REPORT

2025 Groundwater Monitoring Report

Baffinland Iron Mines Corporation

Submitted to:

Baffinland Iron Mines Corporation- Mary River Project

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Executive Summary

The 2025 Groundwater Monitoring Report prepared by WSP Canada Inc. (WSP) for Baffinland Iron Mines Corporation (BIM) provides a comprehensive overview of the groundwater monitoring activities conducted in 2025 at the Mary River Project in Nunavut. The report focuses on two waste facilities: the Landfill Facility (LF) and the Hazardous Waste Berm (HWB) Facility. The primary objectives of the monitoring program were to assess groundwater quality, evaluate groundwater flow directions, and identify potential contaminants of concern at both waste facilities. Updates to the conceptual site model are presented based on the 2025 findings.

Previous groundwater quality results from site have been questioned due to the monitoring well construction and previous sampling methodology (CIRNAC 2024). This report acknowledges several areas of uncertainty that may impact the representativeness of the groundwater data collected. A total of 23 standpipe wells installed at the LF and HWB Facility were not equipped with bentonite seals, which may allow surface water infiltration and affect groundwater quality and groundwater levels. Therefore, BIM and WSP have made efforts to mitigate the uncertainty as much as possible by undertaking a different groundwater sampling methodology in 2024 and in 2025, conducting slug testing after sampling once the well had been purged, collecting and comparing groundwater levels, and comparing historical and 2025 analytical results. Following the 2024 recommendations, BIM has installed 5 new standpipe wells (with bentonite seal) based on the WSP well design provided in 2024 to further inform on representativeness of groundwater samples, and to reduce the risk of damage from frost-heave.

In August/September 2025, groundwater samples were collected from standpipe wells and drive point piezometers, following specific procedures to minimise surface flow into the wells. These procedures included purging three well volumes, ensuring parameter stabilization, reaching aquifer's recharge and low-flow sampling techniques. A total of 15 groundwater stations were sampled at the LF, and 13 groundwater stations were sampled at the HWB Facility. One seep station and two surface water stations were also sampled at the LF as part of the August/September 2025 sampling program.

The groundwater stations were characterized based on their location relative to the waste facility, i.e., Source, Background, Proximal and Downgradient. Groundwater and seep quality results were compared to the FIGQ Tier 2 (Industrial/Commercial Land use) for the Protection of Freshwater Aquatic Life (AW-F) guideline, Yukon Contaminated Site Regulation (CSR) AW-F, and the Water Licence Effluent Quality Discharge Limits (Water Licence 2AM-MRY2540). Surface water results were compared to the CCME AW-F and the Water Licence Effluent Quality Discharge Limits (Water Licence 2AM-MRY2540).

At the LF, groundwater elevations ranged from 169.1 to 187.4 masl. Groundwater flow at LF is inferred to be to the west at the north side of the landfill towards Sheardown Lake NW, and to the southwest at the southern side of the landfill towards Sheardown Lake SE. The hydraulic gradient at LF measured in 2025 was estimated to be 0.057 m/m. There were no exceedances measured at the downgradient station of the LF in 2025. Based on proximal and background station data, naturally high concentrations of dissolved copper and total/dissolved uranium may be present in the region. Other contaminants of concern measured at source stations that may impact downgradient groundwater quality include fluoride, sulfate and dissolved boron.

Two RST thermistors were installed in 2025 downgradient of the LF to better understand the active layer and permafrost's thermal regime. The main findings of the ground temperatures with time and depths are the following:

- At similar depths, the thermistor farthest downgradient of the LF (MS-LF-TH-01) showed colder ground temperatures in August compared to the one closest to the LF (MS-LF-TH-02).
- The active zone closest to the landfill (around 2.6 mbgs) was deeper than the one downgradient (around 1.7 mbgs).
- The maximum depth of the active layer should be assessed over the year once additional data is available.

At the HWB Facility, groundwater elevations ranged from 171.3 to 174.2 masl. Groundwater flow at HWB Facility is inferred to be to the southwest towards Camp Lake. The hydraulic gradient at HWB Facility measured in 2025 was estimated at 0.012 m/m. There were no exceedances measured at the newly installed standpipe well downgradient of the HWB Facility in 2025. Contaminants of concern measured at source stations that may impact downgradient groundwater quality include chloride, fluoride, nitrate, nitrite, pyrene, dissolved copper, dissolved cobalt, naphthalene, and PHC F2 (C10-C16). Dissolved iron exceeded the FIGQ AW-F guideline at many stations at HWB Facility as well as at some background stations. This suggests HWB Facility has naturally elevated background concentrations of dissolved iron.

Based on the 2025 findings, the Conceptual Site Model (CSM) was updated and includes the ground temperature information from the newly installed RST thermistors, the presence of ice-wedge polygons observed on aerial photographs, as well as information about a potential talik observed at a nearby lake of similar size (Muriel Lake along the Tote road) to Camp Lake and Sheardown Lake. With the additional information from monitoring well installations with bentonite seals, the shallow groundwater is thought to consist of a combination of meltwater with limited rainfall/surface water impacting the groundwater quality. A "*source-pathway-receptor"* approach was used for the CSM to describe the Site conditions as they relate to human health and the environment.

The recommendations for the 2026 program are summarised as:

- **Continue monitoring groundwater** at existing monitoring standpipe wells and drive point piezometers at LF and HWB Facility including a water level survey and water quality sampling in late August or early September 2026 when the active layer has fully thawed. It is recommended to conduct an elevation survey of all monitoring stations due to the potential for frost heave.
- **Continue monitoring seep quality at source seeps and downgradient and proximal surface water locations at the LF** in September 2026. It is also recommended to identify if new seeps develop throughout the summer season.
- **Continue monitoring ground temperatures** at the two new RST thermistor stations to provide year-round information of potential changing conditions.
- **Remediate standpipe wells (ones installed without bentonite seal)** by excavating around the well to a depth of approximately 1 m and constructing a post-installation bentonite seal around the well to reduce surface water infiltration.

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1.0 INTRODUCTION

1.1 Overview

WSP Canada Inc. (WSP) was requested by Baffinland Iron Mines Corporation (BIM) to provide remote support and complete follow-up reporting for the 2025 groundwater monitoring program for two waste facilities located at the Mary River Project (referred to as "the Project") located on northern Baffin Island in Nunavut. The Project consists of a mine site (referred to as "the Mine Site") and a port facility (referred to as "Milne Port") located approximately 100 km north of the Mine Site. The two waste facilities are located at the Mine Site (Figure A).

1.2 Background and Site Description

1.2.1 General

The Project consists of a high-grade iron open pit mine located at the Mine Site. The Project is located in a zone of continuous permafrost (90 – 100%, Heginbottom et al. 1995). The depth of the active layer at the Project is typically expected to range between 1 m to 3 m, but may be greater in areas where there is loose, sandy soil at the edges of lakes or rivers.

The depth of permafrost in the region is in the order of a half kilometre, based on ground temperature measurements at the former Nanisivik Mine located 270 km northwest of the Project, where permafrost has been measured at depths greater than 430 m (Gartner Lee 2003). Boreholes located 450 km west and 450 km south of Pond Inlet indicate permafrost thicknesses of 500 m and 400 m, respectively (Geological Survey of Canada 2006). A deep thermistor (approximately 400 m) installed near the Project's No. 1 Deposit in 2007, indicates that the permafrost depth may approach 700 m below the deposit.

In areas of continuous permafrost, there are two groundwater flows regimes: a deep groundwater flow regime beneath permafrost, and a shallow groundwater flow regime located in the active layer (seasonally thawed) near the ground surface. With the exception of areas of taliks beneath lakes, the two groundwater regimes are isolated from one another by a thick zone of permafrost. Permafrost reduces the hydraulic conductivity of the bedrock by several orders of magnitude (Burt and Williams 1976; McCauley et al. 2000). Consequently, the permafrost in the rock behaves like a no-flow barrier to groundwater movement. Therefore, the shallow groundwater flow regime has little to no hydraulic connection with the deep groundwater regime which is overlain by thick and continuous permafrost.

The shallow groundwater regime is active only seasonally during the summer months, and the magnitude of the flow in this layer is expected to be several times less than runoff from snowmelt. Groundwater in the active layer (i.e., where the shallow aquifer is located) may mix with surface runoff in the upper part of the aquifer, and primarily flows to local depressions and ponds that drains into larger lakes. Water in the active layer is stored through ground ice during the cold season and is then released once the ice thaws in late spring or early summer, thus providing flow to the surface. During the warm season, groundwater in the active layer is recharged primarily by precipitation.

Based on this information, it can be assumed that shallow groundwater infiltration and storage is minimal, which is reflected in the observed rapid runoff response of streams to rainfall events. Nevertheless, Nunavut Impact Review Board (NIRB) Project Certificate No. 005, Amendment 05, Term and Condition #23 was states that "*The Proponent shall develop and implement a Groundwater Monitoring and Management Plan to monitor, prevent and/or mitigate the potential effects of the Project on shallow groundwater within the Project area*".

The shallow groundwater monitoring well network includes drive point piezometers and standpipe monitoring wells (with and without bentonite seals) and is located at two waste facilities at the Mine Site (Figure A):

- The Landfill Facility (LF), located east of Sheardown Lake NW and north of Sheardown Lake SE.
- The Hazardous Waste Berm (HWB) Facility, located south of and adjacent to the Camp Lake Airstrip, close to Weather Haven.

The shallow groundwater monitoring well network at the two waste facilities (Figures B and C) is designed to monitor seasonal groundwater levels and water quality within the active layer. In winter, when the active layer freezes, the existing groundwater monitoring wells are often subjected to frost jacking which has resulted in irreparable damage to some groundwater monitoring wells, requiring costly replacements. Frost jacking has resulted in the need for several groundwater monitoring wells to be replaced, which results in a disruption to the continuity of annual groundwater monitoring. This is a common issue at sites located in high arctic regions.

The following sections include a description of the facilities and design histories from the 2024 Knight Piésold Consulting Ltd. (KP) report (KP 2024). Both waste facilities (LF and HWB Facility) are industrial in nature. Since 2017, Baffinland has had complications in characterizing groundwater quality due to a number of issues inherent to groundwater monitoring conducted in arctic regions. As discussed in the Final Environmental Impact Statement (FEIS; Baffinland 2012 and Baffinland 2013), groundwater quality is generally not considered to be at risk at the Project because of the extensive permafrost layer that acts as an impermeable barrier limiting potential migration of contaminants into the deep groundwater aquifer located below continuous permafrost. Frost jacking damaging well installs, difficulties installing infrastructure below grade due to permafrost presence, logistical constraints due to sealift, lack of groundwater (dry wells, no recharge), and different groundwater sampling methodologies have resulted in several years of data that has not been comparable year over year. Previous groundwater quality results from site have been questioned due to the monitoring well construction and previous sampling methodology (CIRNAC 2024). This report, while presenting the 2025 groundwater sampling results, is also a continuation of the 2024 annual groundwater report which provided an updated Conceptual Site Model (referred below as CSM) and discussion of the confidence in the groundwater quality data previously collected at the waste facilities.

1.2.2 Landfill Facility

The LF receives inert, non-combustible waste, consisting of plastic, concrete, compliant incinerator ash, and used construction materials such as scrap metal, pipes, glass and wood. The incinerator ash is comprised of combustible non-hazardous wastes that are generated on-site, including food wastes. The incinerator ash is tested prior to disposal to ensure it meets the environmental guideline for industrial waste discharges into municipal solid waste treatment facilities (Department of Environment of the Government of Nunavut 2010). The Toxicity Characteristic Leaching Procedures (TCLP) is the method used to analyse the residuals, as per United States Environmental Protection Agency (USEPA). An inventory of the waste deposited in the landfill was undertaken by BIM in 2024 but was not available for review for this report. Regular inspections are performed by BIM staff to monitor for integrity issues in the LF.

The LF was designed by KP in 2008 (KP 2008) and constructed in 2013. The 2008 design consisted of a single landfill cell. The cell reached its design capacity in 2018, at which time BIM retained KP to complete a staged design to expand the landfill (KP 2018). The current expansion design consists of five cells for progressive waste placement. Waste placement is currently occurring in Cells 1 through 3 and will continue until these cells have reached design capacity. Subsequent landfilling will progress to Cells 4 and 5. Perimeter berms around Cells 1 through 3 were constructed to define the landfill limits, contain the waste, and divert non-contact surface water. The landfilling sequence includes two stages; an initial stage of waste which is covered with a thin layer of sand fill, followed by a second stage which is formed on top of the first. Compaction of the waste is undertaken as required. To achieve permafrost encapsulation for the final landfill, the final cover was designed to be thicker than the anticipated active layer (KP 2018).

The groundwater program started at the LF with the installation of 4 drive point piezometers (MS-LF-GW1, MS-LF-GW2, MS-LF-GW3 and MS-LF-GW-REF2-17) as part of a pilot program in 2017. An additional 5 drive point piezometers locations (MS-LF-GW4, MS-LF-GW5, MS-LF-GW-REF1, MS-LF-GW-REF2 and MS-LF-GW-REF3) were installed by BIM with the help of Tetra Tech from 2018 to 2021. In 2022 and 2023, a total of fifteen standpipe wells were installed by KP (KP 2023a, 2024) to attempt to characterize and collect groundwater sampled near the bottom of the active layer in the vicinity of the LF. Multiple installations of drive point piezometers and/or monitoring wells have occurred over the years at the same location due to damaged wells.

The monitoring program generally consists of a single annual sampling event in late August or early September once the active layer is assumed to have fully thawed.

1.2.3 Hazardous Waste Berm Facility

The HWB Facility is a temporary storage area for hazardous wastes generated by the Project. It was designed by Genivar and constructed around 2008. It is comprised of multiple lined facilities, utilized as a temporary storage location for hazardous waste until the waste is shipped offsite to an approved disposal or recycling facility. An as-built report of the HWB Facility was prepared by Genivar in March 2009 (Genivar 2009). The HWB Facility is an approved component of the Project, as identified in Part A, Item 1 of the Type A Water Licence 2AM-MRY-2540 (NWB 2025). Regular inspections are performed by BIM staff to monitor for integrity issues in the HWB Facility.

The HWB Facility was initially monitored in 2021 when 8 drive point piezometers (MS-HWB-GW3, MS-HWB-GW4, MS-HWB-GW5, MS-HWB-GW6, MS-HWB-GW7, MS-HWB-GW-REF1, MS-HWB-GW-REF2, MS-HWB-GW-REF3) were installed with the support of Tetra Tech (Tetra Tech 2022). The drive point piezometers MS-HWB-GW1 and MS-HWB-GW2 were not installed due to the presence of hard compacted fill/construction pad material at the proposed location (Tetra Tech 2022). Subsequently, two drive point piezometers (MS-HWB-GW8 and MS-HWB-GW9) were installed in 2022 (based on first monitoring year), and a number of reinstallations have occurred due to damaged wells in 2022 and 2023. Similar to the Landfill Facility, the HWB Facility is sampled once annually.

Concerns have been previously raised about a potential liner leak in the northwest section of the HWB (Baffinland 2023); as a result, this section is currently not being used to contain hazardous wastes.

1.2.4 Monitoring Well Installations

In 2022 and 2023, KP designed and installed standpipe wells at both waste facilities. In 2022, the well installation was completed by excavating test pits and adding a 2-inch diameter PVC standpipe to the base of the test pit excavation. The standpipes consisted of varying lengths of schedule 40 PVC (slot 10) screen and schedule 40 PVC solid rise pipe. The excavator operator carefully backfilled around the PVC standpipe using the excavated material. A steel casing was positioned overtop of the PVC pipe to provide protection at surface. PVC standpipes were then developed using inertial foot valve and a surge block. In 2023 monitoring wells were installed by KP using a ShockAuger until refusal (i.e., permafrost) and anchored on permafrost to avoid frost-jacking. A 0.06 m OD (outside diameter) aluminium perforated casing was placed in the boreholes, with the 0.025 m (1 inch) diameter pre-pack monitoring well placed inside the casing. The remaining annular space inside the casing was backfilled with well sand. A steel protective monument casing was installed at ground surface to provide protection for the well pipe. Bentonite and/or concrete was not used near ground surface to provide a protective seal in the standpipe wells installed by KP because equipment was not available at the time of installation.

A key component of well construction is the importance of an annular bentonite seal. An annular bentonite seal is crucial in water well construction to prevent surface water and potential contaminants from migrating into the well screen from surface, allowing good representability of the groundwater properties from the discrete screened part of the well. The wells are shallow and designed to intercept groundwater flowing in the seasonal active zone which is around 2 to 3 m thick. Conceptually, the water in the active zone is made up of groundwater along with surface water from runoff, direct precipitation and snowmelt. This mix of water sources will affect the hydrochemical properties of the groundwater. The extent of mixing in the active layer is not currently understood. The potential influence of surface water and direct precipitation flowing into the well has the potential to overestimate groundwater levels and cause uncertainty in understanding groundwater quality, flow directions and hydraulic gradients.

All standpipe wells installed in 2022 and 2023 were reportedly developed as required after installing the wells and groundwater sampling methods consisted of a combination of low-flow sampling and the monitoring of field parameters for evidence of stabilization. As part of this current report, WSP has compared both groundwater quality results and water elevations between bentonite sealed wells installed in 2025 (detailed in Section 3.1) and wells without bentonite seals to clarify the potential influence of surface water infiltration on results when sampling the shallow aquifer in the active layer.

In the 2024 report (WSP 2025), it was assumed that drive point piezometers were more likely to be representative of groundwater conditions than standpipe wells with no bentonite seals. Drive point piezometers disturb a smaller area and do not have an annular space to allow surface water to infiltrate to the well screen. Using this rationale, WSP compared groundwater levels collected from drive point piezometers with nearby standpipe wells without a bentonite seal (i.e., MS-LF-GW2 and LF-KP23-05, MS-LF-GW3 and LF-KP22-03, and MS-HWB-GW5 and HWB-KP23-01). There were some similarities between groundwater levels suggesting that surface water may be less of an influence in standpipe wells with no bentonite seal than expected. Analytical results were also compared between the drive point piezometers and the nearby standpipe wells. The results were similar for the two locations. Similarities between groundwater levels and analytical results at the drive point piezometer and the nearby standpipe wells without bentonite seals reduces the uncertainty of the results in the standpipe wells without a bentonite seal due to potential surface water influence.

To gain further certainty and insight on groundwater quality, BIM has installed additional standpipe wells with bentonite seals at the HWB Facility, the results from which can be compared to the results from previously installed wells.

1.3 Groundwater Monitoring Program Recommendations from 2024

Following the 2024 groundwater monitoring program, WSP made the following recommendations regarding the monitoring well network in the annual report (WSP 2025): drill and install new monitoring wells with a bentonite seal to allow for discrete groundwater sampling from the active zone primarily in areas downgradient of the two landfill facilities; install bentonite seals on existing wells; and install a series of heavy-duty vibrating wire piezometers. WSP also recommended comparing the results from 2025 following bentonite well installation to the 2023 and 2024 data to evaluate the effect. WSP also recommended conducting an elevation survey of all groundwater wells, standpipes and drive points to evaluate changes in well height due to frost heaving. In regards to continued monitoring, it was recommended to continue sampling all groundwater monitoring wells, standpipes, drive points annually in September prior to freezing conditions, along with all existing seeps and surface water locations.

1.4 Scope of Work and Program Modifications in 2025

The planned Scope of Work for the 2025 Groundwater Program at the LF and the HWB Facility to be completed by BIM, included the following:

1) Install monitoring wells based on the 2024 WSP well design to allow for discrete groundwater sampling within the active zone that will reduce the risk of damage to the well arising from frost-heave. A total of five new standpipe wells (with bentonite seal) were installed in April 2025 by BIM: two at the LF and three at the HWB Facility.
2) Install three RST thermistors at the LF to assess the thermal regime of the active layer.
3) Develop all the new well locations installed at the waste facilities.
4) Conduct a groundwater sampling program at the new and existing wells to assess groundwater quality at the waste facilities.
5) Conduct single well response tests at the new well locations and selected existing wells to estimate the hydraulic conductivity of the screened intervals.
6) Conduct the seep and surface water sampling at the LF.

This report includes results of groundwater, seeps and surface water quality, water levels, hydrogeological testing, as well as the updated CSM with the 2025 findings. The 2025 report also includes a comparison of the groundwater quality and water levels of the standpipe wells with and without bentonite seals.

2.0 APPLICABLE REGULATORY CRITERIA

Groundwater and seepage quality data collected during the 2025 monitoring program were compared to the Federal Interim Groundwater Quality (FIGQ) guidelines (FCSAP 2016) for comparison purposes, as Nunavut currently has no established territorial guidelines for groundwater and seep water quality. The current land use is classified as commercial/ industrial at both the LF and HWB Facility, and the soil type is coarse grained throughout both waste facilities. Tier 2, site-specific guidelines for the protection of freshwater aquatic life (AW-F) were applied (hereafter referred to as FIGQ AW-F) due to the presence of receiving water bodies (i.e., Sheardown Lake at LF and Camp Lake at HWB Facility) located less than 500 m from the LF and HWB Facility. The pH and hardness dependant FIGQ AW-F guidelines are based on the Canadian Council of Ministers of the Environment (CCME) guidelines for surface water quality. The FIGQ guidelines assume that the groundwater is directly discharging to the receiving water body and do not account for dilution between the well location and the water body; thus, exceedances of the applied FIGQ AW-F may not directly indicate potential impacts to aquatic life in receiving water bodies. As such, the FIGQ guidelines presented herein represent a conservative guideline.

Groundwater and seepage analytical results were also compared to the Yukon Contaminated Sites Regulation (CSR) water quality standards (Environment Yukon 2002) in accordance with Yukon CSR Protocol 6 (Environment Yukon 2012) for comparison purposes only as Yukon Territory standards are not applicable to Nunavut. Of the four water use types outlined in the CSR, AW-F is considered applicable based on the presence of lakes located within a one km radius of the waste facilities (hereafter referred to as CSR AW-F). The Yukon CSR numerical standards assume that a minimum 1:10 dilution factor is available between the sampling point and the water body that may contain aquatic life and are therefore less conservative than the FIGQ AW-F guidelines as described above.

The 2023 and 2024 groundwater and seep results were also compared to the Type A Water Licence 2AM-MRY1325 Effluent Quality Discharge Limits (NWB 2015) for comparison purposes. The Water Licence 2AM-MRY1325 expired on June 10, 2025. A new water licence 2AM-MRY2540 was issued by the NWB on April 28, 2025 and expires on April 27, 2040. These new guidelines are not proper effluent compliance limits (as per Schedule I Table 13, NWB 2025), they act as internal guidelines for adaptive management considerations. The 2025 groundwater results were compared to the new water licence effluent quality discharge limits, for comparison purposes only. The new water licence was provided by BIM and the effluent discharge limits are shown below in Table 1.

Table 1: Effluent Quality Discharge Limits for the Landfill Facilities, Type A Water Licence 2AM-MRY2540 from Nunavut Water Board (NWB 2025)

Parameter	Maximum Concentration of Any Grab Sample (mg/L)
pH	Between 6.0 – 9.5
Total arsenic	0.6
Total copper	0.6
Total lead	0.2
Total nickel	1.0
Total zinc	1.0
Total suspended solids (TSS)	30
Oil and grease	No visible sheen

The CCME Water Quality Guidelines (WQGs) for the protection of aquatic life (AW-F; CCME 1999) are primarily used to assess surface water quality. Surface water chemistry results from samples collected at the LF were screened against the WQGs for long-term exposure.

The 2025 surface water results were also compared to the Type A Water Licence 2AM-MRY2540 Effluent Quality Discharge Limits (NWB 2025, Table 1).

3.0 METHODOLOGY

Monitoring well installations were completed by BIM in April 2025. The 2025 groundwater program was conducted between August 25 to September 5, 2025 by BIM environmental field staff with WSP's remote support. Photographs of site and field activities are provided in Appendix A and described in the following sections. Daily field summaries are provided in Appendix B, and the drive point piezometer and standpipe well information summary table is provided in Appendix C.

3.1 New Standpipe Well Install

The shallow groundwater monitoring well network has had a number of drive point piezometers and monitoring wells damaged due to seasonal freeze-thaw cycles that cause the drive point piezometer/monitoring well to heave out of the ground. This frost heave phenomenon alters the depth of the well and may result in damage to the PVC pipe. WSP's proposed design provided in 2024 (WSP 2025) included a larger diameter outer casing installed near surface and above the well screen to reduce the amount of pressure acting on the inner riser-pipe of the well. A total of 5 boreholes were drilled in April 2025 using a FlexiROC D65 down-the-hole drill (6" diameter) and the standpipe wells were installed using 2" diameter Schedule 40 PVC riser and screen. Two wells were installed at the LF (MS-LF-25-01 and MS-LF-25-02) and three standpipe wells were installed at HWB Facility (MS-HWB-25-01, MS-HWB-25-02, and MS-HWB-25-03).

BIM installed the new standpipe wells in April 2025, as WSP recommended to complete the drilling and well installation while the ground is frozen prior to freshet. Table 2 summarizes the installation details of the standpipe wells installed in 2025 by BIM. Additional standpipe well information is provided in Appendix C. A third standpipe well was attempted to be drilled and installed at the LF, but the borehole collapsed, and the location was abandoned.

Table 2: Installation Details of 2025 Standpipe Wells (with bentonite seal)

Waste Facility	Station	Easting NAD 83 UTM 17N(1)	Northing NAD 83 UTM 17N(1)	Depth of borehole (mbgs)	Screened interval (m)	Screened Unit(2)
Landfill Facility	MS-LF-25-01(3)	560696	7912543	3.8	1.7-3.3	Coarse sand with gravel
	MS-LF-25-02(3)	560775	7912474	3.7	1.7-3.3	Coarse sand with gravel
Hazardous Waste Berm Facility	MS-HWB-25-01	558053	7914431	5.3	1.7-3.3	Coarse sand with gravel
	MS-HWB-25-02(3)	558174	7914526	4.2	1.7-3.3	Coarse sand with gravel
	MS-HWB-25-03	558468	7914598	3.7	1.7-3.3	Coarse sand with gravel

mbgs: metres below ground surface

(1) Stations were surveyed by BIM in November 2025.

(2) Lithology was inferred based on soil cuttings and is consistent with soil observed at the site.

(3) Dry or frozen during monitoring.

At each new standpipe well location, the depth to water was measured prior to and following well development. The standpipe wells MS-LF-25-01, MS-LF-25-02, and MS-HWB-25-02 were either dry or frozen. The cause could be due to the well screen being installed above the water table, the well screen being installed too deep into permafrost, or the wells being sampled too late in the season after groundwater has already frozen. A camera survey using a downhole camera was conducted at MS-LF-25-01 on September 4, 2025. As shown in Photo A-49, Appendix A, ice was observed in the bottom of the standpipe well. This suggests that water may be present if sampled earlier in the season.

The standpipe wells MS-HWB-25-01 and MS-HWB-25-02 were successfully developed (refer to Section 3.3) on August 29, 2025 (Photos A-47 and A-48, Appendix A).

3.2 Thermistor Install

WSP ordered 3 thermistor strings in 2024 from RST for BIM. The total length of each string was three metres of cable with thermistor beads placed every 0.5 m with an additional five metres of cable would be above ground surface when installed. It was initially planned to install the thermistor string at three different locations; however, following conversations with BIM, it was decided to install two of the thermistor strings at one location to characterize ground temperatures down to 5 mbgs.

The three RST thermistor strings (MS-LF-TH-01, MS-LF-TH-02_Shallow and MS-LF-TH-02_Deep) were installed on July 26, 2025 seventy metres apart and downgradient of the LF. The boreholes were drilled using a FlexiROC D65 down-the-hole drill to install the thermistor strings. Thermistors were programmed to record temperature four times per day (i.e., 2AM, 8AM, 2PM, 8PM). Table 3 provides the coordinates, elevations, and the string intervals of the RST thermistors installed downgradient of the LF (Figure B).

Table 3: RST Thermistors Installed in 2025 at the Landfill Facility

RST Thermistor	Easting NAD 83 UTM 17N [a]	Northing NAD 83 UTM 17N [a]	Elevation[1]	Thermistor string(s)
MS-LF-TH-01	560702	7912544	171.4	0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0 mbgs
MS-LF-TH-02_Shallow	560770	7912559	180.2	0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0 mbgs
MS-LF-TH-02_Deep				2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0 mbgs

mbgs: metres below ground surface

(1) Thermistors were surveyed by BIM in November 2025.

3.3 Well Development

The new standpipe wells installed in April 2025 were developed to improve permeability of the filter pack, to remove fine particles from the well and filter pack, and to remove any materials introduced to the monitoring well while drilling. Proper monitoring well development results in a filter pack that provides adequate hydraulic connection to the screened formation, and groundwater samples which are representative of surrounding aquifer conditions and contain reduced amounts of sediment. A total of 10 well volumes were purged at the new standpipe wells and field parameters were monitored during the well development. Photos of water appearance were taken at every given well volume to monitor differences in color, turbidity etc. (Appendix A, Photos A-47 and A-48). Well development field sheets and are provided in Appendix D-2.

3.4 Water Level Survey

Static water levels were measured at each of the groundwater well locations prior to purging and sampling. Samples were collected over different days; therefore, weather was noted on each field sheet as any rainfall could impact water levels.

The following information was collected at each standpipe well or drive point piezometer monitored during the water level surveys:

- Height of PVC stick-up from ground surface (for standpipe wells) and riser from ground surface (for drive point piezometers).
- Depth to water from top of PVC or drive point piezometer.
- Depth to bottom of standpipe well or drive point piezometer.
- Observation of standpipe well and drive point piezometer condition (damaged, no longer exists, tubing is stuck).

The water level tape was cleaned between each well visited using distilled water and liquinox (phosphate-free soap) to avoid cross-contamination.

BIM completed a ground surface elevation and PVC pipe elevation survey at most of the well locations in November 2025. LF-KP22-05 could not be surveyed as it was buried in snow. LF-KP23-06, LF-KP23-07, LF-KP23-08 and LF-KP23-09 were not surveyed due to poor GPS signal. Elevations from the prior year were used for these locations to calculate groundwater elevations in meters above sea level (masl).

3.5 Groundwater Sampling

Groundwater samples were collected at both the LF and HWB Facility between August 25 and September 2, 2025. A total of 15 groundwater stations (i.e., drive point piezometers and standpipe wells) were sampled at the LF, and 13 groundwater stations were sampled at the HWB Facility. All samples were collected as per low-flow methodology guidelines for groundwater sampling outlined by CCME and US EPA (CCME 1999; US EPA 2010). The methodology allows for purging the groundwater while reducing the disturbance of water in the well, minimising the drawdown of groundwater (reducing stress on the formation), and provides the required volume of groundwater to collect a representative sample. The low-flow sampling instrumentation included a combination of a peristaltic pump, low-density polyethylene (LDPE, 0.5-inch Inside Diameter) tubing that is inserted into the well, flexible silicone tubing, and dedicated containers provided by ALS Laboratory (ALS) to collect the groundwater samples. Groundwater in the well was pulled upwards as the silicone tubing is compressed by rollers in the peristaltic pump, creating a vacuum. New LDPE and silicone tubing were installed in each well for purging and sampling and subsequently removed and disposed of once sampling was complete to avoid the tubing from freezing in the well. The pumping rate was set to between 0.10 and 0.50 litres per minute (L/min) as recommended by the CCME and USA EPA sampling procedure.

In-situ field measurements of water temperature, pH, dissolved oxygen, specific conductivity, and turbidity were recorded using a multi-parameter probe, YSI Pro DSS water quality field meter and a flow-through cell. The groundwater samples were collected once the following criteria was met:

- Field measurements of temperature, pH, dissolved oxygen, specific conductivity and turbidity had stabilized as per the requirements for this sampling technique. The parameters were considered stable between each reading when:
  - Temperature readings were within +/- 3%
  - Specific Conductivity readings were within +/- 3%
  - pH readings were within +/- 0.1
  - Turbidity readings were within +/- 10%
- Recharge was reached and water levels had not changed of more than 0.1 m between readings.
- Approximately 3 well volumes had been purged.

Observations of the water collected during groundwater purging (sheen, odour, colour changes) and weather conditions were noted on a field datasheet while collecting field measurements and samples.

Equipment such as the water level tape, YSI Pro DSS, and flow-though cell were thoroughly cleaned with distilled water and liquinox between each sampling location to avoid cross-contamination. Nitrile gloves were worn while purging and sampling and disposed of between each well to be sampled.

Groundwater samples were collected in plastic or glass bottles, depending on the requirements for the parameter or parameter groups being sampled. Dissolved parameter samples were field filtered immediately upon collection using syringe and filter kits provided by ALS. Where necessary, the samples were preserved according to laboratory instructions. All samples were kept cool using ice packs and coolers; samples were stored in a fridge after each field day. BIM's Environmental team were responsible for sample submission to ALS.

Groundwater field sheets were reviewed by WSP and are provided in Appendix D-1.

3.5.1 Analysis

A summary of the analytical parameters requested for analysis for the 2025 Annual Monitoring Program is provided in Table 4.

Of note, the 2023 analytical groundwater results from KP (2024) and 2024 (WSP 2025) were included in the 2025 tables for comparison purposes. The analytical suite for 2023 is slightly different than the suite for 2024 and 2025 (Table 4). Certificate of analysis are provided in Appendix E.

Table 4: Summary of Laboratory Analysis of Groundwater Samples at the Waste Facilities

Sampling Location	September 2025 Groundwater Analytical Suite
Landfill Facility	▪ Routine Water Quality Parameters(1) ▪ Dissolved Nutrients(2) ▪ Total Nutrients(3) ▪ Dissolved Metals (including mercury) ▪ PHCs ▪ BTEX ▪ VOCs ▪ PAHs
Hazardous Waste Berm Facility	▪ Routine Water Quality Parameters(1) ▪ Total Nutrients(3) ▪ Dissolved Metals (including mercury) ▪ PHCs ▪ BTEX ▪ Oil and Grease ▪ VOCs ▪ PAHs

PHCs: Petroleum Hydrocarbons; VOCs: Volatile Organic Compounds; BTEX: Benzene, Toluene, Ethylbenzene, Xylene; PAH: Polycyclic Aromatic Hydrocarbons

(1) pH, Electrical Conductivity, Total Suspended Solids, Total Dissolved Solids, Turbidity and Major Ions.

(2) Dissolved Organic Carbon, Dissolved Phosphorus

(3) Total Ammonia, Total phosphorus, Total Kjeldahl Nitrogen

3.6 Seeps and Surface Water Sampling

In the BIM data review, seepage and leachate are both referred to. For this report, WSP has defined seepage as groundwater that daylights at surface. Leachate is groundwater that has changed chemistry as a result of passing through a source of potential contaminant.

Seepage and surface water flowing from the landfill sampling tasks were completed simultaneously with the groundwater sampling at LF. A total of one seep sample and three surface water samples were collected on August 29, 2025. One seep is located within LF limits (i.e., source seep station), and surface water samples were collected upgradient of LF limits and downgradient close to Sheardown Lake. There were no seeps or surface water identified or sampled near HWB Facility.

Field parameters were measured using a YSI Pro DSS water quality meter and were noted on the field datasheet once they had stabilized. Field measurements of water temperature, pH, dissolved oxygen, specific conductivity, and turbidity were measured. Field screening including sheen, odour, colour, flow direction and qualitative velocity were noted on the field datasheet, as well as weather conditions.

Samples were collected while wearing nitrile gloves into dedicated containers provided by ALS.

3.6.1 Analysis

The analytical suite for seeps and surface water was the same as the analytical suite for groundwater samples from LF presented in Table 4 and re-summarized in Table 5 below. Certificates of analysis are provided in Appendix E.

Table 5: Summary of Laboratory Analysis for Seeps and Surface Water Samples in September 2025

September 2025 Seeps and Surface Water Analytical Suite
▪ Routine Water Quality Parameters(1) ▪ Dissolved Nutrients(2) ▪ Total Nutrients(3) ▪ Dissolved Metals (including mercury) ▪ PHCs ▪ BTEX ▪ VOCs ▪ PAHs

PHCs: Petroleum Hydrocarbons; VOCs: Volatile Organic Compounds; BTEX: Benzene, Toluene, Ethylbenzene, Xylene; PAHs: Polycyclic Aromatic Hydrocarbons

(1) pH, Electrical Conductivity, Total Suspended Solids, Total Dissolved Solids, Turbidity and Major Ions.

(2) Dissolved Organic Carbon, Dissolved Phosphorus

(3) Total Ammonia, Total phosphorus, Total Kjeldahl Nitrogen

3.7 Quality Assurance/ Quality Control

WSP's quality assurance and control (QA/QC) procedures for field data collection, laboratory, and data management were followed during the program. Field QA/QC procedures pertain to the maintenance and operation of equipment and instrumentation, sampling methods, and sample handling. Laboratory QA/QC procedures are followed by the laboratory (ALS), accredited by the Canadian Association for Laboratory Accreditation (CALA). Data management QA/QC procedures are used to maintain data quality by following a standard process for tracking, processing, and reviewing field and laboratory data collected during the program.

All sampling equipment (e.g., YSI Pro DSS) were cleaned and maintained in between the sampling locations. Prior to each sampling day, the YSI Pro DSS water quality meter was calibrated/bump tested by BIM according to the manufacturer's instructions, and documentation of calibration was completed. Water quality samples were filtered and preserved, where required, and according to the instructions provided by ALS. In line with the Environment Canada (2012) recommendation, quality control samples consisting of duplicates, field blanks, and/or travel blanks were collected during the field program, amounting to a minimum of 10% of the number of samples as part of QA/QC procedures.

The two types of QC samples were collected during the 2025 September program as detailed below:

- **Travel blanks**, which consist of deionized water provided in sampling bottles by the analytical laboratory. Travel blanks accompanied the samples through all steps of collection and transportation. They were shipped, handled, stored, and treated the same as the collected samples, but were not opened in the field. Travel blanks were used to detect potential sample contamination due to ambient conditions, or that may have occurred during shipping and laboratory analysis.

- **Duplicate samples**, consist of additional samples collected at the same time and location as water samples collected during the field program, using the same sampling methods. They were used to check for precision of field sampling methods and laboratory analysis. For duplicate samples, specific bottles were collected quasi-simultaneously to reduce variability (e.g., alternating filling the sample and duplicate bottles until they are full).

There were no field blanks collected as part of the September 2025 program.

Results of samples submitted to the laboratory were reviewed internally by WSP using the following QA/QC steps:

- Data Quality Objective: Check that results for field and laboratory values are similar. The DQO allow to flag potential issues with data entry, field measurements or sample collection, or the potential for geochemical changes in the sample after collection.
  - pH: DQO for field vs laboratory measurement should be less than 1.
  - Specific Conductivity: DQO for field measurement vs laboratory result should differ by no more than 20%.
- Blank samples: Identify concentrations in blank samples that are notably above Detection Limits (DL) (i.e., by more than 5 times the DL).
- Duplicate samples: To evaluate duplicate water quality samples, the RPD between the measured concentrations in the original and duplicate samples were calculated for each constituent using the following formula:

  $$RPD = (\text{difference in concentration between two of the duplicate samples} / \text{mean concentration}) \times 100$$

  The RPD was calculated when detected concentrations were at least five times greater than the DL. The DQO is met when RPD values are less than 20% except for pH (Appendix F Tables F-6 and F-7). For pH, the DQO is met when the absolute difference between pH values in duplicate pairs was equal to or less than 0.3 pH units.

Within-station variability and field sampling precision were rated as:

- **Low variability and high precision**, if less than 10% of the total number of constituents did not meet the DQO.
- **Moderate variability and precision**, if 10% to 30% of the total number of constituents did not meet the DQO.
- **High variability and low precision**, if more than 30% of the total number of constituents did not meet the DQO.

3.8 Single Well Response Testing

Single well response testing was conducted at both the LF and HWB Facility between August 31 to September 5, 2025. Testing was completed following purging and sampling. Due to time constraints, six slug tests were completed at the LF and four slug tests at HWB Facility. The wells that had not been previously tested in 2024 were completed.

Single well response tests were completed to estimate the hydraulic conductivity of the formation soils adjacent to the well screen, or the open area of a well. The approach involved using a mechanical object or slug to instantaneously change the water level within a well by raising or lowering it from the static water level and measuring the response time of the water level to return to the pre-test static level.

Pressure transducers manufactured by Solinst were used to automatically record the water level response. Water level readings were set to be recorded every second. A Solinst barologger transducer collected atmospheric pressures while conducting the single well response tests. Manual water levels were recorded throughout the test until the water level had recovered to at least 90% of the original static water level. A total of three tests (3 rising and 3 falling head tests) were completed at each tested well

The weather conditions were recorded while conducting each test in the field datasheet. The testing equipment (slug, pressure transducers) were cleaned with distilled water and liquinox between each test. New propylene twine was also used at each well to prevent cross contamination.

Response testing field sheets were reviewed by WSP and are provided in Appendix D-3.

4.0 RESULTS

4.1 Groundwater Elevations and Flow Direction

Conceptually, groundwater flow would be expected to be similar to the topography. The uncertainty of data from groundwater wells was fully detailed in the 2024 report (WSP 2025) along with the potential for ice wedges and areas of shallow permafrost impeding groundwater flow.

4.1.1 Landfill Facility

Groundwater elevations measured at the LF monitoring wells in 2023 (KP, 2024), by WSP in 2024 (WSP 2025), and by BIM in 2025 are compiled in Appendix F Table F-1. Groundwater levels collected in September 2025 were generally consistent with historical groundwater levels (i.e., 2023 and 2024).

Depth to groundwater measurements at LF varied from 0.00 (water level at ground surface) to 1.4 metres below ground surface (mgbs), with groundwater elevations ranging from 169.1 to 187.4 metres above sea level (masl). Groundwater elevations were calculated using ground surface elevations at standpipe wells and drive point piezometers surveyed by BIM in November 2025. Standpipe wells LF-KP23-06, LF-KP23-07, LF-KP23-08 and LF-KP23-09 could not be surveyed in November 2025 due to poor GPS signal. Standpipe well LF-KP22-05 was not accessible as it was covered with snow.

The groundwater elevations collected in 2025 were used to generate a contour plot, Figure D, to estimate the groundwater flow direction and hydraulic gradient in the shallow aquifer. Groundwater flow at the LF is inferred to be to the west on the north side of the landfill towards Sheardown Lake NW, and to the southwest at the southern side of the landfill towards Sheardown Lake SE, which is consistent with previous reports (Tetra Tech 2021, Tetra Tech 2022, KP 2023a, KP 2024, WSP 2025). Two standpipe wells were dry in 2025 (LF-KP23-03, LF-KP23-10), and one standpipe well (MS-LF-25-01) and one drive point piezometer (MS-LF-GW5) was either dry or frozen. The hydraulic gradient was estimated to be 0.057 m/m which is consistent with the historical range of between 0.03 and 0.06 m/m (Tetra Tech 2021, Tetra Tech 2022, KP 2023a, KP 2024, WSP 2025).

4.1.2 Hazardous Waste Berm Facility

Groundwater elevations measured at the HWB monitoring wells by KP in 2023 (KP, 2024), by WSP in 2024 (WSP 2025) and by BIM in 2025 are compiled in Appendix F Table F-2. Groundwater levels collected in September 2025 are generally consistent with the historical groundwater levels (i.e., 2023 and 2024).

Depth to groundwater measurements at HWB Facility in 2025 ranged between 0.011 and 1.425 mgbs, with groundwater elevations ranging from 171.31 to 174.24 masl. Groundwater elevations were calculated using ground surface elevations at standpipe wells and drive point piezometers surveyed by BIM in November 2025.

The groundwater elevations collected in 2025 were used to generate a contour plot, Figure E, to estimate the groundwater flow direction and hydraulic gradient in the shallow aquifer. Groundwater flow at HWB Facility is slightly different than previous reports as the new wells installed provide more coverage in the downgradient and background areas. Groundwater flow is inferred to be to the southwest towards Camp Lake, which is consistent with previous reports (Tetra Tech 2022, KP 2024, WSP 2025). Groundwater flow at the background stations is inferred to be to the northeast towards a ponding area near MS-HWB-GW-REF1 (Appendix A Photo A-31). Two stations (MS-HWB-GW-REF2, MS-HWB-25-02) were dry and one station (MS-HWB-GW6) was frozen when the groundwater program was conducted.

The hydraulic gradient was estimated to be 0.012 m/m in 2025 which is higher than the historical range of between 0.002 and 0.007 m/m (Tetra Tech 2022, KP 2023a, WSP 2025).

With the new installation of MS-HWB-25-03 (with bentonite seal), a comparison could be made to nearby well HWB-KP22-06 (without a bentonite seal) and is provided in Section 5.1. Groundwater levels at MS-HWB-25-03 (with bentonite seal) could not be compared to the drive point piezometer MS-HWB-GW6 as the drive point piezometer was frozen at the time of monitoring.

4.2 Groundwater and Seep Analytical Results

The following sections discuss groundwater and seep quality results based on location relative to each waste facility, i.e. source, proximal, downgradient and background as defined in Table 6.

WSP has identified each well/ seep/ surface water sampling station with a distance qualifier from LF or HWB Facility to better assess and characterize contamination at the source, proximal, downgradient and background relative to each of the waste facilities. The assigned qualifier for each sampling station is identified on Figures B to E and in Appendix F Tables F-1 to F-5. A standpipe well and drive point piezometer information summary table gathering all the relevant information from previous reports and 2025 observations is provided in Appendix C. Well photographs are provided in Appendix A.

Table 6: Distance Qualifier and Definition

Distance Qualifier	Definition
Source *Expected to have elevated concentrations*	LF: Station is located within active cells (Cells 1, 2, 3) in the landfill
	HWB Facility: Station is located within HWB Facility limits or less than 20 metres(1) from the HWB Facility limits
Proximal *Close enough to source to be influenced*	LF: Station is within 20 metres(1) from LF limits
	HWB Facility: Station is located more than 20 metres(1) from HWB Facility limits
Downgradient *Groundwater impacted by the landfill may be intercepted by these stations*	LF: Station is located greater than 20 metres downgradient from the landfill's limits towards Sheardown Lake
	HWB Facility: Station is located greater than 20 metres downgradient from the HWB Facility towards Camp Lake
Background *Not expected to be influenced by LF or HWB Facility*	LF: Station is located in the inactive cells (Cells 4, 5) within the landfill or upgradient of the landfill
	HWB Facility: Station is located upgradient or more than 20 metres from HWB Facility limits

HWB: Hazardous Waste Berm, LF: Landfill Facility, m: metres

(1) The distance of 20 metres was selected for proximal stations based on the review of the distribution of wells around the waste facilities.

