C | 5/13/2025 | UP29717P582 | Umwelt | 297 | 0.056 | 1.48 | 4.25 | 2.87 | NAG |
| UPBH29717P351C | 5/13/2025 | UP29717P351 | Umwelt | 297 | 0.245 | 7.09 | 4.86 | 0.69 | PAG |
| UPBH29718P104C | 5/15/2025 | UP29718P104 | Umwelt | 297 | 0.022 | 0.68 | 6.26 | 9.17 | NAG |
| UPBH29718P108C | 5/15/2025 | UP29718P108 | Umwelt | 297 | - | - | 4.24 | N/A | NAG |
| UPBH29718P112C | 5/15/2025 | UP29718P112 | Umwelt | 297 | 0.455 | 13.87 | 4.24 | 0.31 | PAG |
| UPBH29718P118C | 5/15/2025 | UP29718P118 | Umwelt | 297 | 0.488 | 15.22 | 5.49 | 0.36 | PAG |
| UPBH29718P120C | 5/15/2025 | UP29718P120 | Umwelt | 297 | 0.912 | 28.49 | 5.86 | 0.21 | PAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29718P206C | 5/15/2025 | UP29718P206 | Umwelt | 297 | 0.030 | 0.76 | 5.61 | 7.42 | NAG |
| UPBH29718P21C | 5/15/2025 | UP29718P21 | Umwelt | 297 | 1.073 | 32.81 | 16.45 | 0.50 | PAG |
| UPBH29718P210C | 5/15/2025 | UP29718P210 | Umwelt | 297 | 0.104 | 2.97 | 1.75 | 0.59 | NAG |
| UPBH29718P214C | 5/15/2025 | UP29718P214 | Umwelt | 297 | 0.053 | 1.54 | 4.86 | 3.16 | NAG |
| UPBH29718P219C | 5/15/2025 | UP29718P219 | Umwelt | 297 | 0.113 | 3.54 | 4.00 | 1.13 | NAG |
| UPBH29718P261C | 5/15/2025 | UP29718P261 | Umwelt | 297 | 0.067 | 1.94 | 3.74 | 1.93 | NAG |
| UPBH29718P264C | 5/15/2025 | UP29718P264 | Umwelt | 297 | 0.240 | 7.31 | 3.51 | 0.48 | PAG |
| UPBH29718P267C | 5/15/2025 | UP29718P267 | Umwelt | 297 | 0.088 | 2.31 | 4.74 | 2.06 | NAG |
| UPBH29718P271C | 5/15/2025 | UP29718P271 | Umwelt | 297 | 0.154 | 4.18 | 3.25 | 0.78 | PAG |
| UPBH29718P306C | 5/15/2025 | UP29718P306 | Umwelt | 297 | 0.040 | 0.89 | 3.50 | 3.94 | NAG |
| UPBH29718P310C | 5/15/2025 | UP29718P310 | Umwelt | 297 | 0.030 | 0.79 | 3.38 | 4.27 | NAG |
| UPBH29718P314C | 5/15/2025 | UP29718P314 | Umwelt | 297 | 0.038 | 0.95 | 4.50 | 4.73 | NAG |
| UPBH29718P341C | 5/15/2025 | UP29718P341 | Umwelt | 297 | - | - | 3.87 | N/A | NAG |
| UPBH29718P345C | 5/15/2025 | UP29718P345 | Umwelt | 297 | 0.002 | 0.05 | 5.24 | N/A | NAG |
| UPBH29718P348C | 5/15/2025 | UP29718P348 | Umwelt | 297 | 0.080 | 2.50 | 4.75 | 1.90 | NAG |
| UPBH30001P477C | 5/18/2025 | UP30001P477 | Umwelt | 300 | 0.007 | 0.05 | 6.13 | 114.49 | NAG |
| UPBH30001P52C | 5/18/2025 | UP30001P52 | Umwelt | 300 | 0.139 | 4.34 | 10.74 | 2.47 | NAG |
| UPBH30001P148C | 5/18/2025 | UP30001P148 | Umwelt | 300 | 0.098 | 2.33 | 5.11 | 2.19 | NAG |
| UPBH30001P251C | 5/18/2025 | UP30001P251 | Umwelt | 300 | 0.099 | 3.00 | 5.26 | 1.75 | NAG |
| UPBH30001P351C | 5/18/2025 | UP30001P351 | Umwelt | 300 | 0.092 | 2.80 | 4.75 | 1.70 | NAG |
| UPBH30001P369C | 5/18/2025 | UP30001P369 | Umwelt | 300 | 0.295 | 8.79 | 5.99 | 0.68 | PAG |
| UPBH30001P391C | 5/19/2025 | UP30001P391 | Umwelt | 300 | - | - | 3.62 | N/A | NAG |
| UPBH30001P447C | 5/19/2025 | UP30001P447 | Umwelt | 300 | - | - | 3.50 | N/A | NAG |
| UPBH30001P541C | 5/19/2025 | UP30001P541 | Umwelt | 300 | 0.061 | 1.92 | 5.50 | 2.87 | NAG |
| UPBH30001P71C | 5/19/2025 | UP30001P71 | Umwelt | 300 | 0.072 | 1.86 | 6.23 | 3.36 | NAG |
| UPBH30001P499C | 5/19/2025 | UP30001P499 | Umwelt | 300 | 0.065 | 2.02 | 4.87 | 2.42 | NAG |
| UPBH29719P113C | 5/23/2025 | UP29719P113 | Umwelt | 297 | 0.080 | 1.98 | 7.24 | 3.65 | NAG |
| UPBH29719P202C | 5/23/2025 | UP29719P202 | Umwelt | 297 | 0.386 | 11.68 | 7.24 | 0.62 | PAG |
| UPBH29719P41C | 5/23/2025 | UP29719P41 | Umwelt | 297 | 0.343 | 9.58 | 6.49 | 0.68 | PAG |
| UPBH29719P66C | 5/23/2025 | UP29719P66 | Umwelt | 297 | 0.074 | 2.32 | 7.63 | 3.29 | NAG |
| UPBH29719P131 | 5/25/2025 | UP29719P131 | Umwelt | 297 | 0.056 | 1.61 | 8.13 | 5.05 | NAG |
| UPBH29001P01 | 5/31/2025 | UP29001P01 | Umwelt | 290 | 0.007 | 0.22 | 4.88 | 22.64 | NAG |
| UPBH29001P04 | 5/31/2025 | UP29001P04 | Umwelt | 290 | 0.054 | 1.70 | 2.77 | 1.63 | NAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29001P08 | 5/31/2025 | UP29001P08 | Umwelt | 290 | 0.107 | 3.35 | 5.24 | 1.56 | NAG |
| UPBH29001P102 | 5/31/2025 | UP29001P102 | Umwelt | 290 | 0.152 | 4.73 | 5.14 | 1.08 | PAG |
| UPBH29001P160 | 5/31/2025 | UP29001P160 | Umwelt | 290 | 0.066 | 2.05 | 3.85 | 1.88 | NAG |
| UPBH29001P164 | 5/31/2025 | UP29001P164 | Umwelt | 290 | 0.121 | 3.79 | 5.43 | 1.43 | NAG |
| UPBH29001P212 | 5/31/2025 | UP29001P212 | Umwelt | 290 | 0.949 | 29.50 | 4.34 | 0.15 | PAG |
| UPBH29001P263 | 5/31/2025 | UP29001P263 | Umwelt | 290 | 0.011 | 0.34 | 4.61 | 13.41 | NAG |
| UPBH29001P267 | 5/31/2025 | UP29001P267 | Umwelt | 290 | 0.087 | 2.73 | 5.26 | 1.93 | NAG |
| UPBH29001P270 | 5/31/2025 | UP29001P270 | Umwelt | 290 | 0.473 | 14.79 | 7.28 | 0.49 | PAG |
| UPBH29001P334 | 5/31/2025 | UP29001P334 | Umwelt | 290 | 0.231 | 7.23 | 11.10 | 1.54 | PAG |
| UPBH29001P338 | 5/31/2025 | UP29001P338 | Umwelt | 290 | 0.272 | 7.37 | 18.36 | 2.49 | PAG |
| UPBH29001P392 | 5/31/2025 | UP29001P392 | Umwelt | 290 | 0.268 | 8.37 | 10.05 | 1.20 | PAG |
| UPBH29001P449 | 5/31/2025 | UP29001P449 | Umwelt | 290 | 0.105 | 3.29 | 7.71 | 2.34 | NAG |
| UPBH29001P453 | 5/31/2025 | UP29001P453 | Umwelt | 290 | 0.467 | 14.60 | 17.54 | 1.20 | PAG |
| UPBH29001P95 | 5/31/2025 | UP29001P95 | Umwelt | 290 | 0.137 | 4.27 | 3.83 | 0.90 | NAG |
| UPBH29001P99 | 5/31/2025 | UP29001P99 | Umwelt | 290 | 0.140 | 4.37 | 4.22 | 0.97 | NAG |
| UPBH29001P443 | 6/1/2025 | UP29001P443 | Umwelt | 290 | 0.145 | 4.51 | 15.02 | 3.33 | NAG |
| UPBH29001P257 | 6/1/2025 | UP29001P257 | Umwelt | 290 | 0.525 | 15.60 | 6.66 | 0.43 | PAG |
| UPBH29001P344 | 6/1/2025 | UP29001P344 | Umwelt | 290 | 0.307 | 8.83 | 7.15 | 0.81 | PAG |
| UPBH29001P170 | 6/1/2025 | UP29001P170 | Umwelt | 290 | 0.125 | 3.28 | 7.11 | 2.17 | NAG |
| UPBH29001P89 | 6/1/2025 | UP29001P89 | Umwelt | 290 | 0.140 | 3.84 | 6.51 | 1.69 | NAG |
| UPBH29001P174 | 6/2/2025 | UP29001P174 | Umwelt | 290 | 0.287 | 8.51 | 8.72 | 1.02 | PAG |
| UPBH29001P18 | 6/2/2025 | UP29001P18 | Umwelt | 290 | 0.071 | 2.19 | 4.22 | 1.93 | NAG |
| UPBH29001P253 | 6/2/2025 | UP29001P253 | Umwelt | 290 | 0.118 | 3.28 | 6.64 | 2.02 | NAG |
| UPBH29001P348 | 6/2/2025 | UP29001P348 | Umwelt | 290 | 0.092 | 2.64 | 7.29 | 2.76 | NAG |
| UPBH29001P439 | 6/2/2025 | UP29001P439 | Umwelt | 290 | 0.217 | 6.73 | 6.10 | 0.91 | PAG |
| UPBH29001P85 | 6/2/2025 | UP29001P85 | Umwelt | 290 | 0.120 | 3.28 | 6.86 | 2.09 | NAG |
| UPBH29001P73 | 6/3/2025 | UP29001P73 | Umwelt | 290 | 0.148 | 4.63 | 3.98 | 0.86 | NAG |
| UPBH29001P308 | 6/3/2025 | UP29001P308 | Umwelt | 290 | 0.101 | 2.77 | 4.20 | 1.52 | NAG |
| UPBH29001P415 | 6/3/2025 | UP29001P415 | Umwelt | 290 | 0.184 | 5.37 | 8.51 | 1.58 | PAG |
| UPBH29001P134 | 6/3/2025 | UP29001P134 | Umwelt | 290 | 0.143 | 4.38 | 4.74 | 1.08 | NAG |
| UPBH29001P235 | 6/3/2025 | UP29001P235 | Umwelt | 290 | 0.133 | 3.74 | 6.13 | 1.64 | NAG |
| UPBH29719P520 | 6/3/2025 | UP29719P520 | Umwelt | 297 | 0.076 | 2.20 | 3.23 | 1.47 | NAG |
| UPBH29719P490 | 6/3/2025 | UP29719P490 | Umwelt | 297 | 0.004 | 0.12 | 3.31 | 27.14 | NAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29719P437 | 6/3/2025 | UP29719P437 | Umwelt | 297 | 0.095 | 2.95 | 4.34 | 1.47 | NAG |
| UPBH29719P441 | 6/3/2025 | UP29719P441 | Umwelt | 297 | 0.457 | 13.64 | 5.01 | 0.37 | PAG |
| UPBH29001P239 | 6/4/2025 | UP29001P239 | Umwelt | 290 | 0.280 | 8.56 | 7.67 | 0.90 | PAG |
| UPBH29001P304 | 6/4/2025 | UP29001P304 | Umwelt | 290 | 0.120 | 3.47 | 6.61 | 1.91 | NAG |
| UPBH29001P130 | 6/4/2025 | UP29001P130 | Umwelt | 290 | 0.120 | 3.78 | 3.50 | 0.92 | NAG |
| UPBH29001P419 | 6/4/2025 | UP29001P419 | Umwelt | 290 | 0.300 | 9.39 | 7.60 | 0.81 | PAG |
| UPBH29001P360 | 6/4/2025 | UP29001P360 | Umwelt | 290 | 0.160 | 4.69 | 7.72 | 1.65 | PAG |
| UPBH29001P490 | 6/4/2025 | UP29001P490 | Umwelt | 290 | 0.200 | 6.27 | 8.12 | 1.30 | PAG |
| UPBH29001P494 | 6/4/2025 | UP29001P494 | Umwelt | 290 | 0.180 | 5.69 | 6.50 | 1.14 | PAG |
| UPBH29719P449 | 6/6/2025 | UP29719P449 | Umwelt | 297 | 0.060 | 1.44 | 4.17 | 2.90 | NAG |
| UPBH29719P452 | 6/6/2025 | UP29719P452 | Umwelt | 297 | 0.140 | 4.44 | 5.11 | 1.15 | NAG |
| UPBH29719P488 | 6/6/2025 | UP29719P488 | Umwelt | 297 | 0.010 | 0.45 | 4.88 | 10.84 | NAG |
| UPBH29719P491 | 6/6/2025 | UP29719P491 | Umwelt | 297 | 0.010 | 0.21 | 5.16 | 25.03 | NAG |
| UPBH29719P496 | 6/6/2025 | UP29719P496 | Umwelt | 297 | 0.320 | 9.85 | 3.87 | 0.39 | PAG |
| UPBH29719P519 | 6/6/2025 | UP29719P519 | Umwelt | 297 | 0.460 | 14.19 | 5.49 | 0.39 | PAG |
| UPBH29719P560 | 6/6/2025 | UP29719P560 | Umwelt | 297 | 0.060 | 1.75 | 3.15 | 1.80 | NAG |
| UPBH29719P563 | 6/6/2025 | UP29719P563 | Umwelt | 297 | - | - | 3.71 | N/A | NAG |
| UPBH295R02P295 | 6/10/2025 | UP295R02P295 | Umwelt | 295 | 0.220 | 6.23 | 5.46 | 0.88 | PAG |
| UPBH295R02P302 | 6/10/2025 | UP295R02P302 | Umwelt | 295 | 0.160 | 4.59 | 10.36 | 2.26 | PAG |
| UPBH295R02P313 | 6/10/2025 | UP295R02P313 | Umwelt | 295 | 0.070 | 1.61 | 5.66 | 3.52 | NAG |
| UPBH295R02P327 | 6/10/2025 | UP295R02P327 | Umwelt | 295 | 0.090 | 2.77 | 6.64 | 2.39 | NAG |
| UPBH295R02P332 | 6/10/2025 | UP295R02P332 | Umwelt | 295 | 0.350 | 10.46 | 11.62 | 1.11 | PAG |
| UPBH295R02P342 | 6/10/2025 | UP295R02P342 | Umwelt | 295 | 0.140 | 3.99 | 9.35 | 2.34 | NAG |
| UPBH295R02P343 | 6/10/2025 | UP295R02P343 | Umwelt | 295 | 0.130 | 3.38 | 6.41 | 1.90 | NAG |
| UPBH295R02P345 | 6/10/2025 | UP295R02P345 | Umwelt | 295 | 0.140 | 3.83 | 9.36 | 2.44 | NAG |
| UPBH295R02P350 | 6/10/2025 | UP295R02P350 | Umwelt | 295 | 0.150 | 3.72 | 8.26 | 2.22 | NAG |
| UPBH295R02P355 | 6/10/2025 | UP295R02P355 | Umwelt | 295 | 0.100 | 2.96 | 6.86 | 2.32 | NAG |
| UPBH295R02P364 | 6/10/2025 | UP295R02P364 | Umwelt | 295 | 0.070 | 1.86 | 4.66 | 2.51 | NAG |
| UPBH295R02R152 | 6/13/2025 | UP295R02R152 | Umwelt | 295 | 0.180 | 4.31 | 5.74 | 1.33 | PAG |
| UPBH295R02R154 | 6/13/2025 | UP295R02R154 | Umwelt | 295 | 0.170 | 4.54 | 8.33 | 1.83 | PAG |
| UPBH295R02R193 | 6/13/2025 | UP295R02R193 | Umwelt | 295 | 0.190 | 5.16 | 10.03 | 1.94 | PAG |
| UPBH295R02P103 | 6/13/2025 | UP295R02P103 | Umwelt | 295 | 0.140 | 3.98 | 5.25 | 1.32 | NAG |
| UPBH295R02P105 | 6/14/2025 | UP295R02P105 | Umwelt | 295 | 0.140 | 3.79 | 5.37 | 1.42 | NAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH295R02R116 | 6/14/2025 | UP295R02R116 | Umwelt | 295 | 0.170 | 4.78 | 8.33 | 1.74 | PAG |
| UPBH295R02R148 | 6/14/2025 | UP295R02R148 | Umwelt | 295 | 0.080 | 2.35 | 6.48 | 2.76 | NAG |
| UPBH295R02R219 | 6/14/2025 | UP295R02R219 | Umwelt | 295 | 0.130 | 3.17 | 5.61 | 1.77 | NAG |
| UPBH295R02P24 | 6/14/2025 | UP295R02P24 | Umwelt | 295 | 0.120 | 3.09 | 5.25 | 1.70 | NAG |
| UPBH295R02P28 | 6/14/2025 | UP295R02P28 | Umwelt | 295 | 0.140 | 4.44 | 5.74 | 1.29 | NAG |
| UPBH295R02P65 | 6/14/2025 | UP295R02P65 | Umwelt | 295 | 0.110 | 2.89 | 5.13 | 1.78 | NAG |
| UPBH295R02P74 | 6/14/2025 | UP295R02P74 | Umwelt | 295 | 0.080 | 2.42 | 5.25 | 2.18 | NAG |
| UPBH29723P12 | 6/16/2025 | UP29723P12 | Umwelt | 297 | 0.070 | 1.88 | 8.22 | 4.38 | NAG |
| UPBH29723P127 | 6/16/2025 | UP29723P127 | Umwelt | 297 | 0.120 | 3.73 | 4.55 | 1.22 | NAG |
| UPBH29723P168 | 6/16/2025 | UP29723P168 | Umwelt | 297 | 0.090 | 2.49 | 5.63 | 2.26 | NAG |
| UPBH29723P171 | 6/16/2025 | UP29723P171 | Umwelt | 297 | 0.010 | 0.29 | 3.95 | 13.58 | NAG |
| UPBH29723P219 | 6/16/2025 | UP29723P219 | Umwelt | 297 | 0.030 | 0.95 | 6.26 | 6.59 | NAG |
| UPBH29723P222 | 6/16/2025 | UP29723P222 | Umwelt | 297 | 0.110 | 2.80 | 6.61 | 2.36 | NAG |
| UPBH29723P225 | 6/16/2025 | UP29723P225 | Umwelt | 297 | 0.470 | 13.39 | 8.95 | 0.67 | PAG |
| UPBH29723P228 | 6/16/2025 | UP29723P228 | Umwelt | 297 | 0.330 | 7.50 | 9.17 | 1.22 | PAG |
| UPBH29723P261 | 6/16/2025 | UP29723P261 | Umwelt | 297 | 0.730 | 21.44 | 5.17 | 0.24 | PAG |
| UPBH29723P264 | 6/16/2025 | UP29723P264 | Umwelt | 297 | 0.140 | 4.38 | 4.62 | 1.05 | NAG |
| UPBH29723P67 | 6/16/2025 | UP29723P67 | Umwelt | 297 | 0.060 | 1.14 | 5.79 | 5.06 | NAG |
| UPBH29723P70 | 6/16/2025 | UP29723P70 | Umwelt | 297 | 0.110 | 2.71 | 10.25 | 3.79 | NAG |
| UPBH29723P76 | 6/17/2025 | UP29723P76 | Umwelt | 297 | - | - | 3.98 | N/A | NAG |
| UPBH29723P79 | 6/17/2025 | UP29723P79 | Umwelt | 297 | 0.260 | 8.19 | 4.51 | 0.55 | PAG |
| UPBH29723P97 | 6/17/2025 | UP29723P97 | Umwelt | 297 | 0.030 | 0.82 | 6.78 | 8.28 | NAG |
| UPBH29723P279 | 6/17/2025 | UP29723P279 | Umwelt | 297 | 0.160 | 4.48 | 5.28 | 1.18 | PAG |
| UPBH29723P24 | 6/17/2025 | UP29723P24 | Umwelt | 297 | 0.010 | 0.08 | 4.33 | 53.33 | NAG |
| UPBH29723P202 | 6/17/2025 | UP29723P202 | Umwelt | 297 | 0.090 | 2.39 | 5.35 | 2.24 | NAG |
| UPBH29723P21 | 6/17/2025 | UP29723P21 | Umwelt | 297 | 0.080 | 1.82 | 6.74 | 3.71 | NAG |
| UPBH29723P147 | 6/17/2025 | UP29723P147 | Umwelt | 297 | 0.060 | 1.44 | 4.97 | 3.45 | NAG |
| UPBH29723P151 | 6/17/2025 | UP29723P151 | Umwelt | 297 | 0.140 | 3.83 | 4.43 | 1.16 | NAG |
| 3P001 | 6/19/2025 | TH-3P01 | Umwelt | 290 | 0.650 | 20.39 | 8.47 | 0.42 | PAG |
| 3P002 | 6/19/2025 | TH-3P02 | Umwelt | 290 | 0.320 | 9.59 | 8.25 | 0.86 | PAG |
| 3P003 | 6/19/2025 | TH-3P03 | Umwelt | 290 | - | 0.03 | 2.13 | N/A | NAG |
| 3P004 | 6/19/2025 | TH-3P04 | Umwelt | 290 | 0.050 | 0.03 | 6.97 | N/A | NAG |
| 3P005 | 6/19/2025 | TH-3P05 | Umwelt | 290 | 0.010 | 0.42 | 6.93 | 16.61 | NAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| 3P006 | 6/19/2025 | TH-3P06 | Umwelt | 290 | 0.070 | 2.24 | 5.83 | 2.60 | NAG |
| 3P007 | 6/19/2025 | TH-3P07 | Umwelt | 290 | - | 0.03 | 5.36 | N/A | NAG |
| 3P008 | 6/19/2025 | TH-3P08 | Umwelt | 290 | - | 0.03 | 5.74 | N/A | NAG |
| 3P010 | 6/19/2025 | TH-3P10 | Umwelt | 290 | 0.200 | 6.03 | 4.60 | 0.76 | PAG |
| 3P011 | 6/19/2025 | TH-3P11 | Umwelt | 290 | - | 0.03 | 6.54 | N/A | NAG |
| 3P013 | 6/19/2025 | TH-3P13 | Umwelt | 290 | 0.040 | 0.92 | 5.59 | 6.07 | NAG |
| 3P014 | 6/19/2025 | TH-3P14 | Umwelt | 290 | 0.040 | 1.19 | 5.05 | 4.25 | NAG |
| 3P015 | 6/19/2025 | TH-3P15 | Umwelt | 290 | 0.040 | 1.23 | 5.35 | 4.34 | NAG |
| 3P016 | 6/19/2025 | TH-3P16 | Umwelt | 290 | 0.100 | 2.57 | 5.12 | 2.00 | NAG |
| 3P017 | 6/19/2025 | TH-3P17 | Umwelt | 290 | 0.130 | 4.20 | 4.94 | 1.17 | NAG |
| 3P018 | 6/19/2025 | TH-3P18 | Umwelt | 290 | 0.080 | 2.57 | 6.23 | 2.42 | NAG |
| 3P019 | 6/19/2025 | TH-3P19 | Umwelt | 290 | 0.090 | 2.31 | 4.37 | 1.89 | NAG |
| 3P020 | 6/19/2025 | TH-3P20 | Umwelt | 290 | 0.120 | 3.89 | 7.68 | 1.98 | NAG |
| 3P021 | 6/19/2025 | TH-3P21 | Umwelt | 290 | - | 0.03 | 4.35 | N/A | NAG |
| 3P022 | 6/19/2025 | TH-3P22 | Umwelt | 290 | 0.010 | 0.03 | 4.25 | N/A | NAG |
| UPBH29003P14C | 6/20/2025 | UP29003P14 | Umwelt | 290 | 0.910 | 26.79 | 9.55 | 0.36 | PAG |
| UPBH29003P150C | 6/20/2025 | UP29003P150 | Umwelt | 290 | 0.120 | 3.74 | 5.53 | 1.48 | NAG |
| UPBH29003P154C | 6/20/2025 | UP29003P154 | Umwelt | 290 | 0.120 | 3.49 | 5.30 | 1.52 | NAG |
| UPBH29003P157C | 6/20/2025 | UP29003P157 | Umwelt | 290 | 0.160 | 4.95 | 5.05 | 1.02 | PAG |
| UPBH29003P18C | 6/20/2025 | UP29003P18 | Umwelt | 290 | 0.070 | 2.05 | 6.01 | 2.94 | NAG |
| UPBH29003P23C | 6/20/2025 | UP29003P23 | Umwelt | 290 | 0.050 | 1.66 | 6.92 | 4.18 | NAG |
| UPBH29003P63C | 6/20/2025 | UP29003P63 | Umwelt | 290 | 0.040 | 1.21 | 5.12 | 4.25 | NAG |
| UPBH29003P74C | 6/20/2025 | UP29003P74 | Umwelt | 290 | 0.070 | 2.07 | 4.60 | 2.23 | NAG |
| UPBH29003P36C | 6/21/2025 | UP29003P36 | Umwelt | 290 | 0.040 | 1.26 | 6.84 | 5.44 | NAG |
| UPBH29003P143C | 6/21/2025 | UP29003P143 | Umwelt | 290 | 0.400 | 12.00 | 6.70 | 0.56 | PAG |
| UPBH29003P123C | 6/21/2025 | UP29003P123 | Umwelt | 290 | 0.080 | 2.44 | 5.24 | 2.15 | NAG |
| UPBH29725P1C | 6/21/2025 | UP29725P1 | Umwelt | 297 | 0.130 | 3.89 | 3.66 | 0.94 | NAG |
| UPBH29725P107C | 6/21/2025 | UP29725P107 | Umwelt | 297 | - | 0.03 | 3.70 | N/A | NAG |
| UPBH29725P110C | 6/21/2025 | UP29725P110 | Umwelt | 297 | 0.070 | 2.26 | 2.49 | 1.10 | NAG |
| UPBH29725P113C | 6/21/2025 | UP29725P113 | Umwelt | 297 | 0.140 | 3.87 | 2.09 | 0.54 | NAG |
| UPBH29725P128C | 6/21/2025 | UP29725P128 | Umwelt | 297 | 0.010 | 0.03 | 3.96 | N/A | NAG |
| UPBH29725P131C | 6/21/2025 | UP29725P131 | Umwelt | 297 | - | 0.03 | 3.48 | N/A | NAG |
| UPBH29725P147C | 6/21/2025 | UP29725P147 | Umwelt | 297 | 0.230 | 6.93 | 5.17 | 0.75 | PAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29725P25C | 6/21/2025 | UP29725P25 | Umwelt | 297 | 0.140 | 3.01 | 4.60 | 1.53 | NAG |
| UPBH29725P28C | 6/21/2025 | UP29725P28 | Umwelt | 297 | - | 0.03 | 3.81 | N/A | NAG |
| UPBH29725P3C | 6/21/2025 | UP29725P3 | Umwelt | 297 | 0.010 | 0.03 | 4.09 | N/A | NAG |
| UPBH29725P30C | 6/21/2025 | UP29725P30 | Umwelt | 297 | 0.070 | 1.22 | 4.28 | 3.52 | NAG |
| UPBH29725P46C | 6/21/2025 | UP29725P46 | Umwelt | 297 | 0.120 | 2.78 | 6.96 | 2.50 | NAG |
| UPBH29725P49C | 6/21/2025 | UP29725P49 | Umwelt | 297 | 0.110 | 2.32 | 6.47 | 2.79 | NAG |
| UPBH29725P5C | 6/21/2025 | UP29725P5 | Umwelt | 297 | 0.480 | 14.87 | 6.03 | 0.41 | PAG |
| UPBH29725P52C | 6/21/2025 | UP29725P52 | Umwelt | 297 | 0.050 | 1.12 | 4.53 | 4.04 | NAG |
| UPBH29725P68C | 6/21/2025 | UP29725P68 | Umwelt | 297 | 0.380 | 11.04 | 9.96 | 0.90 | PAG |
| UPBH29725P71C | 6/21/2025 | UP29725P71 | Umwelt | 297 | 0.290 | 7.74 | 4.82 | 0.62 | PAG |
| UPBH29725P73C | 6/21/2025 | UP29725P73 | Umwelt | 297 | 0.050 | 0.66 | 4.58 | 6.93 | NAG |
| UPBH29725P8C | 6/21/2025 | UP29725P8 | Umwelt | 297 | - | 0.03 | 4.78 | N/A | NAG |
| UPBH29725P89C | 6/21/2025 | UP29725P89 | Umwelt | 297 | 0.100 | 2.99 | 6.16 | 2.06 | NAG |
| UPBH29725P91C | 6/21/2025 | UP29725P91 | Umwelt | 297 | 0.010 | 0.03 | 2.70 | N/A | NAG |
| UPBH29725P93C | 6/21/2025 | UP29725P93 | Umwelt | 297 | 0.060 | 1.70 | 4.69 | 2.75 | NAG |
| UPBH29723P304F | 6/25/2025 | UP29723P304 | Umwelt | 297 | 0.030 | 1.08 | (0.11) | (0.10) | NAG |
| UPBH29723P327F | 6/25/2025 | UP29723P327 | Umwelt | 297 | 0.060 | 1.66 | 4.29 | 2.58 | NAG |
| UPBH29724P12F | 6/25/2025 | UP29724P12 | Umwelt | 297 | 0.940 | 29.24 | 10.22 | 0.35 | PAG |
| UPBH29724P167F | 6/25/2025 | UP29724P167 | Umwelt | 297 | 0.020 | 0.57 | 10.72 | 18.89 | NAG |
| UPBH29724P256F | 6/25/2025 | UP29724P256 | Umwelt | 297 | 0.150 | 4.75 | 9.66 | 2.03 | NAG |
| UPBH29724P306F | 6/25/2025 | UP29724P306 | Umwelt | 297 | 0.040 | 1.17 | 5.63 | 4.80 | NAG |
| UPBH29724P49F | 6/25/2025 | UP29724P49 | Umwelt | 297 | 0.260 | 8.13 | 11.14 | 1.37 | PAG |
| UPBH29724P52F | 6/25/2025 | UP29724P52 | Umwelt | 297 | 0.020 | 0.61 | 5.98 | 9.74 | NAG |
| UPBH29724P55F | 6/25/2025 | UP29724P55 | Umwelt | 297 | 0.070 | 2.10 | 11.98 | 5.69 | NAG |
| UPBH29724P191F | 6/26/2025 | UP29724P191 | Umwelt | 297 | 0.120 | 3.79 | 14.06 | 3.71 | NAG |
| UPBH29724P202F | 6/26/2025 | UP29724P202 | Umwelt | 297 | 0.400 | 12.64 | 5.25 | 0.42 | PAG |
| UPBH29724P250F | 6/26/2025 | UP29724P250 | Umwelt | 297 | 0.760 | 23.37 | 9.34 | 0.40 | PAG |
| UPBH29724P254F | 6/26/2025 | UP29724P254 | Umwelt | 297 | 0.540 | 16.68 | 8.59 | 0.52 | PAG |
| UPBH29004P109F | 6/27/2025 | UP29004P109 | Umwelt | 290 | 0.390 | 10.85 | 5.13 | 0.47 | PAG |
| UPBH29004P117F | 6/27/2025 | UP29004P117 | Umwelt | 290 | 0.400 | 11.70 | 6.43 | 0.55 | PAG |
| UPBH29004P134C | 6/27/2025 | UP29004P134 | Umwelt | 290 | 0.200 | 5.50 | 5.26 | 0.96 | PAG |
| UPBH29004P167F | 6/27/2025 | UP29004P167 | Umwelt | 290 | 0.170 | 4.10 | 5.38 | 1.31 | PAG |
| UPBH29004P172F | 6/27/2025 | UP29004P172 | Umwelt | 290 | 0.140 | 4.08 | 6.76 | 1.66 | NAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29004P174F | 6/27/2025 | UP29004P174 | Umwelt | 290 | 0.200 | 5.28 | (1.74) | (0.33) | PAG |
| UPBH29004P177C | 6/27/2025 | UP29004P177 | Umwelt | 290 | 0.270 | 8.10 | 5.26 | 0.65 | PAG |
| UPBH29004P31C | 6/27/2025 | UP29004P31 | Umwelt | 290 | 0.040 | 1.10 | 7.39 | 6.71 | NAG |
| UPBH29004P39F | 6/27/2025 | UP29004P39 | Umwelt | 290 | 0.140 | 1.28 | 3.51 | 2.74 | NAG |
| UPBH29004P71C | 6/27/2025 | UP29004P71 | Umwelt | 290 | 0.050 | 1.59 | 5.01 | 3.15 | NAG |
| UPBH29004P83F | 6/27/2025 | UP29004P83 | Umwelt | 290 | 0.600 | 17.79 | 7.25 | 0.41 | PAG |
| UPBH29004P24F | 6/28/2025 | UP29004P24 | Umwelt | 290 | 0.360 | 10.71 | 4.75 | 0.44 | PAG |
| UPBH29004P146F | 6/28/2025 | UP29004P146 | Umwelt | 290 | 0.320 | 9.61 | 6.61 | 0.69 | PAG |
| UPBH29002P143F | 6/29/2025 | UP29002P143 | Umwelt | 290 | 0.100 | 2.82 | 5.89 | 2.09 | NAG |
| UPBH29002P178F | 6/29/2025 | UP29002P178 | Umwelt | 290 | 0.120 | 3.52 | 8.18 | 2.32 | NAG |
| UPBH29002P183F | 6/29/2025 | UP29002P183 | Umwelt | 290 | 0.260 | 7.89 | 4.46 | 0.57 | PAG |
| UPBH29002P213F | 6/29/2025 | UP29002P213 | Umwelt | 290 | 0.180 | 5.69 | 5.75 | 1.01 | PAG |
| UPBH29002P248F | 6/29/2025 | UP29002P248 | Umwelt | 290 | 0.090 | 2.84 | 6.27 | 2.20 | NAG |
| UPBH29002P253F | 6/29/2025 | UP29002P253 | Umwelt | 290 | 0.130 | 3.82 | 6.45 | 1.69 | NAG |
| UPBH29002P300F | 6/29/2025 | UP29002P300 | Umwelt | 290 | 0.040 | 1.40 | 13.27 | 9.46 | NAG |
| UPBH29002P272C | 6/30/2025 | UP29002P272 | Umwelt | 290 | 0.560 | 16.32 | 7.47 | 0.46 | PAG |
| UPBH29002P291F | 7/1/2025 | UP29002P291 | Umwelt | 290 | 0.440 | 12.90 | 8.73 | 0.68 | PAG |
| UPBH29002P86C | 7/1/2025 | UP29002P86 | Umwelt | 290 | 0.160 | 4.15 | 7.64 | 1.84 | PAG |
| UPBH29002P265C | 7/1/2025 | UP29002P265 | Umwelt | 290 | 0.300 | 9.35 | 7.06 | 0.75 | PAG |
| UPBH29002P238F | 7/1/2025 | UP29002P238 | Umwelt | 290 | 0.240 | 7.28 | 10.52 | 1.44 | PAG |
| UPBH29002P189C | 7/1/2025 | UP29002P189 | Umwelt | 290 | - | 0.03 | 4.98 | N/A | NAG |
| UPBH29002P157C | 7/1/2025 | UP29002P157 | Umwelt | 290 | 0.260 | 7.93 | 9.43 | 1.19 | PAG |
| UPBH29002P163F | 7/2/2025 | UP29002P163 | Umwelt | 290 | 0.270 | 7.96 | 23.71 | 2.98 | PAG |
| UPBH29002P100F | 7/2/2025 | UP29002P100 | Umwelt | 290 | 1.410 | 43.91 | 7.34 | 0.17 | PAG |
| UPBH29002P14F | 7/2/2025 | UP29002P14 | Umwelt | 290 | 0.270 | 7.22 | 8.36 | 1.16 | PAG |
| UPBH29002P43F | 7/2/2025 | UP29002P43 | Umwelt | 290 | 0.260 | 8.25 | 5.75 | 0.70 | PAG |
| UPBH29002P47F | 7/2/2025 | UP29002P47 | Umwelt | 290 | 0.700 | 21.96 | 18.93 | 0.86 | PAG |
| UPBH29002P5F | 7/2/2025 | UP29002P5 | Umwelt | 290 | 0.170 | 5.18 | 7.96 | 1.54 | PAG |
| UPBH29002P64F | 7/2/2025 | UP29002P64 | Umwelt | 290 | 0.160 | 3.97 | 7.96 | 2.01 | PAG |
| UPBH29005P01F | 7/3/2025 | UP29005P01 | Umwelt | 290 | 0.280 | 8.37 | 5.26 | 0.63 | PAG |
| UPBH29005P88F | 7/3/2025 | UP29005P88 | Umwelt | 290 | 0.020 | 0.03 | 5.87 | N/A | NAG |
| UPBH29005P24F | 7/3/2025 | UP29005P24 | Umwelt | 290 | 1.870 | 56.37 | 9.60 | 0.17 | PAG |
| UPBH29005P37F | 7/3/2025 | UP29005P37 | Umwelt | 290 | 0.140 | 3.86 | 8.54 | 2.21 | NAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29005P45F | 7/3/2025 | UP29005P45 | Umwelt | 290 | 0.040 | 0.60 | 3.87 | 6.51 | NAG |
| UPBH29005P59F | 7/3/2025 | UP29005P59 | Umwelt | 290 | 0.280 | 8.28 | 9.58 | 1.16 | PAG |
| UPBH29005P72F | 7/3/2025 | UP29005P72 | Umwelt | 290 | - | 0.03 | 5.82 | N/A | NAG |
| UPBH29005P81F | 7/4/2025 | UP29005P81 | Umwelt | 290 | 0.210 | 6.08 | 8.81 | 1.45 | PAG |
| UPBH29005P100F | 7/4/2025 | UP29005P100 | Umwelt | 290 | 0.150 | 4.37 | 4.81 | 1.10 | NAG |
| UPBH29005P110F | 7/4/2025 | UP29005P110 | Umwelt | 290 | 0.140 | 4.35 | 3.26 | 0.75 | NAG |
| UPBH29005P122F | 7/4/2025 | UP29005P122 | Umwelt | 290 | 0.020 | 0.58 | 3.51 | 6.09 | NAG |
| UPBH29005P144C | 7/4/2025 | UP29005P144 | Umwelt | 290 | 0.330 | 9.70 | 4.74 | 0.49 | PAG |
| UPBH290RAMPV2P69F | 7/6/2025 | UP290RAMPV2P69 | Umwelt | 290 | 0.470 | 14.09 | 10.12 | 0.72 | PAG |
| UPBH290RAMPV2P73F | 7/6/2025 | UP290RAMPV2P73 | Umwelt | 290 | 0.180 | 4.30 | 8.98 | 2.09 | PAG |
| UPBH290RAMPV2P80F | 7/6/2025 | UP290RAMPV2P80 | Umwelt | 290 | 0.070 | 2.12 | 15.23 | 7.20 | NAG |
| UPBH290RAMPV2P94F | 7/6/2025 | UP290RAMPV2P94 | Umwelt | 290 | 0.130 | 4.06 | 8.90 | 2.19 | NAG |
| UPBH290RAMPV2P151F | 7/6/2025 | UP290RAMPV2P151 | Umwelt | 290 | 0.340 | 10.30 | 8.55 | 0.83 | PAG |
| UPBH290RAMPV2P154F | 7/6/2025 | UP290RAMPV2P154 | Umwelt | 290 | 0.440 | 13.75 | 11.55 | 0.84 | PAG |
| UPBH290RAMPV2P157F | 7/6/2025 | UP290RAMPV2P157 | Umwelt | 290 | 0.280 | 8.27 | 14.49 | 1.75 | PAG |
| UPBH290RAMPV2P190F | 7/6/2025 | UP290RAMPV2P190 | Umwelt | 290 | 0.160 | 4.28 | 7.08 | 1.65 | PAG |
| UPBH290RAMPV2P109F | 7/6/2025 | UP290RAMPV2P109 | Umwelt | 290 | 0.200 | 5.81 | 7.23 | 1.24 | PAG |
| UPBH290RAMPV2P128F | 7/7/2025 | UP290RAMPV2P128 | Umwelt | 290 | 0.470 | 13.44 | 13.21 | 0.98 | PAG |
| UPBH290RAMPV2P199F | 7/7/2025 | UP290RAMPV2P199 | Umwelt | 290 | 0.010 | 0.03 | 10.45 | N/A | NAG |
| UPBH290RAMPV2P27C | 7/7/2025 | UP290RAMPV2P27 | Umwelt | 290 | 3.070 | 91.49 | 9.60 | 0.10 | PAG |
| UPBH290RAMPV2P61F | 7/7/2025 | UP290RAMPV2P61 | Umwelt | 290 | 0.070 | 1.72 | 7.43 | 4.31 | NAG |
| UPBH290RAMPV2P161F | 7/7/2025 | UP290RAMPV2P161 | Umwelt | 290 | 0.360 | 10.69 | 8.01 | 0.75 | PAG |
| UPBH29006B01F | 7/9/2025 | UP29006B01 | Umwelt | 290 | 0.140 | 3.15 | 6.19 | 1.97 | NAG |
| UPBH29006P01F | 7/9/2025 | UP29006P01 | Umwelt | 290 | 0.300 | 9.49 | 8.68 | 0.91 | PAG |
| UPBH29006P08F | 7/9/2025 | UP29006P08 | Umwelt | 290 | 0.200 | 6.30 | 5.48 | 0.87 | PAG |
| UPBH29006P13F | 7/9/2025 | UP29006P13 | Umwelt | 290 | 0.320 | 9.88 | 11.06 | 1.12 | PAG |
| UPBH29006P20F | 7/9/2025 | UP29006P20 | Umwelt | 290 | - | 0.03 | 7.25 | N/A | NAG |
| UPBH29006P33F | 7/9/2025 | UP29006P33 | Umwelt | 290 | 0.230 | 7.02 | 6.04 | 0.86 | PAG |
| UPBH29006P47F | 7/9/2025 | UP29006P47 | Umwelt | 290 | 0.200 | 5.50 | 4.68 | 0.85 | PAG |
| UPBH29006P57F | 7/9/2025 | UP29006P57 | Umwelt | 290 | 1.110 | 34.18 | 7.45 | 0.22 | PAG |
| UPBH29006P61F | 7/9/2025 | UP29006P61 | Umwelt | 290 | 0.350 | 10.95 | 13.77 | 1.26 | PAG |
| UPBH29006P78F | 7/9/2025 | UP29006P78 | Umwelt | 290 | 0.240 | 7.30 | 15.31 | 2.10 | PAG |
| UPBH29006P87F | 7/9/2025 | UP29006P87 | Umwelt | 290 | 0.310 | 9.68 | 5.84 | 0.60 | PAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29007P135F | 7/11/2025 | UP29007P135 | Umwelt | 290 | 0.170 | 3.53 | 5.76 | 1.63 | PAG |
| UPBH29007P139F | 7/11/2025 | UP29007P139 | Umwelt | 290 | 0.140 | 4.05 | 5.51 | 1.36 | NAG |
| UPBH29007P142F | 7/11/2025 | UP29007P142 | Umwelt | 290 | 0.110 | 3.49 | 5.55 | 1.59 | NAG |
| UPBH29007P146F | 7/11/2025 | UP29007P146 | Umwelt | 290 | 0.010 | 0.03 | 5.33 | N/A | NAG |
| UPBH29007P149C | 7/11/2025 | UP29007P149 | Umwelt | 290 | 0.060 | 1.63 | 7.02 | 4.29 | NAG |
| UPBH29007P152C | 7/11/2025 | UP29007P152 | Umwelt | 290 | 0.210 | 2.71 | 5.52 | 2.03 | PAG |
| UPBH29007P209F | 7/11/2025 | UP29007P209 | Umwelt | 290 | 0.090 | 1.06 | 5.26 | 4.95 | NAG |
| UPBH29007P212F | 7/11/2025 | UP29007P212 | Umwelt | 290 | 0.100 | 1.33 | 5.93 | 4.46 | NAG |
| UPBH29007P215C | 7/11/2025 | UP29007P215 | Umwelt | 290 | 0.330 | 10.28 | 8.58 | 0.83 | PAG |
| UPBH29007P219C | 7/11/2025 | UP29007P219 | Umwelt | 290 | 0.300 | 6.80 | 7.30 | 1.07 | PAG |
| UPBH29007P78C | 7/11/2025 | UP29007P78 | Umwelt | 290 | 0.120 | 3.67 | 6.16 | 1.68 | NAG |
| UPBH29007P81F | 7/11/2025 | UP29007P81 | Umwelt | 290 | 0.130 | 3.28 | 5.01 | 1.53 | NAG |
| UPBH29007P84F | 7/11/2025 | UP29007P84 | Umwelt | 290 | 0.130 | 4.08 | 4.98 | 1.22 | NAG |
| UPBH29007P87F | 7/11/2025 | UP29007P87 | Umwelt | 290 | 0.170 | 5.02 | 9.47 | 1.89 | PAG |
| UPBH29007P24F | 7/13/2025 | UP29007P24 | Umwelt | 290 | 0.080 | 2.32 | 4.70 | 2.02 | NAG |
| UPBH29007P28F | 7/13/2025 | UP29007P28 | Umwelt | 290 | 0.070 | 2.20 | 7.44 | 3.38 | NAG |
| UPBH29007P21F | 7/13/2025 | UP29007P21 | Umwelt | 290 | 0.120 | 3.47 | 5.19 | 1.50 | NAG |
| UPBH29007P15F | 7/13/2025 | UP29007P15 | Umwelt | 290 | 0.250 | 7.71 | 6.55 | 0.85 | PAG |
| UPBH29007P47F | 7/13/2025 | UP29007P47 | Umwelt | 290 | 0.040 | 1.14 | 6.95 | 6.09 | NAG |
| UPBH29008P206F | 7/14/2025 | UP29008P206 | Umwelt | 290 | 0.040 | 1.33 | 6.21 | 4.68 | NAG |
| UPBH29008P223F | 7/14/2025 | UP29008P223 | Umwelt | 290 | 0.050 | 1.28 | 5.95 | 4.65 | NAG |
| UPBH29008P230C | 7/14/2025 | UP29008P230 | Umwelt | 290 | 0.200 | 6.12 | 10.18 | 1.66 | PAG |
| UPBH29008P209F | 7/15/2025 | UP29008P209 | Umwelt | 290 | 0.340 | 9.90 | 8.37 | 0.85 | PAG |
| UPBH29008P242C | 7/15/2025 | UP29008P242 | Umwelt | 290 | 0.220 | 6.75 | 10.11 | 1.50 | PAG |
| UPBH29008P132F | 7/15/2025 | UP29008P132 | Umwelt | 290 | 0.320 | 7.58 | 7.53 | 0.99 | PAG |
| UPBH29008P135F | 7/15/2025 | UP29008P135 | Umwelt | 290 | 0.360 | 10.59 | 12.25 | 1.16 | PAG |
| UPBH29008P138F | 7/15/2025 | UP29008P138 | Umwelt | 290 | 0.560 | 16.42 | 9.58 | 0.58 | PAG |
| UPBH29008P156F | 7/15/2025 | UP29008P156 | Umwelt | 290 | 0.410 | 11.69 | 9.31 | 0.80 | PAG |
| UPBH29008P162C | 7/15/2025 | UP29008P162 | Umwelt | 290 | 0.170 | 5.02 | 6.88 | 1.37 | PAG |
| UPBH29008P191C | 7/15/2025 | UP29008P191 | Umwelt | 290 | 0.580 | 17.40 | 8.97 | 0.52 | PAG |
| UPBH29008P113C | 7/16/2025 | UP29008P113 | Umwelt | 290 | - | 0.03 | 8.04 | N/A | NAG |
| UPBH29008P116C | 7/16/2025 | UP29008P116 | Umwelt | 290 | 0.050 | 1.11 | 7.61 | 6.84 | NAG |
| UPBH29008P119C | 7/16/2025 | UP29008P119 | Umwelt | 290 | 0.130 | 0.03 | 9.66 | N/A | NAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29007P157C | 7/17/2025 | UP29007P157 | Umwelt | 290 | 0.090 | 1.55 | 6.56 | 4.24 | NAG |
| UPBH29007P199C | 7/17/2025 | UP29007P199 | Umwelt | 290 | 0.140 | 3.52 | 4.25 | 1.21 | NAG |
| UPBH29007P30C | 7/17/2025 | UP29007P30 | Umwelt | 290 | 0.350 | 10.12 | 9.42 | 0.93 | PAG |
| UPBH29007P110C | 7/17/2025 | UP29007P110 | Umwelt | 290 | 0.030 | 0.74 | 5.86 | 7.88 | NAG |
| UPBH29008P27C | 7/17/2025 | UP29008P27 | Umwelt | 290 | 0.130 | 2.39 | 6.60 | 2.76 | NAG |
| UPBH29008P30C | 7/17/2025 | UP29008P30 | Umwelt | 290 | 0.050 | 1.31 | 5.34 | 4.07 | NAG |
| UPBH29008P59C | 7/17/2025 | UP29008P59 | Umwelt | 290 | 0.070 | 2.04 | 6.03 | 2.96 | NAG |
| UPBH29008P62C | 7/17/2025 | UP29008P62 | Umwelt | 290 | 0.090 | 1.61 | 5.22 | 3.25 | NAG |
| UPBH29008P65C | 7/17/2025 | UP29008P65 | Umwelt | 290 | 0.090 | 1.52 | 6.48 | 4.26 | NAG |
| UPBH29007P72C | 7/17/2025 | UP29007P72 | Umwelt | 290 | 0.460 | 13.42 | 8.98 | 0.67 | PAG |
| UPBH29008P24C | 7/17/2025 | UP29008P24 | Umwelt | 290 | 0.270 | 2.70 | 7.70 | 2.85 | PAG |
| UPBH29013P29C | 7/19/2025 | UP29013P29 | Umwelt | 290 | 3.800 | 109.46 | 7.46 | 0.07 | PAG |
| UPBH29013P31C | 7/19/2025 | UP29013P31 | Umwelt | 290 | 1.460 | 40.22 | 7.08 | 0.18 | PAG |
| UPBH29013P34C | 7/19/2025 | UP29013P34 | Umwelt | 290 | 0.270 | 6.21 | 7.43 | 1.20 | PAG |
| UPBH29013P04C | 7/19/2025 | UP29013P04 | Umwelt | 290 | 0.790 | 24.72 | 7.90 | 0.32 | PAG |
| UPBH29013P07C | 7/19/2025 | UP29013P07 | Umwelt | 290 | 1.450 | 42.94 | 8.13 | 0.19 | PAG |
| UPBH29013P09C | 7/19/2025 | UP29013P09 | Umwelt | 290 | 0.110 | 2.39 | 7.71 | 3.23 | NAG |
| UPBH29014P114C | 7/21/2025 | UP29014P114 | Umwelt | 290 | 0.650 | 19.79 | 7.12 | 0.36 | PAG |
| UPBH29014P125C | 7/21/2025 | UP29014P125 | Umwelt | 290 | 1.440 | 45.04 | 9.55 | 0.21 | PAG |
| UPBH29014P15C | 7/21/2025 | UP29014P15 | Umwelt | 290 | 0.630 | 18.16 | 10.62 | 0.58 | PAG |
| UPBH29014P19C | 7/21/2025 | UP29014P19 | Umwelt | 290 | 0.180 | 5.23 | 7.73 | 1.48 | PAG |
| UPBH29014P22C | 7/21/2025 | UP29014P22 | Umwelt | 290 | 0.230 | 6.57 | 7.99 | 1.22 | PAG |
| UPBH29014P49C | 7/21/2025 | UP29014P49 | Umwelt | 290 | 0.330 | 9.99 | 8.89 | 0.89 | PAG |
| UPBH29014P53C | 7/21/2025 | UP29014P53 | Umwelt | 290 | 0.810 | 24.24 | 17.48 | 0.72 | PAG |
| UPBH29014P56C | 7/21/2025 | UP29014P56 | Umwelt | 290 | 0.870 | 26.18 | 7.84 | 0.30 | PAG |
| UPBH29014P82C | 7/21/2025 | UP29014P82 | Umwelt | 290 | 0.680 | 19.93 | 10.61 | 0.53 | PAG |
| UPBH29014P88C | 7/21/2025 | UP29014P88 | Umwelt | 290 | 0.610 | 19.14 | 22.45 | 1.17 | PAG |
| UPBH29011P143C | 7/22/2025 | UP29011P143 | Umwelt | 290 | 0.470 | 13.28 | 11.52 | 0.87 | PAG |
| UPBH29011P146C | 7/22/2025 | UP29011P146 | Umwelt | 290 | 0.090 | 2.09 | 4.99 | 2.39 | NAG |
| UPBH29011P149C | 7/22/2025 | UP29011P149 | Umwelt | 290 | 0.150 | 4.48 | 9.12 | 2.03 | NAG |
| UPBH29011P152C | 7/22/2025 | UP29011P152 | Umwelt | 290 | 0.270 | 7.71 | 6.85 | 0.89 | PAG |
| UPBH29011P155C | 7/22/2025 | UP29011P155 | Umwelt | 290 | 0.120 | 3.63 | 9.18 | 2.53 | NAG |
| UPBH29011P158C | 7/22/2025 | UP29011P158 | Umwelt | 290 | 1.350 | 42.27 | 8.64 | 0.20 | PAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29011P83C | 7/22/2025 | UP29011P83 | Umwelt | 290 | 0.120 | 3.49 | 7.44 | 2.13 | NAG |
| UPBH29011P86C | 7/22/2025 | UP29011P86 | Umwelt | 290 | 0.060 | 1.65 | 8.10 | 4.90 | NAG |
| UPBH29011P89C | 7/22/2025 | UP29011P89 | Umwelt | 290 | 0.350 | 10.30 | 6.98 | 0.68 | PAG |
| UPBH29011P92C | 7/22/2025 | UP29011P92 | Umwelt | 290 | 0.390 | 11.56 | 8.19 | 0.71 | PAG |
| UPBH29011P95C | 7/22/2025 | UP29011P95 | Umwelt | 290 | 0.180 | 5.15 | 8.55 | 1.66 | PAG |
| UPBH29011P98C | 7/22/2025 | UP29011P98 | Umwelt | 290 | 0.250 | 7.35 | 12.04 | 1.64 | PAG |
| UPBH29016P64C | 7/23/2025 | UP29016P64 | Umwelt | 290 | 0.330 | 10.29 | 9.78 | 0.95 | PAG |
| UPBH29016P67C | 7/23/2025 | UP29016P67 | Umwelt | 290 | 0.010 | 0.03 | 16.02 | N/A | NAG |
| UPBH29016P70C | 7/23/2025 | UP29016P70 | Umwelt | 290 | 0.600 | 18.43 | 20.98 | 1.14 | PAG |
| UPBH29016P73C | 7/23/2025 | UP29016P73 | Umwelt | 290 | - | 0.03 | 6.25 | N/A | NAG |
| UPBH29016P78C | 7/23/2025 | UP29016P78 | Umwelt | 290 | 0.410 | 11.82 | 11.81 | 1.00 | PAG |
| UPBH29016P81C | 7/23/2025 | UP29016P81 | Umwelt | 290 | 0.240 | 6.65 | 12.07 | 1.82 | PAG |
| UPBH29012P106C | 7/24/2025 | UP29012P106 | Umwelt | 290 | 0.100 | 2.75 | 8.97 | 3.26 | NAG |
| UPBH29012P109C | 7/24/2025 | UP29012P109 | Umwelt | 290 | 0.170 | 4.44 | 7.73 | 1.74 | PAG |
| UPBH29012P112C | 7/24/2025 | UP29012P112 | Umwelt | 290 | 0.180 | 5.21 | 13.60 | 2.61 | PAG |
| UPBH29012P115C | 7/24/2025 | UP29012P115 | Umwelt | 290 | 0.560 | 15.53 | 15.55 | 1.00 | PAG |
| UPBH29012P136C | 7/24/2025 | UP29012P136 | Umwelt | 290 | 0.110 | 3.11 | 7.15 | 2.30 | NAG |
| UPBH29012P41C | 7/24/2025 | UP29012P41 | Umwelt | 290 | 0.650 | 19.65 | 9.47 | 0.48 | PAG |
| UPBH29012P44C | 7/24/2025 | UP29012P44 | Umwelt | 290 | 0.350 | 10.44 | 9.14 | 0.88 | PAG |
| UPBH29012P47C | 7/24/2025 | UP29012P47 | Umwelt | 290 | 0.150 | 3.68 | 7.00 | 1.90 | NAG |
| UPBH29012P50C | 7/24/2025 | UP29012P50 | Umwelt | 290 | 0.140 | 3.94 | 7.75 | 1.97 | NAG |
| UPBH29012P53C | 7/24/2025 | UP29012P53 | Umwelt | 290 | 0.090 | 2.42 | 6.87 | 2.84 | NAG |
| UPBH29012P93C | 7/24/2025 | UP29012P93 | Umwelt | 290 | 0.060 | 1.61 | 9.48 | 5.90 | NAG |
| UPBH29012P96C | 7/24/2025 | UP29012P96 | Umwelt | 290 | 0.080 | 1.28 | 6.36 | 4.96 | NAG |
| UPBH29011P36C | 7/26/2025 | UP29011P36 | Umwelt | 290 | 0.660 | 20.63 | 8.35 | 0.40 | PAG |
| UPBH29011P39C | 7/26/2025 | UP29011P39 | Umwelt | 290 | 0.250 | 7.49 | 7.59 | 1.01 | PAG |
| UPBH29011P22C | 7/27/2025 | UP29011P22 | Umwelt | 290 | 0.860 | 26.96 | 8.12 | 0.30 | PAG |
| UPBH29011P25C | 7/27/2025 | UP29011P25 | Umwelt | 290 | 0.250 | 7.81 | 7.01 | 0.90 | PAG |
| UPBH29011P28C | 7/27/2025 | UP29011P28 | Umwelt | 290 | 0.230 | 6.29 | 8.44 | 1.34 | PAG |
| UPBH29012P187C | 7/28/2025 | UP29012P187 | Umwelt | 290 | 0.100 | 1.50 | 6.22 | 4.15 | NAG |
| UPBH29012P190C | 7/28/2025 | UP29012P190 | Umwelt | 290 | 0.090 | 2.18 | 6.04 | 2.78 | NAG |
| UPBH29012P147C | 7/28/2025 | UP29012P147 | Umwelt | 290 | 0.170 | 4.79 | 11.24 | 2.35 | PAG |
| UPBH29012P151C | 7/28/2025 | UP29012P151 | Umwelt | 290 | 0.540 | 14.38 | 10.63 | 0.74 | PAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29019P55C | 7/28/2025 | UP29019P55 | Umwelt | 290 | 0.260 | 7.22 | 7.29 | 1.01 | PAG |
| UPBH29019P57C | 7/28/2025 | UP29019P57 | Umwelt | 290 | 0.790 | 22.80 | 10.48 | 0.46 | PAG |
| UPBH29019P60C | 7/28/2025 | UP29019P60 | Umwelt | 290 | 0.400 | 11.12 | 9.96 | 0.90 | PAG |
| UPBH29019P62C | 7/28/2025 | UP29019P62 | Umwelt | 290 | 0.320 | 8.12 | 7.70 | 0.95 | PAG |
| UPBH29019P83C | 7/28/2025 | UP29019P83 | Umwelt | 290 | 0.010 | 0.03 | 4.71 | N/A | NAG |
| UPBH29019P85C | 7/28/2025 | UP29019P85 | Umwelt | 290 | 0.470 | 12.32 | 9.63 | 0.78 | PAG |
| UPBH29019P87C | 7/28/2025 | UP29019P87 | Umwelt | 290 | - | 0.03 | 6.23 | N/A | NAG |
| UPBH29019P89C | 7/28/2025 | UP29019P89 | Umwelt | 290 | 0.450 | 10.60 | 6.91 | 0.65 | PAG |
| UPBH29019P91C | 7/28/2025 | UP29019P91 | Umwelt | 290 | 0.370 | 9.41 | 9.50 | 1.01 | PAG |
| UPBH29012P153C | 7/29/2025 | UP29012P153 | Umwelt | 290 | 0.100 | 2.77 | 6.53 | 2.36 | NAG |
| UPBH29012P178C | 7/29/2025 | UP29012P178 | Umwelt | 290 | 0.080 | 1.98 | 6.58 | 3.32 | NAG |
| UPBH29012P181C | 7/29/2025 | UP29012P181 | Umwelt | 290 | 0.010 | 0.32 | 6.15 | 19.08 | NAG |
| UPBH29012P184C | 7/29/2025 | UP29012P184 | Umwelt | 290 | 0.030 | 0.51 | 5.33 | 10.39 | NAG |
| UPBH29012P194C | 7/29/2025 | UP29012P194 | Umwelt | 290 | 0.130 | 4.04 | 7.34 | 1.81 | NAG |
| UPBH29012P140C | 7/29/2025 | UP29012P140 | Umwelt | 290 | - | 0.03 | 4.72 | N/A | NAG |
| UPBH29012P143C | 7/29/2025 | UP29012P143 | Umwelt | 290 | 0.110 | 2.63 | 7.05 | 2.68 | NAG |
| UPBH29010P07C | 8/1/2025 | UP29010P07 | Umwelt | 290 | 0.090 | 1.58 | 6.50 | 4.11 | NAG |
| UPBH29010P10C | 8/1/2025 | UP29010P10 | Umwelt | 290 | 0.160 | 4.88 | 8.01 | 1.64 | PAG |
| UPBH29010P101C | 8/1/2025 | UP29010P101 | Umwelt | 290 | 0.440 | 13.81 | 5.61 | 0.41 | PAG |
| UPBH29010P104C | 8/1/2025 | UP29010P104 | Umwelt | 290 | - | 0.03 | 4.50 | N/A | NAG |
| UPBH29010P107C | 8/1/2025 | UP29010P107 | Umwelt | 290 | 0.090 | 2.45 | 4.38 | 1.79 | NAG |
| UPBH29010P110C | 8/1/2025 | UP29010P110 | Umwelt | 290 | 0.080 | 1.37 | 4.88 | 3.57 | NAG |
| UPBH29010P13C | 8/1/2025 | UP29010P13 | Umwelt | 290 | 0.100 | 2.35 | 5.15 | 2.19 | NAG |
| UPBH29010P16C | 8/1/2025 | UP29010P16 | Umwelt | 290 | 0.130 | 3.79 | 4.86 | 1.28 | NAG |
| UPBH29010P170C | 8/1/2025 | UP29010P170 | Umwelt | 290 | 0.080 | 2.35 | 5.25 | 2.23 | NAG |
| UPBH29010P173C | 8/1/2025 | UP29010P173 | Umwelt | 290 | 0.080 | 2.34 | 4.37 | 1.87 | NAG |
| UPBH29010P176C | 8/1/2025 | UP29010P176 | Umwelt | 290 | 0.140 | 3.11 | 4.24 | 1.37 | NAG |
| UPBH29010P179C | 8/1/2025 | UP29010P179 | Umwelt | 290 | 0.150 | 2.78 | 5.38 | 1.94 | NAG |
| UPBH29010P182C | 8/1/2025 | UP29010P182 | Umwelt | 290 | 0.080 | 2.02 | 5.38 | 2.66 | NAG |
| UPBH29010P20C | 8/1/2025 | UP29010P20 | Umwelt | 290 | 0.100 | 2.75 | 5.26 | 1.91 | NAG |
| UPBH29010P221C | 8/1/2025 | UP29010P221 | Umwelt | 290 | 0.220 | 6.89 | 8.22 | 1.19 | PAG |
| UPBH29010P224C | 8/1/2025 | UP29010P224 | Umwelt | 290 | 0.080 | 2.23 | 6.97 | 3.13 | NAG |
| UPBH29010P227C | 8/1/2025 | UP29010P227 | Umwelt | 290 | 0.080 | 2.16 | 10.25 | 4.76 | NAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29010P230C | 8/1/2025 | UP29010P230 | Umwelt | 290 | - | 0.03 | 6.63 | N/A | NAG |
| UPBH29010P233C | 8/1/2025 | UP29010P233 | Umwelt | 290 | 0.360 | 9.19 | 7.25 | 0.79 | PAG |
| UPBH29010P236C | 8/1/2025 | UP29010P236 | Umwelt | 290 | 0.060 | 1.56 | 8.22 | 5.27 | NAG |
| UPBH29010P259C | 8/1/2025 | UP29010P259 | Umwelt | 290 | 0.010 | 0.03 | 6.00 | N/A | NAG |
| UPBH29010P47C | 8/1/2025 | UP29010P47 | Umwelt | 290 | 0.120 | 3.55 | 7.99 | 2.25 | NAG |
| UPBH29010P50C | 8/1/2025 | UP29010P50 | Umwelt | 290 | 0.100 | 1.99 | 7.52 | 3.77 | NAG |
| UPBH29010P53C | 8/1/2025 | UP29010P53 | Umwelt | 290 | 0.110 | 3.43 | 5.63 | 1.64 | NAG |
| UPBH29010P56C | 8/1/2025 | UP29010P56 | Umwelt | 290 | 0.170 | 3.94 | 5.50 | 1.40 | PAG |
| UPBH29010P59C | 8/1/2025 | UP29010P59 | Umwelt | 290 | 0.160 | 3.06 | 4.89 | 1.60 | PAG |
| UPBH29030P12C | 8/4/2025 | UP29030P12 | Umwelt | 290 | - | 0.03 | 10.14 | N/A | NAG |
| UPBH29030P129C | 8/4/2025 | UP29030P129 | Umwelt | 290 | 0.080 | 2.12 | 11.65 | 5.49 | NAG |
| UPBH29030P15C | 8/4/2025 | UP29030P15 | Umwelt | 290 | 0.250 | 5.99 | 8.42 | 1.41 | PAG |
| UPBH29030P186C | 8/4/2025 | UP29030P186 | Umwelt | 290 | 0.060 | 1.26 | 10.40 | 8.25 | NAG |
| UPBH29030P190C | 8/4/2025 | UP29030P190 | Umwelt | 290 | - | 0.03 | 10.89 | N/A | NAG |
| UPBH29030P68C | 8/4/2025 | UP29030P68 | Umwelt | 290 | 0.430 | 12.20 | 7.29 | 0.60 | PAG |
| UPBH29030P71C | 8/4/2025 | UP29030P71 | Umwelt | 290 | 0.070 | 2.15 | 10.88 | 5.07 | NAG |
| UPBH29030P253C | 8/4/2025 | UP29030P253 | Umwelt | 290 | 0.240 | 6.16 | 10.89 | 1.77 | PAG |
| UPBH29030P38C | 8/4/2025 | UP29030P38 | Umwelt | 290 | 0.750 | 17.29 | 10.89 | 0.63 | PAG |
| UPBH29030P51C | 8/5/2025 | UP29030P51 | Umwelt | 290 | 0.010 | 0.03 | 7.19 | N/A | NAG |
| UPBH29030P217C | 8/5/2025 | UP29030P217 | Umwelt | 290 | 0.030 | 0.97 | 7.89 | 8.14 | NAG |
| UPBH29030P227C | 8/5/2025 | UP29030P227 | Umwelt | 290 | 3.120 | 97.38 | 32.47 | 0.33 | PAG |
| UPBH29030P174C | 8/5/2025 | UP29030P174 | Umwelt | 290 | 0.050 | 1.06 | 5.74 | 5.42 | NAG |
| UPBH29030P01C | 8/5/2025 | UP29030P01 | Umwelt | 290 | 0.970 | 29.57 | 20.40 | 0.69 | PAG |
| UPBH29030P112C | 8/5/2025 | UP29030P112 | Umwelt | 290 | 0.240 | 6.61 | 11.92 | 1.80 | PAG |
| UPBH29030P115C | 8/5/2025 | UP29030P115 | Umwelt | 290 | 0.240 | 7.28 | 7.40 | 1.02 | PAG |
| UPBH29030P118C | 8/5/2025 | UP29030P118 | Umwelt | 290 | 0.070 | 1.88 | 7.70 | 4.09 | NAG |
| UPBH29026P244C | 8/6/2025 | UP29026P244 | Umwelt | 290 | 0.110 | 3.46 | 14.88 | 4.30 | NAG |
| UPBH29026P12C | 8/6/2025 | UP29026P12 | Umwelt | 290 | 0.550 | 17.10 | 19.21 | 1.12 | PAG |
| UPBH29026P123C | 8/6/2025 | UP29026P123 | Umwelt | 290 | 0.660 | 20.06 | 27.37 | 1.36 | PAG |
| UPBH29026P125C | 8/6/2025 | UP29026P125 | Umwelt | 290 | 0.390 | 12.05 | 16.96 | 1.41 | PAG |
| UPBH29026P15C | 8/6/2025 | UP29026P15 | Umwelt | 290 | 0.230 | 7.09 | 13.26 | 1.87 | PAG |
| UPBH29026P183C | 8/6/2025 | UP29026P183 | Umwelt | 290 | 0.210 | 6.62 | 5.59 | 0.84 | PAG |
| UPBH29026P198C | 8/7/2025 | UP29026P198 | Umwelt | 290 | 0.210 | 6.55 | 10.62 | 1.62 | PAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29026P169C | 8/7/2025 | UP29026P169 | Umwelt | 290 | 0.570 | 16.60 | 17.21 | 1.04 | PAG |
| UPBH29026P171C | 8/7/2025 | UP29026P171 | Umwelt | 290 | 0.220 | 7.02 | 6.95 | 0.99 | PAG |
| UPBH29026P251C | 8/7/2025 | UP29026P251 | Umwelt | 290 | 0.160 | 5.06 | 5.79 | 1.14 | PAG |
| UPBH29026P282C | 8/7/2025 | UP29026P282 | Umwelt | 290 | 0.080 | 2.05 | 5.67 | 2.76 | NAG |
| UPBH29026P287C | 8/7/2025 | UP29026P287 | Umwelt | 290 | 1.700 | 52.98 | 18.38 | 0.35 | PAG |
| UPBH29026P81C | 8/7/2025 | UP29026P81 | Umwelt | 290 | 0.390 | 12.12 | 11.83 | 0.98 | PAG |
| UPBH29026P83C | 8/7/2025 | UP29026P83 | Umwelt | 290 | 0.270 | 7.61 | 8.56 | 1.12 | PAG |
| UPBH29026P10C | 8/7/2025 | UP29026P10 | Umwelt | 290 | - | 0.03 | 4.33 | N/A | NAG |
| UPBH29026P108C | 8/7/2025 | UP29026P108 | Umwelt | 290 | 0.460 | 13.99 | 19.83 | 1.42 | PAG |
| UPBH29040P01 | 8/8/2025 | UP29040P01 | Umwelt | 290 | 0.080 | 2.12 | 9.30 | 4.38 | NAG |
| UPBH29040P04 | 8/8/2025 | UP29040P04 | Umwelt | 290 | 0.130 | 3.63 | 8.30 | 2.28 | NAG |
| UPBH29040P107 | 8/8/2025 | UP29040P107 | Umwelt | 290 | 0.210 | 6.05 | 7.76 | 1.28 | PAG |
| UPBH29040P110 | 8/8/2025 | UP29040P110 | Umwelt | 290 | 0.350 | 10.03 | 5.54 | 0.55 | PAG |
| UPBH29040P163 | 8/8/2025 | UP29040P163 | Umwelt | 290 | 0.190 | 5.05 | 7.96 | 1.58 | PAG |
| UPBH29040P204 | 8/8/2025 | UP29040P204 | Umwelt | 290 | 0.180 | 4.43 | 7.73 | 1.74 | PAG |
| UPBH29040P246 | 8/8/2025 | UP29040P246 | Umwelt | 290 | 0.880 | 26.15 | 13.33 | 0.51 | PAG |
| UPBH29040P249 | 8/8/2025 | UP29040P249 | Umwelt | 290 | 1.150 | 35.30 | 20.64 | 0.58 | PAG |
| UPBH29040P259 | 8/9/2025 | UP29040P259 | Umwelt | 290 | 0.230 | 6.38 | 12.97 | 2.03 | PAG |
| UPBH29040P236 | 8/9/2025 | UP29040P236 | Umwelt | 290 | 0.410 | 10.99 | 4.72 | 0.43 | PAG |
| UPBH29040P239 | 8/9/2025 | UP29040P239 | Umwelt | 290 | 0.320 | 7.63 | 4.66 | 0.61 | PAG |
| UPBH29040P96 | 8/9/2025 | UP29040P96 | Umwelt | 290 | 0.130 | 3.83 | 6.84 | 1.79 | NAG |
| UPBH29040P98 | 8/9/2025 | UP29040P98 | Umwelt | 290 | - | 0.03 | 6.16 | N/A | NAG |
| UPBH29040P166 | 8/9/2025 | UP29040P166 | Umwelt | 290 | 0.060 | 1.74 | 7.07 | 4.06 | NAG |
| UPBH29040P169 | 8/9/2025 | UP29040P169 | Umwelt | 290 | 0.220 | 6.57 | 7.61 | 1.16 | PAG |
| UPBH29040P172 | 8/9/2025 | UP29040P172 | Umwelt | 290 | 0.120 | 3.07 | 7.44 | 2.43 | NAG |
| UPBH29040P145 | 8/9/2025 | UP29040P145 | Umwelt | 290 | 0.120 | 3.59 | 8.77 | 2.45 | NAG |
| UPBH29040P15 | 8/9/2025 | UP29040P15 | Umwelt | 290 | 0.100 | 2.57 | 6.16 | 2.39 | NAG |
| UPBH29040P12 | 8/9/2025 | UP29040P12 | Umwelt | 290 | 0.990 | 30.04 | 7.08 | 0.24 | PAG |
| UPBH29040P09 | 8/9/2025 | UP29040P09 | Umwelt | 290 | 0.140 | 3.99 | 7.01 | 1.75 | NAG |
| UPBH29040P101 | 8/9/2025 | UP29040P101 | Umwelt | 290 | 0.170 | 4.54 | 6.55 | 1.44 | PAG |
| UPBH29040P104 | 8/9/2025 | UP29040P104 | Umwelt | 290 | 0.180 | 4.80 | 8.37 | 1.74 | PAG |
| UPBH29040P177 | 8/10/2025 | UP29040P177 | Umwelt | 290 | 0.060 | 1.79 | 14.09 | 7.86 | NAG |
| UPBH29040P18 | 8/10/2025 | UP29040P18 | Umwelt | 290 | 0.160 | 3.98 | 14.82 | 3.72 | NAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29040P93 | 8/10/2025 | UP29040P93 | Umwelt | 290 | 0.400 | 11.27 | 14.72 | 1.31 | PAG |
| UPBH29040P23 | 8/11/2025 | UP29040P23 | Umwelt | 290 | 0.140 | 2.26 | 15.88 | 7.01 | NAG |
| UPBH29040P27 | 8/11/2025 | UP29040P27 | Umwelt | 290 | 0.040 | 0.88 | 15.21 | 17.32 | NAG |
| UPBH29040P81 | 8/11/2025 | UP29040P81 | Umwelt | 290 | 0.050 | 1.32 | 14.71 | 11.11 | NAG |
| UPBH29040P183 | 8/11/2025 | UP29040P183 | Umwelt | 290 | 0.110 | 3.21 | 20.12 | 6.27 | NAG |
| UPBH29040P131 | 8/11/2025 | UP29040P131 | Umwelt | 290 | 0.090 | 2.23 | 15.11 | 6.77 | NAG |
| UPBH29034P01 | 8/12/2025 | UP29034P01 | Umwelt | 290 | 0.370 | 11.31 | 4.90 | 0.43 | PAG |
| UPBH29034P101 | 8/12/2025 | UP29034P101 | Umwelt | 290 | 0.110 | 3.43 | 5.21 | 1.52 | NAG |
| UPBH29034P104 | 8/12/2025 | UP29034P104 | Umwelt | 290 | 0.110 | 3.43 | 7.43 | 2.16 | NAG |
| UPBH29034P157 | 8/12/2025 | UP29034P157 | Umwelt | 290 | 0.300 | 9.42 | 4.77 | 0.51 | PAG |
| UPBH29034P160 | 8/12/2025 | UP29034P160 | Umwelt | 290 | 0.060 | 1.71 | 5.87 | 3.43 | NAG |
| UPBH29034P260 | 8/12/2025 | UP29034P260 | Umwelt | 290 | 0.080 | 2.44 | 6.31 | 2.58 | NAG |
| UPBH29034P04 | 8/12/2025 | UP29034P04 | Umwelt | 290 | 0.260 | 7.63 | 2.78 | 0.36 | PAG |
| UPBH29009P76 | 8/12/2025 | UP29009P76 | Umwelt | 290 | 0.030 | 0.85 | 9.40 | 11.12 | NAG |
| UPBH29009P81 | 8/12/2025 | UP29009P81 | Umwelt | 290 | 0.020 | 0.49 | 8.35 | 16.92 | NAG |
| UPBH29009P44 | 8/12/2025 | UP29009P44 | Umwelt | 290 | 0.040 | 1.10 | 5.50 | 4.99 | NAG |
| UPBH29009P47 | 8/12/2025 | UP29009P47 | Umwelt | 290 | - | 0.03 | 5.48 | N/A | NAG |
| UPBH29009P52 | 8/12/2025 | UP29009P52 | Umwelt | 290 | 0.110 | 3.05 | 7.86 | 2.57 | NAG |
| UPBH29009P55 | 8/12/2025 | UP29009P55 | Umwelt | 290 | 0.290 | 8.43 | 13.29 | 1.58 | PAG |
| UPBH29009P63 | 8/12/2025 | UP29009P63 | Umwelt | 290 | 0.190 | 5.96 | 15.10 | 2.53 | PAG |
| UPBH29009P66 | 8/12/2025 | UP29009P66 | Umwelt | 290 | - | 0.03 | 9.69 | N/A | NAG |
| UPBH29009P73 | 8/13/2025 | UP29009P73 | Umwelt | 290 | - | 0.03 | 8.62 | N/A | NAG |
| UPBH29009P41 | 8/13/2025 | UP29009P41 | Umwelt | 290 | 0.050 | 1.58 | 6.94 | 4.38 | NAG |
| UPBH29034P60 | 8/13/2025 | UP29034P60 | Umwelt | 290 | 0.180 | 5.61 | 6.93 | 1.23 | PAG |
| UPBH29034P264 | 8/13/2025 | UP29034P264 | Umwelt | 290 | 0.040 | 1.33 | 7.10 | 5.34 | NAG |
| UPBH29034P14 | 8/13/2025 | UP29034P14 | Umwelt | 290 | 0.040 | 1.25 | 6.95 | 5.56 | NAG |
| UPBH29034P149 | 8/13/2025 | UP29034P149 | Umwelt | 290 | 0.170 | 5.33 | 6.51 | 1.22 | PAG |
| UPBH29034P254 | 8/13/2025 | UP29034P254 | Umwelt | 290 | 0.660 | 20.44 | 13.94 | 0.68 | PAG |
| UPBH29034P91 | 8/13/2025 | UP29034P91 | Umwelt | 290 | 2.440 | 76.28 | 41.30 | 0.54 | PAG |
| UPBH29034P94 | 8/13/2025 | UP29034P94 | Umwelt | 290 | - | 0.03 | 5.26 | N/A | NAG |
| UPBH29034P11 | 8/13/2025 | UP29034P11 | Umwelt | 290 | - | 0.03 | 4.29 | N/A | NAG |
| UPBH29034P35 | 8/13/2025 | UP29034P35 | Umwelt | 290 | 0.310 | 9.60 | 8.98 | 0.93 | PAG |
| UPBH29034P169 | 8/14/2025 | UP29034P169 | Umwelt | 290 | 0.030 | 0.93 | 16.05 | 17.32 | NAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29034P190 | 8/14/2025 | UP29034P190 | Umwelt | 290 | 0.210 | 6.27 | 16.49 | 2.63 | PAG |
| UPBH29034P23 | 8/14/2025 | UP29034P23 | Umwelt | 290 | 0.300 | 9.16 | 19.70 | 2.15 | PAG |
| UPBH29034P271 | 8/14/2025 | UP29034P271 | Umwelt | 290 | 0.830 | 23.91 | 16.92 | 0.71 | PAG |
| UPBH29034P276 | 8/14/2025 | UP29034P276 | Umwelt | 290 | 2.550 | 77.56 | 12.81 | 0.17 | PAG |
| UPBH29034P279 | 8/14/2025 | UP29034P279 | Umwelt | 290 | 1.040 | 31.84 | 25.48 | 0.80 | PAG |
| UPBH29034P83 | 8/14/2025 | UP29034P83 | Umwelt | 290 | 0.510 | 15.13 | 22.97 | 1.52 | PAG |
| UPBH29034P87 | 8/14/2025 | UP29034P87 | Umwelt | 290 | 0.020 | 0.48 | 19.36 | 40.04 | NAG |
| UPBH29034P282 | 8/15/2025 | UP29034P282 | Umwelt | 290 | 0.140 | 4.28 | 14.23 | 3.33 | NAG |
| UPBH29034P286 | 8/15/2025 | UP29034P286 | Umwelt | 290 | 2.430 | 73.03 | 63.88 | 0.87 | PAG |
| UPBH29034P26 | 8/15/2025 | UP29034P26 | Umwelt | 290 | 0.040 | 1.17 | 6.22 | 5.33 | NAG |
| UPBH29034P133 | 8/15/2025 | UP29034P133 | Umwelt | 290 | 0.050 | 1.58 | 7.87 | 4.98 | NAG |
| UPBH28002P3 | 8/16/2025 | UP28002P03 | Umwelt | 280 | 0.120 | 3.64 | 7.06 | 1.94 | NAG |
| UPBH28002P13 | 8/16/2025 | UP28002P13 | Umwelt | 280 | 0.140 | 4.23 | 5.90 | 1.39 | NAG |
| UPBH28002P16 | 8/16/2025 | UP28002P16 | Umwelt | 280 | 0.120 | 3.67 | 7.12 | 1.94 | NAG |
| UPBH28002P25 | 8/16/2025 | UP28002P25 | Umwelt | 280 | 0.130 | 3.72 | 6.18 | 1.66 | NAG |
| UPBH29020P18 | 8/18/2025 | UP29020P18 | Umwelt | 290 | 0.080 | 2.51 | 6.85 | 2.73 | NAG |
| UPBH29020P21 | 8/18/2025 | UP29020P21 | Umwelt | 290 | 0.150 | 4.45 | 9.70 | 2.18 | NAG |
| UPBH29020P107 | 8/18/2025 | UP29020P107 | Umwelt | 290 | 0.400 | 11.93 | 10.74 | 0.90 | PAG |
| UPBH29020P83 | 8/18/2025 | UP29020P83 | Umwelt | 290 | 0.260 | 8.25 | 11.11 | 1.35 | PAG |
| UPBH29020P97 | 8/19/2025 | UP29020P97 | Umwelt | 290 | 0.140 | 3.75 | 16.34 | 4.36 | NAG |
| UPBH29020P117 | 8/19/2025 | UP29020P117 | Umwelt | 290 | 0.450 | 12.81 | 11.85 | 0.92 | PAG |
| UPBH29020P144 | 8/19/2025 | UP29020P144 | Umwelt | 290 | 0.300 | 9.06 | 12.69 | 1.40 | PAG |
| UPBH29020P153 | 8/19/2025 | UP29020P153 | Umwelt | 290 | 0.120 | 2.81 | 6.53 | 2.32 | NAG |
| UPBH29020P158 | 8/19/2025 | UP29020P158 | Umwelt | 290 | 0.280 | 8.13 | 14.88 | 1.83 | PAG |
| UPBH29020P175 | 8/19/2025 | UP29020P175 | Umwelt | 290 | 0.260 | 7.19 | 11.98 | 1.67 | PAG |
| UPBH29020P26 | 8/19/2025 | UP29020P26 | Umwelt | 290 | 0.080 | 1.88 | 10.86 | 5.79 | NAG |
| UPBH29020P29 | 8/19/2025 | UP29020P29 | Umwelt | 290 | 0.360 | 9.69 | 14.61 | 1.51 | PAG |
| UPBH29020P78 | 8/19/2025 | UP29020P78 | Umwelt | 290 | 0.180 | 4.69 | 10.89 | 2.32 | PAG |
| UPBH29020P34 | 8/20/2025 | UP29020P34 | Umwelt | 290 | 0.330 | 9.69 | 16.00 | 1.65 | PAG |
| UPBH29020P35 | 8/20/2025 | UP29020P35 | Umwelt | 290 | 0.320 | 9.38 | 20.32 | 2.17 | PAG |
| UPBH29020P38 | 8/20/2025 | UP29020P38 | Umwelt | 290 | 0.130 | 3.75 | 10.40 | 2.77 | NAG |
| UPBH29020P39 | 8/20/2025 | UP29020P39 | Umwelt | 290 | 0.220 | 6.25 | 11.64 | 1.86 | PAG |
| UPBH29020P40 | 8/20/2025 | UP29020P40 | Umwelt | 290 | 0.390 | 11.88 | 39.88 | 3.36 | NAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29020P41 | 8/20/2025 | UP29020P41 | Umwelt | 290 | 0.120 | 3.13 | 8.64 | 2.76 | NAG |
| 297902 | 8/21/2025 | UP29025P181 | Umwelt | 290 | 0.510 | 12.36 | 10.64 | 0.86 | PAG |
| 297905 | 8/21/2025 | UP29025P197 | Umwelt | 290 | 0.250 | 7.80 | 10.01 | 1.28 | PAG |
| UPBH29025P23C | 8/22/2025 | UP29025P23 | Umwelt | 290 | 0.060 | 1.72 | 4.66 | 2.71 | NAG |
| UPBH29025P187C | 8/22/2025 | UP29025P187 | Umwelt | 290 | 0.350 | 10.81 | 32.26 | 2.99 | PAG |
| UPBH29025P144C | 8/22/2025 | UP29025P144 | Umwelt | 290 | 0.120 | 3.62 | 4.89 | 1.35 | NAG |
| UPBH29025P153C | 8/22/2025 | UP29025P153 | Umwelt | 290 | 0.360 | 10.55 | 6.25 | 0.59 | PAG |
| UPBH29025P162C | 8/22/2025 | UP29025P162 | Umwelt | 290 | 0.160 | 4.66 | 5.31 | 1.14 | PAG |
| UPBH29025P165C | 8/22/2025 | UP29025P165 | Umwelt | 290 | 0.110 | 3.40 | 5.63 | 1.66 | NAG |
| UPBH29025P70C | 8/22/2025 | UP29025P70 | Umwelt | 290 | 0.130 | 3.62 | 7.36 | 2.03 | NAG |
| UPBH29025P90C | 8/22/2025 | UP29025P90 | Umwelt | 290 | 0.080 | 2.21 | 6.28 | 2.84 | NAG |
| UPBH29025P45C | 8/22/2025 | UP29025P45 | Umwelt | 290 | 0.040 | 1.24 | 4.66 | 3.76 | NAG |
| UPBH29025P51C | 8/22/2025 | UP29025P51 | Umwelt | 290 | 0.170 | 4.92 | 7.10 | 1.44 | PAG |
| UPBH29025P54C | 8/22/2025 | UP29025P54 | Umwelt | 290 | 0.140 | 3.66 | 5.51 | 1.51 | NAG |
| UPBH29025P3C | 8/22/2025 | UP29025P3 | Umwelt | 290 | 0.260 | 8.03 | 5.29 | 0.66 | PAG |
| UPBH29025P110C | 8/22/2025 | UP29025P110 | Umwelt | 290 | 0.090 | 2.24 | 8.88 | 3.97 | NAG |
| UPBH29025P113C | 8/22/2025 | UP29025P113 | Umwelt | 290 | 0.300 | 9.11 | 4.62 | 0.51 | PAG |
| UPBH29025P131C | 8/22/2025 | UP29025P131 | Umwelt | 290 | 0.060 | 1.49 | 8.11 | 5.46 | NAG |
| UPBH29025P134C | 8/24/2025 | UP29025P134 | Umwelt | 290 | 1.760 | 54.90 | 22.81 | 0.42 | PAG |
| UPBH29025P65C | 8/24/2025 | UP29025P65 | Umwelt | 290 | 0.400 | 11.99 | 10.15 | 0.85 | PAG |
| UPBH29025P36C | 8/24/2025 | UP29025P36 | Umwelt | 290 | 1.190 | 34.94 | 9.29 | 0.27 | PAG |
| UPBH29041P122C | 8/27/2025 | UP29041P122 | Umwelt | 290 | 0.420 | 13.09 | 10.18 | 0.78 | PAG |
| UPBH29041P159C | 8/27/2025 | UP29041P159 | Umwelt | 290 | 0.080 | 2.64 | 11.55 | 4.38 | NAG |
| UPBH29041P162C | 8/27/2025 | UP29041P162 | Umwelt | 290 | 0.370 | 11.53 | 11.29 | 0.98 | PAG |
| UPBH29041P208C | 8/27/2025 | UP29041P208 | Umwelt | 290 | 0.120 | 3.69 | 8.61 | 2.33 | NAG |
| UPBH29041P212C | 8/27/2025 | UP29041P212 | Umwelt | 290 | 0.150 | 4.75 | 9.04 | 1.90 | NAG |
| UPBH29041P8C | 8/27/2025 | UP29041P8 | Umwelt | 290 | 1.230 | 38.40 | 11.13 | 0.29 | PAG |
| UPBH29041P87C | 8/27/2025 | UP29041P87 | Umwelt | 290 | 0.120 | 3.24 | 8.78 | 2.71 | NAG |
| UPBH29041P99C | 8/28/2025 | UP29041P99 | Umwelt | 290 | - | 0.03 | 7.78 | N/A | NAG |
| UPBH29041P37C | 8/28/2025 | UP29041P37 | Umwelt | 290 | - | 0.03 | 4.19 | N/A | NAG |
| UPBH29041P55C | 8/28/2025 | UP29041P55 | Umwelt | 290 | 0.820 | 25.59 | 7.21 | 0.28 | PAG |
| UPBH29041P72C | 8/28/2025 | UP29041P72 | Umwelt | 290 | 0.630 | 19.75 | 11.20 | 0.57 | PAG |
| UPBH29041P75C | 8/28/2025 | UP29041P75 | Umwelt | 290 | 0.080 | 2.57 | 10.39 | 4.05 | NAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29041P166C | 8/28/2025 | UP29041P166 | Umwelt | 290 | 0.350 | 10.98 | 13.79 | 1.26 | PAG |
| UPBH29041P174C | 8/28/2025 | UP29041P174 | Umwelt | 290 | 0.280 | 8.66 | 13.89 | 1.60 | PAG |
| UPBH29041P198C | 8/28/2025 | UP29041P198 | Umwelt | 290 | 0.020 | 0.65 | 7.86 | 12.09 | NAG |
| UPBH29041P205C | 8/28/2025 | UP29041P205 | Umwelt | 290 | 0.040 | 1.17 | 8.58 | 7.33 | NAG |
| UPBH29041P139C | 8/28/2025 | UP29041P139 | Umwelt | 290 | 0.110 | 3.52 | 14.08 | 4.00 | NAG |
| UPBH29041P142C | 8/28/2025 | UP29041P142 | Umwelt | 290 | 0.110 | 3.48 | 11.72 | 3.37 | NAG |
| UPBH29041P148C | 8/28/2025 | UP29041P148 | Umwelt | 290 | 0.040 | 1.29 | 10.56 | 8.20 | NAG |
| UPBH29041P118C | 8/28/2025 | UP29041P118 | Umwelt | 290 | 0.730 | 22.73 | 26.67 | 1.17 | PAG |
| UPBH29043P101C | 8/29/2025 | UP29043P101 | Umwelt | 290 | 0.050 | 1.66 | 7.70 | 4.64 | NAG |
| UPBH29043P104C | 8/29/2025 | UP29043P104 | Umwelt | 290 | 0.100 | 3.12 | 7.61 | 2.44 | NAG |
| UPBH29043P107C | 8/29/2025 | UP29043P107 | Umwelt | 290 | 0.120 | 3.71 | 7.26 | 1.95 | NAG |
| UPBH29043P152C | 8/29/2025 | UP29043P152 | Umwelt | 290 | 0.200 | 6.31 | 16.26 | 2.58 | PAG |
| UPBH29043P155C | 8/29/2025 | UP29043P155 | Umwelt | 290 | 0.970 | 29.65 | 13.80 | 0.47 | PAG |
| UPBH29043P158C | 8/29/2025 | UP29043P158 | Umwelt | 290 | 0.010 | 0.03 | 7.09 | N/A | NAG |
| UPBH29043P26C | 8/29/2025 | UP29043P26 | Umwelt | 290 | 0.010 | 0.03 | 8.30 | N/A | NAG |
| UPBH29043P29C | 8/29/2025 | UP29043P29 | Umwelt | 290 | 0.070 | 2.20 | 9.35 | 4.25 | NAG |
| UPBH29043P32C | 8/29/2025 | UP29043P32 | Umwelt | 290 | 1.320 | 40.04 | 12.80 | 0.32 | PAG |
| UPBH29043P35C | 8/29/2025 | UP29043P35 | Umwelt | 290 | 0.180 | 5.03 | 13.21 | 2.63 | PAG |
| UPBH29043P98C | 8/29/2025 | UP29043P98 | Umwelt | 290 | 0.090 | 2.60 | 7.86 | 3.03 | NAG |
| UPBH29043P49C | 8/30/2025 | UP29043P49 | Umwelt | 290 | 0.250 | 6.54 | 4.62 | 0.71 | PAG |
| UPBH29043P82C | 8/30/2025 | UP29043P82 | Umwelt | 290 | 0.510 | 15.95 | 19.77 | 1.24 | PAG |
| UPBH29043P86C | 8/30/2025 | UP29043P86 | Umwelt | 290 | - | 0.03 | 5.33 | N/A | NAG |
| UPBH29043P131C | 8/30/2025 | UP29043P131 | Umwelt | 290 | 0.190 | 5.98 | 20.48 | 3.42 | NAG |
| UPBH29043P133C | 8/30/2025 | UP29043P133 | Umwelt | 290 | 0.370 | 11.35 | 14.85 | 1.31 | PAG |
| UPBH29043P2C | 8/30/2025 | UP29043P2 | Umwelt | 290 | 0.780 | 22.69 | 11.84 | 0.52 | PAG |
| UPBH29043P6C | 8/30/2025 | UP29043P6 | Umwelt | 290 | 0.220 | 6.89 | 5.92 | 0.86 | PAG |
| UPBH29043P162C | 8/31/2025 | UP29043P162 | Umwelt | 290 | 0.640 | 18.34 | 20.19 | 1.10 | PAG |
| UPBH29035P100C | 8/31/2025 | UP29035P100 | Umwelt | 290 | 0.190 | 2.80 | 6.12 | 2.18 | PAG |
| UPBH29035P103C | 8/31/2025 | UP29035P103 | Umwelt | 290 | 0.180 | 5.51 | 6.54 | 1.19 | PAG |
| UPBH29035P181C | 8/31/2025 | UP29035P181 | Umwelt | 290 | 0.110 | 2.27 | 6.34 | 2.79 | NAG |
| UPBH29035P186C | 8/31/2025 | UP29035P186 | Umwelt | 290 | 0.590 | 16.96 | 6.20 | 0.37 | PAG |
| UPBH29035P49C | 8/31/2025 | UP29035P49 | Umwelt | 290 | 0.350 | 9.22 | 6.15 | 0.67 | PAG |
| UPBH29035P52C | 8/31/2025 | UP29035P52 | Umwelt | 290 | 0.230 | 5.49 | 6.53 | 1.19 | PAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29035P62C | 9/1/2025 | UP29035P62 | Umwelt | 290 | 0.160 | 4.43 | 5.72 | 1.29 | PAG |
| UPBH29035P78C | 9/1/2025 | UP29035P78 | Umwelt | 290 | 0.060 | 1.17 | 5.65 | 4.84 | NAG |
| UPBH29035P191C | 9/1/2025 | UP29035P191 | Umwelt | 290 | 0.090 | 1.99 | 6.38 | 3.20 | NAG |
| UPBH29035P26C | 9/1/2025 | UP29035P26 | Umwelt | 290 | 0.140 | 3.25 | 5.78 | 1.78 | NAG |
| UPBH29035P32C | 9/1/2025 | UP29035P32 | Umwelt | 290 | 0.040 | 1.12 | 5.41 | 4.85 | NAG |
| UPBH29035P39C | 9/1/2025 | UP29035P39 | Umwelt | 290 | - | 0.03 | 6.73 | N/A | NAG |
| UPBH29035P45C | 9/1/2025 | UP29035P45 | Umwelt | 290 | 0.240 | 6.31 | 6.46 | 1.02 | PAG |
| UPBH29035P110C | 9/1/2025 | UP29035P110 | Umwelt | 290 | 0.100 | 2.55 | 7.31 | 2.86 | NAG |
| UPBH29035P117C | 9/1/2025 | UP29035P117 | Umwelt | 290 | 0.570 | 17.61 | 10.56 | 0.60 | PAG |
| UPBH29035P130C | 9/1/2025 | UP29035P130 | Umwelt | 290 | 0.060 | 0.77 | 6.91 | 8.99 | NAG |
| UPBH29035P136C | 9/1/2025 | UP29035P136 | Umwelt | 290 | 0.460 | 10.89 | 5.82 | 0.53 | PAG |
| UPBH29035P161C | 9/1/2025 | UP29035P161 | Umwelt | 290 | 0.130 | 2.90 | 6.90 | 2.38 | NAG |
| UPBH29035P167C | 9/1/2025 | UP29035P167 | Umwelt | 290 | - | 0.03 | 7.05 | N/A | NAG |
| UPBH29035P174C | 9/1/2025 | UP29035P174 | Umwelt | 290 | 0.010 | 0.03 | 6.34 | N/A | NAG |
| UPBH29046P119C | 9/6/2025 | UP29046P119 | Umwelt | 290 | 0.160 | 4.94 | 6.63 | 1.34 | PAG |
| UPBH29046P175C | 9/6/2025 | UP29046P175 | Umwelt | 290 | 0.180 | 5.32 | 6.13 | 1.15 | PAG |
| UPBH29046P35C | 9/6/2025 | UP29046P35 | Umwelt | 290 | 0.160 | 4.11 | 8.46 | 2.06 | PAG |
| UPBH29046P44C | 9/6/2025 | UP29046P44 | Umwelt | 290 | 0.130 | 4.20 | 9.65 | 2.30 | NAG |
| UPBH29046P48C | 9/8/2025 | UP29046P48 | Umwelt | 290 | 0.490 | 14.64 | 9.36 | 0.64 | PAG |
| UPBH29046P51C | 9/8/2025 | UP29046P51 | Umwelt | 290 | 0.250 | 7.33 | 7.24 | 0.99 | PAG |
| UPBH29046P89C | 9/8/2025 | UP29046P89 | Umwelt | 290 | 0.280 | 8.26 | 7.63 | 0.92 | PAG |
| UPBH29046P97C | 9/8/2025 | UP29046P97 | Umwelt | 290 | 0.160 | 4.48 | 8.25 | 1.84 | PAG |
| UPBH29046P42C | 9/8/2025 | UP29046P42 | Umwelt | 290 | 0.160 | 4.59 | 7.13 | 1.55 | PAG |
| UPBH29046P112C | 9/8/2025 | UP29046P112 | Umwelt | 290 | 0.100 | 2.68 | 8.50 | 3.18 | NAG |
| UPBH29046P26C | 9/8/2025 | UP29046P26 | Umwelt | 290 | 0.130 | 3.99 | 7.50 | 1.88 | NAG |
| UPBH29046P160C | 9/8/2025 | UP29046P160 | Umwelt | 290 | 0.140 | 4.09 | 7.38 | 1.80 | NAG |
| UPBH29046P171C | 9/8/2025 | UP29046P171 | Umwelt | 290 | 0.500 | 14.60 | 9.13 | 0.63 | PAG |
| UPBH29046P122C | 9/8/2025 | UP29046P122 | Umwelt | 290 | 0.140 | 4.02 | 6.37 | 1.58 | NAG |
| UPBH29046P145C | 9/9/2025 | UP29046P145 | Umwelt | 290 | 0.130 | 3.80 | 7.49 | 1.97 | NAG |
| UPBH29046P183C | 9/9/2025 | UP29046P183 | Umwelt | 290 | 0.130 | 3.99 | 17.76 | 4.45 | NAG |
| UPBH29046P197C | 9/9/2025 | UP29046P197 | Umwelt | 290 | 0.070 | 1.30 | 8.62 | 6.62 | NAG |
| UPBH29046P62C | 9/9/2025 | UP29046P62 | Umwelt | 290 | 0.110 | 3.33 | 6.75 | 2.03 | NAG |
| UPBH28003P73 | 9/13/2025 | UP28003P73 | Umwelt | 280 | 0.210 | 5.10 | 7.72 | 1.52 | PAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29017P108 | 9/14/2025 | UP29017P108 | Umwelt | 290 | 0.150 | 4.37 | 5.36 | 1.23 | NAG |
| UPBH29017P114 | 9/14/2025 | UP29017P114 | Umwelt | 290 | 0.270 | 7.79 | 4.50 | 0.58 | PAG |
| UPBH29017P118 | 9/14/2025 | UP29017P118 | Umwelt | 290 | - | 0.03 | 4.12 | N/A | NAG |
| UPBH28003P76 | 9/15/2025 | UP28003P76 | Umwelt | 280 | 0.030 | 0.85 | 6.86 | 8.08 | NAG |
| UPBH28003P176 | 9/15/2025 | UP28003P176 | Umwelt | 280 | 0.010 | 0.03 | 6.75 | N/A | NAG |
| UPBH28003P67 | 9/15/2025 | UP28003P67 | Umwelt | 280 | 0.240 | 7.57 | 6.73 | 0.89 | PAG |
| UPBH28003P70 | 9/15/2025 | UP28003P70 | Umwelt | 280 | 0.050 | 1.21 | 5.87 | 4.86 | NAG |
| UPBH28003P115 | 9/15/2025 | UP28003P115 | Umwelt | 280 | 0.100 | 2.42 | 7.11 | 2.94 | NAG |
| UPBH28003P118 | 9/15/2025 | UP28003P118 | Umwelt | 280 | 0.230 | 7.20 | 14.28 | 1.98 | PAG |
| UPBH28003P120 | 9/15/2025 | UP28003P120 | Umwelt | 280 | 0.190 | 5.12 | 8.84 | 1.73 | PAG |
| UPBH28003P122 | 9/15/2025 | UP28003P122 | Umwelt | 280 | 0.240 | 6.69 | 7.60 | 1.14 | PAG |
| UPBH28003P137 | 9/16/2025 | UP28003P137 | Umwelt | 280 | 0.140 | 3.66 | 7.50 | 2.05 | NAG |
| UPBH28003P163 | 9/16/2025 | UP28003P163 | Umwelt | 280 | 0.140 | 3.71 | 9.65 | 2.60 | NAG |
| UPBH28003P170 | 9/16/2025 | UP28003P170 | Umwelt | 280 | 0.120 | 3.60 | 7.48 | 2.08 | NAG |
| UPBH28008P11 | 9/20/2025 | UP28008P11 | Umwelt | 280 | 0.150 | 2.40 | 5.87 | 2.44 | NAG |
| UPBH28008P31 | 9/20/2025 | UP28008P31 | Umwelt | 280 | 0.120 | 3.37 | 4.38 | 1.30 | NAG |
| UPBH28008P68 | 9/20/2025 | UP28008P68 | Umwelt | 280 | 0.180 | 4.37 | 4.75 | 1.09 | PAG |
| UPBH28005P121 | 9/21/2025 | UP28005P121 | Umwelt | 280 | 0.740 | 21.18 | 4.49 | 0.21 | PAG |
| UPBH28005P67 | 9/21/2025 | UP28005P67 | Umwelt | 280 | 0.110 | 3.08 | 6.31 | 2.05 | NAG |
| UPBH28005P102 | 9/21/2025 | UP28005P102 | Umwelt | 280 | 1.260 | 38.79 | 7.70 | 0.20 | PAG |
| UPBH28005P113 | 9/21/2025 | UP28005P113 | Umwelt | 280 | 0.080 | 2.16 | 4.75 | 2.20 | NAG |
| UPBH28005P118 | 9/22/2025 | UP28005P118 | Umwelt | 280 | 1.640 | 50.42 | 19.45 | 0.39 | PAG |
| UPBH28005P71 | 9/22/2025 | UP28005P71 | Umwelt | 280 | 0.290 | 7.97 | 8.20 | 1.03 | PAG |
| UPBH28005P86 | 9/22/2025 | UP28005P86 | Umwelt | 280 | 0.800 | 24.92 | 10.16 | 0.41 | PAG |
| UPBH28005P23 | 9/22/2025 | UP28005P23 | Umwelt | 280 | 0.100 | 1.76 | 6.84 | 3.89 | NAG |
| UPBH28005P38 | 9/22/2025 | UP28005P38 | Umwelt | 280 | 0.160 | 5.05 | 7.83 | 1.55 | PAG |
| UPBH28005P45 | 9/22/2025 | UP28005P45 | Umwelt | 280 | 0.360 | 10.91 | 8.07 | 0.74 | PAG |
| UPBH28005P63 | 9/22/2025 | UP28005P63 | Umwelt | 280 | 0.160 | 3.83 | 7.58 | 1.98 | PAG |
| UPBH28004P90 | 9/23/2025 | UP28004P90 | Umwelt | 280 | 0.370 | 11.47 | 7.47 | 0.65 | PAG |
| UPBH28004P93 | 9/23/2025 | UP28004P93 | Umwelt | 280 | 1.740 | 54.22 | 8.98 | 0.17 | PAG |
| UPBH28004P97 | 9/23/2025 | UP28004P97 | Umwelt | 280 | 0.330 | 10.29 | 6.73 | 0.65 | PAG |
| UPBH28004P10 | 9/23/2025 | UP28004P10 | Umwelt | 280 | 0.210 | 5.25 | 4.37 | 0.83 | PAG |
| UPBH28004P121 | 9/23/2025 | UP28004P121 | Umwelt | 280 | 0.540 | 16.86 | 5.63 | 0.33 | PAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH28004P124 | 9/23/2025 | UP28004P124 | Umwelt | 280 | 0.450 | 14.06 | 9.25 | 0.66 | PAG |
| UPBH28004P14 | 9/23/2025 | UP28004P14 | Umwelt | 280 | 0.210 | 6.29 | 7.24 | 1.15 | PAG |
| UPBH28004P145 | 9/23/2025 | UP28004P145 | Umwelt | 280 | 1.110 | 33.55 | 6.29 | 0.19 | PAG |
| UPBH28004P148 | 9/23/2025 | UP28004P148 | Umwelt | 280 | 0.650 | 20.47 | 4.25 | 0.21 | PAG |
| UPBH28004P158 | 9/23/2025 | UP28004P158 | Umwelt | 280 | 0.390 | 11.43 | 5.26 | 0.46 | PAG |
| UPBH28004P162 | 9/23/2025 | UP28004P162 | Umwelt | 280 | 0.720 | 22.61 | 8.77 | 0.39 | PAG |
| UPBH28004P173 | 9/23/2025 | UP28004P173 | Umwelt | 280 | 0.660 | 20.53 | 6.60 | 0.32 | PAG |
| UPBH28004P29 | 9/24/2025 | UP28004P29 | Umwelt | 280 | 0.500 | 14.97 | 6.48 | 0.43 | PAG |
| UPBH28004P50 | 9/24/2025 | UP28004P50 | Umwelt | 280 | 0.370 | 10.35 | 13.61 | 1.31 | PAG |
| UPBH28004P2 | 9/24/2025 | UP28004P2 | Umwelt | 280 | 1.050 | 29.29 | 6.48 | 0.22 | PAG |
| UPBH28004P5 | 9/24/2025 | UP28004P5 | Umwelt | 280 | 0.400 | 12.39 | 17.83 | 1.44 | PAG |
| UPBH29022P1 | 9/25/2025 | UP29022P01 | Umwelt | 290 | 0.310 | 8.54 | 18.72 | 2.19 | PAG |
| UPBH29022B14 | 9/25/2025 | UP29022B14 | Umwelt | 290 | 0.190 | 6.06 | 14.32 | 2.36 | PAG |
| UPBH29022P23 | 9/25/2025 | UP29022P23 | Umwelt | 290 | 0.670 | 19.02 | 7.93 | 0.42 | PAG |
| UPBH29022P37 | 9/25/2025 | UP29022P37 | Umwelt | 290 | 0.420 | 11.76 | 5.23 | 0.44 | PAG |
| UPBH29022P46 | 9/25/2025 | UP29022P46 | Umwelt | 290 | 0.280 | 8.60 | 28.30 | 3.29 | NAG |
| UPBH29022P49 | 9/25/2025 | UP29022P49 | Umwelt | 290 | 0.780 | 23.08 | 11.38 | 0.49 | PAG |
| UPBH29022P52 | 9/25/2025 | UP29022P52 | Umwelt | 290 | 0.010 | 0.03 | 10.24 | N/A | NAG |
| UPBH29022B9 | 9/25/2025 | UP29022B9 | Umwelt | 290 | 0.330 | 10.07 | 5.74 | 0.57 | PAG |
| UPBH29023B1 | 9/26/2025 | UP29023B1 | Umwelt | 290 | 0.200 | 6.20 | 8.02 | 1.29 | PAG |
| UPBH29023B10 | 9/26/2025 | UP29023B10 | Umwelt | 290 | 0.080 | 2.46 | 5.78 | 2.35 | NAG |
| UPBH29023P101 | 9/26/2025 | UP29023P101 | Umwelt | 290 | 0.130 | 3.74 | 5.39 | 1.44 | NAG |
| UPBH29023P106 | 9/26/2025 | UP29023P106 | Umwelt | 290 | 0.180 | 5.21 | 6.99 | 1.34 | PAG |
| UPBH29023P111 | 9/26/2025 | UP29023P111 | Umwelt | 290 | 0.130 | 4.12 | 7.02 | 1.70 | NAG |
| UPBH29023P114 | 9/26/2025 | UP29023P114 | Umwelt | 290 | 0.290 | 8.18 | 6.02 | 0.74 | PAG |
| UPBH29023P118 | 9/26/2025 | UP29023P118 | Umwelt | 290 | 1.260 | 39.25 | 10.97 | 0.28 | PAG |
| UPBH29023B15 | 9/26/2025 | UP29023B15 | Umwelt | 290 | 0.090 | 2.95 | 4.76 | 1.61 | NAG |
| UPBH29023B19 | 9/26/2025 | UP29023B19 | Umwelt | 290 | 0.560 | 15.60 | 5.01 | 0.32 | PAG |
| UPBH29023B27 | 9/26/2025 | UP29023B27 | Umwelt | 290 | 0.030 | 0.78 | 5.26 | 6.75 | NAG |
| UPBH29023B33 | 9/26/2025 | UP29023B33 | Umwelt | 290 | 0.040 | 0.95 | 5.76 | 6.06 | NAG |
| UPBH29023P35 | 9/26/2025 | UP29023P35 | Umwelt | 290 | 0.100 | 3.08 | 5.76 | 1.87 | NAG |
| UPBH29023P40 | 9/26/2025 | UP29023P40 | Umwelt | 290 | 0.450 | 13.82 | 7.00 | 0.51 | PAG |
| UPBH29023P44 | 9/26/2025 | UP29023P44 | Umwelt | 290 | 0.160 | 3.29 | 11.71 | 3.56 | NAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29023P47 | 9/26/2025 | UP29023P47 | Umwelt | 290 | 0.420 | 11.17 | 7.13 | 0.64 | PAG |
| UPBH29023B5 | 9/26/2025 | UP29023B5 | Umwelt | 290 | 0.140 | 3.46 | 5.76 | 1.66 | NAG |
| UPBH29023P57 | 9/26/2025 | UP29023P57 | Umwelt | 290 | 0.020 | 0.72 | 7.50 | 10.41 | NAG |
| UPBH29023P72 | 9/26/2025 | UP29023P72 | Umwelt | 290 | 0.280 | 7.59 | 7.14 | 0.94 | PAG |
| UPBH280RAMPR301 | 9/27/2025 | UP280RAMPR301 | Umwelt | 280 | 0.170 | 4.97 | 9.57 | 1.93 | PAG |
| UPBH280RAMPR304 | 9/27/2025 | UP280RAMPR304 | Umwelt | 280 | 0.530 | 16.35 | 10.45 | 0.64 | PAG |
| UPBH280RAMPR4 | 9/27/2025 | UP280RAMPR4 | Umwelt | 280 | 0.190 | 6.01 | 11.33 | 1.89 | PAG |
| UPBH280RAMPR1 | 9/27/2025 | UP280RAMPR1 | Umwelt | 280 | 0.160 | 4.29 | 8.38 | 1.95 | PAG |
| UPBH280RAMPR123 | 9/27/2025 | UP280RAMPR123 | Umwelt | 280 | 0.190 | 5.47 | 7.34 | 1.34 | PAG |
| UPBH280RAMPR127 | 9/27/2025 | UP280RAMPR127 | Umwelt | 280 | 0.130 | 3.05 | 8.88 | 2.91 | NAG |
| UPBH280RAMPR237 | 9/27/2025 | UP280RAMPR237 | Umwelt | 280 | 0.190 | 4.92 | 7.74 | 1.57 | PAG |
| UPBH280RAMPR239 | 9/27/2025 | UP280RAMPR239 | Umwelt | 280 | 0.260 | 7.66 | 8.30 | 1.08 | PAG |
| UPBH280RAMPR241 | 9/27/2025 | UP280RAMPR241 | Umwelt | 280 | 0.290 | 7.88 | 9.56 | 1.21 | PAG |
| UPBH280RAMPR249 | 9/28/2025 | UP280RAMPR249 | Umwelt | 280 | 0.130 | 3.21 | 7.36 | 2.29 | NAG |
| UPBH280RAMPR253 | 9/28/2025 | UP280RAMPR253 | Umwelt | 280 | 0.100 | 3.14 | 7.24 | 2.30 | NAG |
| UPBH280RAMPB26 | 9/28/2025 | UP280RAMPB26 | Umwelt | 280 | 0.090 | 2.83 | 6.01 | 2.13 | NAG |
| UPBH280RAMPR69 | 9/28/2025 | UP280RAMPR69 | Umwelt | 280 | 0.520 | 16.27 | 6.67 | 0.41 | PAG |
| UPBH280RAMPR72 | 9/28/2025 | UP280RAMPR72 | Umwelt | 280 | 0.170 | 4.10 | 8.42 | 2.05 | PAG |
| UPBH280RAMPR310 | 9/28/2025 | UP280RAMPR310 | Umwelt | 280 | 0.040 | 0.98 | 6.29 | 6.41 | NAG |
| UPBH280RAMPR171 | 9/28/2025 | UP280RAMPR171 | Umwelt | 280 | 0.250 | 7.41 | 8.09 | 1.09 | PAG |
| UPBH280RAMPR211 | 9/29/2025 | UP280RAMPR211 | Umwelt | 280 | 0.140 | 3.97 | 8.69 | 2.19 | NAG |
| UPBH280RAMPR214 | 9/29/2025 | UP280RAMPR214 | Umwelt | 280 | 0.950 | 24.89 | 9.56 | 0.38 | PAG |
| UPBH280RAMPR217 | 9/29/2025 | UP280RAMPR217 | Umwelt | 280 | - | 0.03 | 5.21 | N/A | NAG |
| UPBH280RAMPR220 | 9/29/2025 | UP280RAMPR220 | Umwelt | 280 | 1.600 | 45.24 | 12.76 | 0.28 | PAG |
| UPBH280RAMPR223 | 9/29/2025 | UP280RAMPR223 | Umwelt | 280 | 0.120 | 3.05 | 8.37 | 2.75 | NAG |
| UPBH280RAMPR329 | 9/29/2025 | UP280RAMPR329 | Umwelt | 280 | 0.060 | 0.65 | 4.80 | 7.39 | NAG |
| UPBH280RAMPR34 | 9/29/2025 | UP280RAMPR34 | Umwelt | 280 | 0.250 | 5.73 | 15.18 | 2.65 | PAG |
| UPBH280RAMPR38 | 9/29/2025 | UP280RAMPR38 | Umwelt | 280 | 0.130 | 3.03 | 9.89 | 3.27 | NAG |
| UPBH280RAMPR42 | 9/29/2025 | UP280RAMPR42 | Umwelt | 280 | 0.190 | 2.68 | 6.48 | 2.41 | PAG |
| UPBH280RAMPR45 | 9/29/2025 | UP280RAMPR45 | Umwelt | 280 | 1.220 | 34.48 | 6.87 | 0.20 | PAG |
| UPBH280RAMPR48 | 9/29/2025 | UP280RAMPR48 | Umwelt | 280 | 0.140 | 2.85 | 7.57 | 2.66 | NAG |
| UPBH280RAMPR281 | 9/29/2025 | UP280RAMPR281 | Umwelt | 280 | 0.100 | 2.34 | 8.22 | 3.51 | NAG |
| UPBH280RAMPR284 | 9/29/2025 | UP280RAMPR284 | Umwelt | 280 | 0.120 | 2.69 | 6.30 | 2.34 | NAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH280RAMPR139 | 9/29/2025 | UP280RAMPR139 | Umwelt | 280 | 0.080 | 2.42 | 8.87 | 3.66 | NAG |
| UPBH280RAMPR142 | 9/29/2025 | UP280RAMPR142 | Umwelt | 280 | 0.110 | 3.07 | 12.35 | 4.02 | NAG |
| UPBH280RAMPR145 | 9/29/2025 | UP280RAMPR145 | Umwelt | 280 | 0.250 | 5.37 | 9.29 | 1.73 | PAG |
| UPBH280RAMPR148 | 9/29/2025 | UP280RAMPR148 | Umwelt | 280 | 0.020 | 0.48 | 14.02 | 29.29 | NAG |
| UPBH28007P1 | 10/1/2025 | UP28007P1 | Umwelt | 280 | 0.210 | 6.56 | 12.14 | 1.85 | PAG |
| UPBH28007P10 | 10/1/2025 | UP28007P10 | Umwelt | 280 | 0.850 | 26.28 | 22.13 | 0.84 | PAG |
| UPBH28007P7 | 10/1/2025 | UP28007P7 | Umwelt | 280 | 0.180 | 4.69 | 6.70 | 1.43 | PAG |
| UPBH28007P32 | 10/1/2025 | UP28007P32 | Umwelt | 280 | 0.340 | 8.74 | 6.46 | 0.74 | PAG |
| UPBH28007P35 | 10/1/2025 | UP28007P35 | Umwelt | 280 | 0.330 | 9.19 | 6.16 | 0.67 | PAG |
| UPBH28007P4 | 10/1/2025 | UP28007P4 | Umwelt | 280 | 0.130 | 3.54 | 8.43 | 2.38 | NAG |
| UPBH28007P180 | 10/2/2025 | UP28007P180 | Umwelt | 280 | 0.020 | 0.03 | 4.74 | N/A | NAG |
| UPBH28007P161 | 10/2/2025 | UP28007P161 | Umwelt | 280 | 0.550 | 17.01 | 11.77 | 0.69 | PAG |
| UPBH28007P101 | 10/2/2025 | UP28007P101 | Umwelt | 280 | 0.260 | 7.86 | 9.89 | 1.26 | PAG |
| UPBH28007P132 | 10/2/2025 | UP28007P132 | Umwelt | 280 | 0.290 | 8.84 | 5.63 | 0.64 | PAG |
| UPBH28007P134 | 10/2/2025 | UP28007P134 | Umwelt | 280 | 0.380 | 11.85 | 6.48 | 0.55 | PAG |
| UPBH28007P73 | 10/2/2025 | UP28007P73 | Umwelt | 280 | 0.010 | 0.41 | 6.88 | 16.65 | NAG |
| UPBH28007P98 | 10/2/2025 | UP28007P98 | Umwelt | 280 | 1.820 | 54.83 | 6.58 | 0.12 | PAG |
| UPBH28007P151 | 10/3/2025 | UP28007P151 | Umwelt | 280 | 0.340 | 4.02 | 6.16 | 1.53 | PAG |
| UPBH28007P107 | 10/3/2025 | UP28007P107 | Umwelt | 280 | 0.060 | 1.83 | 7.10 | 3.88 | NAG |
| UPBH28007P126 | 10/3/2025 | UP28007P126 | Umwelt | 280 | 0.270 | 8.38 | 7.38 | 0.88 | PAG |
| UPBH28007P174 | 10/3/2025 | UP28007P174 | Umwelt | 280 | 3.940 | 118.04 | 6.46 | 0.05 | PAG |
| UPBH28007P70 | 10/3/2025 | UP28007P70 | Umwelt | 280 | 0.120 | 3.69 | 18.11 | 4.90 | NAG |
| UPBH28007P199 | 10/3/2025 | UP28007P199 | Umwelt | 280 | 0.870 | 27.21 | 7.27 | 0.27 | PAG |
| UPBH28007P42 | 10/3/2025 | UP28007P42 | Umwelt | 280 | 0.240 | 7.58 | 12.92 | 1.70 | PAG |
| UPBH28007P44 | 10/3/2025 | UP28007P44 | Umwelt | 280 | 0.030 | 1.01 | 8.22 | 8.10 | NAG |
| UPBH28007P67 | 10/3/2025 | UP28007P67 | Umwelt | 280 | 0.250 | 7.68 | 5.95 | 0.77 | PAG |
| UPBH28007P232 | 10/4/2025 | UP28007P232 | Umwelt | 280 | 0.010 | 0.03 | 5.00 | N/A | NAG |
| UPBH28007P246 | 10/4/2025 | UP28007P246 | Umwelt | 280 | 0.420 | 0.80 | 5.40 | 6.77 | NAG |
| UPBH29039P68 | 10/5/2025 | UP29039P68 | Umwelt | 290 | 0.480 | 14.06 | 14.34 | 1.02 | PAG |
| UPBH29039P9 | 10/5/2025 | UP29039P9 | Umwelt | 290 | 0.170 | 5.40 | 8.52 | 1.58 | PAG |
| UPBH29039P100 | 10/6/2025 | UP29039P100 | Umwelt | 290 | - | 0.03 | 8.77 | N/A | NAG |
| UPBH29039P2 | 10/6/2025 | UP29039P2 | Umwelt | 290 | 0.660 | 20.73 | 4.11 | 0.20 | PAG |
| UPBH28011P100 | 10/7/2025 | UP28011P100 | Umwelt | 280 | 0.080 | 1.51 | 6.64 | 4.40 | NAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH28011P102 | 10/7/2025 | UP28011P102 | Umwelt | 280 | 0.330 | 7.81 | 8.58 | 1.10 | PAG |
| UPBH28011P127 | 10/7/2025 | UP28011P127 | Umwelt | 280 | - | 0.03 | 7.11 | N/A | NAG |
| UPBH28011P137 | 10/7/2025 | UP28011P137 | Umwelt | 280 | 0.140 | 4.08 | 10.91 | 2.68 | NAG |
| UPBH28011P153 | 10/7/2025 | UP28011P153 | Umwelt | 280 | 0.640 | 17.47 | 28.16 | 1.61 | PAG |
| UPBH28011P156 | 10/7/2025 | UP28011P156 | Umwelt | 280 | 0.180 | 5.56 | 8.42 | 1.51 | PAG |
| UPBH28011P45 | 10/7/2025 | UP28011P45 | Umwelt | 280 | 0.460 | 13.50 | 7.48 | 0.55 | PAG |
| UPBH28011P49 | 10/7/2025 | UP28011P49 | Umwelt | 280 | 0.190 | 4.83 | 7.18 | 1.49 | PAG |
| UPBH28011P5 | 10/8/2025 | UP28011P5 | Umwelt | 280 | 0.120 | 3.60 | 2.97 | 0.82 | NAG |
| UPBH28011P56 | 10/8/2025 | UP28011P56 | Umwelt | 280 | 0.160 | 4.95 | 9.24 | 1.87 | PAG |
| UPBH28011P70 | 10/8/2025 | UP28011P70 | Umwelt | 280 | 0.490 | 15.16 | 6.93 | 0.46 | PAG |
| UPBH28011P8 | 10/8/2025 | UP28011P8 | Umwelt | 280 | 0.390 | 12.16 | 14.88 | 1.22 | PAG |
| UPBH28011P86 | 10/8/2025 | UP28011P86 | Umwelt | 280 | 0.320 | 9.96 | 16.69 | 1.68 | PAG |
| UPBH28011P91 | 10/8/2025 | UP28011P91 | Umwelt | 280 | 0.230 | 7.23 | 15.69 | 2.17 | PAG |
| UPBH28011P110 | 10/8/2025 | UP28011P110 | Umwelt | 280 | 0.550 | 16.49 | 9.96 | 0.60 | PAG |
| UPBH28011P116 | 10/8/2025 | UP28011P116 | Umwelt | 280 | 0.500 | 15.03 | 11.10 | 0.74 | PAG |
| UPBH28006P4 | 10/9/2025 | UP28006P4 | Umwelt | 280 | 0.230 | 7.33 | 12.16 | 1.66 | PAG |
| UPBH28006P50 | 10/9/2025 | UP28006P50 | Umwelt | 280 | 0.490 | 15.17 | 19.71 | 1.30 | PAG |
| UPBH28006P53 | 10/9/2025 | UP28006P53 | Umwelt | 280 | 0.340 | 10.08 | 18.22 | 1.81 | PAG |
| UPBH28006P8 | 10/9/2025 | UP28006P8 | Umwelt | 280 | 0.360 | 11.16 | 14.76 | 1.32 | PAG |
| UPBH29049P100 | 10/14/2025 | UP29049P100 | Umwelt | 290 | 0.340 | 9.12 | 6.22 | 0.68 | PAG |
| UPBH29049P3 | 10/14/2025 | UP29049P3 | Umwelt | 290 | 0.220 | 6.89 | 3.98 | 0.58 | PAG |
| UPBH29049P39 | 10/14/2025 | UP29049P39 | Umwelt | 290 | 0.250 | 7.95 | 2.48 | 0.31 | PAG |
| UPBH29049P41 | 10/14/2025 | UP29049P41 | Umwelt | 290 | 0.300 | 9.17 | 2.75 | 0.30 | PAG |
| UPBH29049P6 | 10/14/2025 | UP29049P6 | Umwelt | 290 | 0.230 | 7.17 | 3.68 | 0.51 | PAG |
| UPBH29049P61 | 10/14/2025 | UP29049P61 | Umwelt | 290 | 0.170 | 4.36 | 4.56 | 1.05 | PAG |
| UPBH29045P14 | 10/14/2025 | UP29045P14 | Umwelt | 290 | 0.320 | 9.53 | 9.01 | 0.95 | PAG |
| UPBH29045P73 | 10/14/2025 | UP29045P73 | Umwelt | 290 | 1.140 | 35.49 | 6.24 | 0.18 | PAG |
| UPBH29045P76 | 10/14/2025 | UP29045P76 | Umwelt | 290 | 0.110 | 3.43 | 8.06 | 2.35 | NAG |
| UPBH29045P18 | 10/14/2025 | UP29045P18 | Umwelt | 290 | 0.330 | 7.62 | 8.60 | 1.13 | PAG |
| UPBH29045P28 | 10/14/2025 | UP29045P28 | Umwelt | 290 | 0.120 | 3.45 | 6.20 | 1.80 | NAG |
| UPBH29045P37 | 10/15/2025 | UP29045P37 | Umwelt | 290 | 0.240 | 7.46 | 4.50 | 0.60 | PAG |
| UPBH29045P42 | 10/15/2025 | UP29045P42 | Umwelt | 290 | 0.050 | 1.71 | 6.67 | 3.89 | NAG |
| UPBH29045P46 | 10/15/2025 | UP29045P46 | Umwelt | 290 | 0.100 | 3.14 | 6.62 | 2.11 | NAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29045P111 | 10/15/2025 | UP29045P111 | Umwelt | 290 | 0.100 | 3.01 | 3.94 | 1.31 | NAG |
| UPBH29045P115 | 10/15/2025 | UP29045P115 | Umwelt | 290 | 0.260 | 8.15 | 17.76 | 2.18 | PAG |
| UPBH29045P131 | 10/15/2025 | UP29045P131 | Umwelt | 290 | 0.190 | 5.99 | 9.79 | 1.64 | PAG |
| UPBH29045P83 | 10/15/2025 | UP29045P83 | Umwelt | 290 | 0.220 | 6.77 | 8.69 | 1.28 | PAG |
| UPBH29045P92 | 10/15/2025 | UP29045P92 | Umwelt | 290 | 0.070 | 2.27 | 5.66 | 2.49 | NAG |
| UPBH29045P97 | 10/15/2025 | UP29045P97 | Umwelt | 290 | 0.120 | 3.49 | 7.34 | 2.11 | NAG |
| UPBH29045P147 | 10/15/2025 | UP29045P147 | Umwelt | 290 | 0.190 | 5.26 | 7.02 | 1.33 | PAG |
| UPBH29049P79 | 10/15/2025 | UP29049P79 | Umwelt | 290 | 0.130 | 4.09 | 3.91 | 0.96 | NAG |
| UPBH29049P83 | 10/15/2025 | UP29049P83 | Umwelt | 290 | 0.090 | 2.97 | 12.47 | 4.20 | NAG |
| UPBH29049P88 | 10/15/2025 | UP29049P88 | Umwelt | 290 | 0.180 | 5.27 | 5.72 | 1.09 | PAG |
| UPBH29049P36 | 10/15/2025 | UP29049P36 | Umwelt | 290 | 0.210 | 6.71 | 4.85 | 0.72 | PAG |
| UPBH29049P26 | 10/15/2025 | UP29049P26 | Umwelt | 290 | 0.900 | 26.44 | 7.36 | 0.28 | PAG |
| UPBH29049P27 | 10/15/2025 | UP29049P27 | Umwelt | 290 | 0.420 | 13.03 | 4.64 | 0.36 | PAG |
| UPBH29049P29 | 10/15/2025 | UP29049P29 | Umwelt | 290 | 0.230 | 7.02 | (1.51) | (0.22) | PAG |
| UPBH28010P101 | 10/16/2025 | UP28010P101 | Umwelt | 280 | 0.060 | 1.68 | 4.36 | 2.60 | NAG |
| UPBH28010P131 | 10/16/2025 | UP28010P131 | Umwelt | 280 | 0.500 | 15.57 | 17.07 | 1.10 | PAG |
| UPBH28010P134 | 10/16/2025 | UP28010P134 | Umwelt | 280 | 0.340 | 9.47 | 9.94 | 1.05 | PAG |
| UPBH28010P148 | 10/16/2025 | UP28010P148 | Umwelt | 280 | 0.600 | 16.99 | 8.51 | 0.50 | PAG |
| UPBH28010P151 | 10/16/2025 | UP28010P151 | Umwelt | 280 | 0.550 | 15.74 | 9.23 | 0.59 | PAG |
| UPBH28010P161 | 10/16/2025 | UP28010P161 | Umwelt | 280 | 0.300 | 8.52 | 5.41 | 0.63 | PAG |
| UPBH28010P25 | 10/17/2025 | UP28010P25 | Umwelt | 280 | 0.130 | 3.98 | 7.00 | 1.76 | NAG |
| UPBH28010P48 | 10/17/2025 | UP28010P48 | Umwelt | 280 | 0.550 | 14.90 | 9.37 | 0.63 | PAG |
| UPBH28010P51 | 10/17/2025 | UP28010P51 | Umwelt | 280 | 0.080 | 2.42 | 6.13 | 2.53 | NAG |
| UPBH28010P55 | 10/17/2025 | UP28010P55 | Umwelt | 280 | 0.110 | 2.85 | 5.13 | 1.80 | NAG |
| UPBH28010P76 | 10/17/2025 | UP28010P76 | Umwelt | 280 | 0.330 | 9.27 | 10.49 | 1.13 | PAG |
| UPBH28010P79 | 10/17/2025 | UP28010P79 | Umwelt | 280 | 0.350 | 10.81 | 3.66 | 0.34 | PAG |
| UPBH28010P91 | 10/17/2025 | UP28010P91 | Umwelt | 280 | 0.630 | 19.80 | 9.24 | 0.47 | PAG |
| UPBH28010P105 | 10/17/2025 | UP28010P105 | Umwelt | 280 | 0.730 | 22.94 | 7.93 | 0.35 | PAG |
| UPBH28010P127 | 10/17/2025 | UP28010P127 | Umwelt | 280 | 0.240 | 6.86 | 8.99 | 1.31 | PAG |
| UPBH28012P22 | 10/19/2025 | UP28012P22 | Umwelt | 280 | 0.070 | 2.18 | 5.38 | 2.46 | NAG |
| UPBH28012P25 | 10/19/2025 | UP28012P25 | Umwelt | 280 | 0.040 | 1.14 | 6.50 | 5.70 | NAG |
| UPBH28012P28 | 10/19/2025 | UP28012P28 | Umwelt | 280 | 0.060 | 1.78 | 7.00 | 3.93 | NAG |
| UPBH28012P05 | 10/19/2025 | UP28012P05 | Umwelt | 280 | 0.250 | 7.67 | 8.25 | 1.08 | PAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH28012P01 | 10/19/2025 | UP28012P01 | Umwelt | 280 | 0.140 | 4.40 | 7.25 | 1.65 | NAG |
| UPBH28012P106 | 10/20/2025 | UP28012P106 | Umwelt | 280 | 0.340 | 10.54 | 13.74 | 1.30 | PAG |
| UPBH28012P109 | 10/20/2025 | UP28012P109 | Umwelt | 280 | 0.410 | 12.22 | 17.86 | 1.46 | PAG |
| UPBH28012P113 | 10/20/2025 | UP28012P113 | Umwelt | 280 | 0.370 | 11.47 | 12.48 | 1.09 | PAG |
| UPBH28012P56 | 10/20/2025 | UP28012P56 | Umwelt | 280 | 0.140 | 4.21 | 7.38 | 1.75 | NAG |
| UPBH28012P60 | 10/20/2025 | UP28012P60 | Umwelt | 280 | 0.560 | 16.37 | 8.25 | 0.50 | PAG |
| UPBH28012P63 | 10/20/2025 | UP28012P63 | Umwelt | 280 | 0.670 | 18.10 | 10.38 | 0.57 | PAG |
| UPBH28012P78 | 10/20/2025 | UP28012P78 | Umwelt | 280 | 0.220 | 6.96 | 6.14 | 0.88 | PAG |
| UPBH28012P81 | 10/20/2025 | UP28012P81 | Umwelt | 280 | 0.360 | 11.25 | 10.24 | 0.91 | PAG |
| UPBH28012P134 | 10/21/2025 | UP28012P134 | Umwelt | 280 | 0.180 | 5.52 | 6.99 | 1.27 | PAG |
| UPBH28012P138 | 10/21/2025 | UP28012P138 | Umwelt | 280 | 0.120 | 3.41 | 8.40 | 2.46 | NAG |
| UPBH28012P150 | 10/21/2025 | UP28012P150 | Umwelt | 280 | 0.670 | 20.56 | 24.95 | 1.21 | PAG |
| UPBH28015P37 | 10/21/2025 | UP28015P37 | Umwelt | 280 | 0.710 | 21.21 | 29.93 | 1.41 | PAG |
| UPBH28015P41 | 10/21/2025 | UP28015P41 | Umwelt | 280 | 0.170 | 4.66 | 6.91 | 1.48 | PAG |
| UPBH28015P57 | 10/21/2025 | UP28015P57 | Umwelt | 280 | 0.390 | 12.21 | 24.54 | 2.01 | PAG |
| UPBH28015P61 | 10/21/2025 | UP28015P61 | Umwelt | 280 | 0.100 | 3.19 | 6.96 | 2.18 | NAG |
| UPBH28015P80 | 10/21/2025 | UP28015P80 | Umwelt | 280 | 0.480 | 13.95 | 13.56 | 0.97 | PAG |
| UPBH28015P84 | 10/21/2025 | UP28015P84 | Umwelt | 280 | 0.060 | 1.89 | 7.80 | 4.12 | NAG |
| UPBH28015P87 | 10/21/2025 | UP28015P87 | Umwelt | 280 | 0.280 | 8.74 | 5.06 | 0.58 | PAG |
| UPBH28015P90 | 10/21/2025 | UP28015P90 | Umwelt | 280 | 0.230 | 7.11 | 5.10 | 0.72 | PAG |
| UPBH28018P4 | 10/27/2025 | UP28018P04 | Umwelt | 280 | 0.620 | 14.08 | 8.49 | 0.60 | PAG |
| UPBH28018P41 | 10/27/2025 | UP28018P41 | Umwelt | 280 | 0.060 | 1.51 | 5.25 | 3.49 | NAG |
| UPBH28018P45 | 10/27/2025 | UP28018P45 | Umwelt | 280 | 0.130 | 3.92 | 4.51 | 1.15 | NAG |
| UPBH28018P7 | 10/27/2025 | UP28018P07 | Umwelt | 280 | 0.210 | 6.53 | 6.36 | 0.97 | PAG |
| UPBH28018P77 | 10/27/2025 | UP28018P77 | Umwelt | 280 | 0.480 | 12.99 | 5.25 | 0.40 | PAG |
| UPBH28018P79 | 10/27/2025 | UP28018P79 | Umwelt | 280 | - | 0.03 | 5.11 | N/A | NAG |
| UPBH28018P204 | 10/27/2025 | UP28018P204 | Umwelt | 280 | 0.140 | 3.25 | 4.75 | 1.46 | NAG |
| UPBH28018P1 | 10/27/2025 | UP28018P01 | Umwelt | 280 | 0.060 | 1.95 | 6.47 | 3.32 | NAG |
| UPBH28018P103 | 10/27/2025 | UP28018P103 | Umwelt | 280 | 0.650 | 17.75 | 4.72 | 0.27 | PAG |
| UPBH28018P105 | 10/27/2025 | UP28018P105 | Umwelt | 280 | 0.050 | 1.71 | 3.63 | 2.12 | NAG |
| UPBH28018P120 | 10/27/2025 | UP28018P120 | Umwelt | 280 | 0.820 | 23.74 | 18.19 | 0.77 | PAG |
| UPBH28018P124 | 10/27/2025 | UP28018P124 | Umwelt | 280 | 0.210 | 5.78 | 4.01 | 0.69 | PAG |
| UPBH28018P155 | 10/27/2025 | UP28018P155 | Umwelt | 280 | 0.140 | 4.34 | 4.24 | 0.98 | NAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH28018P157 | 10/27/2025 | UP28018P157 | Umwelt | 280 | 0.100 | 2.64 | 3.26 | 1.23 | NAG |
| UPBH28018P160 | 10/27/2025 | UP28018P160 | Umwelt | 280 | 0.710 | 21.19 | 11.00 | 0.52 | PAG |
| UPBH28018P180 | 10/27/2025 | UP28018P180 | Umwelt | 280 | 0.080 | 2.43 | 4.62 | 1.90 | NAG |
| UPBH28018P184 | 10/27/2025 | UP28018P184 | Umwelt | 280 | 0.610 | 15.18 | 4.87 | 0.32 | PAG |
| UPBH28018P188 | 10/28/2025 | UP28018P188 | Umwelt | 280 | 1.020 | 31.93 | 25.02 | 0.78 | PAG |
| UPBH28018P152 | 10/28/2025 | UP28018P152 | Umwelt | 280 | 0.860 | 24.61 | 7.00 | 0.28 | PAG |
| UPBH28018P215 | 10/28/2025 | UP28018P215 | Umwelt | 280 | 0.690 | 21.70 | 6.25 | 0.29 | PAG |
| UPBH29722P20 | 10/30/2025 | UP29722P20 | Umwelt | 297 | - | 0.03 | 4.75 | N/A | NAG |
| UPBH29722P202 | 10/30/2025 | UP29722P202 | Umwelt | 297 | - | 0.03 | 6.13 | N/A | NAG |
| UPBH29722P226 | 10/30/2025 | UP29722P226 | Umwelt | 297 | - | 0.03 | 3.25 | N/A | NAG |
| UPBH29722P247 | 10/30/2025 | UP29722P247 | Umwelt | 297 | - | 0.03 | 7.61 | N/A | NAG |
| UPBH29722P26 | 10/30/2025 | UP29722P26 | Umwelt | 297 | - | 0.03 | 6.72 | N/A | NAG |
| UPBH29722P272 | 10/30/2025 | UP29722P272 | Umwelt | 297 | 0.060 | 1.23 | 7.49 | 6.08 | NAG |
| UPBH29722P51 | 10/30/2025 | UP29722P51 | Umwelt | 297 | - | 0.03 | 5.26 | N/A | NAG |
| UPBH29722P9 | 10/30/2025 | UP29722P9 | Umwelt | 297 | - | 0.03 | 3.75 | N/A | NAG |
| UPBH29722P93 | 10/30/2025 | UP29722P93 | Umwelt | 297 | - | 0.03 | 6.73 | N/A | NAG |
| UPBH28016P111 | 11/1/2025 | UP28016P111 | Umwelt | 280 | 0.410 | 10.38 | 29.05 | 2.80 | PAG |
| UPBH28016P120 | 11/1/2025 | UP28016P120 | Umwelt | 280 | 0.150 | 4.11 | 3.26 | 0.79 | NAG |
| UPBH28016P138 | 11/1/2025 | UP28016P138 | Umwelt | 280 | 0.380 | 11.17 | 4.49 | 0.40 | PAG |
| UPBH28016P143 | 11/1/2025 | UP28016P143 | Umwelt | 280 | 0.460 | 10.19 | 3.25 | 0.32 | PAG |
| UPBH28016P154 | 11/1/2025 | UP28016P154 | Umwelt | 280 | 0.170 | 5.10 | 4.50 | 0.88 | PAG |
| UPBH28016P200 | 11/1/2025 | UP28016P200 | Umwelt | 280 | 0.130 | 3.61 | 1.76 | 0.49 | NAG |
| UPBH28016P204 | 11/1/2025 | UP28016P204 | Umwelt | 280 | 0.110 | 2.23 | 8.87 | 3.98 | NAG |
| UPBH28016P207 | 11/1/2025 | UP28016P207 | Umwelt | 280 | 0.040 | 0.66 | 6.50 | 9.78 | NAG |
| UPBH28016P70 | 11/1/2025 | UP28016P70 | Umwelt | 280 | 0.190 | 5.15 | 5.99 | 1.16 | PAG |
| UPBH28016P79 | 11/1/2025 | UP28016P79 | Umwelt | 280 | 0.050 | 1.48 | 3.26 | 2.19 | NAG |
| UPBH28016P87 | 11/1/2025 | UP28016P87 | Umwelt | 280 | 0.380 | 11.65 | 10.63 | 0.91 | PAG |
| UPBH28013P14 | 11/3/2025 | UP28013P14 | Umwelt | 280 | 0.390 | 11.46 | 5.75 | 0.50 | PAG |
| UPBH28013P17 | 11/3/2025 | UP28013P17 | Umwelt | 280 | 0.290 | 8.99 | 4.13 | 0.46 | PAG |
| UPBH28013P44 | 11/3/2025 | UP28013P44 | Umwelt | 280 | 0.320 | 10.12 | 3.50 | 0.35 | PAG |
| UPBH28013P47 | 11/3/2025 | UP28013P47 | Umwelt | 280 | 0.030 | 0.03 | 3.50 | N/A | NAG |
| UPBH28013P58 | 11/4/2025 | UP28013P58 | Umwelt | 280 | 0.120 | 3.62 | 5.25 | 1.45 | NAG |
| UPBH28013P66 | 11/4/2025 | UP28013P66 | Umwelt | 280 | 0.760 | 23.39 | 5.33 | 0.23 | PAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH28013P70 | 11/4/2025 | UP28013P70 | Umwelt | 280 | 0.100 | 3.08 | 5.02 | 1.63 | NAG |
| UPBH28013P87 | 11/4/2025 | UP28013P87 | Umwelt | 280 | 0.220 | 5.97 | 6.68 | 1.12 | PAG |
| UPBH28013P142 | 11/5/2025 | UP28013P142 | Umwelt | 280 | 0.130 | 3.81 | 3.75 | 0.98 | NAG |
| UPBH28013P110 | 11/5/2025 | UP28013P110 | Umwelt | 280 | 0.340 | 9.56 | 5.74 | 0.60 | PAG |
| UPBH28013P114 | 11/5/2025 | UP28013P114 | Umwelt | 280 | 0.040 | 1.02 | 3.25 | 3.18 | NAG |
| UPBH28013P123 | 11/6/2025 | UP28013P123 | Umwelt | 280 | 0.370 | 11.43 | 4.50 | 0.39 | PAG |
| UPBH28013P139 | 11/6/2025 | UP28013P139 | Umwelt | 280 | 0.010 | 0.03 | 3.00 | N/A | NAG |
| UPBH28013P95 | 11/6/2025 | UP28013P95 | Umwelt | 280 | 0.080 | 2.49 | 7.74 | 3.11 | NAG |
| UPBH28020P124 | 11/7/2025 | UP28020P124 | Umwelt | 280 | 0.020 | 0.44 | 4.25 | 9.57 | NAG |
| UPBH28020P127 | 11/7/2025 | UP28020P127 | Umwelt | 280 | 0.070 | 2.19 | 8.40 | 3.84 | NAG |
| UPBH28020P130 | 11/7/2025 | UP28020P130 | Umwelt | 280 | 0.390 | 12.06 | 13.90 | 1.15 | PAG |
| UPBH28020P17 | 11/7/2025 | UP28020P17 | Umwelt | 280 | 0.240 | 7.41 | 14.74 | 1.99 | PAG |
| UPBH28020P19 | 11/7/2025 | UP28020P19 | Umwelt | 280 | 0.410 | 12.63 | 10.11 | 0.80 | PAG |
| UPBH28020P41 | 11/7/2025 | UP28020P41 | Umwelt | 280 | 0.230 | 6.77 | 8.47 | 1.25 | PAG |
| UPBH28020P56 | 11/7/2025 | UP28020P56 | Umwelt | 280 | 0.880 | 26.07 | 15.65 | 0.60 | PAG |
| UPBH28020P59 | 11/7/2025 | UP28020P59 | Umwelt | 280 | 0.160 | 4.55 | 8.40 | 1.85 | PAG |
| UPBH28020P96 | 11/7/2025 | UP28020P96 | Umwelt | 280 | 0.280 | 8.30 | 10.24 | 1.23 | PAG |
| UPBH28020P99 | 11/7/2025 | UP28020P99 | Umwelt | 280 | 0.160 | 4.78 | 5.63 | 1.18 | PAG |
| UPBH28019P136 | 11/8/2025 | UP28019P136 | Umwelt | 280 | 0.400 | 10.72 | 8.13 | 0.76 | PAG |
| UPBH28019P141 | 11/8/2025 | UP28019P141 | Umwelt | 280 | 0.300 | 8.74 | 8.85 | 1.01 | PAG |
| UPBH28019P150 | 11/8/2025 | UP28019P150 | Umwelt | 280 | 0.050 | 0.73 | 4.57 | 6.27 | NAG |
| UPBH28019P165 | 11/8/2025 | UP28019P165 | Umwelt | 280 | 0.310 | 7.94 | 4.90 | 0.62 | PAG |
| UPBH28019P186 | 11/8/2025 | UP28019P186 | Umwelt | 280 | 0.460 | 13.36 | 5.02 | 0.38 | PAG |
| UPBH28019P192 | 11/8/2025 | UP28019P192 | Umwelt | 280 | 0.010 | 0.39 | 2.48 | 6.40 | NAG |
| UPBH28019P201 | 11/8/2025 | UP28019P201 | Umwelt | 280 | 0.030 | 0.73 | 4.94 | 6.75 | NAG |
| UPBH28019P230 | 11/8/2025 | UP28019P230 | Umwelt | 280 | 0.150 | 3.60 | 7.59 | 2.11 | NAG |
| UPBH28019P236 | 11/8/2025 | UP28019P236 | Umwelt | 280 | 0.240 | 7.34 | 6.03 | 0.82 | PAG |
| UPBH28019P240 | 11/8/2025 | UP28019P240 | Umwelt | 280 | 0.150 | 3.73 | 6.38 | 1.71 | NAG |
| UPBH28019P251 | 11/8/2025 | UP28019P251 | Umwelt | 280 | 0.110 | 3.33 | 5.63 | 1.69 | NAG |
| UPBH28019P270 | 11/8/2025 | UP28019P270 | Umwelt | 280 | 0.340 | 9.99 | 8.34 | 0.83 | PAG |
| UPBH28019P281 | 11/8/2025 | UP28019P281 | Umwelt | 280 | 0.120 | 3.25 | 4.94 | 1.52 | NAG |
| UPBH28019P32 | 11/9/2025 | UP28019P32 | Umwelt | 280 | 0.330 | 9.58 | 4.68 | 0.49 | PAG |
| UPBH28019P34 | 11/9/2025 | UP28019P34 | Umwelt | 280 | 0.090 | 2.48 | 5.35 | 2.15 | NAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH28019P66 | 11/9/2025 | UP28019P66 | Umwelt | 280 | 0.130 | 3.67 | 5.43 | 1.48 | NAG |
| UPBH28019P93 | 11/9/2025 | UP28019P93 | Umwelt | 280 | 0.440 | 13.03 | 6.84 | 0.52 | PAG |
| UPBH28019P104 | 11/9/2025 | UP28019P104 | Umwelt | 280 | 0.340 | 9.93 | 6.03 | 0.61 | PAG |
| UPBH29027P177 | 11/9/2025 | UP29027P177 | Umwelt | 290 | 0.050 | 0.93 | 4.40 | 4.72 | NAG |
| UPBH29027P183 | 11/9/2025 | UP29027P183 | Umwelt | 290 | 0.290 | 7.27 | 4.85 | 0.67 | PAG |
| UPBH29027P185 | 11/9/2025 | UP29027P185 | Umwelt | 290 | 0.340 | 9.52 | 3.57 | 0.38 | PAG |
| UPBH29027P146 | 11/9/2025 | UP29027P146 | Umwelt | 290 | 0.690 | 20.43 | 3.19 | 0.16 | PAG |
| UPBH29027P153 | 11/10/2025 | UP29027P153 | Umwelt | 290 | 0.010 | 0.03 | 3.00 | N/A | NAG |
| UPBH29027P156 | 11/10/2025 | UP29027P156 | Umwelt | 290 | - | 0.03 | 3.50 | N/A | NAG |
| UPBH29027P109 | 11/10/2025 | UP29027P109 | Umwelt | 290 | 0.300 | 8.57 | 10.71 | 1.25 | PAG |
| UPBH29027P124 | 11/10/2025 | UP29027P124 | Umwelt | 290 | 0.030 | 0.83 | 5.75 | 6.94 | NAG |
| UPBH29027P25 | 11/10/2025 | UP29027P25 | Umwelt | 290 | 0.230 | 7.28 | 2.51 | 0.34 | PAG |
| UPBH29027P58 | 11/10/2025 | UP29027P58 | Umwelt | 290 | 0.090 | 1.80 | 5.74 | 3.20 | NAG |
| UPBH29027P6 | 11/10/2025 | UP29027P6 | Umwelt | 290 | 0.050 | 1.67 | 3.12 | 1.87 | NAG |
| UPBH29027P65 | 11/10/2025 | UP29027P65 | Umwelt | 290 | 0.080 | 2.08 | 5.49 | 2.64 | NAG |
| UPBH29027P81 | 11/10/2025 | UP29027P81 | Umwelt | 290 | 0.040 | 1.19 | 3.26 | 2.72 | NAG |
| UPBH29027P90 | 11/10/2025 | UP29027P90 | Umwelt | 290 | 0.030 | 0.73 | 4.24 | 5.84 | NAG |
| UPBH29027P97 | 11/10/2025 | UP29027P97 | Umwelt | 290 | - | 0.03 | 3.01 | N/A | NAG |
| UPBH28021P177 | 11/11/2025 | UP28021P177 | Umwelt | 280 | 0.130 | 4.07 | 9.47 | 2.33 | NAG |
| UPBH28021P181 | 11/11/2025 | UP28021P181 | Umwelt | 280 | 0.130 | 3.89 | 11.99 | 3.08 | NAG |
| UPBH28021P204 | 11/11/2025 | UP28021P204 | Umwelt | 280 | 0.190 | 4.34 | 5.48 | 1.26 | PAG |
| UPBH28021P209 | 11/11/2025 | UP28021P209 | Umwelt | 280 | 0.150 | 3.89 | 5.00 | 1.28 | NAG |
| UPBH28021P104 | 11/12/2025 | UP28021P104 | Umwelt | 280 | 0.820 | 25.51 | 9.97 | 0.39 | PAG |
| UPBH28021P109 | 11/12/2025 | UP28021P109 | Umwelt | 280 | 0.150 | 4.76 | 11.78 | 2.47 | NAG |
| UPBH28021P134 | 11/12/2025 | UP28021P134 | Umwelt | 280 | 0.700 | 21.38 | 18.48 | 0.86 | PAG |
| UPBH28021P145 | 11/12/2025 | UP28021P145 | Umwelt | 280 | 0.080 | 2.51 | 3.23 | 1.29 | NAG |
| UPBH28021P149 | 11/12/2025 | UP28021P149 | Umwelt | 280 | 0.320 | 9.89 | 1.26 | 0.13 | PAG |
| UPBH29033P389 | 11/15/2025 | UP29033P389 | Umwelt | 290 | 0.880 | 24.19 | 11.40 | 0.47 | PAG |
| UPBH29033P411 | 11/15/2025 | UP29033P411 | Umwelt | 290 | 0.100 | 2.53 | 1.90 | 0.75 | NAG |
| UPBH29033P415 | 11/15/2025 | UP29033P415 | Umwelt | 290 | 0.020 | 0.46 | 2.50 | 5.47 | NAG |
| UPBH29033P442 | 11/15/2025 | UP29033P442 | Umwelt | 290 | 0.010 | 0.03 | 1.25 | N/A | NAG |
| UPBH29033P463 | 11/15/2025 | UP29033P463 | Umwelt | 290 | 0.540 | 12.20 | 11.38 | 0.93 | PAG |
| UPBH29033P487 | 11/15/2025 | UP29033P487 | Umwelt | 290 | 0.400 | 11.95 | 2.91 | 0.24 | PAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29033P174 | 11/15/2025 | UP29033P174 | Umwelt | 290 | 0.120 | 3.50 | 3.62 | 1.03 | NAG |
| UPBH29033P202 | 11/15/2025 | UP29033P202 | Umwelt | 290 | 0.110 | 2.51 | 1.39 | 0.56 | NAG |
| UPBH29033P221 | 11/15/2025 | UP29033P221 | Umwelt | 290 | 0.150 | 3.73 | 5.79 | 1.55 | NAG |
| UPBH29033P247 | 11/15/2025 | UP29033P247 | Umwelt | 290 | 0.230 | 4.99 | 1.75 | 0.35 | PAG |
| UPBH29033P250 | 11/15/2025 | UP29033P250 | Umwelt | 290 | 0.210 | 6.10 | 1.52 | 0.25 | PAG |
| UPBH29033P338 | 11/15/2025 | UP29033P338 | Umwelt | 290 | 0.190 | 5.30 | 3.29 | 0.62 | PAG |
| UPBH29033P344 | 11/15/2025 | UP29033P344 | Umwelt | 290 | 0.340 | 10.52 | 3.23 | 0.31 | PAG |
| UPBH29033P300 | 11/16/2025 | UP29033P300 | Umwelt | 290 | - | 0.03 | 9.35 | N/A | NAG |
| UPBH29033P171 | 11/16/2025 | UP29033P171 | Umwelt | 290 | 0.130 | 3.84 | 6.13 | 1.59 | NAG |
| UPBH29033P106 | 11/16/2025 | UP29033P106 | Umwelt | 290 | 0.160 | 5.10 | 4.72 | 0.93 | PAG |
| UPBH29033P128 | 11/16/2025 | UP29033P128 | Umwelt | 290 | - | 0.03 | 7.59 | N/A | NAG |
| UPBH29033P181 | 11/17/2025 | UP29033P181 | Umwelt | 290 | 0.070 | 1.96 | 5.86 | 2.99 | NAG |
| UPBH29033P229 | 11/17/2025 | UP29033P229 | Umwelt | 290 | 0.050 | 0.84 | 5.65 | 6.76 | NAG |
| UPBH29033P214 | 11/17/2025 | UP29033P214 | Umwelt | 290 | 0.010 | 0.03 | 6.09 | N/A | NAG |
| UPBH29033P303 | 11/17/2025 | UP29033P303 | Umwelt | 290 | - | 0.03 | 7.47 | N/A | NAG |
| UPBH29033P334 | 11/17/2025 | UP29033P334 | Umwelt | 290 | 0.040 | 1.17 | 4.74 | 4.06 | NAG |
| UPBH29033P383 | 11/17/2025 | UP29033P383 | Umwelt | 290 | - | 0.03 | 5.17 | N/A | NAG |
| UPBH29033P252 | 11/17/2025 | UP29033P252 | Umwelt | 290 | 0.150 | 4.57 | 6.22 | 1.36 | NAG |
| UPBH29033P262 | 11/17/2025 | UP29033P262 | Umwelt | 290 | - | 0.03 | 4.89 | N/A | NAG |
| UPBH29033P494 | 11/17/2025 | UP29033P494 | Umwelt | 290 | 0.160 | 4.69 | 4.89 | 1.04 | PAG |
| UPBH29033P431 | 11/17/2025 | UP29033P431 | Umwelt | 290 | 0.010 | 0.36 | 5.91 | 16.39 | NAG |
| UPBH29033P74 | 11/18/2025 | UP29033P74 | Umwelt | 290 | 0.260 | 6.83 | 7.24 | 1.06 | PAG |
| UPBH29033P77 | 11/18/2025 | UP29033P77 | Umwelt | 290 | - | 0.03 | 5.68 | N/A | NAG |
| UPBH29033P184 | 11/18/2025 | UP29033P184 | Umwelt | 290 | 0.040 | 0.03 | 6.53 | N/A | NAG |
| UPBH29033P141 | 11/18/2025 | UP29033P141 | Umwelt | 290 | 0.020 | 0.03 | 5.30 | N/A | NAG |
| UPBH29033P145 | 11/18/2025 | UP29033P145 | Umwelt | 290 | 0.050 | 1.08 | 5.62 | 5.18 | NAG |
| UPBH29033P111 | 11/18/2025 | UP29033P111 | Umwelt | 290 | 0.050 | 1.47 | 7.23 | 4.91 | NAG |
| UPBH29033P120 | 11/18/2025 | UP29033P120 | Umwelt | 290 | 0.090 | 1.87 | 9.87 | 5.27 | NAG |
| UPBH28023P157 | 11/19/2025 | UP28023P157 | Umwelt | 280 | 0.090 | 2.22 | 4.19 | 1.88 | NAG |
| UPBH28023P160 | 11/19/2025 | UP28023P160 | Umwelt | 280 | 0.420 | 11.33 | 4.22 | 0.37 | PAG |
| UPBH28023P73 | 11/19/2025 | UP28023P73 | Umwelt | 280 | 0.280 | 8.79 | 3.98 | 0.45 | PAG |
| UPBH28023P77 | 11/19/2025 | UP28023P77 | Umwelt | 280 | 0.120 | 3.68 | 3.97 | 1.08 | NAG |
| UPBH28023P21 | 11/20/2025 | UP28023P21 | Umwelt | 280 | 0.250 | 7.68 | 11.19 | 1.46 | PAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH28023P101 | 11/20/2025 | UP28023P101 | Umwelt | 280 | 0.390 | 12.06 | 9.84 | 0.82 | PAG |
| UPBH28023P127 | 11/20/2025 | UP28023P127 | Umwelt | 280 | - | 0.03 | 7.89 | N/A | NAG |
| UPBH28023P131 | 11/20/2025 | UP28023P131 | Umwelt | 280 | 0.630 | 19.62 | 35.60 | 1.81 | PAG |
| UPBH27001P117 | 11/23/2025 | UP27001P117 | Umwelt | 270 | 0.240 | 6.85 | 9.29 | 1.36 | PAG |
| UPBH27001P140 | 11/23/2025 | UP27001P140 | Umwelt | 270 | 0.370 | 11.15 | 26.34 | 2.36 | PAG |
| UPBH27001P66 | 11/23/2025 | UP27001P66 | Umwelt | 270 | - | 0.03 | 5.05 | N/A | NAG |
| UPBH27002P556 | 11/28/2025 | UP27002P556 | Umwelt | 270 | 1.210 | 37.75 | 10.53 | 0.28 | PAG |
| UPBH27002P566 | 11/28/2025 | UP27002P566 | Umwelt | 270 | 0.200 | 5.28 | 6.28 | 1.19 | PAG |
| UPBH27002P590 | 11/28/2025 | UP27002P590 | Umwelt | 270 | 0.220 | 6.16 | 8.49 | 1.38 | PAG |
| UPBH27002P604 | 11/28/2025 | UP27002P604 | Umwelt | 270 | 0.420 | 13.18 | 7.68 | 0.58 | PAG |
| UPBH28021P32 | 11/28/2025 | UP28021P32 | Umwelt | 280 | 0.610 | 19.00 | 17.97 | 0.95 | PAG |
| UPBH28021P45 | 11/28/2025 | UP28021P45 | Umwelt | 280 | 0.170 | 5.40 | 10.60 | 1.96 | PAG |
| UPBH28021P54 | 11/28/2025 | UP28021P54 | Umwelt | 280 | 0.190 | 5.94 | 12.29 | 2.07 | PAG |
| UPBH28021P69 | 11/28/2025 | UP28021P69 | Umwelt | 280 | - | 0.03 | 5.71 | N/A | NAG |
| UPBH28021P81 | 11/28/2025 | UP28021P81 | Umwelt | 280 | 0.590 | 18.56 | 17.31 | 0.93 | PAG |
| UPBH28021P18 | 11/28/2025 | UP28021P18 | Umwelt | 280 | 0.100 | 2.49 | 8.81 | 3.53 | NAG |
| UPBH29028P168 | 12/11/2025 | UP29028P168 | Umwelt | 290 | 0.110 | 1.73 | 2.63 | 1.52 | NAG |
| UPBH29028P172 | 12/11/2025 | UP29028P172 | Umwelt | 290 | 0.030 | 0.03 | 1.63 | N/A | NAG |
| UPBH29028P184 | 12/11/2025 | UP29028P184 | Umwelt | 290 | 0.040 | 0.50 | 0.26 | 0.52 | NAG |
| UPBH29028P190 | 12/12/2025 | UP29028P190 | Umwelt | 290 | 0.150 | 4.59 | 11.62 | 2.53 | NAG |
| UPBH29028P175 | 12/12/2025 | UP29028P175 | Umwelt | 290 | 0.340 | 9.77 | 11.54 | 1.18 | PAG |
| UPBH29028P74 | 12/12/2025 | UP29028P74 | Umwelt | 290 | - | 0.03 | 9.13 | N/A | NAG |
| UPBH29028P77 | 12/12/2025 | UP29028P77 | Umwelt | 290 | 0.040 | 1.12 | 11.43 | 10.19 | NAG |
| UPBH29028P108 | 12/12/2025 | UP29028P108 | Umwelt | 290 | 0.120 | 2.42 | 8.65 | 3.57 | NAG |
| UPBH29028P120 | 12/12/2025 | UP29028P120 | Umwelt | 290 | 0.160 | 4.74 | 6.53 | 1.38 | PAG |
| UPBH29028P124 | 12/12/2025 | UP29028P124 | Umwelt | 290 | 0.030 | 0.55 | 6.48 | 11.77 | NAG |
| UPBH29028P127 | 12/12/2025 | UP29028P127 | Umwelt | 290 | 0.460 | 12.95 | 7.68 | 0.59 | PAG |
| UPBH29028P135 | 12/12/2025 | UP29028P135 | Umwelt | 290 | 0.730 | 20.75 | 13.49 | 0.65 | PAG |
| UPBH29028P139 | 12/12/2025 | UP29028P139 | Umwelt | 290 | 0.230 | 6.73 | 14.73 | 2.19 | PAG |
| UPBH29028P159 | 12/12/2025 | UP29028P159 | Umwelt | 290 | - | 0.03 | 8.92 | N/A | NAG |
| UPBH29028P166 | 12/12/2025 | UP29028P166 | Umwelt | 290 | 0.160 | 4.88 | 10.26 | 2.10 | PAG |
| UPBH29028P110 | 12/13/2025 | UP29028P110 | Umwelt | 290 | 0.110 | 3.47 | 4.65 | 1.34 | NAG |
| UPBH29028P100 | 12/13/2025 | UP29028P100 | Umwelt | 290 | 0.100 | 2.72 | 7.92 | 2.91 | NAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29028P90 | 12/13/2025 | UP29028P90 | Umwelt | 290 | - | 0.03 | 5.87 | N/A | NAG |
| UPBH29028P95 | 12/13/2025 | UP29028P95 | Umwelt | 290 | - | 0.03 | 11.38 | N/A | NAG |
| UPBH29028P63 | 12/13/2025 | UP29028P63 | Umwelt | 290 | 0.770 | 24.21 | 11.73 | 0.48 | PAG |
| UPBH29029P38 | 12/13/2025 | UP29029P38 | Umwelt | 290 | 0.100 | 2.98 | 5.20 | 1.75 | NAG |
| UPBH29029P43 | 12/13/2025 | UP29029P43 | Umwelt | 290 | 0.100 | 2.82 | 5.37 | 1.90 | NAG |
| UPBH29029P51 | 12/13/2025 | UP29029P51 | Umwelt | 290 | 0.180 | 5.35 | 4.84 | 0.90 | PAG |
| UPBH29029P65 | 12/13/2025 | UP29029P65 | Umwelt | 290 | 0.240 | 7.23 | 8.51 | 1.18 | PAG |
| UPBH29029P68 | 12/13/2025 | UP29029P68 | Umwelt | 290 | 0.180 | 5.28 | 11.34 | 2.15 | PAG |
| UPBH29029P71 | 12/13/2025 | UP29029P71 | Umwelt | 290 | 0.330 | 9.65 | 9.32 | 0.97 | PAG |
| UPBH29029P84 | 12/13/2025 | UP29029P84 | Umwelt | 290 | - | 0.03 | 4.22 | N/A | NAG |
| UPBH29029P92 | 12/13/2025 | UP29029P92 | Umwelt | 290 | 0.130 | 4.11 | 11.13 | 2.71 | NAG |
| UPBH29029P94 | 12/13/2025 | UP29029P94 | Umwelt | 290 | 0.140 | 4.40 | 4.58 | 1.04 | NAG |
| UPBH29028P18 | 12/14/2025 | UP29028P18 | Umwelt | 290 | 0.208 | 6.37 | 5.14 | 0.81 | PAG |
| UPBH29028P25 | 12/14/2025 | UP29028P25 | Umwelt | 290 | 0.136 | 3.97 | 2.57 | 0.65 | NAG |
| UPBH29028P29 | 12/14/2025 | UP29028P29 | Umwelt | 290 | 0.151 | 4.06 | 4.94 | 1.22 | PAG |
| UPBH29028P59 | 12/14/2025 | UP29028P59 | Umwelt | 290 | 0.070 | 1.63 | 4.83 | 2.96 | NAG |
| UPBH29029P12 | 12/14/2025 | UP29029P12 | Umwelt | 290 | 0.108 | 2.84 | 3.47 | 1.22 | NAG |
| UPBH29029P22 | 12/14/2025 | UP29029P22 | Umwelt | 290 | 0.057 | 1.36 | 2.88 | 2.11 | NAG |
| UPBH29029P3 | 12/14/2025 | UP29029P3 | Umwelt | 290 | 0.108 | 2.55 | 16.71 | 6.54 | NAG |
| UPBH29028P11 | 12/14/2025 | UP29028P11 | Umwelt | 290 | 0.088 | 2.30 | 4.91 | 2.14 | NAG |
| UPBH29031P178 | 12/14/2025 | UP29031P178 | Umwelt | 290 | 0.117 | 3.63 | 2.78 | 0.77 | NAG |
| UPBH29031P218 | 12/14/2025 | UP29031P218 | Umwelt | 290 | - | 0.03 | 7.00 | N/A | NAG |
| UPBH29031P227 | 12/14/2025 | UP29031P227 | Umwelt | 290 | 0.046 | 0.65 | 8.32 | 12.70 | NAG |
| UPBH29031P239 | 12/14/2025 | UP29031P239 | Umwelt | 290 | - | 0.03 | 8.70 | N/A | NAG |
| UPBH29031P190 | 12/14/2025 | UP29031P190 | Umwelt | 290 | 0.068 | 1.72 | 4.02 | 2.34 | NAG |
| UPBH29031P360 | 12/15/2025 | UP29031P360 | Umwelt | 290 | 0.061 | 1.52 | 6.67 | 4.38 | NAG |
| UPBH29031P386 | 12/15/2025 | UP29031P386 | Umwelt | 290 | 0.104 | 2.33 | 6.91 | 2.96 | NAG |
| UPBH29031P445 | 12/15/2025 | UP29031P445 | Umwelt | 290 | 0.163 | 4.31 | 6.03 | 1.40 | PAG |
| UPBH29031P453 | 12/15/2025 | UP29031P453 | Umwelt | 290 | 0.384 | 11.83 | 9.09 | 0.77 | PAG |
| UPBH29031P490 | 12/15/2025 | UP29031P490 | Umwelt | 290 | 0.035 | 0.69 | 9.02 | 13.00 | NAG |
| UPBH29031P250 | 12/15/2025 | UP29031P250 | Umwelt | 290 | 0.001 | 0.03 | 6.45 | N/A | NAG |
| UPBH29031P265 | 12/15/2025 | UP29031P265 | Umwelt | 290 | 0.250 | 7.81 | 6.90 | 0.88 | PAG |
| UPBH29031P278 | 12/15/2025 | UP29031P278 | Umwelt | 290 | 0.013 | 0.03 | 6.01 | N/A | NAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29031P283 | 12/15/2025 | UP29031P283 | Umwelt | 290 | 0.219 | 6.85 | 6.23 | 0.91 | PAG |
| UPBH29031P321 | 12/15/2025 | UP29031P321 | Umwelt | 290 | 0.631 | 17.64 | 3.08 | 0.17 | PAG |
| UPBH29031P403 | 12/15/2025 | UP29031P403 | Umwelt | 290 | 0.132 | 3.91 | 7.36 | 1.88 | NAG |
| UPBH29031P416 | 12/15/2025 | UP29031P416 | Umwelt | 290 | 0.332 | 9.61 | 7.79 | 0.81 | PAG |
| UPBH29031P517 | 12/15/2025 | UP29031P517 | Umwelt | 290 | 0.077 | 2.41 | 9.23 | 3.82 | NAG |
| UPBH29031P536 | 12/15/2025 | UP29031P536 | Umwelt | 290 | 0.023 | 0.63 | 15.69 | 25.09 | NAG |
| UPBH29031P60 | 12/16/2025 | UP29031P60 | Umwelt | 290 | 0.097 | 1.55 | 3.85 | 2.48 | NAG |
| UPBH29031P76 | 12/16/2025 | UP29031P76 | Umwelt | 290 | 0.070 | 2.05 | 7.69 | 3.75 | NAG |
| UPBH29031P85 | 12/16/2025 | UP29031P85 | Umwelt | 290 | 0.084 | 2.57 | 4.13 | 1.60 | NAG |
| UPBH29031P53 | 12/16/2025 | UP29031P53 | Umwelt | 290 | 0.021 | 0.65 | 4.50 | 6.96 | NAG |
| UPBH29031P175 | 12/16/2025 | UP29031P175 | Umwelt | 290 | 0.148 | 3.98 | 4.65 | 1.17 | NAG |
| UPBH29031P21 | 12/16/2025 | UP29031P21 | Umwelt | 290 | 0.078 | 1.80 | 3.34 | 1.86 | NAG |
| UPBH29031P185 | 12/16/2025 | UP29031P185 | Umwelt | 290 | 0.115 | 3.59 | 3.45 | 0.96 | NAG |
| UPBH29031P114 | 12/16/2025 | UP29031P114 | Umwelt | 290 | 0.068 | 2.03 | 3.16 | 1.56 | NAG |
| UPBH29031P139 | 12/16/2025 | UP29031P139 | Umwelt | 290 | 1.832 | 54.74 | 9.40 | 0.17 | PAG |
| UPBH29031P169 | 12/16/2025 | UP29031P169 | Umwelt | 290 | - | 0.03 | 3.86 | N/A | NAG |
| UPBH29031P171 | 12/17/2025 | UP29031P171 | Umwelt | 290 | 0.278 | 8.70 | 7.38 | 0.85 | PAG |
| UPBH29031P214 | 12/17/2025 | UP29031P214 | Umwelt | 290 | 0.777 | 24.29 | 16.65 | 0.69 | PAG |
| UPBH29031P326 | 12/17/2025 | UP29031P326 | Umwelt | 290 | 0.545 | 15.86 | 8.61 | 0.54 | PAG |
| UPBH29031P247 | 12/17/2025 | UP29031P247 | Umwelt | 290 | 0.052 | 1.63 | 10.66 | 6.53 | NAG |
| UPBH29031P348 | 12/18/2025 | UP29031P348 | Umwelt | 290 | 0.709 | 20.75 | 12.07 | 0.58 | PAG |
| UPBH29031P390 | 12/18/2025 | UP29031P390 | Umwelt | 290 | 0.255 | 7.47 | 6.84 | 0.92 | PAG |
| UPBH29031P494 | 12/18/2025 | UP29031P494 | Umwelt | 290 | 0.233 | 6.76 | 8.47 | 1.25 | PAG |
| UPBH29031P513 | 12/18/2025 | UP29031P513 | Umwelt | 290 | 0.218 | 6.43 | 12.41 | 1.93 | PAG |
| UPBH29031P435 | 12/18/2025 | UP29031P435 | Umwelt | 290 | 0.262 | 7.83 | 6.83 | 0.87 | PAG |
| UPBH29032P124 | 12/19/2025 | UP29032P124 | Umwelt | 290 | 0.134 | 3.84 | 13.18 | 3.44 | NAG |
| UPBH29032P155 | 12/19/2025 | UP29032P155 | Umwelt | 290 | 0.204 | 5.59 | 7.48 | 1.34 | PAG |
| UPBH29032P158 | 12/19/2025 | UP29032P158 | Umwelt | 290 | 0.161 | 4.14 | 9.89 | 2.39 | PAG |
| UPBH29032P185 | 12/19/2025 | UP29032P185 | Umwelt | 290 | 0.007 | 0.03 | 8.29 | N/A | NAG |
| UPBH29032P193 | 12/19/2025 | UP29032P193 | Umwelt | 290 | 0.242 | 6.61 | 6.79 | 1.03 | PAG |
| UPBH29032P216 | 12/19/2025 | UP29032P216 | Umwelt | 290 | 0.043 | 0.88 | 7.14 | 8.12 | NAG |
| UPBH29032P228 | 12/19/2025 | UP29032P228 | Umwelt | 290 | 0.051 | 1.03 | 6.21 | 6.05 | NAG |
| UPBH29032P244 | 12/20/2025 | UP29032P244 | Umwelt | 290 | 0.132 | 3.41 | 8.29 | 2.43 | NAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29032P280 | 12/20/2025 | UP29032P280 | Umwelt | 290 | 0.348 | 9.41 | 8.43 | 0.90 | PAG |
| UPBH29032P293 | 12/20/2025 | UP29032P293 | Umwelt | 290 | 0.347 | 9.57 | 16.91 | 1.77 | PAG |
| UPBH29032P314 | 12/20/2025 | UP29032P314 | Umwelt | 290 | 0.236 | 6.28 | 7.30 | 1.16 | PAG |
| UPBH29032P66 | 12/20/2025 | UP29032P66 | Umwelt | 290 | 0.087 | 2.23 | 6.83 | 3.06 | NAG |
| UPBH29032P81 | 12/20/2025 | UP29032P81 | Umwelt | 290 | 0.110 | 2.55 | 6.64 | 2.60 | NAG |
| UPBH29032P19 | 12/20/2025 | UP29032P19 | Umwelt | 290 | 0.520 | 13.87 | 6.81 | 0.49 | PAG |
| UPBH29032P99 | 12/20/2025 | UP29032P99 | Umwelt | 290 | 0.255 | 6.65 | 10.14 | 1.53 | PAG |
| UPBH29032P96 | 12/21/2025 | UP29032P96 | Umwelt | 290 | 0.044 | 1.38 | 7.43 | 5.37 | NAG |
| UPBH29032P59 | 12/22/2025 | UP29032P59 | Umwelt | 290 | 0.125 | 3.84 | 7.19 | 1.87 | NAG |
| UPBH29032P242 | 12/22/2025 | UP29032P242 | Umwelt | 290 | 0.239 | 7.47 | 7.06 | 0.94 | PAG |
| UPBH29032P176 | 12/22/2025 | UP29032P176 | Umwelt | 290 | - | 0.03 | 6.08 | N/A | NAG |
| UPBH29032P221 | 12/22/2025 | UP29032P221 | Umwelt | 290 | 0.154 | 4.69 | 6.22 | 1.33 | PAG |
| UPBH29032P197 | 12/22/2025 | UP29032P197 | Umwelt | 290 | 0.213 | 5.66 | 10.76 | 1.90 | PAG |
| UPBH29032P127 | 12/22/2025 | UP29032P127 | Umwelt | 290 | 0.204 | 5.70 | 6.23 | 1.09 | PAG |
| UP29032P290 | 12/23/2025 | UP29032P290 | Umwelt | 290 | 0.310 | 9.69 | 7.50 | 0.77 | PAG |
| UP29032P322 | 12/23/2025 | UP29032P322 | Umwelt | 290 | 0.120 | 3.13 | 7.27 | 2.33 | NAG |
| UP29032P346 | 12/23/2025 | UP29032P346 | Umwelt | 290 | 0.040 | 0.94 | 3.97 | 4.24 | NAG |
| UP29032P353 | 12/23/2025 | UP29032P353 | Umwelt | 290 | 0.120 | 3.44 | 5.25 | 1.53 | NAG |
| UPBH29036P107 | 12/24/2025 | UP29036P107 | Umwelt | 290 | - | 0.03 | 4.35 | N/A | NAG |
| UPBH29036P120 | 12/24/2025 | UP29036P120 | Umwelt | 290 | 0.219 | 6.43 | 4.64 | 0.72 | PAG |
| UPBH29036P128 | 12/24/2025 | UP29036P128 | Umwelt | 290 | 0.008 | 0.03 | 4.75 | N/A | NAG |
| UPBH29036P147 | 12/24/2025 | UP29036P147 | Umwelt | 290 | 0.104 | 3.25 | 5.15 | 1.58 | NAG |
| UPBH29036P70 | 12/24/2025 | UP29036P70 | Umwelt | 290 | 0.010 | 0.03 | 3.77 | N/A | NAG |
| UPBH29036P96 | 12/24/2025 | UP29036P96 | Umwelt | 290 | 0.414 | 11.76 | 9.50 | 0.81 | PAG |
| UPBH29036X16 | 12/24/2025 | UP29036X16 | Umwelt | 290 | 0.016 | 0.50 | 3.14 | 6.29 | NAG |
| UPBH29036P163 | 12/24/2025 | UP29036P163 | Umwelt | 290 | 0.344 | 10.74 | 5.66 | 0.53 | PAG |
| UPBH29036X34 | 12/24/2025 | UP29036X34 | Umwelt | 290 | 0.022 | 0.03 | 6.81 | N/A | NAG |
| UPBH29036X38 | 12/24/2025 | UP29036X38 | Umwelt | 290 | 0.003 | 0.03 | 4.77 | N/A | NAG |
| UPBH29036P76 | 12/24/2025 | UP29036P76 | Umwelt | 290 | 0.286 | 8.93 | 3.23 | 0.36 | PAG |
| UPBH29036P79 | 12/24/2025 | UP29036P79 | Umwelt | 290 | 1.612 | 50.38 | 4.90 | 0.10 | PAG |
| UPBH29036X83 | 12/25/2025 | UP29036X83 | Umwelt | 290 | 0.106 | 3.31 | 2.89 | 0.87 | NAG |
| UPBH29036X86 | 12/25/2025 | UP29036X86 | Umwelt | 290 | 0.157 | 4.90 | 4.23 | 0.86 | PAG |
| UPBH29036X50 | 12/25/2025 | UP29036X50 | Umwelt | 290 | 0.084 | 2.61 | 2.95 | 1.13 | NAG |

| Sample ID | Date | Blast Hole # | Location | Depth (m) | Total Sulphur (wt%) | Acid-Generation Potential (AP) | Neutralization Potential (NP) | Neutralization Potential Ratio (NPR) | Classification |
|---|---|---|---|---|---|---|---|---|---|
| UPBH29036X54 | 12/25/2025 | UP29036X54 | Umwelt | 290 | 0.145 | 3.83 | 3.86 | 1.01 | NAG |
| UPBH29036X66 | 12/25/2025 | UP29036X66 | Umwelt | 290 | 0.220 | 6.86 | 3.47 | 0.51 | PAG |
| UPBH29036X70 | 12/25/2025 | UP29036X70 | Umwelt | 290 | 0.118 | 3.68 | 2.78 | 0.75 | NAG |
| UPBH29036P158 | 12/25/2025 | UP29036P158 | Umwelt | 290 | 0.099 | 2.77 | 3.63 | 1.31 | NAG |
| UPBH270RampV1R39 | 12/28/2025 | UP270RAMPV1R39 | Umwelt | 270 | 0.111 | 2.49 | 6.73 | 2.71 | NAG |
| UPBH29037P153 | 12/30/2025 | UP29037P153 | Umwelt | 290 | 0.063 | 1.37 | 6.73 | 4.91 | NAG |
| UPBH29037P21 | 12/30/2025 | UP29037P21 | Umwelt | 290 | 0.126 | 3.21 | 8.11 | 2.53 | NAG |
| UPBH29037P231 | 12/30/2025 | UP29037P231 | Umwelt | 290 | 0.109 | 2.96 | 6.91 | 2.34 | NAG |
| UPBH29037P85 | 12/30/2025 | UP29037P85 | Umwelt | 290 | 0.946 | 28.34 | 7.60 | 0.27 | PAG |

**Notes:**

*Analysis of Acid Generating Potential based on total sulphur concentrations; analysis of Neutralization Potential based on Modified Sobek Method

### Table D-2: 2025 Echo Waste Rock Placement by Month and Type, as As-Built Volume

| Placement Location | Month | PAG ($m^3$) |
|---|---|---|
| Echo WRSA | January | 283,218 |
| | February | 206,000 |
| | March | 131,604 |
| | April | 140,657 |
| | May | 30,379 |
| | June | - |
| | July | - |
| | August | - |
| | September | - |
| | October | - |
| | November | - |
| | December | - |
| **Total (m3)** | | **791,858** |

### Table D-3: 2025 Umwelt Waste Rock Placement by Month and Type, as As-Built Volume

| Placement Location | Month | NAG ($m^3$) | PAG ($m^3$) | Total ($m^3$) |
|---|---|---|---|---|
| Umwelt WRSA | January | - | - | - |
| | February | - | 36,735 | 36,735 |
| | March | - | 78,153 | 78,153 |
| | April | - | 74,648 | 74,648 |
| | May | - | 56,734 | 56,734 |
| | June | - | 24,880 | 24,880 |
| | July | - | 172,324 | 172,324 |
| | August | - | 214,324 | 214,324 |
| | September | - | 104,281 | 104,281 |
| | October | - | 401,606 | 401,606 |
| | November | 16,447 | 394,952 | 411,399 |
| | December | 25,020 | 287,486 | 312,506 |
| **Total ($m^3$)** | | **41,467** | **1,846,123** | **1,887,590** |

### Table D-4: 2025 Umwelt Overburden Placement by Month and Type, as As-Built Volume

| Placement Location | Month | Overburden ($m^3$) |
|---|---|---|
| Umwelt Overburden Stockpile | January | 18,793 |
| | February | 34,300 |
| | March | 57,222 |
| | April | 39,507 |
| | May | 123,117 |
| | June | 79,454 |
| | July | 64,468 |
| | August | 34,771 |
| | September | 10,677 |
| | October | - |
| | November | 24,498 |
| | December | - |
| **Total ($m^3$)** | | **486,807** |

**Table D-5: 2025 Volume of NAG Removed from Pits Used in Site-wide Construction Projects**

| Month | Echo Pit ($m^3$) | Umwelt Pit ($m^3$) | Total ($m^3$) |
|---|---|---|---|
| January | 31,901 | 714 | 32,615 |
| February | 18,615 | 11,310 | 29,925 |
| March | - | 4,356 | 4,356 |
| April | - | 52,765 | 52,765 |
| May | - | 94,466 | 94,466 |
| June | - | 120,722 | 120,722 |
| July | - | 26,405 | 26,405 |
| August | - | 103,450 | 103,450 |
| September | - | 20,569 | 20,569 |
| October | - | 36,174 | 36,174 |
| November | - | 47,240 | 47,240 |
| December | - | 77,825 | 77,825 |
| **Total ($m^3$)** | **50,516** | **595,996** | **646,512** |

# APPENDIX E WATER QUALITY ANALYTICAL RESULTS

## Table E-1a Water Quality Data for Regulated Monitoring Stations: General Runoff Sites 1 and 2, 2025

| Station | Unit | BRP-G-01 General Site Runoff | | | | BRP-G-02 General Site Runoff | | | |
|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-05-27<br>14:40:00<br>C549554 | 2025-06-27<br>09:10:00<br>C558898 | 2025-07-01<br>09:40:00<br>C559713 | Lowest Detection Limit | 2025-05-22<br>14:00:00<br>C548022 | 2025-05-27<br>14:55:00<br>C549554 | 2025-06-27<br>09:35:00<br>C558898 |
| Aluminum (Al)-Dissolved | mg/L | 0.003 | - | 0.107 | 0.111 | 0.003 | - | - | 0.221 |
| Antimony (Sb)-Dissolved | mg/L | 0.0005 | - | <0.0005 | <0.0005 | 0.0005 | - | - | <0.0005 |
| Arsenic (As)-Dissolved | mg/L | 0.0001 | - | 0.0008 | 0.0008 | 0.0001 | - | - | 0.0006 |
| Barium (Ba)-Dissolved | mg/L | 0.001 | - | 0.033 | 0.044 | 0.001 | - | - | 0.051 |
| Beryllium (Be)-Dissolved | mg/L | 0.0001 | - | <0.0001 | <0.0001 | 0.0001 | - | - | <0.0001 |
| Bismuth (Bi)-Dissolved | mg/L | 0.001 | - | <0.001 | <0.001 | 0.001 | - | - | <0.001 |
| Boron (B)-Dissolved | mg/L | 0.05 | - | <0.05 | <0.05 | 0.05 | - | - | <0.05 |
| Cadmium (Cd)-Dissolved | mg/L | 0.00001 | - | <0.00001 | 0.00002 | 0.00001 | - | - | 0.00004 |
| Calcium (Ca)-Dissolved | mg/L | 0.05 | - | 9.86 | 10.90 | 0.05 | - | - | 11.30 |
| Chromium (Cr)-Dissolved | mg/L | 0.001 | - | <0.001 | <0.001 | 0.001 | - | - | <0.001 |
| Cobalt (Co)-Dissolved | mg/L | 0.0002 | - | 0.0003 | 0.0003 | 0.0002 | - | - | 0.0063 |
| Copper (Cu)-Dissolved | mg/L | 0.0002 | - | 0.0029 | 0.0028 | 0.0002 | - | - | 0.0029 |
| Iron (Fe)-Dissolved | mg/L | 0.005 | - | 0.074 | 0.047 | 0.005 | - | - | 0.105 |
| Lead (Pb)-Dissolved | mg/L | 0.0002 | - | <0.0002 | <0.0002 | 0.0002 | - | - | <0.0002 |
| Lithium (Li)-Dissolved | mg/L | 0.002 | - | 0.002 | 0.002 | 0.002 | - | - | 0.004 |
| Magnesium (Mg)-Dissolved | mg/L | 0.05 | - | 5.70 | 6.07 | 0.05 | - | - | 6.87 |
| Manganese (Mn)-Dissolved | mg/L | 0.001 | - | 0.001 | 0.001 | 0.001 | - | - | 0.043 |
| Molybdenum (Mo)-Dissolved | mg/L | 0.001 | - | <0.001 | <0.001 | 0.001 | - | - | <0.001 |
| Nickel (Ni)-Dissolved | mg/L | 0.001 | - | 0.008 | 0.008 | 0.001 | - | - | 0.009 |
| Nitrate (NO3)-Dissolved | mg/L | 0.013 | - | 0.480 | 1.200 | 0.18 | - | - | 2.40 |
| Nitrite (NO2)-Dissolved | mg/L | 0.0033 | - | <0.0033 | <0.0033 | 0.0033 | - | - | <0.0033 |
| Potassium (K)-Dissolved | mg/L | 0.05 | - | 1.12 | 1.07 | 0.05 | - | - | 1.81 |
| Selenium (Se)-Dissolved | mg/L | 0.0001 | - | <0.0001 | <0.0001 | 0.0001 | - | - | <0.0001 |
| Silicon (Si)-Dissolved | mg/L | 0.1 | - | 2.2 | 2.9 | 0.1 | - | - | 3.4 |
| Silver (Ag)-Dissolved | mg/L | 0.00002 | - | <0.00002 | <0.00002 | 0.00002 | - | - | <0.00002 |
| Sodium (Na)-Dissolved | mg/L | 0.05 | - | 1.76 | 1.82 | 0.05 | - | - | 1.75 |
| Strontium (Sr)-Dissolved | mg/L | 0.001 | - | 0.043 | 0.053 | 0.001 | - | - | 0.054 |
| Sulphur (S)-Dissolved | mg/L | 3 | - | 10 | 19 | 3 | - | - | 13 |
| Thallium (Tl)-Dissolved | mg/L | 0.00001 | - | <0.00001 | <0.00001 | 0.00001 | - | - | <0.00001 |
| Tin (Sn)-Dissolved | mg/L | 0.005 | - | <0.005 | <0.005 | 0.005 | - | - | <0.005 |
| Titanium (Ti)-Dissolved | mg/L | 0.005 | - | <0.005 | <0.005 | 0.005 | - | - | <0.005 |
| Uranium (U)-Dissolved | mg/L | 0.0001 | - | <0.0001 | <0.0001 | 0.0001 | - | - | <0.0001 |
| Vanadium (V)-Dissolved | mg/L | 0.005 | - | <0.005 | <0.005 | 0.005 | - | - | <0.005 |
| Zinc (Zn)-Dissolved | mg/L | 0.005 | - | <0.005 | <0.005 | 0.005 | - | - | 0.013 |
| Zirconium (Zr)-Dissolved | mg/L | 0.0001 | - | 0.0003 | 0.0002 | 0.0001 | - | - | 0.0003 |
| Alkalinity (PP as CaCO3) | mg/L | 0.5 | <0.5 | <0.5 | <0.5 | 0.5 | <0.5 | <0.5 | <0.5 |
| Alkalinity (Total as CaCO3) | mg/L | 0.5 | 3.1 | 3.9 | 3.3 | 0.5 | 7.2 | <0.5 | <0.5 |

| Station | Unit | BRP-G-01<br>General Site Runoff | | | | BRP-G-02<br>General Site Runoff | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Date**<br>**Time**<br>**Lab Job Number**<br>**Parameter** | | **Lowest Detection Limit** | **2025-05-27**<br>**14:40:00**<br>**C549554** | **2025-06-27**<br>**09:10:00**<br>**C558898** | **2025-07-01**<br>**09:40:00**<br>**C559713** | **Lowest Detection Limit** | **2025-05-22**<br>**14:00:00**<br>**C548022** | **2025-05-27**<br>**14:55:00**<br>**C549554** | **2025-06-27**<br>**09:35:00**<br>**C558898** |
| Ammonia (N)-Total | mg/L | 0.005 | - | <0.005 | 0.008 | 0.005 | - | - | <0.005 |
| Bicarbonate (HCO3) | mg/L | 0.5 | 3.8 | 4.8 | 4.0 | 0.5 | 8.7 | <0.5 | <0.5 |
| Carbonate (CO3) | mg/L | 0.5 | <0.5 | <0.5 | <0.5 | 0.5 | <0.5 | <0.5 | <0.5 |
| Chloride (Cl)-Dissolved | mg/L | 0.5 | 7.8 | 12.0 | 9.5 | 0.5 | 7.6 | 17.0 | 17.0 |
| Conductivity | µS/cm | 1 | 98 | 136 | 139 | 1 | 88 | 141 | 167 |
| Field Temperature | deg. C | - | 5.8 | - | 10.4 | - | 0.4 | 5.2 | - |
| Fluoride (F) | mg/L | 0.01 | 0.03 | 0.03 | 0.02 | 0.01 | 0.03 | 0.03 | 0.02 |
| Hardness (CaCO3)-Dissolved | mg/L | 0.5 | - | 48.1 | 52.1 | 0.5 | - | - | 56.4 |
| Hardness (CaCO3)-Total | mg/L | 0.5 | - | 51.1 | 56.2 | 0.5 | - | - | 59.8 |
| Hydroxide (OH) | mg/L | 0.5 | <0.5 | <0.5 | <0.5 | 0.5 | <0.5 | <0.5 | <0.5 |
| Nitrate (as N) | mg/L | 0.003 | - | 0.110 | 0.270 | 0.04 | - | - | 0.54 |
| Nitrate plus Nitrite (N) | mg/L | 0.003 | - | 0.110 | 0.270 | 0.04 | - | - | 0.54 |
| Nitrite (as N) | mg/L | 0.001 | - | <0.001 | <0.001 | 0.001 | - | - | <0.001 |
| Nitrogen (N)-Total | mg/L | 0.02 | - | 0.55 | 0.69 | 0.02 | - | - | 1.20 |
| Organic Carbon (C)-Dissolved | mg/L | 0.2 | - | 8.7 | 9.2 | 0.2 | - | - | 12.0 |
| Organic Carbon (C)-Total | mg/L | 0.2 | - | 8.7 | 9.6 | 0.2 | - | - | 11.0 |
| Redox Potential-Field | mV | - | 329.1 | - | 221.5 | - | 161.8 | 368.8 | - |
| Sulphate (SO4)-Dissolved | mg/L | 0.5 | 26.0 | 39.0 | 42.0 | 0.5 | 14.0 | 30.0 | 46.0 |
| Total Dissolved Solids_Calculated | mg/L | 10 | - | 72 | 75 | 10 | - | - | 87 |
| Total Dissolved Solids_Measured | mg/L | 10 | - | - | 110 | - | - | - | - |
| Total Kjeldahl Nitrogen (Calc)-Total | mg/L | 0.02 | - | 0.44 | 0.42 | 0.04 | - | - | 0.64 |
| Total Oil and Grease | mg/L | 2 | <2 | 6 | <2 | 2 | 3 | <2 | 6 |
| Total Suspended Solids | mg/L | 1 | 2 | 2 | 2 | 0.97 | 39.00 | 6.30 | 1.60 |
| Turbidity | NTU | 0.1 | 11.0 | 3.4 | <0.1 | 0.1 | 86.0 | 8.7 | <0.1 |
| Un-Ionized Ammonia | mg/L | 0.0005 | - | - | <0.0005 | - | - | - | - |
| pH | pH Units | - | 6.23 | 6.42 | 6.3 | - | 6.1 | 5.03 | 5.18 |
| pH-Field | pH | - | 6.2 | - | 6.15 | - | 6.76 | 4.92 | - |
| Aluminum (Al)-Total | mg/L | 0.003 | - | 0.179 | 0.299 | 0.003 | - | - | 0.240 |
| Antimony (Sb)-Total | mg/L | 0.0005 | - | <0.0005 | <0.0005 | 0.0005 | - | - | <0.0005 |
| Arsenic (As)-Total | mg/L | 0.0001 | - | 0.0010 | 0.0010 | 0.0001 | - | - | 0.0006 |
| Barium (Ba)-Total | mg/L | 0.001 | - | 0.035 | 0.046 | 0.001 | - | - | 0.052 |
| Beryllium (Be)-Total | mg/L | 0.0001 | - | <0.0001 | <0.0001 | 0.0001 | - | - | <0.0001 |
| Bismuth (Bi)-Total | mg/L | 0.001 | - | <0.001 | <0.001 | 0.001 | - | - | <0.001 |
| Boron (B)-Total | mg/L | 0.05 | - | <0.05 | <0.05 | 0.05 | - | - | <0.05 |
| Cadmium (Cd)-Total | mg/L | 0.00001 | - | 0.00001 | <0.00001 | 0.00001 | - | - | 0.00004 |
| Calcium (Ca)-Total | mg/L | 0.05 | - | 10.50 | 11.60 | 0.05 | - | - | 11.80 |
| Chromium (Cr)-Total | mg/L | 0.001 | - | <0.001 | 0.001 | 0.001 | - | - | <0.001 |
| Cobalt (Co)-Total | mg/L | 0.0002 | - | 0.0005 | 0.0008 | 0.0002 | - | - | 0.0069 |
| Copper (Cu)-Total | mg/L | 0.0005 | - | 0.0032 | 0.0033 | 0.0005 | - | - | 0.0032 |

| Station | Unit | BRP-G-01<br>General Site Runoff | | | | BRP-G-02<br>General Site Runoff | | | |
|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-05-27<br>14:40:00<br>C549554 | 2025-06-27<br>09:10:00<br>C558898 | 2025-07-01<br>09:40:00<br>C559713 | Lowest Detection Limit | 2025-05-22<br>14:00:00<br>C548022 | 2025-05-27<br>14:55:00<br>C549554 | 2025-06-27<br>09:35:00<br>C558898 |
| Iron (Fe)-Total | mg/L | 0.01 | - | 0.18 | 0.34 | 0.01 | - | - | 0.13 |
| Lead (Pb)-Total | mg/L | 0.0002 | - | <0.0002 | <0.0002 | 0.0002 | - | - | <0.0002 |
| Lithium (Li)-Total | mg/L | 0.002 | - | 0.003 | 0.003 | 0.002 | - | - | 0.004 |
| Magnesium (Mg)-Total | mg/L | 0.05 | - | 6.06 | 6.62 | 0.05 | - | - | 7.38 |
| Manganese (Mn)-Total | mg/L | 0.001 | - | 0.003 | 0.010 | 0.001 | - | - | 0.046 |
| Molybdenum (Mo)-Total | mg/L | 0.001 | - | <0.001 | <0.001 | 0.001 | - | - | <0.001 |
| Nickel (Ni)-Total | mg/L | 0.001 | - | 0.009 | 0.009 | 0.001 | - | - | 0.010 |
| Phosphorus (P)-Total | mg/L | 0.001 | - | 0.007 | 0.006 | 0.001 | - | - | 0.005 |
| Potassium (K)-Total | mg/L | 0.05 | - | 1.17 | 1.35 | 0.05 | - | - | 1.87 |
| Selenium (Se)-Total | mg/L | 0.0001 | - | <0.0001 | <0.0001 | 0.0001 | - | - | <0.0001 |
| Silicon (Si)-Total | mg/L | 0.1 | - | 2.5 | 3.3 | 0.1 | - | - | 3.5 |
| Silver (Ag)-Total | mg/L | 0.00002 | - | <0.00002 | <0.00002 | 0.00002 | - | - | <0.00002 |
| Sodium (Na)-Total | mg/L | 0.05 | - | 1.83 | 2.27 | 0.05 | - | - | 1.84 |
| Strontium (Sr)-Total | mg/L | 0.001 | - | 0.045 | 0.056 | 0.001 | - | - | 0.057 |
| Sulphur (S)-Total | mg/L | 3 | - | 10 | 12 | 3 | - | - | 12 |
| Thallium (Tl)-Total | mg/L | 0.00001 | - | <0.00001 | <0.00001 | 0.00001 | - | - | <0.00001 |
| Tin (Sn)-Total | mg/L | 0.005 | - | <0.005 | <0.005 | 0.005 | - | - | <0.005 |
| Titanium (Ti)-Total | mg/L | 0.005 | - | <0.005 | <0.005 | 0.005 | - | - | <0.005 |
| Uranium (U)-Total | mg/L | 0.0001 | - | <0.0001 | <0.0001 | 0.0001 | - | - | <0.0001 |
| Vanadium (V)-Total | mg/L | 0.005 | - | <0.005 | <0.005 | 0.005 | - | - | <0.005 |
| Zinc (Zn)-Total | mg/L | 0.005 | - | <0.005 | <0.005 | 0.005 | - | - | 0.012 |
| Zirconium (Zr)-Total | mg/L | 0.0001 | - | 0.0003 | 0.0003 | 0.0001 | - | - | 0.0003 |

## Table E-1b Water Quality Data for Regulated Monitoring Stations: General Runoff Site 3, May to July 2025

| Station | Unit | BRP-G-03 General Site Runoff | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-05-19 15:25:00 C546599 | 2025-05-27 15:20:00 C549554 | 2025-06-04 16:00:00 C551892 | 2025-06-12 13:30:00 C554373 | 2025-06-18 09:00:00 C556571 | 2025-06-24 11:05:00 C557889 | 2025-06-27 10:05:00 C558898 | 2025-07-01 10:10:00 C559713 | 2025-07-08 11:15:00 C561664 | 2025-07-17 09:45:00 C564285 | 2025-07-22 14:30:00 C564979 | 2025-07-29 09:40:00 C566777 |
| Aluminum (Al)-Dissolved | mg/L | 0.003 | - | - | - | - | 0.099 | 0.102 | 0.111 | 0.133 | 0.117 | 0.096 | 0.099 | 0.094 |
| Antimony (Sb)-Dissolved | mg/L | 0.0005 | - | - | - | - | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| Arsenic (As)-Dissolved | mg/L | 0.0001 | - | - | - | - | 0.0009 | 0.0008 | 0.0013 | 0.0012 | 0.0010 | 0.0008 | 0.0008 | 0.0006 |
| Barium (Ba)-Dissolved | mg/L | 0.001 | - | - | - | - | 0.029 | 0.029 | 0.026 | 0.026 | 0.039 | 0.043 | 0.036 | 0.038 |
| Beryllium (Be)-Dissolved | mg/L | 0.0001 | - | - | - | - | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 |
| Bismuth (Bi)-Dissolved | mg/L | 0.001 | - | - | - | - | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Boron (B)-Dissolved | mg/L | 0.05 | - | - | - | - | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Cadmium (Cd)-Dissolved | mg/L | 0.00001 | - | - | - | - | 0.00003 | 0.00004 | 0.00003 | 0.00002 | 0.00007 | 0.00006 | 0.00005 | 0.00005 |
| Calcium (Ca)-Dissolved | mg/L | 0.05 | - | - | - | - | 16.50 | 15.50 | 14.00 | 12.80 | 17.30 | 21.00 | 19.80 | 20.10 |
| Chromium (Cr)-Dissolved | mg/L | 0.001 | - | - | - | - | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Cobalt (Co)-Dissolved | mg/L | 0.0002 | - | - | - | - | 0.0015 | 0.0017 | 0.0018 | 0.0014 | 0.0029 | 0.0033 | 0.0033 | 0.0041 |
| Copper (Cu)-Dissolved | mg/L | 0.0002 | - | - | - | - | 0.0047 | 0.0058 | 0.0046 | 0.0053 | 0.0064 | 0.0061 | 0.0060 | 0.0054 |
| Iron (Fe)-Dissolved | mg/L | 0.005 | - | - | - | - | 0.109 | 0.118 | 0.179 | 0.142 | 0.122 | 0.145 | 0.183 | 0.181 |
| Lead (Pb)-Dissolved | mg/L | 0.0002 | - | - | - | - | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 |
| Lithium (Li)-Dissolved | mg/L | 0.002 | - | - | - | - | 0.003 | 0.004 | 0.004 | 0.003 | 0.004 | 0.005 | 0.003 | 0.003 |
| Magnesium (Mg)-Dissolved | mg/L | 0.05 | - | - | - | - | 9.07 | 9.69 | 9.59 | 8.53 | 11.70 | 14.40 | 14.50 | 15.20 |
| Manganese (Mn)-Dissolved | mg/L | 0.001 | - | - | - | - | 0.037 | 0.038 | 0.035 | 0.024 | 0.074 | 0.075 | 0.071 | 0.080 |
| Molybdenum (Mo)-Dissolved | mg/L | 0.001 | - | - | - | - | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Nickel (Ni)-Dissolved | mg/L | 0.001 | - | - | - | - | 0.018 | 0.021 | 0.018 | 0.020 | 0.027 | 0.028 | 0.026 | 0.023 |
| Nitrate (NO3)-Dissolved | mg/L | 0.89 | - | - | - | - | 30.00 | 28.00 | 17.00 | 31.00 | 30.00 | 29.00 | 19.00 | 18.00 |
| Nitrite (NO2)-Dissolved | mg/L | 0.0033 | - | - | - | - | 0.0690 | 0.0850 | 0.1000 | 0.0800 | 0.0840 | 0.0790 | 0.0290 | 0.0250 |
| Potassium (K)-Dissolved | mg/L | 0.05 | - | - | - | - | 3.43 | 3.38 | 3.08 | 2.68 | 3.62 | 4.69 | 4.27 | 4.21 |
| Selenium (Se)-Dissolved | mg/L | 0.0001 | - | - | - | - | 0.0002 | 0.0001 | 0.0002 | 0.0003 | 0.0003 | 0.0003 | 0.0002 | 0.0002 |
| Silicon (Si)-Dissolved | mg/L | 0.1 | - | - | - | - | 1.2 | 0.9 | 1.9 | 2.1 | 1.3 | 1.0 | 1.0 | 1.1 |
| Silver (Ag)-Dissolved | mg/L | 0.00002 | - | - | - | - | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 |
| Sodium (Na)-Dissolved | mg/L | 0.05 | - | - | - | - | 2.46 | 2.28 | 2.31 | 2.02 | 2.97 | 3.74 | 3.97 | 4.37 |
| Strontium (Sr)-Dissolved | mg/L | 0.001 | - | - | - | - | 0.071 | 0.068 | 0.056 | 0.053 | 0.073 | 0.079 | 0.076 | 0.079 |
| Sulphur (S)-Dissolved | mg/L | 3 | - | - | - | - | 14 | 13 | 15 | 20 | 20 | 27 | 25 | 26 |
| Thallium (Tl)-Dissolved | mg/L | 0.00001 | - | - | - | - | 0.00001 | 0.00001 | <0.00001 | <0.00001 | 0.00002 | 0.00002 | 0.00002 | 0.00002 |
| Tin (Sn)-Dissolved | mg/L | 0.005 | - | - | - | - | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| Titanium (Ti)-Dissolved | mg/L | 0.005 | - | - | - | - | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| Uranium (U)-Dissolved | mg/L | 0.0001 | - | - | - | - | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 |
| Vanadium (V)-Dissolved | mg/L | 0.005 | - | - | - | - | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| Zinc (Zn)-Dissolved | mg/L | 0.005 | - | - | - | - | 0.006 | 0.007 | 0.006 | 0.007 | 0.013 | 0.013 | 0.012 | 0.014 |
| Zirconium (Zr)-Dissolved | mg/L | 0.0001 | - | - | - | - | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0004 |
| Alkalinity (PP as CaCO3) | 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 |
| Alkalinity (Total as CaCO3) | mg/L | 0.5 | 7.9 | 5.5 | 10.2 | 7.4 | 8.1 | 8.1 | 8.2 | 5.7 | 7.2 | 8.8 | 10.4 | 12.7 |
| Ammonia (N)-Total | mg/L | 0.005 | - | - | - | - | 3.500 | 2.800 | 1.900 | 3.100 | 1.400 | 1.400 | 0.610 | 0.380 |

| Station | Unit | BRP-G-03<br>General Site Runoff | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-05-19<br>15:25:00<br>C546599 | 2025-05-27<br>15:20:00<br>C549554 | 2025-06-04<br>16:00:00<br>C551892 | 2025-06-12<br>13:30:00<br>C554373 | 2025-06-18<br>09:00:00<br>C556571 | 2025-06-24<br>11:05:00<br>C557889 | 2025-06-27<br>10:05:00<br>C558898 | 2025-07-01<br>10:10:00<br>C559713 | 2025-07-08<br>11:15:00<br>C561664 | 2025-07-17<br>09:45:00<br>C564285 | 2025-07-22<br>14:30:00<br>C564979 | 2025-07-29<br>09:40:00<br>C566777 |
| Bicarbonate (HCO3) | mg/L | 0.5 | 9.6 | 6.7 | 12.5 | 9.0 | 9.9 | 9.9 | 10.0 | 6.9 | 8.8 | 10.7 | 12.7 | 15.5 |
| Carbonate (CO3) | 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 | mg/L | 0.5 | 73.0 | 6.4 | 6.8 | 36.0 | 22.0 | 17.0 | 16.0 | 9.2 | 10.0 | 15.0 | 15.0 | 17.0 |
| Conductivity | µS/cm | 1 | 319 | 197 | 174 | 308 | 246 | 229 | 220 | 213 | 245 | 306 | 272 | 281 |
| Field Temperature | deg. C | - | 0 | 3.9 | 5.1 | 8.9 | 5.4 | 9.6 | - | 8.5 | 13.3 | 10.7 | 7.1 | 12.4 |
| Fluoride (F) | mg/L | 0.01 | 0.04 | 0.04 | 0.04 | 0.01 | 0.04 | 0.03 | 0.04 | 0.04 | 0.04 | 0.03 | 0.02 | 0.04 |
| Hardness (CaCO3)-Dissolved | mg/L | 0.5 | - | - | - | - | 78.4 | 78.5 | 74.5 | 67.1 | 91.5 | 112.0 | 109.0 | 113.0 |
| Hardness (CaCO3)-Total | mg/L | 0.5 | - | - | - | - | 83.1 | 80.3 | 80.0 | 73.5 | 91.5 | 129.0 | 111.0 | 115.0 |
| Hydroxide (OH) | 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 |
| Nitrate (as N) | mg/L | 0.2 | - | - | - | - | 6.8 | 6.3 | 3.8 | 7.1 | 6.7 | 6.5 | 4.4 | 4.1 |
| Nitrate plus Nitrite (N) | mg/L | 0.2 | - | - | - | - | 6.8 | 6.4 | 3.8 | 7.1 | 6.8 | 6.5 | 4.4 | 4.2 |
| Nitrite (as N) | mg/L | 0.001 | - | - | - | - | 0.021 | 0.026 | 0.030 | 0.024 | 0.026 | 0.024 | 0.009 | 0.008 |
| Nitrogen (N)-Total | mg/L | 0.1 | - | - | - | - | 9.4 | 9.7 | 6.1 | 11.0 | 8.5 | 7.4 | 5.2 | 4.4 |
| Organic Carbon (C)-Dissolved | mg/L | 0.2 | - | - | - | - | 10.0 | 11.0 | 9.1 | 10.0 | 9.5 | 12.0 | 12.0 | 11.0 |
| Organic Carbon (C)-Total | mg/L | 0.2 | - | - | - | - | 10.0 | 11.0 | 10.0 | 8.8 | 10.0 | 11.0 | 12.0 | 11.0 |
| Redox Potential-Field | mV | - | 161.2 | 301.8 | 183 | 234.9 | 184 | 164.3 | - | 176.6 | 174.6 | 230 | 100.1 | 311 |
| Sulphate (SO4)-Dissolved | mg/L | 0.5 | 14.0 | 26.0 | 35.0 | 42.0 | 45.0 | 45.0 | 53.0 | 48.0 | 62.0 | 85.0 | 73.0 | 78.0 |
| Total Dissolved Solids_Calculated | mg/L | 10 | - | - | - | - | 140 | 130 | 120 | 120 | - | 180 | 160 | 170 |
| Total Dissolved Solids_Measured | mg/L | 10 | - | - | - | - | 170 | 130 | - | 140 | - | - | - | - |
| Total Kjeldahl Nitrogen (Calc)-Total | mg/L | 0.2 | - | - | - | - | 2.6 | 3.4 | 2.3 | 3.9 | 1.8 | 0.9 | 0.8 | 0.3 |
| Total Oil and Grease | mg/L | 2 | 3 | 3 | <2 | <2 | <2 | 3 | <2 | <2 | <2 | <2 | 4 | <2 |
| Total Suspended Solids | mg/L | 0.97 | 140.00 | 8.50 | <0.97 | 1.30 | 1.10 | 4.80 | 2.50 | <1.00 | 1.90 | 83.00 | 34.00 | 11.00 |
| Turbidity | NTU | 0.1 | 150.0 | 20.0 | 2.9 | 1.9 | 2.3 | 2.4 | 9.6 | 0.2 | 0.1 | 14.0 | 6.4 | 2.0 |
| Un-Ionized Ammonia | mg/L | 0.0005 | - | - | - | - | 0.0011 | 0.0009 | - | 0.0010 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| pH | pH Units | - | 6.31 | 6.56 | 6.46 | 6.41 | 6.7 | 6.59 | 6.61 | 6.56 | 6.61 | 6.76 | 6.57 | 6.32 |
| pH-Field | pH | - | 6.73 | 6.4 | 6.52 | 6.16 | 6.4 | 6.24 | - | 6.3 | 6.13 | 6.18 | 6.4 | 5.7 |
| Aluminum (Al)-Total | mg/L | 0.003 | - | - | - | - | 0.147 | 0.164 | 0.379 | 0.189 | 0.160 | 0.185 | 0.140 | 0.187 |
| Antimony (Sb)-Total | mg/L | 0.0005 | - | - | - | - | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| Arsenic (As)-Total | mg/L | 0.0001 | - | - | - | - | 0.0010 | 0.0009 | 0.0019 | 0.0012 | 0.0010 | 0.0010 | 0.0009 | 0.0008 |
| Barium (Ba)-Total | mg/L | 0.001 | - | - | - | - | 0.030 | 0.032 | 0.028 | 0.028 | 0.037 | 0.044 | 0.034 | 0.038 |
| Beryllium (Be)-Total | mg/L | 0.0001 | - | - | - | - | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 |
| Bismuth (Bi)-Total | mg/L | 0.001 | - | - | - | - | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Boron (B)-Total | mg/L | 0.05 | - | - | - | - | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Cadmium (Cd)-Total | mg/L | 0.00001 | - | - | - | - | 0.00004 | 0.00004 | 0.00004 | 0.00002 | 0.00006 | 0.00007 | 0.00006 | 0.00006 |
| Calcium (Ca)-Total | mg/L | 0.05 | - | - | - | - | 16.90 | 16.10 | 14.80 | 13.80 | 17.30 | 22.40 | 19.40 | 20.60 |
| Chromium (Cr)-Total | mg/L | 0.001 | - | - | - | - | <0.001 | <0.001 | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Cobalt (Co)-Total | mg/L | 0.0002 | - | - | - | - | 0.0019 | 0.0018 | 0.0022 | 0.0015 | 0.0030 | 0.0038 | 0.0035 | 0.0054 |
| Copper (Cu)-Total | mg/L | 0.0005 | - | - | - | - | 0.0058 | 0.0058 | 0.0060 | 0.0059 | 0.0063 | 0.0063 | 0.0062 | 0.0060 |
| Iron (Fe)-Total | mg/L | 0.01 | - | - | - | - | 0.18 | 0.23 | 0.61 | 0.22 | 0.21 | 0.29 | 0.31 | 0.42 |

| Station | Unit | BRP-G-03<br>General Site Runoff | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-05-19<br>15:25:00<br>C546599 | 2025-05-27<br>15:20:00<br>C549554 | 2025-06-04<br>16:00:00<br>C551892 | 2025-06-12<br>13:30:00<br>C554373 | 2025-06-18<br>09:00:00<br>C556571 | 2025-06-24<br>11:05:00<br>C557889 | 2025-06-27<br>10:05:00<br>C558898 | 2025-07-01<br>10:10:00<br>C559713 | 2025-07-08<br>11:15:00<br>C561664 | 2025-07-17<br>09:45:00<br>C564285 | 2025-07-22<br>14:30:00<br>C564979 | 2025-07-29<br>09:40:00<br>C566777 |
| Lead (Pb)-Total | mg/L | 0.0002 | - | - | - | - | <0.0002 | <0.0002 | 0.0003 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 |
| Lithium (Li)-Total | mg/L | 0.002 | - | - | - | - | 0.004 | 0.004 | 0.004 | 0.003 | 0.004 | 0.004 | 0.004 | 0.004 |
| Magnesium (Mg)-Total | mg/L | 0.05 | - | - | - | - | 9.95 | 9.74 | 10.50 | 9.52 | 11.80 | 17.80 | 15.30 | 15.50 |
| Manganese (Mn)-Total | mg/L | 0.001 | - | - | - | - | 0.042 | 0.039 | 0.042 | 0.025 | 0.074 | 0.089 | 0.069 | 0.096 |
| Molybdenum (Mo)-Total | mg/L | 0.001 | - | - | - | - | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Nickel (Ni)-Total | mg/L | 0.001 | - | - | - | - | 0.022 | 0.021 | 0.020 | 0.022 | 0.027 | 0.029 | 0.027 | 0.025 |
| Phosphorus (P)-Total | mg/L | 0.001 | - | - | - | - | 0.003 | 0.010 | 0.010 | 0.002 | 0.002 | 0.011 | 0.004 | 0.003 |
| Potassium (K)-Total | mg/L | 0.05 | - | - | - | - | 3.78 | 3.34 | 3.20 | 3.34 | 3.61 | 4.83 | 4.19 | 4.44 |
| Selenium (Se)-Total | mg/L | 0.0001 | - | - | - | - | 0.0002 | 0.0002 | 0.0002 | 0.0002 | 0.0003 | 0.0003 | 0.0003 | 0.0002 |
| Silicon (Si)-Total | mg/L | 0.1 | - | - | - | - | 1.3 | 1.1 | 2.5 | 2.3 | 1.4 | 1.3 | 1.1 | 1.3 |
| Silver (Ag)-Total | mg/L | 0.00002 | - | - | - | - | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | 0.00003 | <0.00002 | <0.00002 |
| Sodium (Na)-Total | mg/L | 0.05 | - | - | - | - | 2.81 | 2.68 | 2.39 | 2.50 | 2.98 | 4.48 | 4.22 | 4.46 |
| Strontium (Sr)-Total | mg/L | 0.001 | - | - | - | - | 0.073 | 0.067 | 0.059 | 0.056 | 0.072 | 0.090 | 0.072 | 0.079 |
| Sulphur (S)-Total | mg/L | 3 | - | - | - | - | 14 | 14 | 15 | 15 | 19 | 30 | 25 | 27 |
| Thallium (Tl)-Total | mg/L | 0.00001 | - | - | - | - | 0.00001 | 0.00002 | <0.00001 | 0.00001 | 0.00002 | 0.00003 | 0.00002 | 0.00002 |
| Tin (Sn)-Total | mg/L | 0.005 | - | - | - | - | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| Titanium (Ti)-Total | mg/L | 0.005 | - | - | - | - | <0.005 | <0.005 | 0.006 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| Uranium (U)-Total | mg/L | 0.0001 | - | - | - | - | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 |
| Vanadium (V)-Total | mg/L | 0.005 | - | - | - | - | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| Zinc (Zn)-Total | mg/L | 0.005 | - | - | - | - | 0.006 | 0.007 | 0.006 | 0.005 | 0.011 | 0.013 | 0.010 | 0.009 |
| Zirconium (Zr)-Total | mg/L | 0.0001 | - | - | - | - | 0.0004 | 0.0004 | 0.0006 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0004 |

## Table E-1c Water Quality Data for Regulated Monitoring Stations: General Runoff Site 3, August and September 2025

| Station | Unit | BRP-G-03 General Site Runoff | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-08-01<br>13:50:00<br>C567957 | 2025-08-06<br>09:40:00<br>C568625 | 2025-08-13<br>09:30:00<br>C570584 | 2025-08-19<br>15:10:00<br>C572171 | 2025-08-26<br>10:40:00<br>C573970 | 2025-09-01<br>11:10:00<br>C575127 | 2025-09-09<br>14:00:00<br>C577410 | 2025-09-16<br>13:20:00<br>C579802 | 2025-09-23<br>14:25:00<br>C581748 | 2025-09-30<br>09:40:00<br>C583043 |
| Aluminum (Al)-Dissolved | mg/L | 0.003 | 0.098 | 0.084 | 0.064 | 0.088 | 0.084 | 0.085 | 0.071 | 0.067 | 0.072 | 0.072 |
| Antimony (Sb)-Dissolved | mg/L | 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 | mg/L | 0.0001 | 0.0009 | 0.0011 | 0.0007 | 0.0007 | 0.0013 | 0.0012 | 0.0011 | 0.0016 | 0.0010 | 0.0010 |
| Barium (Ba)-Dissolved | mg/L | 0.001 | 0.041 | 0.041 | 0.035 | 0.037 | 0.031 | 0.023 | 0.020 | 0.023 | 0.024 | 0.020 |
| Beryllium (Be)-Dissolved | mg/L | 0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 |
| Bismuth (Bi)-Dissolved | mg/L | 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 | mg/L | 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 | mg/L | 0.00001 | 0.00006 | 0.00005 | 0.00003 | 0.00004 | 0.00003 | 0.00003 | 0.00001 | 0.00002 | 0.00001 | 0.00002 |
| Calcium (Ca)-Dissolved | mg/L | 0.05 | 24.90 | 26.40 | 22.70 | 21.70 | 21.60 | 16.60 | 14.90 | 17.60 | 16.90 | 15.10 |
| Chromium (Cr)-Dissolved | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Cobalt (Co)-Dissolved | mg/L | 0.0002 | 0.0047 | 0.0036 | 0.0026 | 0.0049 | 0.0018 | 0.0015 | 0.0012 | 0.0020 | 0.0011 | 0.0010 |
| Copper (Cu)-Dissolved | mg/L | 0.0002 | 0.0054 | 0.0065 | 0.0053 | 0.0061 | 0.0064 | 0.0063 | 0.0055 | 0.0057 | 0.0054 | 0.0047 |
| Iron (Fe)-Dissolved | mg/L | 0.005 | 0.189 | 0.229 | 0.176 | 0.311 | 0.279 | 0.322 | 0.299 | 0.313 | 0.232 | 0.261 |
| Lead (Pb)-Dissolved | mg/L | 0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 |
| Lithium (Li)-Dissolved | mg/L | 0.002 | 0.005 | 0.004 | 0.003 | 0.003 | 0.004 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 |
| Magnesium (Mg)-Dissolved | mg/L | 0.05 | 16.80 | 18.00 | 17.20 | 16.60 | 16.30 | 13.50 | 12.10 | 14.70 | 14.30 | 12.30 |
| Manganese (Mn)-Dissolved | mg/L | 0.001 | 0.121 | 0.074 | 0.041 | 0.094 | 0.029 | 0.023 | 0.016 | 0.030 | 0.013 | 0.012 |
| Molybdenum (Mo)-Dissolved | mg/L | 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 | mg/L | 0.001 | 0.027 | 0.028 | 0.022 | 0.024 | 0.025 | 0.023 | 0.020 | 0.023 | 0.021 | 0.018 |
| Nitrate (NO3)-Dissolved | mg/L | 0.89 | 22.00 | 19.00 | 20.00 | 10.00 | 30.00 | 20.00 | 15.00 | 22.00 | 23.00 | 21.00 |
| Nitrite (NO2)-Dissolved | mg/L | 0.0033 | 0.0630 | 0.0420 | 0.0190 | 0.0150 | 0.0480 | 0.0170 | 0.0050 | 0.0390 | 0.0240 | 0.0080 |
| Potassium (K)-Dissolved | mg/L | 0.05 | 5.15 | 5.70 | 5.05 | 4.90 | 5.60 | 4.39 | 3.68 | 4.36 | 3.67 | 2.98 |
| Selenium (Se)-Dissolved | mg/L | 0.0001 | 0.0002 | 0.0003 | 0.0002 | 0.0002 | 0.0002 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 |
| Silicon (Si)-Dissolved | mg/L | 0.1 | 1.6 | 1.4 | 1.1 | 1.4 | 2.7 | 2.0 | 2.2 | 3.0 | 4.0 | 3.9 |
| Silver (Ag)-Dissolved | mg/L | 0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 |
| Sodium (Na)-Dissolved | mg/L | 0.05 | 4.19 | 5.02 | 5.36 | 5.38 | 4.46 | 3.79 | 3.25 | 3.60 | 3.61 | 3.14 |
| Strontium (Sr)-Dissolved | mg/L | 0.001 | 0.098 | 0.101 | 0.085 | 0.084 | 0.080 | 0.065 | 0.057 | 0.069 | 0.064 | 0.060 |
| Sulphur (S)-Dissolved | mg/L | 3 | 29 | 33 | 28 | 28 | 26 | 19 | 17 | 22 | 20 | 16 |
| Thallium (Tl)-Dissolved | mg/L | 0.00001 | 0.00002 | 0.00002 | 0.00001 | 0.00002 | 0.00002 | 0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 |
| Tin (Sn)-Dissolved | mg/L | 0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| Titanium (Ti)-Dissolved | mg/L | 0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| Uranium (U)-Dissolved | mg/L | 0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 |
| Vanadium (V)-Dissolved | mg/L | 0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| Zinc (Zn)-Dissolved | mg/L | 0.005 | 0.016 | 0.015 | 0.007 | 0.007 | 0.008 | 0.007 | 0.006 | 0.007 | 0.008 | 0.006 |
| Zirconium (Zr)-Dissolved | mg/L | 0.0001 | 0.0004 | 0.0005 | 0.0004 | 0.0005 | 0.0005 | 0.0006 | 0.0005 | 0.0005 | 0.0006 | 0.0006 |
| Alkalinity (PP as CaCO3) | mg/L | 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 CaCO3) | mg/L | 0.5 | 14.4 | 29.1 | 37.6 | 38.9 | 20.9 | 24.8 | 26.9 | 20.9 | 14.9 | 14.3 |
| Ammonia (N)-Total | mg/L | 0.005 | 0.400 | 0.430 | 0.190 | 0.310 | 1.100 | 0.520 | 0.210 | 0.900 | 0.240 | 0.300 |

| Station | Unit | BRP-G-03<br>General Site Runoff | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-08-01<br>13:50:00<br>C567957 | 2025-08-06<br>09:40:00<br>C568625 | 2025-08-13<br>09:30:00<br>C570584 | 2025-08-19<br>15:10:00<br>C572171 | 2025-08-26<br>10:40:00<br>C573970 | 2025-09-01<br>11:10:00<br>C575127 | 2025-09-09<br>14:00:00<br>C577410 | 2025-09-16<br>13:20:00<br>C579802 | 2025-09-23<br>14:25:00<br>C581748 | 2025-09-30<br>09:40:00<br>C583043 |
| Bicarbonate (HCO3) | mg/L | 0.5 | 17.6 | 35.6 | 45.9 | 47.5 | 25.5 | 30.3 | 32.8 | 25.4 | 18.2 | 17.4 |
| Carbonate (CO3) | mg/L | 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 | mg/L | 0.5 | 20.0 | 20.0 | 18.0 | 19.0 | 13.0 | 9.0 | 6.7 | 10.0 | 10.0 | 12.0 |
| Conductivity | µS/cm | 1 | 321 | 344 | 332 | 315 | 298 | 244 | 212 | 257 | 235 | 225 |
| Field Temperature | deg. C | - | 8.4 | 7.5 | 8.9 | 9 | 11.6 | 4.5 | 6.8 | 5 | 6.4 | 6.4 |
| Fluoride (F) | mg/L | 0.01 | 0.05 | 0.05 | 0.03 | 0.03 | 0.05 | 0.05 | 0.04 | 0.05 | 0.05 | 0.04 |
| Hardness (CaCO3)-Dissolved | mg/L | 0.5 | 131.0 | 140.0 | 127.0 | 122.0 | 121.0 | 97.1 | 86.9 | 104.0 | 101.0 | 88.2 |
| Hardness (CaCO3)-Total | mg/L | 0.5 | 136.0 | 145.0 | 143.0 | 136.0 | 118.0 | 97.1 | 85.3 | 103.0 | 88.5 | 93.7 |
| Hydroxide (OH) | mg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Nitrate (as N) | mg/L | 0.2 | 5.0 | 4.2 | 4.6 | 2.3 | 6.8 | 4.6 | 3.3 | 4.9 | 5.2 | 4.7 |
| Nitrate plus Nitrite (N) | mg/L | 0.2 | 5.1 | 4.3 | 4.6 | 2.3 | 6.8 | 4.6 | 3.3 | 4.9 | 5.2 | 4.7 |
| Nitrite (as N) | mg/L | 0.001 | 0.019 | 0.013 | 0.006 | 0.005 | 0.015 | 0.005 | 0.001 | 0.012 | 0.007 | 0.002 |
| Nitrogen (N)-Total | mg/L | 0.1 | 5.8 | 4.7 | 5.6 | 3.2 | 8.6 | 5.1 | 4.3 | 6.0 | 5.1 | 5.9 |
| Organic Carbon (C)-Dissolved | mg/L | 0.2 | 11.0 | 14.0 | 13.0 | 13.0 | 13.0 | 14.0 | 12.0 | 11.0 | 12.0 | 11.0 |
| Organic Carbon (C)-Total | mg/L | 0.2 | 11.0 | 17.0 | 13.0 | 12.0 | 12.0 | 15.0 | 12.0 | 11.0 | 13.0 | 11.0 |
| Redox Potential-Field | mV | - | 192 | 223 | 197.8 | 232.5 | 255.5 | 189.2 | 170 | 204.6 | 186.8 | 186.8 |
| Sulphate (SO4)-Dissolved | mg/L | 0.5 | 90.0 | 100.0 | 93.0 | 84.0 | 79.0 | 59.0 | 52.0 | 63.0 | 62.0 | 54.0 |
| Total Dissolved Solids_Calculated | mg/L | 10 | 190 | - | 210 | 190 | 180 | 140 | 120 | 150 | - | 130 |
| Total Dissolved Solids_Measured | mg/L | 10 | 240 | - | - | - | 200 | 160 | 160 | 190 | - | - |
| Total Kjeldahl Nitrogen (Calc)-Total | mg/L | 0.2 | 0.8 | 0.4 | 0.9 | 0.9 | 1.8 | 0.5 | 1.0 | 1.1 | <0.4 | 1.2 |
| Total Oil and Grease | mg/L | 2 | 3 | 3 | <2 | <2 | 3 | <2 | <2 | 3 | <2 | <2 |
| Total Suspended Solids | mg/L | 0.97 | 13.00 | 2.50 | <1.00 | 1.10 | 2.80 | <1.00 | 12.00 | 2.10 | <0.99 | 1.30 |
| Turbidity | NTU | 0.1 | 15.0 | 2.8 | 2.5 | 2.0 | 3.8 | 3.5 | 3.0 | 3.6 | 3.3 | 3.5 |
| Un-Ionized Ammonia | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.0029 | <0.0005 | <0.0005 | 0.0005 | <0.0005 | <0.0005 |
| pH | pH Units | - | 6.49 | 6.57 | 6.48 | 6.34 | 6.39 | 6.28 | 6.69 | 6.28 | 6.33 | 6.06 |
| pH-Field | pH | - | 6.5 | 6.5 | 6.43 | 6.37 | 7.12 | 6.26 | 6.5 | 6.68 | 6.51 | 6.51 |
| Aluminum (Al)-Total | mg/L | 0.003 | 0.733 | 0.143 | 0.095 | 0.106 | 0.130 | 0.118 | 0.095 | 0.130 | 0.082 | 0.097 |
| Antimony (Sb)-Total | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| Arsenic (As)-Total | mg/L | 0.0001 | 0.0022 | 0.0013 | 0.0009 | 0.0008 | 0.0016 | 0.0013 | 0.0012 | 0.0018 | 0.0010 | 0.0012 |
| Barium (Ba)-Total | mg/L | 0.001 | 0.043 | 0.039 | 0.040 | 0.040 | 0.031 | 0.023 | 0.020 | 0.023 | 0.026 | 0.022 |
| Beryllium (Be)-Total | mg/L | 0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 |
| Bismuth (Bi)-Total | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Boron (B)-Total | mg/L | 0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Cadmium (Cd)-Total | mg/L | 0.00001 | 0.00007 | 0.00006 | 0.00004 | 0.00004 | 0.00003 | 0.00002 | 0.00001 | 0.00002 | 0.00002 | 0.00002 |
| Calcium (Ca)-Total | mg/L | 0.05 | 25.30 | 26.10 | 24.90 | 23.10 | 21.10 | 16.40 | 14.60 | 18.00 | 16.50 | 15.80 |
| Chromium (Cr)-Total | mg/L | 0.001 | 0.002 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Cobalt (Co)-Total | mg/L | 0.0002 | 0.0060 | 0.0039 | 0.0031 | 0.0053 | 0.0019 | 0.0018 | 0.0013 | 0.0020 | 0.0012 | 0.0012 |
| Copper (Cu)-Total | mg/L | 0.0005 | 0.0076 | 0.0072 | 0.0062 | 0.0068 | 0.0067 | 0.0069 | 0.0057 | 0.0059 | 0.0054 | 0.0054 |
| Iron (Fe)-Total | mg/L | 0.01 | 1.13 | 0.38 | 0.26 | 0.41 | 0.41 | 0.51 | 0.42 | 0.53 | 0.29 | 0.36 |

| Station | Unit | BRP-G-03<br>General Site Runoff | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-08-01<br>13:50:00<br>C567957 | 2025-08-06<br>09:40:00<br>C568625 | 2025-08-13<br>09:30:00<br>C570584 | 2025-08-19<br>15:10:00<br>C572171 | 2025-08-26<br>10:40:00<br>C573970 | 2025-09-01<br>11:10:00<br>C575127 | 2025-09-09<br>14:00:00<br>C577410 | 2025-09-16<br>13:20:00<br>C579802 | 2025-09-23<br>14:25:00<br>C581748 | 2025-09-30<br>09:40:00<br>C583043 |
| Lead (Pb)-Total | mg/L | 0.0002 | 0.0004 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 |
| Lithium (Li)-Total | mg/L | 0.002 | 0.006 | 0.003 | 0.003 | 0.003 | 0.004 | 0.003 | 0.002 | 0.003 | 0.003 | 0.003 |
| Magnesium (Mg)-Total | mg/L | 0.05 | 17.60 | 19.50 | 19.60 | 18.90 | 15.70 | 13.70 | 11.90 | 14.20 | 11.50 | 13.20 |
| Manganese (Mn)-Total | mg/L | 0.001 | 0.137 | 0.079 | 0.049 | 0.102 | 0.029 | 0.024 | 0.016 | 0.030 | 0.012 | 0.013 |
| Molybdenum (Mo)-Total | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Nickel (Ni)-Total | mg/L | 0.001 | 0.031 | 0.031 | 0.025 | 0.026 | 0.026 | 0.024 | 0.020 | 0.021 | 0.020 | 0.020 |
| Phosphorus (P)-Total | mg/L | 0.001 | 0.013 | 0.005 | 0.003 | 0.020 | 0.008 | 0.008 | 0.005 | 0.007 | 0.004 | 0.005 |
| Potassium (K)-Total | mg/L | 0.05 | 5.66 | 5.53 | 5.63 | 5.38 | 5.52 | 4.39 | 3.63 | 4.36 | 3.62 | 3.19 |
| Selenium (Se)-Total | mg/L | 0.0001 | 0.0003 | 0.0003 | 0.0003 | 0.0002 | 0.0003 | 0.0002 | 0.0001 | 0.0001 | 0.0001 | 0.0001 |
| Silicon (Si)-Total | mg/L | 0.1 | 2.4 | 1.4 | 1.2 | 1.5 | 2.6 | 1.9 | 2.2 | 3.1 | 3.0 | 4.2 |
| Silver (Ag)-Total | mg/L | 0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 |
| Sodium (Na)-Total | mg/L | 0.05 | 4.52 | 5.37 | 5.88 | 5.88 | 4.43 | 3.93 | 3.18 | 3.44 | 3.43 | 3.74 |
| Strontium (Sr)-Total | mg/L | 0.001 | 0.097 | 0.103 | 0.096 | 0.089 | 0.084 | 0.059 | 0.056 | 0.073 | 0.070 | 0.058 |
| Sulphur (S)-Total | mg/L | 3 | 29 | 32 | 32 | 30 | 25 | 18 | 16 | 21 | 18 | 18 |
| Thallium (Tl)-Total | mg/L | 0.00001 | 0.00002 | 0.00002 | 0.00001 | 0.00002 | 0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 |
| Tin (Sn)-Total | mg/L | 0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| Titanium (Ti)-Total | mg/L | 0.005 | 0.013 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| Uranium (U)-Total | mg/L | 0.0001 | 0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 |
| Vanadium (V)-Total | mg/L | 0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| Zinc (Zn)-Total | mg/L | 0.005 | 0.015 | 0.015 | 0.008 | 0.007 | 0.007 | 0.009 | 0.006 | 0.006 | 0.006 | 0.006 |
| Zirconium (Zr)-Total | mg/L | 0.0001 | 0.0007 | 0.0005 | 0.0004 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 | 0.0005 |

## Table E-1d Water Quality Data for Regulated Monitoring Stations: General Runoff Sites 4 to 6, 2025

| Station | Unit | BRP-G-04 General Site Runoff | | | | BRP-G-05 General Site Runoff | | | | BRP-G-06 General Site Runoff | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-05-22 14:40:00 C548022 | 2025-05-27 15:55:00 C549554 | 2025-06-27 10:30:00 C558898 | Lowest Detection Limit | 2025-06-27 10:50:00 C558898 | 2025-07-01 10:45:00 C559713 | 2025-08-01 13:30:00 C567957 | Lowest Detection Limit | 2025-06-27 11:55:00 C558898 | 2025-07-01 11:05:00 C559713 | 2025-08-01 13:10:00 C567957 |
| Aluminum (Al)-Dissolved | mg/L | 0.003 | - | - | 0.226 | 0.003 | 0.083 | 0.059 | 0.078 | 0.003 | 0.096 | 0.055 | 0.088 |
| Antimony (Sb)-Dissolved | mg/L | 0.0005 | - | - | <0.0005 | 0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.0005 | <0.0005 | <0.0005 | <0.0005 |
| Arsenic (As)-Dissolved | mg/L | 0.0001 | - | - | 0.0009 | 0.0001 | 0.0013 | 0.0006 | 0.0005 | 0.0001 | 0.0011 | 0.0011 | 0.0013 |
| Barium (Ba)-Dissolved | mg/L | 0.001 | - | - | 0.041 | 0.001 | 0.050 | 0.070 | 0.083 | 0.001 | 0.077 | 0.099 | 0.073 |
| Beryllium (Be)-Dissolved | mg/L | 0.0001 | - | - | <0.0001 | 0.0001 | <0.0001 | <0.0001 | <0.0001 | 0.0001 | <0.0001 | <0.0001 | <0.0001 |
| Bismuth (Bi)-Dissolved | mg/L | 0.001 | - | - | <0.001 | 0.001 | <0.001 | <0.001 | <0.001 | 0.001 | <0.001 | <0.001 | <0.001 |
| Boron (B)-Dissolved | mg/L | 0.05 | - | - | <0.05 | 0.05 | <0.05 | <0.05 | <0.05 | 0.05 | <0.05 | <0.05 | <0.05 |
| Cadmium (Cd)-Dissolved | mg/L | 0.00001 | - | - | 0.00009 | 0.00001 | 0.00014 | 0.00020 | 0.00009 | 0.00001 | 0.00013 | 0.00015 | 0.00014 |
| Calcium (Ca)-Dissolved | mg/L | 0.05 | - | - | 19.50 | 0.05 | 48.40 | 63.50 | 80.30 | 0.05 | 74.50 | 90.40 | 86.20 |
| Chromium (Cr)-Dissolved | mg/L | 0.001 | - | - | <0.001 | 0.001 | <0.001 | <0.001 | <0.001 | 0.001 | <0.001 | <0.001 | <0.001 |
| Cobalt (Co)-Dissolved | mg/L | 0.0002 | - | - | 0.0104 | 0.0002 | 0.0059 | 0.0049 | 0.0016 | 0.0002 | 0.0227 | 0.0285 | 0.0216 |
| Copper (Cu)-Dissolved | mg/L | 0.0002 | - | - | 0.0025 | 0.0002 | 0.0022 | 0.0020 | 0.0022 | 0.0002 | 0.0037 | 0.0030 | 0.0031 |
| Iron (Fe)-Dissolved | mg/L | 0.005 | - | - | 0.148 | 0.005 | 0.058 | 0.017 | 0.019 | 0.005 | 0.135 | 0.065 | 0.092 |
| Lead (Pb)-Dissolved | mg/L | 0.0002 | - | - | <0.0002 | 0.0002 | <0.0002 | <0.0002 | <0.0002 | 0.0002 | <0.0002 | <0.0002 | <0.0002 |
| Lithium (Li)-Dissolved | mg/L | 0.002 | - | - | 0.006 | 0.002 | 0.009 | 0.009 | 0.010 | 0.002 | 0.009 | 0.009 | 0.008 |
| Magnesium (Mg)-Dissolved | mg/L | 0.05 | - | - | 12.90 | 0.05 | 29.90 | 41.10 | 49.90 | 0.05 | 49.50 | 78.60 | 72.70 |
| Manganese (Mn)-Dissolved | mg/L | 0.001 | - | - | 0.161 | 0.001 | 0.303 | 0.274 | 0.035 | 0.001 | 0.560 | 0.734 | 0.559 |
| Molybdenum (Mo)-Dissolved | mg/L | 0.001 | - | - | <0.001 | 0.001 | <0.001 | <0.001 | <0.001 | 0.001 | <0.001 | <0.001 | <0.001 |
| Nickel (Ni)-Dissolved | mg/L | 0.001 | - | - | 0.011 | 0.001 | 0.022 | 0.028 | 0.027 | 0.001 | 0.037 | 0.044 | 0.041 |
| Nitrate (NO3)-Dissolved | mg/L | 0.18 | - | - | 2.10 | 4.4 | 63.0 | 85.0 | 61.0 | 4.4 | 100.0 | 150.0 | 72.0 |
| Nitrite (NO2)-Dissolved | mg/L | 0.0033 | - | - | <0.0033 | 0.0033 | 0.1400 | 0.1300 | 0.0310 | 0.0033 | 0.5500 | 0.4500 | 0.4200 |
| Potassium (K)-Dissolved | mg/L | 0.05 | - | - | 4.42 | 0.05 | 8.51 | 10.20 | 9.12 | 0.05 | 12.50 | 16.20 | 12.40 |
| Selenium (Se)-Dissolved | mg/L | 0.0001 | - | - | 0.0004 | 0.0001 | 0.0005 | 0.0006 | 0.0006 | 0.0001 | 0.0007 | 0.0013 | 0.0009 |
| Silicon (Si)-Dissolved | mg/L | 0.1 | - | - | 3.6 | 0.1 | 3.4 | 4.3 | 4.8 | 0.1 | 3.1 | 3.2 | 3.7 |
| Silver (Ag)-Dissolved | mg/L | 0.00002 | - | - | <0.00002 | 0.00002 | <0.00002 | <0.00002 | <0.00002 | 0.00002 | <0.00002 | <0.00002 | <0.00002 |
| Sodium (Na)-Dissolved | mg/L | 0.05 | - | - | 4.98 | 0.05 | 5.71 | 6.34 | 9.50 | 0.05 | 8.39 | 10.00 | 10.40 |
| Strontium (Sr)-Dissolved | mg/L | 0.001 | - | - | 0.081 | 0.001 | 0.289 | 0.379 | 0.482 | 0.001 | 0.337 | 0.371 | 0.341 |
| Sulphur (S)-Dissolved | mg/L | 3 | - | - | 28 | 3 | 53 | 80 | 96 | 3 | 84 | 141 | 133 |
| Thallium (Tl)-Dissolved | mg/L | 0.00001 | - | - | 0.00001 | 0.00001 | 0.00002 | 0.00003 | 0.00001 | 0.00001 | 0.00004 | 0.00006 | 0.00005 |
| Tin (Sn)-Dissolved | mg/L | 0.005 | - | - | <0.005 | 0.005 | <0.005 | <0.005 | <0.005 | 0.005 | <0.005 | <0.005 | <0.005 |
| Titanium (Ti)-Dissolved | mg/L | 0.005 | - | - | <0.005 | 0.005 | <0.005 | <0.005 | <0.005 | 0.005 | <0.005 | <0.005 | <0.005 |
| Uranium (U)-Dissolved | mg/L | 0.0001 | - | - | <0.0001 | 0.0001 | <0.0001 | <0.0001 | <0.0001 | 0.0001 | <0.0001 | <0.0001 | <0.0001 |
| Vanadium (V)-Dissolved | mg/L | 0.005 | - | - | <0.005 | 0.005 | <0.005 | <0.005 | <0.005 | 0.005 | <0.005 | <0.005 | <0.005 |
| Zinc (Zn)-Dissolved | mg/L | 0.005 | - | - | 0.014 | 0.005 | 0.012 | 0.015 | 0.013 | 0.005 | 0.010 | 0.011 | 0.007 |
| Zirconium (Zr)-Dissolved | mg/L | 0.0001 | - | - | 0.0002 | 0.0001 | 0.0002 | 0.0001 | 0.0001 | 0.0001 | 0.0003 | 0.0002 | 0.0002 |
| Alkalinity (PP as CaCO3) | 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 |
| Alkalinity (Total as CaCO3) | mg/L | 0.5 | 4.6 | <0.5 | <0.5 | 0.5 | 3.7 | 2.7 | 2.6 | 0.5 | 4.9 | 5.4 | 6.9 |
| Ammonia (N)-Total | mg/L | 0.005 | - | - | 0.005 | 0.005 | 0.730 | 0.720 | 0.036 | 0.005 | 3.200 | 3.600 | 0.980 |

| Station | Unit | BRP-G-04 General Site Runoff | | | | BRP-G-05 General Site Runoff | | | | BRP-G-06 General Site Runoff | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-05-22 14:40:00 C548022 | 2025-05-27 15:55:00 C549554 | 2025-06-27 10:30:00 C558898 | Lowest Detection Limit | 2025-06-27 10:50:00 C558898 | 2025-07-01 10:45:00 C559713 | 2025-08-01 13:30:00 C567957 | Lowest Detection Limit | 2025-06-27 11:55:00 C558898 | 2025-07-01 11:05:00 C559713 | 2025-08-01 13:10:00 C567957 |
| Bicarbonate (HCO3) | mg/L | 0.5 | 5.6 | <0.5 | <0.5 | 0.5 | 4.5 | 3.3 | 3.1 | 0.5 | 6.0 | 6.5 | 8.4 |
| Carbonate (CO3) | 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 |
| Chloride (Cl)-Dissolved | mg/L | 0.5 | 2.7 | 14.0 | 21.0 | 0.5 | 47.0 | 52.0 | 77.0 | 0.5 | 85.0 | 68.0 | 75.0 |
| Conductivity | µS/cm | 1 | 44 | 176 | 282 | 1 | 612 | 788 | 893 | 1 | 956 | 1210 | 1070 |
| Field Temperature | deg. C | - | 1.5 | 2.5 | - | - | - | 8 | 8.7 | - | - | 8.9 | 9.1 |
| Fluoride (F) | mg/L | 0.01 | 0.04 | 0.03 | 0.02 | 0.01 | 0.04 | 0.05 | 0.05 | 0.01 | 0.04 | 0.04 | 0.04 |
| Hardness (CaCO3)-Dissolved | mg/L | 0.5 | - | - | 102.0 | 0.5 | 244.0 | 328.0 | 406.0 | 0.5 | 390.0 | 549.0 | 515.0 |
| Hardness (CaCO3)-Total | mg/L | 0.5 | - | - | 109.0 | 0.5 | 254.0 | 338.0 | 414.0 | 0.5 | 423.0 | 572.0 | 528.0 |
| Hydroxide (OH) | 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 |
| Nitrate (as N) | mg/L | 0.04 | - | - | 0.46 | 1 | 14 | 19 | 14 | 1 | 23 | 33 | 16 |
| Nitrate plus Nitrite (N) | mg/L | 0.04 | - | - | 0.46 | 1 | 14 | 19 | 14 | 1 | 23 | 33 | 16 |
| Nitrite (as N) | mg/L | 0.001 | - | - | <0.001 | 0.001 | 0.042 | 0.038 | 0.009 | 0.001 | 0.170 | 0.140 | 0.130 |
| Nitrogen (N)-Total | mg/L | 0.02 | - | - | 1.00 | 0.2 | 13.0 | 18.0 | 13.0 | 0.2 | 27.0 | 38.0 | 15.0 |
| Organic Carbon (C)-Dissolved | mg/L | 0.2 | - | - | 9.2 | 0.2 | 7.0 | 6.2 | 8.1 | 0.2 | 16.0 | 16.0 | 17.0 |
| Organic Carbon (C)-Total | mg/L | 0.2 | - | - | 11.0 | 0.2 | 7.1 | 6.7 | 8.0 | 0.2 | 17.0 | 18.0 | 17.0 |
| Redox Potential-Field | mV | - | 126.1 | 337.2 | - | - | - | 212 | 267 | - | - | 169.1 | 289 |
| Sulphate (SO4)-Dissolved | mg/L | 0.5 | 4.5 | 49.0 | 100.0 | 2.5 | 180.0 | 220.0 | 290.0 | 2.5 | 270.0 | 390.0 | 380.0 |
| Total Dissolved Solids_Calculated | mg/L | 10 | - | - | 170 | 10 | 380 | 480 | 580 | 10 | 610 | 810 | 720 |
| Total Dissolved Solids_Measured | mg/L | - | - | - | - | 10 | - | 530 | 660 | 10 | - | 910 | 830 |
| Total Kjeldahl Nitrogen (Calc)-Total | mg/L | 0.04 | - | - | 0.55 | 1 | <1 | <1 | <1 | 1 | 4 | 5 | <1 |
| Total Oil and Grease | mg/L | 2 | 4 | 4 | 7 | 2 | 4 | 3 | <2 | 2 | <2 | <2 | <2 |
| Total Suspended Solids | mg/L | 1 | 53 | 4 | <1 | 1 | 49 | 2 | 15 | 0.99 | 3.40 | 1.80 | 3.50 |
| Turbidity | NTU | 0.1 | 81.0 | 6.7 | 2.2 | 0.1 | 53.0 | 0.1 | 6.1 | 0.1 | 22.0 | 2.9 | 7.2 |
| Un-Ionized Ammonia | mg/L | - | - | - | - | 0.0005 | - | <0.0005 | <0.0005 | 0.0005 | - | 0.0006 | <0.0005 |
| pH | pH Units | - | 6.02 | 5.05 | 5.12 | - | 6.31 | 6.2 | 5.97 | - | 6.45 | 6.37 | 6.24 |
| pH-Field | pH | - | 6.21 | 4.92 | - | - | - | 5.78 | 5.3 | - | - | 5.96 | 5.7 |
| Aluminum (Al)-Total | mg/L | 0.003 | - | - | 0.261 | 0.003 | 1.790 | 0.115 | 0.414 | 0.003 | 0.725 | 0.136 | 0.373 |
| Antimony (Sb)-Total | mg/L | 0.0005 | - | - | <0.0005 | 0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.0005 | <0.0005 | <0.0005 | <0.0025 |
| Arsenic (As)-Total | mg/L | 0.0001 | - | - | 0.0009 | 0.0001 | 0.0041 | 0.0007 | 0.0009 | 0.0001 | 0.0024 | 0.0013 | 0.0018 |
| Barium (Ba)-Total | mg/L | 0.001 | - | - | 0.043 | 0.001 | 0.056 | 0.074 | 0.084 | 0.001 | 0.084 | 0.109 | 0.075 |
| Beryllium (Be)-Total | mg/L | 0.0001 | - | - | <0.0001 | 0.0001 | <0.0001 | <0.0001 | <0.0001 | 0.0001 | <0.0001 | <0.0001 | <0.0005 |
| Bismuth (Bi)-Total | mg/L | 0.001 | - | - | <0.001 | 0.001 | <0.001 | <0.001 | <0.001 | 0.001 | <0.001 | <0.001 | <0.005 |
| Boron (B)-Total | mg/L | 0.05 | - | - | <0.05 | 0.05 | <0.05 | <0.05 | <0.05 | 0.05 | <0.05 | <0.05 | <0.25 |
| Cadmium (Cd)-Total | mg/L | 0.00001 | - | - | 0.00009 | 0.00001 | 0.00016 | 0.00018 | 0.00011 | 0.00001 | 0.00015 | 0.00016 | 0.00015 |
| Calcium (Ca)-Total | mg/L | 0.05 | - | - | 20.60 | 0.05 | 49.10 | 67.10 | 81.80 | 0.05 | 80.70 | 98.30 | 88.70 |
| Chromium (Cr)-Total | mg/L | 0.001 | - | - | <0.001 | 0.001 | 0.005 | <0.001 | 0.001 | 0.001 | 0.002 | <0.001 | <0.005 |
| Cobalt (Co)-Total | mg/L | 0.0002 | - | - | 0.0112 | 0.0002 | 0.0080 | 0.0056 | 0.0022 | 0.0002 | 0.0260 | 0.0322 | 0.0248 |
| Copper (Cu)-Total | mg/L | 0.0005 | - | - | 0.0029 | 0.0005 | 0.0056 | 0.0024 | 0.0031 | 0.0005 | 0.0060 | 0.0034 | 0.0044 |
| Iron (Fe)-Total | mg/L | 0.01 | - | - | 0.19 | 0.01 | 2.99 | 0.11 | 0.63 | 0.01 | 1.24 | 0.20 | 0.59 |

| Station | Unit | BRP-G-04 General Site Runoff | | | | BRP-G-05 General Site Runoff | | | | BRP-G-06 General Site Runoff | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-05-22<br>14:40:00<br>C548022 | 2025-05-27<br>15:55:00<br>C549554 | 2025-06-27<br>10:30:00<br>C558898 | Lowest Detection Limit | 2025-06-27<br>10:50:00<br>C558898 | 2025-07-01<br>10:45:00<br>C559713 | 2025-08-01<br>13:30:00<br>C567957 | Lowest Detection Limit | 2025-06-27<br>11:55:00<br>C558898 | 2025-07-01<br>11:05:00<br>C559713 | 2025-08-01<br>13:10:00<br>C567957 |
| Lead (Pb)-Total | mg/L | 0.0002 | - | - | <0.0002 | 0.0002 | 0.0008 | <0.0002 | <0.0002 | 0.0002 | 0.0005 | <0.0002 | <0.0010 |
| Lithium (Li)-Total | mg/L | 0.002 | - | - | 0.006 | 0.002 | 0.013 | 0.010 | 0.011 | 0.002 | 0.012 | 0.010 | <0.010 |
| Magnesium (Mg)-Total | mg/L | 0.05 | - | - | 14.10 | 0.05 | 31.80 | 41.40 | 51.00 | 0.05 | 53.80 | 79.30 | 74.50 |
| Manganese (Mn)-Total | mg/L | 0.001 | - | - | 0.175 | 0.001 | 0.339 | 0.289 | 0.044 | 0.001 | 0.639 | 0.786 | 0.592 |
| Molybdenum (Mo)-Total | mg/L | 0.001 | - | - | <0.001 | 0.001 | <0.001 | <0.001 | <0.001 | 0.001 | <0.001 | <0.001 | <0.005 |
| Nickel (Ni)-Total | mg/L | 0.001 | - | - | 0.012 | 0.001 | 0.028 | 0.030 | 0.029 | 0.001 | 0.043 | 0.048 | 0.045 |
| Phosphorus (P)-Total | mg/L | 0.001 | - | - | 0.007 | 0.001 | 0.048 | 0.003 | 0.016 | 0.001 | 0.024 | 0.003 | 0.016 |
| Potassium (K)-Total | mg/L | 0.05 | - | - | 4.57 | 0.05 | 8.76 | 10.70 | 9.41 | 0.05 | 13.30 | 17.10 | 13.20 |
| Selenium (Se)-Total | mg/L | 0.0001 | - | - | 0.0004 | 0.0001 | 0.0005 | 0.0006 | 0.0006 | 0.0001 | 0.0008 | 0.0012 | 0.0010 |
| Silicon (Si)-Total | mg/L | 0.1 | - | - | 3.8 | 0.1 | 6.2 | 4.7 | 4.9 | 0.1 | 4.3 | 3.6 | 4.0 |
| Silver (Ag)-Total | mg/L | 0.00002 | - | - | <0.00002 | 0.00002 | <0.00002 | 0.00004 | <0.00002 | 0.00002 | 0.00003 | <0.00002 | <0.00010 |
| Sodium (Na)-Total | mg/L | 0.05 | - | - | 5.44 | 0.05 | 5.90 | 7.78 | 9.99 | 0.05 | 9.02 | 11.00 | 11.10 |
| Strontium (Sr)-Total | mg/L | 0.001 | - | - | 0.084 | 0.001 | 0.292 | 0.406 | 0.479 | 0.001 | 0.372 | 0.410 | 0.344 |
| Sulphur (S)-Total | mg/L | 3 | - | - | 30 | 3 | 53 | 73 | 97 | 3 | 88 | 133 | 132 |
| Thallium (Tl)-Total | mg/L | 0.00001 | - | - | <0.00001 | 0.00001 | 0.00003 | 0.00003 | 0.00002 | 0.00001 | 0.00005 | 0.00006 | <0.00005 |
| Tin (Sn)-Total | mg/L | 0.005 | - | - | <0.005 | 0.005 | <0.005 | <0.005 | <0.005 | 0.005 | <0.005 | <0.005 | <0.025 |
| Titanium (Ti)-Total | mg/L | 0.005 | - | - | <0.005 | 0.005 | 0.033 | <0.005 | 0.006 | 0.005 | 0.014 | <0.005 | <0.025 |
| Uranium (U)-Total | mg/L | 0.0001 | - | - | <0.0001 | 0.0001 | <0.0001 | <0.0001 | <0.0001 | 0.0001 | <0.0001 | <0.0001 | <0.0005 |
| Vanadium (V)-Total | mg/L | 0.005 | - | - | <0.005 | 0.005 | <0.005 | <0.005 | <0.005 | 0.005 | <0.005 | <0.005 | <0.025 |
| Zinc (Zn)-Total | mg/L | 0.005 | - | - | 0.017 | 0.005 | 0.018 | 0.014 | 0.014 | 0.005 | 0.012 | 0.010 | <0.025 |
| Zirconium (Zr)-Total | mg/L | 0.0001 | - | - | 0.0002 | 0.0001 | 0.0008 | 0.0001 | 0.0003 | 0.0001 | 0.0006 | 0.0003 | <0.0005 |

## Table E-1e Water Quality Data for Regulated Monitoring Stations: Goose Lake Discharge, 2025

| Station | Unit | BRP-01 Goose Lake Discharge | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-07-13<br>11:00:00<br>C562712 | 2025-07-20<br>14:40:00<br>C564267 | 2025-07-28<br>13:50:00<br>C566044 | 2025-08-03<br>14:00:00<br>C567947 | 2025-08-10<br>14:25:00<br>C569351 | 2025-08-19<br>15:10:00<br>C571965 | 2025-08-25<br>09:45:00<br>C573668 | 2025-09-02<br>14:00:00<br>C575562 |
| Aluminum (Al)-Dissolved | mg/L | 0.003 | 0.011 | 0.009 | 0.008 | 0.011 | 0.012 | 0.012 | 0.007 | 0.006 |
| Antimony (Sb)-Dissolved | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| Arsenic (As)-Dissolved | mg/L | 0.0001 | 0.0004 | 0.0004 | 0.0004 | 0.0005 | 0.0007 | 0.0007 | 0.0009 | 0.0008 |
| Barium (Ba)-Dissolved | mg/L | 0.001 | 0.010 | 0.011 | 0.011 | 0.013 | 0.013 | 0.013 | 0.029 | 0.011 |
| Beryllium (Be)-Dissolved | mg/L | 0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 |
| Bismuth (Bi)-Dissolved | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Boron (B)-Dissolved | mg/L | 0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Cadmium (Cd)-Dissolved | mg/L | 0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 |
| Calcium (Ca)-Dissolved | mg/L | 0.05 | 7.13 | 7.19 | 6.82 | 7.08 | 8.45 | 9.19 | 20.30 | 7.34 |
| Chromium (Cr)-Dissolved | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Cobalt (Co)-Dissolved | mg/L | 0.0002 | <0.0002 | <0.0002 | 0.0003 | 0.0003 | <0.0002 | <0.0002 | 0.0003 | <0.0002 |
| Copper (Cu)-Dissolved | mg/L | 0.0002 | 0.0013 | 0.0014 | 0.0014 | 0.0013 | 0.0015 | 0.0014 | 0.0011 | 0.0010 |
| Iron (Fe)-Dissolved | mg/L | 0.005 | 0.024 | 0.045 | 0.018 | 0.025 | 0.040 | 0.037 | 0.037 | 0.035 |
| Lead (Pb)-Dissolved | mg/L | 0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 |
| Lithium (Li)-Dissolved | mg/L | 0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| Magnesium (Mg)-Dissolved | mg/L | 0.05 | 3.66 | 3.59 | 3.71 | 3.75 | 4.08 | 4.18 | 7.32 | 4.02 |
| Manganese (Mn)-Dissolved | mg/L | 0.001 | 0.002 | 0.004 | 0.002 | 0.002 | 0.002 | 0.002 | 0.009 | 0.011 |
| Mercury (Hg)-Dissolved | mg/L | 0.0000019 | <0.0000019 | <0.0000019 | <0.0000019 | <0.0000019 | <0.0000019 | <0.0000019 | <0.0000019 | <0.0000019 |
| Molybdenum (Mo)-Dissolved | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Nickel (Ni)-Dissolved | mg/L | 0.001 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.002 |
| Nitrate (NO3)-Dissolved | mg/L | 0.013 | 0.150 | 0.110 | 0.014 | 0.045 | 0.110 | 0.048 | 0.063 | 0.027 |
| Nitrite (NO2)-Dissolved | mg/L | 0.0033 | <0.0033 | <0.0033 | <0.0033 | <0.0033 | <0.0033 | <0.0033 | <0.0033 | <0.0033 |
| Potassium (K)-Dissolved | mg/L | 0.05 | 0.68 | 0.72 | 0.70 | 0.74 | 0.93 | 0.90 | 1.50 | 0.86 |
| Selenium (Se)-Dissolved | mg/L | 0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0005 | <0.0001 |
| Silicon (Si)-Dissolved | mg/L | 0.1 | 0.3 | 0.2 | 0.2 | 0.2 | <0.1 | 0.1 | <0.5 | 0.1 |
| Silver (Ag)-Dissolved | mg/L | 0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 |
| Sodium (Na)-Dissolved | mg/L | 0.05 | 1.10 | 1.12 | 1.13 | 1.11 | 1.21 | 1.29 | 2.02 | 1.17 |
| Strontium (Sr)-Dissolved | mg/L | 0.001 | 0.028 | 0.027 | 0.027 | 0.029 | 0.036 | 0.034 | 0.065 | 0.030 |
| Sulphur (S)-Dissolved | mg/L | 3 | 6 | 5 | 5 | 5 | 4 | 5 | 6 | 6 |
| Thallium (Tl)-Dissolved | mg/L | 0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 |
| Tin (Sn)-Dissolved | mg/L | 0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| Titanium (Ti)-Dissolved | mg/L | 0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| Uranium (U)-Dissolved | mg/L | 0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 |
| Vanadium (V)-Dissolved | mg/L | 0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| Zinc (Zn)-Dissolved | mg/L | 0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| Zirconium (Zr)-Dissolved | mg/L | 0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 |
| 1,1,1,2-tetrachloroethane | mg/L | 0.001 | - | - | <0.001 | - | - | - | - | - |
| 1,1,1-trichloroethane | mg/L | 0.0005 | - | - | <0.0005 | - | - | - | - | - |

| Station | Unit | BRP-01<br>Goose Lake Discharge | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-07-13<br>11:00:00<br>C562712 | 2025-07-20<br>14:40:00<br>C564267 | 2025-07-28<br>13:50:00<br>C566044 | 2025-08-03<br>14:00:00<br>C567947 | 2025-08-10<br>14:25:00<br>C569351 | 2025-08-19<br>15:10:00<br>C571965 | 2025-08-25<br>09:45:00<br>C573668 | 2025-09-02<br>14:00:00<br>C575562 |
| 1,1,2,2-tetrachloroethane | mg/L | 0.002 | - | - | <0.002 | - | - | - | - | - |
| 1,1,2-trichloroethane | mg/L | 0.0005 | - | - | <0.0005 | - | - | - | - | - |
| 1,1-dichloroethane | mg/L | 0.0005 | - | - | <0.0005 | - | - | - | - | - |
| 1,1-dichloroethene | mg/L | 0.0005 | - | - | <0.0005 | - | - | - | - | - |
| 1,2,3-trichlorobenzene | mg/L | 0.001 | - | - | <0.001 | - | - | - | - | - |
| 1,2,4-trichlorobenzene | mg/L | 0.001 | - | - | <0.001 | - | - | - | - | - |
| 1,2,4-trimethylbenzene | mg/L | 0.0005 | - | - | <0.0005 | - | - | - | - | - |
| 1,2-dibromoethane | mg/L | 0.0002 | - | - | <0.0002 | - | - | - | - | - |
| 1,2-dichlorobenzene | mg/L | 0.0005 | - | - | <0.0005 | - | - | - | - | - |
| 1,2-dichloroethane | mg/L | 0.0005 | - | - | <0.0005 | - | - | - | - | - |
| 1,2-dichloropropane | mg/L | 0.0005 | - | - | <0.0005 | - | - | - | - | - |
| 1,3,5-trichlorobenzene | mg/L | 0.0005 | - | - | <0.0005 | - | - | - | - | - |
| 1,3,5-trimethylbenzene | mg/L | 0.0005 | - | - | <0.0005 | - | - | - | - | - |
| 1,3-dichlorobenzene | mg/L | 0.0005 | - | - | <0.0005 | - | - | - | - | - |
| 1,4-dichlorobenzene | mg/L | 0.0005 | - | - | <0.0005 | - | - | - | - | - |
| Alkalinity (PP as CaCO3) | mg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Alkalinity (Total as CaCO3) | mg/L | 0.5 | 7.7 | 7.0 | 7.6 | 6.6 | 7.1 | 8.3 | 10.2 | 8.1 |
| Ammonia (N)-Total | mg/L | 0.005 | 0.010 | 0.007 | 0.006 | <0.005 | 0.007 | <0.005 | 0.040 | 0.009 |
| Benzene | mg/L | 0.0004 | - | - | <0.0004 | - | - | - | - | - |
| Bicarbonate (HCO3) | mg/L | 0.5 | 9.4 | 8.5 | 9.3 | 8.1 | 8.7 | 10.1 | 12.5 | 9.9 |
| Bromodichloromethane | mg/L | 0.0005 | - | - | <0.0005 | - | - | - | - | - |
| Bromoform | mg/L | 0.0005 | - | - | <0.0005 | - | - | - | - | - |
| Bromomethane | mg/L | 0.002 | - | - | <0.002 | - | - | - | - | - |
| Carbon tetrachloride | mg/L | 0.0005 | - | - | <0.0005 | - | - | - | - | - |
| Carbonate (CO3) | mg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloride (Cl)-Dissolved | mg/L | 0.5 | 9.1 | 9.2 | 8.7 | 8.8 | 14.0 | 13.0 | 40.0 | 9.2 |
| Chlorobenzene | mg/L | 0.0005 | - | - | <0.0005 | - | - | - | - | - |
| Chloroethane | mg/L | 0.001 | - | - | <0.001 | - | - | - | - | - |
| Chloroform | mg/L | 0.0005 | - | - | <0.0005 | - | - | - | - | - |
| Chloromethane | mg/L | 0.002 | - | - | <0.002 | - | - | - | - | - |
| Conductivity | µS/cm | 1 | 81 | 87 | 83 | 86 | 97 | 99 | 196 | 91 |
| Cyanide (CN)-Free | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.0006 | 0.0007 |
| Cyanide (CN)-Strong Acid Dissoc. | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.0006 | <0.0005 | 0.0006 | 0.0007 |
| Cyanide (CN)-Weak Acid Dissoc. | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.0006 | <0.0005 | <0.0005 | <0.0005 |
| Dibromochloromethane | mg/L | 0.001 | - | - | <0.001 | - | - | - | - | - |
| Dichloromethane | mg/L | 0.002 | - | - | <0.002 | - | - | - | - | - |
| Ethylbenzene | mg/L | 0.0004 | - | - | <0.0004 | - | - | - | - | - |
| F1 (C6-C10) | mg/L | 0.1 | - | - | <0.1 | - | - | - | - | - |
| F1 (C6-C10) – BTEX | mg/L | 0.1 | - | - | <0.1 | - | - | - | - | - |

| Station | Unit | BRP-01<br>Goose Lake Discharge | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-07-13<br>11:00:00<br>C562712 | 2025-07-20<br>14:40:00<br>C564267 | 2025-07-28<br>13:50:00<br>C566044 | 2025-08-03<br>14:00:00<br>C567947 | 2025-08-10<br>14:25:00<br>C569351 | 2025-08-19<br>15:10:00<br>C571965 | 2025-08-25<br>09:45:00<br>C573668 | 2025-09-02<br>14:00:00<br>C575562 |
| Field Temperature | deg. C | - | 10.8 | 12 | 9.6 | 18.7 | 15 | 14.4 | 12.3 | 9.2 |
| Fluoride (F) | mg/L | 0.01 | 0.03 | 0.03 | 0.02 | 0.03 | 0.03 | 0.02 | 0.03 | 0.03 |
| Hardness (CaCO3)-Dissolved | mg/L | 0.5 | 32.9 | 32.7 | 32.3 | 33.1 | 37.9 | 40.2 | - | 34.9 |
| Hardness (CaCO3)-Total | mg/L | 0.5 | 33.8 | 38.3 | 33.5 | 35.7 | 38.0 | 40.8 | 76.1 | 35.2 |
| Hydroxide (OH) | mg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl methacrylate | mg/L | 0.0005 | - | - | <0.0005 | - | - | - | - | - |
| Methyl-tert-butyl ether (MTBE) | mg/L | 0.0005 | - | - | <0.0005 | - | - | - | - | - |
| Nitrate (as N) | mg/L | 0.003 | 0.033 | 0.026 | 0.003 | 0.010 | 0.025 | 0.011 | 0.014 | 0.006 |
| Nitrate plus Nitrite (N) | mg/L | 0.003 | 0.033 | 0.026 | 0.003 | 0.010 | 0.025 | 0.011 | 0.014 | 0.006 |
| Nitrite (as N) | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Nitrogen (N)-Total | mg/L | 0.02 | 8.30 | 0.28 | 0.24 | 0.27 | 0.33 | 0.46 | 0.33 | 0.27 |
| Organic Carbon (C)-Dissolved | mg/L | 0.2 | 3.4 | 3.7 | 4.2 | 3.9 | 5.1 | 3.6 | 4.7 | 3.6 |
| Organic Carbon (C)-Total | mg/L | 0.2 | 3.6 | 4.1 | 4.5 | 4.3 | 4.9 | 4.1 | 4.7 | 3.4 |
| Radium 226 | Bq/L | 0.005 | <0.005 | - | <0.010 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| Redox Potential-Field | mV | - | 150.7 | 165.1 | 261.3 | 246.6 | 80 | 272.5 | 195.1 | 295.8 |
| Silica-Reactive | mg/L | 0.05 | - | - | - | - | 0.23 | 0.40 | - | - |
| Styrene | mg/L | 0.0005 | - | - | <0.0005 | - | - | - | - | - |
| Sulphate (SO4)-Dissolved | mg/L | 0.5 | 16.0 | 16.0 | 16.0 | 18.0 | 15.0 | 17.0 | 17.0 | 19.0 |
| Tetrachloroethene | mg/L | 0.0005 | - | - | <0.0005 | - | - | - | - | - |
| Toluene | mg/L | 0.0004 | - | - | <0.0004 | - | - | - | - | - |
| Total Dissolved Solids_Calculated | mg/L | 10 | 43 | 42 | 41 | 43 | 47 | 51 | 95 | 47 |
| Total Dissolved Solids_Measured | mg/L | 10 | 56 | 68 | 60 | 64 | 80 | 64 | 140 | 60 |
| Total Kjeldahl Nitrogen (Calc)-Total | mg/L | 0.02 | 8.30 | 0.26 | 0.24 | 0.26 | 0.30 | 0.44 | 0.31 | 0.26 |
| Total Suspended Solids | mg/L | 1 | 1 | 5 | <1 | <1 | <1 | <1 | 2 | 9 |
| Total Trihalomethanes | mg/L | 0.0013 | - | - | <0.0013 | - | - | - | - | - |
| Trichloroethene | mg/L | 0.0002 | - | - | <0.0002 | - | - | - | - | - |
| Trichlorofluoromethane | mg/L | 0.0005 | - | - | <0.0005 | - | - | - | - | - |
| Turbidity | NTU | 0.1 | 2.9 | 3.4 | 0.2 | 0.1 | 1.7 | 0.2 | 2.0 | 5.2 |
| Un-Ionized Ammonia | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| Vinyl chloride | mg/L | 0.0005 | - | - | <0.0005 | - | - | - | - | - |
| Xylene, m+p-_Concentration | mg/L | 0.0008 | - | - | <0.0008 | - | - | - | - | - |
| Xylene, o-_Concentration | mg/L | 0.0004 | - | - | <0.0004 | - | - | - | - | - |
| Xylenes, total | mg/L | 0.00089 | - | - | <0.00089 | - | - | - | - | - |
| cis-1,2-dichloroethene | mg/L | 0.0005 | - | - | <0.0005 | - | - | - | - | - |
| cis-1,3-dichloropropene | mg/L | 0.0005 | - | - | <0.0005 | - | - | - | - | - |
| pH | pH Units | - | 6.13 | 6.73 | 6.41 | 6.4 | 6.92 | 6.25 | 6.22 | 6.16 |
| pH-Field | pH | - | 6.97 | 6.88 | 6.59 | 6.53 | 6.8 | 6.87 | 7.29 | 7.01 |
| trans-1,2-dichloroethene | mg/L | 0.0005 | - | - | <0.0005 | - | - | - | - | - |
| trans-1,3-dichloropropene | mg/L | 0.0005 | - | - | <0.0005 | - | - | - | - | - |

| Station | Unit | BRP-01<br>Goose Lake Discharge | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-07-13<br>11:00:00<br>C562712 | 2025-07-20<br>14:40:00<br>C564267 | 2025-07-28<br>13:50:00<br>C566044 | 2025-08-03<br>14:00:00<br>C567947 | 2025-08-10<br>14:25:00<br>C569351 | 2025-08-19<br>15:10:00<br>C571965 | 2025-08-25<br>09:45:00<br>C573668 | 2025-09-02<br>14:00:00<br>C575562 |
| Aluminum (Al)-Total | mg/L | 0.003 | 0.015 | 0.125 | 0.013 | 0.018 | 0.036 | 0.041 | 0.071 | 0.143 |
| Antimony (Sb)-Total | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| Arsenic (As)-Total | mg/L | 0.0001 | 0.0004 | 0.0006 | 0.0004 | 0.0006 | 0.0008 | 0.0008 | 0.0011 | 0.0010 |
| Barium (Ba)-Total | mg/L | 0.001 | 0.011 | 0.012 | 0.012 | 0.013 | 0.013 | 0.013 | 0.027 | 0.012 |
| Beryllium (Be)-Total | mg/L | 0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 |
| Bismuth (Bi)-Total | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Boron (B)-Total | mg/L | 0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Cadmium (Cd)-Total | mg/L | 0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | 0.00001 | <0.00001 | <0.00001 |
| Calcium (Ca)-Total | mg/L | 0.05 | 7.38 | 7.89 | 7.21 | 7.60 | 8.36 | 9.27 | 19.70 | 7.27 |
| Chromium (Cr)-Total | mg/L | 0.001 | 0.003 | <0.001 | <0.001 | <0.001 | <0.001 | 0.029 | <0.001 | <0.001 |
| Cobalt (Co)-Total | mg/L | 0.0002 | <0.0002 | 0.0002 | 0.0004 | 0.0003 | 0.0002 | 0.0005 | 0.0004 | 0.0003 |
| Copper (Cu)-Total | mg/L | 0.0005 | 0.0016 | 0.0023 | 0.0015 | 0.0017 | 0.0018 | 0.0021 | 0.0016 | 0.0020 |
| Iron (Fe)-Total | mg/L | 0.01 | 0.06 | 0.19 | 0.04 | 0.05 | 0.10 | 0.25 | 0.23 | 0.28 |
| Lead (Pb)-Total | mg/L | 0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 |
| Lithium (Li)-Total | mg/L | 0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | 0.002 | <0.002 |
| Magnesium (Mg)-Total | mg/L | 0.05 | 3.73 | 4.52 | 3.75 | 4.05 | 4.16 | 4.30 | 6.56 | 4.13 |
| Manganese (Mn)-Total | mg/L | 0.001 | 0.004 | 0.007 | 0.003 | 0.002 | 0.002 | 0.005 | 0.010 | 0.014 |
| Mercury (Hg)-Total | mg/L | 0.0000019 | <0.0000019 | <0.0000019 | <0.0000019 | <0.0000019 | <0.0000019 | <0.0000019 | <0.0000019 | <0.0000019 |
| Molybdenum (Mo)-Total | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | 0.003 | <0.001 | <0.001 |
| Nickel (Ni)-Total | mg/L | 0.001 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.016 | 0.003 | 0.003 |
| Phosphorus (P)-Total | mg/L | 0.001 | 0.002 | 0.005 | 0.001 | 0.004 | 0.003 | 0.005 | 0.004 | 0.009 |
| Potassium (K)-Total | mg/L | 0.05 | 0.70 | 0.77 | 0.73 | 0.84 | 0.95 | 0.92 | 1.44 | 0.89 |
| Selenium (Se)-Total | mg/L | 0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 |
| Silicon (Si)-Total | mg/L | 0.1 | 0.3 | 0.4 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 |
| Silver (Ag)-Total | mg/L | 0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 |
| Sodium (Na)-Total | mg/L | 0.05 | 1.12 | 1.39 | 1.14 | 1.25 | 1.21 | 1.31 | 1.87 | 1.23 |
| Strontium (Sr)-Total | mg/L | 0.001 | 0.030 | 0.032 | 0.028 | 0.030 | 0.036 | 0.034 | 0.066 | 0.029 |
| Sulphur (S)-Total | mg/L | 3 | 5 | 6 | 5 | 6 | 5 | 6 | 6 | 6 |
| Thallium (Tl)-Total | mg/L | 0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 |
| Tin (Sn)-Total | mg/L | 0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| Titanium (Ti)-Total | mg/L | 0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | 0.006 |
| Uranium (U)-Total | mg/L | 0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 |
| Vanadium (V)-Total | mg/L | 0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| Zinc (Zn)-Total | mg/L | 0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| Zirconium (Zr)-Total | mg/L | 0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 |

## Table E-1f Water Quality Data for Regulated Monitoring Stations: Goose STP, 2025

| Station | Unit | BRP-17 Goose STP (treated sewage discharge) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-05-28 15:45:00 C549549 | 2025-06-12 14:25:00 C554375 | 2025-06-23 13:00:00 C557890 | 2025-06-24 16:00:00 250826 | 2025-06-29 14:40:00 C558882 | 2025-07-03 7:05:00 C559880 | 2025-07-14 15:20:00 C562740 | 2025-07-27 15:15:00 C566037 | 2025-08-10 11:15:00 C569350 | 2025-08-25 15:40:00 C573677 | 2025-09-07 10:10:00 C577033 | 2025-09-21 14:40:00 C580583 |
| Nitrate (NO3)-Dissolved | mg/L | 0.013 | 8.1 | 25 | 44 | - | 2.2 | 1.3 | 10 | 0.77 | 65 | 8.3 | 11 | 36 |
| Nitrite (NO2)-Dissolved | mg/L | 0.0033 | 0.11 | 0.35 | 0.11 | - | 0.043 | 0.027 | 0.27 | <0.0033 | 0.24 | 0.03 | 0.2 | 1.6 |
| Alkalinity (PP as CaCO3) | 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 |
| Alkalinity (Total as CaCO3) | mg/L | 0.5 | 11 | 4.5 | <0.5 | - | 5.3 | 7.1 | 7.3 | 15.6 | 3.4 | 15.6 | 59 | 87.3 |
| Ammonia (N)-Total | mg/L | 0.005 | 0.37 | 4.5 | 7.7 | - | 0.17 | 0.11 | 1.2 | 1.7 | 4.2 | 1.7 | 4.1 | 13 |
| Bicarbonate (HCO3) | mg/L | 0.5 | 13.4 | 5.5 | <0.5 | - | 6.5 | 8.7 | 8.9 | 19.1 | 4.2 | 19.1 | 72 | 106 |
| Biochemical oxygen demand [BOD] | mg/L | 2 | <2 | 3 | <2 | - | <2 | <2 | <2 | <2 | <2 | <2 | 4 | 7 |
| Carbonate (CO3) | 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 |
| Chloride (Cl)-Dissolved | mg/L | 0.5 | 4.4 | 23 | 46 | - | 1.3 | 1 | 8.3 | 3.9 | 79 | 17 | 16 | 57 |
| Coliforms, Escherichia coli [E. coli] | MPN/100mL | 1 | <1 | 2 | - | <1 | 2 | <1 | 6 | 9 | 8 | 20 | 20 | 10 |
| Coliforms, thermotolerant [fecal] | CFU/100mL | 1 | - | - | - | - | - | - | - | - | <1 | 18 | 14 | 10 |
| Coliforms, total | MPN/100mL | 1 | 114 | 82 | - | 276 | 272 | 260 | 1990 | 770 | 3440 | 2250 | 1450 | 8660 |
| Conductivity | µS/cm | 1 | 99 | 328 | 621 | - | 61 | 53 | 125 | 79 | 804 | 216 | 294 | 674 |
| Field Temperature | deg. C | - | 9.8 | 11.1 | 9.8 | - | 12.1 | 8 | 12.8 | 8.6 | 11 | 26.2 | 6.3 | 16 |
| Fluoride (F) | mg/L | 0.01 | 0.02 | 0.02 | 0.02 | - | 0.02 | 0.02 | 0.03 | 0.03 | 0.03 | 0.04 | 0.04 | 0.05 |
| Hydroxide (OH) | 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 |
| Nitrate (as N) | mg/L | 0.003 | 1.8 | 5.6 | 9.9 | - | 0.5 | 0.29 | 2.3 | 0.17 | 15 | 1.9 | 2.5 | 8.2 |
| Nitrate plus Nitrite (N) | mg/L | 0.003 | 1.9 | 5.7 | 9.9 | - | 0.52 | 0.3 | 2.4 | 0.17 | 15 | 1.9 | 2.5 | 8.7 |
| Nitrite (as N) | mg/L | 0.001 | 0.033 | 0.1 | 0.032 | - | 0.013 | 0.008 | 0.082 | <0.001 | 0.073 | 0.009 | 0.061 | 0.48 |
| Nitrogen (N)-Total | mg/L | 0.02 | 1.3 | 9.2 | 16 | - | 1 | 4.4 | 4.2 | 2.2 | 22 | 4.1 | 6.5 | 22 |
| Organic Carbon (C)-Dissolved | mg/L | 0.2 | 4.6 | - | - | - | - | - | - | - | - | - | - | - |
| Organic Carbon (C)-Total | mg/L | 0.2 | 4.4 | 8.8 | 11 | - | 5.4 | 3.7 | 6 | 4.7 | 14 | 7.5 | 8.4 | 14 |
| Redox Potential-Field | mV | - | 187.7 | 135.2 | 171.8 | - | 126.3 | 160.3 | 51 | 69.9 | 210 | 197 | 167 | 173 |
| Sulphate (SO4)-Dissolved | mg/L | 0.5 | 18 | 91 | 180 | - | 16 | 12 | 28 | 12 | 190 | 49 | 52 | 110 |
| Total Dissolved Solids_Measured | mg/L | 10 | - | - | 380 | - | 44 | 40 | 80 | 52 | 510 | 160 | 160 | - |
| Total Kjeldahl Nitrogen (Calc)-Total | mg/L | 0.04 | <0.20 | 3.5 | 6 | - | 0.49 | 4.1 | 1.8 | 2.1 | 7 | 2.2 | 4 | 14 |
| Total Oil and Grease | mg/L | 2 | <2 | <2 | 4 | - | <2 | <2 | <2 | <2 | 3 | 5 | <2 | <2 |
| Total Suspended Solids | mg/L | 0.99 | 4.3 | 20 | 7.6 | - | <1.00 | <1.00 | 3.5 | 1.3 | 11 | 4.3 | 10 | 1.4 |
| Turbidity | NTU | 0.1 | 2 | 3.8 | 4.9 | - | <0.1 | <0.1 | 4.3 | 0.3 | 8.1 | 3 | 4.9 | 1.8 |
| Un-Ionized Ammonia | mg/L | 0.0005 | <0.0005 | 0.0045 | <0.0005 | - | <0.0005 | <0.0005 | 0.0008 | 0.0015 | <0.0005 | 0.052 | 0.011 | 0.078 |
| pH | pH Units | - | 6.66 | 6.01 | 5.28 | - | 6.57 | 6.56 | 6.26 | 6.82 | 6.4 | 6.64 | 7.37 | 7.19 |
| pH-Field | pH | - | 6.74 | 6.7 | 5.45 | - | 6.8 | 6.66 | 6.46 | 6.7 | 5.2 | 7.72 | 7.3 | 7.3 |
| Phosphorus (P)-Total | mg/L | 0.001 | 0.037 | 0.06 | 0.044 | - | 0.007 | 0.003 | 0.012 | 0.006 | 0.042 | 0.013 | 0.023 | 0.34 |

## Table E-1g Water Quality Data for Regulated Monitoring Stations: MLA Fuel Tank Farm and MLA Temporary Fuel Storage Facility, 2025

| Station | Unit | BRP-43<br>MLA Fuel Tank Farm | | BRP-49<br>MLA-IB1-TREATED | |
|---|---|---|---|---|---|
| **Date**<br>**Time**<br>**Lab Job Number**<br>**Parameter** | | **Lowest Detection Limit** | **2025-05-25<br>15:15:00<br>C548469** | **Lowest Detection Limit** | **2025-10-03<br>08:15:00<br>C583539** |
| Alkalinity (PP as CaCO3) | mg/L | 0.5 | <0.5 | 0.5 | 45.5 |
| Alkalinity (Total as CaCO3) | mg/L | 0.5 | 44.8 | 0.5 | 126 |
| Ammonia (N)-Total | mg/L | 0.005 | 0.069 | 0.005 | 0.015 |
| Benzene | mg/L | 0.0004 | <0.0004 | 0.0004 | <0.0004 |
| Bicarbonate (HCO3) | mg/L | 0.5 | 54.6 | 0.5 | 43.3 |
| Carbonate (CO3) | mg/L | 0.5 | <0.5 | 0.5 | 54.6 |
| Chloride (Cl)-Dissolved | mg/L | 0.5 | 54.0 | 2.5 | 300 |
| Conductivity | µS/cm | 1 | 309 | 1 | 1530 |
| Ethylbenzene | mg/L | 0.0004 | <0.0004 | 0.0004 | <0.0004 |
| F1 (C6-C10) | mg/L | 0.1 | <0.1 | 100 | <100 |
| F1 (C6-C10) – BTEX | mg/L | 0.1 | <0.1 | 0.1 | <0.1 |
| Field Temperature | deg. C | - | 10.8 | - | 6.8 |
| Fluoride (F) | mg/L | 0.01 | 0.11 | 0.01 | 0.205 |
| Hardness (CaCO3)-Total | mg/L | 0.5 | 51.5 | 0.5 | 206 |
| Hydroxide (OH) | mg/L | 0.5 | <0.5 | 0.5 | <0.5 |
| Redox Potential-Field | mV | - | 129.8 | - | 16.1 |
| Sulphate (SO4)-Dissolved | mg/L | 0.5 | 16.0 | 2.5 | 140 |
| Toluene | mg/L | 0.0004 | <0.0004 | 0.0004 | <0.0004 |
| Total Dissolved Solids_Measured | mg/L | 17 | 320 | 10 | 780 |
| Total Oil and Grease | mg/L | 2 | <2 | 2 | <2 |
| Total Suspended Solids | mg/L | 2.7 | 120.0 | 1 | 8.5 |
| Turbidity | NTU | 0.2 | 580.0 | 0.1 | 2.7 |
| Un-Ionized Ammonia | mg/L | 0.0005 | <0.0005 | 0.0012 | 0.0038 |
| Xylene, m+p-_Concentration | mg/L | 0.0008 | <0.0008 | 0.0008 | <0.0008 |
| Xylene, o-_Concentration | mg/L | 0.0004 | <0.0004 | 0.0004 | <0.0004 |
| Xylenes, total | mg/L | 0.00089 | <0.00089 | 0.89 | <0.89 |
| pH | pH Units | - | 6.4 | - | 8.89 |
| pH-Field | pH | - | 7.52 | - | 9.35 |
| Aluminum (Al)-Total | mg/L | 0.003 | 6.600 | 0.003 | 1.14 |
| Antimony (Sb)-Total | mg/L | 0.0005 | 0.0007 | 0.0005 | 0.00546 |
| Arsenic (As)-Total | mg/L | 0.0001 | 0.0040 | 0.0001 | 0.0157 |
| Barium (Ba)-Total | mg/L | 0.001 | 0.267 | 0.001 | 0.227 |
| Beryllium (Be)-Total | mg/L | 0.0001 | 0.0004 | 0.0001 | <0.0001 |
| Bismuth (Bi)-Total | mg/L | 0.001 | <0.001 | 0.001 | <0.001 |
| Boron (B)-Total | mg/L | 0.05 | 0.10 | 0.05 | 0.168 |
| Cadmium (Cd)-Total | mg/L | 0.00001 | 0.00003 | 0.00001 | <0.00001 |
| Calcium (Ca)-Total | mg/L | 0.05 | 10.60 | 0.05 | 45 |
| Chromium (Cr)-Total | mg/L | 0.001 | 0.010 | 0.001 | <0.001 |

| Station | Unit | BRP-43<br>MLA Fuel Tank Farm | | BRP-49<br>MLA-IB1-TREATED | |
|---|---|---|---|---|---|
| **Date**<br>**Time**<br>**Lab Job Number**<br>**Parameter** | | **Lowest Detection Limit** | **2025-05-25**<br>**15:15:00**<br>**C548469** | **Lowest Detection Limit** | **2025-10-03**<br>**08:15:00**<br>**C583539** |
| Cobalt (Co)-Total | mg/L | 0.0002 | 0.0024 | 0.0002 | <0.0002 |
| Copper (Cu)-Total | mg/L | 0.0005 | 0.0073 | 0.0005 | <0.0005 |
| Iron (Fe)-Total | mg/L | 0.01 | 3.46 | 0.01 | 0.049 |
| Lead (Pb)-Total | mg/L | 0.0002 | 0.0060 | 0.0002 | <0.0002 |
| Lithium (Li)-Total | mg/L | 0.002 | 0.009 | 0.002 | 0.0195 |
| Magnesium (Mg)-Total | mg/L | 0.05 | 6.09 | 0.05 | 22.7 |
| Manganese (Mn)-Total | mg/L | 0.001 | 0.076 | 0.001 | 0.0157 |
| Molybdenum (Mo)-Total | mg/L | 0.001 | 0.002 | 0.001 | 0.0444 |
| Nickel (Ni)-Total | mg/L | 0.001 | 0.005 | 0.001 | <0.001 |
| Potassium (K)-Total | mg/L | 0.05 | 7.89 | 0.05 | 17.7 |
| Selenium (Se)-Total | mg/L | 0.0001 | <0.0001 | 0.0001 | 0.0008 |
| Silicon (Si)-Total | mg/L | 0.1 | 10.8 | 0.1 | 1.43 |
| Silver (Ag)-Total | mg/L | 0.00002 | <0.00002 | 0.00002 | <0.00002 |
| Sodium (Na)-Total | mg/L | 0.05 | 39.20 | 0.05 | 217 |
| Strontium (Sr)-Total | mg/L | 0.001 | 0.080 | 0.001 | 0.505 |
| Sulphur (S)-Total | mg/L | 3 | 6 | 3 | 52 |
| Thallium (Tl)-Total | mg/L | 0.00001 | 0.00003 | 0.00001 | <0.00001 |
| Tin (Sn)-Total | mg/L | 0.005 | <0.005 | 0.005 | <0.005 |
| Titanium (Ti)-Total | mg/L | 0.005 | 0.043 | 0.005 | <0.005 |
| Uranium (U)-Total | mg/L | 0.0001 | 0.0043 | 0.0001 | 0.00433 |
| Vanadium (V)-Total | mg/L | 0.005 | 0.006 | 0.005 | 0.0278 |
| Zinc (Zn)-Total | mg/L | 0.005 | 0.021 | 0.005 | <0.005 |
| Zirconium (Zr)-Total | mg/L | 0.0001 | 0.0011 | 0.0001 | <0.0001 |

## Table E-2a Water Quality Data for General Monitoring Stations: General Seepage, 2025

| Station | Unit | BRP-S-01 General Seepage | | | | BRP-S-02 General Seepage | | BRP-S-03 General Seepage | |
|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-06-16<br>14:15:00<br>C555633 | 2025-07-17<br>15:40:00<br>C564280 | 2025-08-20<br>10:50:00<br>C572728 | Lowest Detection Limit | 2025-08-20<br>13:55:00<br>C572728 | Lowest Detection Limit | 2025-09-09<br>14:40:00<br>C577414 |
| Aluminum (Al)-Dissolved | mg/L | 0.003 | <0.015 | 0.005 | <0.015 | 0.015 | 0.109 | 0.003 | 0.051 |
| Antimony (Sb)-Dissolved | mg/L | 0.0005 | 0.0060 | 0.0056 | 0.0038 | 0.0025 | <0.0025 | 0.0005 | <0.0005 |
| Arsenic (As)-Dissolved | mg/L | 0.0001 | 0.0064 | 0.0138 | 0.0125 | 0.0005 | 0.0032 | 0.0001 | 0.0009 |
| Barium (Ba)-Dissolved | mg/L | 0.001 | 0.026 | 0.040 | 0.037 | 0.005 | 0.074 | 0.001 | 0.042 |
| Beryllium (Be)-Dissolved | mg/L | 0.0001 | <0.0005 | <0.0001 | <0.0005 | 0.0005 | <0.0005 | 0.0001 | <0.0001 |
| Bismuth (Bi)-Dissolved | mg/L | 0.001 | <0.005 | <0.001 | <0.005 | 0.005 | <0.005 | 0.001 | <0.001 |
| Boron (B)-Dissolved | mg/L | 0.05 | <0.25 | 0.25 | 0.28 | 0.25 | <0.25 | 0.05 | <0.05 |
| Cadmium (Cd)-Dissolved | mg/L | 0.00001 | 0.00011 | 0.00029 | 0.00038 | 0.00005 | 0.00019 | 0.00001 | 0.00011 |
| Calcium (Ca)-Dissolved | mg/L | 0.05 | 59.30 | 125.00 | 167.00 | 0.25 | 165.00 | 0.05 | 64.20 |
| Chromium (Cr)-Dissolved | mg/L | 0.001 | <0.005 | 0.001 | <0.005 | 0.005 | <0.005 | 0.001 | <0.001 |
| Cobalt (Co)-Dissolved | mg/L | 0.0002 | 0.0097 | 0.0211 | 0.0154 | 0.001 | 0.086 | 0.0002 | 0.0147 |
| Copper (Cu)-Dissolved | mg/L | 0.0002 | 0.0063 | 0.0102 | 0.0093 | 0.001 | 0.008 | 0.0002 | 0.0035 |
| Iron (Fe)-Dissolved | mg/L | 0.005 | <0.025 | 0.011 | <0.025 | 0.025 | 2.380 | 0.005 | 0.081 |
| Lead (Pb)-Dissolved | mg/L | 0.0002 | <0.0010 | <0.0002 | <0.0010 | 0.001 | <0.001 | 0.0002 | <0.0002 |
| Lithium (Li)-Dissolved | mg/L | 0.002 | 0.017 | 0.031 | 0.037 | 0.01 | <0.01 | 0.002 | 0.006 |
| Magnesium (Mg)-Dissolved | mg/L | 0.05 | 22.20 | 46.70 | 63.70 | 0.25 | 189.00 | 0.05 | 55.50 |
| Manganese (Mn)-Dissolved | mg/L | 0.001 | 0.491 | 0.937 | 0.924 | 0.005 | 2.920 | 0.001 | 0.365 |
| Mercury (Hg)-Dissolved | mg/L | 0.0000019 | <0.0000019 | <0.0000019 | <0.0000019 | 0.0000019 | 0.0000022 | 0.0000019 | <0.0000019 |
| Molybdenum (Mo)-Dissolved | mg/L | 0.001 | 0.008 | 0.014 | 0.009 | 0.005 | <0.005 | 0.001 | <0.001 |
| Nickel (Ni)-Dissolved | mg/L | 0.001 | 0.038 | 0.065 | 0.068 | 0.005 | 0.065 | 0.001 | 0.034 |
| Nitrate (NO3)-Dissolved | mg/L | 4.4 | 79.0 | 190.0 | 280.0 | 8.9 | 160.0 | 4.4 | 47.0 |
| Nitrite (NO2)-Dissolved | mg/L | 0.13 | 3.60 | 6.20 | 1.40 | 0.66 | 7.20 | 0.0033 | 0.2900 |
| Potassium (K)-Dissolved | mg/L | 0.05 | 12.40 | 21.00 | 22.70 | 0.25 | 19.30 | 0.05 | 10.10 |
| Selenium (Se)-Dissolved | mg/L | 0.0001 | 0.0009 | 0.0043 | 0.0026 | 0.0005 | 0.0013 | 0.0001 | 0.0006 |
| Silicon (Si)-Dissolved | mg/L | 0.1 | 2.8 | 3.2 | 3.7 | 0.5 | 5.1 | 0.1 | 3.8 |
| Silver (Ag)-Dissolved | mg/L | 0.00002 | <0.00010 | 0.00003 | <0.00010 | 0.0001 | <0.0001 | 0.00002 | <0.00002 |
| Sodium (Na)-Dissolved | mg/L | 0.05 | 15.70 | 30.50 | 30.30 | 0.25 | 21.30 | 0.05 | 7.60 |
| Strontium (Sr)-Dissolved | mg/L | 0.001 | 0.307 | 0.612 | 1.010 | 0.005 | 0.353 | 0.001 | 0.234 |
| Sulphur (S)-Dissolved | mg/L | 3 | 44 | 92 | 103 | 15 | 284 | 3 | 89 |
| Thallium (Tl)-Dissolved | mg/L | 0.00001 | <0.00005 | 0.00007 | 0.00009 | 0.00005 | 0.00005 | 0.00001 | 0.00002 |
| Tin (Sn)-Dissolved | mg/L | 0.005 | <0.025 | <0.005 | <0.025 | 0.025 | <0.025 | 0.005 | <0.005 |
| Titanium (Ti)-Dissolved | mg/L | 0.005 | <0.025 | <0.005 | <0.025 | 0.025 | <0.025 | 0.005 | <0.005 |
| Uranium (U)-Dissolved | mg/L | 0.0001 | 0.0017 | 0.0040 | 0.0040 | 0.0005 | 0.0211 | 0.0001 | <0.0001 |
| Vanadium (V)-Dissolved | mg/L | 0.005 | <0.025 | <0.005 | <0.025 | 0.025 | <0.025 | 0.005 | <0.005 |
| Zinc (Zn)-Dissolved | mg/L | 0.005 | <0.025 | 0.010 | <0.025 | 0.025 | <0.025 | 0.005 | 0.008 |
| Zirconium (Zr)-Dissolved | mg/L | 0.0001 | <0.0005 | 0.0002 | <0.0005 | 0.0005 | 0.0033 | 0.0001 | 0.0005 |
| 1,1,1,2-tetrachloroethane | mg/L | 0.001 | - | <0.001 | <0.001 | 0.001 | <0.001 | 0.0005 | <0.0005 |
| 1,1,1-trichloroethane | mg/L | 0.0005 | - | <0.0005 | <0.0005 | 0.0005 | <0.0005 | 0.0005 | <0.0005 |

| Station | Unit | BRP-S-01<br>General Seepage | | | | BRP-S-02<br>General Seepage | | BRP-S-03<br>General Seepage | |
|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-06-16<br>14:15:00<br>C555633 | 2025-07-17<br>15:40:00<br>C564280 | 2025-08-20<br>10:50:00<br>C572728 | Lowest Detection Limit | 2025-08-20<br>13:55:00<br>C572728 | Lowest Detection Limit | 2025-09-09<br>14:40:00<br>C577414 |
| 1,1,2,2-tetrachloroethane | mg/L | 0.002 | - | <0.002 | <0.002 | 0.002 | <0.002 | 0.0005 | <0.0005 |
| 1,1,2-trichloroethane | mg/L | 0.0005 | - | <0.0005 | <0.0005 | 0.0005 | <0.0005 | 0.0005 | <0.0005 |
| 1,1-dichloroethane | mg/L | 0.0005 | - | <0.0005 | <0.0005 | 0.0005 | <0.0005 | 0.0005 | <0.0005 |
| 1,1-dichloroethene | mg/L | 0.0005 | - | <0.0005 | <0.0005 | 0.0005 | <0.0005 | 0.0005 | <0.0005 |
| 1,2,3-trichlorobenzene | mg/L | 0.001 | - | <0.001 | <0.001 | 0.001 | <0.001 | 0.002 | <0.002 |
| 1,2,4-trichlorobenzene | mg/L | 0.001 | - | <0.001 | <0.001 | 0.001 | <0.001 | 0.002 | <0.002 |
| 1,2,4-trimethylbenzene | mg/L | 0.0005 | - | <0.0005 | <0.0005 | 0.0005 | <0.0005 | - | - |
| 1,2-dibromoethane | mg/L | 0.0002 | - | <0.0002 | <0.0002 | 0.0002 | <0.0002 | 0.0002 | <0.0002 |
| 1,2-dichlorobenzene | mg/L | 0.0005 | - | <0.0005 | <0.0005 | 0.0005 | <0.0005 | 0.0005 | <0.0005 |
| 1,2-dichloroethane | mg/L | 0.0005 | - | <0.0005 | <0.0005 | 0.0005 | <0.0005 | 0.0005 | <0.0005 |
| 1,2-dichloropropane | mg/L | 0.0005 | - | <0.0005 | <0.0005 | 0.0005 | <0.0005 | 0.0005 | <0.0005 |
| 1,3,5-trichlorobenzene | mg/L | 0.0005 | - | <0.0005 | <0.0005 | 0.0005 | <0.0005 | - | - |
| 1,3,5-trimethylbenzene | mg/L | 0.0005 | - | <0.0005 | <0.0005 | 0.0005 | <0.0005 | - | - |
| 1,3-dichlorobenzene | mg/L | 0.0005 | - | <0.0005 | <0.0005 | 0.0005 | <0.0005 | 0.0005 | <0.0005 |
| 1,4-dichlorobenzene | mg/L | 0.0005 | - | <0.0005 | <0.0005 | 0.0005 | <0.0005 | 0.0005 | <0.0005 |
| Alkalinity (PP as CaCO3) | mg/L | 0.5 | <0.5 | <0.5 | <0.5 | 0.5 | <0.5 | 0.5 | <0.5 |
| Alkalinity (Total as CaCO3) | mg/L | 0.5 | 73.4 | 91.7 | 77.2 | 0.5 | 189.0 | 0.5 | 13.7 |
| Ammonia (N)-Total | mg/L | 0.025 | 6.900 | 13.000 | 13.000 | 0.025 | 3.900 | 0.005 | 0.440 |
| Benzene | mg/L | 0.0004 | - | <0.0004 | <0.0004 | 0.0004 | <0.0004 | 0.0004 | <0.0004 |
| Bicarbonate (HCO3) | mg/L | 0.5 | 89.5 | 112.0 | 94.2 | 0.5 | 230.0 | 0.5 | 16.7 |
| Bromodichloromethane | mg/L | 0.0005 | - | <0.0005 | <0.0005 | 0.0005 | <0.0005 | 0.001 | <0.001 |
| Bromoform | mg/L | 0.0005 | - | <0.0005 | <0.0005 | 0.0005 | <0.0005 | 0.001 | <0.001 |
| Bromomethane | mg/L | 0.002 | - | <0.002 | <0.002 | 0.002 | <0.002 | 0.001 | <0.001 |
| Carbon tetrachloride | mg/L | 0.0005 | - | <0.0005 | <0.0005 | 0.0005 | <0.0005 | 0.0005 | <0.0005 |
| Carbonate (CO3) | mg/L | 0.5 | <0.5 | <0.5 | <0.5 | 0.5 | <0.5 | 0.5 | <0.5 |
| Chloride (Cl)-Dissolved | mg/L | 0.5 | 48.0 | 110.0 | 190.0 | 0.5 | 95.0 | 0.5 | 73.0 |
| Chlorobenzene | mg/L | 0.0005 | - | <0.0005 | <0.0005 | 0.0005 | <0.0005 | 0.0005 | <0.0005 |
| Chloroethane | mg/L | 0.001 | - | <0.001 | <0.001 | 0.001 | <0.001 | 0.001 | <0.001 |
| Chloroform | mg/L | 0.0005 | - | <0.0005 | <0.0005 | 0.0005 | <0.0005 | 0.001 | <0.001 |
| Chloromethane | mg/L | 0.002 | - | <0.002 | <0.002 | 0.002 | <0.002 | 0.001 | <0.001 |
| Conductivity | µS/cm | 1 | 722 | 1430 | 1690 | 1 | 2170 | 1 | 865 |
| Cyanide (CN)-Free | mg/L | 0.0005 | 0.0026 | <0.0005 | 0.0021 | 0.0005 | 0.0054 | 0.0005 | 0.0024 |
| Cyanide (CN)-Strong Acid Dissoc. | mg/L | 0.0005 | 0.0066 | 0.0102 | 0.0064 | 0.0005 | 0.0258 | 0.0005 | 0.0067 |
| Cyanide (CN)-Weak Acid Dissoc. | mg/L | 0.0005 | 0.0038 | 0.0055 | 0.0044 | 0.0005 | 0.0101 | 0.0005 | 0.0043 |
| Dibromochloromethane | mg/L | 0.001 | - | <0.001 | <0.001 | 0.001 | <0.001 | 0.001 | <0.001 |
| Dichloromethane | mg/L | 0.002 | - | <0.002 | <0.002 | 0.002 | <0.002 | 0.002 | <0.002 |
| Ethylbenzene | mg/L | 0.0004 | - | <0.0004 | <0.0004 | 0.0004 | <0.0004 | 0.0004 | <0.0004 |
| F1 (C6-C10) | mg/L | 0.1 | - | <0.1 | <0.1 | 0.1 | <0.1 | 0.3 | <0.3 |
| F1 (C6-C10) - BTEX | mg/L | 0.1 | - | <0.1 | <0.1 | 0.1 | <0.1 | 0.3 | <0.3 |

| Station | Unit | BRP-S-01 General Seepage | | | | BRP-S-02 General Seepage | | BRP-S-03 General Seepage | |
|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-06-16<br>14:15:00<br>C555633 | 2025-07-17<br>15:40:00<br>C564280 | 2025-08-20<br>10:50:00<br>C572728 | Lowest Detection Limit | 2025-08-20<br>13:55:00<br>C572728 | Lowest Detection Limit | 2025-09-09<br>14:40:00<br>C577414 |
| Field Temperature | deg. C | - | 5 | 9 | 12 | - | 1.2 | - | 9.2 |
| Fluoride (F) | mg/L | 0.01 | 0.16 | 0.14 | 0.14 | 0.01 | 0.08 | 0.01 | 0.05 |
| Hardness (CaCO3)-Dissolved | mg/L | 0.5 | 240.0 | 505.0 | 678.0 | 0.5 | 1190.0 | 0.5 | 389.0 |
| Hardness (CaCO3)-Total | mg/L | 0.5 | 247.0 | 574.0 | 698.0 | 0.5 | 1240.0 | 0.5 | 391.0 |
| Hydroxide (OH) | mg/L | 0.5 | <0.5 | <0.5 | <0.5 | 0.5 | <0.5 | 0.5 | <0.5 |
| Methyl methacrylate | mg/L | 0.0005 | - | <0.0005 | <0.0005 | 0.0005 | <0.0005 | - | - |
| Methyl-tert-butyl ether (MTBE) | mg/L | 0.0005 | - | <0.0005 | <0.0005 | 0.0005 | <0.0005 | 0.004 | <0.004 |
| Nitrate (as N) | mg/L | 1 | 18 | 44 | 63 | 2 | 35 | 1 | 11 |
| Nitrate plus Nitrite (N) | mg/L | 1 | 19 | 46 | 63 | 2 | 37 | 1 | 11 |
| Nitrite (as N) | mg/L | 0.04 | 1.10 | 1.90 | 0.41 | 0.2 | 2.2 | 0.001 | 0.089 |
| Nitrogen (N)-Total | mg/L | 2 | 29 | 61 | 72 | 1 | 39 | 0.2 | 9.9 |
| Organic Carbon (C)-Dissolved | mg/L | 0.2 | 5.0 | 7.0 | 6.2 | 1 | 58 | 0.2 | 13.0 |
| Organic Carbon (C)-Total | mg/L | 0.2 | 4.6 | 6.6 | 10.0 | 1 | 59 | 0.2 | 13.0 |
| Redox Potential-Field | mV | - | 215.9 | 147.9 | 281.6 | - | 146.2 | - | 199 |
| Silica-Reactive | mg/L | 0.05 | - | 7.60 | 7.40 | 0.1 | 9.6 | 0.05 | 7.80 |
| Styrene | mg/L | 0.0005 | - | <0.0005 | <0.0005 | 0.0005 | <0.0005 | 0.0005 | <0.0005 |
| Sulphate (SO4)-Dissolved | mg/L | 2.5 | 140.0 | 290.0 | 290.0 | 13 | 850 | 2.5 | 250.0 |
| Tetrachloroethene | mg/L | 0.0005 | - | <0.0005 | <0.0005 | 0.0005 | <0.0005 | 0.0005 | <0.0005 |
| Toluene | mg/L | 0.0004 | - | <0.0004 | <0.0004 | 0.0004 | <0.0004 | 0.0004 | <0.0004 |
| Total Dissolved Solids_Calculated | mg/L | 10 | 430 | 910 | 1100 | 15 | 1600 | 10 | 520 |
| Total Dissolved Solids_Measured | mg/L | 10 | 430 | 940 | 1200 | 10 | 1800 | 10 | 640 |
| Total Kjeldahl Nitrogen (Calc)-Total | mg/L | 2 | 10 | 15 | 8 | 2 | <2 | 1 | <1 |
| Total Suspended Solids | mg/L | 1 | 4 | 68 | 240 | 1 | 11 | 1 | 10 |
| Total Trihalomethanes | mg/L | 0.0013 | - | <0.0013 | <0.0013 | 0.0013 | <0.0013 | - | - |
| Trichloroethene | mg/L | 0.0002 | - | <0.0002 | <0.0002 | 0.0002 | <0.0002 | 0.0005 | <0.0005 |
| Trichlorofluoromethane | mg/L | 0.0005 | - | <0.0005 | <0.0005 | 0.0005 | <0.0005 | 0.004 | <0.004 |
| Turbidity | NTU | 0.1 | 5.5 | 25.0 | 33.0 | 0.1 | 7.8 | 0.1 | 2.5 |
| Un-Ionized Ammonia | mg/L | 0.0005 | 0.0077 | 0.0110 | 0.0180 | 0.0005 | 0.0010 | 0.0005 | <0.0005 |
| Vinyl chloride | mg/L | 0.0005 | - | <0.0005 | <0.0005 | 0.0005 | <0.0005 | 0.0005 | <0.0005 |
| Xylene, m+p-_Concentration | mg/L | 0.0008 | - | <0.0008 | <0.0008 | 0.0008 | <0.0008 | - | - |
| Xylene, o-_Concentration | mg/L | 0.0004 | - | <0.0004 | <0.0004 | 0.0004 | <0.0004 | - | - |
| Xylenes, total | mg/L | 0.00089 | - | <0.00089 | <0.00089 | 0.00089 | <0.00089 | 0.0004 | <0.0004 |
| cis-1,2-dichloroethene | mg/L | 0.0005 | - | <0.0005 | <0.0005 | 0.0005 | <0.0005 | 0.001 | <0.001 |
| cis-1,3-dichloropropene | mg/L | 0.0005 | - | <0.0005 | <0.0005 | 0.0005 | <0.0005 | 0.001 | <0.001 |
| pH | pH Units | - | 7.87 | 7.6 | 6.75 | - | 6.94 | - | 6.32 |
| pH-Field | pH | - | 6.95 | 6.68 | 6.8 | - | 6.46 | - | 6.1 |
| trans-1,2-dichloroethene | mg/L | 0.0005 | - | <0.0005 | <0.0005 | 0.0005 | <0.0005 | 0.001 | <0.001 |
| trans-1,3-dichloropropene | mg/L | 0.0005 | - | <0.0005 | <0.0005 | 0.0005 | <0.0005 | 0.001 | <0.001 |
| Aluminum (Al)-Total | mg/L | 0.003 | 0.055 | 1.210 | 1.750 | 0.003 | 0.491 | 0.003 | 0.317 |

| Station | Unit | BRP-S-01<br>General Seepage | | | | BRP-S-02<br>General Seepage | | BRP-S-03<br>General Seepage | |
|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-06-16<br>14:15:00<br>C555633 | 2025-07-17<br>15:40:00<br>C564280 | 2025-08-20<br>10:50:00<br>C572728 | Lowest Detection Limit | 2025-08-20<br>13:55:00<br>C572728 | Lowest Detection Limit | 2025-09-09<br>14:40:00<br>C577414 |
| Antimony (Sb)-Total | mg/L | 0.0005 | 0.0063 | 0.0061 | 0.0055 | 0.0005 | <0.0005 | 0.0005 | <0.0005 |
| Arsenic (As)-Total | mg/L | 0.0001 | 0.0082 | 0.0186 | 0.0263 | 0.0001 | 0.0041 | 0.0001 | 0.0012 |
| Barium (Ba)-Total | mg/L | 0.001 | 0.027 | 0.044 | 0.051 | 0.001 | 0.074 | 0.001 | 0.045 |
| Beryllium (Be)-Total | mg/L | 0.0001 | <0.0005 | <0.0001 | <0.0001 | 0.0001 | <0.0001 | 0.0001 | <0.0001 |
| Bismuth (Bi)-Total | mg/L | 0.001 | <0.005 | <0.001 | <0.001 | 0.001 | <0.001 | 0.001 | <0.001 |
| Boron (B)-Total | mg/L | 0.05 | <0.25 | 0.23 | 0.24 | 0.05 | <0.05 | 0.05 | <0.05 |
| Cadmium (Cd)-Total | mg/L | 0.00001 | 0.00016 | 0.00030 | 0.00059 | 0.00001 | 0.00019 | 0.00001 | 0.00012 |
| Calcium (Ca)-Total | mg/L | 0.05 | 65.30 | 133.00 | 177.00 | 0.25 | 170.00 | 0.05 | 63.30 |
| Chromium (Cr)-Total | mg/L | 0.001 | <0.005 | 0.004 | 0.006 | 0.001 | 0.002 | 0.001 | 0.001 |
| Cobalt (Co)-Total | mg/L | 0.0002 | 0.0120 | 0.0227 | 0.0691 | 0.0002 | 0.0831 | 0.0002 | 0.0149 |
| Copper (Cu)-Total | mg/L | 0.0005 | 0.0082 | 0.0149 | 0.0224 | 0.0005 | 0.0094 | 0.0005 | 0.0039 |
| Iron (Fe)-Total | mg/L | 0.01 | 0.11 | 1.48 | 2.95 | 0.01 | 2.87 | 0.01 | 0.59 |
| Lead (Pb)-Total | mg/L | 0.0002 | <0.0010 | 0.0014 | 0.0027 | 0.0002 | 0.0002 | 0.0002 | <0.0002 |
| Lithium (Li)-Total | mg/L | 0.002 | 0.020 | 0.031 | 0.036 | 0.002 | 0.007 | 0.002 | 0.006 |
| Magnesium (Mg)-Total | mg/L | 0.05 | 20.40 | 58.50 | 62.00 | 0.25 | 197.00 | 0.05 | 56.50 |
| Manganese (Mn)-Total | mg/L | 0.001 | 0.567 | 1.090 | 2.810 | 0.001 | 2.470 | 0.001 | 0.364 |
| Mercury (Hg)-Total | mg/L | 0.0000019 | <0.0000019 | <0.0000019 | <0.0000019 | 0.0000019 | 0.0000035 | 0.0000019 | <0.0000019 |
| Molybdenum (Mo)-Total | mg/L | 0.001 | 0.009 | 0.013 | 0.018 | 0.001 | 0.002 | 0.001 | <0.001 |
| Nickel (Ni)-Total | mg/L | 0.001 | 0.045 | 0.070 | 0.091 | 0.001 | 0.061 | 0.001 | 0.034 |
| Phosphorus (P)-Total | mg/L | 0.001 | 0.019 | 0.047 | 0.220 | 0.001 | 0.095 | 0.001 | 0.016 |
| Potassium (K)-Total | mg/L | 0.05 | 13.90 | 22.80 | 22.20 | 0.05 | 18.30 | 0.05 | 10.10 |
| Selenium (Se)-Total | mg/L | 0.0001 | 0.0011 | 0.0024 | 0.0028 | 0.0001 | 0.0013 | 0.0001 | 0.0006 |
| Silicon (Si)-Total | mg/L | 0.1 | 2.7 | 5.0 | 6.0 | 0.1 | 5.3 | 0.1 | 4.2 |
| Silver (Ag)-Total | mg/L | 0.00002 | <0.00010 | 0.00007 | 0.00010 | 0.00002 | 0.00002 | 0.00002 | <0.00002 |
| Sodium (Na)-Total | mg/L | 0.05 | 17.70 | 35.30 | 29.60 | 0.05 | 19.70 | 0.05 | 7.71 |
| Strontium (Sr)-Total | mg/L | 0.001 | 0.348 | 0.764 | 1.000 | 0.001 | 0.339 | 0.001 | 0.227 |
| Sulphur (S)-Total | mg/L | 3 | 47 | 99 | 101 | 15 | 302 | 3 | 86 |
| Thallium (Tl)-Total | mg/L | 0.00001 | <0.00005 | 0.00009 | 0.00011 | 0.00001 | 0.00005 | 0.00001 | 0.00003 |
| Tin (Sn)-Total | mg/L | 0.005 | <0.025 | <0.005 | <0.005 | 0.005 | <0.005 | 0.005 | <0.005 |
| Titanium (Ti)-Total | mg/L | 0.005 | <0.025 | 0.023 | 0.046 | 0.005 | 0.019 | 0.005 | 0.006 |
| Uranium (U)-Total | mg/L | 0.0001 | 0.0017 | 0.0048 | 0.0045 | 0.0001 | 0.0206 | 0.0001 | <0.0001 |
| Vanadium (V)-Total | mg/L | 0.005 | <0.025 | <0.005 | <0.005 | 0.005 | <0.005 | 0.005 | <0.005 |
| Zinc (Zn)-Total | mg/L | 0.005 | <0.025 | 0.016 | 0.022 | 0.005 | 0.014 | 0.005 | 0.009 |
| Zirconium (Zr)-Total | mg/L | 0.0001 | <0.0005 | 0.0010 | 0.0012 | 0.0001 | 0.0037 | 0.0001 | 0.0006 |

## Table E-2b Water Quality Data for General Monitoring Stations: Llama and Umwelt Lakes, 2025

| Station | Unit | BRP-02 Llama Lake | | | | | BRP-06 Umwelt Lake | |
|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-07-08<br>16:10:00<br>C561669 | 2025-07-13<br>11:00:00<br>C562712 | 2025-08-05<br>16:45:00<br>C568627 | 2025-08-10<br>14:20:00<br>C569351 | Lowest Detection Limit | 2025-08-10<br>14:20:00<br>C569351 |
| Aluminum (Al)-Dissolved | mg/L | 0.003 | 0.014 | 0.011 | 0.008 | 0.005 | 0.003 | 0.013 |
| Antimony (Sb)-Dissolved | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.0005 | <0.0005 |
| Arsenic (As)-Dissolved | mg/L | 0.0001 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0001 | 0.0006 |
| Barium (Ba)-Dissolved | mg/L | 0.001 | 0.011 | 0.010 | 0.011 | 0.009 | 0.001 | 0.013 |
| Beryllium (Be)-Dissolved | mg/L | 0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | 0.0001 | <0.0001 |
| Bismuth (Bi)-Dissolved | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | 0.001 | <0.001 |
| Boron (B)-Dissolved | mg/L | 0.05 | <0.05 | <0.05 | <0.05 | <0.05 | 0.05 | <0.05 |
| Cadmium (Cd)-Dissolved | mg/L | 0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | 0.00001 | <0.00001 |
| Calcium (Ca)-Dissolved | mg/L | 0.05 | 7.15 | 7.09 | 7.36 | 7.05 | 0.05 | 9.30 |
| Chromium (Cr)-Dissolved | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | 0.001 | <0.001 |
| Cobalt (Co)-Dissolved | mg/L | 0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | 0.0002 | <0.0002 |
| Copper (Cu)-Dissolved | mg/L | 0.0002 | 0.0014 | 0.0013 | 0.0015 | 0.0013 | 0.0002 | 0.0017 |
| Iron (Fe)-Dissolved | mg/L | 0.005 | 0.014 | 0.018 | 0.016 | 0.011 | 0.005 | 0.048 |
| Lead (Pb)-Dissolved | mg/L | 0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | 0.0002 | <0.0002 |
| Lithium (Li)-Dissolved | mg/L | 0.002 | <0.002 | <0.002 | <0.002 | <0.002 | 0.002 | <0.002 |
| Magnesium (Mg)-Dissolved | mg/L | 0.05 | 3.79 | 3.79 | 3.85 | 3.77 | 0.05 | 4.03 |
| Manganese (Mn)-Dissolved | mg/L | 0.001 | 0.005 | 0.003 | 0.002 | 0.002 | 0.001 | 0.004 |
| Mercury (Hg)-Dissolved | mg/L | 0.0000019 | <0.0000019 | <0.0000019 | <0.0000019 | <0.0000019 | - | - |
| Molybdenum (Mo)-Dissolved | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | 0.001 | <0.001 |
| Nickel (Ni)-Dissolved | mg/L | 0.001 | 0.002 | 0.002 | 0.002 | 0.002 | 0.001 | 0.002 |
| Nitrate (NO3)-Dissolved | mg/L | 0.013 | 0.310 | 0.390 | 0.063 | 0.024 | 0.013 | 0.093 |
| Nitrite (NO2)-Dissolved | mg/L | 0.0033 | <0.0033 | <0.0033 | <0.0033 | <0.0033 | 0.0033 | <0.0033 |
| Potassium (K)-Dissolved | mg/L | 0.05 | 0.69 | 0.70 | 0.84 | 0.70 | 0.05 | 1.01 |
| Selenium (Se)-Dissolved | mg/L | 0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | 0.0001 | <0.0001 |
| Silicon (Si)-Dissolved | mg/L | 0.1 | 0.3 | 0.3 | 0.1 | 0.1 | 0.1 | <0.1 |
| Silver (Ag)-Dissolved | mg/L | 0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | 0.00002 | <0.00002 |
| Sodium (Na)-Dissolved | mg/L | 0.05 | 1.13 | 1.13 | 1.28 | 1.11 | 0.05 | 1.26 |
| Strontium (Sr)-Dissolved | mg/L | 0.001 | 0.027 | 0.028 | 0.030 | 0.029 | 0.001 | 0.040 |
| Sulphur (S)-Dissolved | mg/L | 3 | 5 | 5 | 5 | 5 | 3 | 4 |
| Thallium (Tl)-Dissolved | mg/L | 0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | 0.00001 | <0.00001 |
| Tin (Sn)-Dissolved | mg/L | 0.005 | <0.005 | <0.005 | <0.005 | <0.005 | 0.005 | <0.005 |
| Titanium (Ti)-Dissolved | mg/L | 0.005 | <0.005 | <0.005 | <0.005 | <0.005 | 0.005 | <0.005 |
| Uranium (U)-Dissolved | mg/L | 0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | 0.0001 | <0.0001 |
| Vanadium (V)-Dissolved | mg/L | 0.005 | <0.005 | <0.005 | <0.005 | <0.005 | 0.005 | <0.005 |
| Zinc (Zn)-Dissolved | mg/L | 0.005 | <0.005 | <0.005 | <0.005 | <0.005 | 0.005 | <0.005 |
| Zirconium (Zr)-Dissolved | mg/L | 0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | 0.0001 | <0.0001 |
| 1,1,1,2-tetrachloroethane | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | - | - |
| 1,1,1-trichloroethane | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |

| Station | Unit | BRP-02 Llama Lake | | | | | BRP-06 Umwelt Lake | |
|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-07-08<br>16:10:00<br>C561669 | 2025-07-13<br>11:00:00<br>C562712 | 2025-08-05<br>16:45:00<br>C568627 | 2025-08-10<br>14:20:00<br>C569351 | Lowest Detection Limit | 2025-08-10<br>14:20:00<br>C569351 |
| 1,1,2,2-tetrachloroethane | mg/L | 0.002 | <0.002 | <0.002 | <0.002 | <0.002 | - | - |
| 1,1,2-trichloroethane | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| 1,1-dichloroethane | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| 1,1-dichloroethene | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| 1,2,3-trichlorobenzene | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | - | - |
| 1,2,4-trichlorobenzene | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | - | - |
| 1,2,4-trimethylbenzene | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| 1,2-dibromoethane | mg/L | 0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | - | - |
| 1,2-dichlorobenzene | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| 1,2-dichloroethane | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| 1,2-dichloropropane | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| 1,3,5-trichlorobenzene | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| 1,3,5-trimethylbenzene | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| 1,3-dichlorobenzene | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| 1,4-dichlorobenzene | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| Alkalinity (PP as CaCO3) | mg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.5 | <0.5 |
| Alkalinity (Total as CaCO3) | mg/L | 0.5 | 7.3 | 7.6 | 7.9 | 7.1 | 0.5 | 8.3 |
| Ammonia (N)-Total | mg/L | 0.005 | 0.009 | 0.013 | 0.011 | 0.008 | 0.005 | 0.018 |
| Benzene | mg/L | 0.0004 | <0.0004 | <0.0004 | <0.0004 | <0.0004 | - | - |
| Bicarbonate (HCO3) | mg/L | 0.5 | 8.9 | 9.2 | 9.6 | 8.7 | 0.5 | 10.1 |
| Bromodichloromethane | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| Bromoform | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| Bromomethane | mg/L | 0.002 | <0.002 | <0.002 | <0.002 | <0.002 | - | - |
| Carbon tetrachloride | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| Carbonate (CO3) | mg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.5 | <0.5 |
| Chloride (Cl)-Dissolved | mg/L | 0.5 | 8.4 | 8.4 | 8.2 | 8.3 | 0.5 | 15.0 |
| Chlorobenzene | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| Chloroethane | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | - | - |
| Chloroform | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| Chloromethane | mg/L | 0.002 | <0.002 | <0.002 | <0.002 | <0.002 | - | - |
| Conductivity | µS/cm | 1 | 83 | 82 | 85 | 84 | 1 | 102 |
| Cyanide (CN)-Strong Acid Dissoc. | mg/L | 0.0005 | <0.0005 | <0.0005 | 0.0008 | <0.0005 | - | - |
| Cyanide (CN)-Weak Acid Dissoc. | mg/L | 0.0005 | <0.0005 | <0.0005 | 0.0008 | 0.0005 | - | - |
| Dibromochloromethane | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | - | - |
| Dichloromethane | mg/L | 0.002 | <0.002 | <0.002 | <0.002 | <0.002 | - | - |
| Ethylbenzene | mg/L | 0.0004 | <0.0004 | <0.0004 | <0.0004 | <0.0004 | - | - |
| F1 (C6-C10) | mg/L | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | - | - |
| F1 (C6-C10) - BTEX | mg/L | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | - | - |
| Field Temperature | deg. C | - | 18.2 | 10.4 | 17 | 15 | - | 13 |

| Station | Unit | BRP-02 Llama Lake | | | | | BRP-06 Umwelt Lake | |
|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-07-08<br>16:10:00<br>C561669 | 2025-07-13<br>11:00:00<br>C562712 | 2025-08-05<br>16:45:00<br>C568627 | 2025-08-10<br>14:20:00<br>C569351 | Lowest Detection Limit | 2025-08-10<br>14:20:00<br>C569351 |
| Fluoride (F) | mg/L | 0.01 | 0.03 | 0.03 | 0.03 | 0.03 | 0.01 | 0.03 |
| Hardness (CaCO3)-Dissolved | mg/L | 0.5 | 33.5 | 33.3 | 34.2 | 33.1 | 0.5 | 39.8 |
| Hardness (CaCO3)-Total | mg/L | 0.5 | 34.2 | 33.7 | 35.0 | 33.7 | 0.5 | 40.5 |
| Hydroxide (OH) | mg/L | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.5 | <0.5 |
| Methyl methacrylate | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| Methyl-tert-butyl ether (MTBE) | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| Nitrate (as N) | mg/L | 0.003 | 0.070 | 0.089 | 0.014 | 0.005 | 0.003 | 0.021 |
| Nitrate plus Nitrite (N) | mg/L | 0.003 | 0.070 | 0.089 | 0.014 | 0.005 | 0.003 | 0.021 |
| Nitrite (as N) | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | 0.001 | <0.001 |
| Nitrogen (N)-Total | mg/L | 0.02 | 0.32 | 0.33 | 0.26 | 0.26 | 0.02 | 0.39 |
| Organic Carbon (C)-Dissolved | mg/L | 0.2 | 3.2 | 3.7 | 3.9 | 3.6 | 0.2 | 4.8 |
| Organic Carbon (C)-Total | mg/L | 0.2 | 3.2 | 3.9 | 4.1 | 3.6 | 0.2 | 4.6 |
| Redox Potential-Field | mV | - | 226.1 | 141.7 | 279.6 | 71 | - | 81 |
| Silica-Reactive | mg/L | 0.05 | 0.90 | - | 0.27 | 0.24 | 0.05 | 0.16 |
| Styrene | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| Sulphate (SO4)-Dissolved | mg/L | 0.5 | 16.0 | 16.0 | 17.0 | 16.0 | 0.5 | 14.0 |
| Tetrachloroethene | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| Toluene | mg/L | 0.0004 | <0.0004 | <0.0004 | <0.0004 | <0.0004 | - | - |
| Total Dissolved Solids_Calculated | mg/L | 10 | 43 | 43 | 43 | 41 | 10 | 50 |
| Total Dissolved Solids_Measured | mg/L | 10 | 52 | 52 | 56 | 56 | 10 | 44 |
| Total Kjeldahl Nitrogen (Calc)-Total | mg/L | 0.02 | 0.25 | 0.24 | 0.25 | 0.25 | 0.02 | 0.37 |
| Total Oil and Grease | mg/L | 2 | 3 | 5 | 4 | 4 | 2 | 3 |
| Total Suspended Solids | mg/L | 0.99 | <1.00 | 17.00 | <0.99 | <1.00 | 1 | 2 |
| Total Trihalomethanes | mg/L | 0.0013 | <0.0013 | <0.0013 | <0.0013 | <0.0013 | - | - |
| Trichloroethene | mg/L | 0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | - | - |
| Trichlorofluoromethane | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| Turbidity | NTU | 0.1 | 0.1 | 3.7 | 4.0 | 0.1 | 0.1 | 3.8 |
| Un-Ionized Ammonia | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.0005 | <0.0005 |
| Vinyl chloride | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| Xylene, m+p-_Concentration | mg/L | 0.0008 | <0.0008 | <0.0008 | <0.0008 | <0.0008 | - | - |
| Xylene, o-_Concentration | mg/L | 0.0004 | <0.0004 | <0.0004 | <0.0004 | <0.0004 | - | - |
| Xylenes, total | mg/L | 0.00089 | <0.00089 | <0.00089 | <0.00089 | <0.00089 | - | - |
| cis-1,2-dichloroethene | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| cis-1,3-dichloropropene | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| pH | pH Units | - | 6.83 | 6.33 | 6.45 | 6.99 | - | 7.03 |
| pH-Field | pH | - | 7.17 | 7 | 7.28 | 7 | - | 7 |
| trans-1,2-dichloroethene | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| trans-1,3-dichloropropene | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | - |
| Aluminum (Al)-Total | mg/L | 0.003 | 0.030 | 0.031 | 0.011 | 0.011 | 0.003 | 0.087 |

| Station | Unit | BRP-02 Llama Lake | | | | | BRP-06 Umwelt Lake | |
|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-07-08<br>16:10:00<br>C561669 | 2025-07-13<br>11:00:00<br>C562712 | 2025-08-05<br>16:45:00<br>C568627 | 2025-08-10<br>14:20:00<br>C569351 | Lowest Detection Limit | 2025-08-10<br>14:20:00<br>C569351 |
| Antimony (Sb)-Total | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.0005 | <0.0005 |
| Arsenic (As)-Total | mg/L | 0.0001 | 0.0005 | 0.0004 | 0.0004 | 0.0005 | 0.0001 | 0.0009 |
| Barium (Ba)-Total | mg/L | 0.001 | 0.011 | 0.011 | 0.010 | 0.010 | 0.001 | 0.015 |
| Beryllium (Be)-Total | mg/L | 0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | 0.0001 | <0.0001 |
| Bismuth (Bi)-Total | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | 0.001 | <0.001 |
| Boron (B)-Total | mg/L | 0.05 | <0.05 | <0.05 | <0.05 | <0.05 | 0.05 | <0.05 |
| Cadmium (Cd)-Total | mg/L | 0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | 0.00001 | <0.00001 |
| Calcium (Ca)-Total | mg/L | 0.05 | 7.23 | 7.22 | 7.44 | 7.10 | 0.05 | 9.37 |
| Chromium (Cr)-Total | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | 0.001 | <0.001 |
| Cobalt (Co)-Total | mg/L | 0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | 0.0002 | 0.0003 |
| Copper (Cu)-Total | mg/L | 0.0005 | 0.0016 | 0.0015 | 0.0016 | 0.0015 | 0.0005 | 0.0024 |
| Iron (Fe)-Total | mg/L | 0.01 | 0.06 | 0.07 | 0.04 | 0.03 | 0.01 | 0.23 |
| Lead (Pb)-Total | mg/L | 0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | 0.0002 | 0.0003 |
| Lithium (Li)-Total | mg/L | 0.002 | <0.002 | <0.002 | <0.002 | <0.002 | 0.002 | <0.002 |
| Magnesium (Mg)-Total | mg/L | 0.05 | 3.92 | 3.82 | 3.99 | 3.88 | 0.05 | 4.14 |
| Manganese (Mn)-Total | mg/L | 0.001 | 0.006 | 0.005 | 0.004 | 0.003 | 0.001 | 0.006 |
| Mercury (Hg)-Total | mg/L | 0.0000019 | <0.0000019 | <0.0000019 | <0.0000019 | <0.0000019 | - | - |
| Molybdenum (Mo)-Total | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | 0.001 | <0.001 |
| Nickel (Ni)-Total | mg/L | 0.001 | 0.003 | 0.002 | 0.002 | 0.002 | 0.001 | 0.003 |
| Phosphorus (P)-Total | mg/L | 0.001 | 0.001 | 0.002 | 0.002 | 0.002 | 0.001 | 0.005 |
| Potassium (K)-Total | mg/L | 0.05 | 0.70 | 0.72 | 0.77 | 0.72 | 0.05 | 1.03 |
| Selenium (Se)-Total | mg/L | 0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | 0.0001 | <0.0001 |
| Silicon (Si)-Total | mg/L | 0.1 | 0.4 | 0.3 | 0.1 | 0.1 | 0.1 | 0.2 |
| Silver (Ag)-Total | mg/L | 0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | 0.00002 | <0.00002 |
| Sodium (Na)-Total | mg/L | 0.05 | 1.09 | 1.15 | 1.18 | 1.11 | 0.05 | 1.26 |
| Strontium (Sr)-Total | mg/L | 0.001 | 0.027 | 0.030 | 0.029 | 0.030 | 0.001 | 0.040 |
| Sulphur (S)-Total | mg/L | 3 | 5 | 5 | 5 | 5 | 3 | 5 |
| Thallium (Tl)-Total | mg/L | 0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | 0.00001 | <0.00001 |
| Tin (Sn)-Total | mg/L | 0.005 | <0.005 | <0.005 | <0.005 | <0.005 | 0.005 | <0.005 |
| Titanium (Ti)-Total | mg/L | 0.005 | <0.005 | <0.005 | <0.005 | <0.005 | 0.005 | <0.005 |
| Uranium (U)-Total | mg/L | 0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | 0.0001 | <0.0001 |
| Vanadium (V)-Total | mg/L | 0.005 | <0.005 | <0.005 | <0.005 | <0.005 | 0.005 | <0.005 |
| Zinc (Zn)-Total | mg/L | 0.005 | <0.005 | <0.005 | <0.005 | <0.005 | 0.005 | <0.005 |
| Zirconium (Zr)-Total | mg/L | 0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | 0.0001 | 0.0001 |

## Table E-2c Water Quality Data for General Monitoring Stations: Llama Watershed Outflow, 2025

| Station | Unit | BRP-18 Llama Watershed Outflow | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-05-27<br>16:15:00<br>C549556 | 2025-06-21<br>11:00:00<br>C557592 | 2025-07-03<br>14:30:00<br>C560106 | 2025-07-13<br>11:00:00<br>C562712 | 2025-07-27<br>13:40:00<br>C566053 | 2025-07-29<br>09:10:00<br>C566779 | 2025-08-07<br>09:00:00<br>C568801 | 2025-08-10<br>13:50:00<br>C569351 | 2025-09-02<br>09:50:00<br>C575588 | 2025-09-26<br>09:30:00<br>C582399 |
| Aluminum (Al)-Dissolved | mg/L | 0.0001 | - | 0.0430 | 0.0592 | 0.0342 | 0.0224 | 0.0270 | 0.0598 | 0.0351 | 0.0206 | 0.0424 |
| Antimony (Sb)-Dissolved | mg/L | 0.000003 | - | 0.000022 | <0.000500 | <0.000500 | 0.000018 | <0.000500 | <0.000500 | <0.000500 | <0.000500 | 0.000016 |
| Arsenic (As)-Dissolved | mg/L | 0.000005 | - | 0.000264 | 0.000340 | 0.000300 | 0.000260 | 0.000270 | 0.000330 | 0.000310 | 0.000290 | 0.000233 |
| Barium (Ba)-Dissolved | mg/L | 0.000008 | - | 0.017500 | 0.024800 | 0.026200 | 0.021800 | 0.019600 | 0.038200 | 0.021400 | 0.031100 | 0.046300 |
| Beryllium (Be)-Dissolved | mg/L | 0.0000015 | - | 0.0000067 | <0.0001000 | <0.0001000 | 0.0000045 | <0.0001000 | <0.0001000 | <0.0001000 | <0.0001000 | 0.0000111 |
| Bismuth (Bi)-Dissolved | mg/L | 0.000001 | - | <0.000001 | <0.001000 | <0.001000 | <0.000001 | <0.001000 | <0.001000 | <0.001000 | <0.001000 | <0.000001 |
| Boron (B)-Dissolved | mg/L | 0.0001 | - | 0.0032 | <0.0500 | <0.0500 | 0.0034 | <0.0500 | <0.0500 | <0.0500 | <0.0500 | 0.0051 |
| Cadmium (Cd)-Dissolved | mg/L | 0.000003 | - | 0.000025 | 0.000038 | 0.000052 | 0.000030 | 0.000034 | 0.000106 | 0.000041 | 0.000045 | 0.000108 |
| Calcium (Ca)-Dissolved | mg/L | 0.002 | - | 9.830 | 9.480 | 9.920 | 12.800 | 8.660 | 14.500 | 9.090 | 14.700 | 31.200 |
| Chromium (Cr)-Dissolved | mg/L | 0.00002 | - | 0.00030 | <0.00100 | <0.00100 | 0.00021 | <0.00100 | <0.00100 | <0.00100 | <0.00100 | 0.00011 |
| Cobalt (Co)-Dissolved | mg/L | 0.000004 | - | 0.000921 | 0.001860 | 0.000900 | 0.001640 | 0.000450 | 0.003270 | 0.001220 | 0.000740 | 0.006060 |
| Copper (Cu)-Dissolved | mg/L | 0.00002 | - | 0.00267 | 0.00313 | 0.00242 | 0.00228 | 0.00240 | 0.00318 | 0.00262 | 0.00272 | 0.00416 |
| Iron (Fe)-Dissolved | mg/L | 0.001 | - | 0.011 | 0.019 | 0.010 | 0.005 | 0.008 | 0.011 | 0.009 | 0.007 | 0.006 |
| Lead (Pb)-Dissolved | mg/L | 0.000003 | - | 0.000016 | <0.000200 | <0.000200 | 0.000011 | <0.000200 | <0.000200 | <0.000200 | <0.000200 | 0.000037 |
| Lithium (Li)-Dissolved | mg/L | 0.00005 | - | 0.00104 | <0.00200 | <0.00200 | 0.00142 | <0.00200 | 0.00210 | <0.00200 | <0.00200 | 0.00168 |
| Magnesium (Mg)-Dissolved | mg/L | 0.0005 | - | 5.2000 | 5.9900 | 6.0200 | 7.1000 | 5.2700 | 8.7400 | 5.4200 | 8.8800 | 12.6000 |
| Manganese (Mn)-Dissolved | mg/L | 0.000004 | - | 0.025700 | 0.023900 | 0.020300 | 0.034400 | 0.009100 | 0.072600 | 0.024900 | 0.018900 | 0.131000 |
| Mercury (Hg)-Dissolved | mg/L | 0.0000001 | - | 0.0000022 | <0.0000019 | <0.0000019 | 0.0000015 | <0.0000019 | <0.0000019 | <0.0000019 | <0.0000019 | 0.0000005 |
| Molybdenum (Mo)-Dissolved | mg/L | 0.000005 | - | 0.000020 | <0.001000 | <0.001000 | 0.000037 | <0.001000 | <0.001000 | <0.001000 | <0.001000 | 0.000018 |
| Nickel (Ni)-Dissolved | mg/L | 0.000015 | - | 0.007580 | 0.009400 | 0.009300 | 0.010800 | 0.007900 | 0.015600 | 0.009000 | 0.011000 | 0.022800 |
| Nitrate (NO3)-Dissolved | mg/L | 0.044 | 2.100 | 10.000 | 17.000 | 12.000 | 9.600 | 7.000 | 8.100 | 10.000 | 9.200 | 23.000 |
| Nitrite (NO2)-Dissolved | mg/L | 0.0033 | 0.0050 | 0.0050 | 0.0360 | 0.0120 | 0.0160 | <0.0033 | <0.0033 | 0.0130 | <0.0033 | 0.0160 |
| Phosphorus(P)-Dissolved | mg/L | 0.001 | 0.002 | <0.001 | - | - | <0.001 | - | - | - | - | <0.001 |
| Potassium (K)-Dissolved | mg/L | 0.005 | - | 1.390 | 1.920 | 1.470 | 1.550 | 1.110 | 2.150 | 1.330 | 1.700 | 2.820 |
| Selenium (Se)-Dissolved | mg/L | 0.00001 | - | 0.00007 | 0.00013 | <0.00010 | 0.00007 | <0.00010 | 0.00014 | <0.00010 | <0.00010 | 0.00013 |
| Silicon (Si)-Dissolved | mg/L | 0.0012 | - | 0.4660 | 0.6900 | 0.5800 | 0.4760 | 0.4800 | 0.9200 | 0.5100 | 0.6000 | 1.1800 |
| Silver (Ag)-Dissolved | mg/L | 0.000002 | - | 0.000004 | <0.000020 | <0.000020 | 0.000004 | <0.000020 | <0.000020 | <0.000020 | <0.000020 | 0.000003 |
| Sodium (Na)-Dissolved | mg/L | 0.0005 | - | 2.7400 | 3.0500 | 2.6300 | 2.8300 | 2.3400 | 3.8100 | 2.5800 | 3.6100 | 7.2700 |
| Strontium (Sr)-Dissolved | mg/L | 0.000008 | - | 0.052700 | 0.040000 | 0.043000 | 0.055500 | 0.036300 | 0.062400 | 0.039800 | 0.063200 | 0.150000 |
| Sulphur (S)-Dissolved | mg/L | 0.001 | - | 7.510 | 10.600 | 10.400 | 10.600 | 8.600 | 15.000 | 9.100 | 15.200 | 23.400 |
| Thallium (Tl)-Dissolved | mg/L | 0.0000008 | - | 0.0000056 | <0.0000100 | <0.0000100 | 0.0000081 | <0.0000100 | <0.0000100 | <0.0000100 | <0.0000100 | 0.0000132 |
| Tin (Sn)-Dissolved | mg/L | 0.000005 | - | <0.000005 | <0.005000 | <0.005000 | <0.000005 | <0.005000 | <0.005000 | <0.005000 | <0.005000 | <0.000005 |
| Titanium (Ti)-Dissolved | mg/L | 0.00003 | - | 0.00042 | <0.00500 | <0.00500 | <0.00003 | <0.00500 | <0.00500 | <0.00500 | <0.00500 | 0.00004 |
| Uranium (U)-Dissolved | mg/L | 0.0000005 | - | 0.0000137 | <0.0001000 | <0.0001000 | 0.0000091 | <0.0001000 | <0.0001000 | <0.0001000 | <0.0001000 | 0.0000098 |
| Vanadium (V)-Dissolved | mg/L | 0.000005 | - | 0.000034 | <0.005000 | <0.005000 | 0.000023 | <0.005000 | <0.005000 | <0.005000 | <0.005000 | 0.000032 |
| Zinc (Zn)-Dissolved | mg/L | 0.00006 | - | 0.00264 | <0.00500 | 0.00680 | 0.00363 | <0.00500 | 0.00820 | 0.00520 | 0.00850 | 0.00756 |
| Zirconium (Zr)-Dissolved | mg/L | 0.000008 | - | 0.000071 | 0.000110 | <0.000100 | 0.000064 | <0.000100 | 0.000110 | <0.000100 | <0.000100 | 0.000080 |
| Alkalinity (PP as CaCO3) | mg/L | 0.5 | - | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

| Station | Unit | BRP-18<br>Llama Watershed Outflow | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-05-27<br>16:15:00<br>C549556 | 2025-06-21<br>11:00:00<br>C557592 | 2025-07-03<br>14:30:00<br>C560106 | 2025-07-13<br>11:00:00<br>C562712 | 2025-07-27<br>13:40:00<br>C566053 | 2025-07-29<br>09:10:00<br>C566779 | 2025-08-07<br>09:00:00<br>C568801 | 2025-08-10<br>13:50:00<br>C569351 | 2025-09-02<br>09:50:00<br>C575588 | 2025-09-26<br>09:30:00<br>C582399 |
| Alkalinity (Total as CaCO3) | mg/L | 0.5 | - | 4.1 | 3.7 | 4.5 | 4.1 | 3.5 | 3.4 | 2.7 | 5.2 | 4.3 |
| Ammonia (N)-Total | mg/L | 0.005 | 0.150 | 0.140 | 1.300 | 0.088 | 0.230 | <0.005 | 0.050 | 0.180 | 0.005 | 0.270 |
| Bicarbonate (HCO3) | mg/L | 0.5 | - | 5.0 | 4.5 | 5.5 | 5.0 | 4.2 | 4.2 | 3.3 | 6.3 | 5.2 |
| Carbonate (CO3) | mg/L | 0.5 | - | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloride (Cl)-Dissolved | mg/L | 0.5 | - | 9.9 | 7.2 | 8.1 | 16.0 | 9.8 | 9.6 | 11.0 | 19.0 | 42.0 |
| Conductivity | µS/cm | 1 | - | 130 | 149 | 128 | 160 | 116 | 123 | 139 | 196 | 350 |
| Cyanide (CN)-Free | mg/L | 0.0005 | <0.0005 | 0.0010 | 0.0018 | 0.0016 | 0.0017 | 0.0007 | 0.0007 | 0.0011 | 0.0005 | 0.0011 |
| Cyanide (CN)-Strong Acid Dissoc. | mg/L | 0.0005 | 0.0007 | 0.0025 | 0.0049 | 0.0033 | 0.0028 | 0.0011 | 0.0011 | 0.0018 | 0.0007 | 0.0017 |
| Cyanide (CN)-Weak Acid Dissoc. | mg/L | 0.0005 | 0.0006 | 0.0010 | 0.0032 | 0.0022 | 0.0021 | 0.0007 | 0.0009 | 0.0014 | <0.0005 | 0.0014 |
| Field Temperature | deg. C | - | - | 5.6 | 9.3 | 9.3 | 8.6 | 8.9 | 10.4 | 13 | 8.3 | 6.4 |
| Fluoride (F) | mg/L | 0.01 | 0.02 | 0.03 | 0.02 | 0.03 | 0.02 | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 |
| Hardness (CaCO3)-Dissolved | mg/L | 0.5 | - | 45.9 | 48.3 | 49.5 | 61.2 | 43.3 | 72.2 | 45.0 | 73.4 | 130.0 |
| Hardness (CaCO3)-Total | mg/L | 0.5 | - | 42.0 | 55.9 | 49.0 | 63.2 | 45.5 | 45.9 | 50.1 | 73.4 | 137.0 |
| Hydroxide (OH) | mg/L | 0.5 | - | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Nitrate (as N) | mg/L | 0.01 | 0.47 | 2.30 | 3.70 | 2.60 | 2.20 | 1.60 | 1.80 | 2.30 | 2.10 | 5.10 |
| Nitrate plus Nitrite (N) | mg/L | 0.01 | 0.47 | 2.30 | 3.70 | 2.60 | 2.20 | 1.60 | 1.80 | 2.30 | 2.10 | 5.10 |
| Nitrite (as N) | mg/L | 0.001 | 0.002 | 0.002 | 0.011 | 0.004 | 0.005 | <0.001 | <0.001 | 0.004 | <0.001 | 0.005 |
| Nitrogen (N)-Total | mg/L | 0.02 | 0.90 | 2.20 | 5.50 | 2.70 | 2.20 | 1.70 | 2.00 | 2.40 | 2.20 | 5.10 |
| Organic Carbon (C)-Dissolved | mg/L | 0.2 | 4.7 | 3.4 | 3.5 | 3.1 | 3.1 | 3.5 | 3.3 | 3.2 | 4.1 | 3.7 |
| Organic Carbon (C)-Total | mg/L | 0.2 | 5.0 | 3.3 | 3.7 | 3.7 | 3.6 | 3.2 | 3.2 | 3.3 | 4.1 | 3.7 |
| Redox Potential-Field | mV | - | - | - | 256.4 | 191.2 | - | 311 | 340.5 | 101 | 308.2 | - |
| Silica-Reactive | mg/L | 0.05 | - | 1.20 | 1.60 | - | 1.70 | - | 1.30 | 1.40 | 1.40 | 2.80 |
| Sulphate (SO4)-Dissolved | mg/L | 0.5 | - | 26.0 | 38.0 | 32.0 | 36.0 | 28.0 | 29.0 | 32.0 | 48.0 | 67.0 |
| Total Dissolved Solids_Calculated | mg/L | 10 | - | 69 | 88 | 75 | 90 | 64 | 79 | 74 | 110 | 190 |
| Total Dissolved Solids_Measured | mg/L | 10 | 40 | 68 | 100 | 84 | 140 | 76 | 100 | 76 | 120 | 220 |
| Total Kjeldahl Nitrogen (Calc)-Total | mg/L | 0.02 | 0.43 | <0.20 | 1.80 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.40 |
| Total Suspended Solids | mg/L | 0.99 | 1.70 | 2.60 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 | 1.20 |
| Turbidity | NTU | 0.1 | 4.3 | <0.1 | 0.1 | <0.1 | 0.2 | <0.1 | <0.1 | <0.1 | <0.1 | 0.3 |
| Un-Ionized Ammonia | mg/L | 0.0005 | - | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| pH | pH Units | - | - | 5.95 | 6.37 | 6.16 | 6.27 | 6.07 | 6.31 | 6.29 | 6.53 | 6.03 |
| pH-Field | pH | - | - | 6.09 | 5.85 | 5.6 | 6.92 | 5.71 | 5.94 | 5.8 | 5.96 | 5.37 |
| Aluminum (Al)-Total | mg/L | 0.0001 | - | 0.0394 | 0.0833 | 0.0389 | 0.0309 | 0.0284 | 0.0311 | 0.0541 | 0.0200 | 0.0535 |
| Antimony (Sb)-Total | mg/L | 0.0005 | - | - | <0.0005 | <0.0005 | - | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - |
| Arsenic (As)-Total | mg/L | 0.0001 | - | - | 0.0004 | 0.0003 | - | 0.0003 | 0.0003 | 0.0004 | 0.0003 | - |
| Barium (Ba)-Total | mg/L | 0.001 | - | - | 0.029 | 0.027 | - | 0.020 | 0.021 | 0.026 | 0.031 | - |
| Beryllium (Be)-Total | mg/L | 0.0001 | - | - | <0.0001 | <0.0001 | - | <0.0001 | <0.0001 | <0.0001 | <0.0001 | - |
| Bismuth (Bi)-Total | mg/L | 0.000001 | - | <0.000001 | <0.001000 | <0.001000 | <0.000001 | <0.001000 | <0.001000 | <0.001000 | <0.001000 | <0.000001 |
| Boron (B)-Total | mg/L | 0.0001 | - | 0.0028 | <0.0500 | <0.0500 | 0.0037 | <0.0500 | <0.0500 | <0.0500 | <0.0500 | 0.0052 |
| Cadmium (Cd)-Total | mg/L | 0.00001 | - | - | 0.00007 | 0.00005 | - | 0.00004 | 0.00004 | 0.00006 | 0.00004 | - |

| Station | Unit | BRP-18<br>Llama Watershed Outflow | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-05-27<br>16:15:00<br>C549556 | 2025-06-21<br>11:00:00<br>C557592 | 2025-07-03<br>14:30:00<br>C560106 | 2025-07-13<br>11:00:00<br>C562712 | 2025-07-27<br>13:40:00<br>C566053 | 2025-07-29<br>09:10:00<br>C566779 | 2025-08-07<br>09:00:00<br>C568801 | 2025-08-10<br>13:50:00<br>C569351 | 2025-09-02<br>09:50:00<br>C575588 | 2025-09-26<br>09:30:00<br>C582399 |
| Calcium (Ca)-Total | mg/L | 0.002 | - | 9.360 | 11.300 | 9.930 | 13.300 | 9.040 | 9.230 | 9.890 | 14.700 | 33.100 |
| Chromium (Cr)-Total | mg/L | 0.001 | - | - | <0.001 | <0.001 | - | <0.001 | <0.001 | <0.001 | <0.001 | - |
| Cobalt (Co)-Total | mg/L | 0.0002 | - | - | 0.0022 | 0.0010 | - | 0.0005 | 0.0008 | 0.0018 | 0.0007 | - |
| Copper (Cu)-Total | mg/L | 0.0005 | - | - | 0.0035 | 0.0028 | - | 0.0026 | 0.0027 | 0.0032 | 0.0029 | - |
| Iron (Fe)-Total | mg/L | 0.001 | - | 0.016 | 0.045 | 0.016 | 0.012 | <0.010 | 0.015 | 0.033 | <0.010 | 0.012 |
| Lead (Pb)-Total | mg/L | 0.0002 | - | - | <0.0002 | <0.0002 | - | <0.0002 | <0.0002 | <0.0002 | <0.0002 | - |
| Lithium (Li)-Total | mg/L | 0.00005 | - | 0.00112 | <0.00200 | <0.00200 | 0.00141 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | 0.00170 |
| Magnesium (Mg)-Total | mg/L | 0.0005 | - | 4.5300 | 6.7400 | 5.8700 | 7.3000 | 5.5600 | 5.5500 | 6.1600 | 8.9000 | 13.1000 |
| Manganese (Mn)-Total | mg/L | 0.000004 | - | 0.013800 | 0.029000 | 0.020300 | 0.035300 | 0.009700 | 0.017700 | 0.037000 | 0.017300 | 0.135000 |
| Mercury (Hg)-Total | mg/L | 0.0000001 | - | 0.0000030 | 0.0000022 | 0.0000022 | 0.0000018 | <0.0000019 | <0.0000019 | <0.0000019 | <0.0000019 | 0.0000016 |
| Molybdenum (Mo)-Total | mg/L | 0.001 | - | - | <0.001 | <0.001 | - | <0.001 | <0.001 | <0.001 | <0.001 | - |
| Nickel (Ni)-Total | mg/L | 0.001 | - | - | 0.011 | 0.010 | - | 0.009 | 0.009 | 0.012 | 0.012 | - |
| Phosphorus (P)-Total | mg/L | 0.001 | 0.007 | <0.001 | 0.002 | <0.001 | <0.001 | 0.006 | 0.001 | 0.001 | <0.001 | 0.001 |
| Potassium (K)-Total | mg/L | 0.005 | - | 1.180 | 2.270 | 1.460 | 1.570 | 1.190 | 1.220 | 1.540 | 1.680 | 2.870 |
| Selenium (Se)-Total | mg/L | 0.0001 | - | - | 0.0002 | <0.0001 | - | <0.0001 | <0.0001 | <0.0001 | <0.0001 | - |
| Silicon (Si)-Total | mg/L | 0.0012 | - | 0.4690 | 0.8500 | 0.5800 | 0.5070 | 0.5100 | 0.5200 | 0.6400 | 0.5900 | 1.2100 |
| Silver (Ag)-Total | mg/L | 0.00002 | - | - | <0.00002 | <0.00002 | - | <0.00002 | <0.00002 | <0.00002 | <0.00002 | - |
| Sodium (Na)-Total | mg/L | 0.0005 | - | 2.3300 | 3.7000 | 2.7000 | 2.8600 | 2.4600 | 2.4900 | 2.9100 | 3.7300 | 7.5300 |
| Strontium (Sr)-Total | mg/L | 0.000008 | - | 0.045900 | 0.045100 | 0.043200 | 0.057100 | 0.036300 | 0.039100 | 0.046600 | 0.059800 | 0.152000 |
| Sulphur (S)-Total | mg/L | 0.001 | - | 9.150 | 13.200 | 10.200 | 11.100 | 9.300 | 9.500 | 10.700 | 14.500 | 24.000 |
| Thallium (Tl)-Total | mg/L | 0.00001 | - | - | 0.00001 | <0.00001 | - | <0.00001 | <0.00001 | <0.00001 | <0.00001 | - |
| Tin (Sn)-Total | mg/L | 0.005 | - | - | <0.005 | <0.005 | - | <0.005 | <0.005 | <0.005 | <0.005 | - |
| Titanium (Ti)-Total | mg/L | 0.00003 | - | 0.00023 | <0.00500 | <0.00500 | 0.00050 | <0.00500 | <0.00500 | <0.00500 | <0.00500 | 0.00010 |
| Uranium (U)-Total | mg/L | 0.0001 | - | - | <0.0001 | <0.0001 | - | <0.0001 | <0.0001 | <0.0001 | <0.0001 | - |
| Vanadium (V)-Total | mg/L | 0.005 | - | - | <0.005 | <0.005 | - | <0.005 | <0.005 | <0.005 | <0.005 | - |
| Zinc (Zn)-Total | mg/L | 0.005 | - | - | <0.005 | <0.005 | - | 0.006 | <0.005 | 0.005 | <0.005 | - |
| Zirconium (Zr)-Total | mg/L | 0.000008 | - | 0.000096 | 0.000110 | <0.000100 | 0.000055 | <0.000100 | <0.000100 | <0.000100 | <0.000100 | 0.000086 |

## Table E-2d Water Quality Data for General Monitoring Stations: Echo Outflow, 2025

| Station | Unit | BRP-19 Echo Outflow | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-05-19<br>14:45:00<br>C546599 | 2025-05-27<br>13:15:00<br>C549556 | 2025-06-11<br>15:30:00<br>C554374 | 2025-06-21<br>10:00:00<br>C557592 | 2025-07-03<br>15:00:00<br>C560106 | 2025-07-27<br>15:15:00<br>C566053 | 2025-09-26<br>11:00:00<br>C582399 |
| Aluminum (Al)-Dissolved | mg/L | 0.0001 | 0.1750 | - | 0.1900 | 0.0970 | 0.1570 | 0.0553 | 0.0595 |
| Antimony (Sb)-Dissolved | mg/L | 0.000003 | <0.000500 | - | <0.000500 | 0.000043 | <0.000500 | 0.000052 | 0.000032 |
| Arsenic (As)-Dissolved | mg/L | 0.000005 | 0.002430 | - | 0.002510 | 0.001070 | 0.002770 | 0.001310 | 0.001630 |
| Barium (Ba)-Dissolved | mg/L | 0.000008 | 0.004600 | - | 0.014900 | 0.025800 | 0.014400 | 0.029900 | 0.022600 |
| Beryllium (Be)-Dissolved | mg/L | 0.0000015 | <0.0001000 | - | <0.0001000 | 0.0000118 | <0.0001000 | 0.0000048 | 0.0000077 |
| Bismuth (Bi)-Dissolved | mg/L | 0.000001 | <0.001000 | - | <0.001000 | 0.000001 | <0.001000 | <0.000001 | <0.000001 |
| Boron (B)-Dissolved | mg/L | 0.0001 | <0.0500 | - | <0.0500 | 0.0060 | <0.0500 | 0.0065 | 0.0045 |
| Cadmium (Cd)-Dissolved | mg/L | 0.000003 | 0.000022 | - | 0.000028 | 0.000025 | <0.000010 | 0.000015 | 0.000017 |
| Calcium (Ca)-Dissolved | mg/L | 0.002 | 2.660 | - | - | 15.100 | 5.590 | 19.000 | 15.500 |
| Chromium (Cr)-Dissolved | mg/L | 0.00002 | <0.00100 | - | <0.00100 | 0.00046 | <0.00100 | 0.00041 | 0.00054 |
| Cobalt (Co)-Dissolved | mg/L | 0.000004 | 0.003430 | - | 0.000830 | 0.002470 | 0.002420 | 0.002940 | 0.001650 |
| Copper (Cu)-Dissolved | mg/L | 0.00002 | 0.00194 | - | 0.00467 | 0.00552 | 0.00397 | 0.00448 | 0.00504 |
| Iron (Fe)-Dissolved | mg/L | 0.001 | 0.367 | - | 0.989 | 0.191 | 1.470 | 0.411 | 0.314 |
| Lead (Pb)-Dissolved | mg/L | 0.000003 | <0.000200 | - | <0.000200 | 0.000037 | <0.000200 | 0.000036 | 0.000035 |
| Lithium (Li)-Dissolved | mg/L | 0.00005 | 0.00390 | - | 0.00230 | 0.00312 | 0.00220 | 0.00327 | 0.00270 |
| Magnesium (Mg)-Dissolved | mg/L | 0.0005 | 1.5400 | - | - | 10.4000 | 3.6100 | 15.5000 | 11.3000 |
| Manganese (Mn)-Dissolved | mg/L | 0.000004 | 0.077800 | - | 0.009300 | 0.064000 | 0.031200 | 0.043700 | 0.026200 |
| Mercury (Hg)-Dissolved | mg/L | 0.0000001 | 0.0000033 | - | 0.0000093 | 0.0000045 | 0.0000089 | 0.0000031 | 0.0000003 |
| Molybdenum (Mo)-Dissolved | mg/L | 0.000005 | <0.001000 | - | <0.001000 | 0.000250 | <0.001000 | 0.000313 | 0.000182 |
| Nickel (Ni)-Dissolved | mg/L | 0.000015 | 0.006700 | - | 0.009700 | 0.021700 | 0.010000 | 0.020100 | 0.022700 |
| Nitrate (NO3)-Dissolved | mg/L | 0.013 | 1.100 | 65.000 | 1.400 | 30.000 | 0.053 | 14.000 | 21.000 |
| Nitrite (NO2)-Dissolved | mg/L | 0.0033 | 0.0040 | 0.1500 | <0.0033 | 0.2400 | <0.0033 | 0.0370 | 0.0380 |
| Phosphorus(P)-Dissolved | mg/L | 0.001 | - | 0.003 | - | 0.002 | - | 0.002 | 0.003 |
| Potassium (K)-Dissolved | mg/L | 0.005 | 2.560 | - | - | 3.510 | 1.150 | 5.000 | 3.430 |
| Selenium (Se)-Dissolved | mg/L | 0.00001 | <0.00010 | - | <0.00010 | 0.00018 | <0.00010 | 0.00021 | 0.00012 |
| Silicon (Si)-Dissolved | mg/L | 0.0012 | 1.1300 | - | 2.0700 | 0.9850 | 1.4900 | 0.2600 | 3.6200 |
| Silver (Ag)-Dissolved | mg/L | 0.000002 | <0.000020 | - | <0.000020 | <0.000002 | <0.000020 | <0.000002 | 0.000003 |
| Sodium (Na)-Dissolved | mg/L | 0.0005 | 0.9150 | - | - | 2.8000 | 1.8000 | 4.7800 | 3.3300 |
| Strontium (Sr)-Dissolved | mg/L | 0.000008 | 0.012300 | - | 0.022300 | 0.068600 | 0.023800 | 0.076700 | 0.058800 |
| Sulphur (S)-Dissolved | mg/L | 0.001 | <3.000 | - | - | 12.400 | 6.200 | 24.300 | 18.400 |
| Thallium (Tl)-Dissolved | mg/L | 0.0000008 | <0.0000100 | - | 0.0000110 | 0.0000151 | <0.0000100 | 0.0000096 | 0.0000087 |
| Tin (Sn)-Dissolved | mg/L | 0.000005 | <0.005000 | - | <0.005000 | 0.000006 | <0.005000 | <0.000005 | <0.000005 |
| Titanium (Ti)-Dissolved | mg/L | 0.00003 | <0.00500 | - | <0.00500 | 0.00064 | <0.00500 | 0.00048 | 0.00042 |
| Uranium (U)-Dissolved | mg/L | 0.0000005 | 0.0001100 | - | <0.0001000 | 0.0000666 | <0.0001000 | 0.0000401 | 0.0000541 |
| Vanadium (V)-Dissolved | mg/L | 0.000005 | <0.005000 | - | <0.005000 | 0.000171 | <0.005000 | 0.000289 | 0.000203 |
| Zinc (Zn)-Dissolved | mg/L | 0.00006 | <0.00500 | - | <0.00500 | 0.00168 | <0.00500 | 0.00129 | 0.00157 |
| Zirconium (Zr)-Dissolved | mg/L | 0.000008 | 0.000540 | - | 0.000510 | 0.000407 | 0.000500 | 0.000334 | 0.000520 |
| Alkalinity (PP as CaCO3) | mg/L | 0.5 | <0.5 | - | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

| Station | Unit | BRP-19<br>Echo Outflow | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Date**<br>**Time**<br>**Lab Job Number**<br>**Parameter** | | **Lowest Detection Limit** | **2025-05-19**<br>**14:45:00**<br>**C546599** | **2025-05-27**<br>**13:15:00**<br>**C549556** | **2025-06-11**<br>**15:30:00**<br>**C554374** | **2025-06-21**<br>**10:00:00**<br>**C557592** | **2025-07-03**<br>**15:00:00**<br>**C560106** | **2025-07-27**<br>**15:15:00**<br>**C566053** | **2025-09-26**<br>**11:00:00**<br>**C582399** |
| Alkalinity (Total as CaCO3) | mg/L | 0.5 | 5.0 | - | 7.3 | 12.5 | 8.7 | 35.2 | 20.5 |
| Ammonia (N)-Total | mg/L | 0.005 | 0.140 | 8.600 | 0.063 | 4.800 | 0.016 | 1.800 | 1.100 |
| Bicarbonate (HCO3) | mg/L | 0.5 | 6.1 | - | 8.9 | 15.3 | 10.6 | 42.9 | 25.0 |
| Carbonate (CO3) | mg/L | 0.5 | <0.5 | - | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloride (Cl)-Dissolved | mg/L | 0.5 | 2.0 | - | 2.7 | 20.0 | 2.5 | 13.0 | 5.6 |
| Conductivity | µS/cm | 1 | 46 | - | 68 | 250 | 77 | 280 | 230 |
| Cyanide (CN)-Free | mg/L | 0.0005 | 0.0006 | 0.0021 | 0.0016 | 0.0010 | 0.0008 | 0.0010 | 0.0007 |
| Cyanide (CN)-Strong Acid Dissoc. | mg/L | 0.0005 | 0.0019 | 0.0071 | 0.0037 | 0.0023 | 0.0016 | 0.0016 | 0.0015 |
| Cyanide (CN)-Weak Acid Dissoc. | mg/L | 0.0005 | 0.0005 | 0.0050 | 0.0017 | 0.0012 | 0.0010 | 0.0011 | 0.0008 |
| Field Temperature | deg. C | - | 0.7 | - | 16.3 | 3.5 | 17.9 | 9 | 5.1 |
| Fluoride (F) | mg/L | 0.01 | 0.03 | 0.04 | 0.02 | 0.05 | 0.03 | 0.05 | 0.03 |
| Hardness (CaCO3)-Dissolved | mg/L | 0.5 | 13.0 | - | - | 80.5 | 28.8 | 111.0 | 84.9 |
| Hardness (CaCO3)-Total | mg/L | 0.5 | 83.9 | - | 27.3 | 78.3 | 33.9 | 107.0 | 86.8 |
| Hydroxide (OH) | mg/L | 0.5 | <0.5 | - | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Nitrate (as N) | mg/L | 0.003 | 0.240 | 15.000 | 0.320 | 6.700 | 0.012 | 3.100 | 4.800 |
| Nitrate plus Nitrite (N) | mg/L | 0.003 | 0.240 | 15.000 | 0.320 | 6.800 | 0.012 | 3.100 | 4.800 |
| Nitrite (as N) | mg/L | 0.001 | 0.001 | 0.046 | <0.001 | 0.073 | <0.001 | 0.011 | 0.012 |
| Nitrogen (N)-Total | mg/L | 0.2 | 0.4 | 23.0 | 0.9 | 12.0 | 0.5 | 5.8 | 6.6 |
| Organic Carbon (C)-Dissolved | mg/L | 0.2 | 11.0 | 10.0 | 14.0 | 10.0 | 12.0 | 12.0 | 11.0 |
| Organic Carbon (C)-Total | mg/L | 0.2 | 11.0 | 10.0 | 14.0 | 11.0 | 13.0 | 13.0 | 11.0 |
| Redox Potential-Field | mV | - | 155.7 | - | 117 | - | 32.3 | - | - |
| Silica-Reactive | mg/L | 0.05 | - | - | - | 2.40 | 3.60 | 0.68 | 8.70 |
| Sulphate (SO4)-Dissolved | mg/L | 0.5 | 4.8 | - | 13.0 | 45.0 | 20.0 | 75.0 | 58.0 |
| Total Dissolved Solids_Calculated | mg/L | 10 | - | - | - | 140 | 45 | 170 | 140 |
| Total Dissolved Solids_Measured | mg/L | 10 | - | 110 | 92 | 140 | 80 | 180 | 150 |
| Total Kjeldahl Nitrogen (Calc)-Total | mg/L | 0.2 | <0.2 | 8.5 | 0.6 | 5.0 | 0.5 | 2.7 | 1.7 |
| Total Suspended Solids | mg/L | 0.99 | 730.00 | 11.00 | 12.00 | 1.10 | <1.00 | 8.50 | 1.60 |
| Turbidity | NTU | 0.1 | 430.0 | 26.0 | 4.3 | 4.0 | 1.8 | 1.9 | 3.5 |
| Un-Ionized Ammonia | mg/L | 0.0005 | <0.0005 | - | <0.0005 | 0.0014 | <0.0005 | 0.0030 | 0.0007 |
| pH | pH Units | - | 6.31 | - | 6.43 | 6.26 | 6.6 | 6.74 | 6.49 |
| pH-Field | pH | - | 6.01 | - | 6.57 | 6.43 | 6.5 | 6.99 | 6.7 |
| Aluminum (Al)-Total | mg/L | 0.0001 | 19.4000 | - | 0.4370 | 0.1320 | 0.2040 | 0.2920 | 0.1390 |
| Antimony (Sb)-Total | mg/L | 0.00002 | <0.00050 | - | <0.00050 | - | <0.00050 | 0.00006 | 0.00004 |
| Arsenic (As)-Total | mg/L | 0.00002 | 0.03520 | - | 0.00319 | - | 0.00336 | 0.00191 | 0.00204 |
| Barium (Ba)-Total | mg/L | 0.00005 | 0.05650 | - | 0.01500 | - | 0.01610 | 0.03160 | 0.02100 |
| Beryllium (Be)-Total | mg/L | 0.00001 | 0.00057 | - | <0.00010 | - | <0.00010 | 0.00001 | <0.00001 |
| Bismuth (Bi)-Total | mg/L | 0.000001 | <0.001000 | - | <0.001000 | 0.000003 | <0.001000 | <0.000010 | <0.000010 |
| Boron (B)-Total | mg/L | 0.0001 | <0.0500 | - | <0.0500 | 0.0057 | <0.0500 | <0.0100 | <0.0100 |
| Cadmium (Cd)-Total | mg/L | 0.000005 | 0.000125 | - | 0.000022 | - | 0.000022 | 0.000030 | 0.000018 |

| Station | Unit | BRP-19<br>Echo Outflow | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-05-19<br>14:45:00<br>C546599 | 2025-05-27<br>13:15:00<br>C549556 | 2025-06-11<br>15:30:00<br>C554374 | 2025-06-21<br>10:00:00<br>C557592 | 2025-07-03<br>15:00:00<br>C560106 | 2025-07-27<br>15:15:00<br>C566053 | 2025-09-26<br>11:00:00<br>C582399 |
| Calcium (Ca)-Total | mg/L | 0.002 | 4.970 | - | 4.960 | 15.400 | 6.510 | 18.500 | 14.800 |
| Chromium (Cr)-Total | mg/L | 0.0001 | 0.0519 | - | 0.0014 | - | 0.0012 | 0.0010 | 0.0009 |
| Cobalt (Co)-Total | mg/L | 0.00001 | 0.01770 | - | 0.00350 | - | 0.00265 | 0.00328 | 0.00205 |
| Copper (Cu)-Total | mg/L | 0.0001 | 0.0316 | - | 0.0060 | - | 0.0049 | 0.0060 | 0.0053 |
| Iron (Fe)-Total | mg/L | 0.001 | 31.400 | - | 1.910 | 0.405 | 1.800 | 1.110 | 0.674 |
| Lead (Pb)-Total | mg/L | 0.00002 | 0.01080 | - | 0.00023 | - | <0.00020 | 0.00015 | 0.00010 |
| Lithium (Li)-Total | mg/L | 0.00005 | 0.04950 | - | 0.00270 | 0.00317 | 0.00290 | 0.00330 | 0.00316 |
| Magnesium (Mg)-Total | mg/L | 0.0005 | 17.4000 | - | 3.6300 | 9.6700 | 4.2900 | 14.7000 | 12.1000 |
| Manganese (Mn)-Total | mg/L | 0.000004 | 0.354000 | - | 0.047300 | 0.095600 | 0.035600 | 0.048000 | 0.029500 |
| Mercury (Hg)-Total | mg/L | 0.0000001 | 0.0000210 | - | 0.0000100 | 0.0000039 | 0.0000102 | 0.0000070 | 0.0000044 |
| Molybdenum (Mo)-Total | mg/L | 0.00005 | <0.00100 | - | <0.00100 | - | <0.00100 | 0.00036 | 0.00021 |
| Nickel (Ni)-Total | mg/L | 0.0001 | 0.0645 | - | 0.0115 | - | 0.0113 | 0.0219 | 0.0217 |
| Phosphorus (P)-Total | mg/L | 0.001 | 0.460 | 0.025 | 0.018 | 0.004 | 0.010 | 0.023 | 0.016 |
| Potassium (K)-Total | mg/L | 0.005 | 4.740 | - | 1.450 | 3.550 | 1.280 | 4.940 | 3.240 |
| Selenium (Se)-Total | mg/L | 0.00004 | 0.00018 | - | 0.00013 | - | 0.00013 | 0.00023 | 0.00013 |
| Silicon (Si)-Total | mg/L | 0.0012 | 23.4000 | - | 2.1300 | 1.0300 | 1.8100 | 0.4780 | 4.0000 |
| Silver (Ag)-Total | mg/L | 0.00001 | 0.00013 | - | <0.00002 | - | <0.00002 | <0.00001 | <0.00001 |
| Sodium (Na)-Total | mg/L | 0.0005 | 1.4700 | - | 1.7400 | 2.8000 | 2.0900 | 4.6300 | 3.5200 |
| Strontium (Sr)-Total | mg/L | 0.000008 | 0.021700 | - | 0.020500 | 0.070300 | 0.025600 | 0.077500 | 0.054000 |
| Sulphur (S)-Total | mg/L | 0.001 | <3.000 | - | <3.000 | 16.200 | 7.300 | 24.800 | 18.500 |
| Thallium (Tl)-Total | mg/L | 0.000002 | 0.000095 | - | <0.000010 | - | <0.000010 | 0.000007 | 0.000009 |
| Tin (Sn)-Total | mg/L | 0.0002 | <0.0050 | - | <0.0050 | - | <0.0050 | <0.0002 | <0.0002 |
| Titanium (Ti)-Total | mg/L | 0.00003 | 0.19400 | - | 0.00600 | 0.00138 | <0.00500 | 0.00430 | <0.00200 |
| Uranium (U)-Total | mg/L | 0.000005 | 0.001030 | - | <0.000100 | - | <0.000100 | 0.000075 | 0.000066 |
| Vanadium (V)-Total | mg/L | 0.0002 | 0.0299 | - | <0.0050 | - | <0.0050 | 0.0009 | 0.0005 |
| Zinc (Zn)-Total | mg/L | 0.001 | 0.055 | - | <0.005 | - | <0.005 | 0.002 | 0.002 |
| Zirconium (Zr)-Total | mg/L | 0.000008 | 0.001780 | - | 0.000520 | 0.000417 | 0.000480 | 0.000290 | 0.000480 |

## Table E-2e Water Quality Data for General Monitoring Stations: Gander Pond Outflow, 2025

| Station | Unit | BRP-23 Gander Pond Outflow | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-05-21<br>14:30:00<br>C548084 | 2025-05-27<br>10:00:00<br>C549556 | 2025-06-21<br>07:50:00<br>C557592 | 2025-07-03<br>15:40:00<br>C560106 | 2025-07-28<br>10:22:00<br>C566435 | 2025-08-07<br>10:30:00<br>C568801 | 2025-09-26<br>14:15:00<br>C582399 | 2025-10-07<br>05:30:00<br>C585071 |
| Aluminum (Al)-Dissolved | mg/L | 0.0001 | 0.1000 | - | 0.0135 | 0.0234 | 0.0074 | 0.0107 | 0.0210 | 0.0228 |
| Antimony (Sb)-Dissolved | mg/L | 0.000003 | <0.000500 | - | 0.000007 | <0.000500 | <0.000003 | <0.000500 | 0.000005 | <0.000500 |
| Arsenic (As)-Dissolved | mg/L | 0.000005 | 0.001610 | - | 0.000216 | 0.000290 | 0.000298 | 0.000420 | 0.000303 | 0.000310 |
| Barium (Ba)-Dissolved | mg/L | 0.000008 | 0.017500 | - | 0.005810 | 0.009800 | 0.006430 | 0.012300 | 0.018300 | 0.014000 |
| Beryllium (Be)-Dissolved | mg/L | 0.0000015 | <0.0001000 | - | 0.0000019 | <0.0001000 | <0.0000015 | <0.0001000 | 0.0000040 | <0.0001000 |
| Bismuth (Bi)-Dissolved | mg/L | 0.000001 | <0.001000 | - | <0.000001 | <0.001000 | <0.000001 | <0.001000 | <0.000001 | <0.001000 |
| Boron (B)-Dissolved | mg/L | 0.0001 | <0.0500 | - | 0.0018 | <0.0500 | 0.0014 | <0.0500 | 0.0020 | <0.0500 |
| Cadmium (Cd)-Dissolved | mg/L | 0.000003 | 0.000042 | - | 0.000004 | <0.000010 | <0.000003 | <0.000010 | 0.000012 | 0.000014 |
| Calcium (Ca)-Dissolved | mg/L | 0.002 | 8.390 | - | 3.370 | 3.730 | 3.770 | 6.450 | 8.750 | 7.930 |
| Chromium (Cr)-Dissolved | mg/L | 0.00002 | <0.00100 | - | 0.00008 | <0.00100 | 0.00009 | <0.00100 | 0.00012 | <0.00100 |
| Cobalt (Co)-Dissolved | mg/L | 0.000004 | 0.002420 | - | 0.000120 | <0.000200 | 0.000299 | 0.000630 | 0.001590 | 0.001700 |
| Copper (Cu)-Dissolved | mg/L | 0.00002 | 0.00142 | - | 0.00110 | 0.00140 | 0.00123 | 0.00128 | 0.00110 | 0.00131 |
| Iron (Fe)-Dissolved | mg/L | 0.001 | 0.108 | - | 0.031 | 0.066 | 0.105 | 0.225 | 0.121 | 0.141 |
| Lead (Pb)-Dissolved | mg/L | 0.000003 | <0.000200 | - | 0.000004 | <0.000200 | 0.000007 | <0.000200 | 0.000007 | <0.000200 |
| Lithium (Li)-Dissolved | mg/L | 0.00005 | <0.00200 | - | 0.00061 | <0.00200 | 0.00079 | <0.00200 | 0.00088 | <0.00200 |
| Magnesium (Mg)-Dissolved | mg/L | 0.0005 | 2.6700 | - | 2.4100 | 2.2300 | 2.6800 | 3.1900 | 4.1700 | 4.6000 |
| Manganese (Mn)-Dissolved | mg/L | 0.000004 | 0.157000 | - | 0.002440 | 0.003000 | 0.010300 | 0.019100 | 0.034900 | 0.036700 |
| Mercury (Hg)-Dissolved | mg/L | 0.0000001 | <0.0000019 | - | 0.0000017 | <0.0000019 | 0.0000013 | <0.0000019 | <0.0000001 | <0.0000019 |
| Molybdenum (Mo)-Dissolved | mg/L | 0.000005 | <0.001000 | - | 0.000007 | <0.001000 | 0.000008 | <0.001000 | 0.000009 | <0.001000 |
| Nickel (Ni)-Dissolved | mg/L | 0.000015 | 0.006000 | - | 0.002810 | 0.003200 | 0.002680 | 0.003500 | 0.005210 | 0.005300 |
| Nitrate (NO3)-Dissolved | mg/L | 0.013 | 2.200 | 0.880 | 0.640 | 1.400 | 0.280 | 0.670 | 1.900 | 1.900 |
| Nitrite (NO2)-Dissolved | mg/L | 0.0033 | 0.0040 | <0.0033 | <0.0033 | <0.0033 | <0.0033 | <0.0033 | <0.0033 | <0.0033 |
| Phosphorus(P)-Dissolved | mg/L | 0.001 | - | 0.002 | <0.001 | - | <0.001 | - | 0.001 | - |
| Potassium (K)-Dissolved | mg/L | 0.005 | 1.530 | - | 0.345 | 0.392 | 0.368 | 0.487 | 0.613 | 0.602 |
| Selenium (Se)-Dissolved | mg/L | 0.00001 | <0.00010 | - | 0.00001 | <0.00010 | 0.00001 | <0.00010 | 0.00004 | <0.00010 |
| Silicon (Si)-Dissolved | mg/L | 0.0012 | 0.5100 | - | 0.2110 | 0.3100 | 0.0560 | 0.1300 | 0.6110 | 0.7100 |
| Silver (Ag)-Dissolved | mg/L | 0.000002 | <0.000020 | - | <0.000002 | <0.000020 | <0.000002 | <0.000020 | <0.000002 | <0.000020 |
| Sodium (Na)-Dissolved | mg/L | 0.0005 | 0.8800 | - | 0.7390 | 0.7800 | 0.8620 | 0.9720 | 1.4400 | 1.4300 |
| Strontium (Sr)-Dissolved | mg/L | 0.000008 | 0.025900 | - | 0.012200 | 0.013500 | 0.013500 | 0.022800 | 0.029400 | 0.025800 |
| Sulphur (S)-Dissolved | mg/L | 0.001 | <3.000 | - | 3.340 | 3.400 | 3.630 | 3.700 | 5.300 | 5.700 |
| Thallium (Tl)-Dissolved | mg/L | 0.0000008 | <0.0000100 | - | 0.0000015 | <0.0000100 | 0.0000026 | <0.0000100 | 0.0000033 | <0.0000100 |
| Tin (Sn)-Dissolved | mg/L | 0.000005 | <0.005000 | - | <0.000005 | <0.005000 | 0.000006 | <0.005000 | <0.000005 | <0.005000 |
| Titanium (Ti)-Dissolved | mg/L | 0.00003 | <0.00500 | - | 0.00022 | <0.00500 | <0.00003 | <0.00500 | <0.00003 | <0.00500 |
| Uranium (U)-Dissolved | mg/L | 0.0000005 | <0.0001000 | - | 0.0000038 | <0.0001000 | 0.0000043 | <0.0001000 | 0.0000039 | <0.0001000 |
| Vanadium (V)-Dissolved | mg/L | 0.000005 | <0.005000 | - | 0.000067 | <0.005000 | 0.000068 | <0.005000 | 0.000068 | <0.005000 |
| Zinc (Zn)-Dissolved | mg/L | 0.00006 | 0.01020 | - | 0.00042 | <0.00500 | 0.00044 | <0.00500 | 0.00127 | <0.00500 |
| Zirconium (Zr)-Dissolved | mg/L | 0.000008 | 0.000170 | - | 0.000064 | <0.000100 | 0.000048 | <0.000100 | 0.000076 | 0.000120 |
| Alkalinity (PP as CaCO3) | mg/L | 0.5 | <0.5 | - | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

| Station | Unit | BRP-23<br>Gander Pond Outflow | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-05-21<br>14:30:00<br>C548084 | 2025-05-27<br>10:00:00<br>C549556 | 2025-06-21<br>07:50:00<br>C557592 | 2025-07-03<br>15:40:00<br>C560106 | 2025-07-28<br>10:22:00<br>C566435 | 2025-08-07<br>10:30:00<br>C568801 | 2025-09-26<br>14:15:00<br>C582399 | 2025-10-07<br>05:30:00<br>C585071 |
| Alkalinity (Total as CaCO3) | mg/L | 0.5 | 2.2 | - | 6.2 | 5.2 | 8.0 | 7.9 | 9.1 | 25.1 |
| Ammonia (N)-Total | mg/L | 0.005 | 0.180 | 0.150 | 0.053 | 0.085 | 0.015 | 0.035 | 0.180 | 0.150 |
| Bicarbonate (HCO3) | mg/L | 0.5 | 2.7 | - | 7.6 | 6.4 | 9.7 | 9.6 | 11.0 | 30.6 |
| Carbonate (CO3) | mg/L | 0.5 | <0.5 | - | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloride (Cl)-Dissolved | mg/L | 0.5 | 21.0 | - | 1.2 | 2.0 | 1.0 | 7.2 | 12.0 | 9.2 |
| Conductivity | µS/cm | 1 | 94 | - | 46 | 51 | 49 | 72 | 100 | 120 |
| Cyanide (CN)-Free | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.0005 | <0.0005 | <0.0005 |
| Cyanide (CN)-Strong Acid Dissoc. | mg/L | 0.0005 | 0.0006 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.0005 | <0.0005 | <0.0005 |
| Cyanide (CN)-Weak Acid Dissoc. | mg/L | 0.0005 | 0.0006 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.0006 | <0.0005 | <0.0005 |
| Field Temperature | deg. C | - | -0.1 | - | 4.6 | 15 | 7.4 | 10.4 | 5.9 | 3.5 |
| Fluoride (F) | mg/L | 0.01 | 0.01 | 0.02 | 0.02 | 0.02 | 0.01 | 0.03 | 0.03 | 0.01 |
| Hardness (CaCO3)-Dissolved | mg/L | 0.5 | 32.0 | - | 18.4 | 18.5 | 20.5 | 29.2 | 39.0 | 38.7 |
| Hardness (CaCO3)-Total | mg/L | 0.5 | 41.6 | - | 17.8 | 22.3 | 21.2 | 28.7 | 39.6 | 44.8 |
| Hydroxide (OH) | mg/L | 0.5 | <0.5 | - | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Nitrate (as N) | mg/L | 0.003 | 0.500 | 0.200 | 0.150 | 0.310 | 0.064 | 0.150 | 0.440 | 0.440 |
| Nitrate plus Nitrite (N) | mg/L | 0.003 | 0.500 | 0.200 | 0.150 | 0.310 | 0.064 | 0.150 | 0.440 | 0.440 |
| Nitrite (as N) | mg/L | 0.001 | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Nitrogen (N)-Total | mg/L | 0.02 | 0.97 | 0.62 | 0.39 | 0.70 | 0.33 | 0.49 | 0.88 | 0.98 |
| Organic Carbon (C)-Dissolved | mg/L | 0.2 | 4.6 | 4.4 | 3.1 | 5.0 | 3.9 | 4.8 | 3.9 | 5.3 |
| Organic Carbon (C)-Total | mg/L | 0.2 | 4.4 | 4.4 | 3.7 | 4.2 | 4.4 | 4.7 | 3.8 | 4.9 |
| Redox Potential-Field | mV | - | 189.3 | - | - | 127.9 | - | 239.9 | - | 249.1 |
| Silica-Reactive | mg/L | 0.05 | - | - | 0.54 | 0.72 | 0.12 | 0.27 | 1.50 | 1.80 |
| Sulphate (SO4)-Dissolved | mg/L | 0.5 | 4.7 | - | 10.0 | 12.0 | 12.0 | 12.0 | 16.0 | 19.0 |
| Total Dissolved Solids_Calculated | mg/L | 10 | - | - | 23 | 27 | - | 36 | 52 | 62 |
| Total Dissolved Solids_Measured | mg/L | 10 | - | 16 | 20 | 44 | 28 | 48 | 88 | 52 |
| Total Kjeldahl Nitrogen (Calc)-Total | mg/L | 0.02 | 0.47 | 0.42 | 0.24 | 0.38 | 0.27 | 0.34 | 0.44 | 0.54 |
| Total Suspended Solids | mg/L | 0.99 | 44.00 | 82.00 | 2.90 | <1.00 | 3.40 | 2.00 | 1.60 | <1.00 |
| Turbidity | NTU | 0.1 | 53.0 | 17.0 | 0.1 | <0.1 | <0.1 | 0.2 | 1.1 | 1.7 |
| Un-Ionized Ammonia | mg/L | 0.0005 | <0.0005 | - | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| pH | pH Units | - | 5.85 | - | 6.12 | 6.42 | 6.32 | 6.97 | 6.26 | 6.12 |
| pH-Field | pH | - | 6.01 | - | 6.43 | 6.58 | 7.92 | 7.14 | 6.83 | 7.02 |
| Aluminum (Al)-Total | mg/L | 0.0001 | 2.7900 | - | 0.0449 | 0.0385 | 0.0260 | 0.0186 | 0.0427 | 0.0430 |
| Antimony (Sb)-Total | mg/L | 0.0005 | <0.0005 | - | - | <0.0005 | - | <0.0005 | - | <0.0005 |
| Arsenic (As)-Total | mg/L | 0.0001 | 0.0057 | - | - | 0.0004 | - | 0.0004 | - | 0.0004 |
| Barium (Ba)-Total | mg/L | 0.001 | 0.031 | - | - | 0.008 | - | 0.012 | - | 0.016 |
| Beryllium (Be)-Total | mg/L | 0.0001 | <0.0001 | - | - | <0.0001 | - | <0.0001 | - | <0.0001 |
| Bismuth (Bi)-Total | mg/L | 0.000001 | <0.001000 | - | <0.000001 | <0.001000 | <0.000001 | <0.001000 | <0.000001 | <0.001000 |
| Boron (B)-Total | mg/L | 0.0001 | <0.0500 | - | 0.0016 | <0.0500 | 0.0014 | <0.0500 | 0.0024 | <0.0500 |
| Cadmium (Cd)-Total | mg/L | 0.00001 | 0.00006 | - | - | <0.00001 | - | <0.00001 | - | 0.00002 |

| Station | Unit | BRP-23<br>Gander Pond Outflow | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-05-21<br>14:30:00<br>C548084 | 2025-05-27<br>10:00:00<br>C549556 | 2025-06-21<br>07:50:00<br>C557592 | 2025-07-03<br>15:40:00<br>C560106 | 2025-07-28<br>10:22:00<br>C566435 | 2025-08-07<br>10:30:00<br>C568801 | 2025-09-26<br>14:15:00<br>C582399 | 2025-10-07<br>05:30:00<br>C585071 |
| Calcium (Ca)-Total | mg/L | 0.002 | 9.080 | - | 3.440 | 4.430 | 3.960 | 6.300 | 8.850 | 9.350 |
| Chromium (Cr)-Total | mg/L | 0.001 | 0.007 | - | - | <0.001 | - | <0.001 | - | <0.001 |
| Cobalt (Co)-Total | mg/L | 0.0002 | 0.0047 | - | - | 0.0003 | - | 0.0007 | - | 0.0018 |
| Copper (Cu)-Total | mg/L | 0.0005 | 0.0067 | - | - | 0.0017 | - | 0.0020 | - | 0.0014 |
| Iron (Fe)-Total | mg/L | 0.001 | 4.090 | - | 0.137 | 0.107 | 0.258 | 0.363 | 0.272 | 0.223 |
| Lead (Pb)-Total | mg/L | 0.0002 | 0.0013 | - | - | <0.0002 | - | <0.0002 | - | <0.0002 |
| Lithium (Li)-Total | mg/L | 0.00005 | 0.00760 | - | 0.00063 | <0.00200 | 0.00074 | <0.00200 | 0.00089 | <0.00200 |
| Magnesium (Mg)-Total | mg/L | 0.0005 | 4.5900 | - | 2.2400 | 2.7200 | 2.7600 | 3.1600 | 4.2400 | 5.2000 |
| Manganese (Mn)-Total | mg/L | 0.000004 | 0.197000 | - | 0.004370 | 0.004100 | 0.012100 | 0.020200 | 0.038700 | 0.037700 |
| Mercury (Hg)-Total | mg/L | 0.0000001 | 0.0000026 | - | 0.0000042 | 0.0000022 | 0.0000013 | <0.0000019 | 0.0000009 | <0.0000019 |
| Molybdenum (Mo)-Total | mg/L | 0.001 | <0.001 | - | - | <0.001 | - | <0.001 | - | <0.001 |
| Nickel (Ni)-Total | mg/L | 0.001 | 0.014 | - | - | 0.004 | - | 0.004 | - | 0.005 |
| Phosphorus (P)-Total | mg/L | 0.001 | 0.026 | 0.012 | <0.001 | 0.002 | 0.002 | 0.002 | 0.003 | 0.004 |
| Potassium (K)-Total | mg/L | 0.005 | 1.850 | - | 0.353 | 0.476 | 0.387 | 0.452 | 0.626 | 0.665 |
| Selenium (Se)-Total | mg/L | 0.0001 | <0.0001 | - | - | <0.0001 | - | <0.0001 | - | <0.0001 |
| Silicon (Si)-Total | mg/L | 0.0012 | 3.7500 | - | 0.2430 | 0.4000 | 0.0870 | 0.1300 | 0.6180 | 0.9600 |
| Silver (Ag)-Total | mg/L | 0.00002 | <0.00002 | - | - | <0.00002 | - | <0.00002 | - | <0.00002 |
| Sodium (Na)-Total | mg/L | 0.0005 | 1.0700 | - | 0.6920 | 0.9550 | 0.8890 | 0.9850 | 1.4700 | 1.4500 |
| Strontium (Sr)-Total | mg/L | 0.000008 | 0.028800 | - | 0.012400 | 0.015900 | 0.013900 | 0.021600 | 0.030300 | 0.028100 |
| Sulphur (S)-Total | mg/L | 0.001 | <3.000 | - | 4.050 | 4.500 | 3.500 | 3.800 | 5.710 | 6.900 |
| Thallium (Tl)-Total | mg/L | 0.00001 | 0.00001 | - | - | <0.00001 | - | <0.00001 | - | <0.00001 |
| Tin (Sn)-Total | mg/L | 0.005 | <0.005 | - | - | <0.005 | - | <0.005 | - | <0.005 |
| Titanium (Ti)-Total | mg/L | 0.00003 | 0.04900 | - | 0.00209 | <0.00500 | 0.00282 | <0.00500 | 0.00032 | <0.00500 |
| Uranium (U)-Total | mg/L | 0.0001 | 0.0001 | - | - | <0.0001 | - | <0.0001 | - | <0.0001 |
| Vanadium (V)-Total | mg/L | 0.005 | 0.005 | - | - | <0.005 | - | <0.005 | - | <0.005 |
| Zinc (Zn)-Total | mg/L | 0.005 | 0.021 | - | - | <0.005 | - | <0.005 | - | <0.005 |
| Zirconium (Zr)-Total | mg/L | 0.000008 | 0.000490 | - | 0.000068 | <0.000100 | 0.000072 | <0.000100 | 0.000089 | 0.000120 |

## Table E-2f Water Quality Data for General Monitoring Stations: Goose Southeast Inflow, 2025

| Station | Unit | BRP-30 Goose Southeast Inflow | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-05-28<br>14:30:00<br>C549556 | 2025-06-21<br>14:20:00<br>C557592 | 2025-07-27<br>10:15:00<br>C566053 | 2025-08-06<br>15:55:00<br>C568801 | 2025-09-08<br>09:10:00<br>C577044 | 2025-09-28<br>09:45:00<br>C582399 |
| Aluminum (Al)-Dissolved | mg/L | 0.0001 | - | 0.0793 | 0.0509 | 0.0750 | 0.0293 | 0.0340 |
| Antimony (Sb)-Dissolved | mg/L | 0.000003 | - | 0.000012 | 0.000010 | <0.000500 | <0.000500 | 0.000007 |
| Arsenic (As)-Dissolved | mg/L | 0.000005 | - | 0.000380 | 0.000631 | 0.000840 | 0.000440 | 0.000373 |
| Barium (Ba)-Dissolved | mg/L | 0.000008 | - | 0.008210 | 0.010800 | 0.013100 | 0.015300 | 0.014500 |
| Beryllium (Be)-Dissolved | mg/L | 0.0000015 | - | 0.0000075 | 0.0000062 | <0.0001000 | <0.0001000 | 0.0000043 |
| Bismuth (Bi)-Dissolved | mg/L | 0.000001 | - | <0.000001 | <0.000001 | <0.001000 | <0.001000 | <0.000001 |
| Boron (B)-Dissolved | mg/L | 0.0001 | - | 0.0013 | 0.0011 | <0.0500 | <0.0500 | 0.0012 |
| Cadmium (Cd)-Dissolved | mg/L | 0.000003 | - | 0.000007 | 0.000006 | <0.000010 | 0.000011 | 0.000005 |
| Calcium (Ca)-Dissolved | mg/L | 0.002 | - | 2.820 | 3.800 | 4.270 | 5.660 | 5.690 |
| Chromium (Cr)-Dissolved | mg/L | 0.00002 | - | 0.00054 | 0.00080 | <0.00100 | <0.00100 | 0.00058 |
| Cobalt (Co)-Dissolved | mg/L | 0.000004 | - | 0.000200 | 0.000368 | 0.000800 | 0.000360 | 0.000262 |
| Copper (Cu)-Dissolved | mg/L | 0.00002 | - | 0.00207 | 0.00227 | 0.00294 | 0.00149 | 0.00140 |
| Iron (Fe)-Dissolved | mg/L | 0.001 | - | 0.082 | 0.569 | 1.330 | 0.275 | 0.157 |
| Lead (Pb)-Dissolved | mg/L | 0.000003 | - | 0.000014 | 0.000035 | <0.000200 | <0.000200 | 0.000005 |
| Lithium (Li)-Dissolved | mg/L | 0.00005 | - | 0.00066 | 0.00076 | <0.00200 | <0.00200 | 0.00095 |
| Magnesium (Mg)-Dissolved | mg/L | 0.0005 | - | 2.1200 | 2.8800 | 3.0000 | 4.9500 | 4.4200 |
| Manganese (Mn)-Dissolved | mg/L | 0.000004 | - | 0.000143 | 0.003040 | 0.007700 | 0.003200 | 0.001820 |
| Mercury (Hg)-Dissolved | mg/L | 0.0000001 | - | 0.0000035 | 0.0000034 | <0.0000019 | <0.0000019 | 0.0000003 |
| Molybdenum (Mo)-Dissolved | mg/L | 0.000005 | - | 0.000014 | 0.000027 | <0.001000 | <0.001000 | 0.000013 |
| Nickel (Ni)-Dissolved | mg/L | 0.000015 | - | 0.005160 | 0.006450 | 0.008100 | 0.005000 | 0.005310 |
| Nitrate (NO3)-Dissolved | mg/L | 0.013 | 0.360 | 0.110 | <0.013 | <0.022 | 0.036 | 0.022 |
| Nitrite (NO2)-Dissolved | mg/L | 0.0033 | <0.0160 | <0.0160 | <0.0033 | <0.0160 | <0.0033 | <0.0033 |
| Phosphorus(P)-Dissolved | mg/L | 0.001 | 0.006 | <0.001 | 0.003 | - | - | 0.002 |
| Potassium (K)-Dissolved | mg/L | 0.005 | - | 0.101 | 0.204 | 0.346 | 0.512 | 0.588 |
| Selenium (Se)-Dissolved | mg/L | 0.00001 | - | 0.00002 | 0.00003 | <0.00010 | <0.00010 | 0.00003 |
| Silicon (Si)-Dissolved | mg/L | 0.0012 | - | 0.7610 | 0.1030 | 0.2800 | 0.6500 | 2.0400 |
| Silver (Ag)-Dissolved | mg/L | 0.000002 | - | 0.000003 | <0.000002 | <0.000020 | <0.000020 | <0.000002 |
| Sodium (Na)-Dissolved | mg/L | 0.0005 | - | 1.0400 | 1.3000 | 1.3400 | 1.6800 | 1.6900 |
| Strontium (Sr)-Dissolved | mg/L | 0.000008 | - | 0.010900 | 0.015100 | 0.017800 | 0.021100 | 0.021300 |
| Sulphur (S)-Dissolved | mg/L | 0.001 | - | 2.250 | 1.720 | <3.000 | 6.400 | 5.770 |
| Thallium (Tl)-Dissolved | mg/L | 0.0000008 | - | 0.0000020 | 0.0000027 | <0.0000100 | <0.0000100 | 0.0000023 |
| Tin (Sn)-Dissolved | mg/L | 0.000005 | - | <0.000005 | <0.000005 | <0.005000 | <0.005000 | <0.000005 |
| Titanium (Ti)-Dissolved | mg/L | 0.00003 | - | 0.00041 | 0.00079 | <0.00500 | <0.00500 | 0.00042 |
| Uranium (U)-Dissolved | mg/L | 0.0000005 | - | 0.0000107 | 0.0000161 | <0.0001000 | <0.0001000 | 0.0000084 |
| Vanadium (V)-Dissolved | mg/L | 0.000005 | - | 0.000138 | 0.000530 | <0.005000 | <0.005000 | 0.000160 |
| Zinc (Zn)-Dissolved | mg/L | 0.00006 | - | 0.00128 | 0.00218 | <0.00500 | <0.00500 | 0.00116 |
| Zirconium (Zr)-Dissolved | mg/L | 0.000008 | - | 0.000266 | 0.000339 | 0.000520 | 0.000210 | 0.000272 |
| Alkalinity (PP as CaCO3) | mg/L | 0.5 | - | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

| Station | Unit | BRP-30<br>Goose Southeast Inflow | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-05-28<br>14:30:00<br>C549556 | 2025-06-21<br>14:20:00<br>C557592 | 2025-07-27<br>10:15:00<br>C566053 | 2025-08-06<br>15:55:00<br>C568801 | 2025-09-08<br>09:10:00<br>C577044 | 2025-09-28<br>09:45:00<br>C582399 |
| Alkalinity (Total as CaCO3) | mg/L | 0.5 | - | 6.2 | 13.9 | 13.9 | 14.4 | 14.2 |
| Ammonia (N)-Total | mg/L | 0.005 | <0.005 | 0.008 | 0.010 | 0.013 | 0.042 | 0.011 |
| Bicarbonate (HCO3) | mg/L | 0.5 | - | 7.6 | 17.0 | 17.0 | 17.6 | 17.3 |
| Carbonate (CO3) | mg/L | 0.5 | - | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloride (Cl)-Dissolved | mg/L | 0.5 | - | 0.6 | 0.7 | 1.4 | 0.8 | 1.2 |
| Conductivity | µS/cm | 1 | - | 35 | 45 | 48 | 77 | 76 |
| Cyanide (CN)-Free | mg/L | 0.0005 | <0.0005 | <0.0005 | 0.0006 | 0.0006 | 0.0006 | <0.0005 |
| Cyanide (CN)-Strong Acid Dissoc. | mg/L | 0.0005 | <0.0005 | 0.0005 | 0.0008 | 0.0010 | 0.0008 | <0.0005 |
| Cyanide (CN)-Weak Acid Dissoc. | mg/L | 0.0005 | <0.0005 | <0.0005 | 0.0007 | 0.0006 | <0.0005 | <0.0005 |
| Field Temperature | deg. C | - | - | 7.8 | 7.8 | 10.7 | 1.4 | 4 |
| Fluoride (F) | mg/L | 0.01 | 0.02 | 0.03 | 0.03 | 0.04 | 0.03 | 0.03 |
| Hardness (CaCO3)-Dissolved | mg/L | 0.5 | - | 15.8 | 21.4 | 23.0 | 34.5 | 32.4 |
| Hardness (CaCO3)-Total | mg/L | 0.5 | - | 16.2 | 21.5 | 23.1 | 33.0 | 32.4 |
| Hydroxide (OH) | mg/L | 0.5 | - | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Nitrate (as N) | mg/L | 0.003 | 0.081 | 0.025 | <0.003 | <0.005 | 0.008 | 0.005 |
| Nitrate plus Nitrite (N) | mg/L | 0.003 | 0.081 | 0.025 | <0.003 | <0.003 | 0.008 | 0.005 |
| Nitrite (as N) | mg/L | 0.001 | <0.005 | <0.005 | <0.001 | <0.005 | <0.001 | <0.001 |
| Nitrogen (N)-Total | mg/L | 0.02 | 0.52 | 0.49 | 0.80 | 0.83 | 0.65 | 0.51 |
| Organic Carbon (C)-Dissolved | mg/L | 0.2 | 8.4 | 9.9 | 13.0 | 16.0 | 9.0 | 9.2 |
| Organic Carbon (C)-Total | mg/L | 0.2 | 8.5 | 10.0 | 14.0 | 16.0 | 8.5 | 9.0 |
| Redox Potential-Field | mV | - | - | - | - | 313.5 | 192.3 | - |
| Silica-Reactive | mg/L | 0.05 | - | 1.80 | 0.24 | 0.58 | 1.50 | 5.20 |
| Sulphate (SO4)-Dissolved | mg/L | 0.5 | - | 5.7 | 3.8 | 2.9 | 19.0 | 18.0 |
| Total Dissolved Solids_Calculated | mg/L | 10 | - | 18 | 22 | 24 | 43 | 45 |
| Total Dissolved Solids_Measured | mg/L | 10 | 28 | 36 | 52 | 64 | 52 | 80 |
| Total Kjeldahl Nitrogen (Calc)-Total | mg/L | 0.02 | 0.44 | 0.47 | 0.80 | 0.83 | 0.64 | 0.50 |
| Total Suspended Solids | mg/L | 0.97 | 1.90 | 2.10 | 13.00 | 5.10 | 1.10 | 1.60 |
| Turbidity | NTU | 0.1 | 4.0 | 0.2 | 2.7 | 6.5 | 1.6 | 0.9 |
| Un-Ionized Ammonia | mg/L | 0.0005 | - | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 |
| pH | pH Units | - | - | 6.23 | 6.7 | 7.14 | 6.31 | 6.46 |
| pH-Field | pH | - | - | 5.97 | 7.16 | 6.74 | 7.02 | 6.53 |
| Aluminum (Al)-Total | mg/L | 0.003 | - | 0.093 | 0.161 | 0.106 | 0.043 | 0.045 |
| Antimony (Sb)-Total | mg/L | 0.00002 | - | 0.00003 | <0.00002 | <0.00050 | <0.00050 | <0.00002 |
| Arsenic (As)-Total | mg/L | 0.00002 | - | 0.00039 | 0.00071 | 0.00093 | 0.00051 | 0.00040 |
| Barium (Ba)-Total | mg/L | 0.00005 | - | 0.00799 | 0.01210 | 0.01320 | 0.01550 | 0.01340 |
| Beryllium (Be)-Total | mg/L | 0.00001 | - | 0.00001 | 0.00001 | <0.00010 | <0.00010 | <0.00001 |
| Bismuth (Bi)-Total | mg/L | 0.00001 | - | <0.00001 | <0.00001 | <0.00100 | <0.00100 | <0.00001 |
| Boron (B)-Total | mg/L | 0.01 | - | <0.01 | <0.01 | <0.05 | <0.05 | <0.01 |
| Cadmium (Cd)-Total | mg/L | 0.000005 | - | 0.000009 | 0.000010 | 0.000012 | 0.000013 | <0.000005 |

| Station | Unit | BRP-30<br>Goose Southeast Inflow | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-05-28<br>14:30:00<br>C549556 | 2025-06-21<br>14:20:00<br>C557592 | 2025-07-27<br>10:15:00<br>C566053 | 2025-08-06<br>15:55:00<br>C568801 | 2025-09-08<br>09:10:00<br>C577044 | 2025-09-28<br>09:45:00<br>C582399 |
| Calcium (Ca)-Total | mg/L | 0.05 | - | 2.88 | 3.84 | 4.19 | 5.57 | 5.46 |
| Chromium (Cr)-Total | mg/L | 0.0001 | - | 0.0006 | 0.0011 | 0.0014 | 0.0091 | 0.0005 |
| Cobalt (Co)-Total | mg/L | 0.00001 | - | 0.00026 | 0.00058 | 0.00087 | 0.00045 | 0.00030 |
| Copper (Cu)-Total | mg/L | 0.0001 | - | 0.0020 | 0.0027 | 0.0034 | 0.0018 | 0.0014 |
| Iron (Fe)-Total | mg/L | 0.005 | - | 0.205 | 1.090 | 2.130 | 0.456 | 0.287 |
| Lead (Pb)-Total | mg/L | 0.00002 | - | 0.00003 | 0.00010 | <0.00020 | <0.00020 | <0.00002 |
| Lithium (Li)-Total | mg/L | 0.0005 | - | 0.0012 | 0.0007 | <0.0020 | <0.0020 | 0.0011 |
| Magnesium (Mg)-Total | mg/L | 0.05 | - | 2.18 | 2.88 | 3.06 | 4.64 | 4.56 |
| Manganese (Mn)-Total | mg/L | 0.0001 | - | 0.0012 | 0.0056 | 0.0080 | 0.0046 | 0.0023 |
| Mercury (Hg)-Total | mg/L | 0.0000001 | - | 0.0000039 | 0.0000055 | <0.0000019 | <0.0000019 | 0.0000003 |
| Molybdenum (Mo)-Total | mg/L | 0.00005 | - | <0.00005 | <0.00005 | <0.00100 | <0.00100 | <0.00005 |
| Nickel (Ni)-Total | mg/L | 0.0001 | - | 0.0049 | 0.0069 | 0.0088 | 0.0076 | 0.0049 |
| Phosphorus (P)-Total | mg/L | 0.001 | 0.013 | <0.001 | 0.027 | 0.019 | 0.004 | 0.012 |
| Potassium (K)-Total | mg/L | 0.05 | - | 0.12 | 0.22 | 0.33 | 0.50 | 0.55 |
| Selenium (Se)-Total | mg/L | 0.00004 | - | 0.00006 | 0.00005 | <0.00010 | <0.00010 | <0.00004 |
| Silicon (Si)-Total | mg/L | 0.05 | - | 0.89 | 0.25 | 0.29 | 0.64 | 2.27 |
| Silver (Ag)-Total | mg/L | 0.00001 | - | <0.00001 | <0.00001 | <0.00002 | <0.00002 | <0.00001 |
| Sodium (Na)-Total | mg/L | 0.05 | - | 1.14 | 1.31 | 1.32 | 1.57 | 1.72 |
| Strontium (Sr)-Total | mg/L | 0.00005 | - | 0.01040 | 0.01550 | 0.01700 | 0.02220 | 0.01960 |
| Sulphur (S)-Total | mg/L | 0.6 | - | 2.5 | 1.6 | <3.0 | 5.8 | 6.2 |
| Thallium (Tl)-Total | mg/L | 0.000002 | - | <0.000002 | <0.000002 | <0.000010 | <0.000010 | 0.000003 |
| Tin (Sn)-Total | mg/L | 0.0002 | - | <0.0002 | <0.0002 | <0.0050 | <0.0050 | <0.0002 |
| Titanium (Ti)-Total | mg/L | 0.002 | - | <0.002 | 0.005 | <0.005 | <0.005 | <0.002 |
| Uranium (U)-Total | mg/L | 0.000005 | - | 0.000010 | 0.000026 | <0.000100 | <0.000100 | 0.000010 |
| Vanadium (V)-Total | mg/L | 0.0002 | - | 0.0003 | 0.0012 | <0.0050 | <0.0050 | 0.0003 |
| Zinc (Zn)-Total | mg/L | 0.001 | - | 0.001 | 0.003 | <0.005 | <0.005 | 0.002 |
| Zirconium (Zr)-Total | mg/L | 0.0001 | - | 0.0003 | 0.0003 | 0.0004 | 0.0002 | 0.0002 |

## Table E-2g Water Quality Data for General Monitoring Stations: Bathurst Inlet Intake, 2025

| Station | Unit | BRP-40 Bathurst Inlet Intake (MLA) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | | Lowest Detection Limit | 2025-01-30 | 2025-02-26 | 2025-03-11 | 2025-04-15 | 2025-05-25 | 2025-08-18 | 2025-09-30 | 2025-10-07 | 2025-11-04 |
| Time | | | 6:40:00 | 6:15:00 | 7:10:00 | 7:00:00 | C548477 | 9:10:00 | 7:15:00 | 7:10:00 | 7:15:00 |
| Lab Job Number | | | C511643 | C518768 | C522352 | C532761 | | C571736 | C583052 | C584581 | C592023 |
| Parameter | | | | | | | | | | | |
| Aluminum (Al)-Dissolved | mg/L | 0.15 | <0.15 | - | - | - | - | - | - | - | <0.15 |
| Antimony (Sb)-Dissolved | mg/L | 0.025 | <0.025 | - | - | - | - | - | - | - | <0.025 |
| Arsenic (As)-Dissolved | mg/L | 0.005 | <0.005 | - | - | - | - | - | - | - | <0.005 |
| Barium (Ba)-Dissolved | mg/L | 0.05 | <0.05 | - | - | - | - | - | - | - | <0.05 |
| Beryllium (Be)-Dissolved | mg/L | 0.005 | <0.005 | - | - | - | - | - | - | - | <0.005 |
| Bismuth (Bi)-Dissolved | mg/L | 0.05 | <0.05 | - | - | - | - | - | - | - | <0.05 |
| Boron (B)-Dissolved | mg/L | 2.5 | 2.9 | - | - | - | - | - | - | - | 2.7 |
| Cadmium (Cd)-Dissolved | mg/L | 0.0005 | <0.0005 | - | - | - | - | - | - | - | <0.0005 |
| Calcium (Ca)-Dissolved | mg/L | 2.5 | 297 | - | - | - | - | - | - | - | 243 |
| Chromium (Cr)-Dissolved | mg/L | 0.05 | <0.05 | - | - | - | - | - | - | - | <0.05 |
| Cobalt (Co)-Dissolved | mg/L | 0.01 | <0.01 | - | - | - | - | - | - | - | <0.01 |
| Copper (Cu)-Dissolved | mg/L | 0.01 | <0.01 | - | - | - | - | - | - | - | <0.01 |
| Iron (Fe)-Dissolved | mg/L | 0.25 | <0.25 | - | - | - | - | - | - | - | <0.25 |
| Lead (Pb)-Dissolved | mg/L | 0.01 | <0.01 | - | - | - | - | - | - | - | <0.01 |
| Lithium (Li)-Dissolved | mg/L | 0.1 | 0.1 | - | - | - | - | - | - | - | 0.1 |
| Magnesium (Mg)-Dissolved | mg/L | 2.5 | 886 | - | - | - | - | - | - | - | 760 |
| Manganese (Mn)-Dissolved | mg/L | 0.05 | <0.05 | - | - | - | - | - | - | - | <0.05 |
| Mercury (Hg)-Dissolved | mg/L | 0.0000019 | - | - | - | - | - | - | - | - | <0.0000019 |
| Molybdenum (Mo)-Dissolved | mg/L | 0.05 | <0.05 | - | - | - | - | - | - | - | <0.05 |
| Nickel (Ni)-Dissolved | mg/L | 0.05 | <0.05 | - | - | - | - | - | - | - | <0.05 |
| Nitrate (NO3)-Dissolved | mg/L | 0.066 | <0.330 | <0.130 | - | - | - | - | - | - | <0.066 |
| Nitrite (NO2)-Dissolved | mg/L | 0.0033 | 0.017 | <0.0033 | - | - | - | - | - | - | <0.0033 |
| Potassium (K)-Dissolved | mg/L | 2.5 | 267 | - | - | - | - | - | - | - | 229 |
| Selenium (Se)-Dissolved | mg/L | 0.005 | <0.005 | - | - | - | - | - | - | - | <0.005 |
| Silicon (Si)-Dissolved | mg/L | 5 | <5 | - | - | - | - | - | - | - | <5 |
| Silver (Ag)-Dissolved | mg/L | 0.001 | <0.001 | - | - | - | - | - | - | - | <0.001 |
| Sodium (Na)-Dissolved | mg/L | 2.5 | 7750 | - | - | - | - | - | - | - | 6490 |
| Strontium (Sr)-Dissolved | mg/L | 0.05 | 5.6 | - | - | - | - | - | - | - | 4.41 |
| Sulphur (S)-Dissolved | mg/L | 150 | 684 | - | - | - | - | - | - | - | 582 |
| Thallium (Tl)-Dissolved | mg/L | 0.0005 | <0.0005 | - | - | - | - | - | - | - | <0.0005 |
| Tin (Sn)-Dissolved | mg/L | 0.25 | <0.25 | - | - | - | - | - | - | - | <0.25 |
| Titanium (Ti)-Dissolved | mg/L | 0.25 | <0.25 | - | - | - | - | - | - | - | <0.25 |
| Uranium (U)-Dissolved | mg/L | 0.005 | <0.005 | - | - | - | - | - | - | - | <0.005 |

| Station | Unit | BRP-40<br>Bathurst Inlet Intake (MLA) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | | | 2025-01-30 | 2025-02-26 | 2025-03-11 | 2025-04-15 | 2025-05-25 | 2025-08-18 | 2025-09-30 | 2025-10-07 | 2025-11-04 |
| Time | | Lowest Detection Limit | 6:40:00 | 6:15:00 | 7:10:00 | 7:00:00 | C548477 | 9:10:00 | 7:15:00 | 7:10:00 | 7:15:00 |
| Lab Job Number | | | C511643 | C518768 | C522352 | C532761 | | C571736 | C583052 | C584581 | C592023 |
| Parameter | | | | | | | | | | | |
| Vanadium (V)-Dissolved | mg/L | 0.25 | <0.25 | - | - | - | - | - | - | - | <0.25 |
| Zinc (Zn)-Dissolved | mg/L | 0.25 | <0.25 | - | - | - | - | - | - | - | <0.25 |
| Zirconium (Zr)-Dissolved | mg/L | 0.005 | <0.005 | - | - | - | - | - | - | - | <0.005 |
| 1,1,1,2-tetrachloroethane | mg/L | 0.001 | - | - | - | - | - | - | - | - | <0.001 |
| 1,1,1-trichloroethane | mg/L | 0.0005 | - | - | - | - | - | - | - | - | <0.0005 |
| 1,1,2,2-tetrachloroethane | mg/L | 0.002 | - | - | - | - | - | - | - | - | <0.002 |
| 1,1,2-trichloroethane | mg/L | 0.0005 | - | - | - | - | - | - | - | - | <0.0005 |
| 1,1-dichloroethane | mg/L | 0.0005 | - | - | - | - | - | - | - | - | <0.0005 |
| 1,1-dichloroethene | mg/L | 0.0005 | - | - | - | - | - | - | - | - | <0.0005 |
| 1,2,3-trichlorobenzene | mg/L | 0.001 | - | - | - | - | - | - | - | - | <0.001 |
| 1,2,4-trichlorobenzene | mg/L | 0.001 | - | - | - | - | - | - | - | - | <0.001 |
| 1,2,4-trimethylbenzene | mg/L | 0.0005 | - | - | - | - | - | - | - | - | <0.0005 |
| 1,2-dibromoethane | mg/L | 0.0002 | - | - | - | - | - | - | - | - | <0.0002 |
| 1,2-dichlorobenzene | mg/L | 0.0005 | - | - | - | - | - | - | - | - | <0.0005 |
| 1,2-dichloroethane | mg/L | 0.0005 | - | - | - | - | - | - | - | - | <0.0005 |
| 1,2-dichloropropane | mg/L | 0.0005 | - | - | - | - | - | - | - | - | <0.0005 |
| 1,3,5-trichlorobenzene | mg/L | 0.0005 | - | - | - | - | - | - | - | - | <0.0005 |
| 1,3,5-trimethylbenzene | mg/L | 0.0005 | - | - | - | - | - | - | - | - | <0.0005 |
| 1,3-dichlorobenzene | mg/L | 0.0005 | - | - | - | - | - | - | - | - | <0.0005 |
| 1,4-dichlorobenzene | mg/L | 0.0005 | - | - | - | - | - | - | - | - | <0.0005 |
| Alkalinity (PP as CaCO3) | mg/L | 0.5 | <0.5 | <0.5 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| Alkalinity (Total as CaCO3) | mg/L | 0.5 | 105 | 104 | 120 | 97 | 10 | 49 | 70 | 90 | 98 |
| Ammonia (N)-Total | mg/L | 0.005 | - | - | - | - | - | - | - | - | 0.048 |
| Benzene | mg/L | 0.0004 | - | - | - | - | - | - | - | - | <0.0004 |
| Bicarbonate (HCO3) | mg/L | 0.5 | 128 | 127 | 150 | 120 | 12 | 59 | 85 | 110 | 120 |
| Bromodichloromethane | mg/L | 0.0005 | - | - | - | - | - | - | - | - | <0.0005 |
| Bromoform | mg/L | 0.0005 | - | - | - | - | - | - | - | - | <0.0005 |
| Bromomethane | mg/L | 0.002 | - | - | - | - | - | - | - | - | <0.002 |
| Carbon tetrachloride | mg/L | 0.0005 | - | - | - | - | - | - | - | - | <0.0005 |
| Carbonate (CO3) | mg/L | 0.5 | <0.5 | <0.5 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| Chloride (Cl)-Dissolved | mg/L | 13 | 13000 | 14000 | 13000 | 14000 | 1100 | 6700 | 12000 | 10000 | 11000 |
| Chlorobenzene | mg/L | 0.0005 | - | - | - | - | - | - | - | - | <0.0005 |
| Chloroethane | mg/L | 0.001 | - | - | - | - | - | - | - | - | <0.001 |
| Chloroform | mg/L | 0.0005 | - | - | - | - | - | - | - | - | <0.0005 |

| Station | Unit | BRP-40<br>Bathurst Inlet Intake (MLA) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | | | 2025-01-30 | 2025-02-26 | 2025-03-11 | 2025-04-15 | 2025-05-25 | 2025-08-18 | 2025-09-30 | 2025-10-07 | 2025-11-04 |
| Time | | Lowest Detection Limit | 6:40:00 | 6:15:00 | 7:10:00 | 7:00:00 | C548477 | 9:10:00 | 7:15:00 | 7:10:00 | 7:15:00 |
| Lab Job Number | | | C511643 | C518768 | C522352 | C532761 | | C571736 | C583052 | C584581 | C592023 |
| Parameter | | | | | | | | | | | |
| Chloromethane | mg/L | 0.002 | - | - | - | - | - | - | - | - | <0.002 |
| Coliforms, Escherichia coli [E. coli] | MPN/100mL | 1 | - | - | - | - | - | - | - | - | - |
| Coliforms, total | MPN/100mL | 1 | - | - | - | - | - | - | - | - | - |
| Conductivity | µS/cm | 1 | 36800 | - | 39000 | 40000 | 4000 | 19000 | 31000 | 32000 | 35000 |
| Dibromochloromethane | mg/L | 0.001 | - | - | - | - | - | - | - | - | <0.001 |
| Dichloromethane | mg/L | 0.002 | - | - | - | - | - | - | - | - | <0.002 |
| Ethylbenzene | mg/L | 0.0004 | - | - | - | - | - | - | - | - | <0.0004 |
| F1 (C6-C10) | mg/L | 0.1 | - | - | - | - | - | - | - | - | <0.1 |
| F1 (C6-C10) - BTEX | mg/L | 0.1 | - | - | - | - | - | - | - | - | <0.1 |
| Field Conductivity | uS/cm | - | 20 | 20 | 19.99 | 19.99 | - | - | - | - | - |
| Field Temperature | deg. C | - | 2.6 | 1.5 | 3.3 | 5.4 | 0.2 | 14.5 | 7.7 | 3.7 | 0 |
| Fluoride (F) | mg/L | 0.01 | 0.59 | 0.71 | - | - | 0.1 | - | - | - | 0.59 |
| Fluoride (F)-Dissolved | mg/L | 0.05 | - | - | 0.74 | 0.69 | - | 0.38 | 0.41 | 0.54 | - |
| Hardness (CaCO3)-Dissolved | mg/L | 0.5 | 4390 | - | - | - | - | - | - | - | 3740 |
| Hardness (CaCO3)-Total | mg/L | 0.5 | 4520 | - | - | - | - | - | - | - | 4110 |
| Hydroxide (OH) | mg/L | 0.5 | <0.5 | <0.5 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| Methyl methacrylate | mg/L | 0.0005 | - | - | - | - | - | - | - | - | <0.0005 |
| Methyl-tert-butyl ether (MTBE) | mg/L | 0.0005 | - | - | - | - | - | - | - | - | <0.0005 |
| Nitrate (as N) | mg/L | 0.015 | <0.075 | <0.030 | - | - | - | - | - | - | <0.015 |
| Nitrate plus Nitrite (N) | mg/L | 0.015 | <0.075 | <0.030 | - | - | - | - | - | - | <0.015 |
| Nitrite (as N) | mg/L | 0.001 | 0.005 | <0.001 | - | - | - | - | - | - | <0.001 |
| Nitrogen (N)-Total | mg/L | 0.2 | 0.3 | - | - | - | - | - | - | - | <0.2 |
| Organic Carbon (C)-Dissolved | mg/L | 4 | 68 | - | - | - | - | - | - | - | 56 |
| Organic Carbon (C)-Total | mg/L | 4 | 76 | - | - | - | - | - | - | - | 59 |
| Redox Potential-Field | mV | - | - | - | - | - | - | 277.3 | 183.1 | 263.7 | 433.6 | 513.5 |
| Salinity | - | 2 | - | 25 | 25 | 26 | 2.1 | 12 | 19 | 20 | 22 |
| Styrene | mg/L | 0.0005 | - | - | - | - | - | - | - | - | <0.0005 |
| Sulphate (SO4)-Dissolved | mg/L | 2.5 | 1800 | 1900 | 2000 | 2000 | 170 | 870 | 1500 | 1500 | 1700 |
| Tetrachloroethene | mg/L | 0.0005 | - | - | - | - | - | - | - | - | <0.0005 |
| Toluene | mg/L | 0.0004 | - | - | - | - | - | - | - | - | <0.0004 |
| Total Dissolved Solids_Calculated | mg/L | 100 | - | - | - | - | - | - | - | - | 21000 |
| Total Dissolved Solids_Measured | mg/L | 10 | - | - | - | - | 2100 | 12000 | 17000 | - | - |
| Total Kjeldahl Nitrogen (Calc)-Total | mg/L | 0.2 | 0.3 | - | - | - | - | - | - | - | <0.2 |
| Total Oil and Grease | mg/L | 2 | - | - | - | - | - | - | - | - | <2 |

| Station | Unit | BRP-40<br>Bathurst Inlet Intake (MLA) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | | | 2025-01-30 | 2025-02-26 | 2025-03-11 | 2025-04-15 | 2025-05-25 | 2025-08-18 | 2025-09-30 | 2025-10-07 | 2025-11-04 |
| Time | | Lowest Detection Limit | 6:40:00 | 6:15:00 | 7:10:00 | 7:00:00 | C548477 | 9:10:00 | 7:15:00 | 7:10:00 | 7:15:00 |
| Lab Job Number | | | C511643 | C518768 | C522352 | C532761 | | C571736 | C583052 | C584581 | C592023 |
| Parameter | | | | | | | | | | | |
| Total Suspended Solids | mg/L | 0.99 | <1.00 | 1.6 | 6.3 | 14 | 2.7 | 19 | 8.7 | 22 | 49 |
| Total Trihalomethanes | mg/L | 0.0013 | - | - | - | - | - | - | - | - | <0.0013 |
| Trichloroethene | mg/L | 0.0002 | - | - | - | - | - | - | - | - | <0.0002 |
| Trichlorofluoromethane | mg/L | 0.0005 | - | - | - | - | - | - | - | - | <0.0005 |
| Turbidity | NTU | 0.1 | 0.1 | <0.1 | 0.1 | 0.4 | 4.5 | 6.7 | 4.5 | 1.9 | 39 |
| Un-Ionized Ammonia | mg/L | 0.0005 | - | - | - | - | - | - | - | - | <0.0005 |
| Vinyl chloride | mg/L | 0.0005 | - | - | - | - | - | - | - | - | <0.0005 |
| Xylene, m+p-_Concentration | mg/L | 0.0008 | - | - | - | - | - | - | - | - | <0.0008 |
| Xylene, o-_Concentration | mg/L | 0.0004 | - | - | - | - | - | - | - | - | <0.0004 |
| Xylenes, total | mg/L | 0.00089 | - | - | - | - | - | - | - | - | <0.00089 |
| cis-1,2-dichloroethene | mg/L | 0.0005 | - | - | - | - | - | - | - | - | <0.0005 |
| cis-1,3-dichloropropene | mg/L | 0.0005 | - | - | - | - | - | - | - | - | <0.0005 |
| pH | pH Units | - | 7.19 | 6.35 | 7.66 | 7.06 | 6.46 | 7.74 | 7.58 | 7.71 | 7.71 |
| pH-Field | pH | - | 7.08 | 7.45 | 6.6 | 7.31 | 7.25 | 7.65 | 7.66 | 7.72 | 7.68 |
| trans-1,2-dichloroethene | mg/L | 0.0005 | - | - | - | - | - | - | - | - | <0.0005 |
| trans-1,3-dichloropropene | mg/L | 0.0005 | - | - | - | - | - | - | - | - | <0.0005 |
| Aluminum (Al)-Total | mg/L | 0.003 | 0.008 | - | - | - | - | - | - | - | 0.9 |
| Antimony (Sb)-Total | mg/L | 0.0005 | <0.0005 | - | - | - | - | - | - | - | <0.0500 |
| Arsenic (As)-Total | mg/L | 0.0001 | 0.001 | - | - | - | - | - | - | - | <0.0100 |
| Barium (Ba)-Total | mg/L | 0.001 | 0.012 | - | - | - | - | - | - | - | <0.100 |
| Beryllium (Be)-Total | mg/L | 0.0001 | <0.0001 | - | - | - | - | - | - | - | <0.0100 |
| Bismuth (Bi)-Total | mg/L | 0.001 | <0.001 | - | - | - | - | - | - | - | <0.100 |
| Boron (B)-Total | mg/L | 2.5 | 3.3 | - | - | - | - | - | - | - | <5.0 |
| Cadmium (Cd)-Total | mg/L | 0.00001 | 0.00005 | - | - | - | - | - | - | - | <0.00100 |
| Calcium (Ca)-Total | mg/L | 2.5 | 292 | - | - | - | - | - | - | - | 275 |
| Chromium (Cr)-Total | mg/L | 0.001 | <0.001 | - | - | - | - | - | - | - | <0.100 |
| Cobalt (Co)-Total | mg/L | 0.0002 | <0.0002 | - | - | - | - | - | - | - | <0.0200 |
| Copper (Cu)-Total | mg/L | 0.0005 | 0.0008 | - | - | - | - | - | - | - | <0.0500 |
| Iron (Fe)-Total | mg/L | 0.01 | <0.01 | - | - | - | - | - | - | - | 1.4 |
| Lead (Pb)-Total | mg/L | 0.0002 | <0.0002 | - | - | - | - | - | - | - | <0.0200 |
| Lithium (Li)-Total | mg/L | 0.002 | 0.105 | - | - | - | - | - | - | - | <0.200 |
| Magnesium (Mg)-Total | mg/L | 2.5 | 919 | - | - | - | - | - | - | - | 830 |
| Manganese (Mn)-Total | mg/L | 0.001 | 0.002 | - | - | - | - | - | - | - | <0.100 |
| Mercury (Hg)-Total | mg/L | 0.0000019 | - | - | - | - | - | - | - | - | <0.0000019 |

| Station | Unit | BRP-40 Bathurst Inlet Intake (MLA) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | | | 2025-01-30 | 2025-02-26 | 2025-03-11 | 2025-04-15 | 2025-05-25 | 2025-08-18 | 2025-09-30 | 2025-10-07 | 2025-11-04 |
| Time | | Lowest Detection Limit | 6:40:00 | 6:15:00 | 7:10:00 | 7:00:00 | C548477 | 9:10:00 | 7:15:00 | 7:10:00 | 7:15:00 |
| Lab Job Number | | | C511643 | C518768 | C522352 | C532761 | | C571736 | C583052 | C584581 | C592023 |
| Parameter | | | | | | | | | | | |
| Molybdenum (Mo)-Total | mg/L | 0.001 | 0.008 | - | - | - | - | - | - | - | <0.100 |
| Nickel (Ni)-Total | mg/L | 0.001 | <0.001 | - | - | - | - | - | - | - | <0.100 |
| Phosphorus (P)-Total | mg/L | 0.001 | 0.024 | - | - | - | - | - | - | - | 0.062 |
| Potassium (K)-Total | mg/L | 2.5 | 274 | - | - | - | - | - | - | - | 249 |
| Selenium (Se)-Total | mg/L | 0.0001 | 0.0006 | - | - | - | - | - | - | - | <0.0100 |
| Silicon (Si)-Total | mg/L | 0.1 | 0.6 | - | - | - | - | - | - | - | <0.1 |
| Silver (Ag)-Total | mg/L | 0.00002 | <0.00002 | - | - | - | - | - | - | - | <0.00200 |
| Sodium (Na)-Total | mg/L | 2.5 | 7630 | - | - | - | - | - | - | - | 7050 |
| Strontium (Sr)-Total | mg/L | 0.001 | 5.84 | - | - | - | - | - | - | - | 4.64 |
| Sulphur (S)-Total | mg/L | 150 | 675 | - | - | - | - | - | - | - | 495 |
| Thallium (Tl)-Total | mg/L | 0.00001 | 0.00001 | - | - | - | - | - | - | - | <0.00100 |
| Tin (Sn)-Total | mg/L | 0.005 | <0.005 | - | - | - | - | - | - | - | <0.500 |
| Titanium (Ti)-Total | mg/L | 0.005 | <0.005 | - | - | - | - | - | - | - | <0.500 |
| Uranium (U)-Total | mg/L | 0.0001 | 0.0024 | - | - | - | - | - | - | - | <0.0100 |
| Vanadium (V)-Total | mg/L | 0.005 | <0.005 | - | - | - | - | - | - | - | <0.500 |
| Zinc (Zn)-Total | mg/L | 0.005 | <0.005 | - | - | - | - | - | - | - | 0.53 |
| Zirconium (Zr)-Total | mg/L | 0.0001 | <0.0001 | - | - | - | - | - | - | - | <0.0100 |