4.2.1 Landfill Facility Water Quality Results

The 2025 groundwater and seep water quality data are provided in Appendix F Table F-3. Monitoring well locations are shown in Figure B. Table 7 summarizes groundwater and seepage exceedances of the standards and guidelines applicable to the LF.

Table 7: Summary of Parameters Exceeding Applicable Groundwater Guidelines at the Landfill Facility Monitoring Stations in 2025

Station	Exceedance: FIGQ Tier 2 AW-F Guideline	Exceedance: Yukon CSR AW-F Standard(1)
Source		
LF-KP-23-13	Fluoride	-
MS-LF-GW1	Sulfate, dissolved uranium	-
LF-KP22-01	Sulfate, dissolved boron, dissolved uranium	Sulfate
Proximal		
MS-LF-GW2	Dissolved copper	-
LF-KP22-05	Dissolved iron(2), dissolved selenium	-
Downgradient		
No exceedances at downgradient groundwater stations in 2025		
Background		
LF-KP23-06	Dissolved copper	-

AW-F = Protection of Freshwater Aquatic Life, CSR = Contaminated Sites Regulation, FIGQ = Federal Interim Groundwater Quality

(1) Yukon CSR is only used for comparison purposes. It is not applicable to Nunavut (Refer to Section 3.0).

(2) Dissolved iron is not considered to be a contaminant of concern at the site as natural occurring elevated iron is expected at a high-grade iron mine.

4.2.2 Hazardous Waste Berm Facility Water Quality Results

HWB Facility groundwater quality results are presented in Appendix F Table F-4. Station locations are presented in Figure C. Table 8 summarizes groundwater exceedances to the guidelines and standards at the HWB Facility.

Table 8: Summary of Parameters exceeding Applicable Groundwater Guidelines at the HWB Facility Monitoring Stations in 2025

Station	FIGQ Tier 2 AW-F Guideline	Yukon CSR AW-F Standard(1)
Source		
HWB-KP23-02	Fluoride, naphthalene, dissolved iron(2)	Naphthalene
HWB-KP23-01	Nitrate, nitrite, dissolved copper	-
MS-HWB-GW5	Nitrate, nitrite	-
Proximal		
HWB-KP22-04	Nitrate, nitrite	
HWB-KP22-05	Chloride, naphthalene, dissolved iron(2)	Dissolved cobalt
HWB-KP23-03	Naphthalene, dissolved iron(2)	Naphthalene

Station	FIGQ Tier 2 AW-F Guideline	Yukon CSR AW-F Standard(1)
Downgradient		
No exceedances at downgradient groundwater stations in 2025		
Background		
MS-HWB-GW-REF1	Nitrate	-
MS-HWB-GW-REF3	Chloride	-
HWB-KP22-01	Dissolved iron(2)	Dissolved cobalt

AW-F = Protection of Freshwater Aquatic Life, CSR = Contaminated Sites Regulation, FIGQ = Federal Interim Groundwater Quality, PHC = Petroleum Hydrocarbons

(1) Yukon CSR is only used for comparison purposes. It is not applicable to Nunavut (Refer to Section 2.0).

(2) Dissolved iron is not considered to be a contaminant of concern at the site as naturally occurring elevated iron is expected at a high-grade iron mine.

The results from the standpipe well MS-HWB-25-03 (with bentonite seal) compared to HWB-KP22-06 (without bentonite seal) have very similar groundwater quality results (Appendix E Table 4), indicating that the well without a bentonite seal does not have a different chemistry signature due to the presence of surface water. This suggests the groundwater sampling methodology is appropriate for the standpipe wells without bentonite seals and that there is less uncertainty regarding the groundwater quality representativeness at standpipe wells without bentonite seals. This is the only location where a comparison could be done as the other newly installed standpipe wells (with bentonite seal) were dry or frozen in 2025. Additional locations where a comparison could be completed would provide additional confidence of the representativeness of groundwater quality collected at standpipe wells without bentonite seals (using the proper groundwater sampling methodology).

4.3 Single Well Response Testing Results

Single well response test analysis was completed using AQTESOLV Pro software to estimate the hydraulic conductivity of the aquifer at the screened portion of the standpipe wells. The data collected during the tests were interpreted with the Bouwer et Rice (1976) method as the aquifer was interpreted to be unconfined at all well locations. All slug test analyses are provided in Appendix G and summarized in Table 9.

The hydraulic conductivity at the wells screened in the fine to coarse sand tested in 2025 at the LF ranged between 1×10^{-5} and 4×10^{-7} m/s. The hydraulic conductivity at the HWB Facility in the wells screened in the coarse sand tested in 2025 ranged between 2×10^{-4} and 9×10^{-7} m/s. These hydraulic conductivities are consistent with literature[1], where typical hydraulic conductivities of a coarse sand varies between 6×10^{-3} to 9×10^{-7} to m/s, a medium sand varies between 5×10^{-4} to 9×10^{-7} m/s, and a fine sand varies between 2×10^{-4} to 2×10^{-7} m/s (Domenico & Schwartz, 1990).

All transducer data installed at the LF and HWB Facility standpipe wells were compensated for barometric pressure.

Response testing at LF-KP22-05 and MS-HWB-25-01 could not be completed due to an insufficient water column length.

[1] http://www.aqtesolv.com/aquifer-tests/aquifer_properties.htm

Table 9: Single Well Response Testing Summary Results Table

Waste Facility	Tested Standpipe Well[1]	Screened Unit	2023 Hydraulic Conductivity (m/s)[2]	2024 Hydraulic Conductivity (m/s)[3]	2025 Hydraulic Conductivity (m/s)[4]	Comment
Landfill Facility	LF-KP23-04	Fine and medium sand	2×10^{-6}	-	2×10^{-5}	▪ Rising head test analyzed in 2025 (H0=0.20 m)
	LF-KP23-06	Coarse sand and medium sand (contains large pebbles)	1×10^{-5}	-	4×10^{-5}	▪ Rising head test analyzed in 2025 (H0=0.20 m)
	LF-KP23-09	Top soil, medium sand (contains medium to large pebbles)	4×10^{-6}	-	2×10^{-6}	▪ Rising head test analyzed in 2025 (H0=0.20 m)
	LF-KP23-11	Medium sand (contains medium cobbles)	7×10^{-7}	3×10^{-6}	4×10^{-7}	▪ Rising head test analyzed in 2024 (H0= 0.38 m) ▪ Rising head test analyzed in 2025 (H0=0.38 m)
	LF-KP23-13	Medium sand, trace coarse sand, contains medium to large pebbles	9×10^{-8}	-	4×10^{-7}	▪ Rising head test analyzed in 2025 (H0=0.13 m)
Hazardous Waste Berm Facility	HWB-KP22-03	Coarse sand, some gravel and cobbles	3×10^{-5}	-	5×10^{-5}	▪ Falling head test analyzed in 2025 (H0=0.26 m)
	HWB-KP22-05	Gravelly sand, coarse sand some gravel and cobbles	2×10^{-5}	-	4×10^{-5}	▪ Rising head test analyzed in 2025 (H0=0.26 m)
	HWB-KP23-02	Medium sand (contains large pebbles) and coarse sand	7×10^{-6}	-	1×10^{-5}	▪ Rising head test analyzed in 2025 (H0=0.20 m)
	HWB-KP22-06	Coarse sand, some gravel and cobbles	-	-	2×10^{-4}	▪ Rising head test analyzed in 2025 (H0=0.26 m)
	MS-HWB-25-03	Coarse sand and gravel	-	-	2×10^{-6}	▪ Rising head test analyzed in 2025 (H0=0.26 m)

H0=Initial displacement when inserting/removing slug, mbgs= metres below ground surface, m/s=metre per second, - = no data

(1) Standpipe wells were not installed with a bentonite seal which may impact hydraulic conductivity results, with the exception of MS-HWB-25-03

(2) Hydraulic conductivity from KP (2024) in appendix. Hydraulic conductivity values transcribed from the report appendix were rounded at one significant digit.

(3) Hydraulic conductivity from WSP (2025). Hydraulic conductivity values transcribed as reported.

(4) Best analyzed response test in 2025 was reported in the Table. Hydraulic conductivity reported from Appendix G were rounded at one significant digit as those results are estimations.

Note that the 2022 wells (i.e., HWB-KP22-03, HWB-KP22-05, HWB-KP22-06) were installed inside a backfilled test pit; the hydraulic conductivity is primarily representing backfill conditions.

4.4 Characterization of Surface Water Sampled at the Landfill Facility

Surface water analytical results were compared to surface water guidelines and are presented in Appendix F Table F-5. Station locations are presented in Figure B.

Proximal

Surface water proximal station LF-US-POND-01 is located upgradient and along the LF limits. There were no exceedances of the CCME WQG AW-F (long-term exposure) guidelines or Water Licence Effluent Quality Discharge Limits in 2025 at this station. This station serves as comparison to the downgradient stations as it should not be impacted by the landfill since it is technically upgradient of the LF.

Downgradient

Surface water downgradient stations include MS-MRY-13B and MS-MRY-13C located close to Sheardown Lake NW shore (Figure B). Total uranium concentrations exceeded the CCME WQG AW-F (long-term exposure) guideline (0.015 mg/L) at station MS-MRY-13C (0.017 mg/L) in 2024. Dissolved uranium concentration (0.00821 mg/L) in 2025 is lower than the CCME WQG AW-F guideline (0.015 mg/L). Timeseries for dissolved uranium at downgradient and source stations were compared in Appendix H-3 and are discussed in Section 5.0.

4.5 Quality Assurance and Quality Control Results

A summary of key results from the QA/QC assessment conducted by WSP for the September 2025 sampling program is provided in Appendix F and is summarized in the following sections.

4.5.1 Field Data

Field parameters measured in the September sampling program, were of acceptable quality, meeting the acceptance criteria set out in Section 3.7; all measurements were retained in the dataset (Appendix F Tables F-3 and F-4). Field values and their corresponding laboratory values were similar, with differences of less than 0.5 for pH and a RPD of less than 20% for conductivity.

4.5.2 Blank Samples

During the September sampling programs, a travel blank was collected and analyzed for notable results, defined as any result exceeding five times the detection limit. None of the detected concentrations exceeded five times the detection limit. The results indicate a low potential for contamination during the transportation, and laboratory analysis stages.

A field blank was not collected as part of the September 2025 program.

4.5.3 Duplicate samples

RPD's greater than 20% between sample LF-KP22-01 and its duplicate was measured for dissolved cadmium only (Appendix F Table F-6). RPDs exceeding 20% between sample HWB-KP23-02 and its duplicate were identified for turbidity, fluoride, xylenes (m+p), 2-Methylnaphthalene, dissolved iron, dissolved lithium and dissolved strontium (Appendix F Table F-7). Based on the listed parameters, the sample variability was assessed as low because less than 10% of parameters had an RPD greater than 20% between the samples and their field duplicates (Appendix F Tables F-6 and F-7).

4.6 Thermistors

BIM has provided recorded temperatures of the thermistors installed downgradient of the LF (Figure B, Table 3) from July 26 to August 31, 2025. Only 3 ports of each thermistor were recording ground temperatures, therefore the following data was available:

- MS-LF-TH-01 at 0 mbgs, 1.0 mbgs and 2.0 mbgs
- MS-LF-TH-02_Shallow at 0 mbgs, 1.0 mbgs and 2.0 mbgs
- MS-LF-TH-02_Deep at 2.0 mbgs, 3.0 mbgs and 4.0 mbgs

Ground temperatures with time and depths at each RST thermistor are provided in Appendix J. The main findings include the following:

- The ground is frozen (remain below 0 °C) throughout the month of August at 2.0 mbgs at MS-LF-TH-01; however ground temperatures seem to be slightly increasing towards the end of August (Appendix J-1). Similar ground temperatures and trends were observed at MS-LF-TH-02 but at 3.0 mbgs (Appendix J-2).
- Ground temperatures in August at MS-LF-TH-01 vary between -0.3 to -0.8 °C at 2.0 mbgs (Appendix J-1).
- Ground temperatures in August at MS-LF-TH-02 vary between -2 to -3 °C at 4.0 mbgs (Appendix J-2).
- Ground temperatures at or close to the surface are warmer in early August compared to late August.
- The active layer observed at MS-LF-TH-02 (around 2.6 mbgs) is deeper than at MS-LF-TH-01 (around 1.7 mbgs) (Appendices J-3 and J-4). In future years, the maximum depth of the active layer should be assessed using the thermistor data.
- The ground temperature on August 29 at 1.0 mbgs is warmer than the air temperature (at 0.0 mbgs) (Appendix J-4). This is typical when air temperatures decrease in the fall; the ground at the surface will eventually start to freeze again from top to bottom (as well as bottom to top).

5.0 DISCUSSION

5.1 Data Integrity Assessment

As a standard industry practice, standpipe wells are usually installed with a bentonite seal at the ground surface to prevent surface water infiltration into the well resulting in and dilution/contamination of groundwater. A total of 23 standpipe wells installed in 2022 and 2023 at the LF and HWB Facility were not installed with a bentonite seal. This introduces a degree of uncertainty to the BIM groundwater database as to the representativeness of the groundwater quality and water levels measured from these wells. BIM and WSP have made efforts to mitigate the uncertainty as much as possible by undertaking a different groundwater sampling methodology, conducting slug testing after sampling once the well had been purged, collecting and comparing water levels, and comparing analytical results, and installing new monitoring wells with bentonite seal.

For the purposes of this 2025 annual groundwater report and in continuation of the 2024 annual groundwater report (WSP 2025), additional evidence in the groundwater quality data representativeness can be made and include the following:

- **Sampling methodology, well purging –** Groundwater samples taken from wells with no bentonite seal in 2024 and 2025 were collected only after three well volumes were purged, the well had recharged, and once field parameters had stabilized. This procedure removed existing, standing water from the well and the water that recharged the well was considered to be the most representative groundwater samples possible considering the lack of bentonite seal at the standpipe wells installed in 2022 and 2023.
- **Comparison of groundwater quality results between samples collected at drive point piezometers and samples collected at nearby standpipe wells without bentonite seal –** Using the assumption that drive point piezometers would be less influenced by surface water infiltration than open (unsealed/with no bentonite seal) standpipe monitoring wells, a comparison of water quality in proximal pairs of drive point piezometers and standpipe wells was made. A total of three pairs of drive point piezometers and nearby standpipe wells (MS-LF-GW-REF2/LF-KP23-05, MS-LF-GW3/LF-KP22-03, MS-HWB-GW5/HWB-KP23-01) were assessed. Samples collected in 2023, 2024 and 2025 had similar results between the samples collected from drive point piezometers and nearby standpipe wells without bentonite seal.
- **Comparison of groundwater levels between measurements taken from drive point piezometers and nearby standpipe wells without bentonite seal –** Using the same rationale as previously outlined, a comparison between water levels in proximal pairs of drive points piezometers and standpipe wells was made. Well pairs showing a comparable water level suggested that the standpipe well data was recording a reasonable representation of groundwater conditions. A scenario where the standpipe well (without bentonite seal) had a water level near ground surface, compared with its nearby drive point piezometers showing much deeper water levels, especially following a rain event, would be indicative of surface water influence in the standpipe well. A total of three pairs of drive point piezometers and nearby standpipe wells (MS-LF-GW-REF2/LF-KP23-05, MS-LF-GW3/LF-KP22-03, MS-HWB-GW5/HWB-KP23-01) were assessed. Groundwater levels recorded in drive point piezometers and nearby standpipe wells were similar to each other in measurements collected in 2024 and 2025 (Table 10). The only exception would be the water levels collected in 2025 at the groundwater wells MS-LF-GW-REF2/LF-KP23-05; however, both are showing a very small water column (0.066 m and 0.226 m, respectively) and are almost dry conditions.

Table 10: Water Level Comparison Between Drive Point Piezometers Near Standpipe Wells Without Bentonite Seal in 2024 and 2025

	Drive point piezometer MS-LF-GW-REF2	Standpipe well (without bentonite seal) LF-KP23-05
Groundwater level in 2024 (masl)	178.58	178.35
Depth to bottom in 2024 (masl)	177.94	177.92
Groundwater level in 2025 (masl)	177.77	178.05
Depth to bottom in 2025 (masl)	177.70	177.82
	MS-LF-GW3	**LF-KP22-03**
Groundwater level in 2024 (masl)	177.45	177.70
Depth to bottom in 2024 (masl)	176.09	176.44
Groundwater level in 2025 (masl)	177.50	177.55
Depth to bottom in 2025 (masl)	177.05	176.47
	MS-HWB-GW5	**HWB-KP23-01**
Groundwater level in 2024 (masl)	173.30	173.07
Depth to bottom in 2024 (masl)	172.55	172.02
Groundwater level in 2025 (masl)	173.22	173.20
Depth to bottom in 2025 (masl)	172.53	172.24

masl: metres above sea level.

- **Groundwater quality comparison between 2023, 2024 and 2025 –** Sampling results with large variations in water chemistry from one year to the next could suggest that samples are not representative of shallow groundwater in the active layer and have a greater influence from surface water. Groundwater quality samples from 2023, 2024 and 2025 were compared (Appendix H). Results prior to 2023 presented larger variations of water chemistry results which may be due to a difference in sampling methodology.
- **Comparison of groundwater quality results between samples collected at standpipe wells (without bentonite seal) and nearby standpipe wells (with bentonite seal) –** Only one pair of a nearby standpipe well with and without bentonite seal could be assessed (MS-HWB-GW-25-03/HWB-KP22-06). Samples collected in 2025 had similar analytical results. If the concentrations were different, it could indicate that the standpipe well without a bentonite seal had concentrations reflective of both surface water and groundwater.
- **Comparison of water levels standpipe wells with and without bentonite seals –** As shown in Table 11, there is reasonable alignment between the water levels collected in 2025 at the nearby standpipe wells with and with no bentonite seal.

Table 11: Water Level Comparison Between Nearby Standpipe Wells With and Without Bentonite Seal in 2025

	MS-HWB-25-03 (with bentonite seal)	HWB-KP22-06 (without bentonite seal)
Groundwater level in 2025 (masl)	172.90	173.04
Depth to bottom in 2025 (masl)	171.85	172.21

masl: metres above sea level

- **Recording weather conditions throughout the monitoring program –** BIM and WSP monitored weather on a daily basis while groundwater samples and/or water levels measurements were being collected in the field in 2024 and 2025 to assess the impact of rainfall on groundwater quality and water levels. Standpipe wells with no bentonite seal may show an elevated and rapid increase in water levels due to direct precipitation and runoff into the standpipe well. There has been no connection made between rainfall and water levels and/or groundwater sample results at standpipe wells with no bentonite. The exception being during a 1 in 1000 year rainfall event that occurred in October 2024 where a slight increase in water levels was measured.

5.2 Landfill Facility

There were no parameters exceeding the guidelines at the downgradient stations of the LF in 2025. Timeseries plots (Appendix H) of the contaminants of concern (i.e., nitrate, dissolved copper and total/dissolved uranium) at downgradient stations were compared to source stations (groundwater and seep stations) where concentrations are expected to be more elevated. Surface water and groundwater guidelines (i.e., CCME AW-F, and FIGQ AW-F, respectively) were included in the timeseries to better visualize exceedances. The following discussion compares concentrations of the contaminants of concern at source stations versus downgradient stations at the LF. Heat maps were also plotted for nitrate (Appendix I-1), dissolved copper (Appendix I-2) and dissolved uranium (Appendix I-3) to visually compare downgradient and source stations concentration distribution in 2025.

There were no nitrate exceedances at any of the source stations in 2025, suggesting that nitrate does not originate from the LF. The nitrate concentration at the downgradient location, LF-KP23-01 (0.965 mg/L) has been below the FIGQ guideline (2.9 mg/L) since 2024. It last exceeded the FIGQ AW-F guideline in 2023 with a concentration of 4.2 mg/L. In general nitrate concentrations at other sampling locations have also been decreasing since 2022.

Dissolved copper concentrations at the seep station LF-DS-SEEP-01 in 2025 remained consistent with historical results as well as results from test pits TP-22-01 to TP-22-04 collected in 2022. LF-DS-SEEP-02 was dry in 2025. There have been no dissolved copper exceedances of the FIGQ AW-F guideline at any source stations in 2023, 2024 and 2025. There was previously one exceedance of the FIGQ AW-F guideline (0.002 mg/L) at the downgradient groundwater station LF-KP23-04 in 2023 (0.0037 mg/L); however, concentrations have decreased to 0.0033 mg/L in 2025. Elevated dissolved copper exceedances were measured at proximal groundwater station MS-LF-GW2 and background groundwater station LF-KP23-06 (Appendix F Table F-3) in 2023, 2024 and 2025 suggesting that naturally high copper concentrations may be present in the Project area. Dissolved copper concentrations have been decreasing at almost all stations since 2021.

Dissolved uranium concentrations measured at source groundwater stations MS-LF-GW1 (0.0022 mg/L in 2025) and at LF-KP22-01 (0.032 mg/L in 2025) were greater than the FIGQ AW-F guideline (0.015 mg/L). Concentrations at seep stations TP-22-01, TP-22-03 and TP-22-04 collected in 2022 were greater than the FIGQ AW-F guideline but seep results at source stations LF-DS-SEEP-01, LF-DS-SEEP-02 and TP-22-02 were less than the guideline. There is one dissolved uranium exceedance of the FIGQ AW-F guideline at the proximal station MS-LF-GW2 (Appendix F Table F-3, Figure B) in 2023 (0.0220 mg/L), but it has been decreasing since (0.0052 mg/L in 2025). There was a total uranium concentration (0.017 mg/L) greater than the CCME AW-F guideline (0.015 mg/L) at the downgradient surface water station MS-MRY-13C in 2024. It is possible that naturally high uranium concentrations are present at the Project area.

5.3 Hazardous Waste Berm Facility

Historically, the only downgradient station at HWB Facility is MS-HWB-GW6. There are no historical results at MS-HWB-GW6 as it has been dry or frozen since its installation. A new downgradient station next to MS-HWB-GW6 was installed by BIM in 2025, MS-HWB-25-01 where a sample could be collected. There were no exceedances to the guidelines at this well. Heat maps were plotted for chloride (Appendix I-3), naphthalene (Appendix I-4, PHC F2 (C10-C16) (Appendix I-5), and nitrate (Appendix I-6) to visually compare the proximal and source station concentration distribution (in 2025).

Exceedances to the guidelines (FIGQ AW-F and Yukon CSR AW-F) measured at source and proximal stations that could impact downgradient groundwater quality in the future included chloride, fluoride, nitrate, nitrite, pyrene, dissolved copper, dissolved cobalt, naphthalene, and PHC F2 (C10-C16) (Table 8). Dissolved iron had exceedances at many stations at the HWB Facility including the background stations, suggesting naturally high concentrations in the area. High iron concentrations in soil and groundwater would be expected as Mary River Project is a high-grade iron mine.

6.0 2025 CONCEPTUAL SITE MODEL

The Project is in an area of continuous permafrost with depths in excess of 700 m (Heginbottom et al. 1995). In permafrost regions, the active zone refers to the upper layer of soil and rock that thaws during the warmer summer months, creating a temporary dynamic hydrogeological environment during which time, most suprapermafrost groundwater movement occurs.

During this period, suprapermafrost groundwater or active layer water movement is primarily controlled by the freeze-thaw cycle and the presence of ice-rich soils. The freeze-thaw cycle controls near surface groundwater storage and drainage, while the permafrost limits vertical groundwater movement. The permafrost below acts as a barrier to deeper water flow (excluding potential talik areas) meaning water movement is largely restricted to the shallow active layer during only a few weeks of the summer.

Characterizing groundwater flow in the active zone is inherently difficult as the cross-sectional area is constantly changing in response to the thawing and freezing conditions and interaction with surface water from infiltration during rainfall events and melting surface water bodies. The air and ground temperature affects the depth of the active zone each year along with specific conditions that can increase the ground temperature (i.e., placement of fill material, removal of vegetation, deposition of waste, presence of septic systems (above or under ground), water wells with heat trace lines, presence of buildings etc.). The depth of the active zone controls the depth of the suprapermafrost groundwater and the potential for contaminant transport within the active zone. Deeper groundwater quality is generally not considered to be at risk in the Project area as indicated in the FEIS (Baffinland 2012) because the extensive permafrost layer acts as an impermeable barrier eliminating/limiting potential migration of contaminants into any deeper aquifers potentially located below.

6.1 Site Characteristics

The site-specific characteristics that strongly influence the hydrogeological environment that are applicable to the CSM include the following:

- **Groundwater quality at the waste facilities –** With the updated groundwater sampling methodology and the data analysis completed in 2024 and 2025, the shallow groundwater is most likely a result of meltwater with limited rainfall/surface water impacting the shallow groundwater quality.
- **Ground temperatures at the LF –** The newly installed RST thermistors provide information on the active zone thickness in August and show that the active layer becomes shallower with increasing distance from the LF. This was incorporated into the CSM (i.e., Cross Section A1-A' August) in Figure 1. Year-round ground temperatures from both thermistors will provide further information on the active layer thickness.
- **Seasonal, yearly fluctuations and climate change –** The active zone experiences significant changes in water content throughout the year, with groundwater only available during the thaw period when the soil is unfrozen, and leads to the potential for surface runoff when the active layer is fully saturated or frozen. Changes in air temperatures from one year to another will impact the thermal exchange between the air and ground interface. As the depth to permafrost increases due to warming temperatures or increased ground disturbance, the active layer deepens, potentially leading to increased water storage capacity and altered hydrological and hydrogeological processes, including increased surface runoff and the potential for thermokarst features.

- **Limited groundwater flow –** Due to the presence of permafrost, vertical groundwater flow is restricted with no vertical movement (excluding near lakes where taliks may be present) beyond the active zone due to the underlying continuous permafrost. Horizontal groundwater flow within the active zone is also restricted due to the limited time within a year when water is present and due to uneven thawing, potentially resulting in disconnected flow paths.
- **Ice wedges –** Ice wedges are formed in thermal contraction cracks which are filled by water from melting snow in the spring. Repeated seasonal contraction cracking of the ice in the wedge, followed by freezing of water in the crack, gradually increases the width and depth and causes vertical banding of ice mass (Lewkowicz et al 2025). Ice wedges form the patterned ground (also known as ice-wedge polygons) observed in permafrost regions which impacts flow (both at surface and in the ground) preferential pathways. As highlighted in the 2024 report (WSP 2025), some evidence of ice wedges can be seen on aerial photography in the area of the Site and were included in the CSM in Figure 1.
- **Talik formation –** In certain situations, such as below large/ deep bodies of water (lakes) unfrozen areas called taliks can develop within the permafrost. In the 2024 report, it was assumed taliks in the Baffinland area would be closed taliks and do not continue through the permafrost. In 2025, BIM discovered some evidence of a potential open talik at Muriel Lake, along the Tote Road. Muriel Lake is located approximately 14 km northwest of Camp Lake. Open taliks typically develop beneath deep lakes and can connect the subpermafrost groundwater to the suprapermafrost groundwater. Surface expression of what appears to be groundwater was observed at the Muriel margins of the lake and a sample was collected in December 2025. Analytical results are indicative of deep saline groundwater and the water collected was characterized by high specific conductivity and high concentrations of dissolved solids, sodium and chloride. As Sheardown Lake and Camp Lake are of similar size, taliks may also be present beneath them. Taliks haven't been shown on Figure 1 as this has not been confirmed for Sheardown Lake and Camp Lake.
- **Presence of landfill, roads and mine operations –** Disturbances to the natural environment induced by anthropogenic activities impact the depth of permafrost due to the warming influence of disturbed soil, placement of landfill waste, fill material and vehicle use (French 2017; Andersland and Ladanyi 2003). Undisturbed areas are characterized by a shallower active zone (i.e., a depth to permafrost closer to ground surface).

6.2 Source – Pathway – Receptor Conditions

This section of the CSM integrates the findings presented in previous sections and uses the "*source-pathway-receptor"* approach to describe the Site conditions as they relate to human health and the environment. The CSM for the two waste facilities at the Mary River mine site defines the ways that landfill contaminants may move from the waste facilities into the receiving environment. The CSM is depicted schematically in Figure 1. Key components of the CSM are described in the following sub-sections.

6.2.1 Sources

Sources of contamination consist of historical or current activities or waste products at the site that have a potential to contaminate environmental media at a site (e.g. soil, groundwater, surface water) and may pose risks to human health and/or the environment. The primary sources of the landfill portions of the Site are the LF and HWB Facility described above. The LF receives inert, non-combustible waste, consisting of plastic, concrete, compliant incinerator ash, and used construction materials such as scrap metal, pipes, glass and wood. The incinerator ash is comprised of combustible non-hazardous wastes that are generated on-site, including food wastes. The HWB Facility is a temporary storage area for hazardous wastes generated by the Project. It is comprised of multiple lined facilities, utilized as a temporary storage location for hazardous waste until the waste is shipped offsite to an approved disposal or recycling facility. Groundwater monitoring wells in the LF source area have had elevated concentrations of fluoride, sulfate, dissolved boron, iron, uranium and zinc in groundwater samples collected in 2024 and 2025. Groundwater monitoring wells in the source area of the HWB have had elevated concentrations of chloride, fluoride, nitrate, nitrite, naphthalene, PHC F2 (C10-C16), pyrene, dissolved copper and iron in groundwater samples collected in 2024 and 2025.

6.2.2 Pathways

Pathways describe the manner a contaminant moves from its source into a receiving environment and generally include two components: a release mechanism (i.e., the physical, chemical, or biological process that releases a contaminant from a source) and a transport pathway (i.e., the physical path that a contaminant follows from a source to a receptor.

The following Environmental pathways were identified at the Site:

- Infiltration: water may come into contact with landfill deposits through infiltration of precipitation through the surface of the landfill producing landfill leachate. This leachate infiltrates to the shallow groundwater and is transported by suprapermafrost groundwater flow during active flow months.
- Groundwater Transport: Contaminants leached from the landfill waste through infiltration or groundwater contact are then transported by groundwater in the active zone through advection (i.e., forward movement of groundwater) and dispersion (i.e., movement of a contaminant within the groundwater column). Groundwater undergoes further geochemical evolution along the flow path. Due to the presence of permafrost, vertical groundwater flow would be restricted with no vertical movement (excluding near lakes where taliks may be present) beyond the active zone due to the underlying continuous permafrost. Horizontal groundwater flow within the active zone is also restricted due to the limited time within a year when water is present.
- Seepage: Groundwater may discharge to the ground surface as seepage which may then flow overland and discharge directly to the receiving environment or return to the subsurface.
- Surface Runoff: overland flow may entrain contaminants from shallow, surficial contaminated soils from historical spills and transport them via surface runoff into receiving environments. To limit environmental damage, BIM has a Spill Contingency Plan in place that requires the removal of contaminated soils from spill locations to containment areas (i.e., landfarms).
- Surface Water Contact: shallow groundwater may reach and discharge into nearby surface water.
- Plant Uptake: through a plants root system.
- The shallow groundwater is most likely a combination of primarily meltwater with limited rainfall/surface water.

6.2.3 Receptors

Receptors at a site consist of humans, wildlife, and plant species that may be exposed to contaminants.

Exposure zones include Sheardown Lake at the LF and Camp Lake at HWB Facility and areas where the shallow groundwater may emerge as seeps. The water quality in downgradient shallow surface water at the LF has not indicated impact by the waste deposition areas. The only elevated concentrations detected at a downgradient surface water station at the LF is dissolved/total uranium (in 2024); however this is likely representative of natural water quality. Groundwater monitoring wells in the downgradient area of the LF have had elevated concentrations of nitrate and dissolved copper in groundwater samples collected in 2024, with no elevated concentrations measured in 2025. There were no elevated concentrations of contaminants of concern measured in downgradient groundwater monitoring wells at the HWB Facility; however there are limited monitoring wells in this area.

Receptors that may be exposed to any potential contamination in the two lakes resulting from transport through groundwater or seeps include aquatic invertebrates, aquatic plants, fish, wildlife via contact/ingestion, and people, via contact and accidental ingestion.



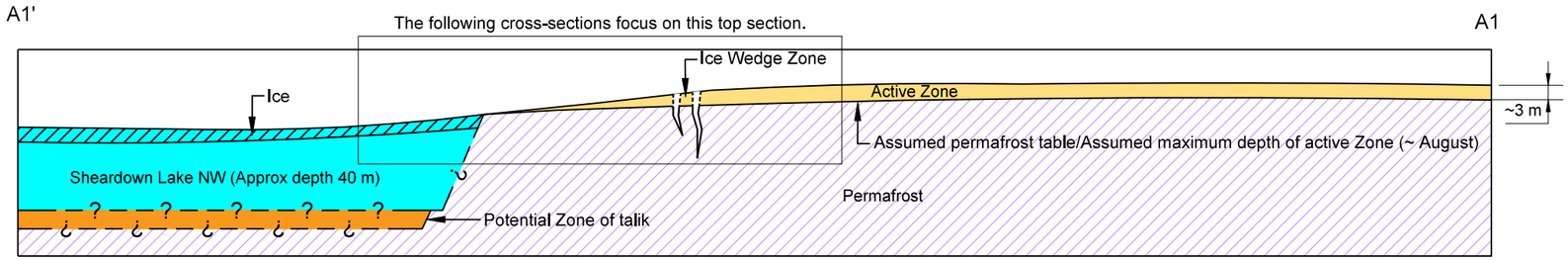
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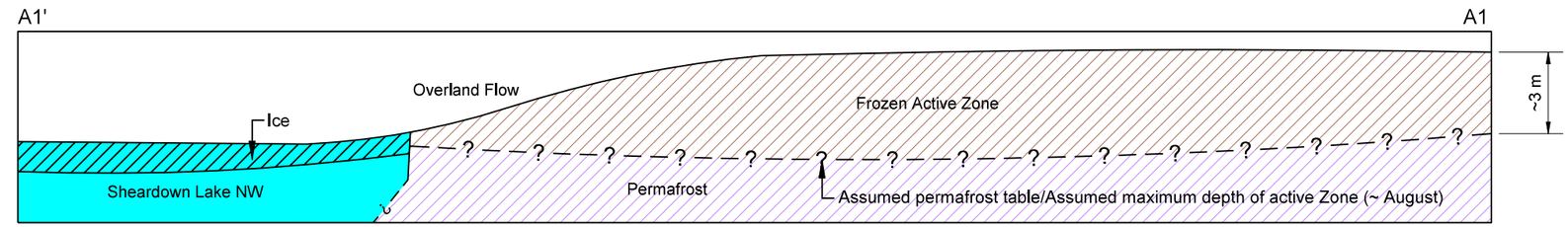
NOTE(S)

1. CONCEPTUAL SECTIONS ARE NOT TO SCALE
2. BACKGROUND IMAGERY SOURCED FROM ESRI WORLD IMAGERY ON 2025-01-21

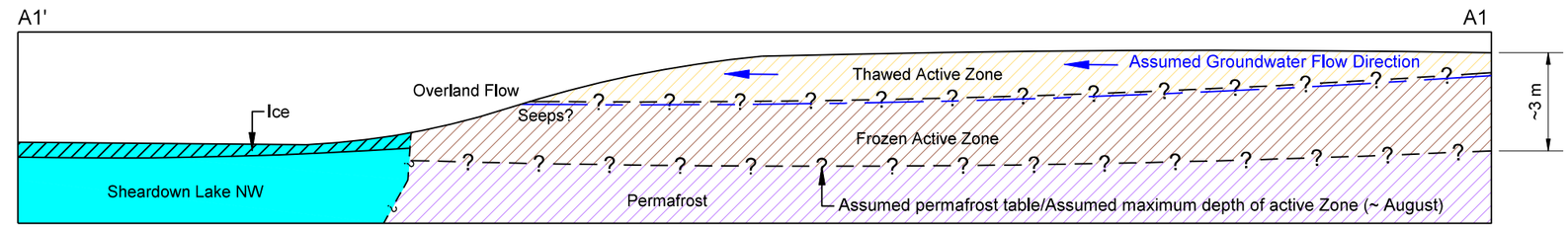
Cross Section A-A'



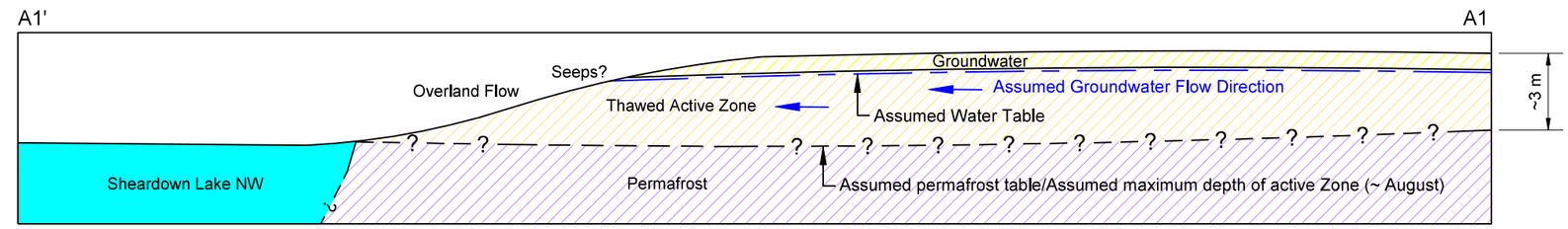
Cross Section A1-A1' November to May



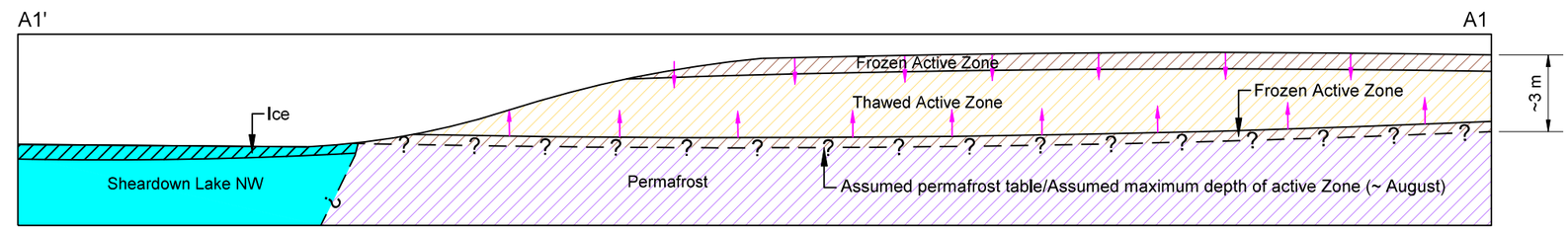
Cross Section A1-A1' June



Cross Section A1-A1' August



Cross Section A1-A1' October



CLIENT
BAFFINLAND IRON MINES CORPORATION

PROJECT
MARY RIVER PROJECT

CONSULTANT
wsp

YYYY-MM-DD	2026-02-20
DESIGNED	JP
PREPARED	BB/RTJ
REVIEWED	JP
APPROVED	TR

TITLE
CONCEPTUAL SITE MODEL

PROJECT NO.	TASK	REV.	FIGURE
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7.0 CONCLUSIONS

Based on the results of the 2025 monitoring program conducted at the LF and HWB facilities, the following conclusions have been made.

7.1 Landfill Facility

Fifteen groundwater stations, 1 seep station and 2 surface water stations were sampled in August/September 2025 at the LF. There were no exceedances of contaminants of concern measured at the downgradient station of the LF in 2025. Based on proximal and background station data, naturally high concentrations of dissolved copper and uranium may be present across the area. Other elevated parameters measured at the source wells included fluoride, sulfate and dissolved boron.

Groundwater flow at LF is inferred to be to the west from the north side of the landfill towards Sheardown Lake NW, and to the southwest from the southern side of the landfill towards Sheardown Lake SE. The hydraulic gradient at LF measured in 2025 was estimated to be 0.057 m/m.

Additional groundwater response testing was conducted at monitoring wells at the LF. The hydraulic conductivity ranged between 1 x 10^{-5} and 4 x 10^{-7} m/s which represents a fine to coarse sand.

Two RST thermistors were installed in 2025 downgradient of the LF to better understand the active layer and permafrost's thermal regime. At similar depths, the thermistor farthest downgradient of the LF (MS-LF-TH-01) showed colder ground temperatures in August compared to the one closest to the LF (MS-LF-TH-02). The active zone closest to the landfill (around 2.6 mbgs) was deeper than the one downgradient (around 1.7 mbgs). The maximum depth of the active layer should be assessed over the year once additional data is available.

7.2 Hazardous Waste Berm Facility

Thirteen groundwater stations were sampled in August/September 2025 at the HWB Facility. There were no exceedances of contaminants of concern measured at the downgradient station of the LF that was installed in 2025. Contaminants of concern measured at source stations included chloride, fluoride, nitrate, nitrite, pyrene, dissolved copper and cobalt, naphthalene, and PHC F2 (C10-C16). Based on background station data, naturally high concentrations of dissolved iron may be present across the area.

Groundwater flow at HWB Facility is inferred to be to the southwest towards Camp Lake with a hydraulic gradient of 0.012 m/m.

Additional groundwater response testing was conducted at five monitoring stations. The hydraulic conductivity ranged between 2 x 10^{-4} and 9 x 10^{-7} m/s.

7.3 2025 Conceptual Site Model

Based on the 2025 findings, the CSM was updated and includes the ground temperature information from the newly installed RST thermistors, the presence of ice-wedge polygons observed on aerial photographs, as well as information about a potential talik observed at a nearby, lake of similar size (Muriel Lake along the Tote road) to Camp Lake and Sheardown Lake. With the additional information from monitoring well installations with bentonite seals, the shallow groundwater is thought to consist of a combination of meltwater with limited rainfall/surface water impacting the groundwater quality. A "*source-pathway-receptor*" approach was used for the CSM to describe the Site conditions as they relate to human health and the environment.

8.0 RECOMMENDATIONS

Based on the conclusions, the following recommendations for the 2026 program are proposed:

- **Continue monitoring groundwater** at existing monitoring standpipe wells and drive point piezometers at LF and HWB Facility including a water level survey and water quality sampling in late August or early September 2026 when the active layer has fully thawed. It is recommended to conduct an elevation survey of all monitoring stations due to the potential for frost heave.
- **Continue monitoring seep quality at source seeps and downgradient and proximal surface water locations at the LF** in September 2026. It is also recommended to identify if new seeps develop throughout the summer season.
- **Continue monitoring ground temperatures** at the two new RST thermistor stations to provide year-round information of potential changing conditions.
- **Remediate standpipe wells (ones installed without bentonite seal)** by excavating around the well to a depth of approximately 1 m and constructing a post-installation bentonite seal around the well to reduce surface water infiltration.

9.0 CLOSURE

This report should be read in conjunction with the Study Limitations of this report, which is appended at the beginning of this report. The reader's attention is specifically drawn to this information, as it is essential that it be followed for the proper use and interpretation of this report.

We trust this report satisfies your current requirements. If you have any questions or require further assistance, please do not hesitate to contact us.

WSP Canada Inc.

REGISTERED PROFESSIONAL GEOSCIENTIST
T.J. REYNOLDS
LICENSEE
NT/NU

Feb 27, 2026

Julie Perreault

Julie Perreault, MSc
Hydrogeologist

Tamra Reynolds, MSc, P.Geo., (NT/NU)
Senior Principal Hydrogeologist

JP/TR/cdg

https://wspcanada.sharepoint.com/sites/ca-ca0058709.3053/shared documents/06. deliverables/3.0_issued/ca0058709.3053-001-r-rev0/ca0058709.3053-001-r-rev0-2025 groundwater monitoring report-26feb_26.docx

PERMIT TO PRACTICE
WSP Canada Inc.
Signature
Date 2026-02-27
PERMIT NUMBER: P407
NT/NU Association of Professional Engineers and Geoscientists

10.0 REFERENCES

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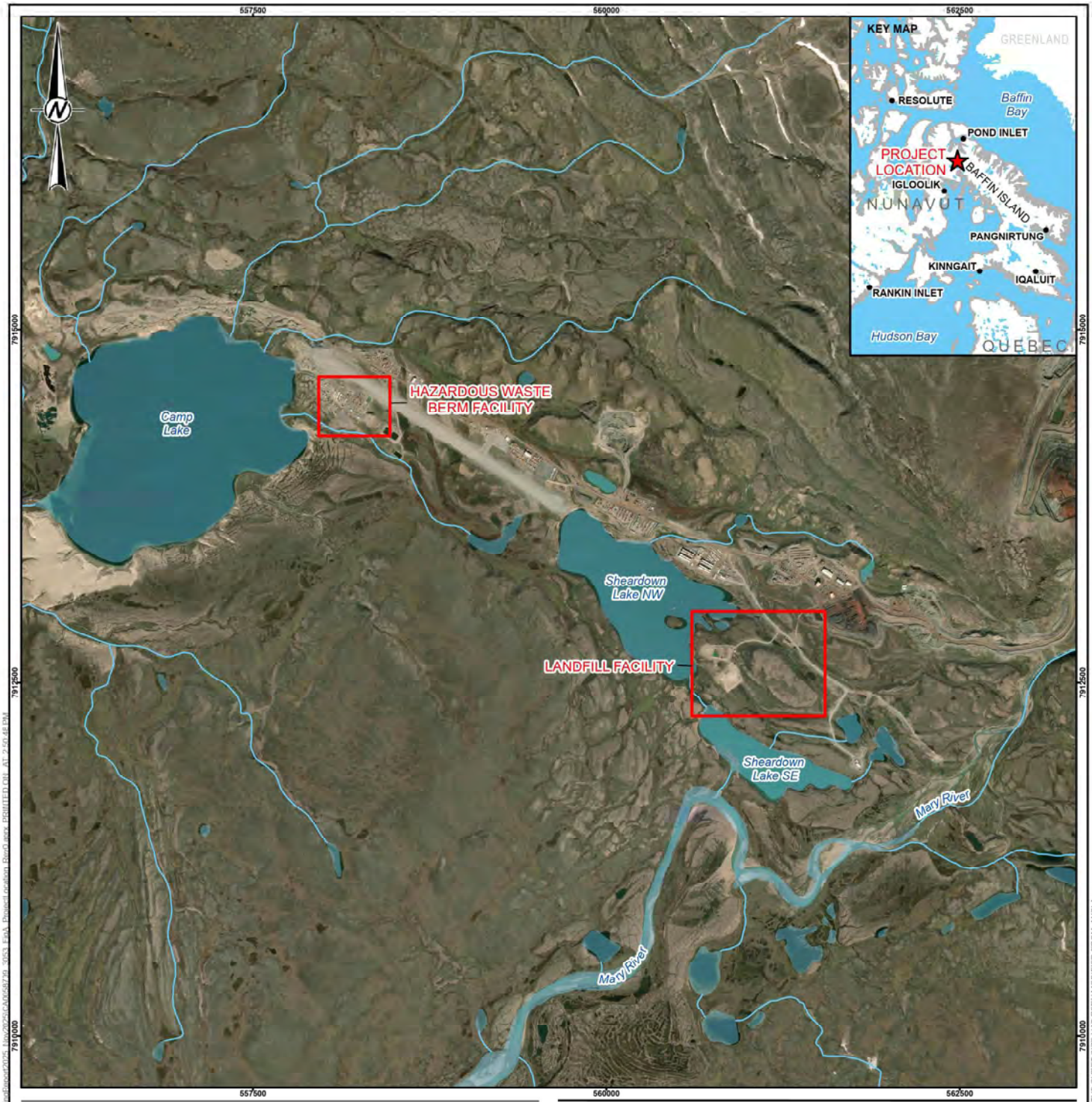
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LEGEND

- WATERCOURSE
- WATERBODY

0 1,000 2,000

1:40,000 METRES

REFERENCE(S)

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CLIENT
BAFFINLAND IRON MINES CORPORATION

PROJECT
MARY RIVER PROJECT

TITLE
LANDFILL FACILITY AND HAZARDOUS WASTE BERM FACILITY LOCATIONS, MARY RIVER MINE

CONSULTANT
wsp

YYYY-MM-DD	2026-02-19
DESIGNED	JP
PREPARED	AA
REVIEWED	JP
APPROVED	TR

PROJECT NO.	CONTROL	REV.	FIGURE
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LEGEND

- TOPOGRAPHIC CONTOUR (2 m INTERVAL)
- TOPOGRAPHIC CONTOUR (10 m INTERVAL)
- 2012 FEIS/TYPE A WATER LICENSE LANDFILL AND LANDFARM LIMIT
- 2022 LANDFILL WASTE EXTENT

DISTANCE QUALIFIER

- BACKGROUND
- DOWNGRADIENT
- PROXIMAL
- SOURCE

STATION STATUS

- **LF-KP23-01** SAMPLED IN 2025
- ***MS-LF-01*** GROUND TEMPERATURE DATA COLLECTED IN 2025
- MS-LF-GW4 NOT SAMPLED IN 2025
- LF-KP23-02* WELL WAS NEVER INSTALLED

STATION TYPE

- GROUNDWATER DRIVE POINT PIEZOMETER
- GROUNDWATER STANDPIPE WITH BENTONITE SEAL
- GROUNDWATER STANDPIPE WELL WITHOUT BENTONITE SEALS
- RST THERMISTOR
- SEEP
- SURFACE WATER

0 50 100

1:2,500 METRES

NOTE(S)

SOURCE = SAMPLING LOCATION IS LOCATED WITHIN ACTIVE CELLS (CELLS 1, 2, 3) IN THE LANDFILL.