## Table E-2h Water Quality Data for General Monitoring Stations: Bathurst Inlet Discharge, 2025

| Station | Unit | BRP-41 Bathurst Inlet Discharge (MLA) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-02-26<br>6:20:00<br>C518768 | 2025-03-11<br>7:12:00<br>C522352 | 2025-04-15<br>7:05:00<br>C532761 | 2025-08-18<br>9:20:00<br>C571736 | 2025-09-30<br>7:30:00<br>C583052 | 2025-10-07<br>7:20:00<br>C584581 | 2025-11-04<br>7:30:00<br>C592023 |
| Aluminum (Al)-Dissolved | mg/L | 0.015 | - | - | - | - | - | - | <0.015 |
| Antimony (Sb)-Dissolved | mg/L | 0.0025 | - | - | - | - | - | - | <0.0025 |
| Arsenic (As)-Dissolved | mg/L | 0.0005 | - | - | - | - | - | - | 0.0011 |
| Barium (Ba)-Dissolved | mg/L | 0.005 | - | - | - | - | - | - | 0.011 |
| Beryllium (Be)-Dissolved | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |
| Bismuth (Bi)-Dissolved | mg/L | 0.005 | - | - | - | - | - | - | <0.005 |
| Boron (B)-Dissolved | mg/L | 0.25 | - | - | - | - | - | - | 2.93 |
| Cadmium (Cd)-Dissolved | mg/L | 0.00005 | - | - | - | - | - | - | <0.00005 |
| Calcium (Ca)-Dissolved | mg/L | 0.25 | - | - | - | - | - | - | 259 |
| Chromium (Cr)-Dissolved | mg/L | 0.005 | - | - | - | - | - | - | <0.005 |
| Cobalt (Co)-Dissolved | mg/L | 0.001 | - | - | - | - | - | - | <0.001 |
| Copper (Cu)-Dissolved | mg/L | 0.001 | - | - | - | - | - | - | <0.001 |
| Iron (Fe)-Dissolved | mg/L | 0.025 | - | - | - | - | - | - | <0.025 |
| Lead (Pb)-Dissolved | mg/L | 0.001 | - | - | - | - | - | - | <0.001 |
| Lithium (Li)-Dissolved | mg/L | 0.01 | - | - | - | - | - | - | 0.12 |
| Magnesium (Mg)-Dissolved | mg/L | 2.5 | - | - | - | - | - | - | 881 |
| Manganese (Mn)-Dissolved | mg/L | 0.005 | - | - | - | - | - | - | <0.005 |
| Molybdenum (Mo)-Dissolved | mg/L | 0.005 | - | - | - | - | - | - | 0.008 |
| Nickel (Ni)-Dissolved | mg/L | 0.005 | - | - | - | - | - | - | <0.005 |
| Nitrate (NO3)-Dissolved | mg/L | 0.13 | <0.13 | - | - | - | - | - | <0.33 |
| Nitrite (NO2)-Dissolved | mg/L | 0.0033 | <0.0033 | - | - | - | - | - | <0.0033 |
| Potassium (K)-Dissolved | mg/L | 0.25 | - | - | - | - | - | - | 254 |
| Selenium (Se)-Dissolved | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |
| Silicon (Si)-Dissolved | mg/L | 0.5 | - | - | - | - | - | - | 0.5 |
| Silver (Ag)-Dissolved | mg/L | 0.0001 | - | - | - | - | - | - | <0.0001 |
| Sodium (Na)-Dissolved | mg/L | 2.5 | - | - | - | - | - | - | 7460 |
| Strontium (Sr)-Dissolved | mg/L | 0.005 | - | - | - | - | - | - | 4.83 |
| Sulphur (S)-Dissolved | mg/L | 15 | - | - | - | - | - | - | 636 |
| Thallium (Tl)-Dissolved | mg/L | 0.00005 | - | - | - | - | - | - | <0.00005 |
| Tin (Sn)-Dissolved | mg/L | 0.025 | - | - | - | - | - | - | <0.025 |
| Titanium (Ti)-Dissolved | mg/L | 0.025 | - | - | - | - | - | - | <0.025 |
| Uranium (U)-Dissolved | mg/L | 0.0005 | - | - | - | - | - | - | 0.0023 |
| Vanadium (V)-Dissolved | mg/L | 0.025 | - | - | - | - | - | - | <0.025 |
| Zinc (Zn)-Dissolved | mg/L | 0.025 | - | - | - | - | - | - | <0.025 |
| Zirconium (Zr)-Dissolved | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |
| 1,1,1,2-tetrachloroethane | mg/L | 0.001 | - | - | - | - | - | - | <0.001 |
| 1,1,1-trichloroethane | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |
| 1,1,2,2-tetrachloroethane | mg/L | 0.002 | - | - | - | - | - | - | <0.002 |
| 1,1,2-trichloroethane | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |
| 1,1-dichloroethane | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |
| 1,1-dichloroethene | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |
| 1,2,3-trichlorobenzene | mg/L | 0.001 | - | - | - | - | - | - | <0.001 |
| 1,2,4-trichlorobenzene | mg/L | 0.001 | - | - | - | - | - | - | <0.001 |
| 1,2,4-trimethylbenzene | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |
| 1,2-dibromoethane | mg/L | 0.0002 | - | - | - | - | - | - | <0.0002 |
| 1,2-dichlorobenzene | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |
| 1,2-dichloroethane | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |
| 1,2-dichloropropane | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |
| 1,3,5-trichlorobenzene | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |
| 1,3,5-trimethylbenzene | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |
| 1,3-dichlorobenzene | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |
| 1,4-dichlorobenzene | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |

| Station | Unit | BRP-41 Bathurst Inlet Discharge (MLA) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-02-26<br>6:20:00<br>C518768 | 2025-03-11<br>7:12:00<br>C522352 | 2025-04-15<br>7:05:00<br>C532761 | 2025-08-18<br>9:20:00<br>C571736 | 2025-09-30<br>7:30:00<br>C583052 | 2025-10-07<br>7:20:00<br>C584581 | 2025-11-04<br>7:30:00<br>C592023 |
| Alkalinity (PP as CaCO3) | mg/L | 0.5 | <0.5 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| Alkalinity (Total as CaCO3) | mg/L | 0.5 | 103 | 110 | 100 | 49 | 75 | 95 | 100 |
| Ammonia (N)-Total | mg/L | 0.005 | - | - | - | - | - | - | 0.017 |
| Benzene | mg/L | 0.0004 | - | - | - | - | - | - | <0.0004 |
| Bicarbonate (HCO3) | mg/L | 0.5 | 126 | 130 | 120 | 60 | 92 | 120 | 120 |
| Bromodichloromethane | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |
| Bromoform | mg/L | 0.0005 | - | - | - | - | - | - | 0.01 |
| Bromomethane | mg/L | 0.002 | - | - | - | - | - | - | <0.002 |
| Carbon tetrachloride | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |
| Carbonate (CO3) | mg/L | 0.5 | <0.5 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| Chloride (Cl)-Dissolved | mg/L | 50 | 13000 | 14000 | 14000 | 7000 | 12000 | 11000 | 12000 |
| Chlorobenzene | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |
| Chloroethane | mg/L | 0.001 | - | - | - | - | - | - | <0.001 |
| Chloroform | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |
| Chloromethane | mg/L | 0.002 | - | - | - | - | - | - | <0.002 |
| Coliforms, Escherichia coli [E. coli] | MPN/100mL | 1 | - | - | - | - | - | - | - |
| Coliforms, total | MPN/100mL | 1 | - | - | - | - | - | - | - |
| Conductivity | µS/cm | 2 | - | 40000 | 41000 | 20000 | 33000 | 35000 | 38000 |
| Dibromochloromethane | mg/L | 0.001 | - | - | - | - | - | - | <0.001 |
| Dichloromethane | mg/L | 0.002 | - | - | - | - | - | - | <0.002 |
| Ethylbenzene | mg/L | 0.0004 | - | - | - | - | - | - | <0.0004 |
| F1 (C6-C10) | mg/L | 0.1 | - | - | - | - | - | - | <0.1 |
| F1 (C6-C10) - BTEX | mg/L | 0.1 | - | - | - | - | - | - | <0.1 |
| Field Conductivity | uS/cm | - | 20 | 19.99 | 19.99 | - | - | - | - |
| Field Temperature | deg. C | - | 3.1 | 1.8 | 2.5 | 13.5 | 7.7 | 5.2 | 0.9 |
| Fluoride (F) | mg/L | 0.01 | 0.73 | - | - | - | - | - | 0.7 |
| Fluoride (F)-Dissolved | mg/L | 0.05 | - | 0.74 | 0.67 | 0.4 | 0.56 | 0.59 | - |
| Hardness (CaCO3)-Dissolved | mg/L | 0.5 | - | - | - | - | - | - | 4280 |
| Hardness (CaCO3)-Total | mg/L | 0.5 | - | - | - | - | - | - | 4220 |
| Hydroxide (OH) | mg/L | 0.5 | <0.5 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| Methyl methacrylate | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |
| Methyl-tert-butyl ether (MTBE) | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |
| Nitrate (as N) | mg/L | 0.03 | <0.03 | - | - | - | - | - | <0.07 |
| Nitrate plus Nitrite (N) | mg/L | 0.03 | <0.03 | - | - | - | - | - | <0.07 |
| Nitrite (as N) | mg/L | 0.001 | <0.001 | - | - | - | - | - | <0.001 |
| Nitrogen (N)-Total | mg/L | 0.1 | - | - | - | - | - | - | <0.1 |
| Organic Carbon (C)-Dissolved | mg/L | 4 | - | - | - | - | - | - | 57 |
| Organic Carbon (C)-Total | mg/L | 4 | - | - | - | - | - | - | 66 |
| Redox Potential-Field | mV | - | - | - | - | 175.8 | 247.7 | 401.5 | 481 |
| Salinity | - | 2 | 25 | 25 | 27 | 12 | 20 | 22 | 23 |
| Styrene | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |
| Sulphate (SO4)-Dissolved | mg/L | 13 | 1900 | 1900 | 2000 | 910 | 1600 | 1600 | 1800 |
| Tetrachloroethene | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |
| Toluene | mg/L | 0.0004 | - | - | - | - | - | - | <0.0004 |
| Total Dissolved Solids_Calculated | mg/L | 100 | - | - | - | - | - | - | 23000 |
| Total Dissolved Solids_Measured | mg/L | 17 | - | - | - | 12000 | 19000 | - | - |
| Total Kjeldahl Nitrogen (Calc)-Total | mg/L | 0.1 | - | - | - | - | - | - | <0.1 |
| Total Oil and Grease | mg/L | 2 | - | - | - | - | - | - | <2 |
| Total Suspended Solids | mg/L | 1 | 3 | 4 | 11 | 10 | 7 | 2 | 30 |
| Total Trihalomethanes | mg/L | 0.0013 | - | - | - | - | - | - | 0.01 |
| Trichloroethene | mg/L | 0.0002 | - | - | - | - | - | - | <0.0002 |
| Trichlorofluoromethane | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |
| Turbidity | NTU | 0.1 | <0.1 | 0.1 | 0.4 | 6 | 5.4 | 1.6 | 20 |

| Station | Unit | BRP-41 Bathurst Inlet Discharge (MLA) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-02-26<br>6:20:00<br>C518768 | 2025-03-11<br>7:12:00<br>C522352 | 2025-04-15<br>7:05:00<br>C532761 | 2025-08-18<br>9:20:00<br>C571736 | 2025-09-30<br>7:30:00<br>C583052 | 2025-10-07<br>7:20:00<br>C584581 | 2025-11-04<br>7:30:00<br>C592023 |
| Un-Ionized Ammonia | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |
| Vinyl chloride | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |
| Xylene, m+p-_Concentration | mg/L | 0.0008 | - | - | - | - | - | - | <0.0008 |
| Xylene, o-_Concentration | mg/L | 0.0004 | - | - | - | - | - | - | <0.0004 |
| Xylenes, total | mg/L | 0.00089 | - | - | - | - | - | - | <0.00089 |
| cis-1,2-dichloroethene | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |
| cis-1,3-dichloropropene | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |
| pH | pH Units | - | 6.41 | 7.84 | 6.86 | 7.68 | 7.67 | 7.63 | 7.12 |
| pH-Field | pH | - | 7.18 | 6.94 | 7.47 | 7.69 | 7.75 | 7.77 | 7.73 |
| trans-1,2-dichloroethene | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |
| trans-1,3-dichloropropene | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |
| Aluminum (Al)-Total | mg/L | 0.15 | - | - | - | - | - | - | 0.83 |
| Antimony (Sb)-Total | mg/L | 0.025 | - | - | - | - | - | - | <0.025 |
| Arsenic (As)-Total | mg/L | 0.005 | - | - | - | - | - | - | <0.005 |
| Barium (Ba)-Total | mg/L | 0.05 | - | - | - | - | - | - | <0.05 |
| Beryllium (Be)-Total | mg/L | 0.005 | - | - | - | - | - | - | <0.005 |
| Bismuth (Bi)-Total | mg/L | 0.05 | - | - | - | - | - | - | <0.05 |
| Boron (B)-Total | mg/L | 2.5 | - | - | - | - | - | - | 2.8 |
| Cadmium (Cd)-Total | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |
| Calcium (Ca)-Total | mg/L | 2.5 | - | - | - | - | - | - | 286 |
| Chromium (Cr)-Total | mg/L | 0.05 | - | - | - | - | - | - | <0.05 |
| Cobalt (Co)-Total | mg/L | 0.01 | - | - | - | - | - | - | <0.01 |
| Copper (Cu)-Total | mg/L | 0.025 | - | - | - | - | - | - | <0.025 |
| Iron (Fe)-Total | mg/L | 0.5 | - | - | - | - | - | - | 1 |
| Lead (Pb)-Total | mg/L | 0.01 | - | - | - | - | - | - | <0.01 |
| Lithium (Li)-Total | mg/L | 0.1 | - | - | - | - | - | - | 0.1 |
| Magnesium (Mg)-Total | mg/L | 2.5 | - | - | - | - | - | - | 852 |
| Manganese (Mn)-Total | mg/L | 0.05 | - | - | - | - | - | - | <0.05 |
| Molybdenum (Mo)-Total | mg/L | 0.05 | - | - | - | - | - | - | <0.05 |
| Nickel (Ni)-Total | mg/L | 0.05 | - | - | - | - | - | - | <0.05 |
| Phosphorus (P)-Total | mg/L | 0.001 | - | - | - | - | - | - | 0.078 |
| Potassium (K)-Total | mg/L | 2.5 | - | - | - | - | - | - | 261 |
| Selenium (Se)-Total | mg/L | 0.005 | - | - | - | - | - | - | <0.005 |
| Silicon (Si)-Total | mg/L | 0.1 | - | - | - | - | - | - | <0.1 |
| Silver (Ag)-Total | mg/L | 0.001 | - | - | - | - | - | - | <0.001 |
| Sodium (Na)-Total | mg/L | 2.5 | - | - | - | - | - | - | 7280 |
| Strontium (Sr)-Total | mg/L | 0.05 | - | - | - | - | - | - | 4.82 |
| Sulphur (S)-Total | mg/L | 150 | - | - | - | - | - | - | 538 |
| Thallium (Tl)-Total | mg/L | 0.0005 | - | - | - | - | - | - | <0.0005 |
| Tin (Sn)-Total | mg/L | 0.25 | - | - | - | - | - | - | <0.25 |
| Titanium (Ti)-Total | mg/L | 0.25 | - | - | - | - | - | - | <0.25 |
| Uranium (U)-Total | mg/L | 0.005 | - | - | - | - | - | - | <0.005 |
| Vanadium (V)-Total | mg/L | 0.25 | - | - | - | - | - | - | <0.25 |
| Zinc (Zn)-Total | mg/L | 0.25 | - | - | - | - | - | - | <0.25 |
| Zirconium (Zr)-Total | mg/L | 0.005 | - | - | - | - | - | - | <0.005 |

## Table E-3 Water Quality Data for Verification Monitoring Stations, 2025

| Station | Unit | BRP-10 Primary Water Pond | | | | | | | | | BRP-13 Plant Site Pond | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-06-16 16:10:00 C555627 | 2025-06-29 09:40:00 C558903 | 2025-07-14 12:00:00 C562725 | 2025-08-05 16:00:00 C568627 | 2025-08-11 13:45:00 C569779 | 2025-09-02 10:10:00 C575588 | 2025-09-17 14:10:00 C579800 | 2025-10-07 14:30:00 C585098 | Lowest Detection Limit | 2025-06-11 14:20:00 C554374 | 2025-08-01 13:35:00 C567939 |
| Aluminum (Al)-Dissolved | mg/L | 0.003 | 0.049 | 0.045 | 0.039 | 0.031 | 0.024 | 0.026 | 0.020 | 0.017 | 0.003 | 0.005 | - |
| Antimony (Sb)-Dissolved | mg/L | 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 | mg/L | 0.0001 | 0.0016 | 0.0018 | 0.0027 | 0.0030 | 0.0031 | 0.0039 | 0.0034 | 0.0032 | 0.0001 | 0.0037 | - |
| Barium (Ba)-Dissolved | mg/L | 0.001 | 0.021 | 0.026 | 0.034 | 0.035 | 0.034 | 0.038 | 0.034 | 0.030 | 0.001 | 0.016 | - |
| Beryllium (Be)-Dissolved | mg/L | 0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | 0.0001 | <0.0001 | - |
| Bismuth (Bi)-Dissolved | mg/L | 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 | mg/L | 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 | mg/L | 0.00001 | 0.00002 | 0.00003 | 0.00004 | 0.00002 | 0.00001 | <0.00001 | 0.00001 | 0.00001 | 0.00001 | 0.00008 | - |
| Calcium (Ca)-Dissolved | mg/L | 0.05 | 11.10 | 14.60 | 19.00 | 21.80 | 22.60 | 26.30 | 24.00 | 23.50 | 0.05 | 79.90 | - |
| Chromium (Cr)-Dissolved | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | 0.001 | <0.001 | - |
| Cobalt (Co)-Dissolved | mg/L | 0.0002 | 0.0021 | 0.0032 | 0.0032 | 0.0016 | 0.0016 | 0.0022 | 0.0017 | 0.0019 | 0.0002 | 0.0014 | - |
| Copper (Cu)-Dissolved | mg/L | 0.0002 | 0.0028 | 0.0051 | 0.0051 | 0.0053 | 0.0049 | 0.0050 | 0.0046 | 0.0046 | 0.0002 | 0.0011 | - |
| Iron (Fe)-Dissolved | mg/L | 0.005 | 0.086 | 0.135 | 0.270 | 0.363 | 0.390 | 0.674 | 0.531 | 0.574 | 0.005 | 0.007 | - |
| Lead (Pb)-Dissolved | mg/L | 0.0002 | <0.0002 | 0.0004 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | 0.0002 | <0.0002 | - |
| Lithium (Li)-Dissolved | mg/L | 0.002 | 0.002 | 0.003 | 0.004 | 0.006 | 0.005 | 0.007 | 0.006 | 0.004 | 0.002 | 0.007 | - |
| Magnesium (Mg)-Dissolved | mg/L | 0.05 | 7.53 | 12.20 | 15.10 | 17.80 | 19.80 | 23.80 | 21.50 | 20.80 | 0.05 | 2.80 | - |
| Manganese (Mn)-Dissolved | mg/L | 0.001 | 0.103 | 0.146 | 0.160 | 0.059 | 0.047 | 0.059 | 0.037 | 0.034 | 0.001 | 0.045 | - |
| Mercury (Hg)-Dissolved | mg/L | 0.0000019 | <0.0000019 | 0.0000025 | 0.0000035 | <0.0000019 | 0.0000027 | 0.0000026 | 0.0000029 | <0.0000019 | 0.0000019 | <0.0000019 | - |
| Molybdenum (Mo)-Dissolved | mg/L | 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 | mg/L | 0.001 | 0.007 | 0.010 | 0.011 | 0.012 | 0.012 | 0.012 | 0.010 | 0.012 | 0.001 | 0.012 | - |
| Nitrate (NO3)-Dissolved | mg/L | 0.89 | 11.00 | 24.00 | 30.00 | 28.00 | 31.00 | 30.00 | 24.00 | 22.00 | 1.8 | 26.0 | 96.0 |
| Nitrite (NO2)-Dissolved | mg/L | 0.0033 | 0.2200 | 0.6600 | 0.9800 | 0.6900 | 0.6600 | 0.6200 | 0.3900 | 0.2600 | 0.0033 | 0.3900 | 1.3000 |
| Potassium (K)-Dissolved | mg/L | 0.05 | 2.76 | 4.36 | 6.58 | 8.07 | 8.59 | 10.20 | 8.79 | 8.40 | 0.05 | 4.15 | - |
| Selenium (Se)-Dissolved | mg/L | 0.0001 | 0.0002 | 0.0004 | 0.0005 | 0.0006 | 0.0006 | 0.0007 | 0.0005 | 0.0005 | 0.0001 | <0.0001 | - |
| Silicon (Si)-Dissolved | mg/L | 0.1 | 0.9 | 1.0 | 1.3 | 0.7 | 0.4 | 0.1 | <0.1 | <0.1 | 0.1 | 0.4 | - |
| Silver (Ag)-Dissolved | mg/L | 0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | 0.00002 | <0.00002 | - |
| Sodium (Na)-Dissolved | mg/L | 0.05 | 1.61 | 2.32 | 3.29 | 3.94 | 4.32 | 5.30 | 5.04 | 4.93 | 0.05 | 2.87 | - |
| Strontium (Sr)-Dissolved | mg/L | 0.001 | 0.036 | 0.044 | 0.060 | 0.070 | 0.075 | 0.086 | 0.077 | 0.075 | 0.001 | 0.570 | - |
| Sulphur (S)-Dissolved | mg/L | 3 | 10 | 14 | 18 | 22 | 23 | 27 | 24 | 21 | 3 | 4 | - |
| Thallium (Tl)-Dissolved | mg/L | 0.00001 | <0.00001 | 0.00001 | 0.00002 | 0.00002 | 0.00003 | 0.00002 | 0.00002 | 0.00001 | 0.00001 | 0.00001 | - |
| Tin (Sn)-Dissolved | mg/L | 0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | 0.005 | <0.005 | - |
| Titanium (Ti)-Dissolved | mg/L | 0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | 0.005 | <0.005 | - |
| Uranium (U)-Dissolved | mg/L | 0.0001 | 0.0002 | 0.0004 | 0.0004 | 0.0004 | 0.0005 | 0.0006 | 0.0004 | 0.0004 | 0.0001 | <0.0001 | - |
| Vanadium (V)-Dissolved | mg/L | 0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | 0.005 | <0.005 | - |
| Zinc (Zn)-Dissolved | mg/L | 0.005 | <0.005 | 0.009 | 0.008 | 0.006 | <0.005 | <0.005 | <0.005 | <0.005 | 0.005 | 0.008 | - |
| Zirconium (Zr)-Dissolved | mg/L | 0.0001 | 0.0003 | 0.0002 | 0.0003 | 0.0003 | 0.0002 | 0.0002 | 0.0002 | 0.0002 | 0.0001 | <0.0001 | - |
| 1,1,1,2-tetrachloroethane | 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 |
| 1,1,1-trichloroethane | 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 |

| Station | Unit | BRP-10 Primary Water Pond | | | | | | | | | BRP-13 Plant Site Pond | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-06-16<br>16:10:00<br>C555627 | 2025-06-29<br>09:40:00<br>C558903 | 2025-07-14<br>12:00:00<br>C562725 | 2025-08-05<br>16:00:00<br>C568627 | 2025-08-11<br>13:45:00<br>C569779 | 2025-09-02<br>10:10:00<br>C575588 | 2025-09-17<br>14:10:00<br>C579800 | 2025-10-07<br>14:30:00<br>C585098 | Lowest Detection Limit | 2025-06-11<br>14:20:00<br>C554374 | 2025-08-01<br>13:35:00<br>C567939 |
| 1,1,2,2-tetrachloroethane | mg/L | 0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | 0.002 | <0.002 | <0.002 |
| 1,1,2-trichloroethane | 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 |
| 1,1-dichloroethane | 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 |
| 1,1-dichloroethene | 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 |
| 1,2,3-trichlorobenzene | 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 |
| 1,2,4-trichlorobenzene | 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 |
| 1,2,4-trimethylbenzene | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.0005 | 0.0006 | <0.0005 |
| 1,2-dibromoethane | 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 |
| 1,2-dichlorobenzene | 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 |
| 1,2-dichloroethane | 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 |
| 1,2-dichloropropane | 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 |
| 1,3,5-trichlorobenzene | 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 |
| 1,3,5-trimethylbenzene | 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 |
| 1,3-dichlorobenzene | 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 |
| 1,4-dichlorobenzene | 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 |
| Alkalinity (PP as CaCO3) | 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 |
| Alkalinity (Total as CaCO3) | mg/L | 0.5 | 7.7 | 9.9 | 16.8 | 35.3 | 30.3 | 54.8 | 43.4 | 48.5 | 0.5 | 6.3 | 7.3 |
| Ammonia (N)-Total | mg/L | 0.005 | 0.780 | 1.900 | 2.500 | 2.400 | 2.400 | 2.300 | 1.800 | 1.300 | 0.025 | 3.100 | 11.000 |
| Benzene | mg/L | 0.0004 | <0.0004 | 0.0004 | <0.0004 | <0.0004 | <0.0004 | <0.0004 | <0.0004 | <0.0004 | 0.0004 | <0.0004 | <0.0004 |
| Bicarbonate (HCO3) | mg/L | 0.5 | 9.4 | 12.1 | 20.5 | 43.0 | 37.0 | 66.9 | 52.9 | 59.2 | 0.5 | 7.7 | 8.9 |
| Bromodichloromethane | 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 |
| Bromoform | 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 |
| Bromomethane | mg/L | 0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | 0.002 | <0.002 | <0.002 |
| Carbon tetrachloride | 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 |
| Carbonate (CO3) | 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 |
| Chloride (Cl)-Dissolved | mg/L | 0.5 | 16.0 | 23.0 | 27.0 | 31.0 | 32.0 | 36.0 | 31.0 | 33.0 | 2.5 | 150.0 | 830.0 |
| Chlorobenzene | 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 |
| Chloroethane | 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 |
| Chloroform | 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 |
| Chloromethane | mg/L | 0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | 0.002 | <0.002 | <0.002 |
| Conductivity | µS/cm | 1 | 172 | 251 | 306 | 340 | 367 | 430 | 368 | 368 | 1 | 615 | 2890 |
| Cyanide (CN)-Free | mg/L | 0.0005 | - | - | - | - | - | - | 0.0041 | - | 0.0005 | 0.0022 | - |
| Cyanide (CN)-Strong Acid Dissoc. | mg/L | 0.0005 | 0.0108 | 0.0178 | 0.0108 | 0.0101 | 0.0108 | 0.0148 | 0.0100 | 0.0040 | 0.0005 | 0.0024 | - |
| Cyanide (CN)-Weak Acid Dissoc. | mg/L | 0.0005 | 0.0080 | 0.0146 | 0.0102 | 0.0087 | 0.0074 | 0.0076 | 0.0058 | 0.0025 | 0.0005 | 0.0026 | - |
| Dibromochloromethane | 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 |
| Dichloromethane | mg/L | 0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 | 0.002 | <0.002 | <0.002 |
| Ethylbenzene | mg/L | 0.0004 | <0.0004 | <0.0004 | <0.0004 | <0.0004 | <0.0004 | <0.0004 | <0.0004 | <0.0004 | 0.0004 | <0.0004 | <0.0004 |
| F1 (C6-C10) | mg/L | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | 0.1 | <0.1 | <0.1 |
| F1 (C6-C10) - BTEX | mg/L | 0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | 0.1 | <0.1 | <0.1 |

| Station | Unit | BRP-10 Primary Water Pond | | | | | | | | | BRP-13 Plant Site Pond | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-06-16 16:10:00 C555627 | 2025-06-29 09:40:00 C558903 | 2025-07-14 12:00:00 C562725 | 2025-08-05 16:00:00 C568627 | 2025-08-11 13:45:00 C569779 | 2025-09-02 10:10:00 C575588 | 2025-09-17 14:10:00 C579800 | 2025-10-07 14:30:00 C585098 | Lowest Detection Limit | 2025-06-11 14:20:00 C554374 | 2025-08-01 13:35:00 C567939 |
| Field Temperature | deg. C | - | 8.6 | - | 10.7 | 18.2 | 12.4 | 6.6 | 8.3 | 2.3 | - | - | 12 |
| Fluoride (F) | mg/L | 0.01 | 0.03 | 0.03 | 0.06 | 0.06 | 0.05 | 0.06 | 0.05 | 0.05 | 0.01 | 0.01 | 0.04 |
| Hardness (CaCO3)-Dissolved | mg/L | 0.5 | 58.7 | 87.0 | 110.0 | 128.0 | 138.0 | 164.0 | 148.0 | 144.0 | 0.5 | 211.0 | - |
| Hardness (CaCO3)-Total | mg/L | 0.5 | 63.3 | 91.0 | 113.0 | 132.0 | 143.0 | 162.0 | 147.0 | 161.0 | 0.5 | 208.0 | 1210.0 |
| Hydroxide (OH) | 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 |
| Methyl methacrylate | 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 |
| Methyl-tert-butyl ether (MTBE) | 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 |
| Nitrate (as N) | mg/L | 0.2 | 2.5 | 5.5 | 6.7 | 6.3 | 7.1 | 6.7 | 5.3 | 4.9 | 0.4 | 5.9 | 22.0 |
| Nitrate plus Nitrite (N) | mg/L | 0.2 | 2.6 | 5.7 | 7.0 | 6.6 | 7.3 | 6.9 | 5.4 | 5.0 | 0.4 | 6.0 | 22.0 |
| Nitrite (as N) | mg/L | 0.001 | 0.068 | 0.200 | 0.300 | 0.210 | 0.200 | 0.190 | 0.120 | 0.078 | 0.001 | 0.120 | 0.390 |
| Nitrogen (N)-Total | mg/L | 0.1 | 3.4 | 8.5 | 8.1 | 9.9 | 9.0 | 8.5 | 8.1 | 7.3 | 0.1 | 8.4 | 33.0 |
| Organic Carbon (C)-Dissolved | mg/L | 0.2 | 7.0 | 8.5 | 10.0 | 12.0 | 11.0 | 14.0 | 11.0 | 12.0 | 0.2 | 1.8 | - |
| Organic Carbon (C)-Total | mg/L | 0.2 | 6.0 | 8.9 | 9.8 | 11.0 | 12.0 | 13.0 | 12.0 | 13.0 | 0.2 | 1.5 | 6.8 |
| Redox Potential-Field | mV | - | 157.7 | - | 188.5 | 282.1 | 289.1 | 275 | 259.6 | 183.5 | - | - | 292 |
| Silica-Reactive | mg/L | 0.05 | 1.90 | 2.30 | 2.90 | 1.60 | 1.20 | 0.28 | <0.05 | <0.05 | 0.05 | - | 2.60 |
| Styrene | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | - | <0.0005 | <0.0005 | 0.0005 | <0.0005 | <0.0005 |
| Sulphate (SO4)-Dissolved | mg/L | 0.5 | 38.0 | 49.0 | 59.0 | 71.0 | 73.0 | 88.0 | 71.0 | 78.0 | 0.5 | 13.0 | 28.0 |
| Tetrachloroethene | 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 |
| Toluene | mg/L | 0.0004 | <0.0004 | <0.0004 | <0.0004 | <0.0004 | <0.0004 | <0.0004 | <0.0004 | <0.0004 | 0.0004 | <0.0004 | <0.0004 |
| Total Dissolved Solids_Calculated | mg/L | 10 | 96 | 140 | 180 | 210 | 220 | 260 | 210 | 220 | - | - | - |
| Total Dissolved Solids_Measured | mg/L | 10 | 120 | 160 | 200 | 230 | 230 | 270 | 210 | 200 | 10 | 520 | 1800 |
| Total Kjeldahl Nitrogen (Calc)-Total | mg/L | 0.2 | 0.8 | 2.8 | 1.1 | 3.4 | 1.8 | 1.7 | 2.6 | 2.3 | 0.4 | 2.4 | 10.0 |
| Total Oil and Grease | mg/L | 2 | <2 | <2 | 3 | <2 | <2 | <2 | <2 | <2 | 2 | - | 3 |
| Total Suspended Solids | mg/L | 0.97 | 19.00 | 2.60 | 2.30 | 2.50 | <1.00 | 3.00 | 3.40 | 6.30 | 1 | 1 | 2 |
| Total Trihalomethanes | mg/L | 0.0013 | <0.0013 | <0.0013 | <0.0013 | <0.0013 | <0.0013 | <0.0013 | <0.0013 | <0.0013 | 0.0013 | <0.0013 | <0.0013 |
| Trichloroethene | 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 |
| Trichlorofluoromethane | 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 |
| Turbidity | NTU | 0.1 | 20.0 | 6.8 | 4.3 | 4.6 | 0.2 | 3.0 | 2.8 | 6.5 | 0.1 | 5.2 | 3.0 |
| Un-Ionized Ammonia | mg/L | 0.0005 | 0.0011 | - | 0.0038 | 0.0120 | 0.0067 | 0.0057 | 0.0058 | 0.0048 | 0.0005 | - | 0.0096 |
| Vinyl chloride | 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 |
| Xylene, m+p-_Concentration | mg/L | 0.0008 | <0.0008 | <0.0008 | <0.0008 | <0.0008 | <0.0008 | <0.0008 | <0.0008 | <0.0008 | 0.0008 | <0.0008 | <0.0008 |
| Xylene, o-_Concentration | mg/L | 0.0004 | <0.0004 | <0.0004 | <0.0004 | <0.0004 | <0.0004 | <0.0004 | <0.0004 | <0.0004 | 0.0004 | <0.0004 | <0.0004 |
| Xylenes, total | mg/L | 0.00089 | <0.00089 | <0.00089 | <0.00089 | <0.00089 | <0.00089 | <0.00089 | <0.00089 | <0.00089 | 0.00089 | <0.00089 | <0.00089 |
| cis-1,2-dichloroethene | 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 |
| cis-1,3-dichloropropene | 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 |
| pH | pH Units | - | 6.54 | 7.11 | 6.57 | 6.87 | 7.54 | 7.69 | 6.94 | 6.41 | - | 6.53 | 6.43 |
| pH-Field | pH | - | 6.91 | - | 6.89 | 7.18 | 7.09 | 7.24 | 7.31 | 7.57 | - | - | 6.6 |
| trans-1,2-dichloroethene | 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 |
| trans-1,3-dichloropropene | 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 |

| Station | Unit | BRP-10 Primary Water Pond | | | | | | | | | BRP-13 Plant Site Pond | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date<br>Time<br>Lab Job Number<br>Parameter | | Lowest Detection Limit | 2025-06-16<br>16:10:00<br>C555627 | 2025-06-29<br>09:40:00<br>C558903 | 2025-07-14<br>12:00:00<br>C562725 | 2025-08-05<br>16:00:00<br>C568627 | 2025-08-11<br>13:45:00<br>C569779 | 2025-09-02<br>10:10:00<br>C575588 | 2025-09-17<br>14:10:00<br>C579800 | 2025-10-07<br>14:30:00<br>C585098 | Lowest Detection Limit | 2025-06-11<br>14:20:00<br>C554374 | 2025-08-01<br>13:35:00<br>C567939 |
| Aluminum (Al)-Total | mg/L | 0.003 | 0.563 | 0.222 | 0.097 | 0.049 | 0.048 | 0.072 | 0.038 | 0.069 | 0.003 | 0.165 | 0.087 |
| Antimony (Sb)-Total | mg/L | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | 0.0005 | <0.0005 | <0.0025 |
| Arsenic (As)-Total | mg/L | 0.0001 | 0.0033 | 0.0027 | 0.0031 | 0.0031 | 0.0032 | 0.0042 | 0.0034 | 0.0035 | 0.0001 | 0.0050 | 0.0047 |
| Barium (Ba)-Total | mg/L | 0.001 | 0.025 | 0.028 | 0.036 | 0.035 | 0.035 | 0.038 | 0.034 | 0.035 | 0.001 | 0.017 | 0.075 |
| Beryllium (Be)-Total | mg/L | 0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | 0.0001 | <0.0001 | <0.0005 |
| Bismuth (Bi)-Total | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | 0.001 | <0.001 | <0.005 |
| Boron (B)-Total | mg/L | 0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | 0.05 | <0.05 | <0.25 |
| Cadmium (Cd)-Total | mg/L | 0.00001 | 0.00002 | 0.00003 | 0.00003 | 0.00002 | 0.00001 | 0.00001 | 0.00001 | 0.00001 | 0.00001 | 0.00009 | 0.00027 |
| Calcium (Ca)-Total | mg/L | 0.05 | 11.40 | 15.30 | 19.50 | 22.20 | 23.60 | 26.00 | 23.90 | 26.50 | 0.05 | 77.50 | 472.00 |
| Chromium (Cr)-Total | mg/L | 0.001 | 0.002 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | 0.001 | 0.001 | <0.005 |
| Cobalt (Co)-Total | mg/L | 0.0002 | 0.0029 | 0.0035 | 0.0036 | 0.0019 | 0.0018 | 0.0024 | 0.0018 | 0.0020 | 0.0002 | 0.0017 | 0.0036 |
| Copper (Cu)-Total | mg/L | 0.0005 | 0.0047 | 0.0063 | 0.0058 | 0.0058 | 0.0052 | 0.0059 | 0.0051 | 0.0047 | 0.0005 | 0.0014 | <0.0025 |
| Iron (Fe)-Total | mg/L | 0.01 | 0.93 | 0.46 | 0.45 | 0.44 | 0.51 | 0.83 | 0.62 | 0.78 | 0.01 | 0.28 | 0.15 |
| Lead (Pb)-Total | mg/L | 0.0002 | 0.0006 | 0.0003 | 0.0002 | <0.0002 | <0.0002 | 0.0002 | <0.0002 | 0.0002 | 0.0002 | <0.0002 | <0.0010 |
| Lithium (Li)-Total | mg/L | 0.002 | 0.003 | 0.004 | 0.005 | 0.006 | 0.006 | 0.007 | 0.005 | 0.007 | 0.002 | 0.008 | 0.035 |
| Magnesium (Mg)-Total | mg/L | 0.05 | 8.42 | 12.80 | 15.60 | 18.50 | 20.40 | 23.70 | 21.30 | 22.90 | 0.05 | 3.49 | 7.56 |
| Manganese (Mn)-Total | mg/L | 0.001 | 0.116 | 0.158 | 0.170 | 0.067 | 0.055 | 0.061 | 0.042 | 0.043 | 0.001 | 0.047 | 0.088 |
| Mercury (Hg)-Total | mg/L | 0.0000019 | 0.0000024 | 0.0000033 | 0.0000050 | 0.0000027 | 0.0000024 | 0.0000027 | 0.0000034 | 0.0000029 | 0.0000019 | <0.0000019 | - |
| Molybdenum (Mo)-Total | mg/L | 0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | 0.001 | <0.001 | <0.005 |
| Nickel (Ni)-Total | mg/L | 0.001 | 0.010 | 0.011 | 0.012 | 0.013 | 0.012 | 0.013 | 0.010 | 0.011 | 0.001 | 0.013 | 0.024 |
| Phosphorus (P)-Total | mg/L | 0.001 | 0.013 | 0.013 | 0.007 | 0.009 | 0.011 | 0.022 | 0.030 | 0.035 | 0.001 | 0.001 | 0.001 |
| Potassium (K)-Total | mg/L | 0.05 | 2.96 | 4.55 | 6.67 | 8.02 | 8.50 | 10.00 | 8.82 | 9.41 | 0.05 | 4.42 | 17.00 |
| Selenium (Se)-Total | mg/L | 0.0001 | 0.0002 | 0.0004 | 0.0006 | 0.0006 | 0.0006 | 0.0007 | 0.0005 | 0.0006 | 0.0001 | 0.0001 | <0.0005 |
| Silicon (Si)-Total | mg/L | 0.1 | 1.5 | 1.3 | 1.4 | 0.8 | 0.5 | 0.2 | 0.2 | 0.2 | 0.1 | 0.6 | <0.5 |
| Silver (Ag)-Total | mg/L | 0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | <0.00002 | 0.00002 | <0.00002 | <0.00010 |
| Sodium (Na)-Total | mg/L | 0.05 | 1.39 | 2.40 | 3.42 | 4.14 | 4.44 | 5.45 | 4.97 | 5.39 | 0.05 | 2.88 | 13.20 |
| Strontium (Sr)-Total | mg/L | 0.001 | 0.039 | 0.047 | 0.063 | 0.068 | 0.078 | 0.081 | 0.079 | 0.078 | 0.001 | 0.550 | 2.400 |
| Sulphur (S)-Total | mg/L | 3 | 10 | 14 | 19 | 22 | 24 | 26 | 23 | 24 | 3 | <3 | <15 |
| Thallium (Tl)-Total | mg/L | 0.00001 | 0.00001 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0.00001 | 0.00001 | 0.00001 | <0.00005 |
| Tin (Sn)-Total | mg/L | 0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | 0.005 | <0.005 | <0.025 |
| Titanium (Ti)-Total | mg/L | 0.005 | 0.012 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | 0.005 | <0.005 | <0.025 |
| Uranium (U)-Total | mg/L | 0.0001 | 0.0003 | 0.0004 | 0.0004 | 0.0004 | 0.0005 | 0.0006 | 0.0004 | 0.0004 | 0.0001 | 0.0001 | <0.0005 |
| Vanadium (V)-Total | mg/L | 0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | 0.005 | <0.005 | <0.025 |
| Zinc (Zn)-Total | mg/L | 0.005 | 0.006 | 0.007 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | 0.005 | <0.005 | <0.025 |
| Zirconium (Zr)-Total | mg/L | 0.0001 | 0.0004 | 0.0004 | 0.0003 | 0.0002 | 0.0002 | 0.0002 | 0.0002 | 0.0002 | 0.0001 | 0.0002 | <0.0005 |

# APPENDIX F WASTE DISPOSAL

## Table F-1 Goose Waste Backhauled, 2025

| Date | Manifest # | UN | Description | Class | Quantity Shipped | Unit of Measure | Number | No, Containers (code) | Container Type |
|---|---|---|---|---|---|---|---|---|---|
| 06-12-2025 | NT25919-1 | 1044 | Compressed Gas- Fire Extinguishers | 2.2 | 295 | Kg | 3 | 59 | Each |
| | | NR | Non Regulated Solid - E Waste | NR | 305 | Kg | 7 | 2 | Skid |
| | | 3090 | Batteries – Lithium | 9 | 17 | Kg | 3 | 17 | KG |
| | | NR | Non Regulated Solid - Printer Cartridges | NR | 20 | Kg | 7 | 4 | Pail |
| | | NR | Non Regulated Solid - Hydraulic Hoses | NR | 250 | Kg | 5 | 2 | Mega Bag |
| | | NR | Soil Contaminated with Hydrocarbons | NR | 3000 | Kg | 5 | 3 | Mega Bag |
| | | NR | Waste Leachate - Mix | NR | 2000 | L | 7 | 2 | Tote |
| | | NR | Ammonium Hydroxide Solution Residual From Empty Pails | NR | 50 | Kg | 7 | 20 | Pail |
| 06-18-2025 | NT25145-3 | NR | Non Regulated Solid - Incinerator Ash | NR | 1600 | Kg | 1 | 32 | Drum |
| | | NR | Soil Contaminated with Hydrocarbons | NR | 2000 | Kg | 5 | 2 | Mega Bag |
| | | NR | Non Regulated Solid - Oil/ Fuel Filters | NR | 500 | Kg | 7 | 1 | Tote |
| 07-02-2025 | N/A | NR | Non Regulated Solid - Incinerator Ash | NR | 3150 | Kg | 63 | 1 | Drum |
| 07-11-2025 | NT23331-1 | NR | Waste Leachate - Mix | NR | 600 | L | 3 | 1 | Drum |
| 07-22-2025 | N/A | NR | Non Regulated Solid - Incinerator Ash | NR | 3150 | Kg | 63 | 1 | Drum |
| 07-25-2025 | NT21538-3 | NR | Non Regulated Solid - Oil/ Fuel Filters | NR | 3000 | Kg | 6 | 7 | Tote |
| | | NR | Non Regulated Solid - Scrap Metal | NR | 750 | Kg | 3 | 7 | Tote |
| | | NR | Non Regulated Solid - Oily Debris | NR | 99 | Kg | 1 | 7 | Tote |
| | | NR | Non Regulated Solid - Incinerator Ash | NR | 1200 | Kg | 24 | 1 | Drum |
| | | 1993 | Flammable Liquids, NOS | 3 | 600 | Kg | 3 | 1 | Drum |
| 08-08-2025 | NT25919-1 | 1044 | Compressed Gas- Fire Extinguishers | 2.2 | 295 | Kg | 59 | 3 | Box |
| | | 3090 | Batteries – Lithium | 9 | 17 | Kg | 17 | 3 | Pail |
| | | NR | Soil Contaminated with Hydrocarbons | NR | 3000 | Kg | 3 | 5 | Megabag |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | NR | Waste Leachate - Mix | NR | 2000 | L | 2 | 7 | Drum |
| 08-27-2025 | NT25299-8 | NR | Non Regulated Liquid - Petroleum Grease | NR | 1600 | L | 8 | 1 | Drum |
| | | NR | Non Regulated Solid - Empty Drums | NR | 480 | Kg | 32 | 1 | Drum |
| | | NR | Waste Leachate - Oil | NR | 2000 | L | 2 | 7 | Tote |
| | | NR | Waste Leachate - Mix | NR | 2000 | L | 2 | 7 | Tote |
| | | NR | Waste Leachate - Oil (from empty drums) | NR | 280 | L | 14 | 7 | Pail |
| 08-29-2025 | NT25261-8 | NR | Waste Leachate - Oil | NR | 2000 | L | 2 | 7 | Tote |
| | | NR | Waste Leachate - Mix | NR | 4000 | L | 4 | 7 | Tote |
| | | NR | Non Regulated Solid - Incinerator Ash | NR | 200 | Kg | 4 | 1 | Drum |
| 09-02-2025 | NT25346-7 | NR | Waste Leachate - Mix | NR | 10,000 | L | 10 | 7 | Tote |
| | | NR | Waste Leachate - Glycol | NR | 1000 | L | 1 | 7 | Tote |
| | | NR | Waste Leachate - Oil | NR | 1000 | L | 1 | 7 | Tote |
| | | NR | Non Regulated Solid - Incinerator Ash | NR | 400 | Kg | 8 | 1 | Drum |
| | | 1993 | Flammable Liquids, NOS | 3 | 200 | L | 1 | 1 | Drum |
| | | NR | Non Regulated Solid - Saturated Rags | NR | 400 | Kg | 4 | 1 | Drum |
| | | NR | Waste Leachate - Mix | NR | 200 | L | 1 | 1 | Drum |
| 09-04-2025 | N/A | NR | Non Regulated Contaminated Solids - Ash | NR | - | - | 83 | - | Drums |
| 09-22-2025 | N/A | NR | Other – Ashes | NR | - | - | 44 | - | Drums |
| 09-30-2025 | N/A | NR | Non Regulated Solid - Hydraulic Hoses | NR | 1050 | Kg | 3 | 7 | Tote |
| | | NR | Non Regulated Solid - Oily Debris | NR | 1250 | Kg | 5 | 7 | Tote |
| | | NR | Non Regulated Solid - Oil/ Fuel Filters | NR | 1500 | Kg | 3 | 7 | Tote |
| | | NR | Empty Drum | NR | 160 | Kg | 16 | 1 | Drum |
| | | NR | Waste Leachate - Mix | NR | 20 | L | 3 | 7 | Pail |
| | | NR | Non Regulated Solid - Sugar | NR | 348 | Kg | 2 | 1 | Drum |
| 09-30-2025 | NT25377-2 | NR | Waste Leachate - Mix | NR | 20 | L | 3 | 7 | Drum |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 11-01-2025 | NT24164-5 | 1870 | Potassium Borohydride- Water Reactive | 4.3 | 7 | Kg | 1 | 7 | Pail |
| 11-01-2025 | NT24147-0 | NR | Non Regulated Solid - Incinerator Ash | NR | 1600 | Kg | 32 | 1 | Drum |
| | | NR | Non Regulated Solid - Oil/ Fuel Filters | NR | 100 | Kg | 1 | 1 | Drum |
| | | NR | Waste Leachate - Glycol | NR | 200 | L | 1 | 1 | Drum |
| | | NR | Non Regulated Liquid - Petroleum Grease | NR | 200 | L | 1 | 1 | Drum |
| 11-26-2025 | NT24161-1 | NR | Waste Leachate - Glycol | NR | 800 | L | 4 | 1 | Drum |
| | | NR | Waste Leachate - Glycol | NR | 1000 | L | 1 | 7 | Tote |
| | | NR | Non Regulated Solid - Hoses | NR | 600 | Kg | 1 | 7 | Tote |
| | | NR | Non Regulated Liquid - Kitchen Grease | NR | 1000 | L | 1 | 7 | Tote |
| | | NR | Non Regulated Solid - Oily Debris | NR | 400 | Kg | 1 | 7 | Tote |
| | | NR | Non Regulated Solid - Incinerator Ash | NR | 50 | Kg | 4 | 1 | Drum |
| 12-09-2025 | NT24252-8 | NR | Waste Leachate - Mix | NR | 7000 | L | 7 | 7 | Tote |
| | | NR | Water Contaminated with Hydrocarbons | NR | 3000 | L | 3 | 7 | Tote |
| | | NR | Waste Leachate - Glycol | NR | 1000 | L | 1 | 7 | Tote |
| 12-09-2025 | NT24253-6 | NR | Water Contaminated with Hydrocarbons | NR | 2000 | L | 2 | 7 | Tote |
| | | NR | Waste Leachate - Mix | NR | 1000 | L | 1 | 7 | Tote |
| 12-16-2025 | NT24251-0 | NR | Waste Leachate - Mix | NR | 4000 | L | 4 | 7 | Tote |
| | | NR | Contaminated Snow | NR | 1000 | L | 1 | 7 | Tote |

**Notes:**

NR = not regulated as a dangerous good for transport

L = liters

Kg = kilograms

## Table F-2 MLA Waste Backhauled, 2025

| Date Shipped | Manifest # | UN | Description | Class | Quantity Shipped | Unit of Measure | Number | Container Type |
|---|---|---|---|---|---|---|---|---|
| 2025-01-09 | Not provided | NR | Incinerator ash | NR | 1,742 | Kg | 3 | Skid |
| 2025-02-12 | Not provided | NR | 4 drums ash | NR | 544 | Kg | 1 | Pallet |
| 2025-03-21 | Not provided | NR | Contaminated snow (diesel) | NR | 3,363 | Kg | 10 | Mega-bag |
| 2025-03-23 | Not provided | NR | Incinerator ash | NR | 572 | Kg | 1 | Pallet |
| 2025-03-23 | Not provided | NR | Contaminated snow | NR | 3,332 | Kg | 8 | Mega-bag |
| 2025-03-23 | Not provided | NR | Sheet rock | NR | 281 | Kg | 1 | Pallet |
| 2025-03-27 | Not provided | NR | Ashes, drywall | NR | 1,529 | Kg | 3 | Pallet |
| 2025-03-28 | Not provided | NR | Incinerator ash | NR | 517 | Kg | 1 | Pallet |
| 2025-04-27 | Not provided | NR | Contaminated water | NR | 3,017 | Kg | 3 | Tote |
| 2025-04-27 | Not provided | NR | Contaminated water | NR | 2,937 | Kg | 3 | Tote |
| 2025-04-29 | Not provided | NR | Contaminated water | NR | 1,142 | Kg | 1 | Tote |
| 2025-04-29 | Not provided | NR | Contaminated water | NR | 1,123 | Kg | 1 | Tote |
| 2025-04-29 | Not provided | NR | Contaminated water | NR | 1,077 | Kg | 1 | Tote |
| 2025-04-29 | Not provided | NR | Contaminated water | NR | 1,123 | Kg | 1 | Tote |
| 2025-04-30 | Not provided | NR | Contaminated water | NR | 1,031 | Kg | 1 | Tote |
| 2025-04-30 | Not provided | NR | Contaminated water | NR | 1,127 | Kg | 1 | Tote |
| 2025-04-30 | Not provided | NR | Contaminated water | NR | 1,139 | Kg | 1 | Tote |
| 2025-04-30 | Not provided | NR | Contaminated water | NR | 1,356 | Kg | 1 | Tote |
| 2025-05-03 | Not provided | NR | 5 x totes filters 2 x pallets 7 drums filters 1 x tote hoses | NR | 3,789 | Kg | 8 | Pallet/tote |
| 2025-05-06 | Not provided | NR | 4 x drums per pallet of ash | NR | 2,245 | Kg | 4 | Pallet |
| 2025-05-10 | Not provided | NR | Used coolant, 4 drums ash on pallet | NR | 3,564 | Kg | 4 | Pallet/tote |
| 2025-05-12 | Not provided | NR | Used coolant | NR | 3,537 | Kg | 3 | Tote |
| 2025-05-13 | Not provided | NR | Used coolant | NR | 1,080 | Kg | 1 | Pallet |

| Date Shipped | Manifest # | UN | Description | Class | Quantity Shipped | Unit of Measure | Number | Container Type |
|---|---|---|---|---|---|---|---|---|
| 2025-06-21 | Not provided | NR | Contaminated water | NR | 3,096 | Kg | 4 | Tote |
| 2025-06-23 | Not provided | NR | Contaminated water | NR | 4,249 | Kg | 5 | Tote |
| 2025-06-23 | Not provided | NR | Used coolant/8 drums of ash | NR | 3,611 | Kg | 4 | Pallet/tote |
| 2025-06-24 | Not provided | NR | 4 drums of ash | NR | 574 | Kg | 1 | Pallet |
| 2025-06-30 | Not provided | NR | 6 x mega bags drywall 4 drums of ash 1 pallet | NR | 1,745 | Kg | 7 | Mega-bag/drum/pallet |
| 2025-07-26 | Not provided | NR | 4 x drums of ash | NR | 611 | Kg | 1 | Pallet |
| 2025-08-26 | Not provided | NR | 4 drums ashes | NR | 552 | Kg | 1 | Pallet |
| 2025-08-28 | Not provided | NR | Waste fluid coolant for disposal | NR | 1,128 | Kg | 1 | Tote |
| 2025-08-31 | Not provided | NR | 4 X drums ashes | NR | 569 | Kg | 1 | Pallet |
| 2025-09-30 | Not provided | NR | 4 x drums of ash | NR | 570 | Kg | 1 | Skid |
| 2025-10-05 | Not provided | NR | 4 x drums of ash | NR | 544 | Kg | 1 | Skid |
| 2025-11-06 | Not provided | NR | 4 x drums of ash | NR | 567 | Kg | 1 | Pallet |
| 2025-11-06 | Not provided | NR | 4 x drums of Waste coolant | NR | 885 | Kg | 1 | Pallet |
| 2025-11-10 | Not provided | NR | 1 x tote of Waste coolant | NR | 1,082 | Kg | 1 | Tote |
| 2025-12-29 | Not provided | NR | Ash waste (4 drums on pallet) | NR | 573 | Kg | 4 | Drum |

**Notes:**

NR = not regulated as a dangerous good for transport

Kg = kilograms

## Table F-3 Goose Incinerator and Open Burn Log, 2025

| Month | Incinerator | | | Ash (lbs) | Waste Oil to Furnace (L) | Open Burn ($m^3$) |
|---|---|---|---|---|---|---|
| | Food Waste (lbs) | Human Waste (lbs) | Miscellaneous (lbs) | | | |
| January | 38,078 | 6,440 | 30,229 | 8,095* | 0 | 330 |
| February | 42,281 | 5,718 | 32,884 | 8,759* | 0 | 418 |
| March | 25,533 | 6,327 | 35,569 | 7,302* | 12440 | 1,453 |
| April | 43,664 | 12,031 | 39,949 | 10,358* | 2070 | 546 |
| May | 30,480 | 5,547 | 29,157 | 7,059* | 1450 | 914 |
| June | 27,704 | 4,907 | 33,429 | 7,152* | 0 | 944 |
| July | 29,587 | 6,986 | 36,892 | 8,722 | 0 | 1,359 |
| August | 39,769 | 7,256 | 36,779 | 8,634 | 0 | 1,434 |
| September | 35,698 | 5,982 | 37,843 | 8,202 | 4,928 | 685 |
| October | 44,527 | 8,080 | 54,571 | 11,607* | 6,337 | 1,315 |
| November | 41,260 | 4,731 | 47,839 | 10,161* | 5,070 | 462 |
| December | 49,713 | 4,355 | 44,048 | 10,626* | 3,590 | 427 |
| **Total** | **448,294** | **78,360** | **459,189** | **106,677** | **35,885** | **10,287** |

**Note:**

*Ash data were estimated from the average number of pounds of ash generated per pound of waste incinerated from July to September 2025.

## Table F-4 MLA Incinerator and Open Burn Log, 2025

| Month | Incinerator | | | Ash (lbs) | Waste Oil to Furnace (L) | Open Burn ($m^3$) |
|---|---|---|---|---|---|---|
| | Food Waste (lbs) | Human Waste (lbs) | Miscellaneous (lbs) | | | |
| January* | 2,000 | 600 | 1,200 | 10 | - | 0 |
| February | 56,600 | 25,100 | 24,700 | 1,800 | - | 0 |
| March | 50,950 | 26,160 | 17,800 | 1,350 | - | 2,000 |
| April | 34,900 | 17,600 | 9,150 | 1,945 | - | 6,000 |
| May | 10,800 | 5,400 | 6,800 | 575 | - | 49,500 |
| June | 14,700 | 11,100 | 10,850 | 1,415 | - | 11,000 |
| July | 12,180 | 9,250 | 9,650 | 1,165 | - | 0 |
| August | 12,675 | 11,175 | 7,995 | 1,325 | - | 0 |
| September | 12,510 | 11,465 | 10,752 | 1,598 | 1,860 | 0 |
| October | 10,565 | 9,425 | 11,545 | 1,572 | 3,720 | 0 |
| November | 9,080 | 8,905 | 9,472 | 1,274 | 6,520 | 1,550 |
| December | 10,200 | 10,465 | 10,330 | 1,473 | 10,000 | 3,840 |
| **Total** | **237,160** | **146,645** | **130,244** | **15,502** | **22,100** | **73,890** |

**Note:**

*Values presented for January represent data recorded on January 31, 2025, no data are available for January 1 to 30, 2025.

- = data not available

## Table F-5 Volumes of Waste Landfilled, 2025

| Month | Waste Volume ($m^3$) | Waste Volume ($m^3$) |
|---|---|---|
| | Echo WRSA Landfill | Umwelt WRSA Landfill |
| January | 620* | 0 |
| February | 560* | 0 |
| March | 260 | 0 |
| April | 575 | 0 |
| May | 667 | 0 |
| June | 1,020 | 0 |
| July | 3,252 | 0 |
| August | 458 | 326 |
| September | 0 | 669 |
| October | 0 | 786 |
| November | 0 | 804 |
| December | 0 | 486 |
| **Total** | **7,412** | **3,071** |

**Note:**
*Volumes of waste landfilled were estimated as 20 $m^3$ per day.

## Table F-6 Greywater and Sewage Discharge Volumes, 2025

| Month | Goose Mine | MLA Accommodations Complex | Goose Forward Camp | MLA Forward Camp |
|---|---|---|---|---|
| | Sewage Discharge ($m^3$) | Greywater Discharge ($m^3$) | Greywater Discharge ($m^3$) | Greywater Discharge ($m^3$) |
| January | 3,614 | 501 | 175 | 119 |
| February | 3,460 | 1,011 | 350 | 140 |
| March | 3,399 | 1,514 | 490 | 107 |
| April | 3,477 | 1,066 | 238 | 28 |
| May | 4,167 | 438 | 0 | 0 |
| June | 4,740 | 439 | 0 | 0 |
| July | 5,048 | 443 | 0 | 0 |
| August | 4,695 | 563 | 0 | 0 |
| September | 4,400 | 673 | 0 | 0 |
| October | 4,570 | 460 | 0 | 0 |
| November | 4,293 | 455 | 0 | 0 |
| December | 4,133 | 501 | 0 | 119 |
| **Total** | **49,996** | **8.064** | **1,253** | **513** |

**Note:**

Greywater for MLA Accommodations Complex is estimated as 200 litres per person per day.

Greywater for the Goose and MLA Forward camps is estimated as 100% of freshwater supplied to the camp.

## Table F-7 Volumes Placed in the Echo Tailings Facility, 2025

| Month | Tailings Slurry Volume ($m^3$) | Water from Primary Pond ($m^3$) | Dry Tailings ($m^3$) |
|---|---|---|---|
| January | 0 | 0 | 0 |
| February | 0 | 0 | 0 |
| March | 0 | 0 | 0 |
| April | 0 | 0 | 0 |
| May | 0 | 0 | 0 |
| June | 59,300 | 0 | 5,754 |
| July | 151,170 | 0 | 22,094 |
| August | 127,307 | 0 | 16,128 |
| September | 248,403 | 0 | 46,973 |
| October | 276,228 | 48,482 | 53,062 |
| November | 380,877 | 10,765 | 42,253 |
| December | 95,871 | 0 | 36,134 |
| **Total** | **1,339,156** | **59,247** | **222,398** |

**Notes:**

Volumes for tailings slurry are based on survey data for the Echo Tailings Facility thus include rainwater and snow volumes.

Volumes for dry tailings are equivalent to the volume of ore processed and represent the dry portion of the tailings slurry volume.

# APPENDIX G REPORTABLE SPILLS RECORD

**Table G-1 Reportable Spills, 2025**

| Date (D-MMM-YY) | Product Spilled | Quantity | Spill Description | Site | Approximate Location | NT-NU Spill # | Mitigation (how was the spill cleaned up) |
|---|---|---|---|---|---|---|---|
| 1-JAN-25 | Hydraulic Oil | 110 L | A main hydraulic hose failed spilling approximately 110L of hydraulic oil. The unit was shutdown and absorbent pads were used to contain the spill. The oil soaked into the ice/snow 3 inches (max) | Goose Mine | Tire Laydown (across from Maintenance) N65.543140 E106.490366 | 2025013 | Spill pads deployed to soak up material on surface of snow. Occurred on night shift. Excavator used to scrape up material and put into one lined mega-bag. Mega-bag was moved to a hazardous waste containment to be melted down and treated in the spring. |
| 13-JAN-25 | Hydraulic Oil | 25 L | Wear and tear of hoses on snowcat. Incidentally released 25 L of hydraulic oil onto Bathurst Lake. | WIR | Bathurst Lake N66.301405 E107.206731 | 2025047 | Spill tray was placed immediately to prevent additional spillage. Once machine was able to be moved, all remaining oil was cleaned using spill pads and all contaminated snow and ice that was cleaned up was put into Mega-bags. These were then brought to camp where it was incinerated. |
| 03-MAR-25 | Diesel | 400 L | Winter Ice Road truck jackknifed and the fuel trailer tipped over releasing approximately 400L of diesel to the snow. | Winter Ice Road | Winter Ice Road – KM 97 N66.3191 E107.223330556 | 2025218 | A poly liner was laid down immediately, and the tank lid was strapped closed to prevent further leakage. Spill pads and snakes were deployed to absorb as much standing fuel as possible. Equipment was used to remove the majority of the contaminated snow, which was then backhauled to MLA for treatment. |
| 17-MAR-25 | Diesel, plastic, rubber | <20 L | Semitruck caught fire on Bathurst Lake. It was hauling a tanker full of diesel, but the tanker was not compromised. Minimal fluids were released to the | Winter Ice Road (Lake 34 – Bathurst Lake) | N66.3191 E-107.223330556 | 2025218 | Grader scraped up what was left (black ice). Contaminated ice and snow were brought back to MLA to be treated in the spring. Used spill pads were incinerated. |

| Date (D-MMM-YY) | Product Spilled | Quantity | Spill Description | Site | Approximate Location | NT-NU Spill # | Mitigation (how was the spill cleaned up) |
|---|---|---|---|---|---|---|---|
| | | | ice (initial reports of less than 20 L) | | | | |
| 01-APR-25 | Diesel | 150 L | A spill was noticed during an inspection. Cleanup began immediately after. The contaminated snow and soil was scraped up and placed into mega-bags for treatment. | Goose | Underground Fueling Station<br>N65.542308<br>E-106.491589 | 2025153 | The spill was scraped up and placed into lined mega-bags and taken to a secondary containment for future treatment. |
| 14-APR-25 | Diesel | 140 L | A semi-truck heading northbound on Portage 25 jack knifed into the ditch which caused the tanker behind it to puncture and release diesel to the snow. | Winter Ice Road | Portage 25<br>N66.19451<br>E-107.132833 | 2025178 | Driver immediately isolated the LH tank and mechanics pumped all remaining fuel in the RH (damaged) tank. Truck was pulled out of the incident site - MLA coordinated a loader to remove as much contaminated snow as possible and backhauled the snow to MLA to be treated. |
| 28-APR-25 | Hydraulic Oil | 250 L | An operator accidentally punctured a seacan at the new warehouse location, which punctured a tote inside and released approximately 500L inside the seacan. | Goose | New Warehouse<br>N65.546514<br>E-106.512868 | 2025194 | Contaminated rock and snow were excavated and put into lined mega-bags for eventual treatment. |
| 01-MAY-25 | Hydraulic Oil | 190 L | Lube truck was parked outside of shop, when operator came back out he found oil on the ground and leaking out of truck. Drain | Goose | Maintenance Shop<br>N65.542342<br>E-106.490276 | 2025200 | Oil on ground was sucked up with vacuum; excavator was used to clean up ground and enviro bags were used for storage. Mega-bags were placed in lined area for future treatment. |

| Date (D-MMM-YY) | Product Spilled | Quantity | Spill Description | Site | Approximate Location | NT-NU Spill # | Mitigation (how was the spill cleaned up) |
|---|---|---|---|---|---|---|---|
| | | | pans were put down under truck to catch remaining oil leaking from unit, containment berm was made with shovels and ground material to stop further oil travel. Oil absorbent was put down, standing oil was sucked up with lube trucks waste oil system. Oil spill was caused by ruptured of oil tank. Cause of tank rupture will need to be investigated as it ruptured from the inside out. | | | | |
| 03-MAY-25 | Ammonium Nitrate | 50 kg | Removing Ammonium Nitrate (AN) bags from seacan using a telehandler, bags caught on inside of seacan and ripped open releasing approximately 50 kg to the ground. | Goose | Magazine Road | TBD | Product was shovelled up and placed in mini-bulk bags for shipment off-site. |
| 04-JUN-25 | Diesel | 5 L | Diesel sheen observed on Goose Lake adjacent to freshwater barge. Residual spillage from refueling operations have now | Goose | Freshwater Barge<br>N65.543689<br>E-106.28711500 | 2025250 | Hydrocarbons sucked with suction pump; oil only booms deployed to capture and retain sheen from spreading. Clean up progressed and environment monitored the shoreline for the next few weeks to confirm that all sheen has been removed from the shoreline prior to removing |

| Date (D-MMM-YY) | Product Spilled | Quantity | Spill Description | Site | Approximate Location | NT-NU Spill # | Mitigation (how was the spill cleaned up) |
|---|---|---|---|---|---|---|---|
| | | | leached through the pad and into the lake. Grey booms were deployed to contain the spill initially, but environment directed white oil only booms be used. Clean up in progress. Hydrocarbon sheen removed using suction pump. | | | | the containment booms. Contaminated materials were transported to the incinerator for disposal. |
| 17-JUN-25 | Diesel | 500 L | On June 17, 2025, at 12:15 MDT, a fuel truck, while reversing to refuel an excavator in the Umwelt Pit, made contact with an unseen rock ridge, approximately 6 to 8 inches in height. This contact caused the truck to bottom out, rupturing fuel dispensing lines located beneath the vehicle. Approximately 500 liters of diesel fuel were released onto the ground, which consisted of fractured rock within Umwelt Pit. Initial response included using a | Goose | Umwelt Pit<br>N65.553224<br>E -106.517039 | 2025259 | Unrecoverable - in a planned blast pattern and anticipated to ignite during planned blast activities. |

| Date (D-MMM-YY) | Product Spilled | Quantity | Spill Description | Site | Approximate Location | NT-NU Spill # | Mitigation (how was the spill cleaned up) |
|---|---|---|---|---|---|---|---|
| | | | small lid from a 45-gallon spill kit to capture dripping fuel from under the truck as well as spill pads to capture free product on surface. Some fuel seeped through the coarse textured material in this area, but remained local to the open pit area, is expected to be confined to a shallow depth and will be recoverable upon further blasting and excavation. A nearby lube truck was promptly dispatched to transfer the remaining fuel from the damaged truck. | | | | |
| 20-OCT-25 | Wet Slurry (PAG) | 200 L | During a plant upset in the grinding secondary circuit, regrind cyclone #8 was opened by mistake, which increased the volume of the plant surge. | Goose | Grinding Trash Screen (Mill) | 2025376 | Small loader and skid steer used to scrape up material for re-processing through the primary crusher for treatment. |
| 01-NOV-25 | Tailings Slurry | 7,000 L | There was a communications error (comms fault) on the DCS (Mill control computer), and the final tailings pump, as | Goose | Process Plant N65.542530 E-106.509745 | 2025427 | The clean-up effort included scraping up slurry off the ground and dumping it into the temporary berm erected on the east side of the Mill. Also used a pump to pump as much slurry as possible ~1000L back into containment. On December 6 the remaining frozen ice and |

| Date (D-MMM-YY) | Product Spilled | Quantity | Spill Description | Site | Approximate Location | NT-NU Spill # | Mitigation (how was the spill cleaned up) |
|---|---|---|---|---|---|---|---|
| | | | well as other Mill equipment, shut down. The Mill control room operator neglected to turn the pump back on once. The pump box overfilled, then the berm overfilled, which caused the slurry to go out of containment. | | | | contaminated soil was excavated and stored in mega-bags within lined area for future treatment in the spring or to be backhauled off site to be properly disposed of. |
| 30-NOV-25 | Coolant | 1,000 L | Operator put a fork through the side of a seacan and pierced a tote inside. Fluid then leaked out the back side of the seacan. Operator reported right away. Spill pads were deployed and a spill tray at the entry point where the forks pierced the sea can. | Goose | Winter Ice Road Laydown #4<br>N65.546944<br>E−106.508333 | 2025448 | Spill pads were deployed and a spill tray at the entry point of the fork. Contaminated material was placed into lined mega-bags. A lube truck was called to remove free product from the ground and sea can. This free product was transferred into a 1,000L tote for off-site disposal. |

# APPENDIX H MONITORING PROGRAM ACTIVITY OVERVIEW BY STATION

## Table H-1 Monitoring Activity Overview by Station, 2025

| Monitoring Program Station | Monitoring Type | Description | Mine Phase | Group Code* | Frequency | Monitoring Activity |
|---|---|---|---|---|---|---|
| BRP-G-01 to BRP-G-TBD | Regulated Monitoring | General Site Runoff Surficial runoff anywhere at both Goose Property and MLA, including quarries; monitoring for erosion and sedimentation. | Construction | C | Weekly if flow enters a waterbody | Active. See Section 2.6 and Appendix E |
| BRP-S-01 to BRP-S-TBD | General Monitoring | General Seeps Seepage or runoff from excavated and/or stockpiled material anywhere at both Goose Property and MLA, including quarries, that does not gather into a collection system or the site is reclaimed. | Construction and Operations | A, D | Monthly during flow, or as found | Active. See Section 2.6 and Appendix E |
| BRP-01 | Regulated Monitoring | Goose Lake Discharge (discharge point for release of dewatering effluent with or without treatment) | Construction | A, B, G | Weekly during dewatering | Active. See Section 2.6 and Appendix E |
| | | | | D | Four times during dewatering, at the same time as the weekly samples | |
| | | | | H | Once per month during dewatering, at the same time as Group D | |
| | | | | I | One time during dewatering, at the same time as Group D | |
| BRP-02 | General Monitoring | Llama Lake (intake point for dewatering, triggers need for treatment prior to discharge at BRP-01) | Construction | C (TSS only) | Weekly if treatment is required; no sample if treatment is not required | Active. See Section 2.6 and Appendix E |
| BRP-03 | Verification Monitoring | Llama Pit (representative of collected pit water prior to transfer to tailings management facility) | Operations Stage 1 to Operations Stage 2 | A, G | At Licensee's discretion | N/A – facility not commissioned |
| BRP-04 | General Monitoring | Llama Pit Lake (representative of flooded pit during flooding and before overflow to the downstream environment) | Closure* to Post-Closure | A, D | Twice per year | N/A – mine phase |
| BRP-05 | Verification Monitoring | Llama WRSA Pond (representative of collected water quality) | Operations Stage 1 to Closure | A, G | At Licensee's discretion | N/A – facility not commissioned |

| Monitoring Program Station | Monitoring Type | Description | Mine Phase | Group Code* | Frequency | Monitoring Activity |
|---|---|---|---|---|---|---|
| BRP-06 | General Monitoring | Umwelt Lake (intake point for dewatering, triggers need for treatment prior to discharge at BRP-01) | Construction | C (TSS only) | Weekly if treatment is required; no sample if treatment is not required | Active. See Section 2.6 and Appendix E |
| BRP-07 | Verification Monitoring | Umwelt Pit (representative of collected pit water prior to transfer to tailings management facility) | Construction to Operations Stage 2 | A, G | At Licensee's discretion | N/A – pit construction was initiated in early 2025; no transfer this month |
| BRP-08 | General Monitoring | Umwelt Pit Lake (representative of flooded pit during flooding and before overflow to the downstream environment) | Closure to Post-Closure | A, D | Twice per year | N/A – mine phase |
| BRP-09 | Verification Monitoring | Umwelt WRSA Pond (representative of collected water quality, including landfill seepage/runoff) | Construction to Closure (early)* | A, G | At Licensee's discretion | N/A – facility not commissioned |
| BRP-10 | Verification Monitoring | Primary Water Pond (representative of collected water quality) | Construction to Closure (early) | A, D | At Licensee's discretion | Active. See Section 2.6 and Appendix E |
| BRP-11 | Verification Monitoring | Saline Water Pond (representative of stored water quality) | Construction (late) to Closure (early) | A, D | At Licensee's discretion | N/A – facility not commissioned |
| BRP-12 | General Monitoring | Big Lake Intake (intake point for potable and industrial water withdrawal) | Construction to Closure | A, D | Four times per year | N/A – facility not commissioned |
| | | | | B | Weekly | |
| BRP-13 | Verification Monitoring | Ore Stockpile Pond (representative of collected water quality) | Construction to Closure (early) | A, D | At Licensee's discretion | Active. See Section 2.6 and Appendix E |
| BRP-14 | Verification Monitoring | ANFO Plant (representative of collected water quality) | Construction to Closure | A, E | At Licensee's discretion | N/A – facility not commissioned |
| BRP-15 | Regulated Monitoring | Goose Fuel Tank Farm (representative of collected water quality) | Construction to Closure | A, E | Prior to discharge or transfer of water | N/A – no discharge in 2025 |
| BRP-16 | Regulated Monitoring | Goose Hazardous Waste Management Area (representative of collected water quality) | Construction to Closure | A, E | Prior to discharge or transfer of water | N/A – facility not commissioned |
| BRP-17 | Regulated Monitoring | Goose Property Sewage Treatment Plant (treated sewage discharge/drainage immediately prior to the point of entry into freshwater) | Construction to Closure | A, F | Monthly | Active. See Section 2.6 and Appendix E |

| Monitoring Program Station | Monitoring Type | Description | Mine Phase | Group Code* | Frequency | Monitoring Activity |
|---|---|---|---|---|---|---|
| BRP-17A | Regulated Monitoring | Goose Property Sewage Treatment Plant (discharge point for treated sewage into Tailings Storage Facility or Tailing Facility) | Construction to Closure* | A, F | Prior to discharge | N/A – no STP discharge to the Tailings Storage Facility or Tailing Facility |
| BRP-18 | General Monitoring | Llama Watershed Outflow (representative of non-contact water, PN04 from Water and Load Balance) | Operations Stage 1 to Closure | A, D | Once during freshet and monthly during upstream construction while visible flow is present at the stations | Active. See Section 2.6 and Appendix E |
| BRP-19 | General Monitoring | Echo Outflow (representative of non-contact water). PN09 from water and load balance | Operations Stage 1 to Closure | A, D | Once during freshet and monthly during upstream construction while visible flow is present at the stations | Active. See Section 2.6 and Appendix E |
| BRP-20 | Verification Monitoring | Echo Pit (representative of collected pit water prior to transfer to tailings management facility) | Operations Stage 2 | A, G | At Licensee's discretion | N/A – mine phase |
| BRP-21 | General Monitoring | Echo Pit Lake (representative of flooded pit during flooding and before overflow to the downstream environment) | Closure to Post-Closure | A, D | Twice per year | N/A – mine phase |
| BRP-22 | Verification Monitoring | Echo WRSA Pond (representative of collected water quality) | Operations Stage 2 to Closure (early) | A, G | At Licensee's discretion | N/A – mine phase |
| BRP-23 | General Monitoring | Gander Pond Outflow (representative of non-contact water, PN07 from Water and Load Balance) | Operations Stage 1 to Closure | A, D | Once during freshet and monthly during upstream construction while visible flow is present at the stations | Active. See Section 2.6 and Appendix E |
| BRP-24 | General Monitoring | Goose Lake Intake (intake point for potable and industrial water withdrawal) | Operations Stage 1 to Closure (early) | B | Weekly | Active. Flow metered continuously and monthly volume reported in Section 2.2 |
| BRP-25 | Verification Monitoring | Goose Pit (representative of collected pit water prior to transfer to tailings management facility) | Operations Stage 1 to Operations Stage 2 | A, G | At Licensee's discretion | N/A – facility not commissioned |

| Monitoring Program Station | Monitoring Type | Description | Mine Phase | Group Code* | Frequency | Monitoring Activity |
|---|---|---|---|---|---|---|
| BRP-26 | General Monitoring | Goose Pit Lake (representative of flooded pit during flooding and before overflow to the downstream environment) | Closure* to Post-Closure | A, D | Twice per year | N/A – mine phase |
| BRP-27 | Verification Monitoring | Goose Main Tailings Facility (intake point for water treatment, represents pre- treatment water quality) | Operations Stage 3 to Closure | A, G | At Licensee's discretion | N/A – mine phase |
| BRP-28 | Verification Monitoring | Goose Main Tailings Facility (discharge point for water treatment, represents post-treatment water quality) | Operations Stage 3 to Closure | A, G | At Licensee's discretion | N/A – mine phase |
| BRP-29 | Verification Monitoring | TSF WRSA Pond (representative of collected water quality, including landfill seepage/runoff) | Operations Stage 1 to Closure | A, G | At Licensee's discretion | N/A – facility not commissioned |
| BRP-30 | General Monitoring | Goose Southeast Inflow (representative of non-contact water, PN06 from Water and Load Balance) | Operations Stage 1 to Closure | A, D | Once during freshet | Active. See Section 2.6 and Appendix E |
| BRP-40 | General Monitoring | Bathurst Inlet Intake (intake point in marine environment for potable and industrial water withdrawal) | Construction to Closure | A, D, B | At Licensee's discretion | Active. See Section 2.6 and Appendix E |
| BRP-41 | General Monitoring | Bathurst Inlet Discharge (discharge point in marine environment for effluent from desalinization plant) | Construction to Closure | A, J | At Licensee's discretion | Active. See Section 2.6 and Appendix E |
| BRP-42 | Regulated Monitoring | MLA Greywater (representative drainage at point of entry to the marine receiving environment) | Construction to Closure | A, F | Prior to discharge or transfer of water | Active. See Section 2.6 and Appendix E |
| BRP-43 | Regulated Monitoring | MLA Fuel Tank Farm (representative of collected water quality) | Construction to Closure | A, E | Prior to discharge or transfer of water | Active. See Section 2.6 and Appendix E |
| BRP-44 | Regulated Monitoring | MLA Landfarm (representative of collected water quality) | Construction to Closure | A, E | Prior to discharge or transfer of water | N/A – facility not commissioned |
| BRP-45 | Regulated Monitoring | MLA Hazardous Waste Management Area (representative of collected water quality) | Construction to Closure | A, E | Prior to discharge or transfer of water | N/A – facility not commissioned |
| BRP-49 | Regulated Monitoring | MLA Temporary Fuel Storage Facility (representative of collected water quality) | Construction | A, E | Prior to discharge or transfer of water | Active. See Section 2.6and Appendix E |
| BRP-51 | Regulated Monitoring | Goose Landfarm (representative of collected water quality) | Construction to Closure | A, E | Prior to discharge or transfer of water | N/A – facility not commissioned |

| Monitoring Program Station | Monitoring Type | Description | Mine Phase | Group Code* | Frequency | Monitoring Activity |
|---|---|---|---|---|---|---|
| BRP-52 | General Monitoring | MLA Pond S1 (intake point for potable and industrial water withdrawal) | Construction to Closure | A, D | Once per quarter when in use | N/A – no water was withdrawn in 2025 |
| | | | | B | Weekly when in use | |
| BRP-53 | General Monitoring | MLA Pond S2 (intake point for potable and industrial water withdrawal) | Construction to Closure | A, D | Once per quarter when in use | N/A – no water was withdrawn in 2025 |
| | | | | B | Weekly when in use | |
| BRP-54 | General Monitoring | MLA Lake 3 (intake point for potable and industrial water withdrawal) | Construction to Closure | A, D | Once per quarter when in use | N/A – no water was withdrawn in 2025 |
| | | | | B | Weekly when in use | |
| BRP-55 | General Monitoring | MLA Lake 4 (intake point for potable and industrial water withdrawal) | Construction to Closure | A, D | Once per quarter when in use | N/A – no water was withdrawn in 2025 |
| | | | | B | Weekly when in use | |
| BRP-56 | General Monitoring | Llama Tailings Facility (collected at "inlet" to treatment facility Pre-treatment quality) | Operations to Closure | A, G | At Licensee's discretion | N/A – facility not commissioned |
| BRP-57 | General Monitoring | Llama Tailings Facility (after treatment; collected at "outlet" of treatment facility; no discharge to the receiving environment Post-treatment quality to confirm treatment efficiency) | Operations to Closure | A, G | At Licensee's discretion | N/A – facility not commissioned |
| BRP-58a to BRP-58xx (TBD) | Regulated Monitoring | Final Discharge Point Goose Lake | | | As per Part F, Item 16 | N/A – no discharge in 2025 |
| BRP-I-01 to BRP-I-TBD | General Monitoring | Interconnection Winter Ice Road Proximal Water Bodies (intake points for fresh water used in the construction of the Interconnection Winter Ice Road and WIR Service/Emergency Camps) | Construction to Closure | B | Weekly when in use | Active. See Sections 2.2 and 2.6 |

**Note:**

* Refers to Group Code from Water Licence 2AM-BRP1831 Schedule I Table 1.




KEYPLAN



LEGEND

Water Monitoring Stations

B2GOLD NUNAVUT

BACK RIVER DISTRICT, GOOSE PROJECT

| | |
|---|---|
| Drawing Title: | SURFACE RUNOFF SAMPLES |
| Department: | ENVIRONMENTAL |
| Drawn: | BBrown-John |
| Date: | 2026-03-04 |
| Scale: | 1:20000 |
| Rev: | N/A |

**Figure H-1 Goose Project Monitoring Stations, Goose Mine**

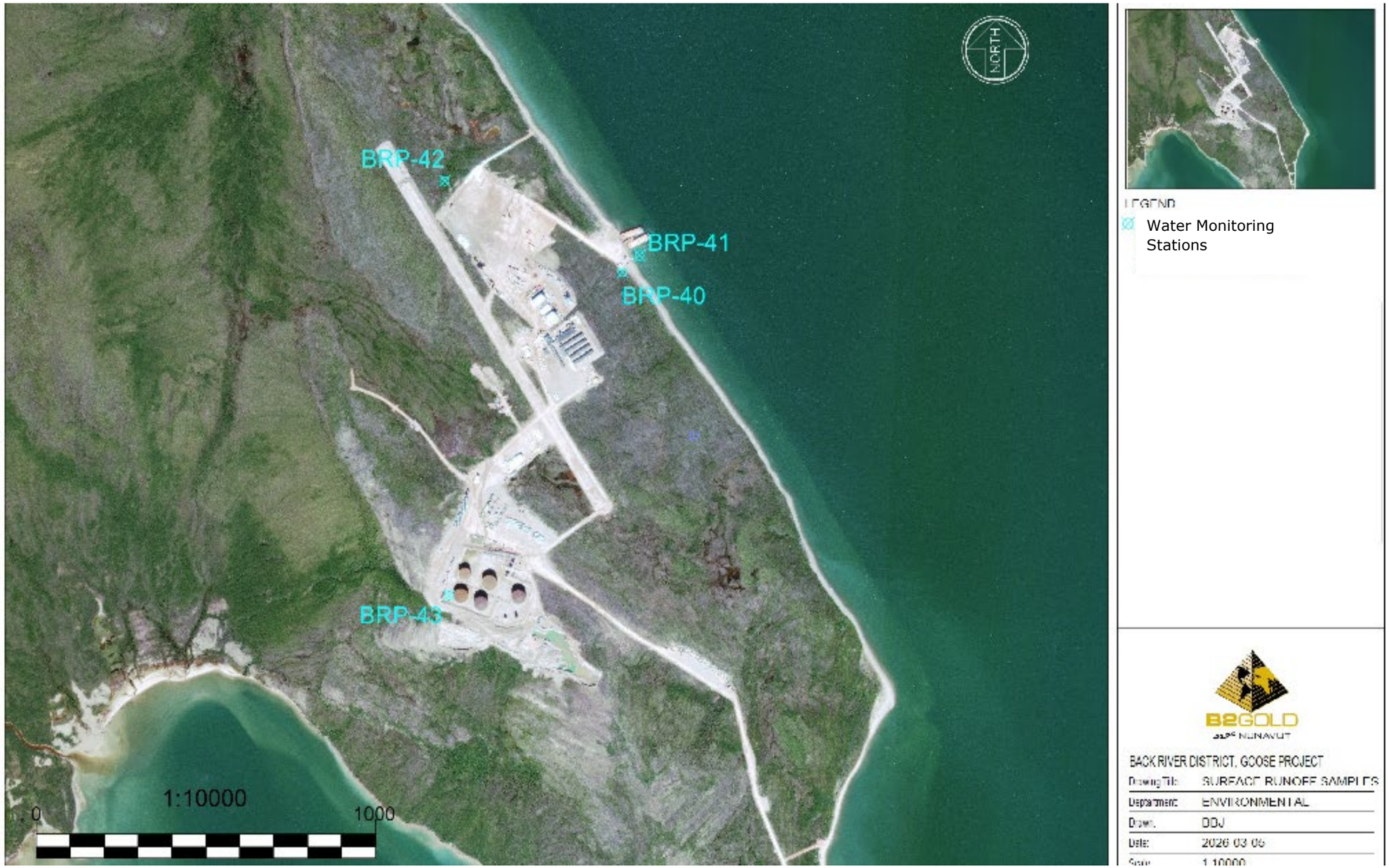



Figure H-2 Goose Project Monitoring Stations, MLA

# APPENDIX I AQUATIC EFFECTS MONITORING REPORT

**REPORT**

# B2Gold Back River Project – 2025 Aquatic Effects Management Plan Report

Submitted to:

**B2Gold Back River Corp.**

Submitted by:

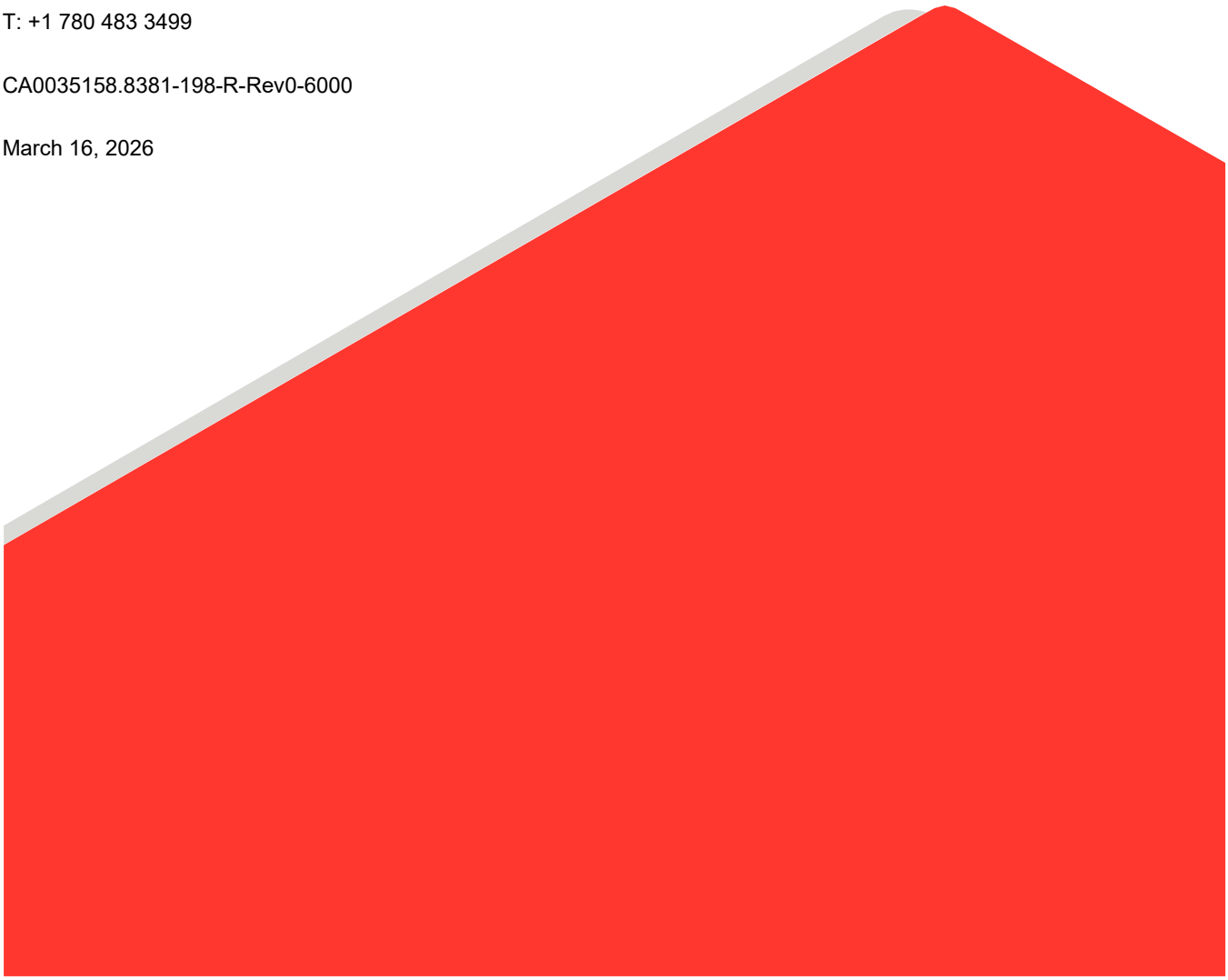
**WSP Canada Inc.**

16820 107 Avenue Edmonton, Alberta T5P 4C3 Canada

T: +1 780 483 3499

CA0035158.8381-198-R-Rev0-6000

March 16, 2026



# Distribution List

Electronic copy – B2Gold Back River Corp.

Electronic copy – WSP Canada Inc.

# Acknowledgements

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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The content and opinions contained in the present report are based on the observations and/or information available to WSP at the time of preparation, using investigation techniques and engineering analysis methods consistent with those ordinarily exercised by WSP and other engineering/scientific practitioners working under similar conditions, and subject to the same time, financial and physical constraints applicable to this project.

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# 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 |
| ICx | 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 |
| LC50 | 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 |
| ºC | 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).

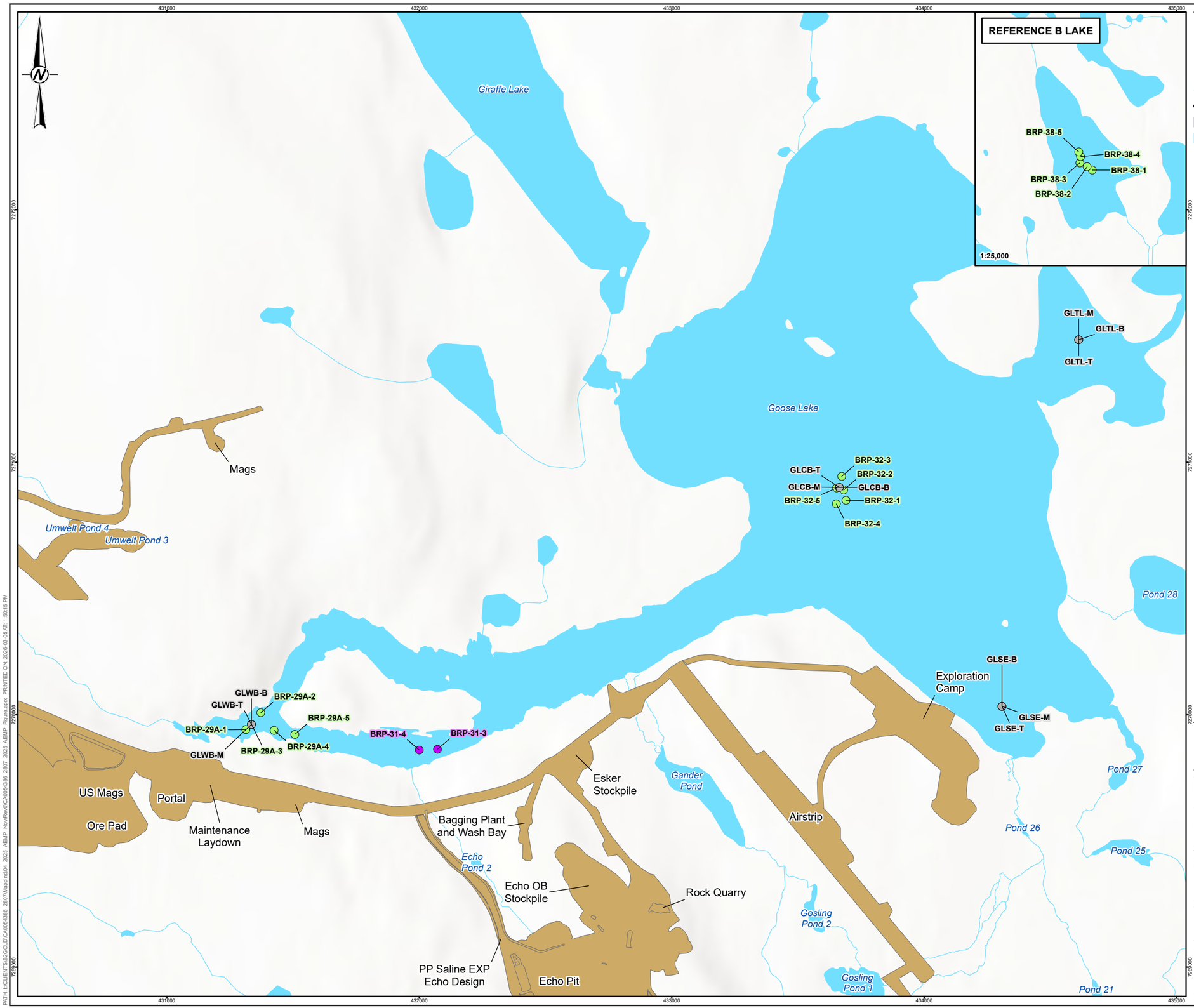
**Table 4-1: Goose Lake Water Quality Sampling Locations, 2025**

| 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.

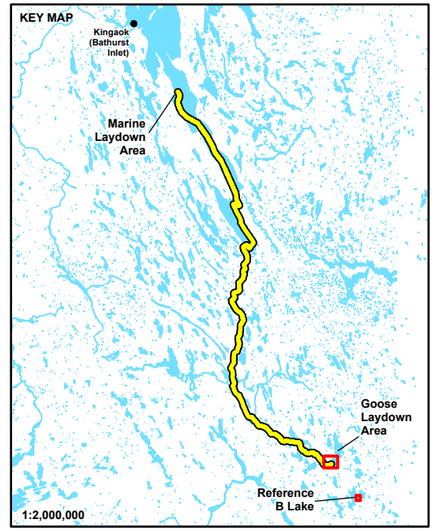



## REFERENCE B LAKE

1:25,000

**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




0 300 600

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**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 |
| CONSULTANT | PREPARED | SP |
| | REVIEWED | JA |
| | APPROVED | KS |

| PROJECT NO. | REV. | FIGURE |
|---|---|---|
| CA0054386.2807 | 0 | 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 parameters[2]:

- 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 ammonia[3], 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 µS/cm in Llama Lake (station BRP-02), 115 to 116 µS/cm in Umwelt Lake (station BRP-06), and 92 µS/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 µS/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 results[4] 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 ranges[5] 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 equation[6] 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 x total alkalinity as $CaCO_3$) + $Na^+$ + $Mg^+$ + $K^+$ + $Ca^{2+}$ + $SO_4^-$ + $Cl^-$ + $NO_3^-$ + $F^-$ + $SiO_3^{2-}$ , where $Na^+$ = sodium cation; $Mg^+$ = magnesium cation; $K^+$ = ion; $Ca^{2+}$ = calcium cation; $CaCO_3$ = calcium carbonate; $SO_4^-$ = 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 baseline[7]. 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:

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

[7]The 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,

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

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

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

$\mu_{IB}$ 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 ΔAICc, the difference between a given AICc and the lowest AICc, for each water quality parameter. The final model was chosen using ΔAICc values following model selection guidance (i.e., ΔAICc = 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:

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

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 $sign(c_i - c_k)$ 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 $CaCO_3$; 218 mg/L at hardness 31 to 75 mg/L as $CaCO_3$; 309 mg/L at hardness 76 to 180 mg/L as $CaCO_3$; 429 mg/L at hardness ≥181 mg/L as $CaCO_3$.

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

(e) pH, DOC, and hardness dependent guideline calculated using the equation: $e^{((0.645\ x\ ln(DOC))+(2.255\ x\ ln(hardness))+(1.995\ x\ pH)+(-0.284\ x\ (ln(hardness)\ x\ pH))-9.898)}$ 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 $CaCO_3$.

(f) Hardness dependent guideline: 0.04 µg/L at hardness >0 to <17 mg/L as $CaCO_3$; calculated using the equation $10^{(0.83(log[hardness])-2.46)}$ at hardness ≥17 to ≤280 mg/L as $CaCO_3$; 0.37 µg/L at hardness >280 mg/L as $CaCO_3$.

(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 $CaCO_3$.

(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 $CaCO_3$.

(j) Hardness dependent guideline: 25 µg/L at hardness 0 to ≤60 mg/L as $CaCO_3$; calculated using the equation $e^{(0.76[ln(hardness)]+1.06)}$ at hardness >60 to ≤180 mg/L as $CaCO_3$; 150 µg/L at hardness >180 mg/L as $CaCO_3$.

(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 $CaCO_3$.

(l) pH, DOC, and hardness dependent guideline is calculated using the equation: $e^{((0.947\ x\ ln(hardness))-(0.815\ x\ pH)+(0.398\ x\ ln(DOC))+4.625)}$ 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 $CaCO_3$.

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; $CaCO_3$ = 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 95$^{th}$ 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 95$^{th}$ 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.

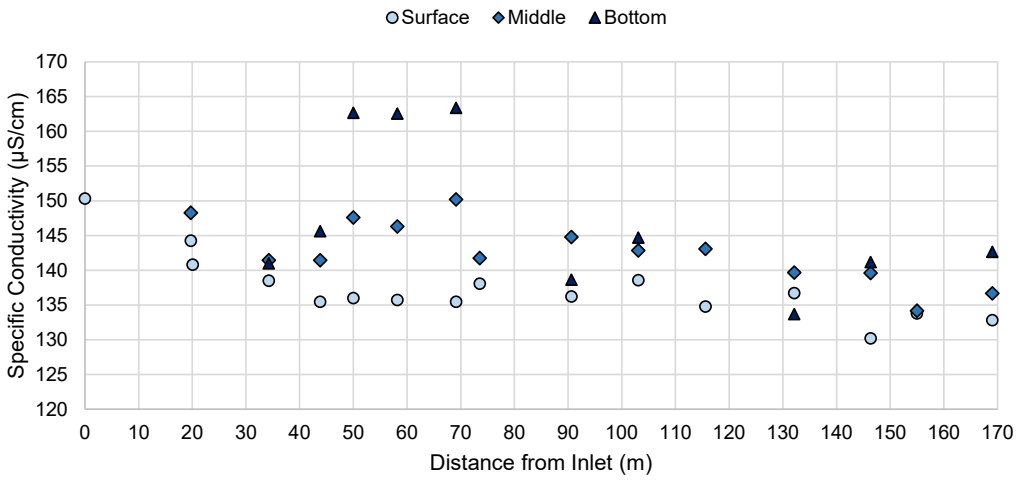
Specific conductivity was used as the main indicator of plume presence in Goose Lake because dewatering discharge water was lower in conductivity than what had been measured in Goose Lake West Bay prior to any dewatering discharge to Goose Lake. Overall, specific conductivity on August 15, 2025, was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

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

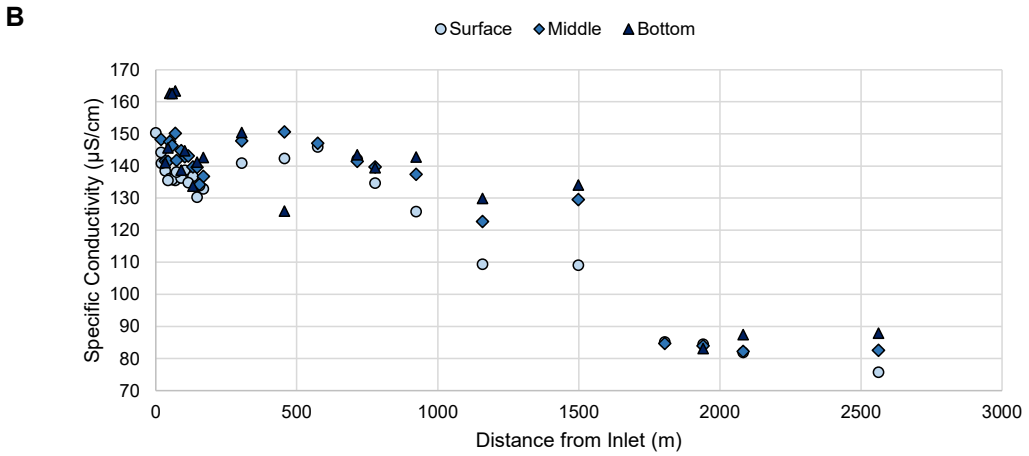
Because the specific conductivity in dewatering discharge on August 15 was 92 µS/cm compared to 149 µS/cm in West Bay three days prior, locating the plume in West Bay should have resulted in lower specific conductivity near the inlet, with an increasing trend with distance from the inlet into Goose Lake. 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-18[8] 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 µS/cm (WSP 2025a) and was greater than 130 µS/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 0ºC at the surface and increased to between 1ºC and 4ºC 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 $CaCO_3$), 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 $SiO_2$, 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 laboratory[9] 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.

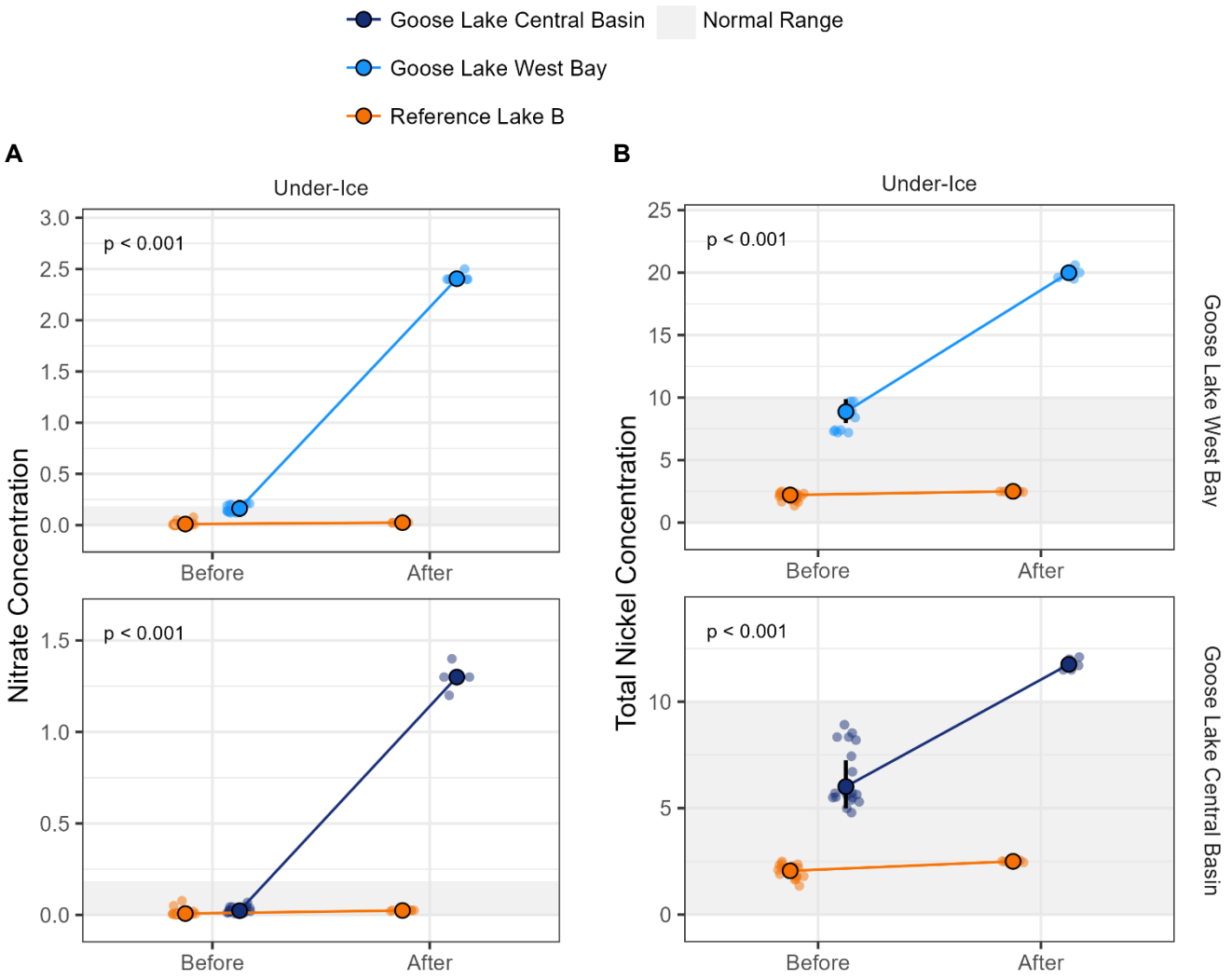
(b) The percent effect was calculated as the BACI difference divided by (Control After – Control Before) and multiplied by 100. It represents the change in the Before and After periods in the Impact area (i.e., exposure area) compared to the change in the Before and After periods in the Control area.

(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).

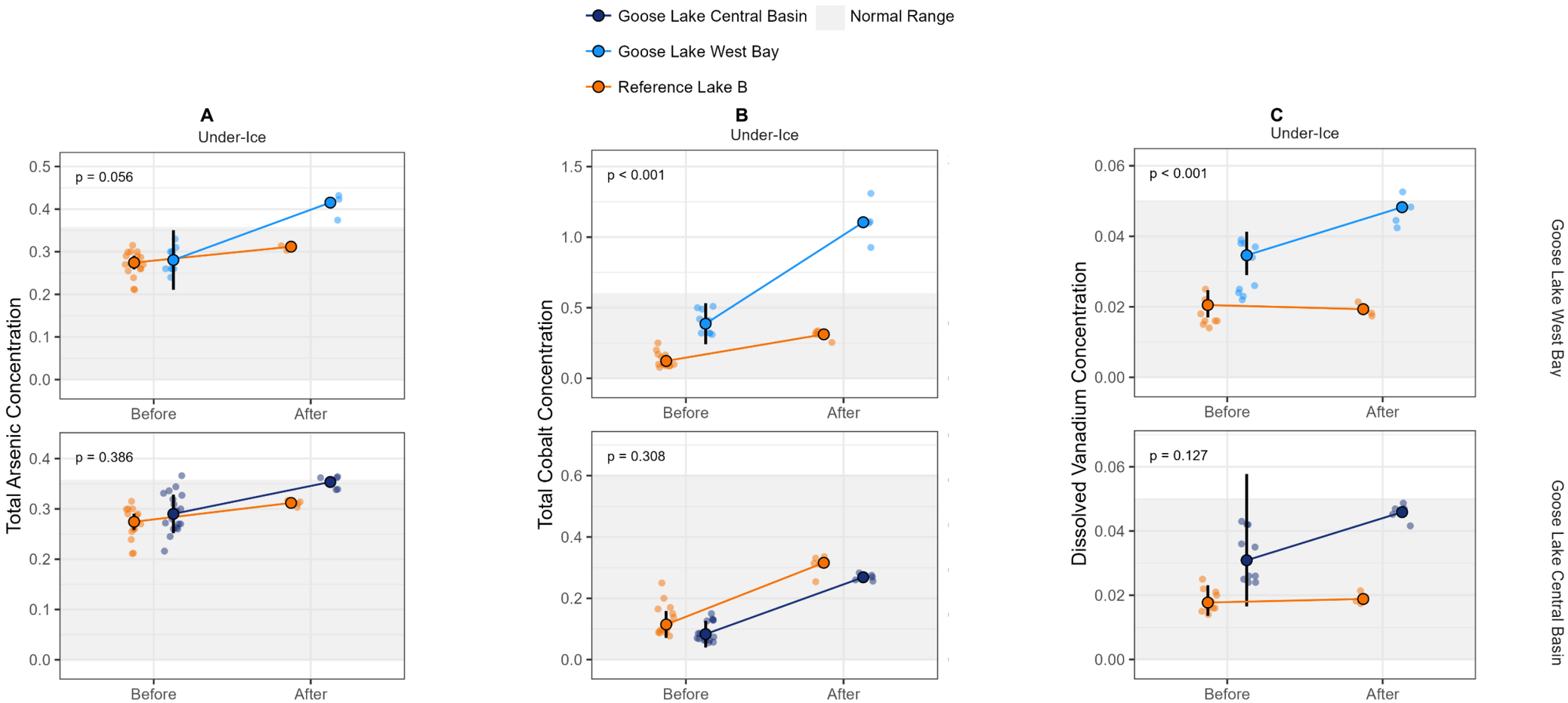
(e) Analysis for West Bay was carried out on calculated total nitrogen.

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 µS/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 cobalt[10]. 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 $CaCO_3$), 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 $SiO_2$, 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 August[11] 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.

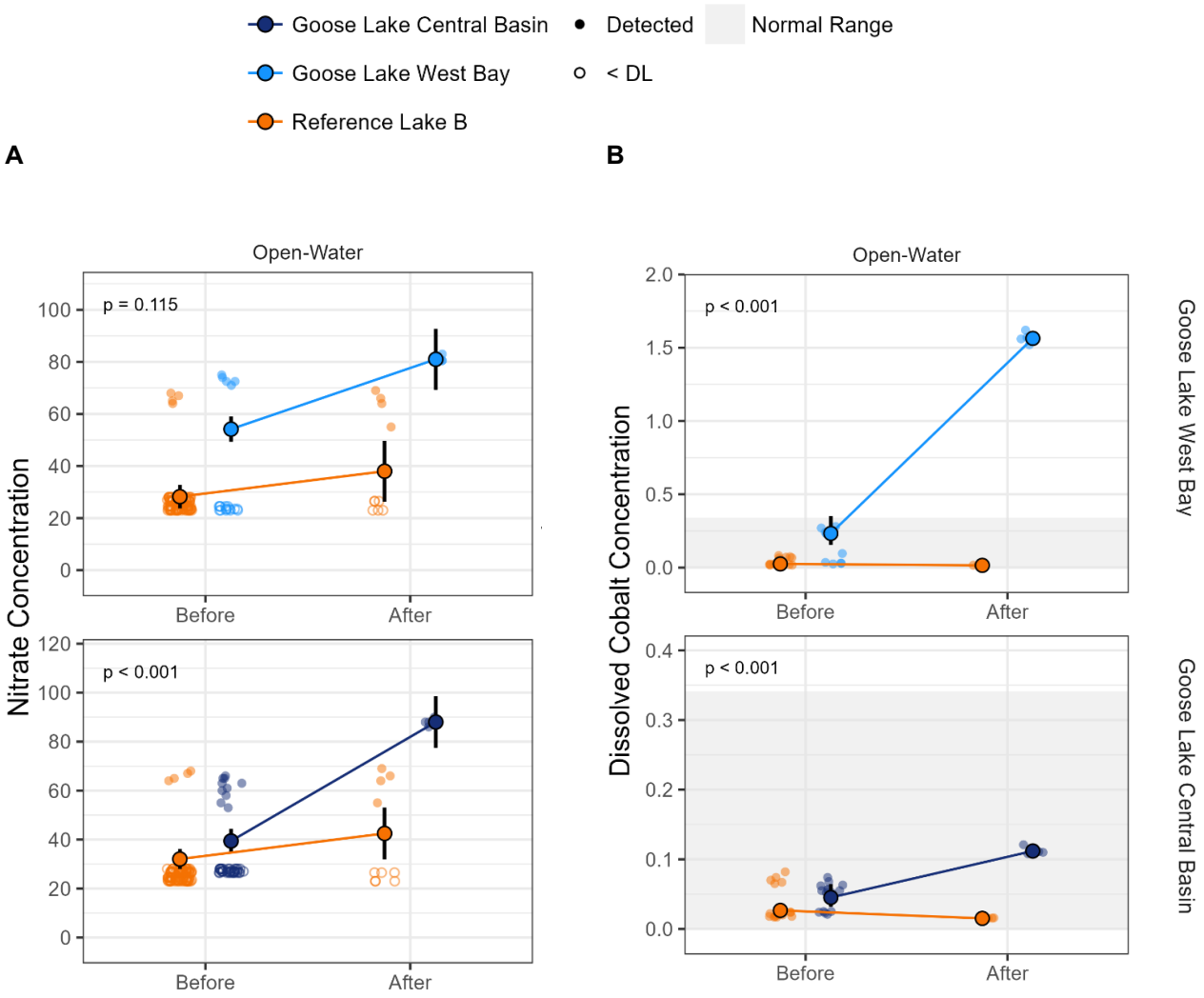
(a) The BACI difference was calculated as (Control After – Control Before) – (Impact After – Impact Before). A negative BACI difference indicates the change in concentration was greater in the Impact area (i.e., exposure area) than in the Control area.

(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 95$^{th}$ 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 95$^{th}$ 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 95th Percentile | Operations Predicted 95th 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 95th Percentile | Operations Predicted 95th 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 *a* | 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 conservativism 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 Phases[12]. Concentrations in 2025 were, however, inconsistent with concentrations predicted during the Construction and Operations Phases. Median and maximum concentrations of most POIs exceeded the 95$^{th}$ 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

**WSP Canada Inc.**

Jennifer Arens, PhD
*Senior Aquatic Biologist*

Kerrie Serben, MSc, PBiol, RPBio
*Senior Technical Manager, Environmental Scientist*

BCF/JA/KS/rd/ss

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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 EQuIS database by the designated member. Data exports from the EQuIS 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 programs[1], 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.

# A6 REFERENCES

B2Gold Nunavut (B2Gold Back River Corp.). 2025. Back River Project Aquatic Effects Management Plan. Version 2.1. December 2025.

CCME (Canadian Council of Ministers of the Environment). 2011. Protocol Manual for Water Quality Sampling in Canada. Canadian Council of Ministers of the Environment.

US EPA (United States Environmental Protection Agency). 2000. EPA Quality Manual for Environmental Programs. CIO 2105-P-01-0 (formerly 5360 A1).

US EPA. 2017. National Functional Guidelines for Inorganic Superfund Methods Data Review. Office of Superfund Remediation and Technology Innovation. Washington, DC 20460. January 2017.

**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** | | | | | | | | | | | | | | |
| Aluminum | 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

# 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 |
| | | | | 3.00 | 65 | 9.1 | 0.8 | 6.0 | 219 |
| BRP-29A-4 | 17-Apr-25 | 6.0 | 1.0 | 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 |
| | | | | 4.00 | 72 | 10 | 1.1 | 5.9 | 230 |
| | | | | 4.50 | 69 | 9.5 | 1.2 | 5.9 | 231 |
| BRP-29A-5 | 17-Apr-25 | 3.5 | 1.5 | 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.

**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.

**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.

**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 |
| | | | 4.0 | 103 | 11 | 12 | 6.4 | 150 |
| BRP-29A-5 | 09-Jul-25 | 3.0 | 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.

**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 |
| | | | | 4.0 | 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.

**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.

**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 |
| | | | | 4.0 | 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 |
| | | | | 3.0 | 104 | 11 | 11 | 6.6 | 151 |
| BRP-29A-4 | 12-Aug-25 | 3.9 | 3.9 | 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 |
| | | | | 2.5 | 105 | 11 | 12 | 6.8 | 150 |
| | | | | 3.0 | 105 | 11 | 12 | 6.7 | 150 |
| BRP-29A-5 | 12-Aug-25 | 3.1 | 3.1 | 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.

**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 |
| | | | | 3.5 | 104 | 11 | 13 | 7.1 | 76 |
| BRP-32-3 | 13-Aug-25 | 5.0 | 4.5 | 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 |
| | | | | 3.0 | 103 | 11 | 12 | 7.0 | 75 |
| | | | | 3.5 | 103 | 11 | 12 | 7.0 | 77 |
| | | | | 4.0 | 103 | 11 | 12 | 7.0 | 76 |
| BRP-32-4 | 13-Aug-25 | 4.0 | 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 | 73 |
| | | | | 2.5 | 104 | 11 | 13 | 7.0 | 77 |
| | | | | 3.0 | 104 | 11 | 13 | 7.0 | 76 |
| BRP-32-5 | 13-Aug-25 | 4.5 | 4.0 | 0.5 | 104 | 11 | 12 | 7.0 | 76 |
| | | | | 1.0 | 103 | 11 | 12 | 7.0 | 76 |
| | | | | 1.5 | 104 | 11 | 12 | 7.0 | 77 |
| | | | | 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.

**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.

**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 |
| | | | | 5.0 | 100 | 11 | 8.2 | 7.1 | 146 |
| 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.

**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 |
| | | | | 3.3 | 102 | 11 | 8.6 | 7.3 | 82 |
| BRP-32-3 | 14-Sep-25 | 4.5 | 4.5 | 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 |
| | | | | 3.0 | 102 | 11 | 8.7 | 7.2 | 82 |
| | | | | 3.5 | 102 | 11 | 8.7 | 7.2 | 82 |
| BRP-32-4 | 14-Sep-25 | 4.3 | 4.3 | 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 |

**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.

**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 |
| | | | | 2.75 | 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.

**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.

**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 |
| | | | | 2.50 | 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.

**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 |

**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 |

**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 |

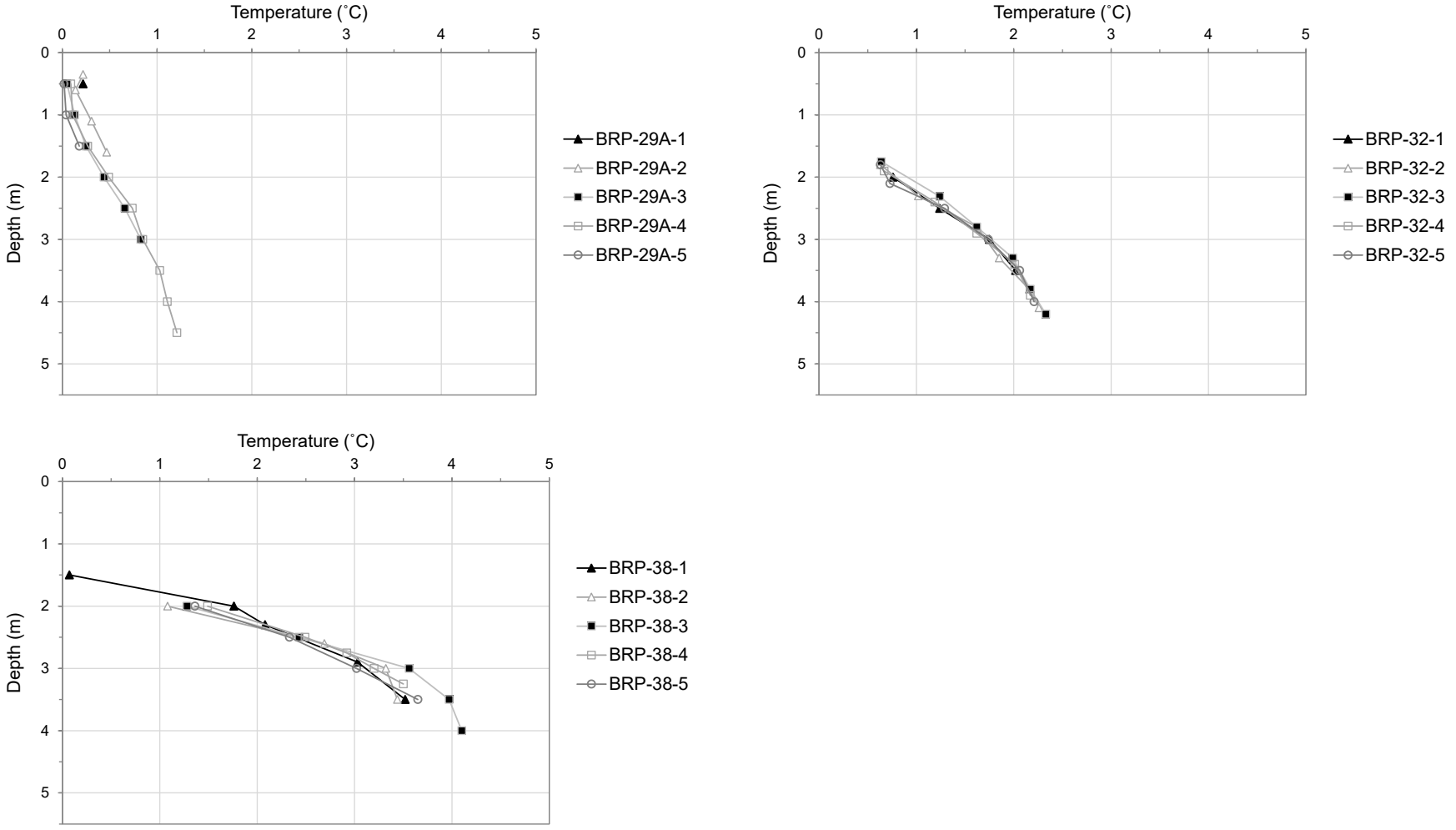
Notes: Light blue cells are locations within Goose Lake Main Basin. Dark grey cells are locations in the channel north of the island. Light Grey cells are locations in the channel that leads into the Main Basin, to the east of the island. Coordinates refer to zone 13W.

(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**

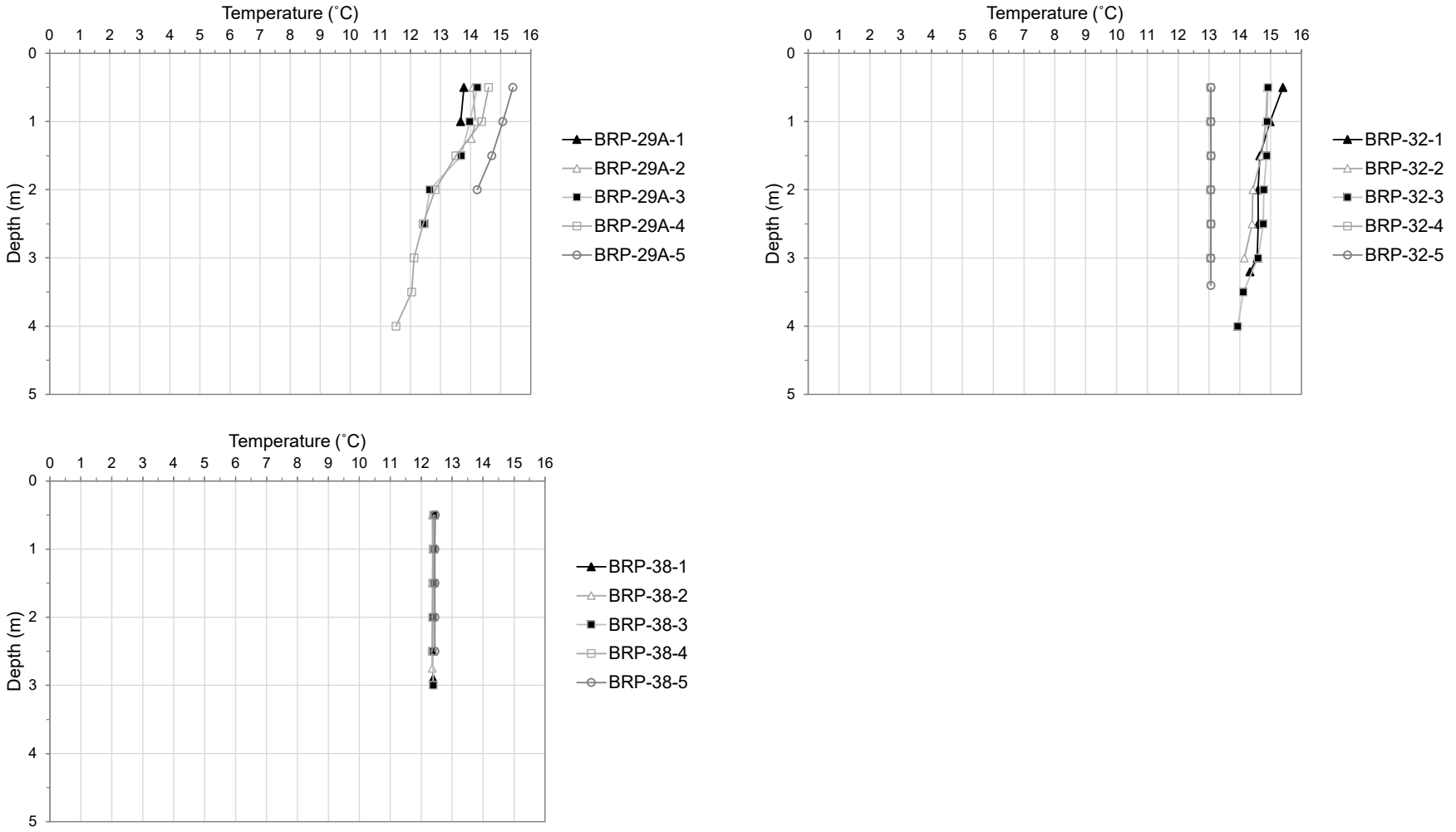


**Figure B-3: Temperature Profiles for the Open-water Season (August) at Goose Lake and Reference B Lake, 2025**

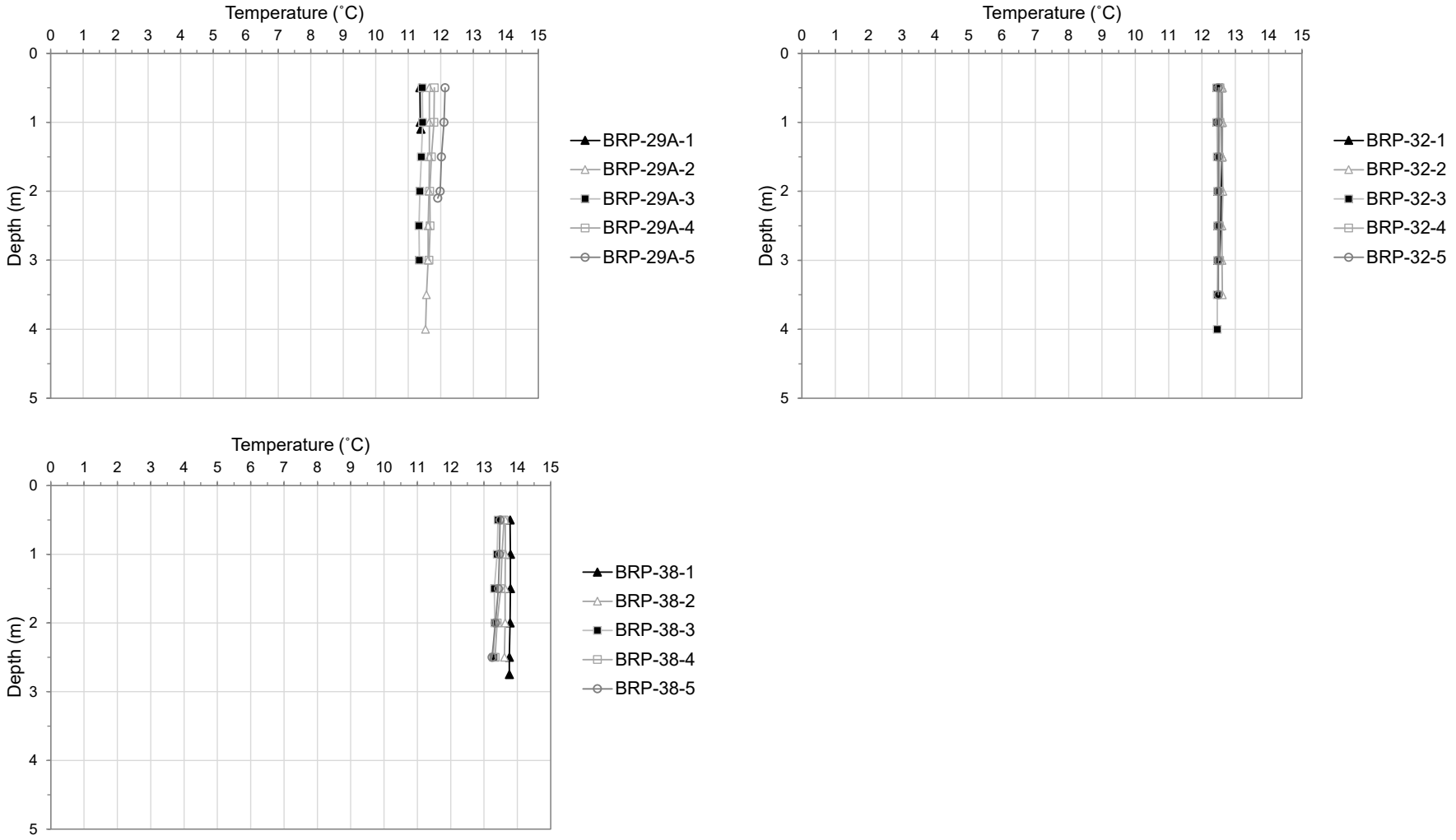
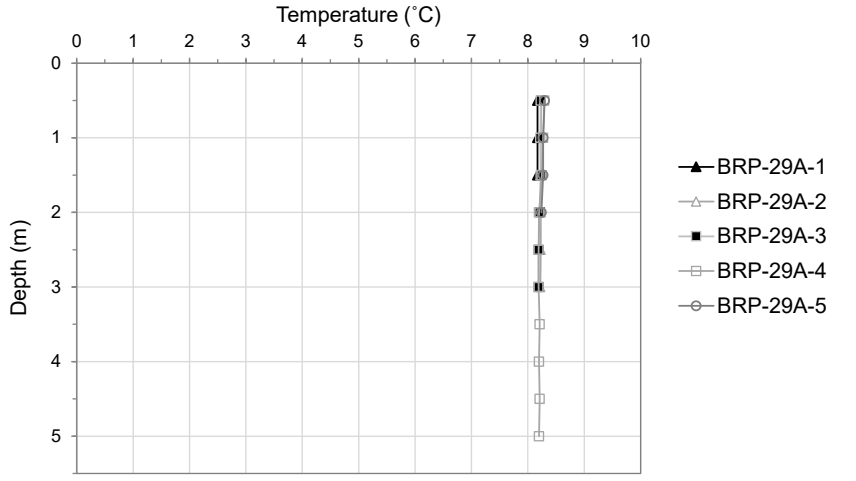
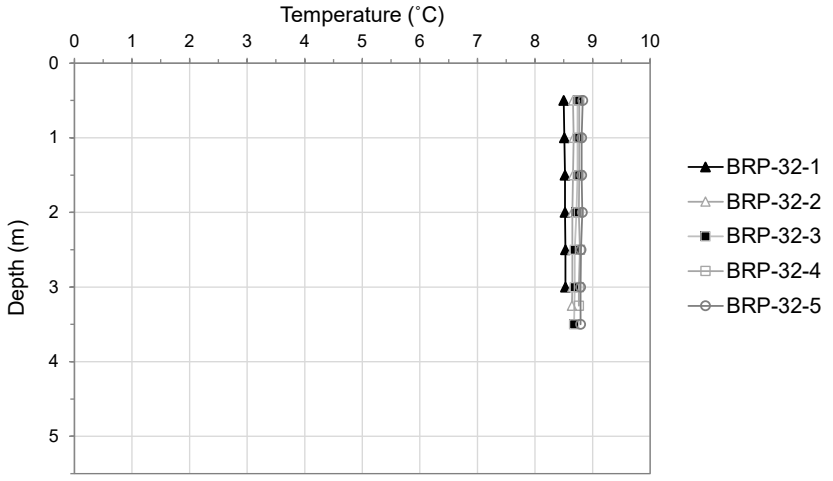


**Figure B-4: Temperature Profiles for the Open-water Season (September) at Goose Lake and Reference B Lake, 2025**



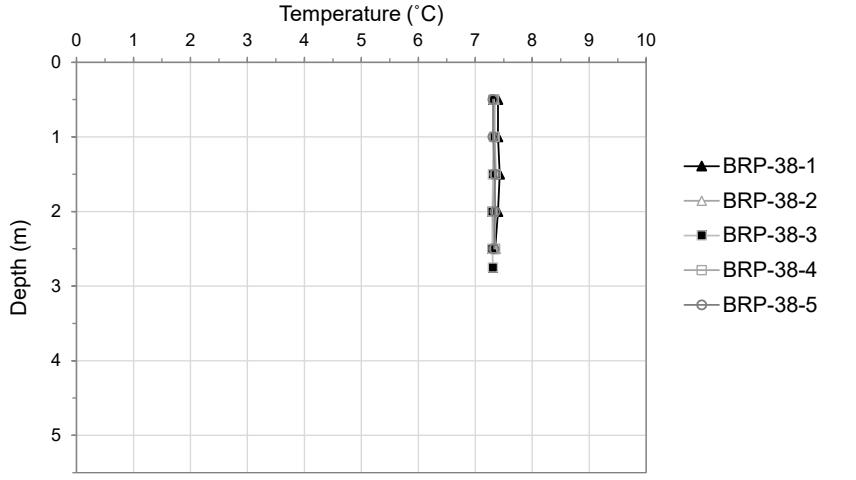
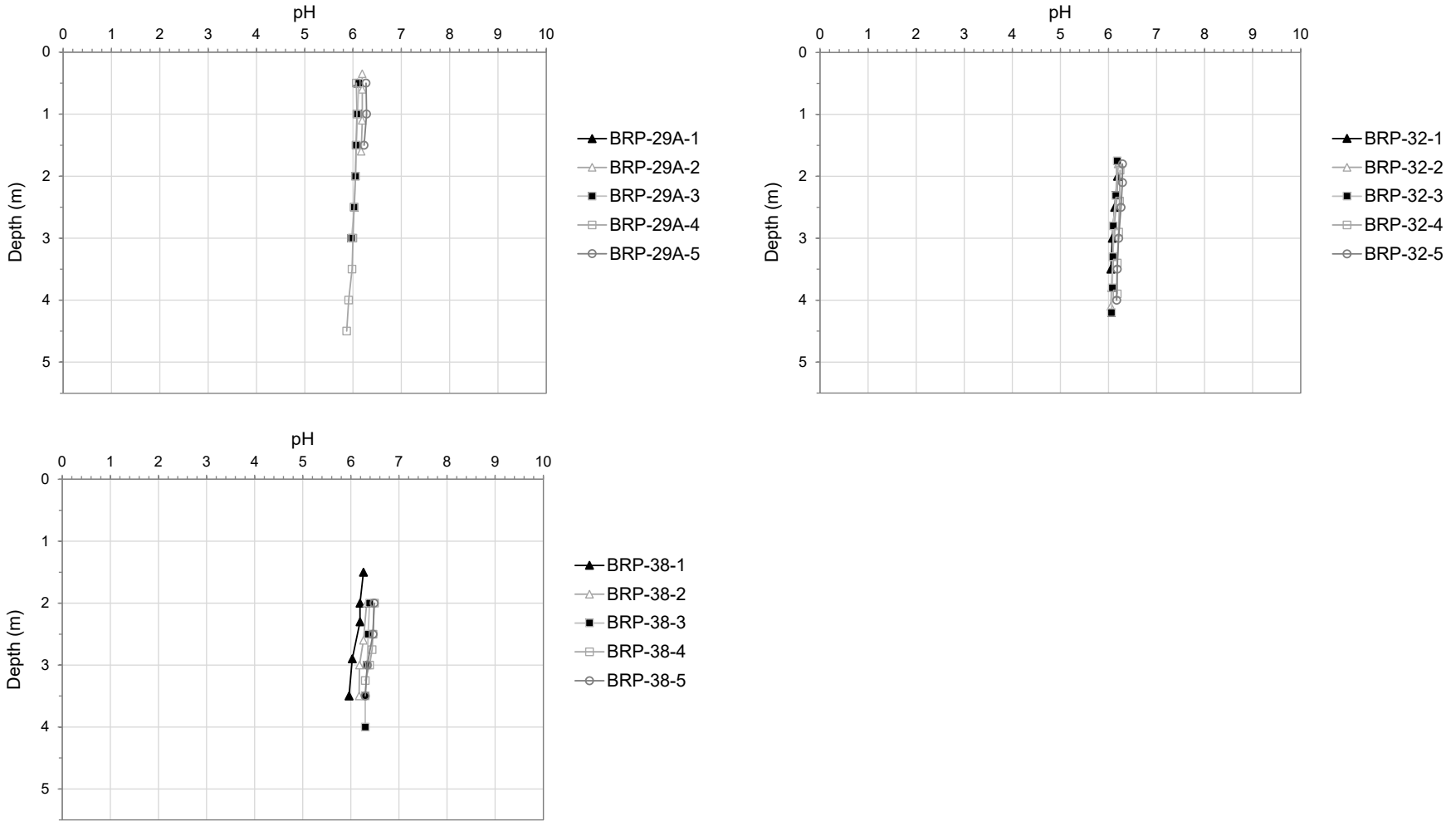



**Figure B-5: pH Profiles for the Ice-cover Season (April) at Goose Lake and Reference B Lake, 2025**




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**

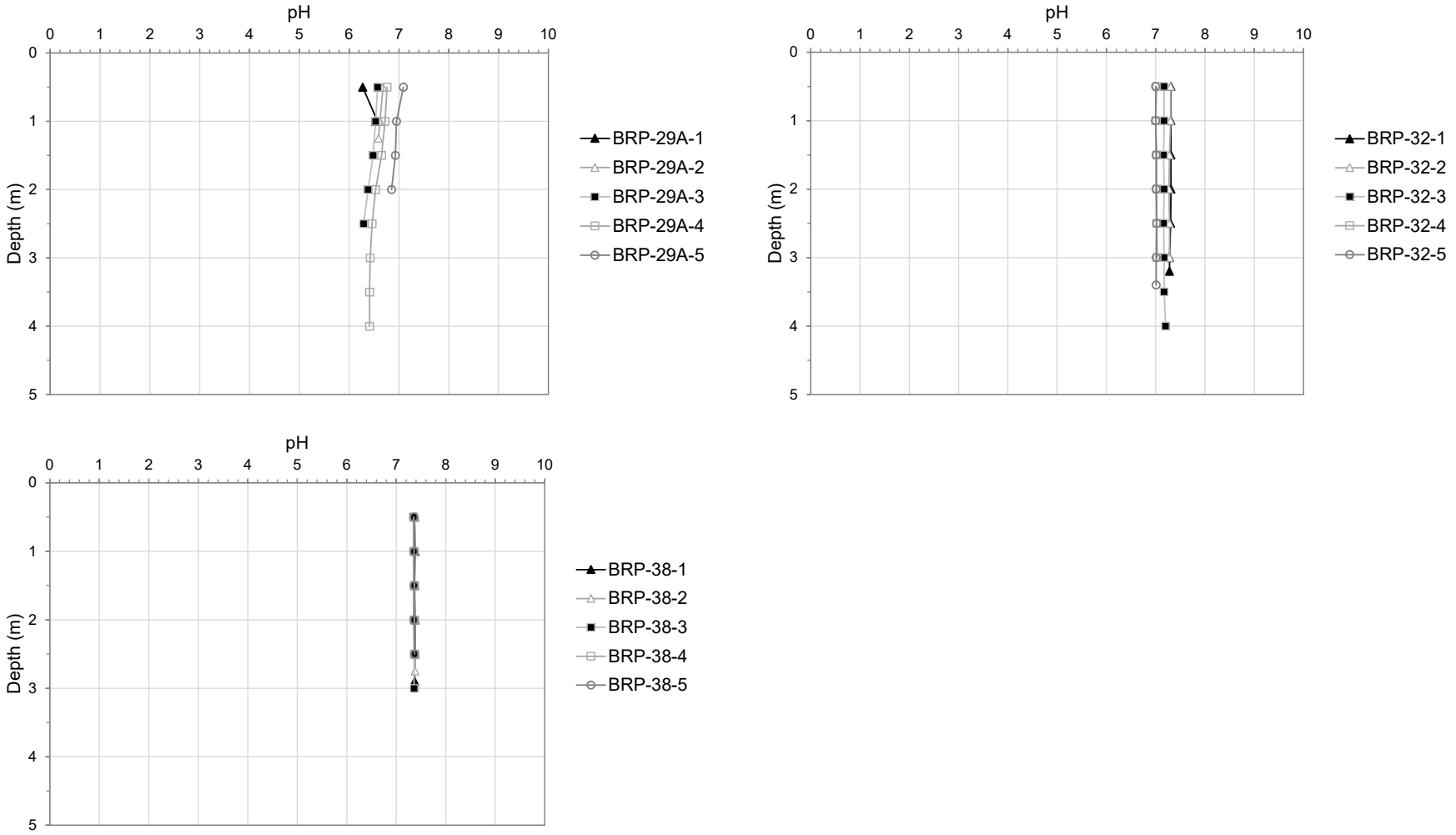
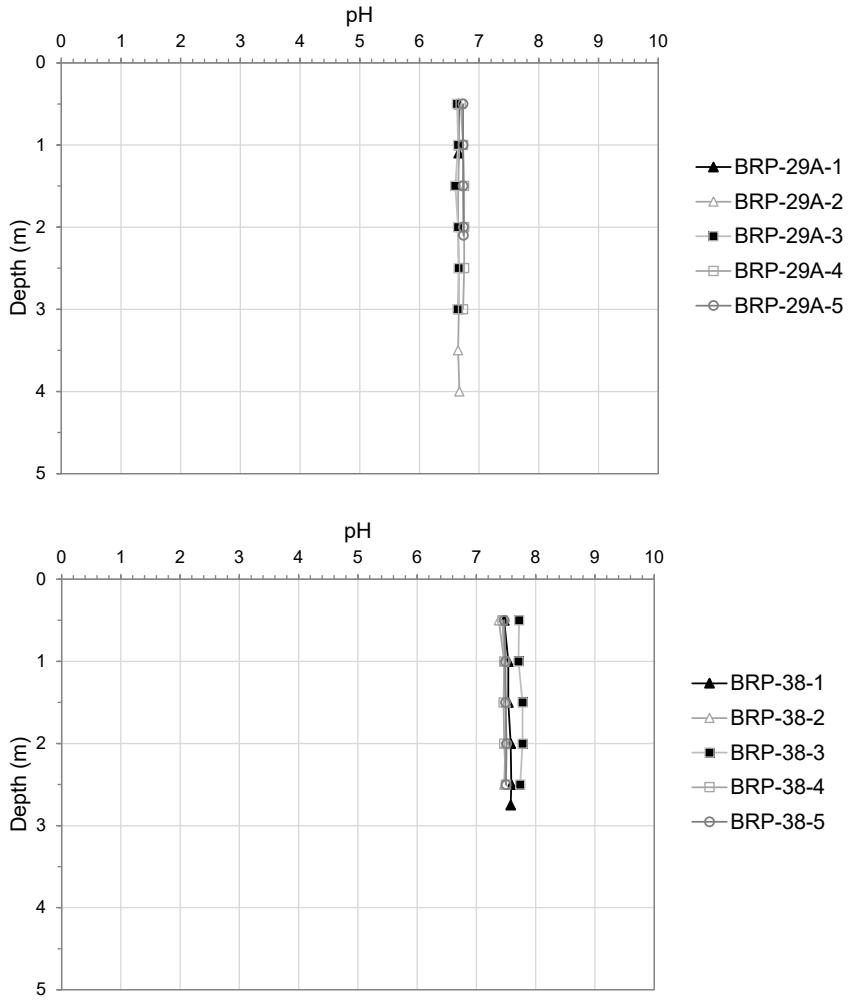


**Figure B-7: pH Profiles for the Open-water Season (August) at Goose Lake and Reference B Lake, 2025**



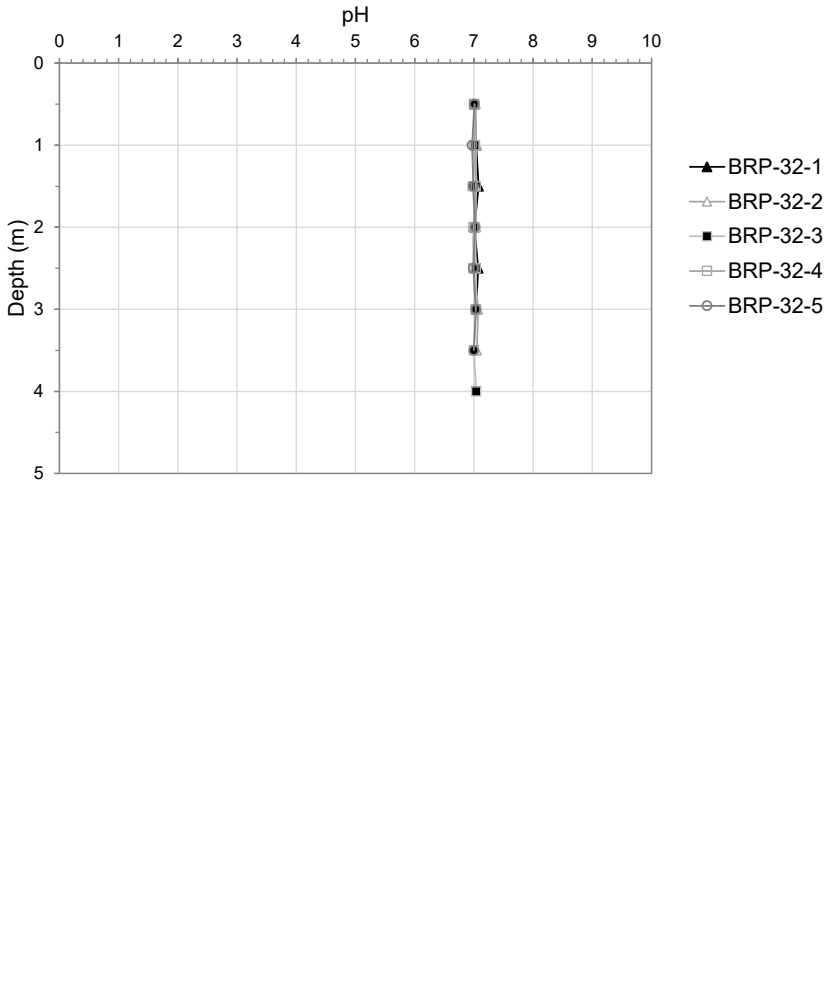



**Figure B-8: pH Profiles for the Open-water Season (September) at Goose Lake and Reference B Lake, 2025**

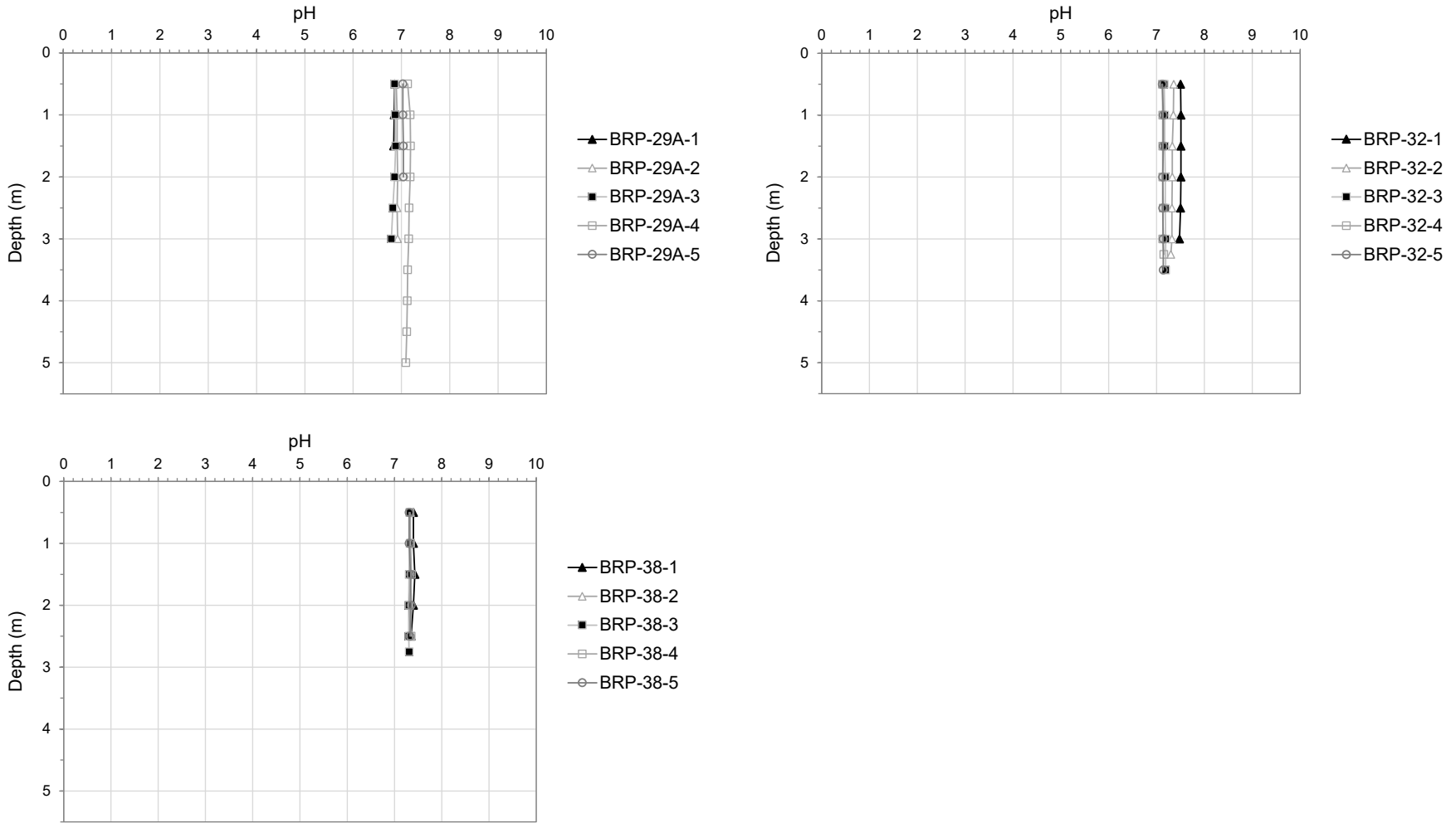
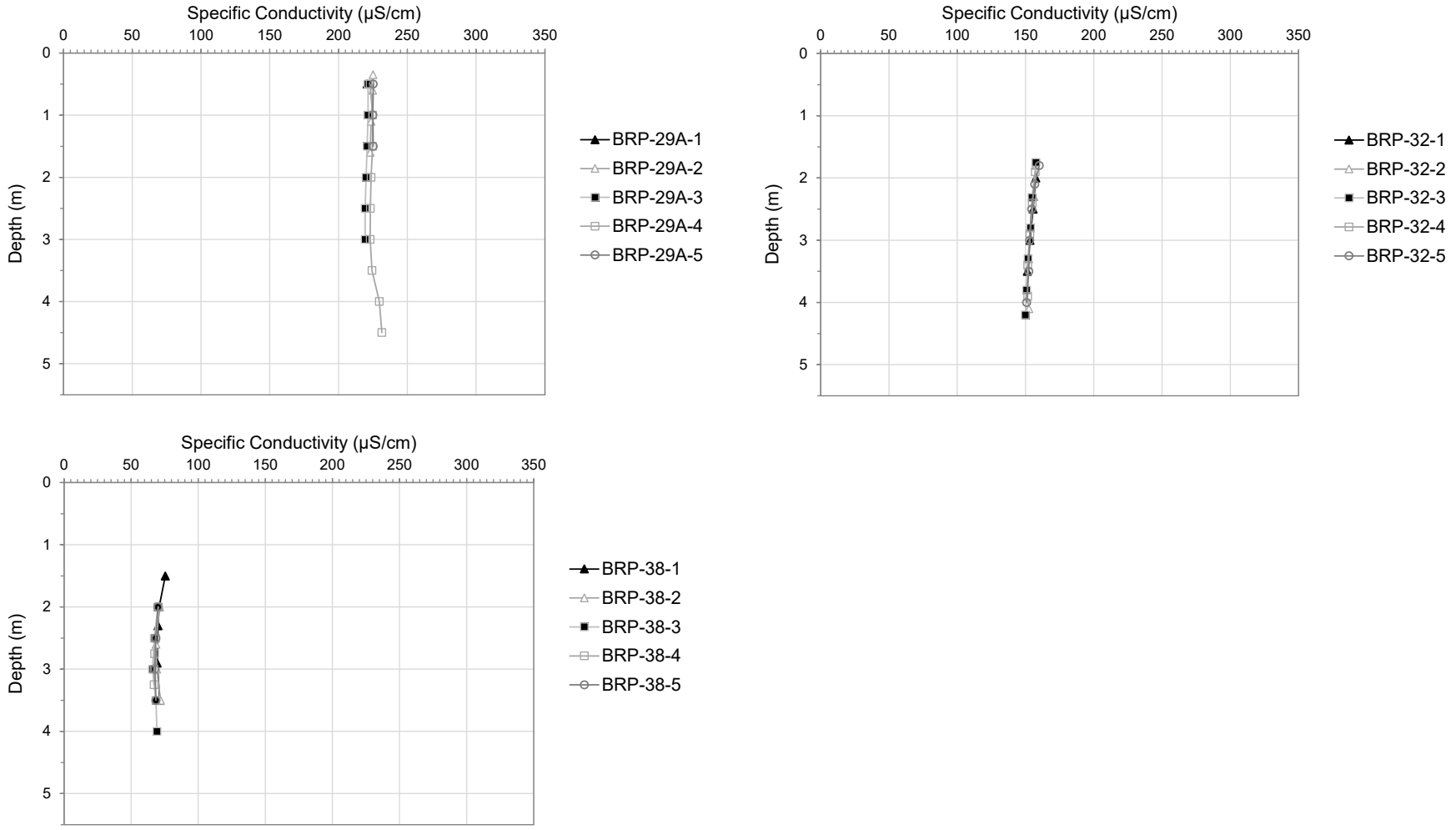
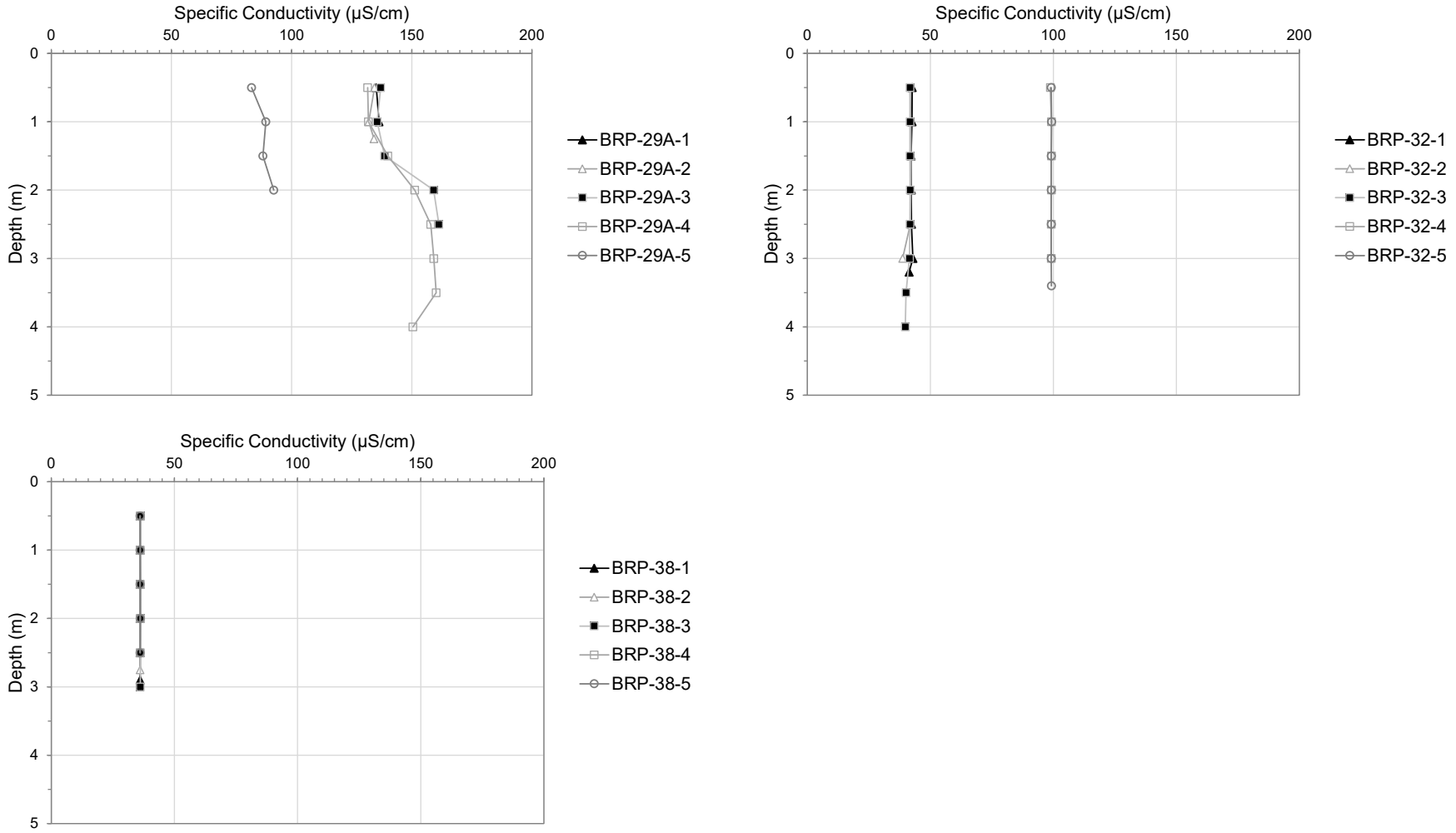


**Figure B-9: Specific Conductivity Profiles for the Ice-cover Season (April) at Goose Lake and Reference B Lake, 2025**



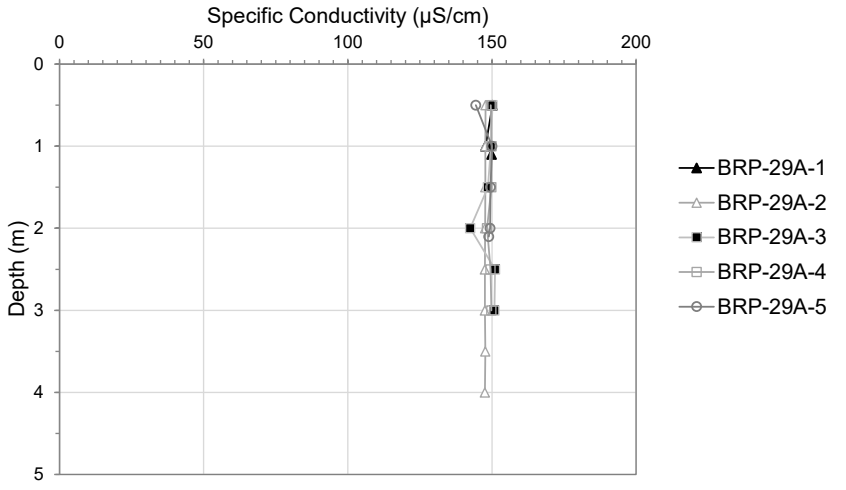

Note: Depth starts from underneath the ice layer.
µS/cm = microsiemens per centimetre.

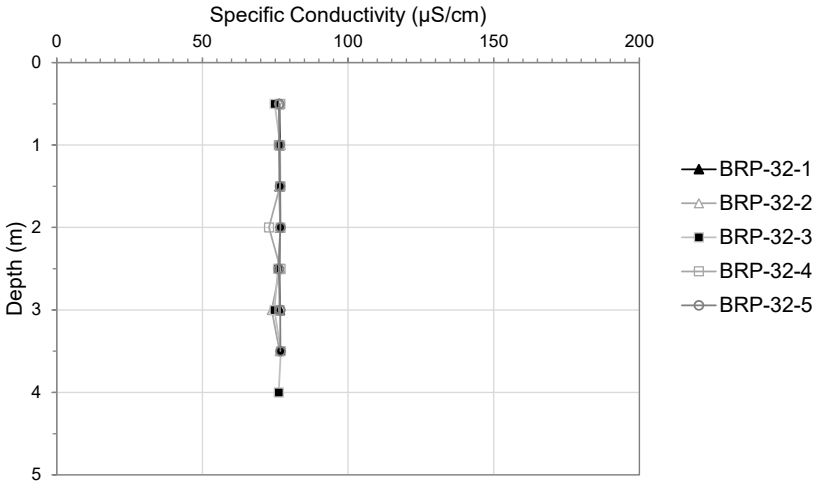
**Figure B-10: Specific Conductivity Profiles for the Open-water Season (July) at Goose Lake and Reference B Lake, 2025**

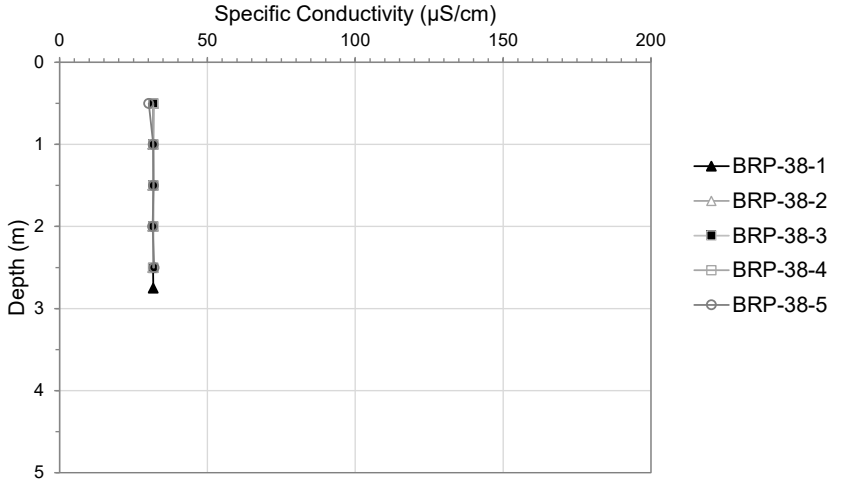



µS/cm = microsiemens per centimetre.

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

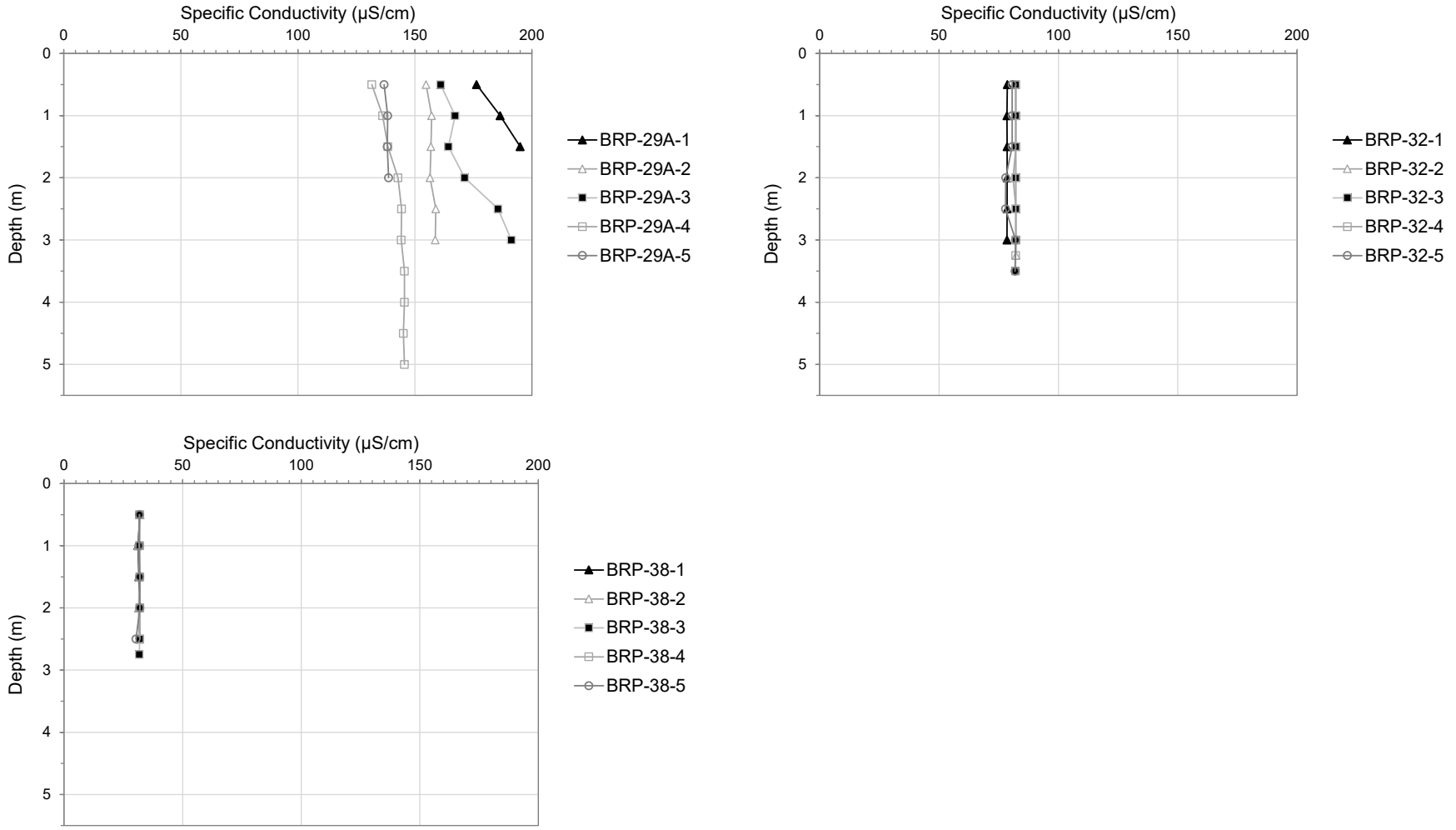


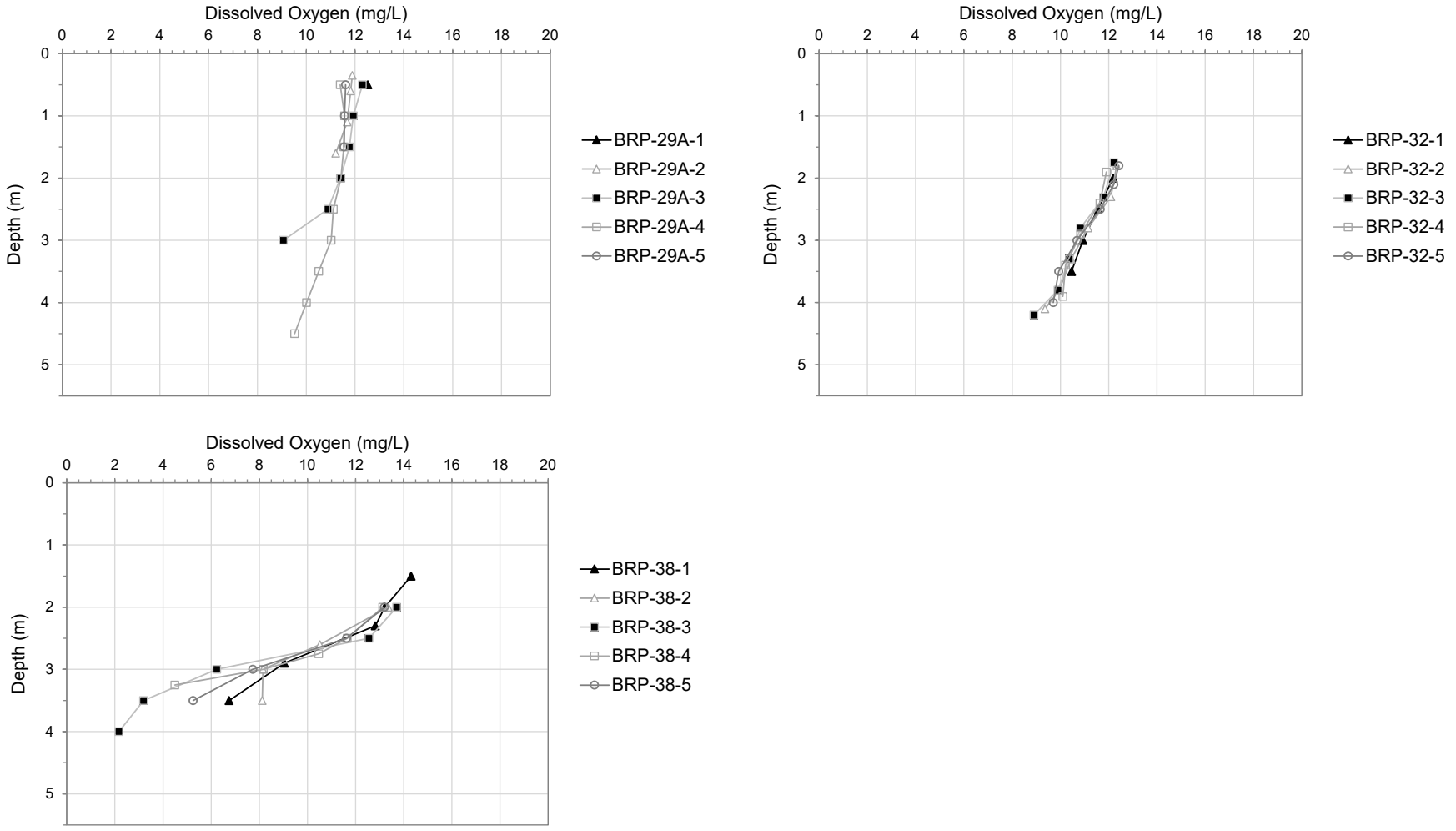

µS/cm = microsiemens per centimetre.

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




µS/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**

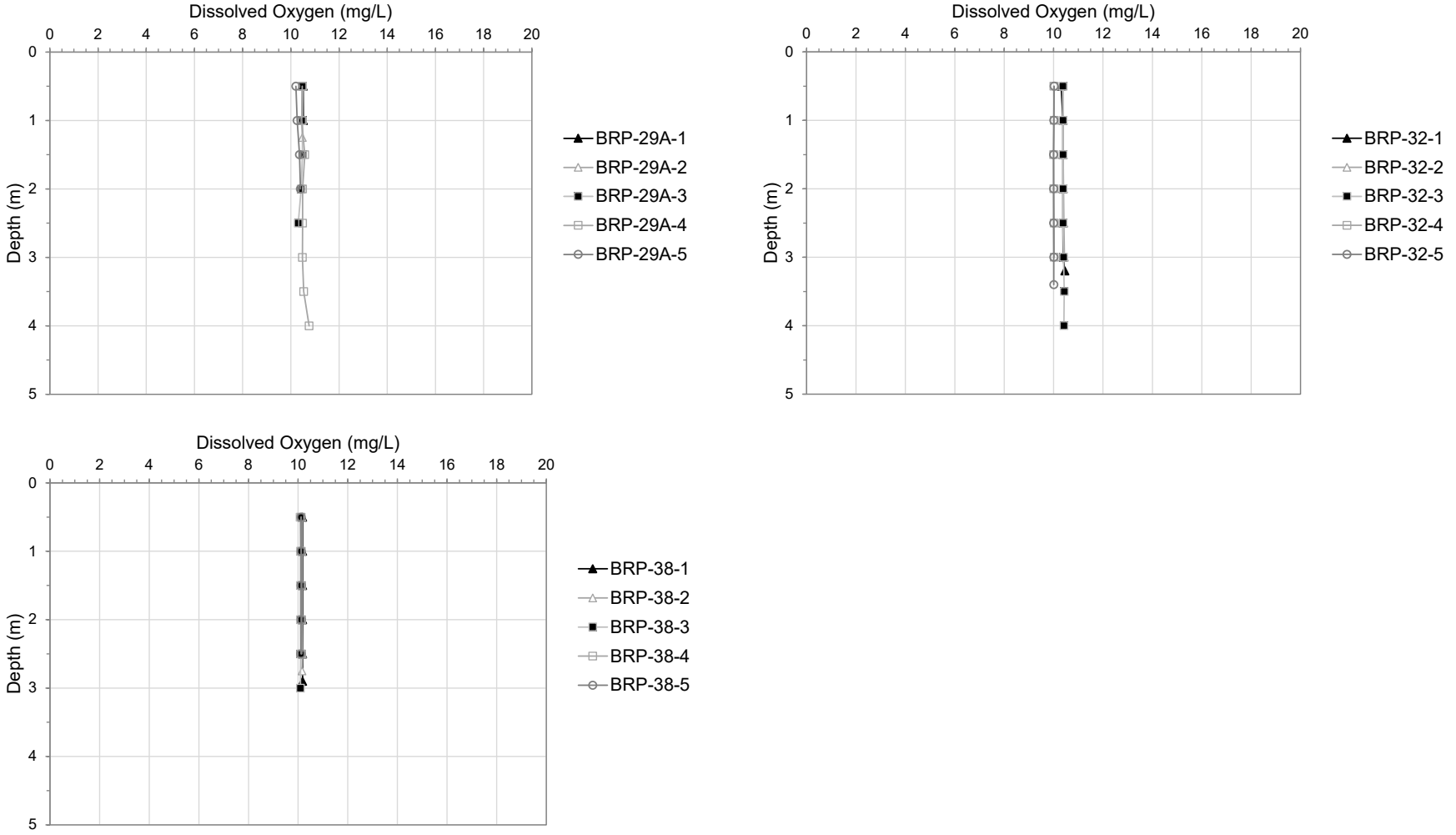
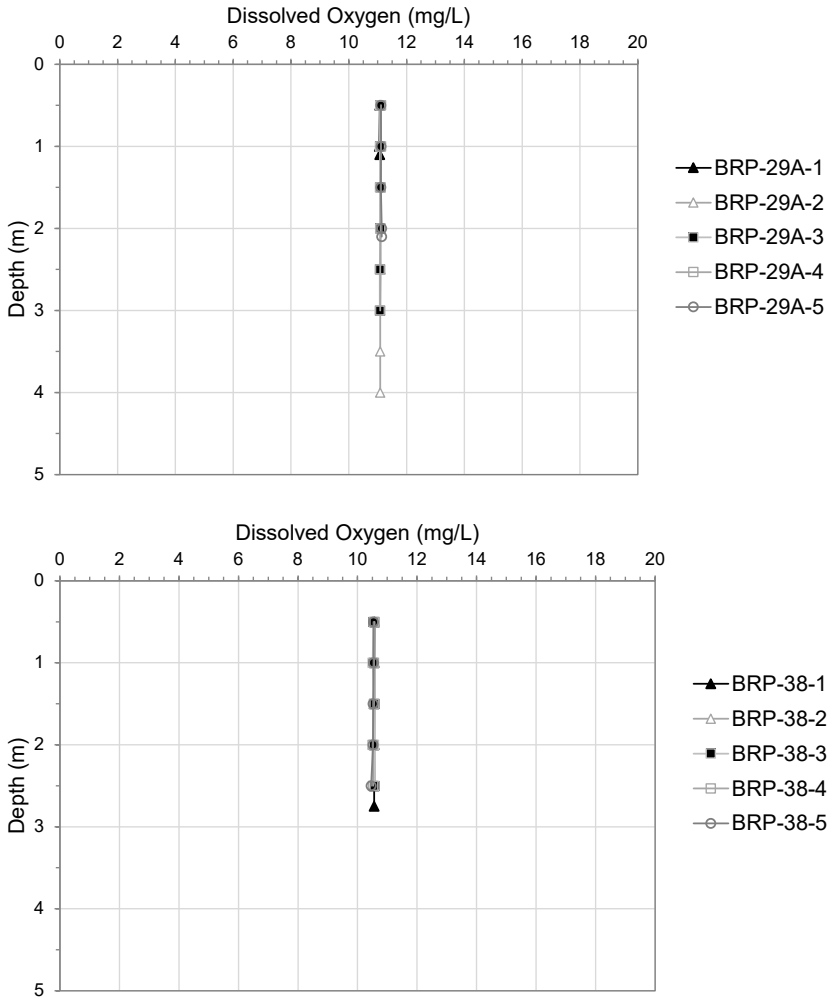


**Figure B-15: Dissolved Oxygen Concentration Profiles for the Open-water Season (August) at Goose Lake and Reference B Lake, 2025**



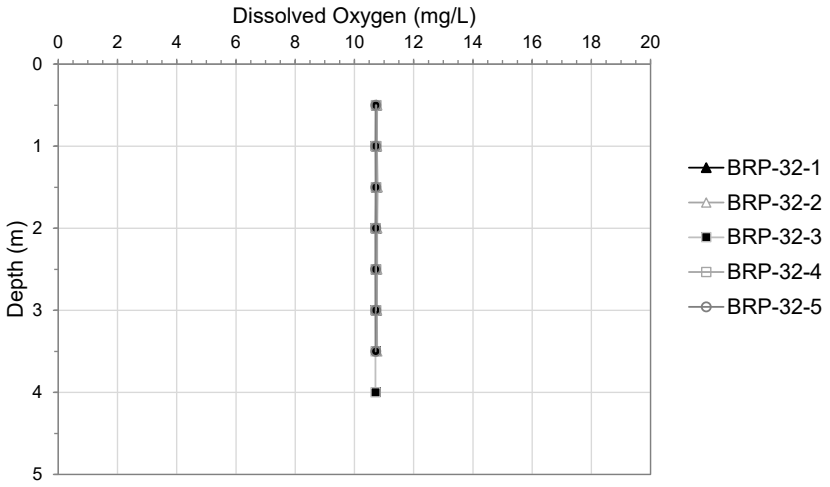
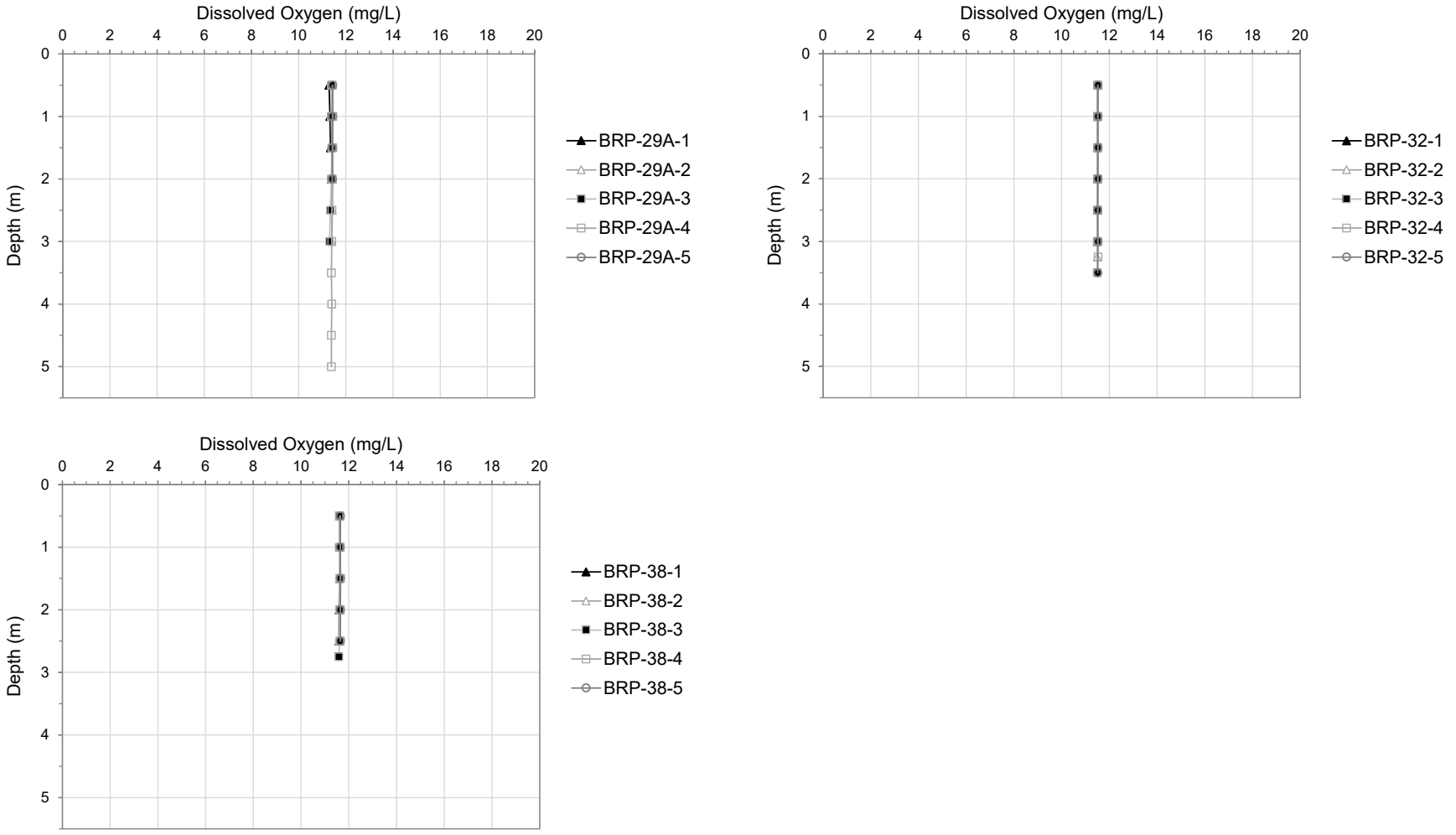



**Figure B-16: Dissolved Oxygen Concentration Profiles for the Open-water Season (September) at Goose Lake and Reference B Lake, 2025**



**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 filter[1]. 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.

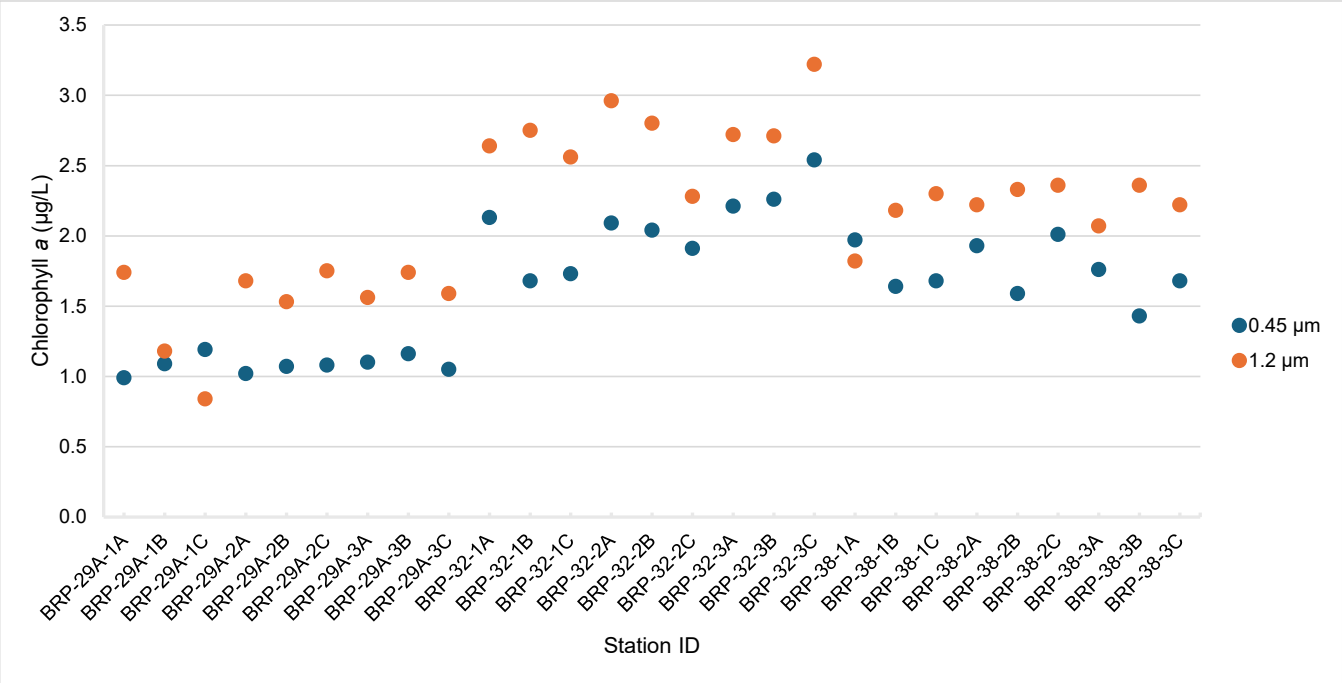


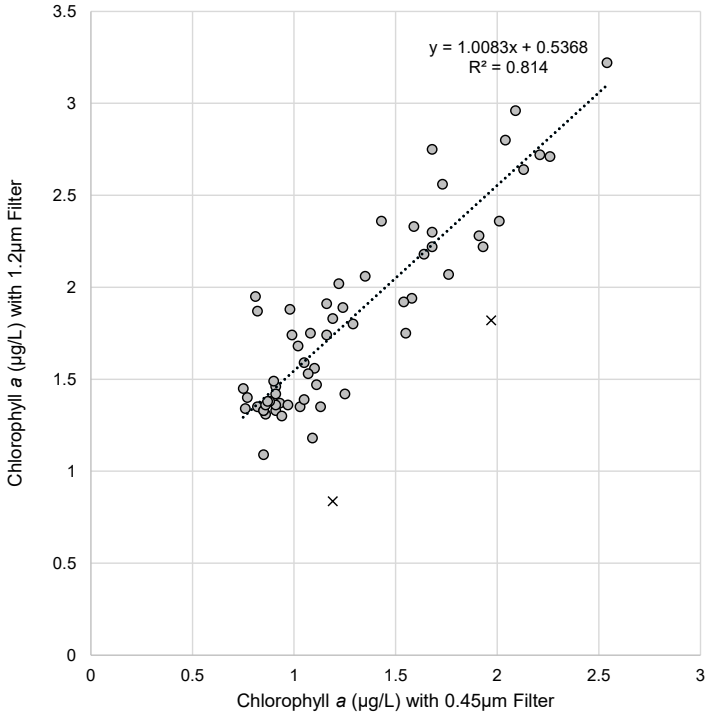

**Figure C-1: Chlorophyll *a* Concentrations in Samples Filtered using 0.45 Cellulose Membrane and 1.2 µm Glass Microfiber Type C Filters, September 2025**

## 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 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.

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

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 | 224 | 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 | <0.99 | 0.68 | <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[a] | 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 | 0.0020 | 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 | 0.00094 | 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 | 0.0066 | 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 phosphorus | mg-P/L | 0.010 | 0.0015 | 0.0019 | <0.001 | <0.001 | <0.001 | <0.001 | 0.00098 | <0.001 | 0.0019 | - | - | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | 0.0005 | <0.0010 | <0.0010 | - | - | 0.0010 | 0.0013 | <0.0010 | 0.0022 | 0.0023 |
| Dissolved phosphorus | mg-P/L | - | <0.001 | <0.001 | 0.0011 | <0.001 | <0.001 | <0.001 | 0.00062 | <0.001 | 0.0011 | - | - | <0.0010 | <0.0010 | 0.0012 | <0.0010 | <0.0010 | <0.0010 | 0.00064 | <0.0010 | 0.0012 | - | - | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 |
| Orthophosphate | mg-P/L | - | <0.001 | 0.0015 | <0.001 | <0.001 | <0.001 | <0.001 | 0.00070 | <0.001 | 0.0015 | - | - | <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 |
| Total Nitrogen | mg-N/L | - | 3.0 | 3.0 | 2.7 | 3.0 | 2.9 | 2.7 | 2.9 | 3.0 | 3.0 | 0.13 | 0.058 | 2.2 | 2.4 | 2.5 | 2.3 | 2.2 | 2.2 | 2.3 | 2.3 | 2.5 | 0.13 | 0.058 | 2.3 | 2.5 | 2.4 | 2.7 | 2.6 |
| Total Kjeldahl nitrogen | mg-N/L | - | 0.54 | 0.48 | 0.24 | 0.53 | 0.43 | 0.24 | 0.44 | 0.48 | 0.54 | 0.12 | 0.055 | 0.26 | 0.45 | 0.52 | 0.60 | 0.41 | 0.26 | 0.45 | 0.45 | 0.60 | 0.13 | 0.057 | 0.44 | 0.58 | 0.54 | 0.52 | 0.67 |
| Chlorophyll *a* (0.45 µm)[g] | µg/L | - | - | - | - | - | - | - | - | - | - | - | - | 1.0 | 0.64 | 0.69 | 0.70 | 0.90 | 0.64 | 0.79 | 0.70 | 1.0 | 0.16 | 0.071 | 0.94 | 0.78 | 0.79 | 0.75 | 0.71 |
| Chlorophyll *a* (1.2 µm)[g] | µg/L | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **Total Metals** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | µg/L | 260 - 500[c, a, d] | 35 | 40 | 39 | 34 | 38 | 34 | 37 | 38 | 40 | 2.6 | 1.2 | 45 | 46 | 47 | 45 | 45 | 45 | 45 | 45 | 47 | 0.81 | 0.36 | 34 | 33 | 33 | 32 | 33 |
| Arsenic | µg/L | 10 | 0.42 | 0.41 | 0.42 | 0.37 | 0.43 | 0.37 | 0.41 | 0.42 | 0.43 | 0.023 | 0.010 | 0.36 | 0.39 | 0.40 | 0.39 | 0.36 | 0.36 | 0.38 | 0.39 | 0.40 | 0.017 | 0.0074 | 0.34 | 0.33 | 0.33 | 0.33 | 0.33 |
| Barium | µg/L | 1,000 | 32 | 35 | 33 | 34 | 37 | 32 | 34 | 34 | 37 | 1.7 | 0.77 | 17 | 17 | 17 | 17 | 16 | 16 | 17 | 17 | 17 | 0.44 | 0.20 | 20 | 20 | 20 | 19 | 20 |
| Cadmium | µg/L | 0.075 - 0.15[a] | 0.052 | 0.057 | 0.052 | 0.054 | 0.051 | 0.051 | 0.053 | 0.052 | 0.057 | 0.0025 | 0.0011 | 0.022 | 0.025 | 0.026 | 0.025 | 0.022 | 0.022 | 0.024 | 0.025 | 0.026 | 0.0019 | 0.00084 | 0.030 | 0.033 | 0.035 | 0.031 | 0.036 |
| Chromium | µg/L | 5[e] | 0.18 | 0.21 | 0.20 | 0.17 | 0.24 | 0.17 | 0.20 | 0.20 | 0.24 | 0.031 | 0.014 | 0.20 | 0.22 | 0.21 | 0.21 | 0.20 | 0.20 | 0.21 | 0.21 | 0.22 | 0.0091 | 0.0041 | 0.12 | 0.13 | 0.14 | 0.12 | 0.13 |
| Cobalt | µg/L | 0.78 - 0.99[a] | **1.1**[A] | **1.3**[A] | **1.1**[A] | **1.1**[A] | 0.93 | 0.93 | 1.1 | 1.1 | 1.3 | 0.14 | 0.06 | **0.94**[A] | **1.1**[A] | **1.1**[A] | **0.97**[A] | **0.80**[A] | 0.80 | 0.97 | 0.97 | 1.1 | 0.11 | 0.048 | **1.7**[A] | **1.6**[A] | **1.5**[A] | **1.6**[A] | **1.6**[A] |
| Copper | µg/L | 4.2 | 3.3 | 3.4 | 3.3 | 3.2 | 3.3 | 3.2 | 3.3 | 3.3 | 3.4 | 0.092 | 0.041 | 2.9 | 2.9 | 2.9 | 2.8 | 2.8 | 2.8 | 2.8 | 2.9 | 2.9 | 0.076 | 0.034 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 |
| Iron | µg/L | 370 - 520[c, d] | 22 | 27 | 29 | 22 | 33 | 22 | 26 | 27 | 33 | 4.8 | 2.1 | 33 | 34 | 34 | 34 | 34 | 33 | 34 | 34 | 34 | 0.42 | 0.19 | 26 | 27 | 25 | 26 | 25 |
| Lead | µg/L | 7.0 - 10[a, d] | 0.11 | 0.39 | 0.066 | 0.014 | 1.5 | 0.014 | 0.41 | 0.11 | 1.5 | 0.61 | 0.27 | 0.014 | 0.014 | 0.015 | 0.012 | 0.018 | 0.012 | 0.015 | 0.014 | 0.018 | 0.0023 | 0.0010 | 0.010 | 0.0088 | 0.0086 | 0.0091 | 0.0079 |
| Manganese | µg/L | - | 24 | 28 | 24 | 24 | 22 | 22 | 24 | 24 | 28 | 2.2 | 1.0 | 14 | 15 | 16 | 14 | 12 | 12 | 14 | 14 | 16 | 1.4 | 0.61 | 26 | 24 | 25 | 24 | 24 |
| Mercury | µg/L | 0.026 | 0.00249 | 0.00116 | 0.00121 | 0.00124 | 0.00467 | 0.00116 | 0.00215 | 0.00124 | 0.00467 | 0.00151 | 0.00068 | 0.0019 | 0.0020 | 0.0020 | 0.0015 | 0.0020 | 0.0015 | 0.0019 | 0.0020 | 0.0020 | 0.00020 | 0.000091 | 0.0016 | 0.0014 | 0.0021 | 0.0015 | 0.0016 |
| Molybdenum | µg/L | 73 | 0.027 | 0.024 | 0.028 | 0.021 | 0.027 | 0.021 | 0.025 | 0.027 | 0.028 | 0.0030 | 0.0013 | 0.032 | 0.036 | 0.034 | 0.029 | 0.032 | 0.029 | 0.032 | 0.032 | 0.036 | 0.0027 | 0.0012 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 |
| Nickel | µg/L | 25 - 91[a] | 20 | 21 | 20 | 20 | 20 | 20 | 20 | 20 | 21 | 0.43 | 0.19 | 8.8 | 9.1 | 9.3 | 8.8 | 8.4 | 8.4 | 8.9 | 8.8 | 9.3 | 0.36 | 0.16 | 11 | 11 | 11 | 10 | 11 |
| Selenium | µg/L | 1.0 | 0.082 | 0.083 | 0.091 | 0.095 | 0.093 | 0.082 | 0.089 | 0.091 | 0.095 | 0.0059 | 0.0027 | 0.055 | 0.047 | 0.050 | 0.054 | 0.073 | 0.047 | 0.056 | 0.054 | 0.073 | 0.010 | 0.0045 | 0.077 | 0.083 | 0.090 | 0.084 | 0.089 |
| Silver | µg/L | 0.25 | <0.0020 | 0.0022 | <0.0020 | <0.0020 | 0.0034 | <0.0020 | 0.0017 | <0.0020 | 0.0034 | - | - | 0.0027 | 0.0036 | <0.0020 | 0.0062 | 0.0045 | <0.0020 | 0.0036 | 0.0036 | 0.0062 | 0.0019 | 0.00087 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 |
| Strontium | µg/L | 2,500 | 101 | 107 | 101 | 104 | 108 | 101 | 104 | 104 | 108 | 3.3 | 1.5 | 50 | 51 | 52 | 50 | 47 | 47 | 50 | 50 | 52 | 1.8 | 0.83 | 74 | 74 | 74 | 73 | 75 |
| Thallium | µg/L | 0.80 | 0.0059 | 0.0059 | 0.0053 | 0.0055 | 0.0051 | 0.0051 | 0.0055 | 0.0055 | 0.0059 | 0.00036 | 0.00016 | 0.0053 | 0.0061 | 0.0062 | 0.0054 | 0.0055 | 0.0053 | 0.0057 | 0.0055 | 0.0062 | 0.00043 | 0.00019 | 0.0066 | 0.0062 | 0.0057 | 0.0064 | 0.0061 |
| Uranium | µg/L | 15 | 0.015 | 0.015 | 0.015 | 0.015 | 0.014 | 0.014 | 0.015 | 0.015 | 0.015 | 0.00056 | 0.00025 | 0.016 | 0.018 | 0.016 | 0.016 | 0.015 | 0.015 | 0.016 | 0.016 | 0.018 | 0.0010 | 0.00046 | 0.012 | 0.012 | 0.012 | 0.013 | 0.012 |
| Vanadium | µg/L | 120 | 0.054 | 0.060 | 0.064 | 0.050 | 0.062 | 0.050 | 0.058 | 0.060 | 0.064 | 0.0055 | 0.0025 | 0.070 | 0.070 | 0.069 | 0.069 | 0.070 | 0.069 | 0.070 | 0.070 | 0.070 | 0.00073 | 0.00033 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Zinc | µg/L | - | 8.2 | 10 | 8.5 | 9.2 | 15 | 8.2 | 10 | 9.2 | 15 | 2.6 | 1.2 | 2.6 | 2.6 | 2.9 | 2.4 | 2.5 | 2.4 | 2.6 | 2.6 | 2.9 | 0.17 | 0.076 | 3.0 | 3.0 | 2.9 | 2.9 | 2.9 |
| **Dissolved Metals** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | µg/L | - | 29 | 31 | 30 | 27 | 26 | 26 | 29 | 29 | 31 | 1.9 | 0.87 | 33 | 32 | 34 | 34 | 32 | 32 | 33 | 33 | 34 | 1.0 | 0.45 | 23 | 22 | 23 | 22 | 23 |
| Arsenic | µg/L | - | 0.39 | 0.40 | 0.41 | 0.39 | 0.40 | 0.39 | 0.40 | 0.40 | 0.41 | 0.0061 | 0.0027 | 0.36 | 0.36 | 0.35 | 0.36 | 0.34 | 0.34 | 0.35 | 0.36 | 0.36 | 0.0091 | 0.0041 | 0.33 | 0.33 | 0.32 | 0.33 | 0.32 |
| Barium | µg/L | - | 33 | 34 | 33 | 33 | 36 | 33 | 34 | 33 | 36 | 1.3 | 0.6 | 17 | 17 | 17 | 17 | 16 | 16 | 17 | 17 | 17 | 0.47 | 0.21 | 19 | 19 | 19 | 19 | 19 |
| Cadmium | µg/L | - | 0.051 | 0.057 | 0.054 | 0.051 | 0.052 | 0.051 | 0.053 | 0.052 | 0.057 | 0.0027 | 0.0012 | 0.020 | 0.018 | 0.026 | 0.023 | 0.019 | 0.018 | 0.021 | 0.020 | 0.026 | 0.0031 | 0.0014 | 0.027 | 0.028 | 0.032 | 0.031 | 0.034 |
| Chromium | µg/L | - | 0.15 | 0.17 | 0.18 | 0.15 | 0.17 | 0.15 | 0.16 | 0.17 | 0.18 | 0.011 | 0.0048 | 0.18 | 0.15 | 0.16 | 0.15 | 0.17 | 0.15 | 0.16 | 0.16 | 0.18 | 0.011 | 0.0049 | <0.10 | 0.10 | <0.10 | <0.10 | 0.12 |
| Cobalt | µg/L | - | 0.96 | 1.1 | 0.98 | 0.91 | 0.75 | 0.75 | 0.95 | 0.96 | 1.1 | 0.14 | 0.063 | 0.87 | 0.95 | 1.0 | 0.91 | 0.70 | 0.70 | 0.89 | 0.91 | 1.0 | 0.11 | 0.051 | 1.6 | 1.6 | 1.6 | 1.5 | 1.6 |
| Copper | µg/L | - | 3.1 | 3.2 | 3.2 | 3.0 | 3.1 | 3.0 | 3.1 | 3.1 | 3.2 | 0.083 | 0.037 | 2.7 | 2.5 | 2.6 | 2.6 | 2.5 | 2.5 | 2.6 | 2.6 | 2.7 | 0.073 | 0.033 | 2.6 | 2.6 | 2.8 | 2.5 | 2.6 |
| Iron | µg/L | - | 10 | 9.9 | 11 | 10 | 9.2 | 9.2 | 10 | 10 | 11 | 0.61 | 0.27 | 7.1 | 6.7 | 6.6 | 6.5 | 7.3 | 6.5 | 6.8 | 6.7 | 7.3 | 0.34 | 0.15 | 7.4 | 7.4 | 7.4 | 7.7 | 7.2 |
| Lead | µg/L | - | 0.030 | 0.24 | 0.063 | 0.0085 | 0.54 | 0.0085 | 0.18 | 0.063 | 0.54 | 0.22 | 0.10 | 0.0056 | 0.0044 | 0.0044 | 0.0035 | 0.0033 | 0.0033 | 0.0042 | 0.0044 | 0.0056 | 0.00091 | 0.00041 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 |
| Manganese | µg/L | 330 - 530[a, c, f] | 22 | 26 | 22 | 21 | 19 | 19 | 22 | 22 | 26 | 2.4 | 1.1 | 13 | 14 | 15 | 14 | 11 | 11 | 13 | 14 | 15 | 1.6 | 0.70 | 25 | 24 | 25 | 24 | 24 |
| Mercury | µg/L | - | 0.00290 | 0.00139 | 0.00138 | 0.00287 | 0.00755 | 0.00138 | 0.00322 | 0.00287 | 0.00755 | 0.0025 | 0.0011 | 0.00137 | 0.00134 | 0.00140 | 0.00133 | 0.00121 | 0.00121 | 0.00133 | 0.00134 | 0.00140 | 0.00007 | 0.00003 | 0.0020 | 0.0017 | 0.0013 | 0.0015 | 0.0013 |
| Molybdenum | µg/L | - | 0.024 | 0.023 | 0.027 | 0.022 | 0.021 | 0.021 | 0.024 | 0.023 | 0.027 | 0.0025 | 0.0011 | 0.027 | 0.034 | 0.031 | 0.028 | 0.034 | 0.027 | 0.031 | 0.031 | 0.034 | 0.0034 | 0.0015 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 |
| Nickel | µg/L | - | 19 | 21 | 20 | 19 | 20 | 19 | 20 | 20 | 21 | 0.46 | 0.21 | 8.7 | 8.8 | 9.0 | 8.8 | 8.0 | 8.0 | 8.6 | 8.8 | 9.0 | 0.39 | 0.17 | 10 | 10 | 11 | 10 | 10 |
| Selenium | µg/L | - | 0.088 | 0.086 | 0.089 | 0.072 | 0.068 | 0.068 | 0.081 | 0.086 | 0.089 | 0.0098 | 0.0044 | 0.069 | 0.071 | 0.071 | 0.062 | 0.047 | 0.047 | 0.064 | 0.069 | 0.071 | 0.010 | 0.0046 | 0.075 | 0.043 | 0.040 | 0.091 | 0.081 |
| Silver | µg/L | - | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0010 | <0.0020 | <0.0020 | - | - | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0030 | <0.0020 | 0.0014 | <0.0020 | 0.0030 | - | - | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 |
| Strontium | µg/L | - | 102 | 107 | 101 | 102 | 107 | 101 | 104 | 102 | 107 | 2.9 | 1.3 | 50 | 50 | 52 | 51 | 47 | 47 | 50 | 50 | 52 | 2.0 | 0.88 | 72 | 73 | 74 | 72 | 73 |
| Thallium | µg/L | - | 0.0047 | 0.0055 | 0.0055 | 0.0055 | 0.0044 | 0.0044 | 0.0051 | 0.0055 | 0.0055 | 0.00053 | 0.00024 | 0.0064 | 0.0053 | 0.0055 | 0.0057 | 0.0054 | 0.0053 | 0.0056 | 0.0055 | 0.0064 | 0.00043 | 0.00019 | 0.0067 | 0.0069 | 0.0072 | 0.0061 | 0.0057 |
| Uranium | µg/L | - | 0.014 | 0.013 | 0.014 | 0.013 | 0.012 | 0.012 | 0.013 | 0.013 | 0.014 | 0.00079 | 0.00036 | 0.014 | 0.014 | 0.014 | 0.015 | 0.014 | 0.014 | 0.014 | 0.014 | 0.015 | 0.00050 | 0.00022 | 0.0092 | 0.0099 | 0.010 | 0.0096 | 0.0097 |
| Vanadium | µg/L | - | 0.048 | 0.049 | 0.053 | 0.045 | 0.042 | 0.042 | 0.047 | 0.048 | 0.053 | 0.0040 | 0.0018 | 0.031 | 0.025 | 0.032 | 0.037 | 0.034 | 0.025 | 0.032 | 0.032 | 0.037 | 0.0046 | 0.0021 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Zinc | µg/L | 22 - 76[a, c, d] | 8.2 | 9.8 | 9.9 | 9.4 | 14 | 8.2 | 10 | 9.8 | 14 | 2.3 | 1.04 | 2.5 | 2.4 | 2.5 | 2.4 | 2.2 | 2.2 | 2.4 | 2.4 | 2.5 | 0.12 | 0.052 | 3.0 | 2.9 | 3.1 | 2.8 | 2.9 |
| **Radionuclides** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Radium-226 | Bq/L | 0.11 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 |

Notes: Standard deviation and standard error were not calculated when 50% or more of results were below the detection limit and means were calculated using data below detection limit at half the detection limit. Bolded concentrations are higher than benchmarks.Water quality data and benchmarks shown in this table were rounded to reflect laboratory or field instrument precision after comparisons to benchmarks. Therefore, values slightly above benchmarks may be displayed as being equal to the benchr

(a) The benchmark is hardness dependent. The benchmark range shown is based on the hardness range observed in the dataset (41 to 93 mg/L). The benchmark is calculated based on the individual hardness value for each sample.

(b) The ammonia benchmark is pH and temperature dependent. The benchmark that results in the minimum ammonia benchmark (5.7 mg-N/L) is based on the combination of field pH (7.0) and water temperature (15.1°C). Benchmarks calculated with temperature and pH values falling outside the defined range (i.e., pH 6.0 to 10.0 and temperature 0°C to 30°C) should be used with caution, as the benchmark does not necessarily accurately reflect toxic effects at the low and high pH and temperature extrem

(c) The benchmark is pH dependent. The benchmark range shown is based on the pH range observed in the dataset (6.1 to 7.2). The benchmark is calculated based on the individual pH for each sample.

(d) The benchmark is DOC dependent. The benchmark range shown is based on the DOC concentration range observed in the dataset (3.6 to 6.4 mg/L). The benchmark is calculated based on the individual DOC concentration in each sample.

(e) The benchmark is for chromium VI.

(f) The benchmark was generated using a look-up table provided by CCME.

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

(h) Total dissolved solids calculated by WSP using the Standard Method by APHA (2005): Total dissolved solids mg/L = Σ[$Na^+$, $K^+$, $Ca^{2+}$, $Mg^{2+}$, $Cl^-$, $F^-$, $SO_4^{2-}$, 4.427 * $NO_3^-$ (as nitrogen), 0.6 * total alkalinity (as CaCQ), 1.266 * $SiO_2$].

(A) = concentration is higher than the AEMP benchmark or outside the recommended pH range.

- no benchmark or no data; $CaCO_3$ = calcium carbonate; WAD = weak acid dissociable; mg-N/L = milligrams nitrogen per litre; mg-P/L = milligram phosphorus per litre; DOC = Dissolved Organic Carbon; CCME = Canadian Council of Ministers of the Environment; APHA = American Public Health Association.

References: CCME (Canadian Council of Ministers of the Environment). 1999. Canadian Environmental Quality Guidelines. 1999 with updates to 2019. Winnipeg, MB. 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-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 | Maximum | Standard Deviation | Standard Error |
| **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[a] | 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 *a* (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 *a* (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 | 31 | 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 | 10 | 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 | 0.58 | 0.26 | 94 | 73 | 76 | 70 | 68 | 68 | 76 | 73 | 94 | 11 | 4.7 |
| Thallium | µg/L | 0.80 | 0.0057 | 0.0062 | 0.0062 | 0.0066 | 0.00034 | 0.00015 | 0.0072 | 0.0057 | 0.0050 | 0.0061 | 0.0046 | 0.0046 | 0.0057 | 0.0057 | 0.0072 | 0.0010 | 0.00045 |
| Uranium | µg/L | 15 | 0.012 | 0.012 | 0.012 | 0.013 | 0.00030 | 0.00014 | 0.013 | 0.0098 | 0.011 | 0.010 | 0.011 | 0.0098 | 0.011 | 0.011 | 0.013 | 0.0010 | 0.00046 |
| Vanadium | µg/L | 120 | <0.20 | 0.10 | <0.20 | <0.20 | - | - | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 0.10 | <0.20 | <0.20 | - | - |
| Zinc | µg/L | - | 2.9 | 2.9 | 2.9 | 3.0 | 0.043 | 0.019 | 3.6 | 2.4 | 2.6 | 2.4 | 2.3 | 2.3 | 2.6 | 2.4 | 3.6 | 0.53 | 0.24 |
| **Dissolved Metals** | | | | | | | | | | | | | | | | | | | |
| Aluminum | µg/L | - | 22 | 22 | 23 | 23 | 0.37 | 0.17 | 17 | 12 | 13 | 12 | 12 | 12 | 13 | 12 | 17 | 2.0 | 0.91 |
| Arsenic | µg/L | - | 0.32 | 0.33 | 0.33 | 0.33 | 0.0067 | 0.0030 | 0.33 | 0.32 | 0.33 | 0.32 | 0.31 | 0.31 | 0.32 | 0.32 | 0.33 | 0.0094 | 0.0042 |
| Barium | µg/L | - | 19 | 19 | 19 | 19 | 0.13 | 0.060 | 21 | 18 | 18 | 17 | 17 | 17 | 18 | 18 | 21 | 1.7 | 0.75 |
| Cadmium | µg/L | - | 0.027 | 0.030 | 0.031 | 0.034 | 0.0028 | 0.0013 | 0.036 | 0.025 | 0.027 | 0.021 | 0.022 | 0.021 | 0.026 | 0.025 | 0.036 | 0.0059 | 0.0026 |
| Chromium | µg/L | - | <0.10 | 0.07 | <0.10 | 0.12 | - | - | 0.11 | <0.10 | 0.11 | <0.10 | <0.10 | <0.10 | 0.07 | <0.10 | 0.11 | - | - |
| Cobalt | µg/L | - | 1.5 | 1.6 | 1.6 | 1.6 | 0.036 | 0.016 | 2.1 | 1.0 | 1.2 | 0.96 | 0.89 | 0.89 | 1.2 | 1.0 | 2.1 | 0.49 | 0.22 |
| Copper | µg/L | - | 2.5 | 2.6 | 2.6 | 2.8 | 0.11 | 0.050 | 2.5 | 2.2 | 2.2 | 2.1 | 2.1 | 2.1 | 2.2 | 2.2 | 2.5 | 0.15 | 0.069 |
| Iron | µg/L | - | 7.2 | 7.4 | 7.4 | 7.7 | 0.18 | 0.080 | 4.6 | 4.4 | 4.5 | 4.9 | 4.9 | 4.4 | 4.7 | 4.6 | 4.9 | 0.23 | 0.10 |
| Lead | µg/L | - | <0.0050 | 0.0025 | <0.0050 | <0.0050 | - | - | 0.0065 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0033 | <0.0050 | 0.0065 | - | - |
| Manganese | µg/L | 330 - 530[a, c, f] | 24 | 24 | 24 | 25 | 0.62 | 0.28 | 31 | 15 | 18 | 14 | 12 | 12 | 18 | 15 | 31 | 7.5 | 3.3 |
| Mercury | µg/L | - | 0.0013 | 0.0016 | 0.0015 | 0.0020 | 0.00026 | 0.00012 | 0.00065 | 0.00053 | 0.00065 | 0.00073 | 0.0011 | 0.00053 | 0.00072 | 0.00065 | 0.0011 | 0.00020 | 0.000088 |
| Molybdenum | µg/L | - | <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 | - | 10 | 10 | 10 | 11 | 0.11 | 0.051 | 12 | 9.3 | 9.7 | 9.0 | 8.8 | 8.8 | 9.8 | 9.3 | 12 | 1.3 | 0.60 |
| Selenium | µg/L | - | 0.040 | 0.066 | 0.075 | 0.091 | 0.023 | 0.010 | 0.045 | 0.052 | 0.044 | 0.050 | <0.040 | <0.040 | 0.042 | 0.045 | 0.052 | 0.013 | 0.0057 |
| Silver | µg/L | - | <0.0050 | 0.0025 | <0.0050 | <0.0050 | - | - | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0025 | <0.0050 | <0.0050 | - | - |
| Strontium | µg/L | - | 72 | 73 | 73 | 74 | 0.99 | 0.44 | 89 | 70 | 72 | 69 | 67 | 67 | 73 | 70 | 89 | 9.0 | 4.0 |
| Thallium | µg/L | - | 0.0057 | 0.0065 | 0.0067 | 0.0072 | 0.00061 | 0.00027 | 0.0058 | 0.0050 | 0.0055 | 0.0045 | 0.0048 | 0.0045 | 0.0051 | 0.0050 | 0.0058 | 0.00053 | 0.00024 |
| Uranium | µg/L | - | 0.0092 | 0.0097 | 0.0097 | 0.010 | 0.00037 | 0.00017 | 0.0088 | 0.0077 | 0.0089 | 0.0071 | 0.0081 | 0.0071 | 0.0081 | 0.0081 | 0.0089 | 0.00076 | 0.00034 |
| Vanadium | µg/L | - | <0.20 | 0.10 | <0.20 | <0.20 | - | - | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 0.10 | <0.20 | <0.20 | - | - |
| Zinc | µg/L | 22 - 76[a, c, d] | 2.8 | 2.9 | 2.9 | 3.1 | 0.10 | 0.046 | 3.5 | 2.3 | 2.5 | 2.5 | 2.1 | 2.1 | 2.6 | 2.5 | 3.5 | 0.54 | 0.24 |
| **Radionuclides** | | | | | | | | | | | | | | | | | | | |
| Radium-226 | Bq/L | 0.11 | <0.0050 | 0.0025 | <0.0050 | <0.0050 | - | - | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0025 | <0.0050 | <0.0050 | - | - |

Notes: Standard deviation and standard error were not calculated when 50% or marks and identified as exceedances. Concentrations equal to the benchmark values were not identified as exceedances. Summary statistics were not compared to AEMP benc

(a) The benchmark is hardness dependent. The benchmark range shown is bas

(b) The ammonia benchmark is pH and temperature dependent. The benchmarles. The benchmark is calculated based on the individual field pH and temperature measurements for each sa

(c) The benchmark is pH dependent. The benchmark range shown is based on t

(d) The benchmark is DOC dependent. The benchmark range shown is based o

(e) The benchmark is for chromium VI.

(f) The benchmark was generated using a look-up table provided by CCME.

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

(h) Total dissolved solids calculated by WSP using the Standard Method by APH

(A) = concentration is higher than the AEMP benchmark or outside the recomme

- no benchmark or no data; $CaCO_3$ = calcium carbonate; WAD = weak acid disse

References: CCME (Canadian Council of Ministers of the Environment). 1999. C

**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 | 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 | 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 | 11 | 0.045 | 0.020 |
| Dissolved oxygen | % | - | 86 | 89 | 87 | 86 | 87 | 86 | 87 | 87 | 89 | 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 | 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 | 6.8 | 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 | 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 | 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 | 5.0 | 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 | 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 | 5.4 | 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 | 0.66 | 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 | 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 - 218[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 | 0.27 | 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 | 0.00037 | <0.00050 | 0.00058 | - | - |
| **Nutrients** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nitrate, as N | mg-N/L | 2.9 | 1.3 | 1.4 | 1.2 | 1.3 | 1.3 | 1.2 | 1.3 | 1.3 | 1.4 | 0.071 | 0.032 | 0.56 | 0.54 | 0.55 | 0.51 | 0.51 | 0.51 | 0.53 | 0.54 | 0.56 | 0.023 | 0.010 | 0.50 | 0.50 | 0.51 | 0.50 | 0.49 | 0.49 | 0.50 | 0.50 | 0.51 | 0.0071 | 0.0032 |
| Nitrite, as N | mg-N/L | 0.060 | **0.14**[A] | **0.12**[A] | **0.13**[A] | **0.14**[A] | **0.12**[A] | 0.12 | 0.13 | 0.13 | 0.14 | 0.010 | 0.0045 | 0.0018 | 0.0018 | 0.0017 | 0.0026 | 0.0023 | 0.0017 | 0.0020 | 0.0018 | 0.0026 | 0.00039 | 0.00017 | 0.0011 | 0.0012 | <0.0010 | 0.0014 | <0.0010 | <0.0010 | 0.00094 | 0.0011 | 0.0014 | 0.00042 | 0.00019 |
| Nitrate + nitrite | mg-N/L | - | 1.5 | 1.5 | 1.4 | 1.5 | 1.5 | 1.4 | 1.5 | 1.5 | 1.5 | 0.045 | 0.020 | 0.57 | 0.55 | 0.55 | 0.51 | 0.51 | 0.51 | 0.54 | 0.55 | 0.57 | 0.027 | 0.012 | 0.50 | 0.50 | 0.51 | 0.50 | 0.49 | 0.49 | 0.50 | 0.50 | 0.51 | 0.0071 | 0.0032 |
| Total ammonia | mg-N/L | 2.9 - 136[b] | 0.13 | 0.18 | 0.16 | 0.14 | 0.16 | 0.13 | 0.15 | 0.16 | 0.18 | 0.019 | 0.0087 | 0.076 | 0.039 | 0.029 | 0.024 | 0.025 | 0.024 | 0.039 | 0.029 | 0.076 | 0.022 | 0.0097 | 0.014 | 0.014 | 0.030 | 0.015 | 0.014 | 0.014 | 0.017 | 0.014 | 0.030 | 0.0071 | 0.0032 |
| Un-ionized ammonia | mg-N/L | - | <0.00050 | <0.00050 | <0.00050 | <0.00050 | <0.00050 | <0.00050 | 0.00025 | <0.00050 | <0.00050 | - | - | <0.00050 | <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 | - | - |
| Total phosphorus | mg-P/L | 0.010 | <0.0010 | 0.0014 | 0.0018 | 0.0014 | <0.0010 | <0.0010 | 0.0011 | 0.0014 | 0.0018 | 0.00059 | 0.00026 | <0.0010 | <0.0010 | <0.0010 | 0.0049 | <0.0010 | <0.0010 | 0.0014 | <0.0010 | 0.0049 | - | - | 0.0012 | 0.0027 | 0.0012 | 0.0030 | 0.0025 | 0.0012 | 0.0021 | 0.0025 | 0.0030 | 0.00086 | 0.00038 |
| Dissolved phosphorus | mg-P/L | - | 0.0028 | 0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | 0.0011 | <0.0010 | 0.0028 | - | - | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | 0.0005 | <0.0010 | <0.0010 | - | - | <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 | 0.00050 | <0.0010 | <0.0010 | - | - | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | 0.0005 | <0.0010 | <0.0010 | - | - | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | <0.0010 | 0.0005 | <0.0010 | <0.0010 | - | - |
| Total Nitrogen | mg-N/L | - | 1.8 | 1.9 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.9 | 0.045 | 0.020 | 0.91 | 0.87 | 0.86 | 0.87 | 0.84 | 0.84 | 0.87 | 0.87 | 0.91 | 0.025 | 0.011 | 0.81 | 0.80 | 0.80 | 0.80 | 0.83 | 0.80 | 0.81 | 0.80 | 0.83 | 0.013 | 0.0058 |
| Total Kjeldahl nitrogen | mg-N/L | - | 0.35 | 0.39 | 0.47 | 0.36 | 0.37 | 0.35 | 0.39 | 0.37 | 0.47 | 0.048 | 0.022 | 0.34 | 0.32 | 0.31 | 0.35 | 0.33 | 0.31 | 0.33 | 0.33 | 0.35 | 0.016 | 0.0071 | 0.31 | 0.30 | 0.29 | 0.30 | 0.35 | 0.29 | 0.31 | 0.30 | 0.35 | 0.023 | 0.010 |
| Chlorophyll *a* (0.45 µm)[g] | µg/L | - | - | - | - | - | - | - | - | - | - | - | - | 0.79 | 0.91 | 0.89 | 0.81 | 0.99 | 0.79 | 0.88 | 0.89 | 0.99 | 0.082 | 0.037 | 1.97 | 2.03 | 1.83 | 1.97 | 1.87 | 1.8 | 1.9 | 2.0 | 2.03 | 0.1 | 0.037 |
| Chlorophyll *a* (1.2 µm)[g] | µg/L | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **Total Metals** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | µg/L | 240 - 620[a, c, d] | 28 | 27 | 22 | 22 | 22 | 22 | 24 | 22 | 28 | 2.9 | 1.3 | 27 | 26 | 26 | 35 | 35 | 26 | 30 | 27 | 35 | 4.9 | 2.2 | 17 | 16 | 17 | 17 | 17 | 16 | 17 | 17 | 17 | 0.23 | 0.10 |
| Arsenic | µg/L | 10 | 0.36 | 0.36 | 0.34 | 0.34 | 0.34 | 0.36 | 0.34 | 0.35 | 0.36 | 0.013 | 0.0059 | 0.26 | 0.25 | 0.26 | 0.30 | 0.27 | 0.25 | 0.27 | 0.26 | 0.30 | 0.019 | 0.0086 | 0.28 | 0.27 | 0.26 | 0.28 | 0.27 | 0.26 | 0.27 | 0.27 | 0.28 | 0.0088 | 0.0039 |
| Barium | µg/L | 1,000 | 22 | 23 | 22 | 22 | 22 | 22 | 22 | 22 | 23 | 0.43 | 0.19 | 11 | 10 | 10 | 11 | 11 | 10 | 10 | 11 | 11 | 0.26 | 0.12 | 10 | 10 | 10 | 10 | 10.0 | 10.0 | 10 | 10 | 10 | 0.19 | 0.087 |
| Cadmium | µg/L | 0.055 - 0.11[a] | 0.018 | 0.019 | 0.017 | 0.016 | 0.015 | 0.015 | 0.017 | 0.017 | 0.019 | 0.0016 | 0.00072 | 0.0077 | 0.0071 | 0.0059 | 0.0080 | 0.0076 | 0.0059 | 0.0073 | 0.0076 | 0.0080 | 0.00083 | 0.00037 | 0.0060 | 0.0071 | 0.0052 | 0.0068 | 0.0058 | 0.0058 | 0.0052 | 0.0062 | 0.0060 | 0.0071 | 0.00077 | 0.00034 |
| Chromium | µg/L | 5[e] | 0.20 | 0.19 | 0.15 | 0.15 | 0.15 | 0.15 | 0.16 | 0.15 | 0.20 | 0.025 | 0.011 | 0.16 | 0.15 | 0.15 | 0.16 | 0.14 | 0.14 | 0.15 | 0.15 | 0.16 | 0.010 | 0.0047 | 0.12 | 0.14 | 0.12 | 0.10 | 0.14 | 0.10 | 0.12 | 0.12 | 0.14 | 0.017 | 0.0075 |
| Cobalt | µg/L | 0.78 - 0.85[a] | 0.28 | 0.28 | 0.26 | 0.27 | 0.26 | 0.26 | 0.27 | 0.27 | 0.28 | 0.011 | 0.0049 | 0.26 | 0.25 | 0.25 | 0.26 | 0.29 | 0.25 | 0.26 | 0.26 | 0.29 | 0.016 | 0.0070 | 0.21 | 0.21 | 0.20 | 0.21 | 0.20 | 0.20 | 0.21 | 0.21 | 0.21 | 0.0059 | 0.0026 |
| Copper | µg/L | 4.2 | 2.6 | 2.6 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.6 | 0.11 | 0.048 | 1.9 | 2.0 | 1.9 | 2.1 | 1.9 | 1.9 | 1.9 | 1.9 | 2.1 | 0.088 | 0.040 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 0.013 | 0.0058 |
| Iron | µg/L | 390 - 500[c, d] | 22 | 19 | 14 | 16 | 15 | 14 | 17 | 16 | 22 | 3.2 | 1.5 | 34 | 34 | 35 | 44 | 50 | 34 | 39 | 35 | 50 | 7.3 | 3.2 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 0.19 | 0.087 |
| Lead | µg/L | 6.2 - 9.0[a, d] | 0.76 | 1.7 | 0.21 | 0.34 | 0.36 | 0.21 | 0.67 | 0.36 | 1.7 | 0.60 | 0.27 | 0.0067 | 0.0084 | 0.0092 | 0.0099 | 0.011 | 0.0067 | 0.0091 | 0.0092 | 0.011 | 0.0017 | 0.00075 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0025 | <0.0050 | <0.0050 | - | - |
| Manganese | µg/L | - | 8.3 | 8.3 | 7.8 | 8.3 | 7.8 | 7.8 | 8.1 | 8.3 | 8.3 | 0.28 | 0.13 | 4.6 | 4.4 | 4.4 | 4.9 | 5.3 | 4.4 | 4.7 | 4.6 | 5.3 | 0.40 | 0.18 | 3.3 | 3.3 | 3.2 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 0.032 | 0.014 |
| Mercury | µg/L | 0.026 | 0.00105 | 0.00084 | 0.00092 | 0.00107 | 0.00092 | 0.00084 | 0.00096 | 0.00092 | 0.00107 | 0.00010 | 0.00004 | 0.00151 | 0.00156 | 0.00147 | 0.00153 | 0.00154 | 0.00147 | 0.00152 | 0.00153 | 0.00156 | 0.00003 | 0.00002 | 0.00125 | 0.00180 | 0.00133 | 0.00135 | 0.00126 | 0.00125 | 0.00140 | 0.00133 | 0.00180 | 0.00023 | 0.00010 |
| Molybdenum | µg/L | 73 | 0.030 | 0.031 | 0.027 | 0.024 | 0.025 | 0.024 | 0.027 | 0.027 | 0.031 | 0.0033 | 0.0015 | 0.015 | 0.020 | 0.020 | 0.016 | 0.017 | 0.015 | 0.018 | 0.017 | 0.020 | 0.0021 | 0.00096 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | 0.025 | <0.050 | - | - |
| Nickel | µg/L | 25 - 69[a] | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 0.28 | 0.12 | 6.3 | 6.2 | 6.3 | 6.5 | 6.4 | 6.2 | 6.3 | 6.3 | 6.5 | 0.098 | 0.044 | 5.9 | 5.7 | 5.8 | 5.7 | 5.7 | 5.7 | 5.8 | 5.7 | 5.9 | 0.079 | 0.035 |
| Selenium | µg/L | 1.0 | 0.063 | 0.051 | 0.058 | 0.056 | 0.055 | 0.051 | 0.057 | 0.056 | 0.063 | 0.0044 | 0.0020 | 0.027 | 0.019 | 0.025 | <0.010 | 0.024 | <0.01 | 0.020 | 0.024 | 0.027 | 0.0089 | 0.0040 | <0.040 | <0.040 | <0.040 | <0.040 | <0.040 | <0.040 | <0.040 | 0.020 | <0.040 | - | - |
| Silver | µg/L | 0.25 | 0.0022 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0012 | <0.0020 | 0.0022 | - | - | <0.0020 | 0.0020 | 0.0040 | 0.0035 | 0.0037 | <0.002 | 0.0028 | 0.0035 | 0.0040 | 0.0013 | 0.00057 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0025 | <0.0050 | <0.0050 | - | - |
| Strontium | µg/L | 2,500 | 61 | 63 | 60 | 61 | 61 | 60 | 61 | 61 | 63 | 1.1 | 0.49 | 27 | 26 | 26 | 25 | 25 | 25 | 26 | 26 | 27 | 0.76 | 0.34 | 29 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 29 | 0.49 | 0.22 |
| Thallium | µg/L | 0.80 | 0.0031 | 0.0031 | 0.0030 | 0.0030 | 0.0031 | 0.0030 | 0.0031 | 0.0031 | 0.0031 | 0.000055 | 0.000024 | 0.0039 | 0.0022 | 0.0026 | 0.0035 | 0.0030 | 0.0022 | 0.0030 | 0.0030 | 0.0039 | 0.00067 | 0.00030 | 0.0024 | 0.0028 | 0.0033 | 0.0028 | 0.0028 | 0.0024 | 0.0028 | 0.0028 | 0.0033 | 0.00032 | 0.00014 |
| Uranium | µg/L | 15 | 0.013 | 0.013 | 0.011 | 0.012 | 0.012 | 0.011 | 0.012 | 0.012 | 0.013 | 0.00081 | 0.00036 | 0.012 | 0.011 | 0.010 | 0.014 | 0.013 | 0.010 | 0.012 | 0.012 | 0.014 | 0.0014 | 0.00064 | 0.011 | 0.010 | 0.010 | 0.010 | 0.011 | 0.010 | 0.011 | 0.010 | 0.011 | 0.00049 | 0.00022 |
| Vanadium | µg/L | 120 | 0.062 | 0.056 | 0.049 | 0.050 | 0.050 | 0.049 | 0.053 | 0.050 | 0.062 | 0.0056 | 0.0025 | 0.067 | 0.068 | 0.064 | 0.068 | 0.070 | 0.064 | 0.068 | 0.068 | 0.070 | 0.0020 | 0.00091 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 0.10 | <0.20 | <0.20 | - | - |
| Zinc | µg/L | - | 4.2 | 4.4 | 3.0 | 3.3 | 3.4 | 3.0 | 3.7 | 3.4 | 4.4 | 0.62 | 0.28 | 1.1 | 1.1 | 1.1 | 1.2 | 1.0 | 1.0 | 1.1 | 1.1 | 1.2 | 0.074 | 0.033 | 0.60 | 0.58 | 0.63 | 0.60 | 0.59 | 0.58 | 0.60 | 0.60 | 0.63 | 0.019 | 0.0084 |
| **Dissolved Metals** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | µg/L | - | 19 | 19 | 18 | 18 | 18 | 18 | 18 | 18 | 19 | 0.48 | 0.22 | 18 | 18 | 18 | 17 | 18 | 17 | 18 | 18 | 18 | 0.27 | 0.12 | 11 | 11 | 12 | 11 | 11 | 11 | 11 | 11 | 12 | 0.41 | 0.19 |
| Arsenic | µg/L | - | 0.35 | 0.34 | 0.34 | 0.32 | 0.35 | 0.32 | 0.34 | 0.34 | 0.35 | 0.011 | 0.0048 | 0.27 | 0.24 | 0.25 | 0.23 | 0.23 | 0.23 | 0.24 | 0.24 | 0.27 | 0.016 | 0.0070 | 0.25 | 0.27 | 0.24 | 0.24 | 0.24 | 0.24 | 0.25 | 0.24 | 0.27 | 0.012 | 0.0055 |
| Barium | µg/L | - | 22 | 23 | 22 | 22 | 22 | 22 | 22 | 22 | 23 | 0.41 | 0.18 | 10 | 9.9 | 10 | 10 | 10 | 9.9 | 10 | 10 | 10 | 0.16 | 0.070 | 9.8 | 9.8 | 9.8 | 9.7 | 9.8 | 9.7 | 9.8 | 9.8 | 9.8 | 0.069 | 0.031 |
| Cadmium | µg/L | - | 0.018 | 0.016 | 0.016 | 0.017 | 0.019 | 0.016 | 0.017 | 0.017 | 0.019 | 0.0015 | 0.00066 | 0.0053 | 0.0095 | 0.0055 | 0.0044 | 0.0060 | 0.0044 | 0.0061 | 0.0055 | 0.0095 | 0.0020 | 0.00088 | <0.0050 | <0.0050 | 0.0062 | 0.0058 | <0.0050 | <0.0050 | 0.0039 | <0.0050 | 0.0062 | - | - |
| Chromium | µg/L | - | 0.15 | 0.14 | 0.14 | 0.13 | 0.13 | 0.13 | 0.14 | 0.14 | 0.15 | 0.0062 | 0.0028 | 0.11 | 0.12 | 0.12 | 0.086 | 0.094 | 0.086 | 0.11 | 0.11 | 0.12 | 0.015 | 0.0068 | <0.10 | 0.11 | <0.10 | <0.10 | <0.10 | <0.10 | 0.06 | <0.10 | 0.11 | - | - |
| Cobalt | µg/L | - | 0.22 | 0.24 | 0.23 | 0.24 | 0.22 | 0.22 | 0.23 | 0.23 | 0.24 | 0.0080 | 0.0036 | 0.15 | 0.14 | 0.14 | 0.10 | 0.11 | 0.10 | 0.13 | 0.14 | 0.15 | 0.021 | 0.0094 | 0.11 | 0.12 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.12 | 0.0051 | 0.0023 |
| Copper | µg/L | - | 2.4 | 2.4 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.4 | 0.069 | 0.031 | 1.7 | 1.6 | 1.7 | 1.8 | 1.7 | 1.6 | 1.7 | 1.7 | 1.8 | 0.043 | 0.019 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 0.022 | 0.0097 |
| Iron | µg/L | - | 8.2 | 8.1 | 7.9 | 8.1 | 8.3 | 7.9 | 8.1 | 8.1 | 8.3 | 0.15 | 0.066 | 8.4 | 7.7 | 7.7 | 7.4 | 7.0 | 7.0 | 7.6 | 7.7 | 8.4 | 0.51 | 0.23 | 7.3 | 7.1 | 7.0 | 7.1 | 7.0 | 7.0 | 7.1 | 7.1 | 7.3 | 0.12 | 0.055 |
| Lead | µg/L | - | 0.52 | 1.1 | 0.079 | 0.15 | 0.22 | 0.079 | 0.40 | 0.22 | 1.1 | 0.40 | 0.18 | <0.0030 | <0.0030 | <0.0030 | <0.0030 | <0.0030 | <0.0030 | 0.0015 | <0.0030 | <0.0030 | - | - | <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] | 6.9 | 7.2 | 7.0 | 7.5 | 7.1 | 6.9 | 7.2 | 7.1 | 7.5 | 0.23 | 0.10 | 3.0 | 2.7 | 2.6 | 2.4 | 2.4 | 2.4 | 2.6 | 2.6 | 3.0 | 0.25 | 0.11 | 1.3 | 1.4 | 1.3 | 1.4 | 1.3 | 1.3 | 1.3 | 1.3 | 1.4 | 0.064 | 0.029 |
| Mercury | µg/L | - | 0.00390 | 0.00062 | 0.00234 | 0.00235 | 0.00180 | 0.00062 | 0.00220 | 0.00234 | 0.00390 | 0.00118 | 0.00053 | 0.00103 | 0.00088 | 0.00091 | 0.00085 | 0.00089 | 0.00085 | 0.00091 | 0.00089 | 0.00103 | 0.00007 | 0.00003 | 0.00154 | 0.00093 | 0.00133 | 0.00156 | 0.00129 | 0.00093 | 0.00133 | 0.00133 | 0.00156 | 0.00025 | 0.00011 |
| Molybdenum | µg/L | - | 0.027 | 0.027 | 0.027 | 0.024 | 0.026 | 0.024 | 0.026 | 0.027 | 0.027 | 0.0010 | 0.00045 | 0.018 | 0.017 | 0.020 | 0.017 | 0.019 | 0.017 | 0.018 | 0.018 | 0.020 | 0.0013 | 0.00058 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 |

**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 | 0.50 | 0.51 | 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 | 0.77 | 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 *a* (0.45 µm)[g] | 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 *a* (1.2 µm)[g] | 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[a] | 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 | 0.94 | 0.88 | 0.93 | 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 | - | - |

Notes: Standard deviation and standard error were not calculated when 50% or mo nces. Concentrations equal to the benchmark values were not identified as exceedances. Summary statistics were not compared to AEMP benc

[a] The benchmark is hardness dependent. The benchmark range shown is based o

[b] The ammonia benchmark is pH and temperature dependent. The benchmark tha based on the individual field pH and temperature measurements for each sa

[c] The benchmark is pH dependent. The benchmark range shown is based on the p

[d] The benchmark is DOC dependent. The benchmark range shown is based on the

[e] The benchmark is for chromium VI.

[f] The benchmark was generated using a look-up table provided by CCME.

[g] Chlorophyll *a* concentration results shown as average of three replicates.

[h] Total dissolved solids calculated by WSP using the Standard Method by APHA (2

[A] = concentration is higher than the AEMP benchmark or outside the recommende

- no benchmark or no data; $CaCO_3$ = calcium carbonate; WAD = weak acid dissocia

References: CCME (Canadian Council of Ministers of the Environment). 1999. Can

**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/25 | 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)[h] | 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[a] | 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 | 0.00050 | <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 | 0.00050 | <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 *a* (0.45 µm)[g] | 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 *a* (1.2 µm)[g] | 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 | 0.16 | 0.17 | 0.0054 | 0.0024 |
| Barium | µg/L | 1,000 | 10 | 10 | 10 | 10 | 10.0 | 10.0 | 10 | 10 | 10 | 0.17 | 0.074 | 4.0 | 4.1 | 4.2 | 4.1 | 4.2 | 4.0 | 4.1 | 4.1 | 4.2 | 0.093 | 0.042 |
| Cadmium | µg/L | 0.040 - 0.060[a] | 0.0045 | 0.0034 | 0.0034 | 0.0037 | <0.0030 | <0.0030 | 0.0033 | 0.0034 | 0.0045 | 0.0011 | 0.00049 | <0.0030 | <0.0030 | 0.0059 | <0.0030 | <0.0030 | <0.0030 | 0.0024 | <0.0030 | 0.0059 | - | - |
| Chromium | µg/L | 5[e] | 0.11 | 0.13 | 0.13 | 0.14 | 0.090 | 0.090 | 0.12 | 0.13 | 0.14 | 0.020 | 0.0089 | 0.030 | 0.080 | 0.081 | 0.073 | 0.082 | 0.030 | 0.069 | 0.080 | 0.082 | 0.022 | 0.0099 |
| Cobalt | µg/L | 0.78[a] | 0.25 | 0.34 | 0.31 | 0.33 | 0.31 | 0.25 | 0.31 | 0.31 | 0.34 | 0.033 | 0.015 | 0.088 | 0.064 | 0.064 | 0.062 | 0.052 | 0.052 | 0.066 | 0.064 | 0.088 | 0.013 | 0.0059 |
| Copper | µg/L | 4.2 | 1.1 | 1.1 | 1.1 | 1.1 | 0.99 | 0.99 | 1.1 | 1.1 | 1.1 | 0.052 | 0.023 | 0.65 | 0.73 | 0.77 | 0.73 | 0.78 | 0.65 | 0.73 | 0.73 | 0.78 | 0.051 | 0.023 |
| Iron | µg/L | 360 - 440[c, d] | 63 | 70 | 61 | 66 | 62 | 61 | 64 | 63 | 70 | 3.5 | 1.6 | 104 | 84 | 80 | 86 | 78 | 78 | 86 | 84 | 104 | 10 | 4.7 |
| Lead | µg/L | 4.7 - 7.2[a, d] | 3.6 | 1.8 | 0.91 | 0.99 | 0.72 | 0.72 | 1.6 | 0.99 | 3.6 | 1.2 | 0.54 | 0.0083 | 0.0064 | 0.0060 | 0.0063 | 0.0050 | 0.0050 | 0.0064 | 0.0063 | 0.0083 | 0.0012 | 0.00054 |
| Manganese | µg/L | - | 38 | 48 | 45 | 47 | 46 | 38 | 45 | 46 | 48 | 3.8 | 1.7 | 3.9 | 2.8 | 2.8 | 2.6 | 2.4 | 2.4 | 2.9 | 2.8 | 3.9 | 0.58 | 0.26 |
| Mercury | µg/L | 0.026 | 0.00394 | 0.00320 | 0.00051 | 0.00207 | 0.00046 | 0.00046 | 0.00204 | 0.00207 | 0.00394 | 0.00156 | 0.00070 | 0.00092 | 0.00105 | 0.00096 | 0.00118 | 0.00099 | 0.00092 | 0.00102 | 0.00099 | 0.00118 | 0.00010 | 0.00005 |
| Molybdenum | µg/L | 73 | 0.0086 | 0.0086 | 0.010 | 0.0075 | 0.0057 | 0.0057 | 0.0081 | 0.0086 | 0.010 | 0.0017 | 0.00076 | <0.0050 | <0.0050 | 0.0097 | <0.0050 | <0.0050 | <0.0050 | 0.0039 | <0.0050 | 0.0097 | - | - |
| Nickel | µg/L | 25[a] | 2.5 | 2.6 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.6 | 0.036 | 0.016 | 1.1 | 1.1 | 1.2 | 1.2 | 1.3 | 1.1 | 1.2 | 1.2 | 1.3 | 0.063 | 0.028 |
| Selenium | µg/L | 1.0 | 0.038 | 0.034 | 0.039 | 0.039 | 0.033 | 0.033 | 0.037 | 0.038 | 0.039 | 0.0029 | 0.0013 | <0.010 | <0.010 | 0.017 | 0.025 | <0.010 | <0.010 | 0.011 | <0.010 | 0.025 | - | - |
| Silver | µg/L | 0.25 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0010 | <0.0020 | <0.0020 | - | - | 0.0028 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0014 | <0.0020 | 0.0028 | - | - |
| Strontium | µg/L | 2,500 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 0.089 | 0.040 | 7.4 | 7.2 | 7.3 | 7.2 | 7.4 | 7.2 | 7.3 | 7.3 | 7.4 | 0.078 | 0.035 |
| Thallium | µg/L | 0.80 | 0.0016 | 0.0015 | 0.0014 | 0.0014 | 0.0013 | 0.0013 | 0.0014 | 0.0014 | 0.0016 | 0.00011 | 0.000051 | 0.0014 | 0.0012 | 0.0021 | 0.0012 | 0.0018 | 0.0012 | 0.0015 | 0.0014 | 0.0021 | 0.00040 | 0.00018 |
| Uranium | µg/L | 15 | 0.0052 | 0.0051 | 0.0057 | 0.0054 | 0.0046 | 0.0046 | 0.0052 | 0.0052 | 0.0057 | 0.00041 | 0.00018 | 0.0040 | 0.0052 | 0.0054 | 0.0054 | 0.0058 | 0.0040 | 0.0051 | 0.0054 | 0.0058 | 0.00068 | 0.00030 |
| Vanadium | µg/L | 120 | 0.034 | 0.031 | 0.032 | 0.032 | 0.025 | 0.025 | 0.031 | 0.032 | 0.034 | 0.0038 | 0.0017 | 0.040 | 0.032 | 0.031 | 0.034 | 0.029 | 0.029 | 0.033 | 0.032 | 0.040 | 0.0042 | 0.0019 |
| Zinc | µg/L | - | 1.9 | 2.1 | 2.6 | 3.3 | 1.3 | 1.3 | 2.2 | 2.1 | 3.3 | 0.73 | 0.33 | 0.15 | 0.20 | 0.23 | 0.20 | 0.24 | 0.15 | 0.20 | 0.20 | 0.24 | 0.035 | 0.015 |
| **Dissolved Metals** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | µg/L | - | 1.8 | 1.8 | 1.9 | 1.9 | 1.7 | 1.7 | 1.8 | 1.8 | 1.9 | 0.069 | 0.031 | 4.1 | 4.2 | 4.2 | 4.1 | 3.8 | 3.8 | 4.1 | 4.1 | 4.2 | 0.16 | 0.071 |
| Arsenic | µg/L | - | 0.30 | 0.30 | 0.29 | 0.28 | 0.29 | 0.28 | 0.29 | 0.29 | 0.30 | 0.011 | 0.0047 | 0.13 | 0.15 | 0.15 | 0.14 | 0.15 | 0.13 | 0.14 | 0.15 | 0.15 | 0.0084 | 0.0037 |
| Barium | µg/L | - | 9.8 | 9.7 | 9.4 | 9.6 | 9.4 | 9.4 | 9.6 | 9.6 | 9.8 | 0.18 | 0.079 | 3.8 | 3.7 | 3.8 | 3.8 | 3.9 | 3.7 | 3.8 | 3.8 | 3.9 | 0.057 | 0.025 |
| Cadmium | µg/L | - | <0.0030 | <0.0030 | <0.0030 | <0.0030 | <0.0030 | <0.0030 | 0.0015 | <0.0030 | <0.0030 | - | - | <0.0030 | <0.0030 | <0.0030 | <0.0030 | <0.0030 | <0.0030 | 0.0015 | <0.0030 | <0.0030 | - | - |
| Chromium | µg/L | - | 0.070 | 0.073 | 0.075 | 0.070 | 0.061 | 0.061 | 0.070 | 0.070 | 0.075 | 0.0054 | 0.0024 | 0.033 | 0.027 | 0.047 | 0.031 | 0.046 | 0.027 | 0.037 | 0.033 | 0.047 | 0.0091 | 0.0041 |
| Cobalt | µg/L | - | 0.036 | 0.035 | 0.040 | 0.037 | 0.037 | 0.035 | 0.037 | 0.037 | 0.040 | 0.0019 | 0.00084 | 0.013 | 0.014 | 0.015 | 0.014 | 0.011 | 0.011 | 0.013 | 0.014 | 0.015 | 0.0017 | 0.00078 |
| Copper | µg/L | - | 1.1 | 1.0 | 1.0 | 1.1 | 0.98 | 0.98 | 1.0 | 1.0 | 1.1 | 0.049 | 0.022 | 0.62 | 0.57 | 0.63 | 0.60 | 0.61 | 0.57 | 0.60 | 0.61 | 0.63 | 0.020 | 0.0091 |
| Iron | µg/L | - | 25 | 28 | 27 | 28 | 28 | 25 | 27 | 28 | 28 | 1.2 | 0.54 | 17 | 17 | 17 | 16 | 16 | 16 | 16 | 17 | 17 | 0.47 | 0.21 |
| Lead | µg/L | - | 0.30 | 0.17 | 0.17 | 0.12 | 0.13 | 0.12 | 0.18 | 0.17 | 0.30 | 0.071 | 0.032 | <0.0030 | <0.0030 | <0.0030 | <0.0030 | <0.0030 | <0.0030 | 0.0015 | <0.0030 | <0.0030 | - | - |
| Manganese | µg/L | 240 - 330[a, c, f] | 0.53 | 0.41 | 1.8 | 0.73 | 1.2 | 0.41 | 0.93 | 0.73 | 1.8 | 0.57 | 0.26 | 0.21 | 0.22 | 0.28 | 0.16 | 0.18 | 0.16 | 0.21 | 0.21 | 0.28 | 0.046 | 0.021 |
| Mercury | µg/L | - | 0.00071 | 0.00165 | 0.00293 | 0.00266 | 0.00044 | 0.00044 | 0.00168 | 0.00165 | 0.00293 | 0.00112 | 0.00050 | 0.00065 | 0.00046 | 0.00042 | 0.00041 | 0.00044 | 0.00041 | 0.00048 | 0.00044 | 0.00065 | 0.00010 | 0.00004 |
| Molybdenum | µg/L | - | 0.0069 | 0.0055 | 0.0055 | 0.0060 | <0.0050 | <0.0050 | 0.0053 | 0.0055 | 0.0069 | 0.0017 | 0.00074 | <0.0050 | 0.0052 | <0.0050 | <0.0050 | 0.0671 | <0.0050 | 0.0160 | <0.0050 | 0.067 | - | - |
| Nickel | µg/L | - | 2.4 | 2.4 | 2.4 | 2.4 | 2.3 | 2.3 | 2.4 | 2.4 | 2.4 | 0.028 | 0.013 | 1.0 | 1.0 | 1.1 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.1 | 0.022 | 0.0097 |
| Selenium | µg/L | - | 0.036 | 0.036 | 0.028 | 0.026 | 0.030 | 0.026 | 0.031 | 0.030 | 0.036 | 0.0046 | 0.0021 | 0.024 | 0.012 | 0.017 | 0.020 | 0.020 | 0.012 | 0.019 | 0.020 | 0.024 | 0.0044 | 0.0020 |
| Silver | µg/L | - | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0010 | <0.0020 | <0.0020 | - | - | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0010 | <0.0020 | <0.0020 | - | - |
| Strontium | µg/L | - | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 0.11 | 0.051 | 7.2 | 7.3 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.3 | 0.043 | 0.019 |
| Thallium | µg/L | - | 0.0014 | 0.0012 | 0.0010 | 0.0013 | 0.0013 | 0.0010 | 0.0012 | 0.0013 | 0.0014 | 0.00015 | 0.000068 | 0.0011 | 0.0015 | <0.00080 | 0.0013 | 0.0013 | <0.00080 | 0.0011 | 0.0013 | 0.0015 | 0.00043 | 0.00019 |
| Uranium | µg/L | - | 0.0044 | 0.0041 | 0.0043 | 0.0042 | 0.0048 | 0.0041 | 0.0044 | 0.0043 | 0.0048 | 0.00027 | 0.00012 | 0.0028 | 0.0031 | 0.0033 | 0.0038 | 0.0028 | 0.0028 | 0.0032 | 0.0031 | 0.0038 | 0.00040 | 0.00018 |
| Vanadium | µg/L | - | 0.021 | 0.019 | 0.019 | 0.018 | 0.017 | 0.017 | 0.019 | 0.019 | 0.021 | 0.0015 | 0.00067 | 0.0088 | 0.0052 | 0.0085 | 0.0093 | 0.0066 | 0.0052 | 0.0077 | 0.0085 | 0.0093 | 0.0017 | 0.00077 |
| Zinc | µg/L | 6.2 - 24[c, a, d] | 1.1 | 0.99 | 1.1 | 1.7 | 0.59 | 0.59 | 1.1 | 1.1 | 1.7 | 0.41 | 0.18 | 0.068 | <0.060 | <0.060 | 0.065 | 0.067 | <0.060 | 0.052 | 0.065 | 0.068 | 0.020 | 0.0090 |
| **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 | - | - |

Notes: Standard deviation and standard error were not calculated when 50% or more of results were below the detection limit and means were calculated using data below detection limit at half the detection limit. Bolded concentrations are higher than benchmarks.Water quality data and benchmarks shown in this table were rounded to reflect laboratory or field instrument precision after comparisons to benchmarks. Therefore, values slightly above benchmarks may be displayed as being equal to the benchmarks and identified as exceedances. Concentrations equal to the benchmark values were not identified as exceedances. Summary statistics were not compared to AEMP benchmarks.

(a) The benchmark is hardness dependent. The benchmark range shown is based on the hardness range observed in the dataset (13 to 31 mg/L). The benchmark is calculated based on the individual hardness value for each sample.

(b) The ammonia benchmark is pH and temperature dependent. The benchmark that results in the minimum ammonia benchmark (1.3 mg-N/L) is based on the combination of field pH (7.7) and water temperature (13.4°C). Benchmarks calculated with temperature and pH values falling outside the defined range (i.e., pH 6.0 to 10.0 and temperature 0°C to 30°C) should be used with caution, as the benchmark does not necessarily accurately reflect toxic effects at the low and high pH and temperature extremes. The benchmark is calculated based on the individual field pH and temperature measurements for each sample.

(c) The benchmark is pH dependent. The benchmark range shown is based on the pH range observed in the dataset (6.2 to 7.7). The benchmark is calculated based on the individual pH for each sample.

(d) The benchmark is DOC dependent. The benchmark range shown is based on the DOC concentration range observed in the dataset (3.0 to 4.8 mg/L). The benchmark is calculated based on the individual DOC concentration in each sample.

[e] The benchmark is for chromium VI.

[f] The benchmark was generated using a look-up table provided by CCME.

[g] Chlorophyll *a* concentration results shown as average of three replicates.

(h) Total dissolved solids calculated by WSP using the Standard Method by APHA (2005): Total dissolved solids mg/L = Σ[$Na^+$, $K^+$, $Ca^{2+}$, $Mg^{2+}$, $Cl^-$, $F^-$, $SO_4^{2-}$; 4.427 * $NO_3^-$ (as nitrogen), 0.6 * total alkalinity (as $CaCO_3$), 1.266 * $SiO_2$].

(A) = concentration is higher than the AEMP benchmark or outside the recommended pH range.

- no benchmark or no data; $CaCO_3$ = calcium carbonate; WAD = weak acid dissociable; mg-N/L = milligrams nitrogen per litre; mg-P/L = milligram phosphorus per litre; DOC = Dissolved Organic Carbon; CCME = Canadian Council of Ministers of the Environment; APHA = American Public Health Association.

References: CCME (Canadian Council of Ministers of the Environment). 1999. Canadian Environmental Quality Guidelines. 1999 with updates to 2019. Winnipeg, MB. 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-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[a] | 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 | 0.0093 |
| 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 | <0.0010 | 0.0015 | <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 *a* (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 *a* (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 | 5.8 | 1.1 | 0.49 |
| Arsenic | µg/L | 10 | 0.17 | 0.17 | 0.17 | 0.17 | 0.16 | 0.16 | 0.17 | 0.17 | 0.17 | 0.0039 | 0.0017 | 0.18 | 0.18 | 0.18 | 0.18 | 0.16 | 0.16 | 0.18 | 0.18 | 0.18 | 0.0065 | 0.0029 |
| Barium | µg/L | 1,000 | 3.5 | 3.4 | 3.4 | 3.5 | 3.4 | 3.4 | 3.4 | 3.4 | 3.5 | 0.046 | 0.021 | 3.4 | 3.3 | 3.3 | 3.4 | 3.3 | 3.3 | 3.3 | 3.3 | 3.4 | 0.037 | 0.016 |
| Cadmium | µg/L | 0.040 - 0.060[a] | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0025 | <0.0050 | <0.0050 | - | - | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0025 | <0.0050 | <0.0050 | - | - |
| Chromium | µg/L | 5[e] | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | 0.05 | <0.10 | <0.10 | - | - | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | 0.05 | <0.10 | <0.10 | - | - |
| Cobalt | µg/L | 0.78[a] | 0.088 | 0.080 | 0.082 | 0.087 | 0.078 | 0.078 | 0.083 | 0.082 | 0.088 | 0.0046 | 0.0021 | 0.100 | 0.044 | 0.038 | 0.040 | 0.040 | 0.038 | 0.052 | 0.040 | 0.100 | 0.026 | 0.012 |
| Copper | µg/L | 4.2 | 0.71 | 0.69 | 0.70 | 0.72 | 0.71 | 0.69 | 0.70 | 0.71 | 0.72 | 0.0099 | 0.0044 | 0.70 | 1.2 | 0.67 | 0.67 | 0.66 | 0.66 | 0.77 | 0.67 | 1.2 | 0.22 | 0.097 |
| Iron | µg/L | 360 - 440[c, d] | 82 | 77 | 75 | 80 | 74 | 74 | 77 | 77 | 82 | 3.5 | 1.6 | 103 | 55 | 55 | 54 | 54 | 54 | 64 | 55 | 103 | 22 | 9.8 |
| Lead | µg/L | 4.7 - 7.2[a, d] | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0025 | <0.0050 | <0.0050 | - | - | 0.0066 | <0.0050 | 0.0062 | <0.0050 | <0.0050 | <0.0050 | 0.0041 | <0.0050 | 0.0066 | - | - |
| Manganese | µg/L | - | 4.5 | 4.1 | 4.2 | 4.4 | 3.9 | 3.9 | 4.2 | 4.2 | 4.5 | 0.24 | 0.11 | 4.6 | 1.6 | 1.6 | 1.5 | 1.5 | 1.5 | 2.2 | 1.6 | 4.6 | 1.4 | 0.61 |
| Mercury | µg/L | 0.026 | 0.00109 | 0.00083 | 0.00091 | 0.00057 | 0.00068 | 0.00057 | 0.00082 | 0.00083 | 0.00109 | 0.00020 | 0.00009 | 0.00051 | 0.00043 | 0.00045 | 0.00040 | 0.00048 | 0.00040 | 0.00045 | 0.00045 | 0.00051 | 0.00004 | 0.00002 |
| Molybdenum | µg/L | 73 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <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[a] | 0.94 | 0.90 | 0.93 | 0.93 | 0.94 | 0.90 | 0.93 | 0.93 | 0.94 | 0.016 | 0.0072 | 0.88 | 0.87 | 0.91 | 0.87 | 0.89 | 0.87 | 0.88 | 0.88 | 0.91 | 0.016 | 0.0073 |
| Selenium | µg/L | 1.0 | <0.040 | <0.040 | <0.040 | <0.040 | <0.040 | <0.040 | 0.020 | <0.040 | <0.040 | - | - | <0.040 | <0.040 | <0.040 | <0.040 | <0.040 | <0.040 | 0.020 | <0.040 | <0.040 | - | - |
| Silver | µg/L | 0.25 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0025 | <0.0050 | <0.0050 | - | - | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0025 | <0.0050 | <0.0050 | - | - |
| Strontium | µg/L | 2,500 | 7.9 | 7.8 | 7.8 | 7.8 | 7.7 | 7.7 | 7.8 | 7.8 | 7.9 | 0.070 | 0.031 | 7.6 | 7.8 | 7.7 | 8.1 | 7.9 | 7.6 | 7.8 | 7.8 | 8.1 | 0.19 | 0.085 |
| Thallium | µg/L | 0.80 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0010 | <0.0020 | <0.0020 | - | - | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0010 | <0.0020 | <0.0020 | - | - |
| Uranium | µg/L | 15 | 0.0037 | 0.0033 | 0.0035 | 0.0034 | 0.0039 | 0.0033 | 0.0036 | 0.0035 | 0.0039 | 0.00024 | 0.00011 | 0.0027 | 0.0033 | 0.0026 | 0.0028 | 0.0032 | 0.0026 | 0.0029 | 0.0028 | 0.0033 | 0.00031 | 0.00014 |
| Vanadium | µg/L | 120 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 0.10 | <0.20 | <0.20 | - | - | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 0.10 | <0.20 | <0.20 | - | - |
| Zinc | µg/L | - | 0.14 | <0.10 | <0.10 | <0.10 | 0.13 | <0.10 | 0.084 | <0.10 | 0.14 | - | - | 0.14 | 0.39 | 0.10 | 0.22 | 0.11 | 0.10 | 0.19 | 0.14 | 0.39 | 0.12 | 0.054 |
| **Dissolved Metals** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | µg/L | - | 2.0 | 2.0 | 1.9 | 2.0 | 1.9 | 1.9 | 2.0 | 2.0 | 2.0 | 0.054 | 0.024 | 1.6 | 1.7 | 1.5 | 1.7 | 1.6 | 1.5 | 1.6 | 1.6 | 1.7 | 0.061 | 0.027 |
| Arsenic | µg/L | - | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.0032 | 0.0014 | 0.16 | 0.15 | 0.17 | 0.16 | 0.16 | 0.15 | 0.16 | 0.16 | 0.17 | 0.0053 | 0.0024 |
| Barium | µg/L | - | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 0.014 | 0.0063 | 3.0 | 3.0 | 3.1 | 3.0 | 3.1 | 3.0 | 3.0 | 3.0 | 3.1 | 0.029 | 0.013 |
| Cadmium | µg/L | - | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0025 | <0.0050 | <0.0050 | - | - | <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 | - | - | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | 0.05 | <0.10 | <0.10 | - | - |
| Cobalt | µg/L | - | 0.015 | 0.016 | 0.015 | 0.015 | 0.016 | 0.015 | 0.015 | 0.015 | 0.016 | 0.00061 | 0.00027 | 0.016 | 0.017 | 0.016 | 0.017 | 0.017 | 0.016 | 0.017 | 0.017 | 0.017 | 0.00041 | 0.00018 |
| Copper | µg/L | - | 0.62 | 0.63 | 0.61 | 0.63 | 0.62 | 0.61 | 0.62 | 0.62 | 0.63 | 0.0055 | 0.0025 | 0.61 | 0.62 | 0.63 | 0.61 | 0.60 | 0.60 | 0.61 | 0.61 | 0.63 | 0.011 | 0.0049 |
| Iron | µg/L | - | 19 | 18 | 19 | 19 | 18 | 18 | 19 | 19 | 19 | 0.35 | 0.16 | 24 | 23 | 24 | 24 | 23 | 23 | 24 | 24 | 24 | 0.38 | 0.17 |
| Lead | µg/L | - | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0025 | <0.0050 | <0.0050 | - | - | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0025 | <0.0050 | <0.0050 | - | - |
| Manganese | µg/L | 240 - 330[a, c, f] | 0.068 | 0.065 | 0.079 | 0.065 | 0.060 | 0.060 | 0.067 | 0.065 | 0.079 | 0.0071 | 0.0032 | 0.14 | 0.23 | 0.22 | 0.20 | 0.15 | 0.14 | 0.19 | 0.20 | 0.23 | 0.039 | 0.017 |
| Mercury | µg/L | - | 0.00051 | 0.00104 | 0.00049 | 0.00073 | 0.00052 | 0.00049 | 0.00066 | 0.00052 | 0.00104 | 0.00023 | 0.00010 | 0.00037 | 0.00029 | 0.00030 | 0.00032 | 0.00035 | 0.00029 | 0.00033 | 0.00032 | 0.00037 | 0.00003 | 0.00002 |
| Molybdenum | µg/L | - | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <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 | - | 0.86 | 0.85 | 0.86 | 0.88 | 0.87 | 0.85 | 0.86 | 0.86 | 0.88 | 0.011 | 0.0049 | 0.84 | 0.87 | 0.86 | 0.86 | 0.88 | 0.84 | 0.86 | 0.86 | 0.88 | 0.015 | 0.0067 |
| Selenium | µg/L | - | <0.040 | <0.040 | <0.040 | <0.040 | <0.040 | <0.040 | 0.020 | <0.040 | <0.040 | - | - | <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 | - | - | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0025 | <0.0050 | <0.0050 | - | - |
| Strontium | µg/L | - | 7.6 | 7.6 | 7.7 | 7.6 | 7.6 | 7.6 | 7.6 | 7.6 | 7.7 | 0.036 | 0.016 | 7.4 | 7.3 | 7.5 | 7.5 | 7.4 | 7.3 | 7.4 | 7.4 | 7.5 | 0.067 | 0.030 |
| Thallium | µg/L | - | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0010 | <0.0020 | <0.0020 | - | - | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | <0.0020 | 0.0010 | <0.0020 | <0.0020 | - | - |
| Uranium | µg/L | - | 0.0026 | 0.0028 | 0.0025 | 0.0027 | 0.0025 | 0.0025 | 0.0026 | 0.0026 | 0.0028 | 0.00013 | 0.000058 | <0.0020 | 0.0021 | 0.0026 | 0.0020 | 0.0023 | <0.0020 | 0.0020 | 0.0021 | 0.0026 | 0.00060 | 0.00027 |
| Vanadium | µg/L | - | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 0.10 | <0.20 | <0.20 | - | - | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | 0.10 | <0.20 | <0.20 | - | - |
| Zinc | µg/L | 6.2 - 24[c, a, d] | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | 0.05 | <0.10 | <0.10 | - | - | <0.10 | <0.10 | <0.10 | 0.14 | <0.10 | <0.10 | 0.068 | <0.10 | 0.14 | - | - |
| **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 | - | - | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.0025 | <0.0050 | <0.0050 | - | - |

Notes: Standard deviation and standard error were not calculated when 50% or m
after comparisons to benchmarks. Therefore, values slightly above benchmarks m
(a) The benchmark is hardness dependent. The benchmark range shown is base
(b) The ammonia benchmark is pH and temperature dependent. The benchmark
caution, as the benchmark does not necessarily accurately reflect toxic effects at t
(c) The benchmark is pH dependent. The benchmark range shown is based on th
(d) The benchmark is DOC dependent. The benchmark range shown is based on
(e) The benchmark is for chromium VI.
(f) The benchmark was generated using a look-up table provided by CCME.
(g) Chlorophyll *a* concentration results shown as average of three replicates.
(h) Total dissolved solids calculated by WSP using the Standard Method by APHA
(A) = concentration is higher than the AEMP benchmark or outside the recommer
- no benchmark or no data; $CaCO_3$ = calcium carbonate; WAD = weak acid disso
References: CCME (Canadian Council of Ministers of the Environment). 1999. Ca

**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 | 17/Apr/25 | 17/Apr/25 | 17/Apr/25 | 8/Jul/25 | 8/Jul/25 | 14/Aug/25 | 12/Aug/25 | 13/Sep/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 | 94 | 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 | 0.0021 | 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 *a* (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 | 0.17 | 0.21 | 0.23 | 0.20 | 0.17 | 0.16 | 0.18 | 0.19 | 0.24 | 0.19 | 0.19 | 0.14 | 0.12 | <0.10 | 0.10 |
| Cobalt | µg/L | 0.26 | 0.26 | 0.26 | 0.31 | 0.26 | 0.26 | 0.19 | 0.19 | 0.19 | 1.1 | 1.1 | 1.1 | 0.85 | 0.87 | 0.90 | 0.98 | 1.2 | 1.3 |
| Copper | µg/L | 2.4 | 2.5 | 2.4 | 2.4 | 2.7 | 2.7 | 2.4 | 2.5 | 2.5 | 3.2 | 3.3 | 3.6 | 2.8 | 2.8 | 2.3 | 2.5 | 2.4 | 2.4 |
| Iron | µg/L | 16 | 20 | 16 | 28 | 28 | 29 | 18 | 20 | 21 | 24 | 22 | 26 | 33 | 33 | 42 | 32 | 33 | 32 |
| Lead | µg/L | 0.059 | 0.13 | 0.022 | 0.042 | 0.12 | 0.66 | 0.085 | 0.32 | 1.1 | 0.077 | 0.14 | 2.7 | 0.013 | 0.013 | 0.0067 | 0.0057 | 0.044 | 0.0077 |
| Manganese | µg/L | 7.7 | 7.9 | 7.6 | 11 | 7.7 | 7.6 | 5.5 | 5.6 | 5.6 | 24 | 24 | 24 | 13 | 13 | 12 | 14 | 18 | 19 |
| Mercury | µg/L | 0.00090 | 0.00094 | 0.00070 | 0.00092 | 0.00107 | 0.00097 | 0.00103 | 0.00255 | 0.00201 | 0.00119 | 0.00151 | 0.00124 | 0.00199 | 0.00190 | 0.00168 | 0.00194 | 0.00122 | 0.00125 |
| Molybdenum | µg/L | 0.030 | 0.028 | 0.025 | 0.029 | 0.029 | 0.031 | 0.032 | 0.022 | 0.023 | 0.024 | 0.027 | 0.031 | 0.029 | 0.028 | <0.050 | <0.050 | <0.050 | <0.050 |
| Nickel | µg/L | 11.4 | 11.6 | 11.5 | 11.7 | 11.6 | 12.1 | 10.2 | 10.1 | 10.2 | 19.4 | 20 | 20 | 8.54 | 8.5 | 7.6 | 8.4 | 9.8 | 9.8 |
| Selenium | µg/L | 0.062 | 0.056 | 0.053 | 0.05 | 0.06 | 0.067 | 0.056 | 0.053 | 0.058 | 0.079 | 0.087 | 0.084 | 0.068 | 0.051 | 0.058 | 0.081 | 0.060 | <0.040 |
| Silver | µg/L | <0.0020 | 0.0029 | <0.0020 | <0.0020 | <0.0020 | 0.0029 | <0.0020 | <0.0020 | <0.0020 | 0.0025 | <0.0020 | 0.0032 | 0.0031 | 0.0020 | <0.0050 | <0.0050 | <0.0050 | <0.0050 |
| Strontium | µg/L | 60 | 60 | 60 | 62 | 61 | 64 | 68 | 69 | 69 | 101 | 102 | 103 | 50 | 49 | 61 | 59 | 73 | 74 |
| Thallium | µg/L | 0.0031 | 0.0032 | 0.0027 | 0.0030 | 0.0033 | 0.0035 | 0.0030 | 0.0024 | 0.0029 | 0.0052 | 0.0054 | 0.0054 | 0.0050 | 0.0062 | 0.0052 | 0.0046 | 0.0047 | 0.0045 |
| Uranium | µg/L | 0.011 | 0.012 | 0.012 | 0.014 | 0.013 | 0.013 | 0.0090 | 0.0096 | 0.011 | 0.015 | 0.014 | 0.016 | 0.016 | 0.017 | 0.0094 | 0.010 | 0.010 | 0.0096 |
| Vanadium | µg/L | 0.054 | 0.060 | 0.051 | 0.11 | 0.066 | 0.066 | 0.049 | 0.051 | 0.056 | 0.053 | 0.051 | 0.063 | 0.069 | 0.071 | <0.20 | <0.20 | <0.20 | <0.20 |
| Zinc | µg/L | 3.0 | 3.4 | 2.9 | 3.1 | 4.3 | 5.8 | 2.3 | 2.9 | 2.9 | 8.5 | 8.7 | 11 | 2.5 | 2.5 | 1.8 | 2.1 | 2.6 | 2.6 |

**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 | 17/Apr/25 | 17/Apr/25 | 17/Apr/25 | 8/Jul/25 | 8/Jul/25 | 14/Aug/25 | 12/Aug/25 | 13/Sep/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 | 0.40 | 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[$Na^+$, $K^+$, $Ca^{2+}$, $Mg^{2+}$, $Cl^-$, $F^-$, $SO_4^{2-}$, 4.427 * $NO_3^-$ (as nitrogen), 0.6 * total alkalinity (as $CaCO_3$), 1.266 * $SiO_2$].

[b] Chlorophyll *a* concentration results shown as average of three replicates.

- no data; B = bottom, M = Middle, T = top; $CaCO_3$ = 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**

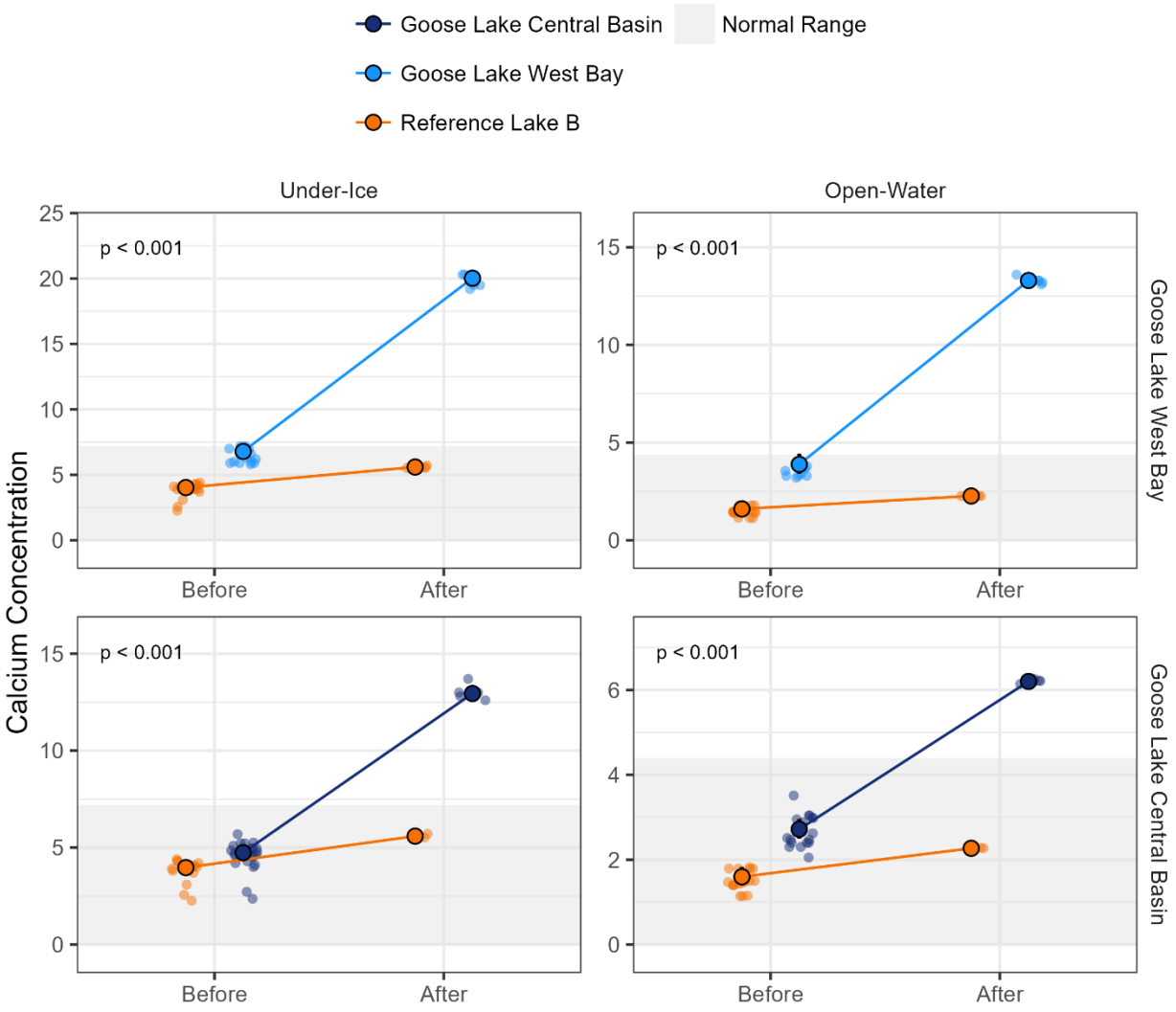
| Parameter | Unit | 80% of the Benchmark for BRP-29A Data | | | | BRP-29A Median Concentrations | | | | 80% of the Benchmark for BRP-32 Data | | | | BRP-32 Median Concentrations | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Apr | Jul | Aug | Sep | Apr | Jul | 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.

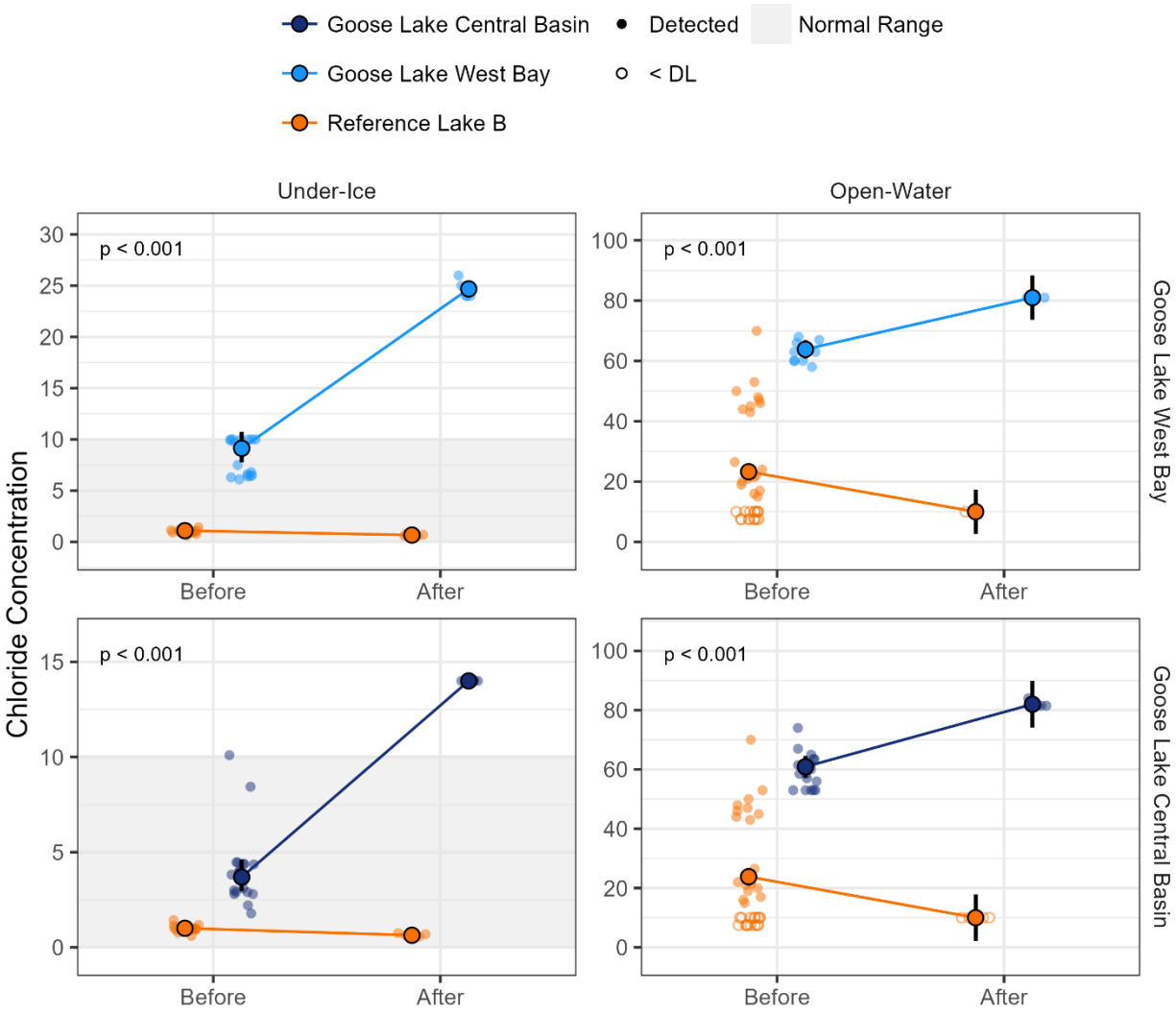
The following figures plots present the information used in the Before-After Control-Impact analysis. The following notes applies to all plots:

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.

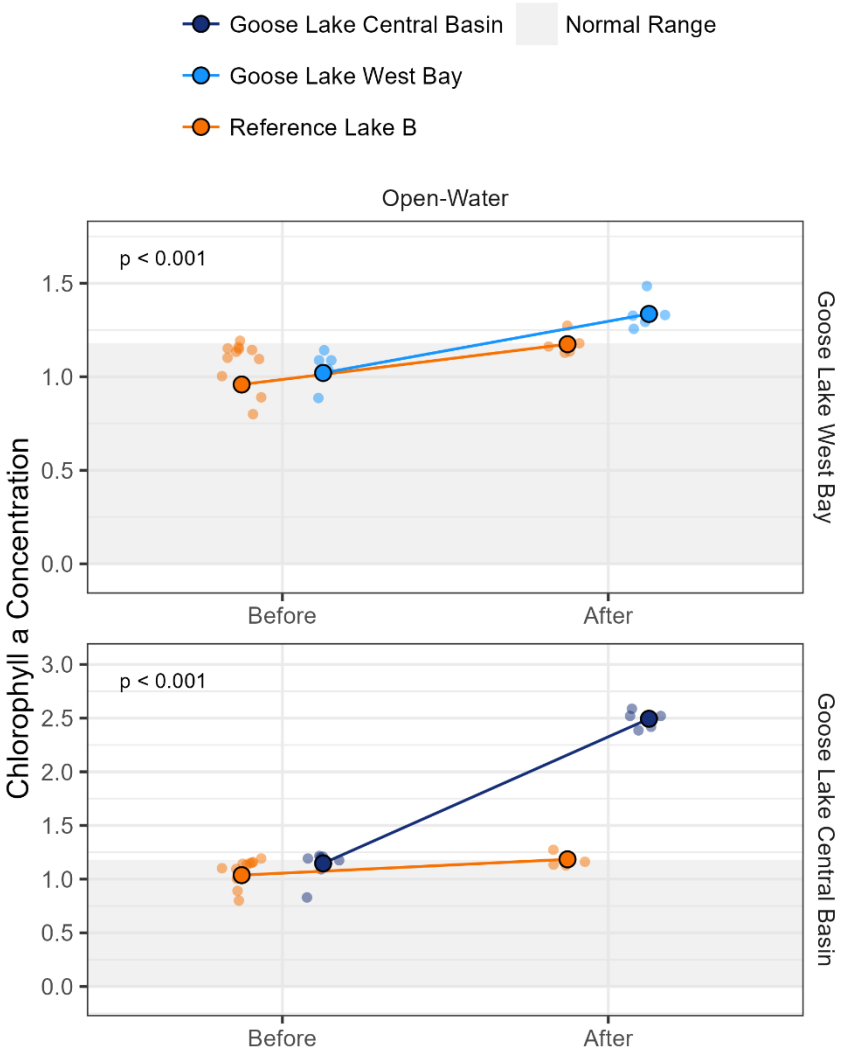
# 1 CALCIUM


Goose Lake Central Basin
Normal Range
Goose Lake West Bay
Reference Lake B
Under-Ice
Open-Water
Calcium Concentration
Goose Lake West Bay
Goose Lake Central Basin
p < 0.001
Before
After

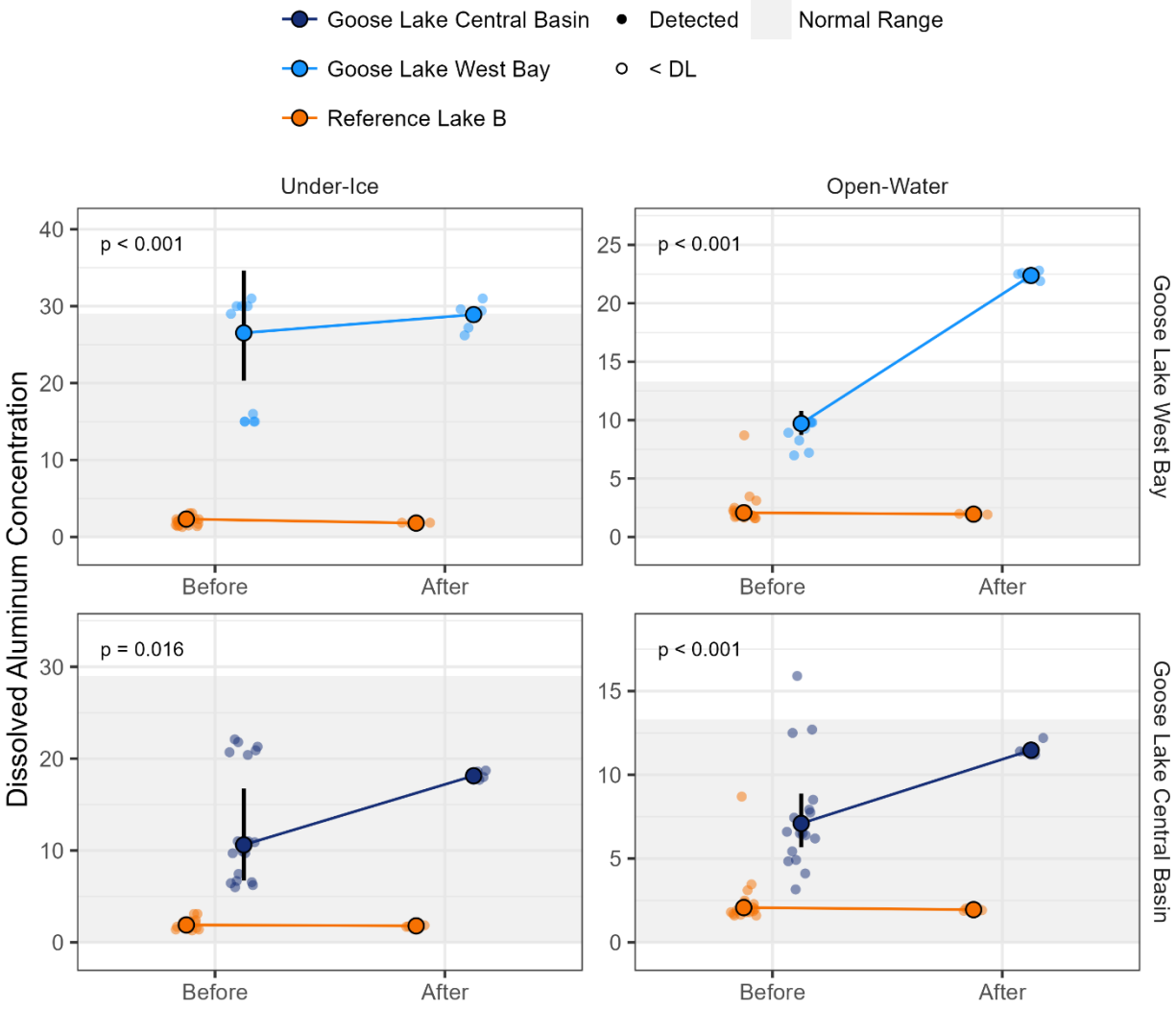
# 2 CHLORIDE


Goose Lake Central Basin
Goose Lake West Bay
Reference Lake B
Detected
< DL
Normal Range
Under-Ice
Open-Water
Chloride Concentration
Goose Lake West Bay
Goose Lake Central Basin
p < 0.001
Before
After

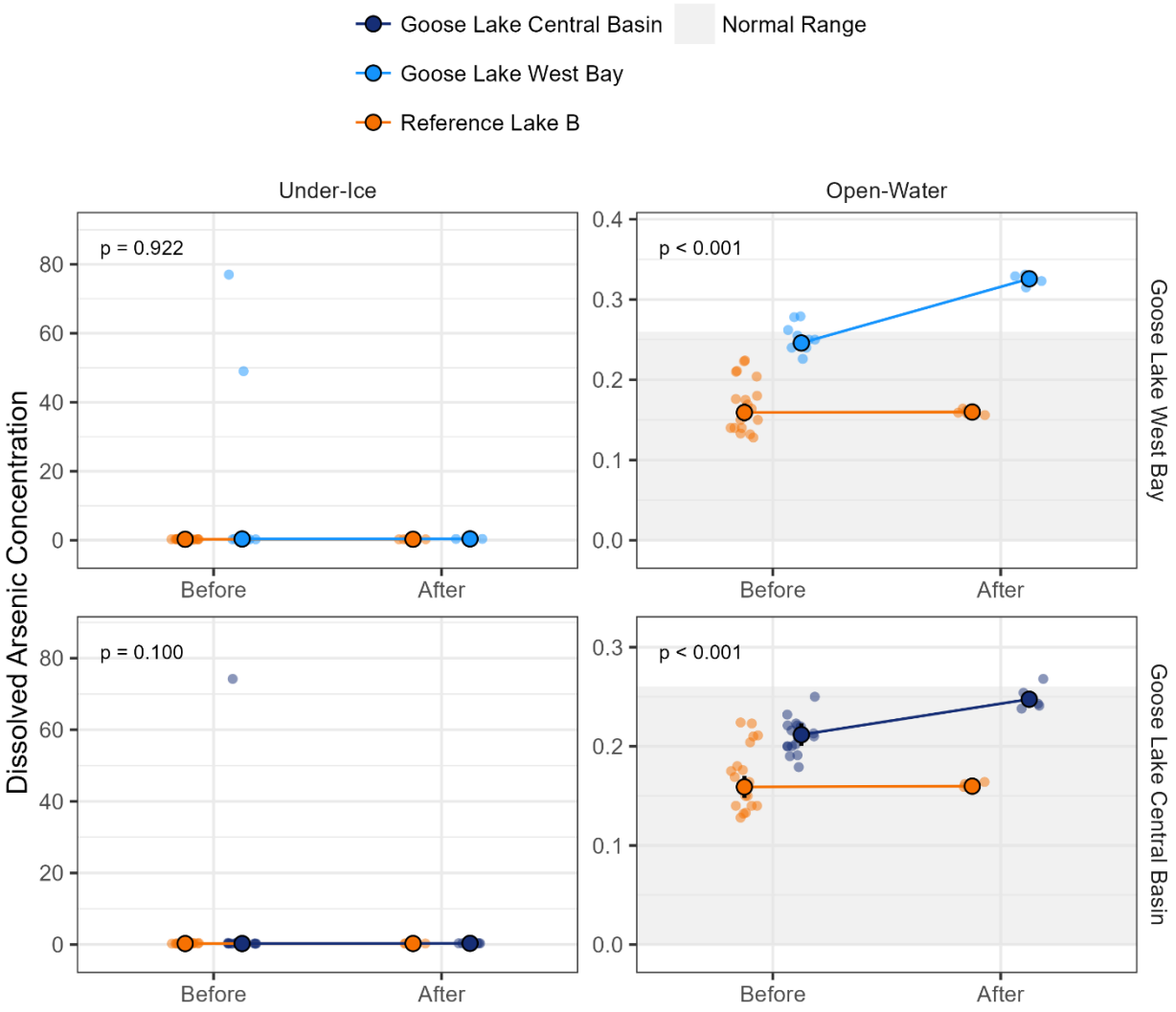
# 3 CHLOROPHYLL A



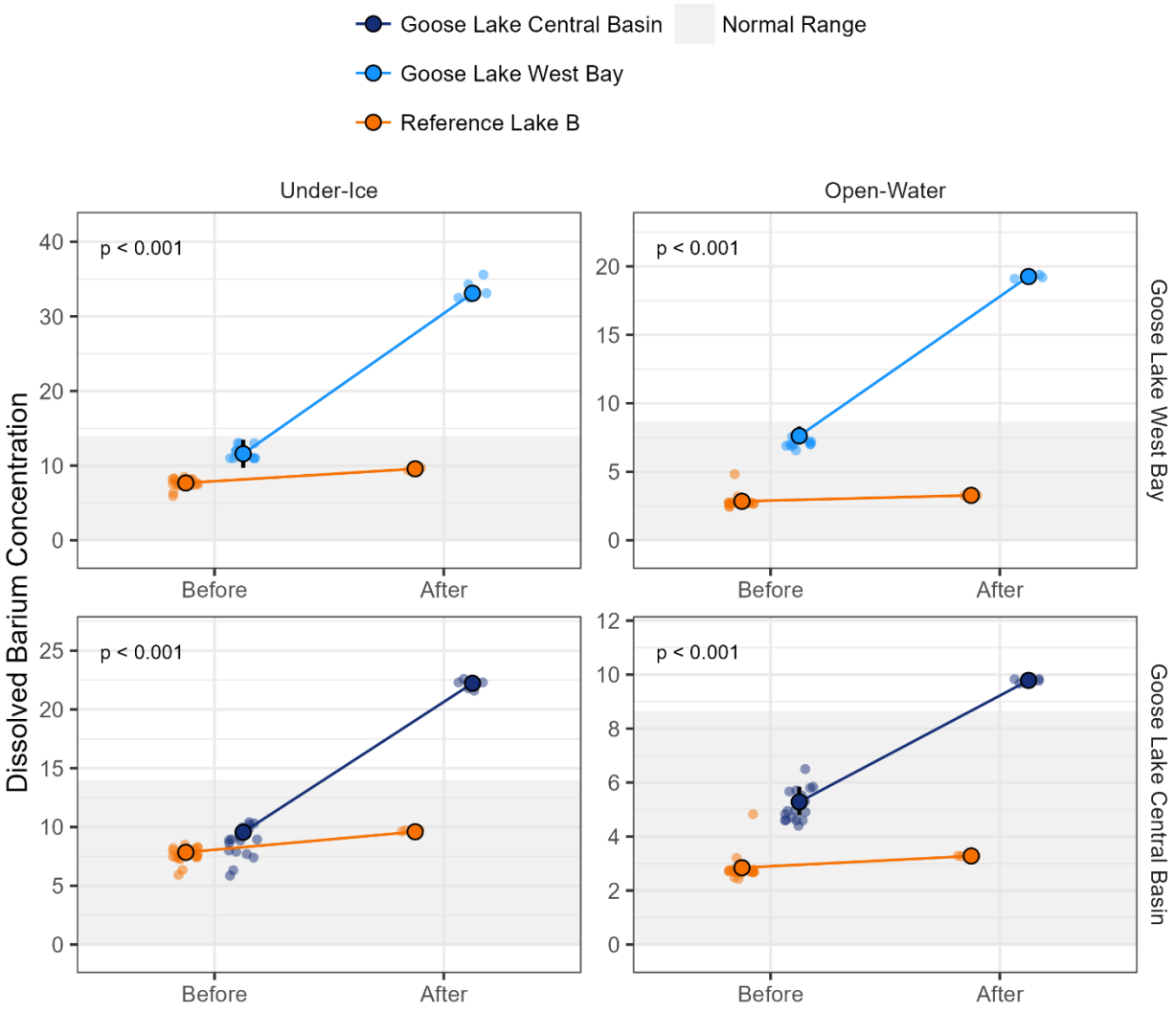
# 4 DISSOLVED ALUMINUM



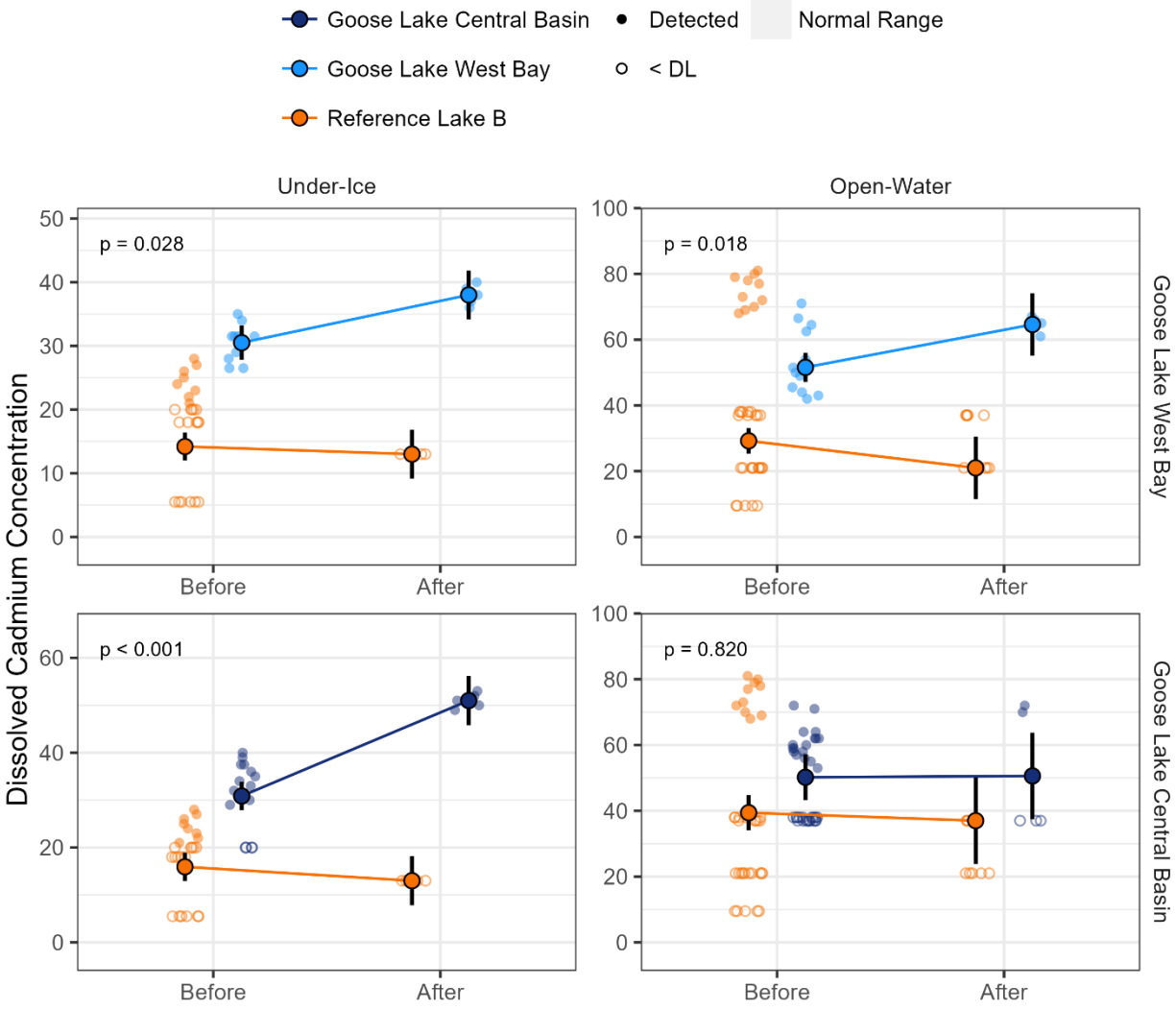
# 5 DISSOLVED ARSENIC



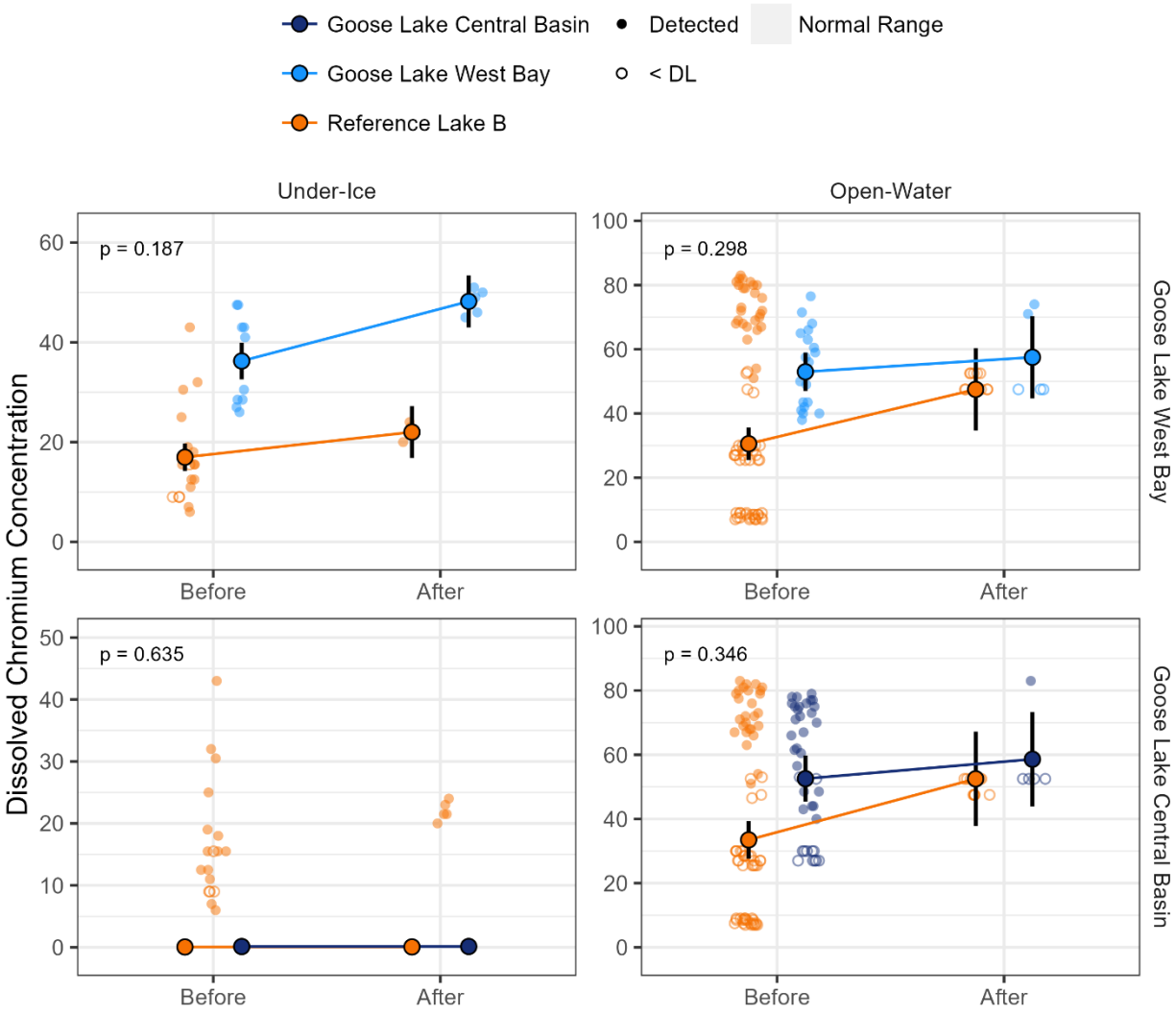
# 6 DISSOLVED BARIUM



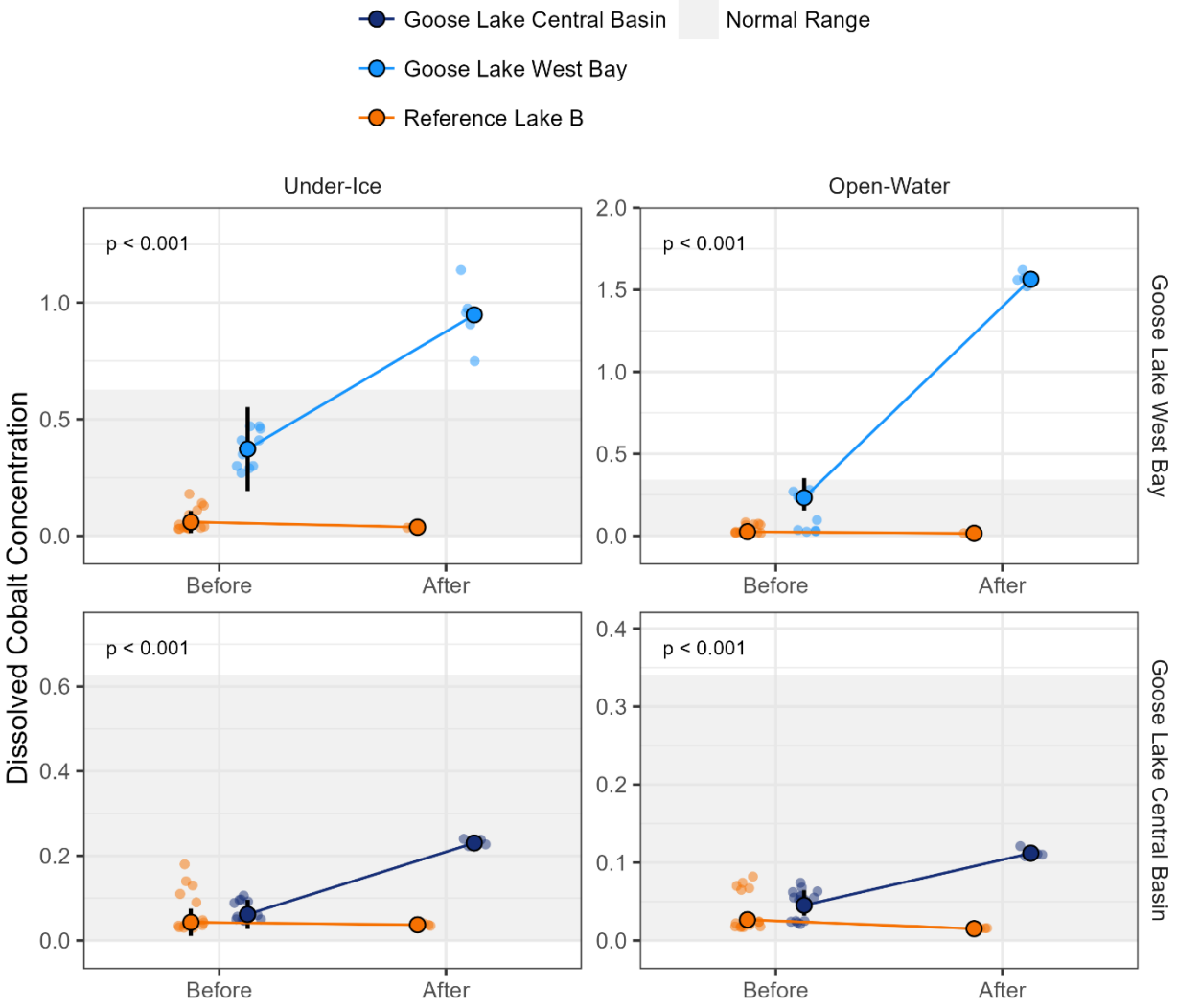
# 7 DISSOLVED CADMIUM



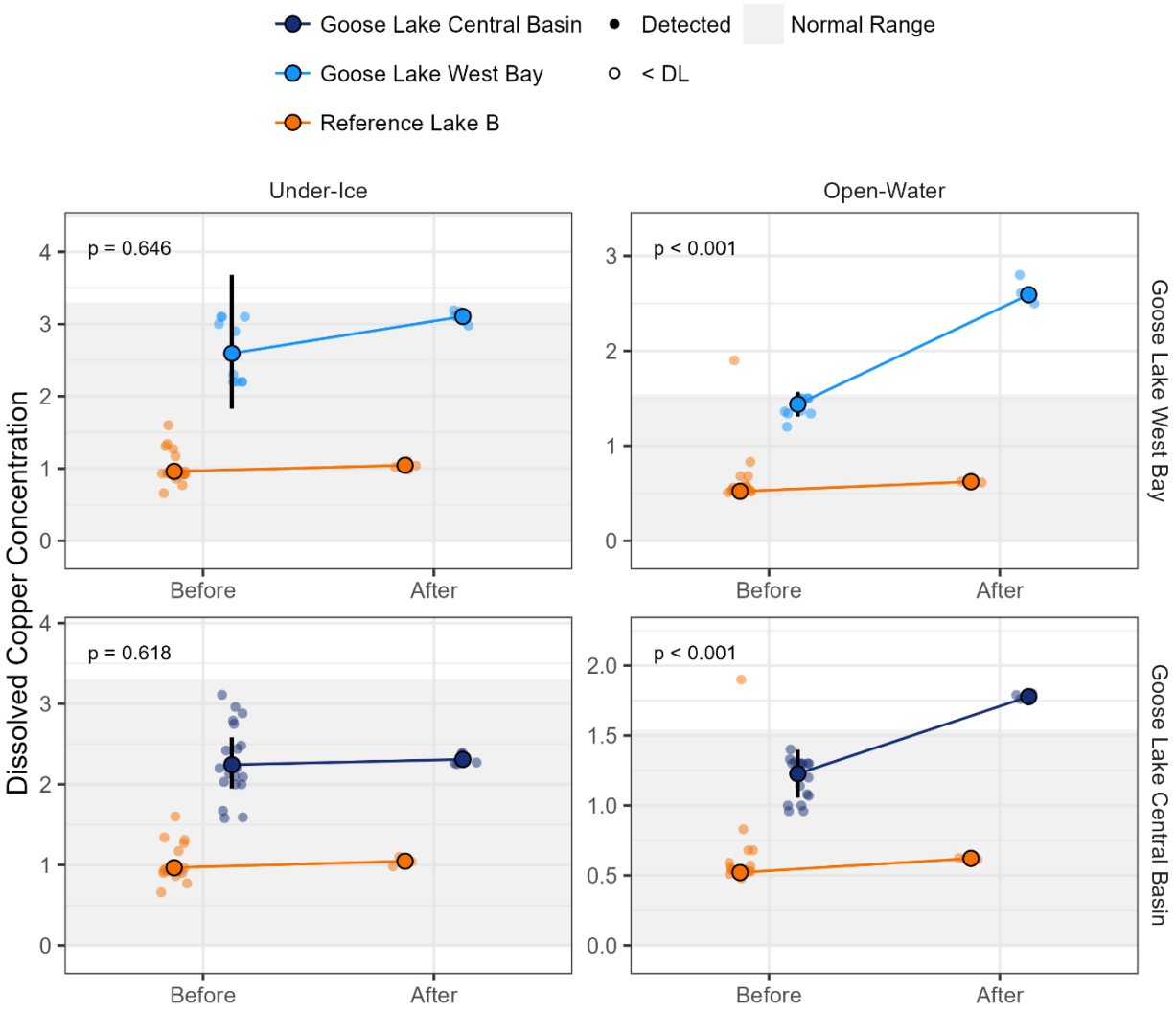
# 8 DISSOLVED CHROMIUM



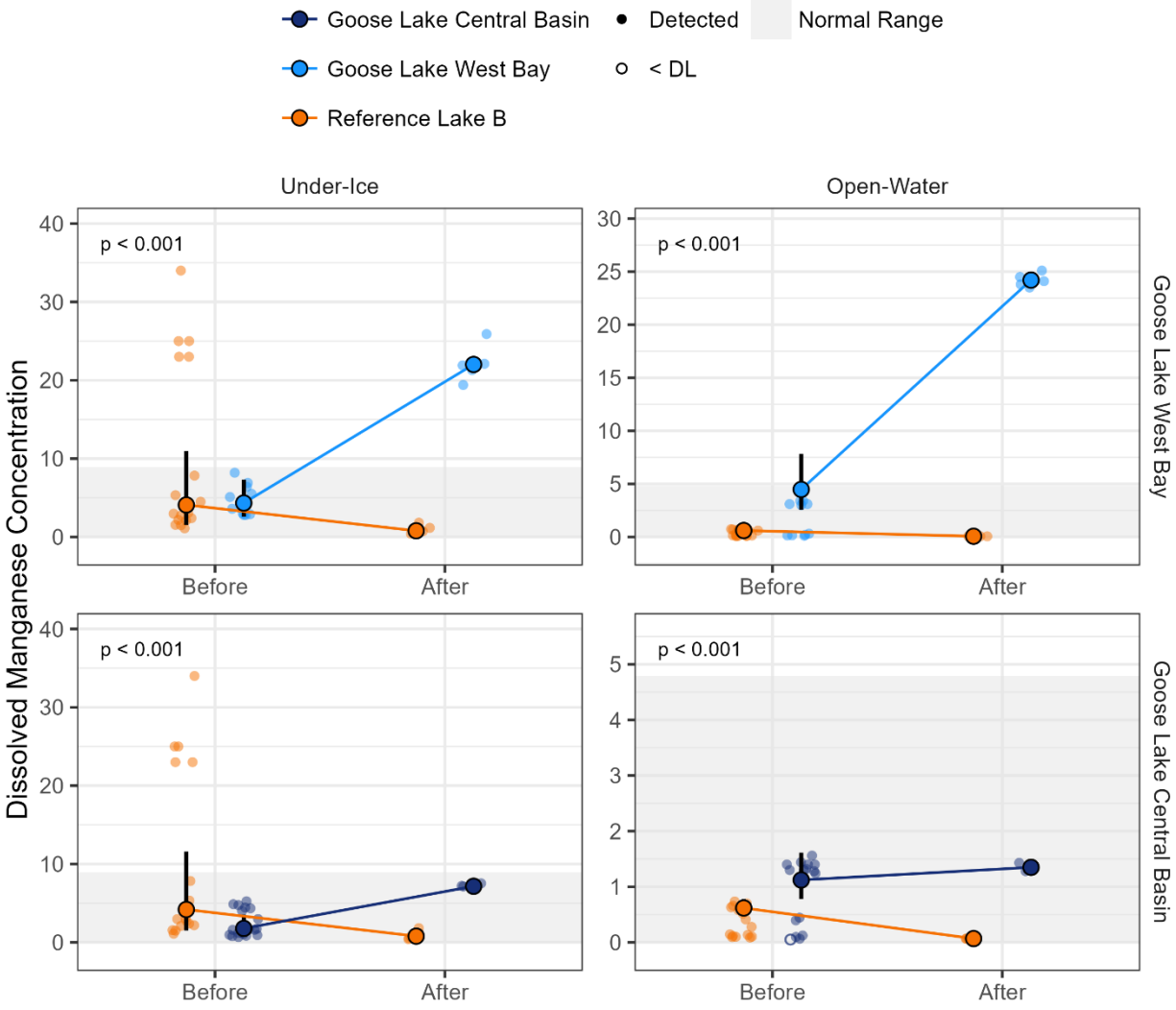
# 9 DISSOLVED COBALT



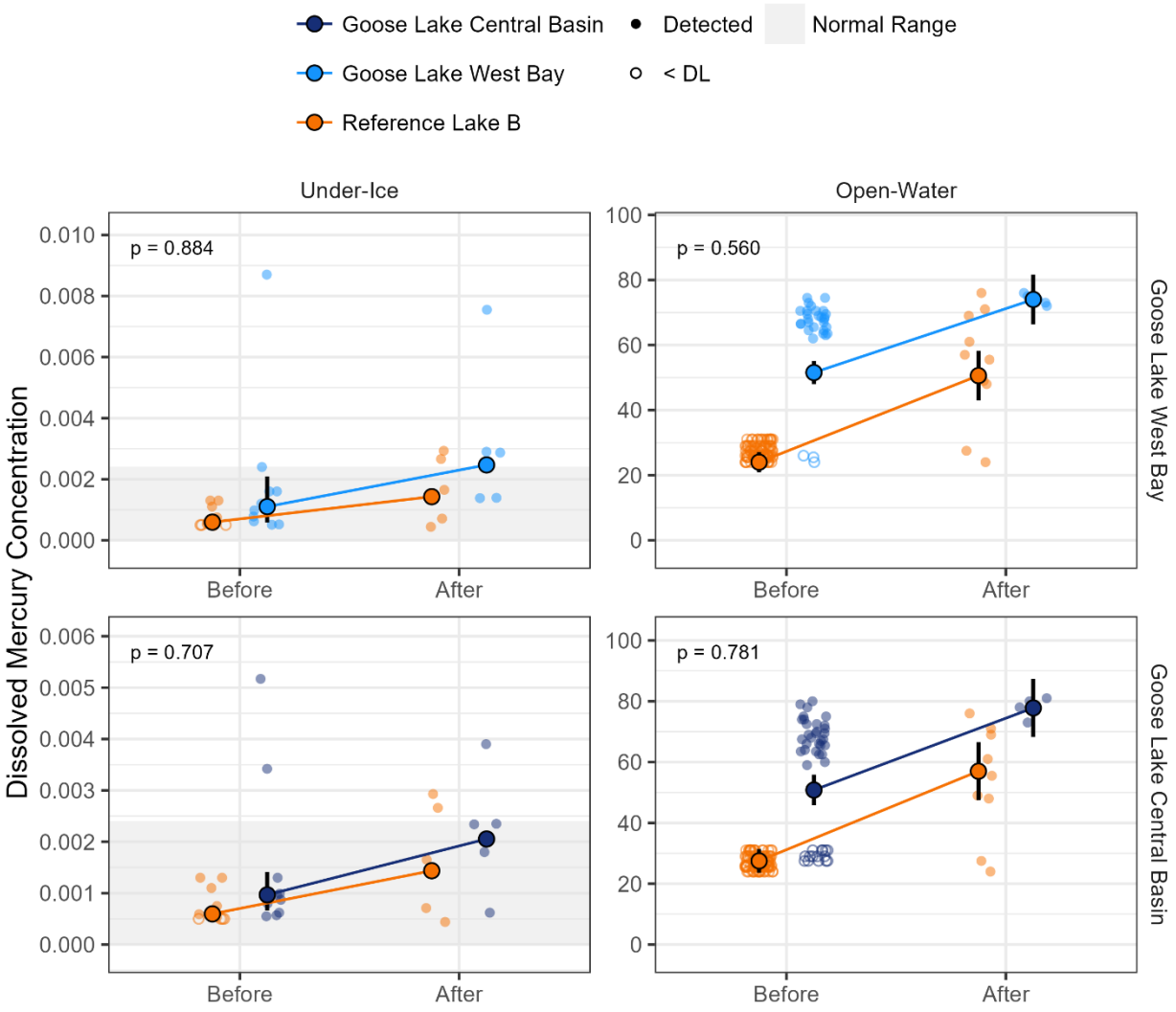
# 10 DISSOLVED COPPER



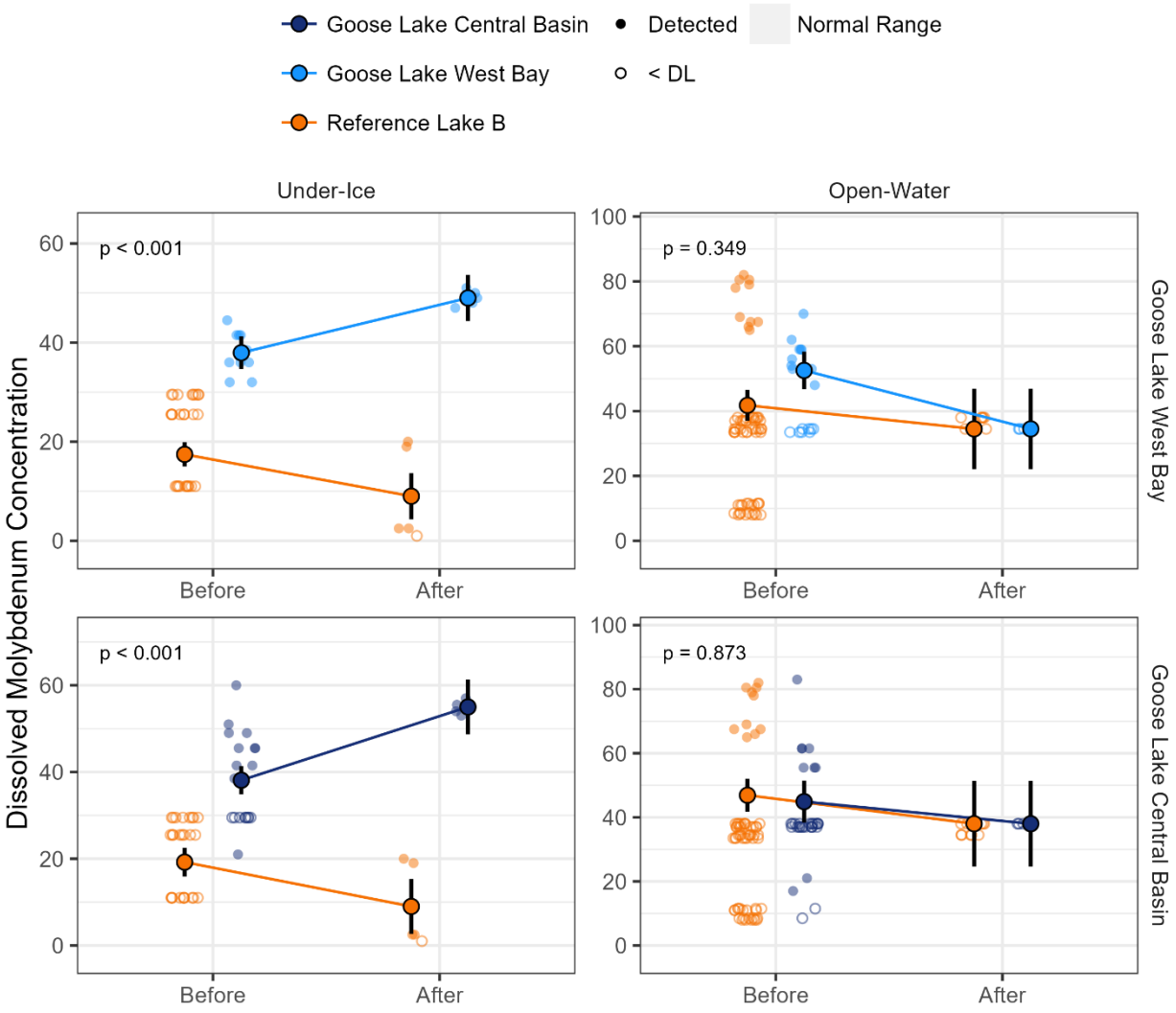
# 11 DISSOLVED MANGANESE



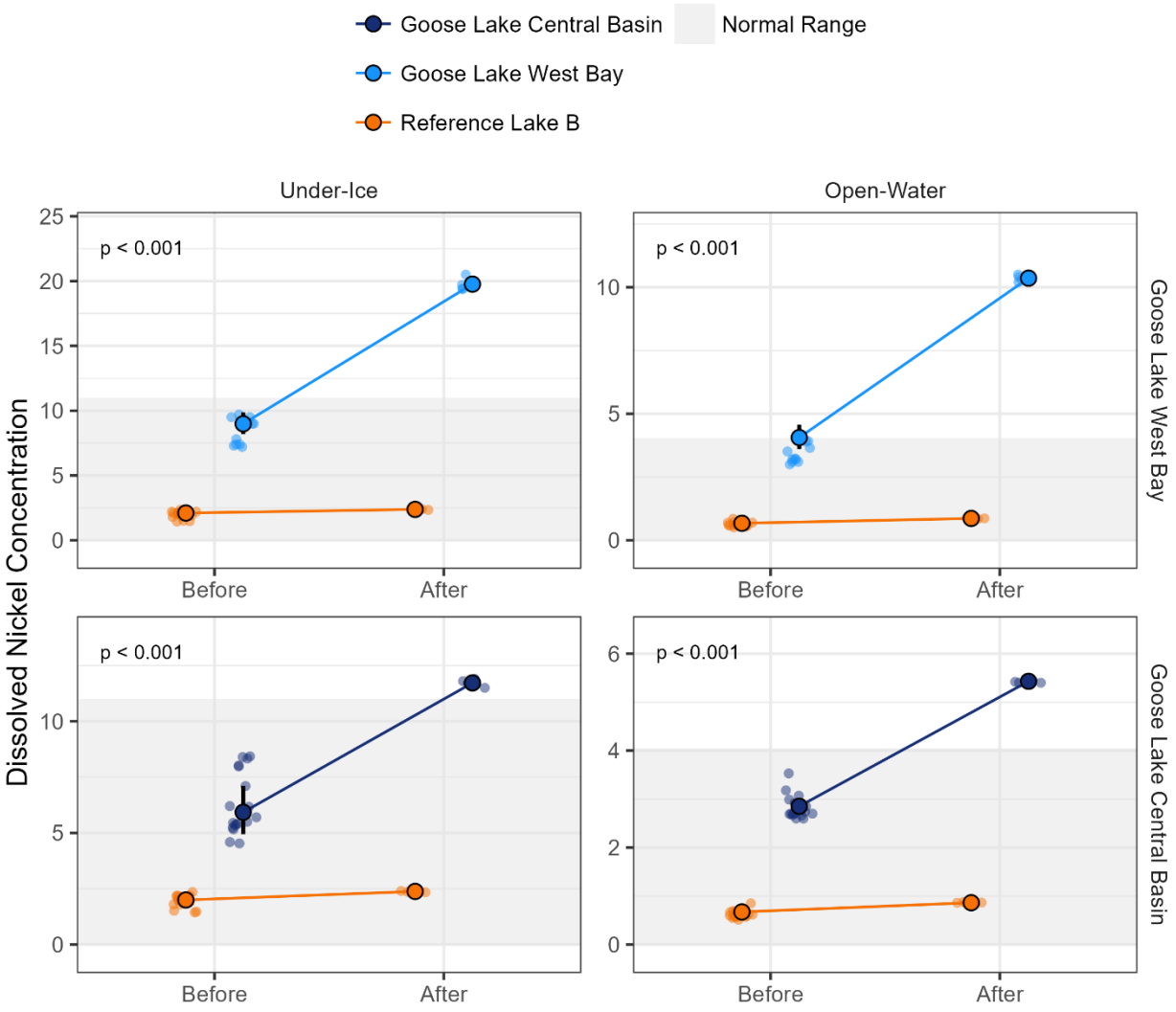
# 12 DISSOLVED MERCURY



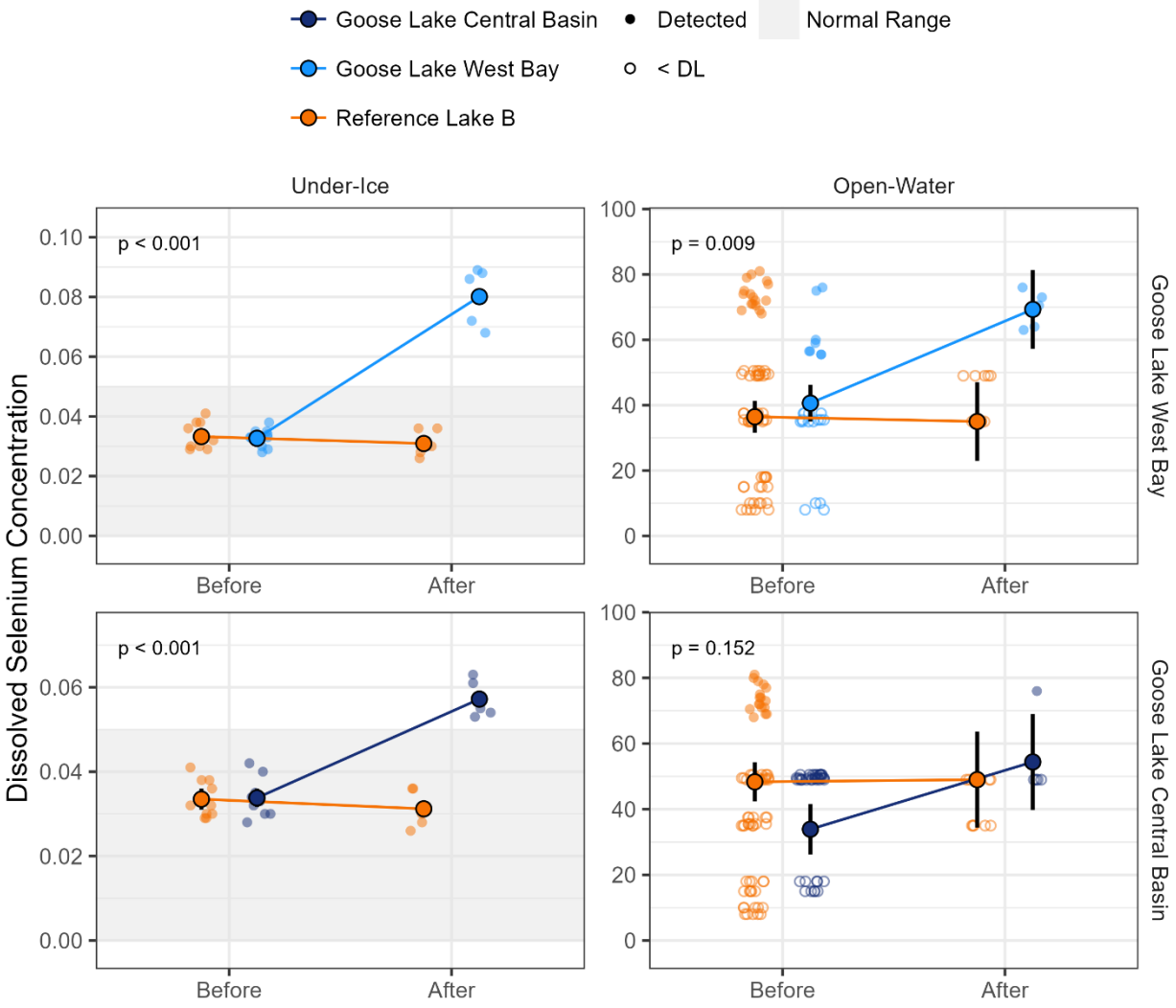
# 13 DISSOLVED MOLYBDENUM



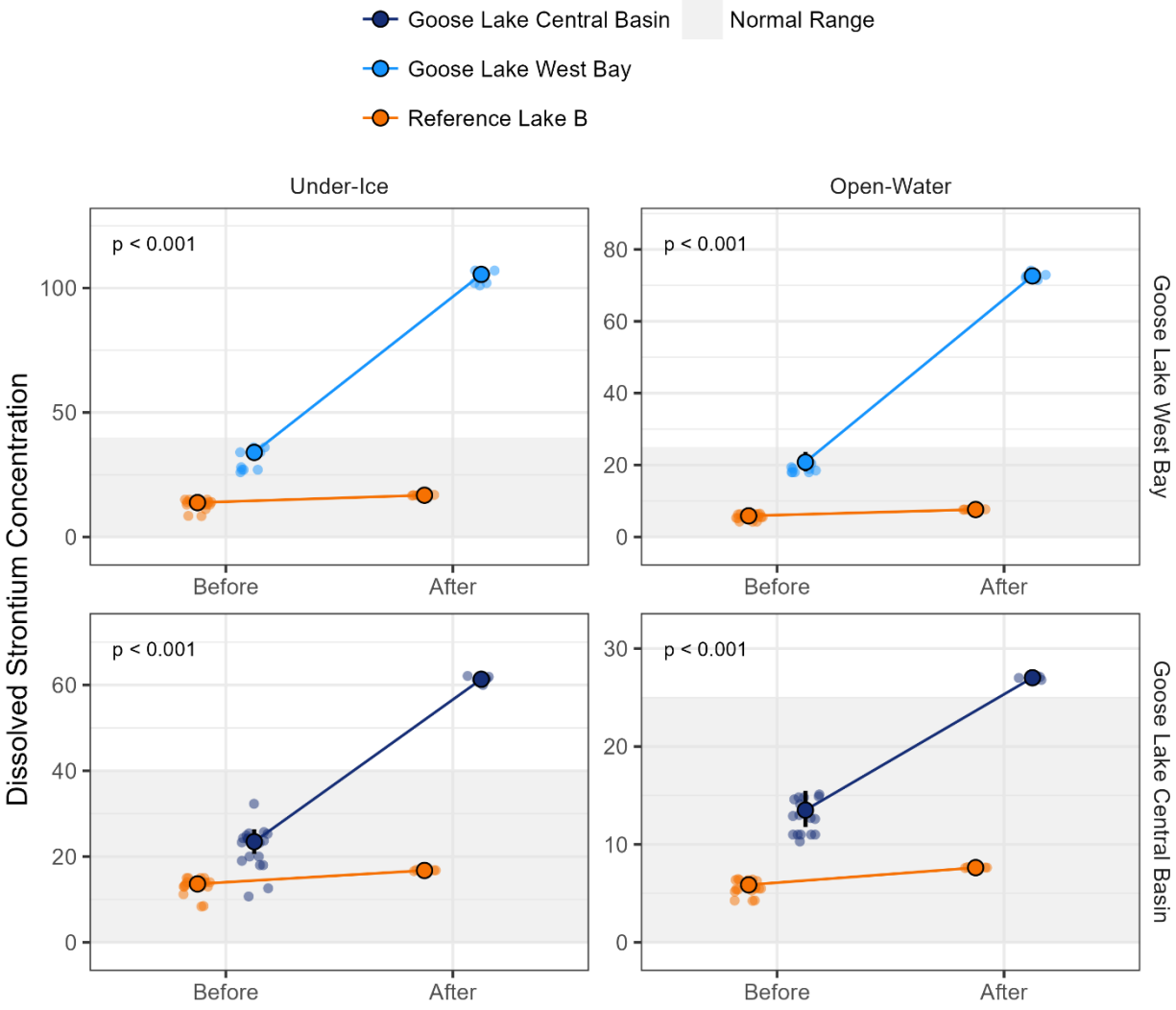
# 14 DISSOLVED NICKEL



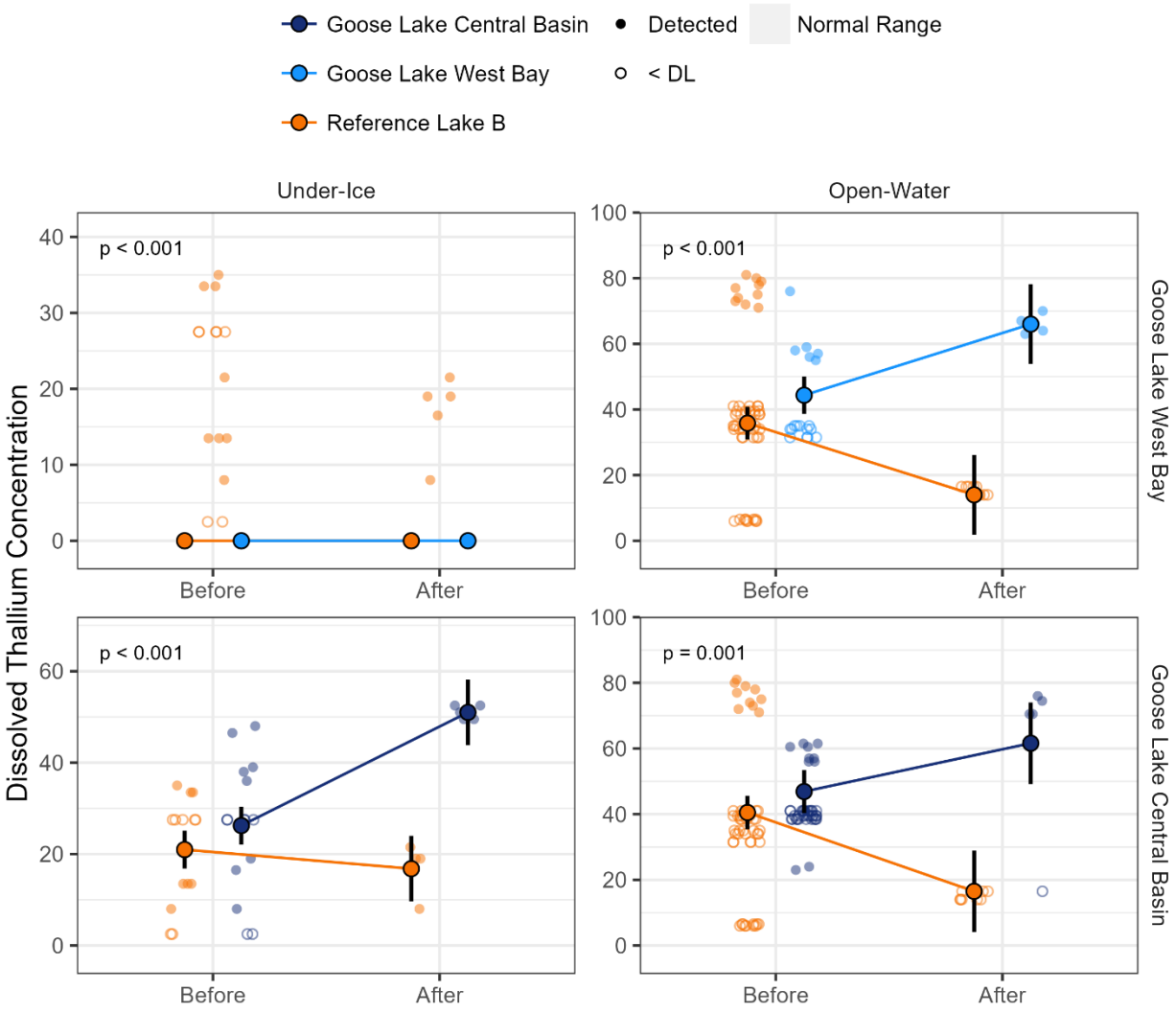
# 15 DISSOLVED SELENIUM



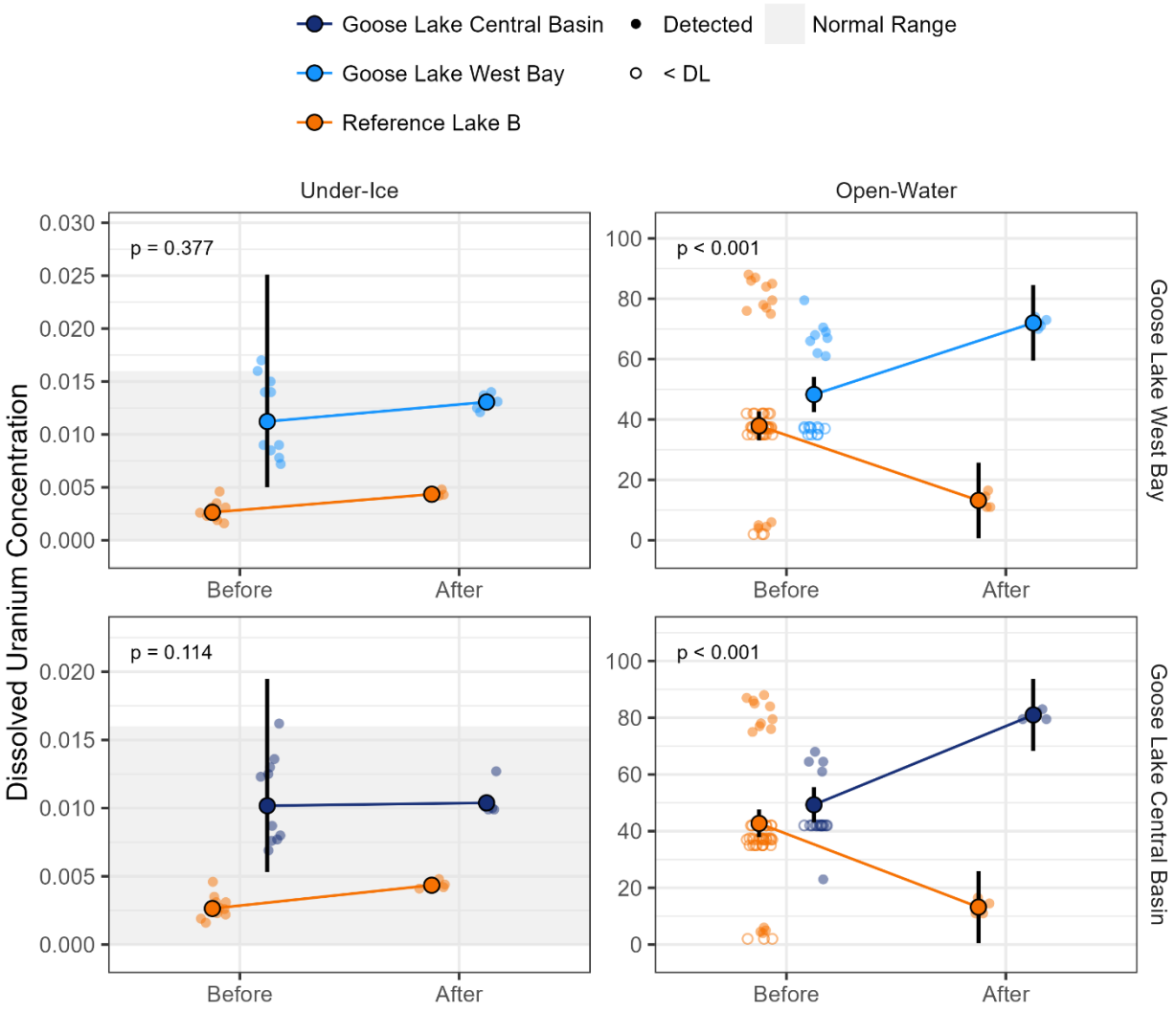
# 16 DISSOLVED STRONTIUM



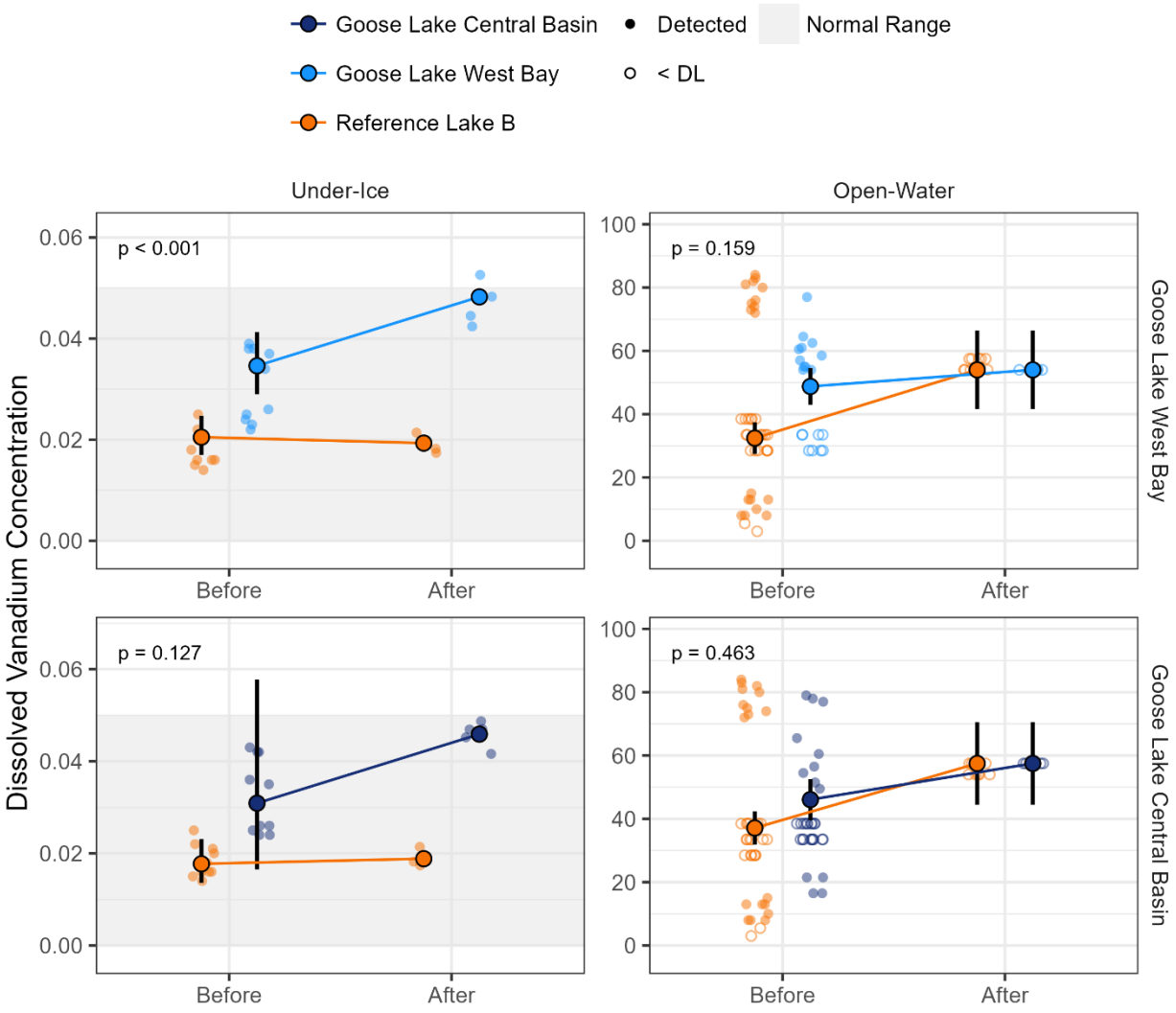
# 17 DISSOLVED THALLIUM



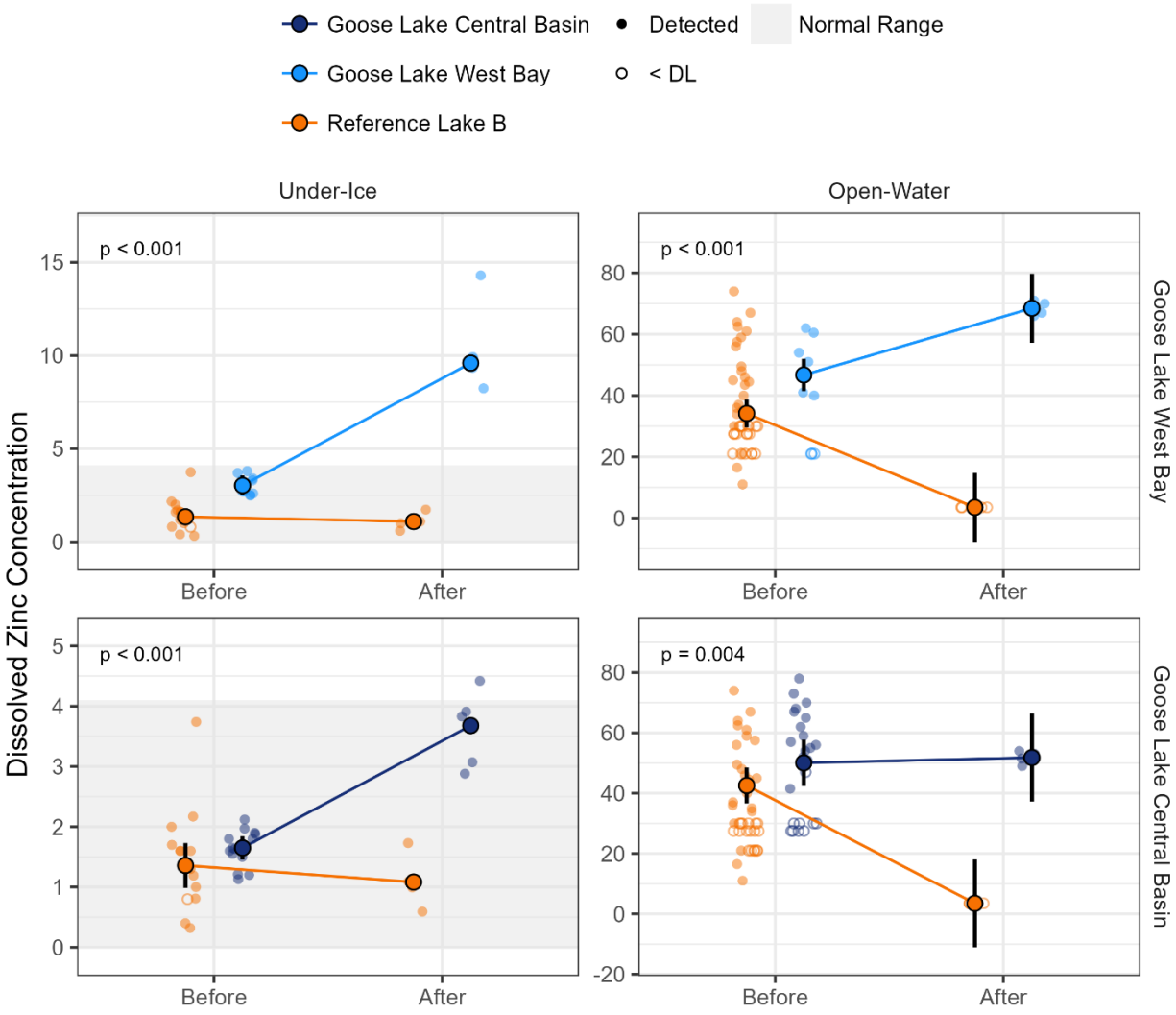
# 18 DISSOLVED URANIUM



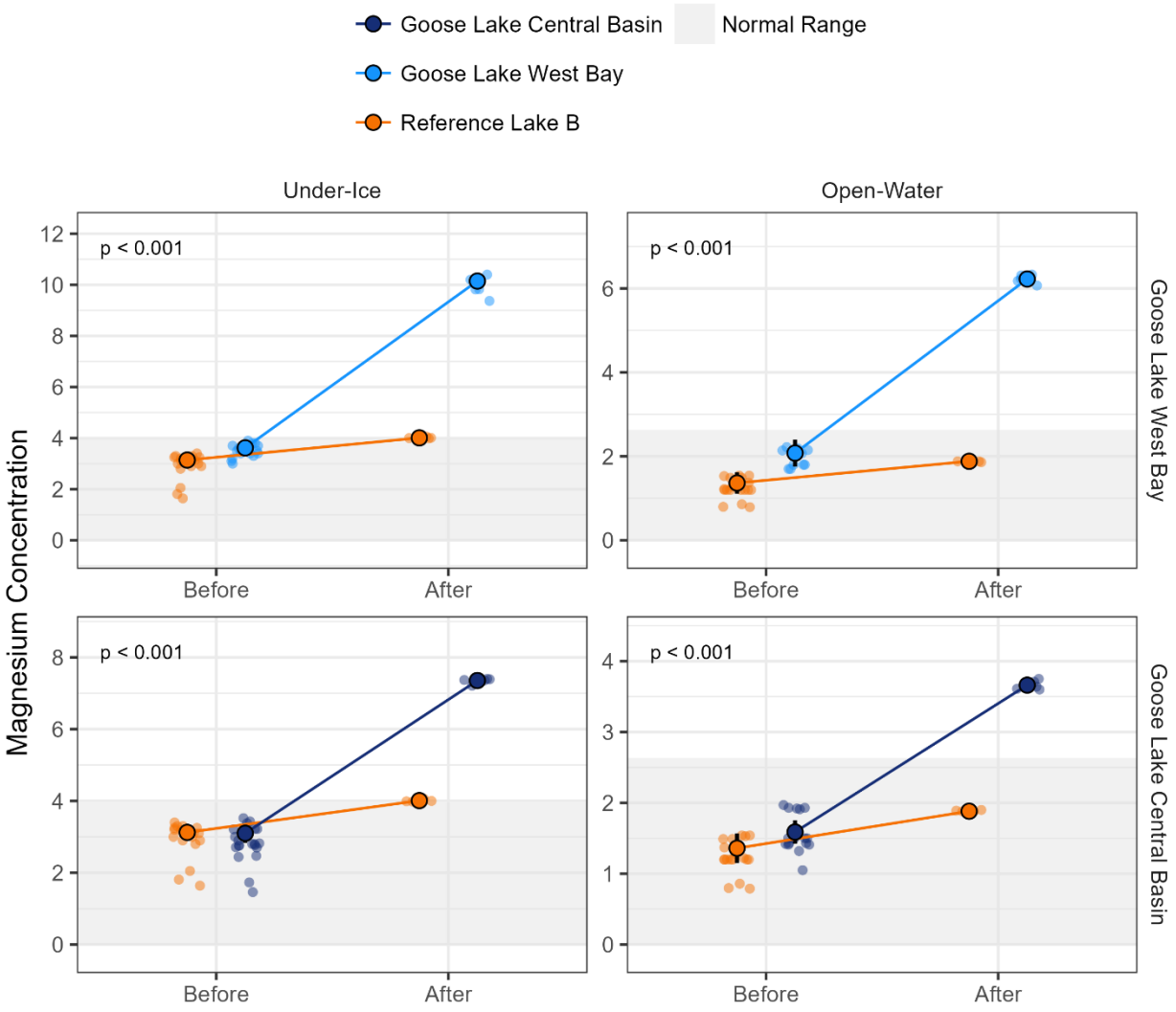
# 19 DISSOLVED VANADIUM



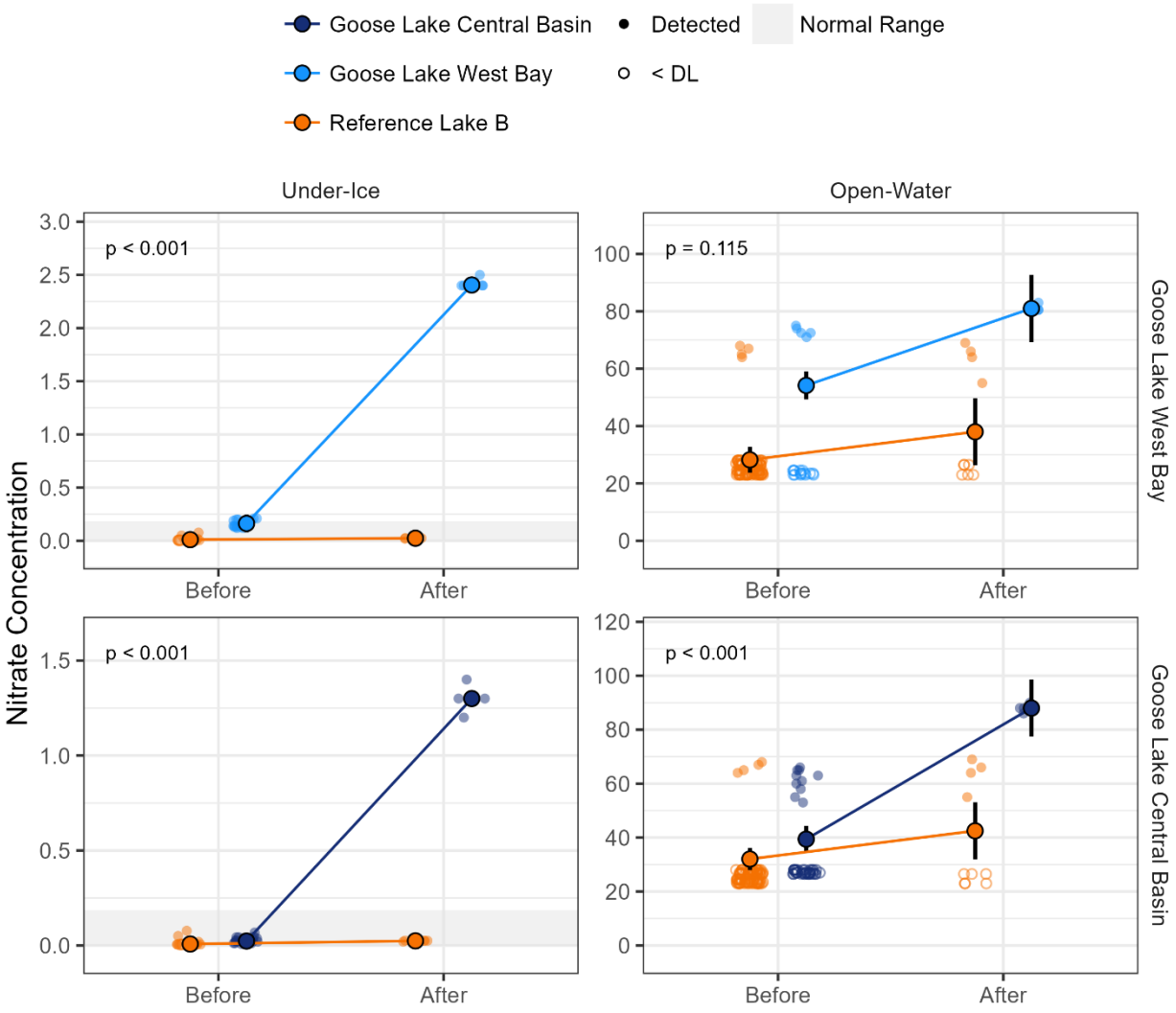
# 20 DISSOLVED ZINC



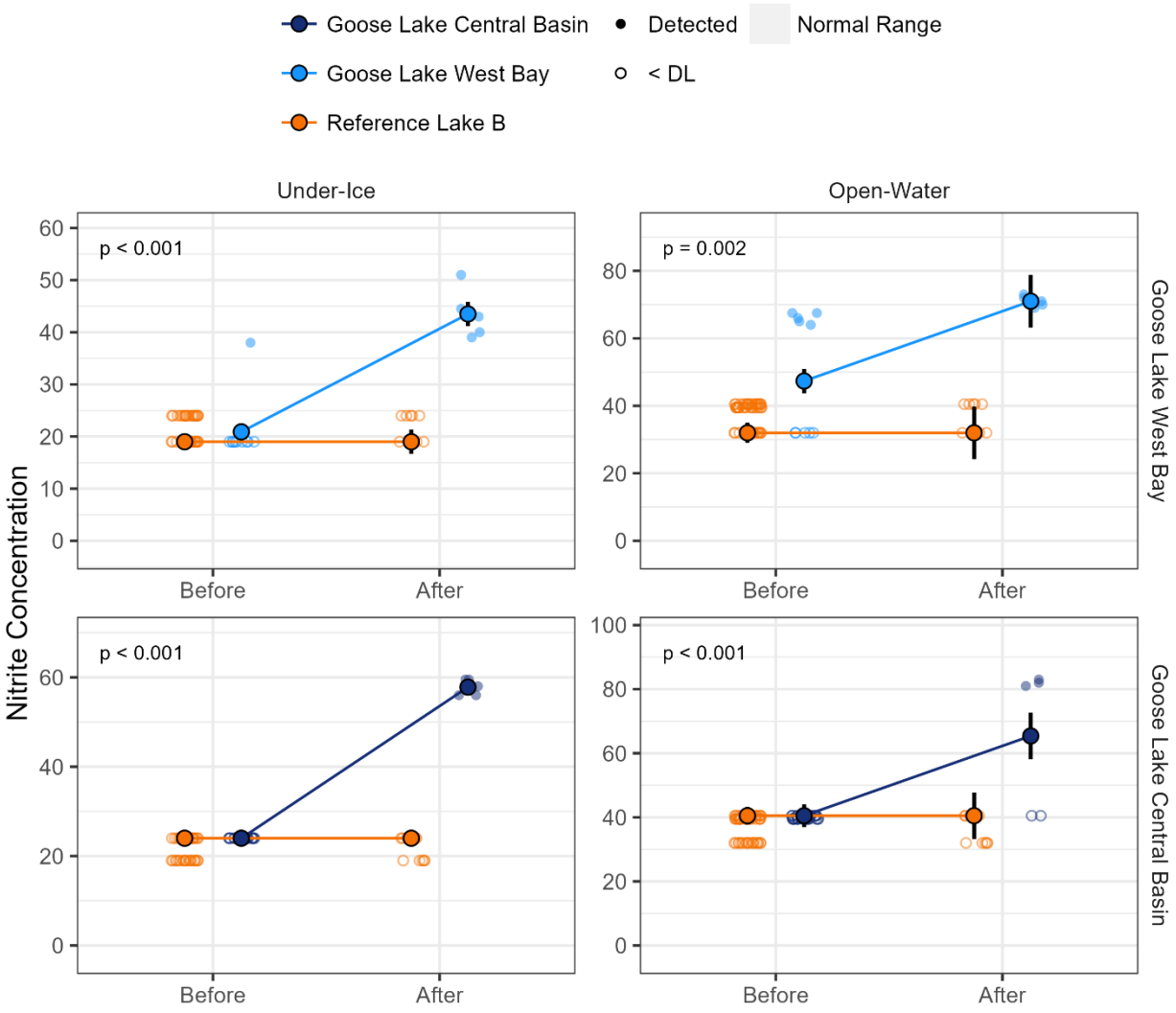
# 21 MAGNESIUM



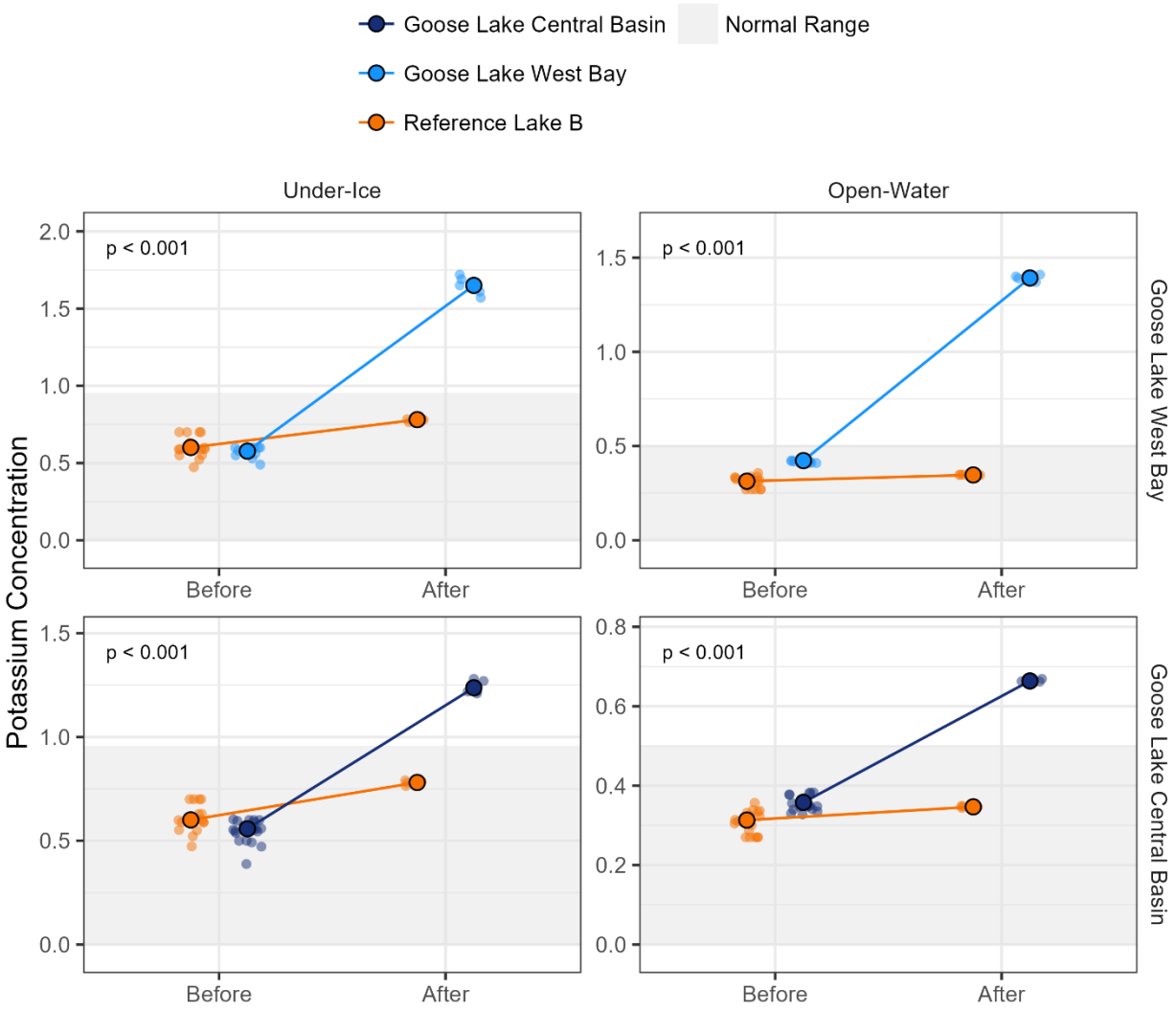
# 22 NITRATE


Goose Lake Central Basin
Goose Lake West Bay
Reference Lake B
Detected
< DL
Normal Range
Under-Ice
Open-Water
Nitrate Concentration
p < 0.001
p = 0.115
p < 0.001
p < 0.001
Goose Lake West Bay
Goose Lake Central Basin
Before
After

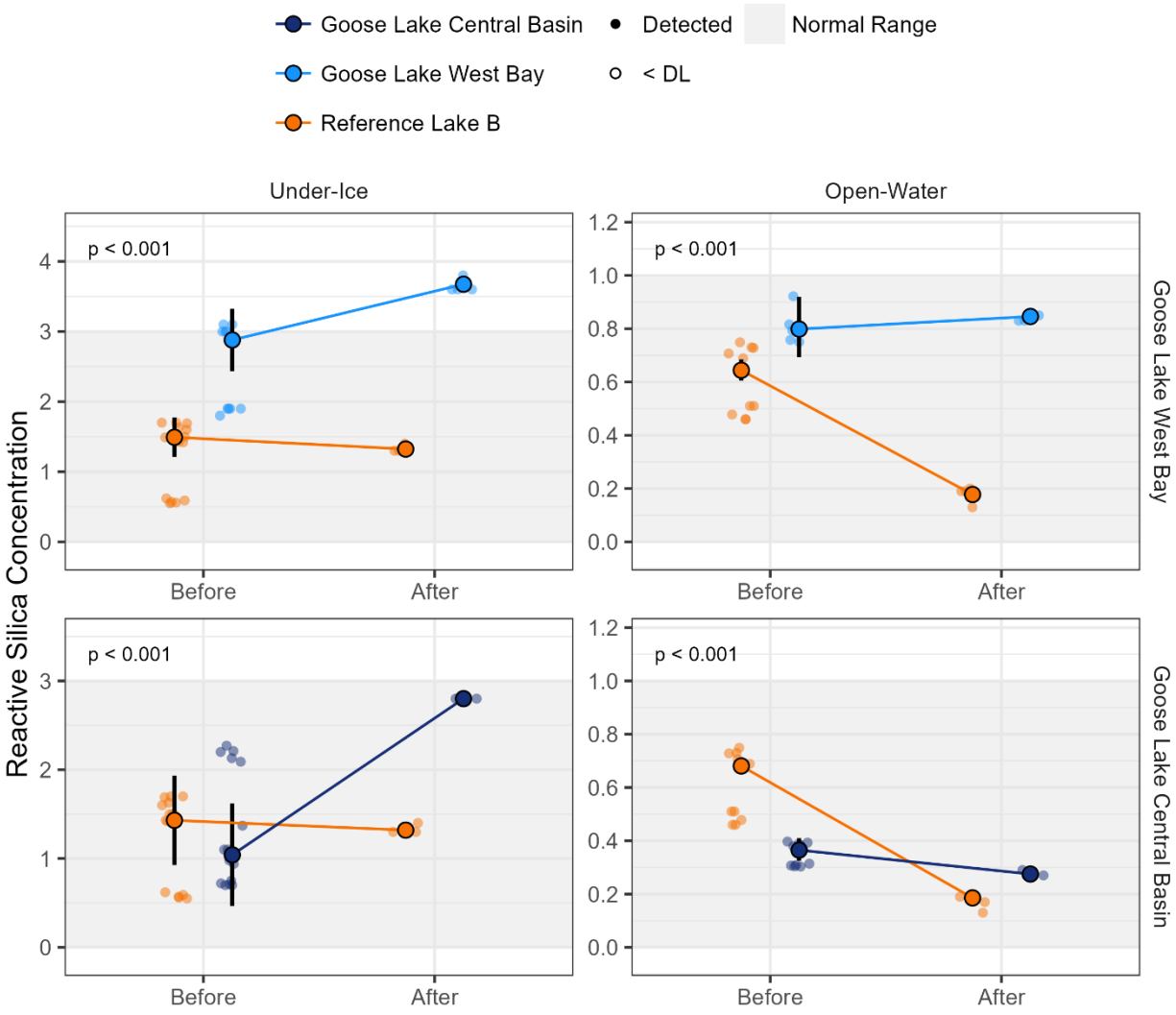
# 23 NITRITE


Goose Lake Central Basin
Goose Lake West Bay
Reference Lake B
Detected
< DL
Normal Range
Under-Ice
Open-Water
Nitrite Concentration
p < 0.001
p = 0.002
p < 0.001
p < 0.001
Goose Lake West Bay
Goose Lake Central Basin
Before
After

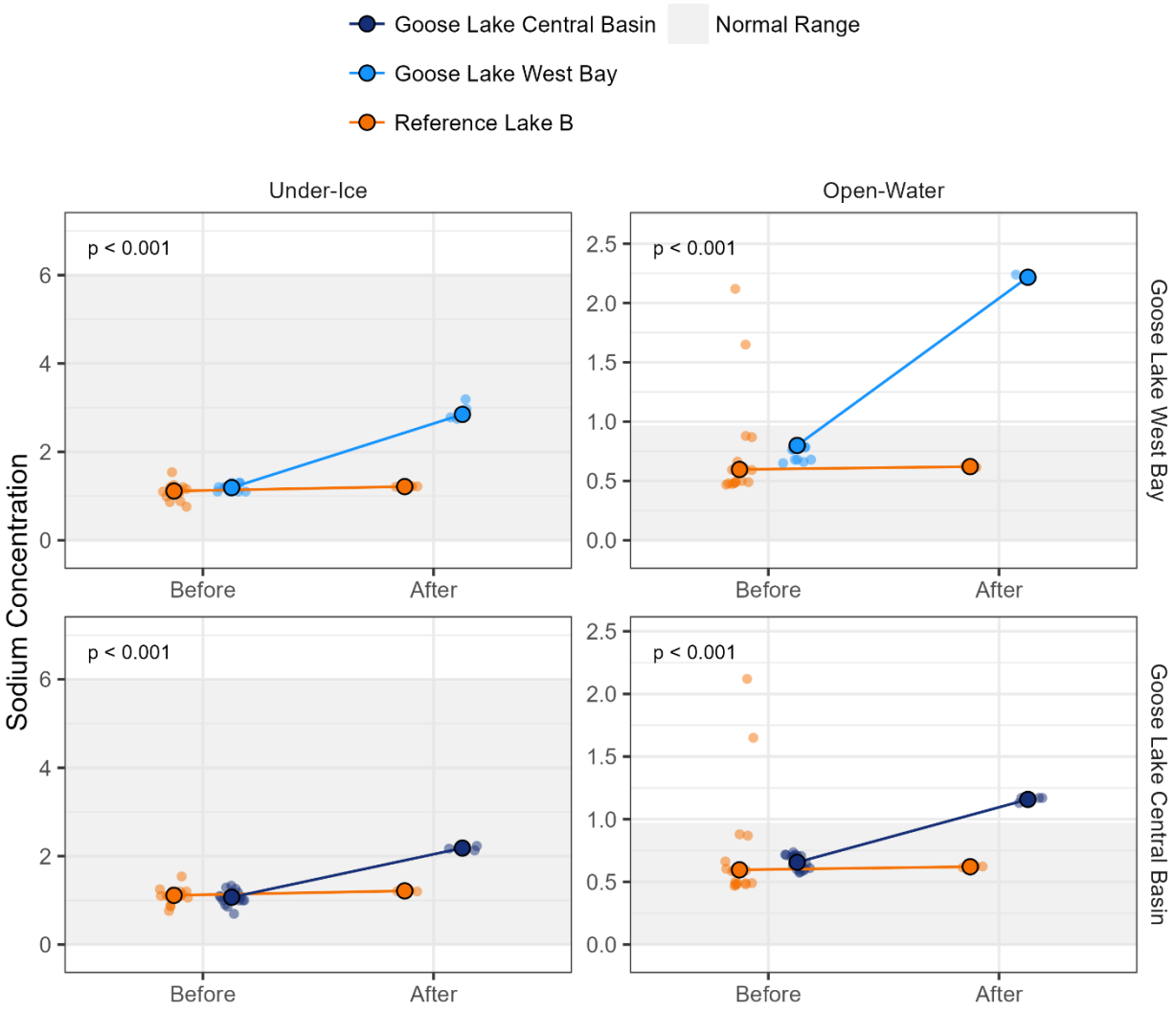
# 24 NITRATE


Goose Lake Central Basin
Normal Range
Goose Lake West Bay
Reference Lake B
Under-Ice
Open-Water
Potassium Concentration
Goose Lake West Bay
Goose Lake Central Basin
p < 0.001
Before
After

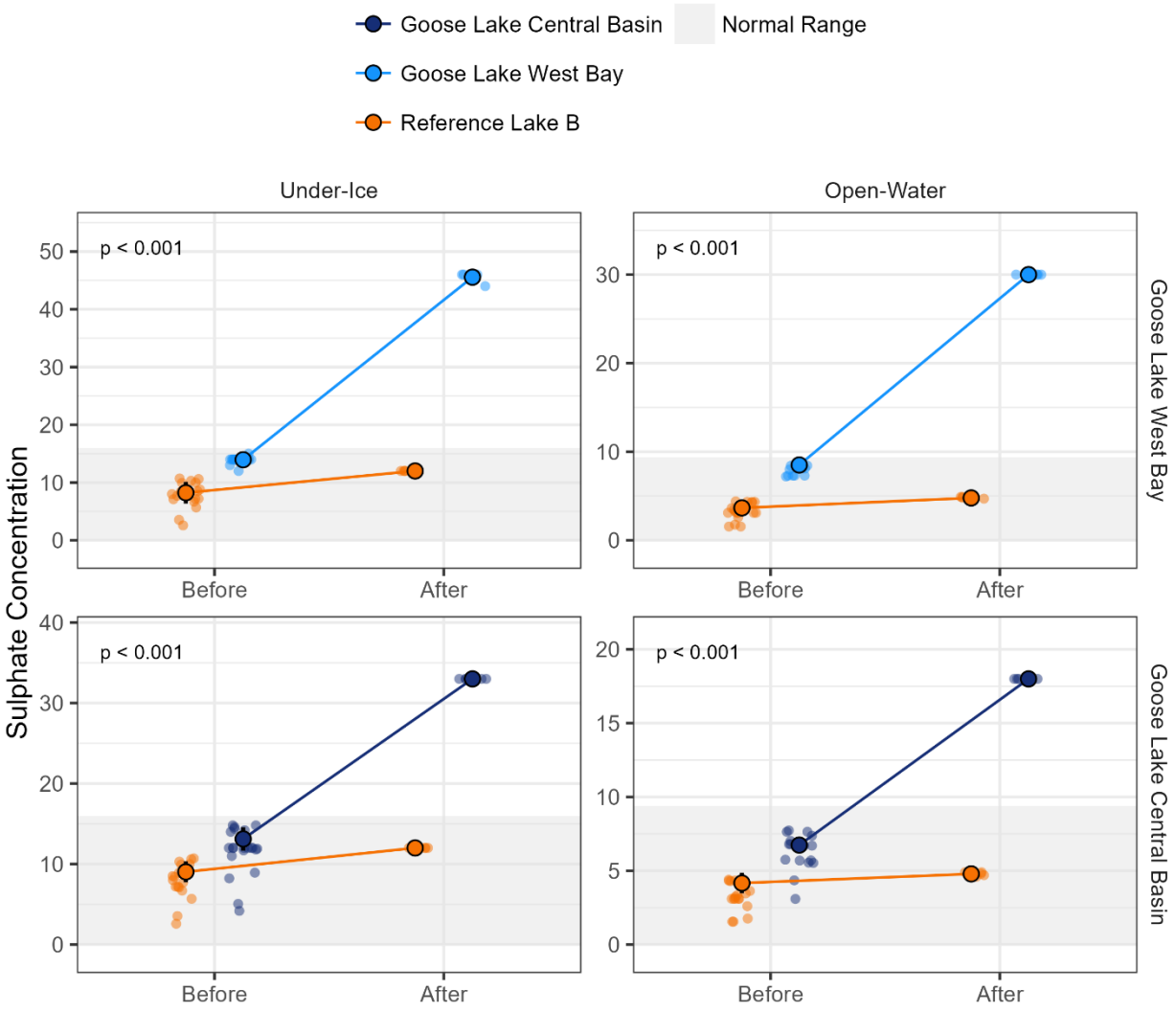
# 25 REACTIVE SILICA



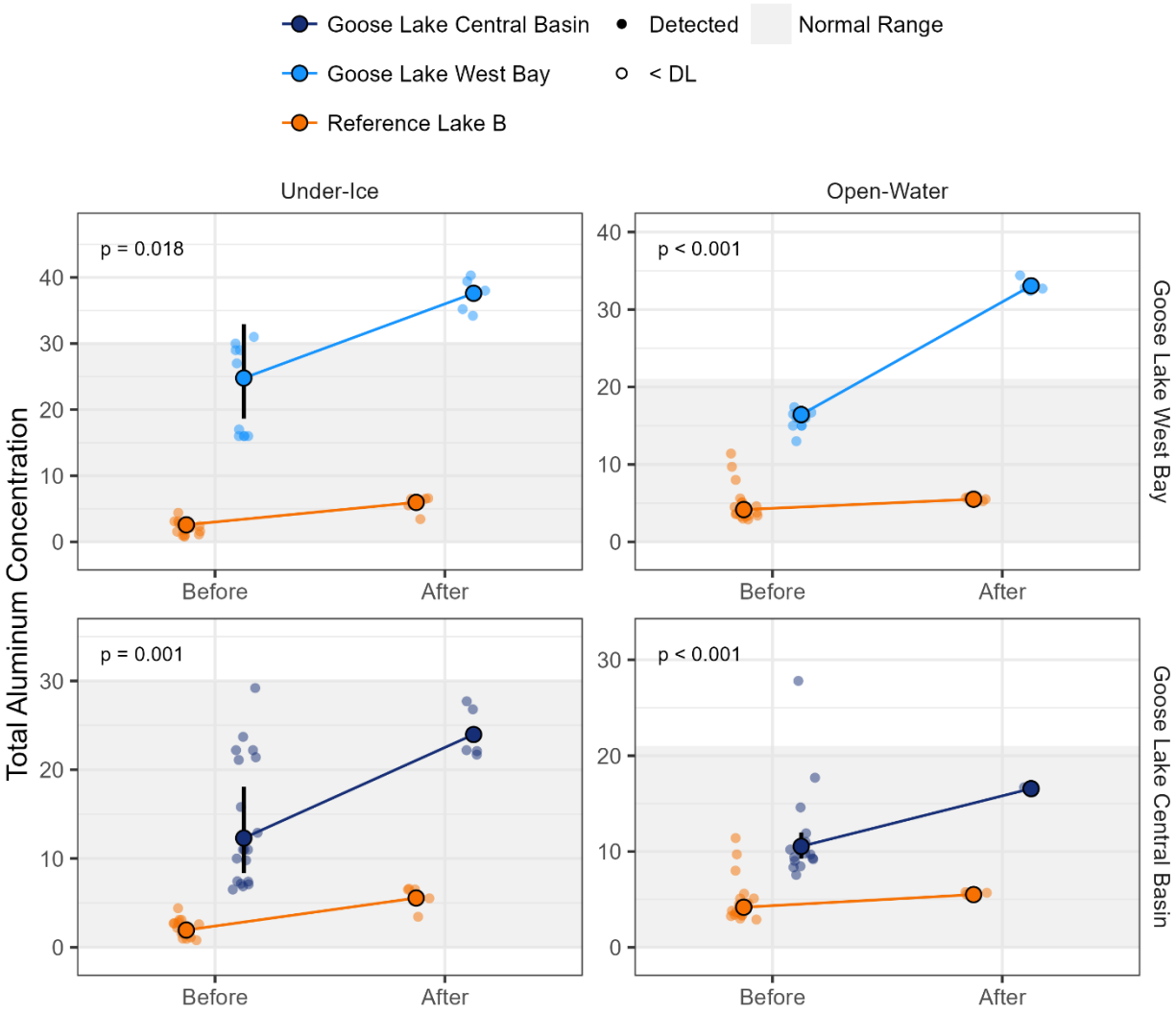
# 26 SODIUM


Goose Lake Central Basin
Normal Range
Goose Lake West Bay
Reference Lake B
Under-Ice
Open-Water
Sodium Concentration
p < 0.001
p < 0.001
p < 0.001
p < 0.001
Goose Lake West Bay
Goose Lake Central Basin
Before
After
Before
After
Before
After
Before
After
0
2
4
6
0.0
0.5
1.0
1.5
2.0
2.5

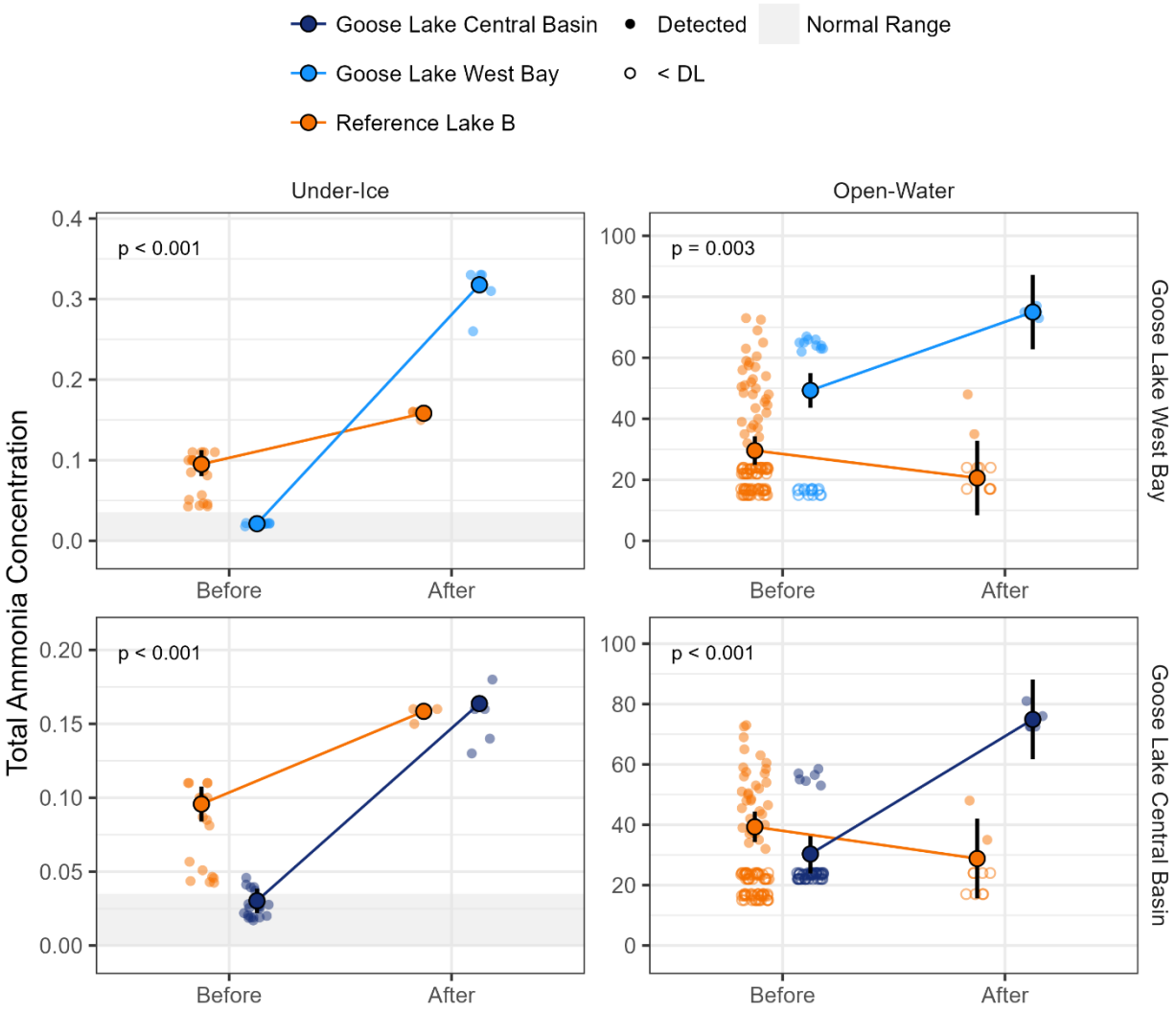
# 27 SULPHATE


Goose Lake Central Basin
Normal Range
Goose Lake West Bay
Reference Lake B
Under-Ice
Open-Water
Sulphate Concentration
Goose Lake West Bay
Goose Lake Central Basin
p < 0.001
Before
After

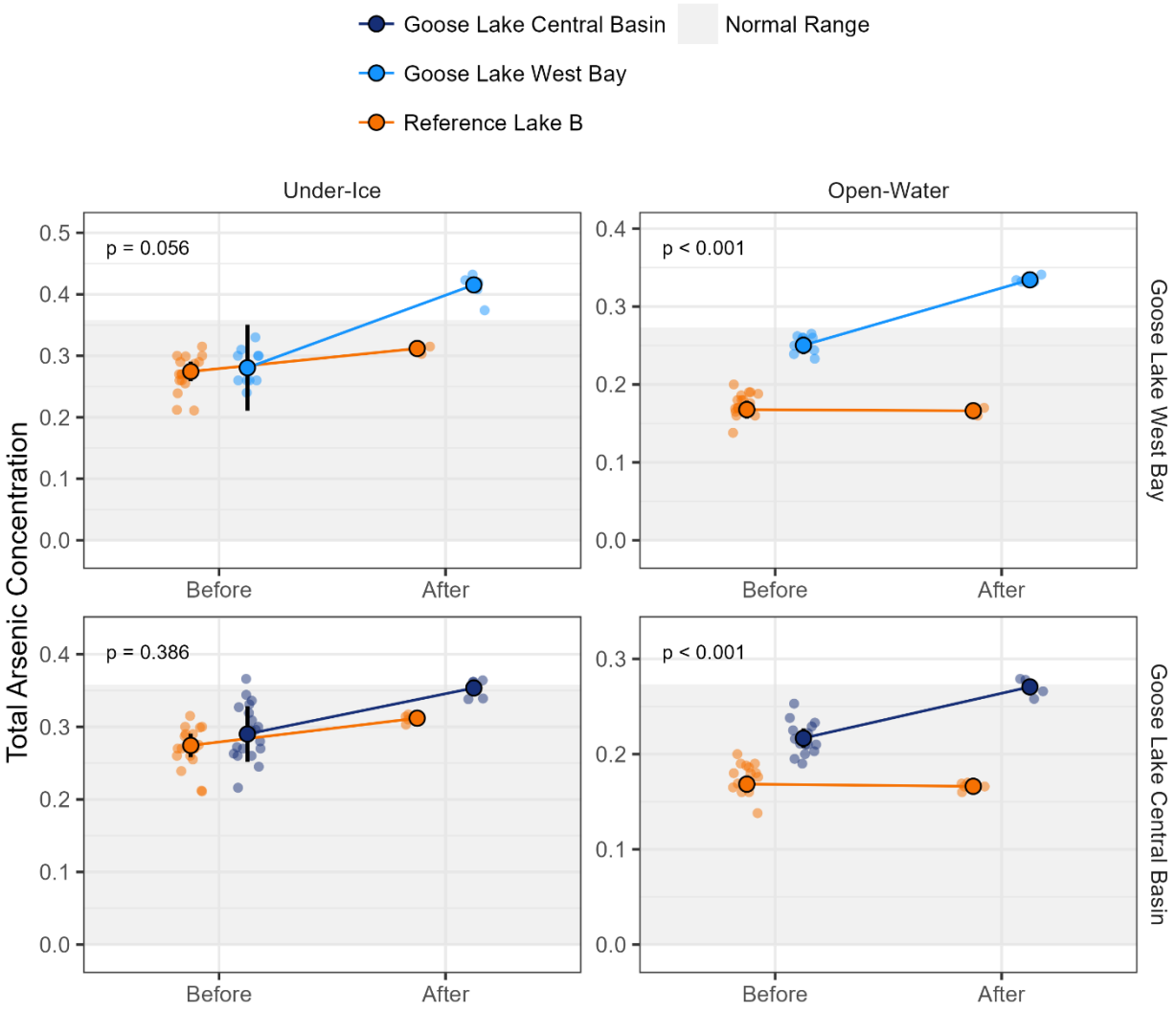
# 28 TOTAL ALUMINUM



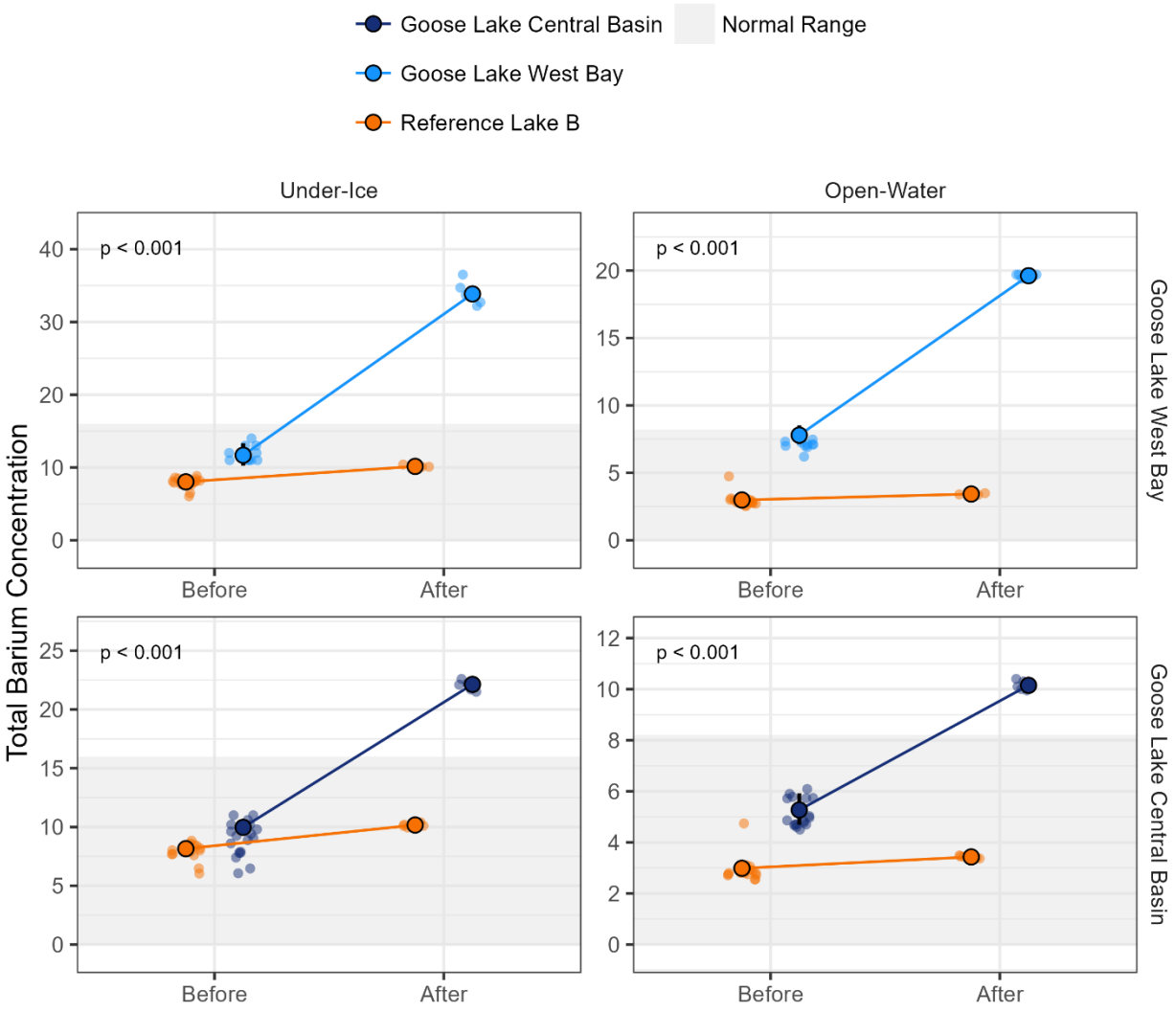
# 29 TOTAL AMMONIA



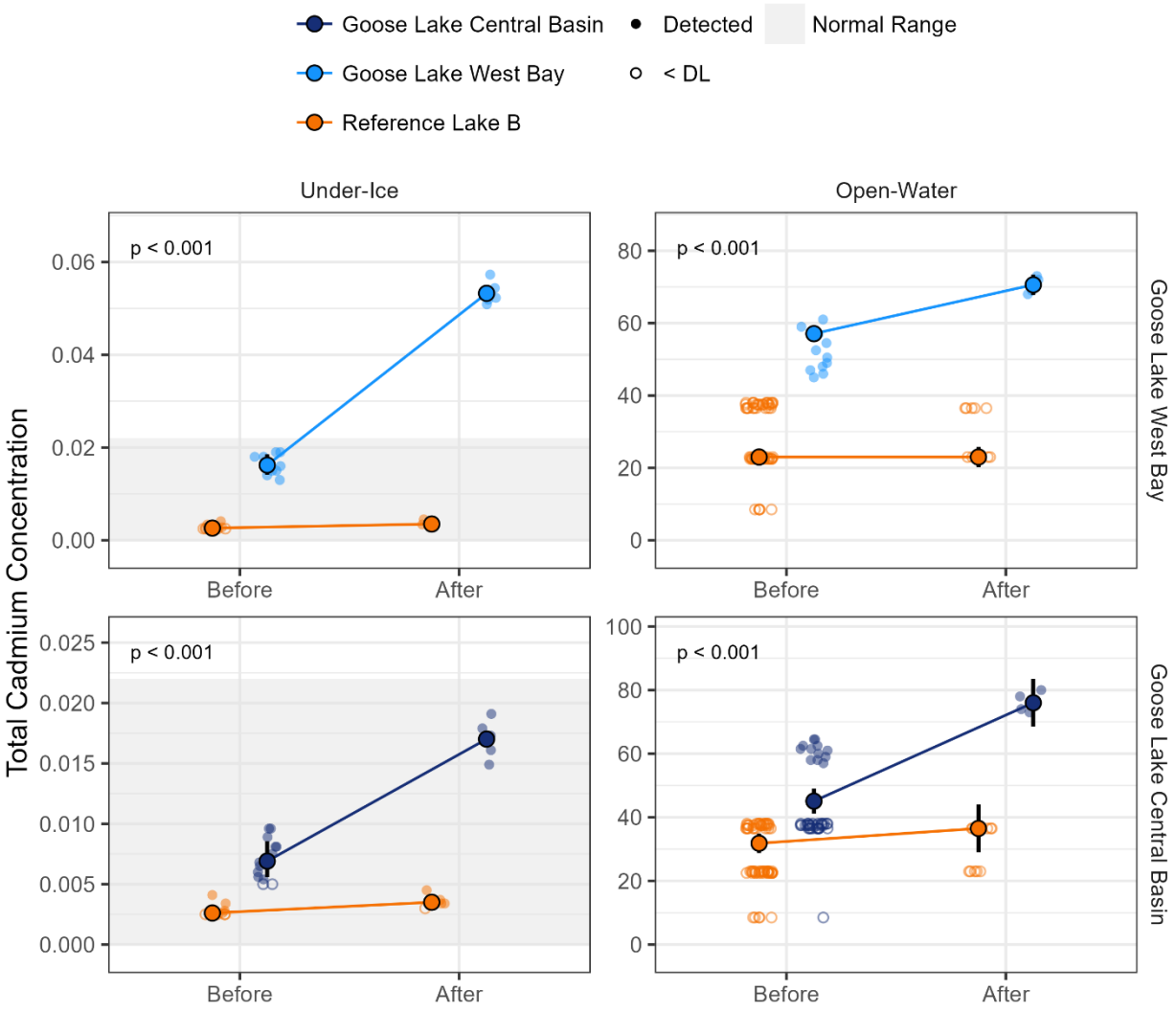
# 30 TOTAL ARSENIC



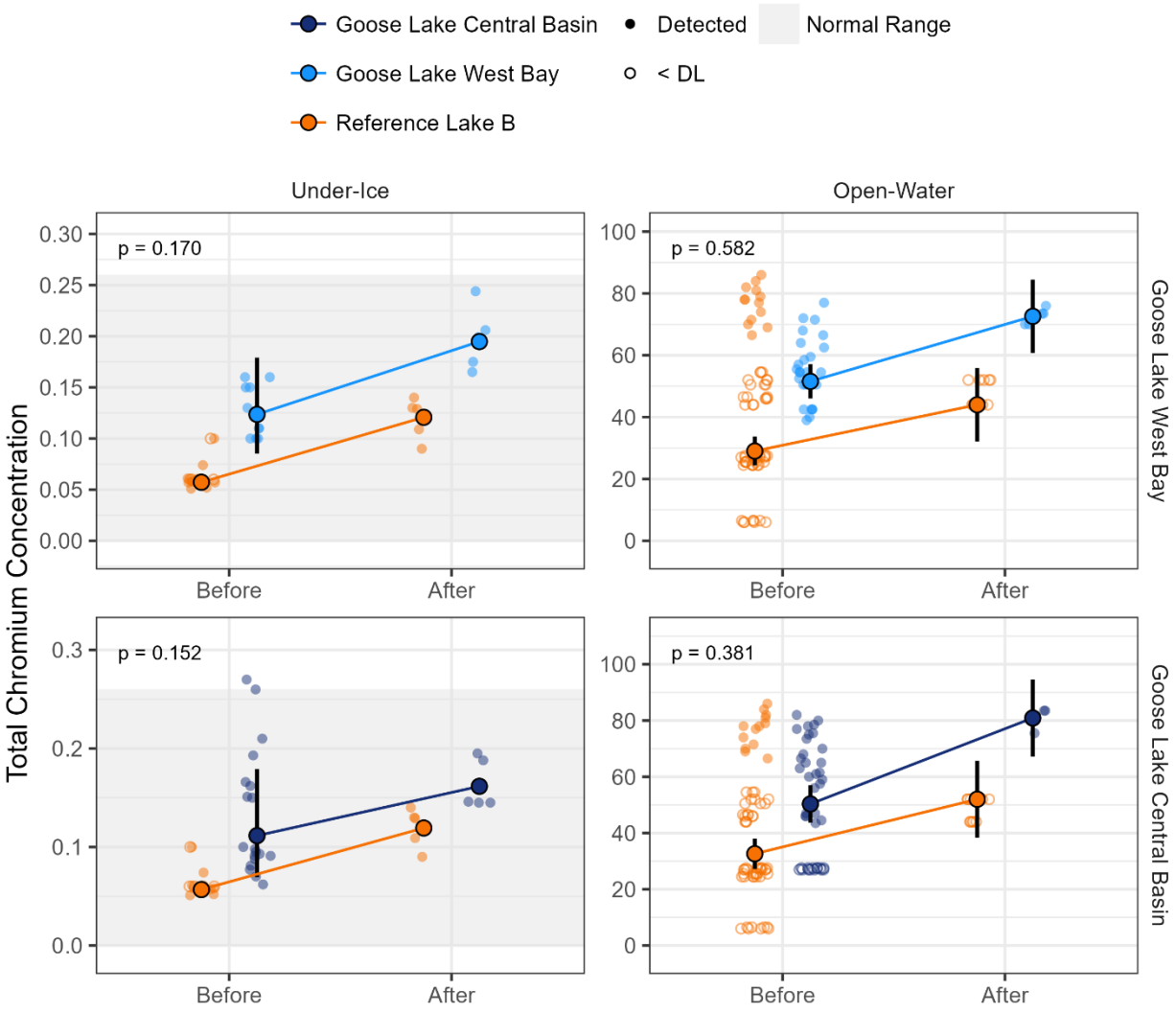
# 31 TOTAL BARIUM



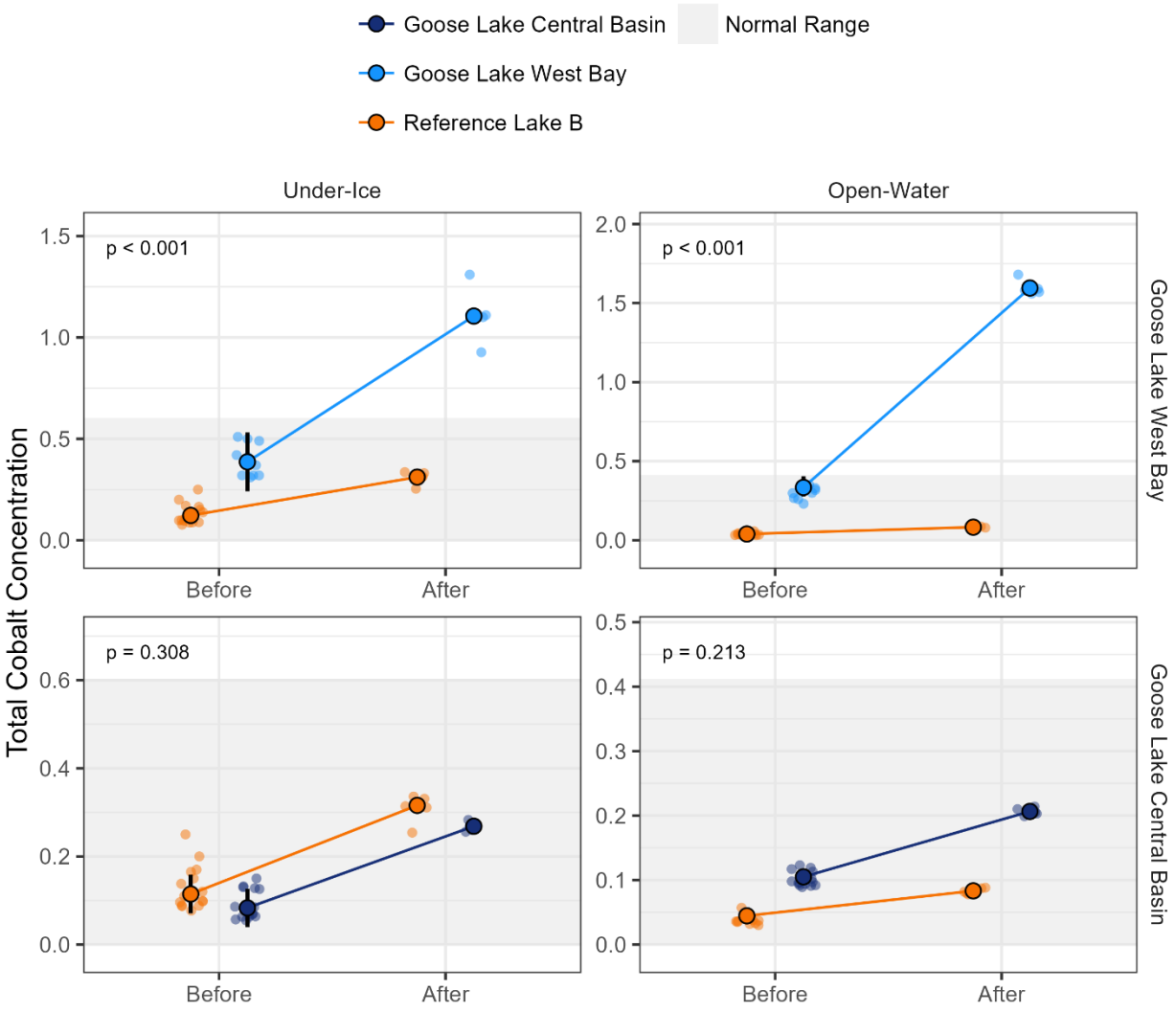
# 32 TOTAL CADMIUM



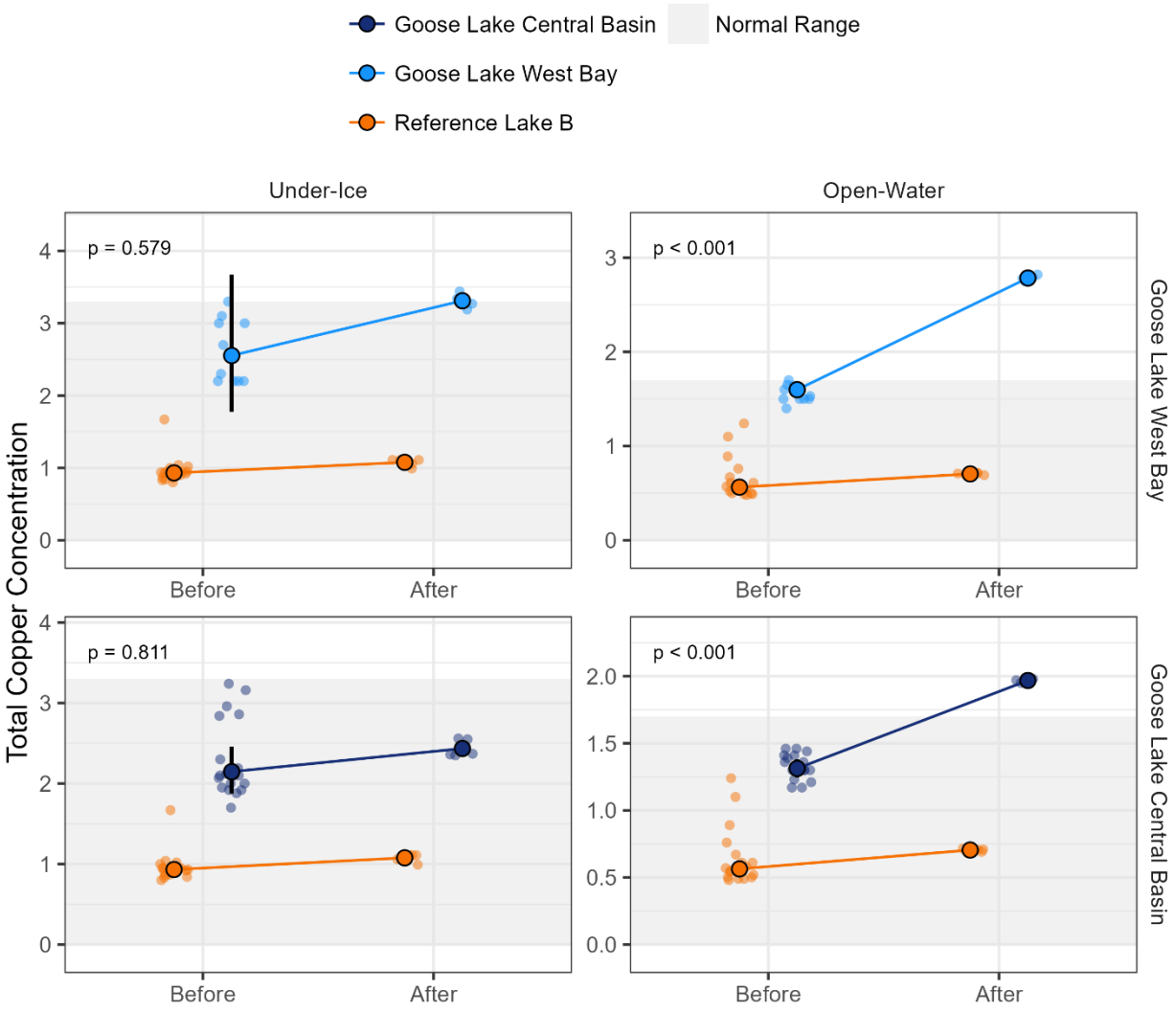
# 33 TOTAL CHROMIUM



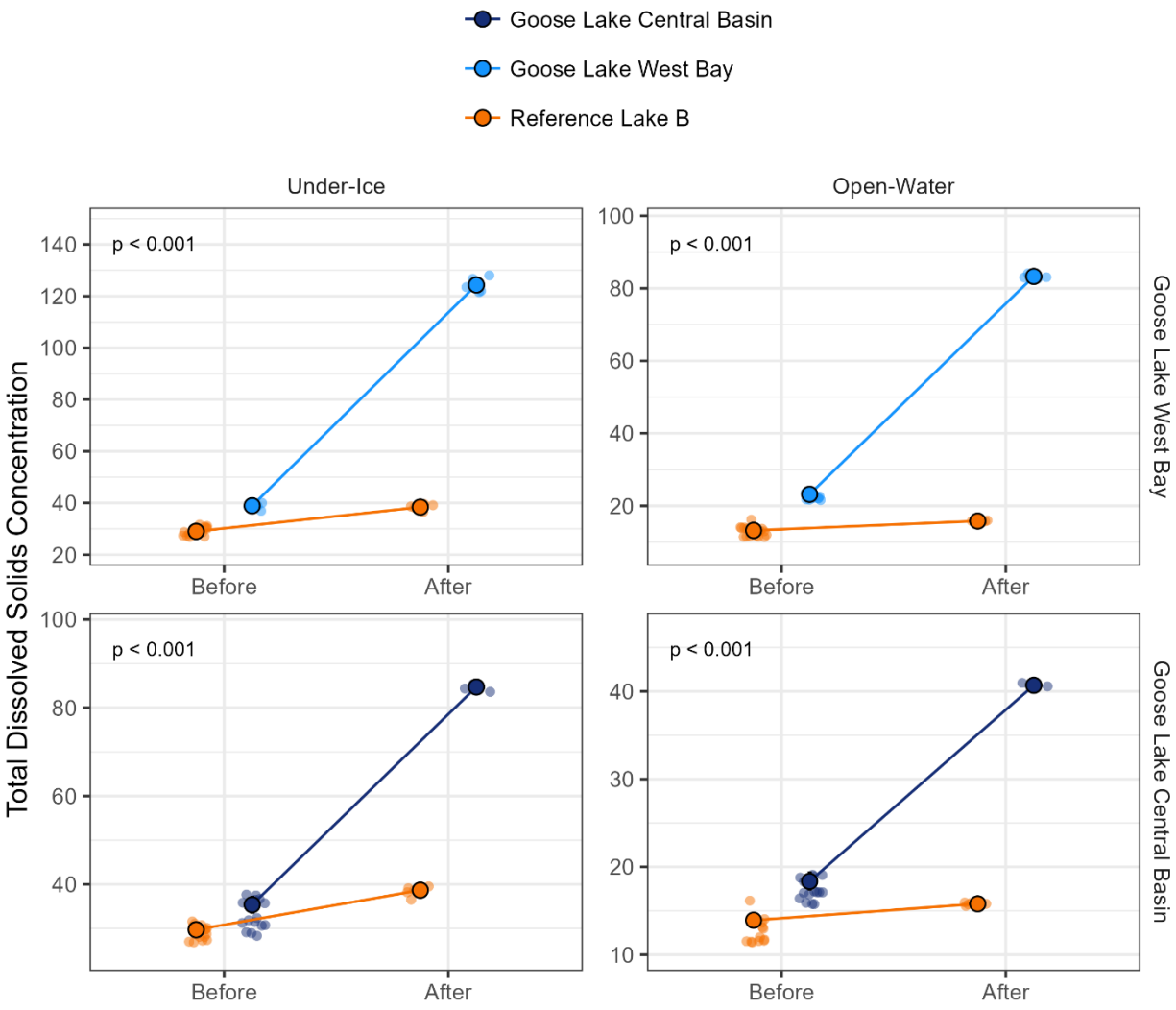
# 34 TOTAL COBALT



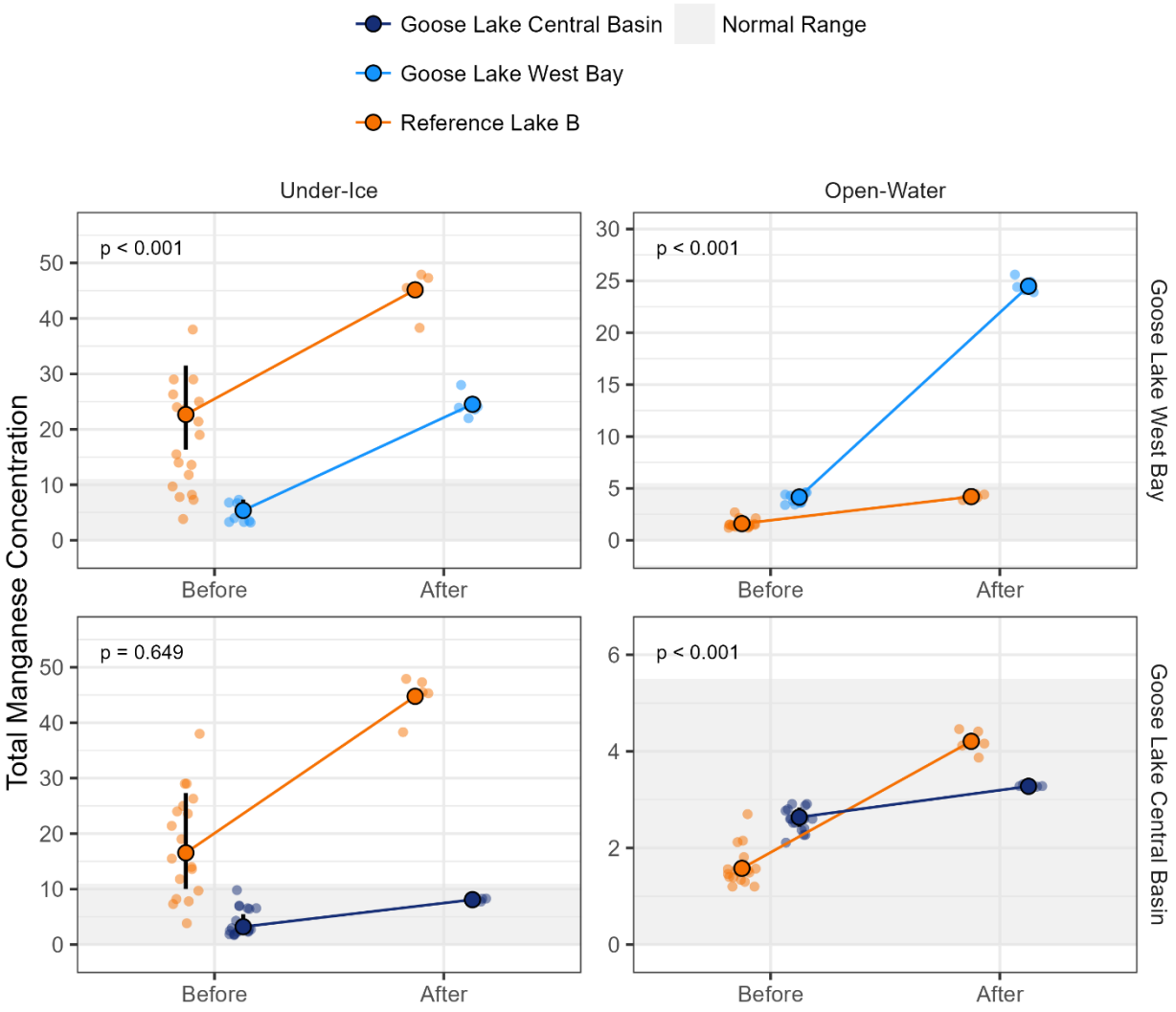
# 35 TOTAL COPPER



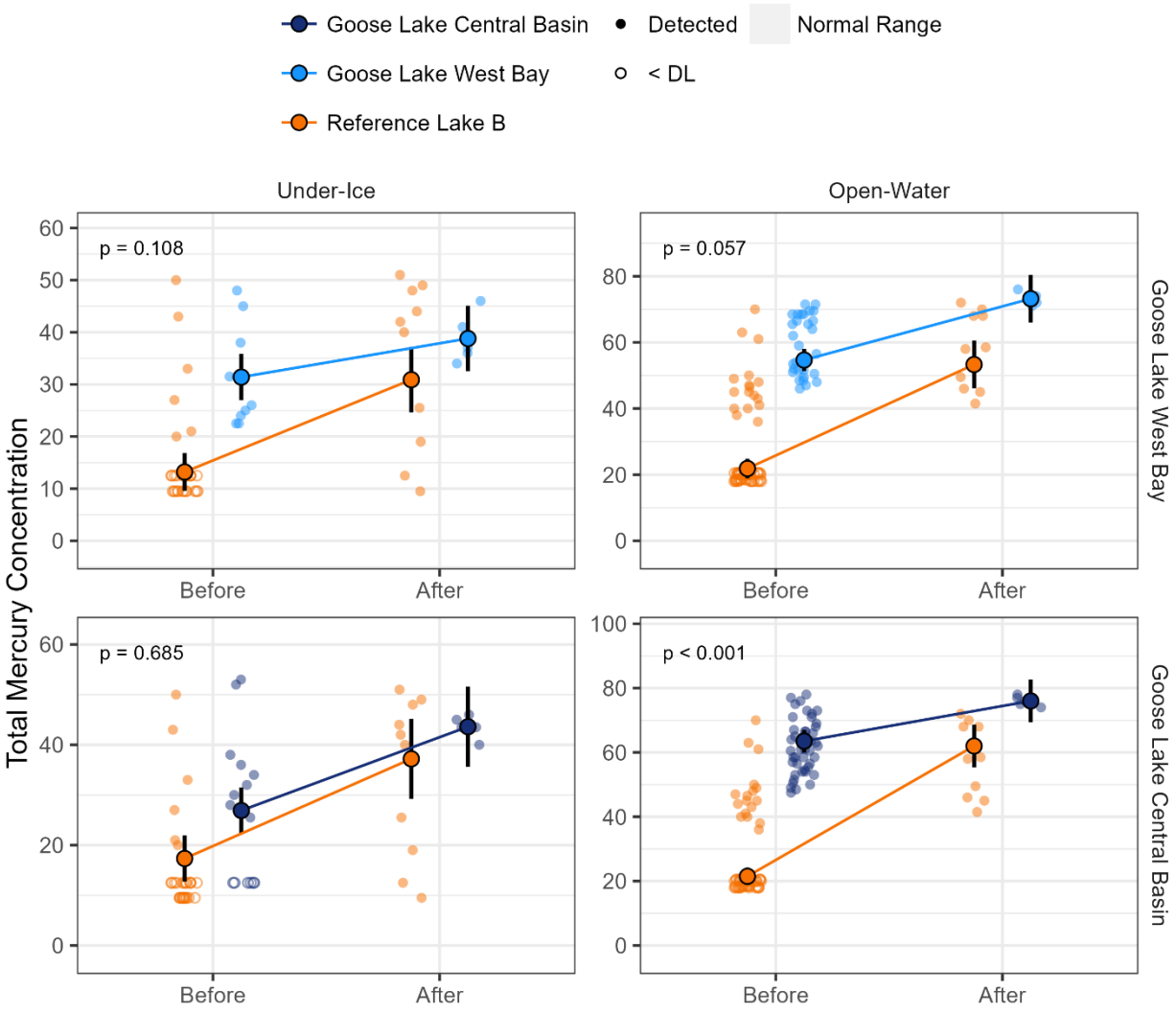
# 36 TOTAL DISSOLVED SOLIDS



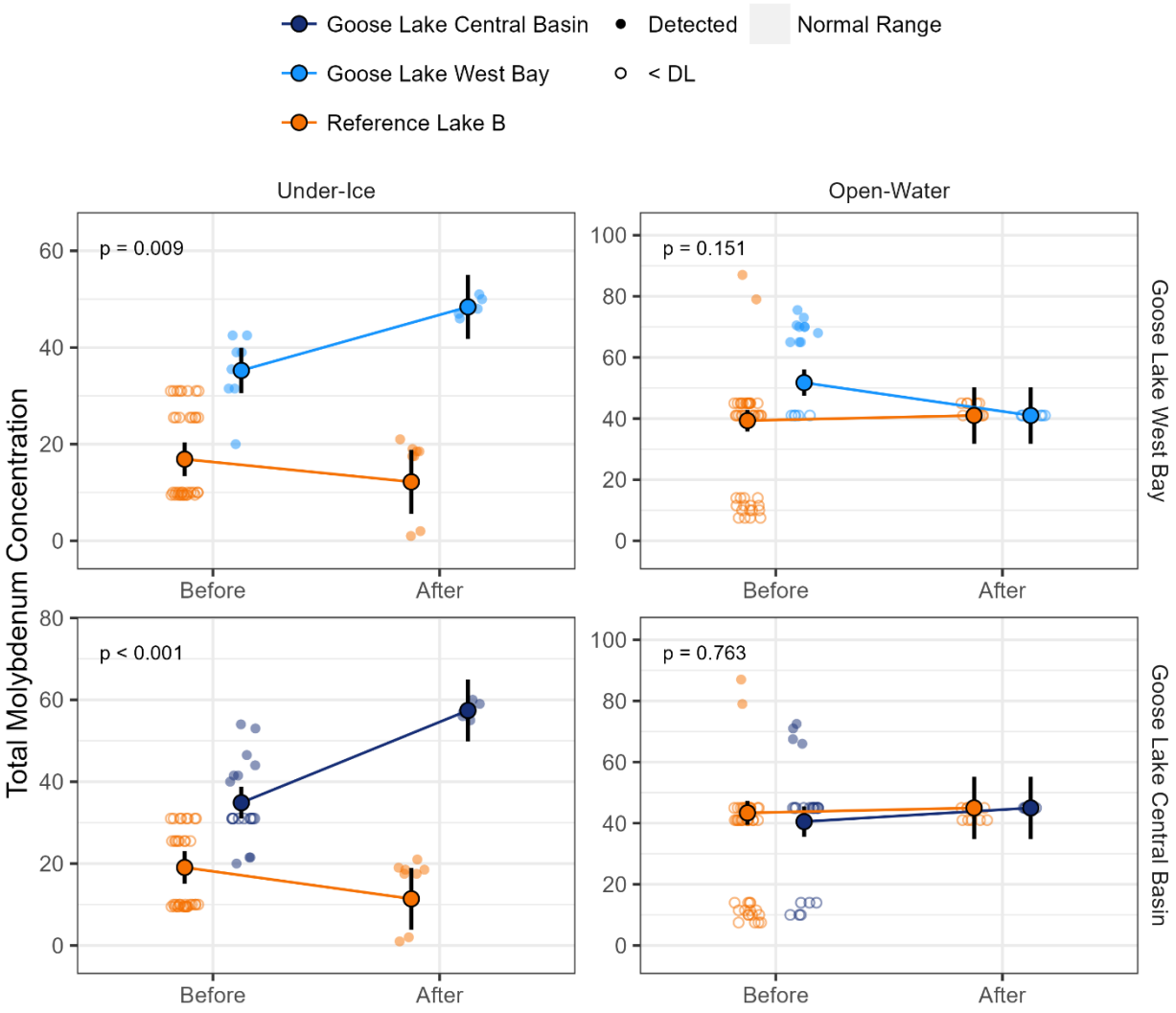
# 37 TOTAL MANGANESE



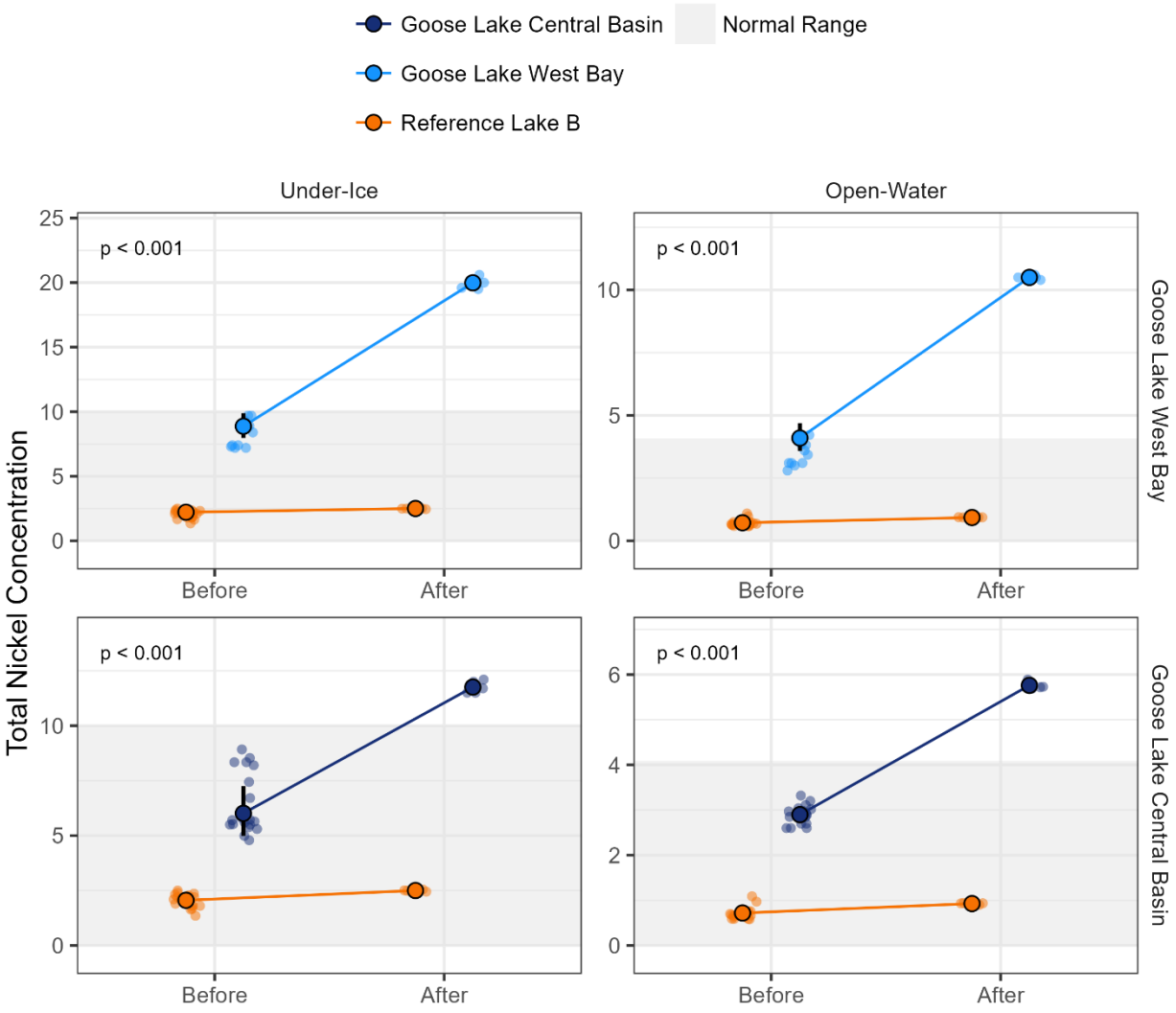
# 38 TOTAL MERCURY



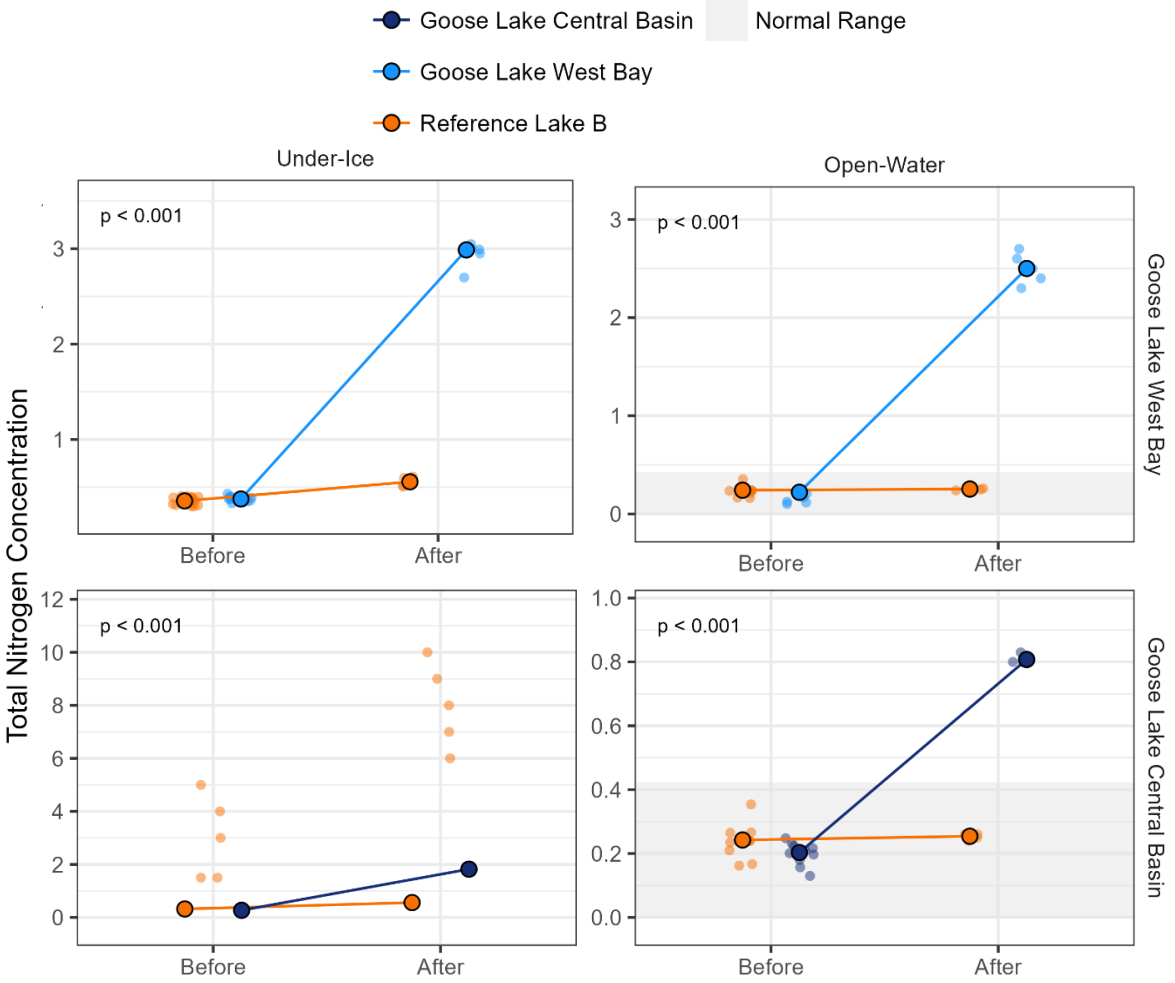
# 39 TOTAL MOLYBDENUM



# 40 TOTAL NICKEL

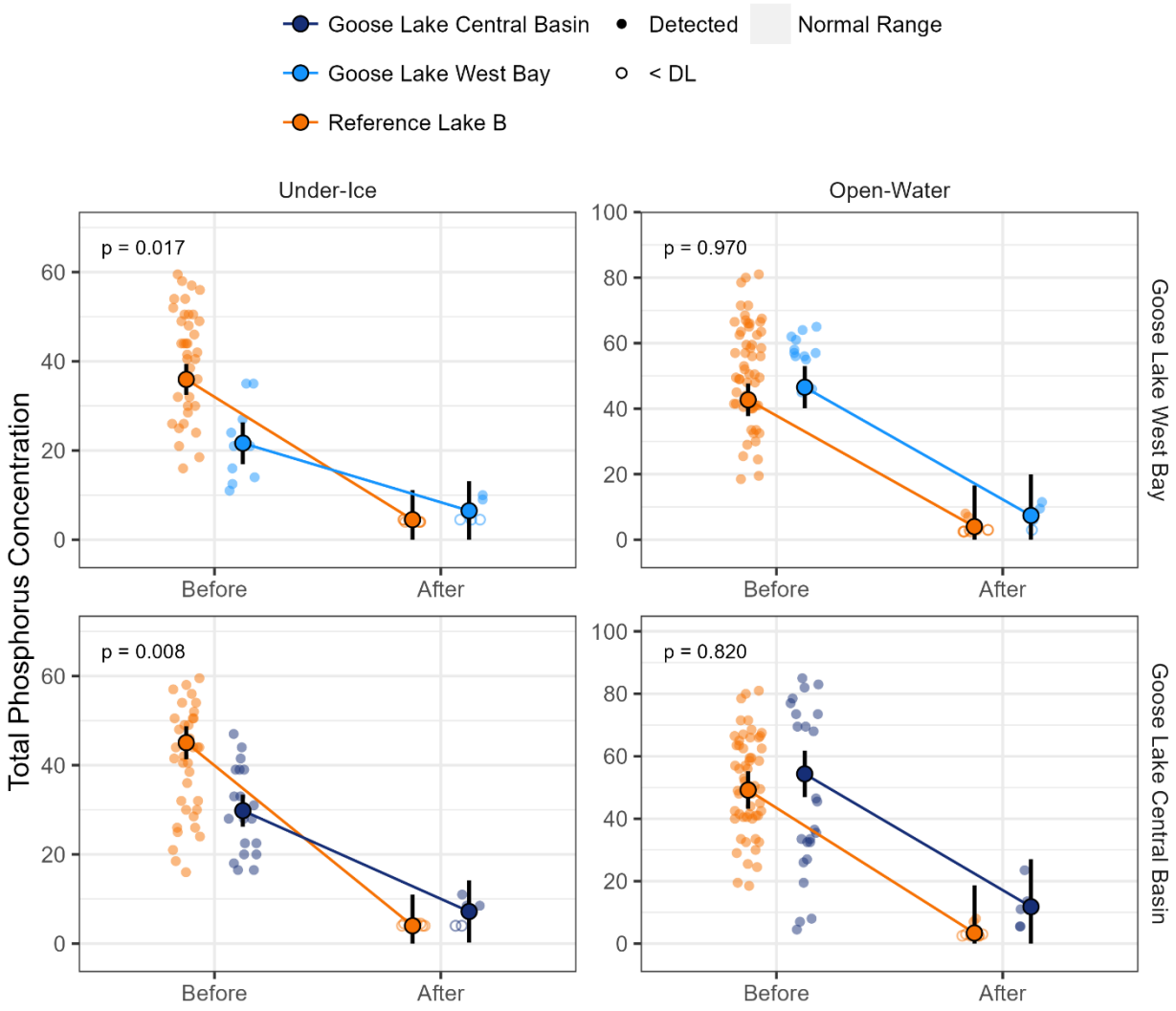


# 41 TOTAL NITROGEN

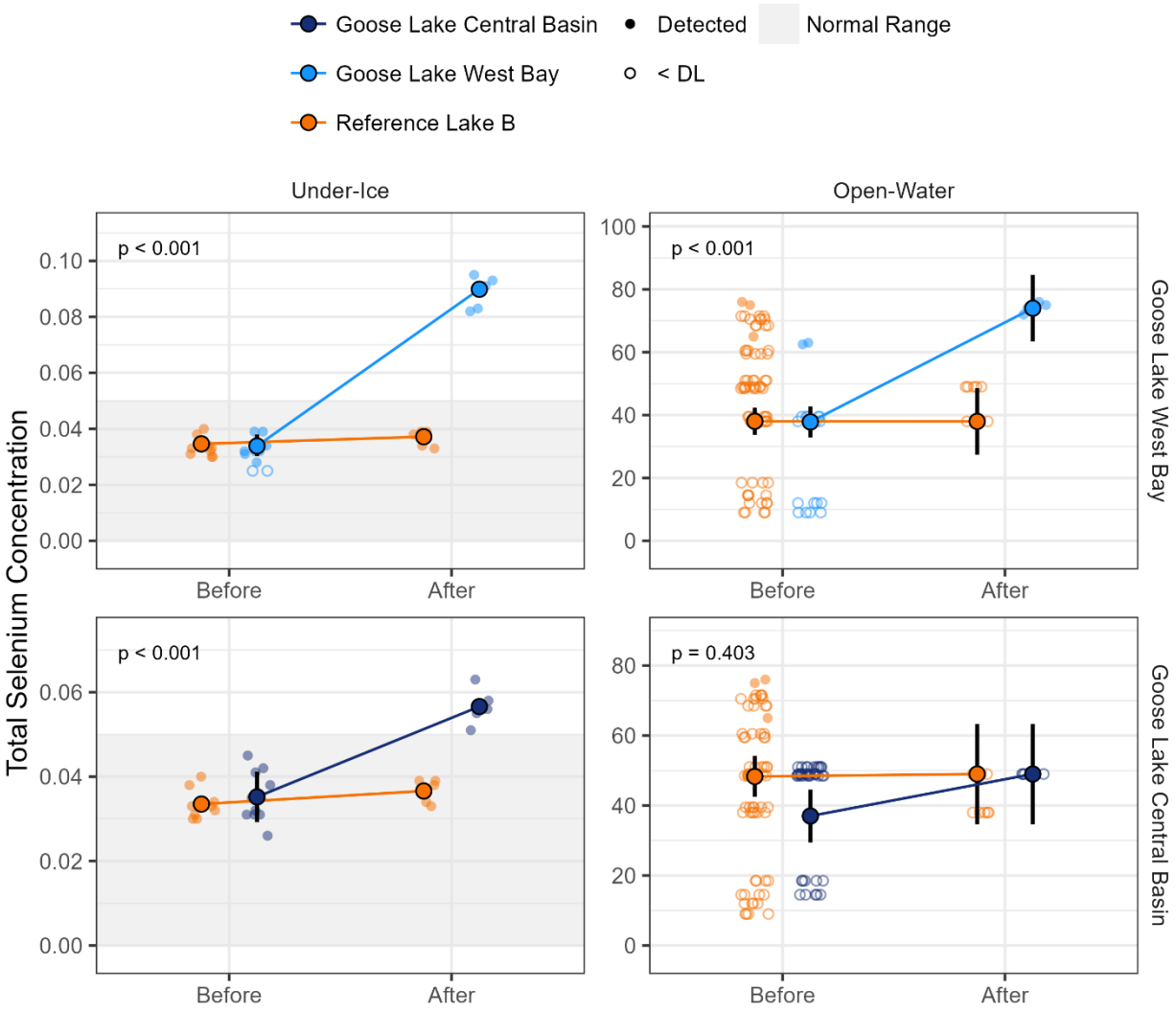



Note: Statistical analysis was carried out on calculated total nitrogen in under-ice conditions as there were no total nitrogen results in the Before period for West Bay in April.