PROXIMAL= SAMPLING LOCATION IS WITHIN 20 m FROM LANDFILL LIMITS.

DOWNGRADIENT = SAMPLING LOCATION IS LOCATED MORE THAN 20 m DOWNGRADIENT FROM THE LANDFILL'S LIMITS TOWARDS SHEARDOWN LAKE.

BACKGROUND = SAMPLING LOCATION IS LOCATED IN THE INACTIVE CELLS (CELLS 4, 5) OF THE LANDFILL OR UPGRADIENT OF THE LANDFILL.

MS-LF-25-01, MS-LF-25-02, MS-LF-TH-01, AND MS-LF-TH-02 WERE INSTALLED IN 2025.

GROUNDWATER STATIONS AND RST THERMISTORS WERE SURVEYED IN NOVEMBER 2025 (WITH THE EXCEPTION OF LF-KP22-05, LF-KP23-06, LF-KP23-07, LF-KP23-08 AND LF-KP23-09).

REFERENCE(S)

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CLIENT
BAFFINLAND IRON MINES CORPORATION

PROJECT
MARY RIVER PROJECT

TITLE
LANDFILL FACILITY AND SAMPLING STATION STATUS IN 2025

CONSULTANT
wsp

YYYY-MM-DD	2026-02-19
DESIGNED	JP
PREPARED	AA
REVIEWED	JP
APPROVED	TR

PROJECT NO.	CONTROL	REV.	FIGURE
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LEGEND

- TOPOGRAPHIC CONTOUR (2 m INTERVAL)
- TOPOGRAPHIC CONTOUR (10 m INTERVAL)
- HAZARDOUS WASTER BERM FACILITIES
- HAZARDOUS WASTE BERM LIMIT

DISTANCE QUALIFIER

- BACKGROUND
- DOWNGRADIENT
- PROXIMAL
- SOURCE

STATION STATUS

HWB-KP23-01	SAMPLED IN 2025
MS-HWB-GW-REF3	NOT SAMPLED IN 2025
MS-HWB-GW1*	DRIVE POINT PIEZOMETER NO LONGER EXISTS

STATION TYPE

- GROUNDWATER DRIVE POINT PIEZOMETER
- GROUNDWATER STANDPIPE WELL WITH BENTONITE SEAL
- GROUNDWATER STANDPIPE WELL WITHOUT BENTONITE SEALS

0 50 100
1:2,500 METRES

NOTE(S)

SOURCE = SAMPLING LOCATION IS LOCATED WITHIN HAZARDOUS WASTE BERM FACILITY LIMITS OR LESS THAN 20 m FROM THE HAZARDOUS WASTE BERM FACILITY LIMITS.

PROXIMAL = STATION IS LOCATED MORE THAN 20 m FROM HAZARDOUS WASTE BERM FACILITY LIMITS.

DOWNGRADIENT = SAMPLING LOCATION IS LOCATED MORE THAN 20 m DOWNGRADIENT FROM THE HAZARDOUS WASTE BERM FACILITY LIMITS TOWARDS CAMP LAKE.

BACKGROUND = SAMPLING LOCATION IS LOCATED UPGRADIENT OR MORE THAN 20 m FROM HAZARDOUS WASTE BERM FACILITY LIMITS.

MS-HWB-25-01, MS-HWB-25-02, MS-HWB-25-03 WERE INSTALLED IN 2025.

GROUNDWATER STATIONS WERE SURVEYED IN NOVEMBER 2025 .

REFERENCE(S)

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CLIENT
BAFFINLAND IRON MINES CORPORATION

PROJECT
MARY RIVER PROJECT

TITLE
HAZARDOUS WASTE BERM FACILITY AND SAMPLING STATION STATUS IN 2025

CONSULTANT
wsp

YYYY-MM-DD	2026-02-19
DESIGNED	JP
PREPARED	AA
REVIEWED	JP
APPROVED	TR

PROJECT NO.	CONTROL	REV.	FIGURE
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LEGEND

- APPROXIMATE GROUNDWATER FLOW DIRECTION
- ESTIMATED GROUNDWATER CONTOUR
- TOPOGRAPHIC CONTOUR (2 m INTERVAL)
- TOPOGRAPHIC CONTOUR (10 m INTERVAL)
- 2012 FEIS/TYPE A WATER LICENSE LANDFILL AND LANDFARM LIMIT
- 2022 LANDFILL WASTE EXTENT

DISTANCE QUALIFIER

- BACKGROUND
- DOWNGRADIENT
- PROXIMAL
- SOURCE

STATION TYPE

- GROUNDWATER DRIVE POINT PIEZOMETER
- GROUNDWATER STANDPIPE WELL WITH BENTONITE SEAL
- GROUNDWATER STANDPIPE WELL WITHOUT BENTONITE SEALS

WATER LEVEL SURVEY

LF-KP23-01	WATER LEVEL MEASUREMENT COLLECTED END OF AUGUST/BEGINNING OF SEPTEMBER 2025
MS-LF-GW4	DRY, FROZEN OR WATER LEVEL COULD NOT BE COLLECTED AT THE STATION
LF-KP23-02*	WELL WAS NEVER INSTALLED

0 50 100
1:2,500 METRES

NOTE(S)

SOURCE = SAMPLING LOCATION IS LOCATED WITHIN ACTIVE CELLS (CELLS 1, 2, 3) IN THE LANDFILL.

PROXIMAL = SAMPLING LOCATION IS WITHIN 20 m FROM LANDFILL LIMITS.

DOWNGRADIENT = SAMPLING LOCATION IS LOCATED MORE THAN 20 m DOWNGRADIENT FROM THE LANDFILL'S LIMITS TOWARDS SHEARDOWN LAKE.

BACKGROUND = SAMPLING LOCATION IS LOCATED IN THE INACTIVE CELLS (CELLS 4, 5) OF THE LANDFILL OR UPGRADIENT OF THE LANDFILL.

masl = METRES ABOVE SEA LEVEL

NOTE THAT WATER LEVELS MEASURED IN STANDPIPE WELLS WITH NO BENTONITE SEAL MAY BE INFLUENCED BY SURFACE WATER RUNOFF AND PRECIPITATION (I.E. OVERESTIMATED). THIS CAN CAUSE ERRORS WHEN CALCULATING GROUNDWATER FLOW DIRECTIONS AND HYDRAULIC GRADIENTS. THIS FIGURE SHOULD BE USED WITH CAUTION. REFER TO REPORT FOR ATTEMPTS TO MITIGATE THE ISSUE IN THE SAMPLING AND MEASUREMENT APPROACHES.

REFERENCE(S)

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PROJECT
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TITLE
2025 GROUNDWATER ELEVATIONS AND ESTIMATED FLOW DIRECTION AT THE LANDFILL FACILITY

CONSULTANT
wsp

YYYY-MM-DD	2026-02-19
DESIGNED	JP
PREPARED	AA
REVIEWED	JP
APPROVED	TR

PROJECT NO.	CONTROL	REV.	FIGURE
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LEGEND

- APPROXIMATE GROUNDWATER FLOW DIRECTION
- ESTIMATED GROUNDWATER CONTOUR
- TOPOGRAPHIC CONTOUR (2 m INTERVAL)
- TOPOGRAPHIC CONTOUR (10 m INTERVAL)
- HAZARDOUS WASTER BERM FACILITIES
- HAZARDOUS WASTE BERM LIMIT

DISTANCE QUALIFIER

- BACKGROUND
- DOWNGRADIENT
- PROXIMAL
- SOURCE

STATION TYPE

- GROUNDWATER DRIVE POINT PIEZOMETER
- GROUNDWATER STANDPIPE WELL WITH BENTONITE SEAL
- GROUNDWATER STANDPIPE WELL WITHOUT BENTONITE SEALS

WATER LEVEL SURVEY

HWB-KP23-01	WATER LEVEL MEASUREMENT COLLECTED END OF AUGUST/ BEGINNING OF SEPTEMBER 2025
MS-HWB-GW-REF3	DRY OR WATER LEVEL MEASUREMENT COULD NOT BE COLLECTED AT THE STATION
MS-HWB-GW1*	DRIVE POINT PIEZOMETER NO LONGER EXISTS

0 50 100
1:2,500 METRES

NOTE(S)

SOURCE = SAMPLING LOCATION IS LOCATED WITHIN HAZARDOUS WASTE BERM FACILITY LIMITS OR LESS THAN 20 m FROM THE HAZARDOUS WASTE BERM FACILITY LIMITS.

PROXIMAL = STATION IS LOCATED MORE THAN 20 m FROM HAZARDOUS WASTE BERM FACILITY LIMITS.

DOWNGRADIENT = SAMPLING LOCATION IS LOCATED MORE THAN 20 m DOWNGRADIENT FROM THE HAZARDOUS WASTE BERM FACILITY LIMITS TOWARDS CAMP LAKE.

BACKGROUND = SAMPLING LOCATION IS LOCATED UPGRADIENT OR MORE THAN 20 m FROM HAZARDOUS WASTE BERM FACILITY LIMITS.

masl = METRES ABOVE SEA LEVEL

NOTE THAT WATER LEVELS MEASURED IN STANDPIPE WELLS WITH NO BENTONITE SEAL MAY BE INFLUENCED BY SURFACE WATER RUNOFF AND PRECIPITATION (I.E. OVERESTIMATED). THIS CAN CAUSE ERRORS WHEN CALCULATING GROUNDWATER FLOW DIRECTIONS AND HYDRAULIC GRADIENTS. THIS FIGURE SHOULD BE USED WITH CAUTION. REFER TO REPORT FOR ATTEMPTS TO MITIGATE THE ISSUE IN THE SAMPLING AND MEASUREMENT APPROACHES.

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CLIENT
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PROJECT
MARY RIVER PROJECT

TITLE
2025 GROUNDWATER ELEVATIONS AND ESTIMATED FLOW DIRECTION AT THE HAZARDOUS WASTE BERM FACILITY

CONSULTANT
wsp

YYYY-MM-DD	2026-02-19
DESIGNED	JP
PREPARED	AA
REVIEWED	JP
APPROVED	TR

PROJECT NO.	CONTROL	REV.	FIGURE
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APPENDIX A

Site Photographs

Groundwater Sampling



Photo A-1: Standpipe well LF-KP23-08 (August 25, 2025).

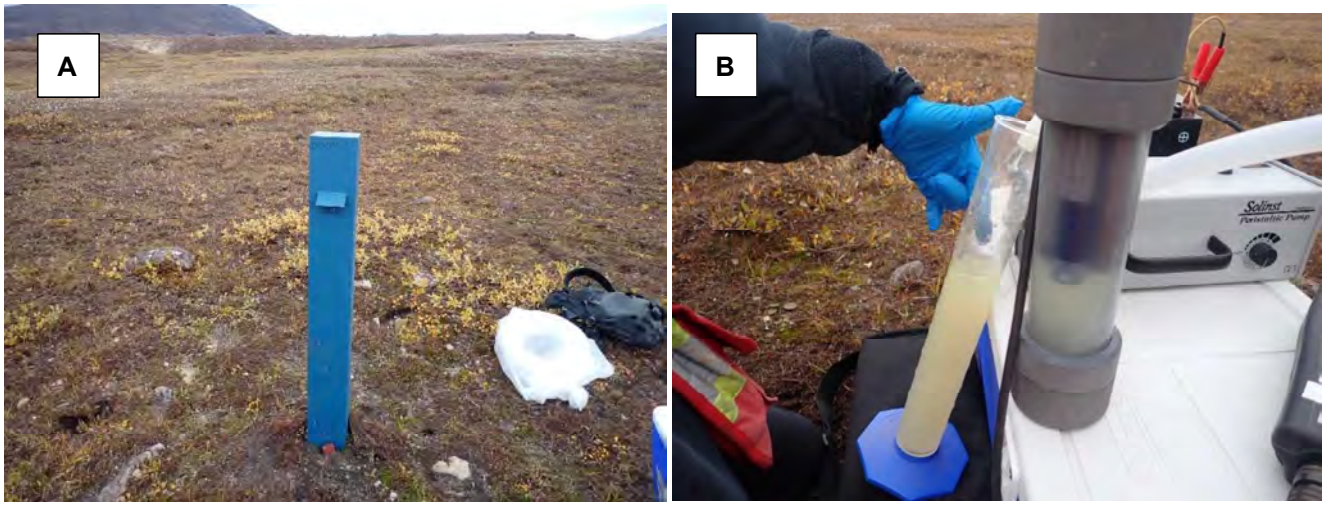


Photo A-2: A) Standpipe well LF-KP23-09 (August 25, 2025), B) Measuring volume of purged water.

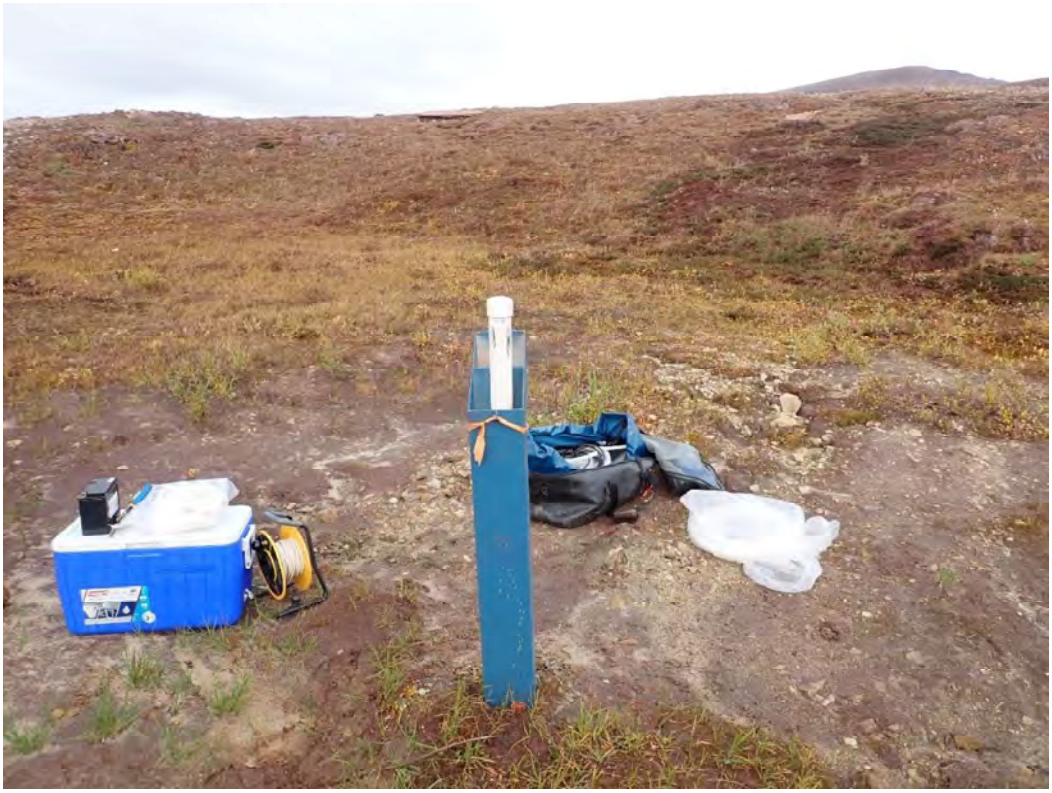


Photo A-3: Standpipe well LF-KP22-05 (August 26, 2025).

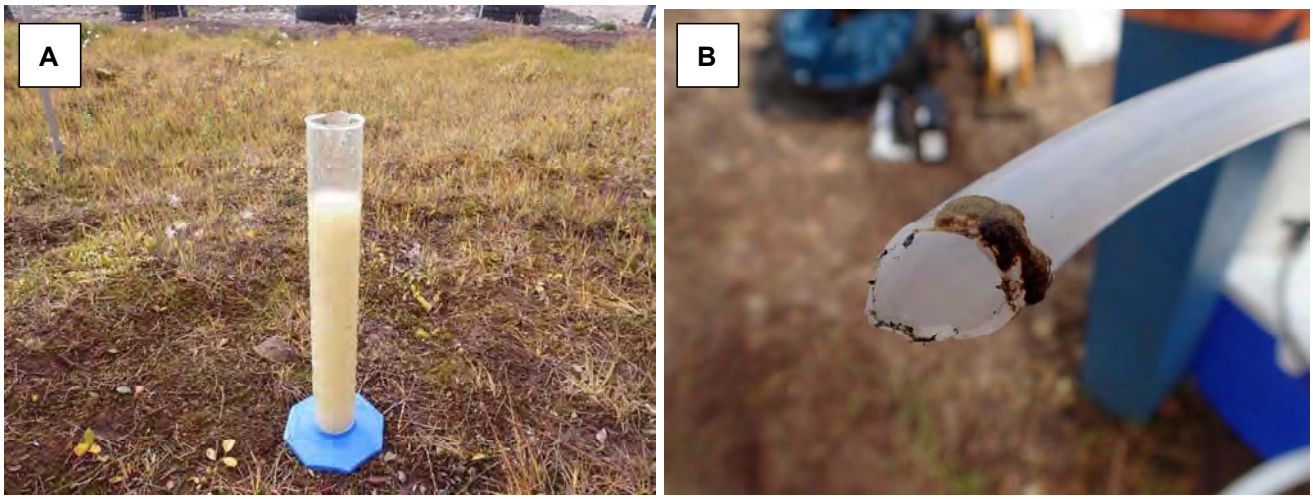


Photo A-4: Standpipe well LF-KP22-05 (August 26, 2025) – A) Yellowish and slightly opaque water appearance. Mild sewage smell was noted by the field crew, B) Brown sediment with apparent oil slick noticed at the bottom of LDPE tubing upon removal.



Photo A-5: Standpipe well LF-KP22-03 (August 27, 2025).

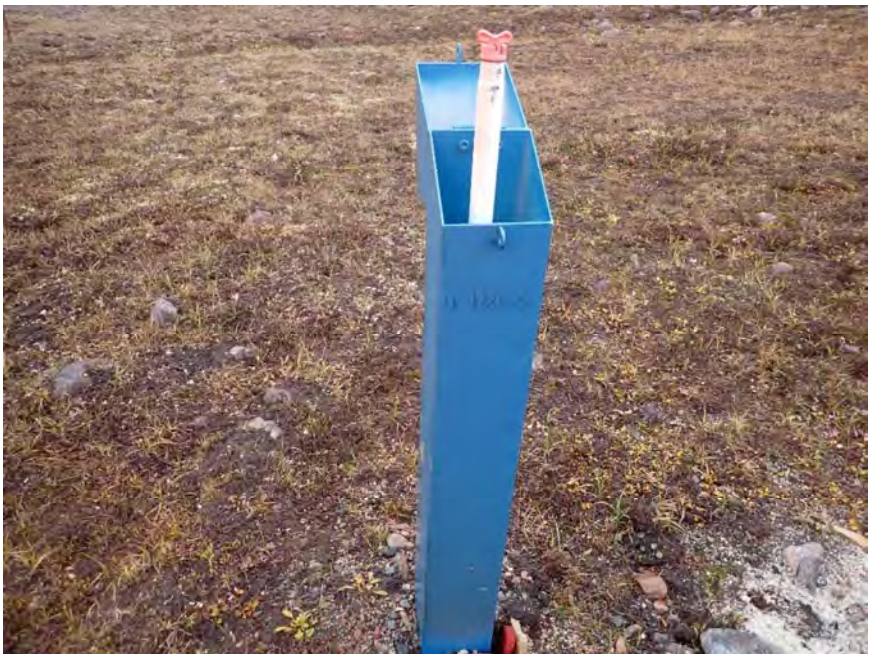


Photo A-6: Standpipe well LF-KP23-05 (August 27, 2025) – PVC casing doesn't allow the metal casing to fully close.



Photo A-7: Drive point piezometer MS-LF-GW3 (August 27, 2025) – 3 nearby drive point piezometers, 2 of which have tubing stuck in the drive point piezometer.

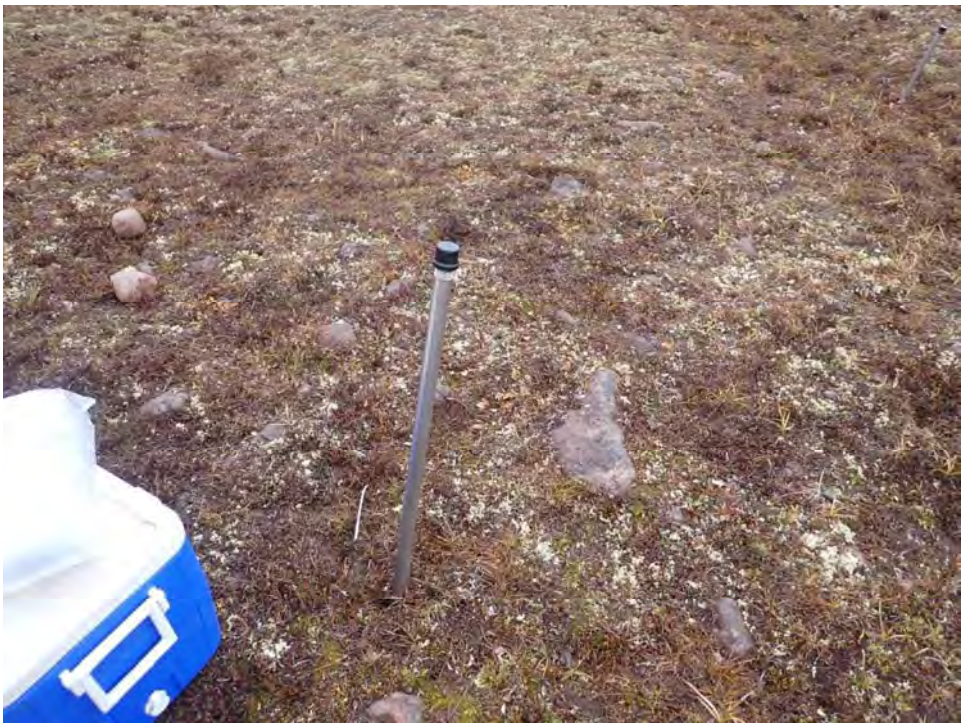


Photo A-8: Drive point piezometer MS-LF-GW-REF2 (August 27, 2025).



Photo A-9: Standpipe well LF-KP22-01 (August 28, 2025).



Photo A-10: Standpipe well LF-KP23-03 (August 28, 2025).



Photo A-11: Standpipe well LF-KP23-13 (August 28, 2025).



Photo A-12: Drive point piezometer MS-LF-GW1 (August 28, 2025).



Photo A-13: Drive point piezometer MS-LF-GW-REF1 (August 28, 2025) – Tubing is stuck in the drive point piezometer.



Photo A-14: LF-KP23-02 hole (August 29, 2025) – Well was never installed.



Photo A-15: Standpipe well LF-KP23-04 (August 29, 2025) – Groundwater sampling set-up.



Photo A-16: Drive point piezometer MS-LF-GW2 (August 29, 2025) – 3 nearby drive point piezometers, 1 with a tubing stuck in the drive point piezometer.



Photo A-17: Newly installed standpipe well (with a bentonite seal) MS-LF-GW-25-02 (August 29, 2025).



Photo A-18: Drive point piezometer MS-LF-GW4 (August 29, 2025) – Tubing is stuck at both locations.



Photo A-19: Drive point piezometer MS-LF-GW5 (August 29, 2025)– Collecting water level measurements at the nearby drive point piezometers, all locations were dry.



Photo A-20: Standpipe well HWB-KP22-01 (August 30, 2025) – Sediment and black particules observed in the first well volume purged. Sediment and particules decreased by last purge. A mild sulfur smell was noted throughout the purging.



Photo A-21: Standpipe well HWB-KP22-03 (August 30, 2025).



Photo A-22: Standpipe well HWB-KP22-04 (August 30, 2025) – Oily water totes stored next to the standpipe well.

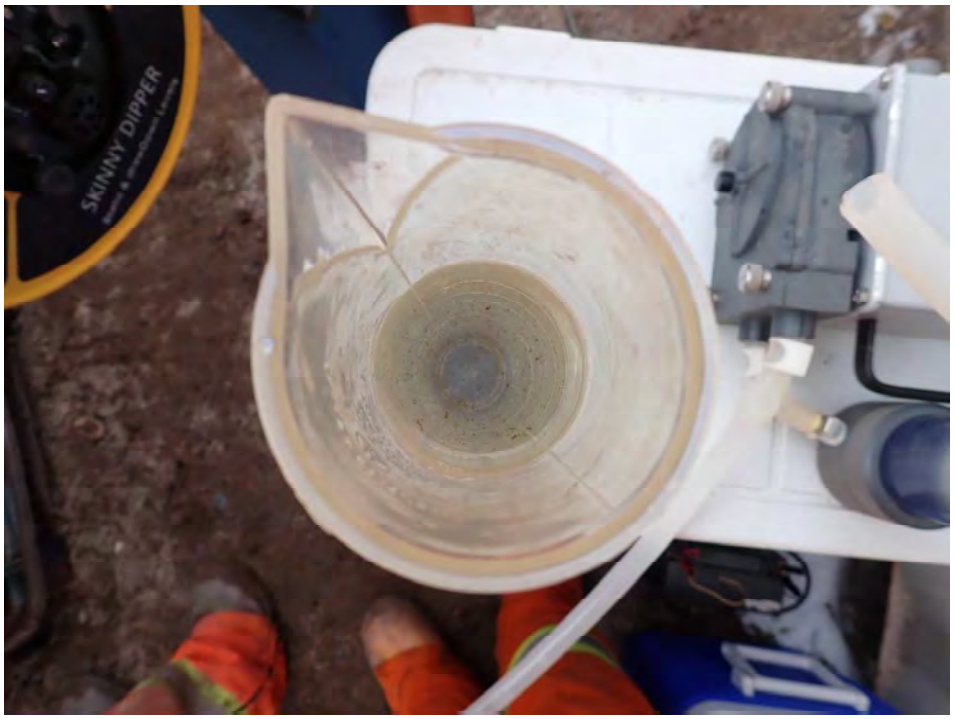


Photo A-23: Standpipe well HWB-KP22-04 (August 30, 2025) – Brown sediments in suspension were observed in the first well volume purged. Water cleared by the third well volume purged.



Photo A-24: Standpipe well HWB-KP22-05 (August 30, 2025).



Photo A-25: Standpipe well HWB-KP23-01 (August 30, 2025).



Photo A-26: Standpipe well HWB-KP23-02 (August 30, 2025).



Photo A-27: Standpipe well HWB-KP23-03 (August 30, 2025) – Metal casing is damaged.



Photo A-28: Drive point piezometer MS-HWB-GW3 (August 30, 2025) – Drive point piezometer is bent and broken.



Photo A-29: Drive point piezometer MS-HWB-GW4 (August 30, 2025) – Seacan is on the drive point piezometer.



Photo A-30: Drive point piezometer MS-HWB-GW5 (August 30, 2025).



Photo A-31: Drive point piezometer MS-HWB-GW-REF1 (August 30, 2025) – Ponding few meters next to the drive point piezometer.



Photo A-32: Drive point piezometer MS-HWB-GW-REF2 (August 30, 2025) – Tubing is stuck in the drive point piezometer.



Photo A-33: Drive point piezometer MS-HWB-GW-REF3 (August 30, 2025).



Photo A-34: Standpipe well HWB-KP22-06 (September 2, 2025).



Photo A-35: Newly installed standpipe well (with a bentonite seal) MS-HWB-25-01 (September 2, 2025).



Photo A-36: Newly installed standpipe well (with a bentonite seal) MS-HWB-25-03 (September 2, 2025).



Photo A-37: Drive point piezometer MS-HWB-GW6 (September 2, 2025).



Photo A-38: Drive point piezometer MS-LF-REF3 (September 2, 2025).

Seep and Surface Water Sampling



Photo A-39 Seep LF-DS-SEEP-01 (August 29, 2025) – Seepage sampling at the Landfill Facility.



Photo A-40: Seep LF-DS-SEEP-02 (August 29, 2025) – Seep was dry. Some stagnant water observed 4 metres from the 2024 seep location.



Photo A-41: LF-US-POND-01 (August 29, 2025) - Surface Water sampling along the Landfill Facility limits.



Photo A-42: MS-MRY-13A (August 29, 2025) – Dry location.



Photo A-43: MS-MRY-13B (August 29, 2025) – Surface Water sampling near Sheardown Lake.



Photo A-44: MS-MRY-13C (August 29, 2025) – Surface Water sampling near Sheardown Lake.

Single Well Response Testing

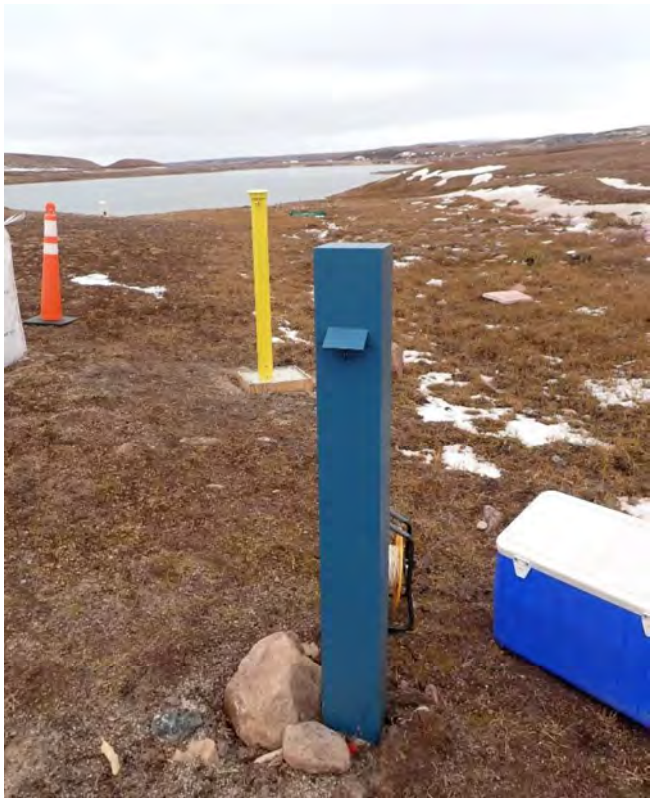


Photo A-45: Standpipe well LF-KP23-04 (September 3, 2025) – Slug test was completed at the well location.



Photo A-46: Standpipe well MS-HWB-25-03 (September 4, 2025) – Slug test was completed at the well location.

Maintenance and Other Activities

Well Development







Photo A-47: Well development at MS-HWB-25-01 (August 29, 2025) – A) Standpipe well MS-HWB-25-01, B) Water clarity after 2 well volumes, C) Water clarity after 10 well volumes.

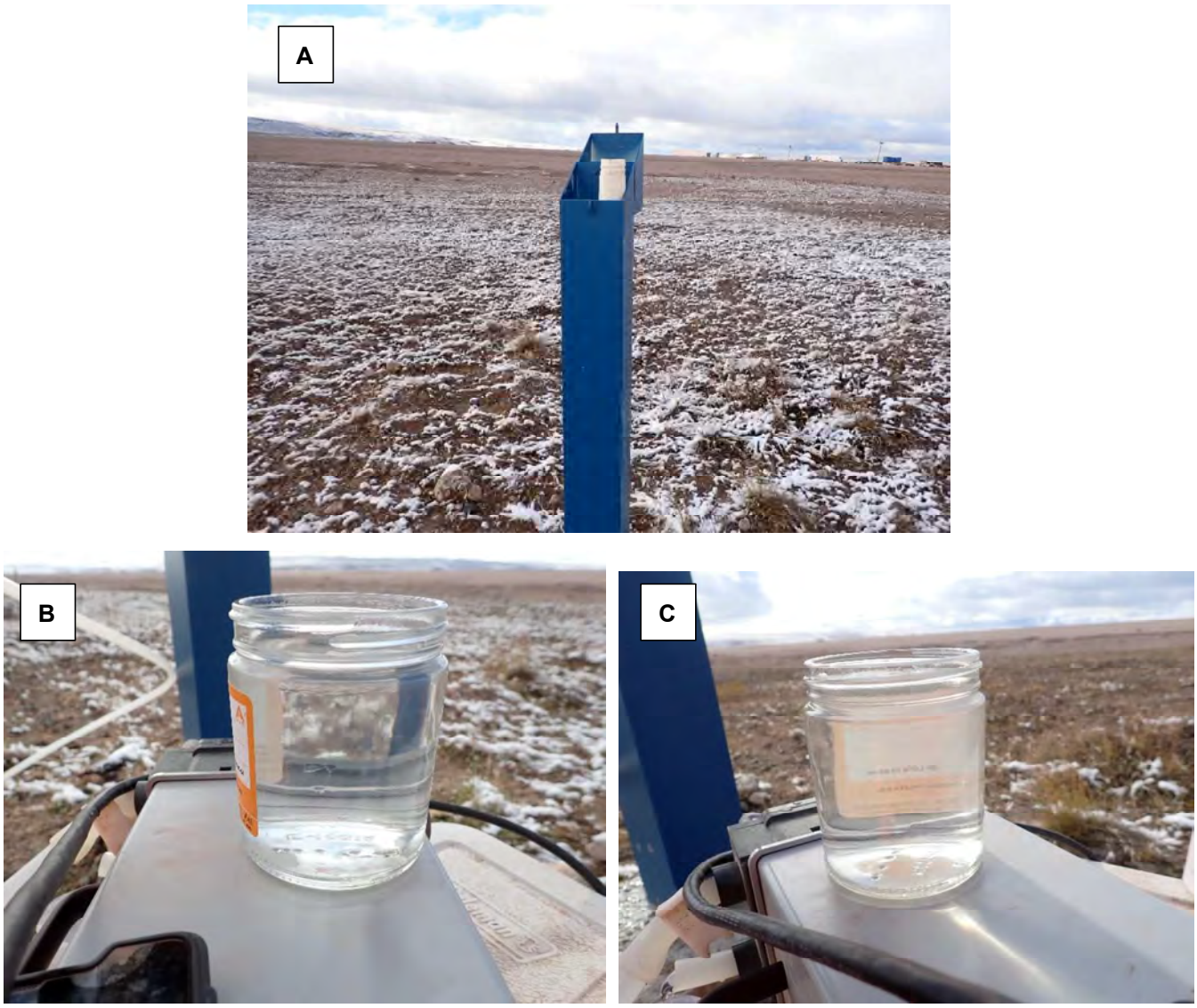


Photo A-48: Well development at MS-HWB-25-03 (August 29, 2025) – A) Standpipe well MS-HWB-25-03, B) Water clarity after 5 well volumes, C) Water clarity after 10 well volumes.

Camera Survey



Photo A-49: A) Standpipe well MS-LF-25-01 (September 4, 2025), B) Blockage investigation using a Milwaukee Downhole Camera. Ice was observed during the survey.

APPENDIX B

Daily Field Summaries

2025 Baffinland Daily Groundwater Summary

25-Aug-2025	Weather: 9-6°C, overcast, windy, and started raining during second well visit.
	Field Crew: Liam Guenther, Alicia Guay
	Two locations sampled: LF-KP-23-09 and LF-KP23-08 Observations: - LF-KP23-08 initial purge was opaque and yellow with no odor. It took 20L of purging to reach stable YSI conditions.  

26-Aug-2025	Weather: 1-2°C, mostly cloudy, strong S. wind.
	Field Crew: Liam Guenther, Jason Manella
	Five locations sampled: LF-KP22-05, LF-KP23-01, LF-KP23-06, LF-KP23-07, and LF-KP23-11. One Dry locations: LF-KP23-10 Observations: - Many well sites have required significantly more than 3 well volumes of purging to reach stable YSI conditions e.g., LF-KP23-07 and LF-KP23-05 required 8 volumes, LF-KP23-11 required 9 well volumes.

- LF-KP22-05: located adjacent to the landfill had a strong sewage smell, and a yellow/opaque colour.
- Water smell and colour improved by final purge but never reached clear conditions.



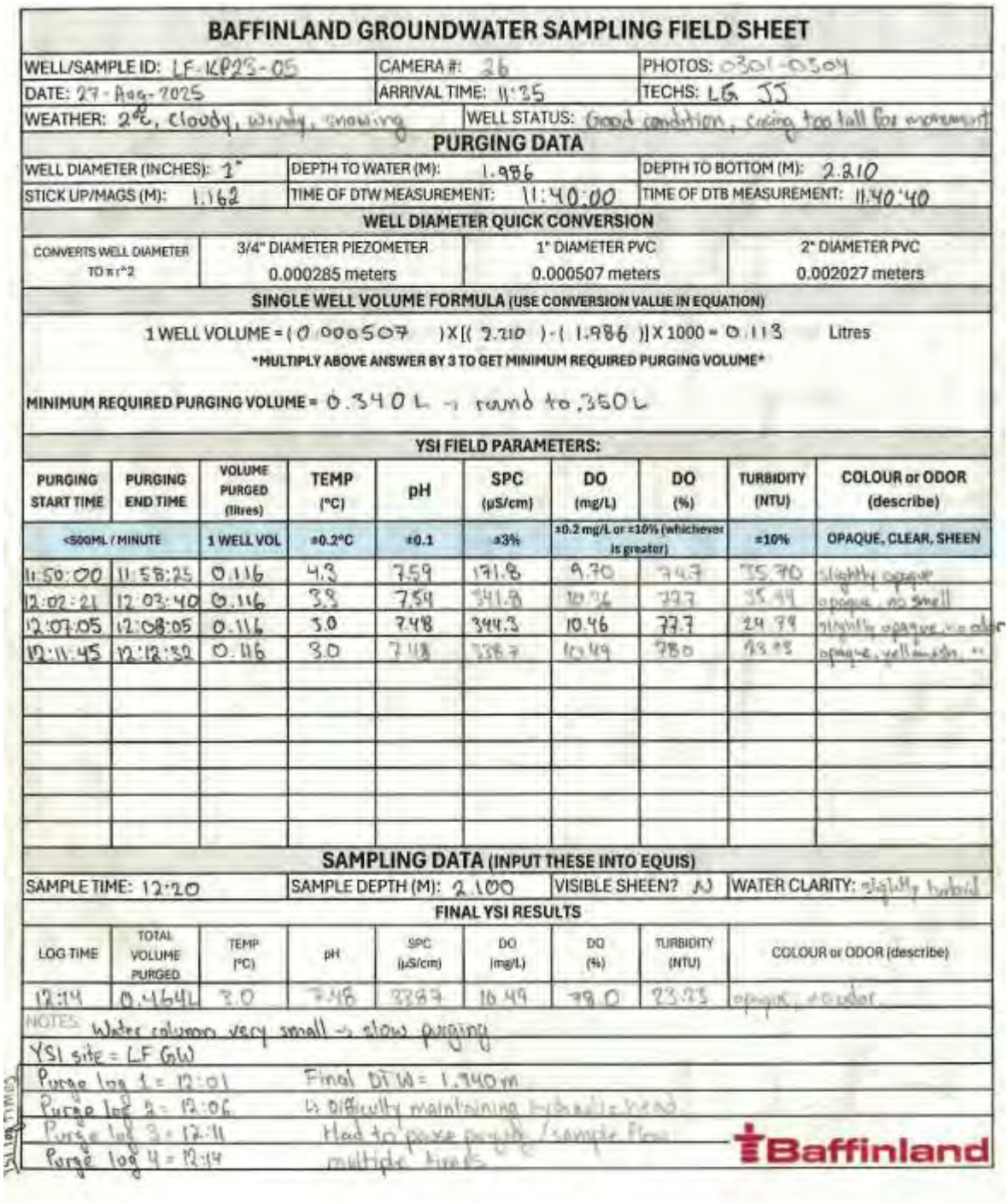
LF-KP22-05 well casing and monument.



Water from LF-KP22-05 after initial purge.

27-Aug-2025	Weather: 0-1°C, windy, rain and snow.
	Field Crew: Liam Guenther, Justin James
	Three locations sampled: LF-KP22-03 (plus trip blank), LF-KP23-05, MS-LF-GW3 One dry location: MS-LF-GW-REF-2 Observations: - Well purging appeared to be more consistent today. Average purge requirement ranged form 4-5 well volumes for stable YSI parameters. - MS-LF-GW-REF-2 is a background drivepoint that was sampled last year. This year, the water column was measured as being only 6.7cm, and thus, was considered to be a dry location.  Circled is the location sampled as MS-LF-GW-REF-2 in 2024. Next to it, is a flagged drivepoint with LDPE tubing stuck inside. No sample could be collected at this location in 2025.

Below is a scan of the current Baffinland Groundwater Field sheet used up until today.
Edits will be made to add a “Water Level” column for future well sites.
Sites sampled prior to August 27th will not have consistent water level readings during sampling.



BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: LF-KB23-05	CAMERA #: 26	PHOTOS: 0301-0304
DATE: 27-Aug-2025	ARRIVAL TIME: 11:35	TECHS: LG JJ
WEATHER: 2°C, cloudy, windy, snowing	WELL STATUS: Good condition, casing too tall for instrument	

PURGING DATA

WELL DIAMETER (INCHES): 1"	DEPTH TO WATER (M): 1.986	DEPTH TO BOTTOM (M): 2.210
STICK UP/MAGS (M): 1.162	TIME OF DTW MEASUREMENT: 11:40:00	TIME OF DTB MEASUREMENT: 11:40:40

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO πr^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (0.000507)X[(2.210)-(1.986)]X 1000 = 0.113 Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME = 0.340 L → round to .350 L

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN
11:50:00	11:58:25	0.116	4.3	7.59	171.8	9.70	74.7	35.70	slightly opaque
12:02:21	12:03:40	0.116	3.8	7.54	341.8	10.26	77.7	35.44	opaque, no smell
12:07:05	12:08:05	0.116	3.0	7.48	344.3	10.46	77.7	24.79	slightly opaque, no odor
12:11:45	12:12:32	0.116	3.0	7.118	338.7	10.49	78.0	23.23	opaque, yellowish, no

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 12:20	SAMPLE DEPTH (M): 2.100	VISIBLE SHEEN? NO	WATER CLARITY: slightly turbid

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
12:14	0.464L	3.0	7.48	338.7	10.49	78.0	23.23	opaque, no odor

NOTES: Water column very small → slow purging
YSI site = LF (GW)
Purge log 1 = 12:01 Final DTW = 1.940m
Purge log 2 = 12:06 ↳ difficulty maintaining hydraulic head
Purge log 3 = 12:11 Had to pause purging / sample flow multiple times
Purge log 4 = 12:14

Baffinland

28-Aug-2025	Weather: 1-5°C, partly cloudy, sunny in the afternoon
	Field Crew: Liam Guenther, Justin James
	Three locations sampled: LF-KP23-13, MS-LF-GW1, LF-KP22-01 (plus field duplicate) One dry location: LF-KP23-03 One location unable to be sampled: MS-LF-GW-REF1 Observations: - Updated field sheets were used today and include purging water drawdown during sample collection. Some wells (drivepoints and 1" wells) could not accommodate the dip tape being used. Extra care was taken at these locations to ensure low-flow with the peristaltic pump. - Waterra tubing was stuck inside MS-LF-GW-REF1. No sample could be collected.  - We continue to have difficulty obtaining stable YSI parameters while purging. Wells that required the most purging were LF-KP23-13 (8 well volumes) and MS-LF-GW1 (12 well volumes). - Going forward, we will cease purging after 5 well volumes, unless specified otherwise by WSP. - We recognized an error in our dip tape measurements today. Well depths measured from the three previous days are all short by 8cm. Meaning, every well volume was underestimated. However, every well had to be purged >3 well volumes to reach stable YSI parameters. Therefore, the data should still be valid for all samples collected prior to today's discovery. - The well progress spreadsheet has the updated well depths, and all field sheets from August 25th – 27th will be updated.

29-Aug-2025	Weather: -5 – +3°C, strong wind, on and off snow throughout the day. The forecast is not looking much warmer over the next week and there is potential for an increase in dry/frozen well locations compared to last year.
	Field Crew: Liam Guenther, Alicia Guay, Justin James, Erin Franchville
	Two locations sampled at the landfill: MS-LF-GW2 and LF-KP23-04 One dry/frozen drivepoint: MS-LF-GW5 Two locations that could not be sampled: LF-KP23-02 and MS-LF-GW4 Two new wells developed: MS-HWB-25-01 and MS-HWB-25-03 Landfill seep investigation locations sampled: MS-MRY-13B, MS-MRY-13C, LF-DS-SEEP-01, and LF-US-POND-01 - Two of the locations associated with this sampling group were dry – LF-DS-SEEP-02 and MS-MRY-13A. Observations: Of the newly installed wells, 4/6 locations were dry/frozen. - **MS-HWB-25-02 and MS-LF-25-02** were completely dry and unobstructed, resulting in no well development. - **MS-LF-25-01** was also dry at the time of the visit and was found to be obstructed. - **MS-HWB-25-01 and MS-HWB-25-03** were active and successfully developed by the crew. These two wells will be ready for sampling in a few days. Below is a breakdown of what was encountered at each well. **MS-HWB-25-01** • Purged 10 well volumes • No water quality concerns • No drawdown concerns **MS-HWB-25-02** • Dry and unobstructed • Depth from ground surface to the bottom of the well: 3.25 meters (0.02 meters off design) • Likely dry due to the well screen being fully embedded in permafrost **MS-HWB-25-03** • Purged 10 well volumes • No water quality concerns • No drawdown concerns **MS-LF-25-01** • Dry and obstructed • Depth from ground surface to the bottom of the well: 1.386 meters

- Cause of obstruction is unknown; potential causes include frozen conditions or casing damage

MS-LF-25-02

- Dry and unobstructed
- Depth from ground surface to the bottom of the well: 3.23 meters (0.04 meters off design)
- Likely dry due to the well screen being fully embedded in permafrost

We have downloaded thermistor data from the landfill and HWB areas and observed steady temperature decreases over the last four days at the surface, 1.5m, and 3.0m below the surface.

<u>MS-LF-TH-01 Data</u>

Date	Surface	1.5m	3.0m
2025-08-25T02:00:00-04:00	7.491	0.911	-0.406
2025-08-25T08:00:00-04:00	7.354	0.919	-0.404
2025-08-25T14:00:00-04:00	9.408	0.927	-0.402
2025-08-25T20:00:00-04:00	5.473	0.923	-0.402
2025-08-26T02:00:00-04:00	3.159	0.94	-0.4
2025-08-26T08:00:00-04:00	2.543	0.953	-0.398
2025-08-26T14:00:00-04:00	4.508	0.968	-0.396
2025-08-26T20:00:00-04:00	5.294	0.968	-0.394
2025-08-27T02:00:00-04:00	2.652	0.957	-0.392
2025-08-27T08:00:00-04:00	1.578	0.942	-0.39
2025-08-27T14:00:00-04:00	2.428	0.919	-0.39
2025-08-27T20:00:00-04:00	2.82	0.868	-0.387
2025-08-28T02:00:00-04:00	2.389	0.839	-0.387
2025-08-28T08:00:00-04:00	0.785	0.82	-0.385
2025-08-28T14:00:00-04:00	4.669	0.799	-0.383
2025-08-28T20:00:00-04:00	3.785	0.776	-0.383
2025-08-29T02:00:00-04:00	1.191	0.749	-0.381
2025-08-29T08:00:00-04:00	0.459	0.724	-0.381



Dry MS-LF-25-02 on 29-Aug-25

Unlike last year, one of the seep locations (LF-DS-SEEP-02) was completely dry.



LF-DS-SEEP-02 in 2025.

Some stagnant water 4m from 2024 seep location. This water was not sampled.



LF-DS-SEEP-02 in 2024.

Significant water originating from the landfill road/berm.

30-Aug-2025

Weather: -2 – 0°C, windy, partly cloudy, some snow in the early morning.

Field Crew: Liam Guenther, Alicia Guay, Justin James, Jeremy Arch-Kelly

Ten locations sampled: HWB-KP23-01, HWB-KP23-02 (plus field dupe), HWB-KP23-03, HWB-KP22-01, HWB-KP22-03, HWB-KP22-04, HWB-KP22,05, MS-HWB-GW5, MS-HWB-GW-REF1, and MS-HWB-GW-REF3.

One dry location: MS-HWB-GW-REF2

Two broken drivepoints: MS-HWB-GW4 and MS-HWB-GW3

Observations:

- HWB-KP22-01, located next to HWB7, had black sediment/particles in the water and a strong sulfur odor.





- Interestingly, MS-HWB-GW-REF2, located ~ 2.5m from HWB-KP22-01 (circled in red), was dry.



Site name:	MAGs	DTW	DTB
HWB-KP22-01	1.28	1.394	2.431
MS-HWB-GW-REF2	0.619	Dry	1.742

Two drivepoints that were sampled in 2024, could not be sampled this year. They were likely both broken in the winter/spring during seacan staging around the Hazardous Waste Berms.



MS-HWB-GW3 – located on the W. side of HWB7 was completely bent and obstructed.



MS-HWB-GW4 – located on the W. side of HWB4 was also completely bent and obstructed.

Remaining locations to be sampled will be sampled in conjunction with the newly installed and recently developed 2025 wells.

- MS-HWB-25-01 & MS-HWB-GW6
- MS-HWB-25.03 & HWB-KP22-06

	Weather: -1 – 0°C, windy, overcast, fog. A large snowstorm began while performing the slug test at the landfill.
	Field Crew: Liam Guenther, Justin James, Alicia Guay
31-Aug-2025	One location slug tested: LF-KP23-11 Observations: - Due to weather constraints, slug testing could only be performed at one landfill location, upgradient of the landfill cell. Below are the field notes used and a snip of the data from the levelogger software. - The sampling rate on the Barologger and Levelogger were set to 0.125s.

BAFFINLAND SLUG TESTING FIELD SHEET

WELL/SAMPLE ID: LF-KP23-11	CAMERA #: 26	PHOTOS: 0490 - 0	
DATE: 31-Aug-2025	ARRIVAL TIME: 13:15	TECHS: LG JJ AG	
WEATHER: 0°C, windy, overcast, fog	WELL STATUS: Good condition		
WELL DIAMETER (INCHES): 1"	DEPTH TO WATER (M): 1.751	DEPTH TO BOTTOM (M): 2.828	
STICK UP/MAGS (M): 1.194	TIME OF DTW MEASUREMENT: 13:18:30	TIME OF DTB MEASUREMENT: 13:19:25	

DATALOGGER INFORMATION

LOGGER SAMPLING RATE (SECONDS): 0.125 seconds	TARGET LOGGER DEPTH: 2.728m	DTW AFTER LOGGER ADDED: 1.743	TIME OF DTW: 13:45:49
LOGGER SERIAL NUMBER: 002-2204461	DATA SAVED AND DELETED FROM LOGGER POST SAMPLE?		
BAROLOGGER START TIME: 13:39	LEVELOGGER START TIME: 13:41		

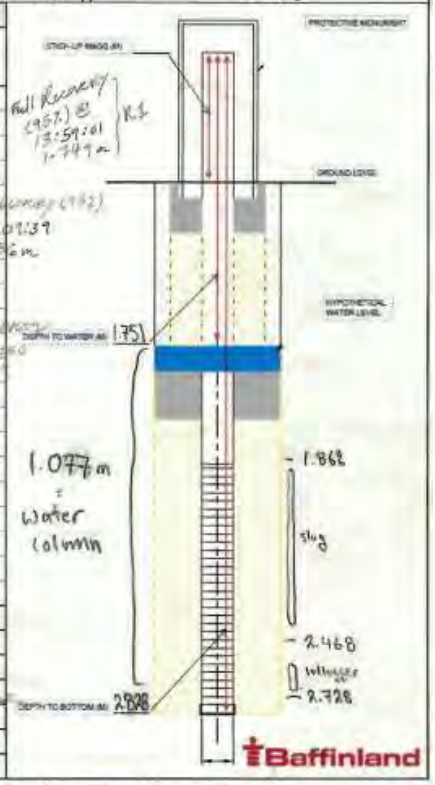
SLUG INFORMATION

SLUG TYPE: Solid	SLUG LENGTH: 0.60 m	SLUG DIAMETER: 0.04m	TARGET SLUG DEPTH: 2.468

FALLING HEAD AND RISING HEAD TEST

TEST TYPE (RISING OR FALLING)	SLUG INSERTION TIME	ELAPSED TIME	WATER DEPTH (M TO TOP)	
Falling 1	13:51:59		1.465	
		13:52:99	1.649	
		13:59:90	1.710	
		13:57:10	1.770	
Rising 1	14:05:15		1.995	Full Recovery (95%) @ 13:59:01 1.749m
		14:02:55	1.845	
		14:09:52	1.749	
		14:09:27	1.761	
Falling 2	14:10:15		1.490	
		14:12:49	1.692	
		14:14:99	1.726	
		14:16:56	1.739	
Rising 2	14:18:10		2.009	
		14:20:06	1.827	
		14:22:96	1.773	
		14:24:55	1.759	
Falling 3	14:25:22		1.471	1.471
		14:28:10	1.712	
		14:31:10	1.741	
		14:33:90	1.743	
Rising 3	14:37:10		2.022	
		14:35:10	1.846	

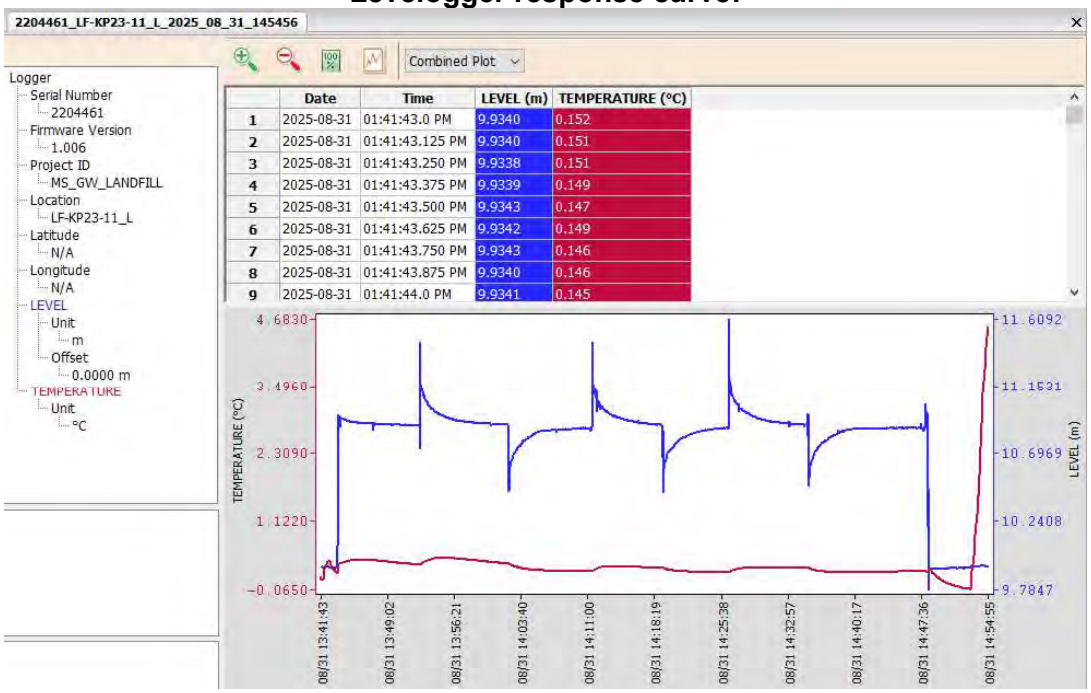
NOTES:
- Project ID: MS-GW-LANDFILL
- Time of logger insertion 13:32
- Full DTW Recovery after the logger insertion @ 13:50:00
- Ice forming in the well casing



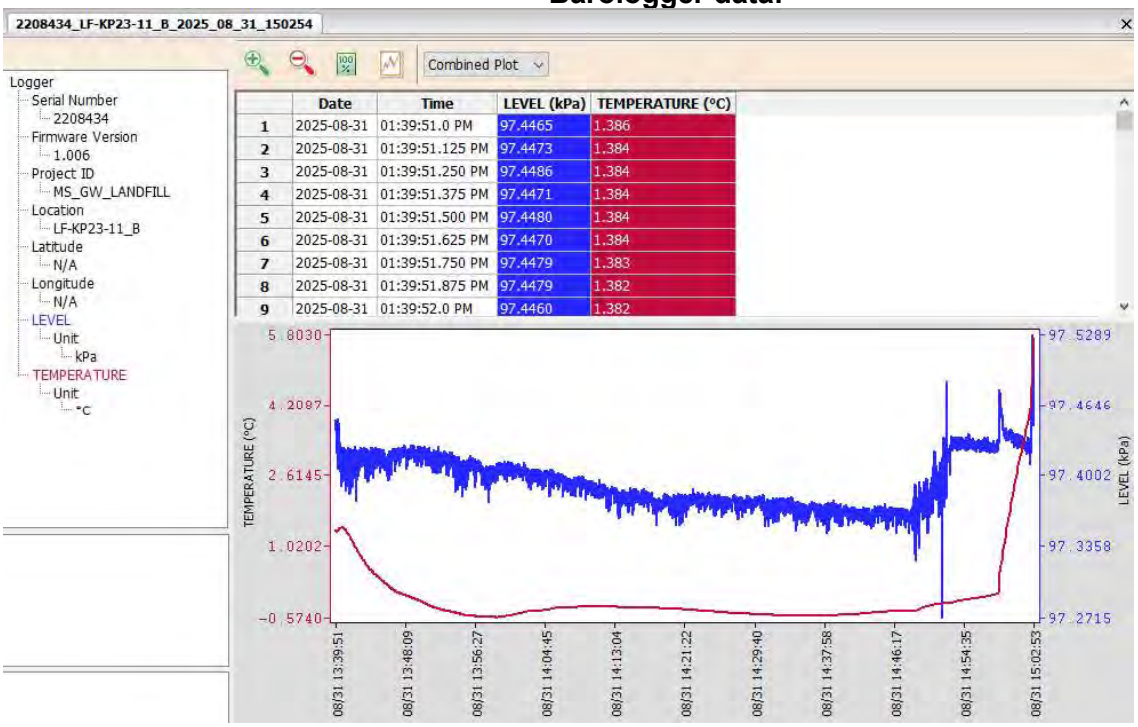
Rising 3 | 14:39:50 | 1.783
14:42:10 | 1.765
14:44:13 | 1.755
14:46:52 | 1.752

Logger Stop Time: 14:53:55
Test Stop Time: 14:46:45

Levelogger response curve:



Barologger data:



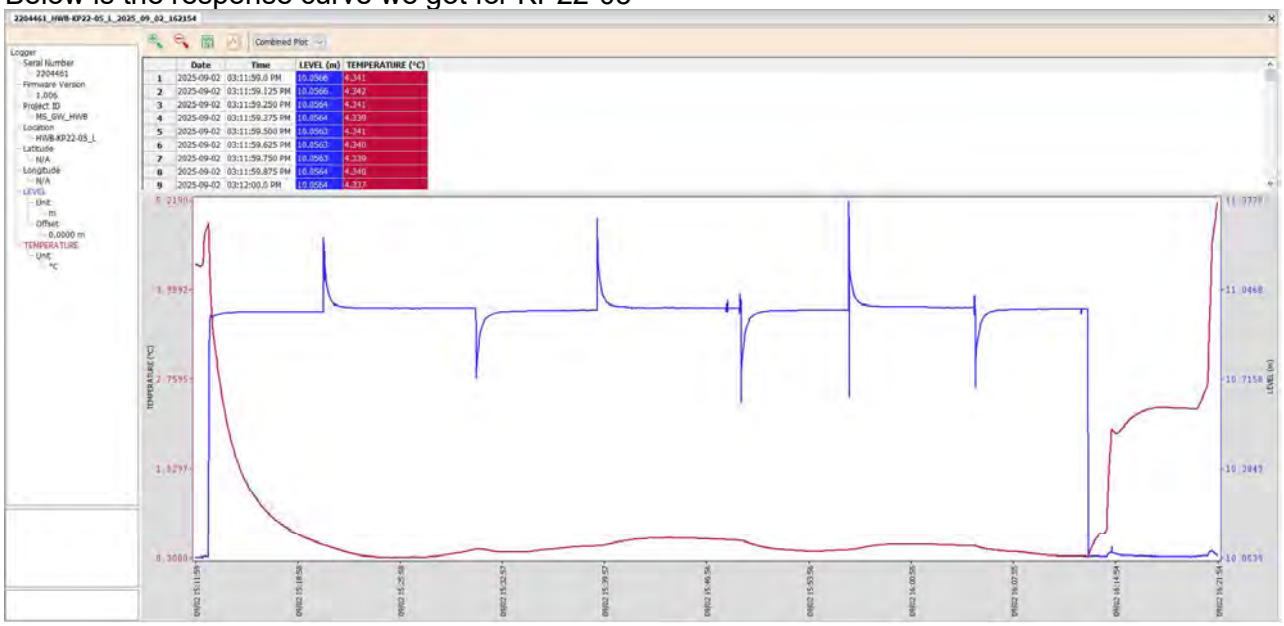
02-Sept-2025	Weather: -1 – 0°C, sunny for the morning, windy all day.
	Field Crew: Liam Guenther, Justin James, Eric Thomson
	Three locations sampled: MS-HWB-25-01, MS-HWB-25-03, and HWB-KP22-06 Two dry/frozen locations: MS-HWB-GW6, and MS-LF-GW-REF3 One location slug tested: HWB-KP22-05 Observations: - Both of the 2025 wells were sampled today. Only one location/reference point could be sampled as the other (MS-HWB-GW6) was dry/frozen.  MS-HWB-GW6 (circled in red) was also dry/frozen in 2024  LF-KP22-06 (foreground) and MS-HWB-25-03 (background) were sampled in back-to-back.

- MS-LF-GW-REF3 at the landfill (circled in red) could not be sampled. An attempt was made, but after five minutes of constant purging, the drivepoint was drained and would not recharge.

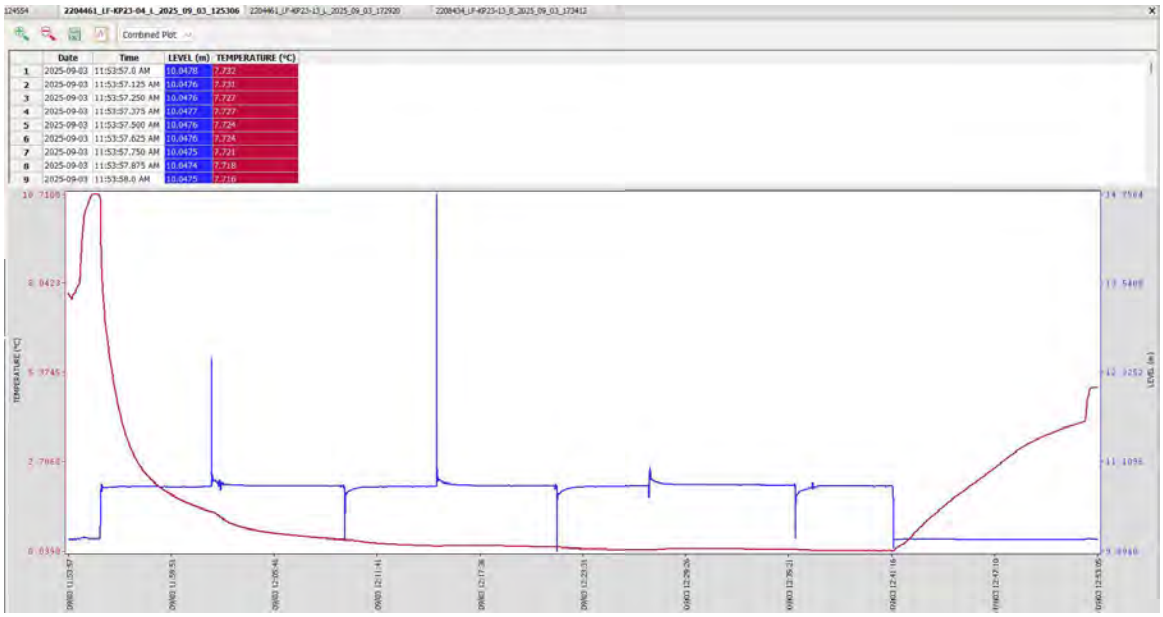


- We might encounter an issue when performing further slug testing on the remaining 2" wells.
- The largest slugs that we have are 1.57 inches in diameter. Today, at KP22-05, we noticed a maximum displacement of 10-12cm from static water level. I have given Justin a couple suggestions for how we can increase the diameter of the slugs we have, however, it might not be sufficient to see the 20-30cm of displacement you are looking for.

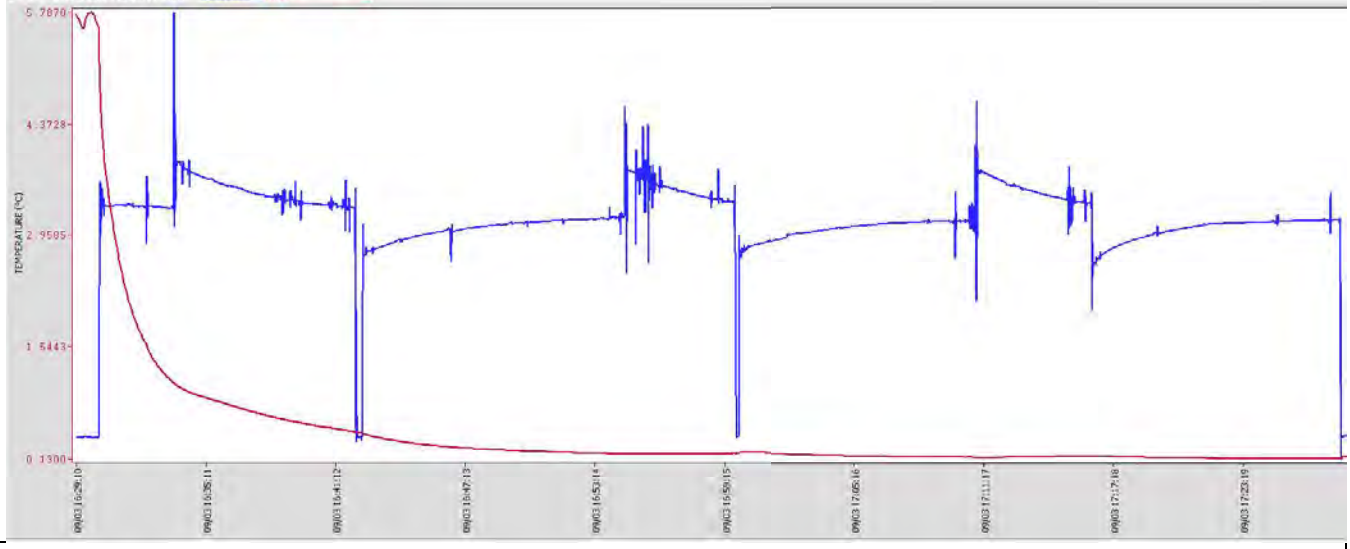
Below is the response curve we got for KP22-05



Weather: 0°C, sunny, light wind

	Field Crew: Justin James, Alicia Guay
03-Sept-2025	Two locations slug tested: LF-KP-23-04, and LF-KP23-13 Two locations unable to test: LF-KP22-05, and MS-HWB-25-01 **Details of the Slug Testing** **LF-KP23-04** • No issues encountered during slug testing. **LF-KP23-13** • Water column height: 0.634 meters • Our standard slug setup height (using 10 cm spacing, a 14 cm logger, and a 31.2 cm slug) was 0.652 meters. We had to adjust the setup by reducing the spacing from the logger to the bottom to 5 cm, and the spacing between the slug and the logger to 5 cm, resulting in a setup height of 0.552 meters. • Some issues were encountered with the logger line becoming tangled with the slug during the Rising 1 and 2 phases of the test. **LF-KP22-05** • Water column height: 0.402 meters • Slug testing was not possible due to the insufficient water column. **MS-HWB-25-01** • Water column height: 0.490 meters • Slug testing was not possible due to the insufficient water column. Below is the response curve we got for LF-KP23-04  Below is the response curve we got for LF-KP23-13

	Date	Time	LEVEL (m)	TEMPERATURE (°C)
1	2025-09-03	04:29:10.0 PM	10.0587	5.763
2	2025-09-03	04:29:10.125 PM	10.0587	5.762
3	2025-09-03	04:29:10.250 PM	10.0586	5.761
4	2025-09-03	04:29:10.375 PM	10.0585	5.760
5	2025-09-03	04:29:10.500 PM	10.0586	5.759
6	2025-09-03	04:29:10.625 PM	10.0586	5.757
7	2025-09-03	04:29:10.750 PM	10.0586	5.758
8	2025-09-03	04:29:10.875 PM	10.0585	5.757
9	2025-09-03	04:29:11.0 PM	10.0585	5.755



04-Sept-2025

Weather: -3°C, Overcast, light snow

Field Crew: Justin James, Eric Thomson

Two locations slug tested: MS-HWB-25-03, and HWB-KP22-06

Inspected Location for obstruction: MS-LF-25-01

MS-LF-25-01

- Obstructed at 2.80 Meters
- Appears to be an ice blockage



MS-HWB-25-03

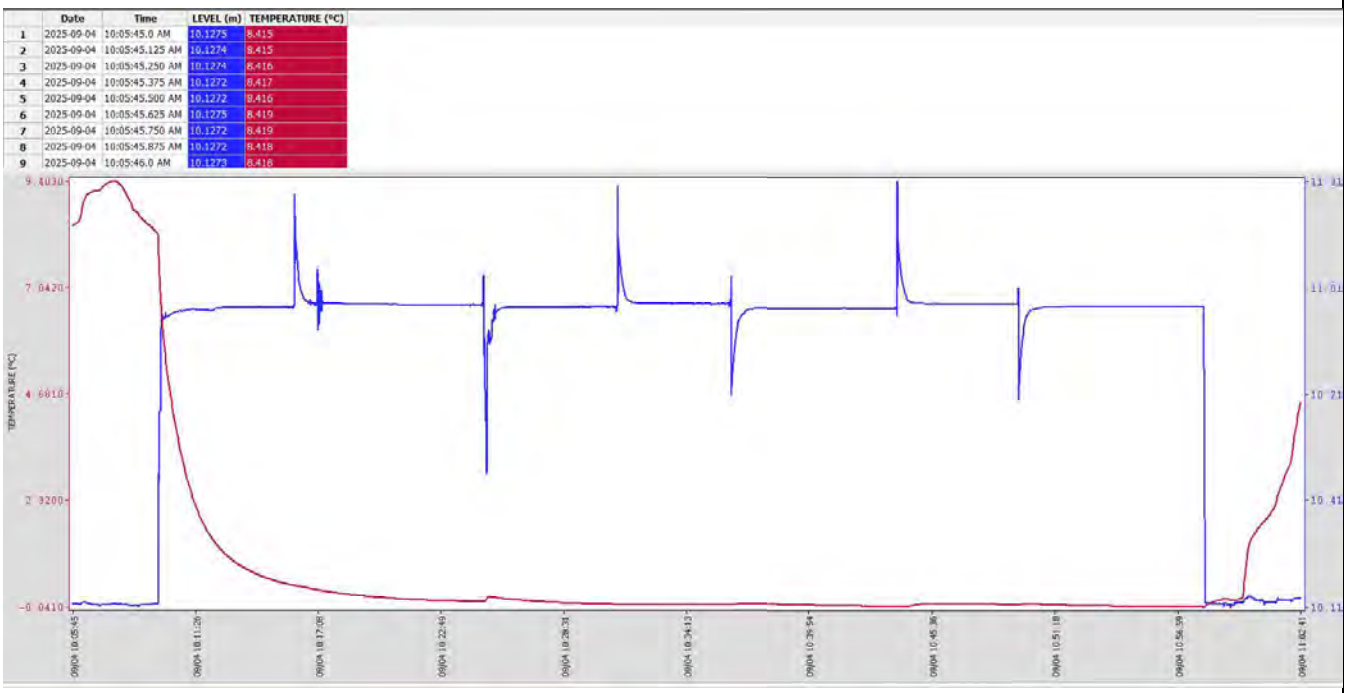
- No issues encountered during slug testing.

HWB-KP22-06

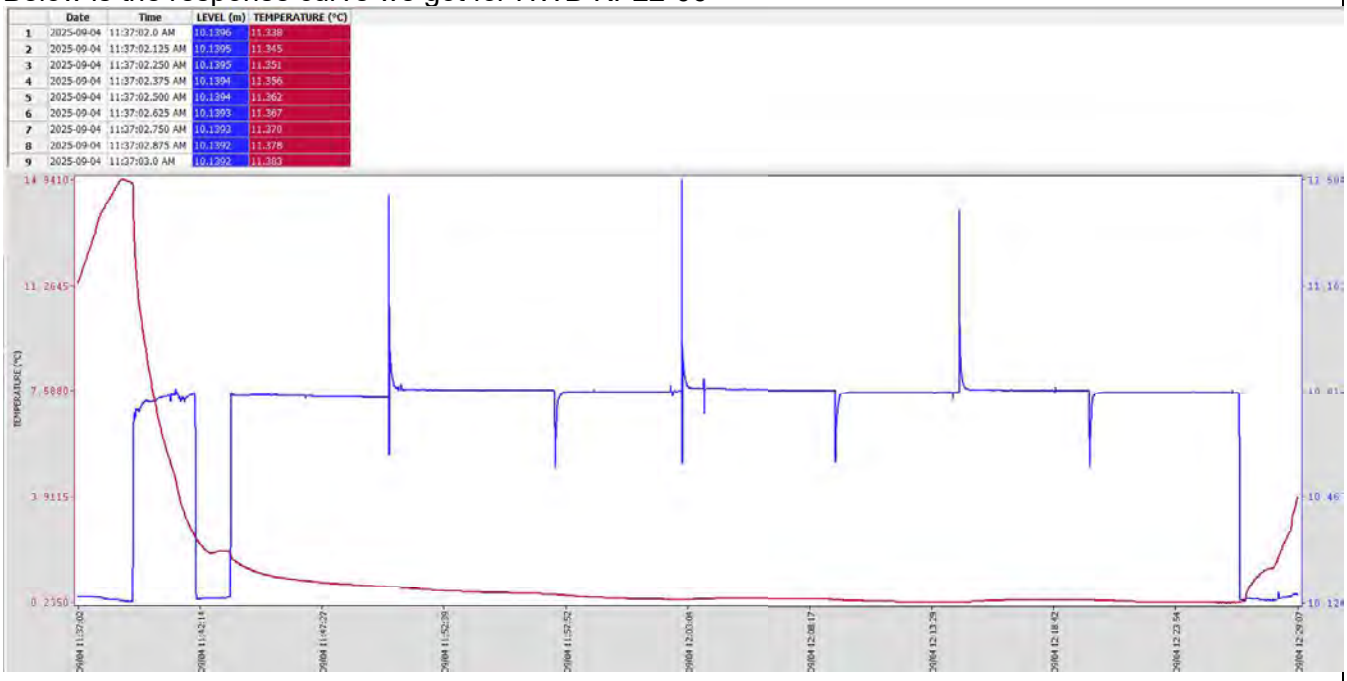
- Water column height: 0.78 meters
- Our standard slug setup height (using 10 cm spacing, a 14 cm logger, and a 0.42 cm slug) was 0.76 meters. We had to adjust the setup by reducing the spacing from the logger to the bottom to 8 cm, and the spacing between the slug and the logger to 8 cm, resulting in a setup height of 0.72 meters.

Below is the response curve we got for MS-HWB-25-03

	Date	Time	LEVEL (m)	TEMPERATURE (°C)
1	2025-09-04	10:05:45.0 AM	10.1275	8.415
2	2025-09-04	10:05:45.125 AM	10.1274	8.415
3	2025-09-04	10:05:45.250 AM	10.1274	8.416
4	2025-09-04	10:05:45.375 AM	10.1272	8.417
5	2025-09-04	10:05:45.500 AM	10.1272	8.416
6	2025-09-04	10:05:45.625 AM	10.1275	8.419
7	2025-09-04	10:05:45.750 AM	10.1272	8.419
8	2025-09-04	10:05:45.875 AM	10.1272	8.418
9	2025-09-04	10:05:46.0 AM	10.1273	8.418



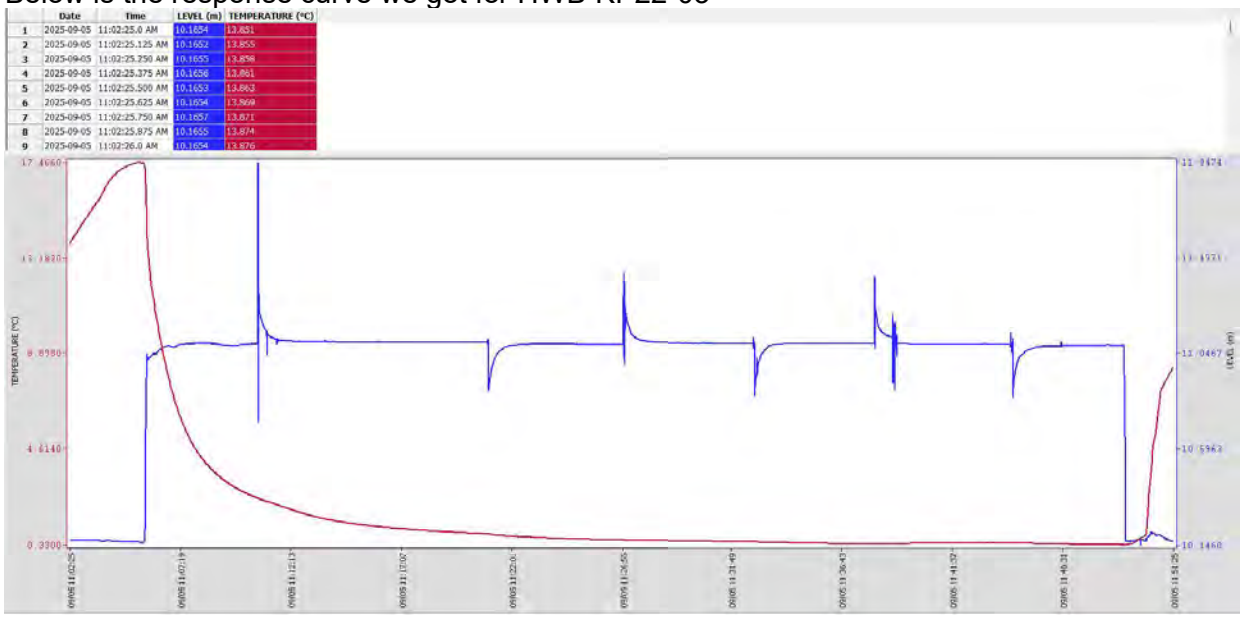
	Below is the response curve we got for HWB-KP22-06



Date	Time	LEVEL (m)	TEMPERATURE (°C)
1	2025-09-04	11:37:02.0 AM	10.1396	11.338
2	2025-09-04	11:37:02.125 AM	10.1395	11.345
3	2025-09-04	11:37:02.250 AM	10.1395	11.351
4	2025-09-04	11:37:02.375 AM	10.1394	11.356
5	2025-09-04	11:37:02.500 AM	10.1394	11.362
6	2025-09-04	11:37:02.625 AM	10.1393	11.367
7	2025-09-04	11:37:02.750 AM	10.1392	11.370
8	2025-09-04	11:37:02.875 AM	10.1392	11.376
9	2025-09-04	11:37:03.0 AM	10.1392	11.383

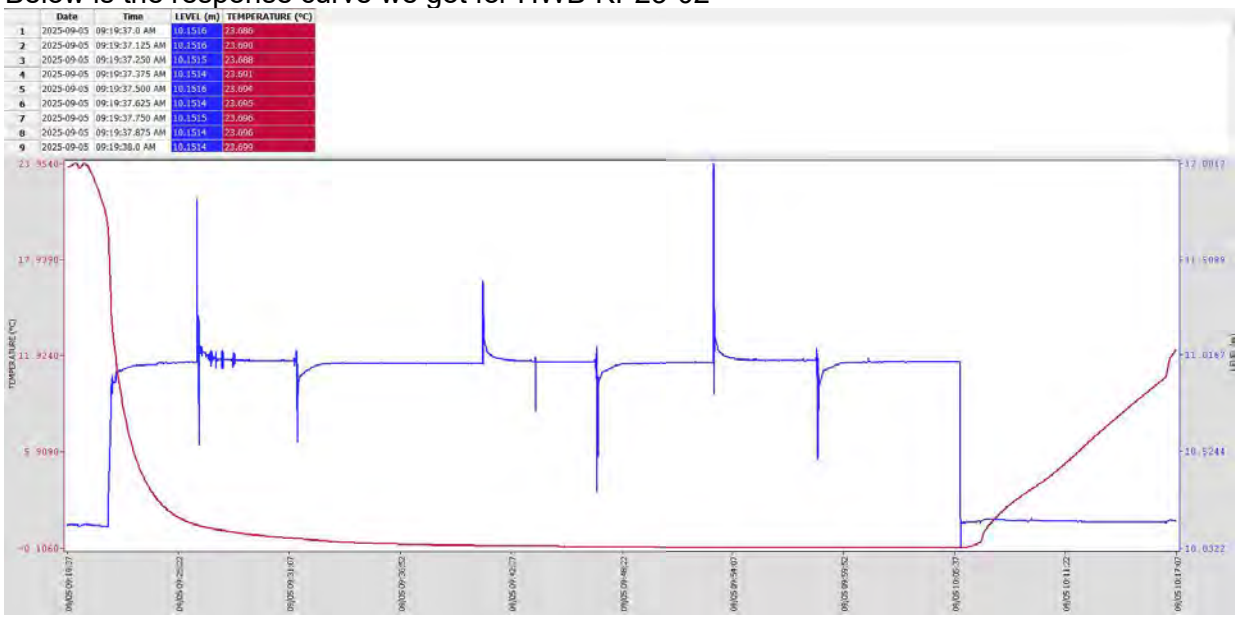
05-Sept-2025	Weather: -2°C, Overcast, light snow
	Field Crew: Justin James, Alicia Guay
	Four locations slug tested: HWB-KP22-03, HWB-KP23-02, LF-KP23-06, LF-KP23-09 Location not slug tested: LF-KP23-05 **HWB-KP22-03** • No issues encountered during slug testing. **HWB-KP23-02** • No issues encountered during slug testing. **LF-KP23-06** • Potential slush at top of water column **LF-KP23-09** • Issues attaching the slug to momentum for the initial test. **LF-KP23-05** • Water Column Height was 0.256 meters. • Our set-up length was long to run the slug test.

Below is the response curve we got for HWB-KP22-03



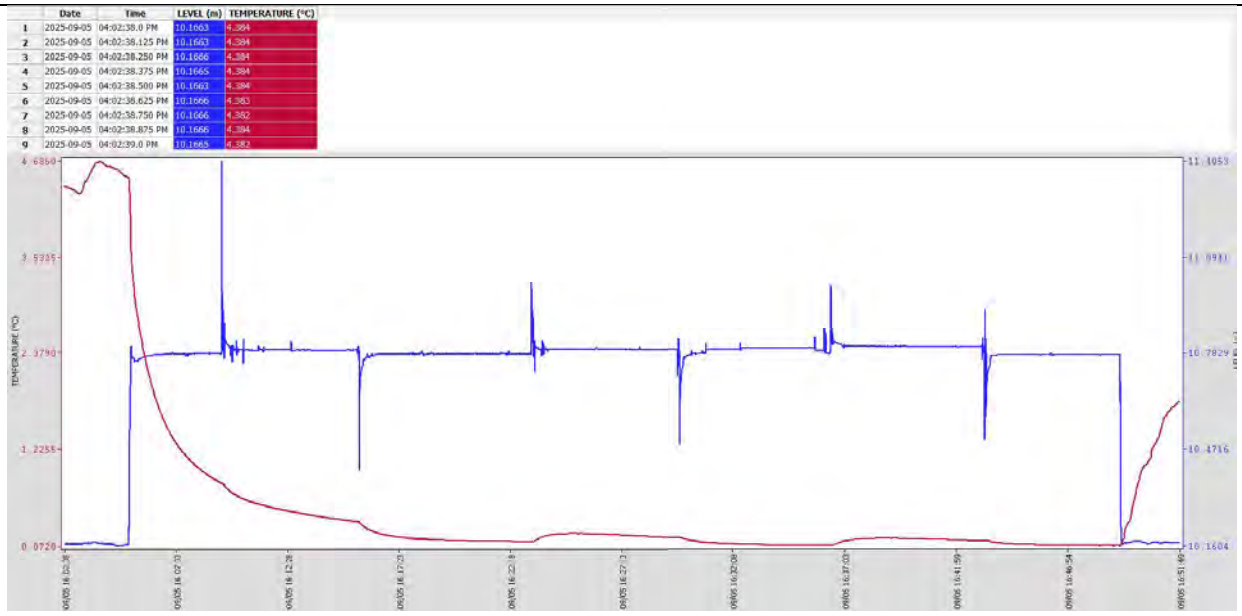
	Date	Time	LEVEL (m)	TEMPERATURE (°C)
1	2025-09-05	11:02:25.0 AM	10.1654	13.851
2	2025-09-05	11:02:25.125 AM	10.1652	13.855
3	2025-09-05	11:02:25.250 AM	10.1655	13.858
4	2025-09-05	11:02:25.375 AM	10.1656	13.861
5	2025-09-05	11:02:25.500 AM	10.1653	13.863
6	2025-09-05	11:02:25.625 AM	10.1654	13.869
7	2025-09-05	11:02:25.750 AM	10.1657	13.871
8	2025-09-05	11:02:25.875 AM	10.1655	13.874
9	2025-09-05	11:02:26.0 AM	10.1654	13.876

Below is the response curve we got for HWB-KP23-02

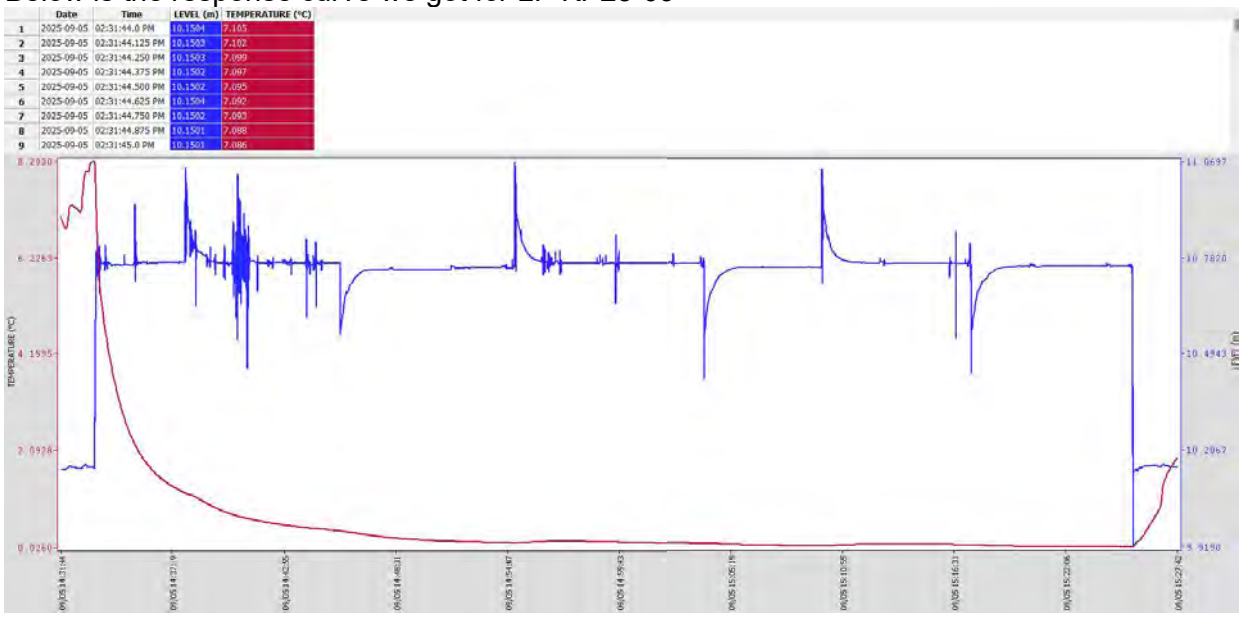


	Date	Time	LEVEL (m)	TEMPERATURE (°C)
1	2025-09-05	09:19:37.0 AM	10.1516	23.686
2	2025-09-05	09:19:37.125 AM	10.1516	23.690
3	2025-09-05	09:19:37.250 AM	10.1515	23.688
4	2025-09-05	09:19:37.375 AM	10.1514	23.691
5	2025-09-05	09:19:37.500 AM	10.1518	23.694
6	2025-09-05	09:19:37.625 AM	10.1514	23.695
7	2025-09-05	09:19:37.750 AM	10.1515	23.696
8	2025-09-05	09:19:37.875 AM	10.1514	23.696
9	2025-09-05	09:19:38.0 AM	10.1514	23.699