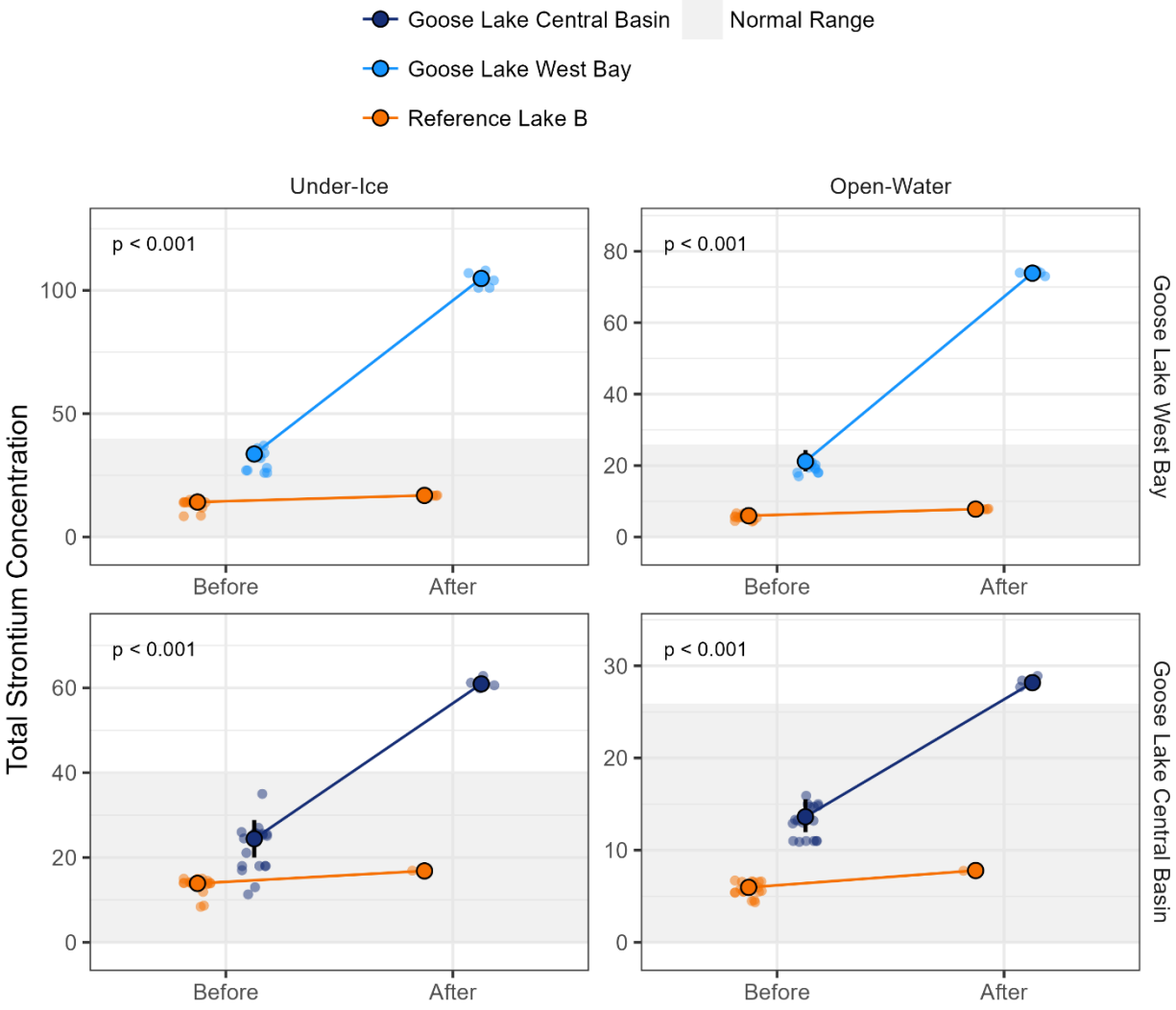
# 42 TOTAL PHOSPHORUS



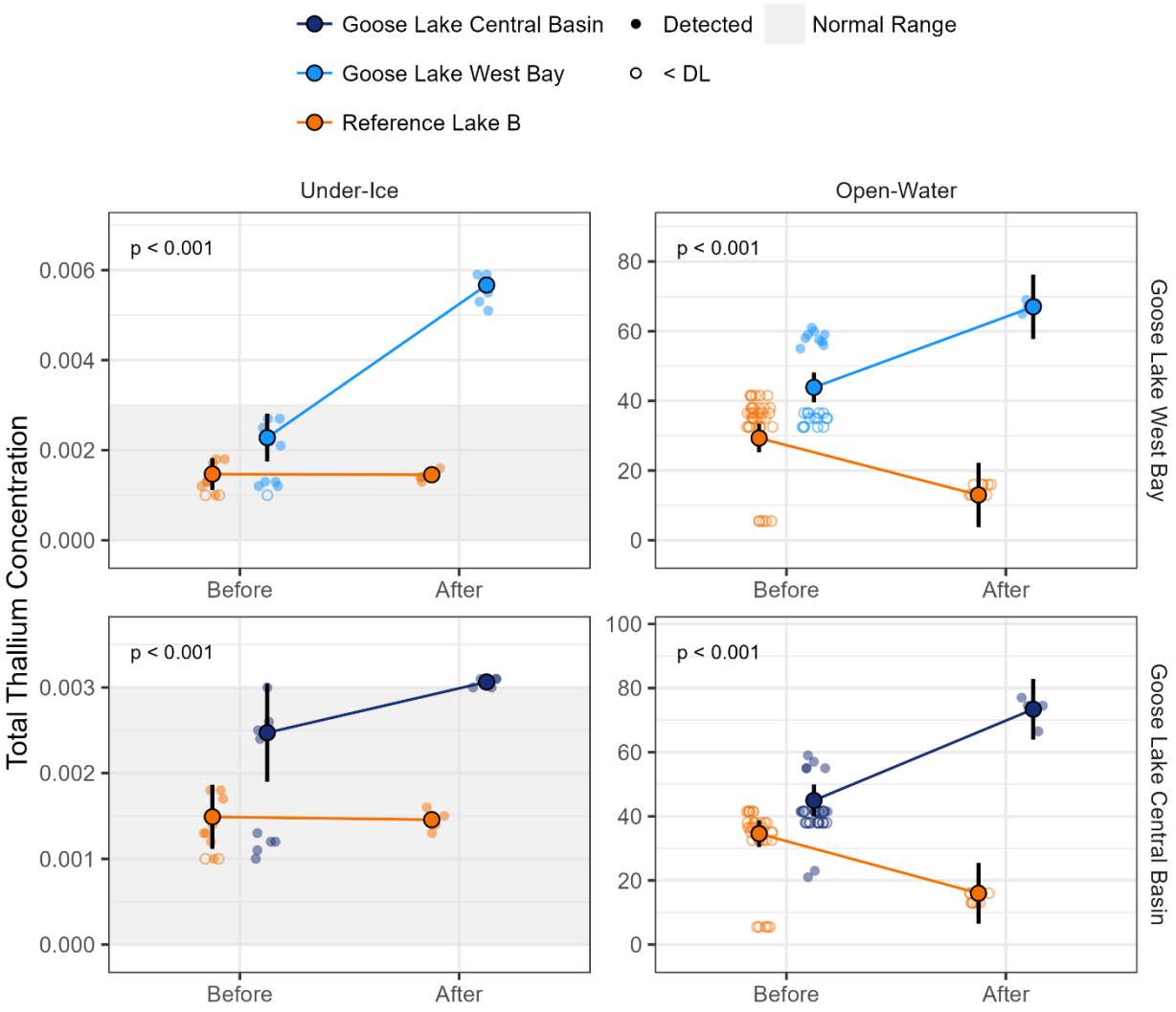
# 43 TOTAL SELENIUM



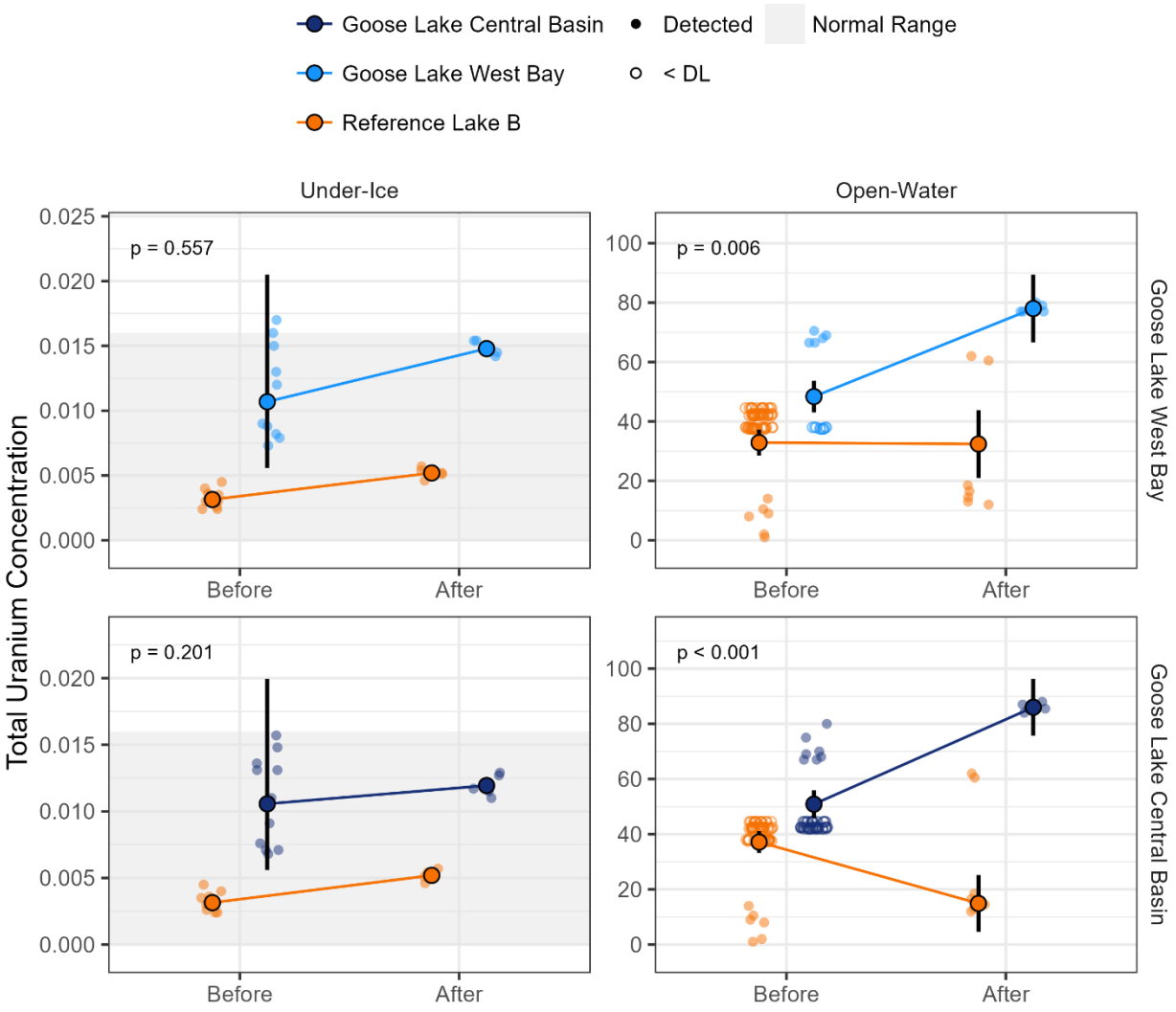
# 44 TOTAL STRONTIUM



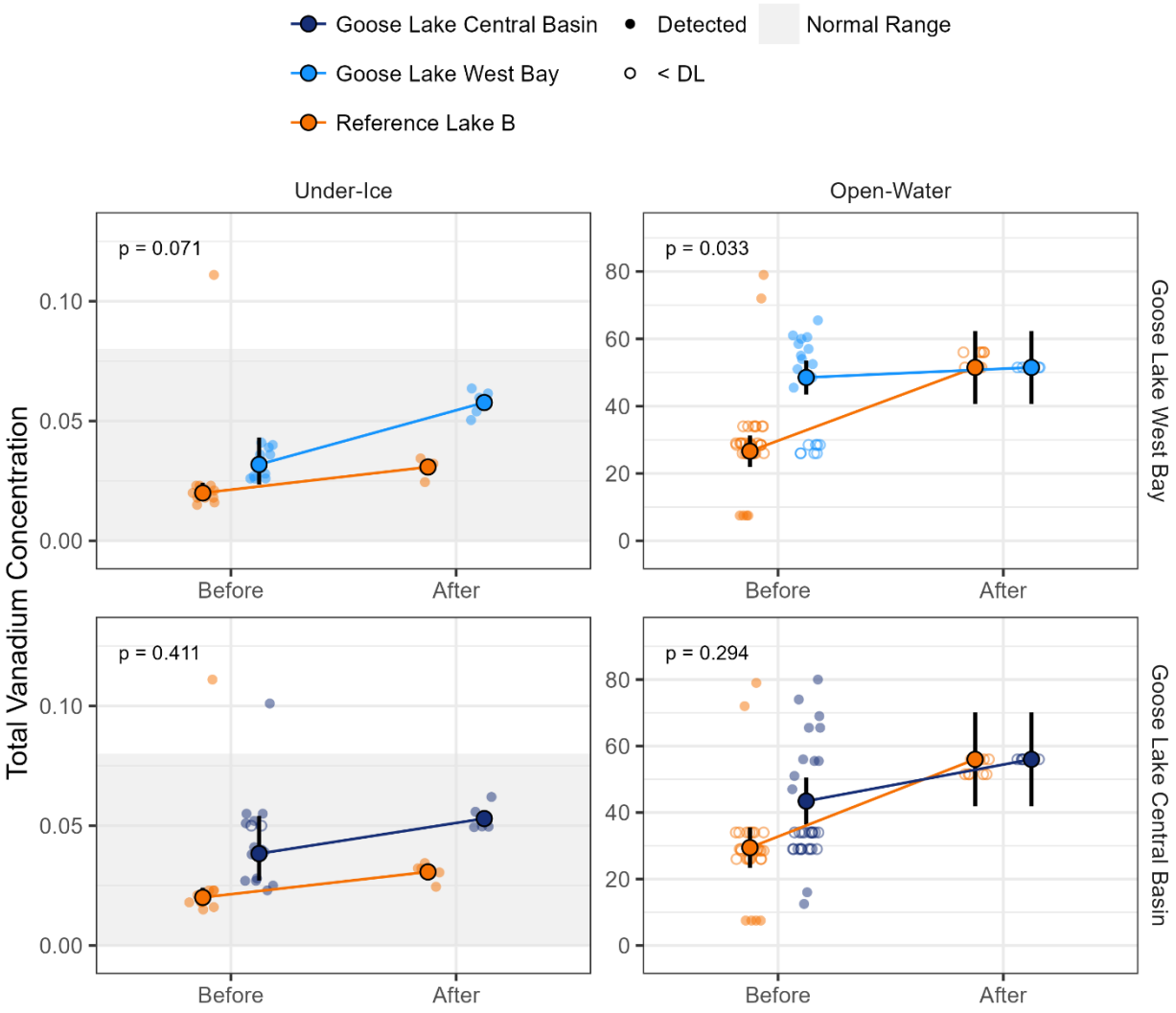
# 45 TOTAL THALLIUM



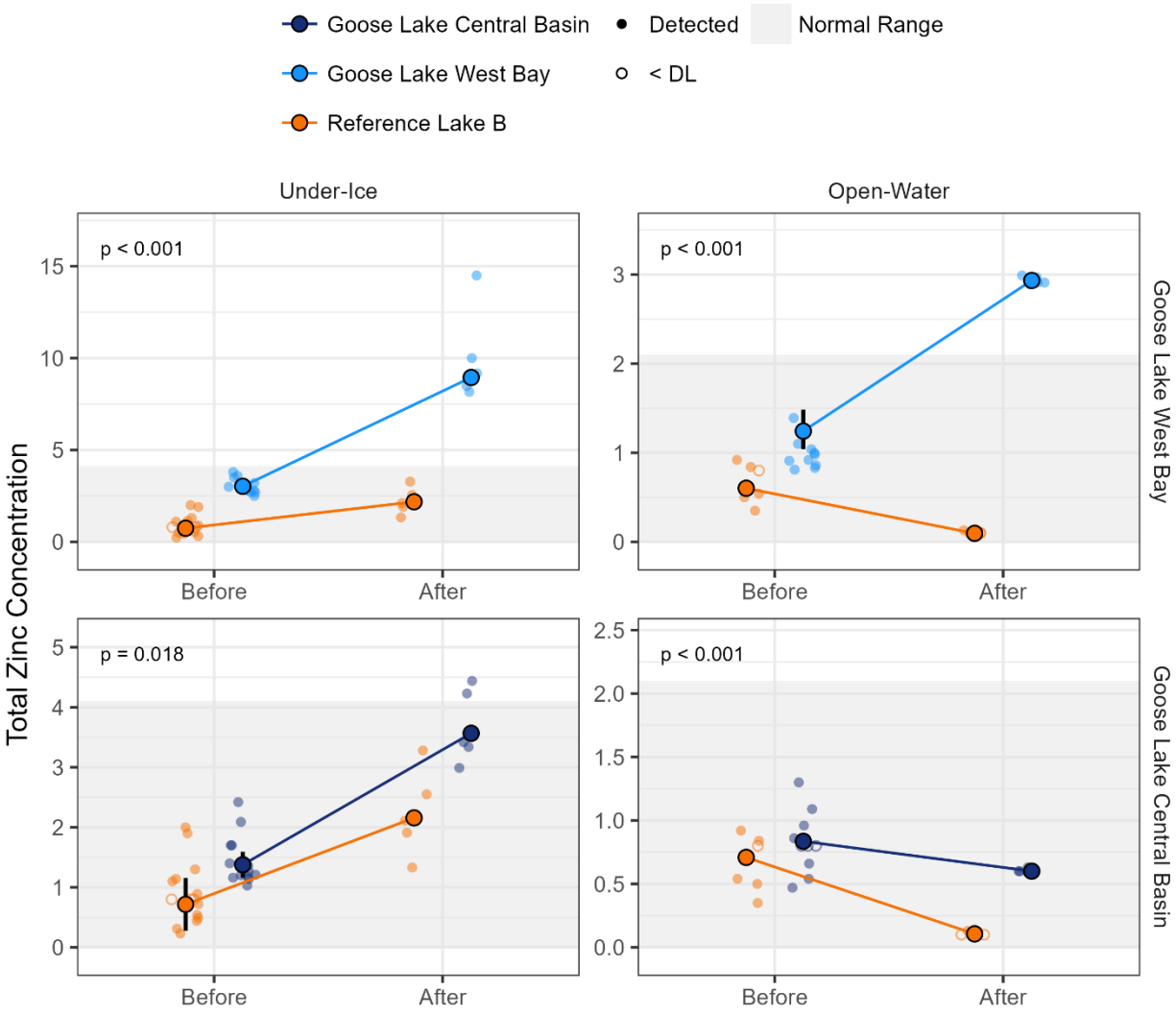
# 46 TOTAL URANIUM



# 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

==========

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 #: 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 | | 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 (CaCO3) | mg/L | 59.0 | 0.50 | B758894 | <0.50 | 0.50 | B758894 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 6.1 | 0.22 | B758899 | 0.016 | 0.013 | B758899 |
| Nitrite (NO2) | mg/L | 0.41 | 0.0033 | B758899 | <0.0033 | 0.0033 | B758899 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | 0.50 | B761391 | <0.50 | 0.50 | B762891 |
| Bicarbonate (HCO3) | mg/L | 10.6 | 0.50 | B761391 | <0.50 | 0.50 | B762891 |
| Carbonate (CO3) | 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.



Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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.


Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 |
| **Calculated Parameters** | | | | | | | | | |
| Dissolved Hardness (CaCO3) | mg/L | 63.2 | 0.50 | B758894 | 61.5 | B758894 | 61.5 | 0.50 | B758894 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 6.7 | 0.22 | B758899 | 6.5 | B758899 | 6.2 | 0.22 | B758899 |
| Nitrite (NO2) | mg/L | 0.13 | 0.0033 | B758899 | 0.13 | B758899 | 0.18 | 0.0033 | B758899 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | 0.50 | B762891 | <0.50 | B762891 | <0.50 | 0.50 | B761391 |
| Bicarbonate (HCO3) | mg/L | 10.6 | 0.50 | B762891 | 10.3 | B762891 | 12.5 | 0.50 | B761391 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (SO4) | 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 | | | | | | | | | |



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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 |
| **Calculated Parameters** | | | | | | | |
| Dissolved Hardness (CaCO3) | mg/L | 66.6 | 0.50 | B758894 | 65.5 | 0.50 | B758894 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 6.5 | 0.22 | B758899 | 5.8 | 0.22 | B758899 |
| Nitrite (NO2) | mg/L | 0.38 | 0.0033 | B758899 | 0.68 | 0.033 | B758899 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | 0.50 | B761391 | <0.50 | 0.50 | B762891 |
| Bicarbonate (HCO3) | mg/L | 14.8 | 0.50 | B761391 | 12.1 | 0.50 | B762891 |
| Carbonate (CO3) | 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



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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 (SO4) | 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 | | | | | | | |



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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 (CaCO3) | mg/L | 64.2 | 0.50 | B758894 | 59.4 | B758894 | 59.1 | 0.50 | B758894 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 5.6 | 0.22 | B758899 | 6.2 | B758899 | 5.9 | 0.22 | B758899 |
| Nitrite (NO2) | mg/L | 0.88 | 0.033 | B758899 | 0.37 | B758899 | 0.43 | 0.0033 | B758899 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | 0.50 | B761391 | <0.50 | B761391 | <0.50 | 0.50 | B761391 |
| Bicarbonate (HCO3) | mg/L | 14.4 | 0.50 | B761391 | 10.9 | B761391 | 10.7 | 0.50 | B761391 |
| Carbonate (CO3) | 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



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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 (SO4) | 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 | | | | | | | | | |



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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 | | | | | | |



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## 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



Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 | | | | | | | | |



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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 |
| **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



Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 | | | | | | | | |



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## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## QUALITY ASSURANCE REPORT



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 |



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## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |



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## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |



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## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | | | |



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## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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



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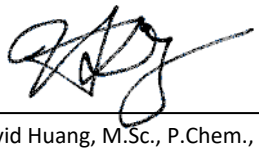
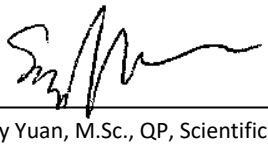
## VALIDATION SIGNATURE PAGE

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.



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Bureau Veritas
4606 Canada Way, Burnaby, British Columbia Canada V5G 1K5 Tel:(604) 734 7276 Toll-free:800-563-6266 Fax:(604) 731 2386 www.bvna.com

# CHAIN OF CUSTODY RECORD

Page of

| INVOICE TO: | | REPORT TO: | | PROJECT INFORMATION: | | Laboratory Use Only: | |
|---|---|---|---|---|---|---|---|
| Company Name: | #10600 B2Gold Back River Corp. | Company Name: | | Quotation #: | C41460 | Bureau Veritas Job #: | Bottle Order #: |
| Attention: | Accounts Payable | Attention: | Chris LeGoffe and Beatriz Cupe-Flores | P.O. #: | | | 750435 |
| Address: | Park Place Suite 3400-666 Burrard St. VANCOUVER BC V6C 2X8 | Address: | (306) 914-3922 | Project: | Ice-cover program B2Gold | COC #: | Project Manager: |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | (867) 336-1349 Fax: | Project Name: | | C#750435-04-01 | Stephanie Rodriguez Camacho |
| Email: | BR.accountspayable@b2gold.com | Email: | CLeGoffe@b2gold.com beatriz.cupe.flores@b2gold.com | Site #: | | | |
| | | | | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

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)** ☐
Date Required:
Rush Confirmation Number:
*(call lab for #)*

| | 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 | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | GLCB-B [redacted] | 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

| * 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: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Michael Kovacs | 25/04/16 | 7:30 | [illegible] | 25/04/19 | 1450 | | ☐ | 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

White: Bureau Veritas Yellow: Client

Received in Yellowknife
By: J Mercredi @ 9:20
APR 18 2025
See ACR
Temp: / /

Bureau Veritas Canada (2019) Inc.

BUREAU VERITAS

# ADDITIONAL COOLER TEMPERATURE RECORD

## CHAIN-OF-CUSTODY RECORD

B2 - GOLD - ICE COVER PROGRAM (WSR)

CHAIN OF CUSTODY # 0# 750435-04-01

| | |
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| Page ___ of ___ | |

**COOLER OBSERVATIONS:**

**BV JOB#:**

| CUSTODY SEAL | YES | NO | COOLER ID | | | |
|---|---|---|---|---|---|---|
| PRESENT | | X | TEMP | 4 (1) | 6 (2) | 5 (3) |
| INTACT | | X | | | | |
| ICE PRESENT | ✓ | | | | | |
| CUSTODY SEAL | YES | NO | COOLER ID | | | |
| PRESENT | | X | TEMP | 5 (1) | 6 (2) | 6 (3) |
| INTACT | | X | | | | |
| ICE PRESENT | ✓ | | | | | |
| CUSTODY SEAL | YES | NO | COOLER ID | | | |
| PRESENT | | X | TEMP | 3 (1) | 4 (2) | 4 (3) |
| INTACT | | X | | | | |
| ICE PRESENT | ✓ | | | | | |
| CUSTODY SEAL | YES | NO | COOLER ID | | | |
| PRESENT | | | TEMP | 1 | 2 | 3 |
| INTACT | | | | | | |
| ICE PRESENT | | | | | | |
| CUSTODY SEAL | YES | NO | COOLER ID | | | |
| PRESENT | | | TEMP | 1 | 2 | 3 |
| INTACT | | | | | | |
| ICE PRESENT | | | | | | |
| CUSTODY SEAL | YES | NO | COOLER ID | | | |
| PRESENT | | | TEMP | 1 | 2 | 3 |
| INTACT | | | | | | |
| ICE PRESENT | | | | | | |
| CUSTODY SEAL | YES | NO | COOLER ID | | | |
| PRESENT | | | TEMP | 1 | 2 | 3 |
| INTACT | | | | | | |
| ICE PRESENT | | | | | | |
| CUSTODY SEAL | YES | NO | COOLER ID | | | |
| PRESENT | | | TEMP | 1 | 2 | 3 |
| INTACT | | | | | | |
| ICE PRESENT | | | | | | |
| CUSTODY SEAL | YES | NO | COOLER ID | | | |
| PRESENT | | | TEMP | 1 | 2 | 3 |
| INTACT | | | | | | |
| ICE PRESENT | | | | | | |
| CUSTODY SEAL | YES | NO | COOLER ID | | | |
| PRESENT | | | TEMP | 1 | 2 | 3 |
| INTACT | | | | | | |
| ICE PRESENT | | | | | | |

| CUSTODY SEAL | YES | NO | COOLER ID | | | |
|---|---|---|---|---|---|---|
| PRESENT | | | TEMP | 1 | 2 | 3 |
| INTACT | | | | | | |
| ICE PRESENT | | | | | | |
| CUSTODY SEAL | YES | NO | COOLER ID | | | |
| PRESENT | | | TEMP | 1 | 2 | 3 |
| INTACT | | | | | | |
| ICE PRESENT | | | | | | |
| CUSTODY SEAL | YES | NO | COOLER ID | | | |
| PRESENT | | | TEMP | 1 | 2 | 3 |
| INTACT | | | | | | |
| ICE PRESENT | | | | | | |
| CUSTODY SEAL | YES | NO | COOLER ID | | | |
| PRESENT | | | TEMP | 1 | 2 | 3 |
| INTACT | | | | | | |
| ICE PRESENT | | | | | | |
| CUSTODY SEAL | YES | NO | COOLER ID | | | |
| PRESENT | | | TEMP | 1 | 2 | 3 |
| INTACT | | | | | | |
| ICE PRESENT | | | | | | |
| CUSTODY SEAL | YES | NO | COOLER ID | | | |
| PRESENT | | | TEMP | 1 | 2 | 3 |
| INTACT | | | | | | |
| ICE PRESENT | | | | | | |
| CUSTODY SEAL | YES | NO | COOLER ID | | | |
| PRESENT | | | TEMP | 1 | 2 | 3 |
| INTACT | | | | | | |
| ICE PRESENT | | | | | | |
| CUSTODY SEAL | YES | NO | COOLER ID | | | |
| PRESENT | | | TEMP | 1 | 2 | 3 |
| INTACT | | | | | | |
| ICE PRESENT | | | | | | |
| CUSTODY SEAL | YES | NO | COOLER ID | | | |
| PRESENT | | | TEMP | 1 | 2 | 3 |
| INTACT | | | | | | |
| ICE PRESENT | | | | | | |

| RECEIVED BY (SIGN & PRINT) | | DATE (YYYY/MM/DD) | TIME (HH:MM) |
|---|---|---|---|
| Jose MCCARR | | 2025/04/18 | 9:30 |

# ADDITIONAL COOLER TEMPERATURE RECORD

## CHAIN-OF-CUSTODY RECORD

| CHAIN OF CUSTODY # | |
|---|---|
| Page 1 of 1 | CA-T50435-04-01 |
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| Page ___ of ___ | |

COOLER OBSERVATIONS:

BV JOB#:

| | YES | NO | COOLER ID | 1 | 2 | 3 |
|---|---|---|---|---|---|---|
| CUSTODY SEAL PRESENT | ✓ | | | | | |
| INTACT | ✓ | | TEMP | 1 | 1 | 1 |
| ICE PRESENT | ✓ | | | | | |
| CUSTODY SEAL PRESENT | ✓ | | COOLER ID | | | |
| INTACT | ✓ | | TEMP | 0 | 0 | 0 |
| ICE PRESENT | ✓ | | | | | |
| CUSTODY SEAL PRESENT | ✓ | | COOLER ID | | | |
| INTACT | ✓ | | TEMP | -1 | -1 | -1 |
| ICE PRESENT | ✓ | | | | | |
| CUSTODY SEAL PRESENT | | | COOLER ID | | | |
| INTACT | | | TEMP | | | |
| ICE PRESENT | | | | | | |
| CUSTODY SEAL PRESENT | | | COOLER ID | | | |
| INTACT | | | TEMP | | | |
| ICE PRESENT | | | | | | |
| CUSTODY SEAL PRESENT | | | COOLER ID | | | |
| INTACT | | | TEMP | | | |
| ICE PRESENT | | | | | | |
| CUSTODY SEAL PRESENT | | | COOLER ID | | | |
| INTACT | | | TEMP | | | |
| ICE PRESENT | | | | | | |
| CUSTODY SEAL PRESENT | | | COOLER ID | | | |
| INTACT | | | TEMP | | | |
| ICE PRESENT | | | | | | |
| CUSTODY SEAL PRESENT | | | COOLER ID | | | |
| INTACT | | | TEMP | | | |
| ICE PRESENT | | | | | | |
| CUSTODY SEAL PRESENT | | | COOLER ID | | | |
| INTACT | | | TEMP | | | |
| ICE PRESENT | | | | | | |

| CUSTODY SEAL | YES | NO | COOLER ID | 1 | 2 | 3 |
|---|---|---|---|---|---|---|
| PRESENT | | | | | | |
| INTACT | | | TEMP | | | |
| ICE PRESENT | | | | | | |
| CUSTODY SEAL | YES | NO | COOLER ID | | | |
| PRESENT | | | | | | |
| INTACT | | | TEMP | | | |
| ICE PRESENT | | | | | | |
| CUSTODY SEAL | YES | NO | COOLER ID | | | |
| PRESENT | | | | | | |
| INTACT | | | TEMP | | | |
| ICE PRESENT | | | | | | |
| CUSTODY SEAL | YES | NO | COOLER ID | | | |
| PRESENT | | | | | | |
| INTACT | | | TEMP | | | |
| ICE PRESENT | | | | | | |
| CUSTODY SEAL | YES | NO | COOLER ID | | | |
| PRESENT | | | | | | |
| INTACT | | | TEMP | | | |
| ICE PRESENT | | | | | | |
| CUSTODY SEAL | YES | NO | COOLER ID | | | |
| PRESENT | | | | | | |
| INTACT | | | TEMP | | | |
| ICE PRESENT | | | | | | |
| CUSTODY SEAL | YES | NO | COOLER ID | | | |
| PRESENT | | | | | | |
| INTACT | | | TEMP | | | |
| ICE PRESENT | | | | | | |
| CUSTODY SEAL | YES | NO | COOLER ID | | | |
| PRESENT | | | | | | |
| INTACT | | | TEMP | | | |
| ICE PRESENT | | | | | | |
| CUSTODY SEAL | YES | NO | COOLER ID | | | |
| PRESENT | | | | | | |
| INTACT | | | TEMP | | | |
| ICE PRESENT | | | | | | |

| RECEIVED BY (SIGN & PRINT) | DATE (YYYY/MM/DD) | TIME (HH:MM) |
|---|---|---|
| [illegible] | 2025/04/09 | 1450 |

| | | | |
|---|---|---|---|
| **Credit - 1st Approval Sent**<br>false | **Credit - Final Approval Sent**<br>false | **Credit - CIT Alert Sent**<br>false | **Client deleted the Invoice ?** |
| **Client rec'd Original Invoice ?** | **Preventative Measure** | **CSAT Escalation Sent**<br>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- |
| 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 | ℃ | - | - | - | 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 |


Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (CaCO3) | mg/L | <0.50 | 0.50 | B758894 | 30.3 | B758894 | 30.3 | 0.50 | B758894 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 0.015 | 0.013 | B758899 | 0.11 | B758899 | 0.11 | 0.013 | B758899 |
| Nitrite (NO2) | mg/L | <0.0033 | 0.0033 | B758899 | <0.0033 | B758899 | <0.0033 | 0.0033 | B758899 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | 0.50 | B762900 | <0.50 | B762900 | <0.50 | 0.50 | B762900 |
| Bicarbonate (HCO3) | mg/L | <0.50 | 0.50 | B762900 | 26.0 | B762900 | 21.4 | 0.50 | B762900 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (SO4) | 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.



Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 |
| **Calculated Parameters** | | | | | | | | |
| Dissolved Hardness (CaCO3) | mg/L | 30.7 | B758894 | 30.2 | B758894 | 30.8 | 0.50 | B758894 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 0.11 | B758899 | 0.089 | B758899 | 0.11 | 0.013 | B758899 |
| Nitrite (NO2) | mg/L | <0.0033 | B758899 | <0.0033 | B758899 | <0.0033 | 0.0033 | B758899 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | B762900 | <0.50 | B762900 | <0.50 | 0.50 | B762900 |
| Bicarbonate (HCO3) | mg/L | 27.1 | B762900 | 25.0 | B762900 | 26.3 | 0.50 | B762900 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (SO4) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 | | | | | | | | |



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## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 | | | | |



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## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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

| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 |



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## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 <= 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

(3) Method blank above criteria. Data inspected. All data < RDL or greater than 10x Method Blank.



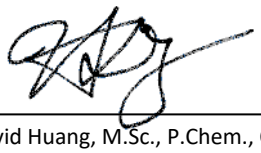
Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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.



Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

C532918
2025/04/17 14:00

Bureau Veritas
4606 Canada Way, Burnaby, British Columbia Canada V5G 1K5 Tel:(604) 734 7276 Toll-free:800-563-6266 Fax:(604) 731 2386 www.bvna.com

# CHAIN OF CUSTODY RECORD

Page 1 of 1

| INVOICE TO: | | REPORT TO: | | PROJECT INFORMATION: | | Laboratory Use Only: | |
|---|---|---|---|---|---|---|---|
| Company Name: | #10600 B2Gold Back River Corp. | Company Name: | | Quotation #: | C41460 | Bureau Veritas Job #: | Bottle Order #: |
| Attention: | Accounts Payable | Attention: | Chris LeGoffe and Beatriz Cupe-Flores | P.O. #: | | | 750435 |
| Address: | Park Place Suite 3400-666 Burrard St. | Address: | (306) 914-3922 beatriz.cupe.flores@wsp.com | Project: | Ice-cover program B2Gold | COC #: | Project Manager: |
| | VANCOUVER BC V6C 2X8 | | | Project Name: | | C#750435-04-01 | Stephanie Rodriguez Camacho |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | (867) 336-1349 Fax: | Site #: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | CLeGoffe@b2gold.com | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

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)** ☐
Date Required:
Rush Confirmation Number: *(call lab for #)*

| | 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 | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | FIELD BLANK | 16Apr 2025 | 15:30 | SW | N | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 2 | | [illegible] | | | | [illegible] | | | | | | | |
| 3 | | BRP-38-1 | 16Apr 2025 | 10:00 | SW | N | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 4 | | BRP-38-2 | ↓ | 11:00 | ↓ | N | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 5 | | BRP-38-3 | ↓ | 12:30 | ↓ | N | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 6 | | BRP-38-4 | ↓ | 13:45 | ↓ | N | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 7 | | BRP-38-5 | ↓ | 15:00 | ↓ | N | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 8 | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | |

MCAL-2025-04-1305

| * 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: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| [signature] Michael Kovacs | 17/04/25 | 7:30 | Charlie KA Loaking | 25/04/19 | 1450 | | ☐ MCAL | 0 0 0 | ☑ 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

ICE = Yes

Received in Yellowknife
By: J MERCADO
@ 14:00
APR 17 2025
ICE - yes / CS - no
Temp: 4/3/3 / 3/3/2

Bureau Veritas Canada (2019) Inc.

| | | | |
|---|---|---|---|
| **Credit - 1st Approval Sent**<br>false | **Credit - Final Approval Sent**<br>false | **Credit - CIT Alert Sent**<br>false | **Client deleted the Invoice ?** |
| **Client rec'd Original Invoice ?** | **Preventative Measure** | **CSAT Escalation Sent**<br>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- |
| 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 | ℃ | - | - | - | 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 H2S) (1) | 14 | N/A | 2025/04/24 | | Auto Calc |
| Hardness Total (calculated as CaCO3) (1, 4) | 14 | N/A | 2025/05/09 | BBY WI-00033 | Auto Calc |
| Hardness (calculated as CaCO3) (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 (NH3) as N | 1 | N/A | 2025/06/10 | | Auto Calc |
| Un-Ionized Ammonia (NH3) as N | 1 | N/A | 2025/06/06 | | Auto Calc |
| Un-Ionized Ammonia (NH3) as N | 7 | N/A | 2025/06/07 | | Auto Calc |
| Un-Ionized Ammonia (NH3) 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 |
| NO2 (N); NO2 (N) + NO3 (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 (CaCO3) | mg/L | 88.5 | B760829 | 93.4 | B760829 | 91.5 | 0.50 | B760829 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 11 | B760554 | 11 | B760554 | 10 | 0.22 | B760554 |
| Nitrite (NO2) | mg/L | 0.17 | B760554 | 0.22 | B760554 | 0.19 | 0.0033 | B760554 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | B762891 | <0.50 | B762891 | <0.50 | 0.50 | B762891 |
| Bicarbonate (HCO3) | mg/L | 9.87 | B762891 | 10.0 | B762891 | 9.94 | 0.50 | B762891 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (SO4) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (CaCO3) | mg/L | 89.5 | B760829 | 88.3 | B760829 | 89.0 | 0.50 | B760829 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 11 | B760554 | 10 | B760554 | 10 | 0.22 | B760554 |
| Nitrite (NO2) | mg/L | 0.23 | B760554 | 0.22 | B760554 | 0.19 | 0.0033 | B760554 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | B762891 | <0.50 | B762891 | <0.50 | 0.50 | B762891 |
| Bicarbonate (HCO3) | mg/L | 10.2 | B762891 | 8.93 | B762891 | 10.0 | 0.50 | B762891 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (SO4) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (CaCO3) | mg/L | 87.2 | B760829 | 92.6 | 0.50 | B760829 | 61.2 | 0.50 | B760829 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 10 | B760554 | 10 | 0.22 | B760554 | 5.4 | 0.22 | B760554 |
| Nitrite (NO2) | mg/L | 0.23 | B760554 | 0.40 | 0.0033 | B760554 | 0.41 | 0.0033 | B760554 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | B762891 | <0.50 | 0.50 | B762891 | <0.50 | 0.50 | B762891 |
| Bicarbonate (HCO3) | mg/L | 8.43 | B762891 | 9.89 | 0.50 | B762891 | 9.31 | 0.50 | B762891 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (CaCO3) | mg/L | 62.8 | B760829 | 62.8 | 0.50 | B760829 | 63.9 | 0.50 | B760829 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 5.9 | B760554 | 6.1 | 0.22 | B760554 | 5.8 | 0.22 | B760554 |
| Nitrite (NO2) | mg/L | 0.48 | B760554 | 0.41 | 0.0033 | B760554 | 0.47 | 0.0033 | B760554 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | B762891 | <0.50 | 0.50 | B762891 | <0.50 | 0.50 | B762891 |
| Bicarbonate (HCO3) | mg/L | 8.96 | B762891 | 9.10 | 0.50 | B762891 | 9.43 | 0.50 | B762891 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (SO4) | 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 | | | | | | | | | |



Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 |
| **Calculated Parameters** | | | | | | | |
| Dissolved Hardness (CaCO3) | mg/L | 62.2 | 0.50 | B760829 | 64.6 | 0.50 | B760829 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 5.8 | 0.22 | B760554 | 5.9 | 0.22 | B760554 |
| Nitrite (NO2) | mg/L | 0.48 | 0.0033 | B760554 | 0.40 | 0.0033 | B760554 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | 0.50 | B762891 | <0.50 | 0.50 | B762891 |
| Bicarbonate (HCO3) | mg/L | 9.10 | 0.50 | B762891 | 9.20 | 0.50 | B762891 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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



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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 | | | | | | | | | |



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## 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



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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.**



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## QUALITY ASSURANCE REPORT



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |



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## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |



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## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |



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## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 <= 2x RDL).

(1) Method blank exceeds acceptance limits, 2x RDL acceptable for low level analysis

(2) Na in the sample >10x the concentration of the method blank.

(3) S in the sample >10x 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.



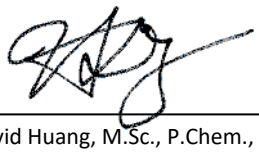
Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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

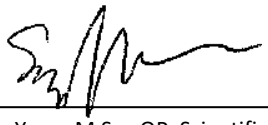
The analytical data and all QC contained in this report were reviewed and validated by:



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

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Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

Your P.O. #: 470000200
Your Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your C.O.C. #: 1OF8

**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 Extracted | Date Analyzed | Laboratory Method | Analytical Method |
|---|---|---|---|---|---|
| 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. #: 1OF8

**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

==========

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 #: 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## GENERAL COMMENTS

**Results relate only to the items tested.**



Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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.



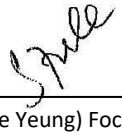
Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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.



Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

C562722
2025/07/14 15:00

Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 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 #: 759730 |
| 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: | WATER QUALITY- JULY AEMP | COC #: C#759730-01-01 | Project Manager: Stephanie Rodriguez Camacho |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Project Name: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com,jennifer.arens@wsp.com, | Site #: | | | |
| | | | | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions:

SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

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)
Date Required:
Rush Confirmation Number: (call lab for #)

| | Sample Barcode Label | Sample (Location) Identification | Date Sampled | Time Sampled | Matrix | Metals Field Filtered ? ( Y / N ) | Chlorophyll and Pheophytin in Water | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | BRP-29A-1A | 25/07/08 | 10:45 | | | / | | |
| 2 | | BRP-29A-1B | | 10:45 | | | / | | |
| 3 | | BRP-29A-1C | | 10:45 | | | / | | |
| 4 | | BRP-29A-2A | | 10:40 | | | / | | |
| 5 | | BRP-29A-2B | | 10:40 | | | / | | |
| 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: (YY/MM/DD) | Time | RECEIVED BY: (Signature/Print) | Date: (YY/MM/DD) | Time | # jars used and not submitted | Laboratory Use Only: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Feldberg | 25/07/13 | 16:20 | Chantelle Landry | 25/07/16 | 1500 | | ☐ | | ☐ 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

MCAL-SEL ACTR

Received in Yellowknife
By: J. McCann
JUL 14 2025
see ACTR
Temp: / /
CS: _____ Ice: _____

EYK-2025-07-029

Bureau Veritas Canada (2019) Inc.

**C562722**
**2025/07/14 15:00**

Bureau Veritas
4000 19st N.E. Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 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. #: | | | 759730 |
| Address: | Park Place Suite 3400-666 Burrard St. | Address: | | Project: | WATER QUALITY- JULY AEMP | COC #: | Project Manager: |
| | VANCOUVER BC V6C 2X8 | | Saskatoon SK S7H 0T4 | Project Name: | | C#759730-02-01 | Stephanie Rodriguez Camacho |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Site #: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com,jennifer.arens@wsp.com, | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

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)** ☐
Date Required: _____
Rush Confirmation Number: _____ *(call lab for #)*

| | Sample Barcode Label | Sample (Location) Identification | Date Sampled | Time Sampled | Matrix | Metals Field Filtered ? ( Y / N ) | Chlorophyll and Pheophytin in Water | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|
| 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 | Laboratory Use Only: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Fedderly Cuppp | 25/07/13 | 16:20 | Charlie KA Lowby Nov | 25/07/15 | 1500 | | ☐ | | ☐ Yes ☐ No |

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** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

White: Bureau Veritas Yellow: Client

MEAL = SEE ACTR

Bureau Veritas Canada (2019) Inc.

Received in Yellowknife
By: J Meeuwis
JUL 14 2025
Temp: See ACTR
CS: _____ Ice: _____

C562722
2025/07/14 15:00

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Page 3 of 6

## 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. #: | | | 759730 |
| Address: | Park Place Suite 3400-666 Burrard St. | Address: | | Project: | WATER QUALITY- JULY AEMP | COC #: | Project Manager: |
| | VANCOUVER BC V6C 2X8 | | Saskatoon SK S7H 0T4 | Project Name: | | C#759730-03-01 | Stephanie Rodriguez Camacho |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Site #: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com,jennifer.arens@wsp.com, | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

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**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 #)*

| | Sample Barcode Label | Sample (Location) Identification | Date Sampled | Time Sampled | Matrix | Metals Field Filtered ? ( Y / N ) | Chlorophyll and Pheophytin in Water | | | | | | | | | | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | BRP-31-4C | 25/07/9 | 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: (YY/MM/DD) | Time | RECEIVED BY: (Signature/Print) | Date: (YY/MM/DD) | Time | # jars used and not submitted | Laboratory Use Only: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Feldberg [illegible] | 25/07/13 | 16:20 | Charlie KA Combs [illegible] | 25/07/16 | 15 00 | | ☐ | | ☐ Yes ☐ No |

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** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

White: Bureau Veritas Yellow: Client

MCAL = SER ACTR

Received in Yellowknife
By: J. McCann
JUL 14 2025
Temp: See ACTR
CS: Ice:

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Page 4 of 6

## 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. #: | | | 759730 |
| Address: | Park Place Suite 3400-666 Burrard St. | Address: | | Project: | WATER QUALITY- JULY AEMP | COC #: | Project Manager: |
| | VANCOUVER BC V6C 2X8 | | Saskatoon SK S7H 0T4 | Project Name: | | C#759730-04-01 | Stephanie Rodriguez Camacho |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Site #: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com,jennifer.arens@wsp.com, | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

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*(will be applied if Rush TAT is not specified):*
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*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 #)*

| | Sample Barcode Label | Sample (Location) Identification | Date Sampled | Time Sampled | Matrix | Metals Field Filtered ? ( Y / N ) | Chlorophyll and Pheophytin in Water | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | BRP-32-4A | 25/07/11 | 7:30 | | | ✓ | | |
| 2 | | BRP-32-4B | ↓ | 7:30 | | | ✓ | | |
| 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) | Date: (YY/MM/DD) | Time | RECEIVED BY: (Signature/Print) | Date: (YY/MM/DD) | Time | # jars used and not submitted | Laboratory Use Only: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Feldberg [signature] | 25/07/13 | 16:20 | Charlie KA Long [signature] | 25/07/16 | 1500 | | ☐ | | ☐ Yes ☐ No |

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White: Bureau Veritas Yellow: Client

MCAL=see ACTR

Received in Yellowknife
By: [signature]
JUL 14 2025
Temp: See ACTM
CS: _____ Ice: _____

Bureau Veritas Canada (2019) Inc.

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# 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. #: | | | 759730 |
| Address: | Park Place Suite 3400-666 Burrard St. | Address: | | Project: | WATER QUALITY- JULY AEMP | COC #: | Project Manager: |
| | VANCOUVER BC V6C 2X8 | | Saskatoon SK S7H 0T4 | Project Name: | | | |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Site #: | | C#759730-05-01 | Stephanie Rodriguez Camacho |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com,jennifer.arens@wsp.com, | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

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 and Pheophytin in Water | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|
| 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 | | | / | | |

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

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*Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details*

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Date Required: _____
Rush Confirmation Number: _____ *(call lab for #)*

| * 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: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Fedders adam | 25/07/13 | 16:20 | Chanle KA Leah NA | 25/07/16 | 15:00 | | ☐ | | ☐ Yes ☐ No |

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White: Bureau Veritas Yellow: Client

MCAL = see ALTR

Received in Yellowknife
By: J. Mercado
JUL 14 2025
See ALTR
Temp: / /
CS: _____ Ice: _____

Bureau Veritas Canada (2019) Inc.

C562722
2025/07/14 15:00

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Page 6 of 6

## 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. #: | | | 759730 |
| Address: | Park Place Suite 3400-666 Burrard St. | Address: | | Project: | WATER QUALITY- JULY AEMP | COC #: | Project Manager: |
| | VANCOUVER BC V6C 2X8 | | Saskatoon SK S7H 0T4 | Project Name: | | C#759730-06-01 | Stephanie Rodriguez Camacho |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Site #: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com,jennifer.arens@wsp.com, | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

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)** ☐
Date Required:
Rush Confirmation Number:
*(call lab for #)*

| | Sample Barcode Label | Sample (Location) Identification | Date Sampled | Time Sampled | Matrix | Metals Field Filtered ? ( Y / N ) | Chlorophyll and Pheophytin in Water | | | | | | | | | | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | BRP-38-5C | 25/07/12 | 12:30 | | | ✓ | | | | | | | | | | | |
| 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 | Laboratory Use Only: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Feldberg CCME | 25/07/13 | 16:20 | Charlie Kalong NG | 25/07/16 | 1500 | | ☐ | | ☐ 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

MCAL = see ACTR

Received in Yellowknife
By: J. Mere
JUL 14 2025
Temp: see Actr
CS: _____ Ice: _____

Bureau Veritas Canada (2019) 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 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

==========

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 (CaCO3) | mg/L | 42.6 | 0.50 | C016855 | 42.8 | 0.50 | C016855 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 8.6 | 0.89 | C016686 | 8.4 | 0.89 | C016686 |
| Nitrite (NO2) | mg/L | 0.022 | 0.0033 | C016686 | 0.028 | 0.0033 | C016686 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | 0.50 | C017487 | <0.50 | 0.50 | C017487 |
| Bicarbonate (HCO3) | mg/L | 4.38 | 0.50 | C017487 | 4.43 | 0.50 | C017487 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (CaCO3) | mg/L | 44.5 | 0.50 | C016855 | 43.7 | 0.50 | C016855 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 8.6 | 0.89 | C016686 | 7.5 | 0.89 | C016686 |
| Nitrite (NO2) | mg/L | 0.023 | 0.0033 | C016686 | 0.022 | 0.0033 | C016686 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | 0.50 | C017487 | <0.50 | 0.50 | C017487 |
| Bicarbonate (HCO3) | mg/L | 4.01 | 0.50 | C017487 | 4.54 | 0.50 | C017487 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (CaCO3) | mg/L | 40.9 | C016855 | 42.7 | 0.50 | 42.6 | 0.50 | C016855 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 7.9 | C016686 | 8.0 | 0.89 | 7.5 | 0.89 | C016686 |
| Nitrite (NO2) | mg/L | 0.022 | C016686 | 0.023 | 0.0033 | 0.023 | 0.0033 | C016686 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | C017487 | <0.50 | 0.50 | <0.50 | 0.50 | C017487 |
| Bicarbonate (HCO3) | mg/L | 4.38 | C017487 | 4.59 | 0.50 | 3.83 | 0.50 | C017487 |
| Carbonate (CO3) | 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.


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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 | | | | | | | | |



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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 (CaCO3) | mg/L | 28.3 | 0.50 | C016855 | 28.1 | 0.50 | C016855 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 2.5 | 0.18 | C016686 | 2.4 | 0.18 | C016686 |
| Nitrite (NO2) | mg/L | 0.0060 | 0.0033 | C016686 | 0.0060 | 0.0033 | C016686 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | 0.50 | C017487 | <0.50 | 0.50 | C017487 |
| Bicarbonate (HCO3) | mg/L | 12.1 | 0.50 | C017487 | 5.33 | 0.50 | C017487 |
| Carbonate (CO3) | 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.


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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 (SO4) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (CaCO3) | mg/L | 27.7 | 0.50 | C016855 | 44.9 | 0.50 | C016855 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 2.4 | 0.18 | C016686 | 8.6 | 0.89 | C016686 |
| Nitrite (NO2) | mg/L | 0.0060 | 0.0033 | C016686 | 0.023 | 0.0033 | C016686 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | 0.50 | C017487 | <0.50 | 0.50 | C017487 |
| Bicarbonate (HCO3) | mg/L | 4.89 | 0.50 | C017487 | 4.33 | 0.50 | C017487 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (CaCO3) | mg/L | <0.50 | 0.50 | C016855 |
| Total Hardness (CaCO3) | mg/L | <0.50 | 0.50 | C016911 |
| Dissolved Nitrate (N) | mg/L | <0.0030 | 0.0030 | C015793 |
| Nitrate (NO3) | mg/L | <0.013 | 0.013 | C016686 |
| Nitrite (NO2) | mg/L | <0.0033 | 0.0033 | C016686 |
| Sulphide (as H2S) | 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 CaCO3) | mg/L | 0.87 | 0.50 | C017487 |
| Total Organic Carbon (C) | mg/L | <0.50 | 0.50 | C020594 |
| Alkalinity (PP as CaCO3) | mg/L | <0.50 | 0.50 | C017487 |
| Bicarbonate (HCO3) | mg/L | 1.06 | 0.50 | C017487 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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 | | | | | | | |



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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



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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



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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 |
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Bureau Veritas Job #: C561674
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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



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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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 | | | | | | | |



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## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

**Results relate only to the items tested.**



Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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

| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 |



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## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |

## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |

## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 <= 2x 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, 2x RDL acceptable for low level analysis



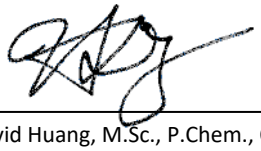
Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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

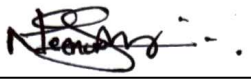
The analytical data and all QC contained in this report were reviewed and validated by:



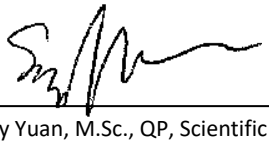
David Huang, M.Sc., P.Chem., QP, Scientific Services Manager



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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 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. #: | | | 759289 |
| Address: | Park Place Suite 3400-666 Burrard St. | Address: | | Project: | WATER QUALITY- JULY AEMP | | |
| | VANCOUVER BC V6C 2X8 | | Saskatoon SK S7H 0T4 | Project Name: | | COC #: | Project Manager: |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Site #: | | C#759289-01-01 | Melissa McIntosh |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com,jennifer.arens@wsp.com, | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

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)** ☐
Date Required: _____
Rush Confirmation Number: _____ *(call lab for #)*

| | 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 filt) | Radium-226 Low Level | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SID#383508 | BRP-29A-1 | 25/07/08 | 10:00 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 2 | SID#383509 | BRP-29A-2 | 25/07/08 | 11:15 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 3 | SID#383510 | BRP-29A-3 | 25/07/08 | 12:15 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 4 | SID#383511 | BRP-29A-4 | 25/07/08 | 13:35 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 5 | SID#383512 | BRP-29A-5 | 25/07/09 | 8:30 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 6 | SID#383513 | ~~BRP-31-1~~ | | | | | | | | | | | | |
| 7 | SID#383514 | ~~BRP-31-2~~ | | | | | | | | | | | | |
| 8 | SID#383515 | BRP-31-3 | 25/07/09 | 9:40 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 9 | SID#383516 | BRP-31-4 | 25/07/09 | 10:45 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 10 | SID#383517 | ~~BRP-31-5~~ | | | | | | | | | | | | |

Received in Yellowknife
By: JACEM
JUL 11 2025
Temp: See ACTR
COC: 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: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Feldbrug | 25/07/10 | 6:30 | Jaskirat Begol | 2025/07/11 | 15:05 | | ☐ | 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 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

Bureau Veritas Canada (2019) Inc.

EYK 2025-07-019

C561674
2025/07/10 13:00



Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 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. #: | | | 759289 |
| Address: | Park Place Suite 3400-666 Burrard St. VANCOUVER BC V6C 2X8 | Address: | Saskatoon SK S7H 0T4 | Project: | WATER QUALITY- JULY AEMP | COC #: | Project Manager: |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Project Name: | | C#759289-02-01 | Melissa McIntosh |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com,jennifer.arens@wsp.com, | Site #: | | | |
| | | | | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

**SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS**

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)** ☐
Date Required:
Rush Confirmation Number:
*(call lab for #)*

| | 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 filt) | Radium-226 Low Level | Chlorophyll and Phaeophytin in Water | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SID#383518 | BRP-32-1 | 25/07/09 | 11:45 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| 2 | SID#383519 | BRP-32-2 | 25/07/09 | 13:15 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| 3 | SID#383520 | BRP-32-3 | 25/07/09 | 14:15 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | Received in Yellowknife |
| 4 | SID#383521 | ~~BRP-32-4~~ | | | | | | | | | | | | | BY: |
| 5 | SID#383522 | ~~BRP-32-5~~ | | | | | | | | | | | | | |
| 6 | SID#383523 | ~~BRP-38-1~~ | | | | | | | | | | | | | JUL 10 2025 |
| 7 | SID#383524 | ~~BRP-38-2~~ | | | | | | | | | | | | | See Agn |
| 8 | SID#383525 | ~~BRP-38-3~~ | | | | | | | | | | | | | Temp: |
| 9 | SID#383526 | ~~BRP-38-4~~ | | | | | | | | | | | | | CS: Ice: |
| 10 | SID#383527 | ~~BRP-38-5~~ | | | | | | | | | | | | | |

| * 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 | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
| Adam Feldbrin Calgary | 25/07/10 | 6:30 | Jaskirat Begol | 2025/07/11 | 15:05 | | ☐ | 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 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

Bureau Veritas Canada (2019) Inc.

Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 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. #: | | | 759289 |
| Address: | Park Place Suite 3400-666 Burrard St. | Address: | | Project: | WATER QUALITY- JULY AEMP | COC #: | Project Manager: |
| | VANCOUVER BC V6C 2X8 | | Saskatoon SK S7H 0T4 | Project Name: | | C#759289-03-01 | Melissa McIntosh |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Site #: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com,jennifer.arens@wsp.com, | Sampled By: | | | |

Regulatory Criteria:
- ATI
- CCME
- Other

Special Instructions

SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

| | 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 filt) | Radium-226 Low Level | Chlorophyll and Phaeophytin in Water | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SID#383528 | FD | 25/07/08 | 12:20 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| 2 | SID#383529 | FB | 25/07/09 | AF | | | | | | | | | | | |
| 3 | | EB | 25/07/09 | 12:20 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| 4 | | TB | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | |

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 #)*

Received in Yellowknife
By: J Mercer
JUL 10 2025
See ATR
Temp:
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 | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
| Adam Feldberg | 25/07/10 | 6:30 | Jasleen Begol | 2025/07/11 | 15:05 | | ☐ | 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 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

Bureau Veritas Canada (2019) 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 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

==========

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 (CaCO3) | mg/L | 42.6 | 0.50 | C016855 | 42.8 | 0.50 | C016855 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 8.6 | 0.89 | C016686 | 8.4 | 0.89 | C016686 |
| Nitrite (NO2) | mg/L | 0.022 | 0.0033 | C016686 | 0.028 | 0.0033 | C016686 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | 0.50 | C017487 | <0.50 | 0.50 | C017487 |
| Bicarbonate (HCO3) | mg/L | 4.38 | 0.50 | C017487 | 4.43 | 0.50 | C017487 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (CaCO3) | mg/L | 44.5 | 0.50 | C016855 | 43.7 | 0.50 | C016855 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 8.6 | 0.89 | C016686 | 7.5 | 0.89 | C016686 |
| Nitrite (NO2) | mg/L | 0.023 | 0.0033 | C016686 | 0.022 | 0.0033 | C016686 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | 0.50 | C017487 | <0.50 | 0.50 | C017487 |
| Bicarbonate (HCO3) | mg/L | 4.01 | 0.50 | C017487 | 4.54 | 0.50 | C017487 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (CaCO3) | mg/L | 40.9 | C016855 | 42.7 | 0.50 | 42.6 | 0.50 | C016855 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 7.9 | C016686 | 8.0 | 0.89 | 7.5 | 0.89 | C016686 |
| Nitrite (NO2) | mg/L | 0.022 | C016686 | 0.023 | 0.0033 | 0.023 | 0.0033 | C016686 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | C017487 | <0.50 | 0.50 | <0.50 | 0.50 | C017487 |
| Bicarbonate (HCO3) | mg/L | 4.38 | C017487 | 4.59 | 0.50 | 3.83 | 0.50 | C017487 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (CaCO3) | mg/L | 28.3 | 0.50 | C016855 | 28.1 | 0.50 | C016855 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 2.5 | 0.18 | C016686 | 2.4 | 0.18 | C016686 |
| Nitrite (NO2) | mg/L | 0.0060 | 0.0033 | C016686 | 0.0060 | 0.0033 | C016686 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | 0.50 | C017487 | <0.50 | 0.50 | C017487 |
| Bicarbonate (HCO3) | mg/L | 12.1 | 0.50 | C017487 | 5.33 | 0.50 | C017487 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (SO4) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (CaCO3) | mg/L | 27.7 | 0.50 | C016855 | 44.9 | 0.50 | C016855 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 2.4 | 0.18 | C016686 | 8.6 | 0.89 | C016686 |
| Nitrite (NO2) | mg/L | 0.0060 | 0.0033 | C016686 | 0.023 | 0.0033 | C016686 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | 0.50 | C017487 | <0.50 | 0.50 | C017487 |
| Bicarbonate (HCO3) | mg/L | 4.89 | 0.50 | C017487 | 4.33 | 0.50 | C017487 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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



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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 (CaCO3) | mg/L | <0.50 | 0.50 | C016855 |
| Total Hardness (CaCO3) | mg/L | <0.50 | 0.50 | C016911 |
| Dissolved Nitrate (N) | mg/L | <0.0030 | 0.0030 | C015793 |
| Nitrate (NO3) | mg/L | <0.013 | 0.013 | C016686 |
| Nitrite (NO2) | mg/L | <0.0033 | 0.0033 | C016686 |
| Sulphide (as H2S) | 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 CaCO3) | mg/L | 0.87 | 0.50 | C017487 |
| Total Organic Carbon (C) | mg/L | <0.50 | 0.50 | C020594 |
| Alkalinity (PP as CaCO3) | mg/L | <0.50 | 0.50 | C017487 |
| Bicarbonate (HCO3) | mg/L | 1.06 | 0.50 | C017487 |
| Carbonate (CO3) | 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.



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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 | | | | |


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## 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 | | | | | | | |



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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



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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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 | | | | | | | |



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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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 | | | | | | | |



Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

**Results relate only to the items tested.**



Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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

| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 |



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## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |

## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |

## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 <= 2x 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, 2x RDL acceptable for low level analysis



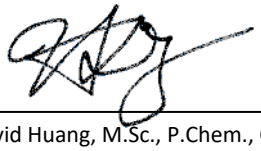
Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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

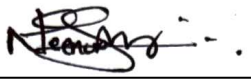
The analytical data and all QC contained in this report were reviewed and validated by:



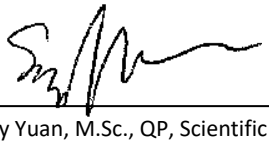
David Huang, M.Sc., P.Chem., QP, Scientific Services Manager



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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 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. #: | | | 759289 |
| Address: | Park Place Suite 3400-666 Burrard St. | Address: | | Project: | WATER QUALITY- JULY AEMP | | |
| | VANCOUVER BC V6C 2X8 | | Saskatoon SK S7H 0T4 | Project Name: | | COC #: | Project Manager: |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Site #: | | C#759289-01-01 | Melissa McIntosh |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com,jennifer.arens@wsp.com, | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

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)** ☐
Date Required: _____
Rush Confirmation Number: _____ *(call lab for #)*

| | 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 filt) | Radium-226 Low Level | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SID#383508 | BRP-29A-1 | 25/07/08 | 10:00 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 2 | SID#383509 | BRP-29A-2 | 25/07/08 | 11:15 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 3 | SID#383510 | BRP-29A-3 | 25/07/08 | 12:15 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 4 | SID#383511 | BRP-29A-4 | 25/07/08 | 13:35 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 5 | SID#383512 | BRP-29A-5 | 25/07/09 | 8:30 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 6 | SID#383513 | ~~BRP-31-1~~ | | | | | | | | | | | | |
| 7 | SID#383514 | ~~BRP-31-2~~ | | | | | | | | | | | | |
| 8 | SID#383515 | BRP-31-3 | 25/07/09 | 9:40 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 9 | SID#383516 | BRP-31-4 | 25/07/09 | 10:45 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| 10 | SID#383517 | ~~BRP-31-5~~ | | | | | | | | | | | | |

Received in Yellowknife
By: JACEM
JUL 11 2025
Temp: See ACTR
COC: 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: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Feldbrug | 25/07/10 | 6:30 | Jaskirat Begol | 2025/07/11 | 15:05 | | ☐ | 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 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

Bureau Veritas Canada (2019) Inc.

EYK 2025-07-019

C561674
2025/07/10 13:00



Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 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. #: | | | 759289 |
| Address: | Park Place Suite 3400-666 Burrard St. VANCOUVER BC V6C 2X8 | Address: | Saskatoon SK S7H 0T4 | Project: | WATER QUALITY- JULY AEMP | COC #: | Project Manager: |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Project Name: | | C#759289-02-01 | Melissa McIntosh |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com,jennifer.arens@wsp.com, | Site #: | | | |
| | | | | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

**SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS**

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)** ☐
Date Required:
Rush Confirmation Number:
*(call lab for #)*

| | 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 filt) | Radium-226 Low Level | Chlorophyll and Phaeophytin in Water | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SID#383518 | BRP-32-1 | 25/07/09 | 11:45 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| 2 | SID#383519 | BRP-32-2 | 25/07/09 | 13:15 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| 3 | SID#383520 | BRP-32-3 | 25/07/09 | 14:15 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | Received in Yellowknife |
| 4 | SID#383521 | ~~BRP-32-4~~ | | | | | | | | | | | | | BY: |
| 5 | SID#383522 | ~~BRP-32-5~~ | | | | | | | | | | | | | |
| 6 | SID#383523 | ~~BRP-38-1~~ | | | | | | | | | | | | | JUL 10 2025 |
| 7 | SID#383524 | ~~BRP-38-2~~ | | | | | | | | | | | | | See Agn |
| 8 | SID#383525 | ~~BRP-38-3~~ | | | | | | | | | | | | | Temp: |
| 9 | SID#383526 | ~~BRP-38-4~~ | | | | | | | | | | | | | CS: Ice: |
| 10 | SID#383527 | ~~BRP-38-5~~ | | | | | | | | | | | | | |

| * 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 | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
| Adam Feldbrin Calgary | 25/07/10 | 6:30 | Jaskirat Begol | 2025/07/11 | 15:05 | | ☐ | 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 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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White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 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. #: | | | 759289 |
| Address: | Park Place Suite 3400-666 Burrard St. | Address: | | Project: | WATER QUALITY- JULY AEMP | COC #: | Project Manager: |
| | VANCOUVER BC V6C 2X8 | | Saskatoon SK S7H 0T4 | Project Name: | | C#759289-03-01 | Melissa McIntosh |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Site #: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com,jennifer.arens@wsp.com, | Sampled By: | | | |

Regulatory Criteria:
- ATI
- CCME
- Other

Special Instructions

SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

| | 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 filt) | Radium-226 Low Level | Chlorophyll and Phaeophytin in Water | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SID#383528 | FD | 25/07/08 | 12:20 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| 2 | SID#383529 | FB | 25/07/09 | AF | | | | | | | | | | | |
| 3 | | EB | 25/07/09 | 12:20 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| 4 | | TB | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | |

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 #)*

Received in Yellowknife
By: J Mercer
JUL 10 2025
See ATR
Temp:
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 | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
| Adam Feldberg | 25/07/10 | 6:30 | Jasleen Begol | 2025/07/11 | 15:05 | | ☐ | ACTR | ☐ Yes ☐ No |

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White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

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 | Quantity | Date Extracted | Date Analyzed | Laboratory Method | Analytical Method |
|---|---|---|---|---|---|
| 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<br>BQL SOP-00017<br>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

==========

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 (CaCO3) | mg/L | 28.1 | C020057 | 28.0 | 0.50 | C020057 | 13.4 | 0.50 | C020057 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 2.3 | C020456 | 2.2 | 0.18 | C020456 | <0.013 | 0.013 | C020456 |
| Nitrite (NO2) | mg/L | 0.0080 | C020456 | 0.0080 | 0.0033 | C020456 | <0.0033 | 0.0033 | C020456 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | C022259 | <0.50 | 0.50 | C022259 | <0.50 | 0.50 | C022259 |
| Bicarbonate (HCO3) | mg/L | 5.46 | C022259 | 5.97 | 0.50 | C022259 | 10.4 | 0.50 | C022259 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (CaCO3) | mg/L | 13.3 | 0.50 | C020057 | 13.5 | C020057 | 13.3 | 0.50 | C020057 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | <0.013 | 0.013 | C020456 | 0.017 | C020456 | <0.013 | 0.013 | C020456 |
| Nitrite (NO2) | mg/L | <0.0033 | 0.0033 | C020456 | <0.0033 | C020456 | <0.0033 | 0.0033 | C020456 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | 0.50 | C022259 | <0.50 | C022259 | <0.50 | 0.50 | C022259 |
| Bicarbonate (HCO3) | mg/L | 9.68 | 0.50 | C022259 | 10.2 | C022259 | 10.3 | 0.50 | C022259 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (CaCO3) | mg/L | 13.3 | 0.50 | C020057 | <0.50 | 0.50 | C021135 | <0.50 | 0.50 | C021135 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 0.021 | 0.013 | C020456 | 0.017 | 0.013 | C020456 | <0.013 | 0.013 | C020456 |
| Nitrite (NO2) | mg/L | <0.0033 | 0.0033 | C020456 | <0.0033 | 0.0033 | C020456 | <0.0033 | 0.0033 | C020456 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | 0.50 | C022259 | <0.50 | 0.50 | C022259 | <0.50 | 0.50 | C022259 |
| Bicarbonate (HCO3) | mg/L | 9.94 | 0.50 | C022259 | 1.03 | 0.50 | C022259 | <0.50 | 0.50 | C022259 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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<br>(1) Reanalysis confirms results >RDL. | | | | | | |



Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 | | | | | | |


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## 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.**



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## QUALITY ASSURANCE REPORT



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |



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## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |

## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |

## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |



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## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 <= 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



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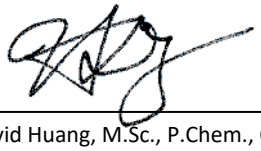
Bureau Veritas Job #: C562731
Report Date: 2025/08/12

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

## VALIDATION SIGNATURE PAGE

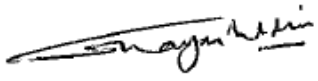
The analytical data and all QC contained in this report were reviewed and validated by:



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



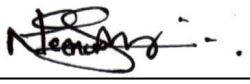
Steven Simpson, Lab Director



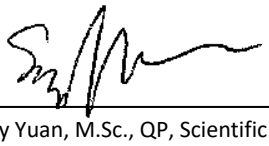
Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics



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

## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

C562731
2025/07/14 15:00

Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 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. #: | | | 759289 |
| Address: | Park Place Suite 3400-666 Burrard St. VANCOUVER BC V6C 2X8 | Address: | Saskatoon SK S7H 0T4 | Project: | WATER QUALITY- JULY AEMP | COC #: | Project Manager: |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Project Name: | | C#759289-02-01 | Melissa McIntosh |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com,jennifer.arens@wsp.com, | Site #: | | | |
| | | | | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

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)** ☐
Date Required: _____
Rush Confirmation Number: _____ *(call lab for #)*

| | 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 filt) | Radium-226 Low Level | Chlorophyll and Phaeophytin in Water | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SID#383518 | BRP-32-1 | | | | | | | | | | | | | |
| 2 | SID#383519 | BRP-32-2 | | | | | | | | | | | | | |
| 3 | SID#383520 | BRP-32-3 | | | | | | | | | | | | | |
| 4 | SID#383521 | BRP-32-4 | 25/07/11 | 7:30 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| 5 | SID#383522 | BRP-32-5 | 25/07/11 | 8:20 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| 6 | SID#383523 | BRP-38-1 | 25/07/12 | 14:35 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| 7 | SID#383524 | BRP-38-2 | 25/07/12 | 13:45 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| 8 | SID#383525 | BRP-38-3 | 25/07/12 | 11:10 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| 9 | SID#383526 | BRP-38-4 | 25/07/12 | 12:50 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| 10 | SID#383527 | BRP-38-5 | 25/07/12 | 12:10 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |

| * 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: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Feldberg | 25/07/13 | 16:20 | Charlie Kotanko | 25/07/16 | 1500 | | ☐ | | ☐ 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

MCAL = see ACTR

MCAL-2025-07-1205

Bureau Veritas Canada (2019) Inc.

Received in Yellowknife
By: J. Meun
JUL 14 2025
see ACTR
Temp: / /
CS: _____ Ice: _____

C562731
2025/07/14 15:00

Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvna.com

Page 3 of 3

# 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. #: | | | 759289 |
| Address: | Park Place Suite 3400-666 Burrard St. | Address: | | Project: | WATER QUALITY- JULY AEMP | COC #: | Project Manager: |
| | VANCOUVER BC V6C 2X8 | | Saskatoon SK S7H 0T4 | Project Name: | | C#759289-03-01 | Melissa McIntosh |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Site #: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com,jennifer.arens@wsp.com, | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

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)** ☐
Date Required:
Rush Confirmation Number:
*(call lab for #)*

| | 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 filt) | Radium-226 Low Level | Chlorophyll and Pheophytin in Water | | | | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SID#383528 | FD | | | | | | | | | | | | | | | | |
| 2 | SID#383529 | FB-1 | 25/07/11 | 9:00 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | |
| 3 | | EB | | | | | | | | | | | | | | | | |
| 4 | | TB-1 | 25/07/12 | 00:00 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | |
| 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 | Laboratory Use Only: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Feldberg [signature] | 25/07/13 | 16:20 | Charlie KA [signature] | 25/07/16 | 1500 | | ☐ | | ☐ 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

MCAL = See ACTR

Received in Yellowknife:
By: [signature]
JUL 14 2025
Temp: See ACTR
CS: Ice:

Bureau Veritas Canada (2019) Inc.

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 | Quantity | Date Extracted | Date Analyzed | Laboratory Method | Analytical Method |
|---|---|---|---|---|---|
| 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<br>BQL SOP-00017<br>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

==========

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 (CaCO3) | mg/L | 28.1 | C020057 | 28.0 | 0.50 | C020057 | 13.4 | 0.50 | C020057 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 2.3 | C020456 | 2.2 | 0.18 | C020456 | <0.013 | 0.013 | C020456 |
| Nitrite (NO2) | mg/L | 0.0080 | C020456 | 0.0080 | 0.0033 | C020456 | <0.0033 | 0.0033 | C020456 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | C022259 | <0.50 | 0.50 | C022259 | <0.50 | 0.50 | C022259 |
| Bicarbonate (HCO3) | mg/L | 5.46 | C022259 | 5.97 | 0.50 | C022259 | 10.4 | 0.50 | C022259 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (CaCO3) | mg/L | 13.3 | 0.50 | C020057 | 13.5 | C020057 | 13.3 | 0.50 | C020057 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | <0.013 | 0.013 | C020456 | 0.017 | C020456 | <0.013 | 0.013 | C020456 |
| Nitrite (NO2) | mg/L | <0.0033 | 0.0033 | C020456 | <0.0033 | C020456 | <0.0033 | 0.0033 | C020456 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | 0.50 | C022259 | <0.50 | C022259 | <0.50 | 0.50 | C022259 |
| Bicarbonate (HCO3) | mg/L | 9.68 | 0.50 | C022259 | 10.2 | C022259 | 10.3 | 0.50 | C022259 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (CaCO3) | mg/L | 13.3 | 0.50 | C020057 | <0.50 | 0.50 | C021135 | <0.50 | 0.50 | C021135 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 0.021 | 0.013 | C020456 | 0.017 | 0.013 | C020456 | <0.013 | 0.013 | C020456 |
| Nitrite (NO2) | mg/L | <0.0033 | 0.0033 | C020456 | <0.0033 | 0.0033 | C020456 | <0.0033 | 0.0033 | C020456 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | 0.50 | C022259 | <0.50 | 0.50 | C022259 | <0.50 | 0.50 | C022259 |
| Bicarbonate (HCO3) | mg/L | 9.94 | 0.50 | C022259 | 1.03 | 0.50 | C022259 | <0.50 | 0.50 | C022259 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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<br>(1) Reanalysis confirms results >RDL. | | | | | | |



Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 | | | | | | |


Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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.**



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## QUALITY ASSURANCE REPORT



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |



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## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |

## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |

## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |



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## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 <= 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



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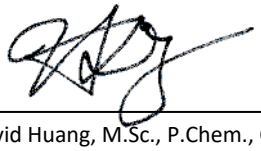
Bureau Veritas Job #: C562731
Report Date: 2025/08/12

WSP Canada Inc.
Client Project #: WATER QUALITY- JULY AEMP
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

## VALIDATION SIGNATURE PAGE

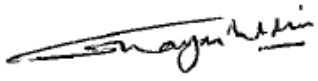
The analytical data and all QC contained in this report were reviewed and validated by:



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



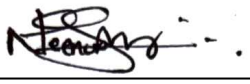
Steven Simpson, Lab Director



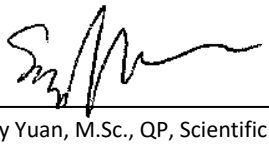
Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics



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

## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

C562731
2025/07/14 15:00

Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 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. #: | | | 759289 |
| Address: | Park Place Suite 3400-666 Burrard St. VANCOUVER BC V6C 2X8 | Address: | Saskatoon SK S7H 0T4 | Project: | WATER QUALITY- JULY AEMP | COC #: | Project Manager: |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Project Name: | | C#759289-02-01 | Melissa McIntosh |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com,jennifer.arens@wsp.com, | Site #: | | | |
| | | | | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

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)** ☐
Date Required: _____
Rush Confirmation Number: _____ *(call lab for #)*

| | 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 filt) | Radium-226 Low Level | Chlorophyll and Phaeophytin in Water | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SID#383518 | BRP-32-1 | | | | | | | | | | | | | |
| 2 | SID#383519 | BRP-32-2 | | | | | | | | | | | | | |
| 3 | SID#383520 | BRP-32-3 | | | | | | | | | | | | | |
| 4 | SID#383521 | BRP-32-4 | 25/07/11 | 7:30 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| 5 | SID#383522 | BRP-32-5 | 25/07/11 | 8:20 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| 6 | SID#383523 | BRP-38-1 | 25/07/12 | 14:35 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| 7 | SID#383524 | BRP-38-2 | 25/07/12 | 13:45 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| 8 | SID#383525 | BRP-38-3 | 25/07/12 | 11:10 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| 9 | SID#383526 | BRP-38-4 | 25/07/12 | 12:50 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| 10 | SID#383527 | BRP-38-5 | 25/07/12 | 12:10 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |

| * 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: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Feldberg | 25/07/13 | 16:20 | Charlie Kotanko | 25/07/16 | 1500 | | ☐ | | ☐ 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

MCAL = see ACTR

MCAL-2025-07-1205

Bureau Veritas Canada (2019) Inc.

Received in Yellowknife
By: J. Meun
JUL 14 2025
see ACTR
Temp: / /
CS: _____ Ice: _____

C562731
2025/07/14 15:00

Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvna.com

Page 3 of 3

# 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. #: | | | 759289 |
| Address: | Park Place Suite 3400-666 Burrard St. | Address: | | Project: | WATER QUALITY- JULY AEMP | COC #: | Project Manager: |
| | VANCOUVER BC V6C 2X8 | | Saskatoon SK S7H 0T4 | Project Name: | | C#759289-03-01 | Melissa McIntosh |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Site #: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com,jennifer.arens@wsp.com, | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

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)** ☐
Date Required:
Rush Confirmation Number:
*(call lab for #)*

| | 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 filt) | Radium-226 Low Level | Chlorophyll and Pheophytin in Water | | | | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SID#383528 | FD | | | | | | | | | | | | | | | | |
| 2 | SID#383529 | FB-1 | 25/07/11 | 9:00 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | |
| 3 | | EB | | | | | | | | | | | | | | | | |
| 4 | | TB-1 | 25/07/12 | 00:00 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | |
| 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 | Laboratory Use Only: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Feldberg [signature] | 25/07/13 | 16:20 | Charlie KA [signature] | 25/07/16 | 1500 | | ☐ | | ☐ 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

MCAL = See ACTR

Received in Yellowknife:
By: [signature]
JUL 14 2025
Temp: See ACTR
CS: Ice:

Bureau Veritas Canada (2019) Inc.

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 Extracted | Date Analyzed | Laboratory Method | Analytical Method |
|---|---|---|---|---|---|
| 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<br>BQL SOP-00017<br>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

==========

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 #: 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 (CaCO3) | mg/L | 45.5 | 0.50 | C052203 | 46.2 | 0.50 | C052203 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 6.7 | 0.89 | C052222 | 6.8 | 0.89 | C052222 |
| Nitrite (NO2) | mg/L | 0.021 | 0.0033 | C052222 | 0.021 | 0.0033 | C052222 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | 0.50 | C052459 | <0.50 | 0.50 | C052459 |
| Bicarbonate (HCO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (CO3) | 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 (SO4) | 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.



Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 |
| **Calculated Parameters** | | | | |
| Dissolved Hardness (CaCO3) | mg/L | <0.50 | 0.50 | C052203 |
| Total Hardness (CaCO3) | mg/L | <0.50 | 0.50 | C052200 |
| Dissolved Nitrate (N) | mg/L | <0.0030 | 0.0030 | C052230 |
| Nitrate (NO3) | mg/L | <0.013 | 0.013 | C052222 |
| Nitrite (NO2) | mg/L | <0.0033 | 0.0033 | C052222 |
| Sulphide (as H2S) | 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 CaCO3) | mg/L | 0.84 | 0.50 | C052459 |
| Total Organic Carbon (C) | mg/L | <0.50 | 0.50 | C060607 |
| Alkalinity (PP as CaCO3) | mg/L | <0.50 | 0.50 | C052459 |
| Bicarbonate (HCO3) | mg/L | 1.02 | 0.50 | C052459 |
| Carbonate (CO3) | 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 (SO4) | mg/L | <0.50 | 0.50 | C053802 |

RDL = Reportable Detection Limit
N/A = Not Applicable



Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 | | | | | | |



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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

## 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 | | | | | | | |

## 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



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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

## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## QUALITY ASSURANCE REPORT



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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.



Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

C570800
2025/08/15 12:30

Bureau Veritas
4326 76 Avenue NW, Edmonton, Alberta Canada T6B 2R4 Tel (780) 577-7100 Toll-free 800-563-6266 Fax (780) 450-4187 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 #: 761493 |
| Attention: | Accounts Payable | Attention: | Beatriz Cupe-Flores | P.O. #: | | | |
| Address: | Park Place Suite 3400-666 Burrard St. | Address: | | Project: | August AEMP program | COC #: | Project Manager: |
| | VANCOUVER BC V6C 2X8 | | Saskatoon SK S7H 0T4 | Project Name: | | C#761493-03-01 | Melissa McIntosh |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Site #: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

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) ☐
Date Required:
Rush Confirmation Number: (call lab for #)

| | Sample Barcode Label | Sample (Location) Identification | Date Sampled | Time Sampled | Matrix | Metals Field Filtered ? ( Y / N ) | AEMP-Routine Parameters | AEMP - Nutrients | AEMP- Other Conventional | Chlorophyll a in Water | 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 | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | TB | | | | | | | | | | | | | | | | |
| 2 | | FB | | | | | | | | | | | | | | | | |
| 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 DI 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 | # jars used and not submitted | Laboratory Use Only: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Feldberg [signature] | 25/08/15 | 6:55 | Jaskirat Begol JB | 2025/08/16 | @14:00 | | ☐ | 5, 0, 6 | ☑ 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

Ice: Yes

Received in Yellowknife
By: J. Mercado @12:30
AUG 15 2025
Temp: 3/3/2
CS: No Ice: yes

EYK-2025-08-048

Bureau Veritas Canada (2015) Inc.

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 Extracted | Date Analyzed | Laboratory Method | Analytical Method |
|---|---|---|---|---|---|
| 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<br>BQL SOP-00017<br>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.

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 (CaCO3) | mg/L | 45.5 | 0.50 | C052203 | 46.2 | 0.50 | C052203 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 6.7 | 0.89 | C052222 | 6.8 | 0.89 | C052222 |
| Nitrite (NO2) | mg/L | 0.021 | 0.0033 | C052222 | 0.021 | 0.0033 | C052222 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | 0.50 | C052459 | <0.50 | 0.50 | C052459 |
| Bicarbonate (HCO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (CO3) | 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 (SO4) | 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.



Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 |
| **Calculated Parameters** | | | | |
| Dissolved Hardness (CaCO3) | mg/L | <0.50 | 0.50 | C052203 |
| Total Hardness (CaCO3) | mg/L | <0.50 | 0.50 | C052200 |
| Dissolved Nitrate (N) | mg/L | <0.0030 | 0.0030 | C052230 |
| Nitrate (NO3) | mg/L | <0.013 | 0.013 | C052222 |
| Nitrite (NO2) | mg/L | <0.0033 | 0.0033 | C052222 |
| Sulphide (as H2S) | 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 CaCO3) | mg/L | 0.84 | 0.50 | C052459 |
| Total Organic Carbon (C) | mg/L | <0.50 | 0.50 | C060607 |
| Alkalinity (PP as CaCO3) | mg/L | <0.50 | 0.50 | C052459 |
| Bicarbonate (HCO3) | mg/L | 1.02 | 0.50 | C052459 |
| Carbonate (CO3) | 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 (SO4) | mg/L | <0.50 | 0.50 | C053802 |

RDL = Reportable Detection Limit
N/A = Not Applicable



Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 | | | | |



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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

## 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 | | | | | | |



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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

## 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 | | | | | | | |

## 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



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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

## 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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## 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.**



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## QUALITY ASSURANCE REPORT



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |



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## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |



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## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |



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## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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).



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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

## 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.



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C570800
2025/08/15 12:30

Bureau Veritas
4326 76 Avenue NW, Edmonton, Alberta Canada T6B 2R4 Tel (780) 577-7100 Toll-free 800-563-6266 Fax (780) 450-4187 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 #: 761493 |
| Attention: | Accounts Payable | Attention: | Beatriz Cupe-Flores | P.O. #: | | | |
| Address: | Park Place Suite 3400-666 Burrard St. | Address: | | Project: | August AEMP program | COC #: | Project Manager: |
| | VANCOUVER BC V6C 2X8 | | Saskatoon SK S7H 0T4 | Project Name: | | C#761493-03-01 | Melissa McIntosh |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Site #: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

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) ☐
Date Required:
Rush Confirmation Number: (call lab for #)

| | Sample Barcode Label | Sample (Location) Identification | Date Sampled | Time Sampled | Matrix | Metals Field Filtered ? ( Y / N ) | AEMP-Routine Parameters | AEMP - Nutrients | AEMP- Other Conventional | Chlorophyll a in Water | 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 | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | TB | | | | | | | | | | | | | | | | |
| 2 | | FB | | | | | | | | | | | | | | | | |
| 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 DI 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 | # jars used and not submitted | Laboratory Use Only: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Feldberg [signature] | 25/08/15 | 6:55 | Jaskirat Begol JB | 2025/08/16 | @14:00 | | ☐ | 5, 0, 6 | ☑ 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

Ice: Yes

Received in Yellowknife
By: J. Mercado @12:30
AUG 15 2025
Temp: 3/3/2
CS: No Ice: yes

EYK-2025-08-048

Bureau Veritas Canada (2015) Inc.

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 | Quantity | Date Extracted | Date Analyzed | Laboratory Method | Analytical Method |
|---|---|---|---|---|---|
| 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


Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## GENERAL COMMENTS

**Results relate only to the items tested.**



Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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

| | | | Spiked Blank | | Method Blank | |
|---|---|---|---|---|---|---|
| **QC Batch** | **Parameter** | **Date** | **% 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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.


Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

Bureau Veritas
4326 76 Avenue NW. Edmonton. Alberta Canada T6B 2R4 Tel (780) 577-7100 Toll-free 800-563-6266 Fax (780) 450-4187 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. #: | | C571366 | 761971 |
| Address: | Park Place Suite 3400-666 Burrard St. | Address: | | Project: | August AEMP program | COC #: | Project Manager: |
| | VANCOUVER BC V6C 2X8 | | Saskatoon SK S7H 0T4 | Project Name: | | C#761971-01-01 | Stephanie Rodriguez Carnacho |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Site #: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

**SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS**

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

| | Sample Barcode Label | Sample (Location) Identification | Date Sampled | Time Sampled | Matrix | Metals Field Filtered ? ( Y / N ) | Chlorophyll a | # Filters used | Total Volume Filtered | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SID#386756 | BRP-29A-1A | Aug 12 2025 | 9:30 | chloro | | ✓ | 2 | 1 | | Filtered volume in L |
| 2 | SID#386757 | BRP-29A-1B | | 1 | | | ✓ | | 1 | | |
| 3 | SID#386758 | BRP-29A-1C | | 1 | | | ✓ | | 1 | | |
| 4 | SID#386759 | BRP-29A-2A | | 11:35 | | | ✓ | | 1.1 | | |
| 5 | SID#386760 | BRP-29A-2B | | 1 | | | ✓ | | 0.9 | | |
| 6 | SID#386761 | BRP-29A-2C | | 1 | | | ✓ | | 1 | | |
| 7 | SID#386762 | BRP-29A-3A | | 10:40 | | | ✓ | | 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 | | |

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 #)*

Received in Yellowknife
By: J Lawson
AUG 18 2025
see AQP
Temp: / /
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 |
|---|---|---|---|---|---|---|
| Adam Feldberg | 25/08/18 | 8:00 | Jeff Lawson | 25/08/19 | 1500 | |

Laboratory Use Only

| Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|
| ☐ | See AQP | ☐ 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.
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** 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 T6B 2R4 Tel (780) 577-7100 Toll-free 800-563-6266 Fax (780) 450-4187 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. #: | | | 761971 |
| Address: | Park Place Suite 3400-666 Burrard St. | Address: | | Project: | August AEMP program | COC #: | Project Manager: |
| | VANCOUVER BC V6C 2X8 | | Saskatoon SK S7H 0T4 | Project Name: | | C#761971-02-01 | Stephanie Rodriguez Camacho |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Site #: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

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*(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 #)*

☐

| | 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#386766 | BRP-29A-4B | Aug 12 2025 | 12:45 | chloro | | ✓ | 2 | 1 | | Filtered Volume in L |
| 2 | SID#386767 | BRP-29A-4C | ↓ | 12:45 | ↓ | | ✓ | ↓ | 0.9 | | |
| 3 | SID#386768 | BRP-29A-5A | | 13:50 | | | ✓ | | 1 | | |
| 4 | SID#386769 | BRP-29A-5B | | ↓ | | | ✓ | | 1 | | |
| 5 | SID#386770 | BRP-29A-5C | ↓ | ↓ | | | ✓ | | 1 | | |
| 6 | SID#386771 | BRP-31-3A | Aug 14 2025 | 11:45 | | | ✓ | | 1 | | |
| 7 | SID#386772 | BRP-31-3B | ↓ | ↓ | | | ✓ | | 1 | | |
| 8 | SID#386773 | BRP-31-3C | | | | | ✓ | | 1 | | |
| 9 | SID#386774 | BRP-31-4A | Aug 17 2025 | 15:00 | | | ✓ | | 1 | | |
| 10 | SID#386775 | BRP-31-4B | ↓ | 15:00 | ↓ | | ✓ | ↓ | 1 | | |

Received in Yellowknife
By: [signature]
AUG 18 2025
See ACTR
Temp: / /
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: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Feldberg | 25/08/18 | 8:00 | Jeff Lemon | 25/08/19 | 1500 | | ☐ | See ACTR | ☐ Yes ☐ No |

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** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

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Bureau Veritas
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# 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 #: 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 | COC #: C#761971-03-01 | Project Manager: Stephanie Rodriguez Camacho |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Project Name: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com | Site #: | | | |
| | | | | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

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)** ☐
Date Required:
Rush Confirmation Number: *(call lab for #)*

| | 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 12 2025 | 15:00 | chloro | | ✓ | 2 | 1 | | Volume Filtered in L |
| 2 | SID#386777 | BRP-32-1A | Aug 13 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 | | | | | ✓ | | | | |

Received in Yellowknife
By: [signature]
AUG 18 2025
Temp: / /
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: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Feldberg [signature] | 25/08/18 | 8:00 | [signature] Jeff Loman | 25/08/19 | 1500 | | ☐ | 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 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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# 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. #: | | | 761971 |
| Address: | Park Place Suite 3400-666 Burrard St. | Address: | | Project: | August AEMP program | COC #: | Project Manager: |
| | VANCOUVER BC V6C 2X8 | | Saskatoon SK S7H 0T4 | Project Name: | | C#761971-04-01 | Stephanie Rodriguez Camacho |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Site #: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

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 ) | ANALYSIS REQUESTED (PLEASE BE SPECIFIC): Chlorophyll a | # Filters used | Volume Filtered | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SID#386786 | BRP-32-4A | Aug 13 2025 | 11:40 | chloro | | ✓ | 2 | 1 | | Volume Filtered in L |
| 2 | SID#386787 | BRP-32-4B | ↓ | ↓ | ↓ | | ✓ | ↓ | ↓ | | |
| 3 | SID#386788 | BRP-32-4C | ↓ | ↓ | ↓ | | ✓ | ↓ | ↓ | | |
| 4 | SID#386789 | BRP-32-5A | ↓ | 10:05 | ↓ | | ✓ | ↓ | ↓ | | |
| 5 | SID#386790 | BRP-32-5B | ↓ | ↓ | ↓ | | ✓ | ↓ | ↓ | | |
| 6 | SID#386791 | BRP-32-5C | ↓ | ↓ | ↓ | | ✓ | ↓ | ↓ | | |
| 7 | SID#386792 | BRP-38-1A | Aug 16 2025 | 13:35 | ↓ | | ✓ | ↓ | ↓ | | |
| 8 | SID#386793 | BRP-38-1B | ↓ | ↓ | ↓ | | ✓ | ↓ | ↓ | | |
| 9 | SID#386794 | BRP-38-1C | ↓ | ↓ | ↓ | | ✓ | ↓ | ↓ | | |
| 10 | SID#386795 | BRP-38-2A | ↓ | 12:45 | ↓ | | ✓ | ↓ | ↓ | | |

Turnaround Time (TAT) Required:

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*(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 #)*

Received in Yellowknife
By: J Mercredi
AUG 18 2025
Temp: see ACTR
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: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Feldberg | 25/08/18 | 8:00 | Jeff Lomen | 25/08/19 | 1500 | | ☐ | See ACTR | ☐ Yes ☐ No |

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# 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. #: | | | 761971 |
| Address: | Park Place Suite 3400-666 Burrard St. | Address: | | Project: | August AEMP program | COC #: | Project Manager: |
| | VANCOUVER BC V6C 2X8 | | Saskatoon SK S7H 0T4 | Project Name: | | C#761971-05-01 | Stephanie Rodriguez Camacho |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Site #: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com | Sampled By: | | | |

Regulatory Criteria:

- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

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*(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 #)*

| | 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#386796 | BRP-38-2B | Aug 16 2025 | 12:45 | | | ✓ | 2 | 1 | | | | | | | | 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 | | | ✓ | | | | | | | | | | |

Received in Yellowknife
By: [signature]
AUG 18 2025
See Acta
Temp: / /
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: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Feldberg [signature] | 25/08/18 | 8:00 | [signature] Jeff Lamon | 25/08/19 | 1500 | | ☐ | See ACTR | ☐ Yes ☐ No |

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# 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. #: | | | 761971 |
| Address: | Park Place Suite 3400-666 Burrard St. | Address: | | Project: | August AEMP program | COC #: | Project Manager: |
| | VANCOUVER BC V6C 2X8 | | Saskatoon SK S7H 0T4 | Project Name: | | C#761971-06-01 | Stephanie Rodriguez Camacho |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Site #: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

**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 ) | ANALYSIS REQUESTED (PLEASE BE SPECIFIC): Chlorophyll a | # filters used | Volume Filtered L | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SID#386806 | BRP-38-5C | AUG 16 2025 | 11:00 | chloro | | ✓ | 2 | 1 | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |

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 #)*

Received in Yellowknife
By: J. Theed
AUG 18 2025
Temp: See ACTR
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: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Feldberg | 25/08/18 | 8:00 | Jeff Lanon | 25/08/18 | 1500 | | ☐ | 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 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 | Quantity | Date Extracted | Date Analyzed | Laboratory Method | Analytical Method |
|---|---|---|---|---|---|
| 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


Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## GENERAL COMMENTS

**Results relate only to the items tested.**



Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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

| | | | Spiked Blank | | Method Blank | |
|---|---|---|---|---|---|---|
| **QC Batch** | **Parameter** | **Date** | **% 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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

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Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

Bureau Veritas
4326 76 Avenue NW. Edmonton. Alberta Canada T6B 2R4 Tel (780) 577-7100 Toll-free 800-563-6266 Fax (780) 450-4187 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. #: | | C571366 | 761971 |
| Address: | Park Place Suite 3400-666 Burrard St. | Address: | | Project: | August AEMP program | COC #: | Project Manager: |
| | VANCOUVER BC V6C 2X8 | | Saskatoon SK S7H 0T4 | Project Name: | | C#761971-01-01 | Stephanie Rodriguez Carnacho |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Site #: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

**SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS**

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

| | Sample Barcode Label | Sample (Location) Identification | Date Sampled | Time Sampled | Matrix | Metals Field Filtered ? ( Y / N ) | Chlorophyll a | # Filters used | Total Volume Filtered | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SID#386756 | BRP-29A-1A | Aug 12 2025 | 9:30 | chloro | | ✓ | 2 | 1 | | Filtered volume in L |
| 2 | SID#386757 | BRP-29A-1B | | 1 | | | ✓ | | 1 | | |
| 3 | SID#386758 | BRP-29A-1C | | 1 | | | ✓ | | 1 | | |
| 4 | SID#386759 | BRP-29A-2A | | 11:35 | | | ✓ | | 1.1 | | |
| 5 | SID#386760 | BRP-29A-2B | | 1 | | | ✓ | | 0.9 | | |
| 6 | SID#386761 | BRP-29A-2C | | 1 | | | ✓ | | 1 | | |
| 7 | SID#386762 | BRP-29A-3A | | 10:40 | | | ✓ | | 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 | | |

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 #)*

Received in Yellowknife
By: J Lawson
AUG 18 2025
see AQP
Temp: / /
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 |
|---|---|---|---|---|---|---|
| Adam Feldberg | 25/08/18 | 8:00 | Jeff Lawson | 25/08/19 | 1500 | |

Laboratory Use Only

| Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|
| ☐ | See AQP | ☐ Yes ☐ No |

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* 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 T6B 2R4 Tel (780) 577-7100 Toll-free 800-563-6266 Fax (780) 450-4187 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. #: | | | 761971 |
| Address: | Park Place Suite 3400-666 Burrard St. | Address: | | Project: | August AEMP program | COC #: | Project Manager: |
| | VANCOUVER BC V6C 2X8 | | Saskatoon SK S7H 0T4 | Project Name: | | C#761971-02-01 | Stephanie Rodriguez Camacho |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Site #: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

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*(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 #)*

☐

| | 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#386766 | BRP-29A-4B | Aug 12 2025 | 12:45 | chloro | | ✓ | 2 | 1 | | Filtered Volume in L |
| 2 | SID#386767 | BRP-29A-4C | ↓ | 12:45 | ↓ | | ✓ | ↓ | 0.9 | | |
| 3 | SID#386768 | BRP-29A-5A | | 13:50 | | | ✓ | | 1 | | |
| 4 | SID#386769 | BRP-29A-5B | | ↓ | | | ✓ | | 1 | | |
| 5 | SID#386770 | BRP-29A-5C | ↓ | ↓ | | | ✓ | | 1 | | |
| 6 | SID#386771 | BRP-31-3A | Aug 14 2025 | 11:45 | | | ✓ | | 1 | | |
| 7 | SID#386772 | BRP-31-3B | ↓ | ↓ | | | ✓ | | 1 | | |
| 8 | SID#386773 | BRP-31-3C | | | | | ✓ | | 1 | | |
| 9 | SID#386774 | BRP-31-4A | Aug 17 2025 | 15:00 | | | ✓ | | 1 | | |
| 10 | SID#386775 | BRP-31-4B | ↓ | 15:00 | ↓ | | ✓ | ↓ | 1 | | |

Received in Yellowknife
By: [signature]
AUG 18 2025
See ACTR
Temp: / /
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: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Feldberg | 25/08/18 | 8:00 | Jeff Lemon | 25/08/19 | 1500 | | ☐ | See ACTR | ☐ Yes ☐ No |

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# 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 #: 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 | COC #: C#761971-03-01 | Project Manager: Stephanie Rodriguez Camacho |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Project Name: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com | Site #: | | | |
| | | | | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

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**Job Specific Rush TAT (if applies to entire submission)** ☐
Date Required:
Rush Confirmation Number: *(call lab for #)*

| | 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 12 2025 | 15:00 | chloro | | ✓ | 2 | 1 | | Volume Filtered in L |
| 2 | SID#386777 | BRP-32-1A | Aug 13 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 | ↓ | ↓ | ↓ | | ✓ | ↓ | ↓ | | |

Received in Yellowknife
By: [signature]
AUG 18 2025
Temp: / /
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: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Feldberg [signature] | 25/08/18 | 8:00 | [signature] Jeff Loman | 25/08/19 | 1500 | | ☐ | See ACTR | ☐ Yes ☐ No |

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# CHAIN OF CUSTODY RECORD

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|---|---|---|---|---|---|---|---|
| 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. #: | | | 761971 |
| Address: | Park Place Suite 3400-666 Burrard St. | Address: | | Project: | August AEMP program | COC #: | Project Manager: |
| | VANCOUVER BC V6C 2X8 | | Saskatoon SK S7H 0T4 | Project Name: | | C#761971-04-01 | Stephanie Rodriguez Camacho |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Site #: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

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 ) | ANALYSIS REQUESTED (PLEASE BE SPECIFIC): Chlorophyll a | # Filters used | Volume Filtered | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SID#386786 | BRP-32-4A | Aug 13 2025 | 11:40 | chloro | | ✓ | 2 | 1 | | Volume Filtered in L |
| 2 | SID#386787 | BRP-32-4B | ↓ | ↓ | ↓ | | ✓ | ↓ | ↓ | | |
| 3 | SID#386788 | BRP-32-4C | ↓ | ↓ | ↓ | | ✓ | ↓ | ↓ | | |
| 4 | SID#386789 | BRP-32-5A | ↓ | 10:05 | ↓ | | ✓ | ↓ | ↓ | | |
| 5 | SID#386790 | BRP-32-5B | ↓ | ↓ | ↓ | | ✓ | ↓ | ↓ | | |
| 6 | SID#386791 | BRP-32-5C | ↓ | ↓ | ↓ | | ✓ | ↓ | ↓ | | |
| 7 | SID#386792 | BRP-38-1A | Aug 16 2025 | 13:35 | ↓ | | ✓ | ↓ | ↓ | | |
| 8 | SID#386793 | BRP-38-1B | ↓ | ↓ | ↓ | | ✓ | ↓ | ↓ | | |
| 9 | SID#386794 | BRP-38-1C | ↓ | ↓ | ↓ | | ✓ | ↓ | ↓ | | |
| 10 | SID#386795 | BRP-38-2A | ↓ | 12:45 | ↓ | | ✓ | ↓ | ↓ | | |

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**Job Specific Rush TAT (if applies to entire submission)** ☐
Date Required: _____
Rush Confirmation Number: _____ *(call lab for #)*

Received in Yellowknife
By: J Mercredi
AUG 18 2025
Temp: see ACTR
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: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Feldberg | 25/08/18 | 8:00 | Jeff Lomen | 25/08/19 | 1500 | | ☐ | See ACTR | ☐ Yes ☐ No |

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# 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. #: | | | 761971 |
| Address: | Park Place Suite 3400-666 Burrard St. | Address: | | Project: | August AEMP program | COC #: | Project Manager: |
| | VANCOUVER BC V6C 2X8 | | Saskatoon SK S7H 0T4 | Project Name: | | C#761971-05-01 | Stephanie Rodriguez Camacho |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Site #: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com | Sampled By: | | | |

Regulatory Criteria:

- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

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**Job Specific Rush TAT (if applies to entire submission)** ☐
Date Required:
Rush Confirmation Number:
*(call lab for #)*

| | 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#386796 | BRP-38-2B | Aug 16 2025 | 12:45 | | | ✓ | 2 | 1 | | | | | | | | 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 | | | ✓ | | | | | | | | | | |

Received in Yellowknife
By: [signature]
AUG 18 2025
See Acta
Temp: / /
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: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Feldberg [signature] | 25/08/18 | 8:00 | [signature] Jeff Lamon | 25/08/19 | 1500 | | ☐ | See ACTR | ☐ Yes ☐ No |

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# CHAIN OF CUSTODY RECORD



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|---|---|---|---|---|---|---|---|
| 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. #: | | | 761971 |
| Address: | Park Place Suite 3400-666 Burrard St. | Address: | | Project: | August AEMP program | COC #: | Project Manager: |
| | VANCOUVER BC V6C 2X8 | | Saskatoon SK S7H 0T4 | Project Name: | | C#761971-06-01 | Stephanie Rodriguez Camacho |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Site #: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com | Sampled By: | | | |

Regulatory Criteria:
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- ☐ CCME
- ☐ Other

Special Instructions

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| | Sample Barcode Label | Sample (Location) Identification | Date Sampled | Time Sampled | Matrix | Metals Field Filtered ? ( Y / N ) | ANALYSIS REQUESTED (PLEASE BE SPECIFIC): Chlorophyll a | # filters used | Volume Filtered L | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SID#386806 | BRP-38-5C | AUG 16 2025 | 11:00 | chloro | | ✓ | 2 | 1 | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |

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Received in Yellowknife
By: J. Theed
AUG 18 2025
Temp: See ACTR
CS: _____ Ice: _____

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|---|---|---|---|---|---|---|---|---|---|
| Adam Feldberg | 25/08/18 | 8:00 | Jeff Lanon | 25/08/18 | 1500 | | ☐ | 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 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
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 Extracted | Date Analyzed | Laboratory Method | Analytical Method |
|---|---|---|---|---|---|
| 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<br>BQL SOP-00017<br>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
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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 (CaCO3) | mg/L | 13.4 | C055338 | 13.4 | C055338 | 13.4 | 0.50 | C055338 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 0.070 | C055593 | <0.013 | C055593 | <0.013 | 0.013 | C055593 |
| Nitrite (NO2) | mg/L | <0.0033 | C055593 | <0.0033 | C055593 | <0.0033 | 0.0033 | C055593 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | C059041 | <0.50 | C059041 | <0.50 | 0.50 | C059041 |
| Bicarbonate (HCO3) | mg/L | 10.5 | C059041 | 10.1 | C059041 | 10.4 | 0.50 | C059041 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (CaCO3) | mg/L | 13.5 | C055338 | 13.3 | 0.50 | C055338 | <0.50 | 0.50 | C055338 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 0.20 | C055593 | <0.013 | 0.013 | C055593 | <0.013 | 0.013 | C055593 |
| Nitrite (NO2) | mg/L | <0.0033 | C055593 | <0.0033 | 0.0033 | C055593 | <0.0033 | 0.0033 | C055593 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | C059041 | <0.50 | 0.50 | C059041 | <0.50 | 0.50 | C059041 |
| Bicarbonate (HCO3) | mg/L | 10.4 | C059041 | 10.3 | 0.50 | C059041 | 0.75 | 0.50 | C059041 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 | | | | | | | |



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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



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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

## 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 | | | | | | | |



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## 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 | | | | | |

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 | | | | | |



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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

## 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.**



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## QUALITY ASSURANCE REPORT



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |



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## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |



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## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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.



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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

## 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.



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Bureau Veritas
4326 76 Avenue NW, Edmonton, Alberta Canada T6B 2R4 Tel (780) 577-7100 Toll-free 800-563-6266 Fax (780) 450-4187 www.bvna.com

# CHAIN OF CUSTODY RECORD

C571520

| 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. #: | | ~~C571366~~ KBL 2025/08/20 | 761493 |
| Address: | Park Place Suite 3400-666 Burrard St. | Address: | | Project: | August AEMP program | COC #: | Project Manager: |
| | VANCOUVER BC V6C 2X8 | | Saskatoon SK S7H 0T4 | Project Name: | | C#761493-05-01 | Melissa McIntosh |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Site #: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

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): ☐
Date Required:
Rush Confirmation Number: (call lab for #)

| | Sample Barcode Label | Sample (Location) Identification | Date Sampled | Time Sampled | Matrix | Metals Field Filtered ? ( Y / N ) | AEMP-Routine Parameters | AEMP - Nutrients | AEMP- Other Conventional | Chlorophyll a in Water | Radium-226 Low Level | Low Level Total Metals with CV Hg | Low Level D. Metals w/ CV Hg-Diss | Unionized 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 | | 12:30 | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | 7.47 | 13.64 | | |
| 3 | | BRP-38-3 | | 9:40 | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | 7.71 | 13.39 | | |
| 4 | | BRP-38-4 | | 11:35 | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | 7.47 | 13.54 | | |
| 5 | | BRP-38-5 | | 10:45 | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | 7.49 | 13.46 | | |
| 6 | | TB | | 00:00 | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | |
| 7 | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | |

Received in Yellowknife
By: [signature]
AUG 18 2025
Temp: See Aga
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: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Feldberg [signature] | 25/08/18 | 8:00 | [signature] Jeff Lomon | 25/08/19 | 1500 | | ☐ | 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 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

EYK-2025-08-059

Bureau Veritas Canada (2019) Inc.

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 Extracted | Date Analyzed | Laboratory Method | Analytical Method |
|---|---|---|---|---|---|
| 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<br>BQL SOP-00017<br>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**

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Canada S7H 0T4

**Report Date: 2025/09/22**
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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 (CaCO3) | mg/L | 13.4 | C055338 | 13.4 | C055338 | 13.4 | 0.50 | C055338 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 0.070 | C055593 | <0.013 | C055593 | <0.013 | 0.013 | C055593 |
| Nitrite (NO2) | mg/L | <0.0033 | C055593 | <0.0033 | C055593 | <0.0033 | 0.0033 | C055593 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | C059041 | <0.50 | C059041 | <0.50 | 0.50 | C059041 |
| Bicarbonate (HCO3) | mg/L | 10.5 | C059041 | 10.1 | C059041 | 10.4 | 0.50 | C059041 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (CaCO3) | mg/L | 13.5 | C055338 | 13.3 | 0.50 | C055338 | <0.50 | 0.50 | C055338 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 0.20 | C055593 | <0.013 | 0.013 | C055593 | <0.013 | 0.013 | C055593 |
| Nitrite (NO2) | mg/L | <0.0033 | C055593 | <0.0033 | 0.0033 | C055593 | <0.0033 | 0.0033 | C055593 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | C059041 | <0.50 | 0.50 | C059041 | <0.50 | 0.50 | C059041 |
| Bicarbonate (HCO3) | mg/L | 10.4 | C059041 | 10.3 | 0.50 | C059041 | 0.75 | 0.50 | C059041 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 | | | | | | | |



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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



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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

## 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 | | | | | | | |



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## 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 | | | | | |

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 | | | | | |



Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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

## 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.**



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## QUALITY ASSURANCE REPORT



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |



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## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |



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## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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.



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Bureau Veritas
4326 76 Avenue NW, Edmonton, Alberta Canada T6B 2R4 Tel (780) 577-7100 Toll-free 800-563-6266 Fax (780) 450-4187 www.bvna.com

# CHAIN OF CUSTODY RECORD

C571520

| 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. #: | | ~~C571366~~ KBL 2025/08/20 | 761493 |
| Address: | Park Place Suite 3400-666 Burrard St. | Address: | | Project: | August AEMP program | COC #: | Project Manager: |
| | VANCOUVER BC V6C 2X8 | | Saskatoon SK S7H 0T4 | Project Name: | | C#761493-05-01 | Melissa McIntosh |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Site #: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

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): ☐
Date Required:
Rush Confirmation Number: (call lab for #)

| | Sample Barcode Label | Sample (Location) Identification | Date Sampled | Time Sampled | Matrix | Metals Field Filtered ? ( Y / N ) | AEMP-Routine Parameters | AEMP - Nutrients | AEMP- Other Conventional | Chlorophyll a in Water | Radium-226 Low Level | Low Level Total Metals with CV Hg | Low Level D. Metals w/ CV Hg-Diss | Unionized 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 | | 12:30 | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | 7.47 | 13.64 | | |
| 3 | | BRP-38-3 | | 9:40 | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | 7.71 | 13.39 | | |
| 4 | | BRP-38-4 | | 11:35 | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | 7.47 | 13.54 | | |
| 5 | | BRP-38-5 | | 10:45 | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | 7.49 | 13.46 | | |
| 6 | | TB | | 00:00 | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | |
| 7 | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | |

Received in Yellowknife
By: [signature]
AUG 18 2025
Temp: See Aga
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: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Feldberg [signature] | 25/08/18 | 8:00 | [signature] Jeff Lomon | 25/08/19 | 1500 | | ☐ | 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 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

EYK-2025-08-059

Bureau Veritas Canada (2019) Inc.

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 |


Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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<br>BQL SOP-00017<br>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

==========

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 (CaCO3) | mg/L | 70.8 | 0.50 | C085513 | 58.6 | 0.50 | C085513 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 9.2 | 0.89 | C085990 | 6.7 | 0.89 | C085990 |
| Nitrite (NO2) | mg/L | 0.014 | 0.0033 | C085990 | 0.016 | 0.0033 | C085990 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | 0.50 | C090051 | <0.50 | 0.50 | C090051 |
| Bicarbonate (HCO3) | mg/L | 5.44 | 0.50 | C090051 | 5.74 | 0.50 | C090051 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (SO4) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (CaCO3) | mg/L | 60.5 | 0.50 | C085513 | 14.2 | C085513 | 14.1 | 0.50 | C085513 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 7.3 | 0.89 | C085990 | 0.014 | C085990 | <0.013 | 0.013 | C085990 |
| Nitrite (NO2) | mg/L | 0.013 | 0.0033 | C085990 | <0.0033 | C085990 | <0.0033 | 0.0033 | C085990 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | 0.50 | C090051 | <0.50 | C090051 | <0.50 | 0.50 | C087574 |
| Bicarbonate (HCO3) | mg/L | 5.78 | 0.50 | C090051 | 11.1 | C090051 | 11.1 | 0.50 | C087574 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (CaCO3) | mg/L | 14.4 | C085513 | 14.1 | C085513 | 14.1 | 0.50 | C085513 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 0.014 | C085990 | 0.019 | C085990 | <0.013 | 0.013 | C085990 |
| Nitrite (NO2) | mg/L | <0.0033 | C085990 | <0.0033 | C085990 | <0.0033 | 0.0033 | C085990 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | C090051 | <0.50 | C090051 | <0.50 | 0.50 | C087574 |
| Bicarbonate (HCO3) | mg/L | 10.9 | C090051 | 10.9 | C090051 | 11.1 | 0.50 | C087574 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (SO4) | 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 | | | | | | | | |



Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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 (CaCO3) | mg/L | <0.50 | 0.50 | C085513 |
| Total Hardness (CaCO3) | mg/L | <0.50 | 0.50 | C085512 |
| Dissolved Nitrate (N) | mg/L | <0.0030 | 0.0030 | C086131 |
| Nitrate (NO3) | mg/L | <0.013 | 0.013 | C085990 |
| Nitrite (NO2) | mg/L | <0.0033 | 0.0033 | C085990 |
| Sulphide (as H2S) | 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 CaCO3) | mg/L | 0.68 | 0.50 | C090051 |
| Total Organic Carbon (C) | mg/L | <0.20 | 0.20 | C087888 |
| Alkalinity (PP as CaCO3) | mg/L | <0.50 | 0.50 | C090051 |
| Bicarbonate (HCO3) | mg/L | 0.83 | 0.50 | C090051 |
| Carbonate (CO3) | 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 (SO4) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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.

## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 | 0.0000050 | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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 | | | | |

## 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 | | | | |

## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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## QUALITY ASSURANCE REPORT



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |



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## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |

## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |

## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | | | |

## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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.



Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

C578064
2025/09/12 12:20



Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 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 #: 764869 |
| 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: | September AEMP program | COC #: C#764869-02-01 | Project Manager: Melissa McIntosh |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Project Name: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com | Site #: | | | |
| | | | | Sampled By: | | | |

Regulatory Criteria: ☐ ATI ☐ CCME ☐ Other

Special Instructions

SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

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)
Date Required: _____ ☐
Rush Confirmation Number: _____ (call lab for #)

| | 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 filt) | Radium-226 Low Level | Un-ionized ammonia | Field pH | Field temperature | | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SID#390289 | BRP-32-4 | | | | | | | | | | | | | | | | |
| 2 | SID#390290 | BRP-32-5 | | | | | | | | | | | | | | | | |
| 3 | SID#390291 | BRP-38-1 | 11 Sep, 2025 | ~~8:55~~ 9:15 AP | Water | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 7.40 | 7.72 | | 19 | Sample time: 9:15 |
| 4 | SID#390292 | BRP-38-2 | ↓ | ~~9:50~~ 10:10 AP | ↓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 7.33 | 7.72 | | ↓ | Sample time: 10:10 |
| 5 | SID#390293 | BRP-38-3 | | ~~10:55~~ 11:05 AP | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 7.33 | 7.70 | | | Sample time: 11:05 |
| 6 | SID#390294 | BRP-38-4 | | ~~12:10~~ 12:25 AP | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 7.34 | 7.73 | | | Sample time: 12:25 |
| 7 | SID#390295 | BRP-38-5 | ↓ | ~~12:50~~ 13:00 AP | ↓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 7.31 | 7.74 | | ↓ | Sample time: 13:00 |
| 8 | SID#390296 | FD | | | | | | | | | | | | | | | | |
| 9 | SID#390297 | EB | | | | | | | | | | | | | | | | |
| 10 | | TB | 11 Sep 2025 | 00:00 | water | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ~~✓~~ ✓ | — | — | | 19 | analyze un-ionized ammonia |

| * 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: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Feldberg Cerlis | 25/09/12 | 7:00 | | | | | ☐ | | ☐ 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

Received in Yellowknife
By: [signature]
SEP 12 2025
Temp: 15°C ACC
CS: _____ Ice: _____

Bureau Veritas Canada (2019) Inc.

C578064
2025/09/12 12:20

Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 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. #: | | | 764869 |
| Address: | Park Place Suite 3400-666 Burrard St. | Address: | | Project: | September AEMP program | COC #: | Project Manager: |
| | VANCOUVER BC V6C 2X8 | | Saskatoon SK S7H 0T4 | Project Name: | | C#764869-01-01 | Melissa McIntosh |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Site #: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

SAMPLES MUST BE KEPT COOL ( < 10ºC ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

| | 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 filt) | Radium-226 Low Level | Un-ionized ammonia | Field pH | Field temperature | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SID#390279 | BRP-29A-1 | Sep 10, 2025 | 11:20 | water | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 6.85 | 8.17 | 19 | |
| 2 | SID#390280 | BRP-29A-2 | ↓ | 12:40 | ↓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 6.91 | 8.23 | ↓ | |
| 3 | SID#390281 | BRP-29A-3 | ↓ | 14:05 | ↓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 6.87 | 8.22 | ↓ | |
| 4 | SID#390282 | BRP-29A-4 | | | | | | | | | | | | | | | |
| 5 | SID#390283 | BRP-29A-5 | | | | | | | | | | | | | | | |
| 6 | SID#390284 | BRP-31-3 | | | | | | | | | | | | | | | |
| 7 | SID#390285 | BRP-31-4 | | | | | | | | | | | | | | | |
| 8 | SID#390286 | BRP-32-1 | | | | | | | | | | | | | | | |
| 9 | SID#390287 | BRP-32-2 | | | | | | | | | | | | | | | |
| 10 | SID#390288 | BRP-32-3 | | | | | | | | | | | | | | | |

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 #)* ☐

| * 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: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Feldberg | 25/09/12 | 7:00 | Saskatoon Hub | 2025/09/13 | 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. 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 SPEC... CONTACT YOUR PROJECT MANAGER

White: Bureau Veritas Yellow: Client

Received in Yellowknife
By: J Mercer @ 12:20
SEP 12 2025 sec Actn
Temp: / /
CS: no Ice: yes

EYK-2025-09-034

Bureau Veritas Canada (2019) Inc.

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 |


Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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<br>BQL SOP-00017<br>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

==========

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 (CaCO3) | mg/L | 70.8 | 0.50 | C085513 | 58.6 | 0.50 | C085513 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 9.2 | 0.89 | C085990 | 6.7 | 0.89 | C085990 |
| Nitrite (NO2) | mg/L | 0.014 | 0.0033 | C085990 | 0.016 | 0.0033 | C085990 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | 0.50 | C090051 | <0.50 | 0.50 | C090051 |
| Bicarbonate (HCO3) | mg/L | 5.44 | 0.50 | C090051 | 5.74 | 0.50 | C090051 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (SO4) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (CaCO3) | mg/L | 60.5 | 0.50 | C085513 | 14.2 | C085513 | 14.1 | 0.50 | C085513 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 7.3 | 0.89 | C085990 | 0.014 | C085990 | <0.013 | 0.013 | C085990 |
| Nitrite (NO2) | mg/L | 0.013 | 0.0033 | C085990 | <0.0033 | C085990 | <0.0033 | 0.0033 | C085990 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | 0.50 | C090051 | <0.50 | C090051 | <0.50 | 0.50 | C087574 |
| Bicarbonate (HCO3) | mg/L | 5.78 | 0.50 | C090051 | 11.1 | C090051 | 11.1 | 0.50 | C087574 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (CaCO3) | mg/L | 14.4 | C085513 | 14.1 | C085513 | 14.1 | 0.50 | C085513 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 0.014 | C085990 | 0.019 | C085990 | <0.013 | 0.013 | C085990 |
| Nitrite (NO2) | mg/L | <0.0033 | C085990 | <0.0033 | C085990 | <0.0033 | 0.0033 | C085990 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | C090051 | <0.50 | C090051 | <0.50 | 0.50 | C087574 |
| Bicarbonate (HCO3) | mg/L | 10.9 | C090051 | 10.9 | C090051 | 11.1 | 0.50 | C087574 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (SO4) | 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 | | | | | | | | |



Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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 (CaCO3) | mg/L | <0.50 | 0.50 | C085513 |
| Total Hardness (CaCO3) | mg/L | <0.50 | 0.50 | C085512 |
| Dissolved Nitrate (N) | mg/L | <0.0030 | 0.0030 | C086131 |
| Nitrate (NO3) | mg/L | <0.013 | 0.013 | C085990 |
| Nitrite (NO2) | mg/L | <0.0033 | 0.0033 | C085990 |
| Sulphide (as H2S) | 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 CaCO3) | mg/L | 0.68 | 0.50 | C090051 |
| Total Organic Carbon (C) | mg/L | <0.20 | 0.20 | C087888 |
| Alkalinity (PP as CaCO3) | mg/L | <0.50 | 0.50 | C090051 |
| Bicarbonate (HCO3) | mg/L | 0.83 | 0.50 | C090051 |
| Carbonate (CO3) | 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 (SO4) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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 | | | | | | | |



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## 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.

## 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 | | | | | | | |



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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 | 0.0000050 | 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 | | | | | | | |



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## 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 | | | | |

## 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 | | | | |

## 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.**



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## QUALITY ASSURANCE REPORT



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |



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## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |

## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |

## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | | | |

## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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.



Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

C578064
2025/09/12 12:20



Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 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 #: 764869 |
| 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: | September AEMP program | COC #: C#764869-02-01 | Project Manager: Melissa McIntosh |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Project Name: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com | Site #: | | | |
| | | | | Sampled By: | | | |

Regulatory Criteria: ☐ ATI ☐ CCME ☐ Other

Special Instructions

SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

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)
Date Required: _____ ☐
Rush Confirmation Number: _____ (call lab for #)

| | 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 filt) | Radium-226 Low Level | Un-ionized ammonia | Field pH | Field temperature | | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SID#390289 | BRP-32-4 | | | | | | | | | | | | | | | | |
| 2 | SID#390290 | BRP-32-5 | | | | | | | | | | | | | | | | |
| 3 | SID#390291 | BRP-38-1 | 11 Sep, 2025 | ~~8:55~~ 9:15 AP | Water | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 7.40 | 7.72 | | 19 | Sample time: 9:15 |
| 4 | SID#390292 | BRP-38-2 | ↓ | ~~9:50~~ 10:10 AP | ↓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 7.33 | 7.72 | | ↓ | Sample time: 10:10 |
| 5 | SID#390293 | BRP-38-3 | | ~~10:55~~ 11:05 AP | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 7.33 | 7.70 | | | Sample time: 11:05 |
| 6 | SID#390294 | BRP-38-4 | | ~~12:10~~ 12:25 AP | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 7.34 | 7.73 | | | Sample time: 12:25 |
| 7 | SID#390295 | BRP-38-5 | ↓ | ~~12:50~~ 13:00 AP | ↓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 7.31 | 7.74 | | ↓ | Sample time: 13:00 |
| 8 | SID#390296 | FD | | | | | | | | | | | | | | | | |
| 9 | SID#390297 | EB | | | | | | | | | | | | | | | | |
| 10 | | TB | 11 Sep 2025 | 00:00 | water | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ~~✓~~ ✓ | — | — | | 19 | analyze un-ionized ammonia |

| * 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: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Feldberg Cerlis | 25/09/12 | 7:00 | | | | | ☐ | | ☐ 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

Received in Yellowknife
By: [signature]
SEP 12 2025
Temp: 15°C ACC
CS: _____ Ice: _____

Bureau Veritas Canada (2019) Inc.

C578064
2025/09/12 12:20

Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 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. #: | | | 764869 |
| Address: | Park Place Suite 3400-666 Burrard St. | Address: | | Project: | September AEMP program | COC #: | Project Manager: |
| | VANCOUVER BC V6C 2X8 | | Saskatoon SK S7H 0T4 | Project Name: | | C#764869-01-01 | Melissa McIntosh |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Site #: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

SAMPLES MUST BE KEPT COOL ( < 10ºC ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

| | 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 filt) | Radium-226 Low Level | Un-ionized ammonia | Field pH | Field temperature | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SID#390279 | BRP-29A-1 | Sep 10, 2025 | 11:20 | water | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 6.85 | 8.17 | 19 | |
| 2 | SID#390280 | BRP-29A-2 | ↓ | 12:40 | ↓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 6.91 | 8.23 | ↓ | |
| 3 | SID#390281 | BRP-29A-3 | ↓ | 14:05 | ↓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 6.87 | 8.22 | ↓ | |
| 4 | SID#390282 | BRP-29A-4 | | | | | | | | | | | | | | | |
| 5 | SID#390283 | BRP-29A-5 | | | | | | | | | | | | | | | |
| 6 | SID#390284 | BRP-31-3 | | | | | | | | | | | | | | | |
| 7 | SID#390285 | BRP-31-4 | | | | | | | | | | | | | | | |
| 8 | SID#390286 | BRP-32-1 | | | | | | | | | | | | | | | |
| 9 | SID#390287 | BRP-32-2 | | | | | | | | | | | | | | | |
| 10 | SID#390288 | BRP-32-3 | | | | | | | | | | | | | | | |

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 #)* ☐

| * 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: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Feldberg | 25/09/12 | 7:00 | Saskatoon Hub | 2025/09/13 | 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. 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 SPEC... CONTACT YOUR PROJECT MANAGER

White: Bureau Veritas Yellow: Client

Received in Yellowknife
By: J Mercer @ 12:20
SEP 12 2025 sec Actn
Temp: / /
CS: no Ice: yes

EYK-2025-09-034

Bureau Veritas Canada (2019) Inc.

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<br>BQL SOP-00017<br>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
Version: 3 - Final

# 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

==========

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 (CaCO3) | mg/L | 56.1 | 0.50 | C088545 | 54.5 | 0.50 | C088545 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 6.0 | 0.89 | C089158 | 6.1 | 0.89 | C089158 |
| Nitrite (NO2) | mg/L | 0.013 | 0.0033 | C089158 | 0.012 | 0.0033 | C089158 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | 0.50 | C097106 | <0.50 | 0.50 | C097106 |
| Bicarbonate (HCO3) | mg/L | 6.25 | 0.50 | C097106 | 6.21 | 0.50 | C097106 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (SO4) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (CaCO3) | mg/L | 59.2 | C088545 | 59.0 | 0.50 | C088545 | 32.4 | 0.50 | C088545 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 7.1 | C089158 | 7.1 | 0.89 | C089899 | 2.3 | 0.18 | C089899 |
| Nitrite (NO2) | mg/L | 0.013 | C089158 | 0.012 | 0.0033 | C089899 | 0.0060 | 0.0033 | C089899 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | C097106 | <0.50 | 0.50 | C097106 | <0.50 | 0.50 | C097106 |
| Bicarbonate (HCO3) | mg/L | 6.02 | C097106 | 6.35 | 0.50 | C097106 | 7.52 | 0.50 | C097106 |
| Carbonate (CO3) | 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



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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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (CaCO3) | mg/L | 32.9 | C088545 | 32.6 | C088545 | 33.0 | 0.50 | C088545 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 2.3 | C089899 | 2.3 | C089899 | 2.3 | 0.18 | C089899 |
| Nitrite (NO2) | mg/L | 0.0060 | C089899 | 0.0060 | C089899 | 0.0060 | 0.0033 | C089899 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | C097106 | <0.50 | C097106 | <0.50 | 0.50 | C097106 |
| Bicarbonate (HCO3) | mg/L | 7.36 | C097106 | 7.46 | C097106 | 7.43 | 0.50 | C097106 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (SO4) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (CaCO3) | mg/L | 32.5 | 0.50 | C088545 | 55.7 | 0.50 | C088545 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 2.2 | 0.18 | C089899 | 6.2 | 0.89 | C089899 |
| Nitrite (NO2) | mg/L | 0.0060 | 0.0033 | C089899 | 0.013 | 0.0033 | C089899 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | 0.50 | C097106 | <0.50 | 0.50 | C097106 |
| Bicarbonate (HCO3) | mg/L | 7.15 | 0.50 | C097106 | 6.20 | 0.50 | C097106 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (CaCO3) | mg/L | <0.50 | C089897 | <0.50 | 0.50 | C089897 |
| Total Hardness (CaCO3) | mg/L | <0.50 | C089822 | <0.50 | 0.50 | C089822 |
| Dissolved Nitrate (N) | mg/L | <0.0030 | C089831 | 0.0033 | 0.0030 | C089831 |
| Nitrate (NO3) | mg/L | <0.013 | C089899 | 0.015 | 0.013 | C089899 |
| Nitrite (NO2) | mg/L | <0.0033 | C089899 | <0.0033 | 0.0033 | C089899 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | C097106 | <0.50 | 0.50 | C097106 |
| Bicarbonate (HCO3) | mg/L | <0.50 | C097106 | <0.50 | 0.50 | C097106 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 | | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 | | | | | | | |



Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 | | | | | | | |



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## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 |
| 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 | | | | | | | |



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## 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.**



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## QUALITY ASSURANCE REPORT



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |

## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |

## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | | | |

## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 <= 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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

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Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 Extracted | Date Analyzed | Laboratory Method | Analytical Method |
|---|---|---|---|---|---|
| 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<br>BQL SOP-00017<br>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 (CaCO3) | mg/L | 58.6 | C049875 | 59.9 | C049875 | 58.2 | 0.50 | C049875 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 8.3 | C051244 | 8.3 | C051550 | 8.4 | 0.89 | C051550 |
| Nitrite (NO2) | mg/L | 0.013 | C051244 | 0.015 | C051550 | 0.014 | 0.0033 | C051550 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | C051893 | <0.50 | C051893 | <0.50 | 0.50 | C051893 |
| Bicarbonate (HCO3) | mg/L | 4.93 | C051893 | 5.24 | C051893 | 4.65 | 0.50 | C051893 |
| Carbonate (CO3) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (SO4) | 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 (CaCO3) | mg/L | 58.0 | C049875 | 59.3 | 0.50 | C049875 | 49.8 | 0.50 | C049875 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 9.5 | C051550 | 8.5 | 0.89 | C051550 | 6.1 | 0.89 | C051550 |
| Nitrite (NO2) | mg/L | 0.015 | C051550 | 0.016 | 0.0033 | C051550 | 0.014 | 0.0033 | C051550 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | C051893 | <0.50 | 0.50 | C051893 | <0.50 | 0.50 | C051893 |
| Bicarbonate (HCO3) | mg/L | 4.92 | C051893 | 4.73 | 0.50 | C051893 | 5.41 | 0.50 | C051893 |
| Carbonate (CO3) | 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.



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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 | | 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 | | | | | | | | | |



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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 | | 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 (CaCO3) | mg/L | 30.5 | C049875 | 30.7 | C049875 | 30.2 | 0.50 | C049875 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 2.2 | C051550 | 2.2 | C051550 | 2.2 | 0.18 | C051550 |
| Nitrite (NO2) | mg/L | 0.0040 | C051550 | 0.0040 | C051550 | <0.0033 | 0.0033 | C051550 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | C051893 | <0.50 | C051893 | <0.50 | 0.50 | C051893 |
| Bicarbonate (HCO3) | mg/L | 6.15 | C051893 | 6.02 | C051893 | 6.05 | 0.50 | C051893 |
| Carbonate (CO3) | 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



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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 | | 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 (SO4) | 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 | | | | | | | | |



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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 | | 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 (CaCO3) | mg/L | 31.0 | C049875 | 30.5 | 0.50 | C049875 | <0.50 | 0.50 | C049875 |
| Total Hardness (CaCO3) | 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 (NO3) | mg/L | 2.2 | C051550 | 2.2 | 0.18 | C051550 | <0.013 | 0.013 | C051244 |
| Nitrite (NO2) | mg/L | 0.0050 | C051550 | <0.0033 | 0.0033 | C051550 | <0.0033 | 0.0033 | C051244 |
| Sulphide (as H2S) | 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 CaCO3) | 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 CaCO3) | mg/L | <0.50 | C051893 | <0.50 | 0.50 | C051893 | <0.50 | 0.50 | C051893 |
| Bicarbonate (HCO3) | mg/L | 6.23 | C051893 | 6.10 | 0.50 | C051893 | <0.50 | 0.50 | C051893 |
| Carbonate (CO3) | 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.


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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 | | 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.


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## 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 | | | | | | | |



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## 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 | | | | | | | |



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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 | | | | | | | |



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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

## 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 | 0.0000050 | 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 | | | | | | | |



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## 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 | | | | | | | |



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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 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 Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

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 | 0.0000050 | 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 | | | | | | | |



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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

## 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 | | | | | | |



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## 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 | | | | | | |



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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

## 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 | | | | | | |


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## 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 | | | | |



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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 |
| 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 | | | | |



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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

## 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 | | | | |


Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

## 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.**



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## QUALITY ASSURANCE REPORT



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |

## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |

## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |



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## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 | | |

## QUALITY ASSURANCE REPORT(CONT'D)



| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % 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 <= 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

(3) Matrix Spike exceeds acceptance limits due to matrix interference. Reanalysis yields similar results.



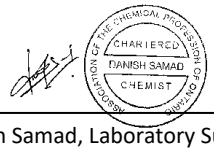
Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

Bureau Veritas Job #: C570633
Report Date: 2025/11/03

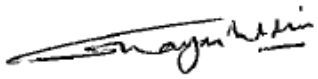
WSP Canada Inc.
Client Project #: August AEMP program
Site Location: 176233659
Your P.O. #: 470000200
Sampler Initials: AF

## VALIDATION SIGNATURE PAGE

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



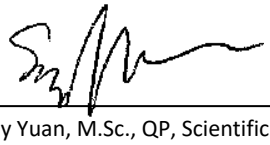

Danish Samad, Laboratory Supervisor



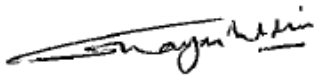
Ghayasuddin Khan, M.Sc., P.Chem., QP, Scientific Specialist, Inorganics



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.



Bureau Veritas Edmonton: 4326 76 Avenue NW T6B 2H8 Telephone (780)577-7100 Fax (780)450-4187

**C570633**
**2025/08/14 14:00**

Bureau Veritas
4326 76 Avenue NW, Edmonton, Alberta Canada T6B 2R4 Tel (780) 577-7100 Toll-free 800-563-6266 Fax (780) 450-4187 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 #: 761493 |
| 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) 681-6209 | Tel: | Fax: | Project Name: | | COC #: C#761493-01-01 | Project Manager: Melissa McIntosh |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com | Site #: | | | |
| | | | | Sampled By: | | | |

Regulatory Criteria:
- [ ] ATI
- [ ] CCME
- [ ] Other

Special Instructions

SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

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)**
Date Required:
Rush Confirmation Number: *(call lab for #)*

| | Sample Barcode Label | Sample (Location) Identification | Date Sampled | Time Sampled | Matrix | Metals Field Filtered ? (Y / N) | AEMP-Routine Parameters | AEMP - Nutrients | AEMP- Other Conventional | Chlorophyll-a in Water | Radium-226 Low Level | Low Level Total Metals with CV Hg | Low Level D. Metals w/ CV Hg-Diss | # of Bottles | Field pH / Temp Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SID#386086 | BRP-29A-1 | Aug 12, 2025 | 8:45 | Water | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | 19 | 6.66 / 11.37°C |
| 2 | SID#386087 | BRP-29A-2 | | 11:20 | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | 6.67 / 11.65°C |
| 3 | SID#386088 | BRP-29A-3 | | 10:20 | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | 6.65 / 11.44°C |
| 4 | SID#386089 | BRP-29A-4 | | 12:25 | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | 6.73 / 11.79°C |
| 5 | SID#386090 | BRP-29A-5 | | 13:40 | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | 6.73 / 12.10°C |
| 6 | SID#386091 | ~~BRP-31-3~~ | | | | | | | | | | | | | |
| 7 | SID#386092 | BRP-31-4 | | 14:40 | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | 7.16 / 12.35 |
| 8 | SID#386093 | BRP-32-1 | Aug 13, 2025 | 12:30 | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | 7.04 / 12.60°C |
| 9 | SID#386094 | BRP-32-2 | | 13:40 | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | 7.04 / 12.62°C |
| 10 | SID#386095 | BRP-32-3 | | 8:30 | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | 7.02 / 12.45°C |

| * 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: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Feldberg | 25/08/14 | 7:30 | TENZING CHOLAK | 25/08/15 | 15:15 | | ☐ | 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 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

Received in Yellowknife
By: J Hearn @ 14:45
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**

Bureau Veritas
4326 76 Avenue NW, Edmonton, Alberta Canada T6B 2R4 Tel (780) 577-7100 Toll-free 800-563-6266 Fax (780) 450-4137 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 #: 761493 |
| 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 | COC #: C#761493-02-01 | Project Manager: Melissa McIntosh |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Project Name: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com | Site #: | | | |
| | | | | Sampled By: | | | |

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☐ Other

Special Instructions

**SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS**

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

| | Sample Barcode Label | Sample (Location) Identification | Date Sampled | Time Sampled | Matrix | Metals Field Filtered ? (Y/N) | AEMP-Routine Parameters | AEMP - Nutrients | AEMP- Other Conventional | ~~Chlorophyll a in Water~~ | Radium-226 Low Level | Low Level Total Metals with CV Hg | Low Level D. Metals w/ CV Hg-Diss | # of Bottles | Field pH / T°Temp Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SID#386096 | BRP-32-4 | Aug 13, 2025 | 11:00 | water | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | 19 | 7.01 / 12.54°C |
| 2 | SID#386097 | BRP-32-5 | " | 9:50 | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | 6.97 / 12.49 |
| 3 | SID#386098 | ~~BRP-38-1~~ | | | | | | | | | | | | | |
| 4 | SID#386099 | ~~BRP-38-2~~ | | | | | | | | | | | | | |
| 5 | SID#386100 | ~~BRP-38-3~~ | | | | | | | | | | | | | |
| 6 | SID#386101 | ~~BRP-38-4~~ | | | | | | | | | | | | | |
| 7 | SID#386102 | ~~BRP-38-5~~ | | | | | | | | | | | | | |
| 8 | SID#386103 | FD | | | | | | | | | | | | | |
| 9 | SID#386104 | EB | | | | | | | | | | | | | |
| 10 | | FB | Aug 13, 2025 | 14:20 | | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | ~~7.04~~ MF only 2L of MF provided ~~7.01~~ NO iodc-free, half RA 226 NO Gen. IL |

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 #)

| * 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: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Feldberg | 25/08/14 | 7:30 | TENZING CHOLAK | 25/08/15 | 15:15 | | ☐ | See ACTK | ☐ 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

Received in Yellowknife
By: J Mercer @ 11:00
AUG 14 2025
See ACTK
Temp: / /
CS: NO Ice: Yes

BUREAU VERITAS

# ADDITIONAL COOLER TEMPERATURE RECORD

## CHAIN-OF-CUSTODY RECORD

**COOLER OBSERVATIONS:**

**BV RECEIPT#:** EYK-2025-08-045

| | CUSTODY SEAL | YES | NO | COOLER ID | | | | | CUSTODY SEAL | YES | NO | COOLER ID | | | | | CUSTODY SEAL | YES | NO | COOLER ID | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PRESENT | ✓ | | TEMP | 9 | 7 | 6 | 11 | PRESENT | | | TEMP | | | | 21 | PRESENT | | | TEMP | | | |
| | INTACT | ✓ | | | 1 | 2 | 3 | | INTACT | | | | 1 | 2 | 3 | | INTACT | | | | 1 | 2 | 3 |
| | ICE PRESENT | ✓ | | | | | | | ICE PRESENT | | | | | | | | ICE PRESENT | | | | | | |
| 2 | PRESENT | ✓ | | TEMP | 0 | 0 | 1 | 12 | PRESENT | | | TEMP | | | | 22 | PRESENT | | | TEMP | | | |
| | INTACT | ✓ | | | 1 | 2 | 3 | | INTACT | | | | 1 | 2 | 3 | | INTACT | | | | 1 | 2 | 3 |
| | ICE PRESENT | ✓ | | | | | | | ICE PRESENT | | | | | | | | ICE PRESENT | | | | | | |
| 3 | PRESENT | ✓ | | TEMP | 0 | 0 | 0 | 13 | PRESENT | | | TEMP | | | | 23 | PRESENT | | | TEMP | | | |
| | INTACT | ✓ | | | 1 | 2 | 3 | | INTACT | | | | 1 | 2 | 3 | | INTACT | | | | 1 | 2 | 3 |
| | ICE PRESENT | ✓ | | | | | | | ICE PRESENT | | | | | | | | ICE PRESENT | | | | | | |
| 4 | PRESENT | ✓ | | TEMP | 0 | 0 | 0 | 14 | PRESENT | | | TEMP | | | | 24 | PRESENT | | | TEMP | | | |
| | INTACT | ✓ | | | 1 | 2 | 3 | | INTACT | | | | 1 | 2 | 3 | | INTACT | | | | 1 | 2 | 3 |
| | ICE PRESENT | ✓ | | | | | | | ICE PRESENT | | | | | | | | ICE PRESENT | | | | | | |
| 5 | PRESENT | | | TEMP | | | | 15 | PRESENT | | | TEMP | | | | 25 | PRESENT | | | TEMP | | | |
| | INTACT | | | | 1 | 2 | 3 | | INTACT | | | | 1 | 2 | 3 | | INTACT | | | | 1 | 2 | 3 |
| | ICE PRESENT | | | | | | | | ICE PRESENT | | | | | | | | ICE PRESENT | | | | | | |
| 6 | PRESENT | | | TEMP | | | | 16 | PRESENT | | | TEMP | | | | 26 | PRESENT | | | TEMP | | | |
| | INTACT | | | | 1 | 2 | 3 | | INTACT | | | | 1 | 2 | 3 | | INTACT | | | | 1 | 2 | 3 |
| | ICE PRESENT | | | | | | | | ICE PRESENT | | | | | | | | ICE PRESENT | | | | | | |
| 7 | PRESENT | | | TEMP | | | | 17 | PRESENT | | | TEMP | | | | 27 | PRESENT | | | TEMP | | | |
| | INTACT | | | | 1 | 2 | 3 | | INTACT | | | | 1 | 2 | 3 | | INTACT | | | | 1 | 2 | 3 |
| | ICE PRESENT | | | | | | | | ICE PRESENT | | | | | | | | ICE PRESENT | | | | | | |
| 8 | PRESENT | | | TEMP | | | | 18 | PRESENT | | | TEMP | | | | 28 | PRESENT | | | TEMP | | | |
| | INTACT | | | | 1 | 2 | 3 | | INTACT | | | | 1 | 2 | 3 | | INTACT | | | | 1 | 2 | 3 |
| | ICE PRESENT | | | | | | | | ICE PRESENT | | | | | | | | ICE PRESENT | | | | | | |
| 9 | PRESENT | | | TEMP | | | | 19 | PRESENT | | | TEMP | | | | 29 | PRESENT | | | TEMP | | | |
| | INTACT | | | | 1 | 2 | 3 | | INTACT | | | | 1 | 2 | 3 | | INTACT | | | | 1 | 2 | 3 |
| | ICE PRESENT | | | | | | | | ICE PRESENT | | | | | | | | ICE PRESENT | | | | | | |
| 10 | PRESENT | | | TEMP | | | | 20 | PRESENT | | | TEMP | | | | 30 | PRESENT | | | TEMP | | | |
| | INTACT | | | | 1 | 2 | 3 | | INTACT | | | | 1 | 2 | 3 | | INTACT | | | | 1 | 2 | 3 |
| | ICE PRESENT | | | | | | | | ICE PRESENT | | | | | | | | ICE PRESENT | | | | | | |

| RECEIVED BY (SIGN & PRINT) | | DATE (YYYY/MM/DD) | TIME (HH:MM) |
|---|---|---|---|
| TENZING CHOLAK | TENZING CHOLAK | 25/08/15 | 15:15 |

| If Custody seal condition and presence of ice is the same for all, use these boxes: | CUSTODY SEAL | YES | NO |
|---|---|---|---|
| | PRESENT | | |
| | INTACT | | |
| | ICE PRESENT | | |

C570633
2025/08/14 14:00

BUREAU VERITAS

# ADDITIONAL COOLER TEMPERATURE RECORD

## CHAIN-OF-CUSTODY RECORD

**COOLER OBSERVATIONS:** WSP - B2 Golds

**BV RECEIPT#:** EYK-2025-08-045

| | CUSTODY SEAL | YES | NO | COOLER ID | | | |
|---|---|---|---|---|---|---|---|
| 1 | PRESENT | | | TEMP | 10 (1) | 7 (2) | 10 (3) |
| | INTACT | | | | | | |
| | ICE PRESENT | | | | | | |
| 2 | PRESENT | | | TEMP | 8 (1) | 9 (2) | 10 (3) |
| | INTACT | | | | | | |
| | ICE PRESENT | | | | | | |
| 3 | PRESENT | | | TEMP | 8 (1) | 8 (2) | 6 (3) |
| | INTACT | | | | | | |
| | ICE PRESENT | | | | | | |
| 4 | PRESENT | | | TEMP | 5 (1) | 5 (2) | 3 (3) |
| | INTACT | | | | | | |
| | ICE PRESENT | | | | | | |
| 5 | PRESENT | | | TEMP | 1 | 2 | 3 |
| | INTACT | | | | | | |
| | ICE PRESENT | | | | | | |
| 6 | PRESENT | | | TEMP | 1 | 2 | 3 |
| | INTACT | | | | | | |
| | ICE PRESENT | | | | | | |
| 7 | PRESENT | | | TEMP | 1 | 2 | 3 |
| | INTACT | | | | | | |
| | ICE PRESENT | | | | | | |
| 8 | PRESENT | | | TEMP | 1 | 2 | 3 |
| | INTACT | | | | | | |
| | ICE PRESENT | | | | | | |
| 9 | PRESENT | | | TEMP | 1 | 2 | 3 |
| | INTACT | | | | | | |
| | ICE PRESENT | | | | | | |
| 10 | PRESENT | | | TEMP | 1 | 2 | 3 |
| | INTACT | | | | | | |
| | ICE PRESENT | | | | | | |

| | CUSTODY SEAL | YES | NO | COOLER ID | | | |
|---|---|---|---|---|---|---|---|
| 11 | PRESENT | | | TEMP | 1 | 2 | 3 |
| | INTACT | | | | | | |
| | ICE PRESENT | | | | | | |
| 12 | PRESENT | | | TEMP | 1 | 2 | 3 |
| | INTACT | | | | | | |
| | ICE PRESENT | | | | | | |
| 13 | PRESENT | | | TEMP | 1 | 2 | 3 |
| | INTACT | | | | | | |
| | ICE PRESENT | | | | | | |
| 14 | PRESENT | | | TEMP | 1 | 2 | 3 |
| | INTACT | | | | | | |
| | ICE PRESENT | | | | | | |
| 15 | PRESENT | | | TEMP | 1 | 2 | 3 |
| | INTACT | | | | | | |
| | ICE PRESENT | | | | | | |
| 16 | PRESENT | | | TEMP | 1 | 2 | 3 |
| | INTACT | | | | | | |
| | ICE PRESENT | | | | | | |
| 17 | PRESENT | | | TEMP | 1 | 2 | 3 |
| | INTACT | | | | | | |
| | ICE PRESENT | | | | | | |
| 18 | PRESENT | | | TEMP | 1 | 2 | 3 |
| | INTACT | | | | | | |
| | ICE PRESENT | | | | | | |
| 19 | PRESENT | | | TEMP | 1 | 2 | 3 |
| | INTACT | | | | | | |
| | ICE PRESENT | | | | | | |
| 20 | PRESENT | | | TEMP | 1 | 2 | 3 |
| | INTACT | | | | | | |
| | ICE PRESENT | | | | | | |

| | CUSTODY SEAL | YES | NO | COOLER ID | | | |
|---|---|---|---|---|---|---|---|
| 21 | PRESENT | | | TEMP | 1 | 2 | 3 |
| | INTACT | | | | | | |
| | ICE PRESENT | | | | | | |
| 22 | PRESENT | | | TEMP | 1 | 2 | 3 |
| | INTACT | | | | | | |
| | ICE PRESENT | | | | | | |
| 23 | PRESENT | | | TEMP | 1 | 2 | 3 |
| | INTACT | | | | | | |
| | ICE PRESENT | | | | | | |
| 24 | PRESENT | | | TEMP | 1 | 2 | 3 |
| | INTACT | | | | | | |
| | ICE PRESENT | | | | | | |
| 25 | PRESENT | | | TEMP | 1 | 2 | 3 |
| | INTACT | | | | | | |
| | ICE PRESENT | | | | | | |
| 26 | PRESENT | | | TEMP | 1 | 2 | 3 |
| | INTACT | | | | | | |
| | ICE PRESENT | | | | | | |
| 27 | PRESENT | | | TEMP | 1 | 2 | 3 |
| | INTACT | | | | | | |
| | ICE PRESENT | | | | | | |
| 28 | PRESENT | | | TEMP | 1 | 2 | 3 |
| | INTACT | | | | | | |
| | ICE PRESENT | | | | | | |
| 29 | PRESENT | | | TEMP | 1 | 2 | 3 |
| | INTACT | | | | | | |
| | ICE PRESENT | | | | | | |
| 30 | PRESENT | | | TEMP | 1 | 2 | 3 |
| | INTACT | | | | | | |
| | ICE PRESENT | | | | | | |

| RECEIVED BY (SIGN & PRINT) | | DATE (YYYY/MM/DD) | TIME (HH:MM) |
|---|---|---|---|
| Jose Morris | | 2025/08/14 | 14:00 |

If Custody seal condition and presence of ice is the same for all, use these boxes:

| CUSTODY SEAL | YES | NO |
|---|---|---|
| PRESENT | | X |
| INTACT | | X |
| ICE PRESENT | ✓ | |

C570633
2025/08/14 14:00

Bureau Veritas
4000 19st N.E. Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 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. #: | | | 764869 |
| Address: | Park Place Suite 3400-666 Burrard St. | Address: | Saskatoon SK S7H 0T4 | Project: | September AEMP program | COC #: | Project Manager: |
| | VANCOUVER BC V6C 2X8 | | | Project Name: | | C#764869-01-01 | Melissa McIntosh |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Site #: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com | Sampled By: | | | |

Regulatory Criteria: ☐ ATI ☐ CCME ☐ Other

Special Instructions

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 filt) | Radium-226 Low Level | Un-ionized ammonia | Field pH | Field temperature | | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SID#390279 | ~~BRP-29A-1~~ | | | | | | | | | | | | | | | | |
| 2 | SID#390280 | ~~BRP-29A-2~~ | | | | | | | | | | | | | | | | |
| 3 | SID#390281 | ~~BRP-29A-3~~ | | | | | | | | | | | | | | | | |
| 4 | SID#390282 | BRP-29A-4 | 13 Sep 2025 | 8:30 | water | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 7.18 | 8.27 | | 19 | |
| 5 | SID#390283 | BRP-29A-5 | 13 Sep 2025 | 9:20 | water | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 7.03 | 8.27 | | | |
| 6 | SID#390284 | BRP-31-3 | 13 sep 2025 | 11:35 | water | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 7.07 | 8.47 | | | |
| 7 | SID#390285 | BRP-31-4 | 13 Sep. 2025 | 11:00 | water | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 7.02 | 8.43 | | | |
| 8 | SID#390286 | BRP-32-1 | 13 Sep 2025 | 12:50 | water | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 7.51 | 8.51 | | | |
| 9 | SID#390287 | BRP-32-2 | AP 13 Sep. 2025 | 9:45 | water | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 7.35 | 8.67 | | | |
| 10 | SID#390288 | BRP-32-3 | Sep 14, 2025 | 10:35 | Water | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 7.17 | 8.68 | | 19 | |

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 #)

| * 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: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Feldberg | 25/09/15 | 7:30 | Jeff Lemon | 2025/09/17 | 1530 | | ☐ | 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 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

C579084
EYK-2025-09-042

Received in Yellowknife
By:
SEP 16 2025
See ACTR
Temp: / /
COC: Jar:

C579084
2025/09/16 10:30



Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 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. #: | | | 764869 |
| Address: | Park Place Suite 3400-666 Burrard St. | Address: | | Project: | September AEMP program | COC #: | Project Manager: |
| | VANCOUVER BC V6C 2X8 | | Saskatoon SK S7H 0T4 | Project Name: | | C#764869-02-01 | Melissa McIntosh |
| Tel: | (604) 681-8371 Fax: (604) 681-6209 | Tel: | Fax: | Site #: | | | |
| Email: | BR.accountspayable@b2gold.com | Email: | beatriz.cupe.flores@wsp.com | Sampled By: | | | |

Regulatory Criteria: ☐ ATI ☐ CCME ☐ Other

Special Instructions:

SAMPLES MUST BE KEPT COOL ( < 10ºC ) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

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)**
Date Required:
Rush Confirmation Number: *(call lab for #)*

| | 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 filt) | Radium-226 Low Level | Un-ionized ammonia | Field pH | Field temperature | | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SID#390289 | BRP-32-4 | Sep 14, 2025 | 12:30 | water | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 7.13 | 8.77 | | 19 | |
| 2 | SID#390290 | BRP-32-5 | ↓ | 13:15 | water | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 7.14 | 8.81 | | 19 | |
| 3 | SID#390291 | BRP-38-1 | | | | | | | | | | | | | | | | |
| 4 | SID#390292 | BRP-38-2 | | | | | | | | | | | | | | | | |
| 5 | SID#390293 | BRP-38-3 | | | | | | | | | | | | | | | | |
| 6 | SID#390294 | BRP-38-4 | | | | | | | | | | | | | | | | |
| 7 | SID#390295 | BRP-38-5 | | | | | | | | | | | | | | | | |
| 8 | SID#390296 | FD | Sep 13, 2025 | 9:25 | water | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | — | — | | 19 | |
| 9 | SID#390297 | EB | Sep 14, 2025 | 13:55 | water | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | — | — | | 19 | Only ½ of 1L general bottle |
| 10 | | FB | Sep 13, 2025 | 11:55 | water | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | — | — | | 19 | |

| * 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: Time Sensitive | Temperature (°C) on Receipt | Custody Seal Intact on Cooler? |
|---|---|---|---|---|---|---|---|---|---|
| Adam Feldberg Cusson | 25/09/15 | 7:30 | Jeff Lomas | 2025/09/17 | 1630 | | ☐ | 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 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

Received in Yellowknife
By: J. Lee
SEP 16 2025
Temp: See ACTR
CS: _____ Ice: _____

Bureau Veritas Canada (2019) Inc.

# CERTIFICATE OF ANALYSIS

| | | | | | |
|---|---|---|---|---|---|
| **Work Order** | : | **YL2500981** | | | |
| 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<br>Vancouver British Columbia Canada V7X 1M7 | Address | : | 102-487 Range Lake Road<br>Yellowknife NT Canada X1A 3R9 |
| Telephone | : | ---- | E-mail | : | oliver.gregg@ALSGlobal.com |
| Project | : | September AEMP Program | Telephone | : | 1 867 445 7143 |
| PO | : | 10402 | Date Samples Received | : | 16-Sep-2025 11:45 |
| C-O-C number | : | ---- | Date Analysis Commenced | : | 30-Sep-2025 |
| Sampler | : | ---- | Issue Date | : | 02-Oct-2025 12:09 |
| 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.

| *Signatories* | *Position* | *Laboratory Department* |
|---|---|---|
| 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.

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# 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<br>Vancouver BC Canada V7X 1M7 | Address | : 102-487 Range Lake Road<br>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 Rec | Holding Times Actual | Eval | Analysis Date | Holding Times Rec | Holding Times Actual | Eval |
| **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

| *Analyte Group : Analytical Method* / Container / Client Sample ID(s) | Method | Sampling Date | Extraction / Preparation | | | | Analysis | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preparation Date | Holding Times Rec | Holding Times Actual | Eval | Analysis Date | Holding Times Rec | Holding Times Actual | Eval |
| **Field Tests : Field Volume (L)** | | | | | | | | | | |
| **Opaque HDPE tube** 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 Rec | Holding Times Actual | Eval | Analysis Date | Holding Times Rec | Holding Times Actual | Eval |
| **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 Rec | Holding Times Actual | Eval | Analysis Date | Holding Times Rec | Holding Times Actual | Eval |
| **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 | ---- | ---- | |

Matrix: **Water**

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

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

| *Analyte Group : Analytical Method* / Container / Client Sample ID(s) | Method | Sampling Date | Extraction / Preparation | | | | Analysis | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preparation Date | Holding Times Rec | Holding Times Actual | Eval | Analysis Date | Holding Times Rec | Holding Times Actual | Eval |
| **Field Tests : Field Volume (L)** | | | | | | | | | | |
| **Opaque HDPE tube** 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 | ---- | ---- | |

Matrix: **Water**

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

| Analyte Group : Analytical Method / Container / Client Sample ID(s) | Method | Sampling Date | Extraction / Preparation | | | | Analysis | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preparation Date | Holding Times Rec | Holding Times Actual | Eval | Analysis Date | Holding Times Rec | Holding Times Actual | Eval |
| **Field Tests : Field Volume (L)** | | | | | | | | | | |
| **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)** | | | | | | | | | | |
| **Opaque HDPE tube** BRP-38-1C | EF003 | 11-Sep-2025 | ---- | ---- | ---- | | 02-Oct-2025 | ---- | ---- | |
| **Field Tests : Field Volume (L)** | | | | | | | | | | |
| **Opaque HDPE tube** BRP-38-2A | EF003 | 11-Sep-2025 | ---- | ---- | ---- | | 02-Oct-2025 | ---- | ---- | |
| **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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| **Opaque HDPE tube** BRP-38-3B | EF003 | 11-Sep-2025 | ---- | ---- | ---- | | 02-Oct-2025 | ---- | ---- | |
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| **Opaque HDPE tube** BRP-38-3C | EF003 | 11-Sep-2025 | ---- | ---- | ---- | | 02-Oct-2025 | ---- | ---- | |
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| **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 | ✓ |

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| **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 | ✓ |
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| **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 | ✓ |
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| **Opaque HDPE tube** BRP-29A-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-31-3B | 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-32-1A | 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-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 | ✓ |
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| **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)** | | | | | | | | | | |
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| **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 | ✓ |

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| **Opaque HDPE tube** 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** 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** 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 Rec | Holding Times Actual | Eval | Analysis Date | Holding Times Rec | Holding Times Actual | Eval |
| **Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)** | | | | | | | | | | |
| **Opaque HDPE tube** BRP-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 Rec | Holding Times Actual | Eval | Analysis Date | Holding Times Rec | Holding Times Actual | Eval |
| **Plant Pigments : Chlorophyll-a by Fluorometry (Field Filtered µg)** | | | | | | | | | | |
| **Opaque HDPE tube** 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<br>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<br>ALS Environmental - Vancouver | Water | CALC | Convert results to sample concentration based on field information. |
| Field Volume (L) | EF003<br>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<br>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<br>Vancouver BC Canada V7X 1M7 | Address | : 102-487 Range Lake Road<br>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 (%) | | |
| 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 | ---- |

# Chain of Custody (COC) / Analytical Request Form

www.alsglobal.com

**Canada Toll Free: 1 800 668 9878**

COC Number: **22 -**

Page 1 of 8

| 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.accountspayable@B2gold.com |

**Reports / Recipients**

Select Report Format: ☑ PDF ☑ EXCEL ☑ EDD (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.cupe.flores@wsp.com

Email 2: jennifer.arens@wsp.com

Email 3: br.environment@b2gold.com

**Invoice Recipients**

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☑ FAX

Email 1 or Fax: (604) 681-6209

Email 2: BR.accountspayable@b2gold.com

**Oil and Gas Required Fields (client use)**

AFE/Cost Center: | PO#

Major/Minor Code: | Routing Code:

**Project Information**

**ALS Client Code / QUOTE #:** YL23-SABI100-001

**Job / Project #:** September AEMP program

PO / AFE:

LSD:

Requisitioner:

Location:

**ALS Lab Work Order # (ALS use only):**

**ALS Contact:** Oliver Gregg

**Sampler:**

**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 [E2] if received by 10am M-S - 200% rush surcharge.

**AFFIX ALS BARCODE LABEL HERE (ALS use only)**

Additional fees may apply to rush requests on weekends, statutory holidays and for non-routine tests.

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

**For all tests with rush TATs requested, please contact your AM to confirm availability.**

**Analysis Request**

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

| ALS Sample # (ALS use only) | Sample Identification and/or Coordinates (This description will appear on the report) | Date (dd-mmm-yy) | Time (hh:mm) | Sample Type | NUMBER OF CONTAINERS | Chlorophyll a in Water | Total Volume Filtered (L) | Total Filters Used (0.45 um) | SAMPLES ON HOLD | EXTENDED STORAGE REQUIRED | SUSPECTED HAZARD (see notes) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | BRP-29A-1A | 10-Sep-25 | 11:50 | chlorophylla | 1 | ✓ | 1 | 2 | | | |
| | BRP-29A-1B | ↓ | ↓ | ↓ | ↓ | ✓ | 1 | 2 | | | |
| | BRP-29A-1C | ↓ | ↓ | ↓ | ↓ | ✓ | 1 | 1 MF | | | |
| | BRP-29A-2A | ↓ | 13:20 | ↓ | ↓ | ✓ | 0.5 | 1 | | | |
| | BRP-29A-2B | ↓ | ↓ | ↓ | ↓ | ✓ | 1 | 2 | | | |
| | BRP-29A-2C | ↓ | ↓ | ↓ | ↓ | ✓ | 1 | 2 | | | |
| | BRP-29A-3A | ↓ | 14:40 | ↓ | ↓ | ✓ | 1 | 2 | | | |
| | BRP-29A-3B | ↓ | ↓ | ↓ | ↓ | ✓ | 1 | 2 | | | |
| | BRP-29A-3C | ↓ | ↓ | ↓ | ↓ | ✓ | 1 | 2 | | | |
| | BRP-29A-4A | 13 Sep 25 | 8:50 | ↓ | ↓ | ✓ | 1 | 2 | | | |
| | BRP-29A-4B | ↓ | ↓ | ↓ | ↓ | ✓ | 1 | 2 | | | |
| | BRP-29A-4C | ↓ | ↓ | ↓ | ↓ | ✓ | 1 | 2 | | | |

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

Are samples taken from a Regulated DW System? ☐ YES ☐ NO

Are samples for human consumption/ use? ☐ YES ☐ NO

**Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)**

Report to: gld.GAL_EQUIS@wsp.com ; nfallon@hatfieldgroup.com ; tlewis@hatfieldgroup.com ; ibystron@hatfieldgroup.com ; zlu@hatfieldgroup.com ; dkock@hatfieldgroup.com

**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 | | | |
|---|---|---|---|---|---|---|---|
| -0.8 | | | | | | | |

**SHIPMENT RELEASE (client use)**

| Released by: | Date: | Time: |
|---|---|---|
| Adam Feldberg | Sept 15, 2025 | 16:00 |

**INITIAL SHIPMENT RECEPTION (ALS use only)**

| Received by: | Date: | Time: |
|---|---|---|
| [illegible] | Sept 16/25 | 1145 |

**FINAL SHIPMENT RECEPTION (ALS use only)**

| Received by: | Date: | Time |
|---|---|---|
| | | |

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

MAY 2020 FRONT

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

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

Environmental Division
Yellowknife
Work Order Reference
YL2500981

Telephone : +1 867 873 5593

# Chain of Custody (COC) / Analytical Request Form

www.alsglobal.com

**Canada Toll Free: 1 800 668 9878**

COC Number: **22 -**

Page 2 of 8

| **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.accountspayable@B2gold.com |

**Reports / Recipients**

Select Report Format: ☑ PDF ☑ EXCEL ☑ EDD (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.cupe.flores@wsp.com

Email 2: jennifer.arens@wsp.com

Email 3: br.environment@b2gold.com

**Invoice Recipients**

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☑ FAX

Email 1 or Fax: (604) 681-6209

Email 2: BR.accountspayable@b2gold.com

**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 [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.

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

For all tests with rush TATs requested, please contact your AM to confirm availability.

**AFFIX ALS BARCODE LABEL HERE (ALS use only)**

**Project Information**

**ALS Client Code / QUOTE #:** YL23-SABI100-001

**Job / Project #:** September AEMP program

PO / AFE:

LSD:

**Oil and Gas Required Fields (client use)**

AFE/Cost Center: | PO#

Major/Minor Code: | Routing Code:

Requisitioner:

Location:

**ALS Lab Work Order # (ALS use only):**

**ALS Contact:** Oliver Gregg **Sampler:**

**Analysis Request**

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

| ALS Sample # (ALS use only) | Sample Identification and/or Coordinates (This description will appear on the report) | Date (dd-mmm-yy) | Time (hh:mm) | Sample Type | NUMBER OF CONTAINERS | Chlorophyll a in Water | Total Volume Filtered (L) | Total Filters Used (0.45 um) | SAMPLES ON HOLD | EXTENDED STORAGE REQUIRED | SUSPECTED HAZARD (see notes) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | BRP-29A-5A | 13-Sep-25 | 9:42 | Chlorophyll a | 1 | ✓ | 1 | 2 | | | |
| | BRP-29A-5B | ↓ | ↓ | ↓ | | ✓ | ↓ | ↓ | | | |
| | BRP-29A-5C | ↓ | ↓ | ↓ | | ✓ | ↓ | ↓ | | | |
| | BRP-31-3A | ↓ | 11:50 | ↓ | | ✓ | ↓ | ↓ | | | |
| | BRP-31-3B | ↓ | ↓ | ↓ | | ✓ | ↓ | ↓ | | | |
| | BRP-31-3C | ↓ | ↓ | ↓ | | ✓ | ↓ | ↓ | | | |
| | BRP-31-4A | ↓ | 11:14 | ↓ | | ✓ | ↓ | ↓ | | | |
| | BRP-31-4B | ↓ | ↓ | ↓ | | ✓ | ↓ | ↓ | | | |
| | BRP-31-4C | ↓ | ↓ | ↓ | | ✓ | ↓ | ↓ | | | |
| | BRP-32-1A | ↓ | 13:10 | ↓ | | ✓ | ↓ | ↓ | | | |
| | BRP-32-1B | ↓ | ↓ | ↓ | | ✓ | ↓ | ↓ | | | |
| | BRP-32-1C | ↓ | ↓ | ↓ | | ✓ | ↓ | ↓ | | | |

Continued on Back

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

Are samples taken from a Regulated DW System?
☐ YES ☐ NO

Are samples for human consumption/ use?
☐ YES ☐ NO

**Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)**

Report to: gld.GAL_EQUIS@wsp.com ; nfallon@hatfieldgroup.com ; tlewis@hatfieldgroup.com ; ibystron@hatfieldgroup.com ; zlu@hatfieldgroup.com ; dkock@hatfieldgroup.com

**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: | Date: | Time: |
|---|---|---|
| Adam Feldberg | Sep 15, 2025 | 16:00 |

**INITIAL SHIPMENT RECEPTION (ALS use only)**

| Received by: | Date: | Time: |
|---|---|---|
| | | |

**FINAL SHIPMENT RECEPTION (ALS use only)**

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REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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

# Chain of Custody (COC) / Analytical Request Form

COC Number: 22 -



www.alsglobal.com

Canada Toll Free: 1 800 668 9878

| 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.accountspayable@B2gold.com |

**Project Information**

| | |
|---|---|
| **ALS Client Code / QUOTE #:** | YL23-SABI100-001 |
| **Job / Project #:** | September AEMP program |
| PO / AFE: | |
| LSD: | |
| **ALS Lab Work Order # (ALS use only):** | |

**Reports / Recipients**

Select Report Format: ☑ PDF ☑ EXCEL ☑ EDD (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.cupe.flores@wsp.com

Email 2: jennifer.arens@wsp.com

Email 3: br.environment@b2gold.com

**Invoice Recipients**

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☑ FAX

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**Oil and Gas Required Fields (client use)**

| | |
|---|---|
| AFE/Cost Center: | PO# |
| Major/Minor Code: | Routing Code: |
| Requisitioner: | |
| Location: | |

**ALS Contact:** Oliver Gregg **Sampler:**

**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
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Additional fees may apply to rush requests on weekends, statutory holidays and for non-routine tests.

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

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AFFIX ALS BARCODE LABEL HERE (ALS use only)

**Analysis Request**

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

| ALS Sample # (ALS use only) | Sample Identification and/or Coordinates (This description will appear on the report) | Date (dd-mmm-yy) | Time (hh:mm) | Sample Type | NUMBER OF CONTAINERS | Chlorophyll a in Water | Total Volume Filtered (L) | Total Filters Used (0.45 um) | SAMPLES ON HOLD | EXTENDED STORAGE REQUIRED | SUSPECTED HAZARD (see notes) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | BRP-32-2A | 14 Sep 25 | 10:00 | chlorophyll a | 1 | ✓ | 1 | 2 | | | |
| | BRP-32-2B | ↓ | ↓ | ↓ | ↓ | ✓ | ↓ | ↓ | | | |
| | BRP-32-2C | ↓ | ↓ | ↓ | ↓ | ✓ | ↓ | ↓ | | | |
| | BRP-32-3A | ↓ | 10:45 | ↓ | ↓ | ✓ | ↓ | ↓ | | | |
| | BRP-32-3B | ↓ | ↓ | ↓ | ↓ | ✓ | ↓ | ↓ | | | |
| | BRP-32-3C | ↓ | ↓ | ↓ | ↓ | ✓ | ↓ | ↓ | | | |
| | BRP-32-4A | ↓ | 12:45 | ↓ | ↓ | ✓ | ↓ | ↓ | | | |
| | BRP-32-4B | ↓ | ↓ | ↓ | ↓ | ✓ | ↓ | ↓ | | | |
| | BRP-32-4C | ↓ | ↓ | ↓ | ↓ | ✓ | ↓ | ↓ | | | |
| | BRP-32-5A | ↓ | 13:25 | ↓ | ↓ | ✓ | ↓ | ↓ | | | |
| | BRP-32-5B | ↓ | ↓ | ↓ | ↓ | ✓ | ↓ | ↓ | | | |
| | BRP-32-5C | ↓ | ↓ | ↓ | ↓ | ✓ | ↓ | ↓ | | | |

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

Are samples taken from a Regulated DW System? ☐ YES ☐ NO

Are samples for human consumption/ use? ☐ YES ☐ NO

**Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)**

Report to: gld.GAL_EQUIS@wsp.com ; nfallon@hatfieldgroup.com ; tlewis@hatfieldgroup.com ; ibystron@hatfieldgroup.com ; zlu@hatfieldgroup.com ; dkock@hatfieldgroup.com

**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 | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

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| Adam Feldberg | Sept 15 - 2025 | 16:00 |

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www.alsglobal.com

**Canada Toll Free: 1 800 668 9878**

COC Number: **22 -**

Page 4 of 8

| **Report To** | Contact and company name below will appear on the final report |
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| 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.accountspayable@B2gold.com |

**Reports / Recipients**

Select Report Format: ☑ PDF ☑ EXCEL ☑ EDD (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

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**Project Information**

**ALS Client Code / QUOTE #:** YL23-SABI100-001

**Job / Project #:** September AEMP program

PO / AFE:

LSD:

**Oil and Gas Required Fields (client use)**

AFE/Cost Center: PO#

Major/Minor Code: Routing Code:

Requisitioner:

Location:

**ALS Lab Work Order # (ALS use only):**

**ALS Contact:** Oliver Gregg **Sampler:**

**Analysis Request**

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

| ALS Sample # (ALS use only) | Sample Identification and/or Coordinates (This description will appear on the report) | Date (dd-mmm-yy) | Time (hh:mm) | Sample Type | NUMBER OF CONTAINERS | Chlorophyll a in Water | Total Volume Filtered (L) | Total Filters Used (0.45 um) | SAMPLES ON HOLD | EXTENDED STORAGE REQUIRED | SUSPECTED HAZARD (see notes) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | BRP-38-1A | 11-Sep-25 | 9:35 | Chlorophyll a | 1 | ✓ | 1 | 2 | | | |
| | BRP-38-1B | ↓ | ↓ | ↓ | | ✓ | 1 | 2 ← 2 filters -uf | | | |
| | BRP-38-1C | | | | | ✓ | 1 | 2 | | | |
| | BRP-38-2A | | 10:25 | | | ✓ | 1 | 2 | | | |
| | BRP-38-2B | | ↓ | | | ✓ | 1 | 2 | | | |
| | BRP-38-2C | | | | | ✓ | 1 | 2 | | | |
| | BRP-38-3A | | 11:22 | | | ✓ | 1 | 2 | | | |
| | BRP-38-3B | | ↓ | | | ✓ | 0.5 | 1 | | | |
| | BRP-38-3C | | | | | ✓ | 0.5 | 1 | | | |
| | BRP-38-4A | | 12:40 | | | ✓ | 0.5 | 1 | | | |
| | BRP-38-4B | | ↓ | | | ✓ | 0.5 | 1 | | | |
| | BRP-38-4C | ↓ | ↓ | ↓ | | ✓ | 0.5 | 1 | | | |

Continued on Back

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

Are samples taken from a Regulated DW System?
☐ YES ☐ NO

Are samples for human consumption/ use?
☐ YES ☐ NO

**Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)**

Report to: gld.GAL_EQUIS@wsp.com ; nfallon@hatfieldgroup.com ; tlewis@hatfieldgroup.com ; ibystron@hatfieldgroup.com ; zlu@hatfieldgroup.com ; dkock@hatfieldgroup.com

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| INITIAL COOLER TEMPERATURES °C | | | | FINAL COOLER TEMPERATURES °C | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

**SHIPMENT RELEASE (client use)**

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|---|---|---|
| Adam Feldberg | 15 Sep. 2025 | 16:00 |

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COC Number: 22 -



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| 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.accountspayable@B2gold.com |

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| | |
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| ALS Client Code / QUOTE #: | YL23-SABI100-001 |
| Job / Project #: | September AEMP program |
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| LSD: | |
| ALS Lab Work Order # (ALS use only): | |

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| Requisitioner: | |
| Location: | |

ALS Contact: Oliver Gregg Sampler:

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|---|---|---|---|---|---|---|---|---|---|---|---|
| | BRP-38-5A | 11-Sep-25 | 13:20 | Chlorophyll a | 1 | ✓ | 0.5 | 1 | | | |
| | BRP-38-5B | ↓ | ↓ | ↓ | 1 | ✓ | 0.5 | 1 | | | |
| | BRP-38-5C | ↓ | ↓ | ↓ | 1 | ✓ | 0.5 | 1 | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2um-BRP-29A-1A | 10 Sep 25 | 11:50 | Chlorophyll a | 1 | / | 1 | 1 | | | |
| | 1.2um-BRP-29A-1B | | | | | / | 1 | 1 | | | |
| | 1.2um-BRP-29A-1C | | | | | / | 1 | 1 | | | |
| | 1.2um-BRP-29A-2A | | 13:20 | | | / | 0.5 | 1 | | | |
| | 1.2um-BRP-29A-2B | | | | | / | 1 | 2 | | | |
| | 1.2um-BRP-29A-2C | | | | | / | 1 | 1 | | | |
| | 1.2um-BRP-29A-3A | | 14:40 | | | / | 1 | 1 | | | |
| | 1.2um-BRP-29A-3B | | | | | / | 1 | 1 | | | |
| | 1.2um-BRP-29A-3C | | | | | / | 1 | 1 | | | |
| | 1.2um-BRP-32-1A | 13 Sep 25 | 13:10 | | | / | 1 | 2 | | | |
| | 1.2um-BRP-32-1B | | | | | / | 1 | 2 | | | |
| | 1.2um-BRP-32-1C | | | | | / | 1 | 2 | | | |

continued on Back →

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**Reports / Recipients**

Select Report Format: ☑ PDF ☑ EXCEL ☑ EDD (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.cupe.flores@wsp.com

Email 2: jennifer.arens@wsp.com

Email 3: br.environment@b2gold.com

**Invoice Recipients**

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☑ FAX

Email 1 or Fax: (604) 681-6209

Email 2: BR.accountspayable@b2gold.com

**Oil and Gas Required Fields (client use)**

AFE/Cost Center: PO#

Major/Minor Code: Routing Code:

Requisitioner:

Location:

ALS Contact: Oliver Gregg Sampler:

**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 [E2] if received by 10am M-S - 200% rush surcharge.

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Additional fees may apply to rush requests on weekends, statutory holidays and for non-routine tests.

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

For all tests with rush TATs requested, please contact your AM to confirm availability.

**Analysis Request**

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

| ALS Sample # (ALS use only) | Sample Identification and/or Coordinates (This description will appear on the report) | Date (dd-mmm-yy) | Time (hh:mm) | Sample Type | NUMBER OF CONTAINERS | Chlorophyll a in Water | Total Volume Filtered (L) | Total Filters Used (1.2 um) | SAMPLES ON HOLD | EXTENDED STORAGE REQUIRED | SUSPECTED HAZARD (see notes) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2um-BRP-32-2A | 14 Sep 25 | 10:00 | Chlorophylla | 1 | ✓ | 1 | 2 | | | |
| | 1.2um-BRP-32-2B | ↓ | ↓ | ↓ | ↓ | ✓ | 1 | 2 | | | |
| | 1.2um-BRP-32-2C | ↓ | ↓ | ↓ | ↓ | ✓ | 1 | 2 | | | |
| | 1.2um-BRP-32-3A | ↓ | 10:45 | ↓ | ↓ | ✓ | 1 | 2 | | | |
| | 1.2um-BRP-32-3B | ↓ | ↓ | ↓ | ↓ | ✓ | 1 | 1 | | | |
| | 1.2um-BRP-32-3C | ↓ | ↓ | ↓ | ↓ | ✓ | 1 | 1 | | | |
| | 1.2um-BRP-38-1A | 11 Sep 25 | 9:35 | ↓ | ↓ | ✓ | 1 | 1 | | | |
| | 1.2um-BRP-38-1B | ↓ | ↓ | ↓ | ↓ | ✓ | 1 | 2 MF | | | |
| | 1.2um-BRP-38-1C | ↓ | ↓ | ↓ | ↓ | ✓ | 1 | 1 | | | |
| | 1.2um-BRP-38-2A | ↓ | 10:25 | ↓ | ↓ | ✓ | 1 | 1 | | | |
| | 1.2um-BRP-38-2B | ↓ | ↓ | ↓ | ↓ | ✓ | 0.5 | 1 | | | |
| | 1.2um-BRP-38-2C | ↓ | ↓ | ↓ | ↓ | ✓ | 0.5 | 1 | | | |

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

Are samples taken from a Regulated DW System? ☐ YES ☐ NO

Are samples for human consumption/ use? ☐ YES ☐ NO

**Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)**

Report to: gld.GAL_EQUIS@wsp.com ; nfallon@hatfieldgroup.com ; tlewis@hatfieldgroup.com ; ibystron@hatfieldgroup.com ; zlu@hatfieldgroup.com ; dkock@hatfieldgroup.com

**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: | Date: | Time: |
|---|---|---|
| Adam Feldberg | 15 Sep 2025 | 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

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

MAY 2023 FRONT

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

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

# Chain of Custody (COC) / Analytical Request Form

www.alsglobal.com

**Canada Toll Free: 1 800 668 9878**

COC Number: **22 -**

Page 8 of 8

| **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.accountspayable@B2gold.com |

**Reports / Recipients**

Select Report Format: ☑ PDF ☑ EXCEL ☑ EDD (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.cupe.flores@wsp.com

Email 2: jennifer.arens@wsp.com

Email 3: br.environment@b2gold.com

**Invoice Recipients**

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☑ FAX

Email 1 or Fax: (604) 681-6209

Email 2: BR.accountspayable@b2gold.com

**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 [E2] if received by 10am M-S - 200% rush surcharge.

**AFFIX ALS BARCODE LABEL HERE (ALS use only)**

Additional fees may apply to rush requests on weekends, statutory holidays and for non-routine tests.

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

**For all tests with rush TATs requested, please contact your AM to confirm availability.**

| **Project Information** | | **Oil and Gas Required Fields (client use)** | |
|---|---|---|---|
| **ALS Client Code / QUOTE #:** | YL23-SABI100-001 | AFE/Cost Center: | PO# |
| **Job / Project #:** | September AEMP program | Major/Minor Code: | Routing Code: |
| PO / AFE: | | Requisitioner: | |
| LSD: | | Location: | |
| **ALS Lab Work Order # (ALS use only):** | | **ALS Contact:** Oliver Gregg | **Sampler:** |

**Analysis Request**

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

| ALS Sample # (ALS use only) | Sample Identification and/or Coordinates (This description will appear on the report) | Date (dd-mmm-yy) | Time (hh:mm) | Sample Type | NUMBER OF CONTAINERS | Chlorophyll a in Water | Total Volume Filtered (L) | Total Filters Used (1.2 um) | SAMPLES ON HOLD | EXTENDED STORAGE REQUIRED | SUSPECTED HAZARD (see notes) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1.2um-~~BRP-32-3A~~ BRP-38-3A | 11 Sep 25 | 11:22 | chlorophyll a | 1 | ✓ | 1 | 1 | | | |
| | 1.2um-~~BRP-32-3B~~ BRP-38-3B | ↓ | ↓ | | 1 | ✓ | 0.5 | 1 | | | |
| | 1.2um-~~BRP-32-3C~~ BRP-38-3C | | | | 1 | ✓ | 0.5 | 1 | | | |
| | ~~1.2um-BRP-32-3A~~ | | | | | | | | | | |
| | ~~1.2um-BRP-32-3B~~ | | | | | | | | | | |
| | ~~1.2um-BRP-32-3C~~ | | | | | | | | | | |

| **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 ; nfallon@hatfieldgroup.com ; tlewis@hatfieldgroup.com ; ibystron@hatfieldgroup.com ; zlu@hatfieldgroup.com ; dkock@hatfieldgroup.com |

**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)** | | | **INITIAL SHIPMENT RECEPTION (ALS use only)** | | | **FINAL SHIPMENT RECEPTION (ALS use only)** | | |
|---|---|---|---|---|---|---|---|---|
| Released by: | Date: | Time: | Received by: | Date: | Time: | Received by: | Date: | Time: |
| Adam Feldberg | 15 Sep 2025 | 16:00 | | | | | | |

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

MAY 2023 FRONT

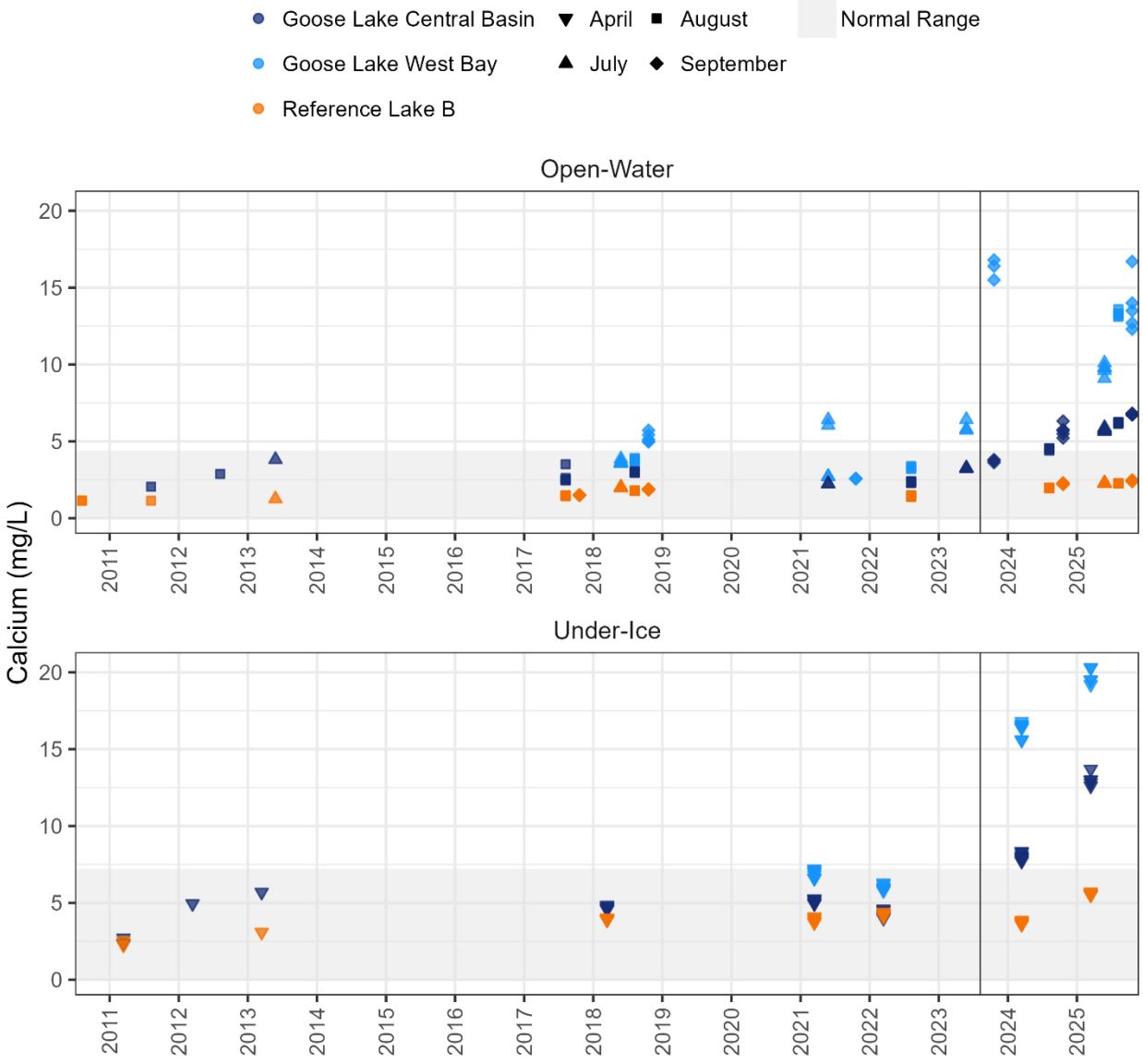
Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

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

**APPENDIX E**

# 2025 Water Quality – Time Series Plots

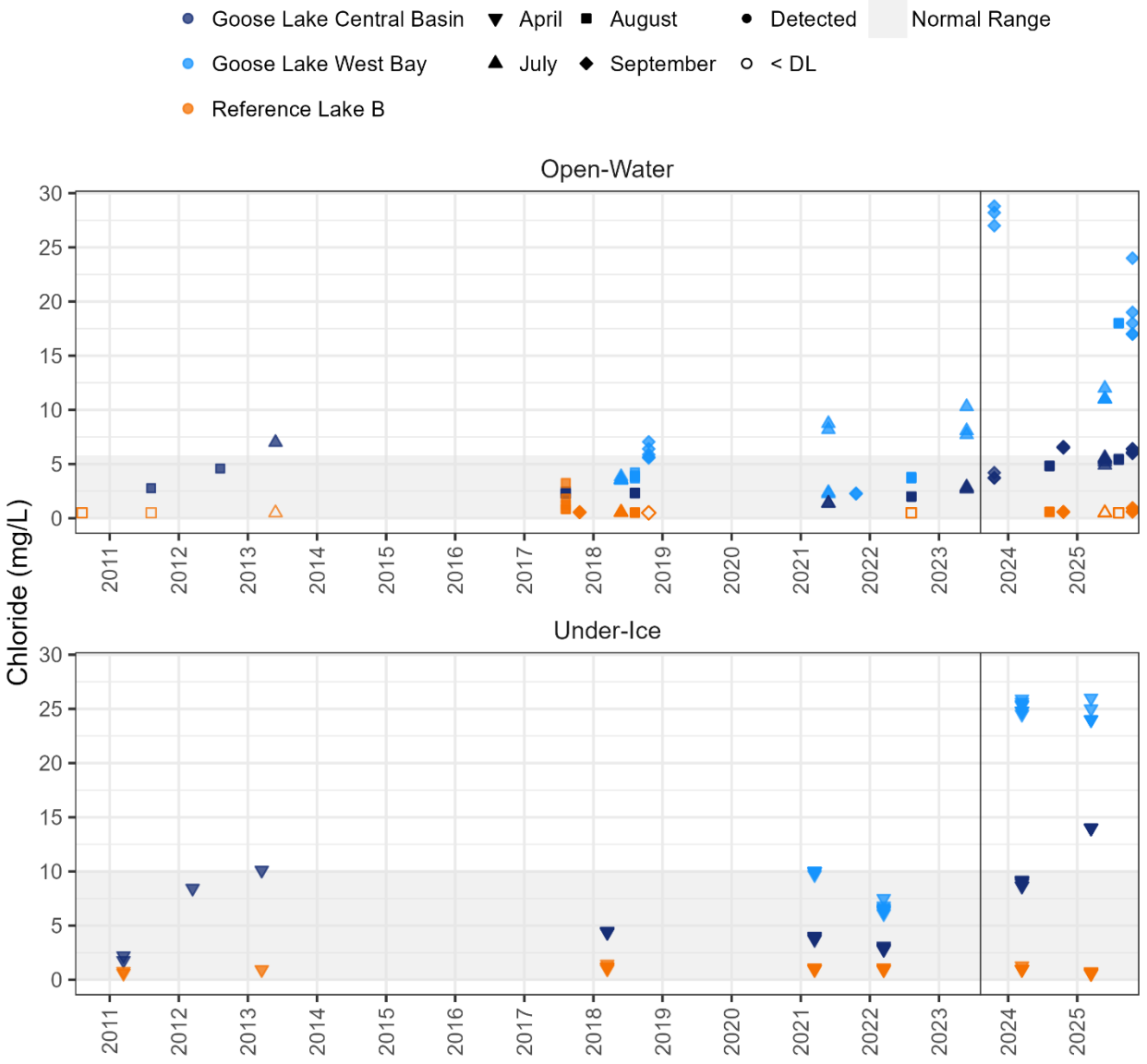
# 1 CALCIUM




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.

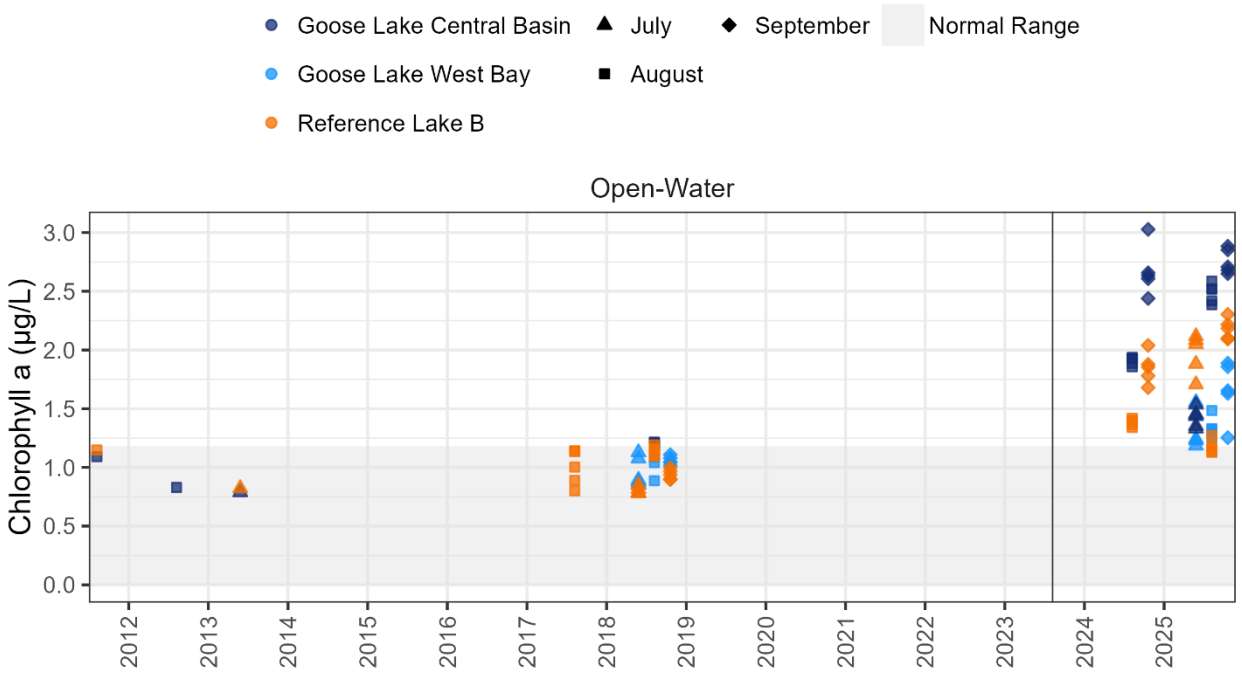
# 2 CHLORIDE




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.

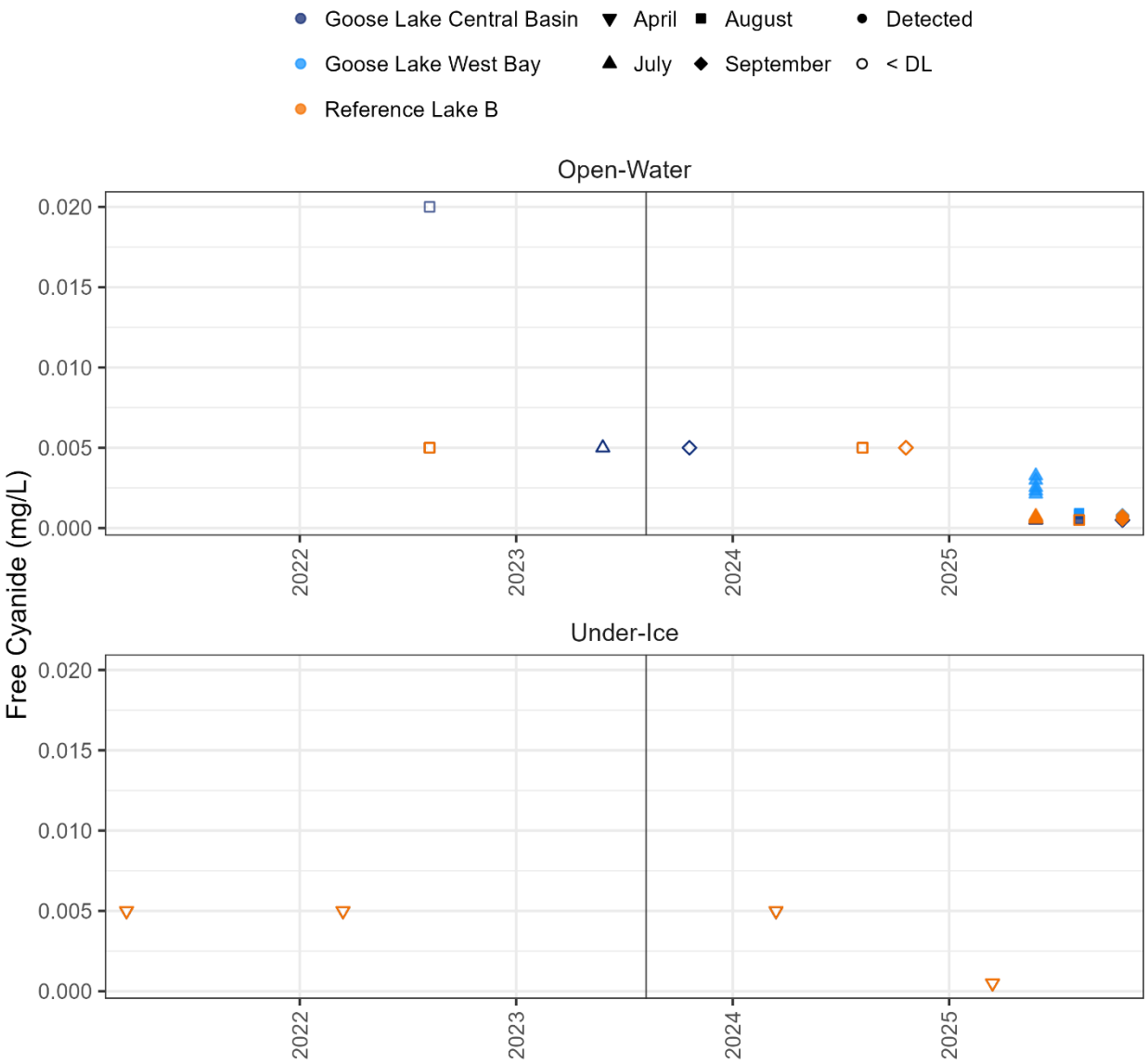
# 3 CHLOROPHYLL A




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.

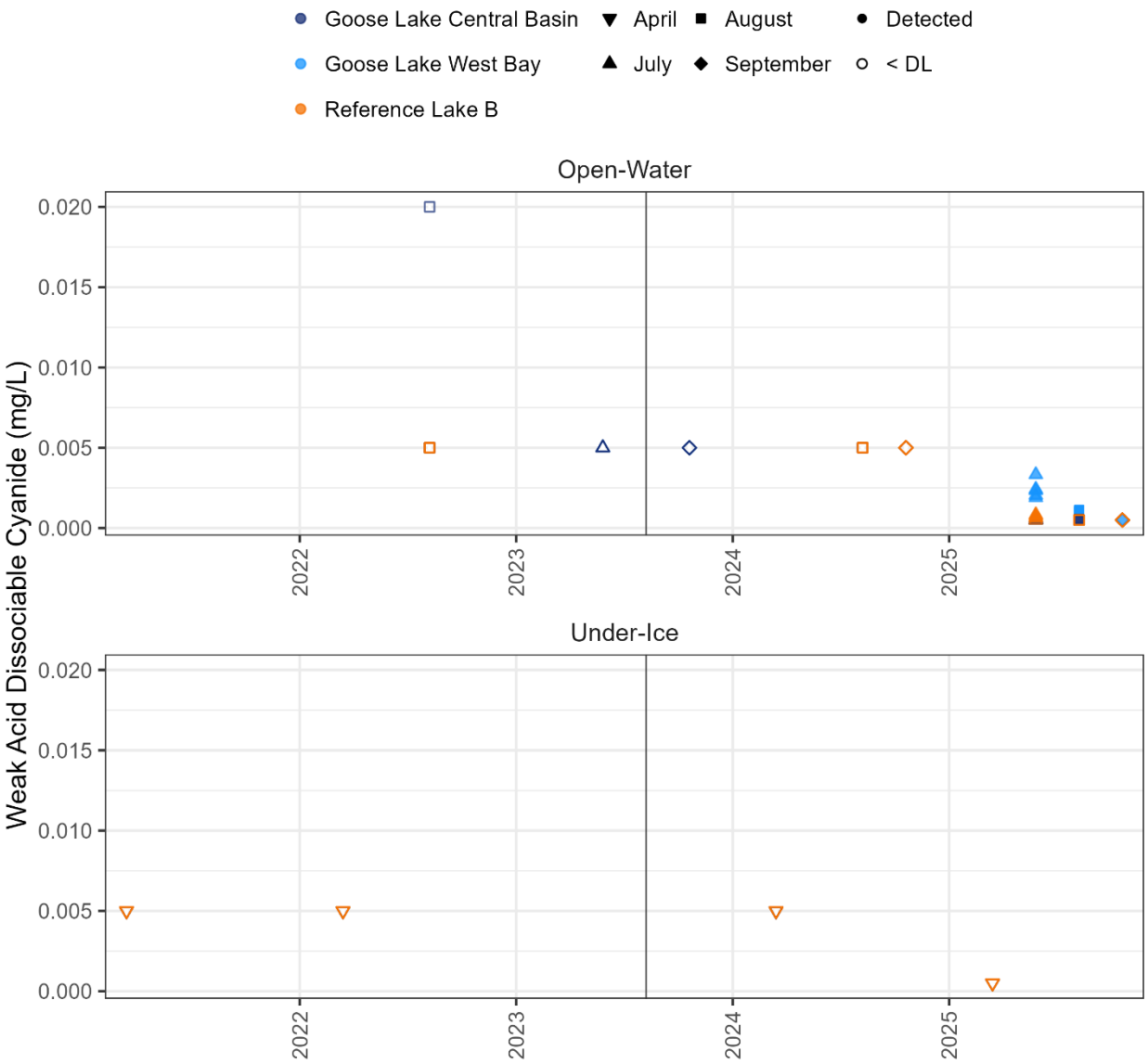
# 4 FREE CYANIDE




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.

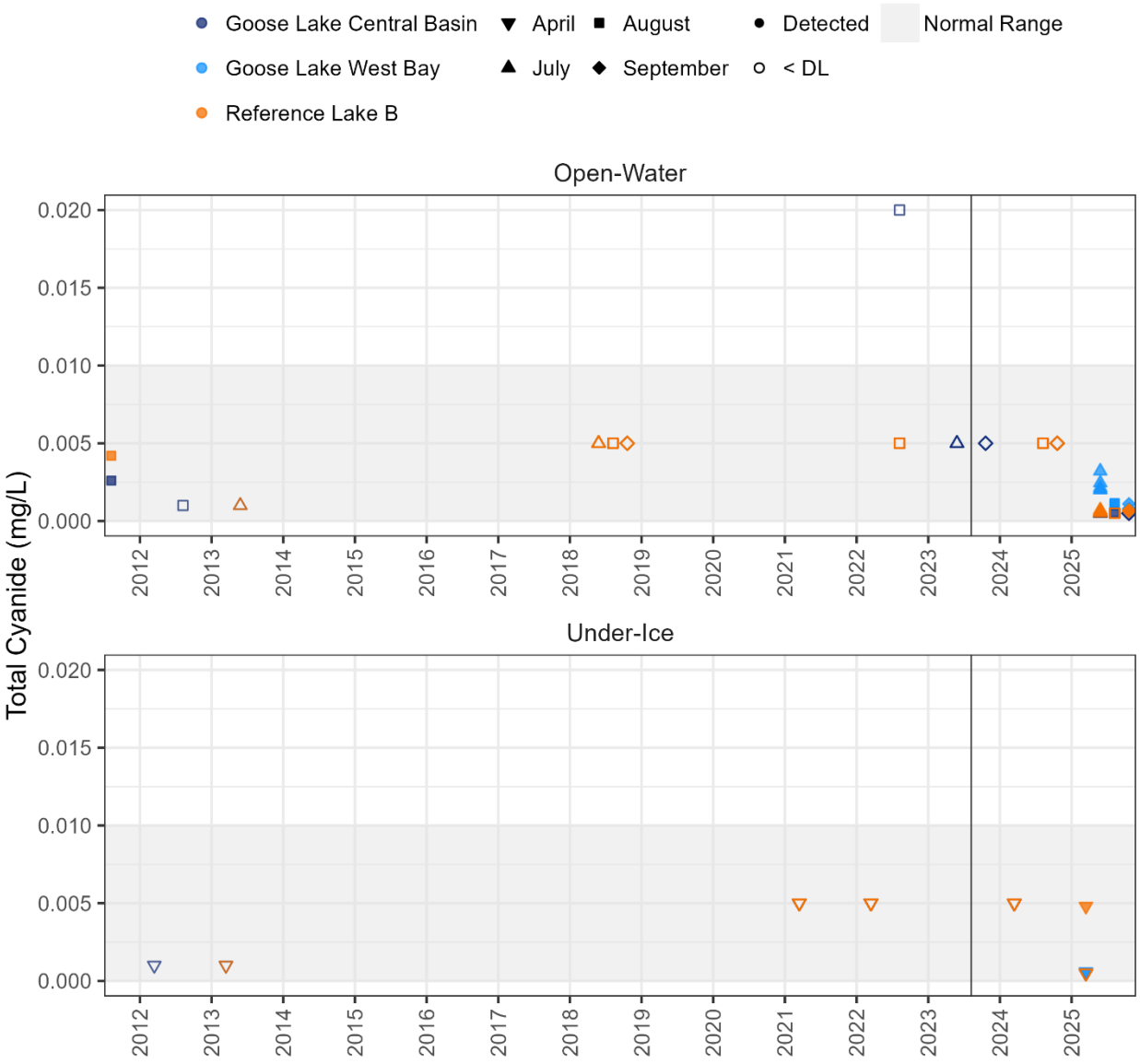
# 5 WEAK ACID DISSOCIABLE CYANIDE




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.

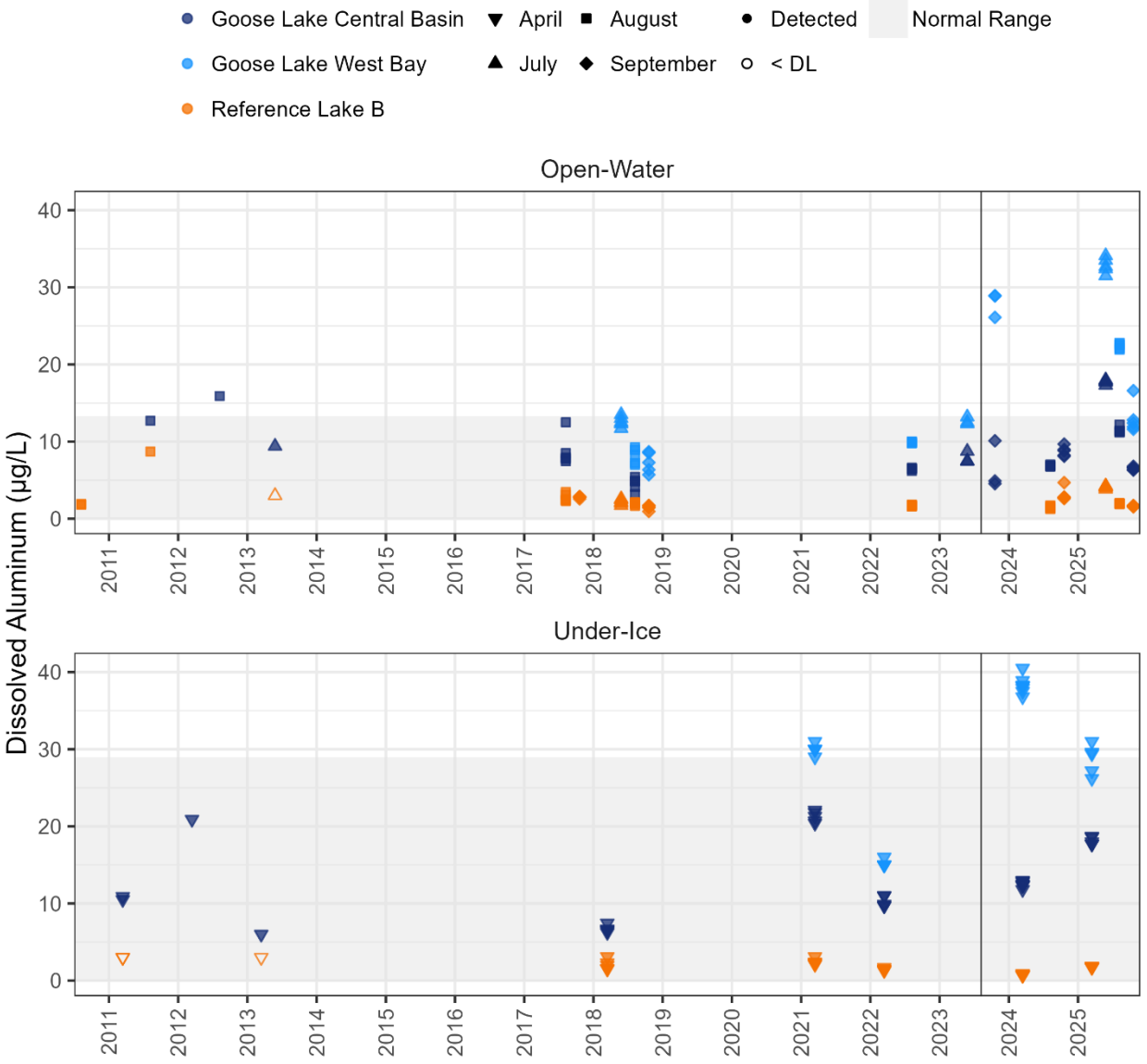
# 6 TOTAL CYANIDE




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.

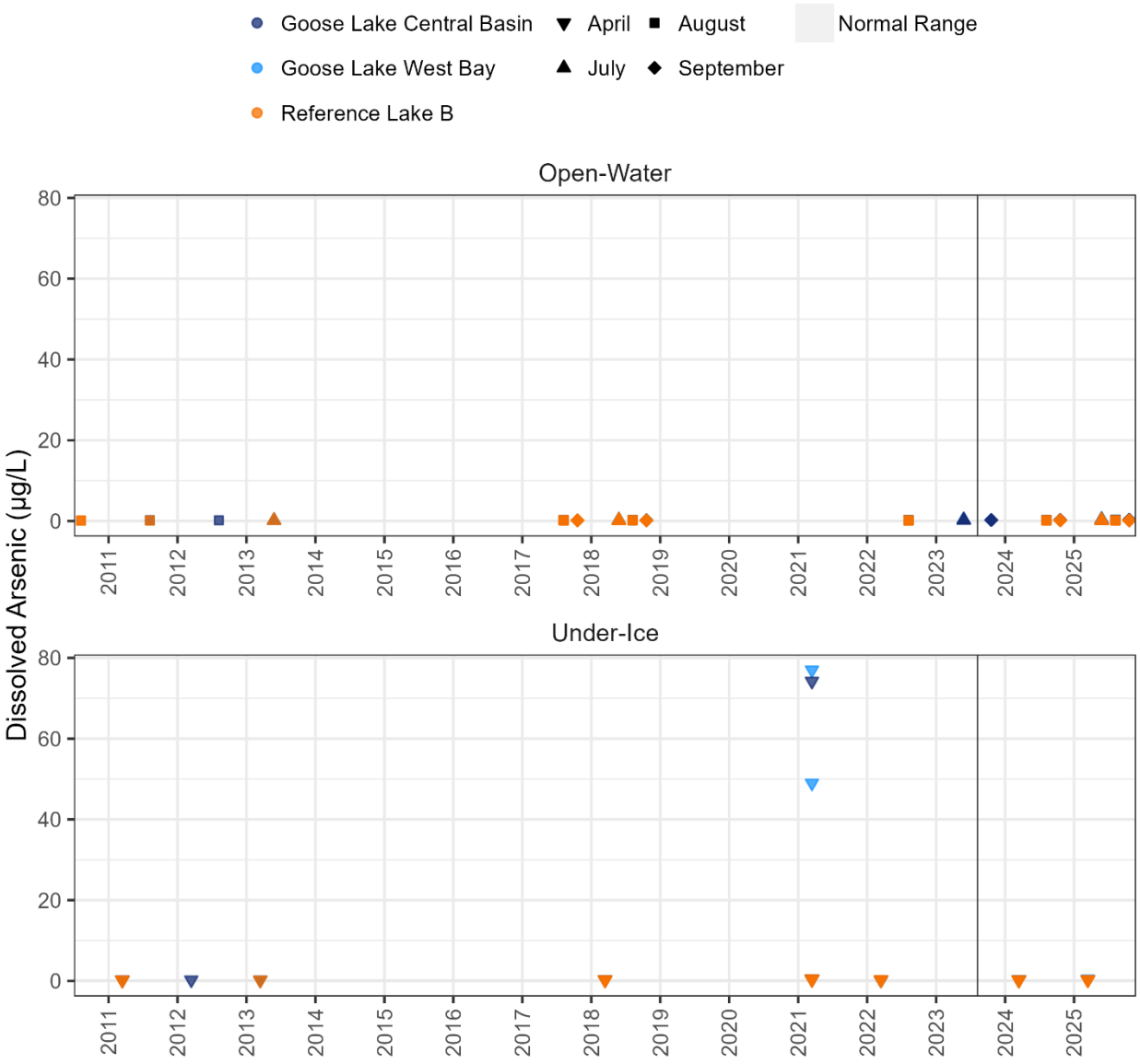
# 7 DISSOLVED ALUMINUM




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.

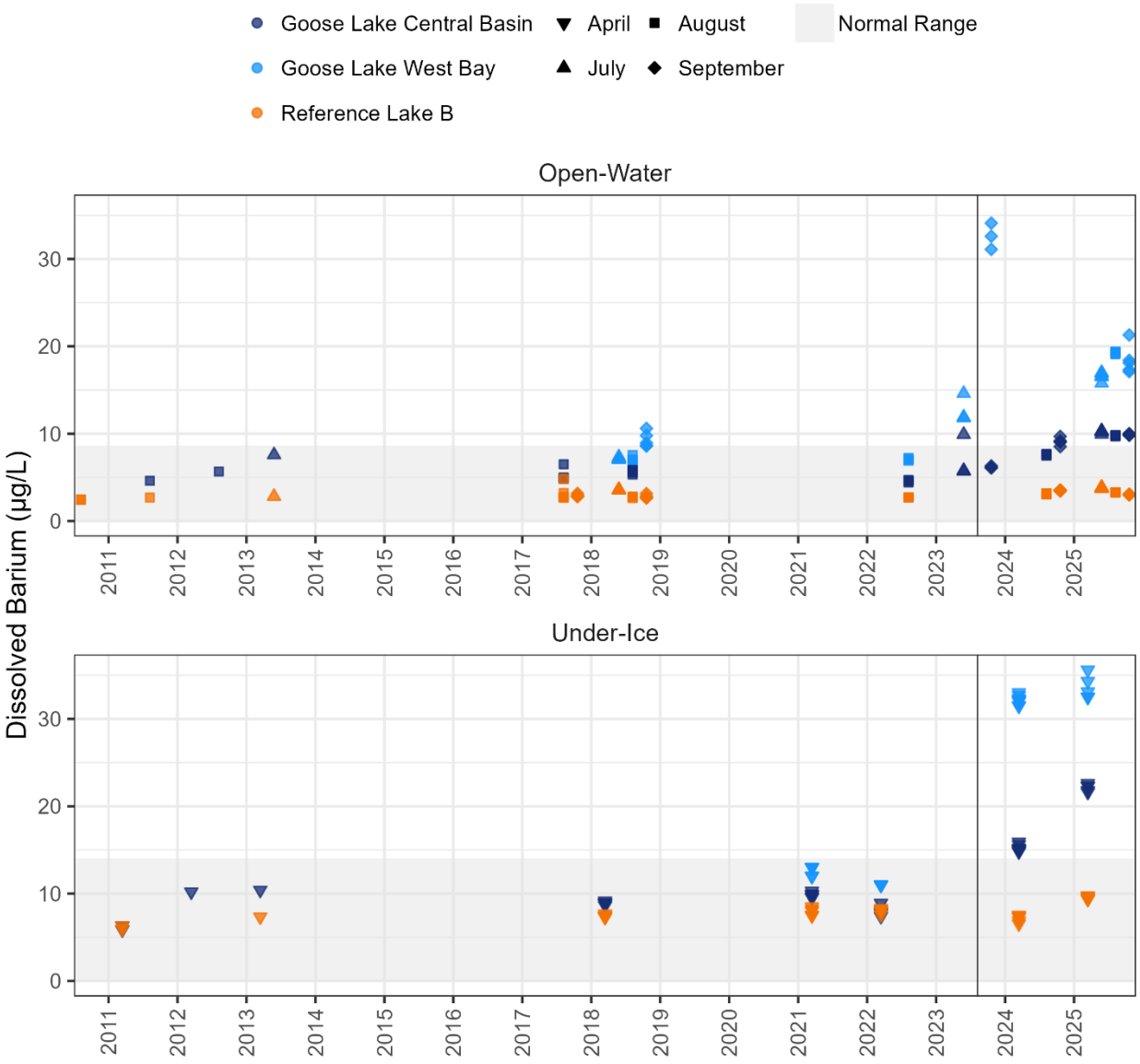
# 8 DISSOLVED ARSENIC




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.

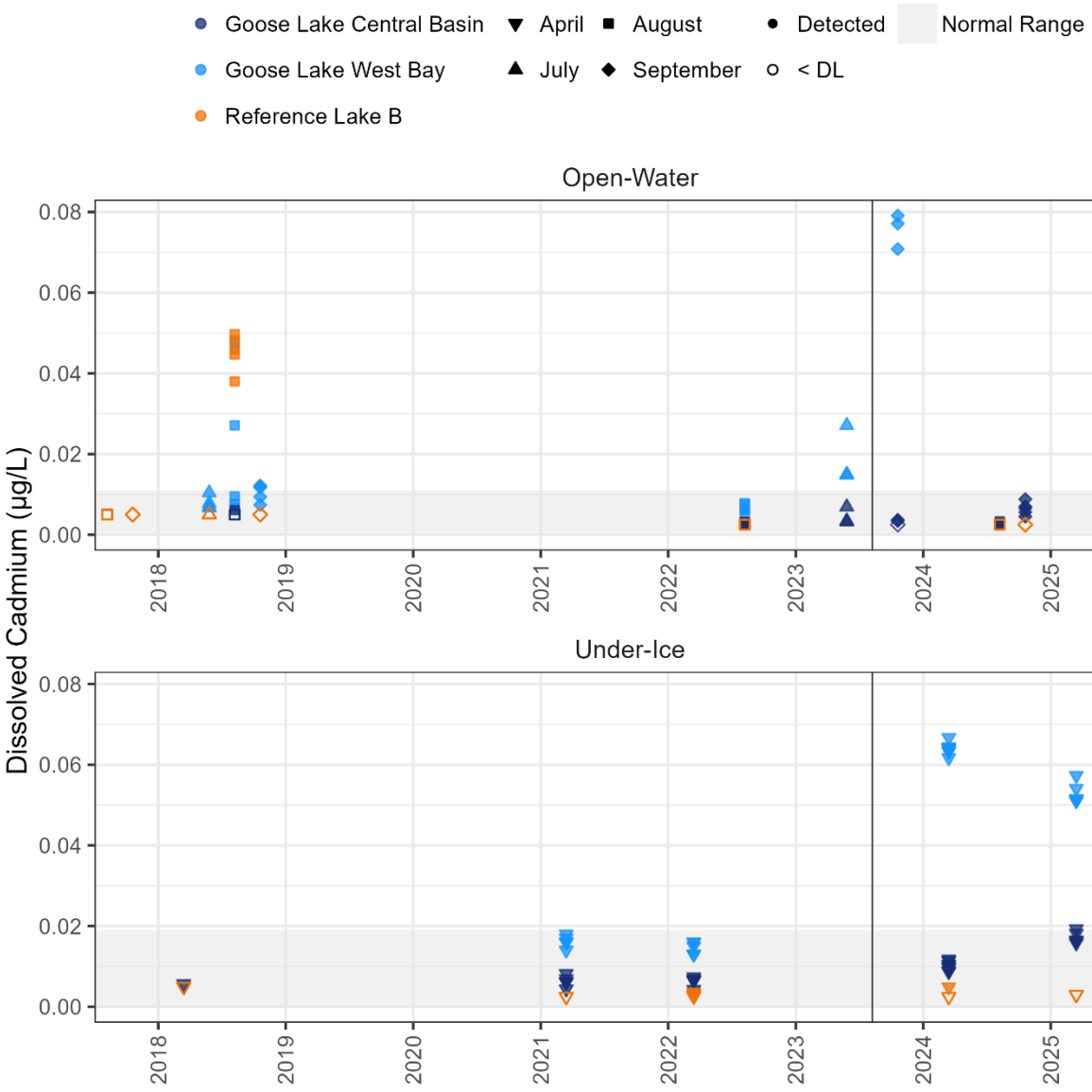
# 9 DISSOLVED BARIUM




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.

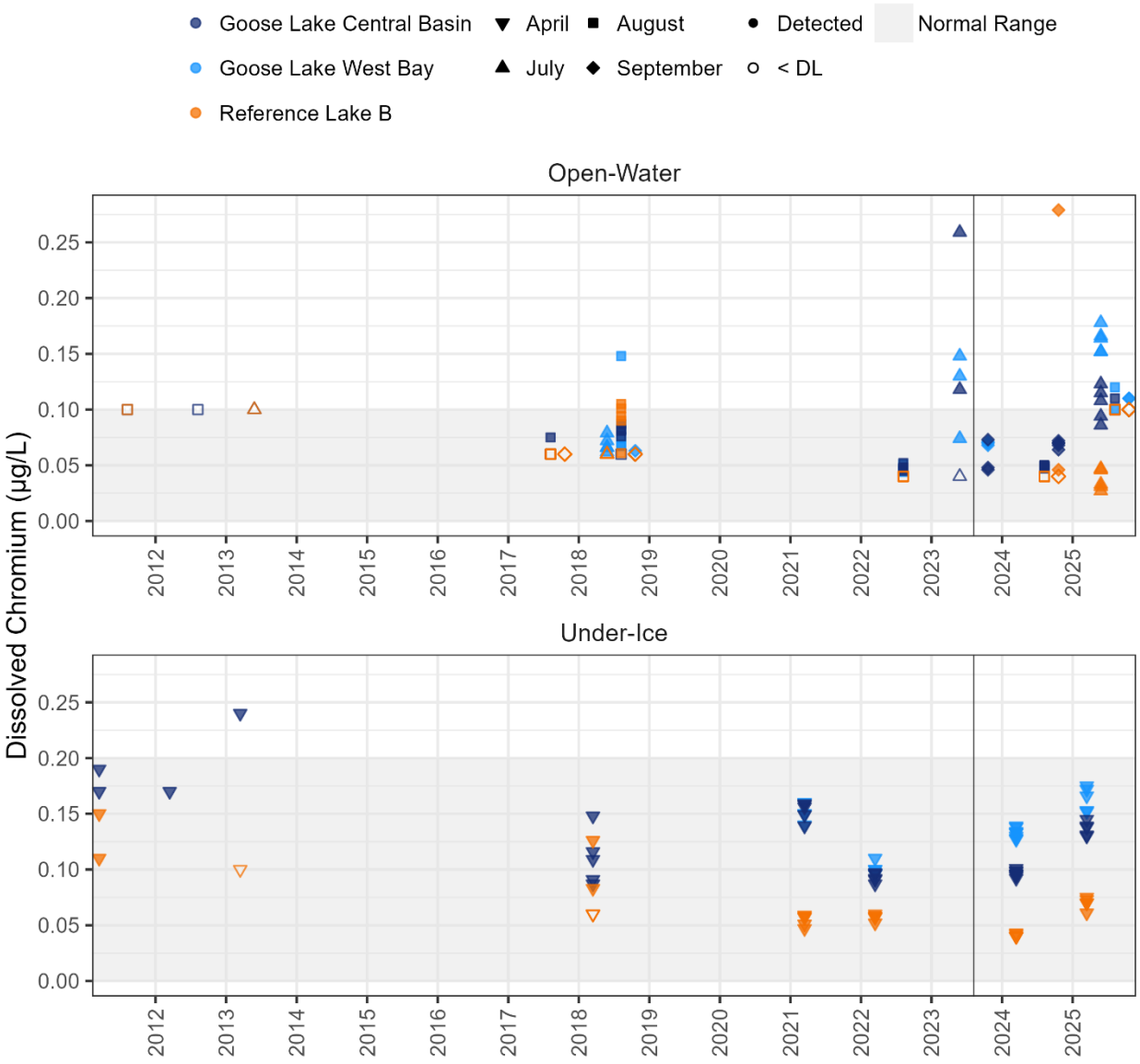
# 10 DISSOLVED CADMIUM




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.

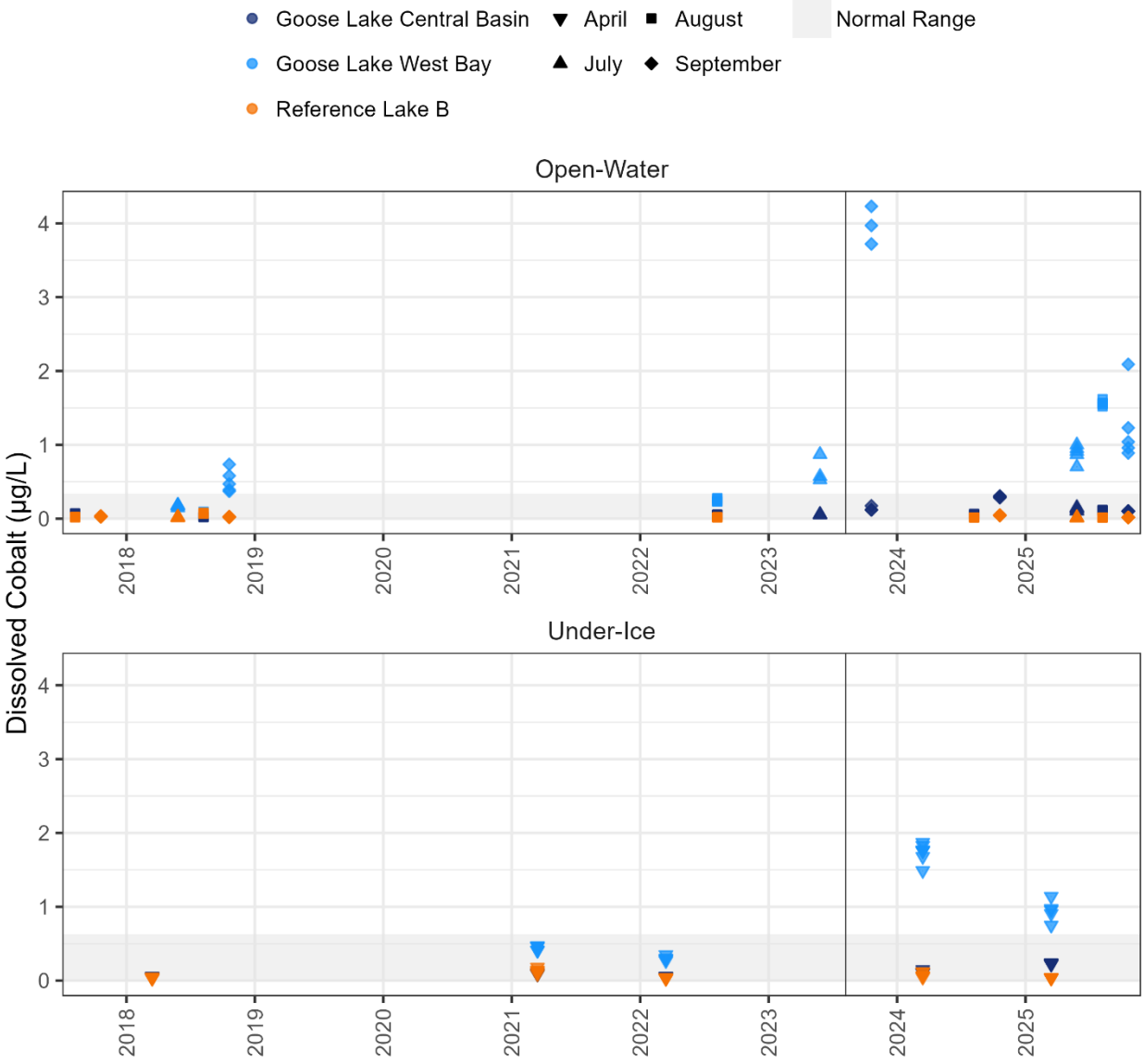
# 11 DISSOLVED CHROMIUM




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.

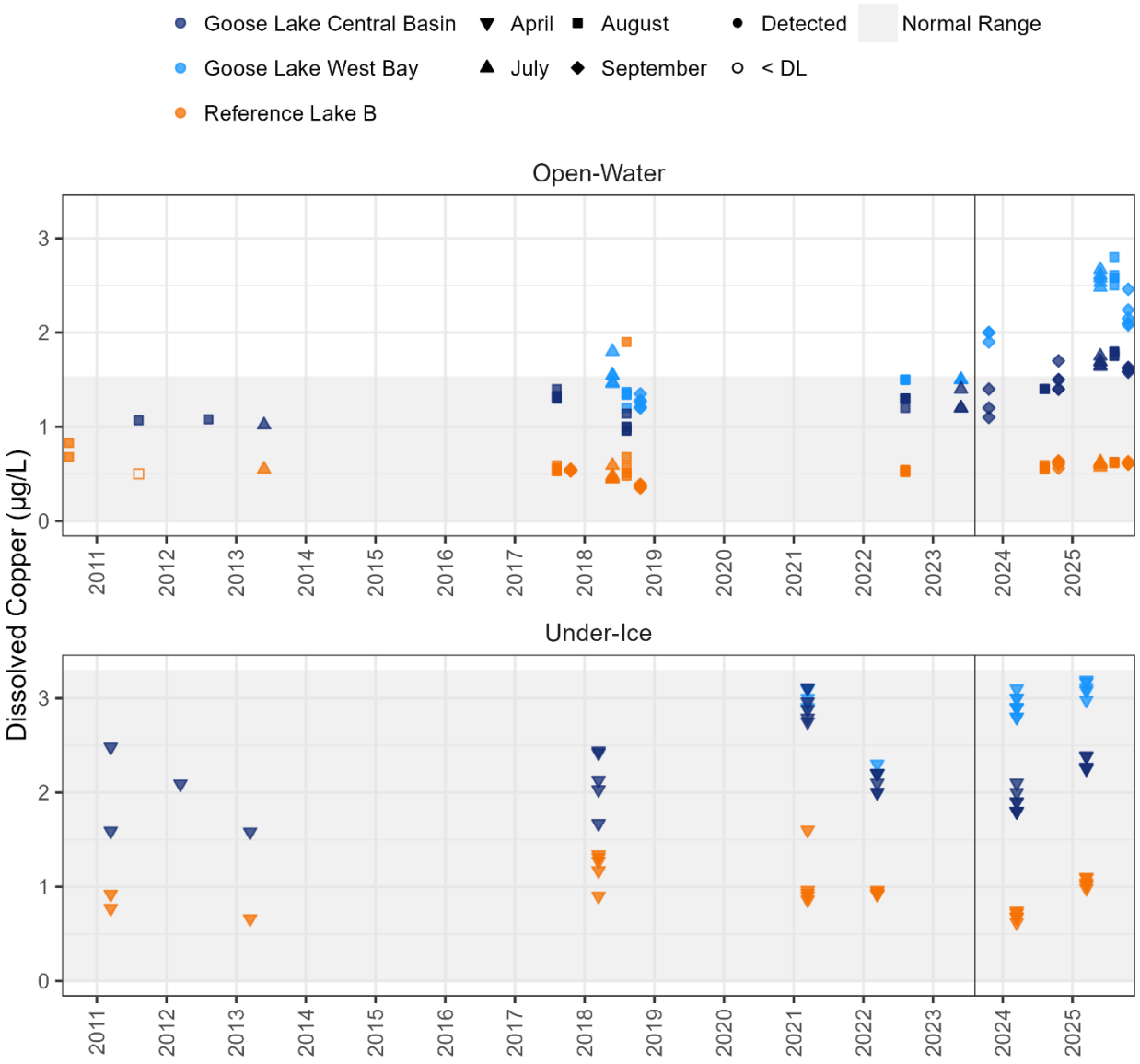
# 12 DISSOLVED COBALT




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.

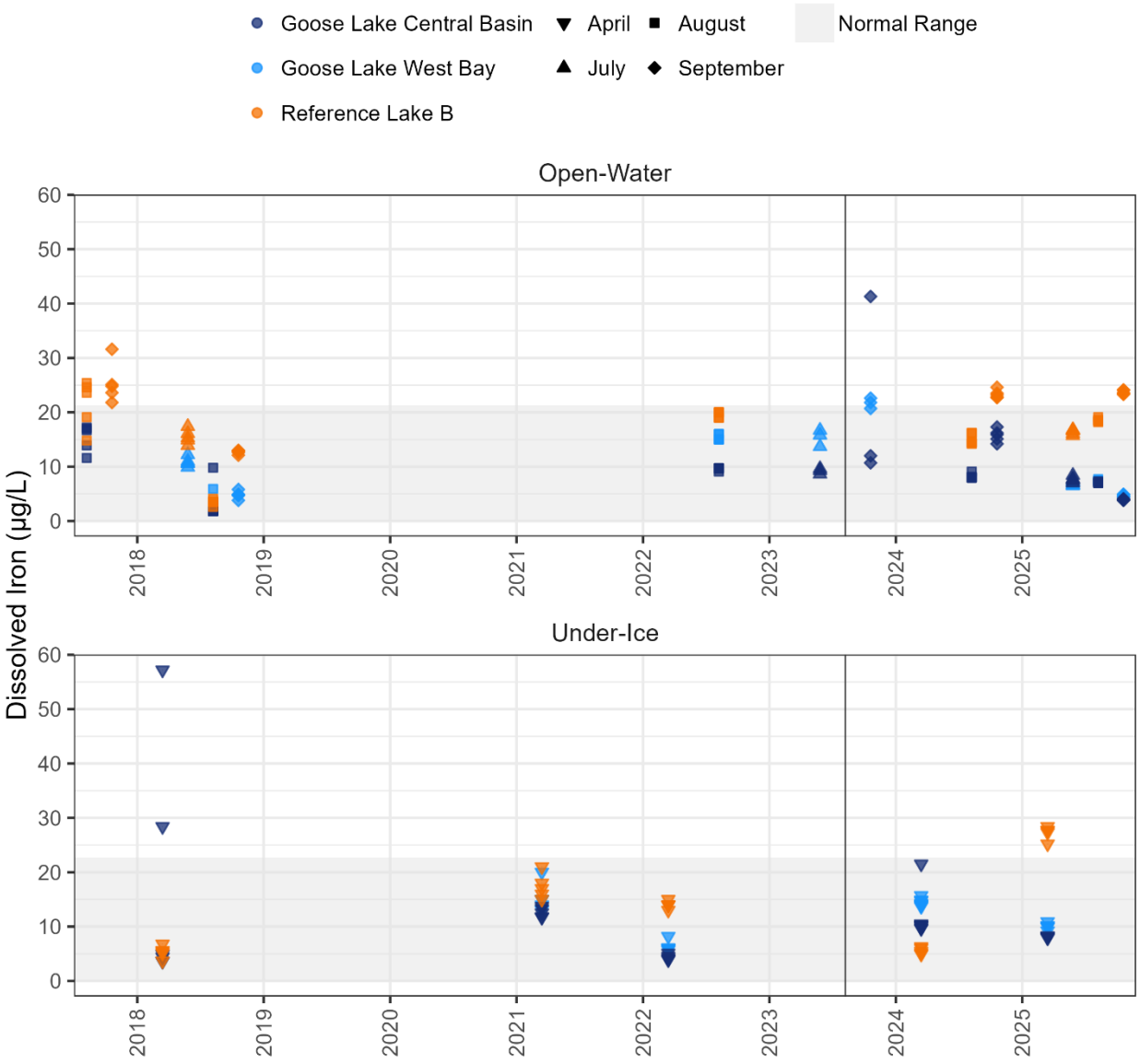
# 13 DISSOLVED COPPER




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.

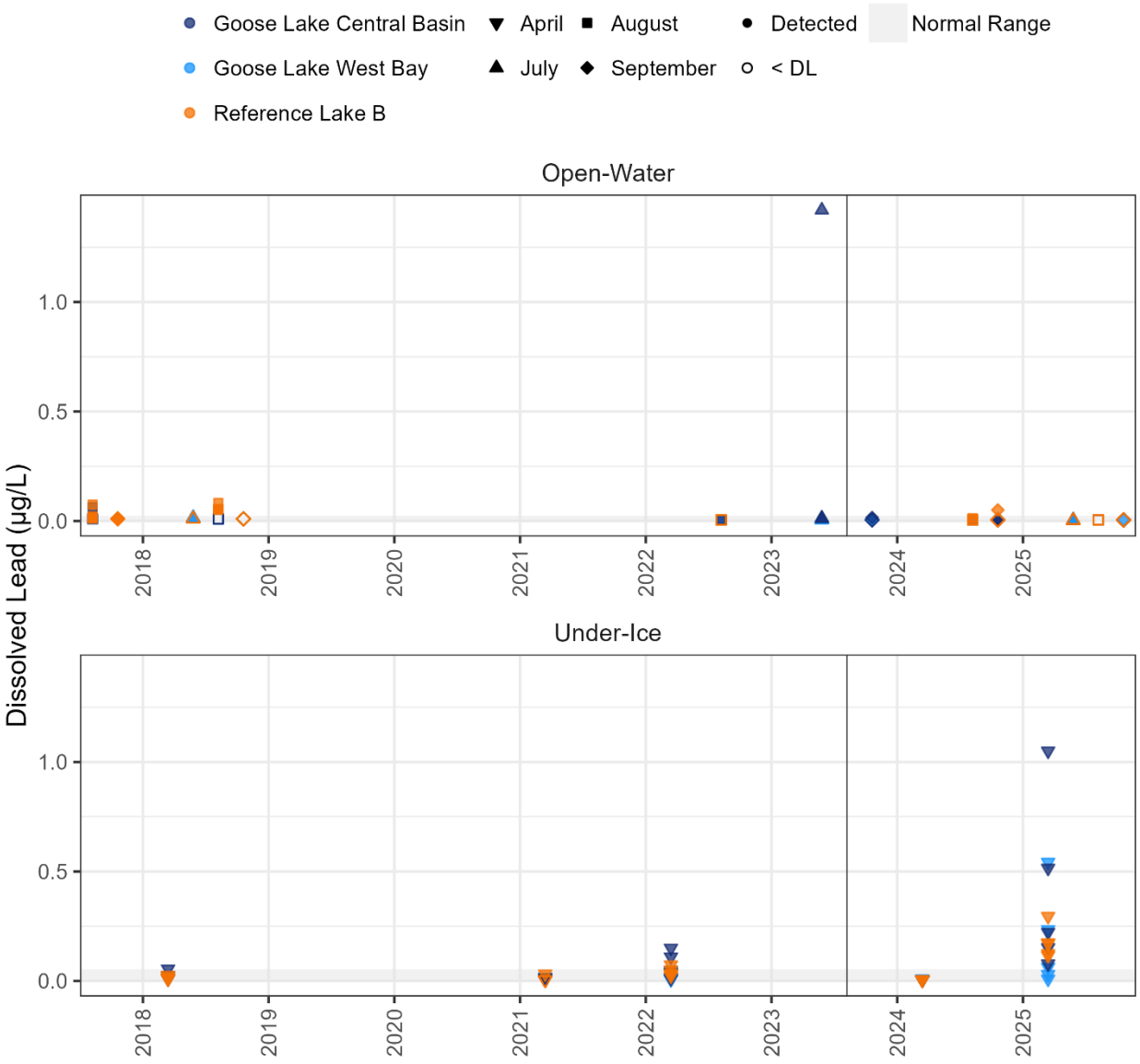
# 14 DISSOLVED IRON




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.

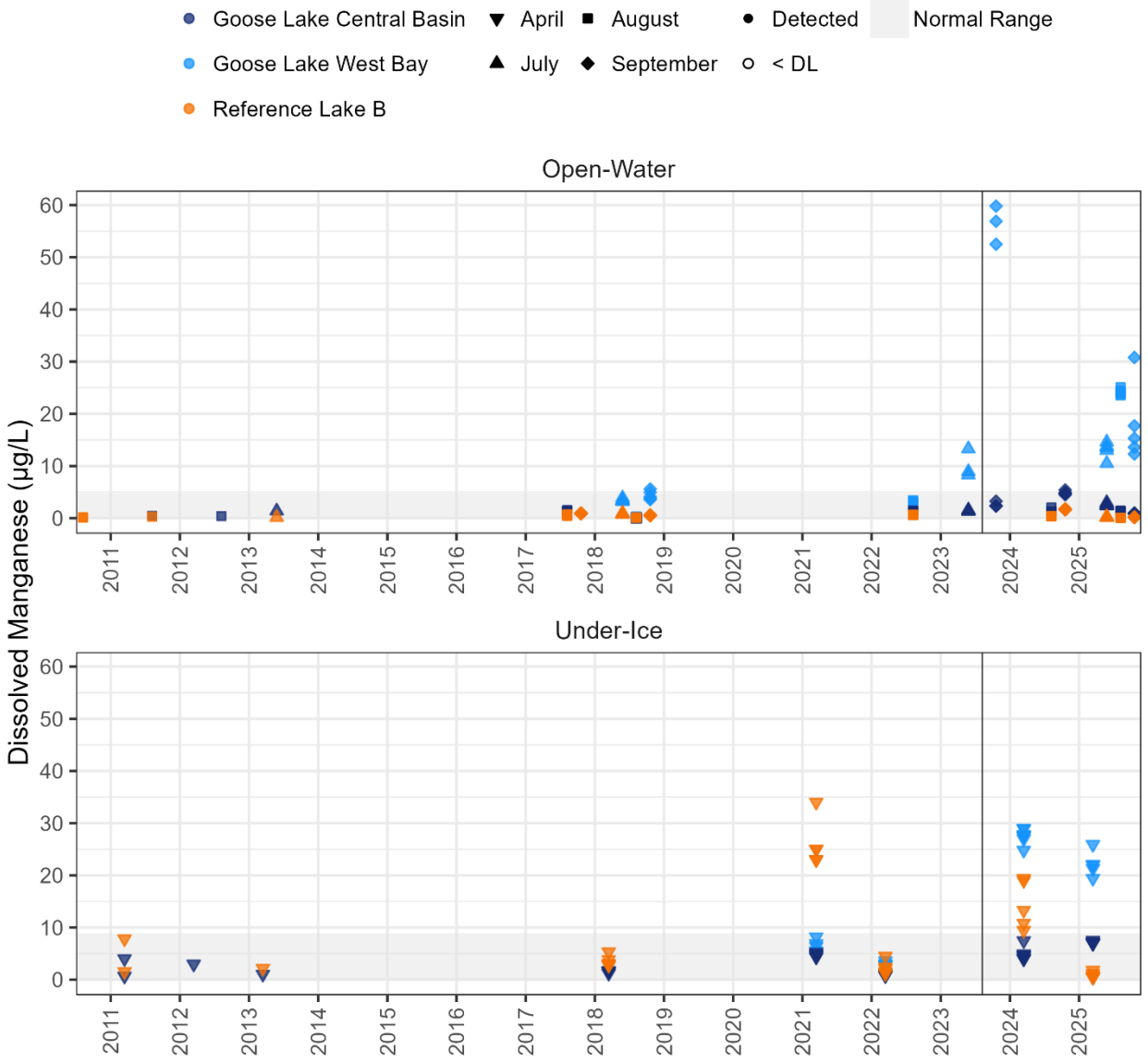
# 15 DISSOLVED LEAD




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.

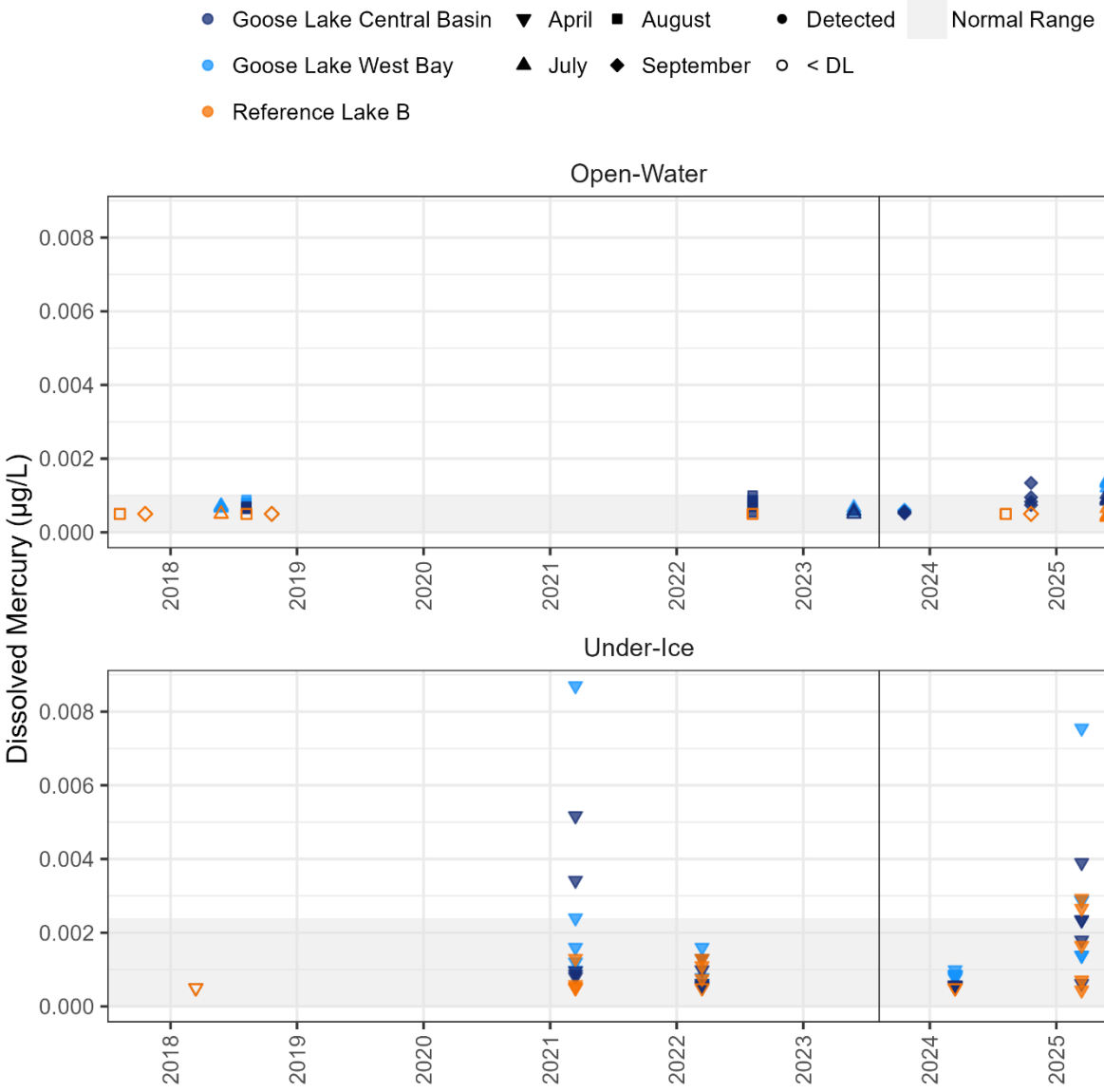
# 16 DISSOLVED MANGANESE




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.

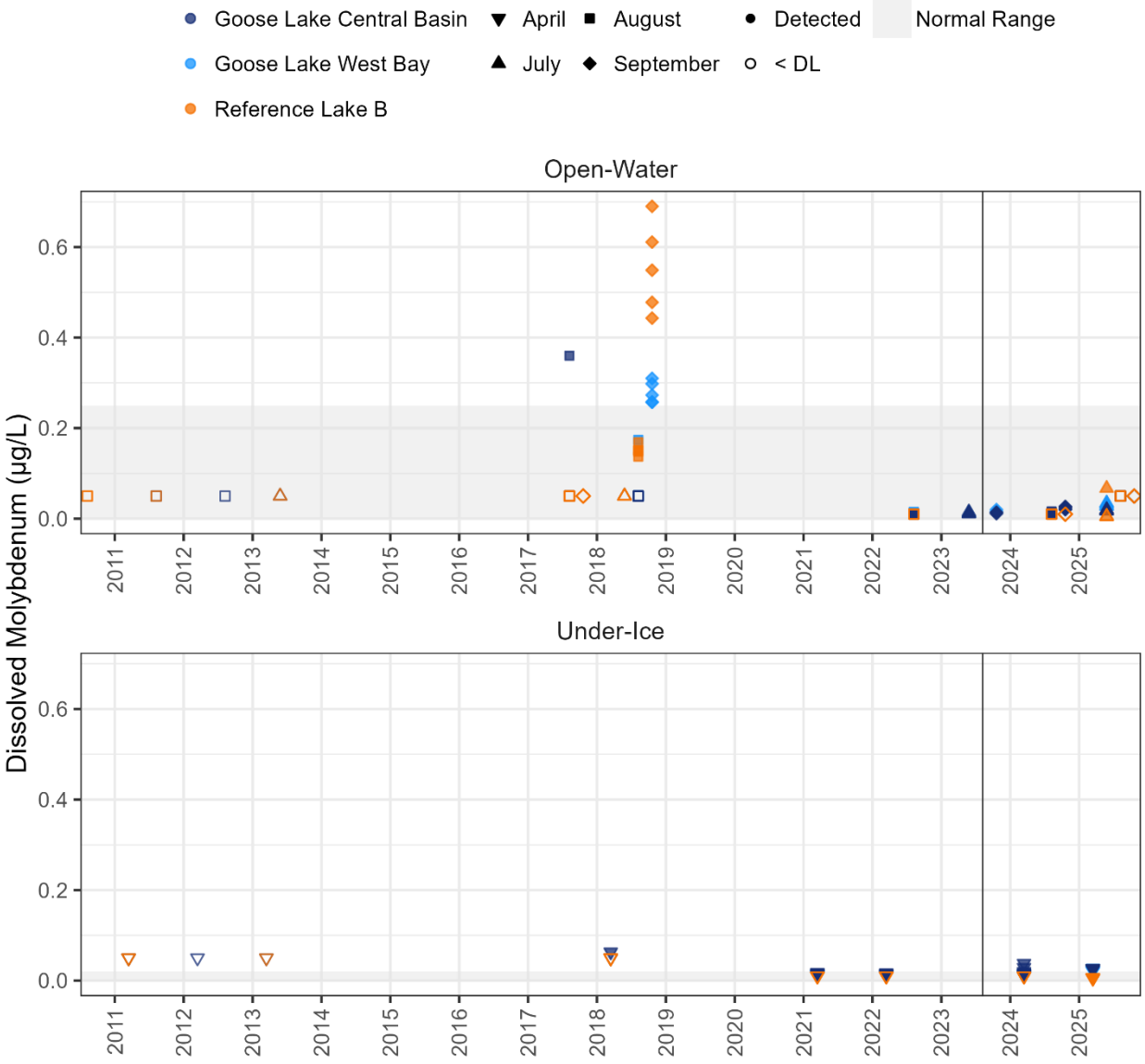
# 17 DISSOLVED MERCURY




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.

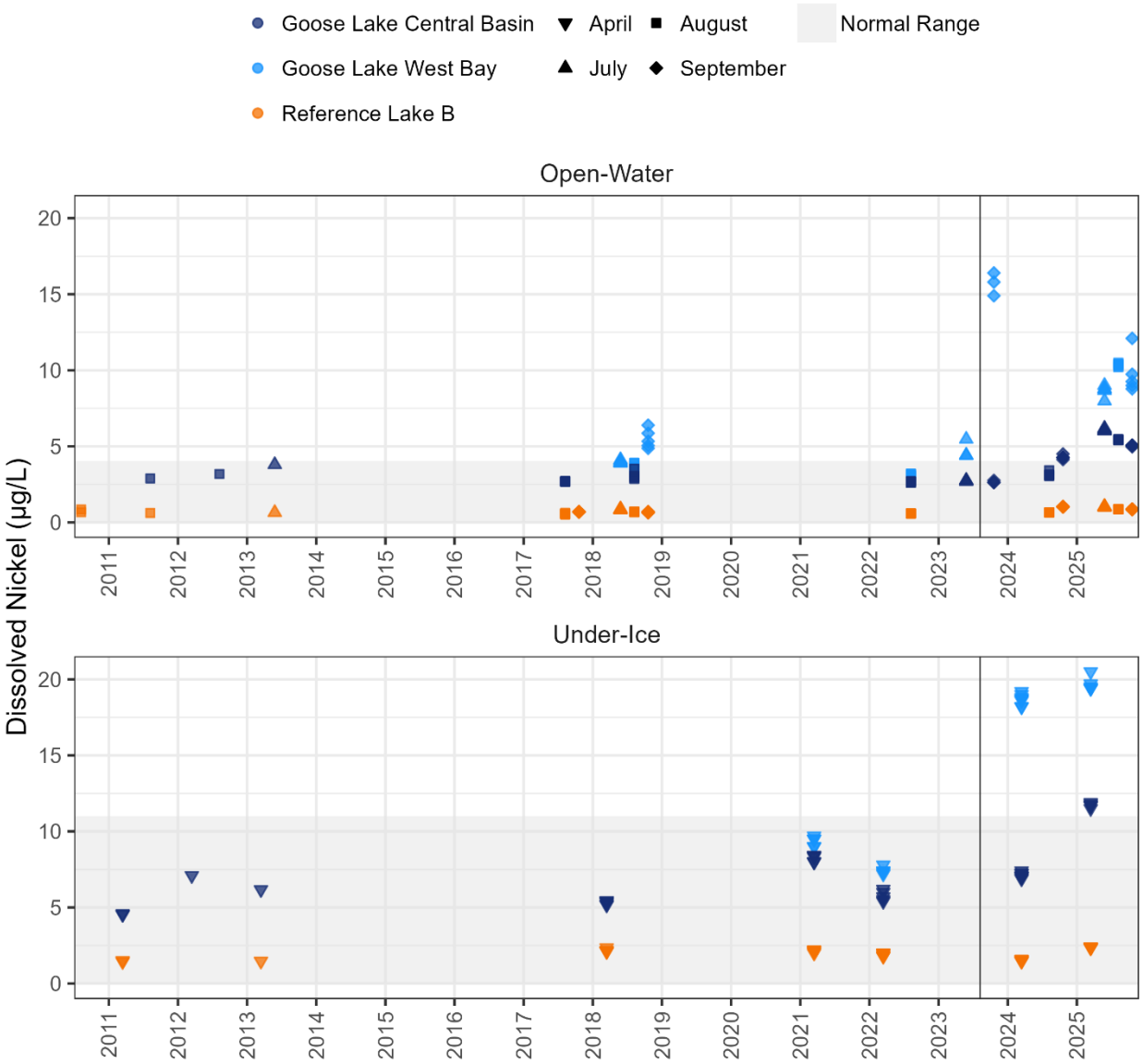
# 18 DISSOLVED MOLYBDENUM




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.

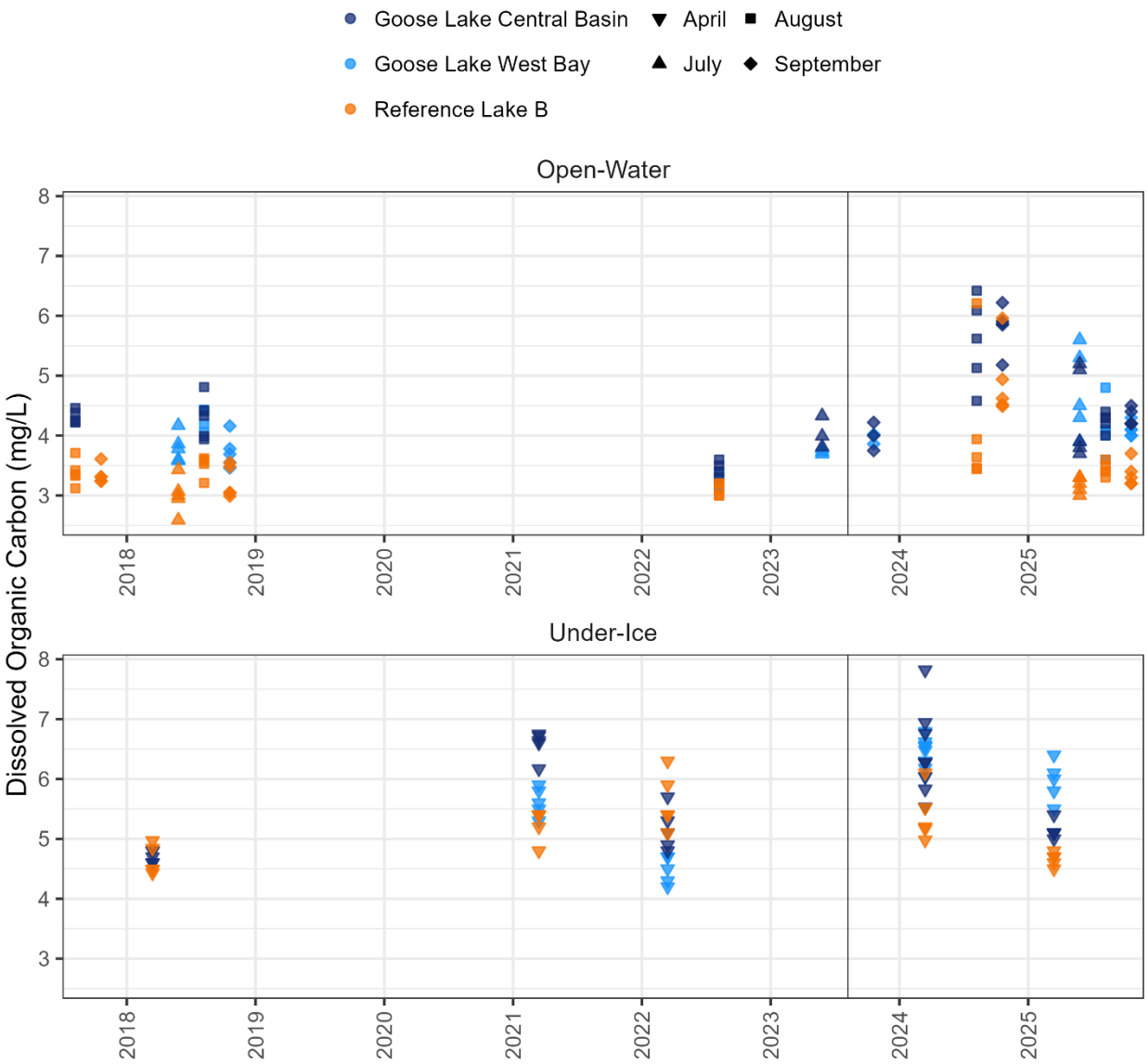
# 19 DISSOLVED NICKEL




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.

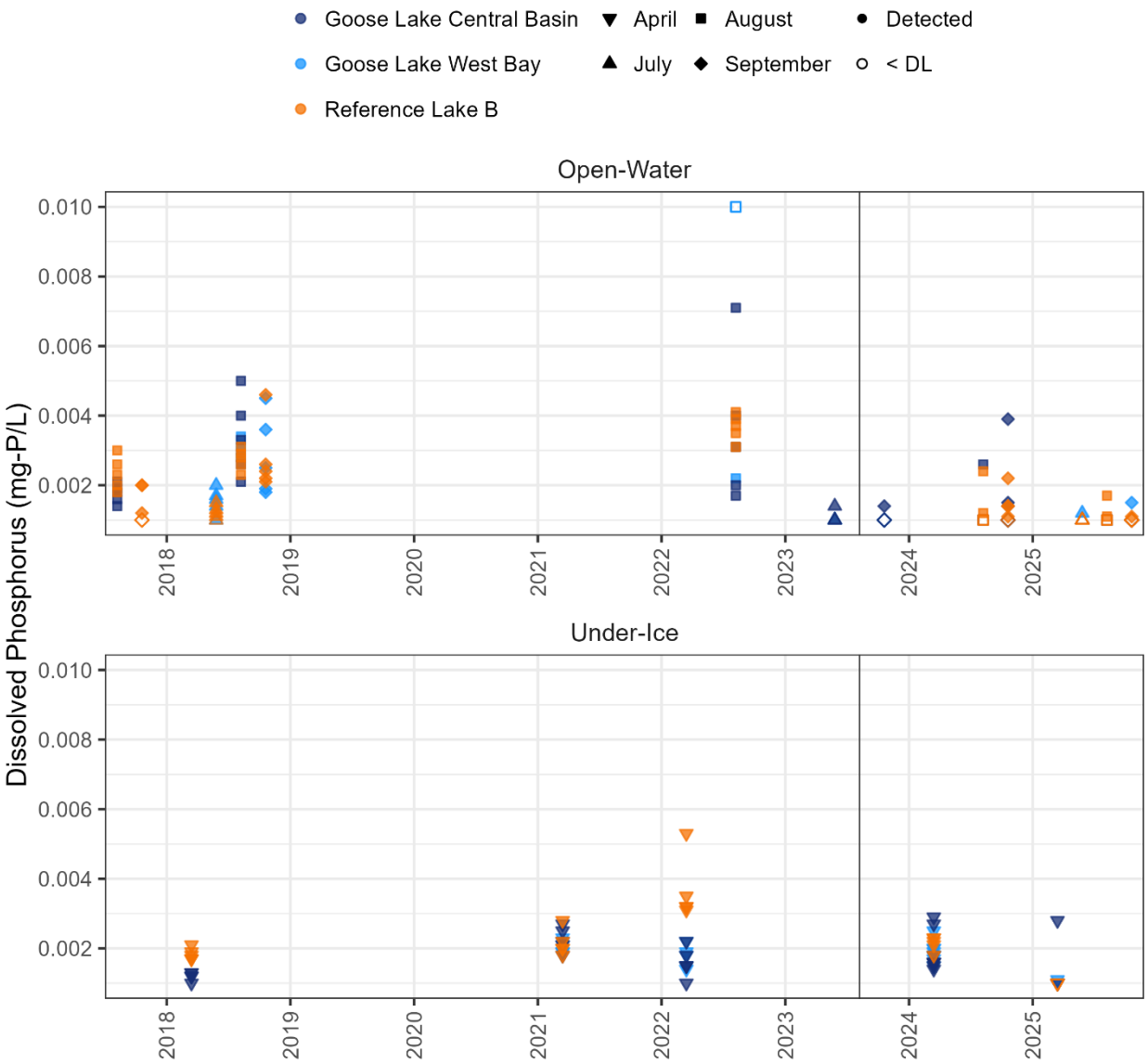
# 20 DISSOLVED ORGANIC CARBON




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.

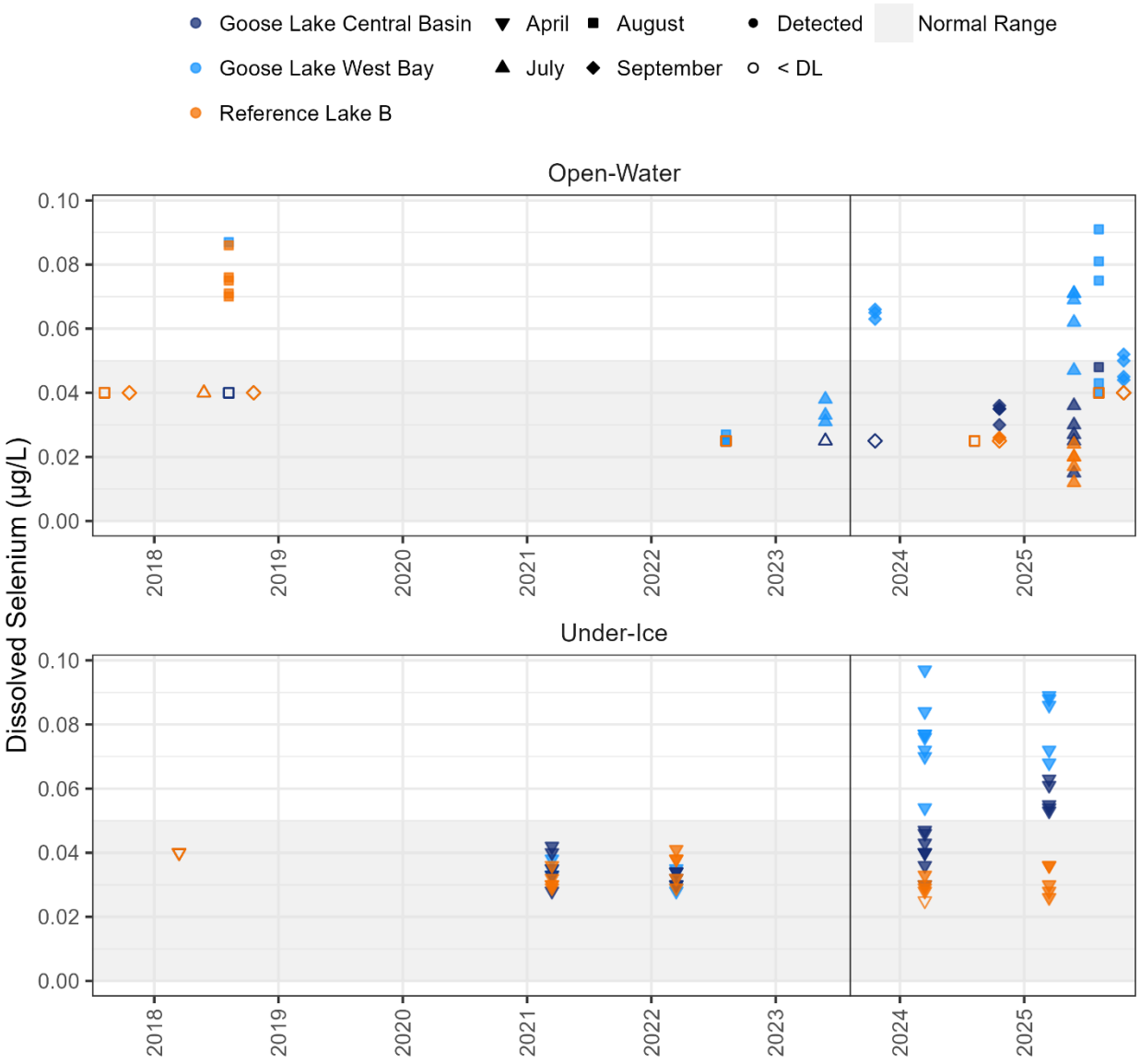
# 21 DISSOLVED PHOSPHORUS




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.

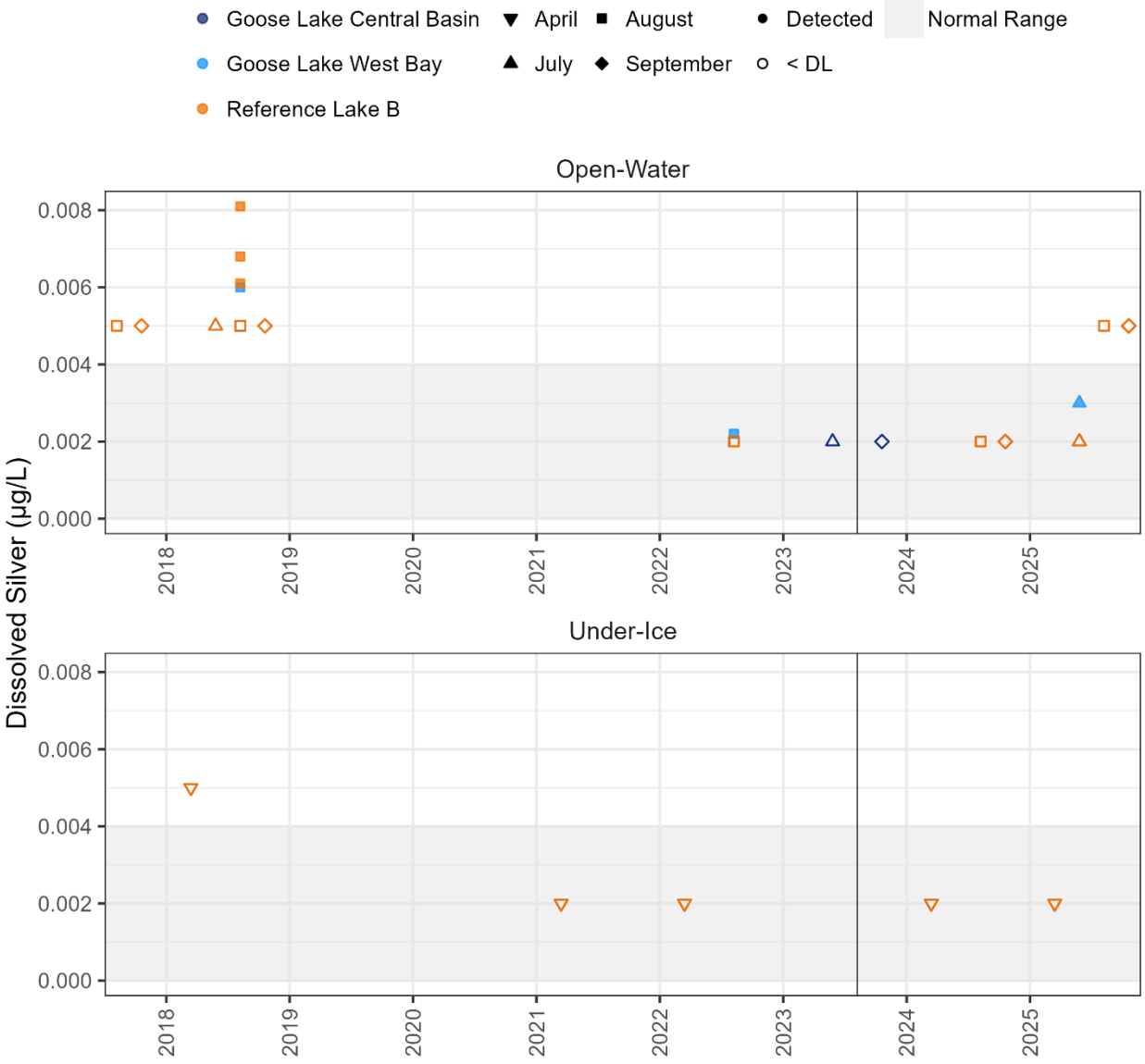
# 22 DISSOLVED SELENIUM




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.

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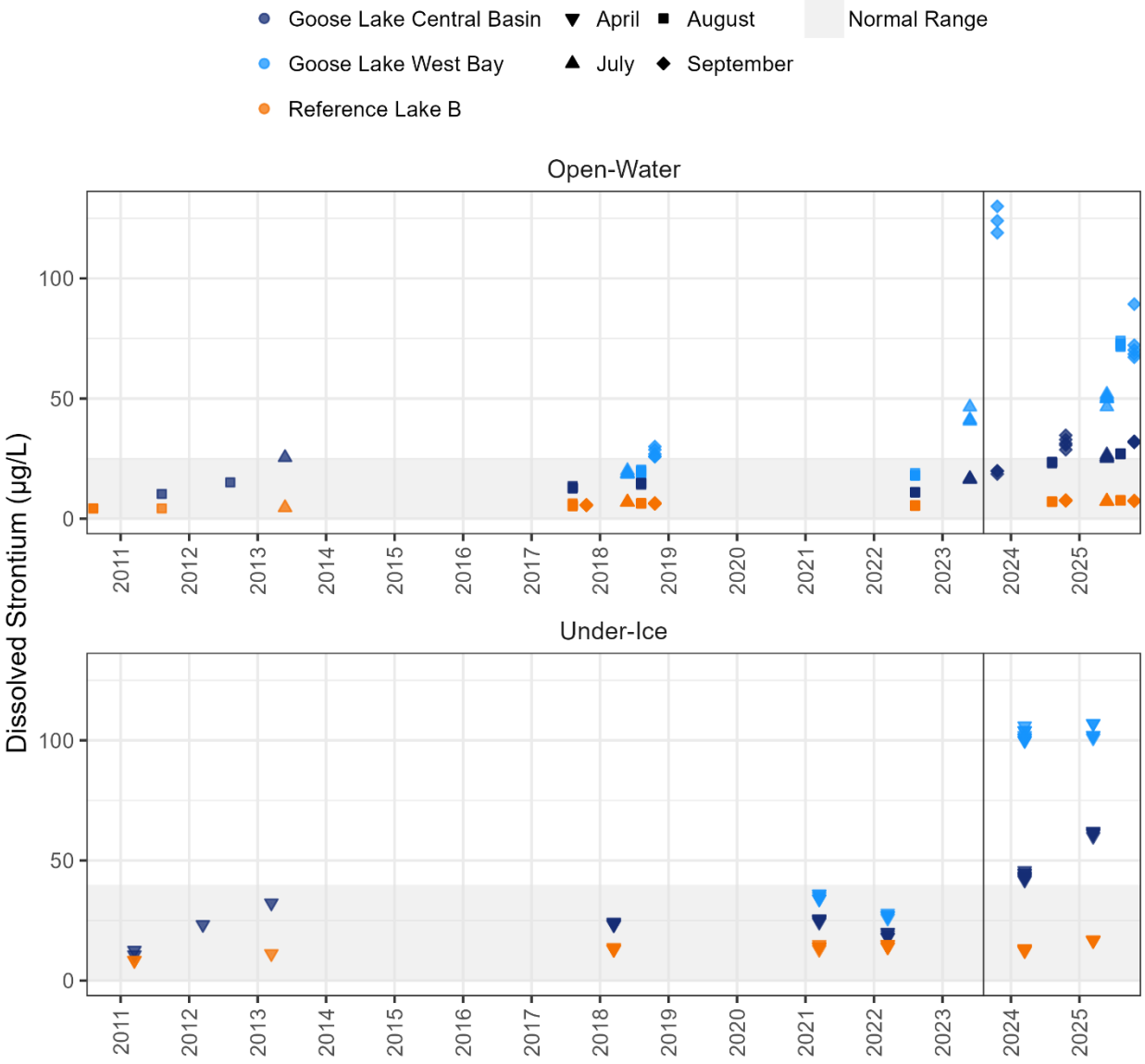
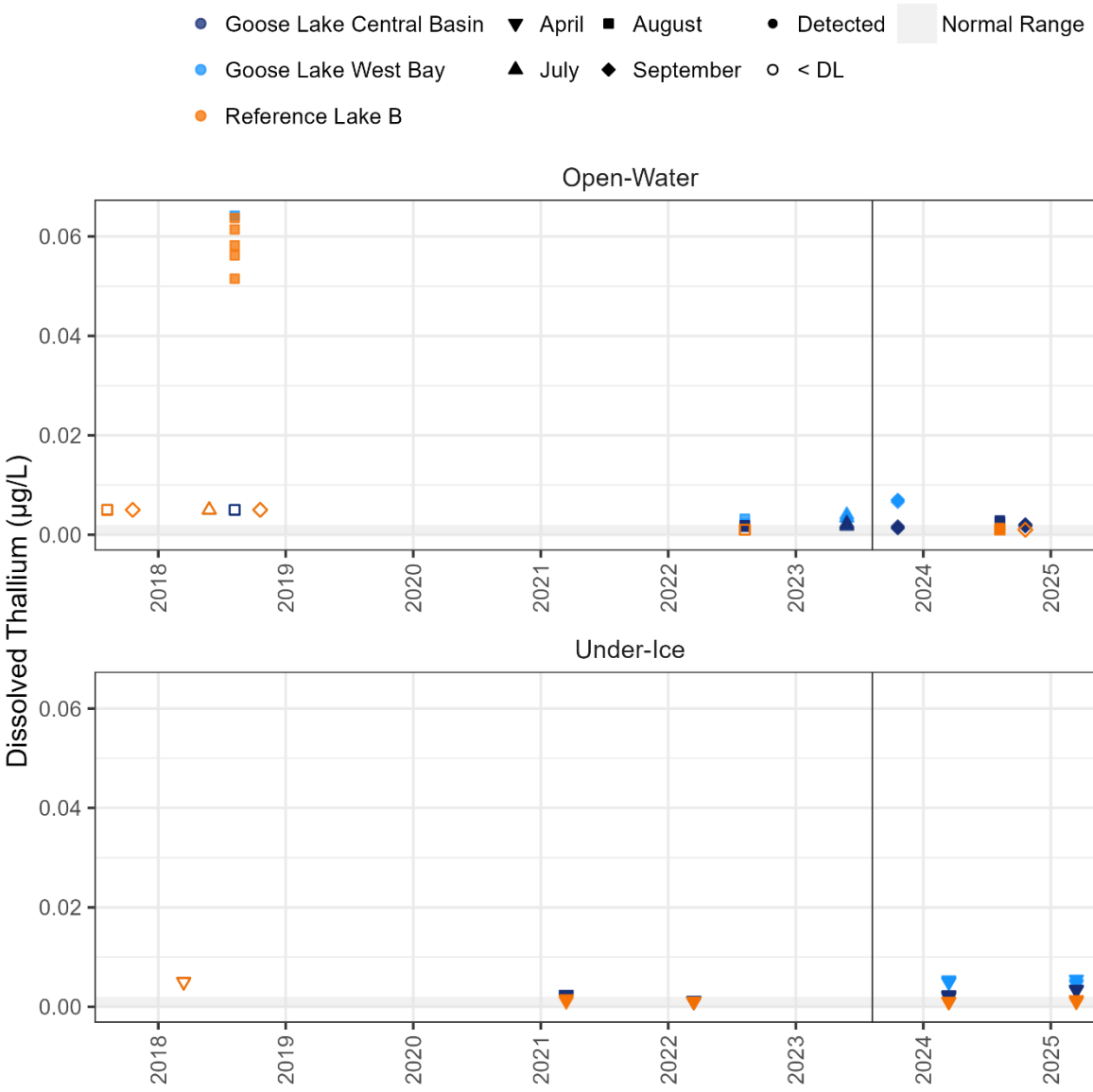
# 24 DISSOLVED STRONTIUM




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.

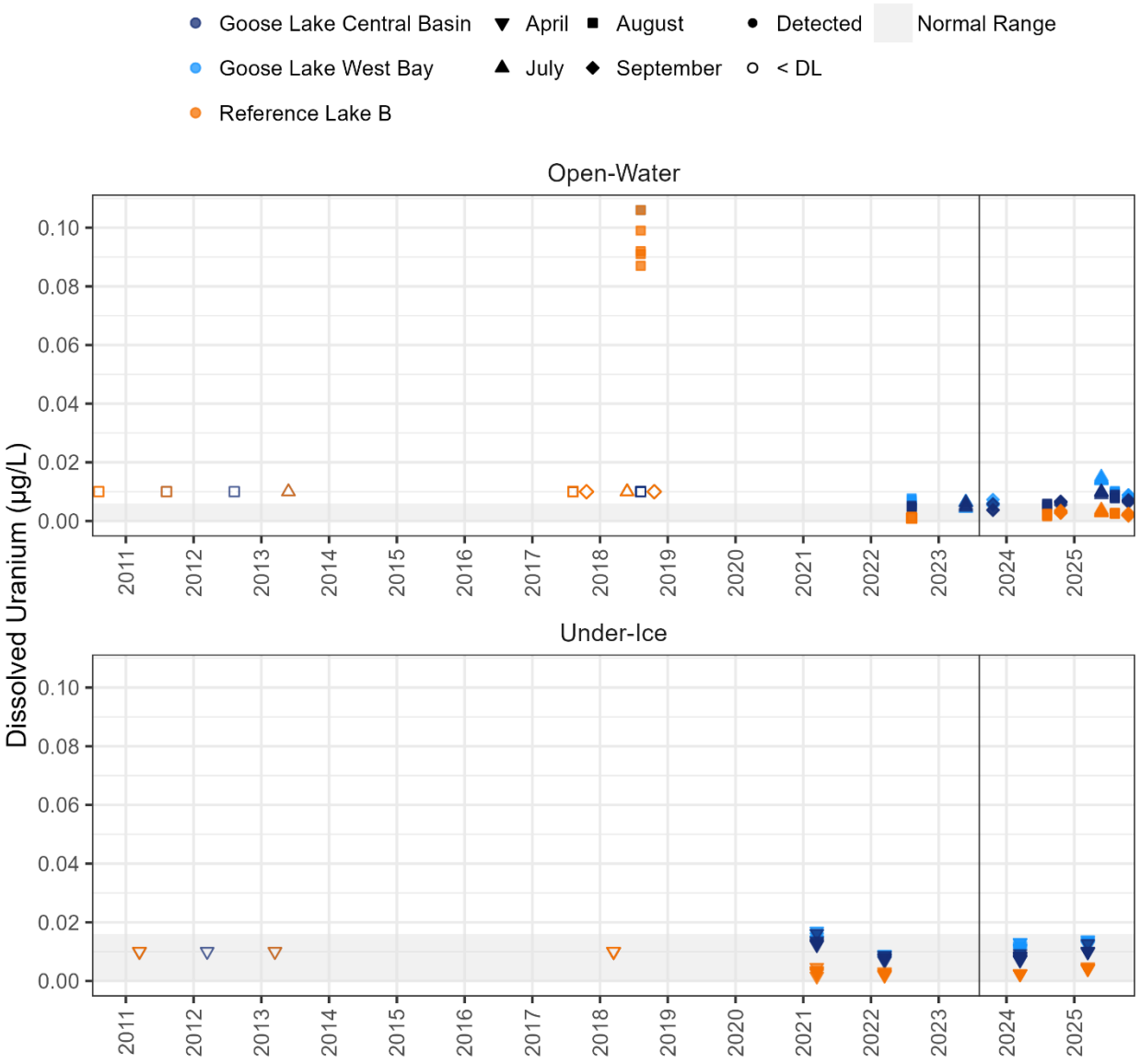
# 25 DISSOLVED THALLIUM




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.

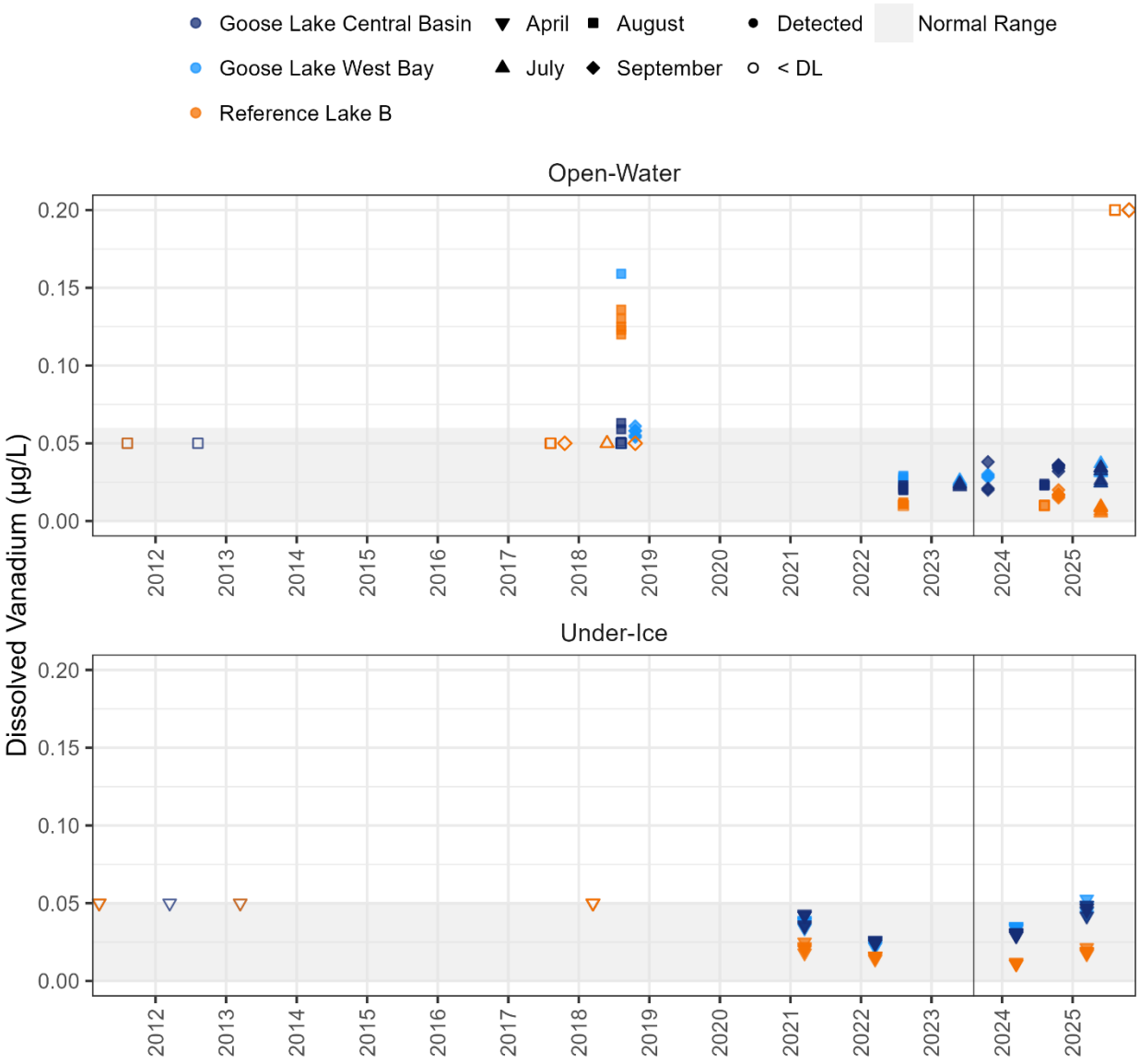
# 26 DISSOLVED URANIUM




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.

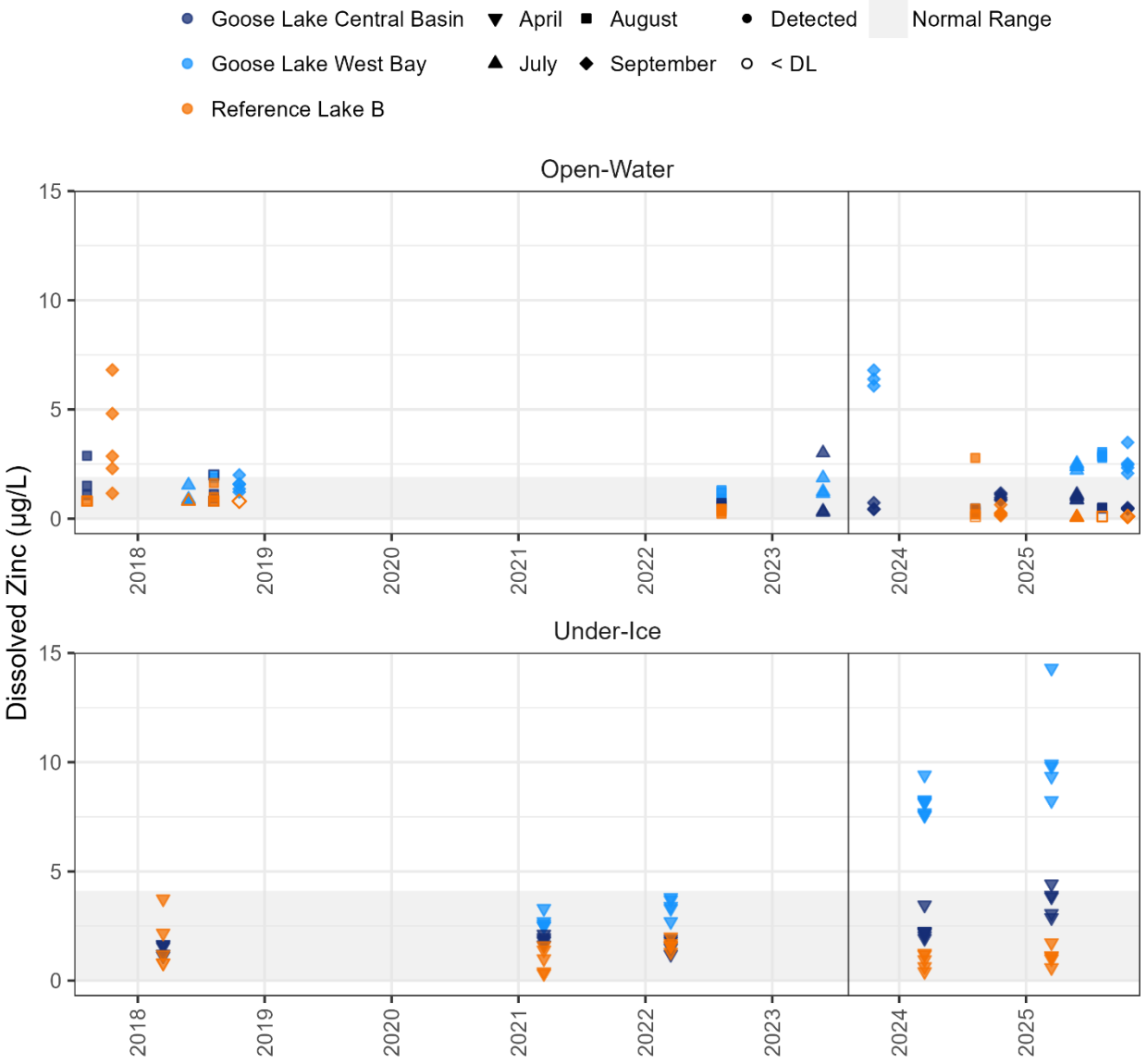
# 27 DISSOLVED VANADIUM




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.

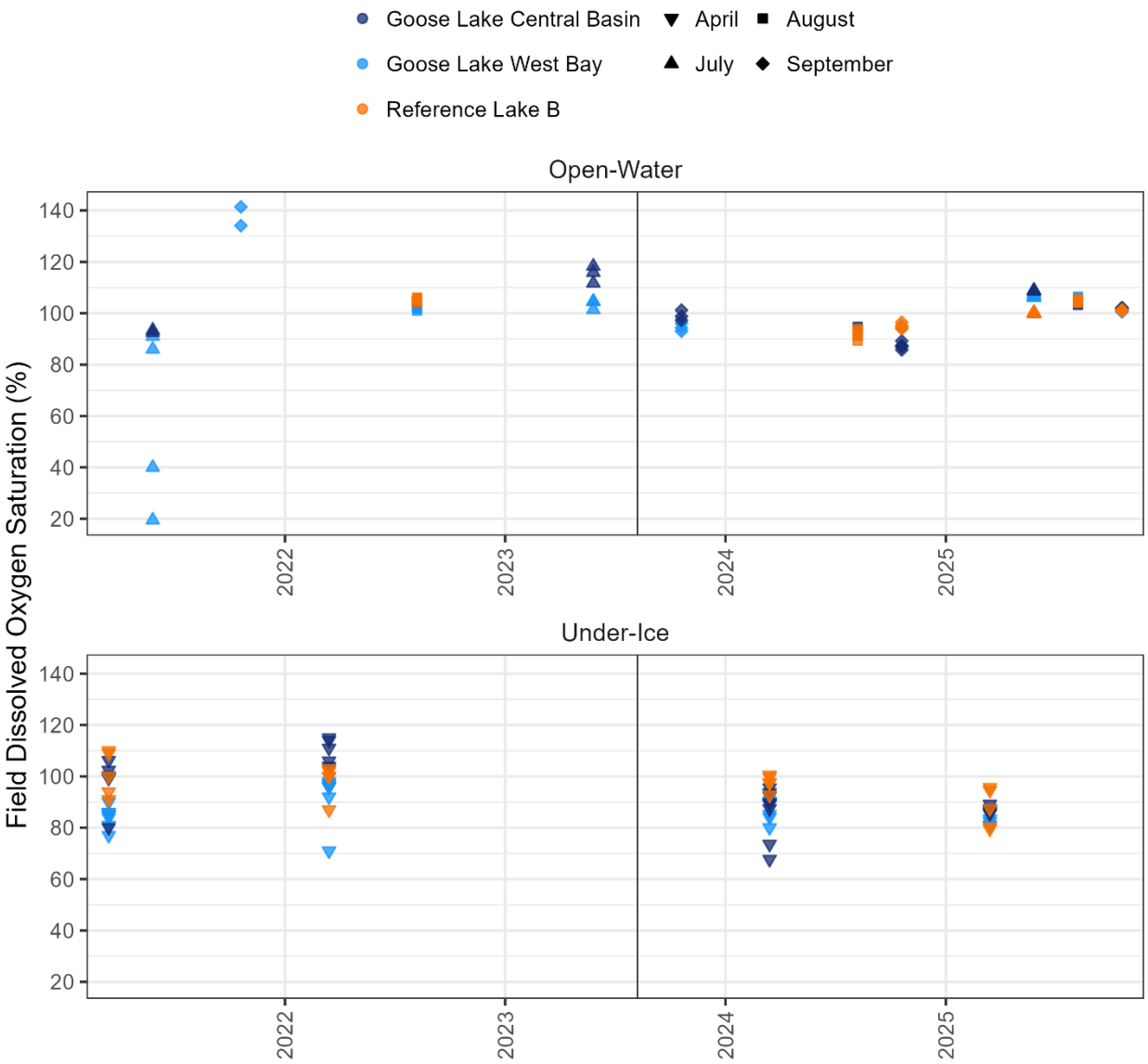
# 28 DISSOLVED ZINC




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.

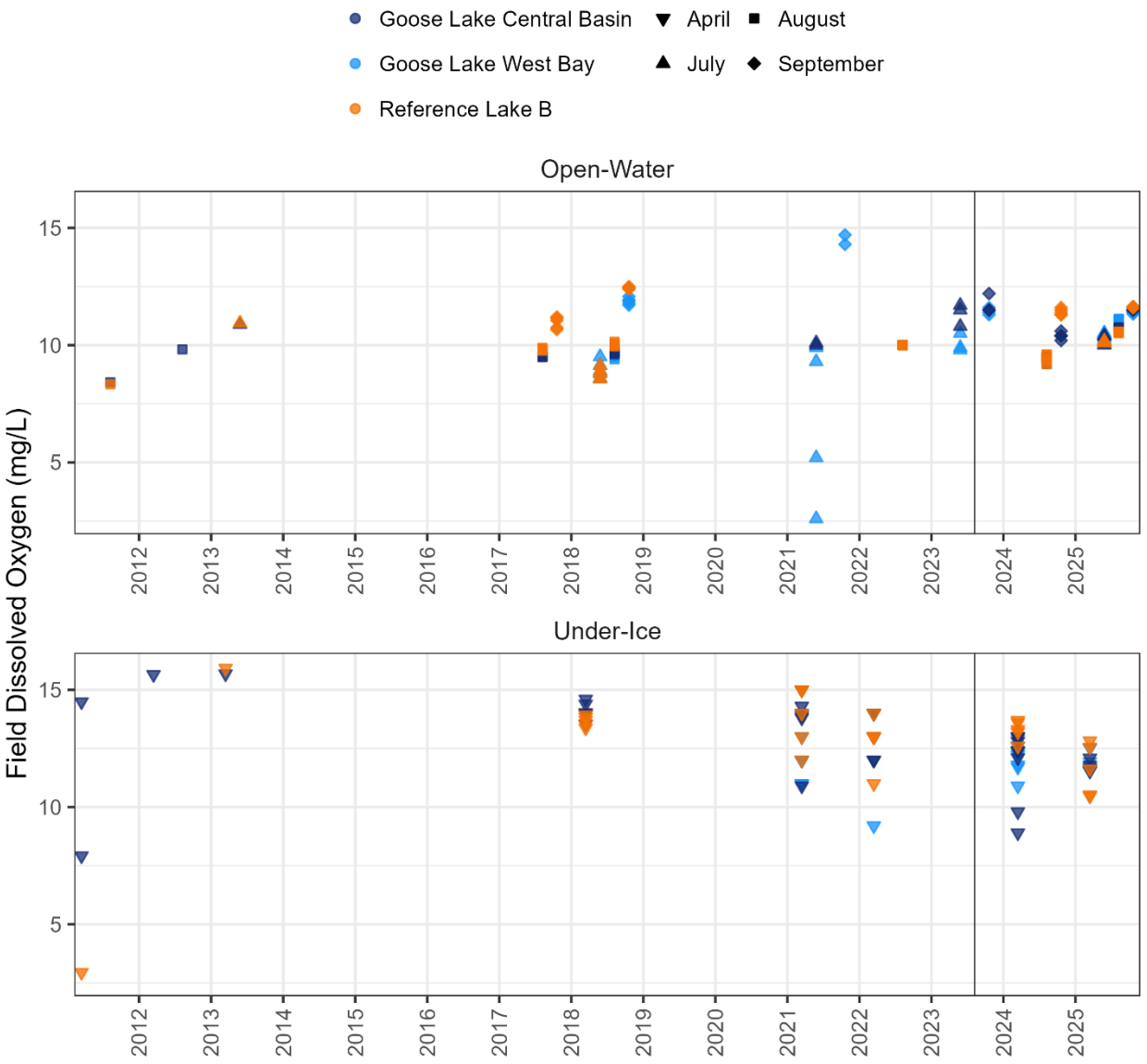
# 29 FIELD DISSOLVED OXYGEN SATURATION




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.

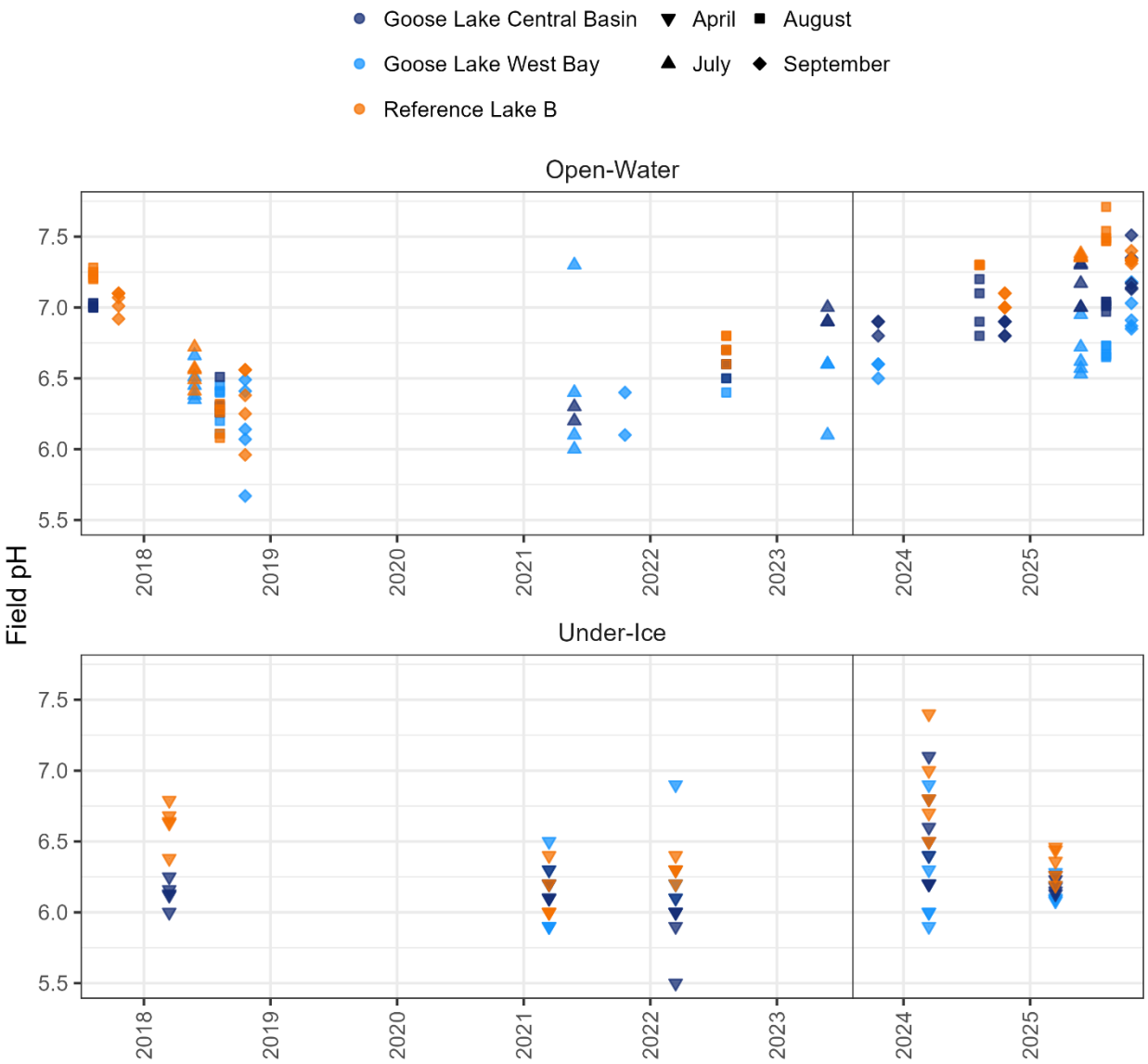
# 30 FIELD DISSOLVED OXYGEN




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.

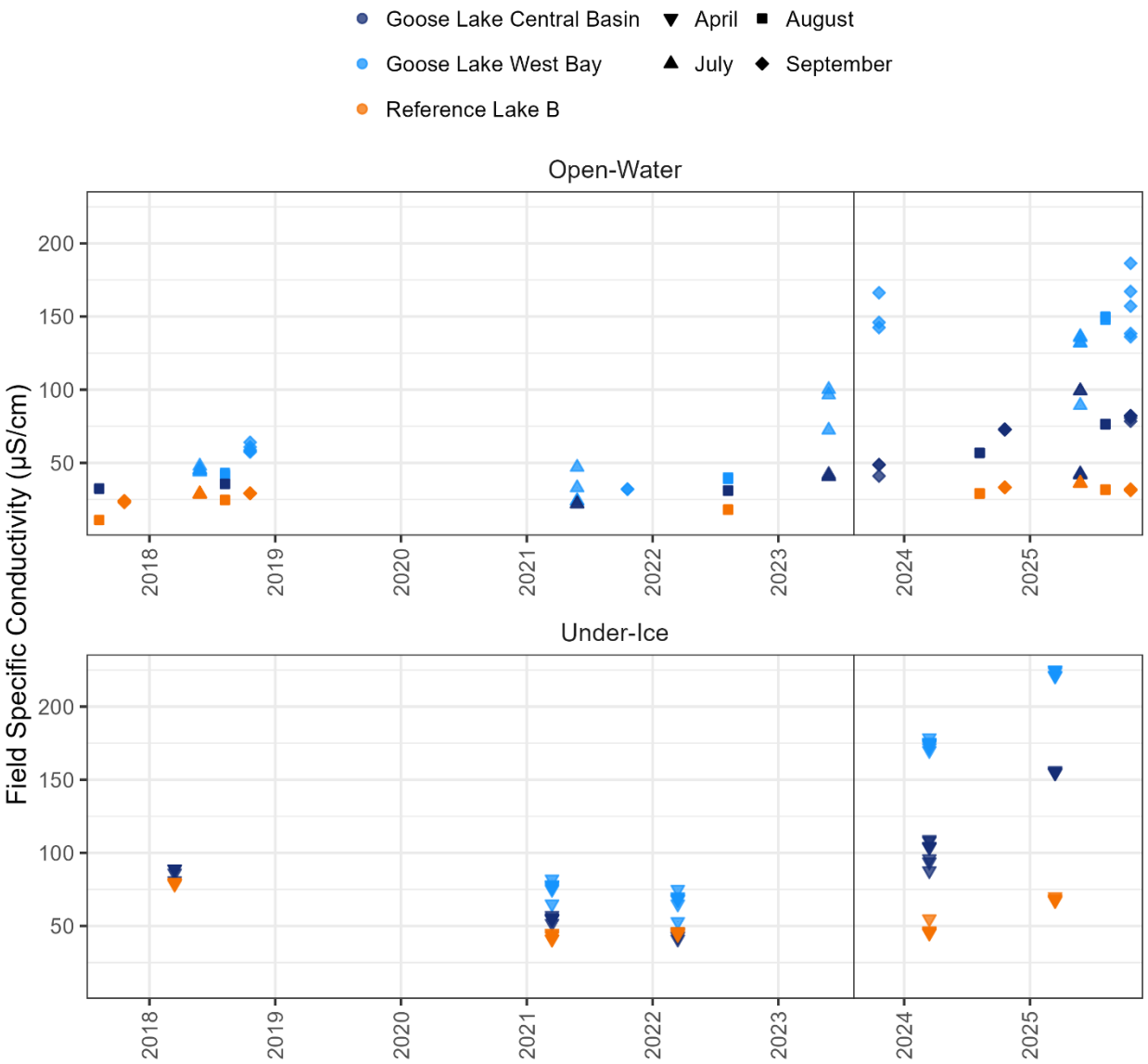
# 31 FIELD PH




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.

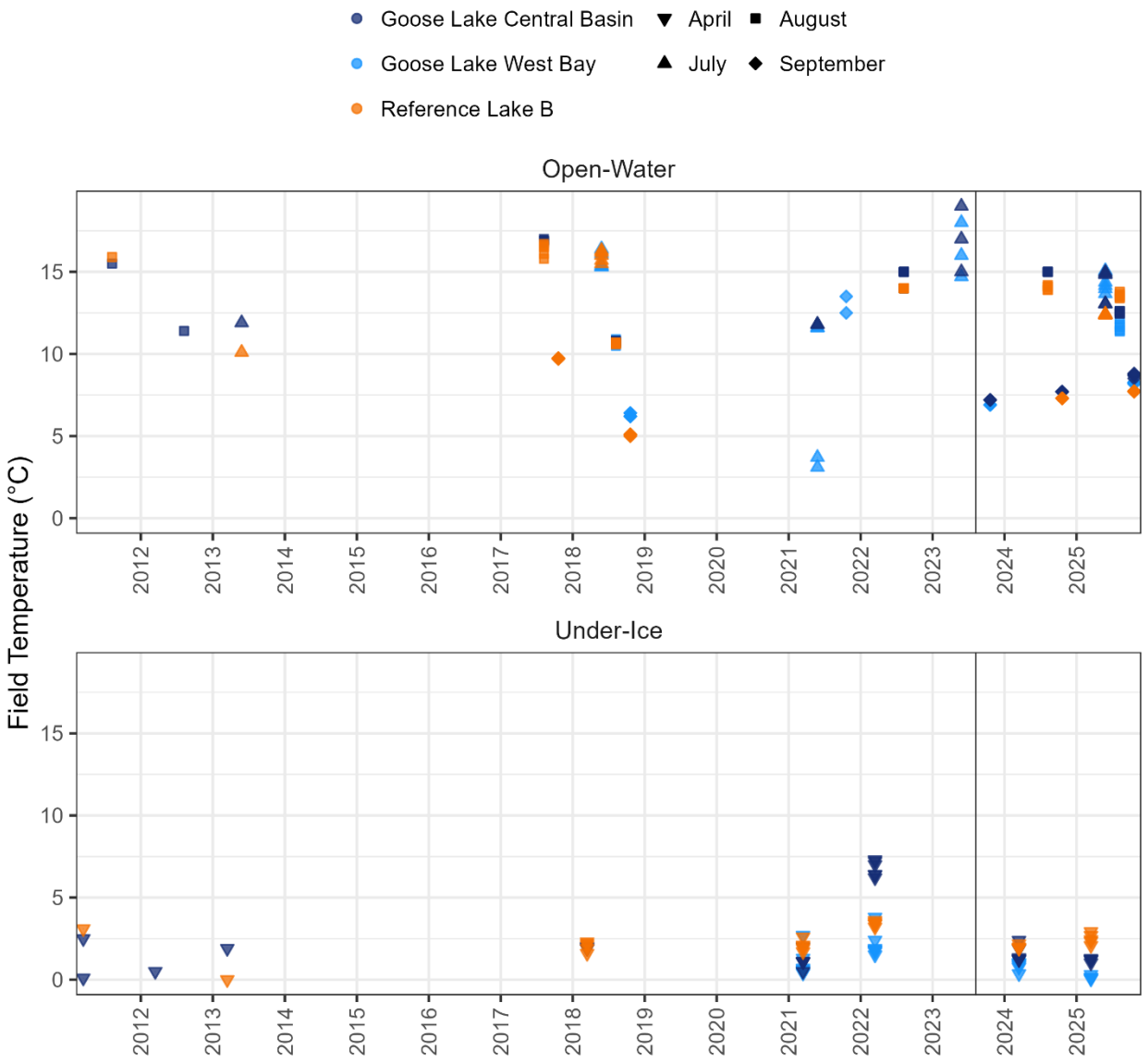
# 32 FIELD SPECIFIC CONDUCTIVITY




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.

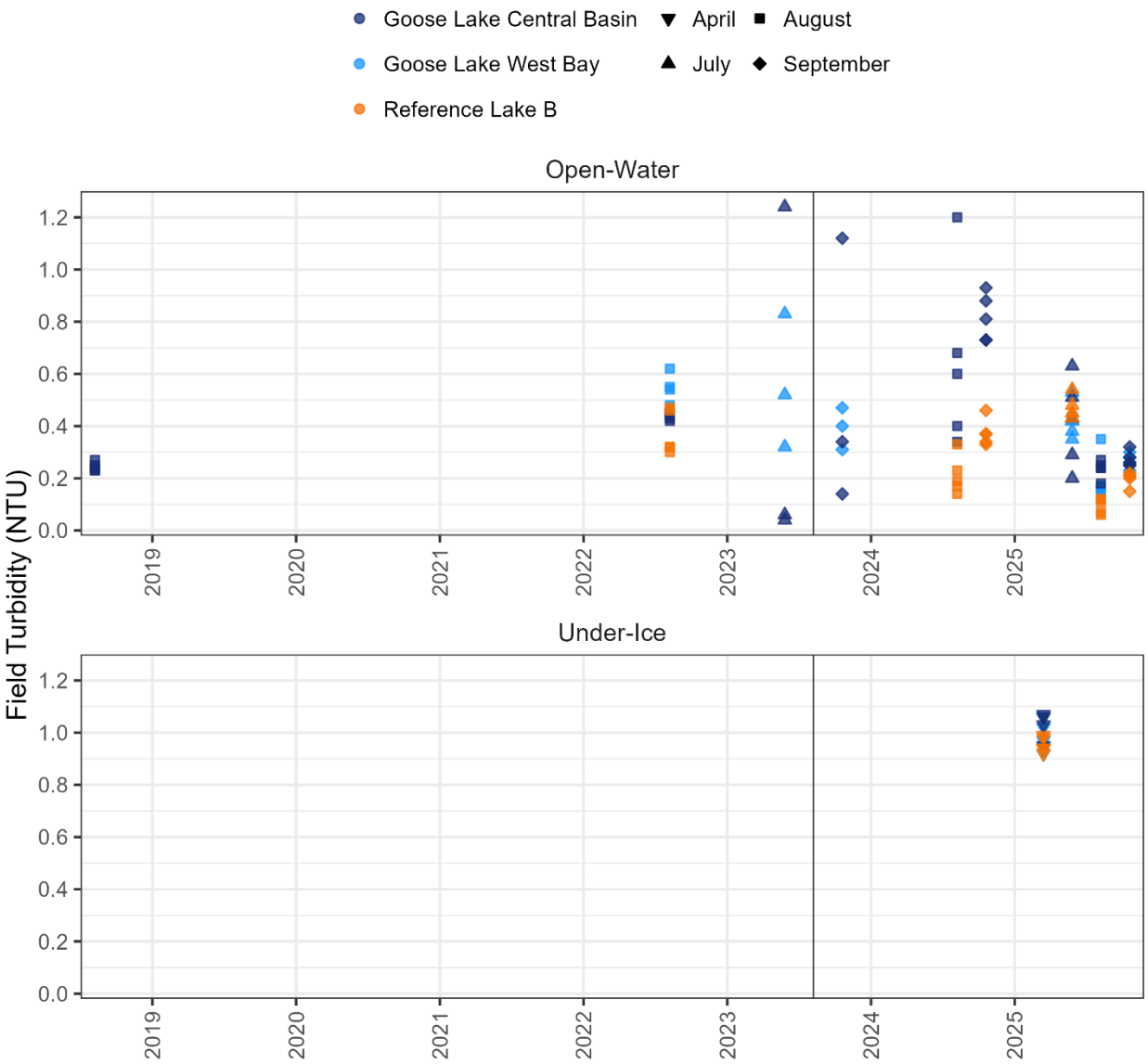
# 33 FIELD TEMPERATURE




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.

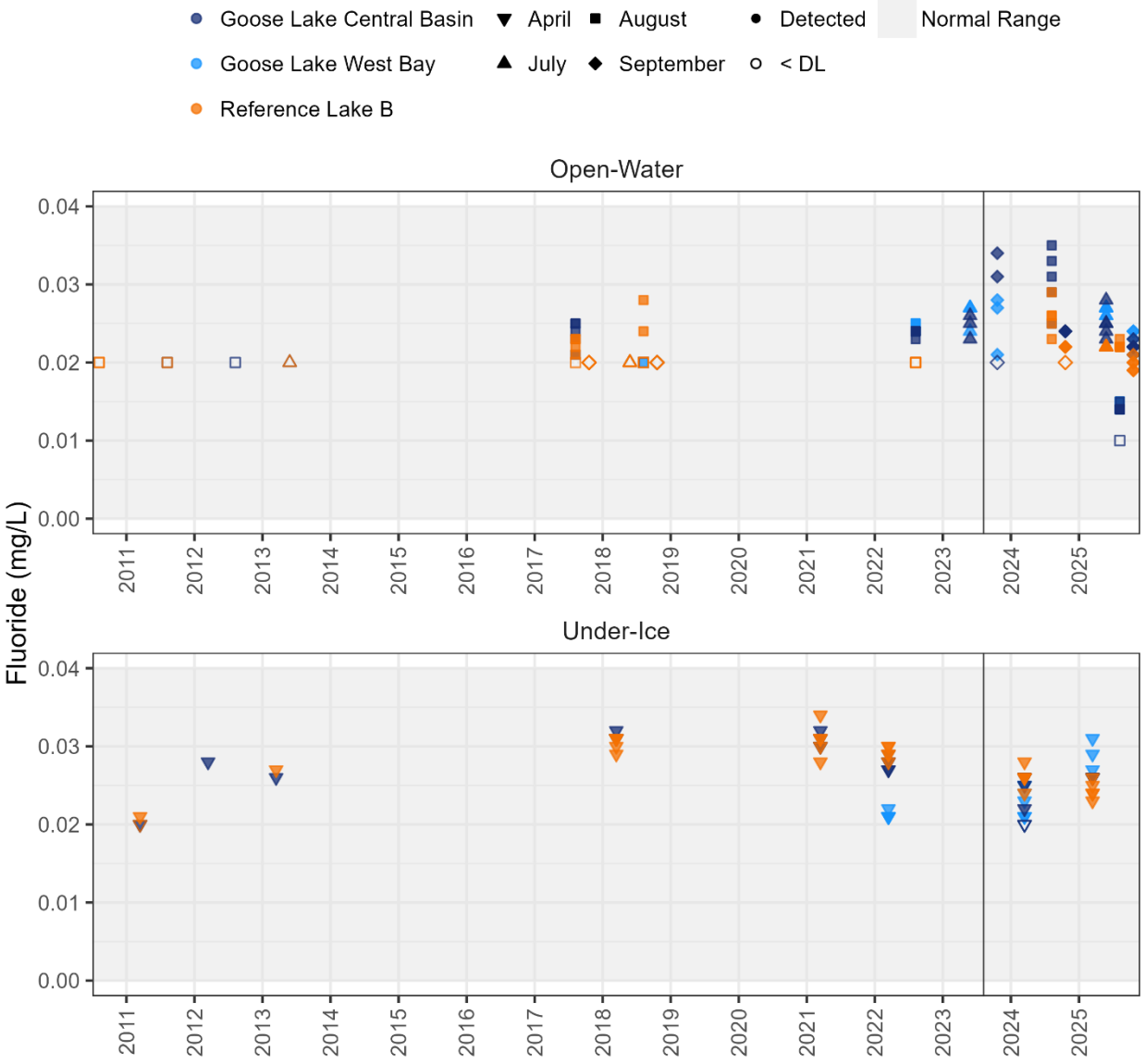
# 34 FIELD TURBIDITY




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.

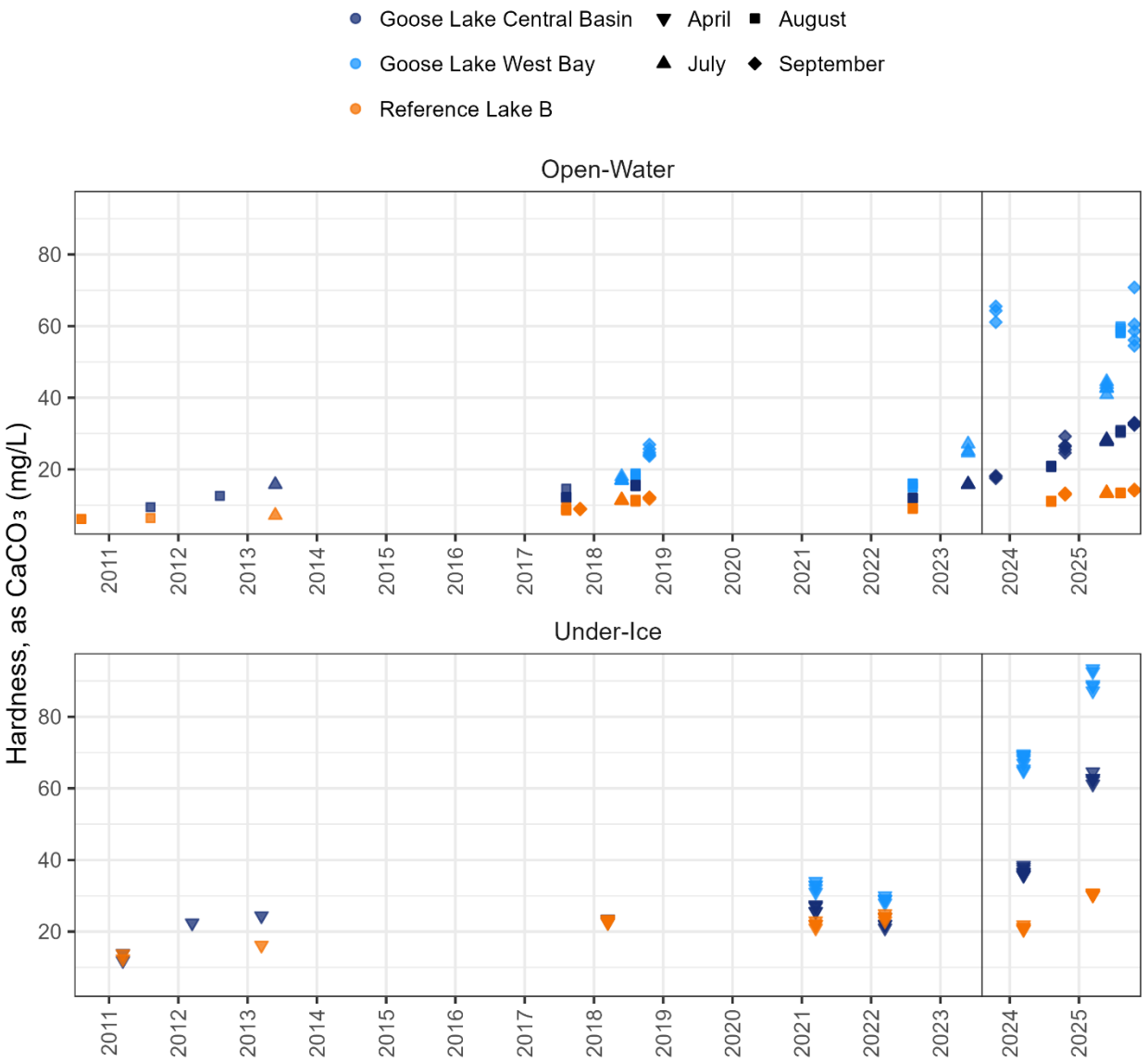
# 35 FLUORIDE




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.

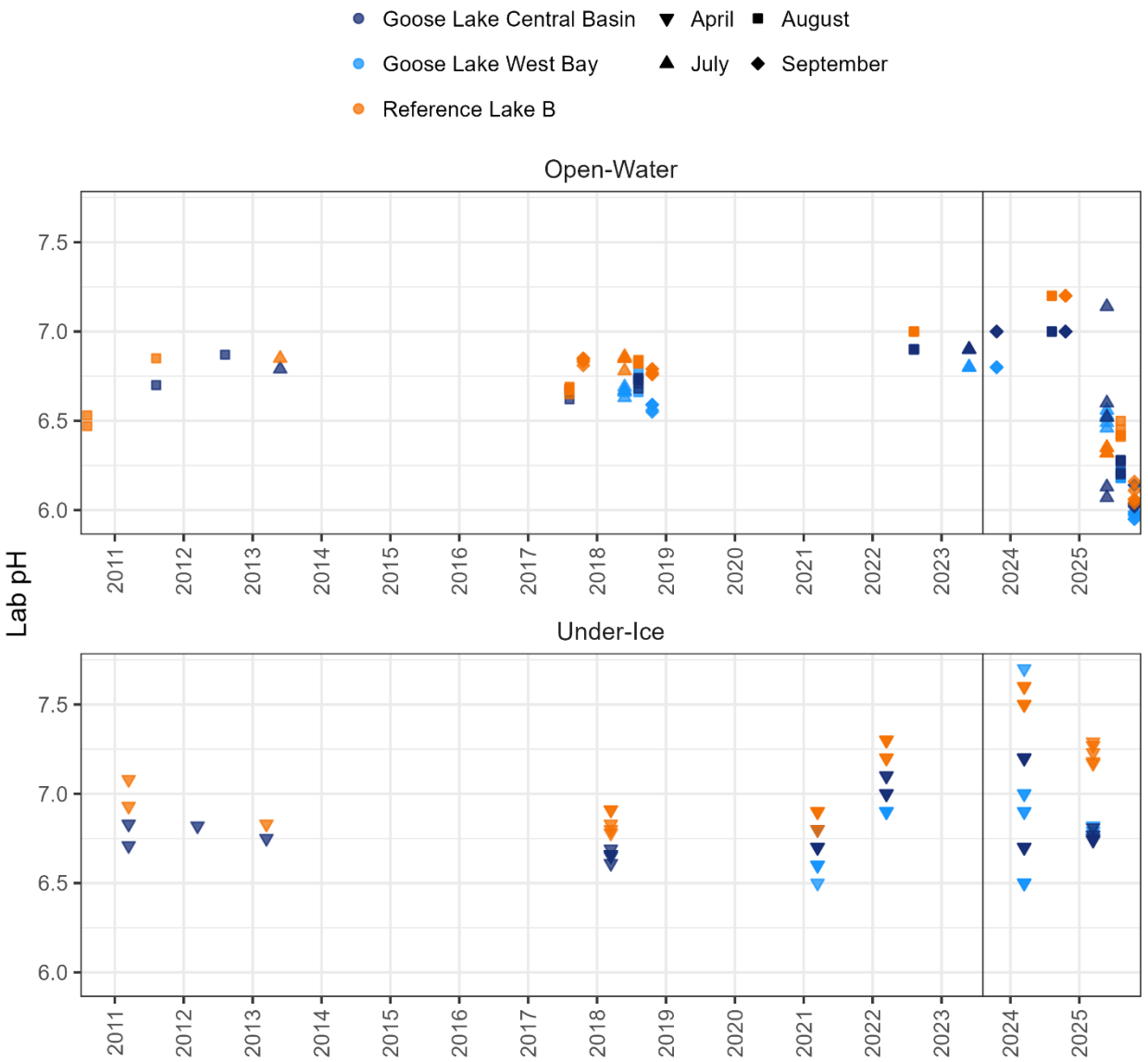
# 36 HARDNESS




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.

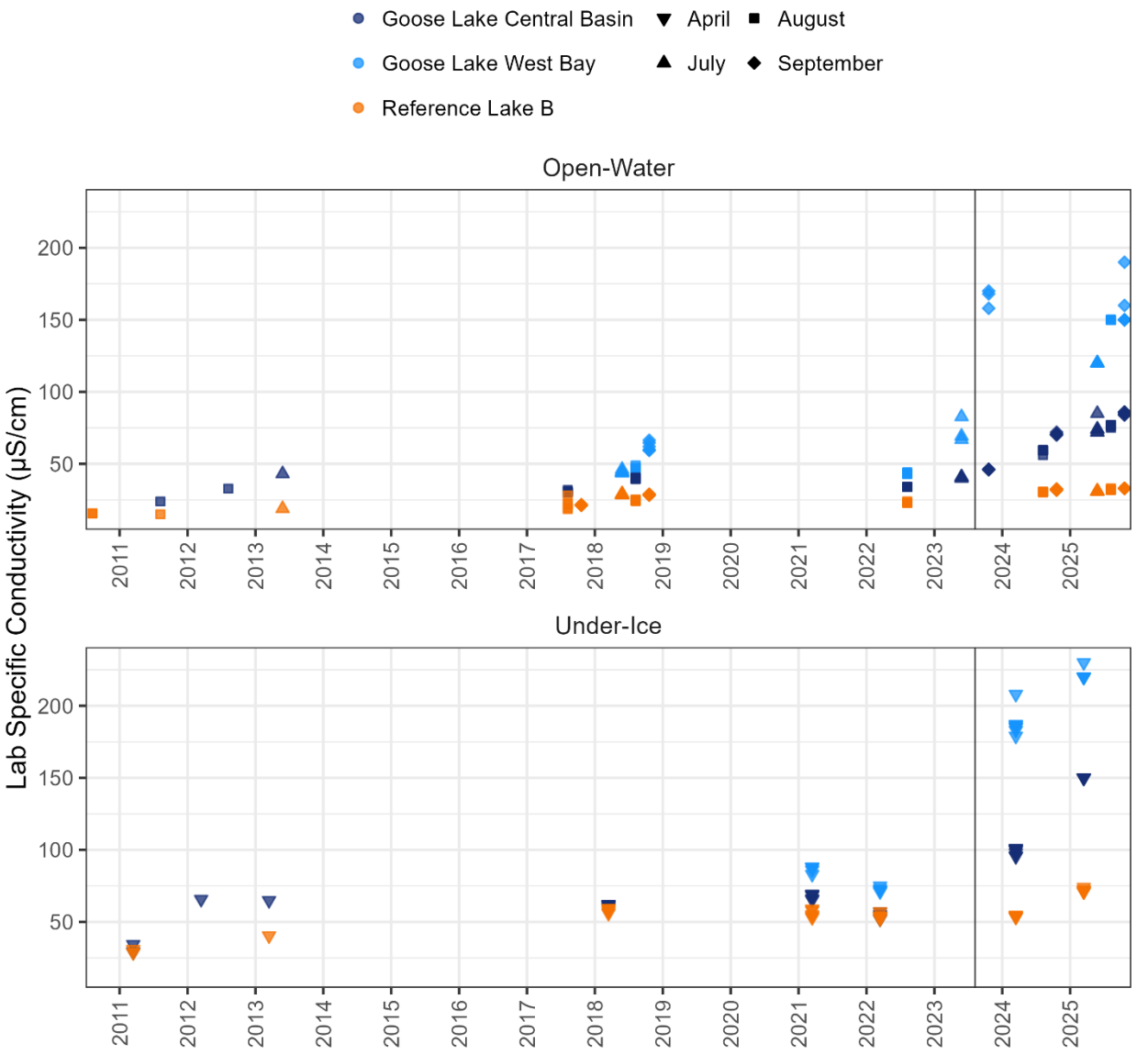
# 37 LABORATORY PH




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.

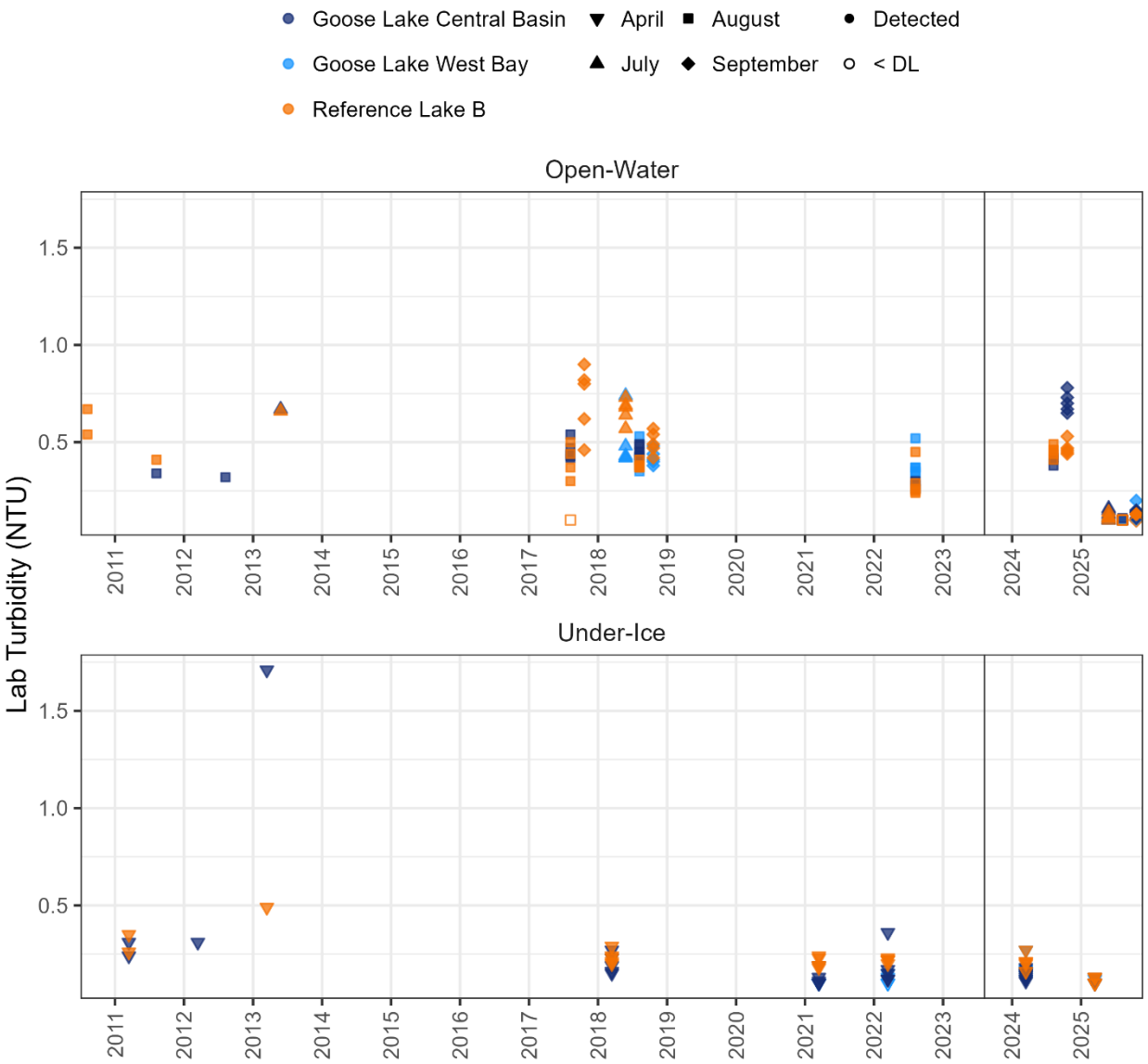
# 38 LABORATORY SPECIFIC CONDUCTIVITY




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.

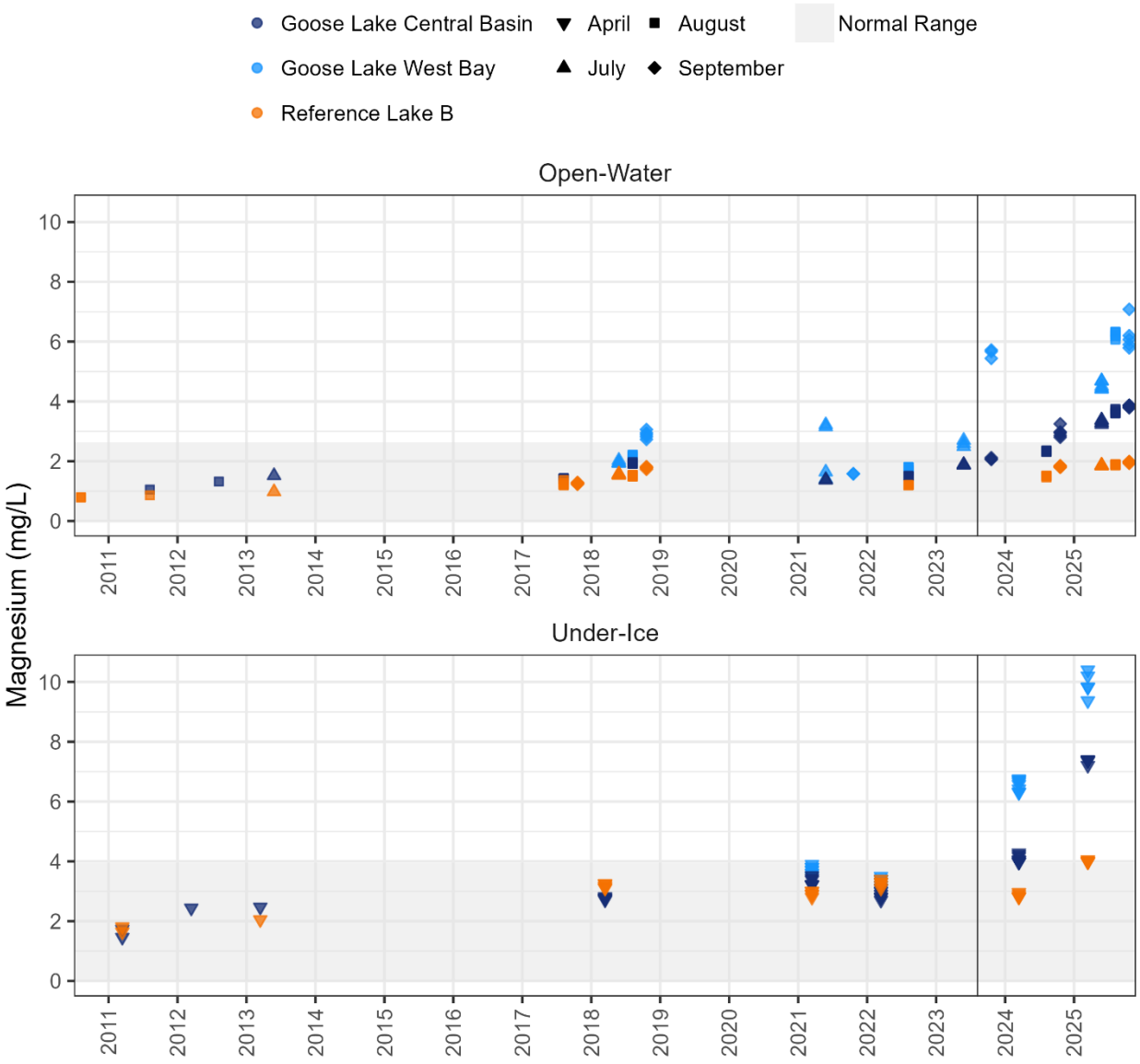
# 39 LABORATORY TURBIDITY




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.

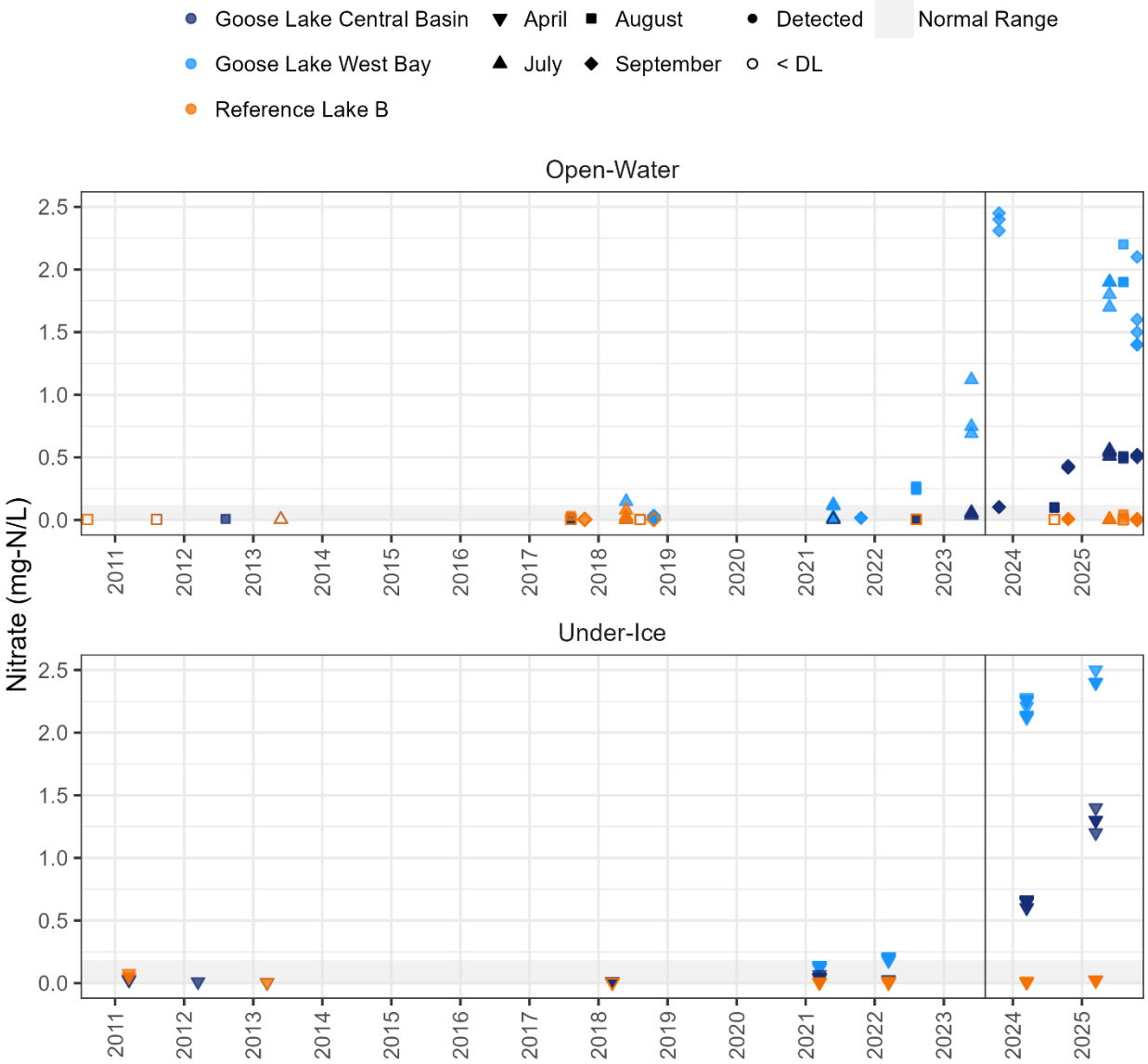
# 40 MAGNESIUM




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.

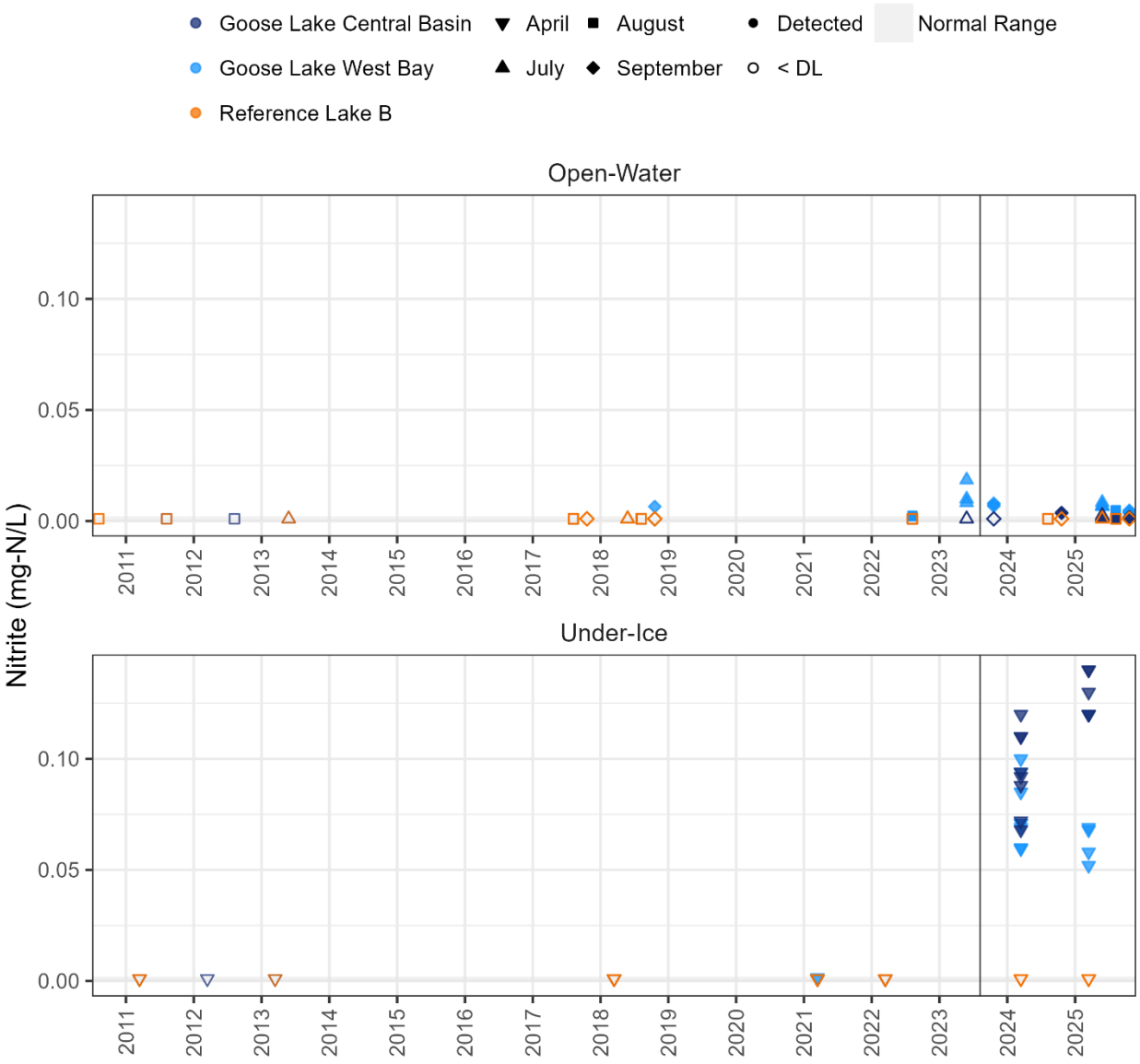
# 41 NITRATE




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.

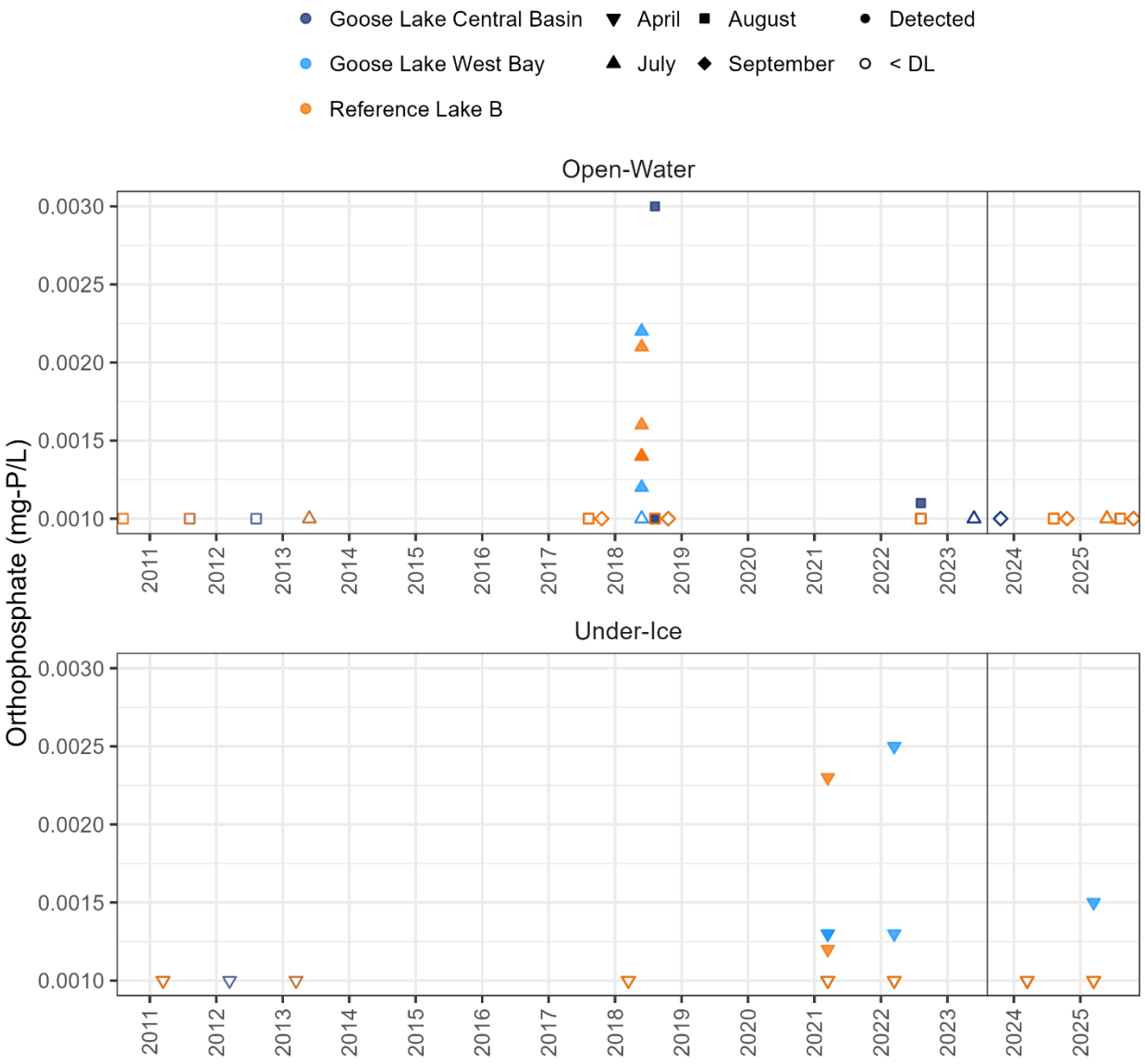
# 42 NITRITE




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.

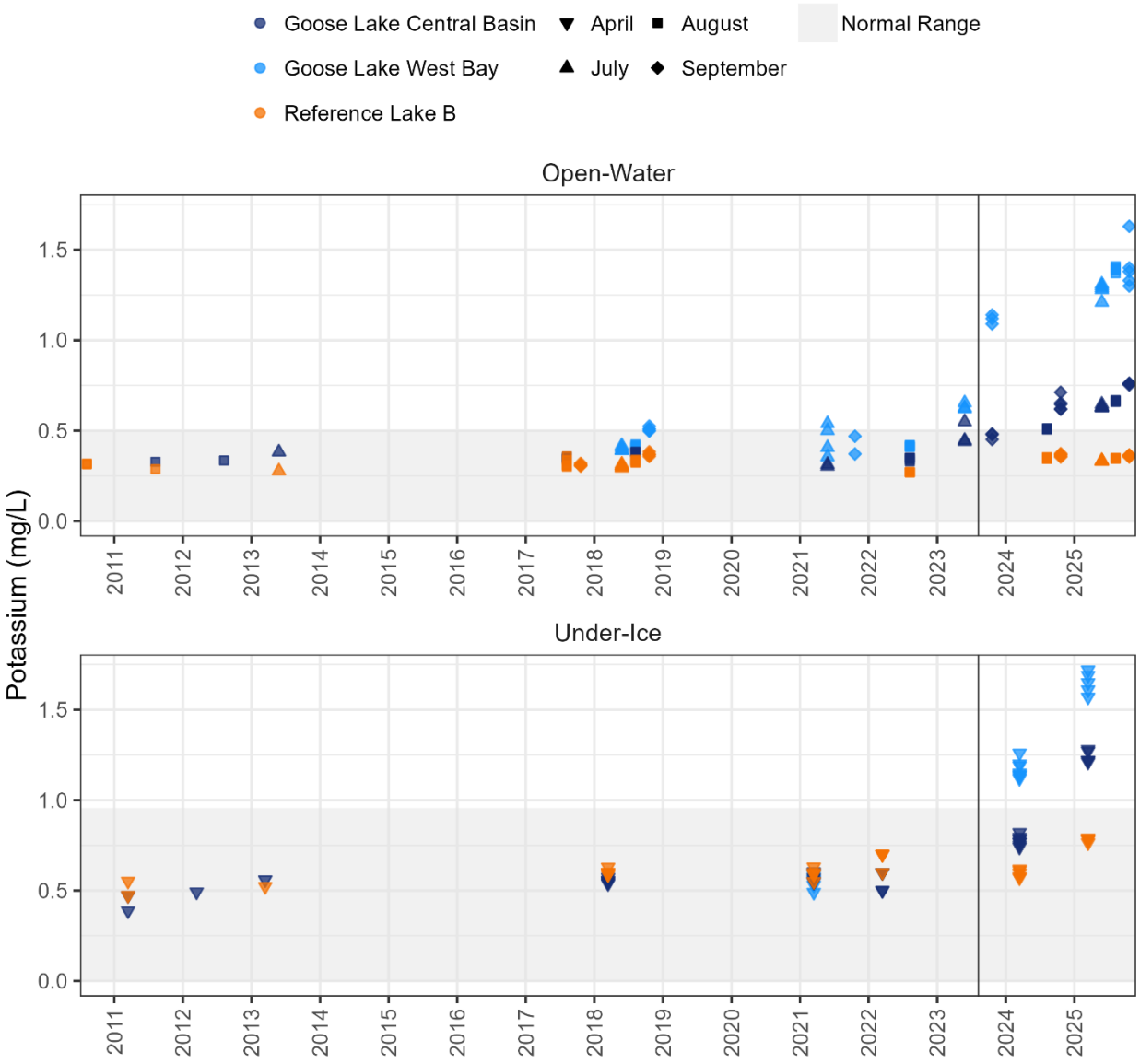
# 43 ORTHOPHOSPHATE




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.

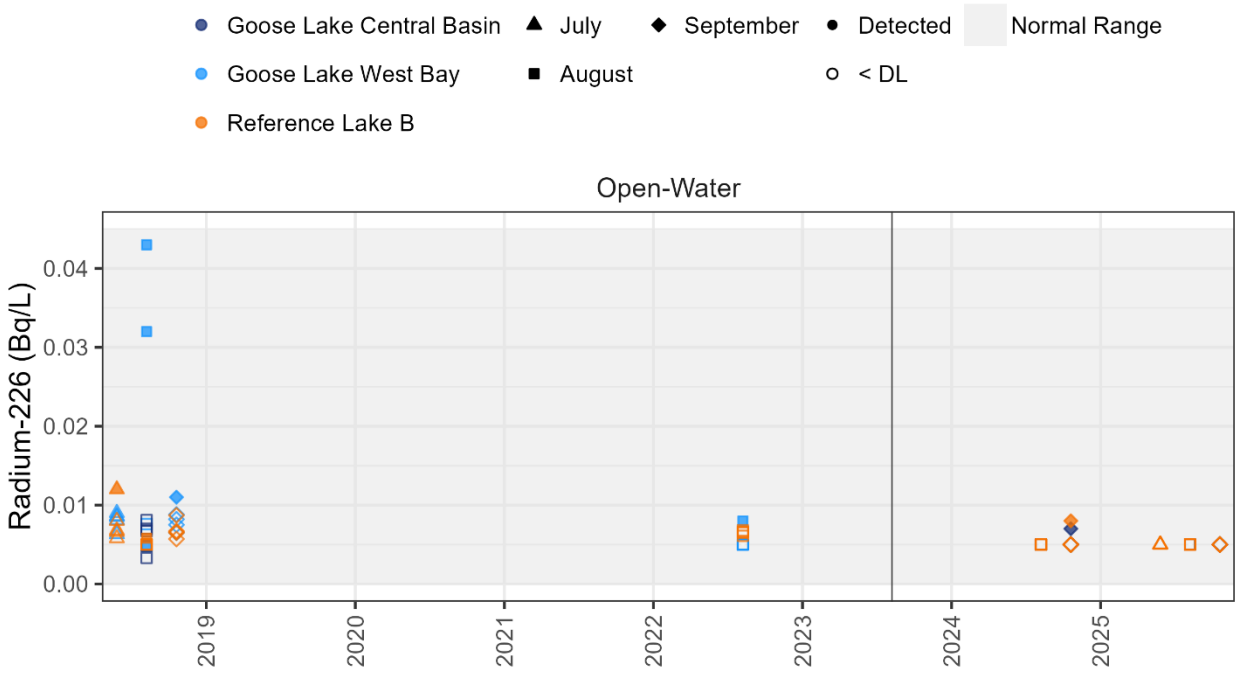
DL = detection limit.

# 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.

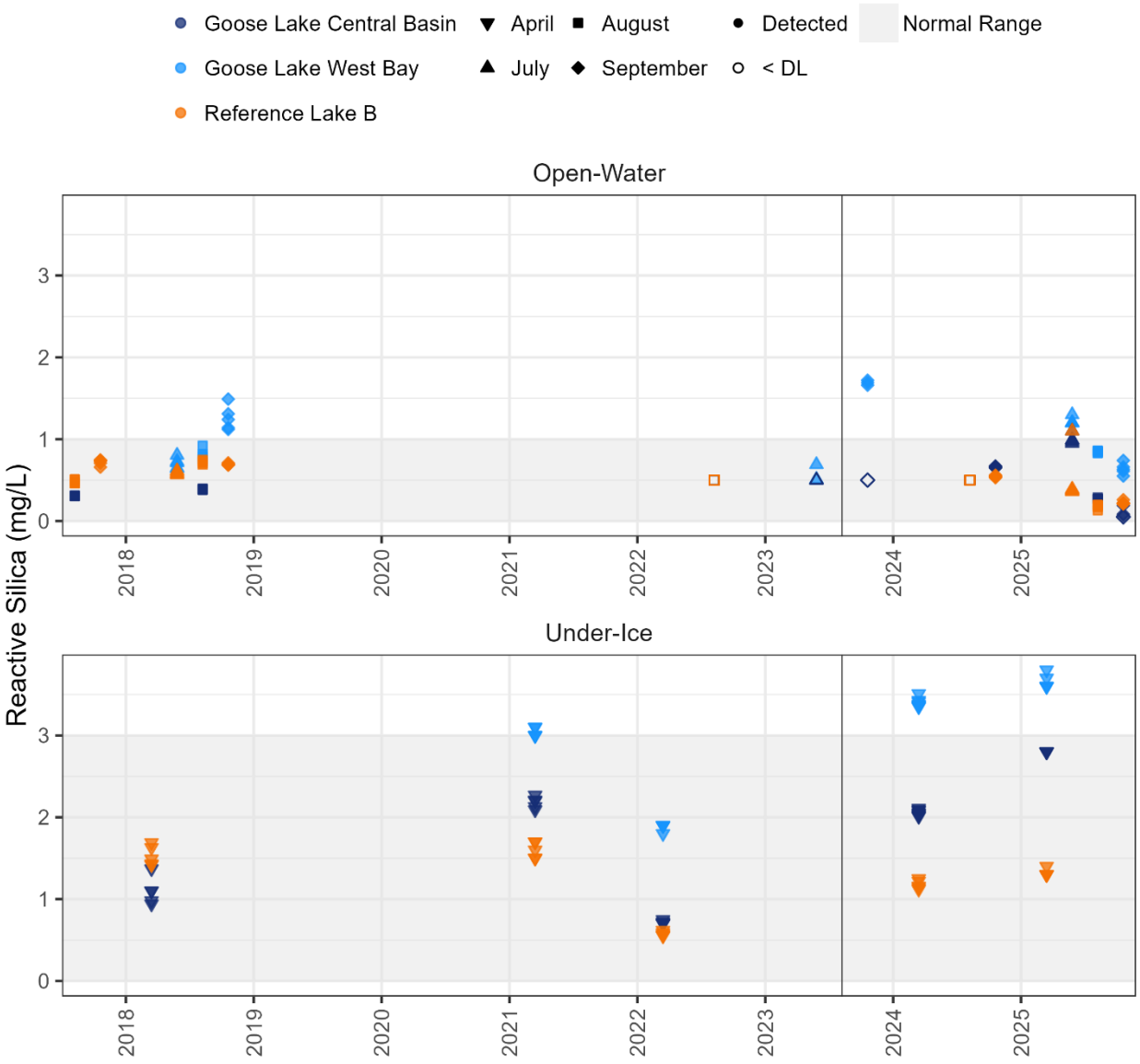
# 45 RADIUM-226




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.

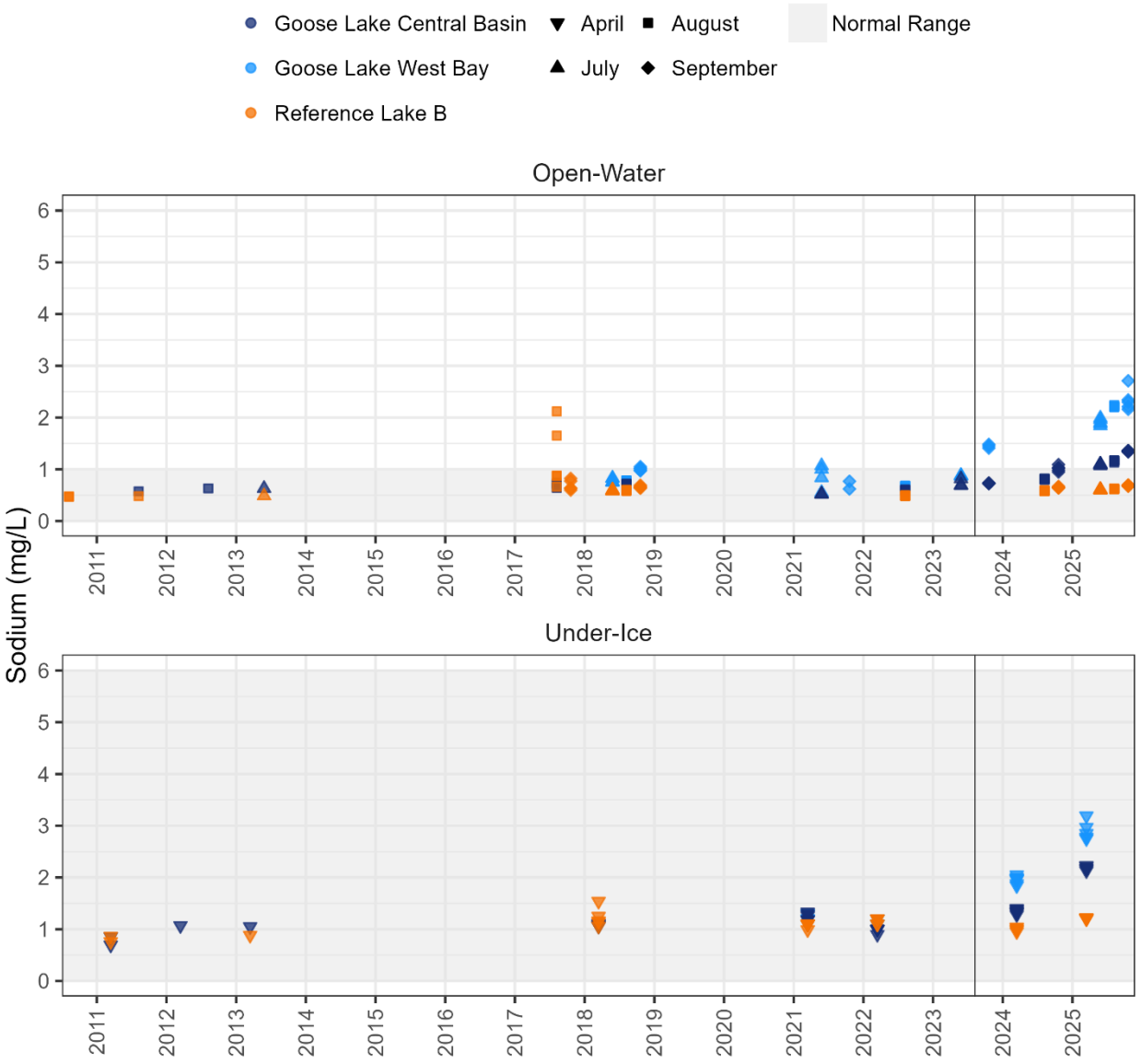
# 46 REACTIVE SILICA




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.

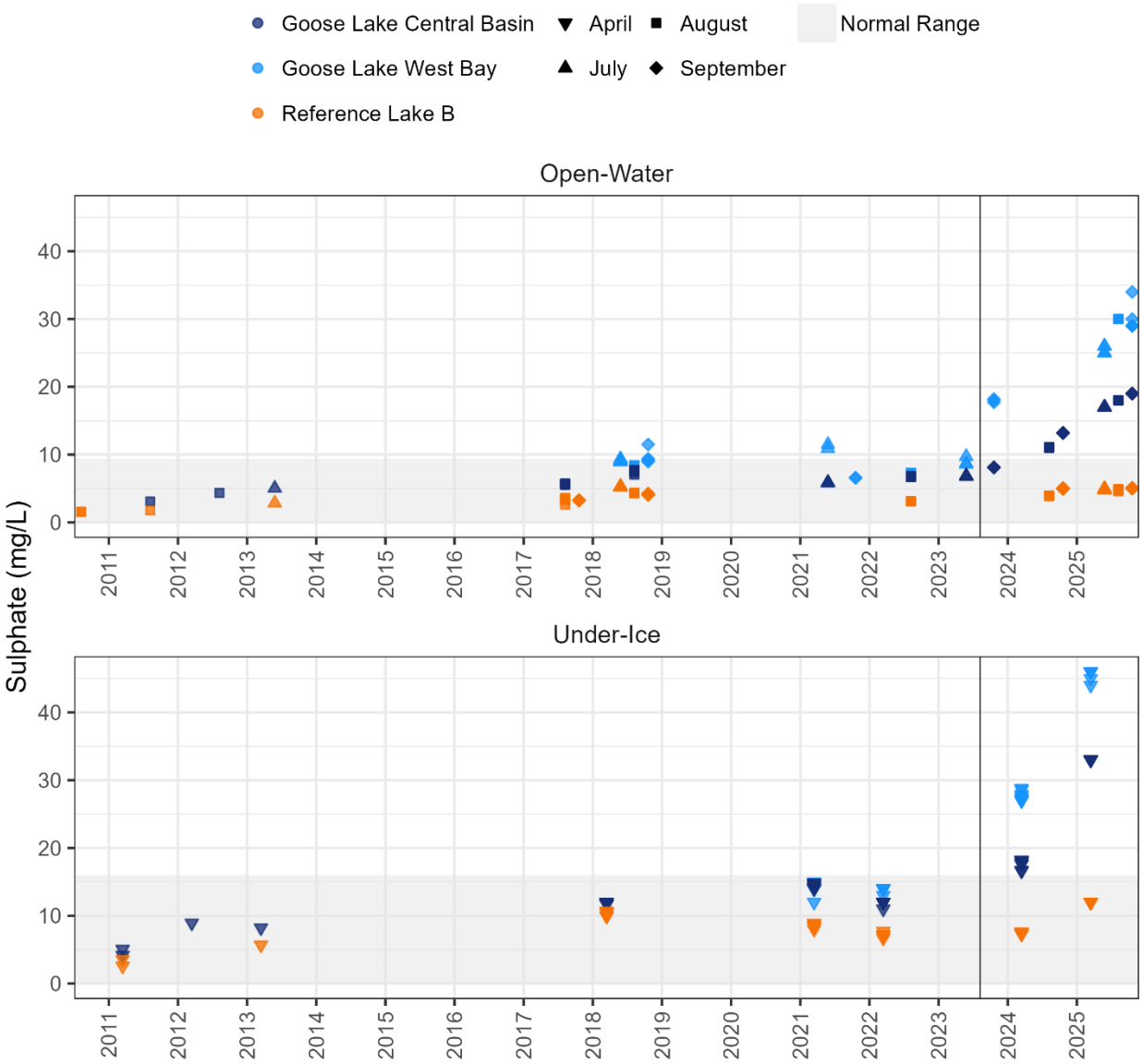
# 47 SODIUM




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.

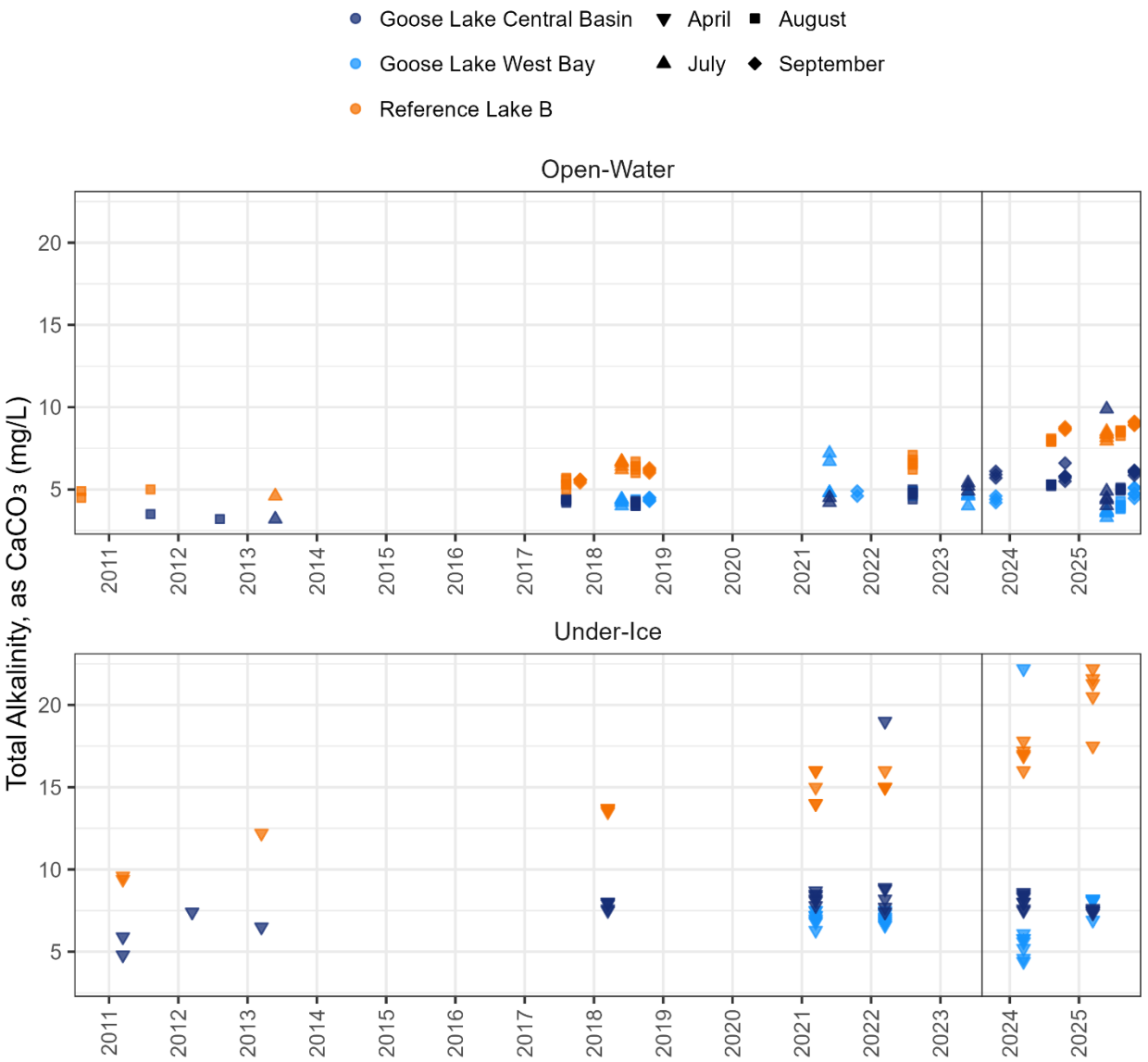
DL = detection limit.

# 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.

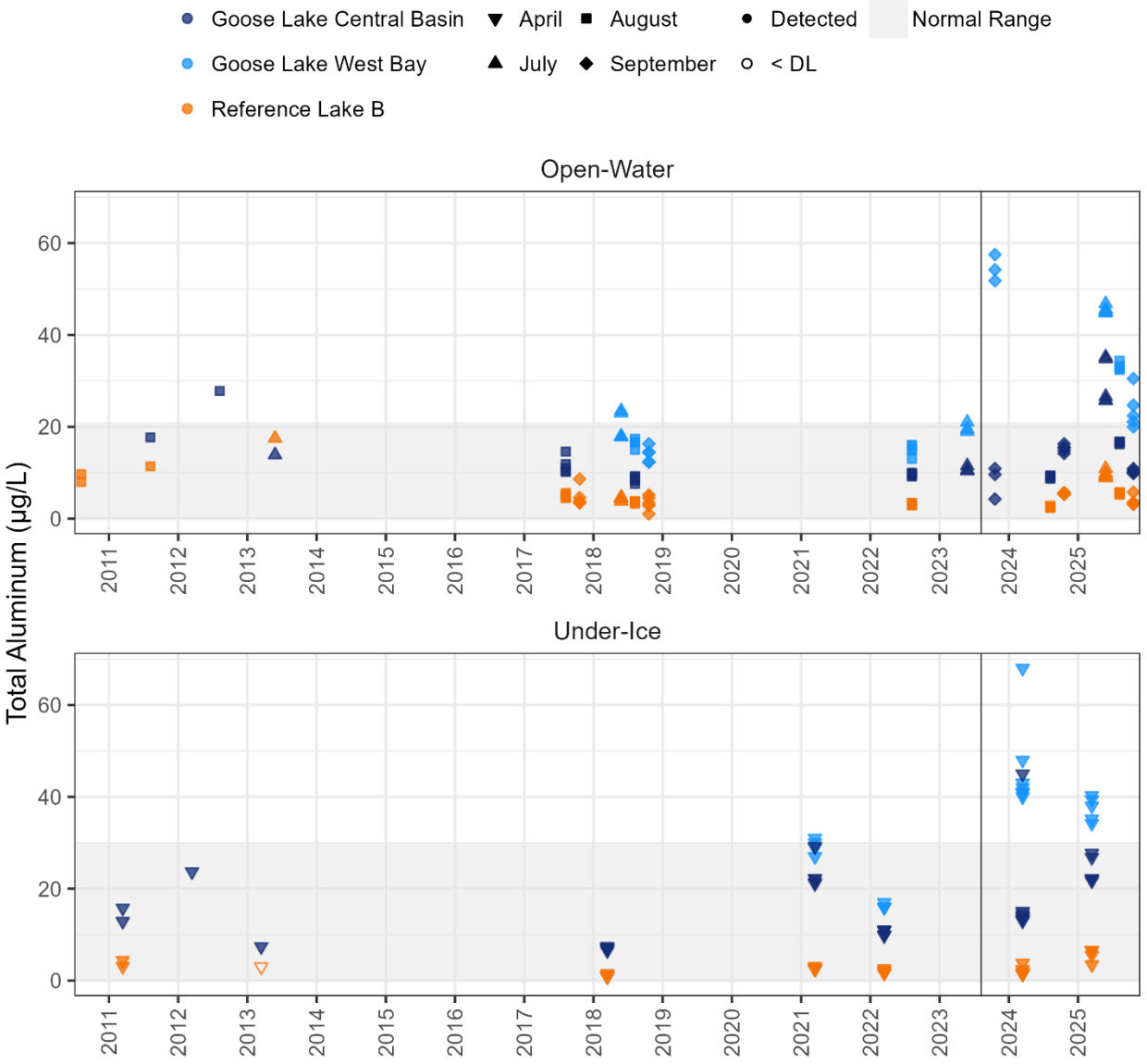
# 49 TOTAL ALKALINITY




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.

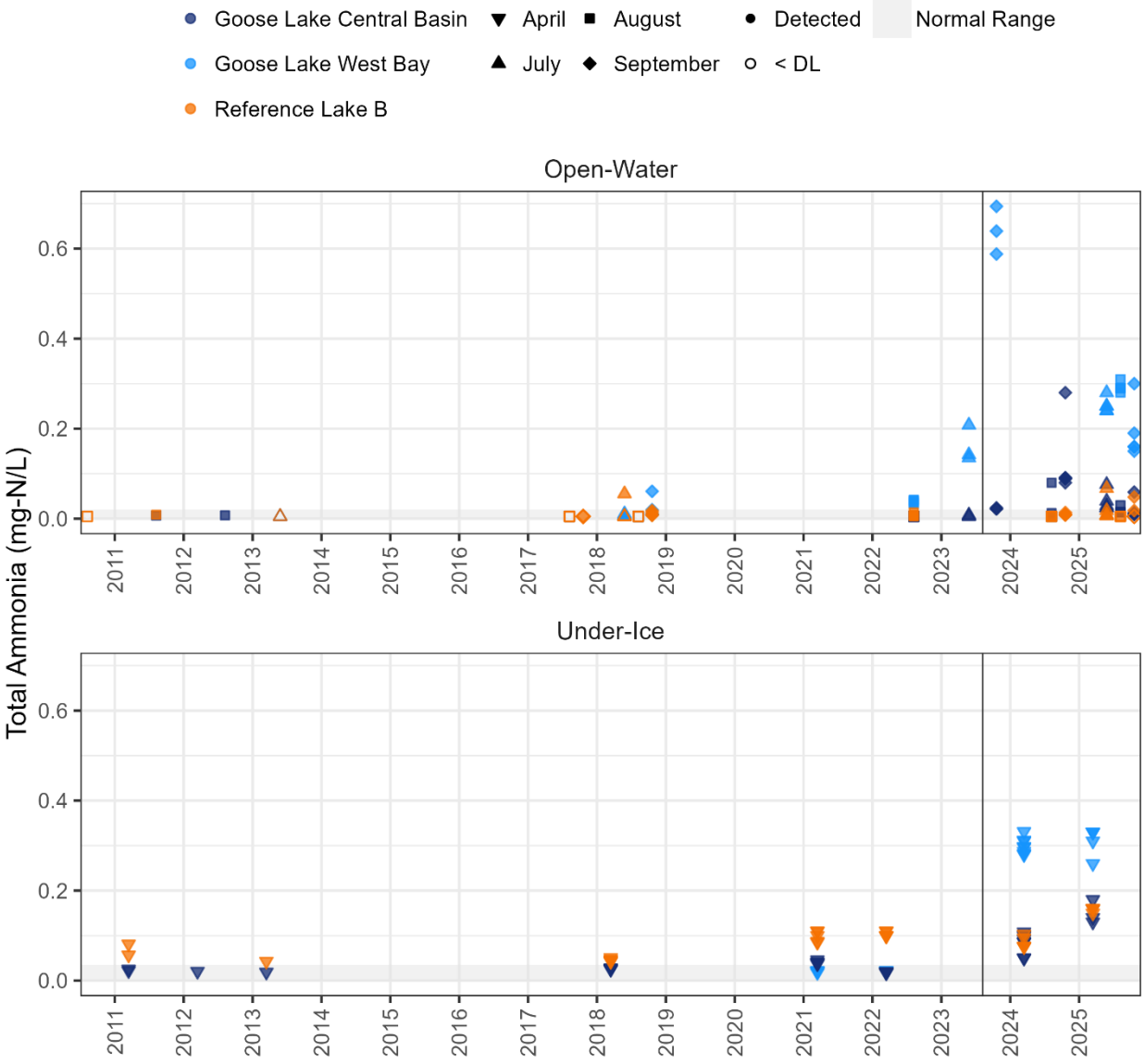
# 50 TOTAL ALUMINUM




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.

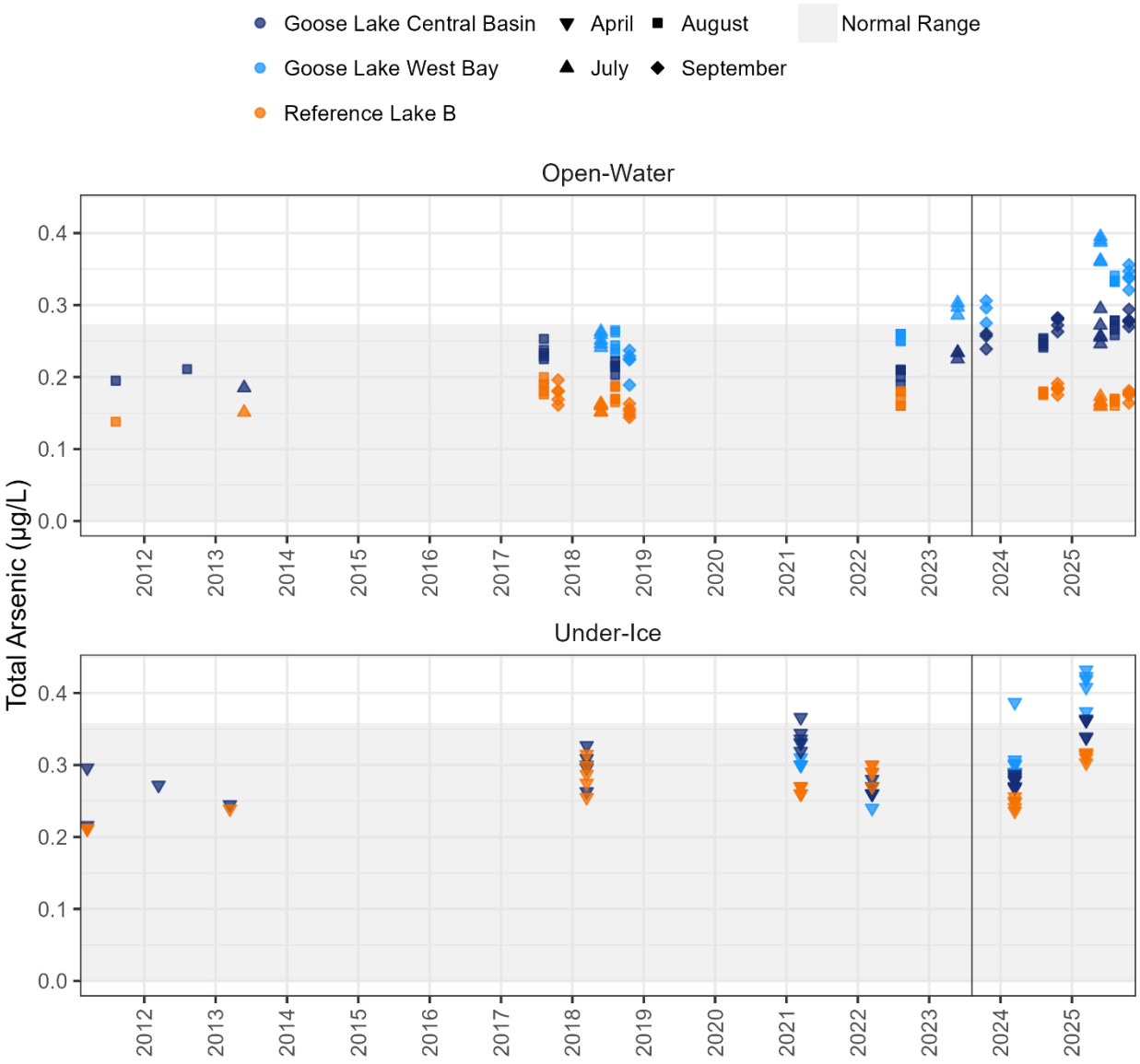
# 51 TOTAL AMMONIA




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.

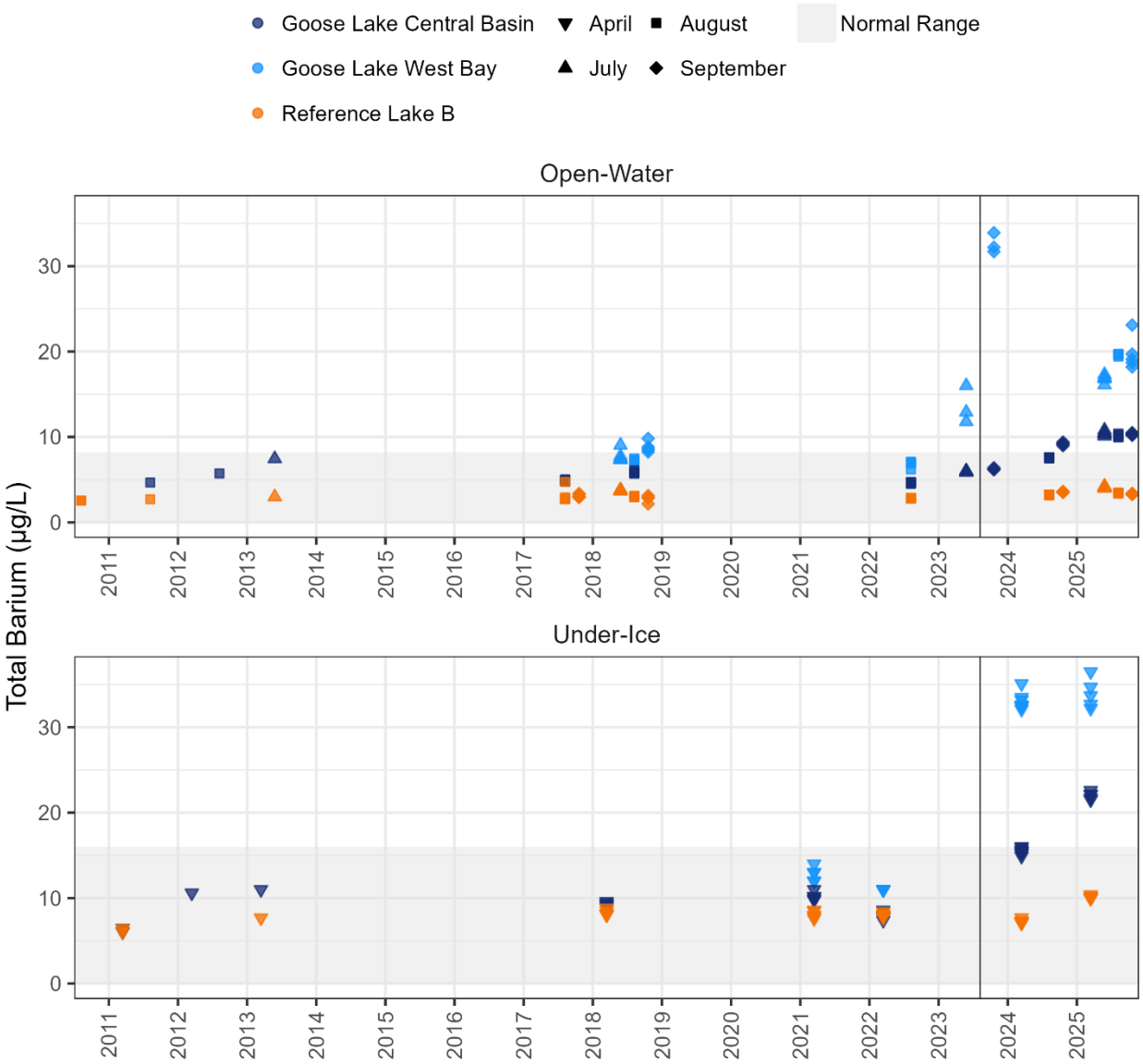
# 52 TOTAL ARSENIC




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.

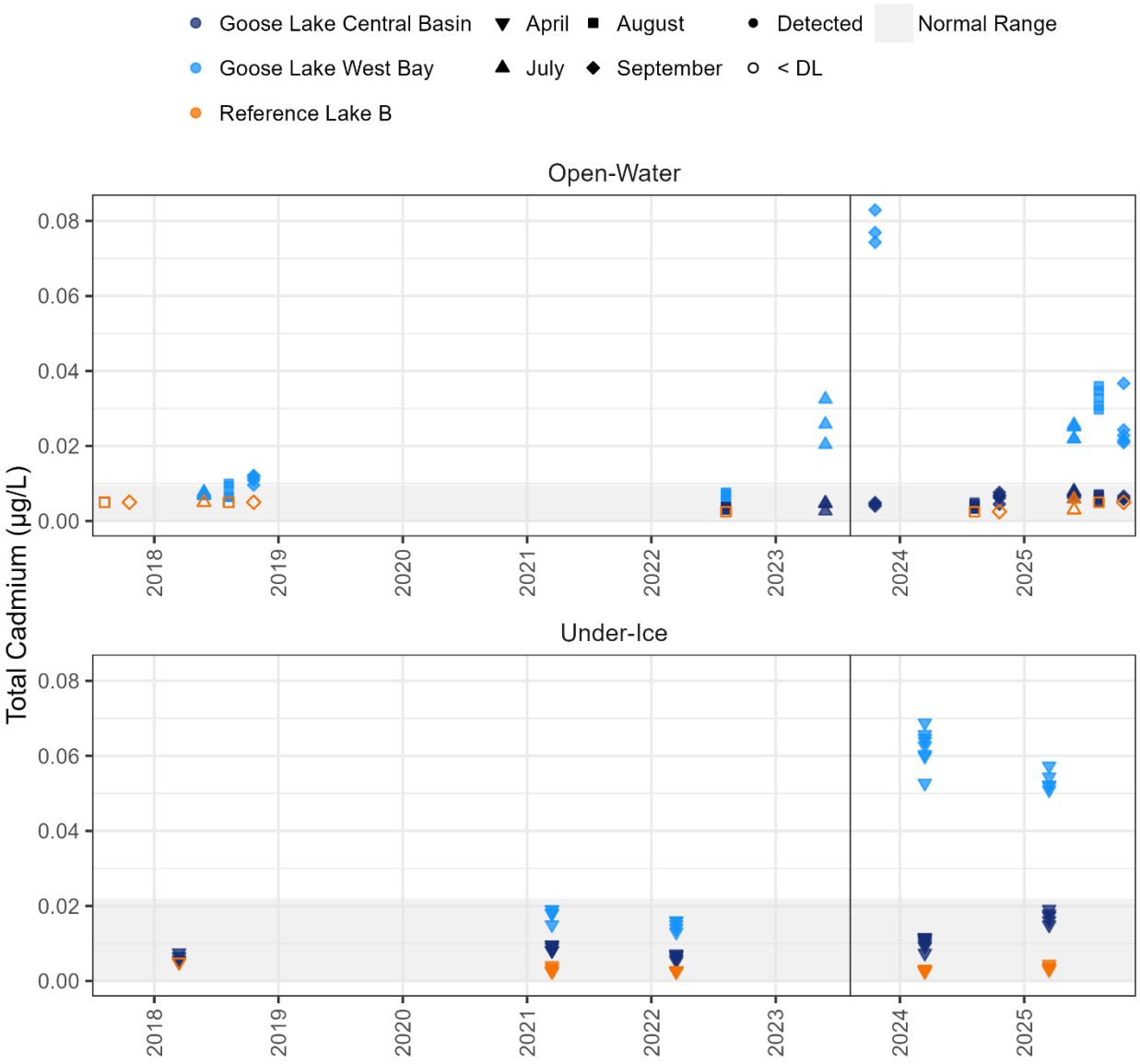
# 53 TOTAL BARIUM




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.

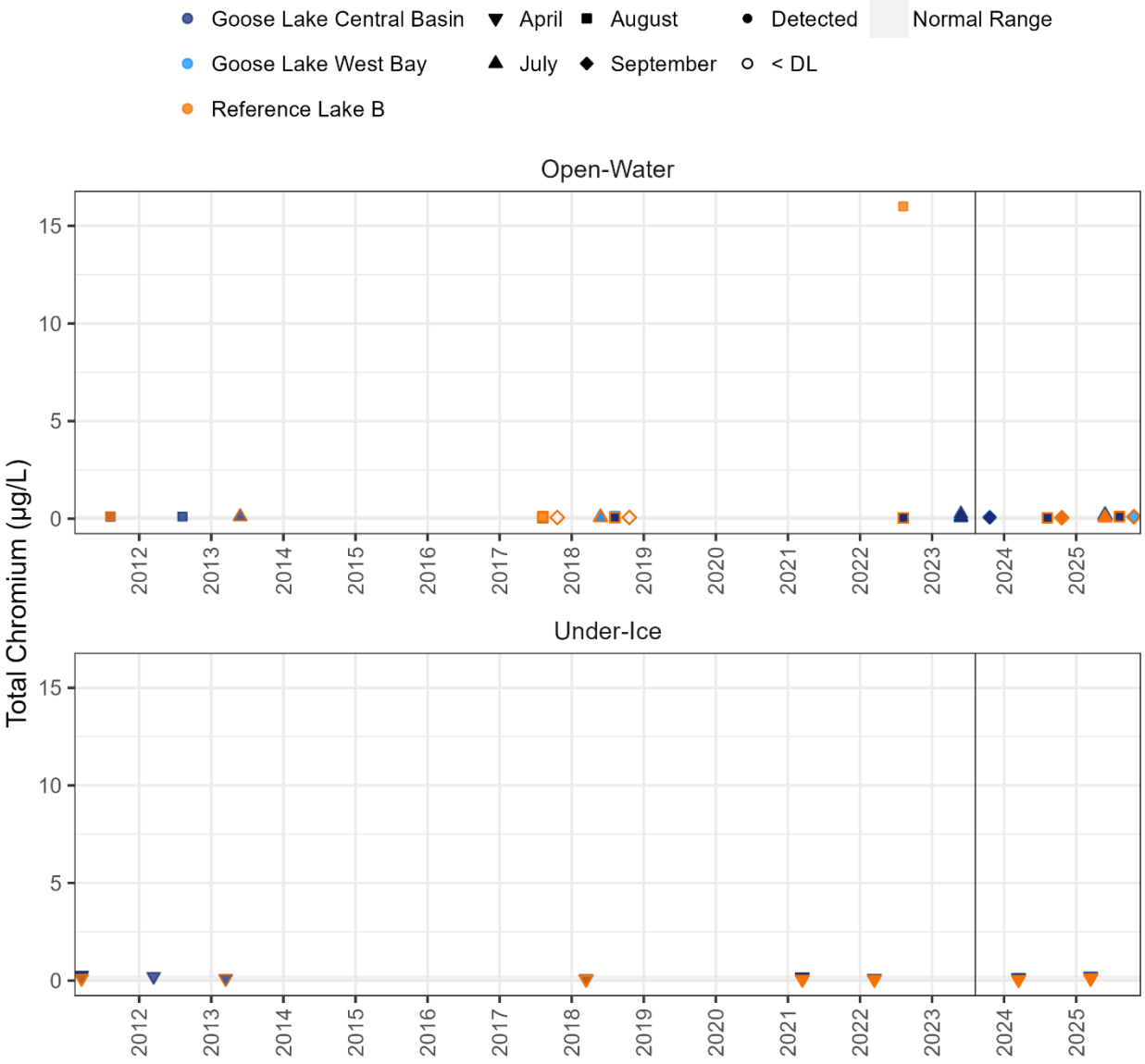
# 54 TOTAL CADMIUM




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.

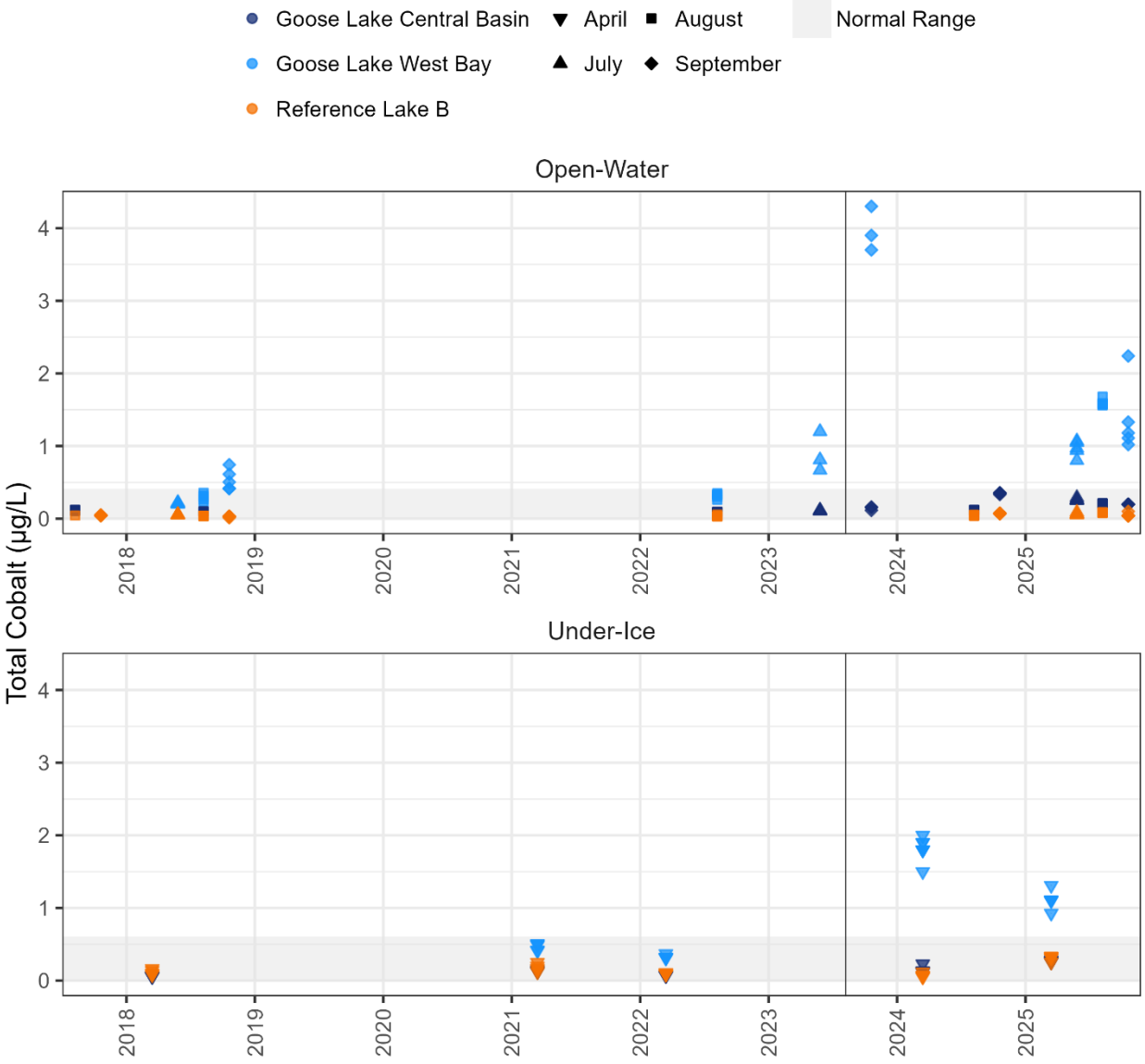
# 55 TOTAL CHROMIUM




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.

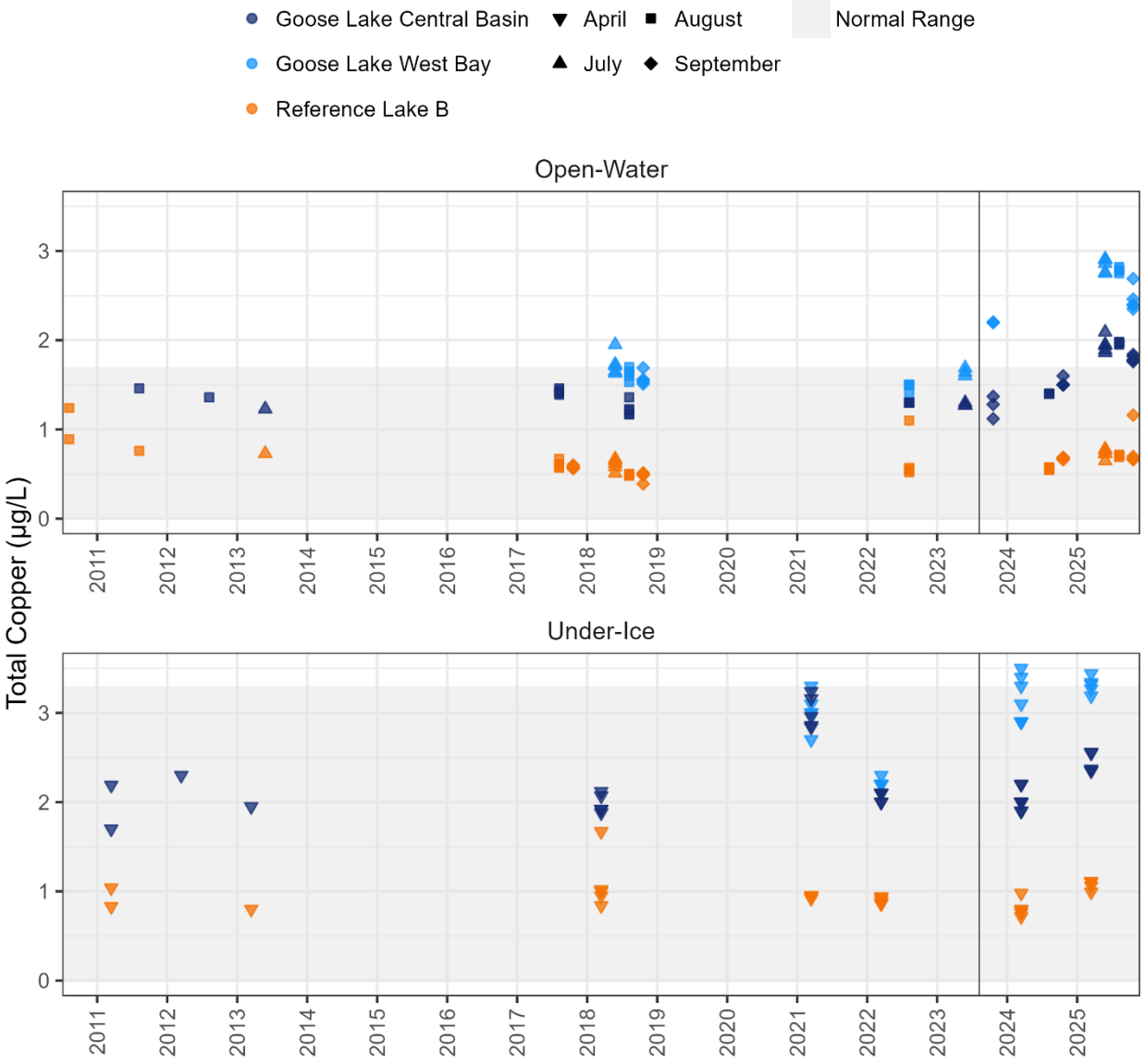
# 56 TOTAL COBALT




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.

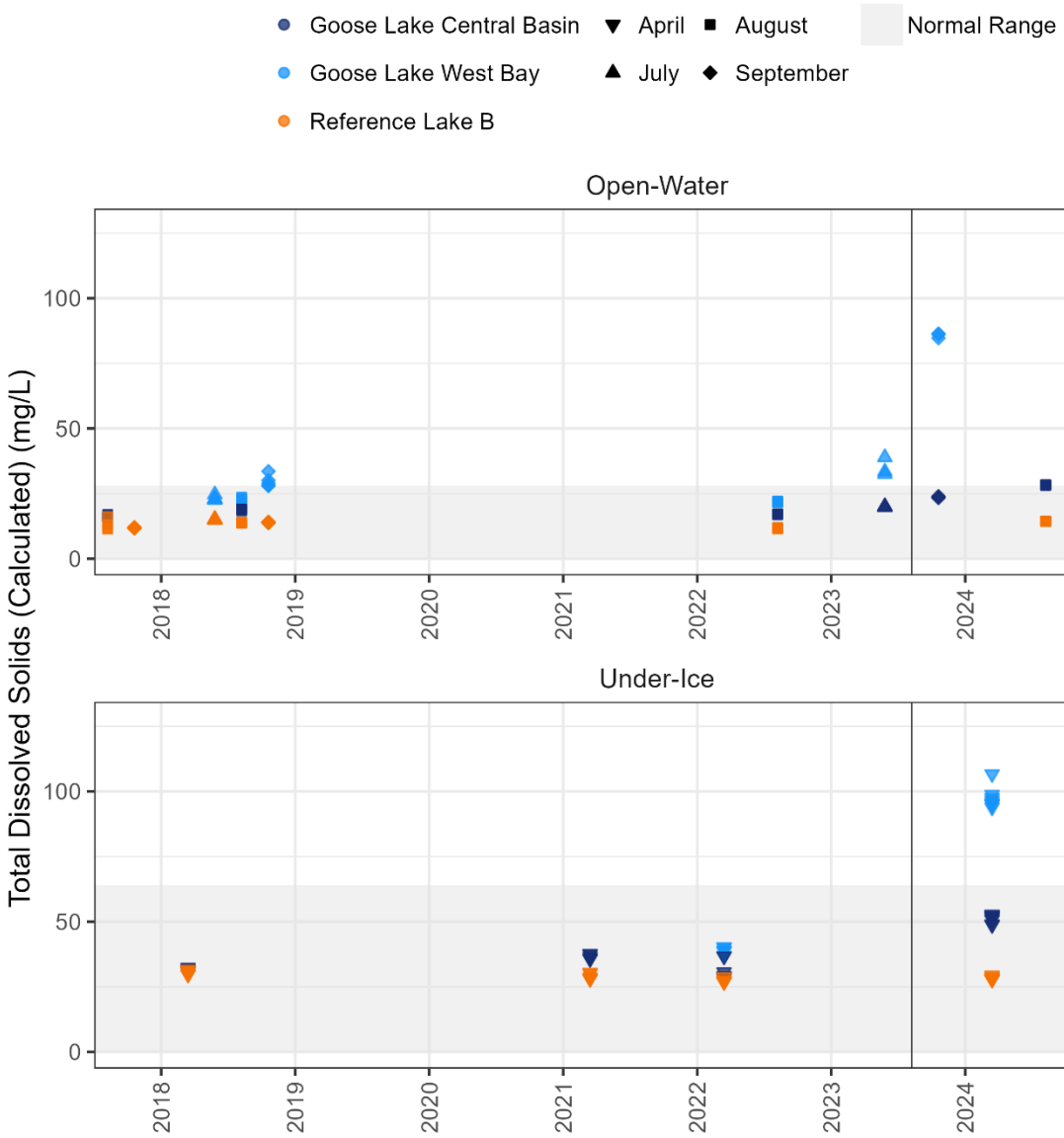
# 57 TOTAL COPPER




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)

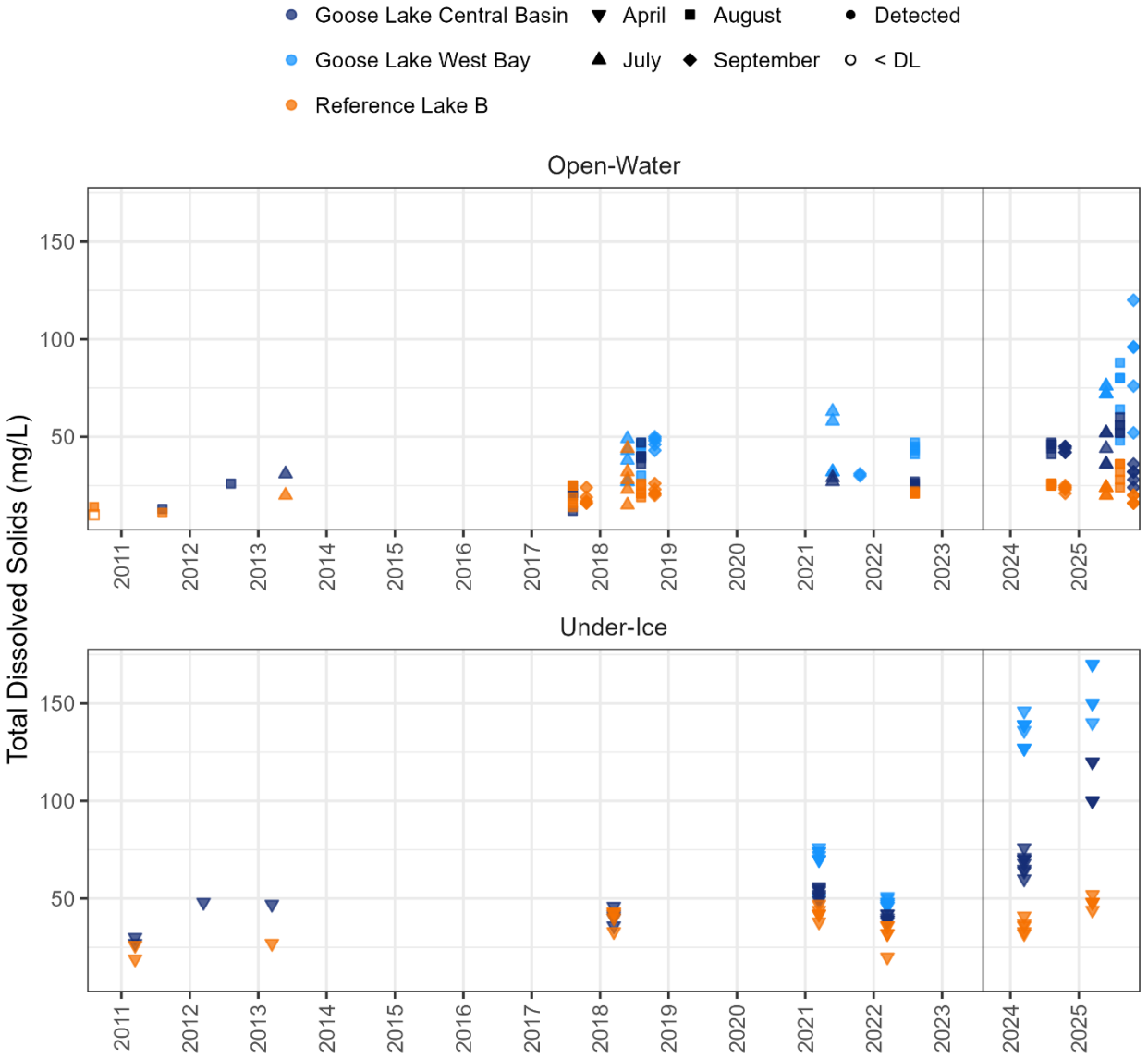



Note: This plot presents total dissolved solids concentrations calculated per APHA 2005 equation described in the main report.