Below is the response curve we got for LF-KP23-06



Below is the response curve we got for LF-KP23-09



APPENDIX C

Drive Point Piezometer and Standpipe Well Information Summary Table

Station	Easting (X) - NAD83 UTM 17N[a]	Northing (Y) - NAD93 UTM 17N[a]	Year Installed	Distance Qualifier[b]	Well Type	Active/Inactive	PVC pipe Diameter (inch)	2025 Observations
Landfill Facility								
LF-KP23-01	560679	7912605	2023	Downgradient	Standpipe well (no bentonite seal)	Active	1	Well casing and monument in good condition. Cap present but was not inside well casing upon arrival. Appendix A Photo A-9.
LF-KP23-02	560747	7912597	2023	-	Standpipe well (no bentonite seal)	Inactive	1	Well was never installed. Appendix A Photo A-14.
LF-KP23-03	560689	7912421	2023	Downgradient	Standpipe well (no bentonite seal)	Active	1	Dry location (same as in 2024). Appendix A Photo A-10.
LF-KP23-04	560778	7912472	2023	Downgradient	Standpipe well (no bentonite seal)	Active	1	Well casing and monument in good condition. Well is close in proximity to MS-LF-25-02. Purging had to be paused frequently to maintain drawdown requirement. Hydraullic head was maintained throughout sample. Appendix A Photo A-15.
LF-KP23-05	560864	7912403	2023	Proximal	Standpipe well (no bentonite seal)	Active	1	Well casing and monument in good condition. PVC sticking out of well monument. Had difficulty maintaining hydraulic head/tubing charge. Had to pause purging/sample flow multiple times. Appendix A Photo A-6.
LF-KP23-06	560968	7912334	2023	Background	Standpipe well (no bentonite seal)	Active	1	Well casing and monument in good condition. Water cleared by final purge, no odor.
LF-KP23-07	561037	7912313	2023	Background	Standpipe well (no bentonite seal)	Active	1	Well casing and monument in good condition. Clear water, no odor.
LF-KP23-08	561122	7912257	2023	Background	Standpipe well (no bentonite seal)	Active	1	Well casing and monument in good condition. Stick-up slightly tilted. Clear water, no odor. Appendix A Photo A-1.
LF-KP23-09	561131	7912363	2023	Background	Standpipe well (no bentonite seal)	Active	1	Purge volume miscalculated resulting in an increased well volume purge. Stable YSI parameters were met after 20L of purging. Appendix A Photo A-2.
LF-KP23-10	561024	7912440	2023	Background	Standpipe well (no bentonite seal)	Active	1	Dry location.
LF-KP23-11	560978	7912544	2023	Proximal	Standpipe well (no bentonite seal)	Active	1	Well casing was loose and could be moved vertically and twisted in a circle. Potential well sand inside of well casing.
LF-KP23-13	560817	7912639	2023	Source	Standpipe well (no bentonite seal)	Active	1	Well casing and monument in good condition. Small casing burried in ground 1.5 ft from KP23-13 monument. Encountered difficulty preventing drawdown <0.100m. Purged well on slowest pump setting possible. Appendix A Photo A-11.
LF-KP22-01	560813	7912592	2022	Source	Standpipe well (no bentonite seal)	Active	2	Water was clear, but smelled like sewage. Appendix A Photo A-9.
LF-KP22-03	560831	7912463	2022	Source	Standpipe well (no bentonite seal)	Active	2	Some sediment noticed in initial purge, water cleared up after first purge. Appendix A Photo A-5.
LF-KP22-05	560953	7912604	2022	Proximal	Standpipe well (no bentonite seal)	Active	2	Well is in good condition, well cap had to be hammered off to remove. Water was opaque, yellowish, and smelled like sewage. Brown sediment with apparent oil slick noticed at bottom of LDPE tubing upon removal. Appendix A Photos A-3 & A-4.
MS-LF-GW1	560816	7912599	2017	Source	Drive point piezometer	Still active, but replaced by LF-KP22-01	0.75	2 drive point piezometers in one area. 1 drive point piezometer is in good condition for sampling. Appendix A Photo A-12.
MS-LF-GW2	560812	7912487	2017	Proximal	Drive point piezometer	Active	0.75	Nearby drive point piezometers. 1 drive point piezometer is in good condition for sampling. Appendix A Photo A-16.
MS-LF-GW3	560821	7912460	2017	Source	Drive point piezometer	Still active, but replaced by LF-KP22-03	0.75	Three drive point piezometers in 5m radius. Only 1 could be sampled due to waterra tubing stuck in others. Appendix A Photo A-7.
MS-LF-GW4	560752	7912493	2020	Downgradient	Drive point piezometer	Partially active	0.75	This location is a PVC pipe adjacent to two drive point piezometers that have waterra tubing stuck (frozen). Appendix A Photo A-18.
MS-LF-GW5	560715	7912484	2020	Downgradient	Drive point piezometer	Partially active	0.75	This location is a PVC pipe adjacent to two dry drive point piezometers. Appendix A Photo A-19.
MS-LF-GW-REF1	560817	7912598	2018	Source	Drive point piezometer	Partially active	0.75	Waterra tubing stuck in drive point piezometer. Appendix A Photo A-13.
MS-LF-GW-REF2	560877	7912409	2017	Proximal	Drive point piezometer	Active	0.75	Insufficient water to collect sample. Appendix A Photo A-8.
MS-LF-GW-REF3	560951	7912606	2020	Proximal	Drive point piezometer	Still active, but replaced by LF-KP22-05	0.75	Drive point piezometer partially obstructed. Well was purged dry, no recharge occurred. Appendix A Photo A-38.
MS-LF-25-01	560696	7912543	2025	Downgradient	Standpipe well (with bentonite seal)	Active	2	Well is dry or frozen. Well screen potentially below permafrost level. Appendix A Photo A-49.
MS-LF-25-02	560775	7912474	2025	Downgradient	Standpipe well (with bentonite seal)	Active	2	Well is dry or frozen. Well screen potentially below permafrost level. Appendix A Photo A-17.
Hazardous Waste Berm Facility								
HWB-KP23-01	558155	7914590	2023	Source	Standpipe well (no bentonite seal)	Active	1	Clear water and no odour. Appendix A Photo A-25.
HWB-KP23-02	558215	7914563	2023	Source	Standpipe well (no bentonite seal)	Active	1	Water was clear but had a slight odor throughout purging. Appendix A Photo A-26.
HWB-KP23-03	558220	7914540	2023	Proximal	Standpipe well (no bentonite seal)	Active	1	Monument was damaged (same as in 2024). Water was clear and had a slight odor. Appendix A Photo A-27.
HWB-KP22-01	558365	7914484	2022	Background	Standpipe well (no bentonite seal)	Active	2	Well casing and monument in good condition. Sediment/black particles in the first purge and a mild sulphur smell. Black sediment decreased by the last purge, but smell/odour continued. Appendix A Photo A-20.
HWB-KP22-03	558303	7914516	2022	Source	Standpipe well (no bentonite seal)	Active	2	Well casing and monument in good condition. Black sediment in water. Appendix A Photo A-21.
HWB-KP22-04	558253	7914452	2022	Proximal	Standpipe well (no bentonite seal)	Active	2	Well casing and monument in good condition. Brown sediment in suspension present during the first purge. The sediments cleared up by the third purge. There were totes labelled "oily water" right next to the well. Appendix A Photos A-22 & A-23.
HWB-KP22-05	558176	7914524	2022	Proximal	Standpipe well (no bentonite seal)	Active	2	Large puddle around well base. Appendix A Photo A-24.
HWB-KP22-06	558472	7914597	2022	Background	Standpipe well (no bentonite seal)	Active	2	Well is in good condition, no PVC stick-up. Appendix A Photo A-34.
MS-HWB-GW1	558489	7914483	unknown	Background	Drive point piezometer	No longer exists	0.75	-
MS-HWB-GW2	558487	7914459	unknown	Background	Drive point piezometer	No longer exists	0.75	-
MS-HWB-GW3	558258	7914467	2021	Proximal	Drive point piezometer	Damaged, but replaced by HWB-KP22-04	0.75	Drive point piezometer is bent and broken. Unable to collect any data from this location. Appendix A Photo A-28.
MS-HWB-GW4	558262	7914546	2021	Source	Drive point piezometer	No longer exists	0.75	Seacan was placed on top of drive point piezometer. Drive point piezometer is bent and compromized. No data could be collected from this location. Appendix A Photo A-29.
MS-HWB-GW5	558156	7914589	2021	Source	Drive point piezometer	Active	0.75	Sample taken, water slightly opaque and turbid. Appendix A Photo A-30.
MS-HWB-GW6	558058	7914430	2021	Downgradient	Drive point piezometer	Active	0.75	Dry location. Appendix A Photo A-37.
MS-HWB-GW7	558198	7914533	2021	Proximal	Drive point piezometer	No longer exists	0.75	-
MS-HWB-GW8	558303	7914524	2022[b]	Source	Drive point piezometer	No longer exists	0.75	-
MS-HWB-GW9	558471	7914608	2022[b]	Background	Drive point piezometer	No longer exists	0.75	-
MS-HWB-GW-REF1	558543	7914697	2021	Background	Drive point piezometer	Active	0.75	Drive point piezometer is partially obstructed. Puddle of stagnant water is located adjacent to drive point piezometer. Appendix A Photo A-31.
MS-HWB-GW-REF2	558362	7914482	2021	Background	Drive point piezometer	Active	0.75	Drive point piezometer is dry. Drive point piezometer approximately 2.5m from HWB-KP22-01 near HWB7. Appendix A Photo A-32.
MS-HWB-GW-REF3	558315	7914418	2021	Background	Drive point piezometer	Active	0.75	Drive point piezometer partially obstructed. Waterra tubing had to be inserted into the drive point piezometer before DTW and DTB were measured. Appendix A Photo A-33.
MS-HWB-25-01	558053	7914431	2025	Downgradient	Standpipe well (with bentonite seal)	Active	2	Well casing and monument in good condition. Well was developed on August 28th, 2025. Appendix A Photo A-35.
MS-HWB-25-02	558174	7914526	2025	Proximal	Standpipe well (with bentonite seal)	Active	2	Well was dry. Could not be developed.
MS-HWB-25-03	558468	7914598	2025	Background	Standpipe well (with bentonite seal)	Active	2	PVC stick-up slanted/tilted inside monument. Well was developed on August 28th, 2025. No drawdown concern. Appendix A Photo A-36.

(a) Stations were surveyed in November 2025, with the exception of LF-KP22-05, LF-KP23-06, LF-KP23-07, LF-KP23-08 and LF-KP23-09.

(b) Distance from Landfill Facility Qualifiers are defined as: Source = Station is located within active cells (Cells 1, 2) in the landfill, Proximal= Station is within 20 metres from landfill limits, Downgradient = Station is located more than 20 m downgradient from the landfill's limits towards Sheardown Lake, Background = Station is located in the inactive cells (Cells 3, 4, 5) of the landfill or upgradient of the landfill. Distances from HWB Facility Qualifiers are defined as: Source = Station is located within HWB Facility limits or less than 20 m from the HWB Facility limits, Proximal =Station is located more than 20 metres from HWB Facility limits, Downgradient = Station is located more than 20 m downgradient from the HWB Facility towards Camp Lake , Background = Station is located upgradient or more than 20 m from HWB Facility limits.

(c) Year installed assumed based on first year the station was monitored.

DTW: Depth to water; DTB: Depth to well bottom

LF-KP22-01 Station was sampled in 2025

LF-KP22-01 Water level measured in 2025

APPENDIX D

Fieldsheets

APPENDIX D-1

Sampling Fieldsheets

GROUNDWATER SAMPLING FIELD SHEET

WELL ID: LF-KP23-09	SAMPLE ID:	
DATE: 25-Aug-2025	TIME: 14:05	TECHS: LG, AG
WEATHER: (temp, rain, etc.) 9°C, windy	WELL STATUS: (casing damage, etc.) casing & monument in good condition	

PURGING DATA

WELL DIAMETER (INCHES): 1.0"	DEPTH TO WATER (METERS): 1.445m	DEPTH TO BOTTOM (METERS): 2.223m (corrected depth = 2.303)
STICK UP/MAGS (METERS): 0.911m	WELL RADIUS (METERS): 0.0127	

DIFFERENT BAFFINLAND WELL RADII: 0.009525m (3/4" diameter), 0.0127m (1" diameter), 0.0254m (2" diameter)

WELL VOLUME PURGE: 1 WELL VOLUME = (π r^2 [(DEPTH TO BOTTOM - DEPTH TO WATER)]) X 1000

π = 3.14159

Well radius = 0.0127 meters

Depth to bottom = 2.223 meters

Depth to water = 1.445 meters

overestimated due to sig fig error.

= (3.14159 (0.0127 meters)^2 x [(2.223 meters) - (1.445 meters)]) x 1000 = 394 Liters x3 = 11.83 TOTL

0.000506907

Multiply final answer by three (3) to calculate total volume to be purged

YSI FIELD PARAMETERS:

PURGING INITIATED AT (time): 13:29:50	PURGING ENDED AT (time): 13:57	TOTAL VOLUME PURGED (litres): 20L

TIME	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)		COLOUR or ODOR (describe)
13:38	4L	2.0	6.90	305.8	5.65	40.9	134.19	Yellow	Opaque no odor
13:43	4L	1.8	6.92	301.2	5.35	38.5	40.85	Opaque	no odor
13:48	4L	2.0	6.90	299.0	5.21	37.7	19.04	Clear	no odor
13:53	4L	1.8	6.92	303.5	4.94	35.6	17.53	clear	no odor
13:57	4L	1.8	6.91	304.2	4.83	34.8	16.60	Clear	no odor

SAMPLING DATA

FINAL YSI RESULTS (INPUT THESE INTO EQUIS)

TIME	VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
13:57	20L	1.8	6.91	304.2	4.83	34.8	16.60	clear no odor

KEY STABILIZATION CRITERIA: Temperature: ±0.2°C, **pH:** ±0.1, **Specfic Conductivity:** ±3%, **Dissolved Oxygen:** ±0.2 mg/L or ±10% (whichever is greater), **Turbidity:** ±10%

NOTES:
- Rounded 3.94L volume to 4L → 12L = 3 well volumes
- Water colour started off very yellow, no smell
  - ↳ started to clear up after 2nd well volume purge
- Rain started during sample collection

GROUNDWATER SAMPLING FIELD SHEET

WELL ID: LF-KP23-08		SAMPLE ID: LF-KP23-08	
DATE: 25-Aug-2025	TIME: 15:15	TECHS: LG AG	
WEATHER: (temp, rain, etc.) 6°C, Windy, Raining		WELL STATUS: (dry, damaged, etc) Good condition	

PURGING DATA

WELL DIAMETER (INCHES): 1"	DEPTH TO WATER (METERS): 1.760	DEPTH TO BOTTOM (METERS): 2.230	Corrected depth = 2.310m
STICK UP/MAGS (METERS): 0.962m		WELL RADIUS (METERS): 0.0127m	

DIFFERENT BAFFINLAND WELL RADII: 0.009525m (3/4" diameter), 0.0127m (1" diameter), 0.0254m (2" diameter)

WELL VOLUME PURGE: 1 WELL VOLUME = (π r^2 [(DEPTH TO BOTTOM - DEPTH TO WATER)]) X 1000

π = 3.14159

Well radius = 0.0127 meters

Depth to bottom = 2.230 meters

Depth to water = 1.760 meters

= (3.14159 (0.0127 meters)^2 x [(2.230 meters) - (1.760 meters)]) x 1000 = 0.238 Liters x 3 = 0.714L

0.47

Multiply final answer by three (3) to calculate total volume to be purged

YSI FIELD PARAMETERS:

PURGING INITIATED AT (time): 14:45:10	PURGING ENDED AT (time): 15:08	TOTAL VOLUME PURGED (litres): 1.75L

TIME	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)		COLOUR or ODOR (describe)
14:52	0.250	2.8	7.81	276.9	12.65	93.6	112.26	Yellow	Opaque no odor
14:55	0.250	3.7	7.81	270.8	12.66	95.9	81.02	Opaque	no odor
14:58	0.250	3.4	7.81	271.5	12.62	94.7	55.74	Opaque	no odor
15:02	0.250	3.3	7.81	270.3	12.61	94.6	45.34	Clearer	than previous
15:04	0.250	3.4	7.80	271.2	12.52	94.2	31.99	"	"
15:07	0.250	3.1	7.80	271.6	12.54	93.5	25.38	"	"
15:08	0.250	2.9	7.80	271.5	12.59	93.3	23.91	Clear	

SAMPLING DATA

FINAL YSI RESULTS (INPUT THESE INTO EQUIS)

TIME	VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
15:08	1.75L	2.9	7.80	271.5	12.59	93.3	23.91	Clear

KEY STABILIZATION CRITERIA: Temperature: ±0.2°C, **pH:** ±0.1, **Specfic Conductivity:** ±3%, **Dissolved Oxygen:** ±0.2 mg/L or ±10% (whichever is greater), **Turbidity:** ±10%

NOTES: • 0.714L rounded to 1L → measurements taken every 0.250L
• Colour changed after 4th purge

BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: HWB-KP22-01	CAMERA #: 26	PHOTOS: 0454 - 0458
DATE:	ARRIVAL TIME: 10:00	TECHS: LG AG
WEATHER: ~2°C, cloudy, windy	WELL STATUS: Good condition	

PURGING DATA

WELL DIAMETER (INCHES): 2"	DEPTH TO WATER (M): 1.394	DEPTH TO BOTTOM (M): 2.431
STICK UP/MAGS (M): 1.280	TIME OF DTW MEASUREMENT: 10:02:40	TIME OF DTB MEASUREMENT: 10:03:15

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO πr^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	(2") DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (0.002027) X [(2.431) - (1.394)] X 1000 = 2.10 Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME = 6.3 -> rounded to 6.45L or 2.15L per purge

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	PURGING WATER DRAWDOWN	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		±0.1M	1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN
10:12:30	10:23:03	<1.494	2.15	1.0	6.82	957	1.45	10.2	4.18	black sediment, mild sulfur smell
10:24:58	10:32:20	<1.494	2.15	0.9	6.86	964	0.97	6.8	3.11	black sediment, stronger odor
10:34:58	10:38:55	<1.494	2.15	1.0	6.89	967	0.56	3.9	3.06	" " , strong odor
10:41:55	10:45:38	<1.494	2.15	1.0	6.90	969	0.48	3.4	15.34	black sed. strong sulfur odor
	Max drawdown during purge = 1.445m									

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 10:50	SAMPLE DEPTH (M): 2.100	VISIBLE SHEEN? N	WATER CLARITY: slightly turbid

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
10:47	8.6	1.0	6.90	969	0.48	3.4	15.34	Yellowish, some black sed & sulfur odor

NOTES: Black PVC pipe inserted in ground 1.5m from standpipe well -> both close to HWB7
- Sediment / black particles in first purge -> mild sulfur smell (see photo 0458)
  - ↳ black sed. decreased by last purge, but smell/odor continued. Turb increased on final purge.

DTW Post Sample = 1.407

Baffinland

YSI log times:
- Purge log 1 = 10:24
- Purge log 2 = 10:33
- Purge log 3 = 10:41
- Purge log 4 = 10:47

BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: HWB-KP22-03	CAMERA #: 26	PHOTOS: 0462 - 0465
DATE: 30-Aug-25	ARRIVAL TIME: 11:35	TECHS: LG & AG
WEATHER: Windy, overcast, -2°C	WELL STATUS: Good conditions	

PURGING DATA

WELL DIAMETER (INCHES): 2"	DEPTH TO WATER (M): 1.501	DEPTH TO BOTTOM (M): 2.549
STICK UP/MAGS (M): 1.051	TIME OF DTW MEASUREMENT: 11:38	TIME OF DTB MEASUREMENT: 11:39

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO π r^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	(2") DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (0.002027) X [(2.549) - (1.501)] X 1000 = 2.124 Litres
1.048

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME !-> Round Up to 2.15 L

MINIMUM REQUIRED PURGING VOLUME = 6.37 L --> Round Up to 6.45 L

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	PURGING WATER DRAWDOWN	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		±0.1M	1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN
11:48:35	11:54:13	1.532	2.15	1.7	7.17	503	1.53	11.0	3.37	Black sediment, mild sulphur odor
11:56:01	12:00:49	1.535	2.15	1.4	7.08	525	1.16	8.3	2.81	Black Sediment
12:02:47	12:07:22	1.543	2.15	1.4	7.08	543	0.91	6.5	2.48	Soft color, mildly opaque Less black sediment & smell is clearing up
12:09:23	12:14:04	1.519	2.15	1.4	7.09	557	0.86	6.1	2.42	Less "sediment" & no smell

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 12:20	SAMPLE DEPTH (M): 1.200	VISIBLE SHEEN? N	WATER CLARITY: Yellow tint (muddy)

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
12:12	8.60	1.4	7.09	557	0.86	6.1	2.42	Less black sediment & minor odor

NOTES:
- Black sediment in water
- DTW post sample 1.515
- Under calculated DTB by 8 cm. Actual DTB is 2.629 L. Corrected WELL VOLUME is 2.286 L for a minimum purging requirement of 6.85 L
- Less black sediments & odor as more water was purged.

Baffinland

YSI Log Times
1 Purge @ 11:56
2 Purge @ 12:03
3 Purge @ 12:09
4 Purge: 12:16

BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: HWB-KP22-04	CAMERA #: 26	PHOTOS: 0471 - 0474 & 0475
DATE: 30-Aug-2025	ARRIVAL TIME: 14:10	TECHS: LG AG
WEATHER: Windy, Sun & Clouds, 0 °C	WELL STATUS: Good condition - Dark water present - well clearly visible	

PURGING DATA --> +8 cm

WELL DIAMETER (INCHES): 2"	DEPTH TO WATER (M): 1.345	DEPTH TO BOTTOM (M): 2.508
STICK UP/MAGS (M): 0.998	TIME OF DTW MEASUREMENT: 14:18:10	TIME OF DTB MEASUREMENT: 14:19:30

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO π r^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	(2") DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (0.002027) X [(2.508) - (1.345)] X 1000 = 2.356 Litres --> Rounded Up to 2.4L

1/3

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME = 7.07 L Rounded Up to 7.2L

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	PURGING WATER DRAWDOWN	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		±0.1M	1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN
14:27:27	14:35:18	1.358	2.4	0.9	7.32	473.1	1.44	10.2	2.15	Lots of sediment in suspension, no odor
14:37:54	14:43:37	1.375	2.4	0.9	7.25	461.6	1.09	7.7	1.95	Less sediment, no odor
14:45:59	14:51:49	1.391	2.4	0.9	7.25	462.0	0.9	6.3	2.15	minimal sediment present, clear, no odor

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 14:55	SAMPLE DEPTH (M): 2.200	VISIBLE SHEEN? N	WATER CLARITY: Clear, no odor

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
14:54	7.2	0.9	7.25	462.0	0.9	6.3	2.15	Clear, no odor

NOTES:
- "Oily water" totes stored right next to the well
- Sediments present in the 1st purge - Brown sediments in suspension.
- Clearing up during the second purge
- Pretty much all cleared up of sediments by the 3rd purge

Baffinland

YSI Log Times
1 Purge @ 14:37
2 Purge @ 14:46
3 purge @ 14:54

- DTW post sampling 1.346

BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: HWB-KP22-05	CAMERA #: 33	PHOTOS: 382 - 385
DATE: 30 Aug 2025	ARRIVAL TIME: 1550	TECHS: JAK JJ
WEATHER: -2 Wind / Snow	WELL STATUS: Active	

PURGING DATA

WELL DIAMETER (INCHES): 2	DEPTH TO WATER (M): 1.498	DEPTH TO BOTTOM (M): 2.666
STICK UP/MAGS (M): 0.937	TIME OF DTW MEASUREMENT: 15:58	TIME OF DTB MEASUREMENT: 15:59

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO π r^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (0.002027) X [(2.666) - (1.498)] X 1000 = 2.364 Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME 2.4

MINIMUM REQUIRED PURGING VOLUME = 7.2

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	PURGING WATER DRAWDOWN	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		±0.1M	1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN
16:07:34	16:12:01	1.55	2.4	2.1	6.89	1933	3.57	26.0	153.31	Brown water
16:18:54	16:23:14	1.55	2.4	1.8	6.96	1909	3.33	23.9	37.41	Opaque
16:25:53	16:30:54	1.55	2.4	1.9	6.97	1881	3.00	21.7	8.93	Clear
16:40:11	16:45:14	1.55	2.4	2.2	6.97	1891	2.60	19.0	3.64	Clear
16:53:29	16:58:39	1.55	2.4	2.2	7.00	1890	3.02	22.1	2.44	Clear

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 17:00	SAMPLE DEPTH (M): ~~2.490~~ 2.36	VISIBLE SHEEN? N	WATER CLARITY: Clear

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
17:05	12	2.2	7.00	1890	3.02	22.1	2.44	Clear

NOTES: Logtime #1 - 16:17
#2 - 16:28
#3 - 16:39
#4 - 16:53
#5 - 17:05

- Large puddle around well base.

Post DTW 1.490

Baffinland

BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: HWB-KP22-06	CAMERA #: 27	PHOTOS: 0607 - 0609
DATE: 02-Sept-2025	ARRIVAL TIME: 10:40	TECHS: LG ET
WEATHER: -1°C, Sunny, windy	WELL STATUS: Good condition, no stake for mags	

PURGING DATA

WELL DIAMETER (INCHES): 2"	DEPTH TO WATER (M): 1.929	DEPTH TO BOTTOM (M): 2.753
STICK UP/MAGS (M): 1.118	TIME OF DTW MEASUREMENT: 10:45:38	TIME OF DTB MEASUREMENT: 10:46:05

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO πr^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	(2") DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (0.002027) X [(2.753) - (1.929)] X 1000 = 1.67 Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME = 5.01L → round to 5.10L or 1.7L per purge

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	PURGING WATER DRAWDOWN	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		±0.1M	1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN
10:55:00	10:58:49	1.949	1.7	1.1	7.78	321.4	8.68	61.4	5.48	clear, no odor
11:01:25	11:04:48	1.948	1.7	1.7	7.63	326.1	8.29	59.6	4.08	" "
11:09:12	11:12:35	1.946	1.9	1.5	7.68	319.8	8.37	59.7	3.15	" "

SAMPLING DATA (INPUT THESE INTO EQUIS) YSI #4

SAMPLE TIME: 11:20	SAMPLE DEPTH (M): 2.450	VISIBLE SHEEN? N	WATER CLARITY: clear

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
11:16	5.3	1.5	7.68	319.8	8.37	59.7	3.15	no odor, clear water

NOTES:
- No stake in ground @ this site. Front of well monument marked for future visits.
- YSI site name: GAW HWB
- Flow cylinder accidentally removed during 3rd YSI reading → extra 200mL purged to get YSI reading
- DTW post sample: 1.938m @ 11:34:42

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YSI log times:
- Purge log 1 = 11:00
- Purge log 2 = 11:08
- Purge log 3 = 11:16

BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: HWB-KPB-01	CAMERA #: 33	PHOTOS: 370 372	
DATE: August 30, 2025	ARRIVAL TIME: 840	TECHS: JAK JJ	
WEATHER: -2 Wind / light Snow	WELL STATUS: Active		

PURGING DATA

WELL DIAMETER (INCHES): 1	DEPTH TO WATER (M): 1.600	DEPTH TO BOTTOM (M): 2.560
STICK UP/MAGS (M): 1.165	TIME OF DTW MEASUREMENT: 843	TIME OF DTB MEASUREMENT: 844

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO π r^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (0.000507) X [(2.56) - (1.60)] X 1000 = 0.487 Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME 0.500

MINIMUM REQUIRED PURGING VOLUME = 1.5 Litres

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	PURGING WATER DRAWDOWN	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		±0.1M	1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN
9:10:31	9:12:05	1.87	0.5	2.0	7.42	426.1	5.63	40.7	14.48	Clear
9:21:24	9:22:26	"	"	0.5	7.40	534	5.56	38.5	17.17	Clear
9:30:49	9:31:40	"	"	0.5	7.39	555	5.52	38.2	7.90	Clear
9:38:20	9:39:20	"	"	0.6	7.38	553	5.64	39.3	5.73	Clear
9:46:30	9:47:25	"	"	0.7	7.38	566	5.61	39.2	4.07	Clear

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 10:00	SAMPLE DEPTH (M): 2.26	VISIBLE SHEEN?	WATER CLARITY: Clear

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
9:58	2.5	0.7	7.38	566	5.61	39.2	4.07	Clear

NOTES:

MW-02 YSI Log time - 920

#2 - 9:29

#3 - 9:37

#4 - 9:45

#5 - 9:58

Post Sampling DTW 1.602

Baffinland

BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID:	HWB-KP23-02	CAMERA #:	33	PHOTOS:	376-378
DATE:	Aug 30 2023	ARRIVAL TIME:	1245	TECHS:	JAK JS
WEATHER:	-2 Wind / light snow	WELL STATUS:	Active		

PURGING DATA

WELL DIAMETER (INCHES):	1	DEPTH TO WATER (M):	1.724	DEPTH TO BOTTOM (M):	2.633
STICK UP/MAGS (M):	1.1845	TIME OF DTW MEASUREMENT:	~~1214~~ 1245	TIME OF DTB MEASUREMENT:	1248

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO π r^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (0.000507) X [(2.633) - (1.724)] X 1000 = 0.461 Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME 0.46 mL

MINIMUM REQUIRED PURGING VOLUME = 1.38

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	PURGING WATER DRAWDOWN	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		±0.1M	1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN
12:57:30	13:00:15	1.824	0.46	1.8	7.26	710	8.46	61.0	3.24	Clear
13:10:20	13:12:12	"	"	1.8	7.20	652	6.37	45.9	1.20	Clear, slight odor
13:22:34	13:23:10	"	"	1.5	7.15	722	5.19	37.0	1.38	Clear, slight odor
13:29:27	13:30:28	"	"	1.4	7.17	733	5.60	40.0	2.54	Clear, Slight odor
13:38:58	13:31:44	"	"	1.3	7.14	751	4.95	35.2	1.04	Clear, Slight odor

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME:	1345	SAMPLE DEPTH (M):	~~1.724~~ 1.733	VISIBLE SHEEN?	N
WATER CLARITY:	Clear				

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
13:46	2.3	1.3	7.14	751	4.95	35.2	1.04	Clear, slight odor.

NOTES: Logtime #1 - 1308
#2 - 13:21
#3 - 13:23
#4 - 13:38
#5 - 13:46

Post Sampling DTW 1.731

Baffinland

BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: HWB-ICP23-03	CAMERA #: 33	PHOTOS: 0379 - 381
DATE: 30-Aug-2025	ARRIVAL TIME: 1480	TECHS: JAK JT
WEATHER: -2 Wind / Snow	WELL STATUS: Active	

PURGING DATA

WELL DIAMETER (INCHES):	DEPTH TO WATER (M): 1.565	DEPTH TO BOTTOM (M): 2.649
STICK UP/MAGS (M): 1.199	TIME OF DTW MEASUREMENT: 1422	TIME OF DTB MEASUREMENT: 1425

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO πr^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (0.000507) X [(2.649) - (1.565)] X 1000 = 0.550 Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME = 1.65

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	PURGING WATER DRAWDOWN	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		±0.1M	1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN
14:35:33	14:39:30	~~1.565~~	0.550	1.9	7.51	599	9.28	87	5.75	Clear, Slight odor
14:49:05	14:50:27	"	0.550	1.4	7.16	661	3.01	31.5	3.56	Clear, Slight odor
15:03:08	15:03:57	"	"	1.1	7.14	657	2.27	16.0	1.64	Clear, Slight odor
15:13:28	15:14:34	"	"	1.1	7.13	660	2.75	19.4	1.70	Clear, Slight odor
15:22:10	15:23:08	"	"	1.3	7.14	655	2.94	20.9	2.07	Clear, Slight odor

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 1530	SAMPLE DEPTH (M): 2.35	VISIBLE SHEEN? N	WATER CLARITY: Clear

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
15:31	2.75	1.3	7.14	655	2.94	20.9	2.07	Clear, Slight odor

NOTES: Damage to Monument

Logtime #1 - 14:48

#2 - 15:01

#3 - 15:13

#4 - 15:21

#5 15:31

Post Sampling 1.579 DTW

Baffinland

BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: LF-GW-REF3	CAMERA #: 27	PHOTOS: 0622-0623
DATE: 02-Sept-2025	ARRIVAL TIME: 14:00	TECHS: LG JJ ET
WEATHER: 1°C, Overcast, windy	WELL STATUS: Drivepoint partially obstructed	

PURGING DATA

WELL DIAMETER (INCHES): 3/4	DEPTH TO WATER (M): 1.341	DEPTH TO BOTTOM (M): 1.823
STICK UP/MAGS (M): 0.874	TIME OF DTW MEASUREMENT: 14:09:30	TIME OF DTB MEASUREMENT: 14:10:00

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO π r^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (0.000285) X [(1.823) - (1.341)] X 1000 = 0.137 Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME = 0.412 L → round to 0.42 L or 0.14 L per purge.

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	PURGING WATER DRAWDOWN	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		±0.1M	1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN
14:19:00	14:24:30									

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 14:25	SAMPLE DEPTH (M): 1.70	VISIBLE SHEEN? N	WATER CLARITY: N/A

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)

NOTES:
- Could not raise tubing 0.3m above bottom.
  - ↳ after 5min of pumping drivepoint went dry. Waited 10min & no recharge occurred
  - could not collect enough water for YSI parameters or sample.
  - Drivepoint considered frozen / dry. NST

Baffinland

BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: LF-KP22-01	CAMERA #: 26	PHOTOS: 0339-0342
DATE: 28-Aug-2025	ARRIVAL TIME: 14:20	TECHS: LG JJ
WEATHER: 5°C, Sunny, windy	WELL STATUS: Good condition, stake present	

PURGING DATA

WELL DIAMETER (INCHES): 2"	DEPTH TO WATER (M): 1.939	DEPTH TO BOTTOM (M): 3.168
STICK UP/MAGS (M): 0.747	TIME OF DTW MEASUREMENT: 14:23:30	TIME OF DTB MEASUREMENT: 14:24:45

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO π r^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	(2") DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (0.002027) X [(3.168) - (1.939)] X 1000 = 2.49 Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME = 7.5L

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	PURGING WATER DRAWDOWN	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		±0.1M	1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN
14:38:08	14:42:40	1.965	2.5	1.8	7.06	2445	0.73	5.3	2.04	clear, no odor
14:46:25	14:50:38	1.945	2.5	1.9	7.07	2455	0.38	2.8	1.31	clear, mild sewage odor
14:54:36	14:58:20	1.970	2.5	1.8	7.07	2441	0.23	1.6	1.44	" "
15:02:03	15:06:08	1.970	2.5	1.9	7.06	2445	0.19	1.4	1.59	" "
15:12:28	15:17:17	1.975	2.5	1.9	7.06	2440	0.11	0.8	1.65	" "
					DO stabilization could not be reached.					
					Sample collected after 5 well vol purges.					

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 15:25	SAMPLE DEPTH (M): 3.120	VISIBLE SHEEN? N	WATER CLARITY:

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
15:21	12.5	1.9	7.06	2440	0.11	0.8	1.65	clear, water has a mild sewage smell.

NOTES: 2" well sufficient size for drawdown measurement.

YSI log times:
Purge log 1 = 14:44
Purge log 2 = 14:53
Purge log 3 = 15:00
Purge log 4 = 15:10
Purge log 5 = 15:21

* Field Dupe taken *

Baffinland

GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: LF-KP22-05	CAMERA #: 26	PHOTOS: 0286 - 0290, 0295, 0297
DATE: 26-Aug-2025	ARRIVAL TIME: 14:20	TECHS: LG JM
WEATHER: 2°C, windy, mostly cloudy	WELL STATUS: Good condition, cap had to be hammered off to remove	

PURGING DATA

WELL DIAMETER (INCHES): 2"	DEPTH TO WATER (M): 1.656	DEPTH TO BOTTOM (M): 2.141 (corrected depth = 2.221m)
STICK UP/MAGS (M): 1.160	TIME OF DTW MEASUREMENT: 14:29:08	TIME OF DTB MEASUREMENT: 14:29:50

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO πr^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (0.002027) X [(2.141) - (1.656)] X 1000 = 0.993 Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME = 2.97L → rounded to 3L

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN
14:39:40	14:24:24	1.0	3.8	6.96	517.0	8.37	63.6	752.48	Yellow, opaque, sewage smell
14:48:35	14:51:20	1.0	3.7	6.91	582.0	2.44	18.5	106.55	" " "
14:54:50	14:57:45	1.0	3.7	6.94	580.0	6.41	48.8	77.25	clearer, yellowish, opaque
15:00:15	15:03:35	1.0	3.4	6.99	600.0	8.08	60.9	72.04	Still has a mild sewage smell
15:06:35	15:09:59	1.0	3.5	6.96	587.0	5.23	39.5	38.42	opaque, yellowish, sewage smell
15:16:45	15:19:35	1.0	3.0	6.93	589.0	2.47	18.3	17.09	Improving colour & clarity
15:26:05	15:28:16	1.0	3.2	6.93	585.0	2.15	16.0	19.80	yellowish, clearer, mild smell
15:38:15	15:40:30	1.0	3.0	6.95	587.0	2.01	15.0	18.50	yellowish, mild smell

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 15:45	SAMPLE DEPTH (M): 2.00 m	VISIBLE SHEEN? N	WATER CLARITY: slightly turbid

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
15:41	8L	3.0	6.95	587	2.01	15.0	18.50	mild sewage smell, yellowish & slightly opaque

NOTES: Well cap was stuck on casing → had to be hammered off → no damage to well casing. Purging had to be paused occasionally due to low water level.

Purge log 1 = 14:46
Purge log 2 = 14:54
Purge log 3 = 14:59
Purge log 4 = 15:06
Purge log 5 = 15:13
Purge log 6 = 15:22
Purge log 7 = 15:31
Purge log 8 15:41

* Brown sediment with apparent oil slick noticed @ bottom of LDPE tubing upon removal see photo 0297 *

YSI site name = LF GW

GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: LF-KP23-01	CAMERA #: 26	PHOTOS: 0298-0300
DATE: 26-Aug-2025	ARRIVAL TIME: 16:10	TECHS: LG
WEATHER: 2°C, Mostly cloudy, windy	WELL STATUS: cap not placed in well casing	

PURGING DATA

WELL DIAMETER (INCHES): 1"	DEPTH TO WATER (M): 1.576	DEPTH TO BOTTOM (M): 2.495 (corrected depth = 2.575)
STICK UP/MAGS (M): 1.093	TIME OF DTW MEASUREMENT: 16:22:00	TIME OF DTB MEASUREMENT: 16:22:45

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO πr^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (0.000507) X [(2.495) - (1.576)] X 1000 = 0.465 Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME = 1.39 L → rounded to 1.5 L

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN
16:36:55	16:39:10	0.5	2.7	6.85	476.2	4.07	30.1	7.45	clear, no smell
16:41:45	16:43:10	0.5	2.1	6.94	458.2	8.00	58.6	21.71	slightly more turbid/opaque
16:46:00	16:47:32	0.5	2.1	6.96	441.8	8.75	63.4	8.97	yellowish, mild opaque
16:48:58	16:50:40	0.5	2.0	6.99	435.2	9.42	68.0	5.48	clearer, slightly opaque
16:52:38	16:54:22	0.5	2.1	7.02	431.0	9.85	71.5	3.62	slightly opaque, no odor
16:56:15	16:57:45	0.5	2.2	7.02	430.6	9.92	72.1	3.49	clear, no odor

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 17:00	SAMPLE DEPTH (M): 2.100	VISIBLE SHEEN? N	WATER CLARITY:

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
16:58	3.0L	2.2	7.02	430.6	9.92	72.1	3.49	clear, no odor

NOTES:

YSI Log times

Purge log 1 = 16:40
Purge log 2 = 16:45
Purge log 3 = 16:48
Purge log 4 = 16:52
Purge log 5 = 16:55
Purge log 6 = 16:58

BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: LF-KP23-02	CAMERA #: 26	PHOTOS: 0380 - 0382
DATE: 29-Aug-2025	ARRIVAL TIME: 11:50	TECHS: LG AG
WEATHER: -5°C, windy, partly cloudy	WELL STATUS: Not a well.	

PURGING DATA

WELL DIAMETER (INCHES):	DEPTH TO WATER (M):	DEPTH TO BOTTOM (M):
STICK UP/MAGS (M):	TIME OF DTW MEASUREMENT:	TIME OF DTB MEASUREMENT:

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO πr^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = ( ) X [( ) - ( )] X 1000 = Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME =

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 11:50	SAMPLE DEPTH (M): N/A	VISIBLE SHEEN? N/A	WATER CLARITY: N/A

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)

NOTES: LF-KP23-02 is a black pvc pipe inserted in the ground downgradient of the landfill. This is not a well. No sample collected.

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BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: LF-KP23-03	CAMERA #: 26	PHOTOS:
DATE: 28-Aug-2023	ARRIVAL TIME: 16:15	TECHS: LG JJ
WEATHER: 6°C, partly cloudy	WELL STATUS: Dry.	

PURGING DATA

WELL DIAMETER (INCHES): 1"	DEPTH TO WATER (M): N/A	DEPTH TO BOTTOM (M): 2.931
STICK UP/MAGS (M): 1.048	TIME OF DTW MEASUREMENT:	TIME OF DTB MEASUREMENT: 16:16:00

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO πr^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = ( ) X [( ) - ( )] X 1000 = Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME =

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 16:15	SAMPLE DEPTH (M):	VISIBLE SHEEN?	WATER CLARITY:

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)

NOTES: Well is dry. NST.

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BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: LF-KP23-04	CAMERA #: 26	PHOTOS:
DATE: 29-Aug-2025	ARRIVAL TIME: 10:30	TECHS: LG AG
WEATHER: -5°C, windy, partly cloudy	WELL STATUS: Good condition.	

PURGING DATA

WELL DIAMETER (INCHES): 1"	DEPTH TO WATER (M): 1.568	DEPTH TO BOTTOM (M): 2.636
STICK UP/MAGS (M): 1.121	TIME OF DTW MEASUREMENT: 10:32:55	TIME OF DTB MEASUREMENT: 10:33:55

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO πr^2	3/4" DIAMETER PIEZOMETER	(1") DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (0.000507)X[(2.636)-(1.568)]X 1000 = 0.541 Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME = 1.62 L → 1.65 total or 0.55L per purge

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	PURGING WATER DRAWDOWN	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		±0.1M	1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN
10:45:15	10:52:40	1.668	0.55	1.4	7.42	442.9	6.23	44.5	26.79	slightly opaque, no odor
10:59:20	11:02:40	1.668	0.55	1.3	7.32	483.1	5.53	39.3	11.20	clear, no odor
11:05:47	11:09:38	1.668	0.55	0.8	7.31	489.3	5.58	39.1	7.23	" "
11:12:04	11:15:25	1.668	0.55	1.0	7.32	502	5.55	39.1	4.48	" "

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 11:20	SAMPLE DEPTH (M): 2.300	VISIBLE SHEEN? N	WATER CLARITY: Clear,

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
11:16	2.2	1.0	7.32	502	5.55	39.1	4.48	Clear, no odor

NOTES: Purging had to be paused to maintain ± 0.100m drawdown
- cold temp could impact YSI temp readings inside flow cylinder
- time to full water lvl recovery = 0.45 seconds
- Hydraulic head / prime maintained in tubing throughout purging / sample
- Water stability (DTW) post sample = 1.572m

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Purge log 1 = 10:58 Purge log 4 = 11:16
Purge log 2 = 11:04
Purge log 3 = 11:11

BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: LF-KP23-05	CAMERA #: 26	PHOTOS: 0301-0304
DATE: 27-Aug-2025	ARRIVAL TIME: 11:35	TECHS: LG JJ
WEATHER: 2°C, cloudy, windy, snowing	WELL STATUS: Good condition, casing too tall for monument	

PURGING DATA

WELL DIAMETER (INCHES): 1"	DEPTH TO WATER (M): 1.986	DEPTH TO BOTTOM (M): 2.210
STICK UP/MAGS (M): 1.162	TIME OF DTW MEASUREMENT: 11:40:00	TIME OF DTB MEASUREMENT: 11:40:40

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO πr^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (0.000507) X [(2.210) - (1.986)] X 1000 = 0.113 Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME = 0.340 L → round to .350 L

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN
11:50:00	11:58:25	0.116	4.3	7.59	171.8	9.70	74.7	35.70	slightly opaque
12:02:21	12:03:40	0.116	3.8	7.54	341.8	10.36	77.7	35.94	opaque, no smell
12:07:05	12:08:05	0.116	3.0	7.48	344.3	10.46	77.7	24.79	slightly opaque, no odor
12:11:45	12:12:32	0.116	3.0	7.48	338.7	10.49	78.0	23.23	opaque, yellowish, "

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 12:20	SAMPLE DEPTH (M): 2.100	VISIBLE SHEEN? N	WATER CLARITY: slightly turbid

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
12:14	0.464L	3.0	7.48	3387	10.49	78.0	23.23	opaque, no odor.

NOTES: Water column very small → slow purging

YSI site = LF GW

YSI log TIMES

Purge log 1 = 12:01 — Final DTW = 1.940m

Purge log 2 = 12:06 — ↳ Difficulty maintaining hydraulic head.

Purge log 3 = 12:11 — Had to pause purging / sample flow multiple times

Purge log 4 = 12:14

Baffinland

GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: LF-KP23-06	CAMERA #: 26	PHOTOS: 0269 - 0272
DATE: 26-Aug-2025	ARRIVAL TIME: 10:30	TECHS: LG JM
WEATHER: 1°C, Partly cloudy, windy	WELL STATUS: Good condition	

PURGING DATA

WELL DIAMETER (INCHES): 1"	DEPTH TO WATER (M): 1.520	DEPTH TO BOTTOM (M): 2.210 (corrected depth = 2.814m)
STICK UP/MAGS (M): 0.910m	TIME OF DTW MEASUREMENT: 10:36:00	TIME OF DTB MEASUREMENT: 10:36:50

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO πr^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (0.000507) X [(2.210) - (1.520)] X 1000 = 0.349 Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME (↳ rounded to 350mL)

MINIMUM REQUIRED PURGING VOLUME = 1.050 L

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN
10:46:00	10:47:45	0.350	3.0	7.61	301.6	9.29	69.1	9.19	Yellow tint, no odor
10:51:40	10:52:35	0.350	2.4	7.48	305.6	9.59	70.1	5.39	clear, no odor
10:55:00	10:55:50	0.350	2.0	7.44	305.1	9.62	69.7	4.41	" "
10:58:05	10:58:57	0.350	1.9	7.43	305.4	9.62	69.5	3.71	" "
11:01:35	11:02:25	0.350	1.7	7.44	304.5	9.60	68.9	3.44	" "

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 11:05	SAMPLE DEPTH (M): 1.90m	VISIBLE SHEEN? N	WATER CLARITY: clear

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
11:03	1.75 L	1.7	7.44	304.5	9.60	68.9	3.44	clear, no odor

NOTES:

Mags = 1.030 - 0.120 = 0.910

- YSI site name = LF GW

YSI log times:
- Purge 1 log = 10:50
- Purge 2 log = 10:54
- Purge 3 log = 10:57
- Purge 4 log = 11:00
- Purge 5 log = 11:03

GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: LF-KP23-07	CAMERA #: 26	PHOTOS: 0273-0277
DATE: 26-Aug-2025	ARRIVAL TIME: 11:22	TECHS: LG JM
WEATHER: 2°C, Partly cloudy, windy	WELL STATUS: Good condition	

PURGING DATA

WELL DIAMETER (INCHES): 1"	DEPTH TO WATER (M): 1.138	DEPTH TO BOTTOM (M): 2.230 (corrected depth = 2.31m)
STICK UP/MAGS (M): 1.039	TIME OF DTW MEASUREMENT: 11:26	TIME OF DTB MEASUREMENT: 11:27

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO πr^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (0.000507) X [(2.230) - (1.138)] X 1000 = 0.553 Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME = 1.66 L → round to 1.80 L

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN
11:34:00	11:36:15	0.600	3.0	7.31	275.7	8.93	66.3	33.22	slightly turbid, no odor
11:39:30	11:40:55	0.600	2.8	7.32	283.4	8.82	65.2	12.00	turbid/yellowish
11:44:20	11:45:35	0.600	2.9	7.33	281.2	8.93	66.1	10.28	clearer, no odor
11:50:30	11:51:55	0.600	2.3	7.34	278.2	9.28	67.7	9.28	clear, no odor
11:53:40	11:54:50	0.600	2.2	7.35	277.9	9.39	68.3	6.86	" "
11:56:20	11:57:40	0.600	2.0	7.36	277.7	9.60	69.7	6.35	" "
11:59:30	12:00:52	0.600	2.1	7.37	277.7	9.72	70.5	5.21	" "
12:02:40	12:04:00	0.600	2.0	7.37	277.3	9.80	71.0	5.21	" "

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 12:00	SAMPLE DEPTH (M): 1.900m	VISIBLE SHEEN? N	WATER CLARITY: clear

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
12:04	4.8L	2.0	7.37	277.3	9.80	71.0	5.21	clear, no odor

NOTES: YSI log times

Purge log 1 = 11:39
Purge log 2 = 11:43
Purge log 3 = 11:50
Purge log 4 = 11:53
Purge log 5 = 11:56
Purge log 6 = 11:59
Purge log 7 = 12:02
Purge log 8 = 12:04

Ysi site name = LF GW

GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: LF-KP23-10	CAMERA #: 26	PHOTOS: 0278 - 0281
DATE: 26-Aug-2025	ARRIVAL TIME: 13:00	TECHS: LG JM
WEATHER: 1°C, Partly cloudy, windy	WELL STATUS: Dry.	

PURGING DATA

WELL DIAMETER (INCHES): 1"	DEPTH TO WATER (M): Dry	DEPTH TO BOTTOM (M): 2.734 (corrected depth = 2.814 m)
STICK UP/MAGS (M): 0.882 m	TIME OF DTW MEASUREMENT: 13:00:30	TIME OF DTB MEASUREMENT: 13:01:00

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO πr^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = ( ) X [( ) - ( )] X 1000 = Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME = N/A

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 13:00	SAMPLE DEPTH (M): N/A	VISIBLE SHEEN? N/A	WATER CLARITY: N/A

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)

NOTES: Well is dry. NST.

GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: LF-KP23-11	CAMERA #: 26	PHOTOS: 0281 - 0285
DATE: 26-Aug-2025	ARRIVAL TIME: 13:10	TECHS: LG JM
WEATHER: 2°C, Partly cloudy, windy	WELL STATUS: Well casing is loose & can be moved.	

PURGING DATA

WELL DIAMETER (INCHES): 1"	DEPTH TO WATER (M): 1.738	DEPTH TO BOTTOM (M): 2.759 (corrected depth = 2.839m)
STICK UP/MAGS (M): 1.201	TIME OF DTW MEASUREMENT: 13:11:55	TIME OF DTB MEASUREMENT: 13:12:30

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO πr^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (0.000507) X [(2.759) - (1.738)] X 1000 = 0.517 Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME = 1.55L → rounded to 1.8L

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN
13:28:50	13:30:12	0.600	2.3	7.16	196.6	9.95	72.7	45.54	Slightly turbid, no odor
13:32:48	13:33:50	0.600	1.6	7.10	272.5	9.05	65.0	56.41	" " "
13:36:20	13:37:55	0.600	1.8	7.18	297.5	9.48	68.2	47.55	Opaque, no odor
13:40:00	13:41:15	0.600	1.8	7.21	306.7	9.48	68.2	41.91	" "
13:43:16	13:44:32	0.600	1.7	7.23	311.5	9.63	69.2	32.52	", no odor or colour
13:46:20	13:47:43	0.600	1.8	7.25	312.7	9.92	71.4	25.62	clearer, slightly turbid
13:49:38	13:51:00	0.600	1.8	7.27	314.7	9.93	71.5	19.51	slightly turbid, no odor
13:53:15	13:54:40	0.600	1.9	7.29	315.5	9.82	70.9	14.62	" "
13:57:10	13:58:38	0.600	1.8	7.30	317.9	9.74	70.1	13.36	" " "

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 14:05	SAMPLE DEPTH (M): 2.400	VISIBLE SHEEN? N	WATER CLARITY: slightly turbid

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
14:00	5.4L	1.8	7.30	317.9	9.74	70.1	13.36	slightly turbid, no colour or odor

NOTES: Well casing is loose & can be moved vertically & twisted } Potential well sand inside
→ Difficulty inserting LDPE → got stuck on side of well casing } of well casing

YSI log times:
- Purge log 1 = 13:32
- Purge log 2 = 13:35
- Purge log 3 = 13:39
- Purge log 4 = 13:43
- Purge log 5 = 13:46
- Purge log 6 = 13:49
- Purge log 7 = 13:53
- Purge log 8 = 13:56
- Purge log 9 = 14:00

YSI site name = LF GW

BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: LF-KP23-13	CAMERA #: 26	PHOTOS: 0330-0333
DATE: 28-Aug-2025	ARRIVAL TIME: 10:35	TECHS: LG JJ
WEATHER: 3°C, sunny, partly cloudy, wind	WELL STATUS: Good condition	

PURGING DATA

WELL DIAMETER (INCHES): 1"	DEPTH TO WATER (M): 1.915	DEPTH TO BOTTOM (M): 2.736
STICK UP/MAGS (M): 1.062	TIME OF DTW MEASUREMENT: 10:39:45	TIME OF DTB MEASUREMENT: 10:41:25

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO πr^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (0.000507) X [(2.736) - (1.915)] X 1000 = 0.416 Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME = 1.25 L → round to 1.5 L total

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	PURGING WATER DRAWDOWN	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		±0.1M	1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN
10:58:30	11:03:25	2.05	0.500	5.1	7.23	375.2	9.25	72.7	18.98	clear, no odor
11:09:15	11:11:05	2.25	0.500	4.3	7.14	412.6	6.88	530	8.71	clear, no odor
11:23:40	11:26:19	2.15	0.500	3.1	7.18	423.3	7.39	55.2	8.21	clear, no odor
11:29:15	11:31:09	Unknown	0.500	3.0	7.23	418.0	7.78	57.9	8.28	" "
11:36:24	11:38:20	Unknown	0.500	2.5	7.30	423.0	8.34	61.3	34.83	slightly turbid.
11:42:54	11:45:46	Unknown	0.500	3.2	7.33	420.0	8.78	65.7	5.26	clear, no odor
11:50:41	11:53:00	Unknown	0.500	2.9	7.35	423.9	8.44	62.7	4.11	clear, no odor
11:56:30	11:58:50	[illegible]	0.500	2.8	7.34	414.7	8.51	63.1	3.33	" "
		2.120								

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 12:05	SAMPLE DEPTH (M): 2.400	VISIBLE SHEEN? N	WATER CLARITY: clear

FINAL YSI RESULTS -> YSI Site = LF GW

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
12:00	4L	2.8	7.34	414.7	8.51	63.1	3.33	clear, no odor

NOTES: Small casing buried in ground 1.5 feet from monument. (see photo 0333)

Purge log 1 = 11:07
Purge log 2 = 11:22
Purge log 3 = 11:28
Purge log 4 = 11:35
Purge log 5 = 11:41
Purge log 6 = 11:49
Purge log 7 = 11:55
Purge log 8 = 12.00

- Cannot prevent drawdown under 0.1 m
- Full recovery after 2nd purge @ 11:17:40
- Full recovery after 3rd purge @ 11:27:00

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* Dip tape gets stuck in 1" casing & cannot provide reliable drawdown information *
- effort was made to reduce purging speed to lowest possible setting on pump
DTW post sample = 2.120 m

BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: MS-HWB-25-01	CAMERA #: 27	PHOTOS: 0599-0602
DATE: 08-Sept-2025	ARRIVAL TIME: 7:45	TECHS: LG
WEATHER: -1°C, sunny, windy	WELL STATUS: Good condition	

PURGING DATA

WELL DIAMETER (INCHES): 2"	DEPTH TO WATER (M): 2.753	DEPTH TO BOTTOM (M): 3.261
STICK UP/MAGS (M): 1.328	TIME OF DTW MEASUREMENT: 7:53:30	TIME OF DTB MEASUREMENT: 7:54:15

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO πr^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	(2") DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (0.002027) X [(3.261) - (2.753)] X 1000 = 1.03 Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME = 3.09L → rounded to 3.15L or 1.05L per purge

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	PURGING WATER DRAWDOWN	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		±0.1M	1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN
8:08:45	8:18:00	2.850	1.05	1.2	7.47	412.5	3.77	26.7	2.98	clear, no odor
8:25:23	8:28:20	2.845	1.05	0.7	7.42	420.9	3.81	23.2	2.28	" "
8:31:40	8:37:50	2.850	1.05	0.6	7.44	422.1	3.19	22.2	2.04	" "
				Stable conditions after 3 volumes.						

SAMPLING DATA (INPUT THESE INTO EQUIS) YSI #4

SAMPLE TIME: 8:45	SAMPLE DEPTH (M): 2.960	VISIBLE SHEEN? N	WATER CLARITY: Clear

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
8:39	3.15	0.6	7.44	422.1	3.19	22.2	2.04	clear, no odor

NOTES: Purging had to be paused to maintain <1.00m drawdown

YSI site = GW HWB

Baffinland

YSI log times:
- Purge log 1 = 8:21
- Purge log 2 = 8:30
- Purge log 3 = 8:39

BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: MS-HWB-25-02	CAMERA #: 33	PHOTOS: 340 - 343
DATE: Aug 29 2025	ARRIVAL TIME: 1350	TECHS: JJ DF
WEATHER: 2 Cloud / Snow	WELL STATUS: Dry	

PURGING DATA

WELL DIAMETER (INCHES): 2	DEPTH TO WATER (M): N/A	DEPTH TO BOTTOM (M): 4.616
STICK UP/MAGS (M): 1.368	TIME OF DTW MEASUREMENT: —	TIME OF DTB MEASUREMENT: 1355

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO πr^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = ( ) X [( ) - ( )] X 1000 = Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME =

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME:	SAMPLE DEPTH (M):	VISIBLE SHEEN?	WATER CLARITY:

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)

NOTES: Well Dry - No purging

4616 - 1.368 = 3.248 Ground level to Bottom

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BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: MS-HWB-25-03	CAMERA #: 27	PHOTOS: 0606 - 0609
DATE: 02-Sept-2025	ARRIVAL TIME: 9:50	TECHS: LG ET
WEATHER: -1°C, Sunny, windy	WELL STATUS: Casing slanted/tilted inside monument	

PURGING DATA

WELL DIAMETER (INCHES): 2"	DEPTH TO WATER (M): 2.362	DEPTH TO BOTTOM (M): 3.410
STICK UP/MAGS (M): 1.314	TIME OF DTW MEASUREMENT: 9:52:50	TIME OF DTB MEASUREMENT: 9:53:35

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO πr^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (0.002027) X [(3.410) - (2.362)] X 1000 = 2.12 Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME = 6.37 L total → round to 6.45 or 2.15 L per purge

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	PURGING WATER DRAWDOWN	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		±0.1M	1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN
10:04:25	10:11:11	2.340	2.15	0.5	7.88	358.2	5.74	39.8	3.75	clear, no sed, no odor
10:13:40	10:17:48	2.415	2.15	0.4	7.82	354.9	5.77	40.0	3.86	clear, no odor
10:19:30	10:23:01	2.422	2.15	0.3	7.81	353.3	5.75	39.7	3.57	" "
			stable conditions after 3 purges							

SAMPLING DATA (INPUT THESE INTO EQUIS) YSI #4

SAMPLE TIME: 10:25	SAMPLE DEPTH (M): 3.100	VISIBLE SHEEN? N	WATER CLARITY: clear

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
10:23	6.45	0.3	7.81	353.3	5.75	39.7	3.57	clear, no odor

NOTES:
- Some suspended solids in initial purge → cleared out by end of first well volume
- YSI log site = GW HWB
- New well located ~3.5 m from HWB-KP22-06
- DTW post sample = 2.372 @ 10:38:30

Baffinland

YSI log times:
- Purge log 1 = 10:12
- Purge log 2 = 10:18
- Purge log 3 = 10:23

GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: MS-HWB-GW3	CAMERA #: RG	PHOTOS: 0466 - 0470
DATE: 30-Aug-25	ARRIVAL TIME: 14:00:00	TECHS: LG & AG
WEATHER: Windy, Sun & Cloudy, 0°C	WELL STATUS: Damaged, bent	

PURGING DATA

WELL DIAMETER (INCHES): 3/4"	DEPTH TO WATER (M):	DEPTH TO BOTTOM (M):
STICK UP/MAGS (M): —	TIME OF DTW MEASUREMENT:	TIME OF DTB MEASUREMENT:

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO πr^2	(3/4") DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = ( ) X [( ) - ( )] X 1000 = Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME =

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME:	SAMPLE DEPTH (M):	VISIBLE SHEEN?	WATER CLARITY:

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)

NOTES: • Drivepoint located between the West HWB 7 berm & seacans • Drive point is bent & broken. Unable to take MAGS, DTW, & DTB measurements

BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: MS-HWB-GW4	CAMERA #: 26	PHOTOS: 0476 - 0480
DATE: 30-Aug-25	ARRIVAL TIME: 15:30	TECHS: L.G & AG
WEATHER: Windy, Sun & Clouds 0°C	WELL STATUS: Damaged	

PURGING DATA

WELL DIAMETER (INCHES): 3/4"	DEPTH TO WATER (M): —	DEPTH TO BOTTOM (M): —
STICK UP/MAGS (M): —	TIME OF DTW MEASUREMENT: —	TIME OF DTB MEASUREMENT: —

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO π r^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = ( ) X [( ) - ( )] X 1000 = Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME =

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	PURGING WATER DRAWDOWN	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		±0.1M	1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME:	SAMPLE DEPTH (M):	VISIBLE SHEEN?	WATER CLARITY:

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)

NOTES:
- Seacan placed on the drivepoint - Drivepoint is bent
- Drivepoint is located on the west side of HWB4

Baffinland

BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: HWB-GW-5	CAMERA #: 33	PHOTOS: 373	0375
DATE: Aug 30 2025	ARRIVAL TIME: 1020	TECHS: JJ, JAM	
WEATHER: -2 wind / Light Snow	WELL STATUS: Active		

PURGING DATA

WELL DIAMETER (INCHES): 3/4	DEPTH TO WATER (M): 1.126	DEPTH TO BOTTOM (M): ~~1.815~~ 1.815
STICK UP/MAGS (M): 0.685	TIME OF DTW MEASUREMENT: 1025	TIME OF DTB MEASUREMENT: 1026

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO π r^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (0.000285) X [(1.815) - (1.126)] X 1000 = 0.196 Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME 0.20

MINIMUM REQUIRED PURGING VOLUME = 0.60 L

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	PURGING WATER DRAWDOWN	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		±0.1M	1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN
10:49:20	10:50:18	1.82	0.2	0.7	7.56	349.6	5.44	41.8	165.34	Opaque
~~10:50:50~~	10:51:24	1.82	0.2	0.7	7.49	449.1	5.42	378	77.93	Opaque
~~10:56:30~~ 11:03:35	11:04:12	1.22	0.2	0.7	7.47	476.5	4.42	30.8	45.51	Opaque
11:10:30	11:11:10	1.22	0.2	1.3	7.46	439.5	4.54	32.2	26.69	Slightly opaque
11:17:23	11:17:45	1.22	0.2	1.7	7.45	495.1	4.18	30.1	14.16	Slightly opaque

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 1120	SAMPLE DEPTH (M): 1.515	VISIBLE SHEEN? N	WATER CLARITY: Slightly Turbid

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
11:23	1.0	1.7	7.45	495.1	4.18	30.1	14.16	Slightly opaque

NOTES: Log time #1 - 10:55
#2 - 11:01
#3 11:09
#4 11:15
#5 11:23

Post Sampling DTW 1.119 m

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BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: MS-HWB-GW6	CAMERA #: 27	PHOTOS: 0603-0605
DATE: 02-Sept-2025	ARRIVAL TIME: 9:05	TECHS: LG ET
WEATHER: -1°C, sunny, windy	WELL STATUS: Dry / frozen	

PURGING DATA

WELL DIAMETER (INCHES): 3/4	DEPTH TO WATER (M): N/A	DEPTH TO BOTTOM (M): 0.927
STICK UP/MAGS (M): 0.398	TIME OF DTW MEASUREMENT: 9:08:00	TIME OF DTB MEASUREMENT: 9:08:30

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO π r^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = ( ) X [( ) - ( )] X 1000 = Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME =

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	PURGING WATER DRAWDOWN	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		±0.1M	1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 9:05	SAMPLE DEPTH (M): N/A	VISIBLE SHEEN? N	WATER CLARITY: N/A

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)

NOTES: MS Drivepoint is dry / or frozen. NST

Baffinland

BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: MS-HWB-GW-REF1	CAMERA #: 26	PHOTOS: 0481-0483
DATE: 30-Aug-25	ARRIVAL TIME: 15:52:10	TECHS: LG & AG
WEATHER: Windy, Sun & Clouds 0°C	WELL STATUS: Good Conditions	

PURGING DATA

WELL DIAMETER (INCHES): 3/4"	DEPTH TO WATER (M): 0.779	DEPTH TO BOTTOM (M): 1.818
STICK UP/MAGS (M): 0.639	TIME OF DTW MEASUREMENT: 16:12:02	TIME OF DTB MEASUREMENT: 16:12:56

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO π r^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (0.000285) X [(1.818) - (0.779)] X 1000 = 0.296 Litres Rounded Up to 0.3L

1.039

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME = 0.888L Rounded Up to 0.9L

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	PURGING WATER DRAWDOWN	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		±0.1M	1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN
16:24:26	16:26:10	—	0.3	2.3	7.09	424.2	6.60	48.3	272.17	opaque, water yellow/brownish tint
16:31:45	16:33:32	—	0.3	2.5	7.15	567	6.65	48.9	146.58	no odor, very opaque
16:35:14	16:36:50	—	0.3	2.1	7.24	641	6.69	48.6	70.63	no odor, opaque & cloudy
16:39:59	16:41:22	—	0.3	2.1	7.28	659	6.7	48.6	33.85	" ", getting clearer

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 16:45	SAMPLE DEPTH (M): 1.500	VISIBLE SHEEN? NO	WATER CLARITY: cloudy,

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
16:44	1.2	2.1	7.28	659	6.7	48.6	33.85	

NOTES:
- Drivepoint is partially obstructed - Water level & Depth had to be taken with Waterra tubing inside the drivepoint.
- Puddles of stagnant water next to drivepoint.

Baffinland

YSI Log Times
1 purge @ 16:31
2 purge @ 16:35
3 purge @ 16:40
4 Purge @ 16:44

• DTW Post Sampling : 0.765

GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: MS-HWB-GW-REF2	CAMERA #: 26	PHOTOS: 0459 - 0461
DATE: 30-Aug-2025	ARRIVAL TIME: 11:10	TECHS: LG AG
WEATHER: -2°C, windy, cloudy	WELL STATUS: Drivepoint w/ tubing stuck inside	

PURGING DATA

WELL DIAMETER (INCHES): 3/4"	DEPTH TO WATER (M): DRY	DEPTH TO BOTTOM (M): 1.742
STICK UP/MAGS (M): 0.619	TIME OF DTW MEASUREMENT:	TIME OF DTB MEASUREMENT: 11:11:00

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO πr^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = ( ) X [( ) - ( )] X 1000 = Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME =

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 11:10	SAMPLE DEPTH (M): N/A	VISIBLE SHEEN? N/A	WATER CLARITY: N/A

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)

NOTES: Drivepoint located ~ 2.5m from HWB-KP22-01
↳ location is dry. NST

BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: MS-HWB-GW-REF3	CAMERA #: 26	PHOTOS: 0450 - 0453
DATE: 30-Aug-2025	ARRIVAL TIME: 08:45	TECHS: LG AG
WEATHER: -2°C, cloudy, windy	WELL STATUS: Drivepoint is partially obstructed	

PURGING DATA

WELL DIAMETER (INCHES): 3/4"	DEPTH TO WATER (M): 0.534	DEPTH TO BOTTOM (M): 1.829
STICK UP/MAGS (M): 0.523	TIME OF DTW MEASUREMENT: 8:46:03	TIME OF DTB MEASUREMENT: 8:46:40

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO πr^2	(3/4") DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (0.000285) X [(1.829) - (0.534)] X 1000 = 0.369 Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME = 1.10 L → round to 1.125 (Total) or .370 L per purge

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	PURGING WATER DRAWDOWN	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		±0.1M	1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN
9:05:45	9:07:25	/	0.370	1.9	6.82	1788	2.65	19.2	14.95	clear, no odor
9:13:02	9:14:25	/	0.370	0.8	6.82	2807	2.14	15.1	8.52	" "
9:17:40	9:19:23	/	0.370	0.5	6.90	3035	2.18	15.3	5.61	" "
9:21:00	9:22:45	/	0.370	0.5	6.97	3069	1.79	12.5	2.88	" "
						DO not reaching stability. Sample taken after 4th purge				

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 9:25	SAMPLE DEPTH (M): 1.500	VISIBLE SHEEN? N	WATER CLARITY: Clear

FINAL YSI RESULTS → YSI log site = GW HWB, YSI #4

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
9:23	1.48	0.5	6.97	3069	1.79	12.5	2.88	Clear, no odor

NOTES: Had some difficulty inserting LDPE into drivepoint → Partially obstructed
↳ Drawdown could not be monitored in drivepoint during sample
↳ Hydraulic head / prime maintained during sample
DTW post sample : 0.655m

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YSI log times { Purge log1 = 9:12, Purge log2 = 9:17, Purge log3 = 9:20, Purge log4 = 9:23

Landfill

BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: MS-LF-25-01	CAMERA #: 33	PHOTOS: 0311-0314
DATE: 29 Aug 2025	ARRIVAL TIME:	TECHS: JJ
WEATHER: 2° Wind	WELL STATUS: Unknown	

PURGING DATA

WELL DIAMETER (INCHES): 2"	DEPTH TO WATER (M): —	DEPTH TO BOTTOM (M): 2.689
STICK UP/MAGS (M): ~~1.305~~ 1.303	TIME OF DTW MEASUREMENT:	TIME OF DTB MEASUREMENT: 9:57

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO πr^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (/) X [(/) - ( )] X 1000 = Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME =

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME:	SAMPLE DEPTH (M):	VISIBLE SHEEN?	WATER CLARITY:

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)

NOTES: New well. Blockage at 2.689 m. There was water present yesterday

2.689 - 1.303 = 1.386 = Blockage
Ground unit to Bottom.

Baffinland

Thermistor Temp 0.42
0.72
-0.38

BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: MS-LF-GW-REF-2	CAMERA #: 26	PHOTOS: 304-308
DATE: 27-Aug-2025	ARRIVAL TIME: 13:05	TECHS: LG JJ
WEATHER: 1°C, windy, rain & snow	WELL STATUS: Waterra stuck in drivepoint	

PURGING DATA

WELL DIAMETER (INCHES): 3/4	DEPTH TO WATER (M): 1.805	DEPTH TO BOTTOM (M): 1.872
STICK UP/MAGS (M): 0.401	TIME OF DTW MEASUREMENT: 13:11:00	TIME OF DTB MEASUREMENT: 13:11:30

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO πr^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (0.000285) X [(1.872) - (1.805)] X 1000 = 0.0191 Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME = 0.0573 L → rounded to 0.06L

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME:	SAMPLE DEPTH (M):	VISIBLE SHEEN?	WATER CLARITY:

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)

NOTES: Waterra tubing stuck inside → Water level from adjacent drivepoint ~4m away

Mags = 0.716m

DTW = 1.618m @ 13:09:35 } Water level too low to collect sample

DTB = 1.741m @ 13:10:00 } ↳ NST

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BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: MS-LF-GW1	CAMERA #: 26	PHOTOS: 0334 - 0338
DATE: 28-Aug-2025	ARRIVAL TIME: 12:34	TECHS: LG JJ
WEATHER: 5°C, Sunny, Windy	WELL STATUS: 2 drive points, 1 w/ tubing stuck inside	

PURGING DATA

WELL DIAMETER (INCHES): 3/4"	DEPTH TO WATER (M): 0.922	DEPTH TO BOTTOM (M): 1.829
STICK UP/MAGS (M): 0.466	TIME OF DTW MEASUREMENT: 12:37:30	TIME OF DTB MEASUREMENT: 12:38:45

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO π r^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (0.000285) X [(1.829) - (0.922)] X 1000 = 0.258 Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME = 0.775 L → round to 0.260 per purge

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	PURGING WATER DRAWDOWN	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		±0.1M	1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN
12:54:22	12:56:26	Unknown	0.260	6.6	7.09	1014.0	3.67	30.0	37.80	Opaque, no odor
13:03:31	13:05:02	"	0.260	6.2	6.90	1644.0	2.91	23.6	18.15	slightly opaque, no odor
13:10:36	13:11:17	"	0.260	5.5	6.88	1790	2.42	19.3	6.73	clearer, no odor
13:14:59	13:15:59	"	0.260	5.0	6.90	1815	2.16	17.0	5.36	clear, no odor
13:19:12	13:19:57	"	0.260	5.7	6.92	1829	1.97	15.8	4.95	clear, no odor
13:26:27	13:27:08	"	0.260	5.2	6.94	1843	1.70	13.5	6.00	" "
13:30:00	13:31:12	"	0.260	4.9	6.96	1829	1.93	15.2	8.63	" "
13:34:03	13:35:04	"	0.260	4.6	6.97	1843	1.78	13.9	6.05	" "
13:39:49	13:40:43	"	0.260	4.1	6.97	1860	1.47	11.3	6.00	" "
13:43:08	13:43:45	"	0.260	3.6	6.98	1861	1.37	10.5	6.81	" "
13:46:41	13:47:39	"	0.260	3.6	6.99	1851	1.63	12.4	8.50	" "

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME:	SAMPLE DEPTH (M):	VISIBLE SHEEN?	WATER CLARITY:

FINAL YSI RESULTS → YSI Site = LF GW

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)

NOTES: 2 drivepoints → 1 w/ tubing stuck inside → larger drivepoint can be sampled.
Smaller flagged drivepoint measurements
mags = 0.102 m
DTW = 0.435 m
DTB = 1.829 m
* Dip tape cannot fit inside drivepoint well during sample.

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YSI log times:
Purge log 1 = 13:02
Purge log 2 = 13:09
Purge log 3 = 13:14
Purge log 4 = 13:18
Purge log 5 = 13:25
Purge log 6 = 13:29
Purge log 7 = 13:33
Purge log 8 = 13:38
Purge log 9 = 13:42
Purge log 10 = 13:45
Purge log 11 = 13:50

BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: MS-LF-GW1	CAMERA #: 26	PHOTOS: 0334-0338
DATE: 28-Aug-2025	ARRIVAL TIME: 12:34	TECHS: LG JJ
WEATHER: 5°C, Sunny, windy	WELL STATUS:	

PURGING DATA

WELL DIAMETER (INCHES):	DEPTH TO WATER (M):	DEPTH TO BOTTOM (M):
STICK UP/MAGS (M):	TIME OF DTW MEASUREMENT:	TIME OF DTB MEASUREMENT:

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO πr^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (CONVERSION VALUE) X [(DTB) - (DTW)] X 1000 = WELL VOLUME Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME =

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN
13:54:13	13:55:01	0.260	3.8	6.99	1851	1.48	11.3	7.95	clear, no odor

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 14:00	SAMPLE DEPTH (M): 1.500	VISIBLE SHEEN? N	WATER CLARITY: clear

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
13:56	3.12	3.8	6.99	1851	1.48	11.3	7.95	clear, no odor

NOTES: This page is a continuation of purging results.

Purge log 12 = 13:56

DTW post sample = 0.818m

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BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: MS-LF-GW2	CAMERA #: 26	PHOTOS: 0361 - 0367
DATE: 29-Aug-2025	ARRIVAL TIME: 09:00	TECHS: LG AG
WEATHER: -3°C, Windy, snowed last night	WELL STATUS: 1 Drivepoint good for sample	

PURGING DATA

WELL DIAMETER (INCHES): 3/4"	DEPTH TO WATER (M): 1.550	DEPTH TO BOTTOM (M): 1.750
STICK UP/MAGS (M): 0.679	TIME OF DTW MEASUREMENT: 9:05:15	TIME OF DTB MEASUREMENT: 9:11:00

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO πr^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (0.000285) X [(1.750) - (1.550)] X 1000 = 0.057 Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME = 0.171L → round to 0.060L per purge

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN
9:28:50	9:30:59	0.200	2.1	7.08	540	5.57	39.8	27.86	slightly opaque
9:34:48	9:35:09	0.06	2.0	6.96	571	4.84	35.0	23.18	" "
9:38:55	9:39:35	0.06	1.3	6.89	627	3.75	26.5	14.63	clear, no odor
9:42:45	9:42:59	0.06	1.1	6.88	657	3.37	23.8	12.55	" "
9:48:10	9:48:39	0.06	1.1	6.84	683	3.25	23.0	9.33	" "
9:51:21	9:51:42	0.06	0.9	6.84	701	3.31	23.5	11.44	" "

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 9:55	SAMPLE DEPTH (M): 1.540	VISIBLE SHEEN? N	WATER CLARITY: clear

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
9:52	0.5	0.9	6.84	701	3.31	23.3	11.44	clear, no odor

NOTES: 3 drivepoints in 1m radius → only 1 could be sampled

* Due to low water column, first purge needed to be 200mL for YSI reading *

Mags	DTW	DTB	
0.561	~~1.758~~	1.758	= Angled drivepoint (DRY)
0.399	1.814	1.993	= Tubing stuck inside

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YSI log times:
Purge log 1 = 9:33
Purge log 2 = 9:38
Purge log 3 = 9:41
Purge log 4 = 9:44
Purge log 5 = 9:50
Purge log 6 = 9:52

could not measure drawdown in drivepoint
↳ hydraulic head was maintained throughout purging & sample collection
DTW post sample = 1.545m

BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: MS-LF-GW3	CAMERA #: 26	PHOTOS: 0309 - 0315
DATE: 27-Aug-2025	ARRIVAL TIME: 13:45	TECHS: LG JJ
WEATHER: -1°C, rain/snow, windy	WELL STATUS: 3 wells in 5m radius 2 w/ waterra stuck inside	

PURGING DATA

WELL DIAMETER (INCHES): 3/4"	DEPTH TO WATER (M): 1.290	DEPTH TO BOTTOM (M): 1.749
STICK UP/MAGS (M): 0828	TIME OF DTW MEASUREMENT: 13:51	TIME OF DTB MEASUREMENT: 13:52

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO πr^2	(3/4) DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (0.000285) X [(1.749) - (1.290)] X 1000 = 0.131 Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME = 0.392 L → round to 0.400L

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN
14:05:56	14:07:45	0.133	1.9	7.12	562	2.81	20.2	195.50	opaque, yellowish
14:11:22	14:11:42	0.133	2.0	7.16	565	2.33	16.9	141.70	opaque, yellowish no odor
14:15:30	14:15:48	0.133	2.0	7.18	568	2.22	16.1	97.46	" " "
14:20:17	14:20:37	0.133	2.1	7.19	568	2.20	16.0	75.47	" " "
14:27:50	14:28:15	0.133	2.2	7.19	568	2.26	16.5	75.95	" " "

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 14:35	SAMPLE DEPTH (M): 1.600	VISIBLE SHEEN? N	WATER CLARITY:

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
14:30	0.665	2.2	7.19	568	2.26	16.5	75.75	opaque, yellowish

NOTES: 3 drivepoints in area. Only 1 could be sampled due to tubing stuck in other 2 wells

YSI log times:

Purge log 1 = 14:10
Purge log 2 = 14:14
Purge log 3 = 14:19
Purge log 4 = 14:26
Purge log 5 = 14:30

DTW post sample = 1.288m @ 14:51:00

Other well measurements
mags = 0.605 & 0.130
DTW = 1.512m & 1.026
DTB = 1.827m & 1.740

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BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: MS-LF-GW4	CAMERA #: 26	PHOTOS: 0376 - 0379, 0383 - 0385
DATE: 29-Aug-2025	ARRIVAL TIME: 12:23	TECHS: LG AG
WEATHER: -5°C, windy, partly cloudy	WELL STATUS: 2 drivepoints 5m from PVC pipe	

PURGING DATA

WELL DIAMETER (INCHES): 3/4"	DEPTH TO WATER (M):	DEPTH TO BOTTOM (M):
STICK UP/MAGS (M):	TIME OF DTW MEASUREMENT:	TIME OF DTB MEASUREMENT:

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO π r^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = ( ) X [( ) - ( )] X 1000 = Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME =

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	PURGING WATER DRAWDOWN	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		±0.1M	1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 12:25	SAMPLE DEPTH (M): N/A	VISIBLE SHEEN? N/A	WATER CLARITY: N/A

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)

NOTES: 2 drivepoints w/ waterra tubing stuck inside. & 1 black pvc pipe with a bucket on top
No sample could be collected.
Drive point measurements:

Mags	DTW	DTB
0.539	1.599	1.739
0.421	DRY	1.737

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BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: MS-LF-GW5	CAMERA #: 26	PHOTOS: 0386-0395
DATE: 29-Aug-2025	ARRIVAL TIME: 12:05	TECHS: LG AG
WEATHER: -5°C, windy, partly cloudy	WELL STATUS: 2 drivepoints 2m from PVC both DRY	

PURGING DATA

WELL DIAMETER (INCHES): 3/4"	DEPTH TO WATER (M):	DEPTH TO BOTTOM (M):
STICK UP/MAGS (M):	TIME OF DTW MEASUREMENT:	TIME OF DTB MEASUREMENT:

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO πr^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = ( ) X [( ) - ( )] X 1000 = Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME =

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 12:05	SAMPLE DEPTH (M): N/A	VISIBLE SHEEN? N/A	WATER CLARITY: N/A

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)

NOTES: 2 drivepoints w/ Waterra tubing stuck inside & 1 black PVC pipe w/ a bucket on top. No sample could be collected.

Drivepoint Measurements:

Mags	DTW	DTB
0.620	DRY	1.741
0.329	DRY	1.734

Both Drivepoints are Dry or Frozen.

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BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: MS-LF-GW-25-02	CAMERA #: 26	PHOTOS: 0368 - 0370
DATE: 29-Aug-2025	ARRIVAL TIME: 10:20	TECHS: LG AG
WEATHER: -4°C, windy, snowing	WELL STATUS: Dry / frozen?	

PURGING DATA

WELL DIAMETER (INCHES):	DEPTH TO WATER (M):	DEPTH TO BOTTOM (M): 4.636
STICK UP/MAGS (M): 1.410	TIME OF DTW MEASUREMENT: N/A	TIME OF DTB MEASUREMENT: 10:25

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO πr^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = ( ) X [( ) - ( )] X 1000 = Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME =

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 10:25	SAMPLE DEPTH (M):	VISIBLE SHEEN?	WATER CLARITY:

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)

NOTES: Well is dry or frozen. NST

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BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: MS-LF-GW-REF 1	CAMERA #: 26	PHOTOS:
DATE: 28-Aug-2025	ARRIVAL TIME: ~~07:37~~ 10:30	TECHS: LG JJ
WEATHER: 1°C, Partly cloudy, Sunny, Windy	WELL STATUS: Tubing stuck inside drivepoint	

PURGING DATA

WELL DIAMETER (INCHES): 3/4"	DEPTH TO WATER (M): 0.098	DEPTH TO BOTTOM (M): 0.910
STICK UP/MAGS (M): 0.110	TIME OF DTW MEASUREMENT: 10:30:30	TIME OF DTB MEASUREMENT: 10:33:00

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO πr^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = ( ) X [( ) - ( )] X 1000 = Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME =

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 10:30	SAMPLE DEPTH (M): N/A	VISIBLE SHEEN? N	WATER CLARITY: N/A

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)

NOTES: Waterra tubing stuck inside drivepoint. No sample could be collected.

Dip tape used over past 3 days no longer working.
↳ switched to different tape

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BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: LF-KP22-03	CAMERA #: 26	PHOTOS: 0323-0326
DATE: 27-Aug-2025	ARRIVAL TIME: 15:15	TECHS: LG JJ
WEATHER: 1°C, windy, rain & snow	WELL STATUS: Good condition	

PURGING DATA

WELL DIAMETER (INCHES): 2"	DEPTH TO WATER (M): 1.848	DEPTH TO BOTTOM (M): 2.934
STICK UP/MAGS (M): 1.072	TIME OF DTW MEASUREMENT: 15:21:40	TIME OF DTB MEASUREMENT: 15:22:15

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO πr^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	(2") DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (0.002027) X [(2.934) - (1.848)] X 1000 = 2.22 Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME = 6.66L rounded to 6.75L

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN
15:35:30	15:39:25	2.25L	1.3	7.09	652.0	5.29	37.7	7.81	clear-ish, no odor
15:42:10	15:45:21	2.25L	1.2	7.12	651.0	4.84	34.3	8.93	clear, no odor
15:47:27	15:51:29	2.25L	1.3	7.13	650.0	4.56	32.4	2.01	" "
15:54:25	15:59:00	2.25L	1.2	7.14	650.0	4.19	29.7	1.89	" "
16:00:50	16:05:05	2.25L	1.2	7.14	648.0	4.11	29.2	1.80	" "

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME: 16:10	SAMPLE DEPTH (M): 2.650	VISIBLE SHEEN? N	WATER CLARITY: clear

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
16:05	11.25	1.2	7.14	648	4.11	29.2	1.80	clear, no odor

NOTES: Some sediment noticed during initial purge.

Purge log 1 = 15:41

Purge log 2 = 15:46 DTW after sample = 1.848

Purge log 3 = 15:52

Purge log 4 = 15:59

Purge log 5 = 16:05

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APPENDIX D-2

Well Development Fieldsheets

BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: MS-HWB-25-01	CAMERA #: 33	PHOTOS: 344 - 46
DATE: 29-Aug-2025	ARRIVAL TIME: 1420	TECHS: JJ EF
WEATHER: 2 Wind Snow	WELL STATUS: Active	

PURGING DATA

WELL DIAMETER (INCHES): 2	DEPTH TO WATER (M): 2.747	DEPTH TO BOTTOM (M): 3.272
STICK UP/MAGS (M): 1.329	TIME OF DTW MEASUREMENT: 1422	TIME OF DTB MEASUREMENT: 1423

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO π r^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (0.002027) X [(2.747) - (~~3.272~~ 3.272)] X 1000 = 1.06 Litres

MULTIPLY ABOVE ANSWER BY ~~3~~ 10 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME = 10 + 1.06 = 10.60

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN
14:50:42	14:53:18	1L	1.4	7.9	396.4	5.98	42.2	18.25	clear 347/348
14:56:57	14:58:53	1	1.4	7.83	393.0	4.61	32.7	9.27	clear 349/350
15:02:48	15:04:26	1	0.8	7.8	393.8	3.15	22.0	4.23	clear 351/352
15:07:44	15:09:25	1	0.8	7.79	395.0	2.82	19.8	4.22	clear 353/354
15:12:27	15:14:14	1	0.7	7.78	395.8	2.58	18.1	3.71	clear 355/356
15:17:05	15:18:39	1	0.7	7.77	395.5	2.34	16.3	3.43	clear 357/358
15:23:15	15:25:16	1	0.8	7.77	397.6	2.65	18.6	2.55	clear 359/360
15:28:19	15:29:41	1	0.8	7.77	396.5	2.57	17.9	2.95	clear 361/362
15:33:36	15:34:40	1	0.8	7.77	397.1	2.14	14.9	2.64	clear 363/364
15:38:31	15:39:15	1	0.7	7.76	398.0	1.39	9.7	3.81	clear 365/366

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME:	SAMPLE DEPTH (M):	VISIBLE SHEEN?	WATER CLARITY:

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)

NOTES: Log times 1 - 14:55
2 - 15:02
3 - 15:06
4 - 15:11 → *dropped pump line 10cm deeper (4)
5 - 15:15
6 - 15:22 *dropped another 10cm
7 - 15:26
8 - 15:32
9 - 15:37
10 - 15:43 *added 15, hit bottom

DTW (m) = 2.755 @ 15:47

End

Baffinland

New well Development

BAFFINLAND GROUNDWATER SAMPLING FIELD SHEET

WELL/SAMPLE ID: MS-HWB-25-03	CAMERA #: 33	PHOTOS: 0315 - 319
DATE: Aug 27 2025	ARRIVAL TIME: 1050	TECHS: JT
WEATHER: 2 Wind	WELL STATUS: Active	

PURGING DATA

WELL DIAMETER (INCHES): 2	DEPTH TO WATER (M): 2.309	DEPTH TO BOTTOM (M): 3.475
STICK UP/MAGS (M): 1.305	TIME OF DTW MEASUREMENT: 1055	TIME OF DTB MEASUREMENT: 1055

WELL DIAMETER QUICK CONVERSION

CONVERTS WELL DIAMETER TO π r^2	3/4" DIAMETER PIEZOMETER	1" DIAMETER PVC	2" DIAMETER PVC
	0.000285 meters	0.000507 meters	0.002027 meters

SINGLE WELL VOLUME FORMULA (USE CONVERSION VALUE IN EQUATION)

1 WELL VOLUME = (0.002027) X [(3.479 - (2.309)] X 1000 = 2.363 Litres

MULTIPLY ABOVE ANSWER BY 3 TO GET MINIMUM REQUIRED PURGING VOLUME

MINIMUM REQUIRED PURGING VOLUME = 10 x 2.363

YSI FIELD PARAMETERS:

PURGING START TIME	PURGING END TIME	VOLUME PURGED (litres)	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
<500ML / MINUTE		1 WELL VOL	±0.2°C	±0.1	±3%	±0.2 mg/L or ±10% (whichever is greater)		±10%	OPAQUE, CLEAR, SHEEN
11:25:51	11:1042	2.360	1.0	8.23	338	10.41	73.1	4.91	clear 320
~~10:42~~ 11:15	11:21:51	2.360	0.6	8.25	340.2	9.62	66.8	1.96	clear 321 - 323
11:25:00	11:30:05	2.360	0.7	8.25	340.5	9.18	63.9	1.38	clear 323 325
11:32:30	11:37:40	2.360	0.8	8.27	339.5	9.78	68.3	2.72	clear 326 327
11:40:30	11:46:06	2.360	0.6	8.27	340.2	9.06	62.8	1.53	clear 328 329
11:49:40	11:54:45	2.360	0.9	8.27	339.4	9.09	63.2	1.36	clear 330 331
11:56:20	12:02:30	2.360	1.0	8.26	337.8	8.92	62.7	1.38	clear 332 333
12:04:32	12:10:13	2.360	0.9	8.25	339.0	8.90	62.3	1.54	clear 334 335
12:11:30	12:16:31	2.360	0.5	8.25	338.6	8.65	59.8	1.73	clear 336 337
12:17:50	12:24:26	2.360	0.7	8.26	335.6	9.16	63.7	1.23	clear 338 339

SAMPLING DATA (INPUT THESE INTO EQUIS)

SAMPLE TIME:	SAMPLE DEPTH (M):	VISIBLE SHEEN?	WATER CLARITY:

FINAL YSI RESULTS

LOG TIME	TOTAL VOLUME PURGED	TEMP (°C)	pH	SPC (µS/cm)	DO (mg/L)	DO (%)	TURBIDITY (NTU)	COLOUR or ODOR (describe)
	23.6							

NOTES: After pumping ATW = 2.315

No drawdown concerns

Started Pumping 30cm from Bottom of well
Moved 15cm down after 5th purge
Moved 15cm/hit bottom after 8th purge

Baffinland

Logger 11:14 11:39 1203 1224 2.17
11:24 11:47 1210
1131 1155 1216

3.27 - 1.22 = 2.05

APPENDIX D-3

Slug Test Fieldsheets

BAFFINLAND SLUG TESTING FIELD SHEET

WELL/SAMPLE ID: MS-HWB-KP22-03	CAMERA #: 26	PHOTOS: 0583 - 0586
DATE: 05-Sep-25	ARRIVAL TIME: 10:30:00	TECHS: JJ & AG
WEATHER: light breeze, partly cloudy, -2°C	WELL STATUS: Good Condition	
WELL DIAMETER (INCHES): 2	DEPTH TO WATER (M): 1.574	DEPTH TO BOTTOM (M): 2.619
STICK UP/MAGS (M): 1.156	TIME OF DTW MEASUREMENT: 10:35:01	TIME OF DTB MEASUREMENT: 10:35:40

DATALOGGER INFORMATION

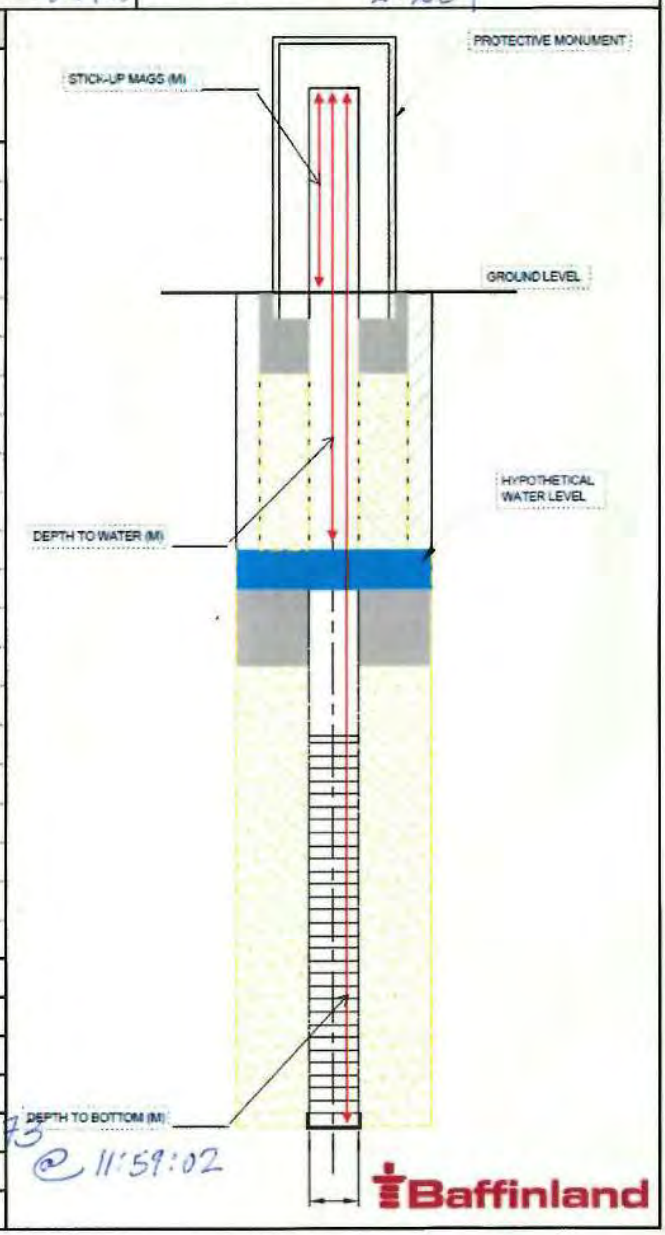
LOGGER SAMPLING RATE (SECONDS): 0.125	TARGET LOGGER DEPTH: 2.519	DTW AFTER LOGGER ADDED: 11:06:40	TIME OF DTW: [redacted] 1.570
LOGGER SERIAL NUMBER: 002-220461		DATA SAVED AND DELETED FROM LOGGER POST SAMPLE? X	
BAROLOGGER START TIME: 1059 11		LEVELOGGER START TIME: 11:02:05	