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

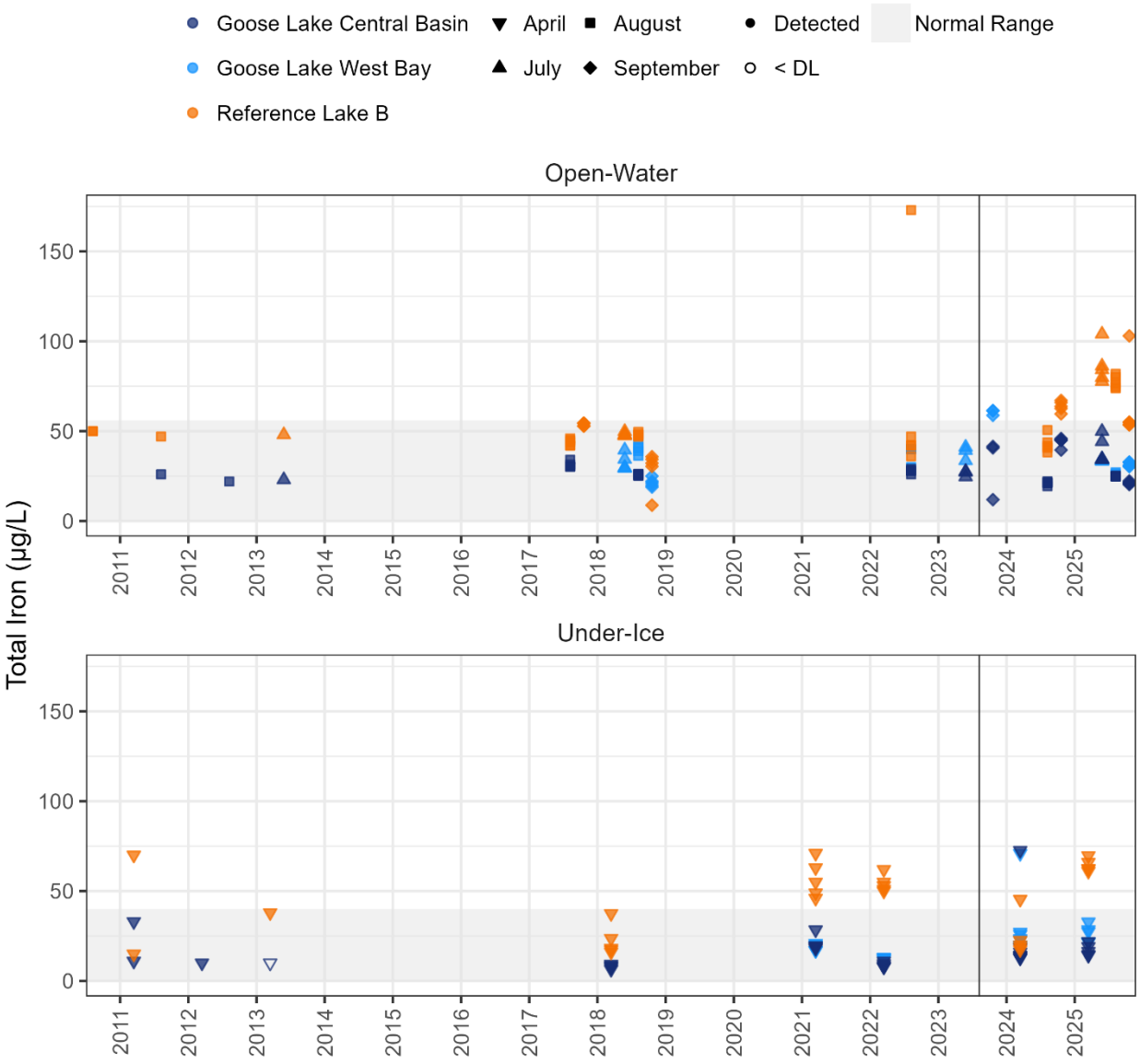



Note: This plot presents measured total dissolved solids concentrations by the laboratory (i.e., gravimetric total dissolved solid method).

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.

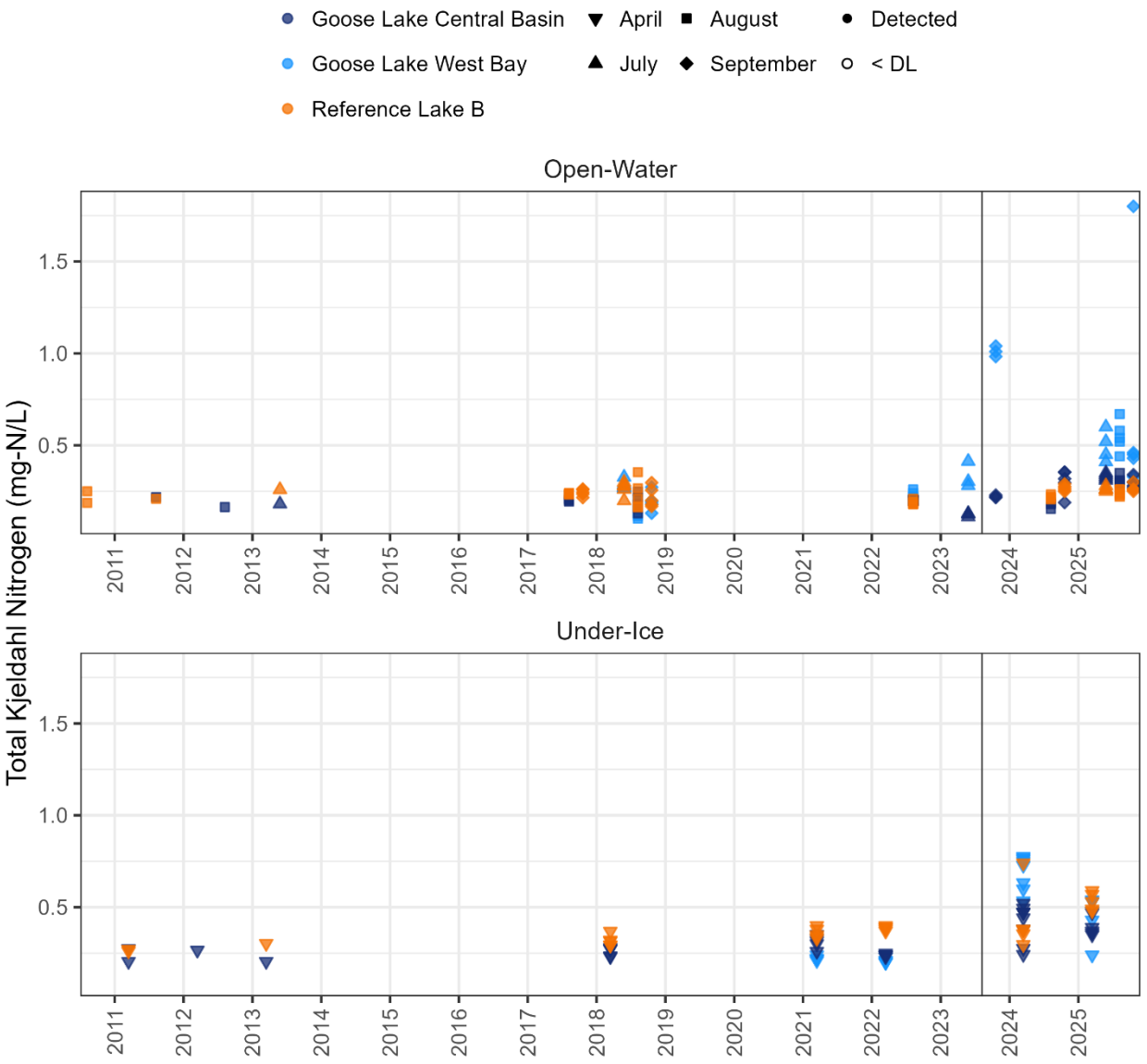
# 60 TOTAL IRON




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.

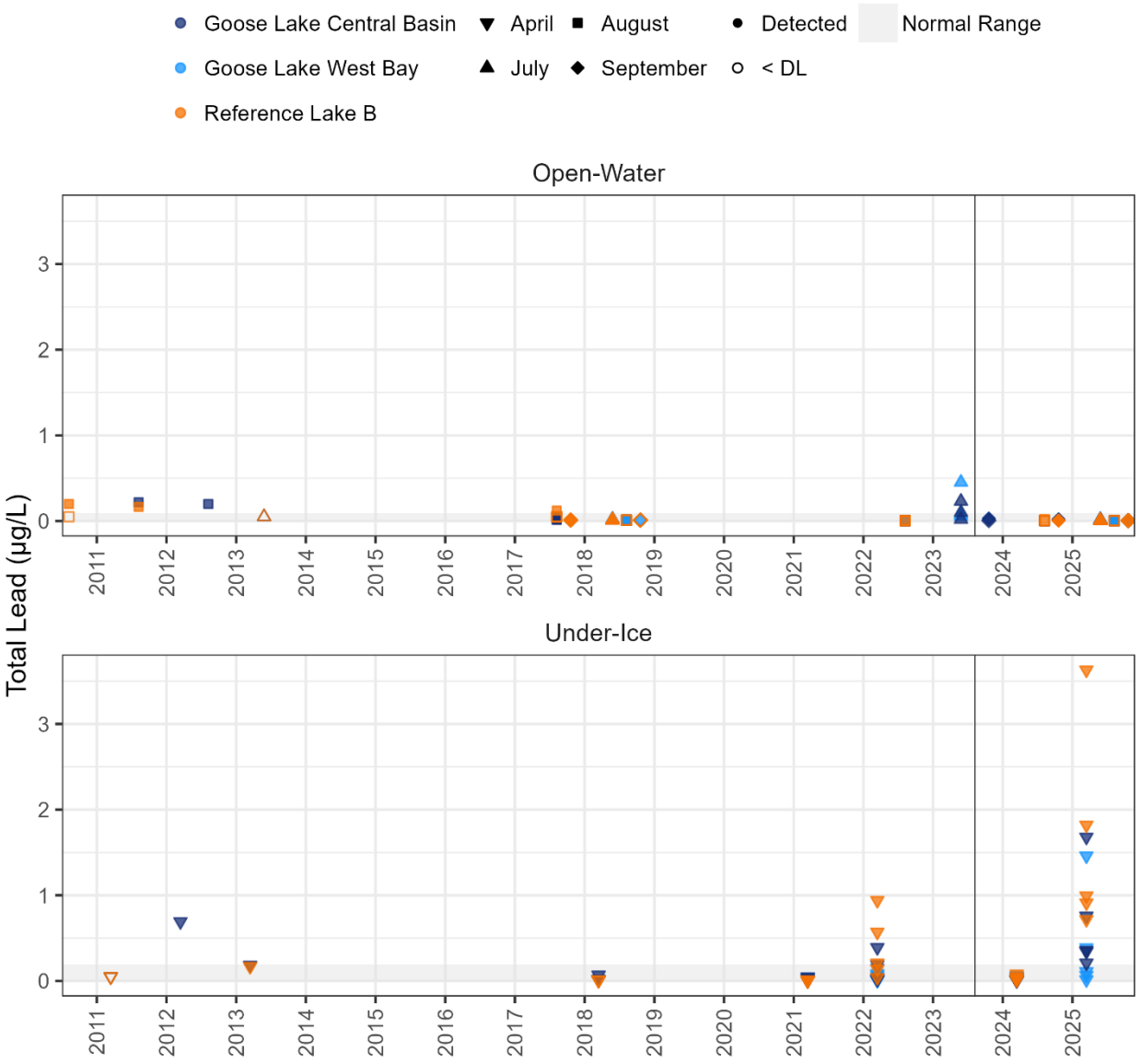
# 61 TOTAL KJELDAHL NITROGEN




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.

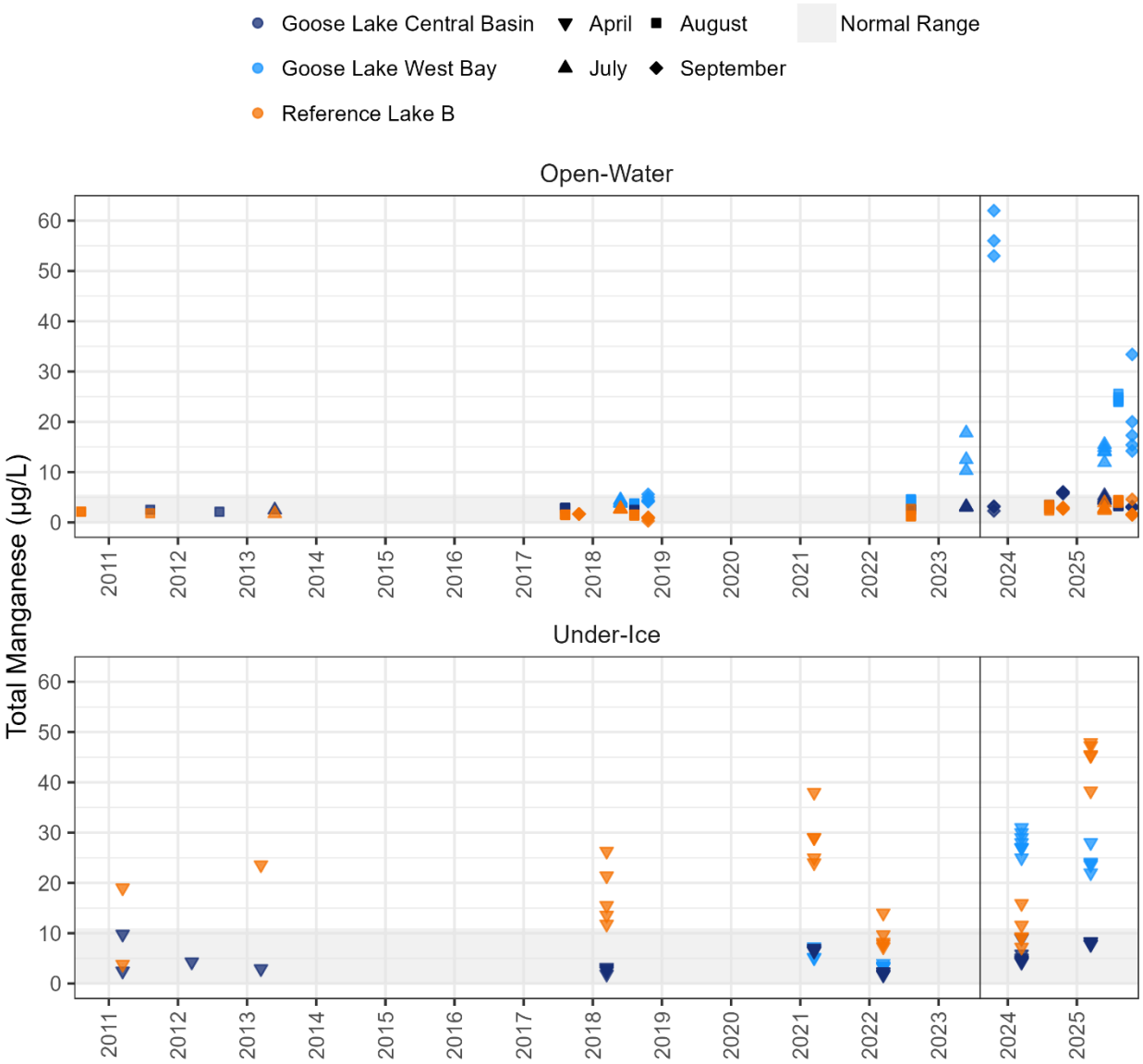
# 62 TOTAL LEAD




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.

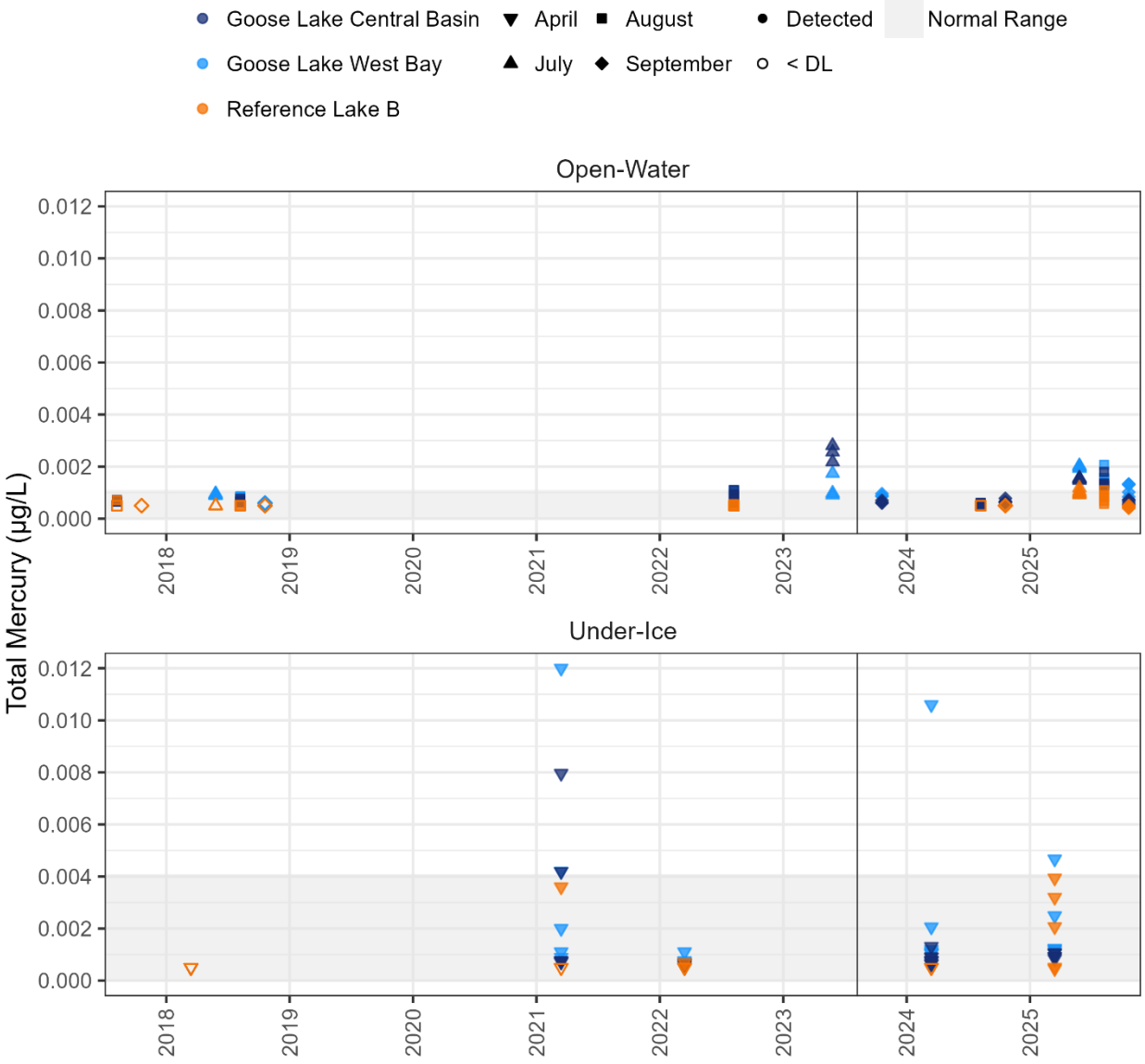
# 63 TOTAL MANGANESE




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.

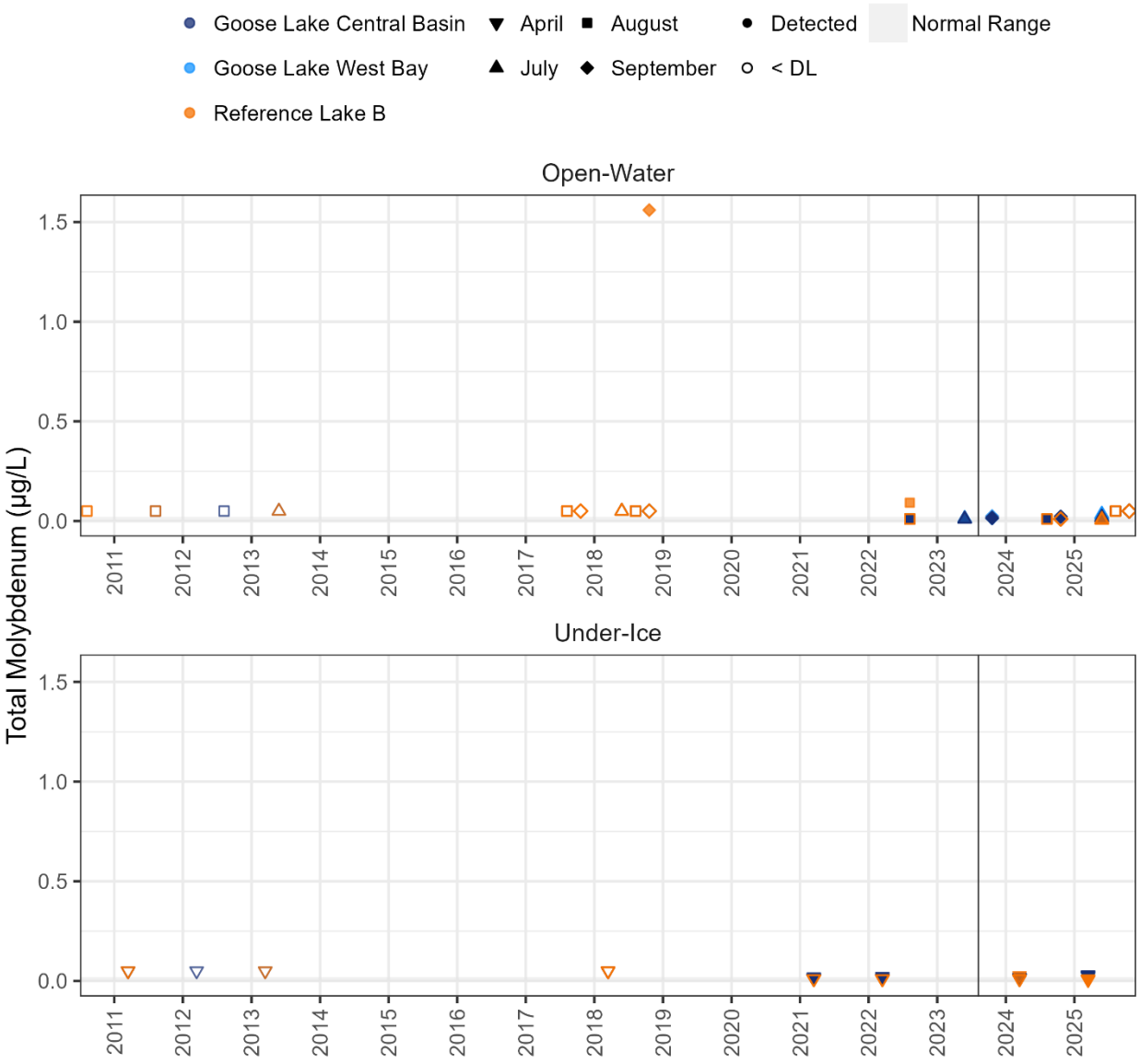
# 64 TOTAL MERCURY




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.

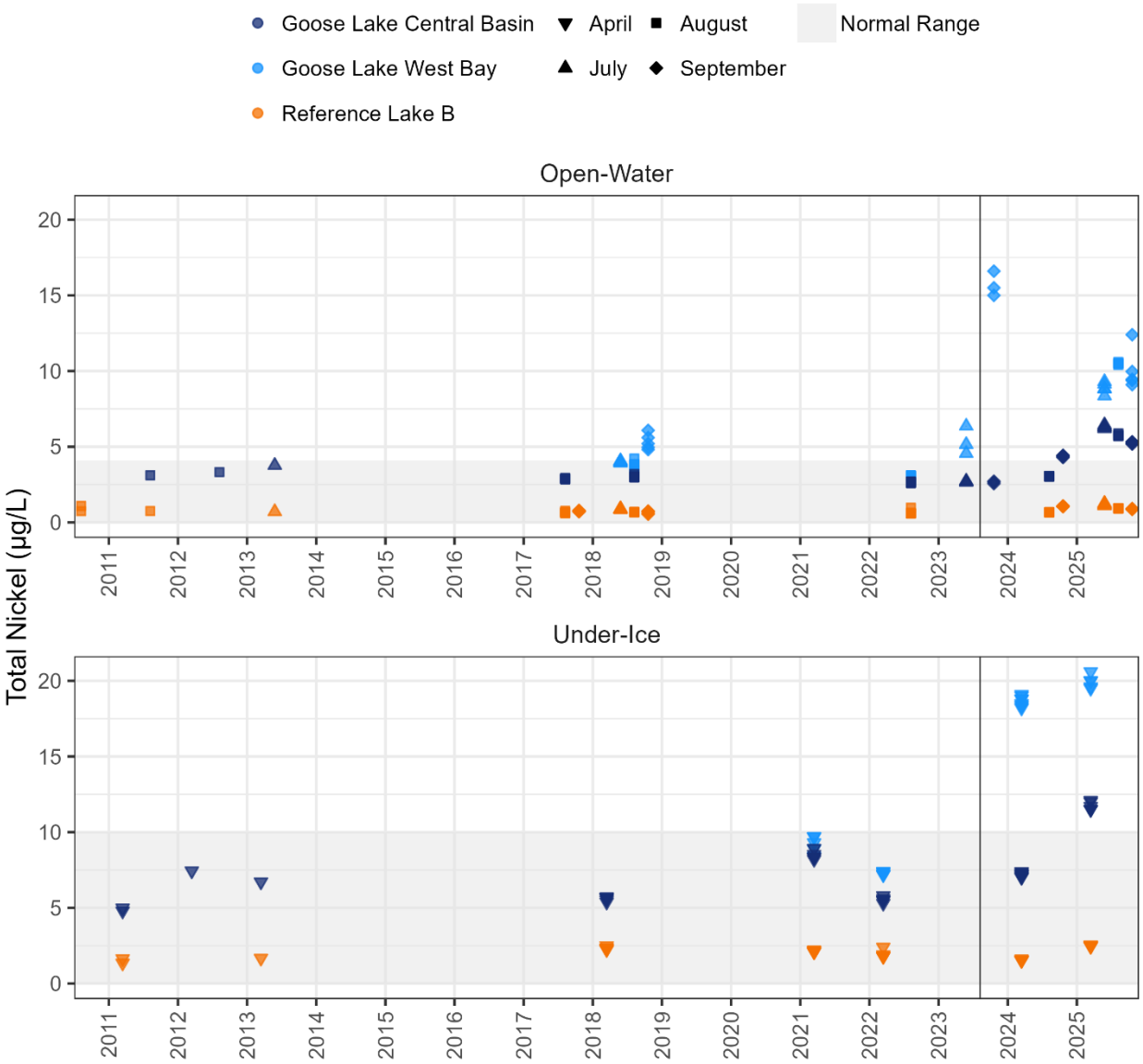
# 65 TOTAL MOLYBDENUM




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.

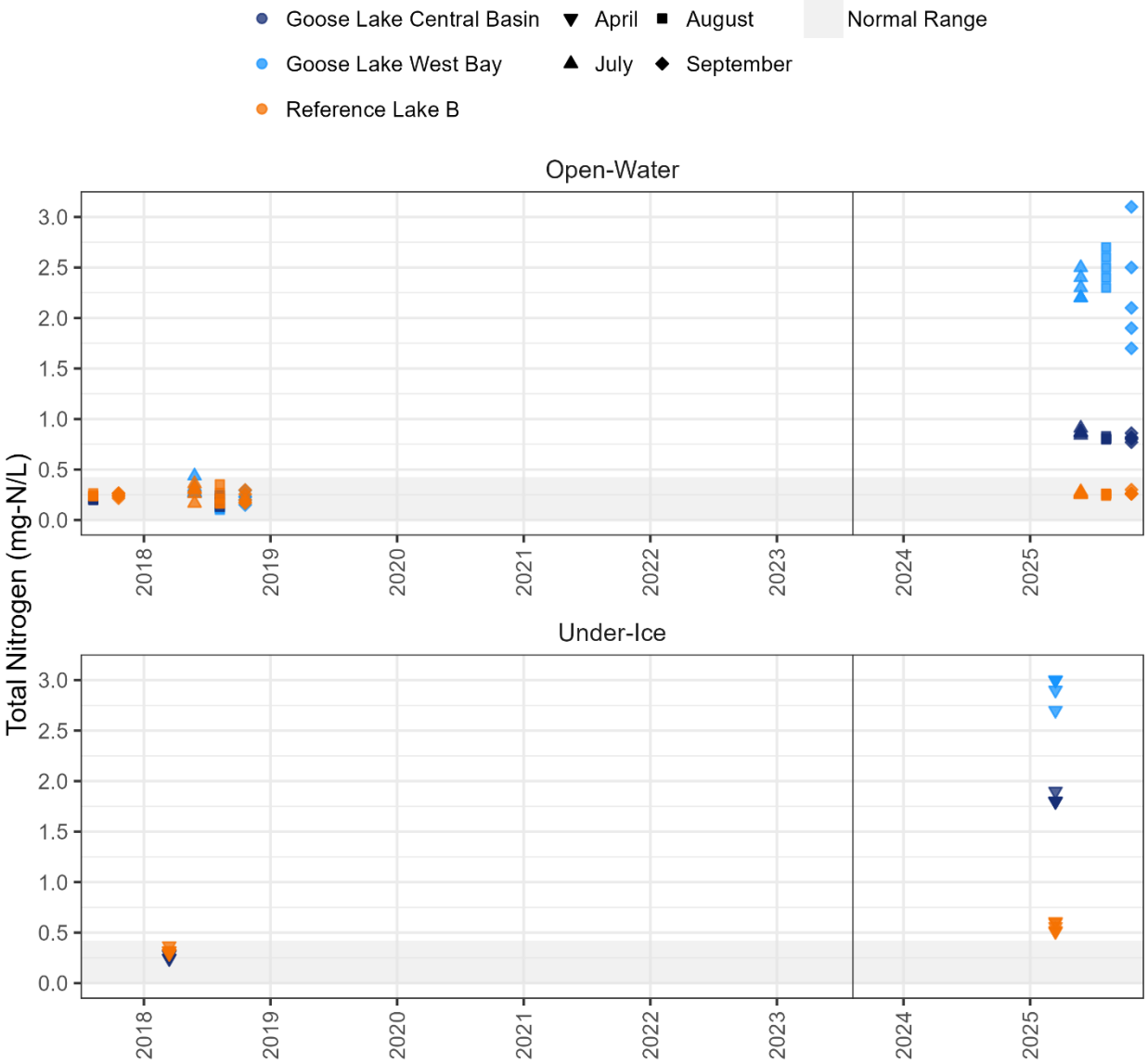
# 66 TOTAL NICKEL




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

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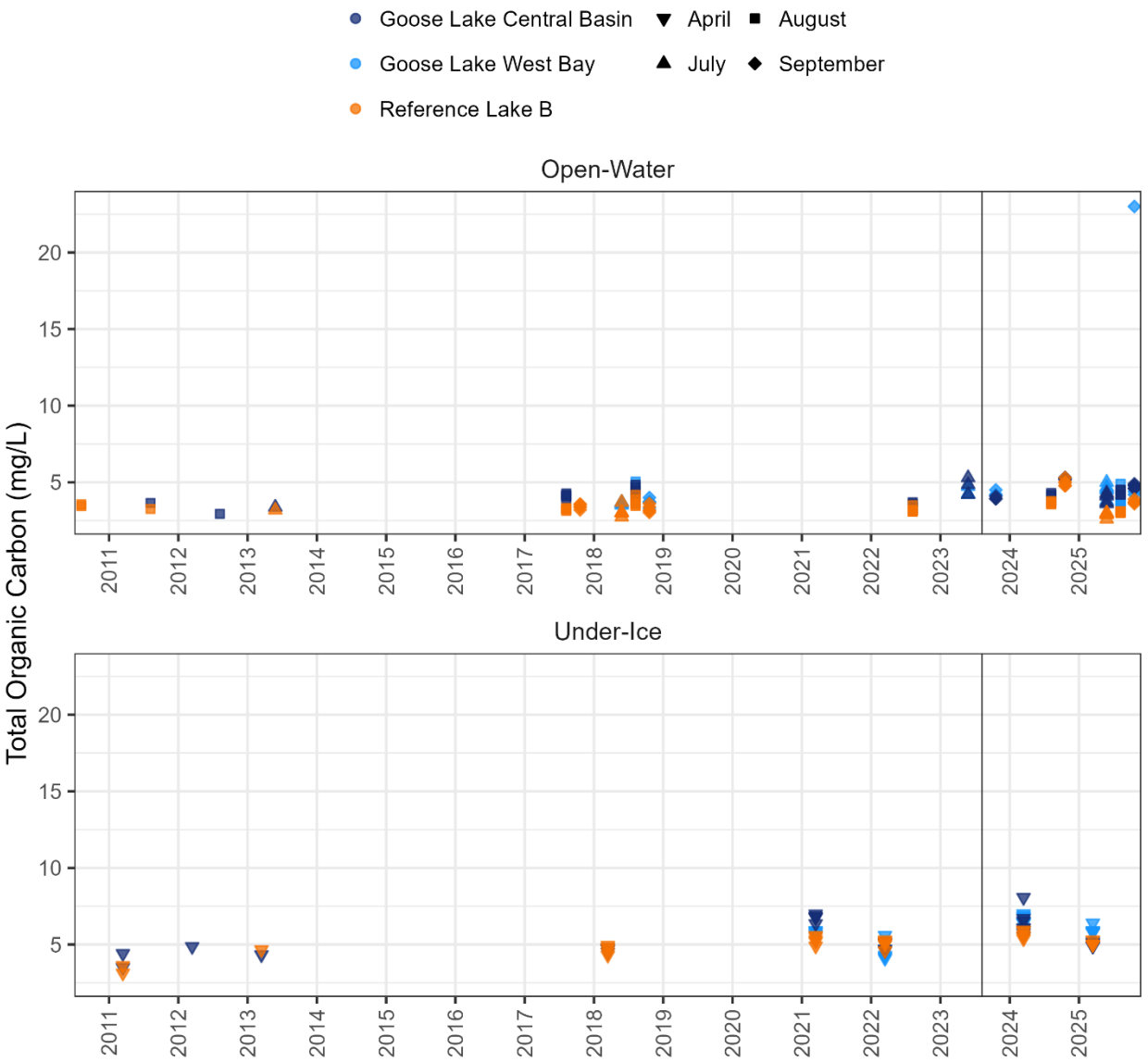
# 68 TOTAL ORGANIC CARBON

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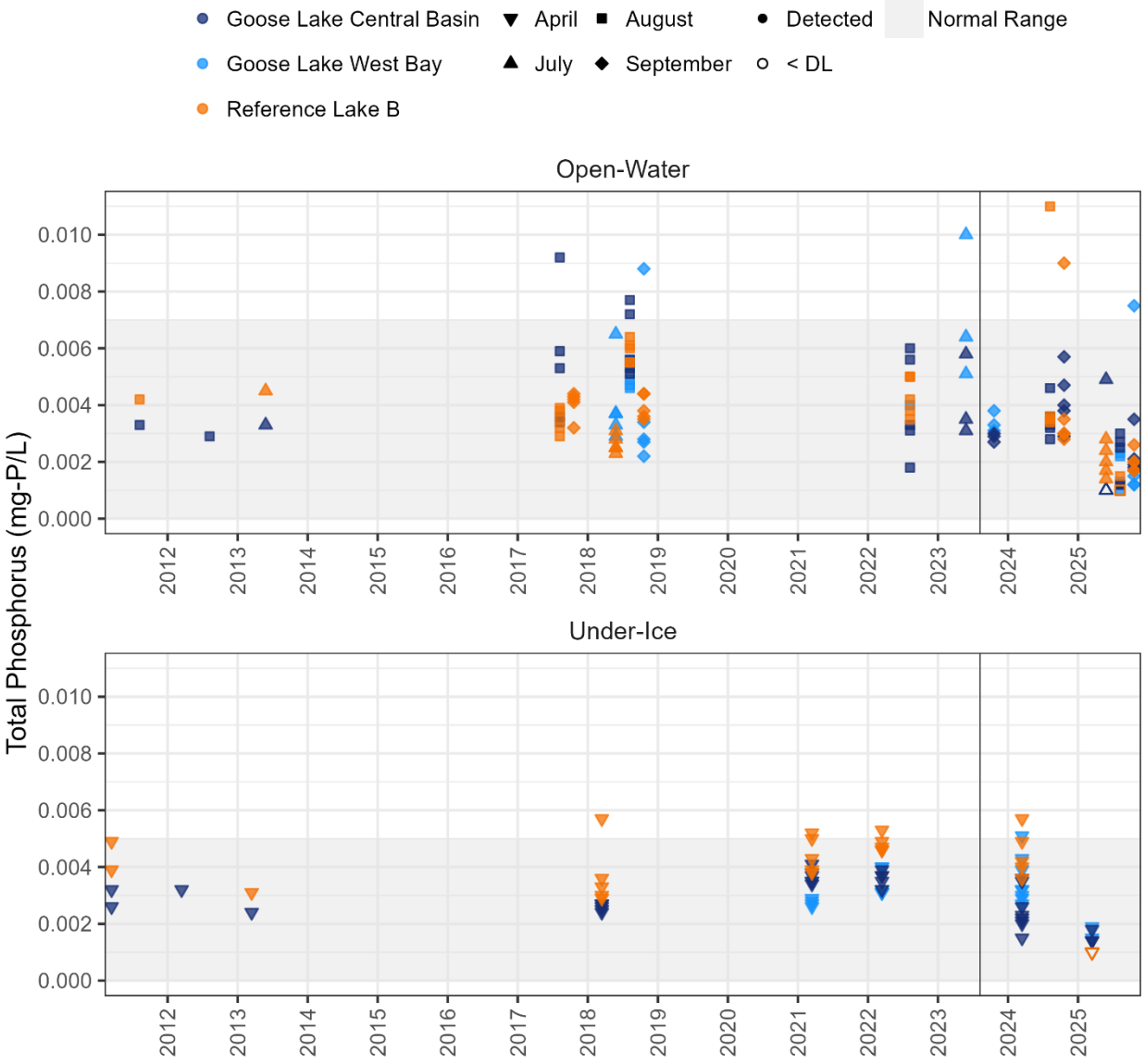
# 69 TOTAL PHOSPHORUS

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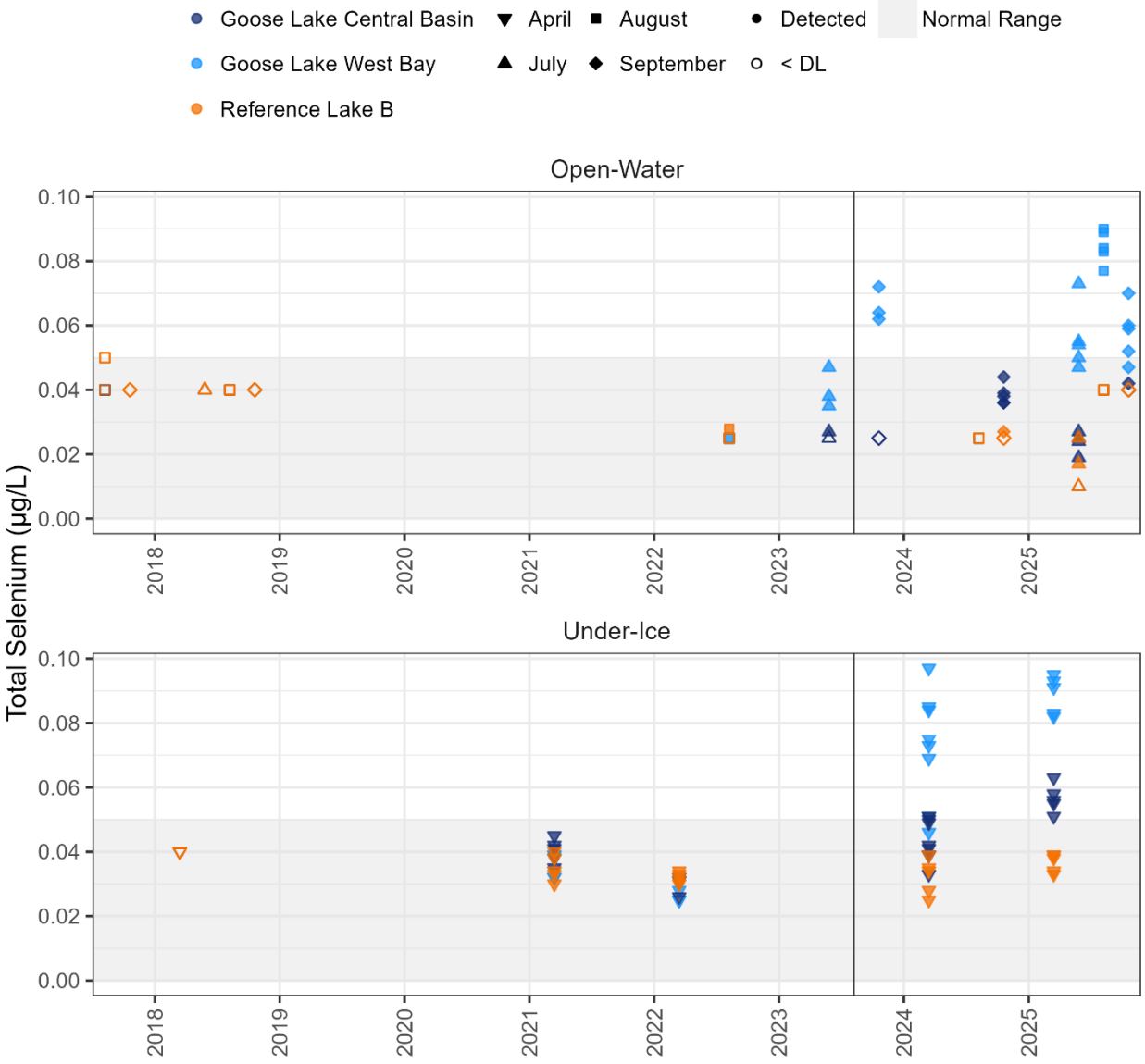
# 70 TOTAL SELENIUM

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DL = detection limit.

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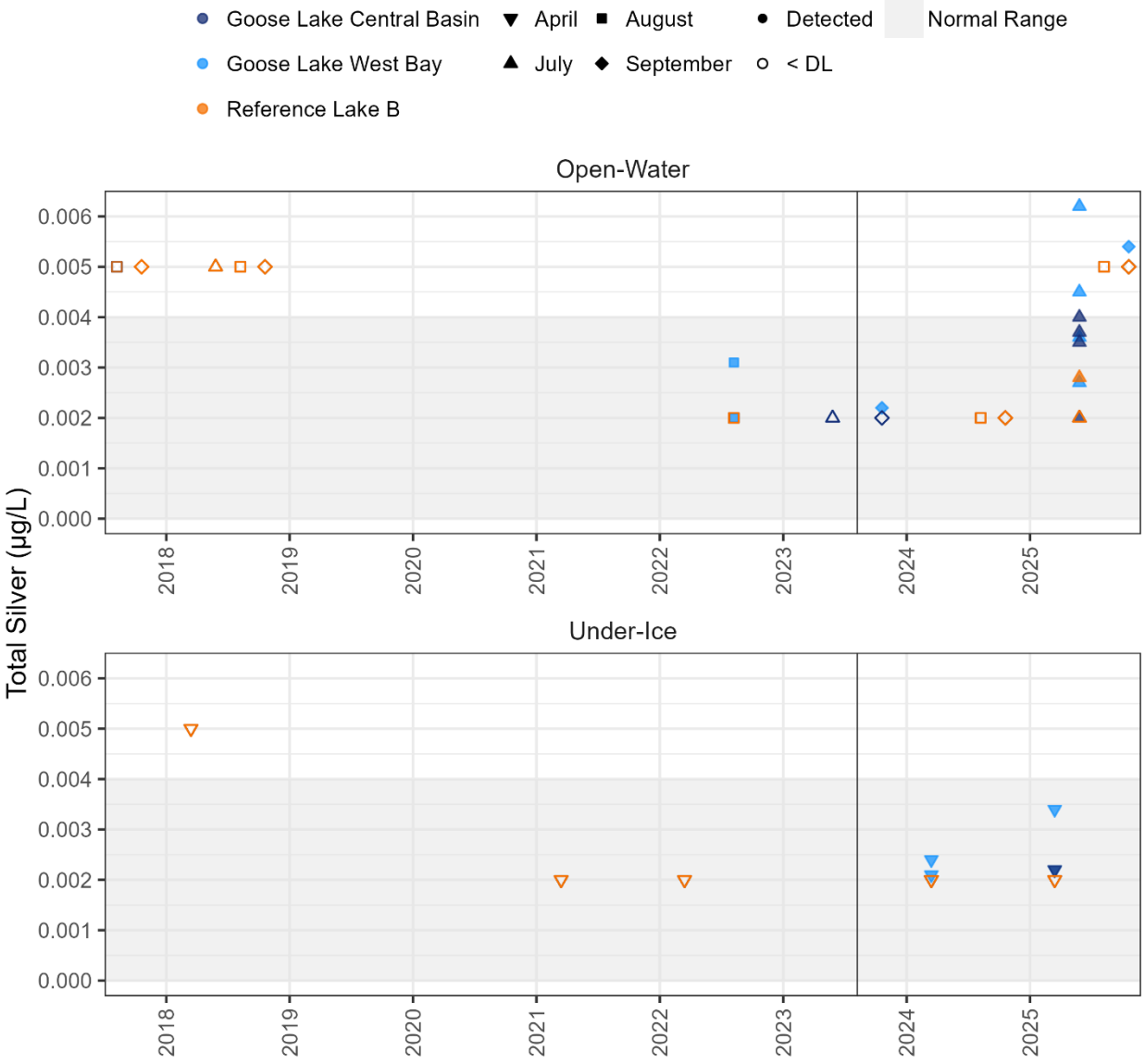


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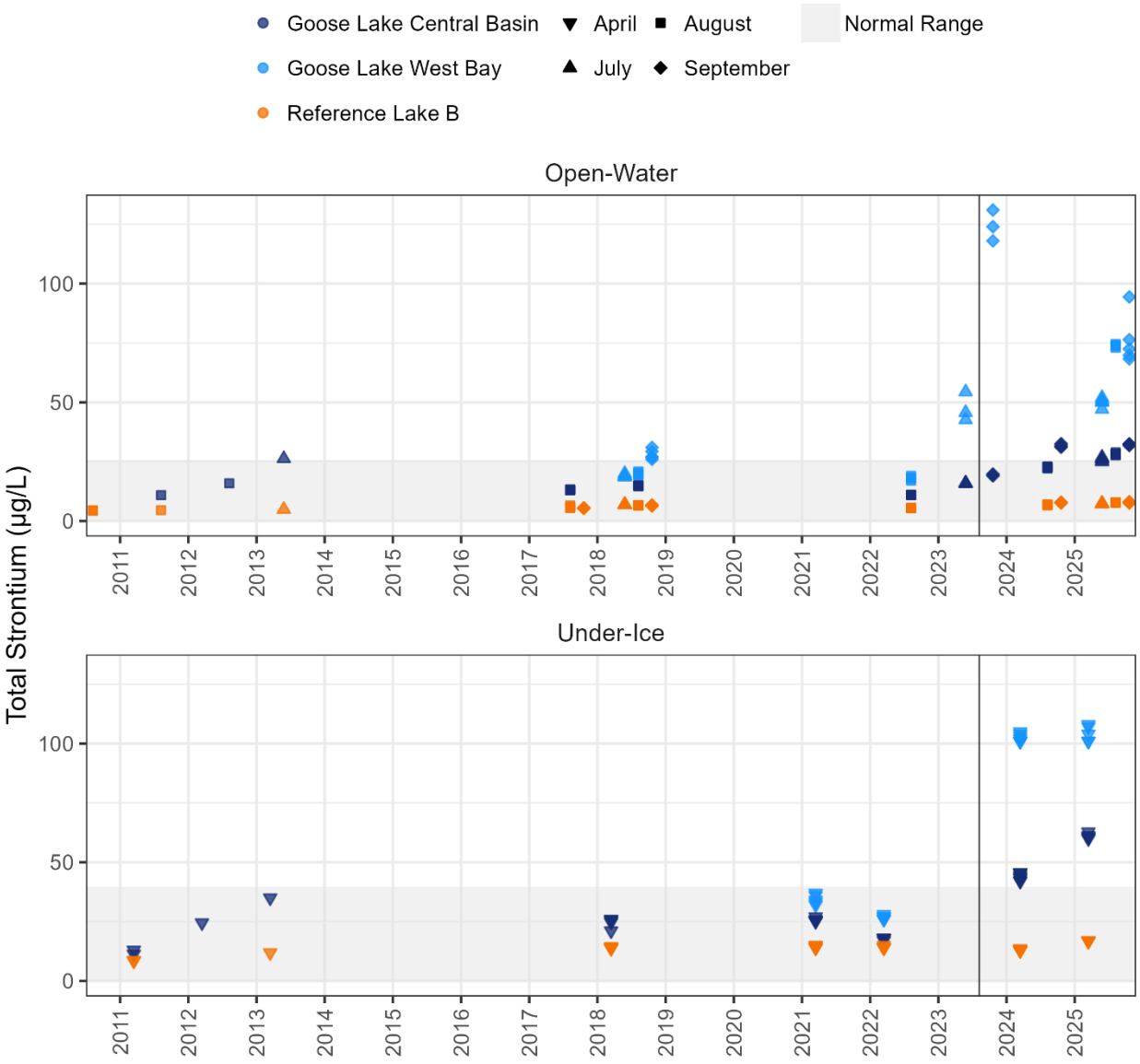
# 72 TOTAL STRONTIUM

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DL = detection limit.

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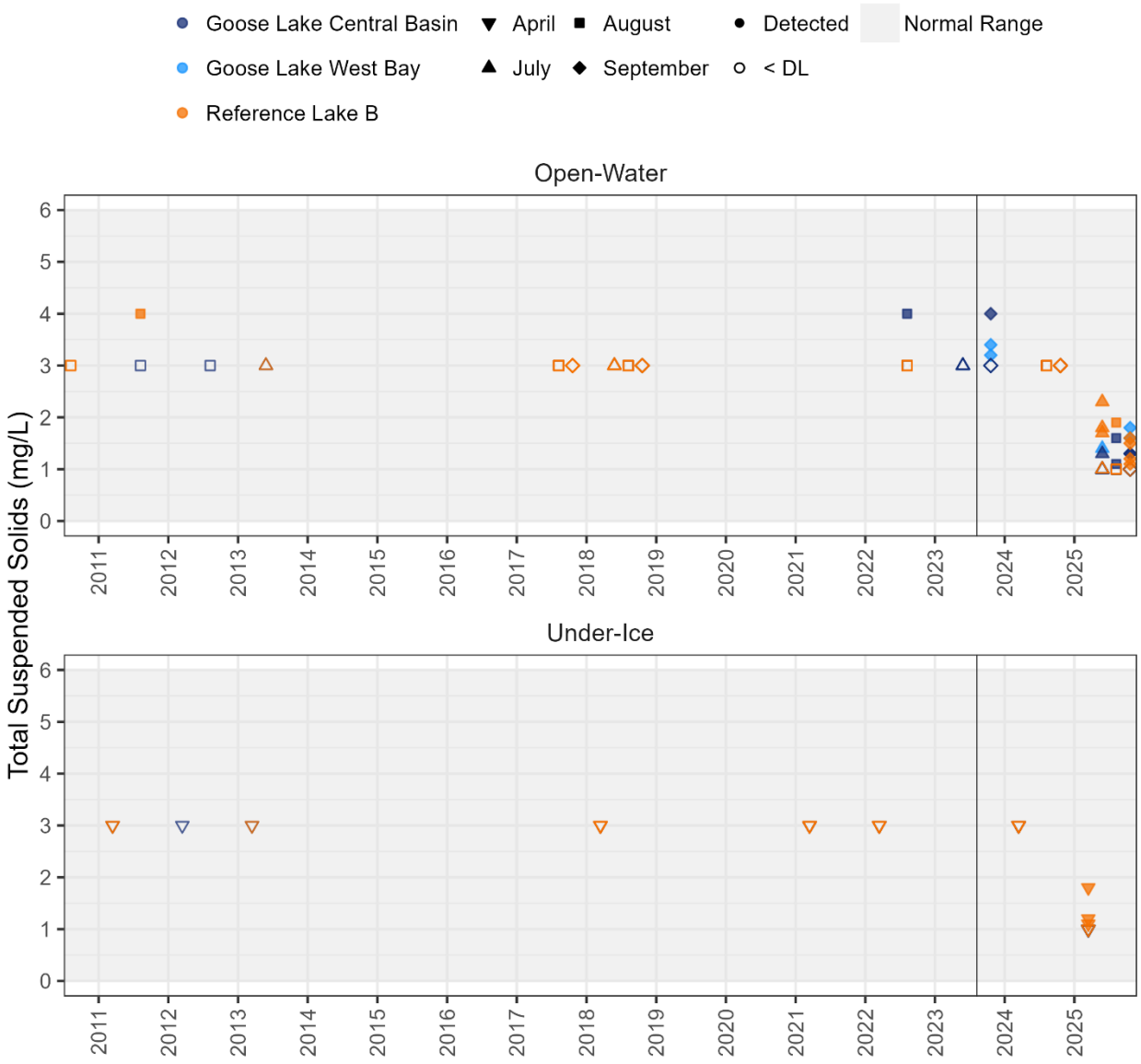


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DL = detection limit.

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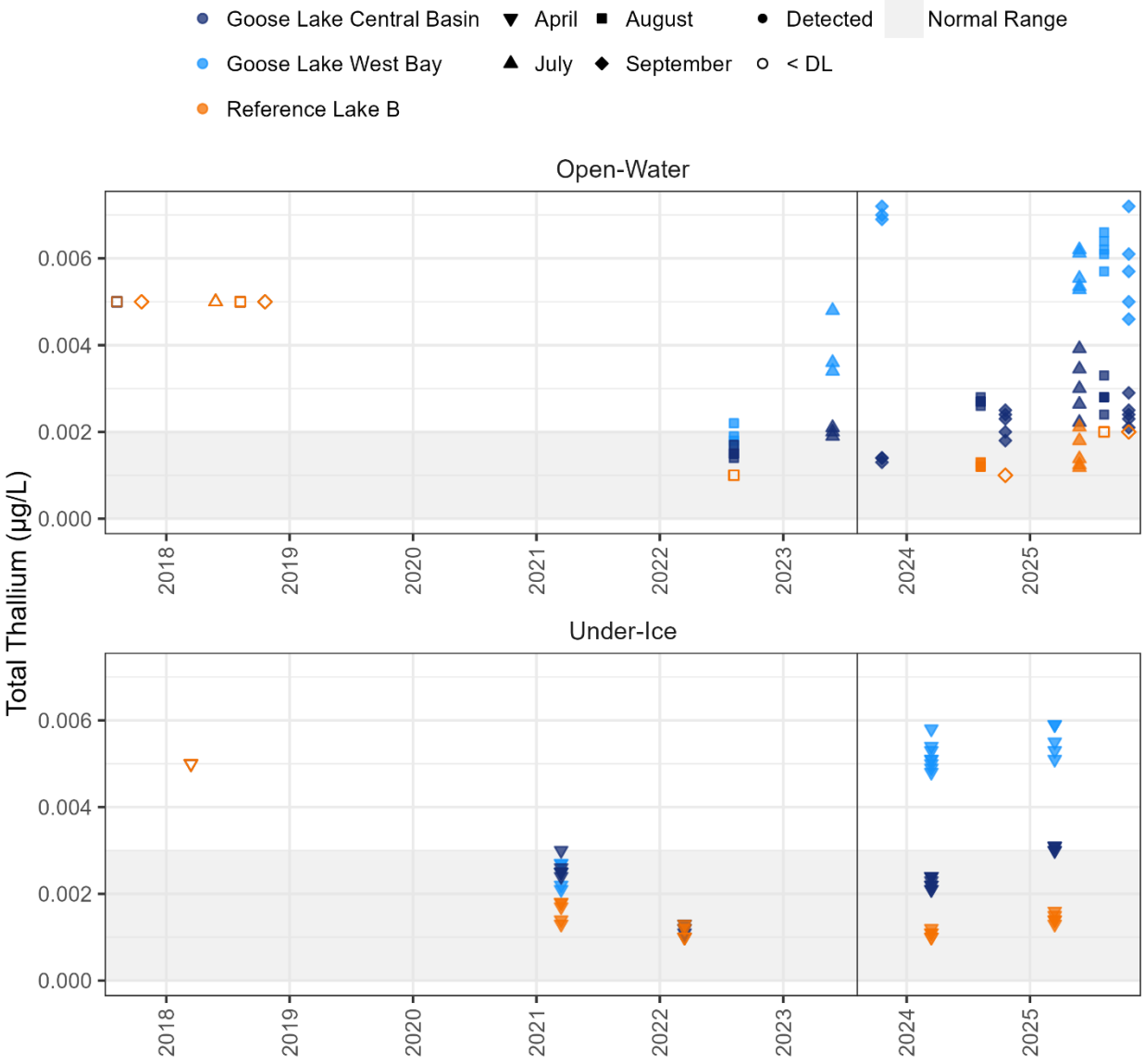


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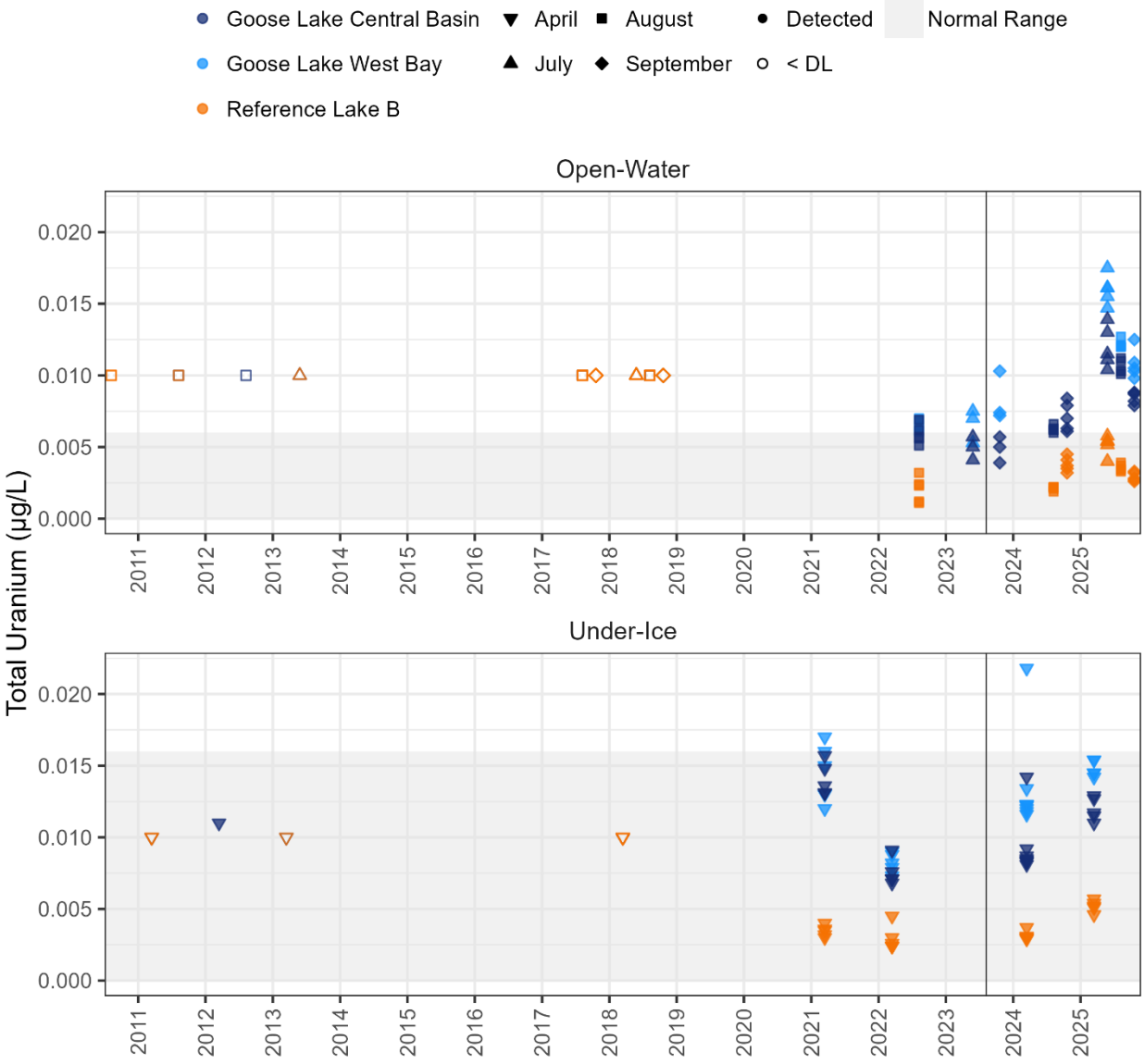
DL = detection limit.

# 75 TOTAL URANIUM

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DL = detection limit.

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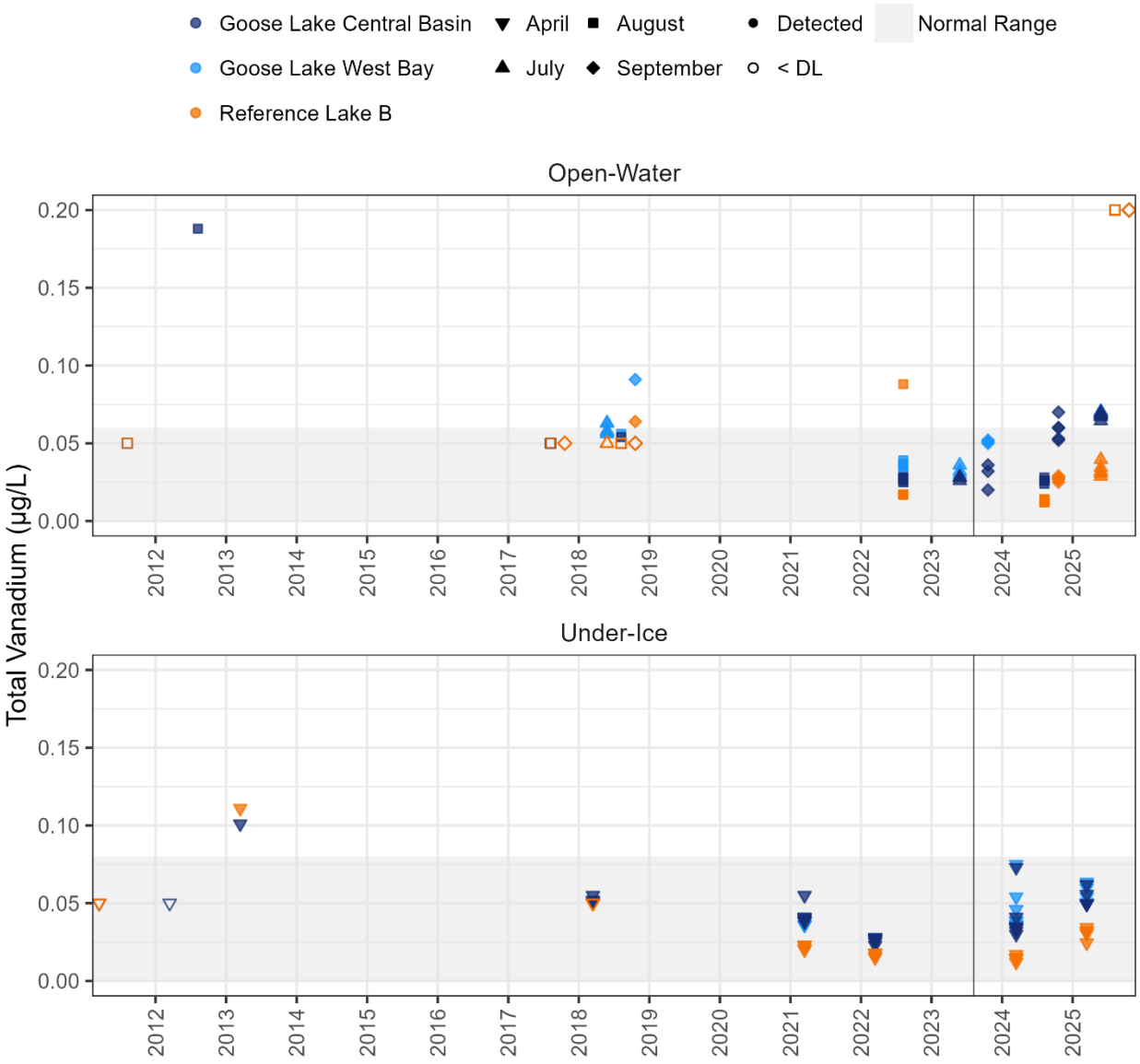


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DL = detection limit.

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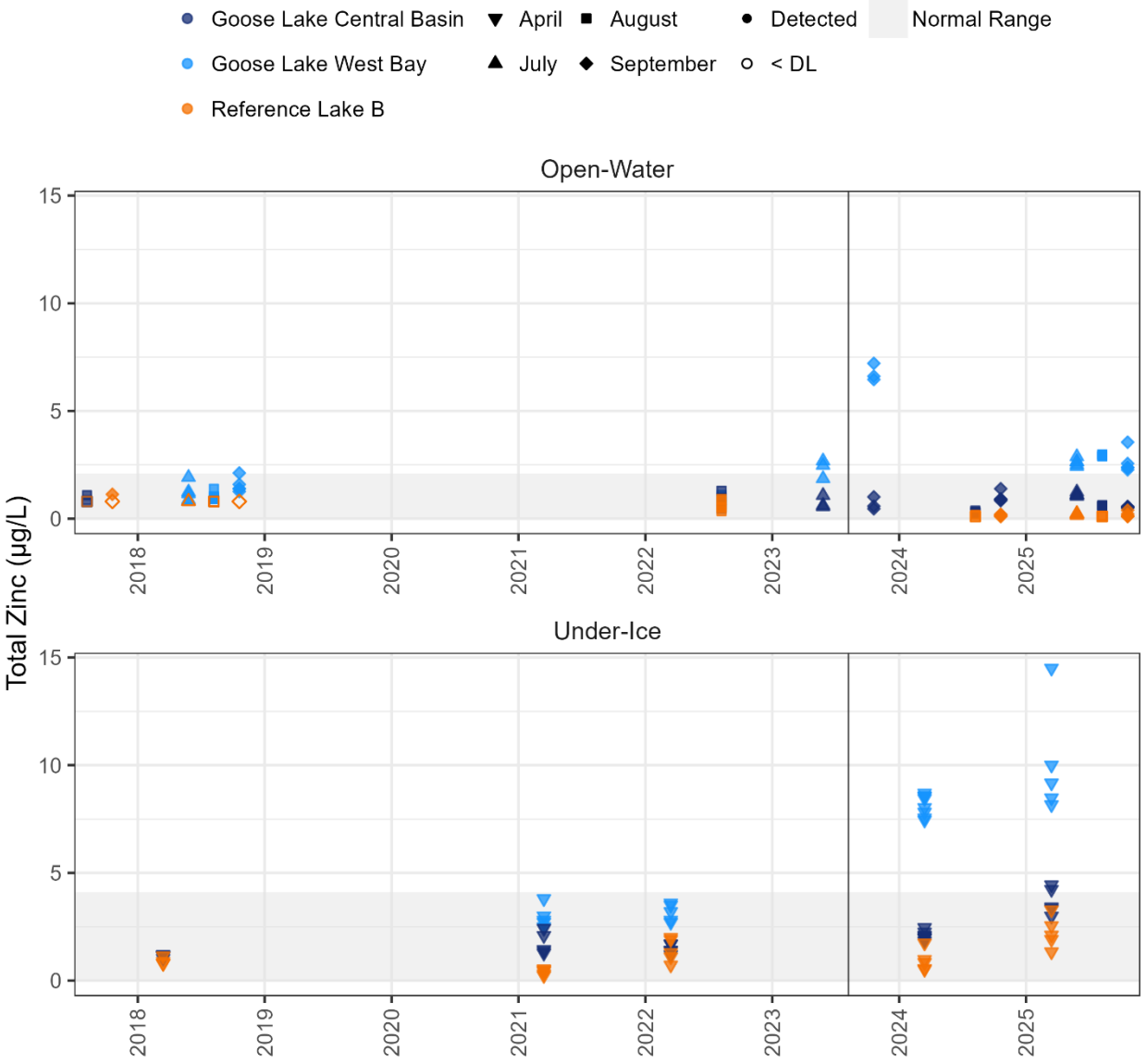


Note: The vertical line located on September 01, 2023 represents the date after which data were not considered baseline when calculating normal ranges and for BACI analyses.

DL = detection limit.

**APPENDIX F**

# 2025 Water Quality Investigative Sampling

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# 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

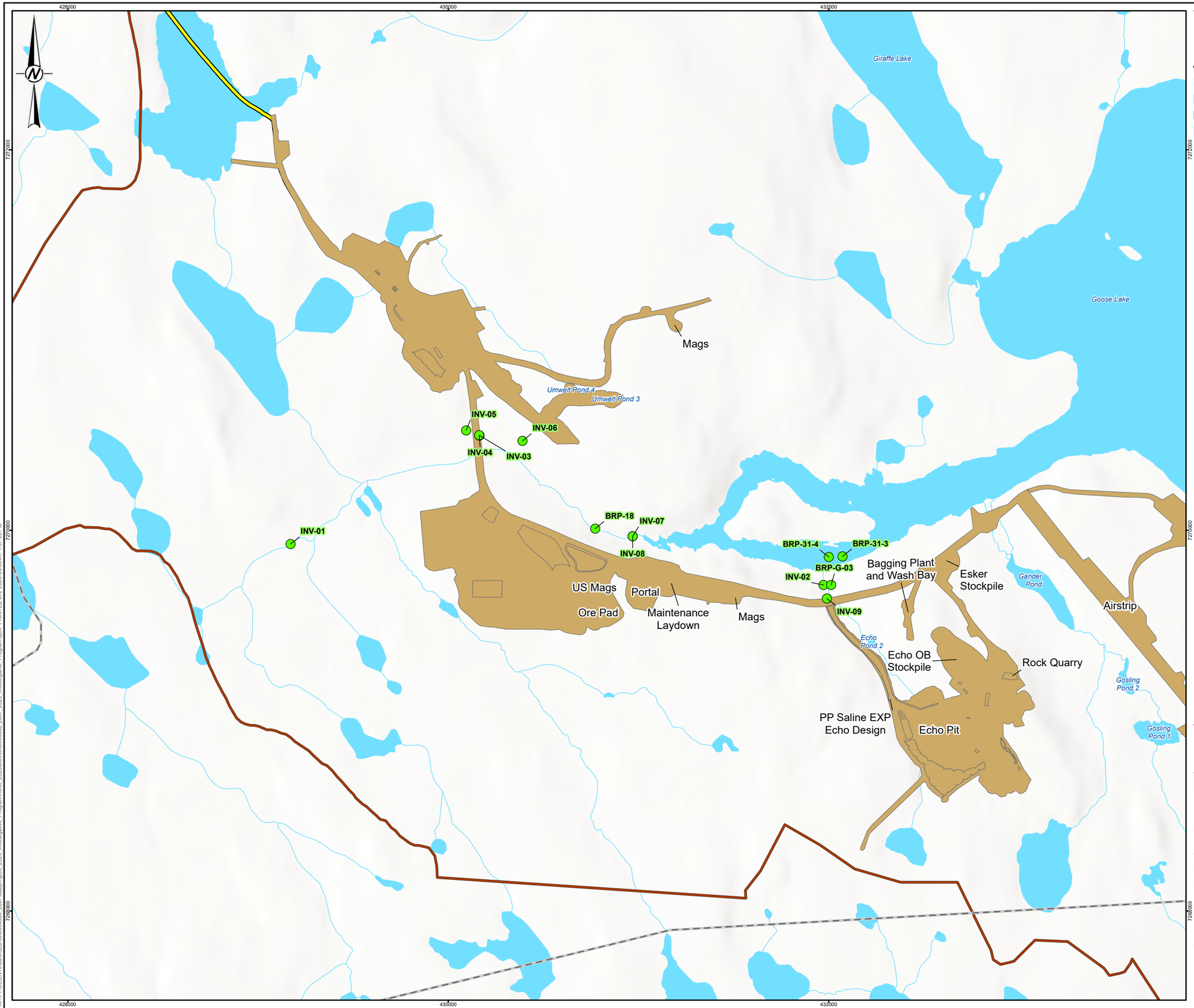
WSP and B2Gold Nunavut met to discuss potential factors that may have contributed to the increased parameter concentrations in Goose Lake West Bay. In June 2025, ten investigation samples were collected near Site in areas that have the potential to report to Goose Lake, especially the West Bay Area. 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**

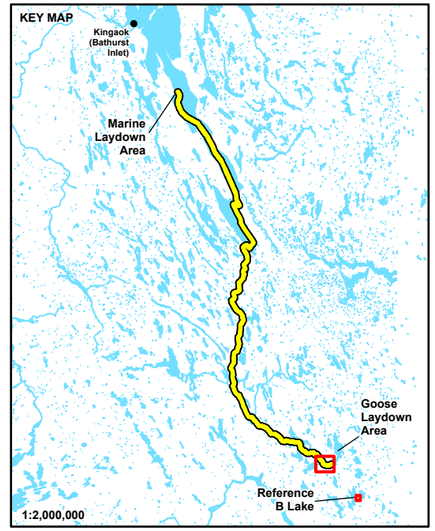
| Sample | Description | UTM Easting (m) | UTM Northing (m) |
|---|---|---|---|
| INV-01 | Stream flowing into Goose Lake West Bay, located upstream of Umwelt Lake discharge. Sample was collected in June. | 429171 | 7269928 |
| INV-02 | Stream flowing into Goose Lake from Echo Lake, located near stream 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

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**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**

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

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CONSULTANT

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## 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.

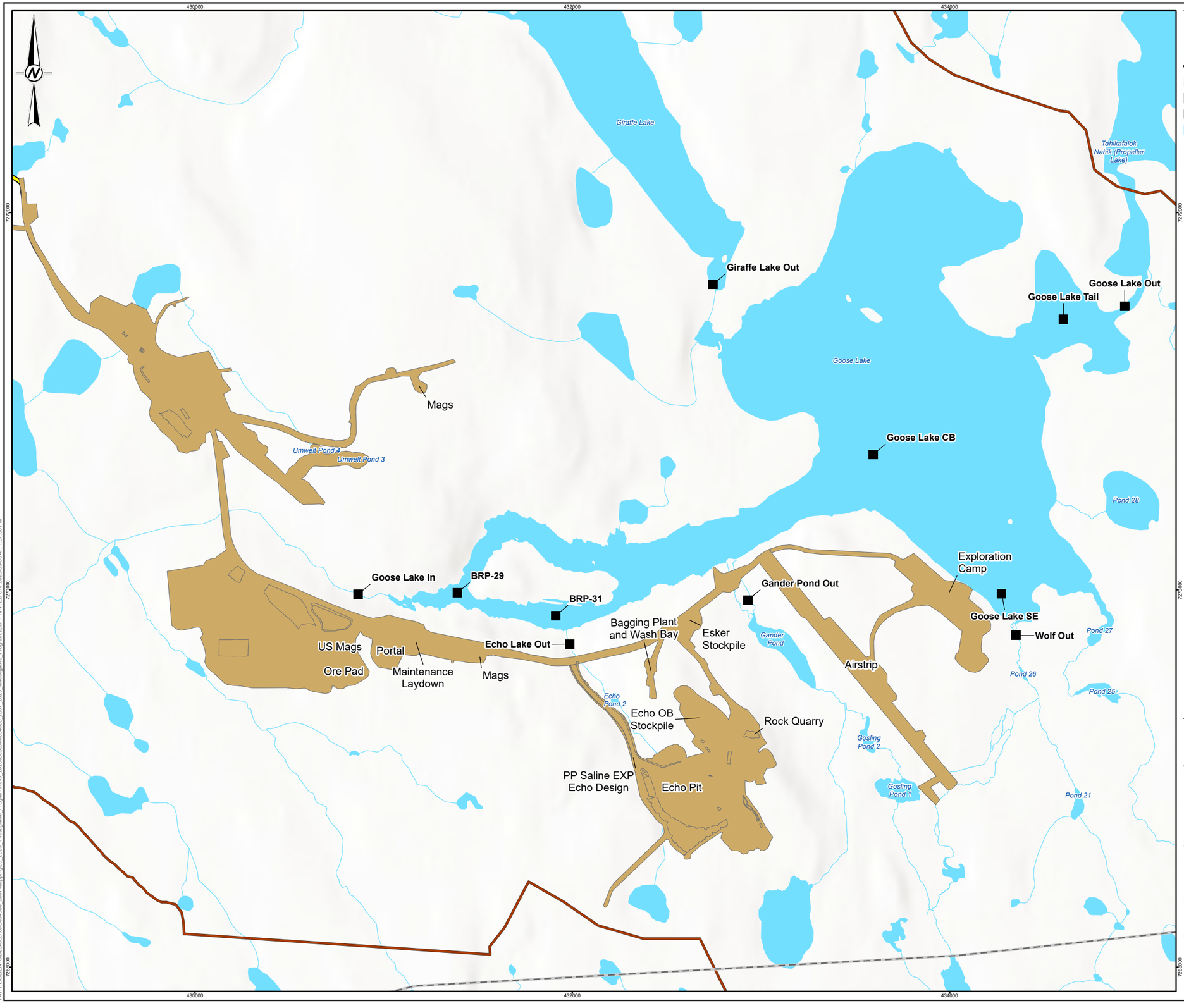
## F2.3 Data Analysis

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 concentrations[1] 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**

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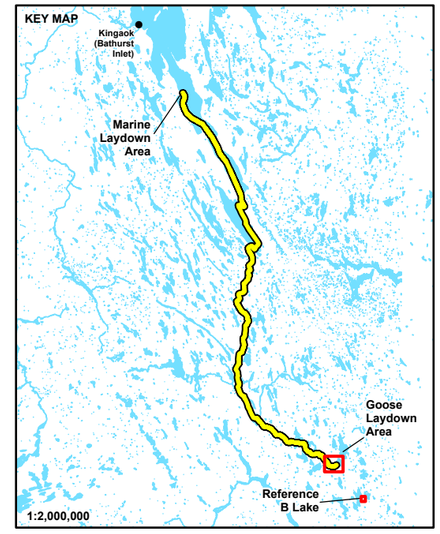
- WATERCOURSE
- WINTER ICE ROAD
- INUIT OWNED LAND
- JUNE 2024 AS-BUILT FOOTPRINT
- POTENTIAL DEVELOPMENT AREA (GOOSE PROPERTY AREA)
- WATERBODY

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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
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| PREPARED | SP \| SK |
| REVIEWED | JA |
| APPROVED | KS |

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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**

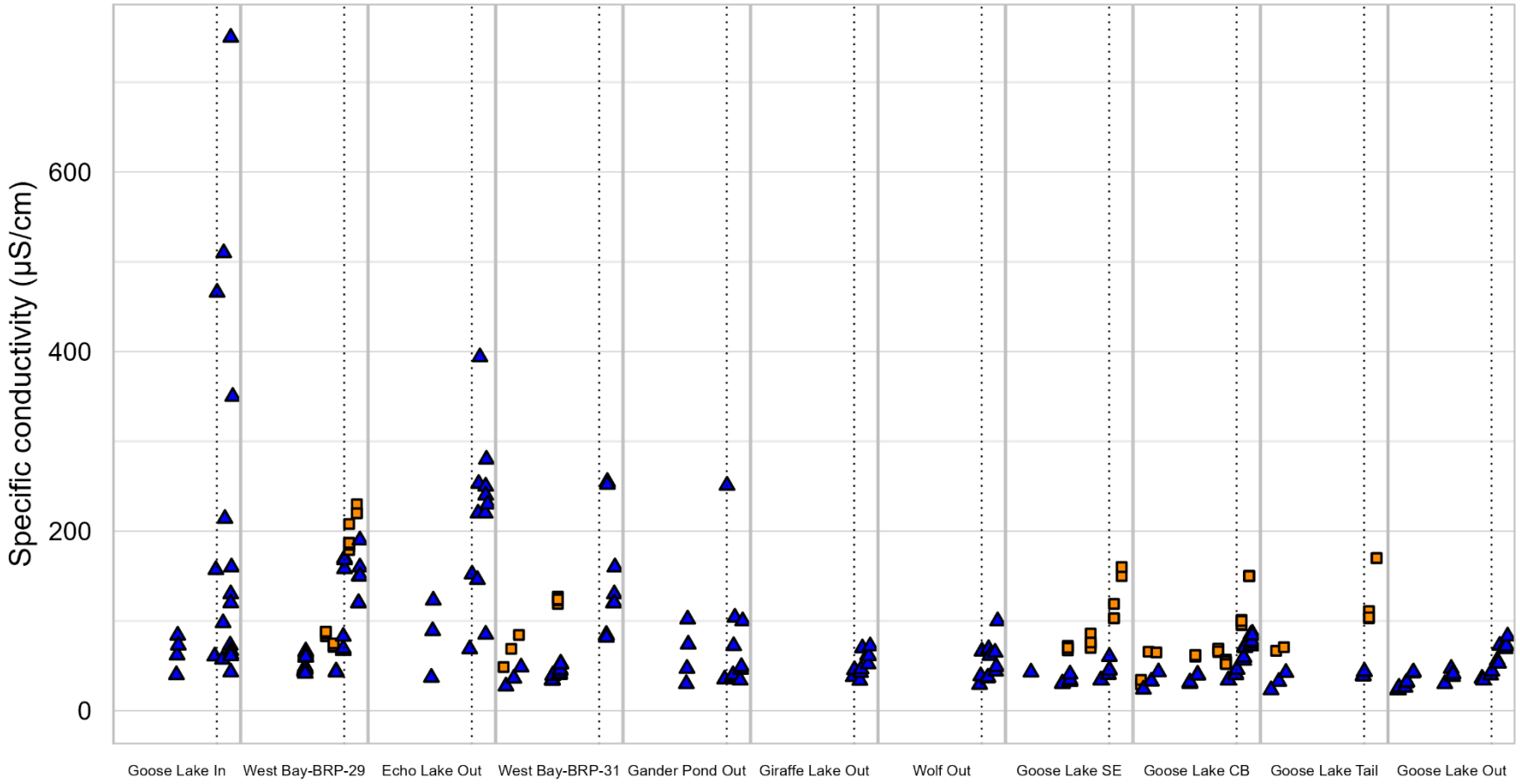
| Sample | Field Specific Conductivity (µS/cm) | Nitrate (mg-N/L) | Nitrite (mg-N/L) | Total Cobalt (µg/L) | Dissolved Cobalt (µg/L) |
|---|---|---|---|---|---|
| INV-01 | 60 | <0.003 | <0.001 | 0.21 | 0.19 |
| INV-02 | 222 | 6.8 | 0.026 | 1.3 | 0.37 |
| INV-03 | 64 | 0.74 | <0.001 | 0.80 | 0.81 |
| 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

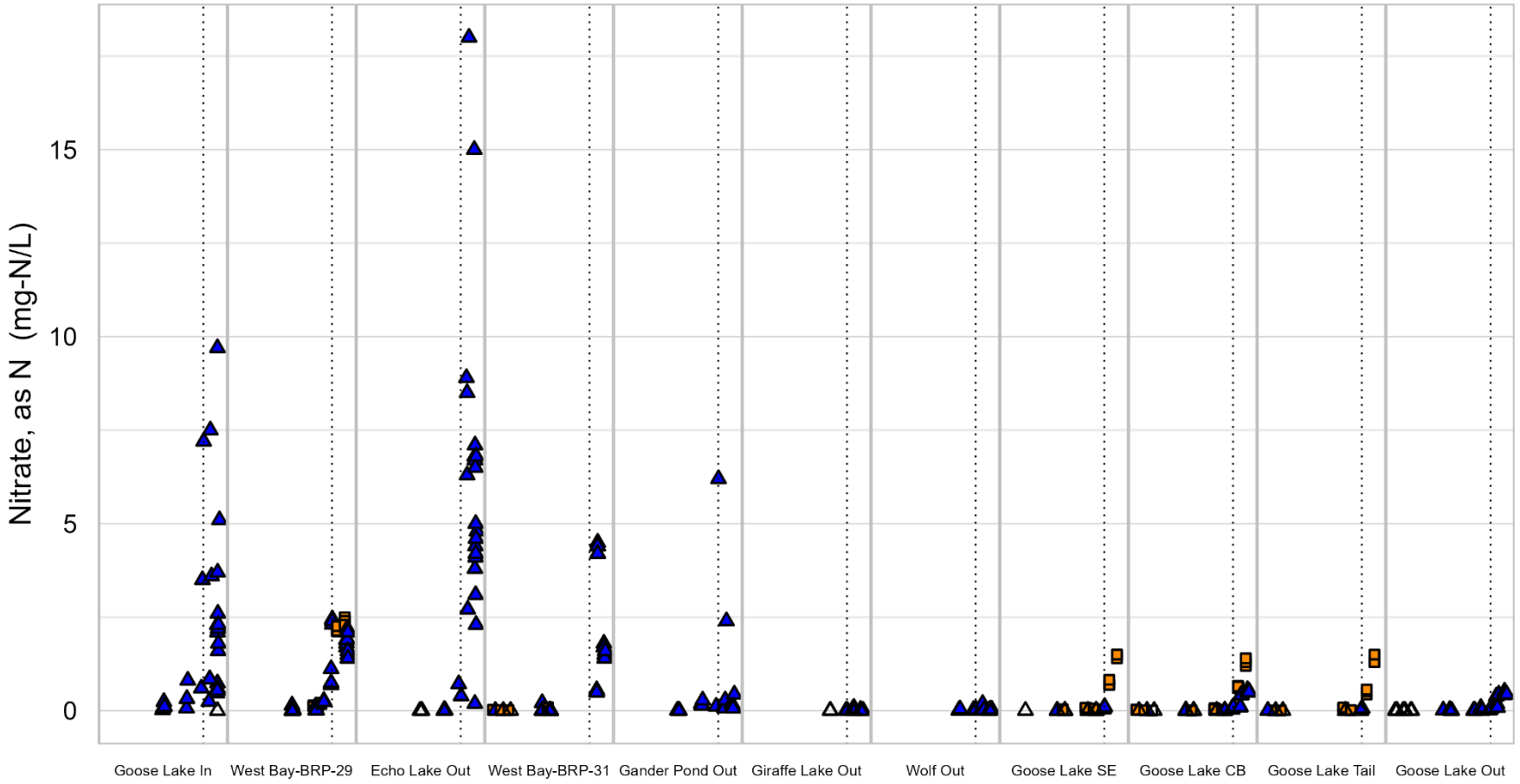
An overview of spatial trends for nitrate indicate that nitrate concentrations have been highest in the two most western inflows to Goose Lake: the inflow from Llama and Umwelt lakes and the inflow from Echo Lake (Figure F3-2. The increase in concentration in these streams coincides with an increase 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.

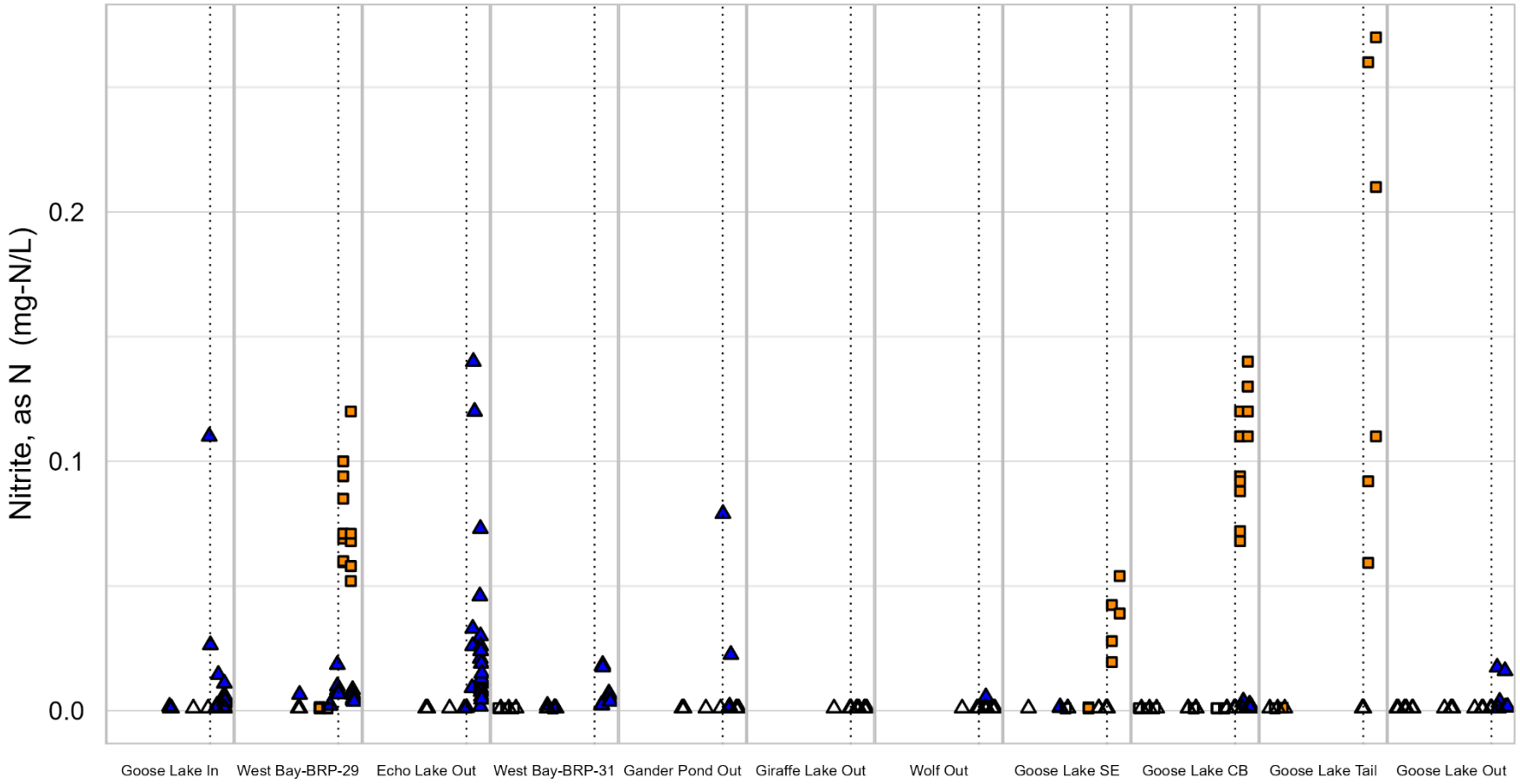



Note: The vertical dashed line represents September 01, 2023. Orange squares represent samples collected in under-ice conditions and blue triangles represent samples collected in open-water conditions. Hollow symbols represent concentrations below the detection limit.

**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.

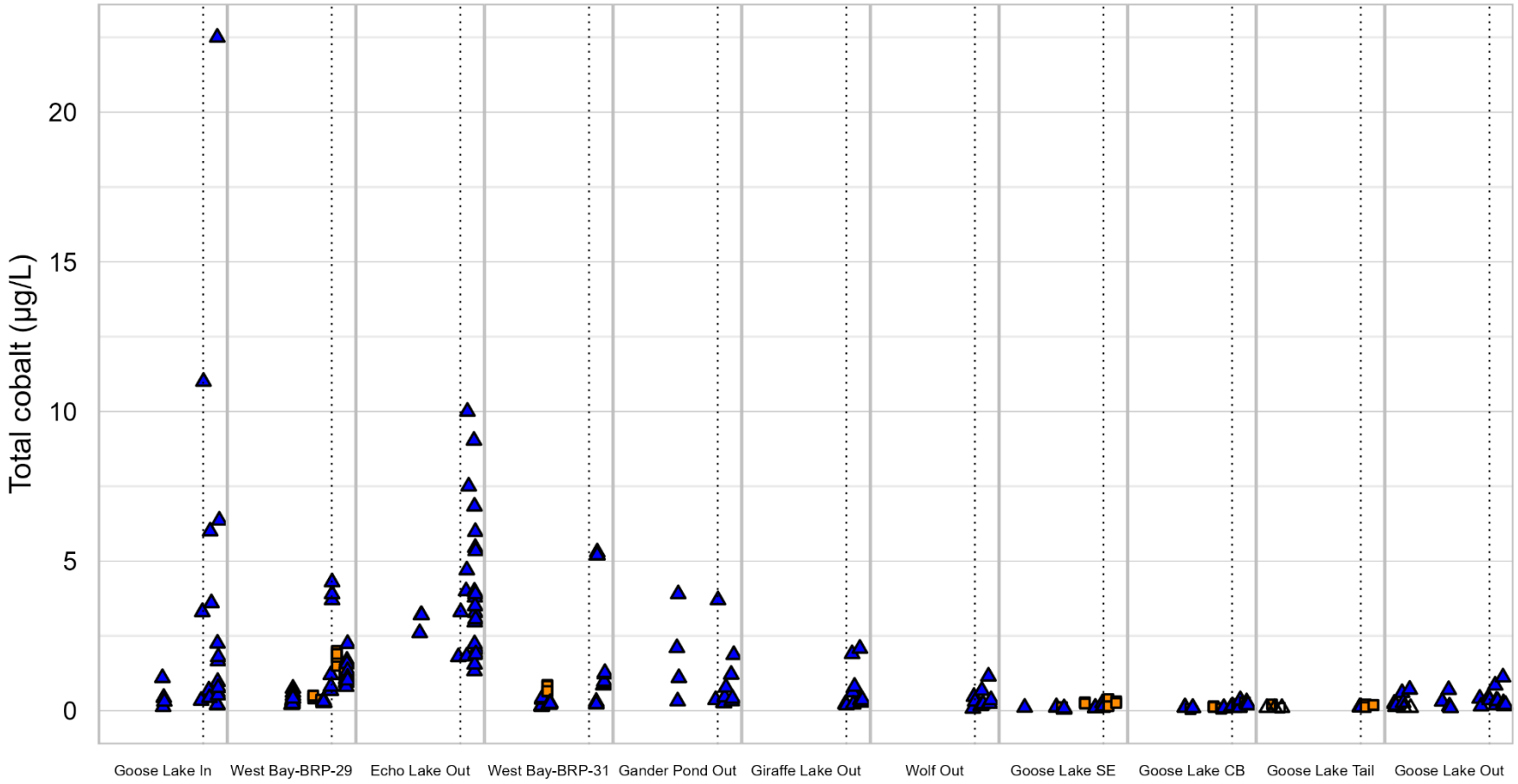



Note: The vertical dashed line represents September 01, 2023. Orange squares represent samples collected in under-ice conditions and blue triangles represent samples collected in open-water conditions. Hollow symbols represent concentrations below the detection limit.

**Figure F3-3: Nitrite Concentrations in Streams Flowing Into and Out of Goose Lake and Goose Lake Areas from 2011 to 2025**

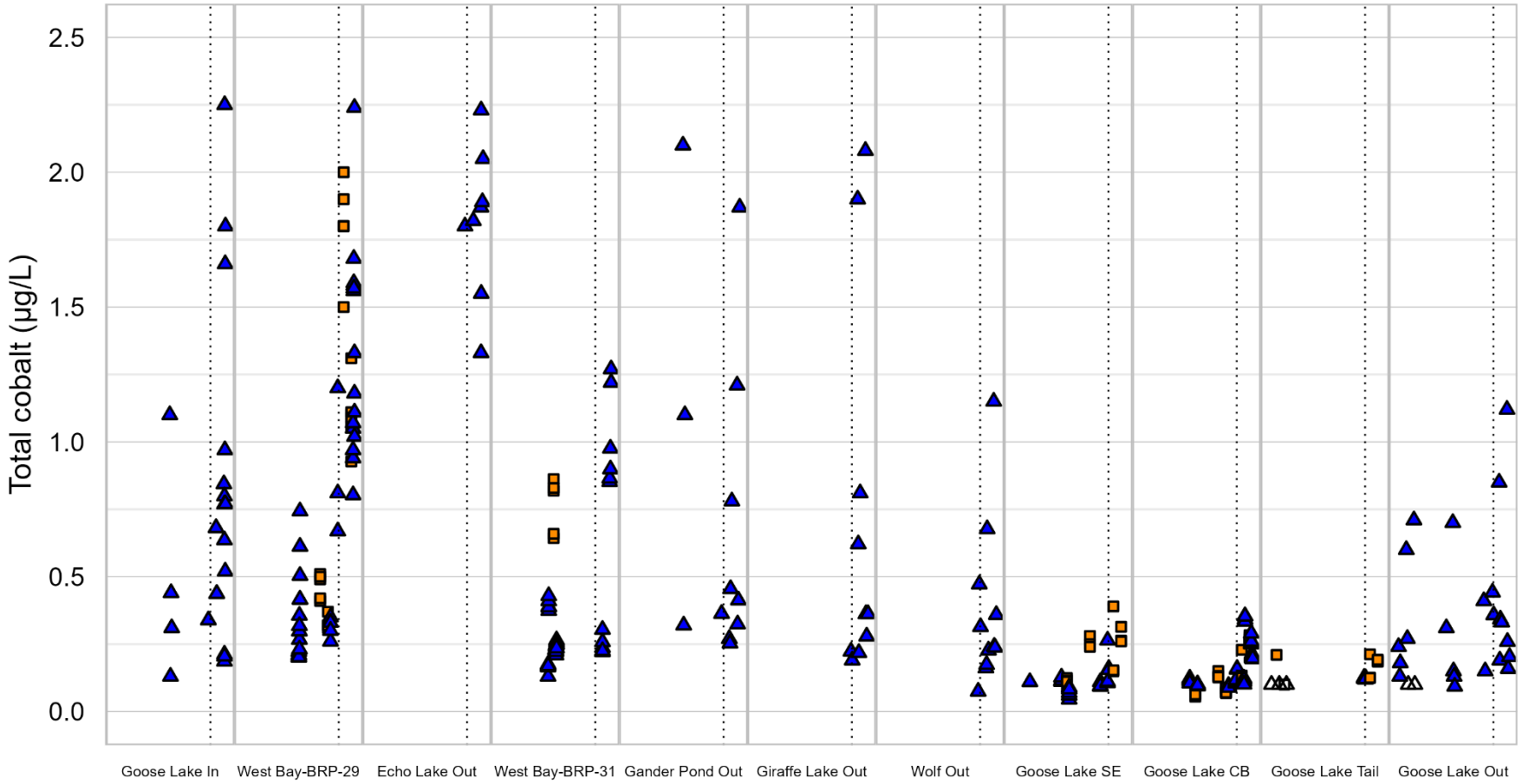
### F4.1.3 Cobalt

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).



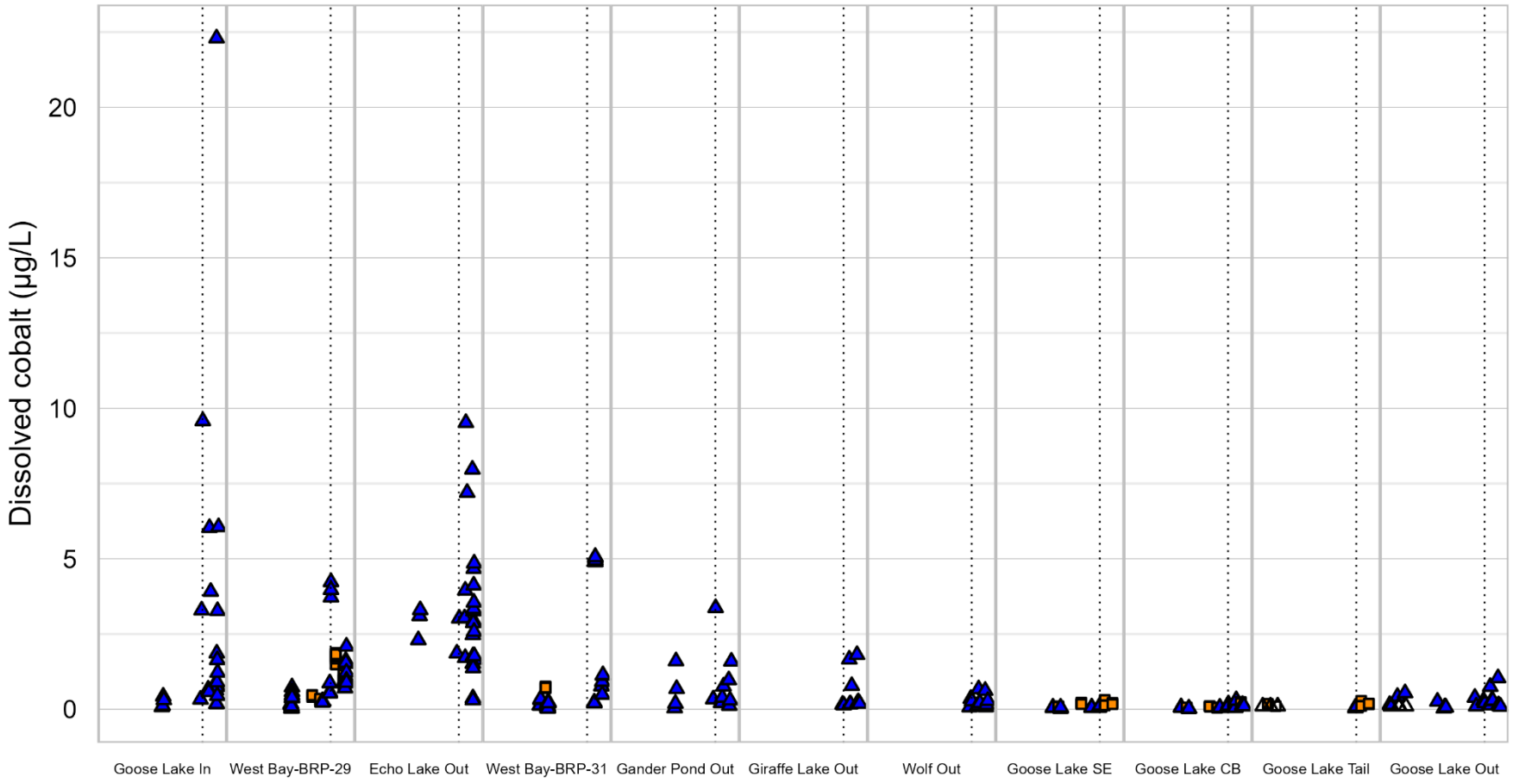

Note: The vertical dashed line represents September 01, 2023. Orange squares represent samples collected in under-ice conditions and blue triangles represent samples collected in open-water conditions. Hollow symbols represent concentrations below the detection limit.

**Figure F3-4: Total Cobalt Concentrations in Streams Flowing Into and Out of Goose Lake and Goose Lake Areas from 2011 to 2025**



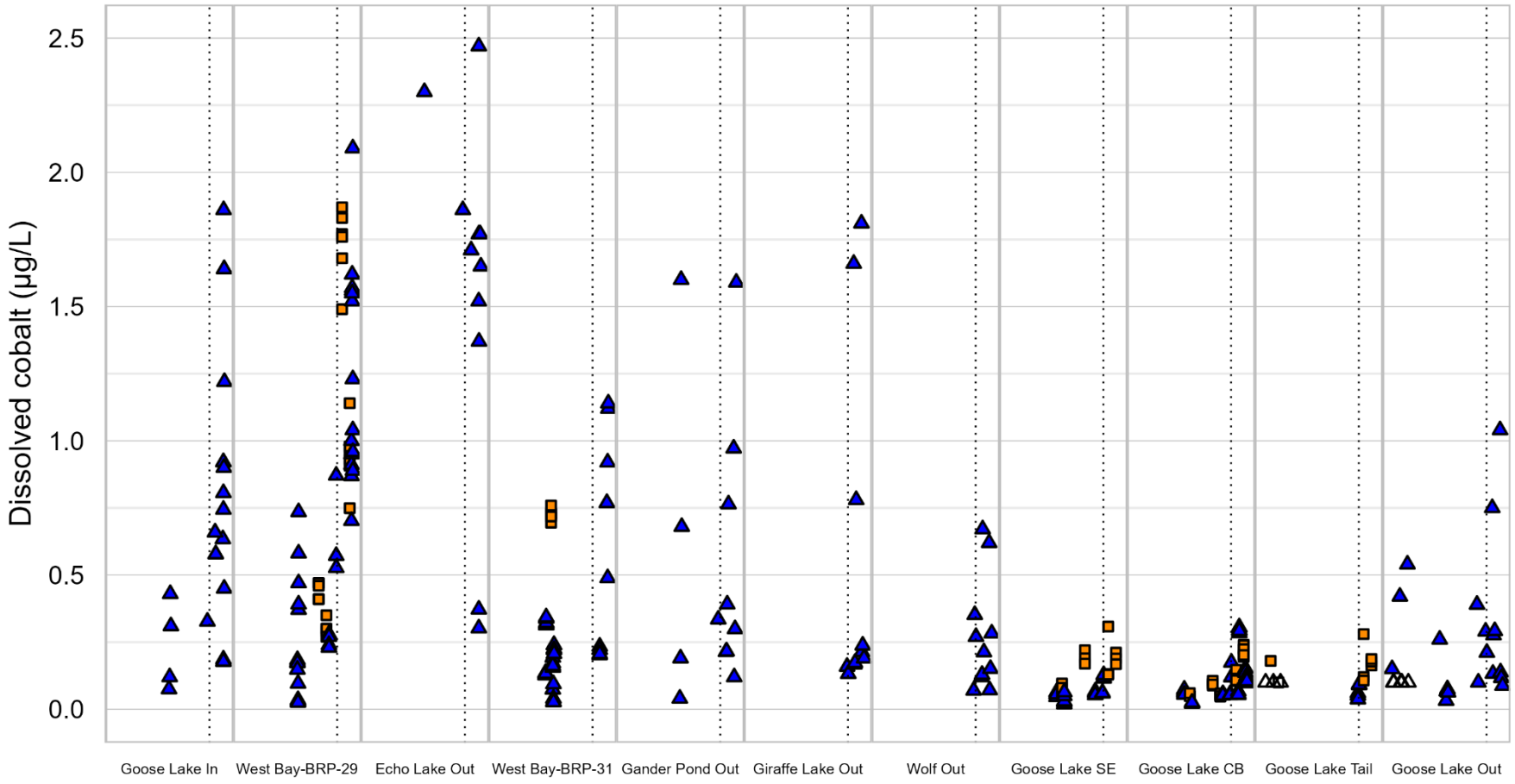

Note: The vertical dashed line represents September 01, 2023. Orange squares represent samples collected in under-ice conditions and blue triangles represent samples collected in open-water conditions. Hollow symbols represent concentrations below the detection limit.

**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

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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.

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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 | 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 |
| **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 |
| 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 (HCO3) | 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 | 0.00556 | 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 | 0.0000042 | 0.00002 | 0.00002 | 0.00002 |
| Silver (Ag)-Total | 0.000002 | mg/L | 0.0000022 | 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 $H_2S$) | 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 | 0.0001 | 0.0000635 | 0.0001 | 0.00011 | 0.0001 |
| Zirconium (Zr)-Total | 0.000008 | mg/L | 0.000082 | 0.000035 | 0.0000961 | 0.00011 | 0.0001 | 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 | 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 | | | | | | | | | | | | | |
| 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 |
| 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 | 0.001 | 0.00088 | 0.00085 | 0.00222 | 0.00125 | 0.00087 | 0.00081 | 0.00156 |
| Barium (Ba)-Dissolved | 0.001 | mg/L | 0.0295 | 0.0292 | 0.0257 | 0.0256 | 0.0386 | 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 (HCO3) | 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 | 0.000069 | 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 (CO3) | 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 | 245 | 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 | 0.0686 | 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 | 0.025 | 0.031 | 0.0307 | 0.025 | 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 (NO3)-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 | 10 | 9.5 | 12 | 12 | 11 | 11 | 14 | 13 | 13 | 13 |
| Organic Carbon (C)-Total | 0.2 | mg/L | 10 | 11 | 10 | 8.8 | 10 | 11 | 12 | 11 | 11 | 17 | 13 | 12 | 12 |
| pH | - | pH Units | 6.7 | 6.59 | 6.61 | 6.56 | 6.61 | 6.76 | 6.57 | 6.32 | 6.49 | 6.57 | 6.48 | 6.34 | 6.39 |
| pH-Field | - | pH | 6.4 | 6.24 | | 6.3 | 6.13 | 6.18 | 6.4 | 5.7 | 6.5 | 6.5 | 6.43 | 6.37 | 7.12 |
| Phosphorus (P)-Total | 0.001 | mg/L | 0.0027 | 0.01 | 0.0098 | 0.0022 | 0.0021 | 0.011 | 0.0036 | 0.0033 | 0.013 | 0.0054 | 0.0027 | 0.02 | 0.0078 |
| Potassium (K)-Dissolved | 0.05 | mg/L | 3.43 | 3.38 | 3.08 | 2.68 | 3.62 | 4.69 | 4.27 | 4.21 | 5.15 | 5.7 | 5.05 | 4.9 | 5.6 |
| Potassium (K)-Total | 0.05 | mg/L | 3.78 | 3.34 | 3.2 | 3.34 | 3.61 | 4.83 | 4.19 | 4.44 | 5.66 | 5.53 | 5.63 | 5.38 | 5.52 |
| Redox Potential-Field | - | mV | 184 | 164 | | 177 | 175 | 230 | 100 | 311 | 192 | 223 | 198 | 232 | 256 |
| Selenium (Se)-Dissolved | 0.0001 | mg/L | 0.00016 | 0.00015 | 0.00021 | 0.00026 | 0.00029 | 0.00034 | 0.00024 | 0.00022 | 0.00022 | 0.00028 | 0.00019 | 0.00018 | 0.00024 |
| Selenium (Se)-Total | 0.0001 | mg/L | 0.00021 | 0.00016 | 0.00024 | 0.00023 | 0.00028 | 0.00032 | 0.00028 | 0.00021 | 0.00028 | 0.00033 | 0.00027 | 0.00019 | 0.00028 |

**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 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0.00002 |
| Silver (Ag)-Total | 0.00002 | mg/L | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0.000032 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0.00002 |
| 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 | 0.00001 | 0.00001 | 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 | 0.00001 | 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 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| Tin (Sn)-Total | 0.005 | mg/L | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| Titanium (Ti)-Dissolved | 0.005 | mg/L | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| Titanium (Ti)-Total | 0.005 | mg/L | 0.005 | 0.005 | 0.0065 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.0132 | 0.005 | 0.005 | 0.005 | 0.005 |
| Total Dissolved Solids_Calculated | 10 | mg/L | 140 | 130 | 120 | 120 | | 180 | 160 | 170 | 190 | | 210 | 190 | 180 |
| Total Dissolved Solids_Measured | 10 | mg/L | 170 | 130 | | 140 | | | | | 240 | | | | 200 |
| 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 | 2 | 3 | 2 | 2 | 2 | 2 | 4 | 2 | 3 | 3 | 2 | 2 | 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 | 0.0029 |
| Uranium (U)-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 |
| Uranium (U)-Total | 0.0001 | mg/L | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.0001 | 0.00011 | 0.0001 | 0.0001 | 0.0001 | 0.0001 |
| Vanadium (V)-Dissolved | 0.005 | mg/L | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| Vanadium (V)-Total | 0.005 | mg/L | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 |
| 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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# APPENDIX J GROUND THERMAL MONITORING PLAN

Revision 01

# Back River Project: Site-wide Ground Thermal Monitoring Plan

Back River Project, Nunavut, Canada

B2Gold Corporation



SRK Consulting (Canada) Inc. ▪ CAPR004313 ▪ March 2026

srk consulting

**Revision 01**

# Back River Project: Site-wide Ground Thermal Monitoring Plan

Back River Project, Nunavut, Canada

**Prepared for:**
B2Gold Back River Corp.
666 Burrard Street, Suite 3400
Vancouver, BC, V6C 2X8
Canada
+1 604 681 8371
www.b2gold.com

**Prepared by:**
SRK Consulting (Canada) Inc.
320 Granville Street, Suite 2600
Vancouver, BC V6C 1S9
Canada
+1 604 681 4196
www.srk.com

**Lead Author:** Christopher Stevens, PhD **Initials:** CWS
**Reviewer:** John Kurylo, PEng **Initials:** JK

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**Cover Image(s):**
Historic ground temperature monitoring site with data logger housing at surface.

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The opinions expressed in this document have been based on the information available to SRK at the time of preparation. SRK has exercised all due care in reviewing information supplied by others for use on this project. While SRK has compared key supplied data with expected values, the accuracy of the results and conclusions from the review are entirely reliant on the accuracy and completeness of the supplied data. SRK does not accept responsibility for any errors or omissions in the supplied information, except to the extent that SRK was hired to verify the data.

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# Table of Revisions

| Date | Revision | Remarks |
|---|---|---|
| April 2024 | Rev 00 | Initial revision submitted as part of 2023 Annual Reporting Package |
| March 2026 | Rev 01 | Revision to the status of the ground temperature sites and addition of recently installed sites. Plan submitted as part of 2025 Annual Reporting Package |
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*This document will be a 'live' document that will be continually updated as the Back River project advances, and as additional infrastructure on site is constructed. A history of the thermal monitoring plan report revisions is provided in the table above.*

# 1 Introduction

## 1.1 Background

The Back River project (the project) is an open pit and underground gold mining project in the West Kitikmeot region of Nunavut, approximately 520 km northeast of Yellowknife and 75 km south of Bathurst Inlet. The mine will consist of a Marine Laydown Area (MLA) at Bathurst Inlet and the mine located at the Goose property (Figure 1). The MLA serves as the primary resupply point for the mine. B2Gold Corporation (B2Gold) began and are completing construction at the MLA and Goose site under their site Water License 2AM-BRP1831 – Amendment No. 1, issued by the Nunavut Water Board (NWB) on October 15, 2021.

A ground temperature monitoring plan and annual report is provided to meet the terms and conditions agreed to in the project certificate. In particular, the Project Certificate Terms and Conditions #11 states that “During construction, the Proponent shall, on an annual basis, provide additional permafrost mapping information documented in fulfillment of this Term and Condition in the Proponent’s annual report to the Nunavut Impact Review Board.”

This Plan provides a framework for monitoring ground temperature and changes to permafrost at the project site. Section 2 of this plan provides background information on site conditions and infrastructure. Section 3 reviews historical and current ground temperature sites used for baseline characterisation of the ground thermal regime. Section 4 identifies the long-term background and infrastructure monitoring sites. Section 5 provides guidance on implementation of the plan, data management, and instrument maintenance, followed by reporting requirements, presented in Section 6.

## 1.2 Monitoring Objectives

The ground temperature monitoring objectives include:

- Identifying natural climate-driven changes to the ground thermal regime and permafrost at background sites located outside of direct influence of mining activities; and
- Identifying changes to the ground thermal regime and permafrost immediately beneath or adjacent to mine infrastructure.

## 1.3 Key Elements

Key elements of the monitoring plan include:

- Ground temperature data collection from long-term monitoring stations;
- Data management and quality assurance;
- Instrument inspection and maintenance for ground temperature site; and
- Annual reporting requirements.

# 2 Site Conditions

## 2.1 Topography

The topography is characterized by low relief terrain at both the Goose property and MLA. At the Goose Property, the land is dominated by undulating or rolling landscapes, presented as a sequence of smooth, non-linear rises and hollows that are largely formed by glacial drumlines at the Goose Property. Frostboils form micro-relief at the ground surface and have developed from repeated freeze thaw cycle at the site. Drainage is variable from well to poorly drained ground depending on local topography, surficial material, and permafrost. The MLA is located near sea level and characterized by gentle slopes and level plains that drain toward Bathurst Inlet.

## 2.2 Climate

The region around the Back River project is characterized by long dark winters, shorter summers and generally gently rolling topography. Typically, the ground is covered in snow from October (and as early as September) to June (sometimes snow melting earlier in mid to late may). Similar to other Northern Canadian sites, Back River is subject to very cold weather and at times persistent Arctic winds.

In the winter the lakes and sea are covered with ice that can be greater than 2 m in thickness. This can allow for on-ice activities such as diamond drilling, winter ice road, and airstrip construction and use. The mean annual air temperature (MAAT) is around -10°C at the Goose Station. The mean annual precipitation ranges from around 270 to 430 mm (SRK 2021)

Meteorological data has been collected at the Goose Station (Lat. 65.54, Long. -106.41, Elev. 277 masl) since August 2004 and at the MLA Station (Lat. 66.65, Long. -107.69, Elev. 11 masl) since 2012. The stations are equipped with gauges to monitor air temperature, precipitation as rainfall and snowfall, solar radiation, wind speed, and wind direction (SRK 2021, Rescan 2014b). Meteorological data collected at these two stations will be used to support understanding of changes in ground temperature and permafrost (see Section 4).

## 2.3 Surficial and Bedrock Geology

Surficial geology at the project site is largely a reflection of the last advance of the North American Laurentide ice sheet during the Wisconsin Glaciation. The maximum extent of the continental glacier occurred approximately 21,000 years ago and began withdrawing from the Kitikmeot Region approximately 10,000 years ago.

The landscape is striated with overburden materials characteristic of a post-glacial environment. At the Goose property, the common surficial deposits include glacial till and drumlines. Glacial till consists of sand and variable amounts of silt and gravel. Drumlines also coarse sand, silt, and gravel compositions and are often associated with kettle lakes.  Organic veneers (less than 1 m in depth) are also common, resulting from the accumulation of very slowly decomposing vegetation, typically in the wet lowlands.

The majority of the Goose Property is underlain by clastic meta-sedimentary rock types consisting of turbidites (greywacke and mudstone) of the Slave Province (Rescan 2013) Vol 5 EIS). This sequence is cut by felsic dikes and gabbroic dikes. From oldest to youngest, the sequence is composed of central greywacke, lower iron formation, middle mudstone, upper iron formation, and upper sediments. Exposed bedrock can be found throughout the Goose Property or immediately below a thin veneer of glacial sediments.

At the MLA, the surficial deposits include marine and morainal deposits. Marine and moraine deposits consist mainly of coarse sands. Poorly drained areas with accumulated organics may also have fine-grained soils and higher amounts of ground ice.

## 2.4 Ground Thermal Regime

Back River is located within a zone of Continuous permafrost, with an estimated 90 to 100% of the land area underlain by permafrost. Permafrost temperature has been measured to range from -4.7°C to -7.5°C at the Goose Property, with an average of -6.3°C (SRK 2015a). The seasonally thawed active layer ranges from approximately 1 to 4 m below ground surface (bgs). The greatest active layer depth occurs in areas with thin soil veneers above bedrock. The base of permafrost is estimated to range from 490 to 570 meters below ground surface (mbgs) using the 0°C isotherm, with a reported geothermal gradient of 0.013 to 0.014°Cm (SRK 2015a). The local groundwater chemistry results in a freezing point depression and unfrozen taliks at the base of permafrost, also referred to as basal cryopegs. The basal cryopeg has been estimated to be 100 m thick.

## 2.5 Infrastructure

Proposed surface infrastructure development to support the mining generally includes the following:

- Marine Laydown Area:
  - Laydown facilities
  - Fuel tank farm
  - Camp and ancillary facilities
  - Workshop and ancillary facilities
  - Airstrip
  - Fuel offloading and general site access roads linking the above elements
- Goose Site:
  - Processing plant and ancillary facilities
  - Mine equipment workshops, warehousing and ancillary facilities
  - Laydown facilities
  - Fuel tank farm

- Camp and ancillary facilities
- In-Pit tailings facilities
- Waste rock and overburden piles
- Ore stockpiles
- Airstrip
- Water management facilities (Primary Pond, Camp Pad, Echo Diversion etc.)
- Culvert crossings.
- All weather roads linking the above infrastructure elements.

The Back River site continues to be in a period of transition, in a pre-operation ramp up stage. This means that many of the pads, roads, ponds, and water conveyance (culvert) structures are currently at an interim state and / or were not yet completed at the end of 2024. Therefore, there are many elements listed in bullets above that are not constructed on site. As later discussed, thermal monitoring is planned to be incorporated as part of geotechnical monitoring of critical infrastructure (e.g. ponds / damstank farms etc.) and will be included in the final designs and construction.

# 3 Ground Temperature Sites

## 3.1 Historic Sites

The ground thermal regime has been characterised as part of baseline studies completed at Goose and MLA (Rescan 2014a). Thermistor cables were installed in drillholes (and one test pit) at the Goose property in 1997, 2008, 2011, 2012, and 2013, 2015, and 2017 (Table 1). At the Goose property, a total of thirty-five thermistor cables were installed nearby the planned open pits and infrastructure sites. An additional six drillholes were instrumented with thermistor cables at the MLA.

Figure 2 shows the location of the historic ground temperature sites located at the Goose property by year of installation. Figure 3 shows the location of the historic ground temperature sites install at the MLA by year of installation. The thermistor cables installed at the historic ground temperature sites were manufactured by RST (SRK 2012, SRK 2015b, Rescan 2010, Rescan 2012), or by GKM (KP 2013a; 2013b). The cables were typically designed to characterise either shallow or deep ground temperature (see classification in Table 1). Most of the instruments were connected to data loggers manufactured by Campbell Scientific (Rescan 2010; 2012; KP 2013a; 2013b) or RST (SRK 2012). Manual temperature readings were collected from cables not connected to data loggers.

The status (function) of the GTCs at the Goose Property and MLA is shown in Figures 4 and 5, respectively. The status of each site is defined as:

- Active – GTC is functional at time of reporting
- Inactive – GTC function is unknown at time of reporting
- Compromised (Repair) – GTC is not functional at time of reporting and requires repair
- Compromised – GTC is not functional and damaged beyond repair or not accessible

Phase 1 audit of the instruments was completed by SRK in 2023. The Phase 1 audit included visual inspection the instrumentation (cable leads and data loggers) for damage at the Goose Property. The information was advanced to Campbell Scientific who is the instrument manufacturer for most of the historic instruments. Campbell Scientific concluded that historic measurements and programing would no longer be store on the data loggers due to depletion of the primary and secondary batteries. The historic data that areavailable for each of the sites are provided in the *Back River Project: Site-wide Ground Thermal Monitoring Plan (Revision 01)* (SRK 2026).

Phase 2 of the instrument audit will include reviewing and evaluating the functionality of the existing equipment and assessing recovery options at a select number of accessible sites, if required. If successful, additional efforts to repair the historic instruments will be made. A portion of the historic site would be used for ground thermal monitoring pending final determination of instrument function. These sites will characterize the deep ground thermal regime to establish long-term changes in permafrost. The instruments are not well suited for monitoring the shallow ground thermal regime, active layer depth, and change in shallow permafrost temperature, due to the original purpose of the instruments. New background sites are planned for installation to characterize the shallow ground thermal regime at background locations outside of the influence of mining infrastructure.

A portion of the historic site will be used for long-term ground thermal monitoring pending final determination of instrument function, as discussed in Section 4. A total of nine historic thermistor cables at the Goose Property have been compromised and are no longer functional (Table 1). Of the compromised sites, thermistor cable 13-GSE-277B, 13-GSE-284, 13-GSE-289 are located under Llama Lake and are not accessible. The remaining six sites have been compromised by construction. These sites were originally installed to measure background ground temperature and are not intended for infrastructure monitoring. An additional six historic thermistor cables installed to establish baseline conditions at the MLA have been compromised (Table 1).

Ground temperature measurements collected at Goose and MLA are provided in Appendix B. The historic ground temperature records are often limited to measurements made several months to years following installation. The historic (pre-mining) baseline measurements will be used to evaluate change in permafrost temperature over the period of mining (see Section 4).

## 3.2 Recent Sites

Ground temperature monitoring sites were recently established at the Goose Camp Pad, Primary Pond Dam, Umwelt Pit Area, and MLA Fuel Tank Farm between 2023 and 2025 (Figures 2 and 3; Table 2). The sites were instrumented with calibrated digital ground temperature cables (GTCs) which provide analog to digital conversion of the measurements at the sensor. The read out of the cables is temperature using the factory established calibration coefficients, which eliminates the need to convert measured resistance to temperature. Figures 6 through 14 show the location of the GTC sensors for recent cables installed at the Primary Pond Dam, Camp Pad, and Tank Pad Areas.

A total of sixteen GTCs were installed at the Primary Pond Dam. The GTCs are installed in vertically in the foundation and horizontally along the excavated and backfilled key trench (Figure 2; Table 2). An additional four temporary GTCs sites were installed in 2024 to characterise the foundation and support construction of the Primary Pond Dam (SRK-24-PP-DH01, SRK-24-PP-DH02, SRK-24-PP-DH03, and SRK-24-PP-DH04 (Appendix B). The temporary sites provide baseline information for the local ground thermal regime but are not intended to be part of long-term monitoring.

At the Goose Camp Pad, GTCs were installed at SRK-23-CPI-DH1 and SRK-23-CPI-DH2 to monitoring ground temperature in the rock pad and foundation (Figure 2; Table 2). Manual measurements have been made at these two sites since installation in 2023 (Appendix B).

Two recent GTCs were installed near Umwelt Pit in 2023 and 2024 (Table 2). Site 22-UMU004B was installed from the underground mine to characterise local ground temperature and permafrost conditions. The GTC has been compromised by underground mining activities. Site 24-GSE-678B was installed from surface and extends adjacent to the planned pit shell and intersects the planned underground mine. The measurement provides baseline characterisation of permafrost and is intended to provide long-term background monitoring adjacent to the pit.

At MLA, two GTCs (MLA-TF-GTC-1 and MLA-TF-GTC-2) were installed at the fuel tank farm to monitor temperature in the rock pad and permafrost foundation. Site MLA-TF-GTC-1 is installed through the tank farm berm and into the foundation on the southwest side of the facility, where the berm is constructed on overburden (Figure 3). The second GTC is installed on the north edge of the pad at

Tank 5 and extends into the foundation (Figure 3). The purpose of these cables will be to monitor the berm and foundation permafrost conditions.

**Table 1: Historic Ground Temperature Sites Installed Between 1997 and 2017**

| Location | Site ID | Year | Northing | Easting | Status | Monitoring Type | GTC Length [m] (Approx.) |
|---|---|---|---|---|---|---|---|
| Goose Property | 13-GSE-261B | 2013 | 7269381 | 433838 | Inactive | Background | 560 |
| | 13-GSE-286 | 2013 | 7269612 | 434066 | Inactive | Background | 210 |
| | 13-GSE-314 | 2013 | 7269764 | 434278 | Inactive | Background | 210 |
| | 11SRKGL-10 | 2011 | 7269557 | 433734 | Inactive | Background | 21.5 |
| | 08-GSE-009 | 2008 | 7269461 | 433904 | Inactive | Background | 300 |
| | 97-GO-14 | 1997 | 7269623 | 434056 | Compromised | Background | 7 |
| | 13-GSE-288 | 2013 | 7270686 | 430310 | Compromised | Background | 560 |
| | 13-GSE-279 | 2013 | 7270260 | 430189 | Compromised | Background | 560 |
| | 12-GSE-233C | 2012 | 7270546 | 430544 | Compromised | Background | 565 |
| | 13-GSE-277B | 2013 | 7272125 | 428852 | Compromised | Background | 265 |
| | 13-GSE-284 | 2013 | 7272370 | 428710 | Compromised | Background | 390 |
| | 13-GSE-289 | 2013 | 7272218 | 428790 | Compromised | Background | 660 |
| | 12-GSE-218 | 2012 | 7272301 | 428508 | Inactive | Background | 390 |
| | 12-GSE-223 | 2012 | 7272161 | 429104 | Inactive | Background | 285 |
| | 14-GSE-468 | 2014 | 7268705 | 432707 | Compromised | Background | 375 |
| | 14-GSE-472 | 2014 | 7268724 | 432957 | Compromised | Background | 375 |
| | TIA-GT13-03 | 2013 | 7272636 | 430246 | Inactive | Background | 17 |
| | TIA-GT13-10 | 2013 | 7273951 | 430604 | Inactive | Background | 17 |
| | TIA-GT13-15 | 2013 | 7273180 | 431079 | Inactive | Background | 17 |
| | TIA-GT13-16 | 2013 | 7272989 | 431079 | Inactive | Background | 17 |
| | GAS-GT13-01 | 2013 | 7269913 | 432983 | Inactive | Background | 17 |
| | GAS-GT13-02 | 2013 | 7269571 | 433495 | Inactive | Background | 27 |
| | GAS-GT13-04 | 2013 | 7268574 | 434367 | Inactive | Background | 27 |

| Location | Site ID | Year | Northing | Easting | Status | Monitoring Type | GTC Length [m] (Approx.) |
|---|---|---|---|---|---|---|---|
| | GAS-TP13-51 | 2013 | 7268379 | 434496 | Inactive | Background | 3 |
| | GPS-GT13-01 | 2013 | 7271857 | 431171 | Inactive | Background | 17 |
| | SRK-15-GSE-DH12 | 2015 | 7267857 | 434863 | Inactive | Background | 15 |
| | SRK-15-GSE-DH13 | 2015 | 7267876 | 434944 | Inactive | Background | 15 |
| | SRK-15-GSE-DH15 | 2015 | 7267916 | 435125 | Inactive | Background | 15 |
| | SRK-15-GSE-DH16 | 2015 | 7267940 | 435231 | Inactive | Background | 15 |
| | SRK-15-GSE-DH17 | 2015 | 7267942 | 435336 | Inactive | Background | 15 |
| | SRK-15-GSE-DH18 | 2015 | 7267919 | 435427 | Inactive | Background | 15 |
| | SRK-15-GSE-DH19 | 2015 | 7267905 | 435517 | Inactive | Background | 15 |
| | SRK-15-GSE-DH20 | 2015 | 7267893 | 435603 | Inactive | Background | 15 |
| | SRK-15-GSE-DH21 | 2015 | 7267877 | 435685 | Inactive | Background | 15 |
| | SRK-15-GSE-DH26 | 2015 | 7266311 | 435268 | Inactive | Background | 15 |
| MLA Property | 17-ML_AA005 | 2017 | 7394381 | 381098 | Compromised | Background | 4.5 |
| | 17-ML_AA008 | 2017 | 7394715 | 381331 | Compromised | Background | 2.9 |
| | 17-ML_AA020 | 2017 | 7394872 | 380934 | Compromised | Background | 2.6 |
| | 17-ML_AA021 | 2017 | 7394212 | 381331 | Compromised | Background | 1.9 |
| | 17-ML_AA022 | 2017 | 7394185 | 381145 | Compromised | Background | 4.3 |
| | 17-ML_AA023 | 2017 | 7394530 | 381258 | Compromised | Background | 3.7 |

**Table 2: Recent Ground Temperature Sites Installed Between 2023 and 2025**

| Location | Area | Drillhole ID | Year | Northing | Easting | Status | Monitoring Type | GTC Length [m] (Approx.) |
|---|---|---|---|---|---|---|---|---|
| Goose Property | Primary Pond Dam | PP-VTC-550-US | 2023 | 7271204 | 429848 | Active | Infrastructure | 15.5 |
| | | PP-VTC-550-KT | 2023 | 7271180 | 429830 | Active | Infrastructure | 15.5 |
| | | PP-VTC-550-DS | 2023 | 7271168 | 429821 | Active | Infrastructure | 15.5 |
| | | PP-HTC-B1-KT | 2023 | 7271196 | 429841 | Active | Infrastructure | 130 |
| | | PP-HTC-B2-KT | 2023 | 7271139 | 429963 | Compromised | Infrastructure | 160 |
| | | PP-HTC-640-LN | 2024 | 7271146 | 429909 | Active | Infrastructure | 42 |
| | | PP-HTC-B3-KT | 2024 | 7271419 | 429512 | Active | Infrastructure | 160 |
| | | PP-HTC-450-LN | 2024 | 7271259 | 429761 | Active | Infrastructure | 48 |
| | | PP-HTC-330-LN | 2025 | 7271259 | 429761 | Active | Infrastructure | 48 |
| | | PP-VTC-300-UT | 2025 | 7271380 | 429680 | Active | Infrastructure | 15.5 |
| | | PP-VTC-320-US | 2025 | 7271340 | 429684 | Active | Infrastructure | 15.5 |
| | | PP-VTC-320-KT | 2025 | 7271322 | 429655 | Active | Infrastructure | 15.5 |
| | | PP-VTC-320-DS | 2025 | 7271305 | 429648 | Active | Infrastructure | 15.5 |
| | | PP-VTC-220-US | 2025 | 7271419 | 429601 | Active | Infrastructure | 15.5 |
| | | PP-VTC-220-KT | 2025 | 7271394 | 429577 | Active | Infrastructure | 15.5 |
| | | PP-VTC-220-DS | 2025 | 7271378 | 429566 | Active | Infrastructure | 15.5 |
| | | SRK-24-PP-DH01 | 2024 | 7271328 | 429660 | Inactive | Temporary | 8 |
| | | SRK-24-PP-DH02 | 2024 | 7271366 | 429613 | Inactive | Temporary | 9 |
| | | SRK-24-PP-DH03 | 2024 | 7271323 | 429658 | Inactive | Temporary | 8 |
| | | SRK-24-PP-DH04 | 2024 | 7271319 | 429664 | Inactive | Temporary | 5 |
| | Umwelt Pit Area | 22-UMU004B | 2023 | 7270357 | 430280 | Compromised | Underground | - |
| | | 24-GSE-678B | 2024 | 7270839 | 430150 | Active | Background | 440 |
| | Camp Pad | SRK-23-CPI-DH1 | 2023 | 7270012 | 429952 | Active | Infrastructure | 13.4 |
| | | SRK-23-CPI-DH2 | 2023 | 7269927 | 430029 | Active | Infrastructure | 8.8 |
| MLA Property | Tank Farm | MLA-TF-GTC-1 | 2024 | 7393818 | 380820 | Active | Infrastructure | 21 |
| | | MLA-TF-GTC-2 | 2024 | 7393854 | 381065 | Active | Infrastructure | 15.3 |

# 4 Long-term Monitoring

## 4.1 Background Sites

The long-term background sites will be established to monitor climate-driven changes in ground temperature at locations that are not directly impacted by mining. The background sites will be selected to capture representative ground conditions based on surficial geology, surface hydrology, vegetation, and expected ground temperature and active layer depth. Sites will be established at both the Goose property and MLA.

At present, one background monitoring site is active at the Goose Property nearby the planned location of Umwelt Pit (24-GSE-678B). Ground temperature is measured and recorded every four hours using a data logger. The site will be used to monitor the thermal influence of pit and underground mine development on the deep ground thermal regime.

B2Gold plans to complete a feasibility review of bringing some of the historic ground temperature sites back online for background ground temperature monitoring as part of the Phase 2 instrument audit. If deemed probable, additional efforts to repair the historic instruments will be made. A portion of the historic site would be used for ground thermal monitoring pending final determination of instrument function. These sites will characterize the deep ground thermal regime to establish long-term changes in permafrost. The instruments are not well-suited for monitoring the shallow ground thermal regime, active layer depth, and change in shallow permafrost temperature, due to the original purpose of the instruments. New background sites are planned for installation to characterize the shallow ground thermal regime at background locations outside of the influence of mining infrastructure.

## 4.2 Infrastructure and Disturbance Sites

Long-term ground temperature monitoring will be established at infrastructure and ground disturbance sites to monitor changes in ground temperature at locations directly influenced by mining activity. At infrastructure sites, the change in ground temperature is expected to result from the combined effects of climate and the infrastructure. Disturbance site would include areas adjacent to mine infrastructure that are influenced or directly impacted by mining activity.

At present, infrastructure monitoring sites included in this monitoring plan include one site at the Goose Camp Pad (SRK-23-CPI-DH1) and three of the sites at the Primary Pond Dam (PP-VTC-550-US, PP-VTC-550-KT, PP-VTC-550-DS). The three sites at the Primary Pond Dam consist of vertical GTCs installed in the foundation beneath the upstream (US), key trench (KT), and downstream (DS), respectively.

At MLA, two infrastructure monitoring sites (MLA-TF-GTC-1 and MLA-TF-GTC-2) at the fuel tank pad are included in the monitoring plan. These sites are used to monitor temperature through the rock pad and permafrost foundation. MLA-TF-GTC-1 is installed through the tank farm berm and foundation on the southwest side of the facility, where the berm is constructed on overburden. The second GTC (MLA-TF-GTC-2) is installed on the north edge of the pad at Tank 5 and extends into the foundation. At

the time of reporting, MLA-TF-GTC-1 is inactive and requires repair. Additional GTCs will be installed at the Goose property and MLA as mine infrastructure is built. The GTCs will be installed during construction or shortly thereafter. In most cases, the instruments will be part of a larger network of instruments used to monitor infrastructure performance and therefore the locations are subject to change as design and construction advances.

## 4.3 Meteorological Stations

Climate data collected at the Goose and MLA stations will allow for changes in weather and longer term climate to be assessed against the measured ground temperature. The monitoring plan data management system includes the historical meteorological data from the Goose and MLA stations (Section 5.2, Appendix C). Appendix C provides the baseline measurements for select parameters collected at the stations. The data management system will be updated with the completed timeseries of historical and recent measurements for each parameter.

# 5 Implementation and Maintenance

The operation and maintenance of the long-term ground temperature monitoring sites will be conducted by B2Gold or consultants. The following section provides guidelines for data collection, data management and quality assurance, and instrument inspection and maintenance.

## 5.1 Data Collection

A key consideration for long-term ground temperature monitoring is the method and frequency of data collection. Data collection will be through the use of data loggers or manual measurement at the frequency described below.

- Data Logger Collection
  - Measurement frequency every six hours (internally recorded)
  - Download of data logger once a quarter
- Manual Data Collection
  - Measurement frequency once a quarter

A standard operating procedures (SOPs) will be developed and appended to this monitoring plan once the monitoring sites and instruments have been established. The SOP will ensure consistent and complete data collection.

## 5.2 Data Management

A ground temperature monitoring database has now been developed in Microsoft PowerBI (data visualization and analytics tools and app) to support data storage, quality assurance and checks, analysis, and reporting. The database includes historic and recent ground temperature sites, along with the long-term ground temperature monitoring sites. The long-term monitoring sites (Background, Infrastructure, and Disturbance sites) for Goose and MLA will be added over time. Meteorological data from the Goose and MLA stations will also be maintained within the database.

Standardised data plots that have been developed to meet and assist with the annual reporting requirements. The data plots include graphical representation of the information as temperature timeseries and temperature versus depth plots. Standardized plots of the climate data for each of the meteorological stations will also be included in the database, such as graphical representation of year-over-year changes and calculated climate indices. The data plots may be expanded as required by data collection, analysis, and reporting.

The database should be updated within one month of manual data collection or data logger download. Climate data should be added to the database on a quarterly basis or at which time the quality checked data is made available.

## 5.3 Quality Checks

The data will be checked for erroneous (abnormal) readings. An abnormal instrument reading is one that is outside the historic range of measured values or shows a sudden change that is unexplainable. All data should be added to the database and then qualified by a subject matter expert. Abnormal readings will be flagged within the database.

## 5.4 Instrument Inspection and Maintenance

The instrument inspection and maintenance will be performed to ensure that the instruments are in good working condition to collect complete and accurate data. Prior to data collection (manual or download of the data logger), the instrument enclosure, data logger and components, and all exposed portions of the GTCs will be visually inspected for damage. Damage should be documented along with the need for repair or replacement.

It is inevitable that monitoring equipment will wear out and need to be replaced over time. These installations may require complete replacement in the event of equipment failure. If the equipment fails and requires replacement, B2Gold will make an effort to replace the equipment or the entire GTC cable in a timely fashion to ensure continuity with data collection. In some cases, it may not be practical to replace the instrument at the same location due to impacts on infrastructure or limitations with equipment and site access. If it is determined that the instruments cannot be replaced at the same location, a new installation will be located as close as possible and will be designed to collect the same data as the original installation.

# 6 Reporting

## 6.1 Annual Report

An annual ground temperature monitoring report, starting for the 2025 site annual reporting submission, will be issued with the annual reporting package for the site. The report will be developed to:

- Report data collection for the year;
- Describe instrument maintenance or replacement that has occurred;
- Update graphical plots of the historic and recent measurements for the monitoring sites;
- Analysis of the ground temperature to identify changes in permafrost and long-term trends;
- Analysis of relevant climate parameters to support understanding of changes in permafrost; and
- Action plan for instrument repair or replacement for the upcoming year, as needed.

This “Back River Project: Site-wide Ground Thermal Monitoring Plan” will be a ‘live’ document that will be continually updated as the Back River project advances, and as additional infrastructure on site is constructed. This plan will therefore be updated when new information is available and not necessarily on an annual basis; i.e. annual updates are not required to the plan if no new or additional information, or changes in monitoring conditions are apparent.

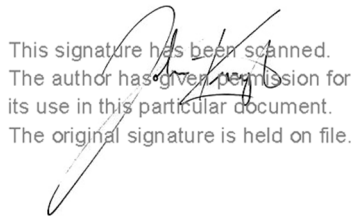
# Closure

This report, Back River Project: Site-wide Ground Thermal Monitoring Plan, was prepared by




Christopher Stevens, PhD
Associate (Permafrost and Infrastructure)

and reviewed by




John Kurylo, PEng
Principal Consultant (Geotechnical and Civil)

All data used as source material plus the text, tables, figures, and attachments of this document have been reviewed and prepared in accordance with generally accepted professional engineering and environmental practices.

# References

Rescan. 2010. Thermistor Data Summary, Back River Project. Prepared for Sabina Gold and Silver Corporation.

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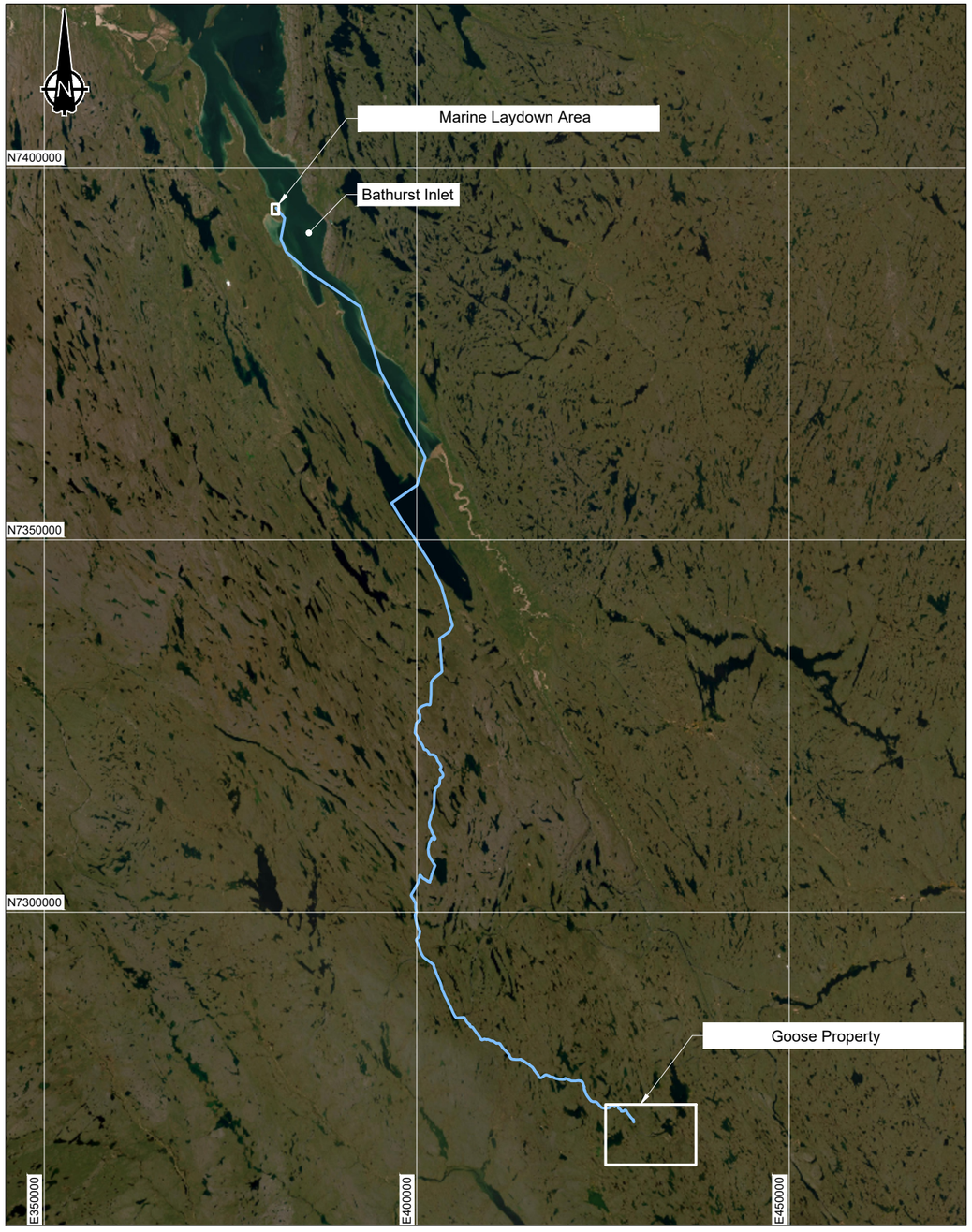
SRK Consulting (Canada) Inc. 2015b. Back River Project: Goose Property Talik Thermal Modeling. Technical Memorandum Prepared for Sabina Gold & Silver Corp., October 2015.

SRK Consulting (Canada) Inc. 2021. Back River: Updated Feasibility Study – Hydrology Update. Prepared for Sabina Gold and Silver Corporation.

# Appendix A Figures




Site Location

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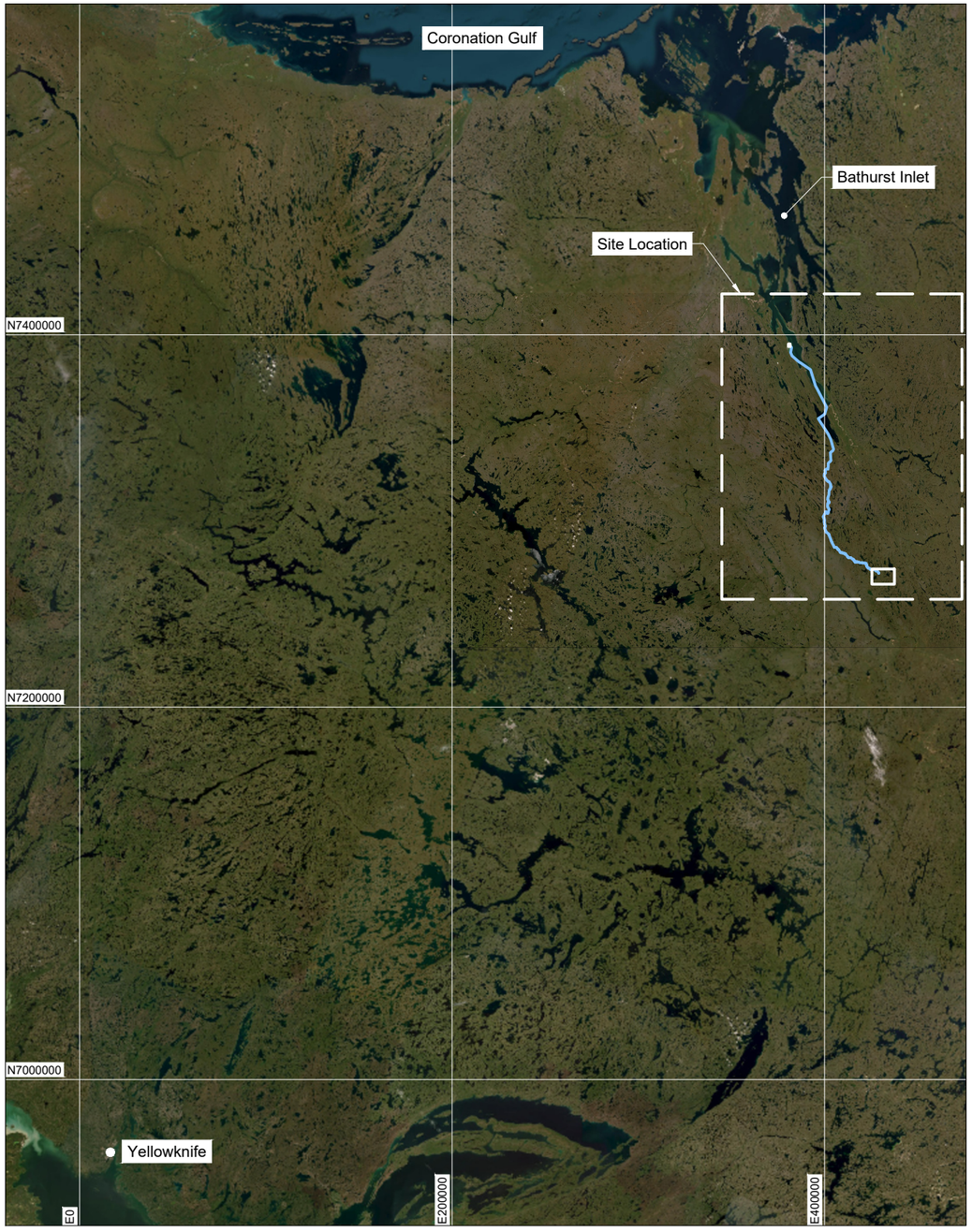


Key Plan

0km 30 60 90 120

**LEGEND**

2025 Winter Road Design

**NOTES**

1. All units are in meters unless otherwise specified.

**REFERENCES**

NAD83 UTM Zone 13.
Imagery acquired from ESRI World Map on 20240203.

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srk consulting

SRK JOB NO.: CAPR004313

FILE NAME: CAPR004313_GA.dwg

B2GOLD

Back River

Site-wide Ground Thermal Monitoring Plan

Location Map

| DATE: | APPROVED: | FIGURE: |
|---|---|---|
| 2026-01-06 | - | 1 |

## LEGEND

- 1997 GTC
- 2008 GTC
- 2011 GTC
- 2012 GTC
- 2013 GTC
- 2014 GTC
- 2015 GTC
- 2022 GTC
- 2023 GTC
- 2024 GTC
- 2025 GTC
- Design Pit and Dump Infrastructure
- Design Infrastructure
- Road
- Waterbody
- Facility Area
- Project Boundary

## NOTES

1. All units are in meters unless otherwise specified.
2. Contours are shown at 2.0 m intervals.
3. For GTC PP-HTC-330-LN, Sensors 4511-12 to 23 were placed in 2024 and Sensors 4511-01 to 11 were placed in 2025.
4. For GTC PP-HTC-450-LN, Sensors 4917-13 to 24 were placed in 2024 and Sensors 4917-01 to12 were placed in 2025.
5. For GTC PP-HTC-640-LN, Sensors 4506-01 to 11 were placed in 2023 and Sensors 4506-12 to 21 were placed in 2024.

## REFERENCES

NAD83 UTM Zone 13.

0m 200 400 600 800

Primary Pond Dam Detail

0m 50 100 150 200

srk consulting

B2GOLD

| | |
|---|---|
| SRK JOB NO.: | CAPR004313 |
| FILE NAME: | CAPR004313_GTC Locations By Year.dwg |

Back River

Site-wide Ground Thermal Monitoring Plan

Goose Property - Historic and Recent Ground Temperature Sites By Year

| DATE: | APPROVED: | FIGURE: |
|---|---|---|
| 2026-01-06 | - | 2 |

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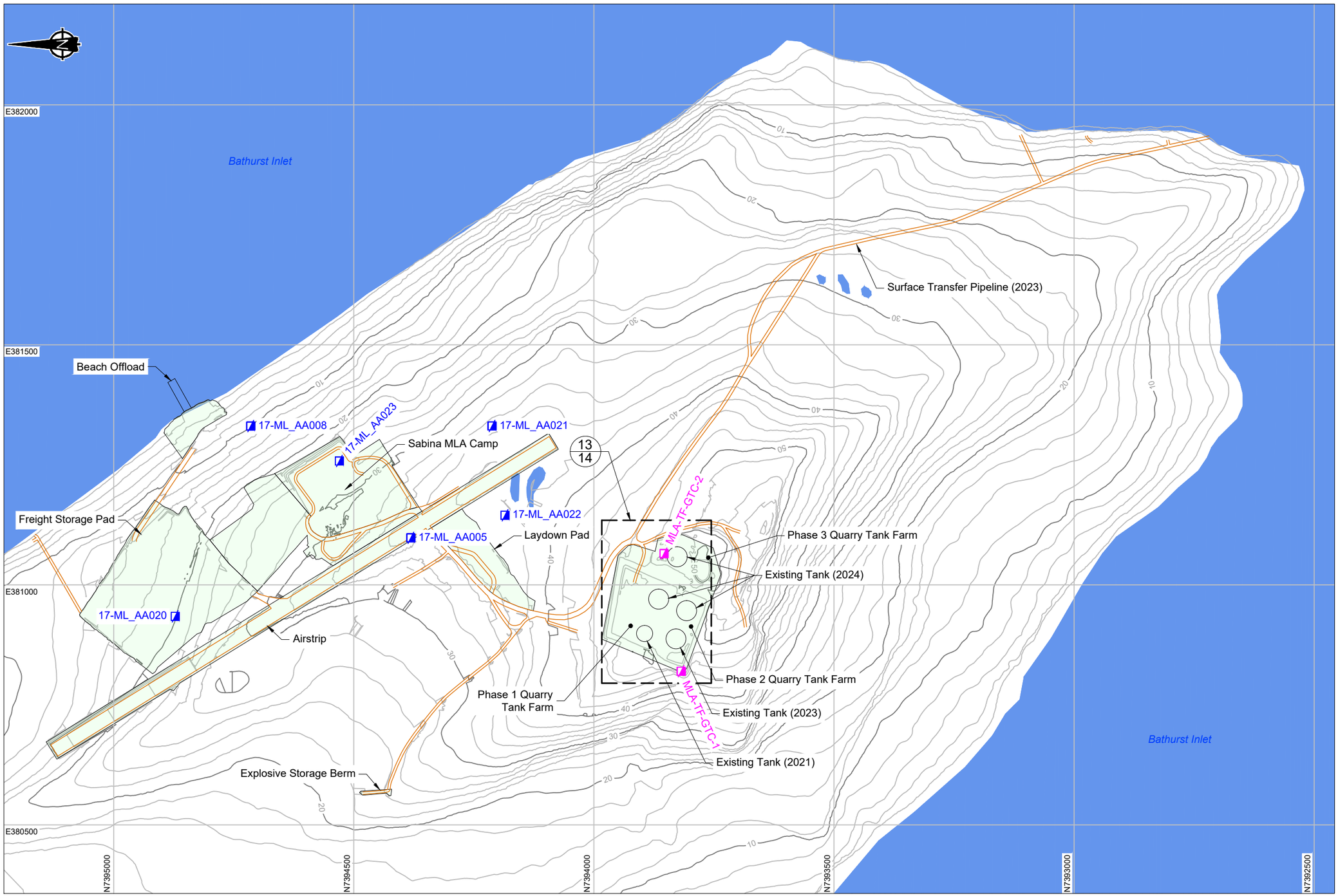


**LEGEND**

- 2017 GTC
- 2024 GTC
- Design Infrastructure
- Road
- Waterbody
- Facility Area

**NOTES**

1. All units are in meters unless otherwise specified.
2. Contours are shown at 2.0 m intervals.

**REFERENCES**

NAD83 UTM Zone 13.

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srk consulting

SRK JOB NO.: CAPR004313

FILE NAME: CAPR004313_GTC Locations By Year.dwg

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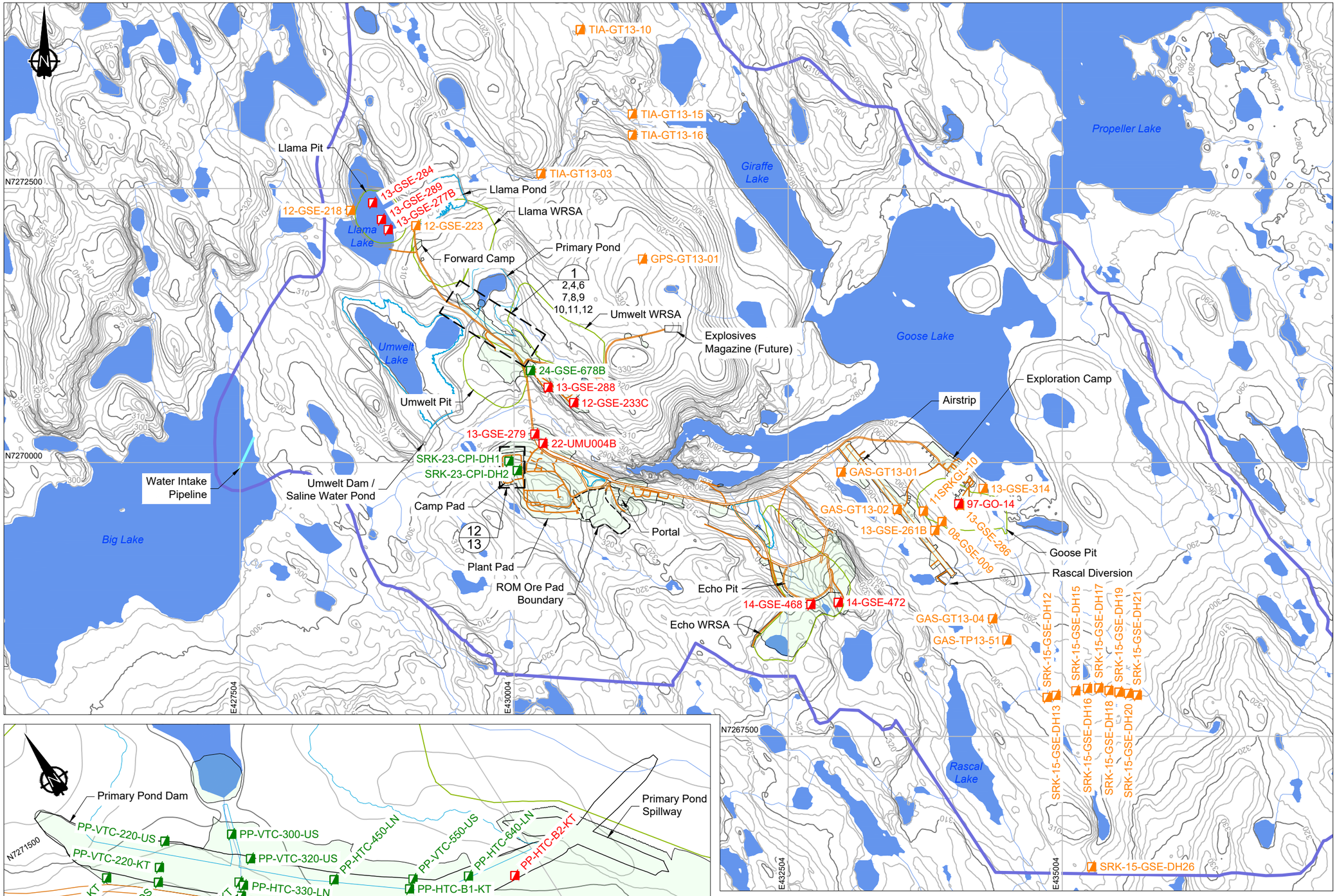
Back River

Site-wide Ground Thermal Monitoring Plan

Marine Laydown Area - Historic and Recent Ground Temperature Sites By Year

| DATE: | APPROVED: | FIGURE: |
|---|---|---|
| 2026-01-06 | - | 3 |







## LEGEND

- Active GTC
- Inactive GTC
- Compromised GTC
- Design Pit and Dump Infrastructure
- Design Infrastructure
- Road
- Waterbody
- Facility Area
- Project Boundary

## NOTES

1. All units are in meters unless otherwise specified.
2. Contours are shown at 2.0 m intervals.
3. Active refers to a GTC that is functional at the time of reporting.
4. Inactive refers to a GTC whose function is unknown at the time of reporting.
5. Compromised (Repair) refers to a GTC that is not functioning at time of reporting and required repair.
6. Compromised refers to a GTC that is not functioning at time of reporting, and is damaged beyond repair or not accessible.

## REFERENCES

NAD83 UTM Zone 13.

srk consulting

SRK JOB NO.: CAPR004313

FILE NAME: CAPR004313_GTC Locations By Status.dwg

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Back River

Site-wide Ground Thermal Monitoring Plan

Goose Property - Historic and Recent Ground Temperature Sites By Status

DATE: 2026-01-06 | APPROVED: - | FIGURE: 4

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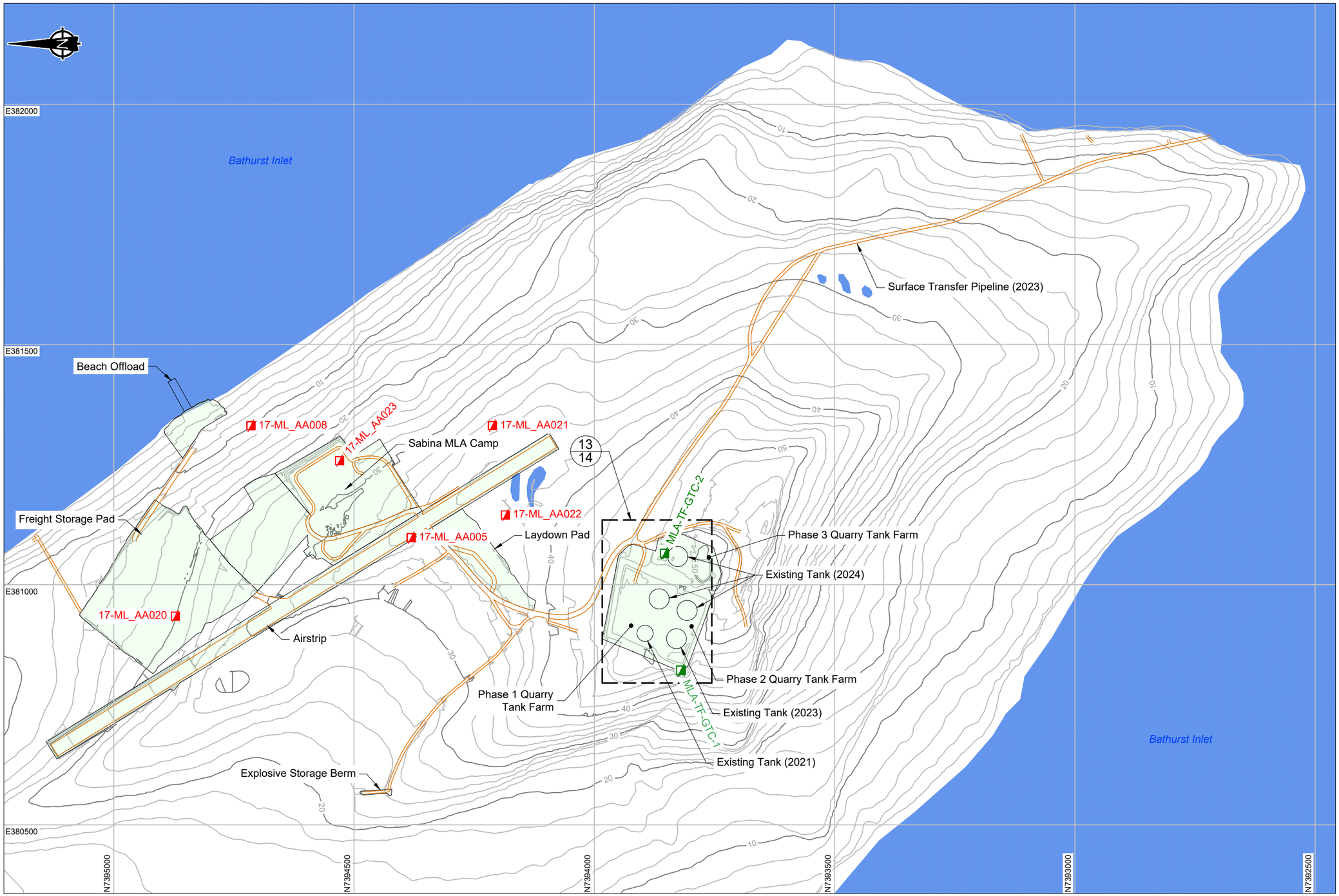


**LEGEND**

- Active GTC
- Compromised (Repair) GTC
- Compromised GTC
- Design Infrastructure
- Road
- Waterbody
- Facility Area

**NOTES**

1. All units are in meters unless otherwise specified.
2. Contours are shown at 2.0 m intervals.
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4. Inactive refers to a GTC whose function is unknown at the time of reporting.
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6. Compromised refers to a GTC that is not functioning at time of reporting, and is damaged beyond repair or not accessible.

**REFERENCES**

NAD83 UTM Zone 13.

srk consulting

SRK JOB NO.: CAPR004313

FILE NAME: CAPR004313_GTC Locations By Status.dwg

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Back River

Site-wide Ground Thermal Monitoring Plan

Marine Laydown Area - Historic and Recent Ground Temperature Sites By Status

| DATE: | APPROVED: | FIGURE: |
|---|---|---|
| 2026-01-06 | - | 5 |

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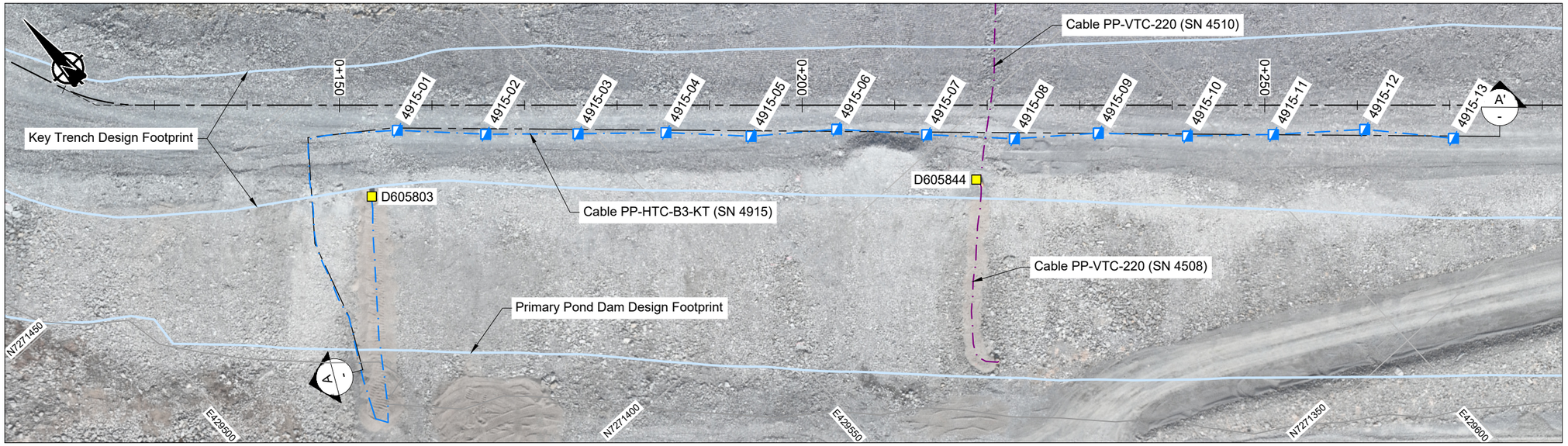


2 - **Cable PP-HTC-B3-KT (SN 4915)**

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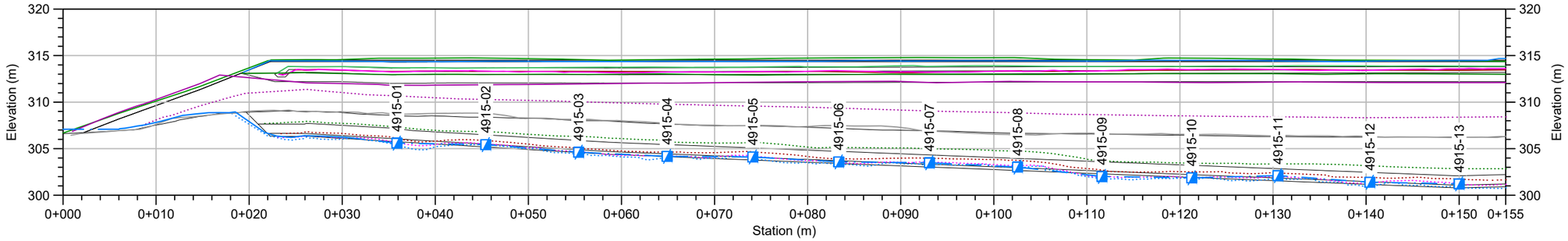


A - **Cable PP-HTC-B3-KT (SN 4915)**

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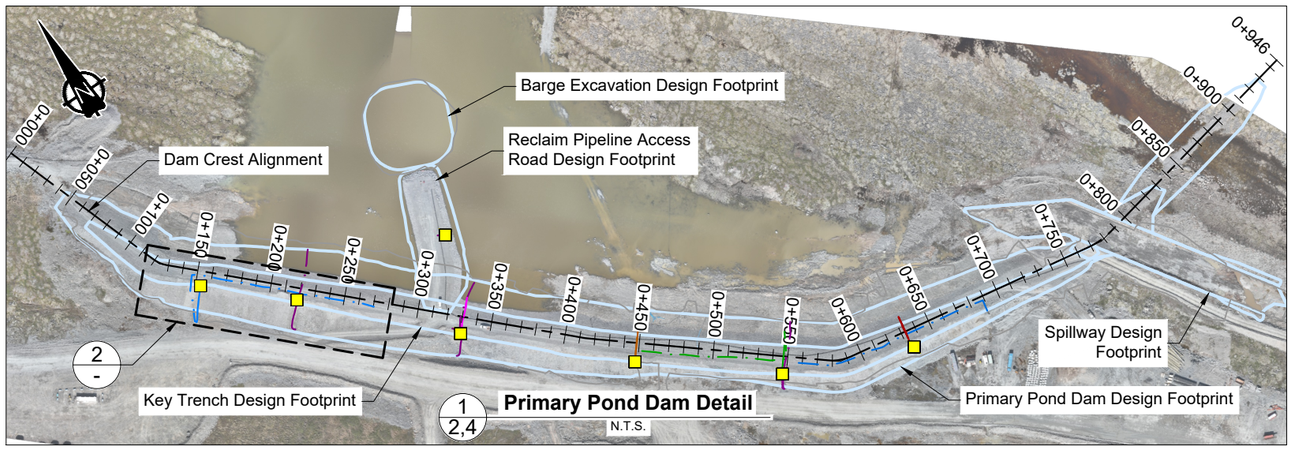


2 - 1 2,4 **Primary Pond Dam Detail**

N.T.S.

**LEGEND**

- Ground Temperature Cable Sensor
- Datalogger
- 20120831 Lidar Survey and Design Surfaces
- Cleared Ground
- Key Trench Excavation
- Key Trench Liner
- Key Trench Bedding
- Key Trench Transition
- Key Trench ROQ
- ROQ SC
- Transition SC
- Bedding Below Liner SC
- Liner SC
- Bedding Above Liner SC
- Transition Above Liner SC
- ROQ Outer Shell
- Cable

**NOTES**

1. All units are in meters unless otherwise specified.
2. Lower confidence in bedding material from as-built survey "20230219 Key Trench Bedding", this corresponds to Sta. 0+700 and 0+725 along the Dam alignment reference.
3. SC refers to Summer Construction

**REFERENCES**

1. Background Imagery is from 20250615.

srk consulting

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SRK JOB NO.: CAPR004313

FILE NAME: CAPR004313_GTC Primary Pond Sensors.dwg

Back River

Site-wide Ground Thermal Monitoring Plan

Goose Property - Primary Pond
GTC PP-HTC-B3-KT (SN 4915)

| DATE: | APPROVED: | FIGURE: |
|---|---|---|
| 2026-01-06 | - | 6 |

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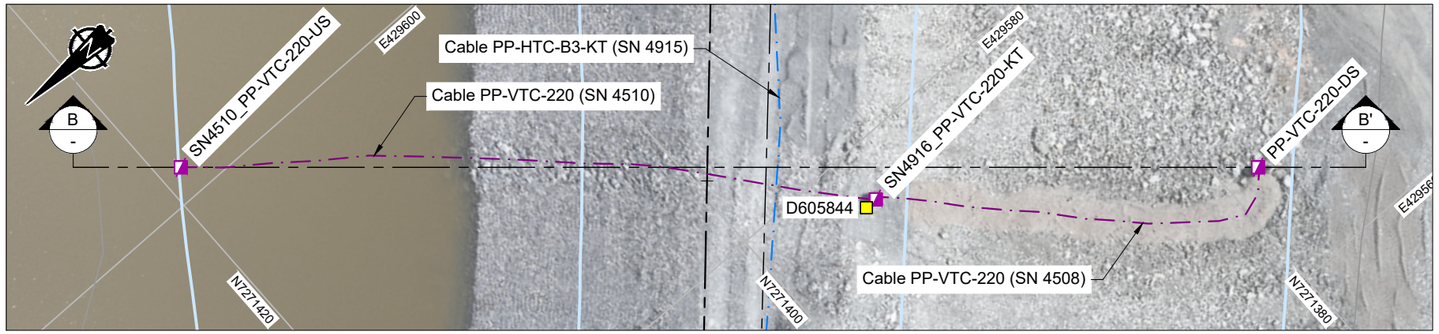


3 - **Cable PP-VTC-220**

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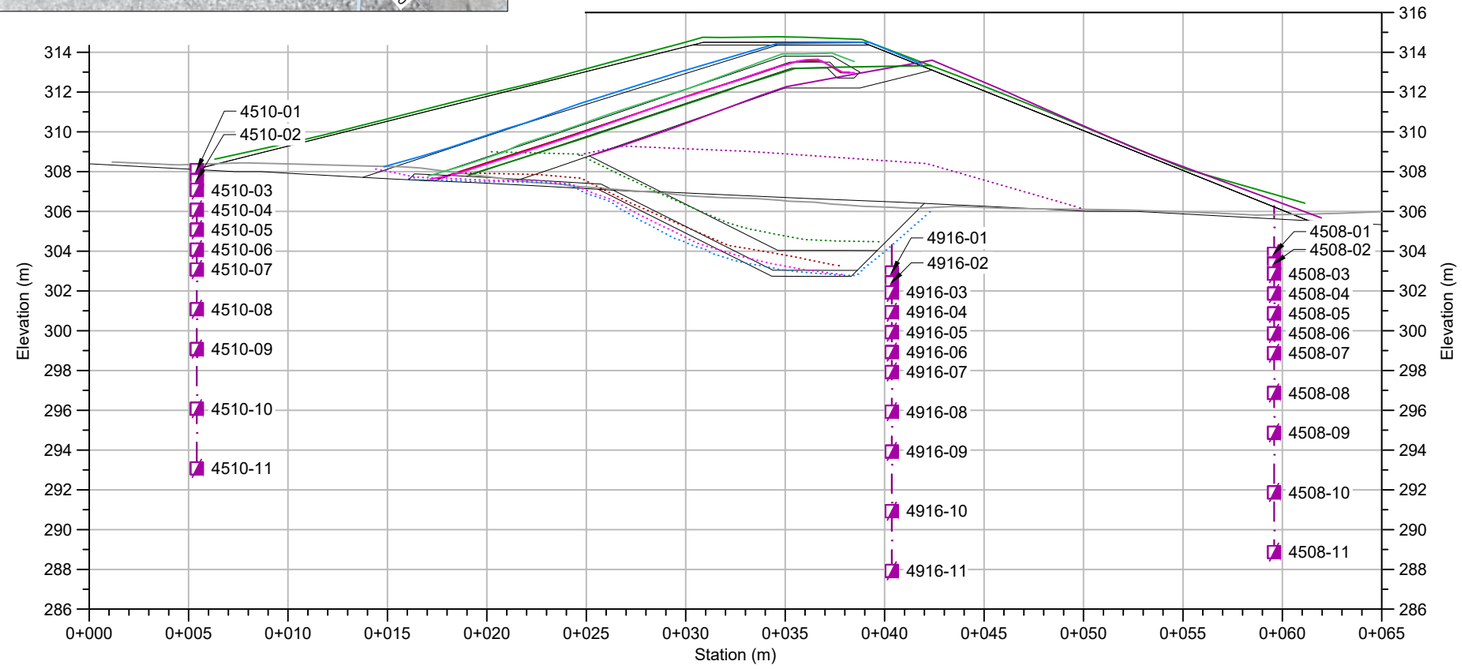


B - **Cable PP-VTC-220**

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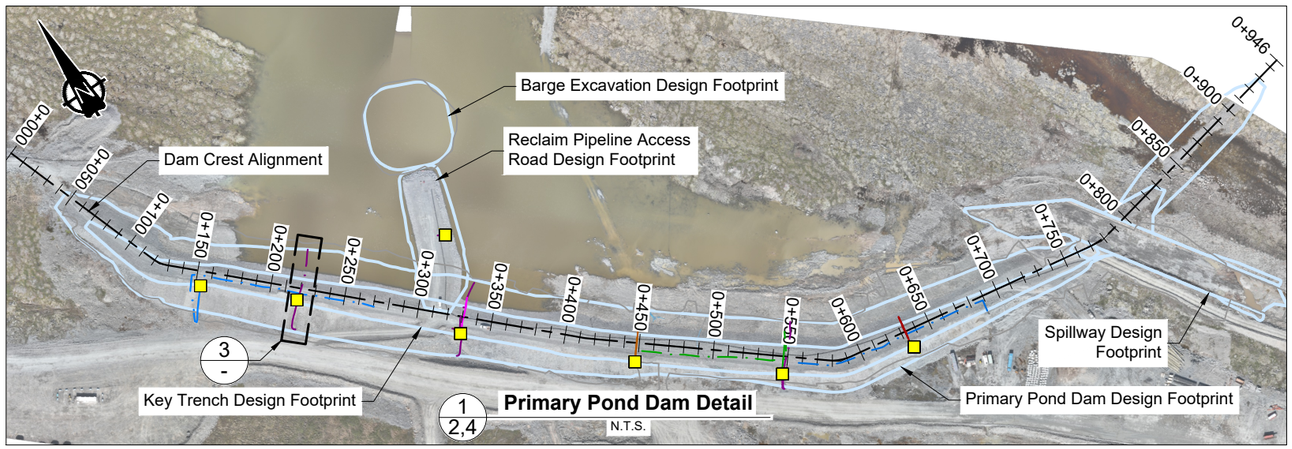


**LEGEND**

- Ground Temperature Cable Sensor
- Datalogger
- 20120831 Lidar Survey and Design Surfaces
- Cleared Ground
- Key Trench Excavation
- Key Trench Liner
- Key Trench Bedding
- Key Trench Transition
- Key Trench ROQ
- ROQ SC
- Transition SC
- Bedding Below Liner SC
- Liner SC
- Bedding Above Liner SC
- Transition Above Liner SC
- ROQ Outer Shell
- Cable

**NOTES**

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2. Lower confidence in bedding material from as-built survey "20230219 Key Trench Bedding", this corresponds to Sta. 0+700 and 0+725 along the Dam alignment reference.
3. SC refers to Summer Construction

**REFERENCES**

1. Background Imagery is from 20250615.

srk consulting

SRK JOB NO.: CAPR004313

FILE NAME: CAPR004313_GTC Primary Pond Sensors.dwg

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Back River

Site-wide Ground Thermal Monitoring Plan

Goose Property - Primary Pond GTC PP-VTC-220 (SN 4508/4510/4916)

DATE: 2026-01-06 | APPROVED: - | FIGURE: 7

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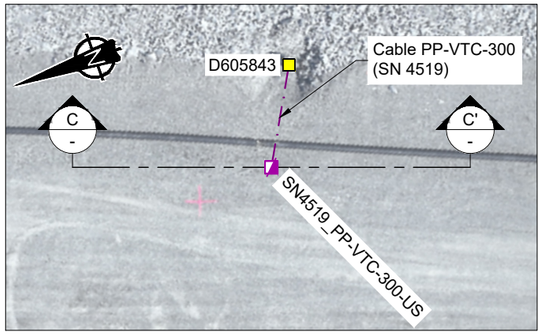


4 - **Cable PP-VTC-300**

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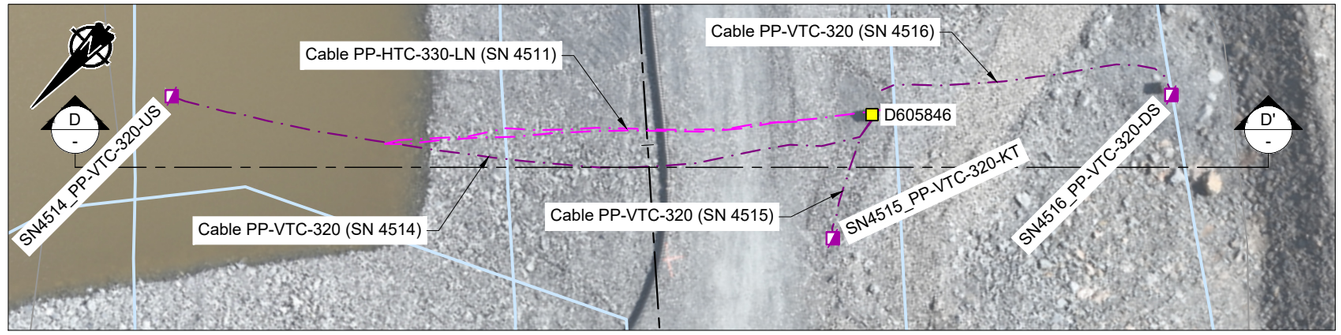


5 - **Cable PP-VTC-320**

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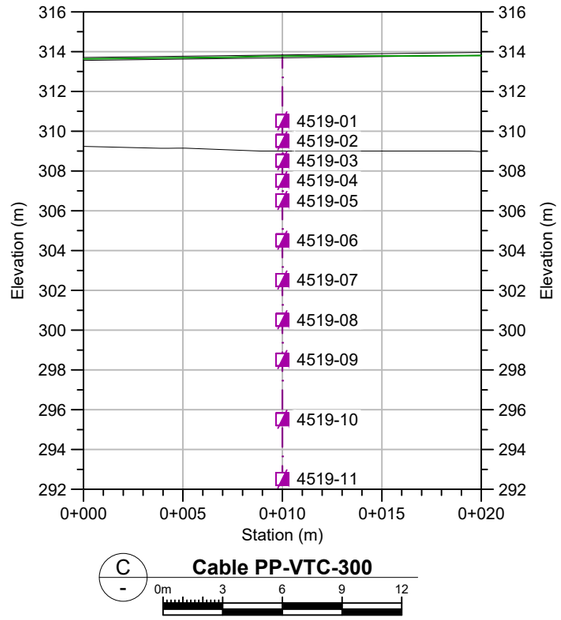


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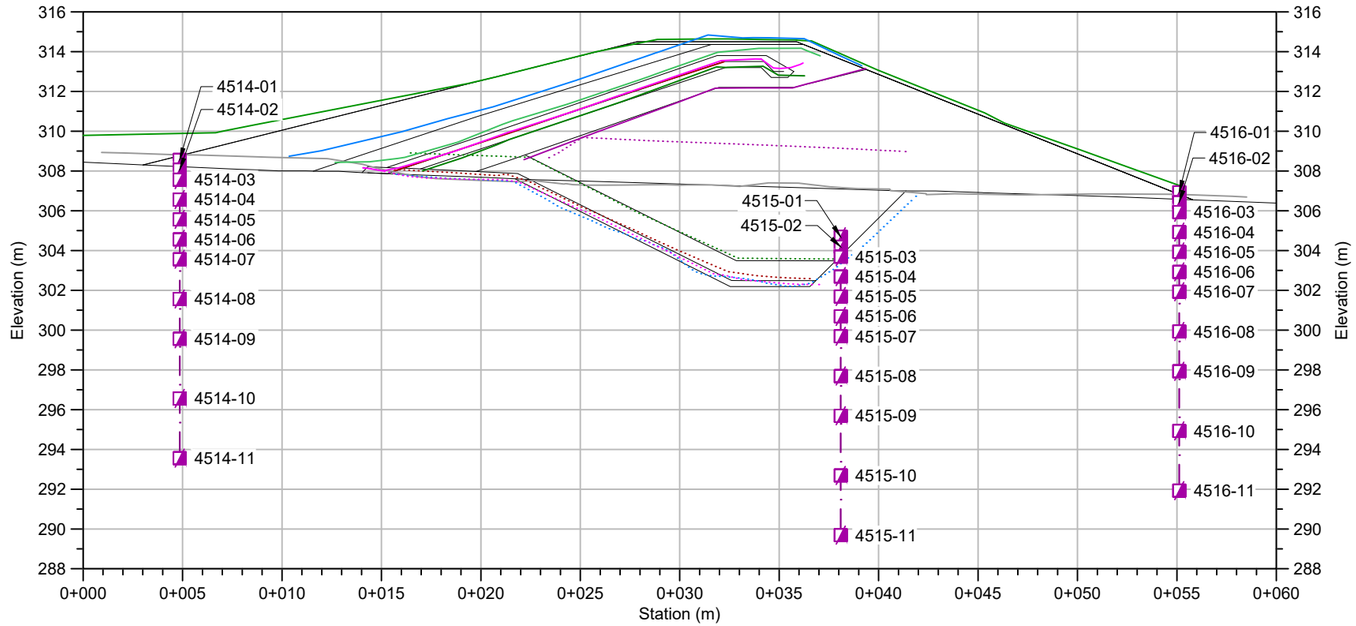


D - **Cable PP-VTC-320**

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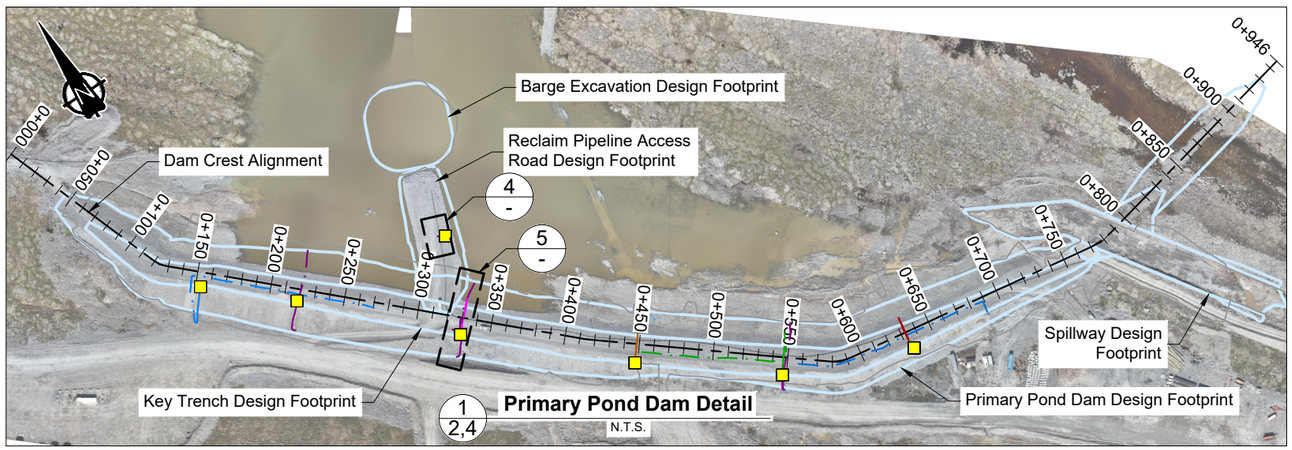


1
2,4
**Primary Pond Dam Detail**

N.T.S.

**LEGEND**

- Ground Temperature Cable Sensor
- Datalogger
- 20120831 Lidar Survey and Design Surfaces
- Cleared Ground
- Key Trench Excavation
- Key Trench Liner
- Key Trench Bedding
- Key Trench Transition
- Key Trench ROQ
- ROQ SC
- Transition SC
- Bedding Below Liner SC
- Liner SC
- Bedding Above Liner SC
- Transition Above Liner SC
- ROQ Outer Shell
- Cable

**NOTES**

1. All units are in meters unless otherwise specified.
2. Lower confidence in bedding material from as-built survey "20230219 Key Trench Bedding", this corresponds to Sta. 0+700 and 0+725 along the Dam alignment reference.
3. SC refers to Summer Construction

**REFERENCES**

1. Background Imagery is from 20250615.

srk consulting

SRK JOB NO.: CAPR004313

FILE NAME: CAPR004313_GTC Primary Pond Sensors.dwg

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Back River

Site-wide Ground Thermal Monitoring Plan

Goose Property - Primary Pond
GTC PP-VTC-300 (SN 4519)
GTC PP-VTC-320 (SN 4514/5/6)

DATE: 2026-01-06 | APPROVED: - | FIGURE: 8

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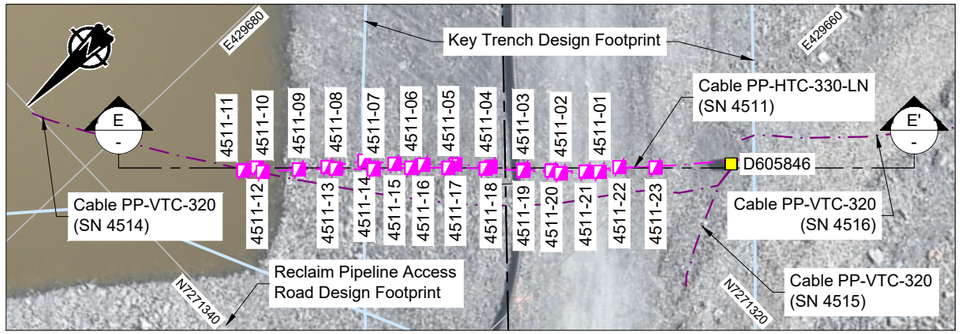


6 - **Cable PP-HTC-330-LN (SN 4511)**

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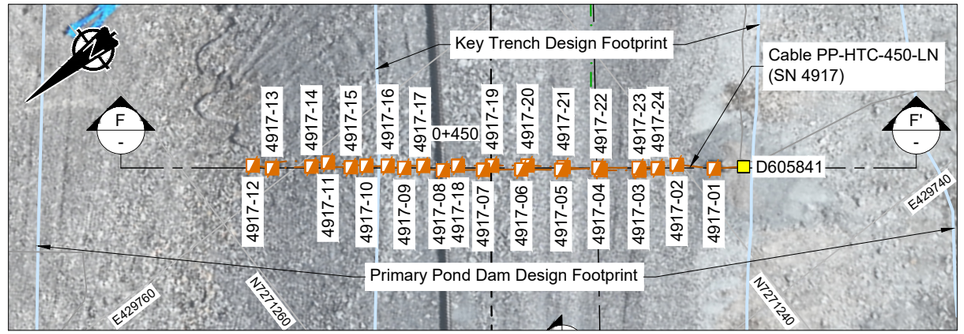
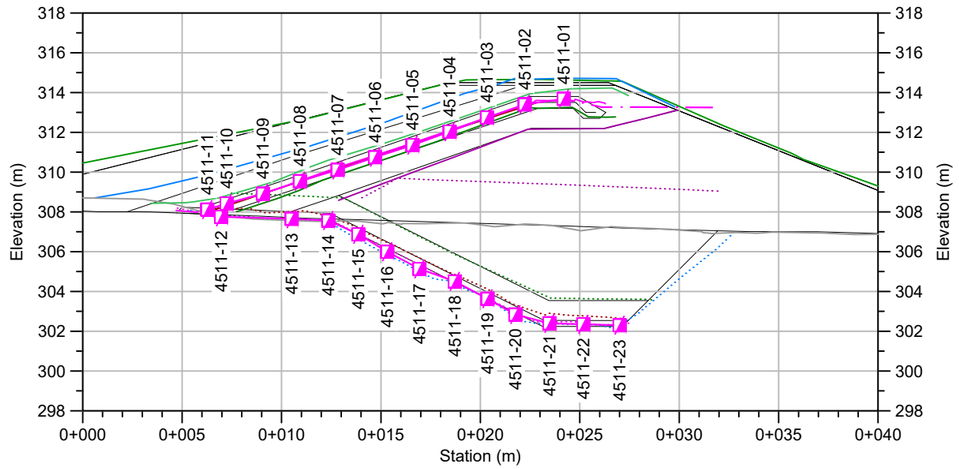


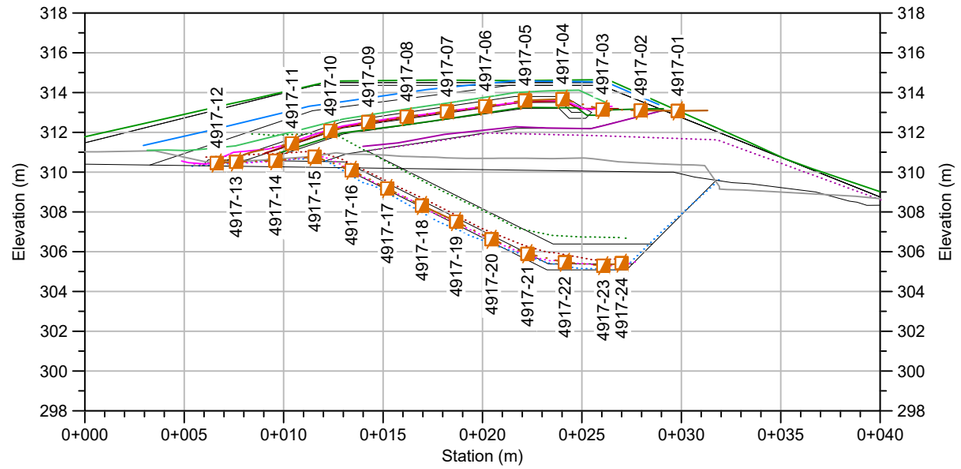

7 - **Cable PP-HTC-450-LN (SN 4917)**

0m 3 6 9 12



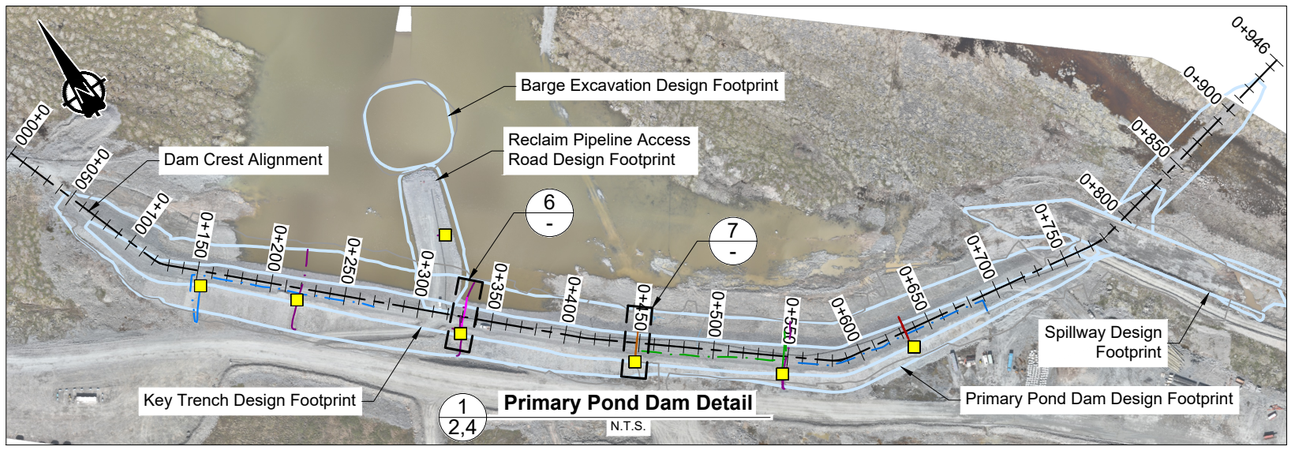

E - **Cable PP-HTC-330-LN (SN 4511)**

0m 3 6 9 12




F - **Cable PP-HTC-450-LN (SN 4917)**

0m 3 6 9 12




**Primary Pond Dam Detail**

N.T.S.

**LEGEND**

- Ground Temperature Cable Sensor
- Datalogger
- 20120831 Lidar Survey and Design Surfaces
- Cleared Ground
- Key Trench Excavation
- Key Trench Liner
- Key Trench Bedding
- Key Trench Transition
- Key Trench ROQ
- ROQ SC
- Transition SC
- Bedding Below Liner SC
- Liner SC
- Bedding Above Liner SC
- Transition Above Liner SC
- ROQ Outer Shell
- Cable

**NOTES**

1. All units are in meters unless otherwise specified.
2. Lower confidence in bedding material from as-built survey "20230219 Key Trench Bedding", this corresponds to Sta. 0+700 and 0+725 along the Dam alignment reference.
3. SC refers to Summer Construction

**REFERENCES**

1. Background Imagery is from 20250615.

srk consulting

SRK JOB NO.: CAPR004313

FILE NAME: CAPR004313_GTC Primary Pond Sensors.dwg

B2GOLD

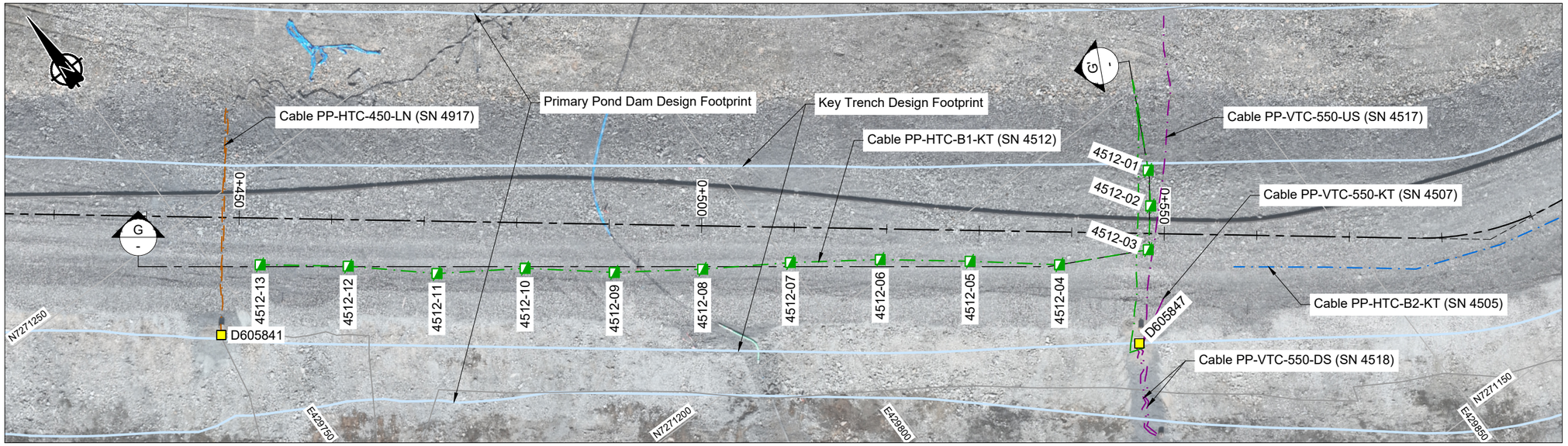
Back River

Site-wide Ground Thermal Monitoring Plan

Goose Property - Primary Pond
GTC PP-HTC-330-LN (SN 4511)
GTC PP-HTC-450-LN (SN 4917)

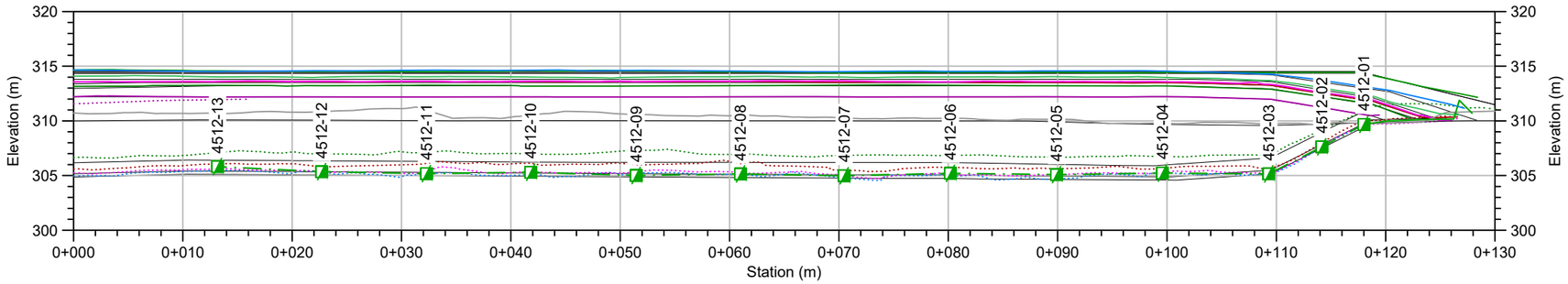
DATE: 2026-01-06 | APPROVED: - | FIGURE: 9

C:\Users\jbocks\SRK Consulting\FS203 Back River (Goose and MLA) - 1940 - AutoCAD\ACAD_C3D\CAPR003102_GroundThermMon\Monitoring Plan\CAPR003102_GTC Primary Pond Sensors.dwg



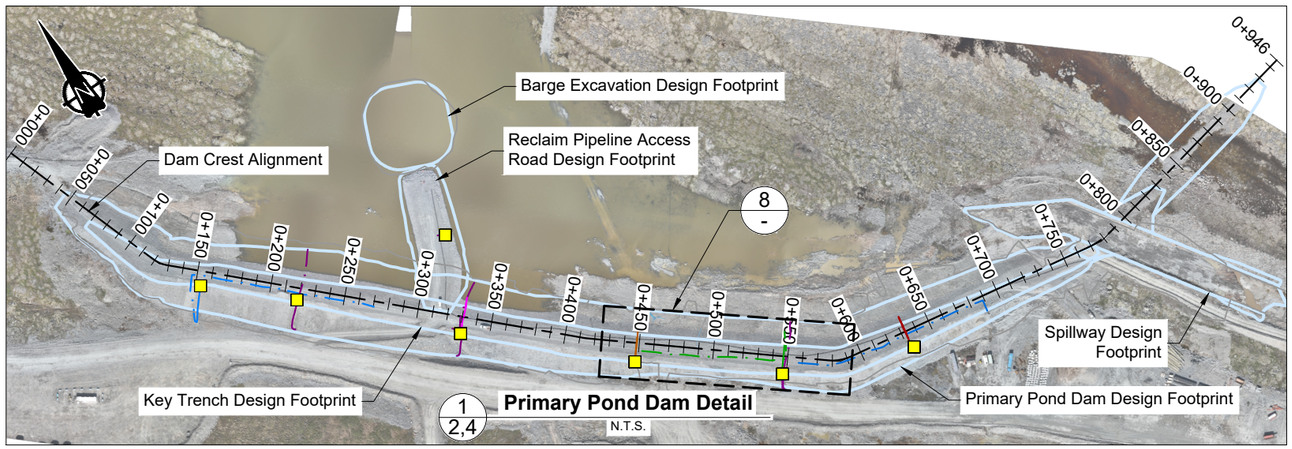

8 - **Cable PP-HTC-B1-KT (SN 4512)**

0m 5 10 15 20




G - **Cable PP-HTC-B1-KT (SN 4512)**

0m 5 10 15 20




1
2,4 **Primary Pond Dam Detail**

N.T.S.

**LEGEND**

- Ground Temperature Cable Sensor
- Datalogger
- 20120831 Lidar Survey and Design Surfaces
- Cleared Ground
- Key Trench Excavation
- Key Trench Liner
- Key Trench Bedding
- Key Trench Transition
- Key Trench ROQ
- ROQ SC
- Transition SC
- Bedding Below Liner SC
- Liner SC
- Bedding Above Liner SC
- Transition Above Liner SC
- ROQ Outer Shell
- Cable

**NOTES**

1. All units are in meters unless otherwise specified.
2. Lower confidence in bedding material from as-built survey "20230219 Key Trench Bedding", this corresponds to Sta. 0+700 and 0+725 along the Dam alignment reference.
3. SC refers to Summer Construction

**REFERENCES**

1. Background Imagery is from 20250615.

srk consulting

B2GOLD

Site-wide Ground Thermal Monitoring Plan

Goose Property - Primary Pond
GTC PP-HTC-B1-KT (SN 4512)

SRK JOB NO.: CAPR004313

FILE NAME: CAPR004313_GTC Primary Pond Sensors.dwg

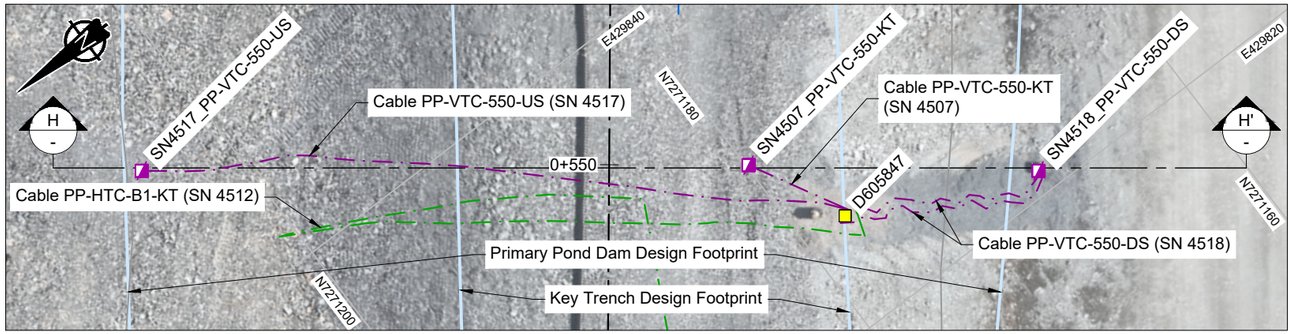
Back River

DATE: 2026-01-06

APPROVED: -

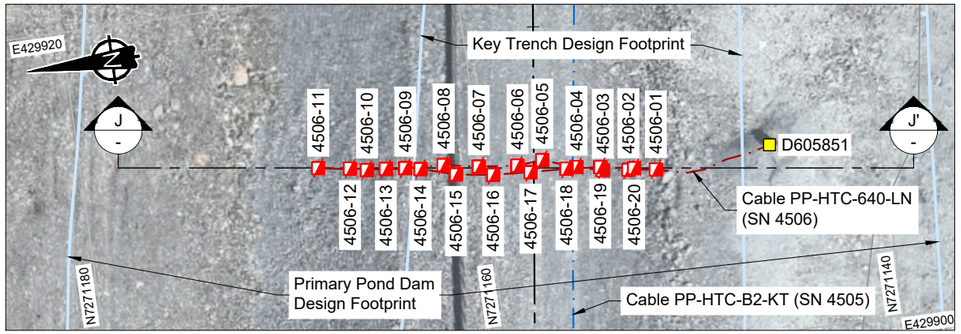
FIGURE: 10

C:\Users\jbolck\SRK Consulting\FS203 Back River (Goose and MLA) - 1040_AutoCAD\ACAD_C3D\CAPR003102_GroundThermMonitoring Plan\CAPR003102_GTC Primary Pond Sensors.dwg




9 - **Cable PP-VTC-550**

0m 3 6 9 12




10 - **Cable PP-HTC-640-LN (SN 4506)**

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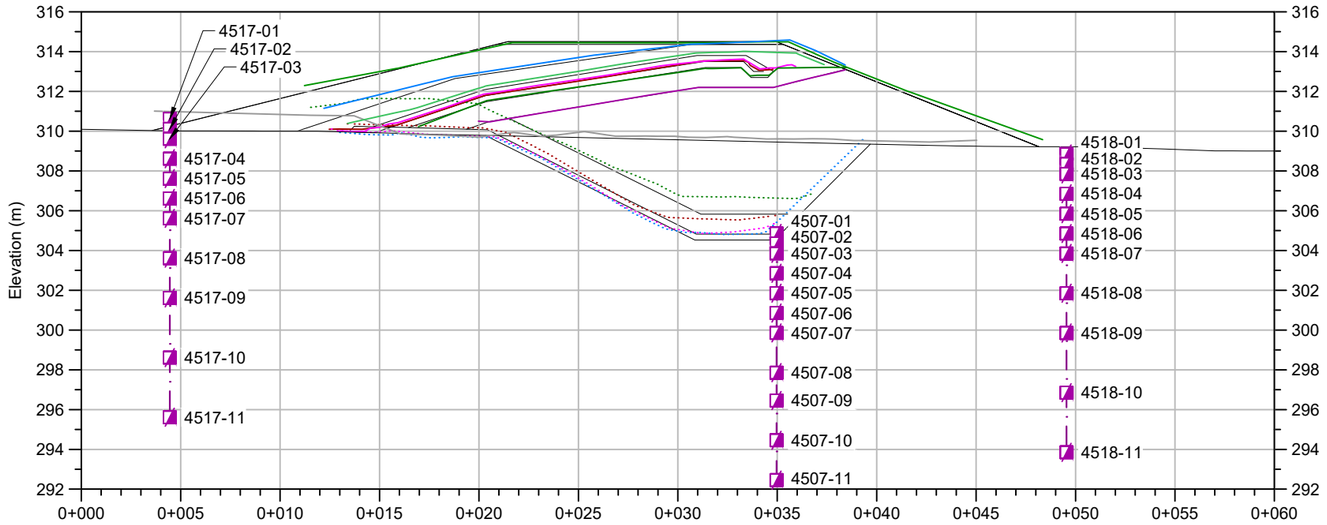
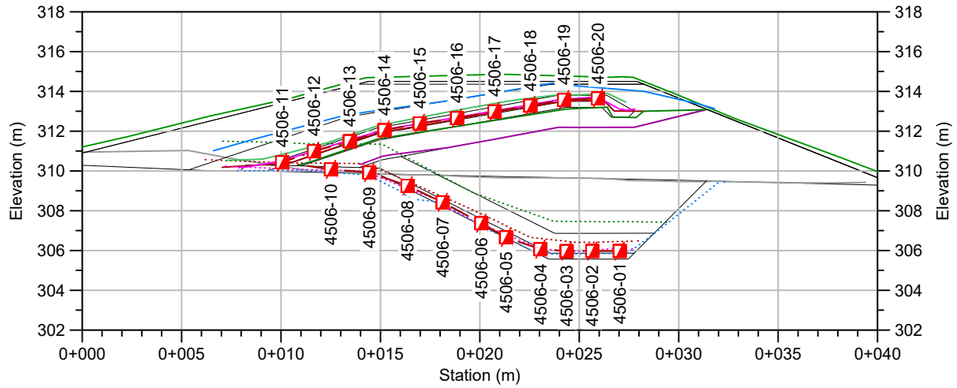


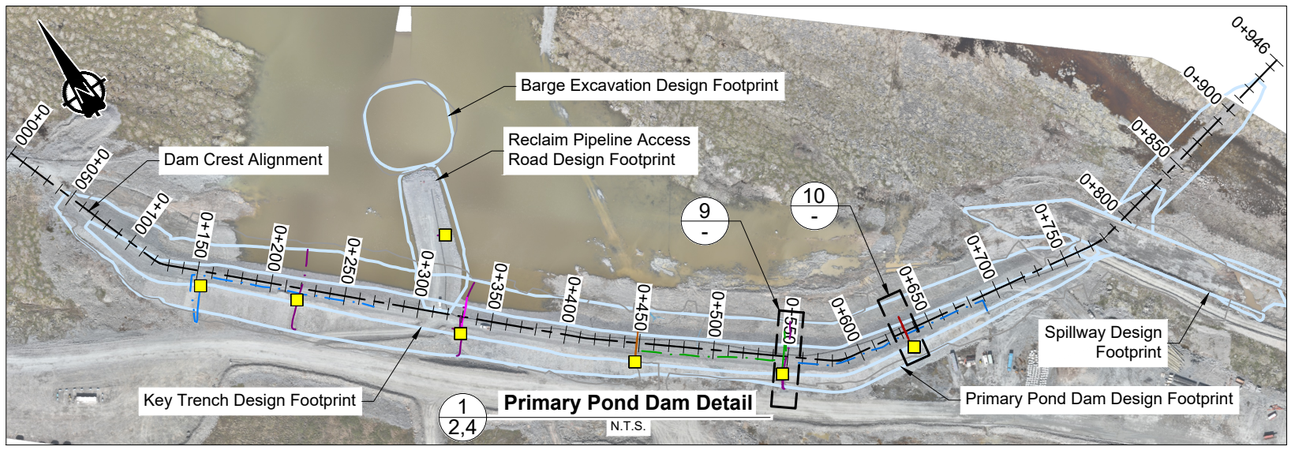

H - **Cable PP-VTC-550**

0m 3 6 9 12




J - **Cable PP-HTC-640-LN (SN 4506)**

0m 3 6 9 12




1 2,4 **Primary Pond Dam Detail**

N.T.S.