SLUG INFORMATION

SLUG TYPE: (SOLID ONLY) Solid	SLUG LENGTH: 0.42 m	SLUG DIAMETER: 0.04m	TARGET SLUG DEPTH: 2.259

FALLING HEAD AND RISING HEAD TEST

TEST TYPE (RISING OR FALLING)	SLUG INSERTION TIME	ELAPSED TIME	WATER DEPTH (M TO TOP)
Rising 1	11:09:40		1.458
		11:12:35	1.574
		11:14:57	1.572
		11:17:43	1.572
Falling 1	11:19:56		1.674
		11:22:26	1.575
		11:24:42	1.574
Rising 2	11:25:52		1.476
		11:28:25	1.573
		11:31:17	1.573
Falling 2	11:31:47		1.673
		11:33:46	1.575
		11:36:14	1.573
Rising 3	11:37:06		1.465
		11:39:07	1.572
		11:41:56	1.573
Falling 3	11:43:17		1.663
		11:45:21	1.574
		11:47:22	1.575



NOTES:

End of test time: 11:48:10 DTW = 1.573

Logger Insertion Time: 11:03:40 @ 11:59:02

Baffinland

BAFFINLAND SLUG TESTING FIELD SHEET

WELL/SAMPLE ID: HWB-KP22-05	CAMERA #: 27	PHOTOS: 624-625
DATE: 2025 09 02	ARRIVAL TIME: 1455	TECHS: LG JJ ET
WEATHER: 0°c light winds	WELL STATUS: Active	
WELL DIAMETER (INCHES): 2"	DEPTH TO WATER (M): 1.621	DEPTH TO BOTTOM (M): 2.544
STICK UP/MAGS (M): 0.962	TIME OF DTW MEASUREMENT: 14:58:38	TIME OF DTB MEASUREMENT: 14:59:15

DATALOGGER INFORMATION

LOGGER SAMPLING RATE (SECONDS): 0.125	TARGET LOGGER DEPTH: 2.544	DTW AFTER LOGGER ADDED: 1.616	TIME OF DTW: 15:18:15
LOGGER SERIAL NUMBER: 002-2204461		DATA SAVED AND DELETED FROM LOGGER POST SAMPLE?	
BAROLOGGER START TIME: 15:09:43		LEVELOGGER START TIME: 15:11:55	

SLUG INFORMATION

SLUG TYPE: (SOLID ONLY)	SLUG LENGTH: 0.420	SLUG DIAMETER: 0.04	TARGET SLUG DEPTH: 2.384

FALLING HEAD AND RISING HEAD TEST

TEST TYPE (RISING OR FALLING)	SLUG INSERTION TIME	ELAPSED TIME	WATER DEPTH (M TO TOP)
falling 1	15:20:40	—	1.510
		15:22:35	1.615
		15:24:20	1.617
		15:27:06	1.617
Rising 1	15:31:10	"	1.690
		15:33:35	1.619
		15:36:11	1.617
		15:38:42	1.616
Falling 2	15:39:25		1.475
		15:42:04	1.616
		15:44:14	1.610
		15:46:45	1.610
Rising 2	15:49:26		1.672
		15:50:46	1.622
		15:52:16	1.615
		15:54:21	1.615
Falling 3	15:56:40		1.519
		15:58:59	1.612
		16:00:56	1.616
		16:02:54	1.616

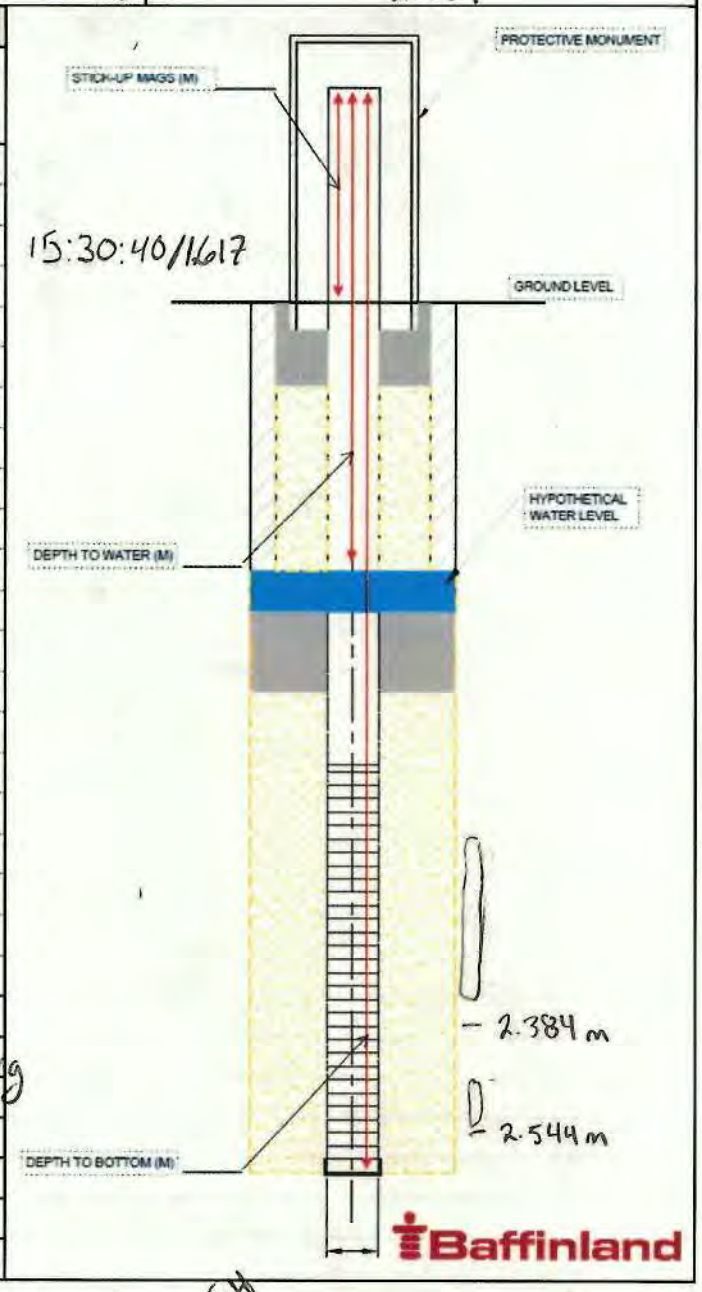
Rising 3 = Next Page

NOTES:

Attached ice @ water surface, Tape measure catching

Test end time: 16:13:05

Post DTW 1.617



95% 1.54
1.702

BAFFINLAND SLUG TESTING FIELD SHEET

WELL/SAMPLE ID: HWB-KP22-05	CAMERA #:	PHOTOS:
DATE:	ARRIVAL TIME:	TECHS:
WEATHER:	WELL STATUS:	
WELL DIAMETER (INCHES):	DEPTH TO WATER (M):	DEPTH TO BOTTOM (M):
STICK UP/MAGS (M):	TIME OF DTW MEASUREMENT:	TIME OF DTB MEASUREMENT:

DATALOGGER INFORMATION

LOGGER SAMPLING RATE (SECONDS):	TARGET LOGGER DEPTH:	DTW AFTER LOGGER ADDED:	TIME OF DTW:
LOGGER SERIAL NUMBER:	DATA SAVED AND DELETED FROM LOGGER POST SAMPLE?		
BAROLOGGER START TIME:	LEVELOGGER START TIME:		

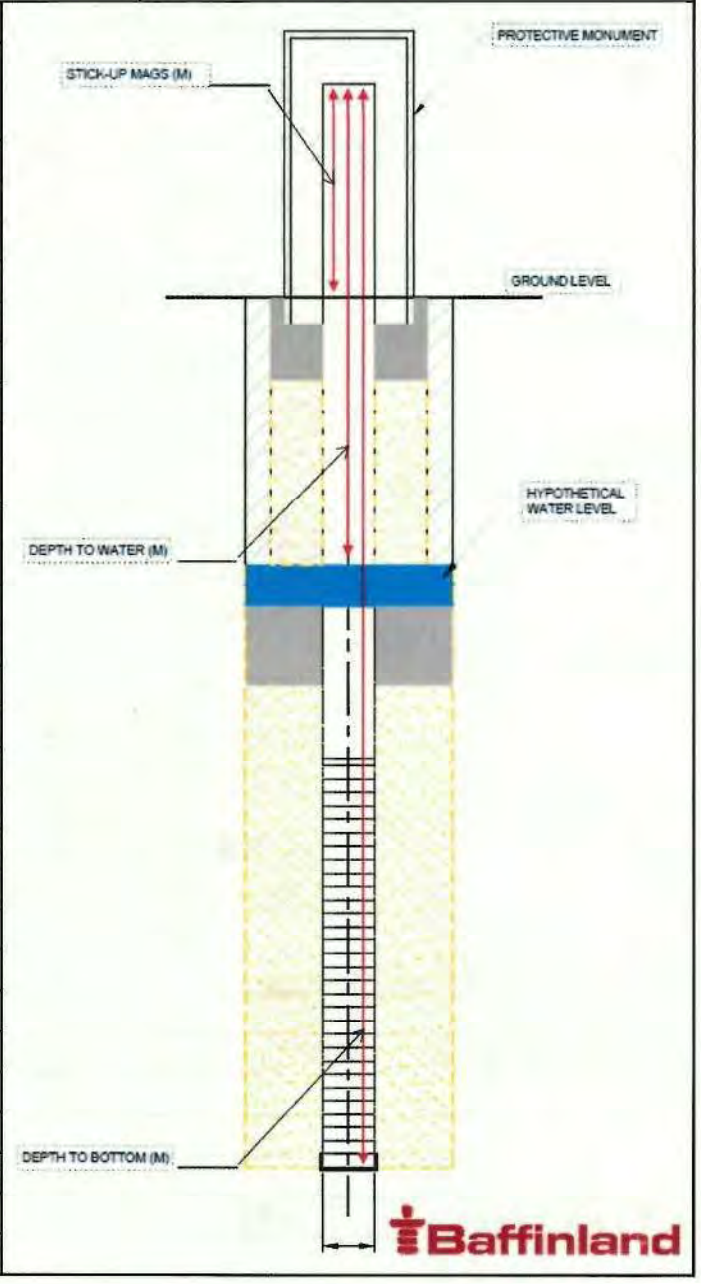
SLUG INFORMATION

SLUG TYPE: (SOLID ONLY)	SLUG LENGTH:	SLUG DIAMETER:	TARGET SLUG DEPTH:

FALLING HEAD AND RISING HEAD TEST

TEST TYPE (RISING OR FALLING)	SLUG INSERTION TIME	ELAPSED TIME	WATER DEPTH (M TO TOP)
Rising 3	16:05:20		1.640
	16:07:30	160730	1.609
		1609:35	1.609
		1611:38	1.612
Test End Time		16:13:05	

NOTES:



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BAFFINLAND SLUG TESTING FIELD SHEET

WELL/SAMPLE ID: HWB - KP22-06	CAMERA #: 2C	PHOTOS: 577 - 579
DATE: -3 Light Snow	ARRIVAL TIME: 1100	TECHS: JJ ET
WEATHER: 2025 - Sept - 04	WELL STATUS: Active	
WELL DIAMETER (INCHES): 2	DEPTH TO WATER (M): 1.942	DEPTH TO BOTTOM (M): 2.722
STICK UP/MAGS (M):	TIME OF DTW MEASUREMENT: 11:21:05	TIME OF DTB MEASUREMENT: 11:19:25

DATALOGGER INFORMATION

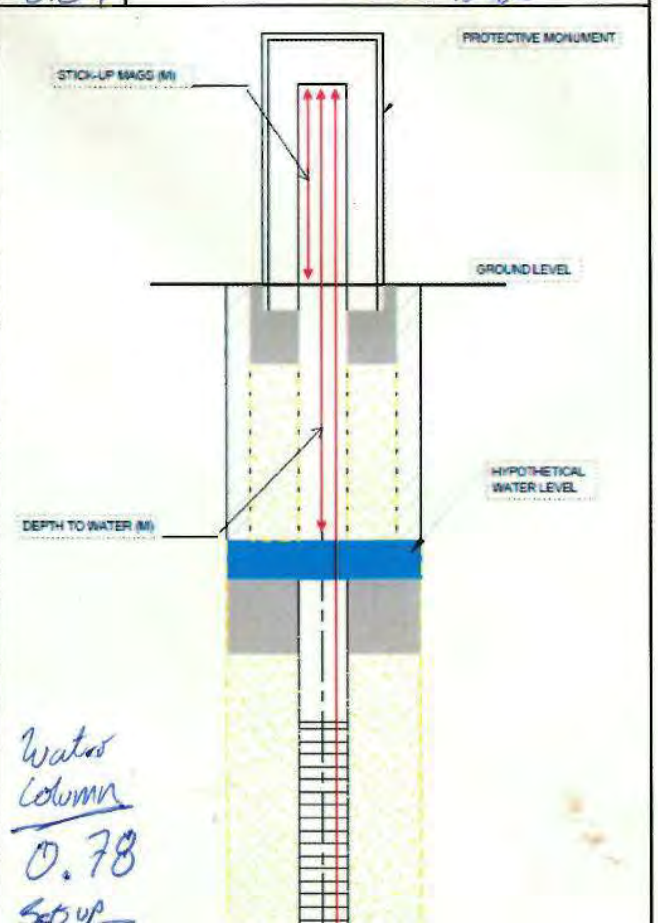
LOGGER SAMPLING RATE (SECONDS): 0.125	TARGET LOGGER DEPTH: 2.642	DTW AFTER LOGGER ADDED: 1.942	TIME OF DTW: 1146:13
LOGGER SERIAL NUMBER: 002 - 220446	DATA SAVED AND DELETED FROM LOGGER POST SAMPLE? yes		
BAROLOGGER START TIME: 1135:19	LEVELOGGER START TIME: 1137:02		

SLUG INFORMATION

SLUG TYPE: Solid	SLUG LENGTH: 0.42	SLUG DIAMETER: 0.04	TARGET SLUG DEPTH: 2.422

FALLING HEAD AND RISING HEAD TEST

TEST TYPE (RISING OR FALLING)	SLUG INSERTION TIME	ELAPSED TIME	WATER DEPTH (M TO TOP)
Rising 1	1150:20		1.856
		11:52:22	1.941
		1154:25	1.941
		1156:18	1.941
Falling 1	1157:20		1.955
		1159:10	1.942
		1201:04	1.941
Rising 2	1202:50		1.884
		1205:10	1.940
		1207:14	1.941
Falling 2	1209:25		1.962
		1211:11	1.941
		1213:26	1.941
Rising 3	1214:40		1.873
		1216:54	1.941
		1218:24	1.941
Falling 3	1220:15		1.974
		1222:21	1.941
		1224:06	1.941
		1226:08	1.941



Water Column
0.78

BAFFINLAND SLUG TESTING FIELD SHEET

WELL/SAMPLE ID: HWB-KP23-02	CAMERA #: 26	PHOTOS: 0580 - 0582	
DATE: 05-Sep-25	ARRIVAL TIME: 08:45:00	TECHS: JJ + AG	
WEATHER: Flurries, Overcast, -2°C	WELL STATUS: Good Condition		
WELL DIAMETER (INCHES): 1	DEPTH TO WATER (M): 1.762	DEPTH TO BOTTOM (M): 2.632	
STICK UP/MAGS (M): 1.584 / 1.154	TIME OF DTW MEASUREMENT: 08:50:05	TIME OF DTB MEASUREMENT: 08:50:55	

DATALOGGER INFORMATION

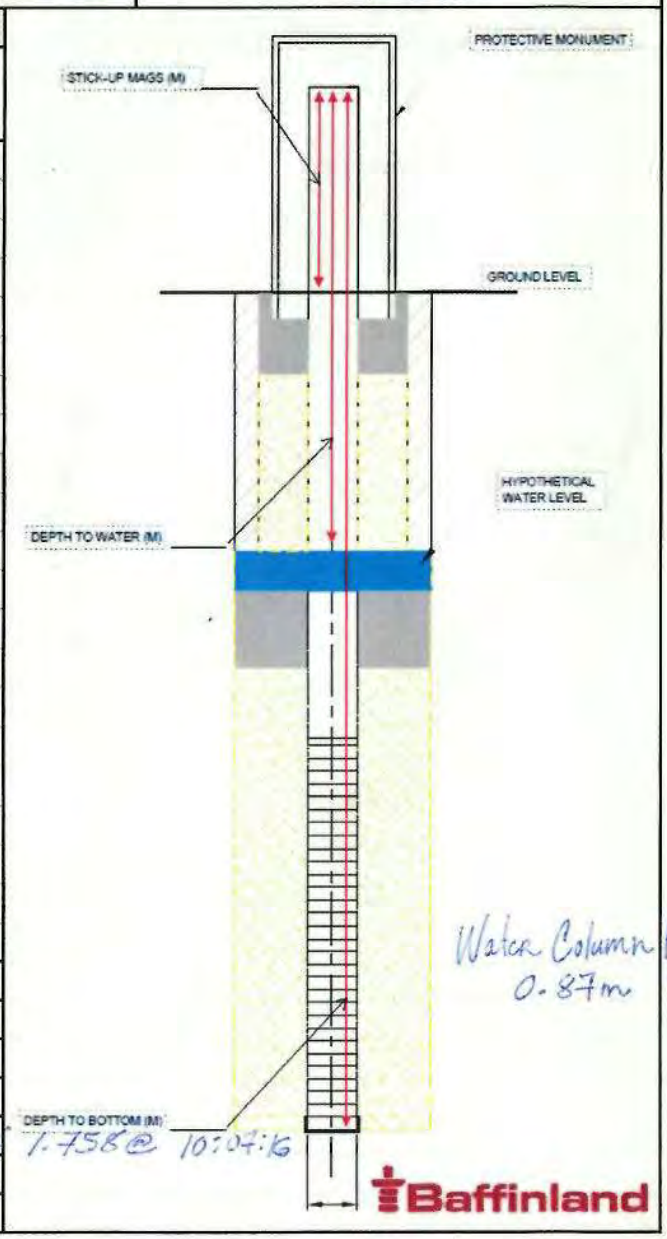
LOGGER SAMPLING RATE (SECONDS): 0.125	TARGET LOGGER DEPTH: 2.532	DTW AFTER LOGGER ADDED: 1.759	TIME OF DTW: 09:23:20
LOGGER SERIAL NUMBER: 002 - 220446	DATA SAVED AND DELETED FROM LOGGER POST SAMPLE? Y		
BAROLOGGER START TIME: 0917:54	LEVELOGGER START TIME: 09:19:24		

SLUG INFORMATION

SLUG TYPE: (SOLID ONLY) Solid	SLUG LENGTH: 0.31 m	SLUG DIAMETER: 0.02 m	TARGET SLUG DEPTH: 2.272

FALLING HEAD AND RISING HEAD TEST

TEST TYPE (RISING OR FALLING)	SLUG INSERTION TIME	ELAPSED TIME	WATER DEPTH (M TO TOP)
[illegible] 1	09:25:15		1.720
Rising 1		09:27:37	1.758
		09:29:42	1.758
[illegible] 1	09:30:25		1.834
Falling 1		09:32:32	1.758
		09:34:42	1.758
Rising 2	09:40:03		1.685
		09:42:23	1.756
		09:44:45	1.759
Falling 2	09:45:59		1.818
		09:49:10	1.758
		09:51:03	1.759
Rising 3	09:52:03		1.672
		09:54:04	1.758
		09:56:34	1.758
Falling 3	09:57:29		1.829
		09:59:58	1.759
		10:01:47	1.759



Water Column Height 0.87m

NOTES:

End of test time: 10:04:45 & DTW of 1.758 @ 10:04:16

Time of logger insertion: 09:20:35

Baffinland

BAFFINLAND SLUG TESTING FIELD SHEET

WELL/SAMPLE ID: LF-KP22-05	CAMERA #: 26	PHOTOS: 0556-0558
DATE: 03-Sep-25	ARRIVAL TIME: 13:40	TECHS: JJ + AG
WEATHER: Overcast, light breeze 0°C	WELL STATUS: PVC pipe too full (can't close the monument lid)	
WELL DIAMETER (INCHES): 2"	DEPTH TO WATER (M): 1.814	DEPTH TO BOTTOM (M): 2.216
STICK UP/MAGS (M): 1.172	TIME OF DTW MEASUREMENT: 13:45:46	TIME OF DTB MEASUREMENT: 13:46:50

DATALOGGER INFORMATION

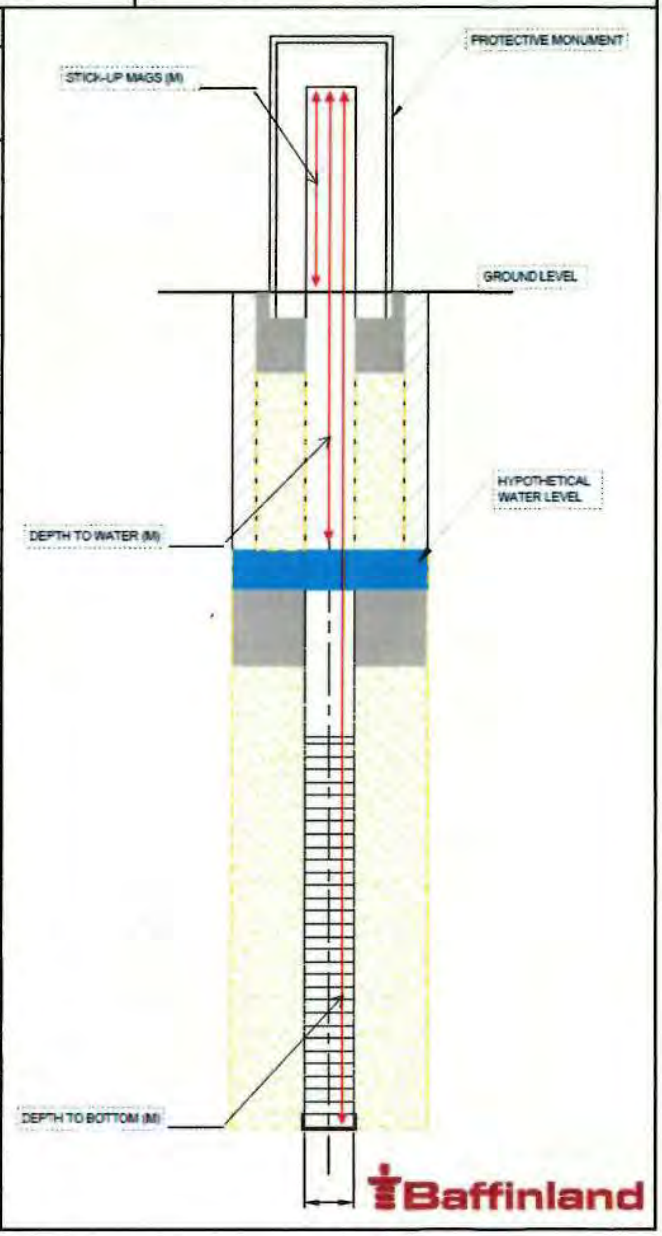
LOGGER SAMPLING RATE (SECONDS):	TARGET LOGGER DEPTH:	DTW AFTER LOGGER ADDED:	TIME OF DTW:
LOGGER SERIAL NUMBER:		DATA SAVED AND DELETED FROM LOGGER POST SAMPLE?	
BAROLOGGER START TIME:		LEVELOGGER START TIME:	

SLUG INFORMATION

SLUG TYPE: (SOLID ONLY)	SLUG LENGTH:	SLUG DIAMETER:	TARGET SLUG DEPTH:

FALLING HEAD AND RISING HEAD TEST

TEST TYPE (RISING OR FALLING)	SLUG INSERTION TIME	ELAPSED TIME	WATER DEPTH (M TO TOP)



NOTES:

- Unable to perform slug test due to short water column. (only ~ 40 cm)

BAFFINLAND SLUG TESTING FIELD SHEET

WELL/SAMPLE ID: LF-KP23-04	CAMERA #: 26	PHOTOS: 0551 - 0555
DATE: 03-Sep-25	ARRIVAL TIME: 11:10	TECHS: JJ & AG
WEATHER: Overcast, light breeze, 1°C	WELL STATUS: Good Condition	
WELL DIAMETER (INCHES): 7"	DEPTH TO WATER (M): 1.595	DEPTH TO BOTTOM (M): 2.439
STICK UP/MAGS (M): 1.129	TIME OF DTW MEASUREMENT: 11:15:43	TIME OF DTB MEASUREMENT: 11:16:05

DATALOGGER INFORMATION

LOGGER SAMPLING RATE (SECONDS): 0.125	TARGET LOGGER DEPTH: 2.339	DTW AFTER LOGGER ADDED: 1.593	TIME OF DTW: 11:58:36
LOGGER SERIAL NUMBER: 002-2204461		DATA SAVED AND DELETED FROM LOGGER POST SAMPLE? Y	
BAROLOGGER START TIME: 11:49:54		LEVELOGGER START TIME: 11:52:43	

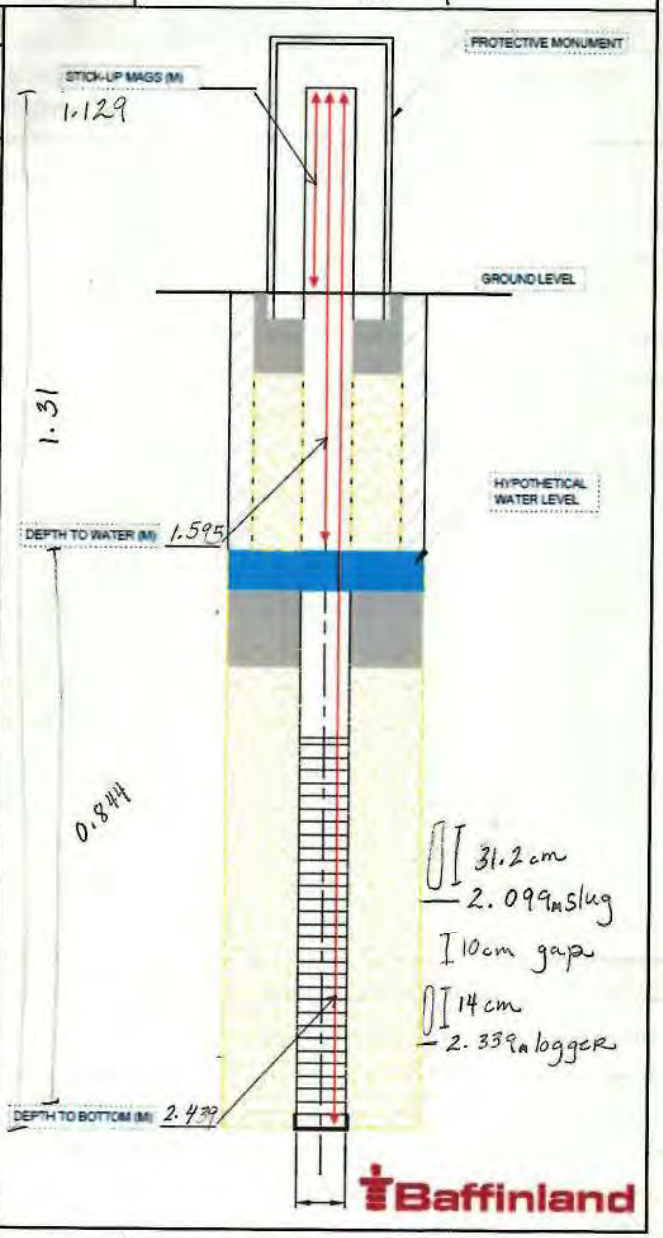
SLUG INFORMATION

SLUG TYPE: (SOLID ONLY) Solid	SLUG LENGTH: 0.312 m	SLUG DIAMETER: 0.10 m	TARGET SLUG DEPTH: 2.099

FALLING HEAD AND RISING HEAD TEST

TEST TYPE (RISING OR FALLING)	SLUG INSERTION TIME	ELAPSED TIME	WATER DEPTH (M TO TOP)
Falling 1	12:01:05		1.528
		12:03:10	1.589
		12:05:10	1.593
		12:07:10	1.593
Rising 1	12:08:52		1.666
		12:10:58	1.595
		12:13:01	1.593
Falling 2	12:14:05		1.527
		12:16:03	1.589
		12:18:01	1.592
		12:20:03	1.593
Rising 2	12:20:55		1.660
		12:22:58	1.595
		12:24:59	1.593
Falling 3	12:26:12		1.515
		12:28:30	1.587
		12:31:26	1.590
		12:34:10	1.593
Rising 3	12:34:46		1.665
		12:36:56	1.595
		12:39:10	1.593

NOTES:



- Data logger insertion @ 11:54:51
- Possible slush on top of well water column
- Inserting/pulling logger feels icy & slushy
- End of test time: 12:40:18

DTW was 1.594 @ end of test

BAFFINLAND SLUG TESTING FIELD SHEET

WELL/SAMPLE ID: LF-KP23-06	CAMERA #: 26	PHOTOS: 0595 - 0597
DATE: 05-Sep-25	ARRIVAL TIME: 15:42:00	TECHS: JJ & AG
WEATHER: Windy, Overcast, -2°C	WELL STATUS: Good Condition	
WELL DIAMETER (INCHES): 1	DEPTH TO WATER (M): 1.555	DEPTH TO BOTTOM (M): 2.290
STICK UP/MAGS (M): 0.926	TIME OF DTW MEASUREMENT: 15:44:52	TIME OF DTB MEASUREMENT: 15:45:23

DATALOGGER INFORMATION

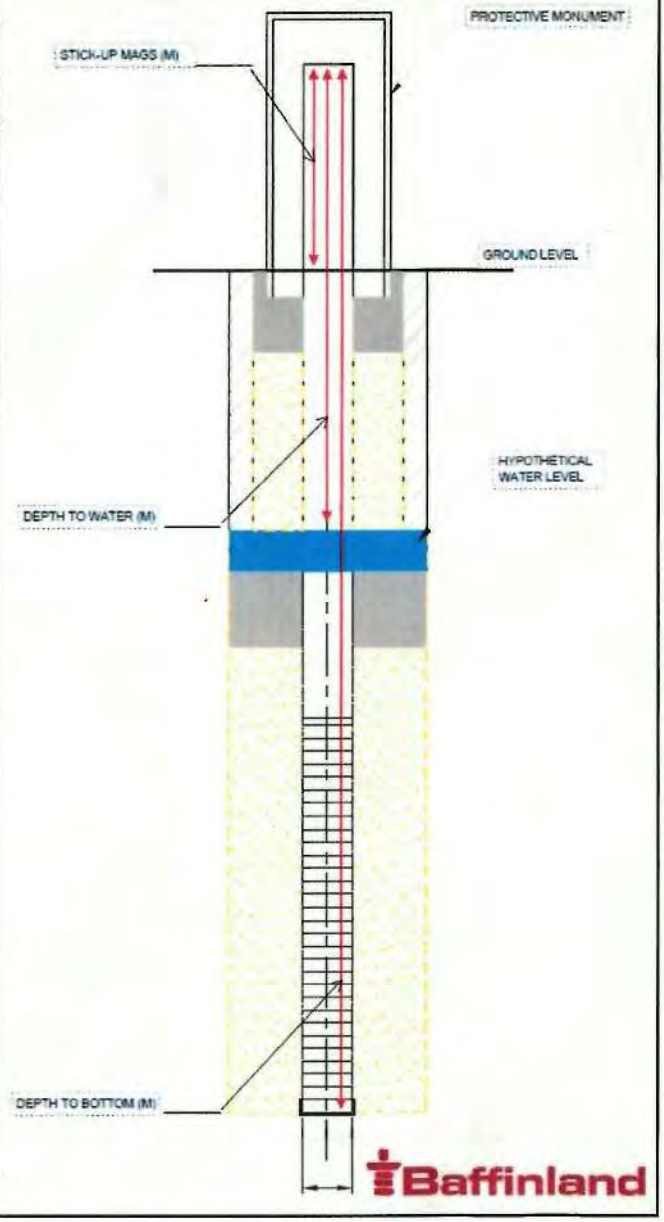
LOGGER SAMPLING RATE (SECONDS): 0.125	TARGET LOGGER DEPTH: 2.190	DTW AFTER LOGGER ADDED: 1.555	TIME OF DTW: 16:06:48
LOGGER SERIAL NUMBER: 002-220GG41		DATA SAVED AND DELETED FROM LOGGER POST SAMPLE? X	
BAROLOGGER START TIME: 16:00:40		LEVELOGGER START TIME: 16:02:45	

SLUG INFORMATION

SLUG TYPE: (SOLID ONLY) Solid	SLUG LENGTH: 0.312	SLUG DIAMETER: 0.02	TARGET SLUG DEPTH: 1.193

FALLING HEAD AND RISING HEAD TEST

TEST TYPE (RISING OR FALLING)	SLUG INSERTION TIME	ELAPSED TIME	WATER DEPTH (M TO TOP)
Rising 1	16:08:34		1.530
		16:11:26	1.555
		16:13:56	1.555
Falling 1	16:14:35		1.618
		16:16:46	1.553
		16:20:42	1.553
Rising 2	16:22:07		1.580
		16:24:34	1.555
		16:26:56	1.555
Falling 2	16:28:48		1.643
		16:31:41	1.553
		16:34:31	1.553
Rising 3	16:35:20		1.592
		16:38:45	1.553
		16:41:07	1.553
Falling 3	16:42:22		1.602
		16:45:05	1.554
		16:47:10	1.554



NOTES:

- Standing conditions
- Logger insertion time: 16:04:17
- End of test time 16:48:10
- DTW: 1.555 @ 16:57:40

BAFFINLAND SLUG TESTING FIELD SHEET

WELL/SAMPLE ID: LF-KP23-09	CAMERA #: 26	PHOTOS: 0590 - 0594
DATE: 05-Sep-25	ARRIVAL TIME: 13:55:00	TECHS: JJ & AG
WEATHER: Windy, overcast, -2°C	WELL STATUS: Good Condition	
WELL DIAMETER (INCHES): 1	DEPTH TO WATER (M): 1.558	DEPTH TO BOTTOM (M): 2.295
STICK UP/MAGS (M): 0.916	TIME OF DTW MEASUREMENT: 13:57:21	TIME OF DTB MEASUREMENT: 13:57:47

DATALOGGER INFORMATION

LOGGER SAMPLING RATE (SECONDS): 0.125	TARGET LOGGER DEPTH: 1.935	DTW AFTER LOGGER ADDED: 1.558	TIME OF DTW: 14:35:13
LOGGER SERIAL NUMBER: 002 - 2204461		DATA SAVED AND DELETED FROM LOGGER POST SAMPLE? Y	
BAROLOGGER START TIME: 14:29:35		LEVELOGGER START TIME: 14:31:43	

SLUG INFORMATION

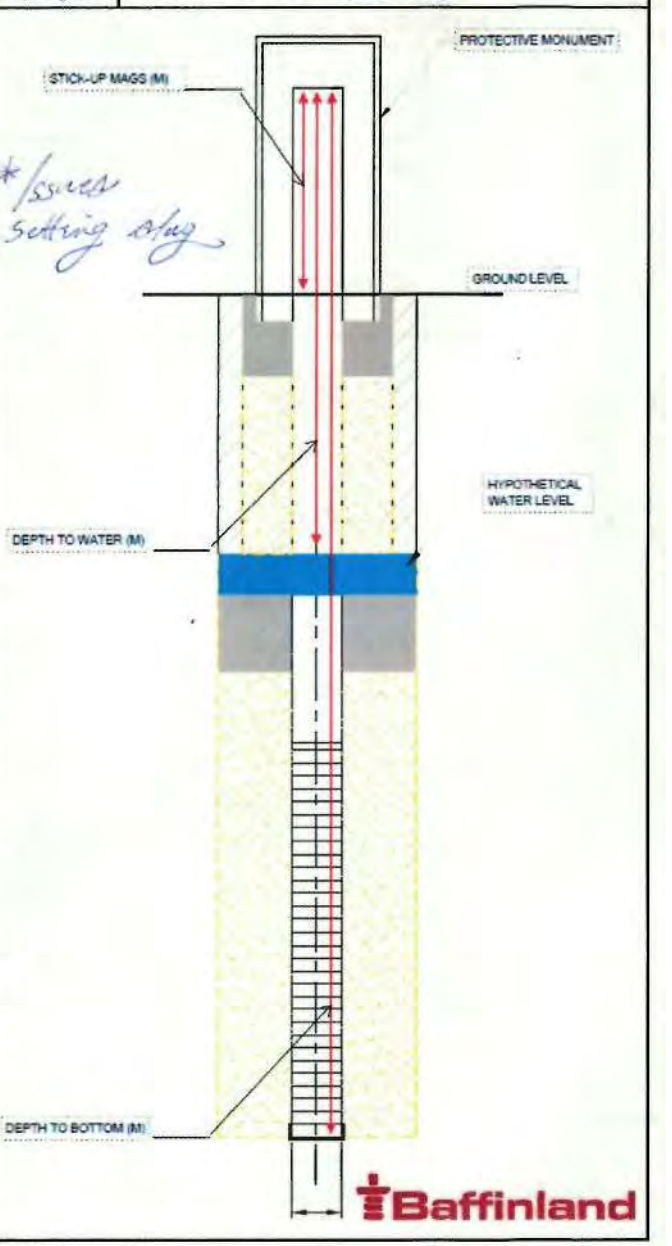
SLUG TYPE: (SOLID ONLY) Solid	SLUG LENGTH: 0.312	SLUG DIAMETER: 0.02	TARGET SLUG DEPTH: 2.195

FALLING HEAD AND RISING HEAD TEST

TEST TYPE (RISING OR FALLING)	SLUG INSERTION TIME	ELAPSED TIME	WATER DEPTH (M TO TOP)
Rising 1	14:36:50		1.427
		~~14:38:50~~	
		14:40:33	1.559
		14:42:03	1.558
		14:44:00	1.558
Falling 1	14:44:41		1.685
		14:46:59	1.555
		14:50:12	1.556
		14:52:50	1.556
Rising 2	14:53:23		1.425
		14:55:24	1.555
		14:57:44	1.555
		15:01:10	1.556
Falling 2	15:02:56		1.686
		15:05:45	1.556
		15:08:04	1.556
Rising 3	15:08:50		1.422
		15:11:36	1.556
		15:15:10	1.556
Falling 3	15:16:18		~~1.678~~ 1.678
		15:19:19	1.555
		15:23:23	1.555

NOTES:

* Issues setting slug



Water Column Height: 0.737 m
Logger Insertion Time: 14:32:11
End of test time: 15:24:23

Baffinland

BAFFINLAND SLUG TESTING FIELD SHEET

WELL/SAMPLE ID: LF-KP23-11	CAMERA #: 26	PHOTOS: 0490 - 0
DATE: 31-Aug-2025	ARRIVAL TIME: 13:15	TECHS: LG JJ AG
WEATHER: 0°C, windy, overcast, fog	WELL STATUS: Good condition	
WELL DIAMETER (INCHES): 1"	DEPTH TO WATER (M): 1.751	DEPTH TO BOTTOM (M): 2.828
STICK UP/MAGS (M): 1.194	TIME OF DTW MEASUREMENT: 13:18:30	TIME OF DTB MEASUREMENT: 13:19:25

DATALOGGER INFORMATION

LOGGER SAMPLING RATE (SECONDS): 0.125 seconds	TARGET LOGGER DEPTH: 2.728m	DTW AFTER LOGGER ADDED: 1.743	TIME OF DTW: 13:45:47
LOGGER SERIAL NUMBER: 002-220446I	DATA SAVED AND DELETED FROM LOGGER POST SAMPLE?		
BAROLOGGER START TIME: 13:39	LEVELOGGER START TIME: 13:41		

SLUG INFORMATION

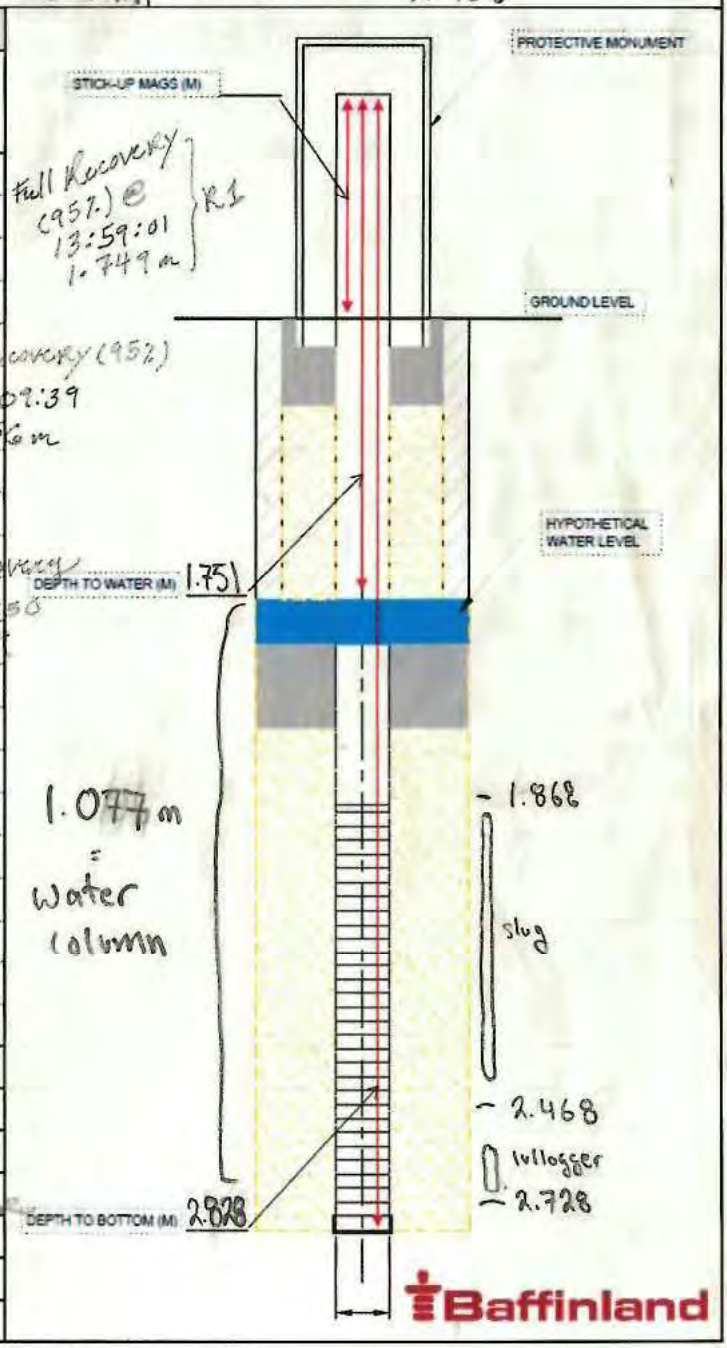
SLUG TYPE: Solid	SLUG LENGTH: 0.60 m	SLUG DIAMETER: 0.019m	TARGET SLUG DEPTH: 2.468

FALLING HEAD AND RISING HEAD TEST

TEST TYPE (RISING OR FALLING)	SLUG INSERTION / REMOVAL TIME	ELAPSED TIME	WATER DEPTH (M TO TOP)	
Falling 1	13:51:53		1.465	
		13:52:49	1.649	
		13:54:40	1.710	
		13:57:10	1.746	
Rising 1	14:01:15		1.993	Full Recovery (95%) @ 14:09:39 1.756 m
		14:02:55	1.845	
		14:04:52	1.784	
		14:07:27	1.761	
Falling 2	14:10:15		1.490	
		14:12:49	1.692	Full Recovery @ 14:16:56 1.734
		14:14:44	1.726	
		14:16:56	1.739	
Rising 2	14:18:10		2.009	
		14:20:06	1.827	
		14:22:46	1.773	
		14:24:55	1.759	
Falling 3	14:25:22		1.471	1.471
		14:28:10	1.712	
		14:31:10	1.741	
		14:33:40	1.748	
Rising 3	14:34:10		2.022	
		14:35:10	1.846	

NOTES:

- Project ID: MS_GW_LANDFILL
- Time of logger insertion 13:42
- Full DTW Recovery after the logger insertion @ 13:50:00
- Ice forming in the well casing



Rising 3 Continued	14:37:50	1.753
	14:40:10	1.765
	14:44:13	1.755
	14:46:32	1.752

Logger Stop Time: 14:53:55

Test Stop Time: 14:46:45

BAFFINLAND SLUG TESTING FIELD SHEET

WELL/SAMPLE ID: LF-KP23-13	CAMERA #: 26	PHOTOS: 0559-0563
DATE: 03-Sep-25	ARRIVAL TIME: 16:00	TECHS: JJ & AG
WEATHER: Overcast, light breeze, 0°C	WELL STATUS: Good Condition	
WELL DIAMETER (INCHES): 1	DEPTH TO WATER (M): 2.080	DEPTH TO BOTTOM (M): 2.714
STICK UP/MAGS (M): 0.748	TIME OF DTW MEASUREMENT: 16:04:58	TIME OF DTB MEASUREMENT: 16:05:30