**LEGEND**

- Ground Temperature Cable Sensor
- Datalogger
- 20120831 Lidar Survey and Design Surfaces
- Cleared Ground
- Key Trench Excavation
- Key Trench Liner
- Key Trench Bedding
- Key Trench Transition
- Key Trench ROQ
- ROQ SC
- Transition SC
- Bedding Below Liner SC
- Liner SC
- Bedding Above Liner SC
- Transition Above Liner SC
- ROQ Outer Shell
- Cable

**NOTES**

1. All units are in meters unless otherwise specified.
2. Lower confidence in bedding material from as-built survey "20230219 Key Trench Bedding", this corresponds to Sta. 0+700 and 0+725 along the Dam alignment reference.
3. SC refers to Summer Construction

**REFERENCES**

1. Background Imagery is from 20250615.

srk consulting

SRK JOB NO.: CAPR004313

FILE NAME: CAPR004313_GTC Primary Pond Sensors.dwg

B2GOLD

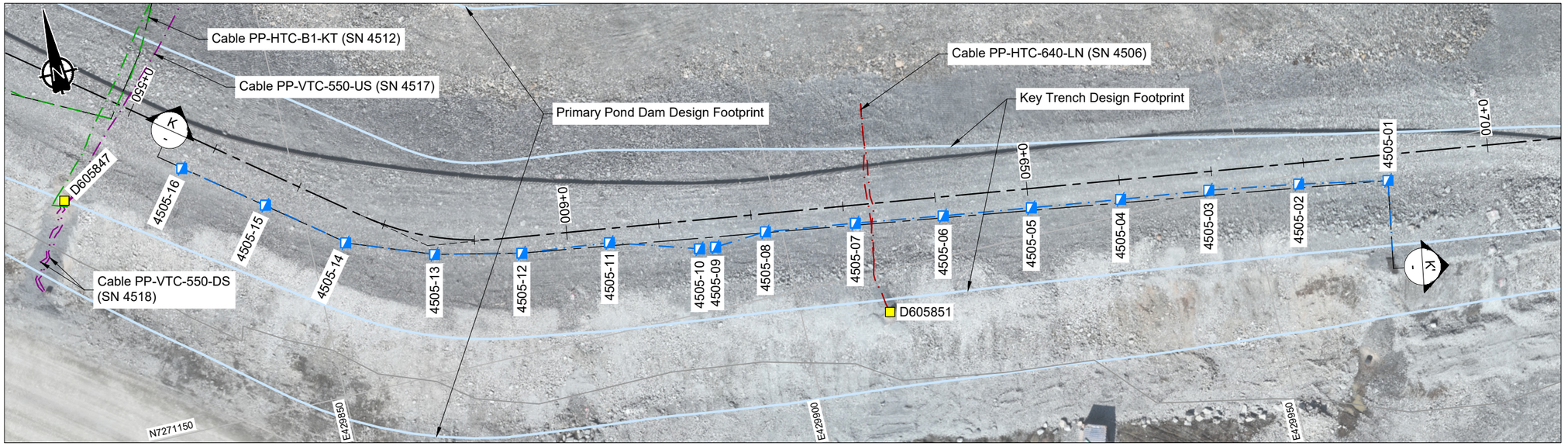
Back River

Site-wide Ground Thermal Monitoring Plan

Goose Property - Primary Pond
GTC PP-VTC-550 (4507/4517/4518)
GTC PP-HTC-640-LN (SN 4506)

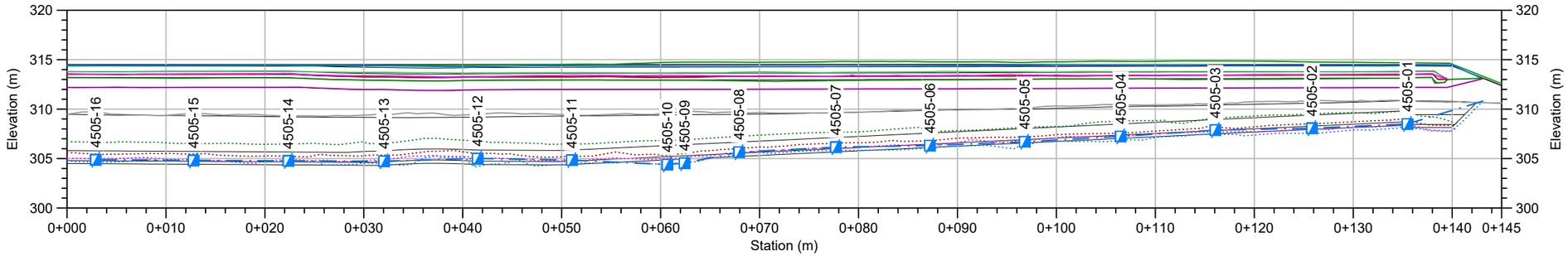
| DATE: | APPROVED: | FIGURE: |
|---|---|---|
| 2026-01-06 | - | 11 |

C:\Users\jbocks\SRK Consulting\FS203 Back River (Goose and MLA) - 1940_AutoCAD\ACAD_C3D\CAPR003102_GroundThermMon\Monitoring Plan\CAPR003102_GTC Primary Pond Sensors.dwg



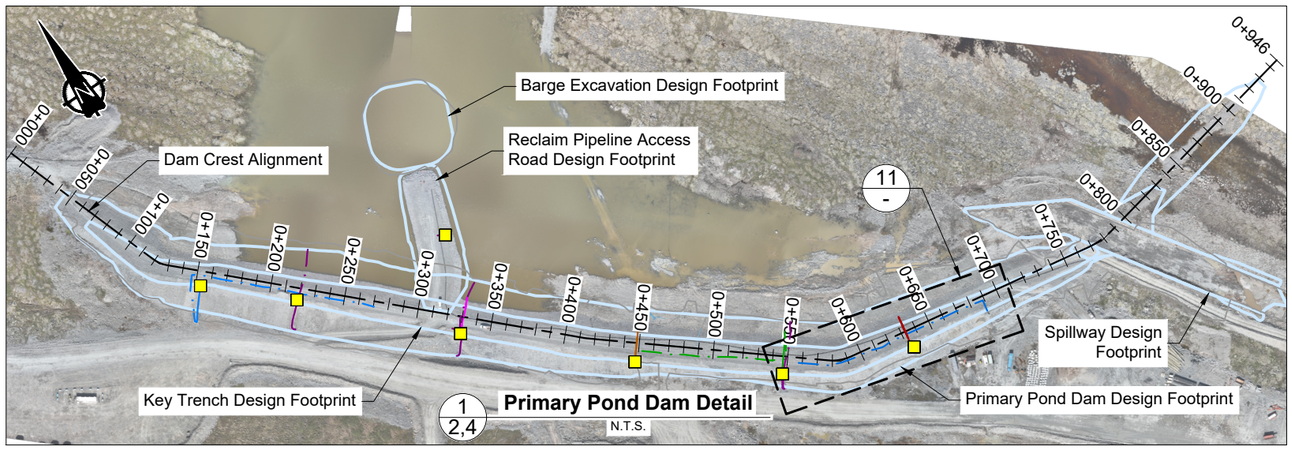

11
-
**Cable PP-HTC-B2-KT (SN 4505)**

0m 5 10 15 20




K
-
**Cable PP-HTC-B2-KT (SN 4505)**

0m 5 10 15 20




1
2,4
**Primary Pond Dam Detail**
N.T.S.

**LEGEND**

- Ground Temperature Cable Sensor
- Datalogger
- 20120831 Lidar Survey and Design Surfaces
- Cleared Ground
- Key Trench Excavation
- Key Trench Liner
- Key Trench Bedding
- Key Trench Transition
- Key Trench ROQ
- ROQ SC
- Transition SC
- Bedding Below Liner SC
- Liner SC
- Bedding Above Liner SC
- Transition Above Liner SC
- ROQ Outer Shell
- Cable

**NOTES**

1. All units are in meters unless otherwise specified.
2. Lower confidence in bedding material from as-built survey "20230219 Key Trench Bedding", this corresponds to Sta. 0+700 and 0+725 along the Dam alignment reference.
3. SC refers to Summer Construction

**REFERENCES**

1. Background Imagery is from 20250615.

srk consulting

SRK JOB NO.: CAPR004313

FILE NAME: CAPR004313_GTC Primary Pond Sensors.dwg

B2GOLD

Back River

Site-wide Ground Thermal Monitoring Plan

Goose Property - Primary Pond
GTC PP-HTC-B2-KT (SN 4505)

| DATE: | APPROVED: | FIGURE: |
|---|---|---|
| 2026-01-06 | - | 12 |

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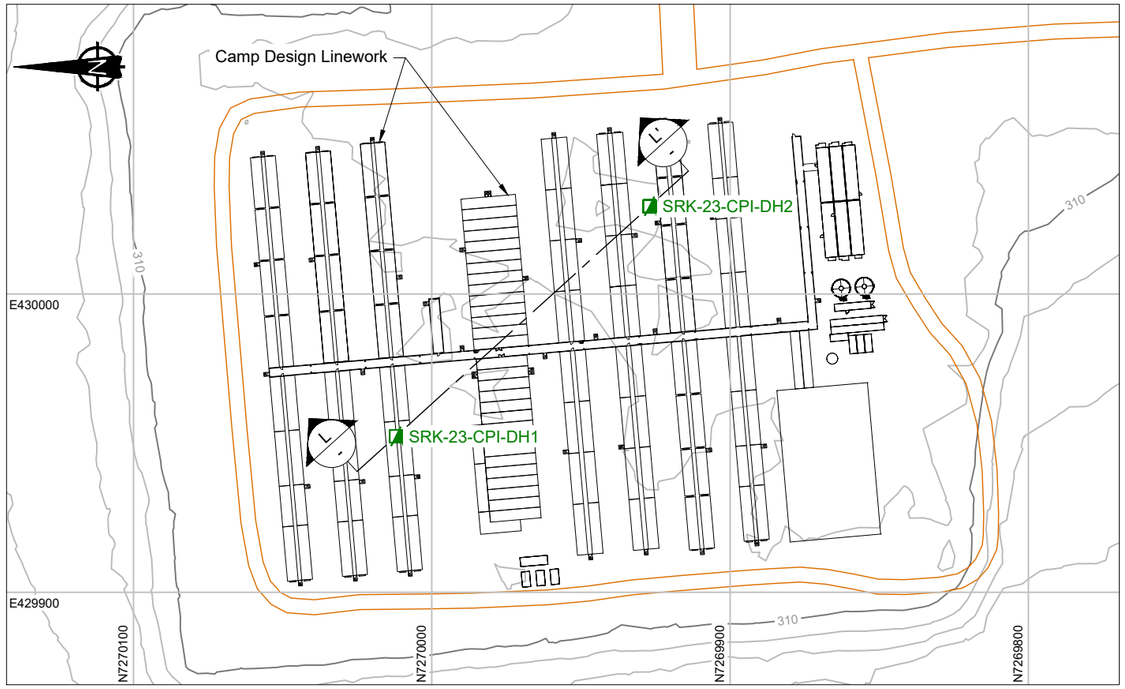
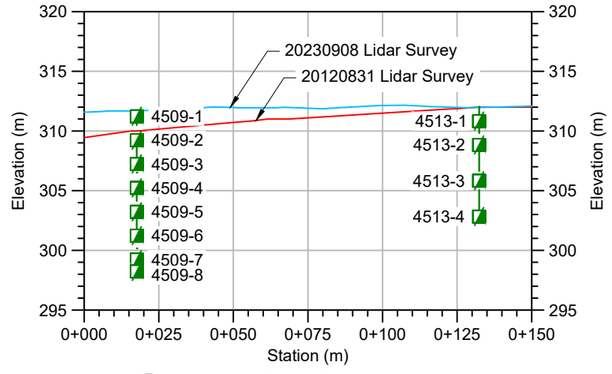



12
2,4

**Camp Site**

0m 20 40 60 80




L
-

**Camp Site**

Vertical 0m 5 10 15 20

Horizontal 0m 20 40 60 80

**LEGEND**

Ground Temperature Cable Sensor

Road

**NOTES**

1. All units are in meters unless otherwise specified.
2. Contours are shown at 2.0 m intervals.

**REFERENCES**

NAD83 UTM Zone 13.

C:\Users\jbok\c\SRK Consulting\FS203 Back River (Goose and MLA) - I040_AutoCAD\ACAD_C3D\CAPR003102_GroundThermMon\Monitoring Plan\CAPR003102_GTC Camp Site and MLA.dwg

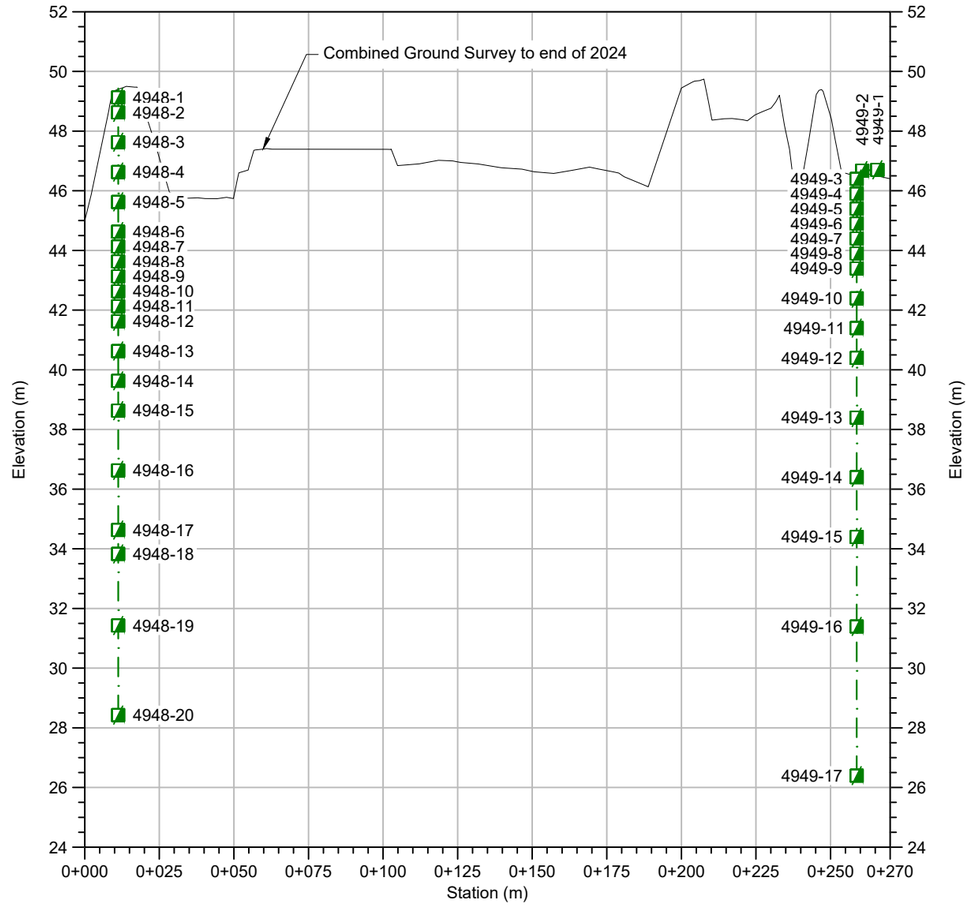
| | | |
|---|---|---|
| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| SRK JOB NO.: CAPR004313 | Back River | Goose Property - Camp Site GTC SRK-23-CPI-DH1 and SRK-23-CPI-DH2 |
| FILE NAME: CAPR004313_GTC Camp Site and MLA.dwg | | DATE: 2026-01-06 / APPROVED: - / FIGURE: 13 |




13
3,5

**Tank Farm Area**

0m 20 40 60 80




M
-

**Tank Farm Area**

Vertical 0m 2 4 6 8

Horizontal 0m 20 40 60 80

**LEGEND**

Ground Temperature Cable Sensor

Road

**NOTES**

1. All units are in meters unless otherwise specified.
2. Contours are shown at 2.0 m intervals.

**REFERENCES**

NAD83 UTM Zone 13.

C:\Users\[lock\SRK Consulting(FS203 Back River (Goose and MLA) - 1040_Aux\CAD\ACAD_C3D\CAPR003102_GroundThermMonMonitoring Plan\CAPR003102_GTC Camp Site and MLA.dwg

srk consulting

SRK JOB NO.: CAPR004313

FILE NAME: CAPR004313_GTC Camp Site and MLA.dwg

B2GOLD

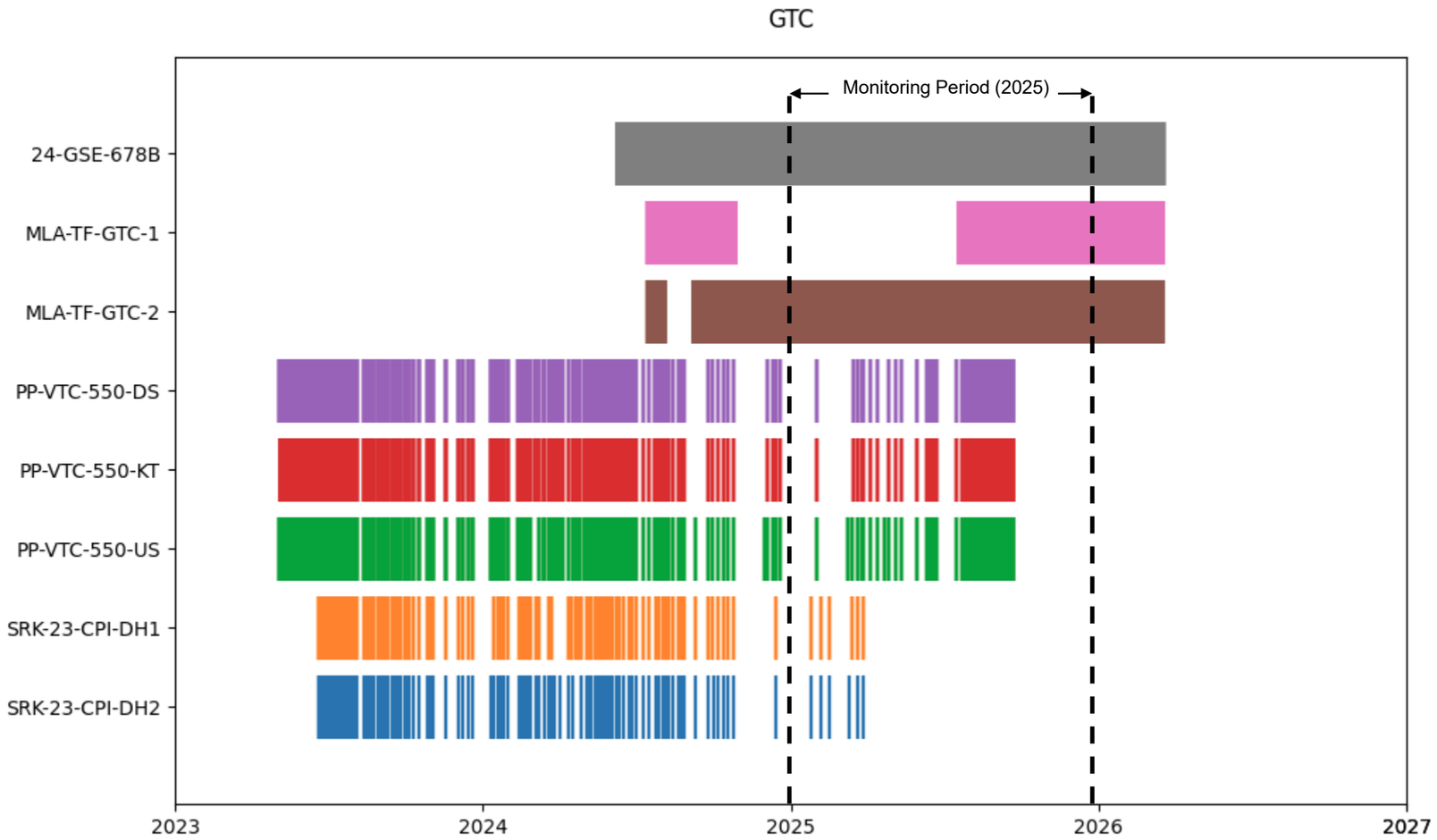
Back River

Site-wide Ground Thermal Monitoring Plan

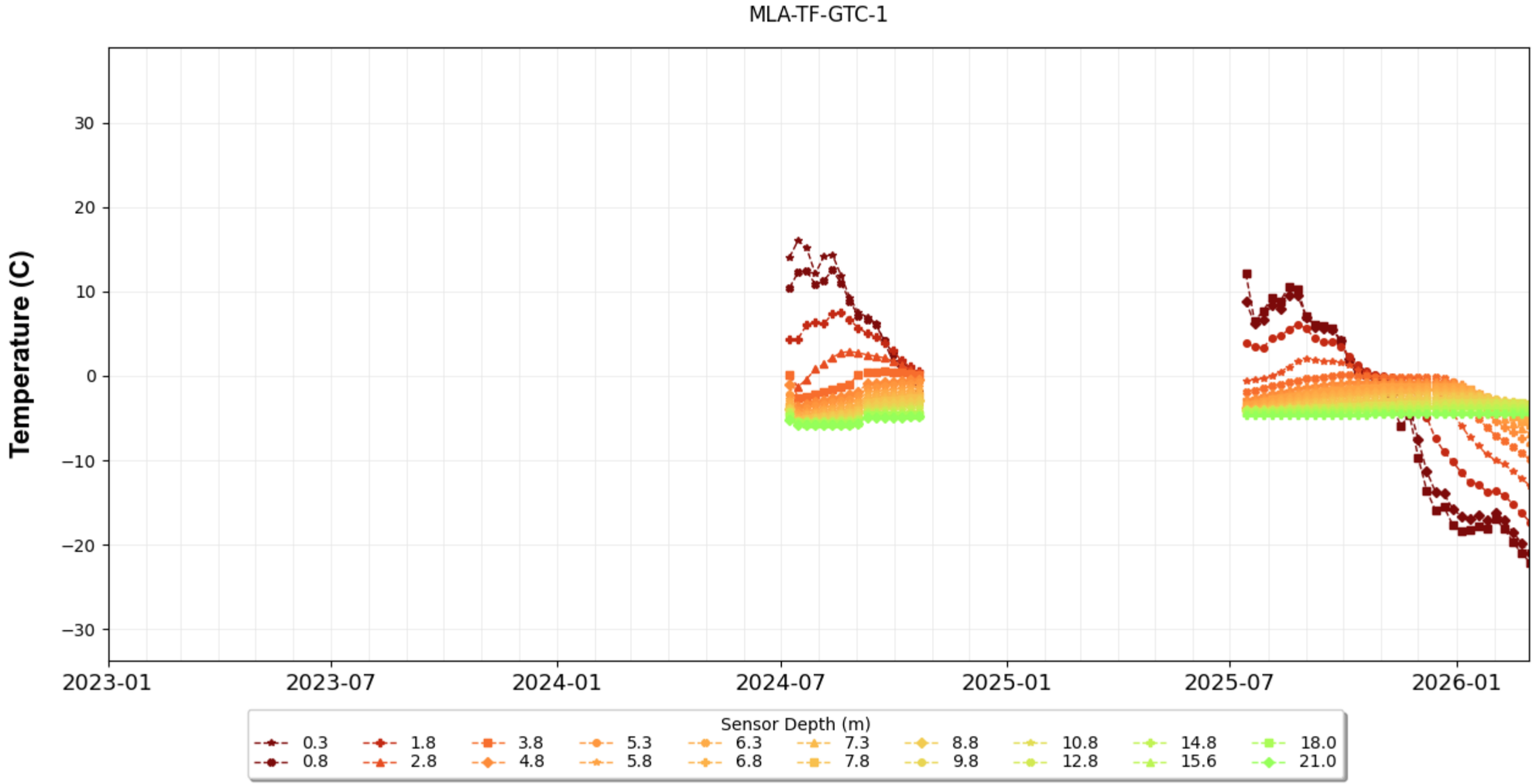
Marine Laydown Area - Tank Farm Area GTC MLA-TF-GTC-1 and MLA-TF-GTC-2

| DATE: | APPROVED: | FIGURE: |
|---|---|---|
| 2026-01-06 | - | 14 |

# Appendix B Ground Temperature Data




| | | |
|---|---|---|
| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Monitoring Sites – Data Record |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 \| Approved: JBK \| Figure: **B-1** |




srk consulting

B2GOLD

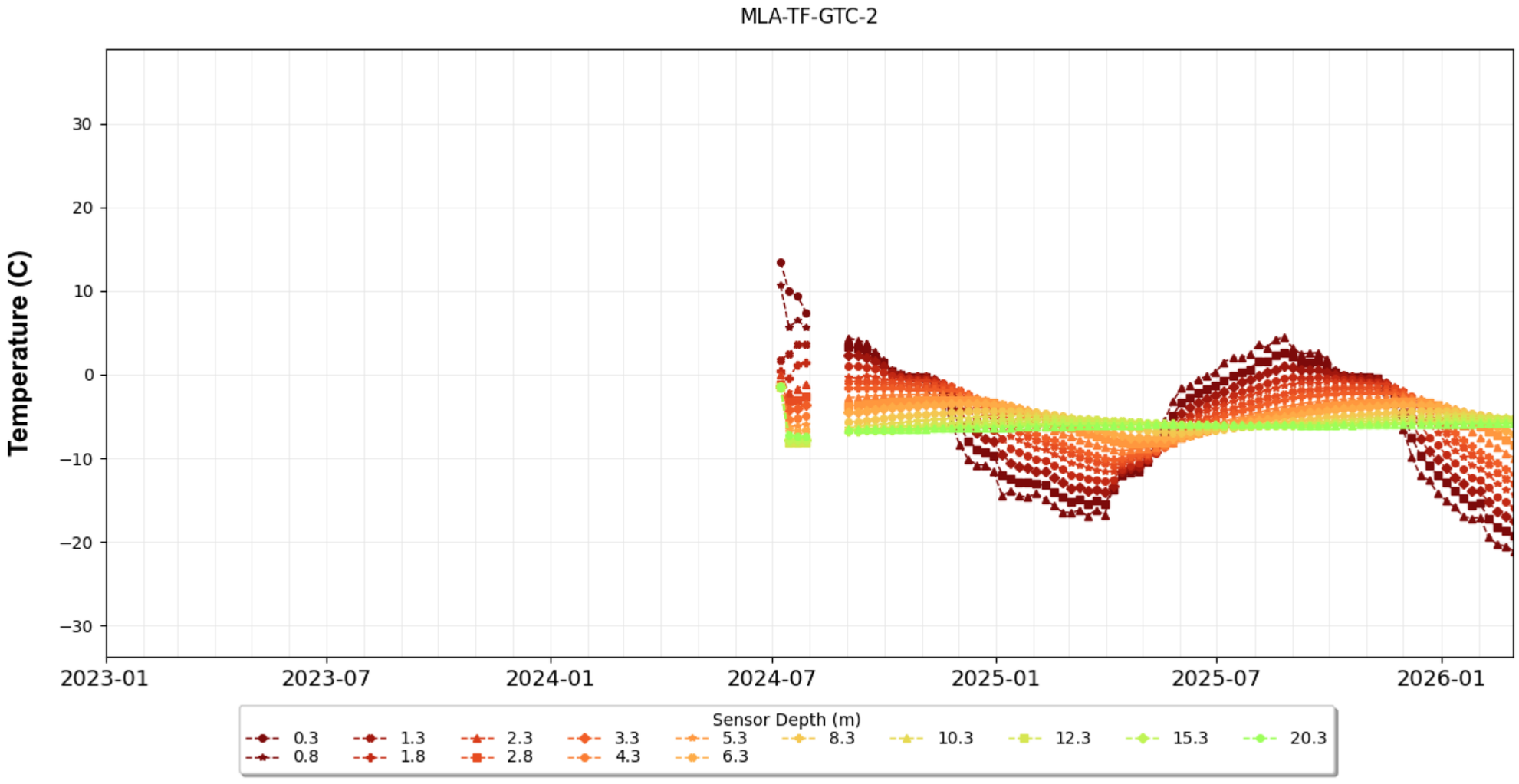
Job No: CAPR004313
Filename: Appendix_GroundThermal.pptx

Back River Project

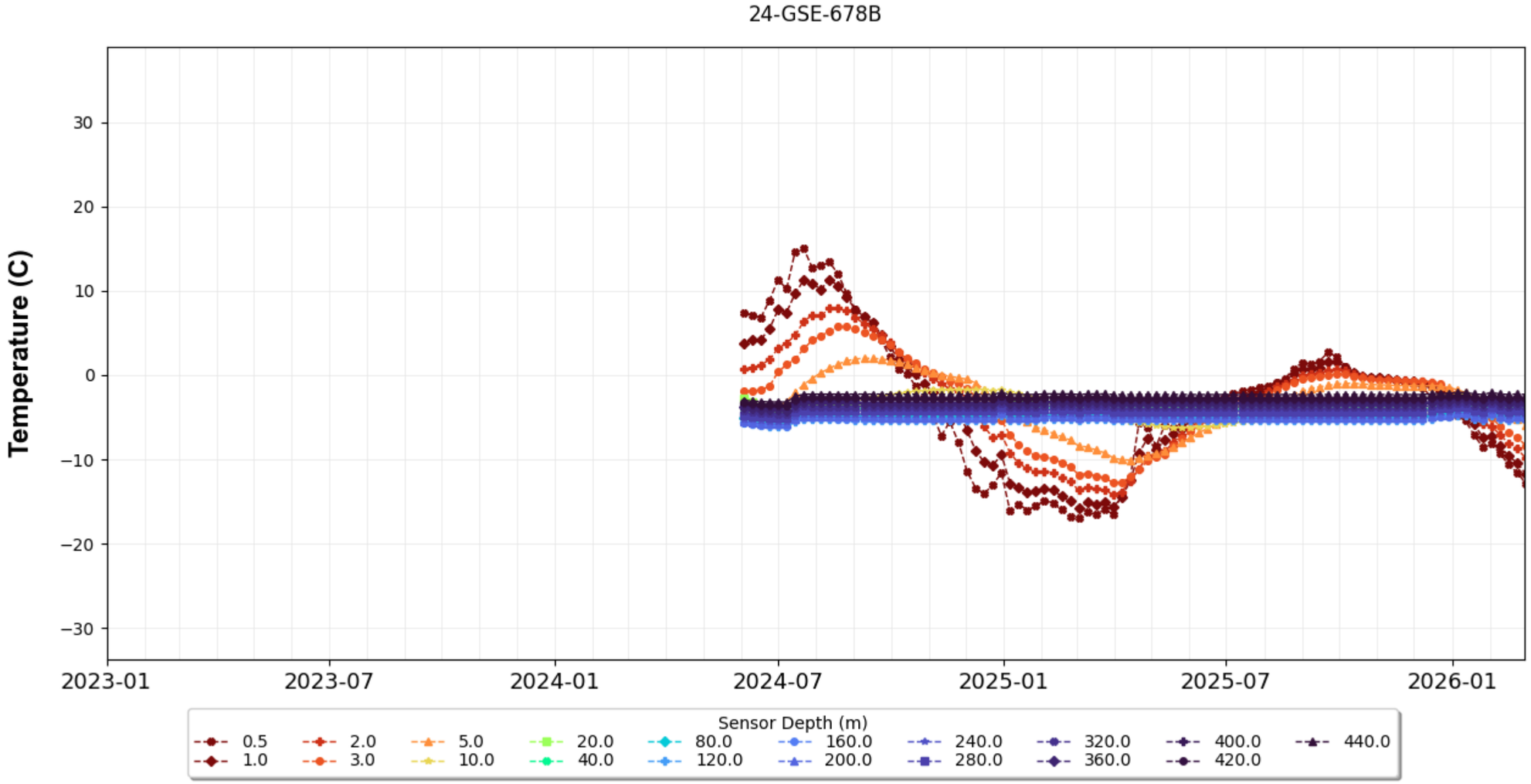
Site-wide Ground Thermal Monitoring Plan

Recent Ground Temperature Site – MLA-TF-GTC-1

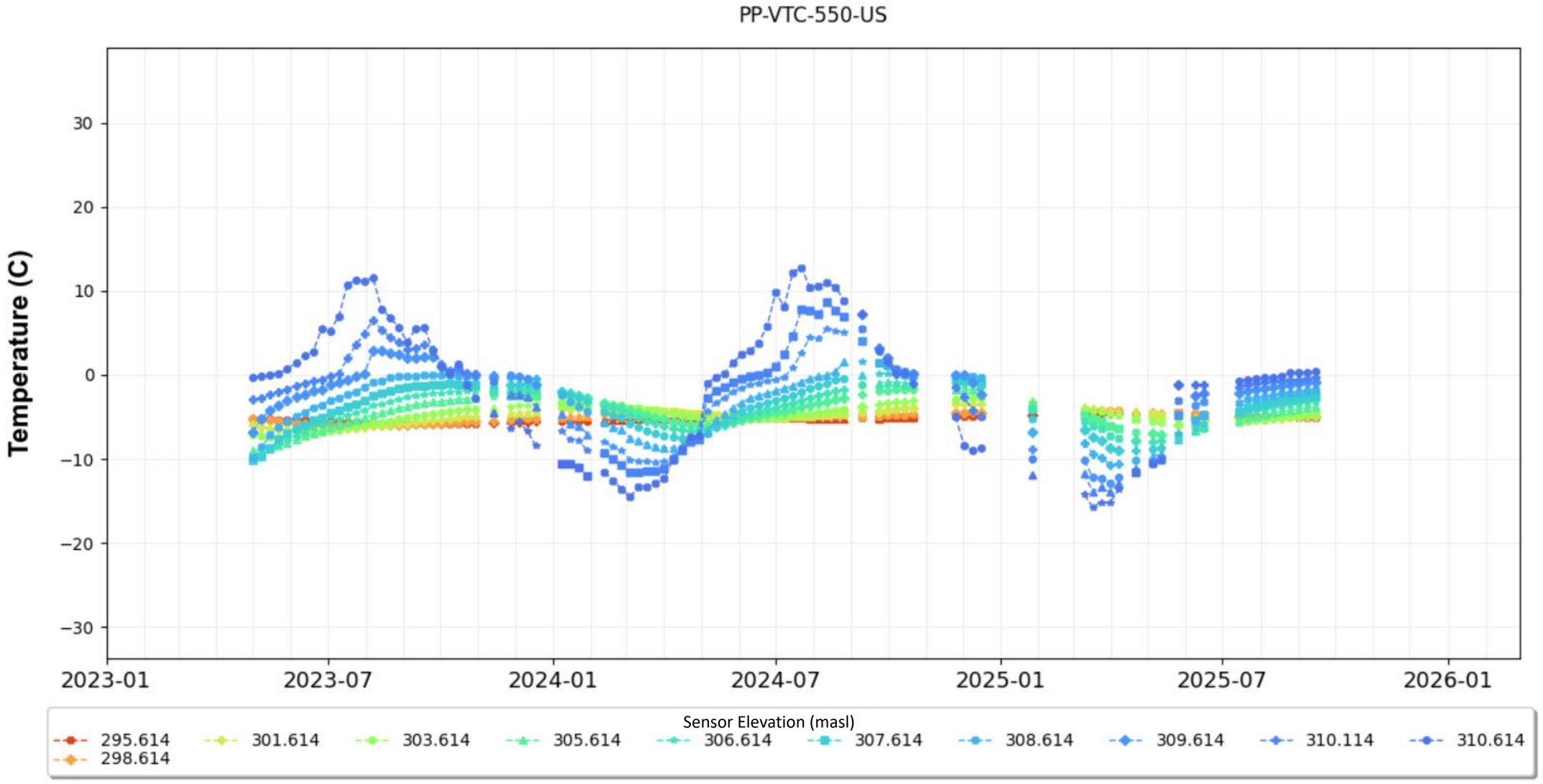
Date: March 2026
Approved: JBK
Figure: **B-2**



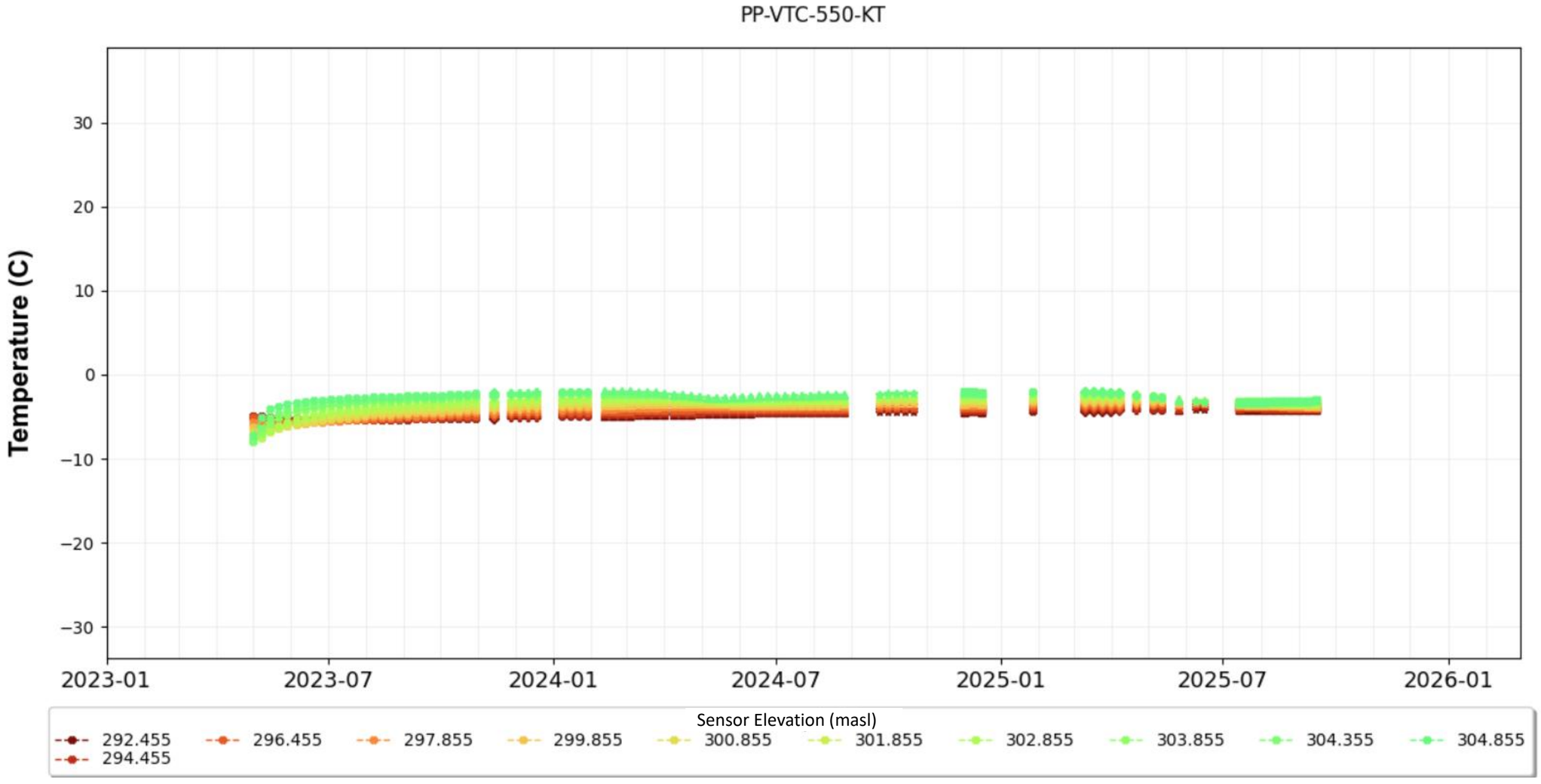

| | | |
|---|---|---|
| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Recent Ground Temperature Site – MLA-TF-GTC-2 |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 · Approved: JBK · Figure: **B-3** |



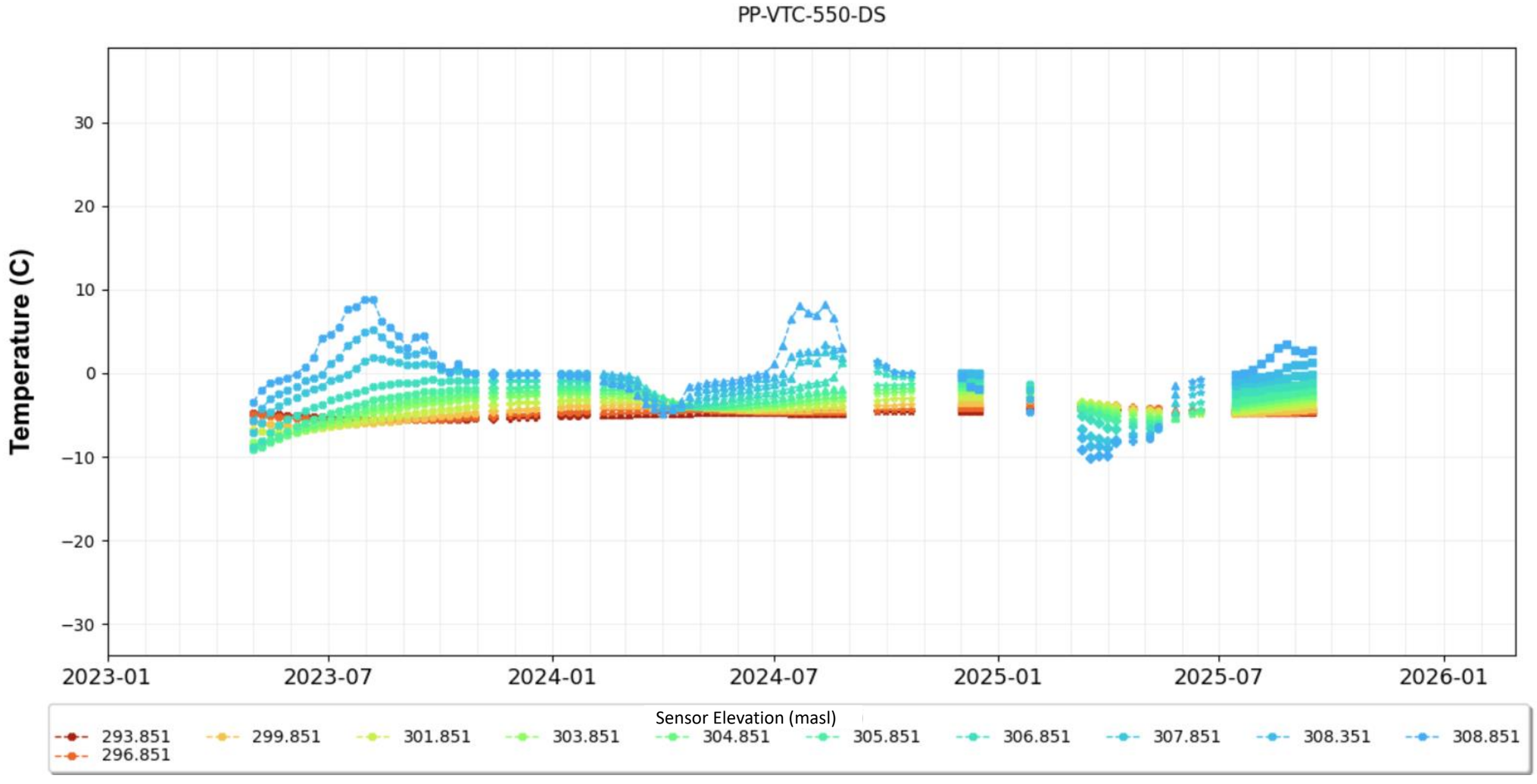

| | | |
|---|---|---|
| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Recent Ground Temperature Site – 24-GSE-678B |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 / Approved: JBK / Figure: **B-4** |



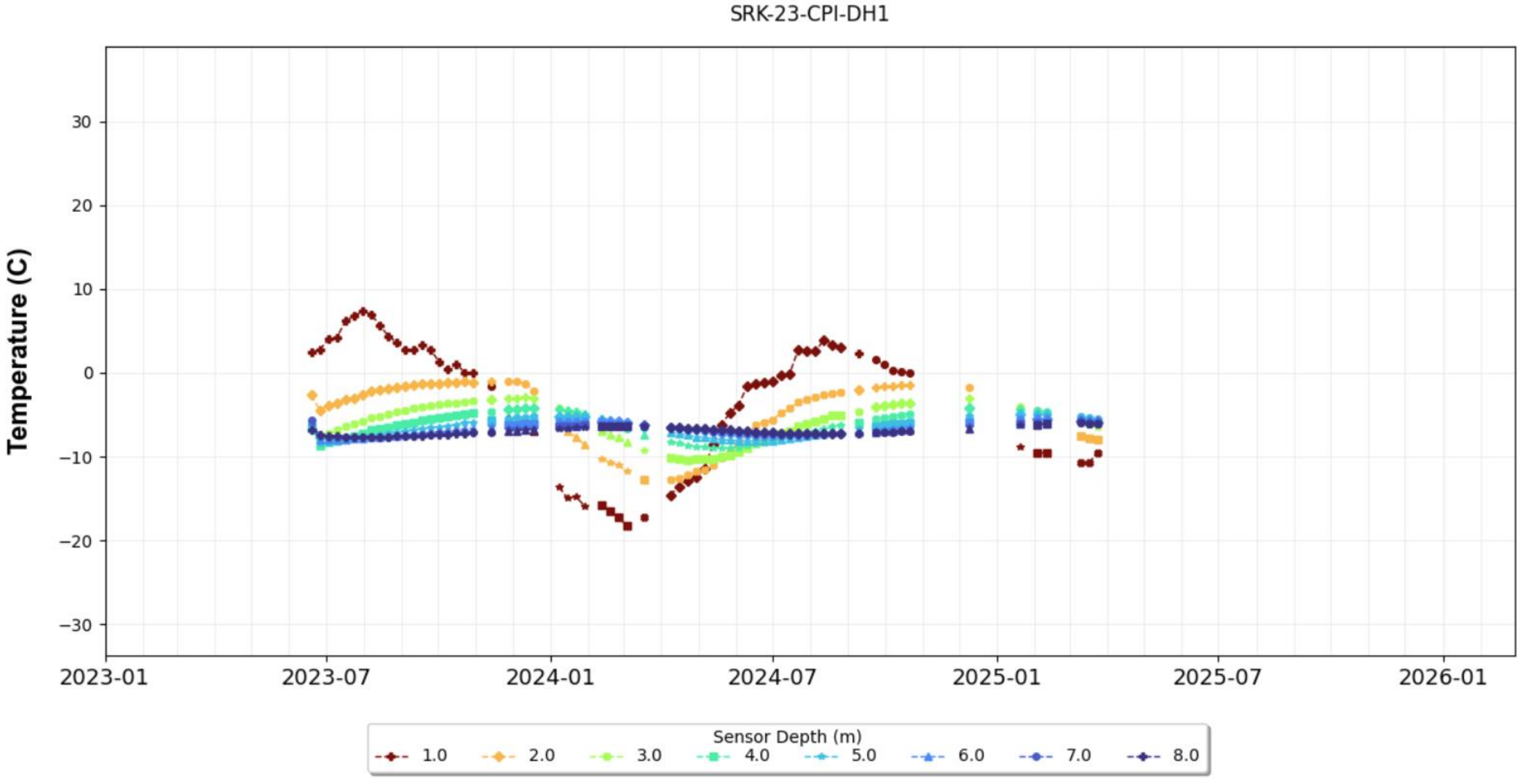

| | | |
|---|---|---|
| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Recent Ground Temperature Site – PP-VTC-550-US |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 · Approved: JBK · Figure: **B-5** |



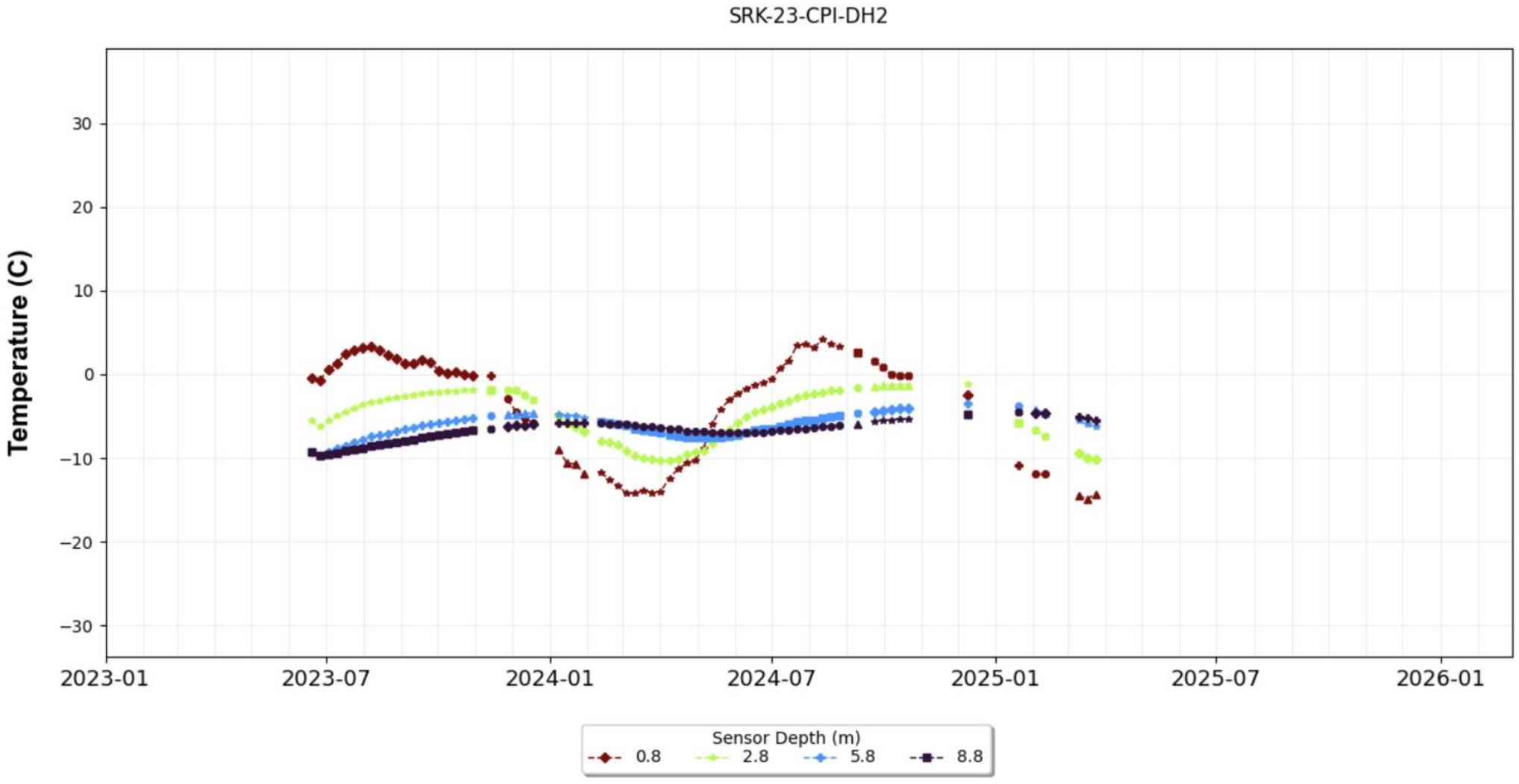

| | | |
|---|---|---|
| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Recent Ground Temperature Site – PP-VTC-550-KT |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 · Approved: JBK · Figure: **B-6** |



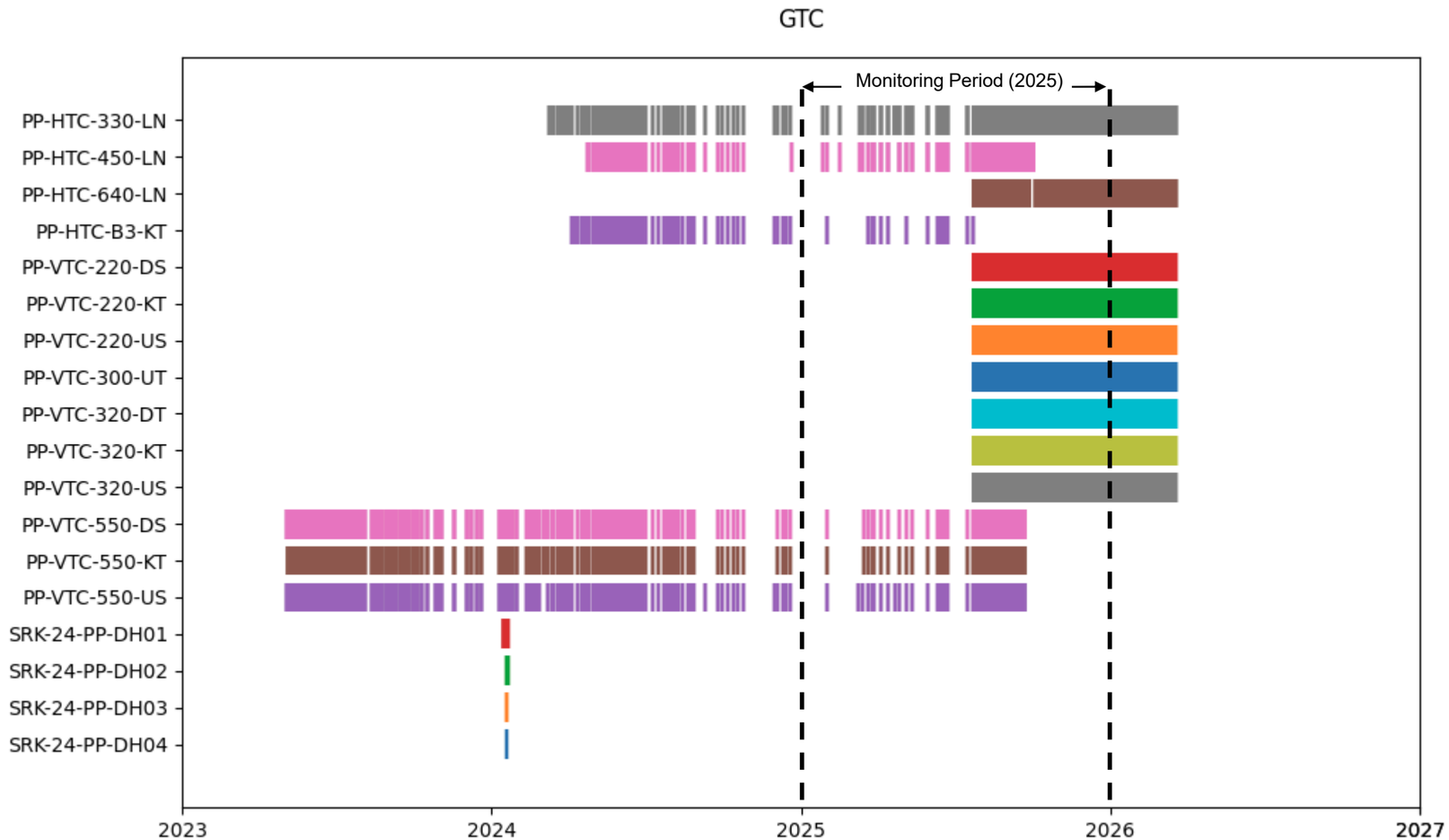

| | | |
|---|---|---|
| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Recent Ground Temperature Site – PP-VTC-550-DS |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 \| Approved: JBK \| Figure: **B-7** |



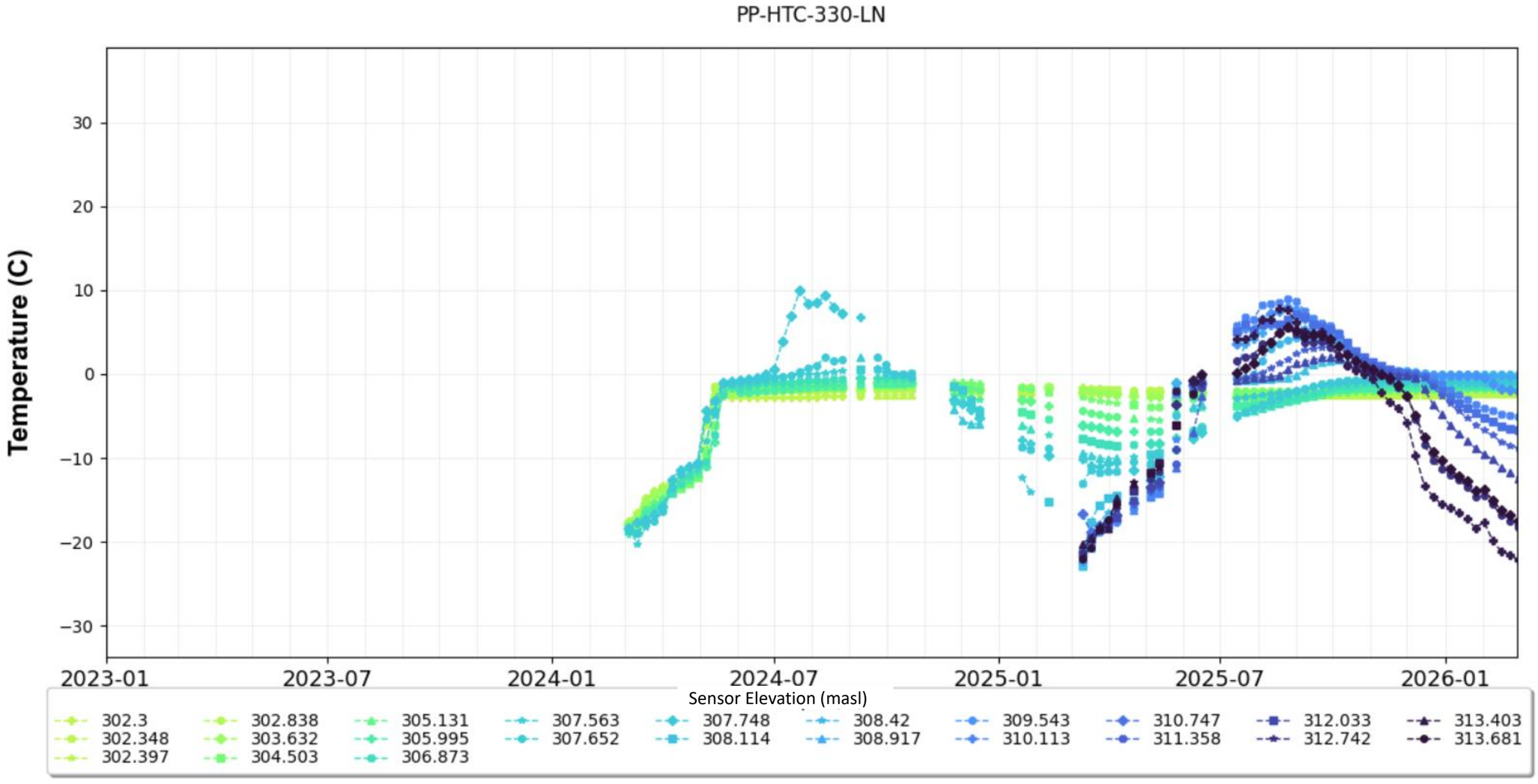

| | | |
|---|---|---|
| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Recent Ground Temperature Site – SRK-23-CPI-DH1 |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 / Approved: JBK / Figure: **B-8** |



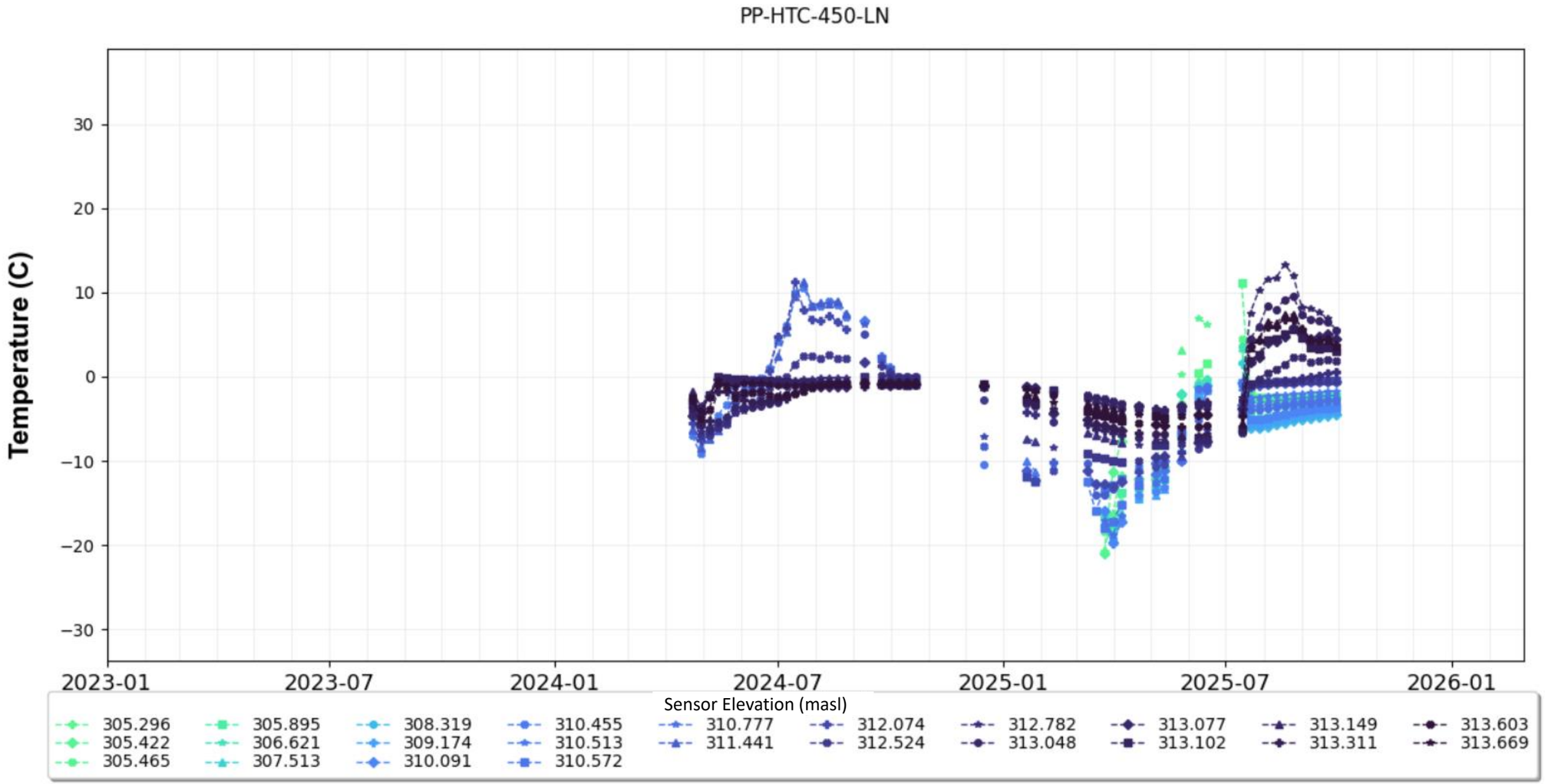

| | | |
|---|---|---|
| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Recent Ground Temperature Site – SRK-23-CPI-DH2 |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 · Approved: JBK · Figure: **B-9** |



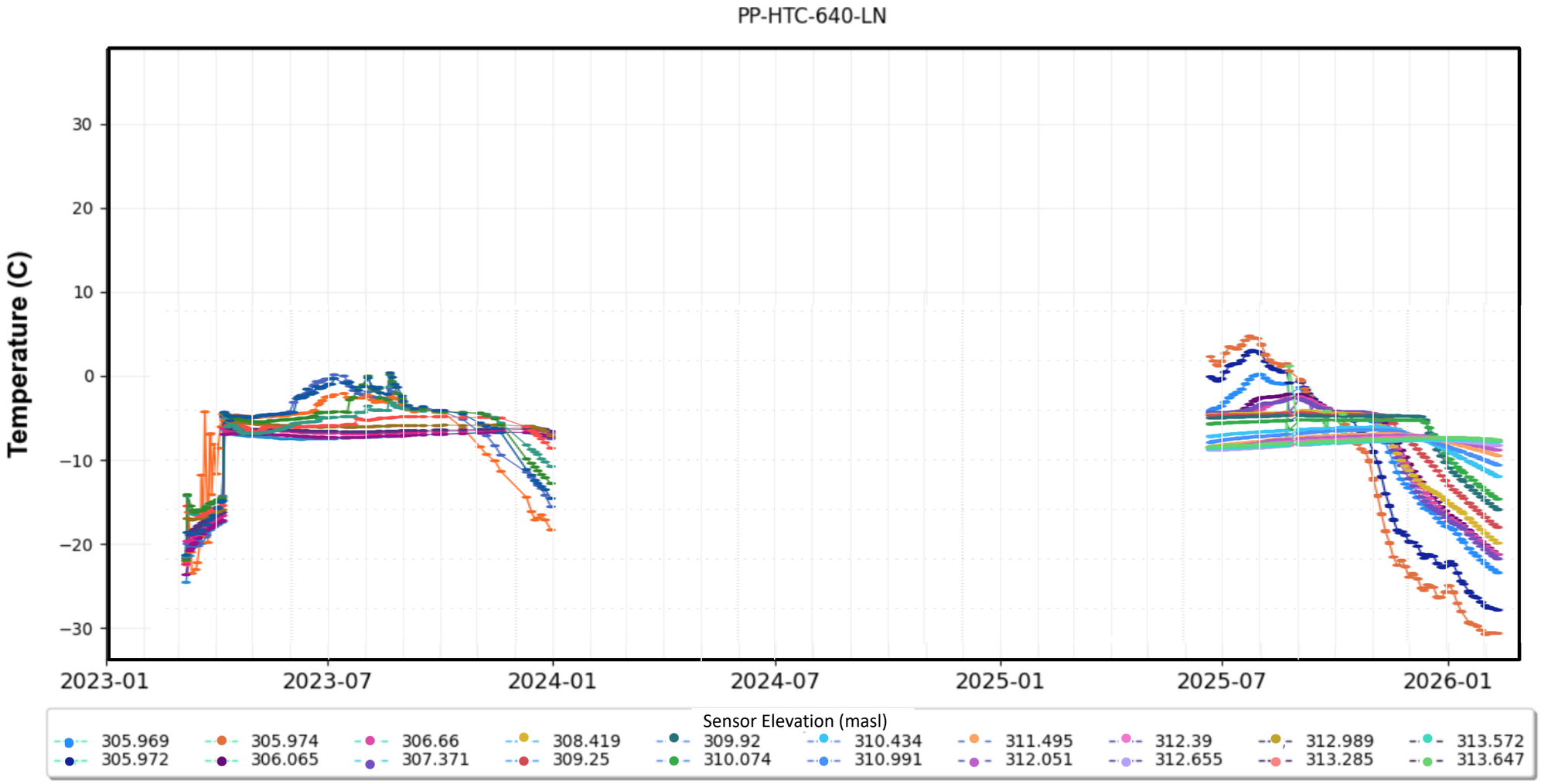

| | | |
|---|---|---|
| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Monitoring Sites – Data Record |
| Job No: CAPR00431<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 · Approved: JBK · Figure: **B-10** |




| | | |
|---|---|---|
| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Recent Ground Temperature Site – PP-HTC-330-LN |
| Job No: CAPR00431<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 · Approved: JBK · Figure: **B-11** |




| | | |
|---|---|---|
| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Recent Ground Temperature Site – PP-HTC-450-LN |
| Job No: CAPR00431<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 / Approved: JBK / Figure: **B-12** |

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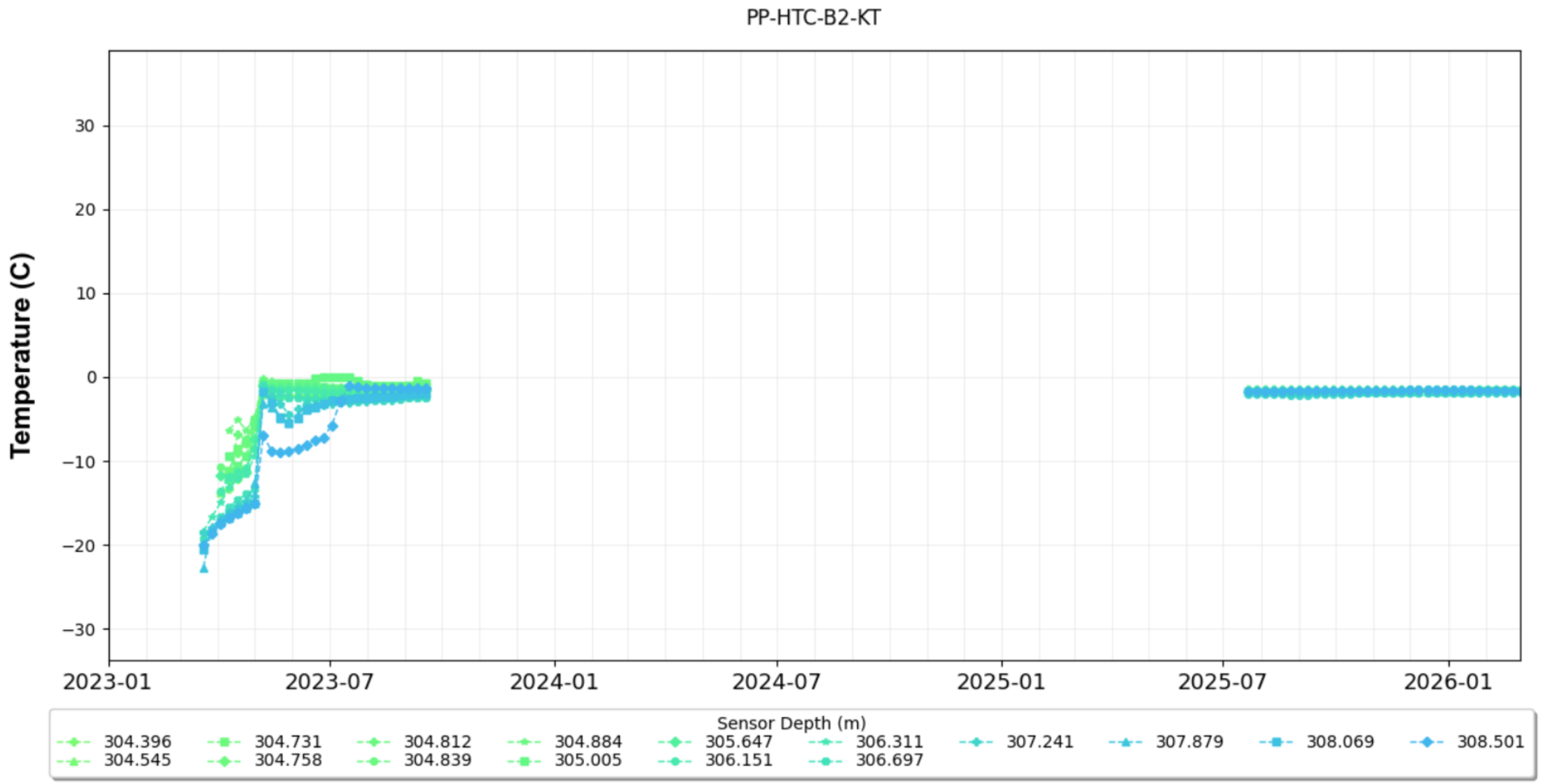
| | | Recent Ground Temperature Site – PP-HTC-640-LN |
| Job No: CAPR00431<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 · Approved: JBK · Figure: **B-13** |

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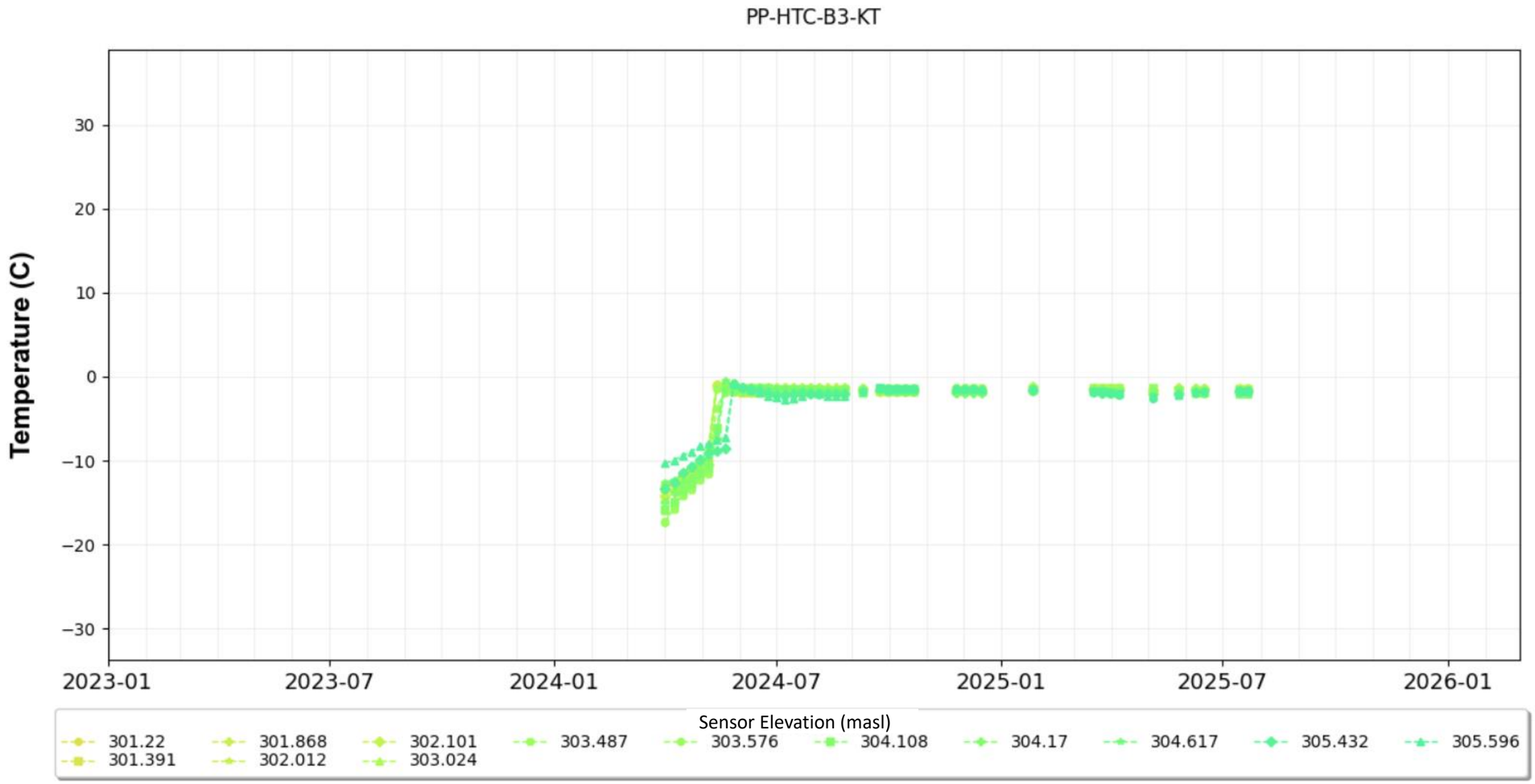
| | | Recent Ground Temperature Site – PP-HTC-B2-KT |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 / Approved: JBK / Figure: **B-14** |

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| | | Recent Ground Temperature Site – PP-HTC-B3-KT |
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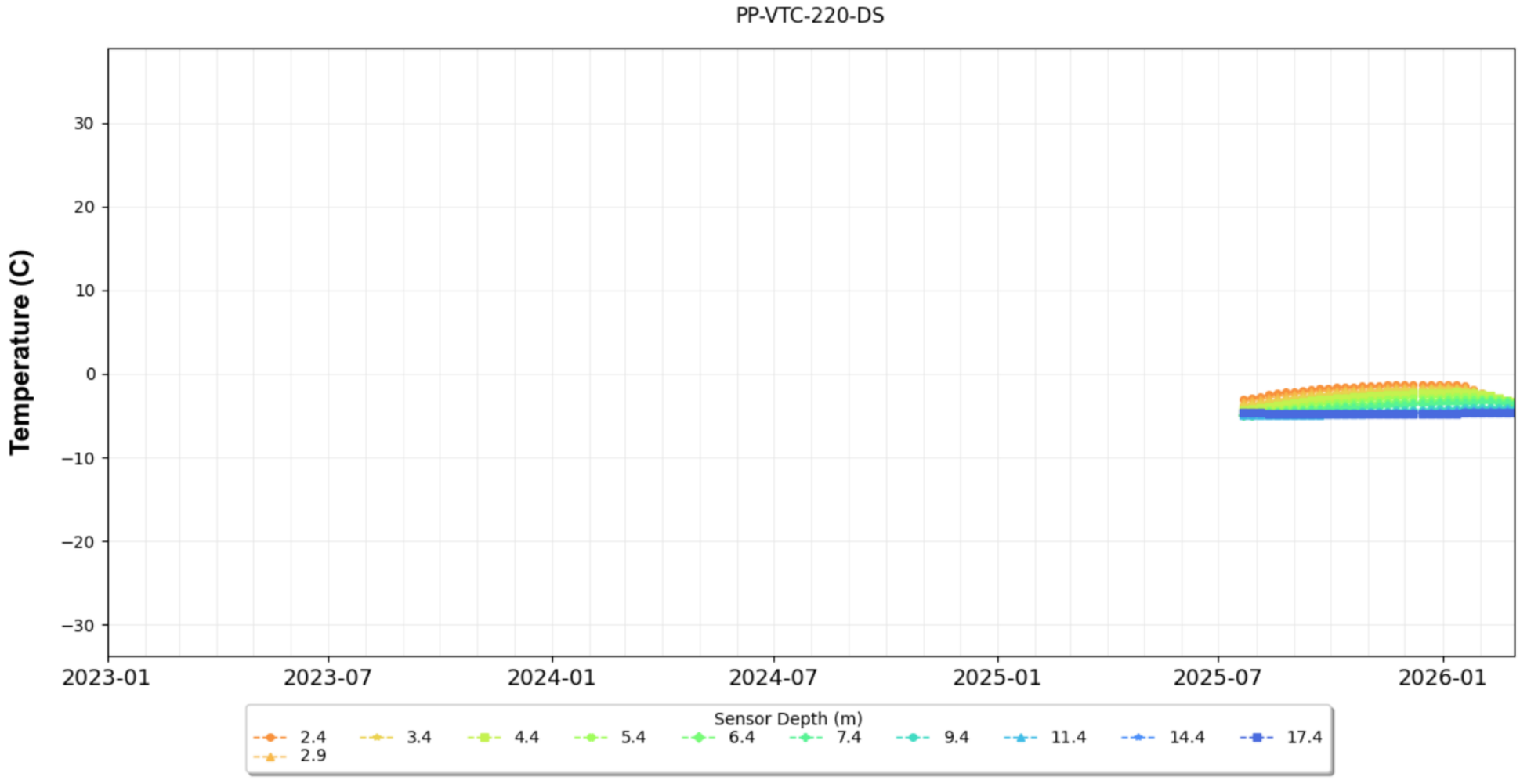


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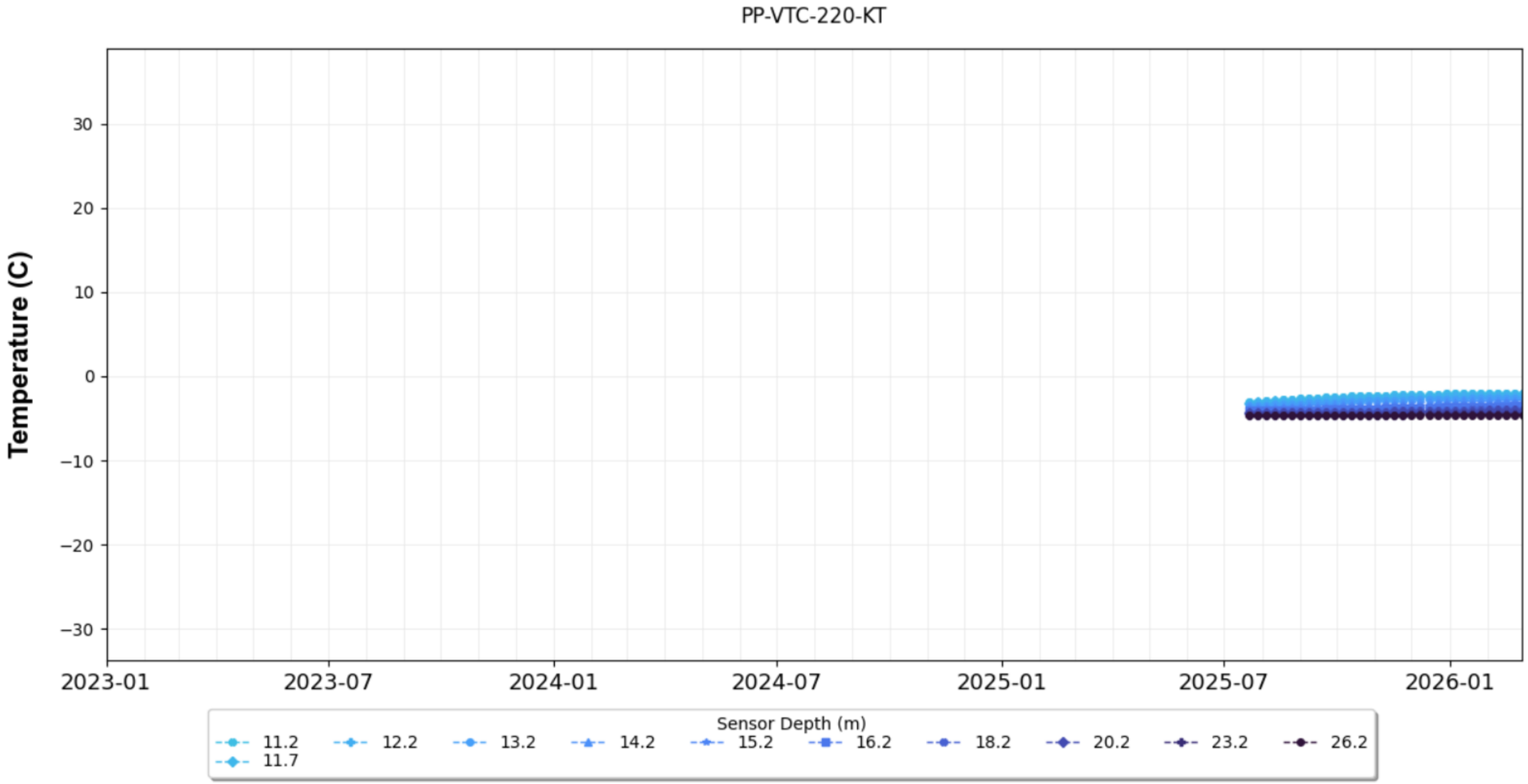
| | | Recent Ground Temperature Site – PP-VTC-220-DS |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 · Approved: JBK · Figure: **B-16** |

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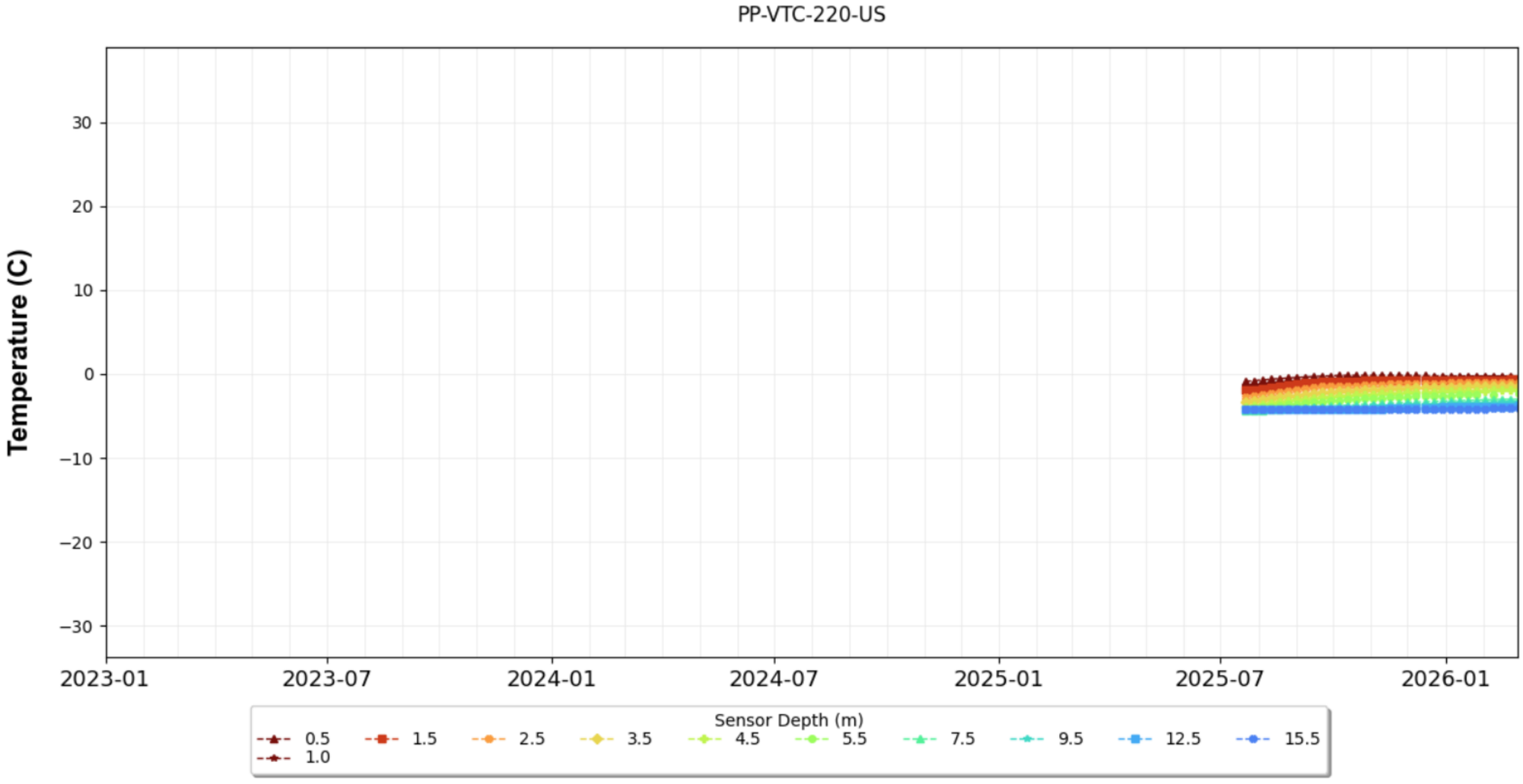
| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Recent Ground Temperature Site – PP-VTC-220-KT |
| | | Date: March 2026 \| Approved: JBK \| Figure: **B-17** |

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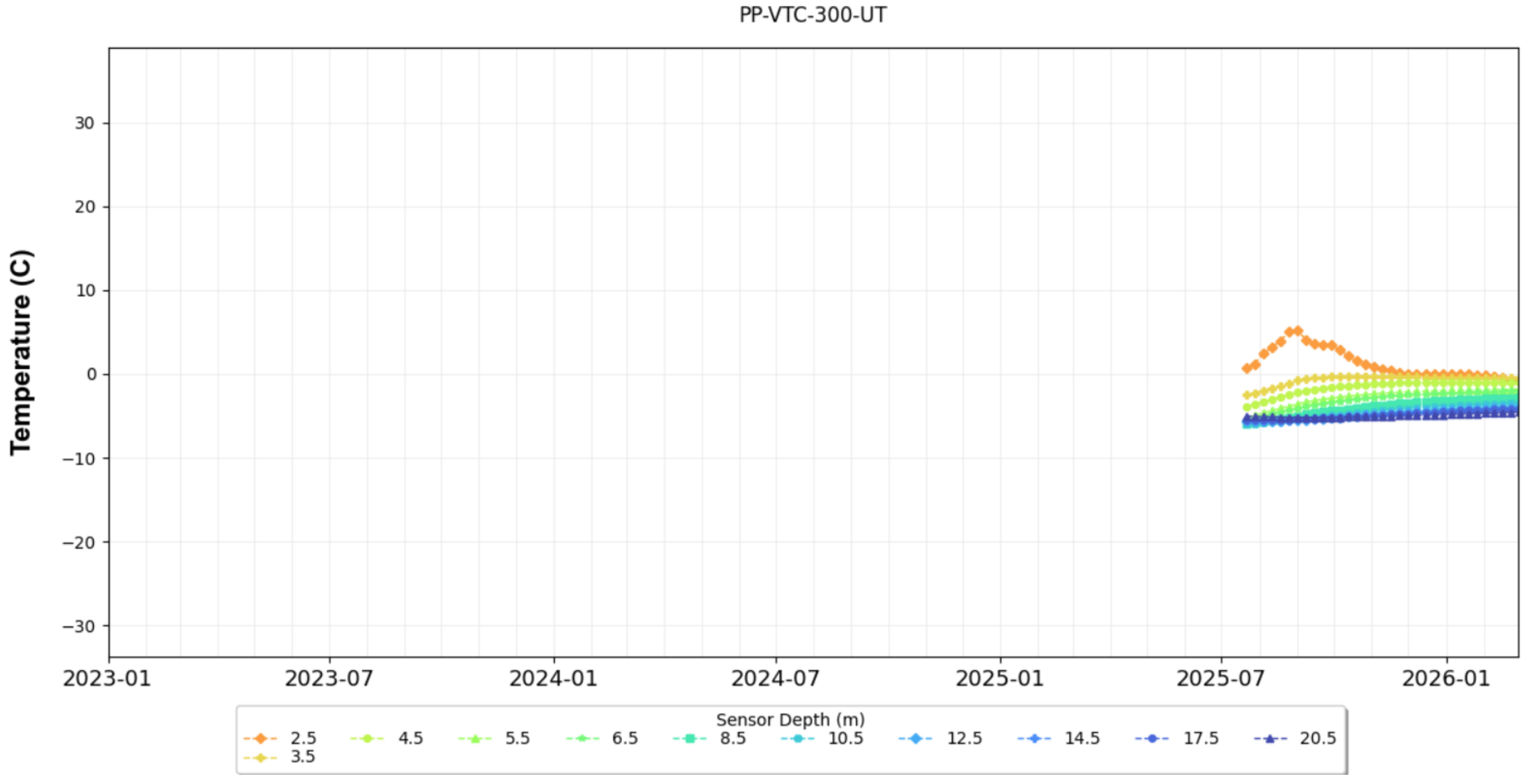


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| | | Recent Ground Temperature Site – PP-VTC-330-UT |
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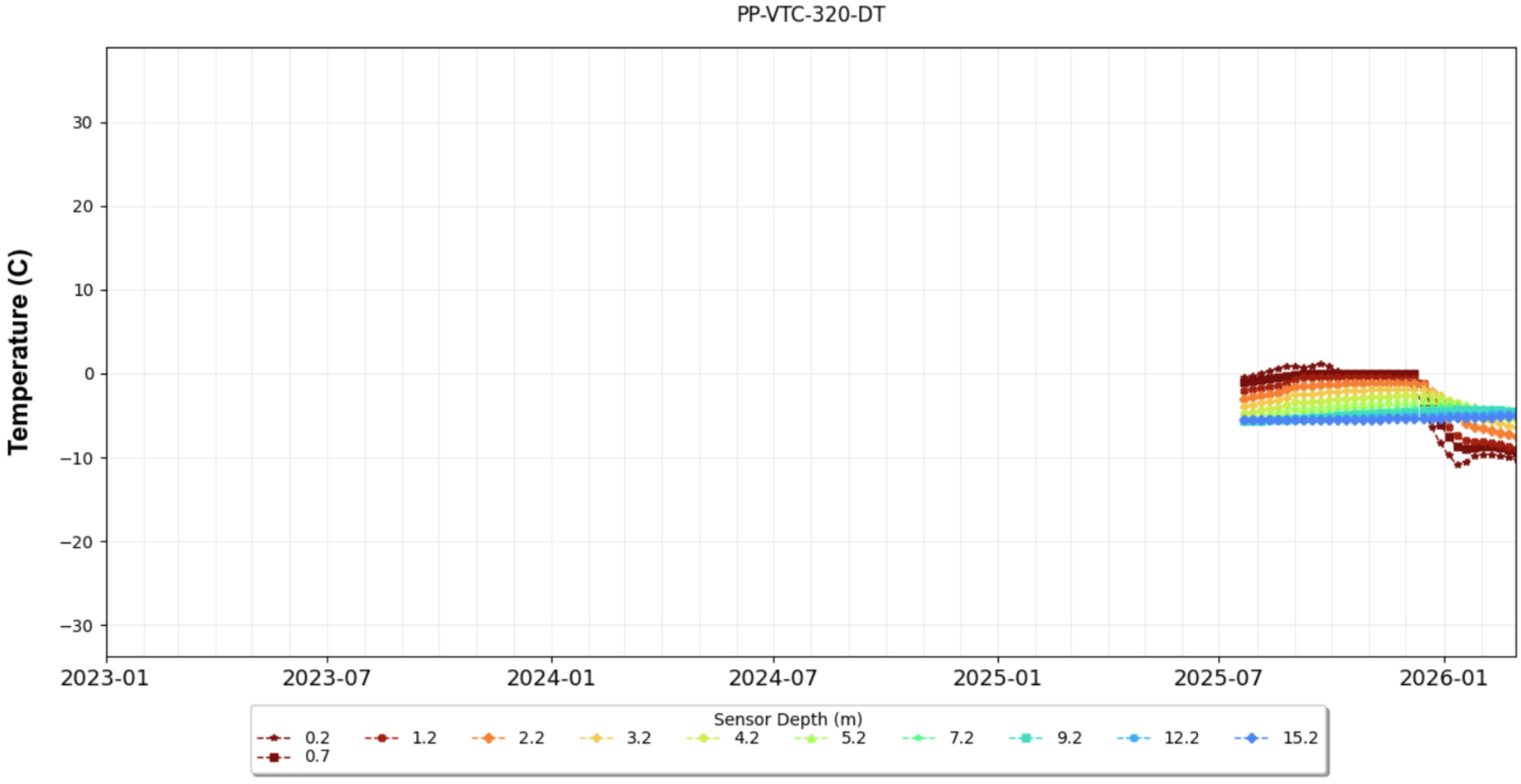


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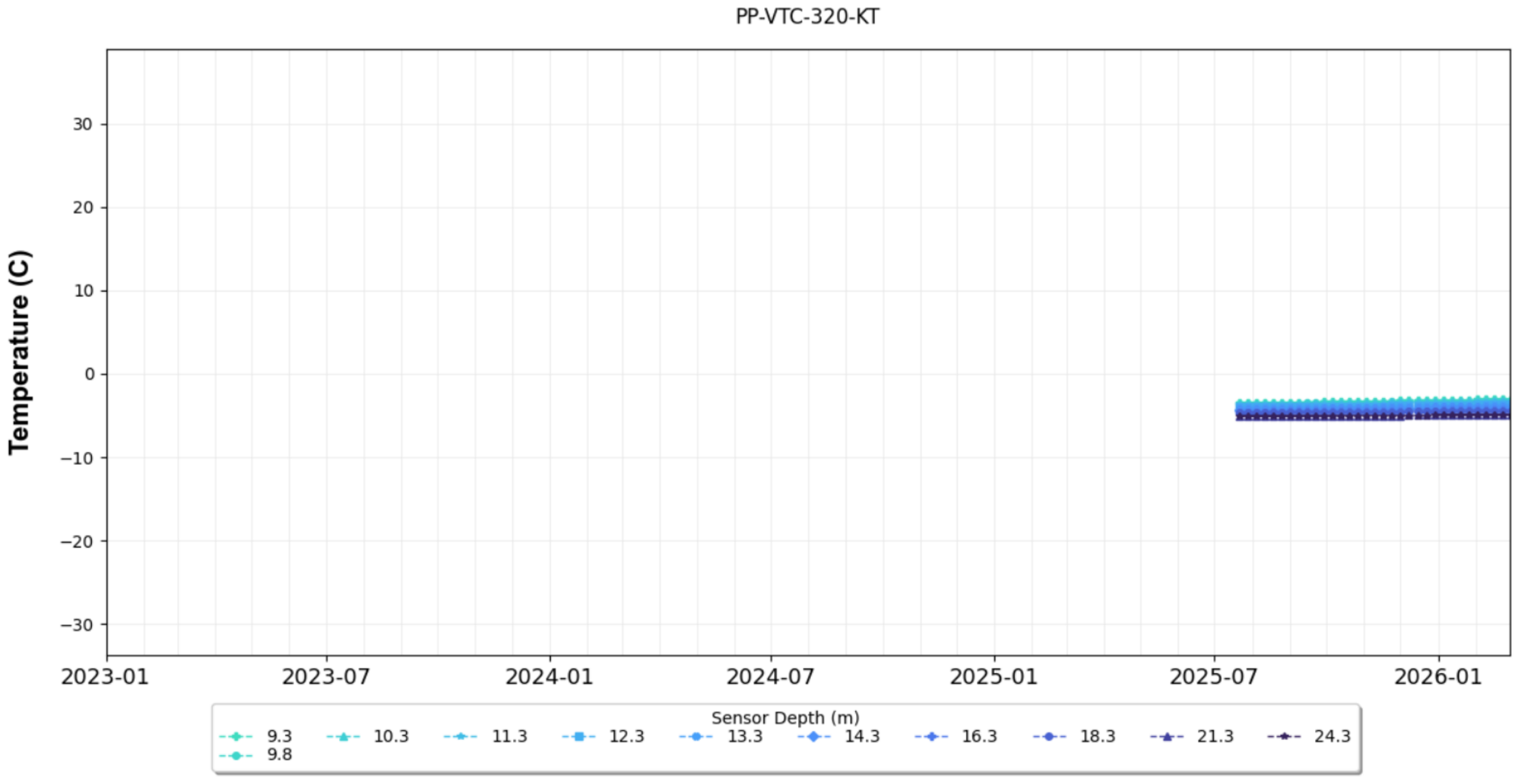
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Recent Ground Temperature Site – PP-VTC-320-DT |
| | | Date: March 2026 / Approved: JBK / Figure: **B-20** |

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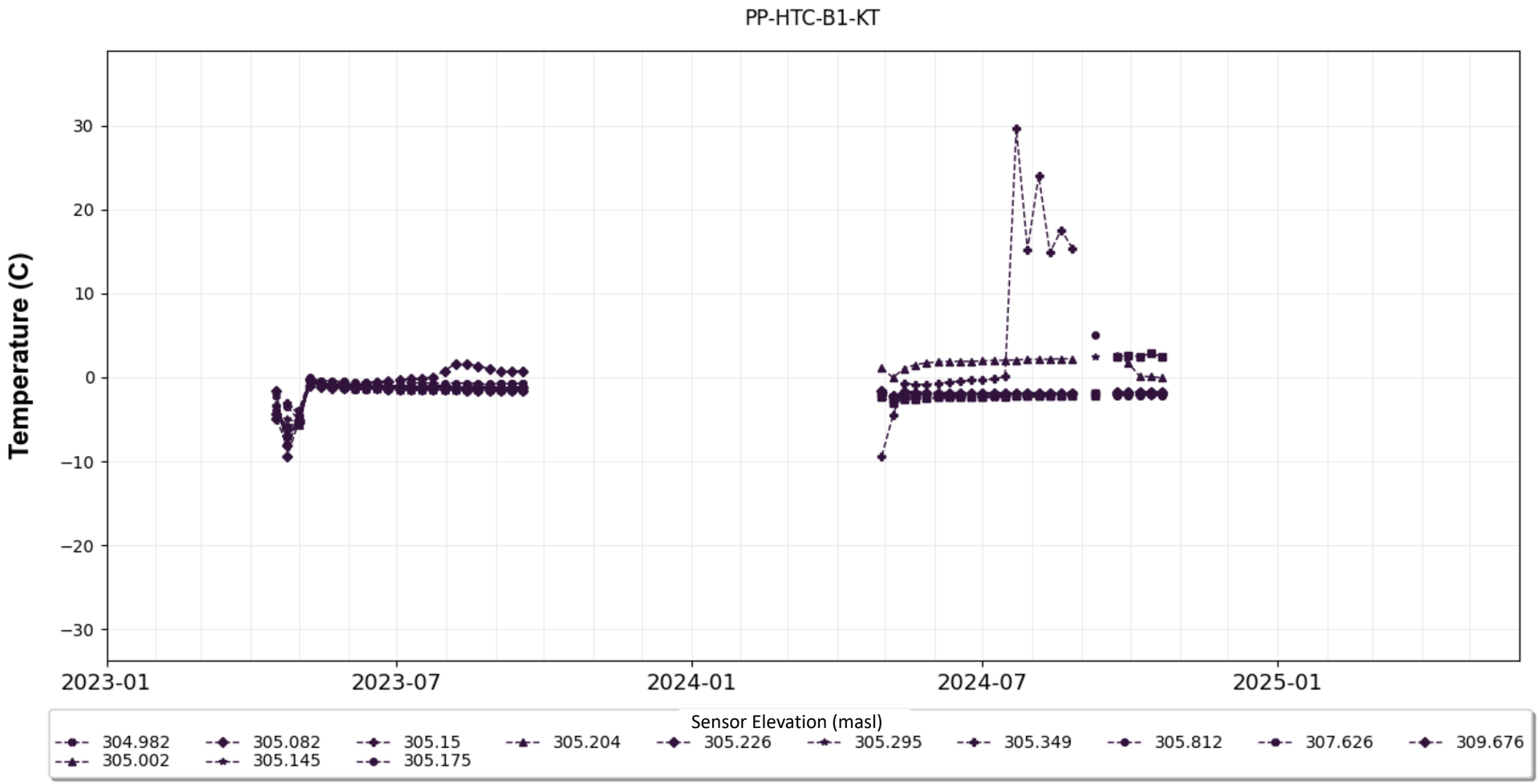
| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Recent Ground Temperature Site – PP-VTC-320-DT |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 / Approved: JBK / Figure: **B-21** |




srk consulting

B2GOLD

Site-wide Ground Thermal Monitoring Plan

Recent Ground Temperature Site – PP-HTC-B1-KT

Job No: CAPR004313

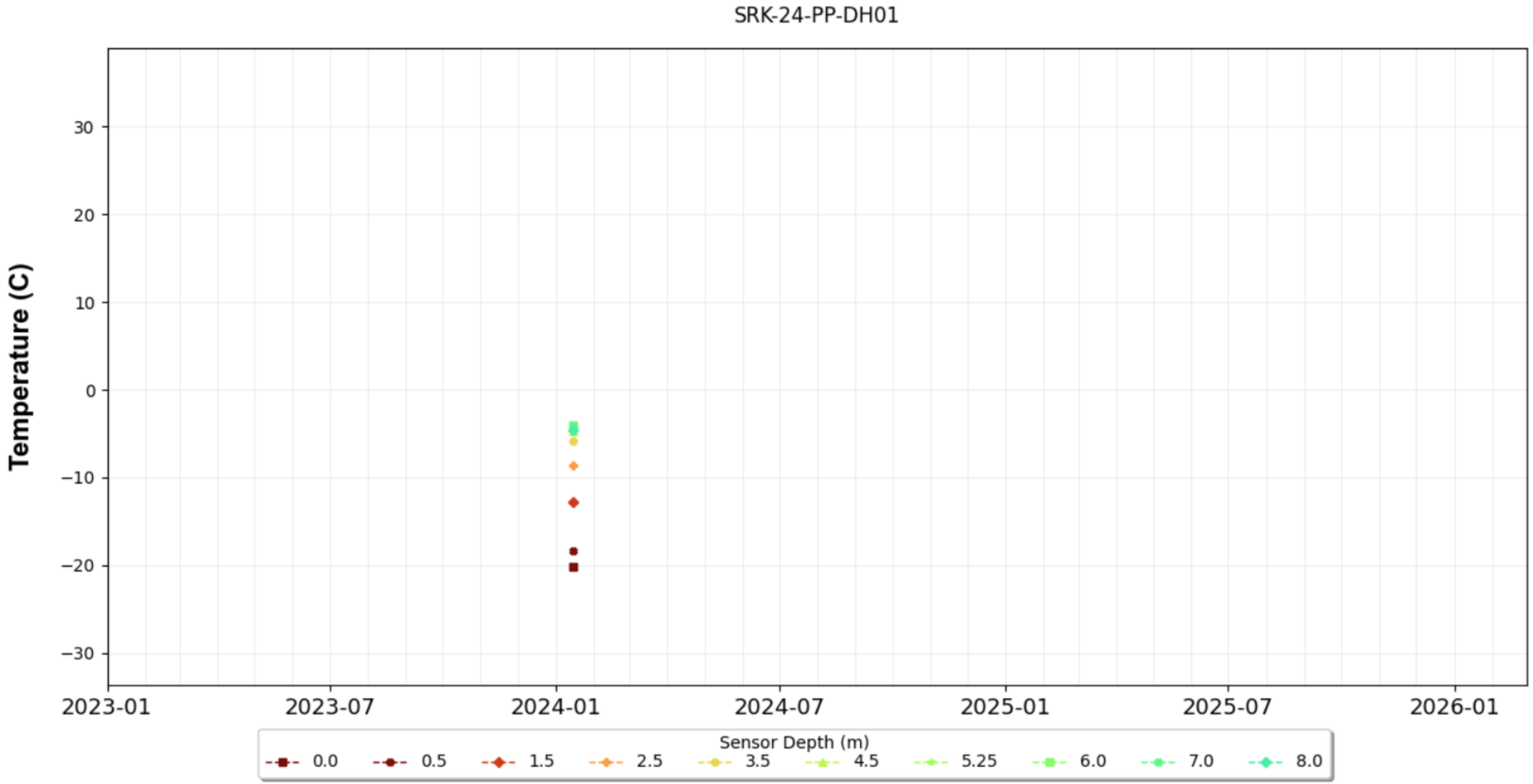
Filename: Appendix_GroundThermal.pptx

Back River Project

Date: March 2026

Approved: JBK

Figure: **B-22**

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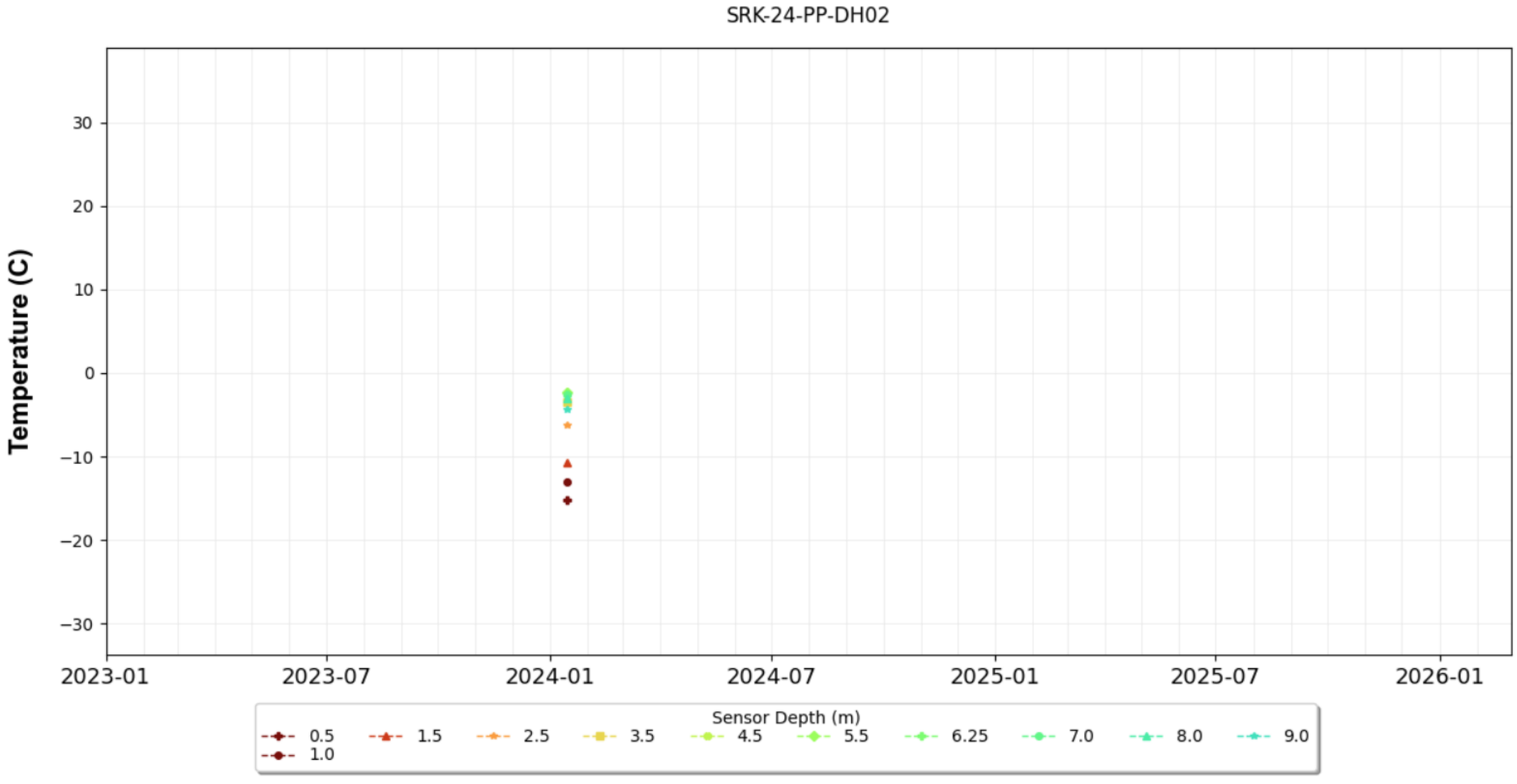
| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Recent Ground Temperature Site – SRK-24-PP-DH01 |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 · Approved: JBK · Figure: **B-23** |

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| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Recent Ground Temperature Site – SRK-24-PP-DH02 |
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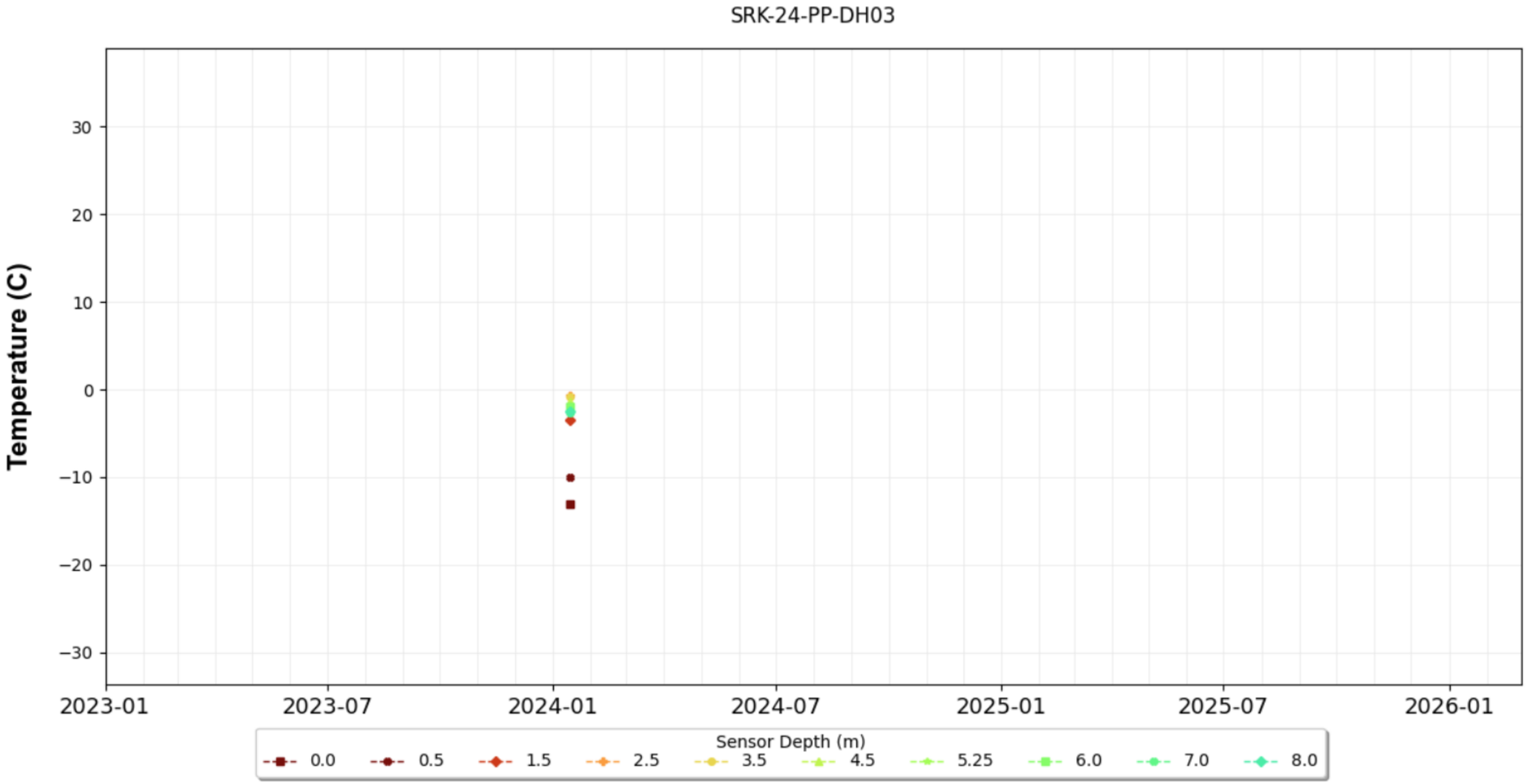


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| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Recent Ground Temperature Site – SRK-24-PP-DH03 |
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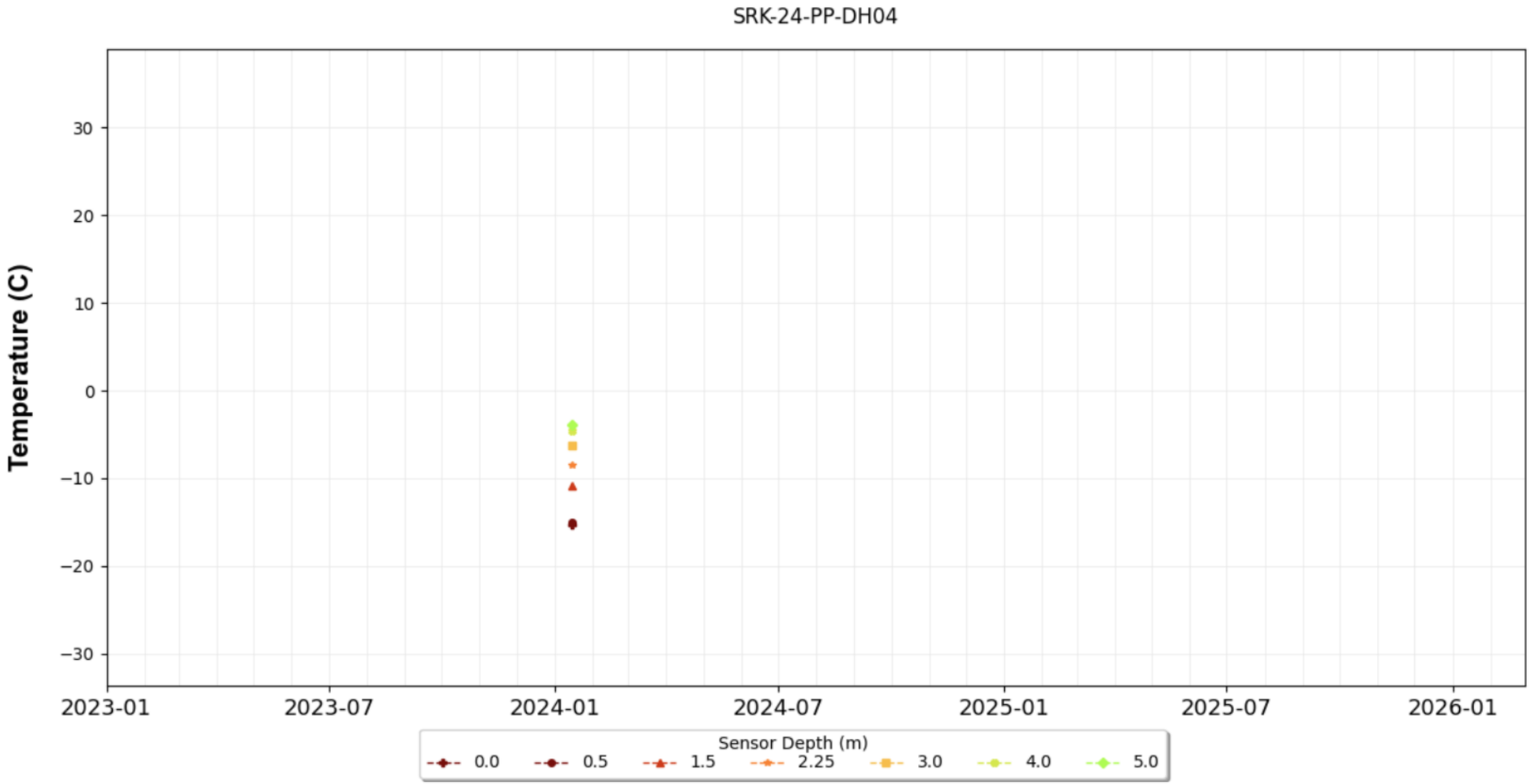


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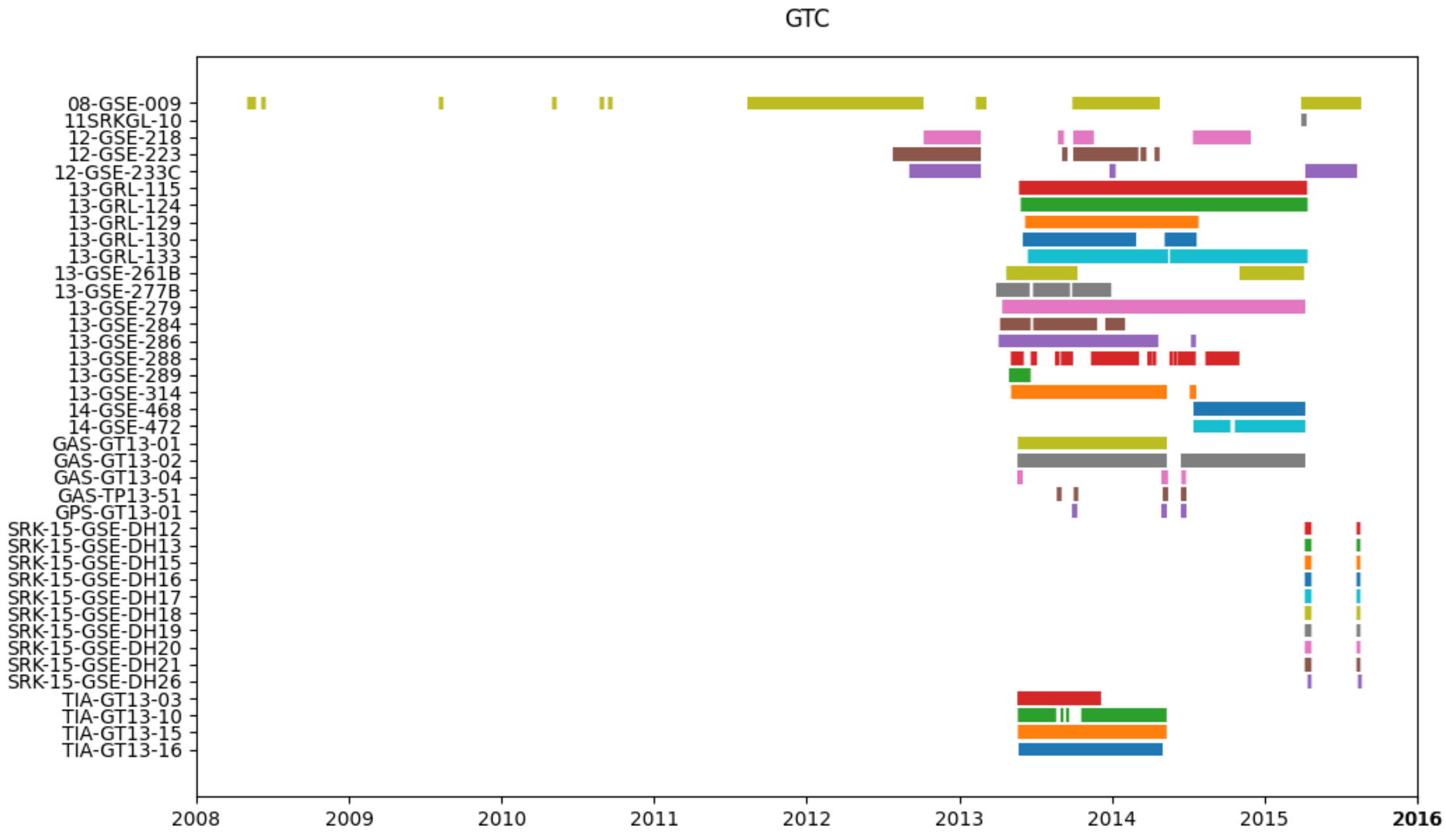
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Recent Ground Temperature Site – SRK-24-PP-DH04 |
| | | Date: March 2026 / Approved: JBK / Figure: **B-26** |

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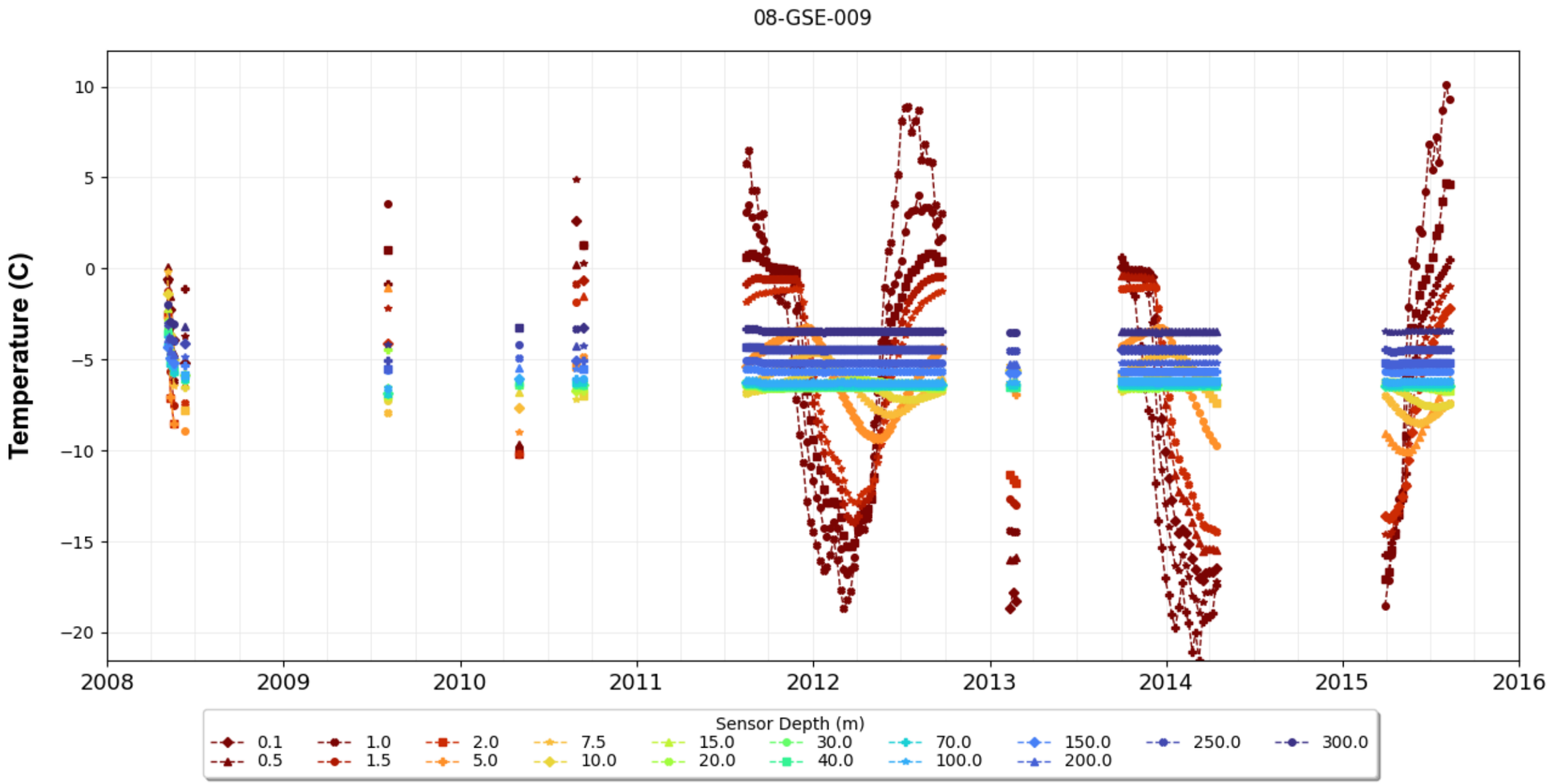
|---|---|---|
| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Historic Ground Temperature Sites – Data Record |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 · Approved: JBK · Figure: **B-27** |

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| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Historic Ground Temperature Site – 08-GSE-009 |
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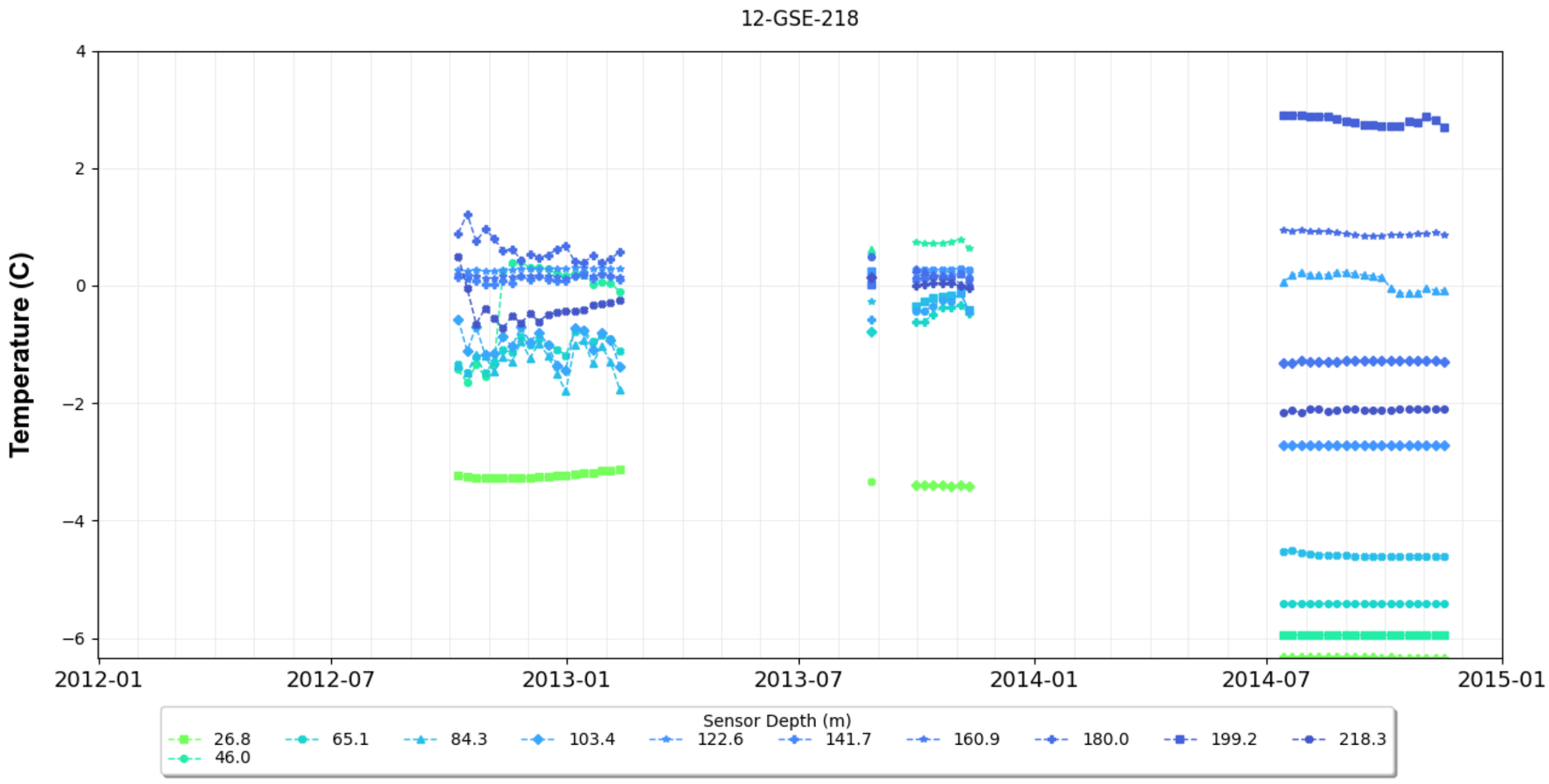


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| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Historic Ground Temperature Site – 12-GSE-218 |
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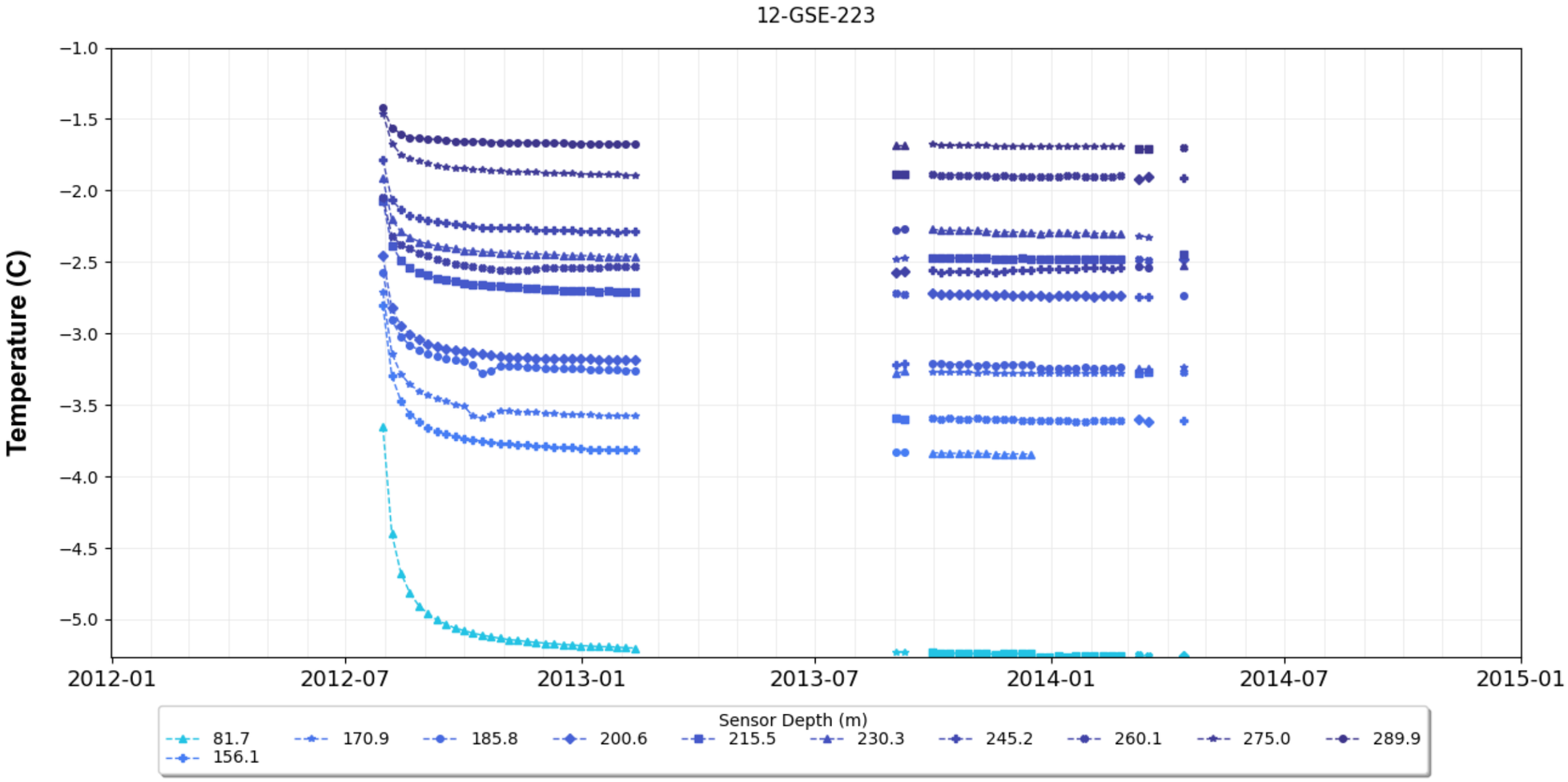


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| | | Historic Ground Temperature Site – 12-GSE-223 |
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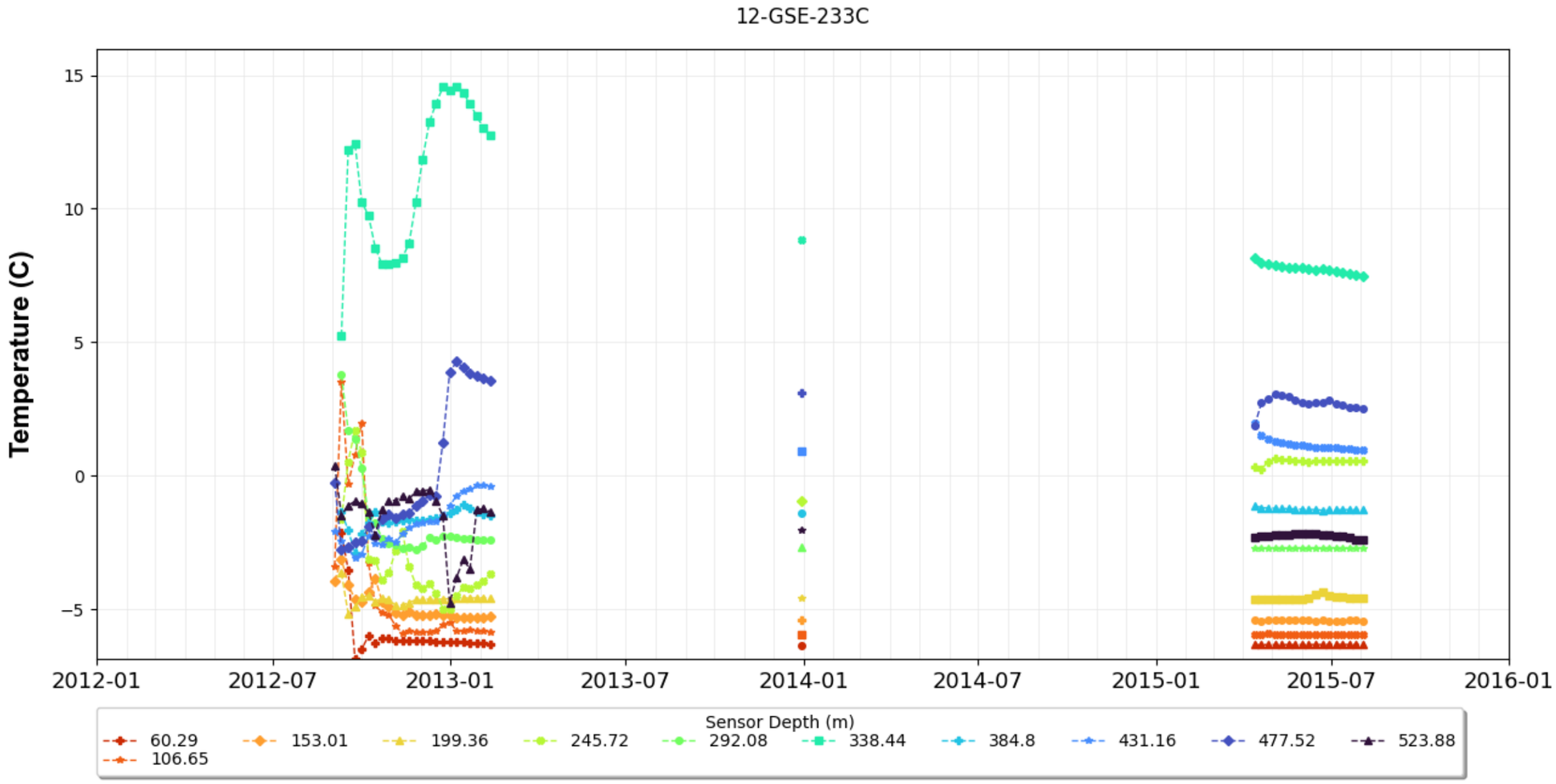


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| | | Historic Ground Temperature Site – 12-GSE-233C |
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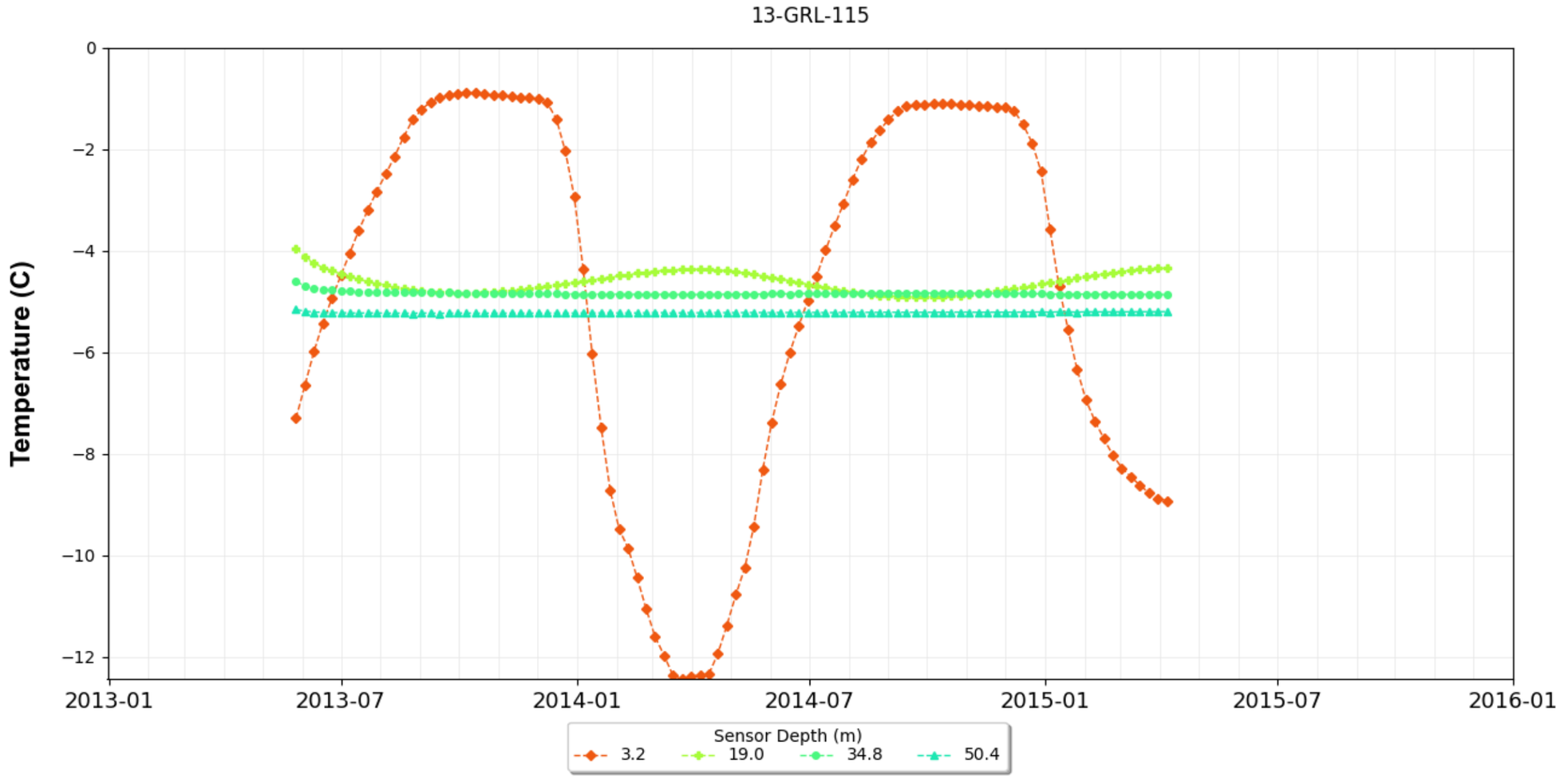


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| | | Historic Ground Temperature Site – 13-GRL-115 |
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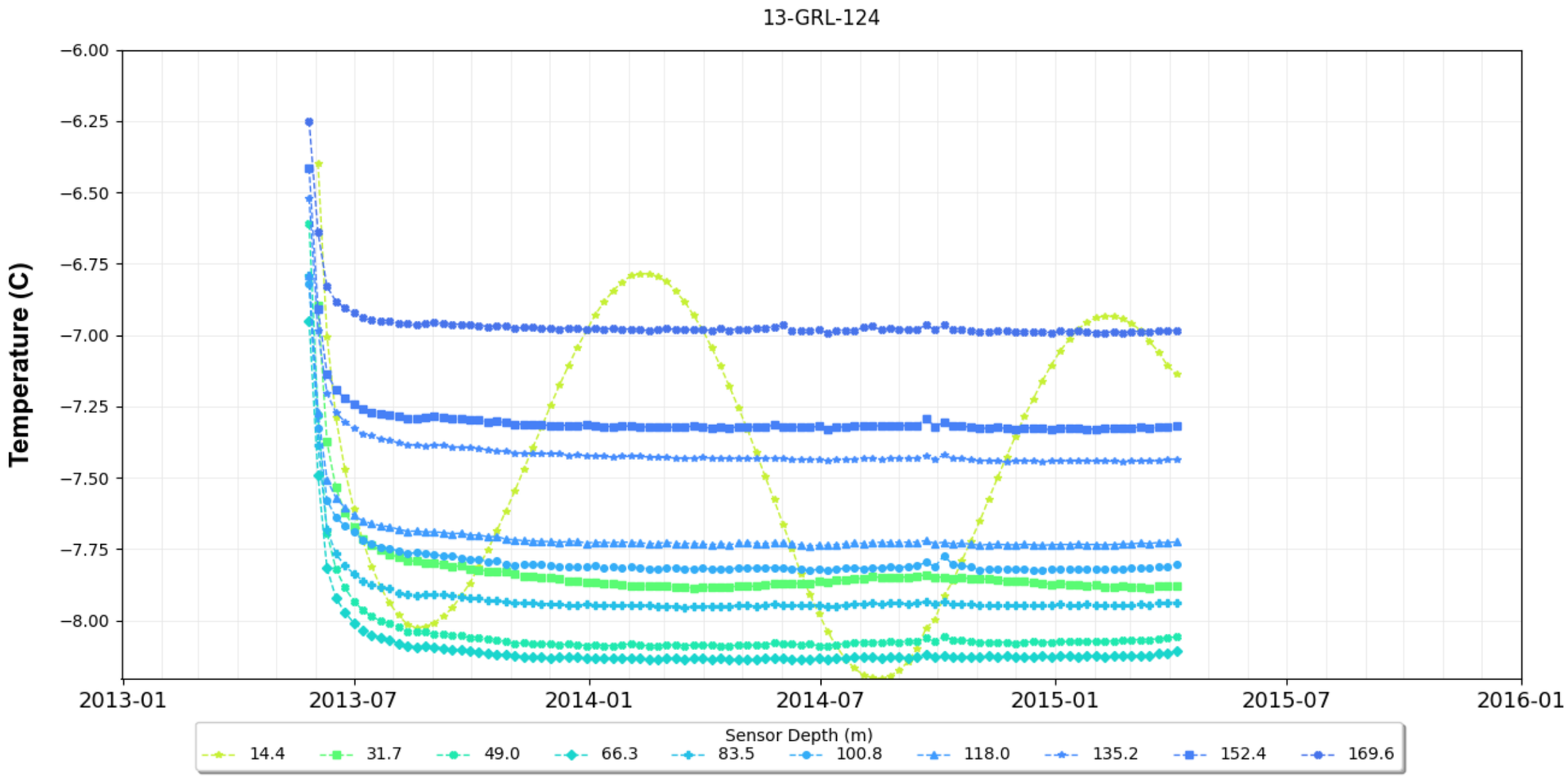


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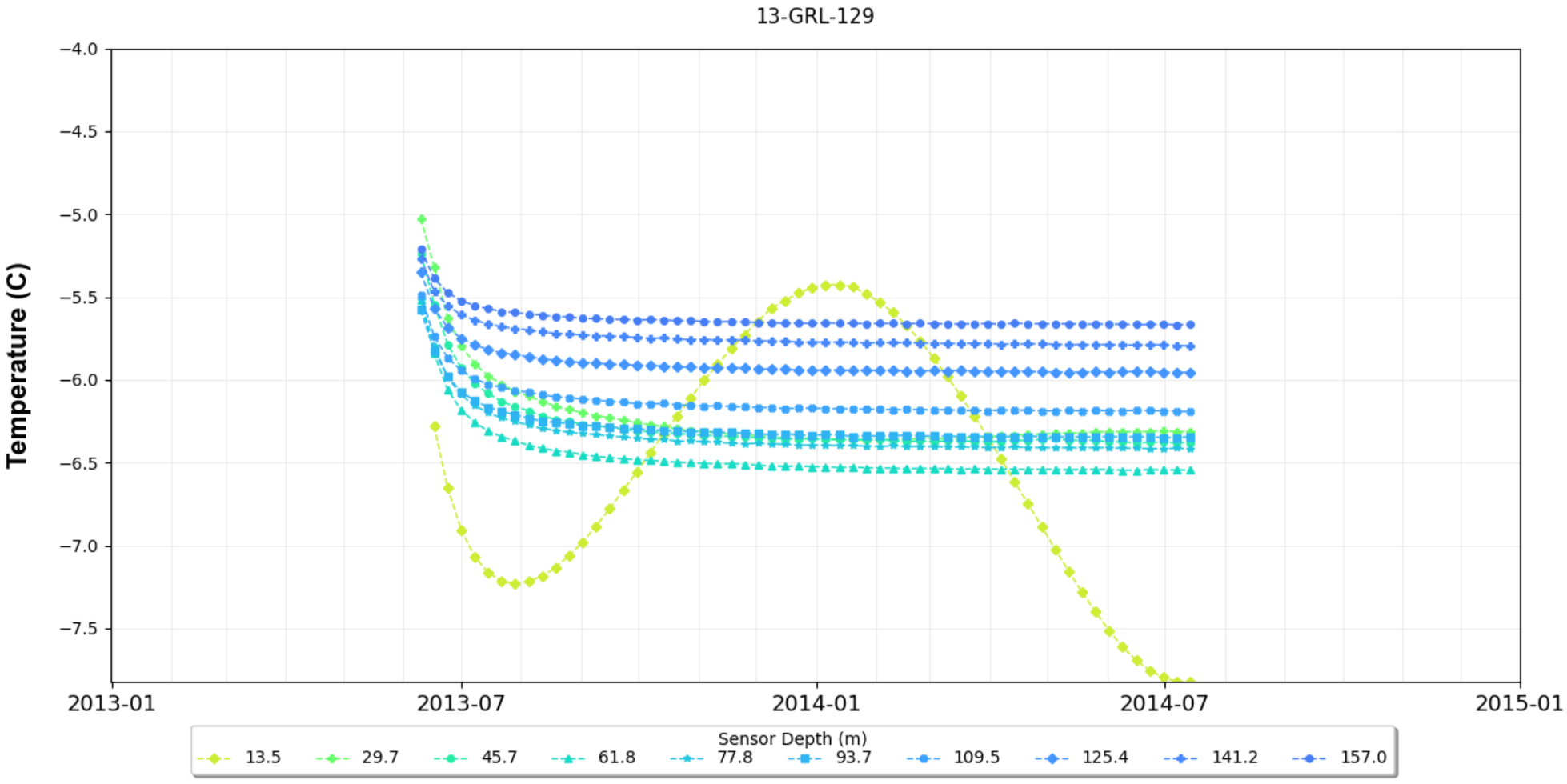
| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Historic Ground Temperature Site – 13-GRL-124 |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 · Approved: JBK · Figure: **B-33** |

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| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Historic Ground Temperature Site – 13-GRL-129 |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 / Approved: JBK / Figure: **B-34** |




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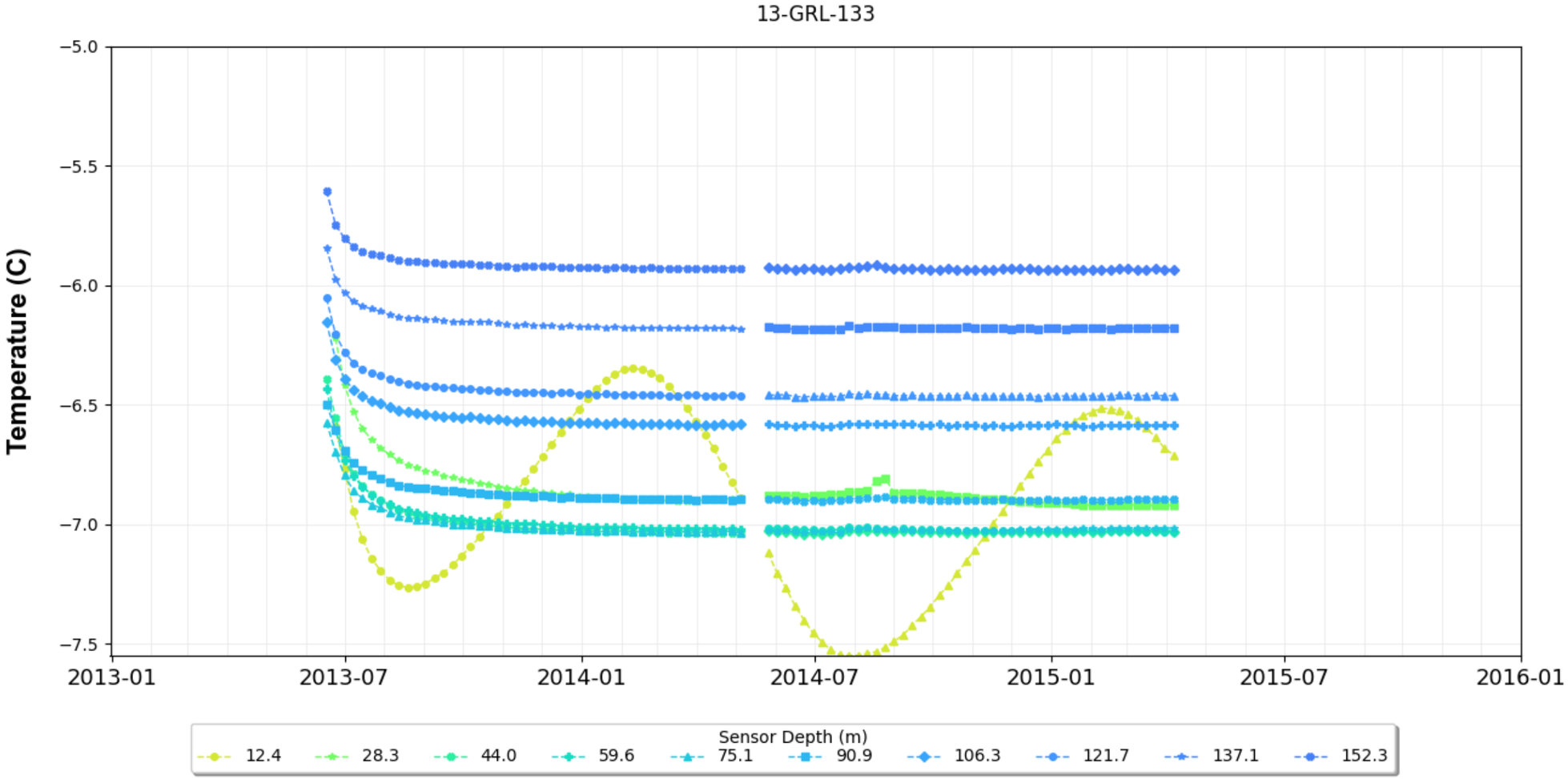
|---|---|---|
| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Historic Ground Temperature Site – 13-GRL-130 |
| | | Date: March 2026 / Approved: JBK / Figure: **B-35** |

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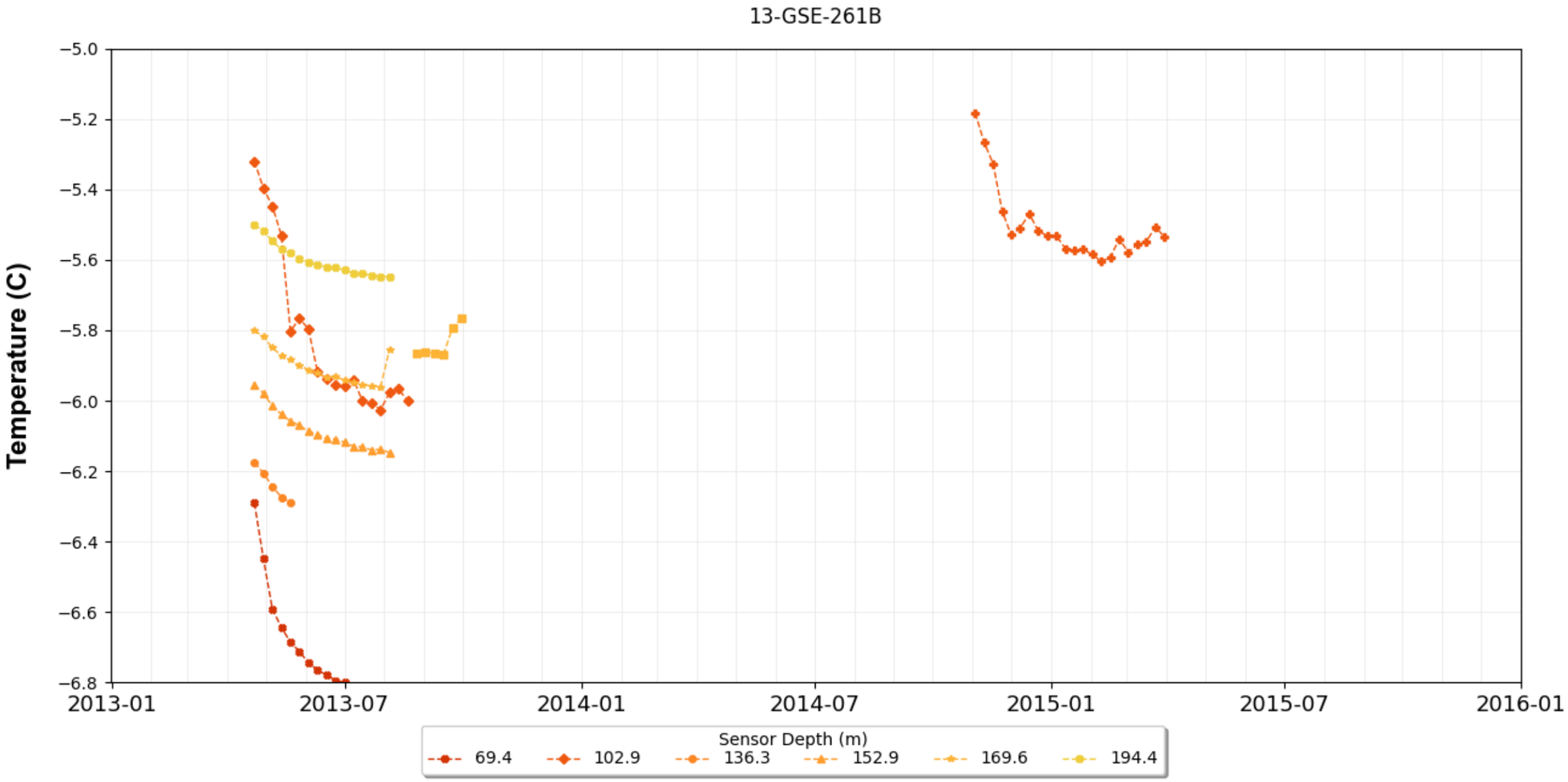
| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Historic Ground Temperature Site – 13-GRL-133 |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 / Approved: JBK / Figure: **B-36** |

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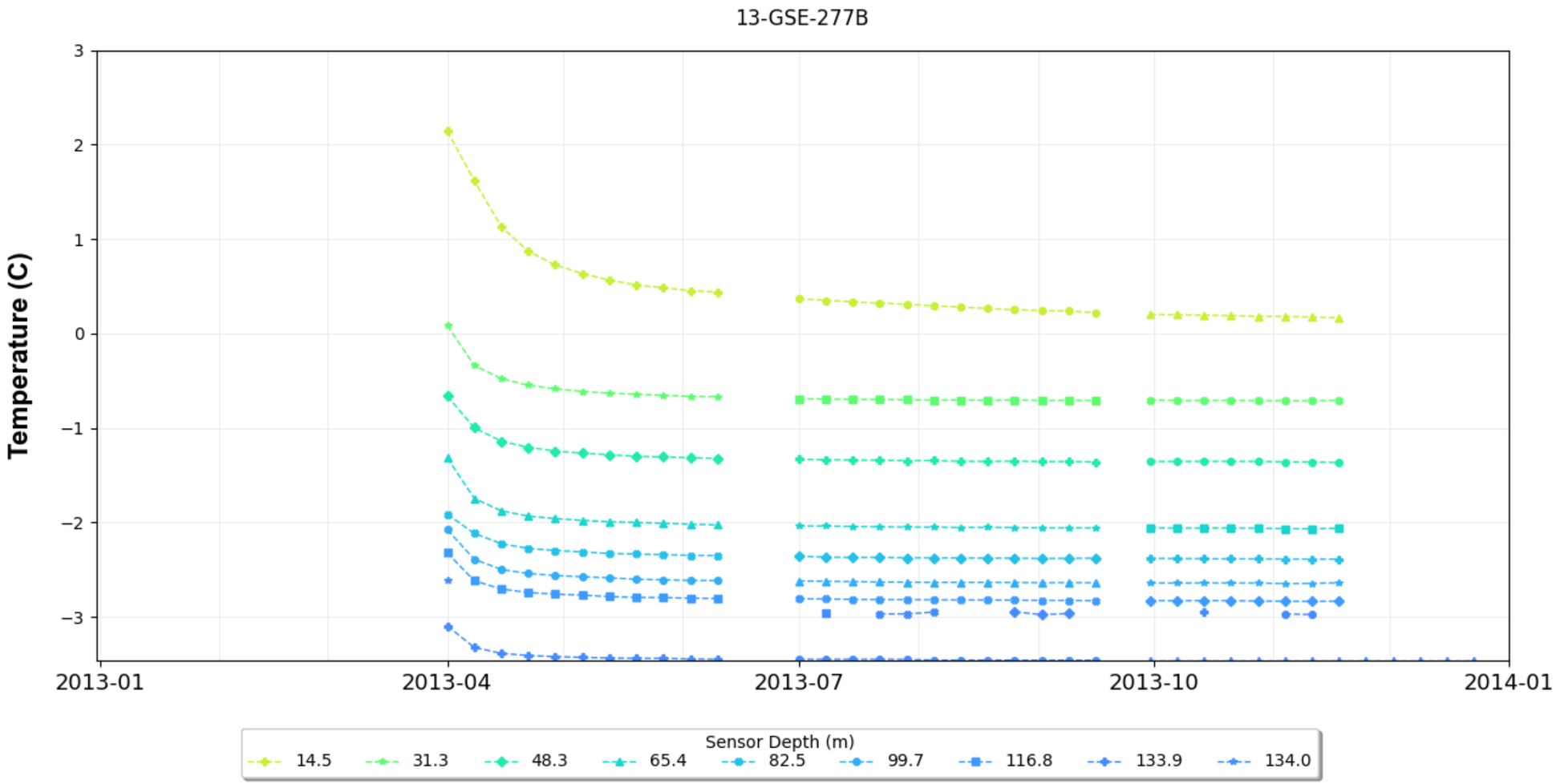
| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Historic Ground Temperature Site – 13-GSE-261B |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 · Approved: JBK · Figure: **B-37** |

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| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Historic Ground Temperature Site – 13-GSE-277B |
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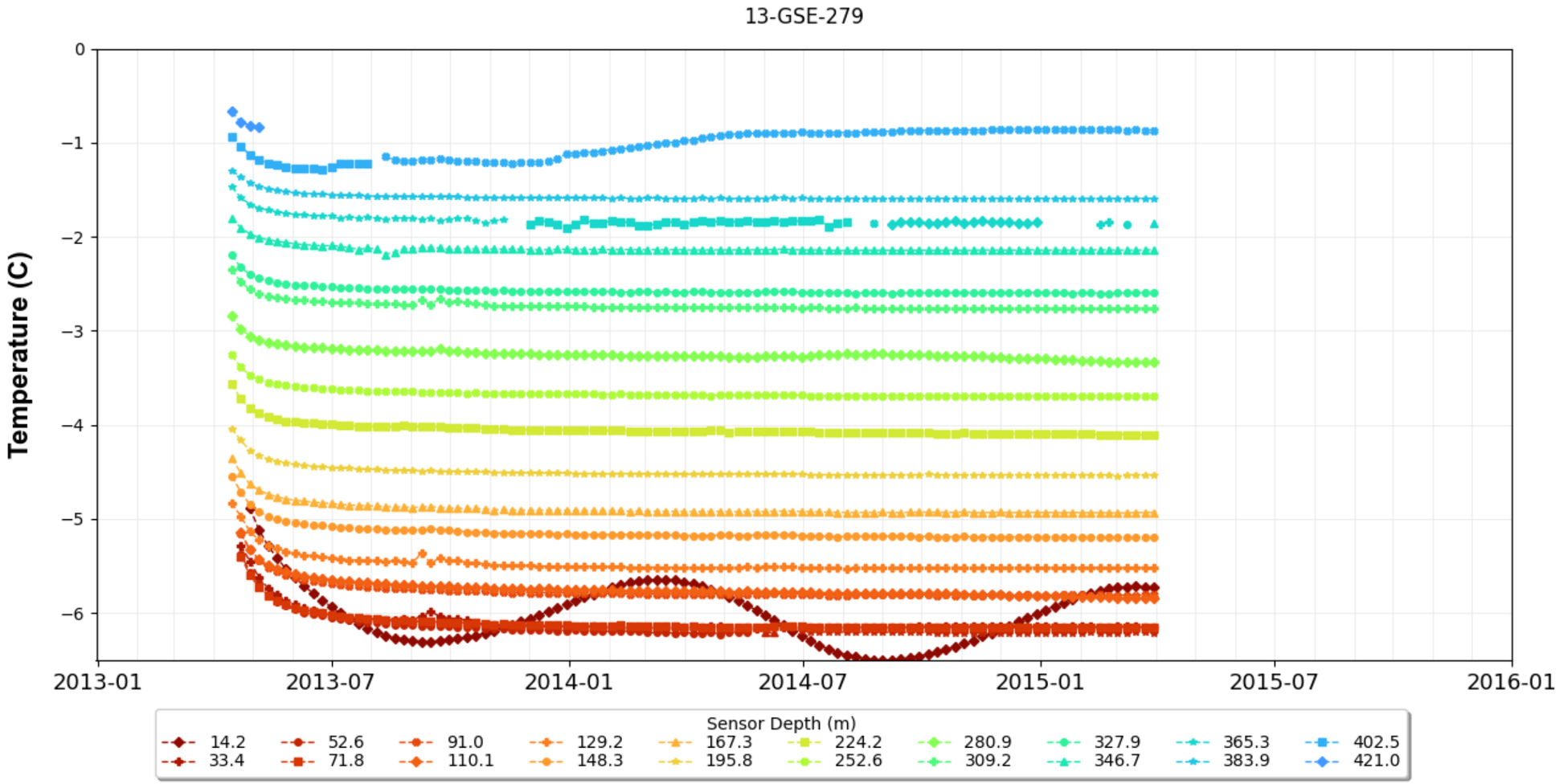


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| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Historic Ground Temperature Site – 13-GSE-279 |
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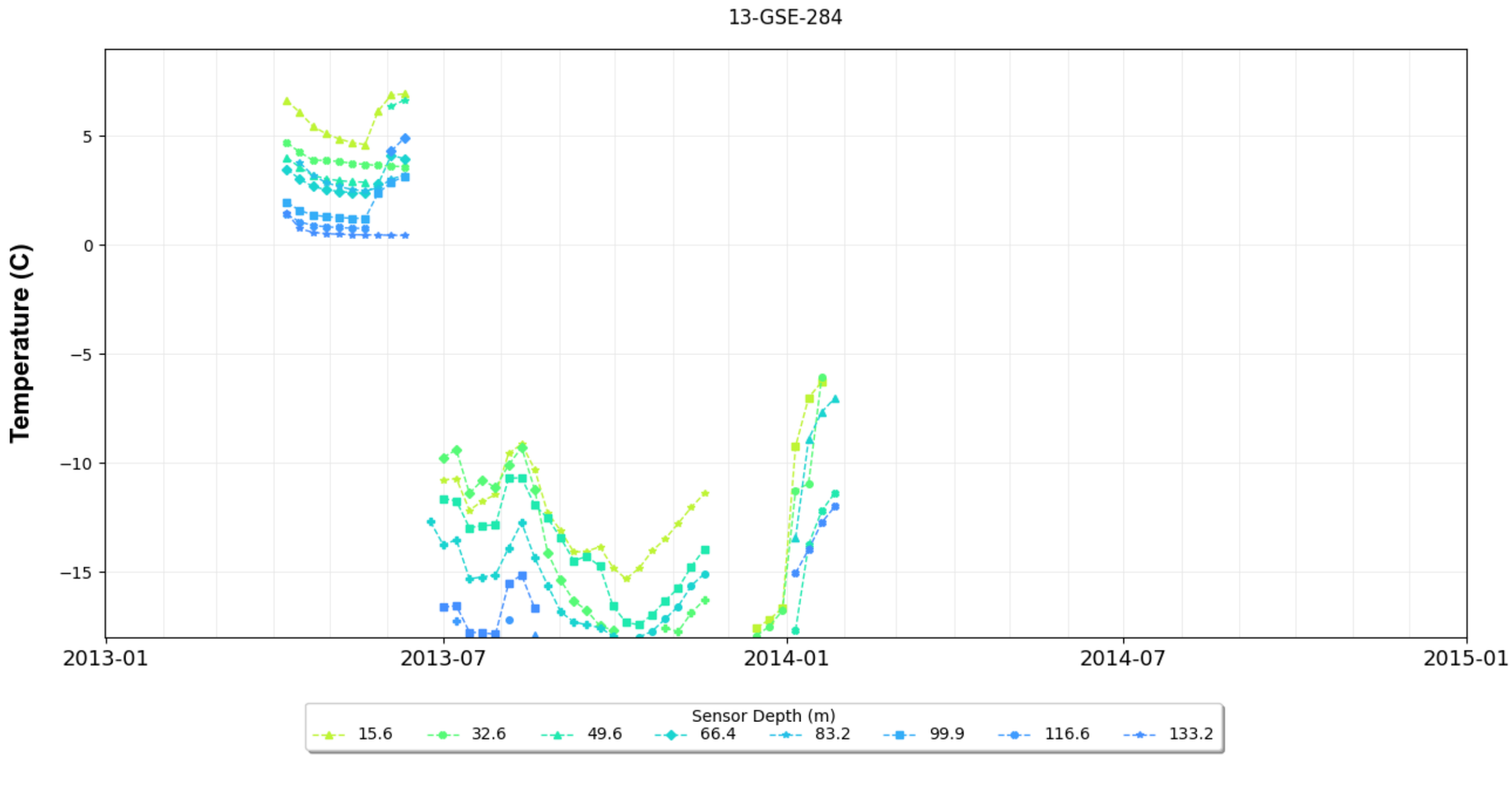


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| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Historic Ground Temperature Site – 13-GSE-284 |
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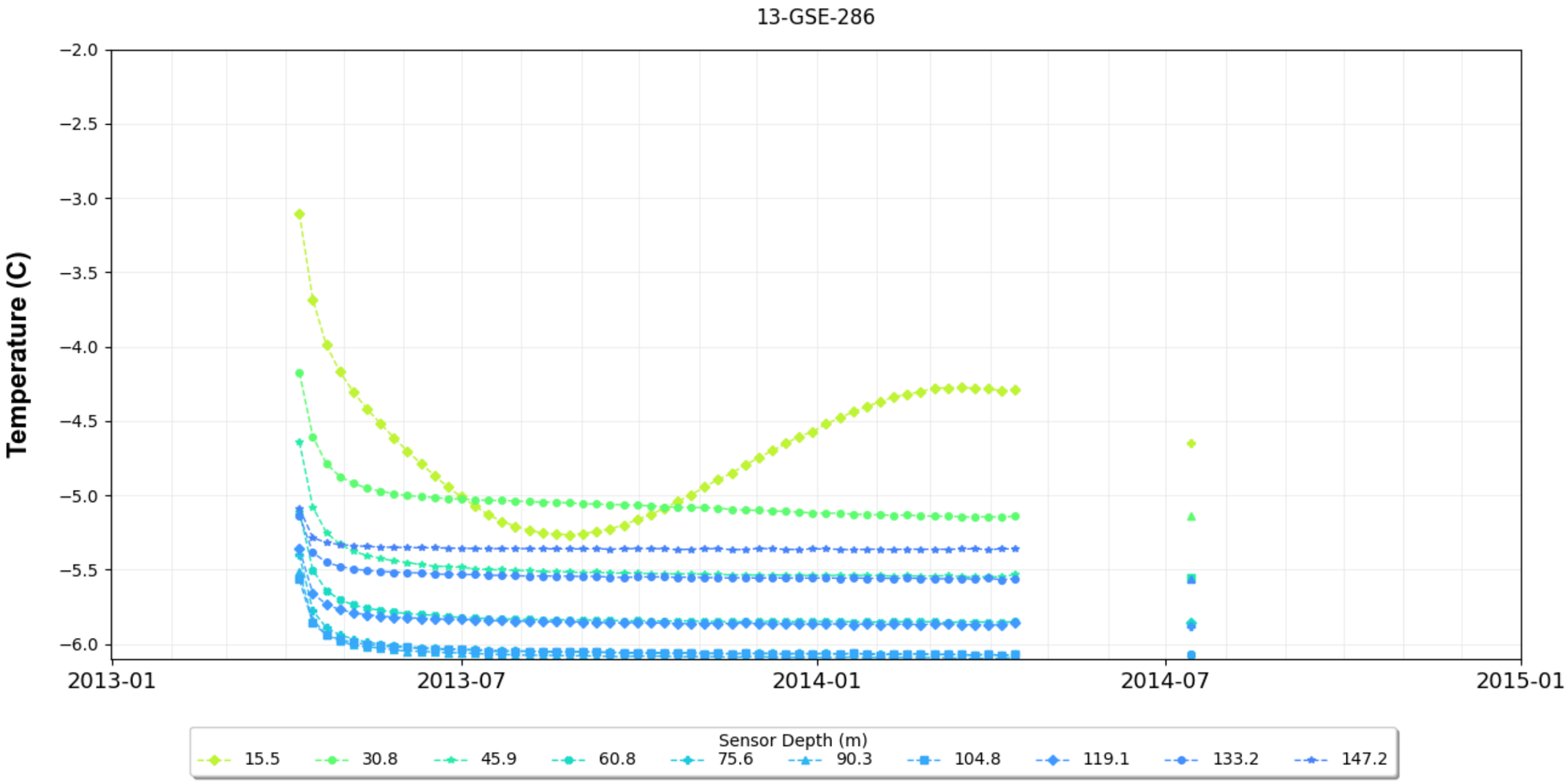


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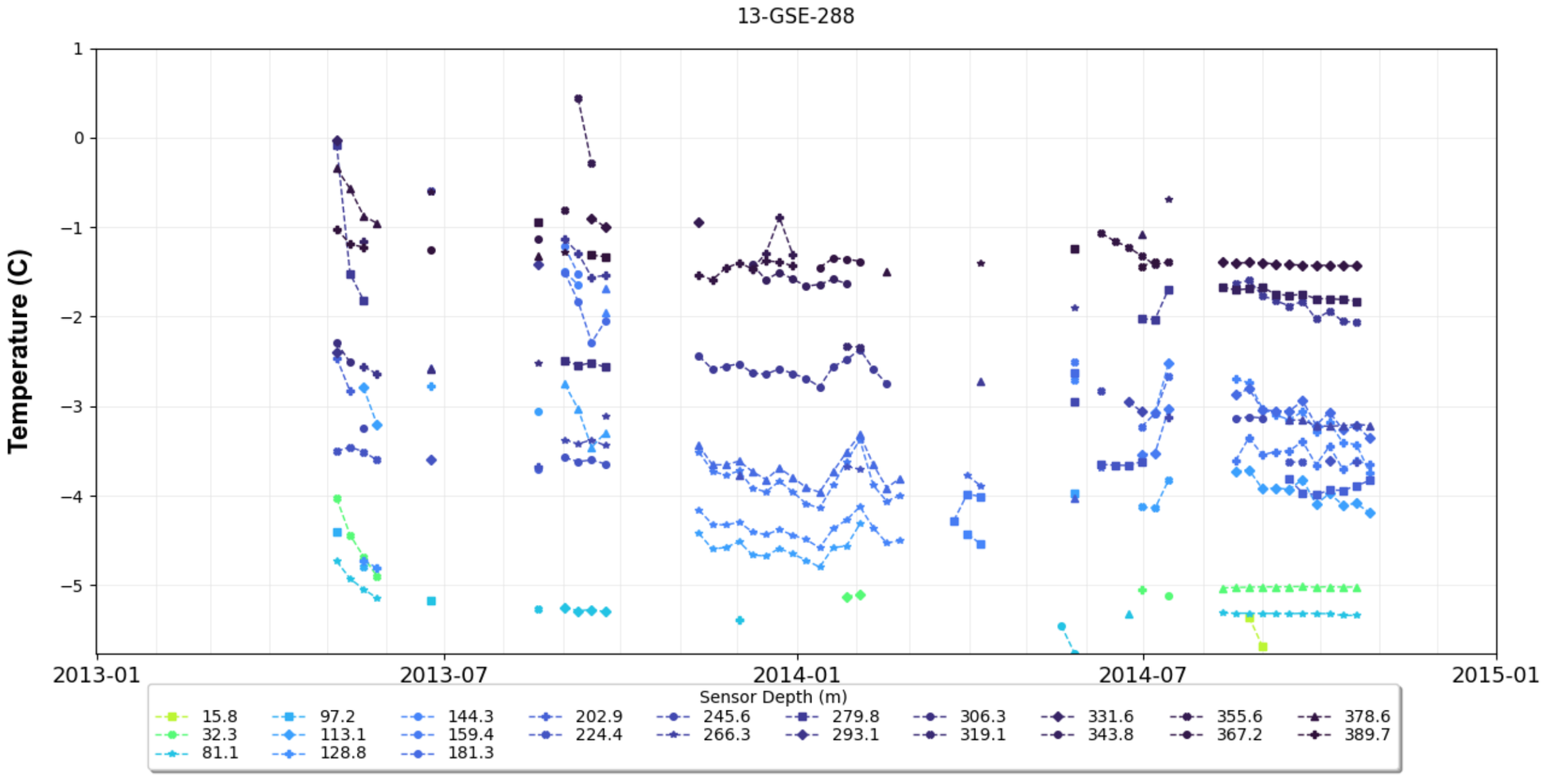
| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Historic Ground Temperature Site – 13-GSE-286 |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 · Approved: JBK · Figure: **B-41** |

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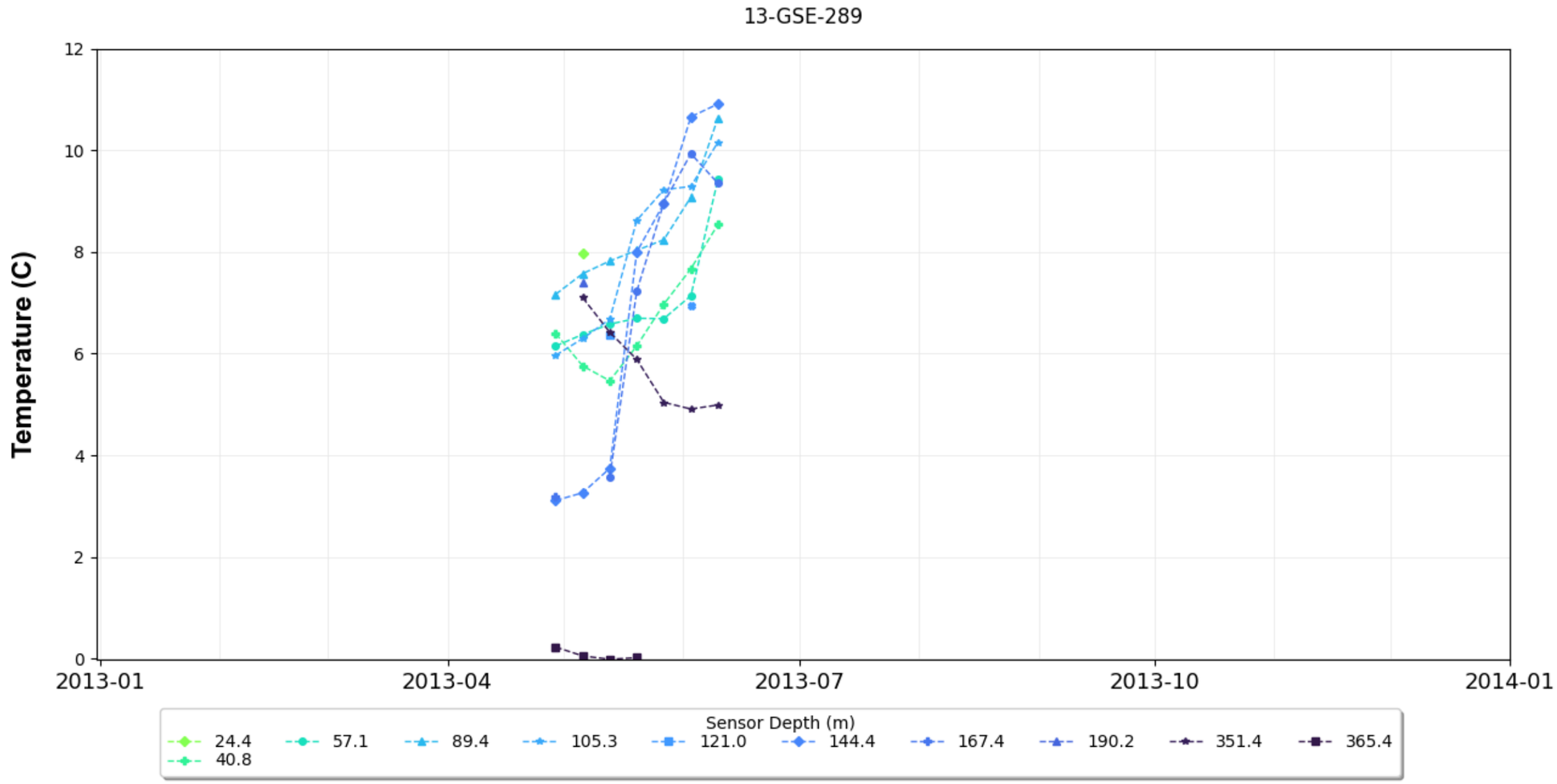
| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Historic Ground Temperature Site – 13-GSE-288 |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 / Approved: JBK / Figure: **B-42** |

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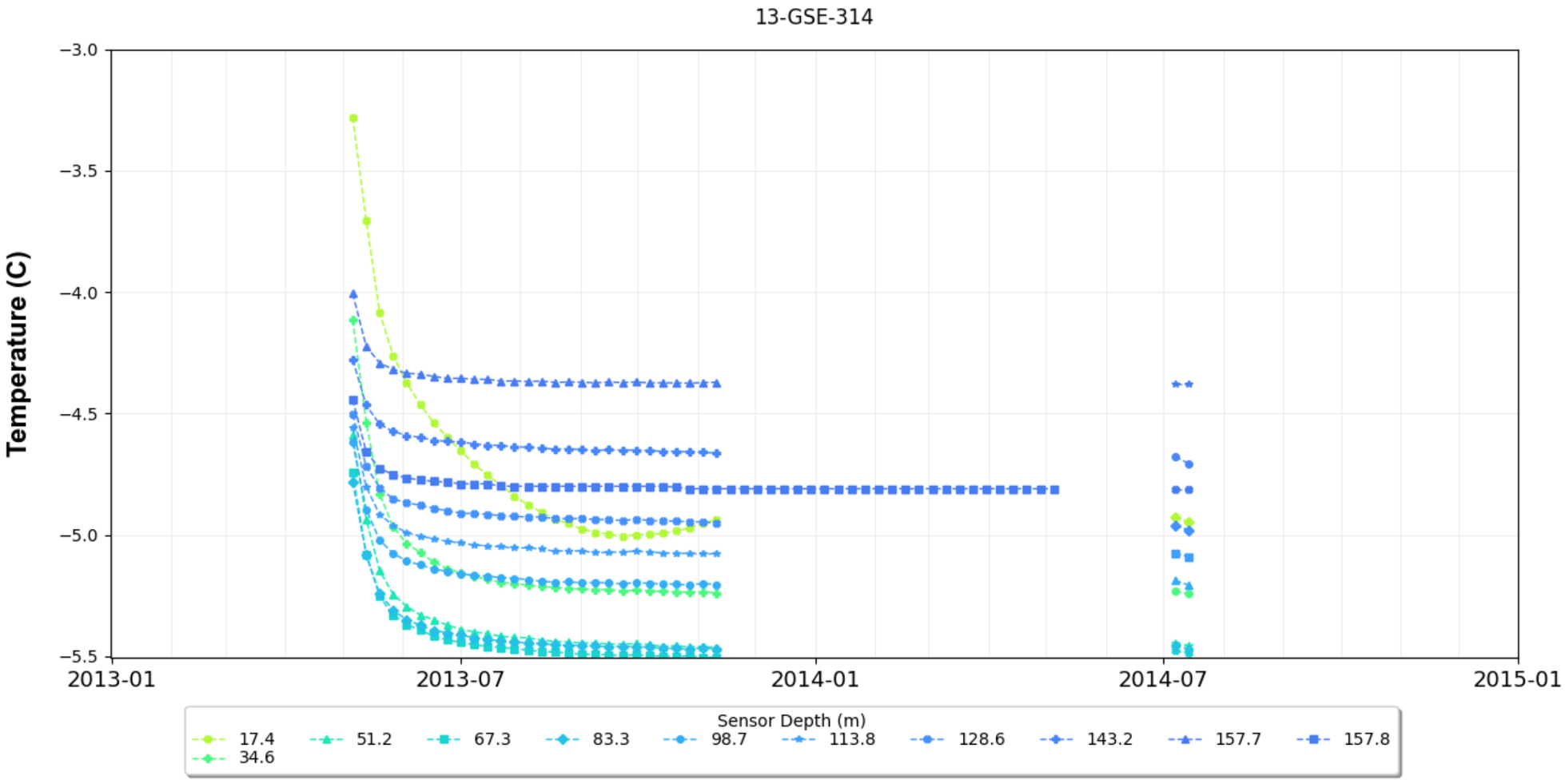
| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Historic Ground Temperature Site – 13-GSE-289 |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 / Approved: JBK / Figure: **B-43** |

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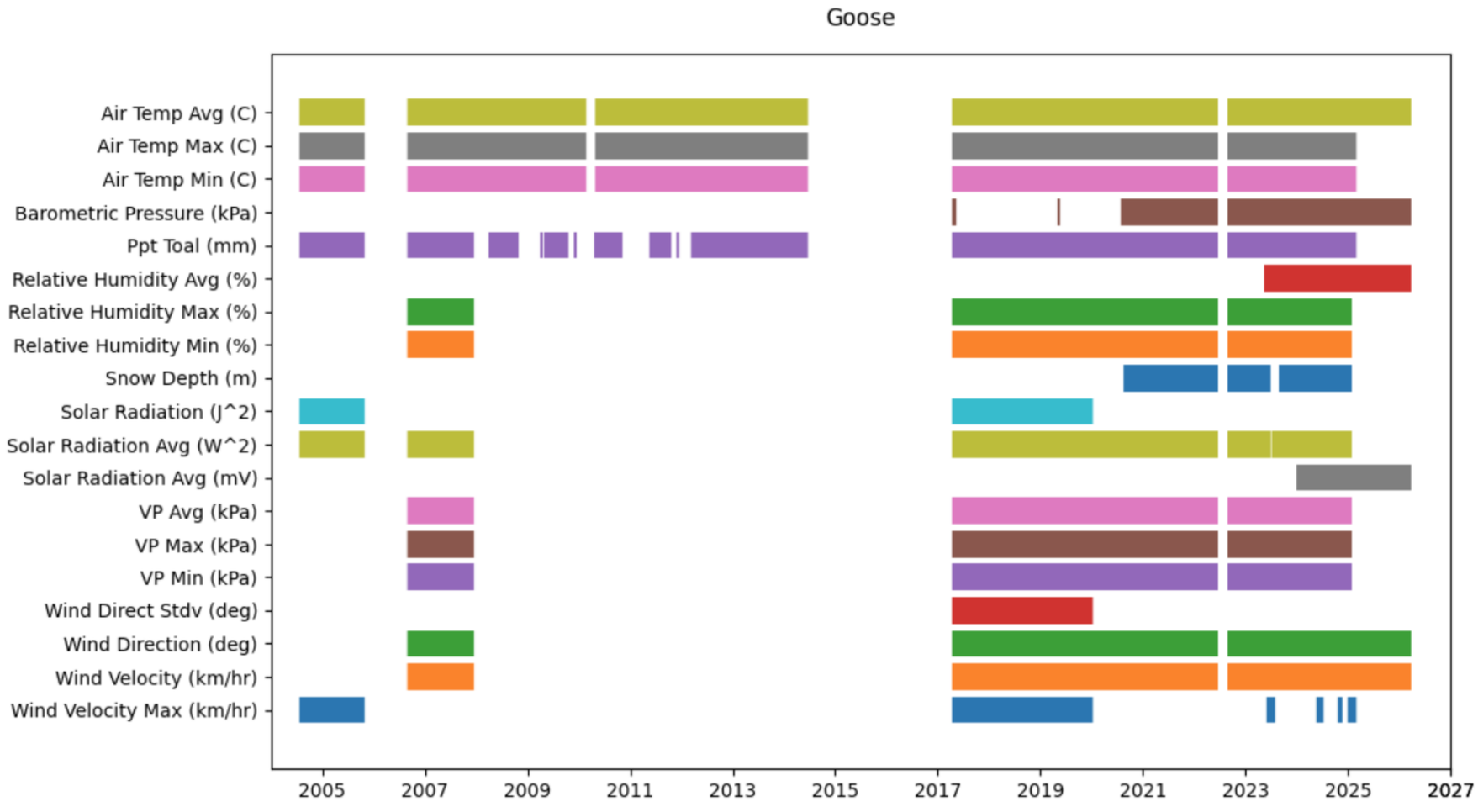
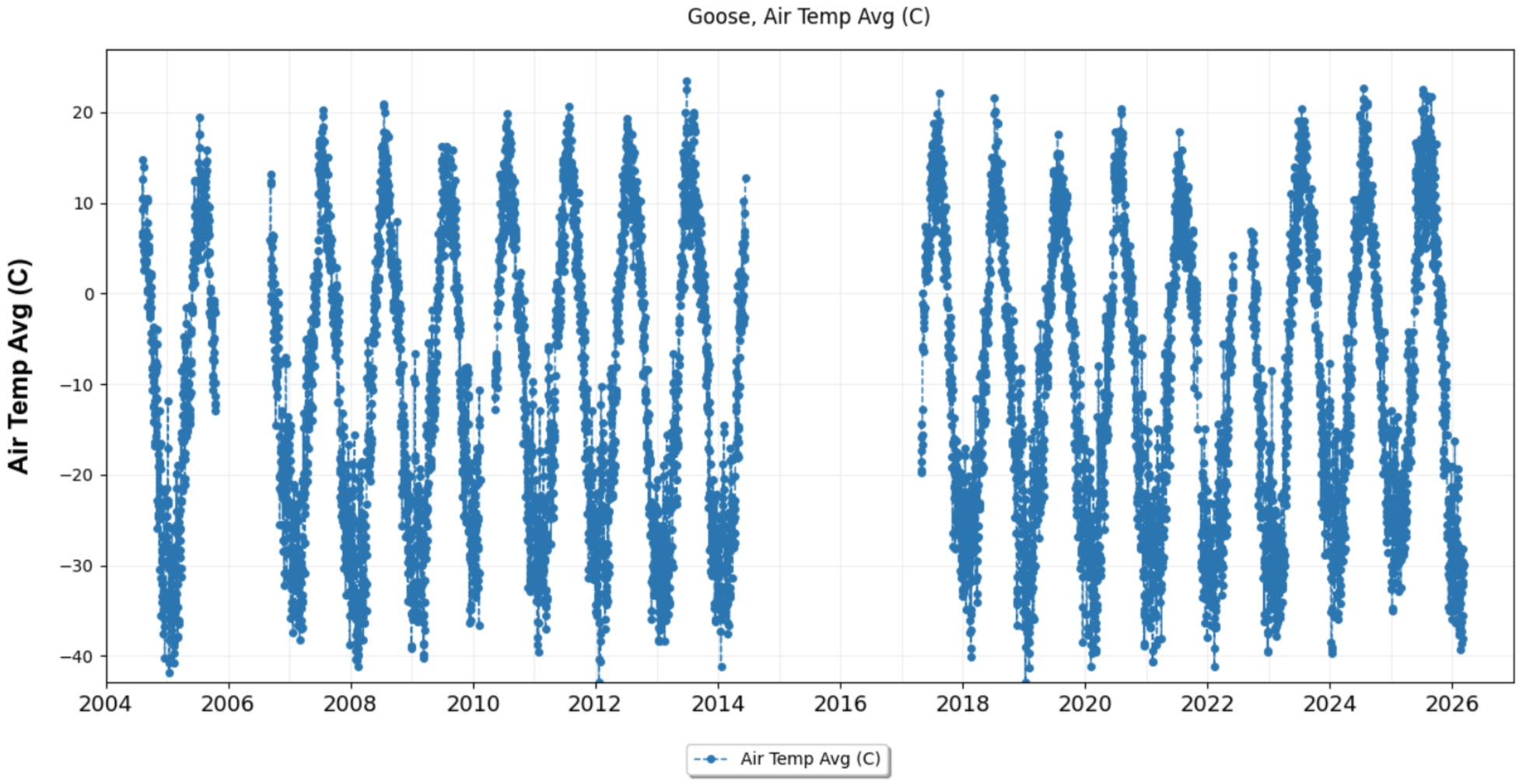
| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Historic Ground Temperature Site – 13-GSE-314 |
| Job No: CAPR004313<br>Filename: Appendix_GroundThermal.pptx | Back River Project | Date: March 2026 / Approved: JBK / Figure: **B-44** |

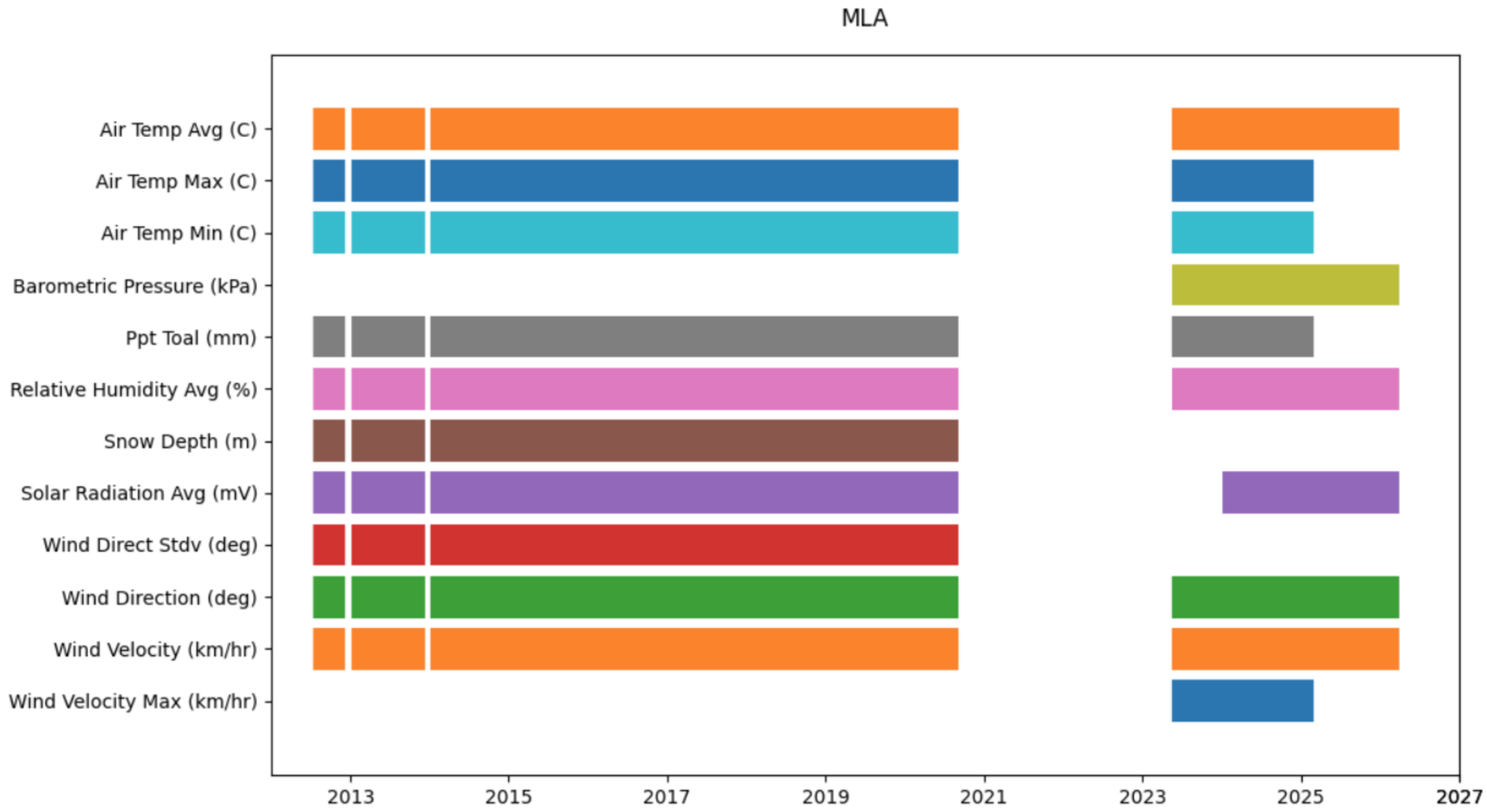
# Appendix C Meteorological Station Data



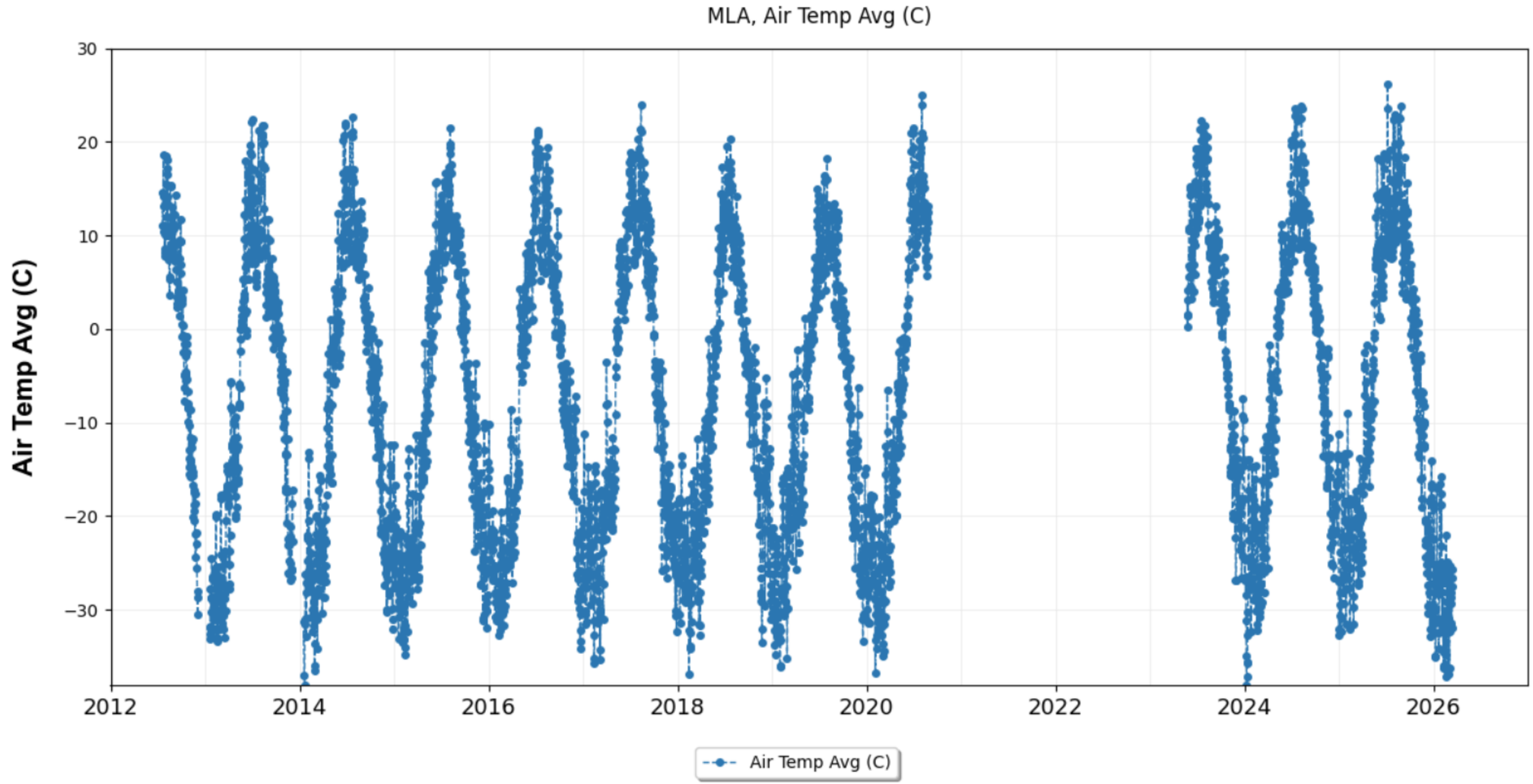

| | | |
|---|---|---|
| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Goose Weather Station – Data Record |
| Job No: CAPR004313<br>Filename: AppendixC_MeteorologicalData.pptx | Back River Project | Date: March 2026 / Approved: JBK / Figure: C-1 |




| | | |
|---|---|---|
| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Goose Weather Station – Mean Daily Air Temperature |
| Job No: CAPR004313<br>Filename: AppendixC_MeteorologicalData.pptx | Back River Project | Date: March 2026 / Approved: JBK / Figure: C-2 |




| | | |
|---|---|---|
| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | MLA Weather Station – Data Record |
| Job No: CAPR004313<br>Filename: AppendixC_MeteorologicalData.pptx | Back River Project | Date: March 2026 / Approved: JBK / Figure: **C-3** |




| | | |
|---|---|---|
| srk consulting | B2GOLD | Site-wide Ground Thermal Monitoring Plan |
| | | Goose Weather Station – Mean Daily Air Temperature |
| Job No: CAPR004313<br>Filename: AppendixC_MeteorologicalData.pptx | Back River Project | Date: March 2026 / Approved: JBK / Figure: C-4 |

# APPENDIX K ENGAGEMENT RECORD

**Table L-1 Community Engagement Record**

| Date | Type of Engagement | Community | Organization/ Group | Description |
|---|---|---|---|---|
| January 2, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post and photos from the B2Gold Nunavut Christmas toy giveaway |
| January 20, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post re. Clive Johnson's meeting with Premier PJ Akeeagok |
| January 24, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB announcement re. winner of B2Gold Nunavut Indigenous Mining and Exploration Scholarship: Jodie Stephens |
| January 28, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post re. B2Gold Nunavut's partnership with Taloyoak Netsilik School |
| February 4, 2025 | Community | Cambridge Bay | Hamlet | Goose Mine update meeting with Cambridge Bay Mayor and council members |
| February 5, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB announcement re. upcoming Kitikmeot Tradeshow in Cambridge Bay |
| February 5, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB photo from the Kitikmeot Tradeshow in Cambridge Bay |
| February 5, 2025 | Conference/ Tradeshow | Multi-Community | Multi-Stakeholder | B2Gold Nunavut Kitikmeot Tradeshow presentation and booth |
| February 6, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post re. meeting with Cambridge Bay Hamlet Council |
| February 10, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post re. B2Gold Nunavut's partnership with the Redfish Arts Society |
| February 10, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB announcement re. B2Gold Nunavut's, GN's, and KIA's signing of a Memorandum of Understanding to strengthen collaboration on economic development, training, and community wellbeing in the Kitikmeot Region |
| February 10, 2025 | Community | Kugluktuk | Kitikmeot Mayor(s) | Project update and Inuit employment discussion with Kugluktuk Mayor |
| February 11, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB notice of Cambridge Bay office closure |
| February 11, 2025 | Community | Kugluktuk | Hamlet | Meeting with Wellness Coordinator and A/SAO to discuss a potential partnership on the development of an Elders/youth cabin in Kugluktuk |
| February 11, 2025 | Community | Kugluktuk | School/Students | Discussion with Kugluktuk High School Principal on potential partnership program between KSO and B2Gold Nunavut to support school-based initiatives. Also discussed GN-B2Gold Nunavut-KIA MOU and IIBA Achievement Awards Program |

| Date | Type of Engagement | Community | Organization/ Group | Description |
|---|---|---|---|---|
| February 12, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post and photos from the Kitikmeot Tradeshow in Cambridge Bay |
| February 12, 2025 | Community | Kugluktuk | Hamlet | Goose Mine update meeting with Kugluktuk Mayor and council members |
| February 18, 2025 | Community | Cambridge Bay | HTO | Meeting with Cambridge Bay HTO for Project update (by Teams) |
| February 19, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post re. B2Gold Nunavut's ERTS program |
| February 20, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB notice of Kugluktuk office closure |
| February 21, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post re. B2Gold Nunavut's partnership with Taloyoak Netsilik School to deliver the 'Youth Care Club' |
| March 11, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post re. B2Gold Nunavut's support for youth volleyball training camp in Gjoa Haven |
| March 12, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post and photos from B2Gold Nunavut's Environmental Management System |
| March 12, 2025 | Community | Kugluktuk | HTO | Virtual meeting to discuss potential fisheries offset project work in 2025 and continued work at the Bernard Harbour Project |
| March 14, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB notice of Cambridge Bay office closure |
| March 17, 2025 | Community | Kingaok and Omingmaktok | HTO | Meeting to discuss oil spill response training and provide a general Project update |
| March 18, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB announcement re. Dr. David S. Robertson Geology Scholarship, the Jim Popowich Memorial Mining Endowment Geology Scholarship, and the Pressacco Geology Scholarship |
| March 19, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB recruitment call for an Open Pit Labourer and a Site Services Labourer at the Goose Mine |
| March 24, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB notice of Cambridge Bay office closure |
| March 26, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post and photos from B2Gold Nunavut's country food and Inuit games night at the Goose Camp |
| April 1, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post celebrating the creation of Nunavut |
| April 1, 2025 | Community | Multi-Community | Hamlet | Email correspondence sent to Kitikmeot Hamlets sharing 2024 Goose Mine Annual Socio-Economic Monitoring Report |

| Date | Type of Engagement | Community | Organization/ Group | Description |
|---|---|---|---|---|
| April 7, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB announcement re. the upcoming 2025 Nunavut Mining Symposium in Iqaluit |
| April 7, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post and photos from the Kugluktuk Frolics BBQ |
| April 7-9, 2025 | Conference/ Tradeshow | N/A | Multi-Stakeholder | Project update and Back River Exploration Project update presentations at the Nunavut Mining Symposium in Iqaluit |
| April 8, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB photo from the Nunavut Mining Symposium |
| April 8, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post and photos from the Nunavut Mining Symposium |
| April 9, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post and photos from the Nunavut Mining Symposium |
| April 10, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB announcement re. 3 Inuit Summer Student Program openings |
| April 10, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB re-post of KIA's post and photos from the Nunavut Mining Symposium |
| April 11, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post congratulating B2Gold Nunavut's John Kaiyogana on his receipt of the 2025 Nunavut Mining Symposium Individual Achievement Award |
| April 13, 2025 | Community | Cambridge Bay | Hamlet | Meeting with Hamlet of Cambridge Bay Chief Administrative Officer to discuss potential B2Gold Nunavut supports for community infrastructure |
| April 14, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post and photos from ceremony at which KIA president Bobby Greenley was awarded the King Charles III Coronation Medal |
| April 17, 2025 | Community | Other (see 'Description') | Athabasca Denesuline NeNe Land Corporation | Email informing ADNLC the Goose Mine 2024 Annual Reports have been submitted to the Nunavut Impact Review Board |
| April 22, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post and photos from the Community Easter Egg Hunt in Cambridge Bay |
| April 24, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB video post: B2Gold Nunavut successfully completed the 2025 Winter Ice Road Campaign for the Goose Mine |
| May 6, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post re. Employee Spotlight Series |
| May 7, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post congratulating B2Gold Nunavut's Ben Scott on his receipt of the 2025 Canadian Young Mining Leaders Award |

| Date | Type of Engagement | Community | Organization/ Group | Description |
|---|---|---|---|---|
| May 14, 2025 | Community | Cambridge Bay | Hamlet | Meeting with Hamlet of Cambridge Bay Mayor and CAO - Update and briefing on Goose Mine Grand Opening plan |
| May 23, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB announcement re. a new scholarship available through the Nunavut Mining Symposium Society |
| May 23, 2025 | Community | Other (see 'Description') | Athabasca Denesųłiné NeNe Land Corporation | Email informing ADNLC the Goose Mine 2024 Annual Reports have been sent out by NIRB for public comment |
| May 23, 2025 | Community | Cambridge Bay | HTO | Email informing HTO the Goose Mine 2024 Annual Reports have been sent out by NIRB for public comment |
| May 26, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB announcement re. B2Gold Nunavut's newest Community Liaison Officer for the Kugluktuk office: Jennifer Ongahak |
| June 12, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post re. Inuit Games and Country Food Night |
| June 19, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post welcoming 4 trainees from Redfish Art Studio to Goose Mine for the Inuit Workplace Experience program |
| June 21, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post celebrating National Indigenous Peoples Day 2025 |
| June 23, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post and photos re. B2Gold Nunavut's partnership with Redfish Arts Studio |
| June 24 and 25, 2025 | Community | Multi-Community | IEAC | IEAC meeting in Yellowknife and IEAC site visit at both MLA and Goose |
| June 27, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post and photos from annual meeting of the IEAC |
| June 30, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB announcement re. the first gold pour at the Goose Mine |
| July 1, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post celebrating Canada Day |
| July 2, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post and photos from the Arctic Sovereignty and Security Summit |
| July 3, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post congratulating the recipients of the 2025 Back River IIBA Achievement Awards |
| July 4, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post sharing message and photos from Premier of Nunavut congratulating B2Gold Nunavut on the successful first gold pour |
| July 8, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post announcing Nunavut Day celebration in Cambridge Bay |

| Date | Type of Engagement | Community | Organization/ Group | Description |
|---|---|---|---|---|
| July 9, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post celebrating Nunavut Day |
| July 9, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post announcing Job Fair in Edmonton on July 17th and 18th |
| July 9, 2025 | Community | Cambridge Bay | General Public | Nunavut Day BBQ and Community Events in Cambridge Bay |
| July 10, 2025 | Community | Cambridge Bay | Hamlet | Meeting with Mayor and Council to provide a Project update and discuss potential partnership opportunities |
| July 11, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post and photos of Nunavut Day celebration and BBQ |
| July 15, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post celebrating World Youth Skills Day |
| July 17, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post and photos of Nunavut Day celebration |
| July 17, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB video from Nunavut Day celebration |
| July 18, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post announcing B2Gold Nunavut's Indigenous Student in Exploration/Mining Scholarship |
| July 23, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB notice of Kugluktuk office closure on July 24 and 25 |
| July 23, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post sharing KIA's announcement about B2Gold Nunavut's and Agnico Eagle's funding of Kitikmeot Inuit who will be attending a three-month Underground Miner training program at Aurora College in Fort Smith, NWT |
| July 24, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post announcing the 2025 Community Tour schedule |
| July 25, 2025 | Community | Multi-Community | HTO | Letters sent to all HTOs in Kitikmeot communities advising of the upcoming 2025 sealift schedule |
| July 30, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post sharing B2Gold Nunavut employee spotlight: Harry Epilon |
| July 30, 2025 | Community | Multi-Community | HTO | Letter sent to all HTOs in Kitikmeot communities advising about the upcoming Community Tour |
| July 30, 2025 | Community | Multi-Community | Hamlet | Letter sent to all Hamlets in Kitikmeot communities advising about the upcoming Community Tour |
| August 6, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post about the Inuit MERT Prep School |
| August 7, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post reporting B2Gold Nunavut's Q2 2025 results |

| Date | Type of Engagement | Community | Organization/ Group | Description |
|---|---|---|---|---|
| August 8, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB notice of Kugluktuk office closure, August 11-15 |
| August 11, 2025 | Community | Kugaaruk | General Public | 2025 Community Tour Open House |
| August 11, 2025 | Community | Kugaaruk | Hamlet | Informal Project update with Kugaaruk SAO Michelle Byers |
| August 12, 2025 | Community | Taloyoak | General Public | 2025 Community Tour Open House |
| August 13, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post announcing schedule change for Community Tour stop in Taloyoak, and photos from Kugaaruk and Gjoa Haven |
| August 13, 2025 | Community | Gjoa Haven | General Public | 2025 Community Tour Open House |
| August 13, 2025 | Community | Gjoa Haven | Hamlet | Informal Project update and site visit planning with Gjoa Haven SAO Jennifer Wakegijig |
| August 14, 2025 | Community | Cambridge Bay | General Public | 2025 Community Tour Open House |
| August 15, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post and photos from the 2025 Community Tour |
| August 15, 2025 | Community | Kugluktuk | General Public | 2025 Community Tour Open House |
| August 18, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post announcing that applications for the Young Mining Professionals Scholarship Fund are currently being accepted |
| August 22, 2025 | Community | Cambridge Bay | Hamlet | Goose Grand Opening Cambridge Bay event update with Cambridge Bay Mayor and SAO |
| August 27, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post announcing the Grand Opening of Goose Mine and celebration events |
| August 28, 2025 | Newsletter | Multi-Community | Multi-Stakeholder | IIBA Newsletter released |
| August 28, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post sharing the latest IIBA Newsletter |
| September 2, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post announcing the Grand Opening of Goose Mine and celebration events |
| September 4, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post announcing the Grand Opening of Goose Mine and celebration events |
| September 4, 2025 | Other (see 'Description') | N/A | Multi-Stakeholder | Goose Mine Grand Opening at the Goose Mine Site - Members of all levels of government, KIA, and communities invited to participate |
| September 5, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post announcing B2Gold Nunavut's investment of $10 million for housing development in the Kitikmeot Region |

| Date | Type of Engagement | Community | Organization/ Group | Description |
|---|---|---|---|---|
| September 5, 2025 | Community | Cambridge Bay | General Public | Goose Mine Grand Opening Community Celebration in Cambridge Bay for the general public |
| September 6, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post announcing the passing of KIA President Bobby Greenley |
| September 8, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB video: Inside the Making of B2Gold Nunavut's Goose Mine |
| September 8, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post and photos sharing Premier of Nunavut's congratulations on the Grand Opening of Goose Mine |
| September 8, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post and photos sharing Premier of Nunavut's message about B2Gold Nunavut's investment in housing in the Kitikmeot |
| September 8, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post and photos sharing Premier of Nunavut's participation in Grand Opening of Goose Mine |
| September 8, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB photo of Goose Mine |
| September 10, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post announcing the opening of the Canadian Institute of Mining Foundation's 'Taking Flight' Grants |
| September 12, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post sharing KIA's post about their participation in the Grand Opening of Goose Mine |
| September 18, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post announcing B2Gold Nunavut's Kitikmeot Social Investment Program |
| September 23, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post and photos about B2Gold Nunavut's Spill Response Training at MLA |
| September 30, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post honouring the National Day for Truth and Reconciliation |
| October 6, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post sharing news release: B2Gold Nunavut Achieves Commercial Production at Goose Mine |
| October 8, 2025 | Community | Gjoa Haven | Hamlet | Informal meeting with SAO to discuss B2Gold Nunavut community funding programs |
| October 8, 2025 | Community | Kingaok and Omingmaktok | HTO | Updates on installation of spill response equipment at Bay Chimo |
| October 8, 2025 | Community | Cambridge Bay | Kitikmeot Corporation | Met with Kitikmeot Corporation’s President & CEO David Omilgoitok, new COO Brad Krizen, and Director of Finance Wes Sutherland - Meeting was informal and an update was provided on the renewable energy project |

| Date | Type of Engagement | Community | Organization/ Group | Description |
|---|---|---|---|---|
| October 9, 2025 | Community | Cambridge Bay | School/Students | Met with the Principal and Vice-Principal at the high school to discuss their Kitikmeot Social Investment Program Application for help getting the carpentry workshop in the school open for some students to learn after school and specifically the need for a Red Seal certified instructor |
| October 15, 2025 | Community | Cambridge Bay | Hamlet | Meeting with Hamlet SAO to provide a Project update and discuss the proposed Inuit Nunangat University locations announced in October 2025 |
| October 16, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post and photos from Inuit Games and Country Food Night at Goose Camp |
| October 16-17, 2025 | Multi-Stakeholder | Multi-Community | KSEMC | Annual KSEMC Meeting |
| October 17, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post and photos from the 2025 KSEMC meeting |
| October 21, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post sharing employee spotlight: Shavonne Analok |
| October 27, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post sharing information about Mining North Works |
| October 28, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post announcing the passing of Attima Hadlari, KIA's Vice President of Economic Development |
| October 30, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post about B2Gold Nunavut's support of the 12-week underground mining training program at Aurora College's Centre for Mine and Industry Training in Fort Smith, NWT |
| November 4, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post announcing the development of the Regional Wealth Creation Fund |
| November 10, 2025 | Community | Kugluktuk | Hamlet | Phone call with the Mayor of Kugluktuk to discuss training partnerships, and community investment programming |
| November 13, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB video about B2Gold Nunavut's partnership with Redfish Art Studio |
| November 14, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post and photos of Inuit Games Night at Goose Camp |
| November 17, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post announcing the new GM Back River: Dan Gagnon |
| November 18, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post sharing student voices: Jaiden Maksagak |
| November 19, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post: B2Gold Nunavut congratulates all Members of the 7th Nunavut Legislative Assembly on recent elections |
| November 20, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post sharing student voices: Miranda Tegumiar |

| Date | Type of Engagement | Community | Organization/ Group | Description |
|---|---|---|---|---|
| November 23, 2025 | Community | Kugluktuk | Hamlet | Call with Mayor to discuss on-site events and counselling supports being deployed to Kugluktuk |
| November 25, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post sharing student voices: Reggie Maqsagak |
| November 27, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post sharing student voices: Henry Angutingunirk |
| December 2, 2025 | Newsletter | Multi-Community | Multi-Stakeholder | IIBA Newsletter released |
| December 2, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post sharing 2nd IIBA Newsletter for 2025 |
| December 8, 2025 | Community | Kugaaruk | Hamlet | Discussion of potential support from B2Gold Nunavut during water plant emergency |
| December 10, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB notice regarding fake B2Gold Nunavut FB page and other social media |
| December 11, 2025 | Community | Taloyoak | Hamlet | Discussion of potential funding/partnership opportunities with CAO |
| December 15, 2025 | Community | Gjoa Haven | Hamlet | Discussion of potential funding/partnership opportunities with CAO and A/CAO |
| December 18, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post and photos from the 2025 Community Toy Drive |
| December 19, 2025 | Social Media | Multi-Community | Multi-Stakeholder | FB post: Happy Holidays from B2Gold |
| December 19, 2025 | Community | Cambridge Bay | Hamlet | Review of 2026 Kitikmeot Tradeshow with CAO |
| December 19, 2025 | Community | Taloyoak | Hamlet | Discussion of potential funding/partnership opportunities with CAO |
| December 21, 2025 | Community | Taloyoak | Hamlet | Discussion of potential funding/partnership opportunities with CAO |