DATALOGGER INFORMATION

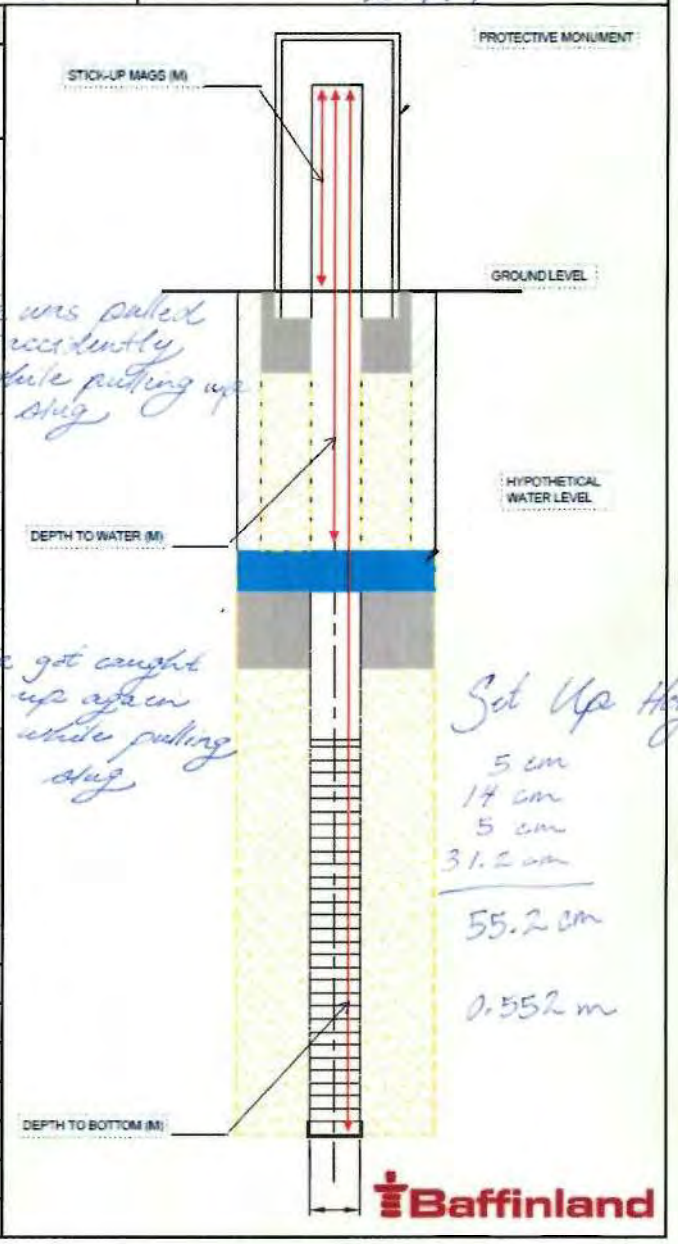
LOGGER SAMPLING RATE (SECONDS): 0.125	TARGET LOGGER DEPTH: 2.664	DTW AFTER LOGGER ADDED: 2.058	TIME OF DTW: 16:31:01
LOGGER SERIAL NUMBER: 002-2204461		DATA SAVED AND DELETED FROM LOGGER POST SAMPLE? Y	
BAROLOGGER START TIME: 16:26:44		LEVELOGGER START TIME: 16:27:55	

SLUG INFORMATION

SLUG TYPE: (SOLID ONLY) Solid	SLUG LENGTH: 31.2 cm	SLUG DIAMETER: 10 cm	TARGET SLUG DEPTH: 2.474

FALLING HEAD AND RISING HEAD TEST

TEST TYPE (RISING OR FALLING)	SLUG INSERTION TIME	ELAPSED TIME	WATER DEPTH (M TO TOP)
Falling 1	16:32:33		1.965
		16:34:17	2.006
		16:37:01	2.046
		16:39:44	2.055
Rising 1	16:41:02	16:41:02	2.170 * logger was pulled accidently while pulling up slug
		16:43:01	2.144
		16:45:06	2.112
		16:48:03	2.102
		16:50:10	2.095
		16:52:20	2.091
Falling 2	16:53:30		1.984
		16:55:40	2.026
		16:57:48	2.054
Rising 2	16:58:40		2.174 * logger got caught up again while pulling slug
		17:01:03	2.134
		17:03:22	2.112
		17:06:10	2.098
		17:08:34	2.094
Falling 3	17:09:35		1.984
		17:11:50	2.022
		17:14:01	2.045
NOT Rising 3	17:15:10		2.178
		17:18:01	2.130
		17:20:26	2.108
		17:23:30	2.096
		17:26:01	2.090



* Water Column Height: 0.634 m
* logger height from bottom is 5cm because water column height is too short.
* Logger insertion time: 16:29:13
* 5 cm gap between logger & slug
* End of test time: 17:26:45 & DTW of 2.121

BAFFINLAND SLUG TESTING FIELD SHEET

D: MS-HWB-25-01	CAMERA #: 26	PHOTOS: 0564 - 0568
P-25	ARRIVAL TIME: 15:10	TECHS: JJ & AG
east, light breeze, 0°C	WELL STATUS: Good Condition	
INCHES): 2"	DEPTH TO WATER (M): 2.758	DEPTH TO BOTTOM (M): 3.248
M): 1.336	TIME OF DTW MEASUREMENT: 15:19:12	TIME OF DTB MEASUREMENT: 15:19:44

DATALOGGER INFORMATION

NG RATE	TARGET LOGGER DEPTH:	DTW AFTER LOGGER ADDED:	TIME OF DTW:
UMBER:	DATA SAVED AND DELETED FROM LOGGER POST SAMPLE?		
ART TIME:	LEVELOGGER START TIME:		

SLUG INFORMATION

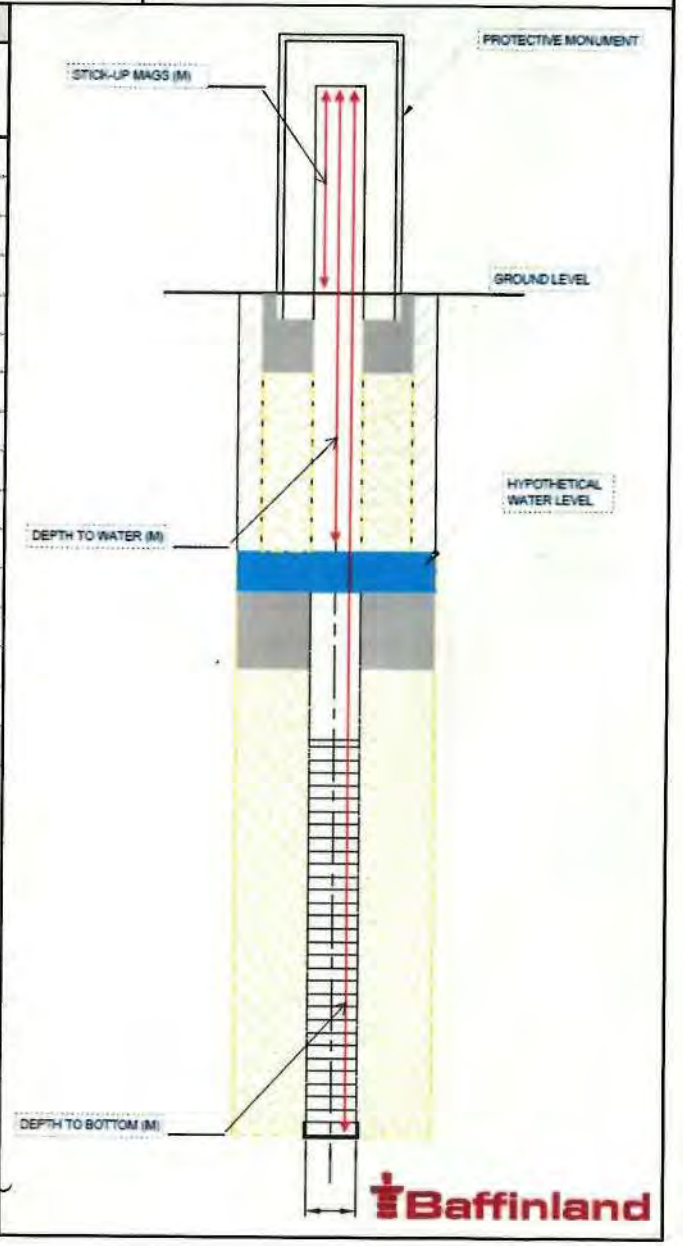
ONLY)	SLUG LENGTH:	SLUG DIAMETER:	TARGET SLUG DEPTH:

FALLING HEAD AND RISING HEAD TEST

NG)	SLUG INSERTION TIME	ELAPSED TIME	WATER DEPTH (M TO TOP)

Column Height = 49 cm 0.49m.

Height: Slug = 42 cm
logger = 14 cm
Gaps = 10cm + 10cm = 20cm
Total = 76 cm. 0.76m



BAFFINLAND SLUG TESTING FIELD SHEET

WELL/SAMPLE ID: MS-HWB-25-03	CAMERA #: 26	PHOTOS: 576 - 573	
DATE: 04-Sept-2025	ARRIVAL TIME: 0935	TECHS: JJ ET	
WEATHER: -3 Light Snow	WELL STATUS: Active		
WELL DIAMETER (INCHES): 2	DEPTH TO WATER (M): 2.384	DEPTH TO BOTTOM (M): 3.358	
STICK UP/MAGS (M): 1.314	TIME OF DTW MEASUREMENT: 0940	TIME OF DTB MEASUREMENT: 9:43	

DATALOGGER INFORMATION

LOGGER SAMPLING RATE (SECONDS): 0.125	TARGET LOGGER DEPTH: 3.258	DTW AFTER LOGGER ADDED: 2.384	TIME OF DTW: 1013:33
LOGGER SERIAL NUMBER: 002-2204461	DATA SAVED AND DELETED FROM LOGGER POST SAMPLE? yes		
BAROLOGGER START TIME: 10:03:36	LEVELOGGER START TIME: 10:05:44		

SLUG INFORMATION

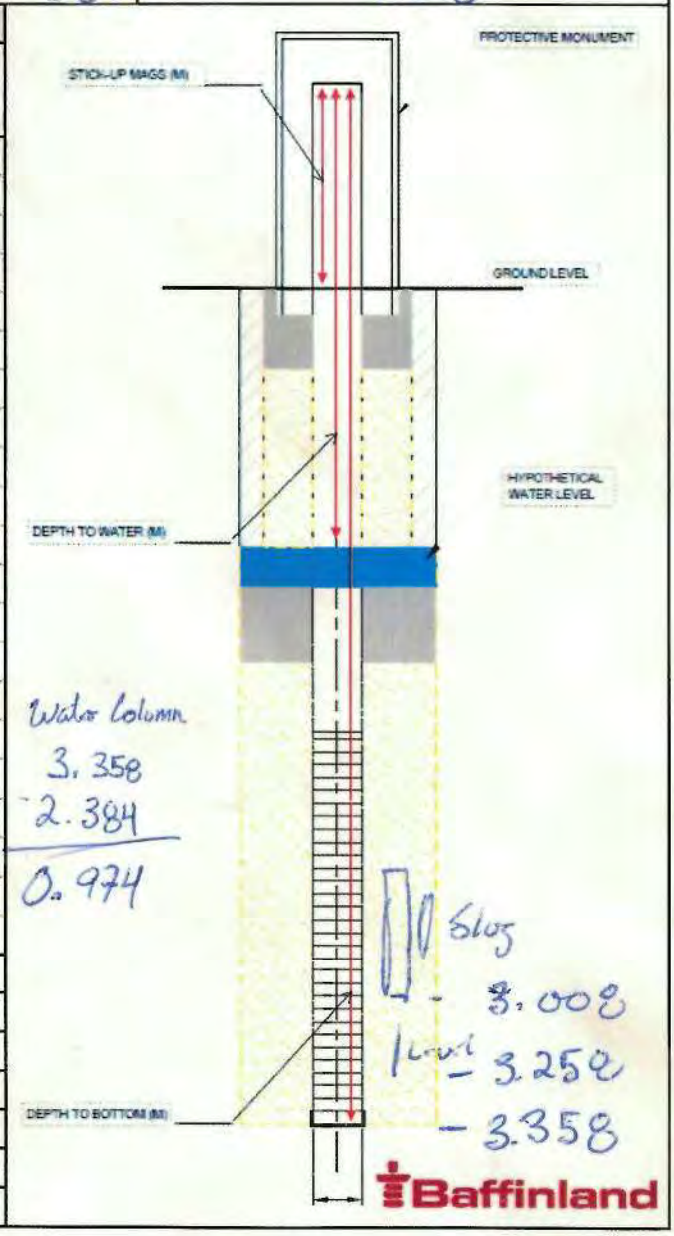
SLUG TYPE: (SOLID/WATER) Solid	SLUG LENGTH: 0.42	SLUG DIAMETER: 0.04m	TARGET SLUG DEPTH: 3.008

FALLING HEAD AND RISING HEAD TEST

TEST TYPE (RISING OR FALLING)	SLUG INSERTION TIME	ELAPSED TIME	WATER DEPTH (M TO TOP)
M1 Rising 1	1016:00		2.254
		10:18:15	2.383
		10:20:30	2.383
		10:22:15	2.383
M1 Falling 1	1024:40		2.438
		1027:23	2.384
		1029:24	2.383
M2 Rising 2	10:31:00		2.253
		1033:18	2.382
		1035:09	2.383
M2 Falling 2	1036:40		2.460
		1039:41	2.383
		1041:31	2.383
M3 Rising 3	1044:00		2.380
		1045:35	2.382
	4:57	1047:16	2.383
M3 Falling 3	1049:40		2.455
		1051:33	2.384
		1053:15	2.383
		1055:36	2.383

NOTES: End time 1058:15
Post Sampling DTW 2.385

Level Logger + Barologger Started Stopped in Truck



APPENDIX E

Certificates of Analysis

CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	:	**BF2500296**			
Client	:	**Baffinland Iron Mines Corporation**	Laboratory	:	ALS Environmental - Baffin Island
Contact	:	Environmental Lab Results	Account Manager	:	Rick Hawthorne
Address	:	360 Oakville Place Dr Suite 300 Oakville Ontario Canada L6H 6K8	Address	:	Mary River, Qikqtani Region Baffin Island NU Canada
Telephone	:	----	Telephone	:	
Project	:	GW_Landfill	Date Samples Received	:	26-Aug-2025 19:30
PO	:	4500156571	Date Analysis Commenced	:	26-Aug-2025
C-O-C number	:	25 08 25_GW_Landfill	Issue Date	:	05-Sep-2025 16:15
Sampler	:	LG/AG			
Site	:	MS			
Quote number	:	2024-2025 Scope of Work			
No. of samples received	:	2			
No. of samples analysed	:	2			

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
- Guideline Comparison

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*
Adam Jodoin		Inorganics, Baffin Island, Nunavut
Cedrick Velasco		Inorganics, Baffin Island, Nunavut
Danielle Gravel		Organics, Waterloo, Ontario
David Tremblett		VOC, Waterloo, Ontario
Walt Kippenhuck		Inorganics, Waterloo, Ontario
Walt Kippenhuck		Metals, Waterloo, Ontario
Walt Kippenhuck		Centralized Prep, Waterloo, Ontario

Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
LF-KP23-09_2025-08-25 ----	Water	Solids, total suspended [TSS]		NWB_LFILL (Table 7 Effluent)	----	65.4 mg/L	30 mg/L

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.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key: LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units
µg/L	micrograms per litre
µS/cm	microsiemens per centimetre

>: greater than.
<: less than.

Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).
For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit.

Analytical Results Evaluation

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-09_2025-08-25 ----	LF-KP23-08_2025-08-25 ----	----	----	----	----	----
				Client sampling date / time	25-Aug-2025 14:05	25-Aug-2025 15:15	----	----	----	----	----
				Sub-Matrix	Groundwater	Groundwater	----	----	----	----	----
					BF2500296-001	BF2500296-002	----	----	----	----	----
					Result	Result	----	----	----	----	----
Sample Preparation											
Dissolved carbon filtration location	----	EP358/WT	-		field	field	----	----	----	----	----
Physical Tests											
Conductivity	----	E100/WT	µS/cm		279	248	----	----	----	----	----
pH	----	E108/BF	pH units		6.94	7.67	----	----	----	----	----
Solids, total dissolved [TDS]	----	E162/BF	mg/L		138	131	----	----	----	----	----
Solids, total suspended [TSS]	----	E160-L/BF	mg/L		65.4	18.0	----	----	----	----	----
Turbidity	----	E121/BF	NTU		24.7	11.7	----	----	----	----	----
Alkalinity, total (as CaCO3)	----	E290/WT	mg/L		147	131	----	----	----	----	----
Anions and Nutrients											
Ammonia, total (as N)	7664-41-7	E298/WT	mg/L		0.0108	<0.0050	----	----	----	----	----
Bromide	24959-67-9	E235.Br/WT	mg/L		<0.10	<0.10	----	----	----	----	----
Chloride	16887-00-6	E235.Cl/WT	mg/L		<0.50	0.51	----	----	----	----	----
Fluoride	16984-48-8	E235.F/WT	mg/L		0.060	0.039	----	----	----	----	----
Kjeldahl nitrogen, total [TKN]	----	E318/WT	mg/L		0.182	0.212	----	----	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3/WT	mg/L		0.056	<0.020	----	----	----	----	----
Nitrite (as N)	14797-65-0	E235.NO2/WT	mg/L		<0.010	<0.010	----	----	----	----	----
Phosphorus, total	7723-14-0	E372-U/WT	mg/L		0.319	0.0842	----	----	----	----	----
Phosphorus, total dissolved	7723-14-0	E375-T/WT	mg/L		0.0115	0.0043	----	----	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	mg/L		<0.30	1.00	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-09_2025-08-25 ----	LF-KP23-08_2025-08-25 ----	----	----	----	----	----
				Client sampling date / time	25-Aug-2025 14:05	25-Aug-2025 15:15	----	----	----	----	----
				Sub-Matrix	Groundwater	Groundwater	----	----	----	----	----
					BF2500296-001	BF2500296-002	----	----	----	----	----
					Result	Result	----	----	----	----	----
Organic / Inorganic Carbon											
Carbon, dissolved organic [DOC]	----	E358-L/WT	mg/L		3.04	3.20	----	----	----	----	----
Dissolved Metals											
Aluminum, dissolved	7429-90-5	E421/WT	mg/L		0.0034	0.0038	----	----	----	----	----
Antimony, dissolved	7440-36-0	E421/WT	mg/L		<0.00010	<0.00010	----	----	----	----	----
Arsenic, dissolved	7440-38-2	E421/WT	mg/L		0.00012	<0.00010	----	----	----	----	----
Barium, dissolved	7440-39-3	E421/WT	mg/L		0.00482	0.00756	----	----	----	----	----
Beryllium, dissolved	7440-41-7	E421/WT	mg/L		<0.000020	<0.000020	----	----	----	----	----
Bismuth, dissolved	7440-69-9	E421/WT	mg/L		<0.000050	<0.000050	----	----	----	----	----
Boron, dissolved	7440-42-8	E421/WT	mg/L		<0.010	<0.010	----	----	----	----	----
Cadmium, dissolved	7440-43-9	E421/WT	mg/L		<0.0000050	<0.0000050	----	----	----	----	----
Calcium, dissolved	7440-70-2	E421/WT	mg/L		31.0	27.5	----	----	----	----	----
Cesium, dissolved	7440-46-2	E421/WT	mg/L		<0.000010	<0.000010	----	----	----	----	----
Chromium, dissolved	7440-47-3	E421/WT	mg/L		<0.00050	<0.00050	----	----	----	----	----
Cobalt, dissolved	7440-48-4	E421/WT	mg/L		<0.00010	<0.00010	----	----	----	----	----
Copper, dissolved	7440-50-8	E421/WT	mg/L		0.00108	0.00184	----	----	----	----	----
Iron, dissolved	7439-89-6	E421/WT	mg/L		<0.010	<0.010	----	----	----	----	----
Lead, dissolved	7439-92-1	E421/WT	mg/L		<0.000050	<0.000050	----	----	----	----	----
Lithium, dissolved	7439-93-2	E421/WT	mg/L		0.0017	0.0013	----	----	----	----	----
Magnesium, dissolved	7439-95-4	E421/WT	mg/L		18.9	17.3	----	----	----	----	----
Manganese, dissolved	7439-96-5	E421/WT	mg/L		0.00042	0.00012	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-09_2025-08-25 ----	LF-KP23-08_2025-08-25 ----	----	----	----	----	----
				Client sampling date / time	25-Aug-2025 14:05	25-Aug-2025 15:15	----	----	----	----	----
				Sub-Matrix	Groundwater	Groundwater	----	----	----	----	----
					BF2500296-001	BF2500296-002	----	----	----	----	----
					Result	Result	----	----	----	----	----
Dissolved Metals											
Mercury, dissolved	7439-97-6	E509/WT	mg/L		<0.0000050	<0.0000050	----	----	----	----	----
Molybdenum, dissolved	7439-98-7	E421/WT	mg/L		<0.000050	0.000123	----	----	----	----	----
Nickel, dissolved	7440-02-0	E421/WT	mg/L		0.00207	0.00106	----	----	----	----	----
Phosphorus, dissolved	7723-14-0	E421/WT	mg/L		<0.050	<0.050	----	----	----	----	----
Potassium, dissolved	7440-09-7	E421/WT	mg/L		0.731	0.659	----	----	----	----	----
Rubidium, dissolved	7440-17-7	E421/WT	mg/L		0.00049	0.00157	----	----	----	----	----
Selenium, dissolved	7782-49-2	E421/WT	mg/L		<0.000050	<0.000050	----	----	----	----	----
Silicon, dissolved	7440-21-3	E421/WT	mg/L		1.97	1.78	----	----	----	----	----
Silver, dissolved	7440-22-4	E421/WT	mg/L		<0.000010	<0.000010	----	----	----	----	----
Sodium, dissolved	7440-23-5	E421/WT	mg/L		2.61	0.934	----	----	----	----	----
Strontium, dissolved	7440-24-6	E421/WT	mg/L		0.0172	0.0136	----	----	----	----	----
Sulfur, dissolved	7704-34-9	E421/WT	mg/L		<0.50	<0.50	----	----	----	----	----
Tellurium, dissolved	13494-80-9	E421/WT	mg/L		<0.00020	<0.00020	----	----	----	----	----
Thallium, dissolved	7440-28-0	E421/WT	mg/L		<0.000010	<0.000010	----	----	----	----	----
Thorium, dissolved	7440-29-1	E421/WT	mg/L		<0.00010	<0.00010	----	----	----	----	----
Tin, dissolved	7440-31-5	E421/WT	mg/L		<0.00010	<0.00010	----	----	----	----	----
Titanium, dissolved	7440-32-6	E421/WT	mg/L		<0.00030	<0.00030	----	----	----	----	----
Tungsten, dissolved	7440-33-7	E421/WT	mg/L		<0.00010	<0.00010	----	----	----	----	----
Uranium, dissolved	7440-61-1	E421/WT	mg/L		0.000248	0.000361	----	----	----	----	----
Vanadium, dissolved	7440-62-2	E421/WT	mg/L		<0.00050	<0.00050	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-09_2025-08-25 ----	LF-KP23-08_2025-08-25 ----	----	----	----	----	----
				Client sampling date / time	25-Aug-2025 14:05	25-Aug-2025 15:15	----	----	----	----	----
				Sub-Matrix	Groundwater	Groundwater	----	----	----	----	----
					BF2500296-001	BF2500296-002	----	----	----	----	----
					Result	Result	----	----	----	----	----
Dissolved Metals											
Zinc, dissolved	7440-66-6	E421/WT	mg/L		<0.0010	0.0011	----	----	----	----	----
Zirconium, dissolved	7440-67-7	E421/WT	mg/L		0.00031	0.00045	----	----	----	----	----
Dissolved mercury filtration location	----	EP509/WT	-		Field	Field	----	----	----	----	----
Dissolved metals filtration location	----	EP421/WT	-		Field	Field	----	----	----	----	----
Volatile Organic Compounds											
Acetone	67-64-1	E611D/WT	µg/L		<20	<20	----	----	----	----	----
Benzene	71-43-2	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Bromodichloromethane	75-27-4	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Bromoform	75-25-2	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Bromomethane	74-83-9	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
BTEX, total	----	E611D/WT	µg/L		<1.0	<1.0	----	----	----	----	----
Carbon disulfide	75-15-0	E611D/WT	µg/L		<1.0	<1.0	----	----	----	----	----
Carbon tetrachloride	56-23-5	E611D/WT	µg/L		<0.20	<0.20	----	----	----	----	----
Chlorobenzene	108-90-7	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Chloroethane	75-00-3	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Chloroform	67-66-3	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Chloromethane	74-87-3	E611D/WT	µg/L		<2.0	<2.0	----	----	----	----	----
Dibromochloromethane	124-48-1	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Dibromoethane, 1,2-	106-93-4	E611D/WT	µg/L		<0.20	<0.20	----	----	----	----	----
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-09_2025-08-25 ----	LF-KP23-08_2025-08-25 ----	----	----	----	----	----
				Client sampling date / time	25-Aug-2025 14:05	25-Aug-2025 15:15	----	----	----	----	----
				Sub-Matrix	Groundwater	Groundwater	----	----	----	----	----
					BF2500296-001	BF2500296-002	----	----	----	----	----
					Result	Result	----	----	----	----	----
Volatile Organic Compounds											
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Dichlorodifluoromethane	75-71-8	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Dichloroethane, 1,1-	75-34-3	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Dichloroethane, 1,2-	107-06-2	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Dichloroethylene, 1,1-	75-35-4	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Dichloroethylene, cis+trans-1,2-	540-59-0	E611D/WT	µg/L		<0.71	<0.71	----	----	----	----	----
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Dichloromethane	75-09-2	E611D/WT	µg/L		<1.0	<1.0	----	----	----	----	----
Dichloropropane, 1,2-	78-87-5	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	µg/L		<0.30	<0.30	----	----	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	µg/L		<0.5	<0.5	----	----	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	µg/L		<0.30	<0.30	----	----	----	----	----
Ethylbenzene	100-41-4	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Hexane, n-	110-54-3	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Hexanone, 2-	591-78-6	E611D/WT	µg/L		<20	<20	----	----	----	----	----
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	µg/L		<20	<20	----	----	----	----	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	µg/L		<20	<20	----	----	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-09_2025-08-25 ----	LF-KP23-08_2025-08-25 ----	----	----	----	----	----
				Client sampling date / time	25-Aug-2025 14:05	25-Aug-2025 15:15	----	----	----	----	----
				Sub-Matrix	Groundwater	Groundwater	----	----	----	----	----
					BF2500296-001	BF2500296-002	----	----	----	----	----
					Result	Result	----	----	----	----	----
Volatile Organic Compounds											
Styrene	100-42-5	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Tetrachloroethylene	127-18-4	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Toluene	108-88-3	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Trichloroethylene	79-01-6	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Trichlorofluoromethane	75-69-4	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Trihalomethanes [THMs], total	----	E611D/WT	µg/L		<1.0	<1.0	----	----	----	----	----
Vinyl chloride	75-01-4	E611D/WT	µg/L		<0.20	<0.20	----	----	----	----	----
Xylene, m+p-	179601-23-1	E611D/WT	µg/L		<0.40	<0.40	----	----	----	----	----
Xylene, o-	95-47-6	E611D/WT	µg/L		<0.30	<0.30	----	----	----	----	----
Xylenes, total	1330-20-7	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Hydrocarbons											
F1 (C6-C10)	----	E581.F1-L/WT	µg/L		<25	<25	----	----	----	----	----
F2 (C10-C16)	----	E601/WT	µg/L		<100	<100	----	----	----	----	----
F3 (C16-C34)	----	E601/WT	µg/L		<250	<250	----	----	----	----	----
F4 (C34-C50)	----	E601/WT	µg/L		<250	<250	----	----	----	----	----
F1-BTEX	----	EC580/WT	µg/L		<25	<25	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-09_2025-08-25 ----	LF-KP23-08_2025-08-25 ----	----	----	----	----	----
				Client sampling date / time	25-Aug-2025 14:05	25-Aug-2025 15:15	----	----	----	----	----
				Sub-Matrix	Groundwater	Groundwater	----	----	----	----	----
					BF2500296-001	BF2500296-002	----	----	----	----	----
					Result	Result	----	----	----	----	----
Hydrocarbons											
Hydrocarbons, total (C6-C50)	n/a	EC581/WT	µg/L		<370	<370	----	----	----	----	----
Hydrocarbons Surrogates											
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/WT	%		92.8	95.7	----	----	----	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.F1-L/WT	%		126	123	----	----	----	----	----
Volatile Organic Compounds Surrogates											
Bromofluorobenzene, 4-	460-00-4	E611D/WT	%		95.3	95.4	----	----	----	----	----
Difluorobenzene, 1,4-	540-36-3	E611D/WT	%		98.8	98.5	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons											
Acenaphthene	83-32-9	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Acenaphthylene	208-96-8	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Acridine	260-94-6	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Anthracene	120-12-7	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Benz(a)anthracene	56-55-3	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Benzo(a)pyrene	50-32-8	E641A-L/WT	µg/L		<0.0050	<0.0050	----	----	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Benzo(b+j+k)fluoranthene	n/a	E641A-L/WT	µg/L		<0.015	<0.015	----	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Benzo(k)fluoranthene	207-08-9	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Chrysene	218-01-9	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A-L/WT	µg/L		<0.0050	<0.0050	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-09_2025-08-25 ----	LF-KP23-08_2025-08-25 ----	----	----	----	----	----
				Client sampling date / time	25-Aug-2025 14:05	25-Aug-2025 15:15	----	----	----	----	----
				Sub-Matrix	Groundwater	Groundwater	----	----	----	----	----
					BF2500296-001	**BF2500296-002**	----	----	----	----	----
					Result	Result	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons											
Fluoranthene	206-44-0	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Fluorene	86-73-7	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Methylnaphthalene, 1+2-	----	E641A-L/WT	µg/L		<0.015	<0.015	----	----	----	----	----
Methylnaphthalene, 2-	91-57-6	E641A-L/WT	µg/L		0.014	0.011	----	----	----	----	----
Naphthalene	91-20-3	E641A-L/WT	µg/L		0.014	0.011	----	----	----	----	----
Perylene	198-55-0	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Phenanthrene	85-01-8	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Pyrene	129-00-0	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Quinoline	91-22-5	E641A-L/WT	µg/L		<0.010	0.019	----	----	----	----	----
B(a)P total potency equivalents [B(a)P TPE]	----	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates											
Chrysene-d12	1719-03-5	E641A-L/WT	%		103	104	----	----	----	----	----
Naphthalene-d8	1146-65-2	E641A-L/WT	%		102	107	----	----	----	----	----
Phenanthrene-d10	1517-22-2	E641A-L/WT	%		100	102	----	----	----	----	----

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

Summary of Guideline Limits

Analyte	CAS Number	Unit	FEQG_BTEX	NWB_LFILL (Table 7 Effluent)					
Sample Preparation									
Dissolved carbon filtration location	----	-	----	----	----	----	----	----	----
Physical Tests									
Conductivity	----	µS/cm	----	----	----	----	----	----	----
pH	----	pH units	----	**6 - 9.5 pH units**	----	----	----	----	----
Solids, total dissolved [TDS]		mg/L	----	----	----	----	----	----	----
Solids, total suspended [TSS]		mg/L	----	**30 mg/L**	----	----	----	----	----
Turbidity	----	NTU	----	----	----	----	----	----	----
Alkalinity, total (as CaCO3)		mg/L	----	----	----	----	----	----	----
Anions and Nutrients									
Ammonia, total (as N)	7664-41-7	mg/L	----	----	----	----	----	----	----
Bromide	24959-67-9	mg/L	----	----	----	----	----	----	----
Chloride	16887-00-6	mg/L	----	----	----	----	----	----	----
Fluoride	16984-48-8	mg/L	----	----	----	----	----	----	----
Kjeldahl nitrogen, total [TKN]		mg/L	----	----	----	----	----	----	----
Nitrate (as N)	14797-55-8	mg/L	----	----	----	----	----	----	----
Nitrite (as N)	14797-65-0	mg/L	----	----	----	----	----	----	----
Phosphorus, total	7723-14-0	mg/L	----	----	----	----	----	----	----
Phosphorus, total dissolved	7723-14-0	mg/L	----	----	----	----	----	----	----
Sulfate (as SO4)	14808-79-8	mg/L	----	----	----	----	----	----	----
Organic / Inorganic Carbon									
Carbon, dissolved organic [DOC]		mg/L	----	----	----	----	----	----	----
Dissolved Metals									
Aluminum, dissolved	7429-90-5	mg/L	----	----	----	----	----	----	----

Antimony, dissolved	7440-36-0	mg/L	----	----	----	----	----	----	----	----
Arsenic, dissolved	7440-38-2	mg/L	----	----	----	----	----	----	----	----
Barium, dissolved	7440-39-3	mg/L	----	----	----	----	----	----	----	----
Beryllium, dissolved	7440-41-7	mg/L	----	----	----	----	----	----	----	----
Bismuth, dissolved	7440-69-9	mg/L	----	----	----	----	----	----	----	----
Boron, dissolved	7440-42-8	mg/L	----	----	----	----	----	----	----	----
Cadmium, dissolved	7440-43-9	mg/L	----	----	----	----	----	----	----	----
Calcium, dissolved	7440-70-2	mg/L	----	----	----	----	----	----	----	----
Cesium, dissolved	7440-46-2	mg/L	----	----	----	----	----	----	----	----
Chromium, dissolved	7440-47-3	mg/L	----	----	----	----	----	----	----	----
Cobalt, dissolved	7440-48-4	mg/L	----	----	----	----	----	----	----	----
Copper, dissolved	7440-50-8	mg/L	----	----	----	----	----	----	----	----
Iron, dissolved	7439-89-6	mg/L	----	----	----	----	----	----	----	----
Lead, dissolved	7439-92-1	mg/L	----	----	----	----	----	----	----	----
Lithium, dissolved	7439-93-2	mg/L	----	----	----	----	----	----	----	----
Magnesium, dissolved	7439-95-4	mg/L	----	----	----	----	----	----	----	----
Manganese, dissolved	7439-96-5	mg/L	----	----	----	----	----	----	----	----
Mercury, dissolved	7439-97-6	mg/L	----	----	----	----	----	----	----	----
Molybdenum, dissolved	7439-98-7	mg/L	----	----	----	----	----	----	----	----
Nickel, dissolved	7440-02-0	mg/L	----	----	----	----	----	----	----	----
Phosphorus, dissolved	7723-14-0	mg/L	----	----	----	----	----	----	----	----
Potassium, dissolved	7440-09-7	mg/L	----	----	----	----	----	----	----	----
Rubidium, dissolved	7440-17-7	mg/L	----	----	----	----	----	----	----	----
Selenium, dissolved	7782-49-2	mg/L	----	----	----	----	----	----	----	----
Silicon, dissolved	7440-21-3	mg/L	----	----	----	----	----	----	----	----
Silver, dissolved	7440-22-4	mg/L	----	----	----	----	----	----	----	----
Sodium, dissolved	7440-23-5	mg/L	----	----	----	----	----	----	----	----

Strontium, dissolved	7440-24-6	mg/L	----	----	----	----	----	----	----
Sulfur, dissolved	7704-34-9	mg/L	----	----	----	----	----	----	----
Tellurium, dissolved	13494-80-9	mg/L	----	----	----	----	----	----	----
Thallium, dissolved	7440-28-0	mg/L	----	----	----	----	----	----	----
Thorium, dissolved	7440-29-1	mg/L	----	----	----	----	----	----	----
Tin, dissolved	7440-31-5	mg/L	----	----	----	----	----	----	----
Titanium, dissolved	7440-32-6	mg/L	----	----	----	----	----	----	----
Tungsten, dissolved	7440-33-7	mg/L	----	----	----	----	----	----	----
Uranium, dissolved	7440-61-1	mg/L	----	----	----	----	----	----	----
Vanadium, dissolved	7440-62-2	mg/L	----	----	----	----	----	----	----
Zinc, dissolved	7440-66-6	mg/L	----	----	----	----	----	----	----
Zirconium, dissolved	7440-67-7	mg/L	----	----	----	----	----	----	----
Dissolved mercury filtration location	----	-	----	----	----	----	----	----	----
Dissolved metals filtration location	----	-	----	----	----	----	----	----	----
Volatile Organic Compounds									
Acetone	67-64-1	µg/L	----	----	----	----	----	----	----
Benzene	71-43-2	µg/L	**590 µg/L**	----	----	----	----	----	----
Bromodichloromethane	75-27-4	µg/L	----	----	----	----	----	----	----
Bromoform	75-25-2	µg/L	----	----	----	----	----	----	----
Bromomethane	74-83-9	µg/L	----	----	----	----	----	----	----
BTEX, total		µg/L	----	----	----	----	----	----	----
Carbon disulfide	75-15-0	µg/L	----	----	----	----	----	----	----
Carbon tetrachloride	56-23-5	µg/L	----	----	----	----	----	----	----
Chlorobenzene	108-90-7	µg/L	----	----	----	----	----	----	----
Chloroethane	75-00-3	µg/L	----	----	----	----	----	----	----
Chloroform	67-66-3	µg/L	----	----	----	----	----	----	----
Chloromethane	74-87-3	µg/L	----	----	----	----	----	----	----

Dibromochloromethane	124-48-1	µg/L	----	----	----	----	----	----	----	----
Dibromoethane, 1,2-	106-93-4	µg/L	----	----	----	----	----	----	----	----
Dichlorobenzene, 1,2-	95-50-1	µg/L	----	----	----	----	----	----	----	----
Dichlorobenzene, 1,3-	541-73-1	µg/L	----	----	----	----	----	----	----	----
Dichlorobenzene, 1,4-	106-46-7	µg/L	----	----	----	----	----	----	----	----
Dichlorodifluoromethane	75-71-8	µg/L	----	----	----	----	----	----	----	----
Dichloroethane, 1,1-	75-34-3	µg/L	----	----	----	----	----	----	----	----
Dichloroethane, 1,2-	107-06-2	µg/L	----	----	----	----	----	----	----	----
Dichloroethylene, 1,1-	75-35-4	µg/L	----	----	----	----	----	----	----	----
Dichloroethylene, cis-1,2-	156-59-2	µg/L	----	----	----	----	----	----	----	----
Dichloroethylene, cis+trans-1,2-	540-59-0	µg/L	----	----	----	----	----	----	----	----
Dichloroethylene, trans-1,2-	156-60-5	µg/L	----	----	----	----	----	----	----	----
Dichloromethane	75-09-2	µg/L	----	----	----	----	----	----	----	----
Dichloropropane, 1,2-	78-87-5	µg/L	----	----	----	----	----	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	µg/L	----	----	----	----	----	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	µg/L	----	----	----	----	----	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	µg/L	----	----	----	----	----	----	----	----
Ethylbenzene	100-41-4	µg/L	**70 µg/L**	----	----	----	----	----	----	----
Hexane, n-	110-54-3	µg/L	----	----	----	----	----	----	----	----
Hexanone, 2-	591-78-6	µg/L	----	----	----	----	----	----	----	----
Methyl ethyl ketone [MEK]	78-93-3	µg/L	----	----	----	----	----	----	----	----
Methyl isobutyl ketone [MIBK]	108-10-1	µg/L	----	----	----	----	----	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	µg/L	----	----	----	----	----	----	----	----
Styrene	100-42-5	µg/L	----	----	----	----	----	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	µg/L	----	----	----	----	----	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	µg/L	----	----	----	----	----	----	----	----
Tetrachloroethylene	127-18-4	µg/L	----	----	----	----	----	----	----	----

Toluene	108-88-3	µg/L	**30 µg/L**	----	----	----	----	----	----
Trichloroethane, 1,1,1-	71-55-6	µg/L	----	----	----	----	----	----	----
Trichloroethane, 1,1,2-	79-00-5	µg/L	----	----	----	----	----	----	----
Trichloroethylene	79-01-6	µg/L	----	----	----	----	----	----	----
Trichlorofluoromethane	75-69-4	µg/L	----	----	----	----	----	----	----
Trihalomethanes [THMs], total		µg/L	----	----	----	----	----	----	----
Vinyl chloride	75-01-4	µg/L	----	----	----	----	----	----	----
Xylene, m+p-	179601-23-1	µg/L	**70 µg/L**	----	----	----	----	----	----
Xylene, o-	95-47-6	µg/L	**70 µg/L**	----	----	----	----	----	----
Xylenes, total	1330-20-7	µg/L	**70 µg/L**	----	----	----	----	----	----
Hydrocarbons									
F1 (C6-C10)		µg/L	----	----	----	----	----	----	----
F2 (C10-C16)	----	µg/L	----	----	----	----	----	----	----
F3 (C16-C34)	----	µg/L	----	----	----	----	----	----	----
F4 (C34-C50)	----	µg/L	----	----	----	----	----	----	----
F1-BTEX		µg/L	----	----	----	----	----	----	----
Hydrocarbons, total (C6-C50)	n/a	µg/L	----	----	----	----	----	----	----
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	%	----	----	----	----	----	----	----
Bromofluorobenzene, 4-	460-00-4	%	----	----	----	----	----	----	----
Dichlorotoluene, 3,4-	95-75-0	%	----	----	----	----	----	----	----
Difluorobenzene, 1,4-	540-36-3	%	----	----	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons									
Acenaphthene	83-32-9	µg/L	----	----	----	----	----	----	----
Acenaphthylene	208-96-8	µg/L	----	----	----	----	----	----	----
Acridine	260-94-6	µg/L	----	----	----	----	----	----	----
Anthracene	120-12-7	µg/L	----	----	----	----	----	----	----
Benz(a)anthracene	56-55-3	µg/L	----	----	----	----	----	----	----

Benzo(a)pyrene	50-32-8	µg/L	----	----	----	----	----	----	----
Benzo(b+j)fluoranthene	n/a	µg/L	----	----	----	----	----	----	----
Benzo(b+j+k)fluoranthene	n/a	µg/L	----	----	----	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	µg/L	----	----	----	----	----	----	----
Benzo(k)fluoranthene	207-08-9	µg/L	----	----	----	----	----	----	----
Chrysene	218-01-9	µg/L	----	----	----	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	µg/L	----	----	----	----	----	----	----
Fluoranthene	206-44-0	µg/L	----	----	----	----	----	----	----
Fluorene	86-73-7	µg/L	----	----	----	----	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	µg/L	----	----	----	----	----	----	----
Methylnaphthalene, 1-	90-12-0	µg/L	----	----	----	----	----	----	----
Methylnaphthalene, 1+2-	----	µg/L	----	----	----	----	----	----	----
Methylnaphthalene, 2-	91-57-6	µg/L	----	----	----	----	----	----	----
Naphthalene	91-20-3	µg/L	----	----	----	----	----	----	----
Perylene	198-55-0	µg/L	----	----	----	----	----	----	----
Phenanthrene	85-01-8	µg/L	----	----	----	----	----	----	----
Pyrene	129-00-0	µg/L	----	----	----	----	----	----	----
Quinoline	91-22-5	µg/L	----	----	----	----	----	----	----
B(a)P total potency equivalents [B(a)P TPE]		µg/L	----	----	----	----	----	----	----
Chrysene-d12	1719-03-5	%	----	----	----	----	----	----	----
Naphthalene-d8	1146-65-2	%	----	----	----	----	----	----	----
Phenanthrene-d10	1517-22-2	%	----	----	----	----	----	----	----

CERTIFICATE OF ANALYSIS

Work Order	:	**BF2500296**			
Client	:	**Baffinland Iron Mines Corporation**	Laboratory	:	ALS Environmental - Baffin Island
Contact	:	Environmental Lab Results	Account Manager	:	Rick Hawthorne
Address	:	360 Oakville Place Dr Suite 300 Oakville Ontario Canada L6H 6K8	Address	:	Mary River, Qikqtani Region Baffin Island NU Canada
Telephone	:	----	E-mail	:	Rick.Hawthorne@ALSGlobal.com
Project	:	GW_Landfill	Telephone	:	
PO	:	4500156571	Date Samples Received	:	26-Aug-2025 19:30
C-O-C number	:	25 08 25_GW_Landfill	Date Analysis Commenced	:	26-Aug-2025
Sampler	:	LG/AG	Issue Date	:	05-Sep-2025 16:15
Site	:	MS			
Quote number	:	2024-2025 Scope of Work			
No. of samples received	:	2			
No. of samples analysed	:	2			

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

Signatories	*Position*	*Laboratory Department*
Adam Jodoin		Inorganics, Baffin Island, Nunavut
Cedrick Velasco		Inorganics, Baffin Island, Nunavut
Danielle Gravel		Organics, Waterloo, Ontario
David Tremblett		VOC, Waterloo, Ontario
Walt Kippenhuck		Inorganics, Waterloo, Ontario
Walt Kippenhuck		Metals, Waterloo, Ontario
Walt Kippenhuck		Centralized Prep, Waterloo, Ontario

General Comments

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

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

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

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

Key: CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.
LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units
µg/L	micrograms per litre
µS/cm	microsiemens per centimetre

<: 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: Groundwater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP23-09_2025-08-25 ----	LF-KP23-08_2025-08-25 ----	----	----	----
					Client sampling date / time	25-Aug-2025 14:05	25-Aug-2025 15:15	----	----	----
						BF2500296-001	BF2500296-002	----	----	----
						Result	Result	----	----	----
Sample Preparation										
Dissolved carbon filtration location	----	EP358/WT	-	-		field	field	----	----	----
Physical Tests										
Conductivity	----	E100/WT	1.0	µS/cm		279	248	----	----	----
pH	----	E108/BF	0.10	pH units		6.94	7.67	----	----	----
Solids, total dissolved [TDS]	----	E162/BF	10	mg/L		138	131	----	----	----
Solids, total suspended [TSS]	----	E160-L/BF	1.0	mg/L		65.4	18.0	----	----	----
Turbidity	----	E121/BF	0.10	NTU		24.7	11.7	----	----	----
Alkalinity, total (as CaCO3)	----	E290/WT	2.0	mg/L		147	131	----	----	----
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/WT	0.0050	mg/L		0.0108	<0.0050	----	----	----
Bromide	24959-67-9	E235.Br/WT	0.10	mg/L		<0.10	<0.10	----	----	----
Chloride	16887-00-6	E235.Cl/WT	0.50	mg/L		<0.50	0.51	----	----	----
Fluoride	16984-48-8	E235.F/WT	0.020	mg/L		0.060	0.039	----	----	----
Kjeldahl nitrogen, total [TKN]	----	E318/WT	0.050	mg/L		0.182	0.212	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3/WT	0.020	mg/L		0.056	<0.020	----	----	----
Nitrite (as N)	14797-65-0	E235.NO2/WT	0.010	mg/L		<0.010	<0.010	----	----	----
Phosphorus, total	7723-14-0	E372-U/WT	0.0020	mg/L		0.319	0.0842	----	----	----
Phosphorus, total dissolved	7723-14-0	E375-T/WT	0.0020	mg/L		0.0115	0.0043	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	0.30	mg/L		<0.30	1.00	----	----	----
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/WT	0.50	mg/L		3.04	3.20	----	----	----

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Analytical Results

Sub-Matrix: Groundwater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP23-09_2025-08-25 ----	LF-KP23-08_2025-08-25 ----	----	----	----
					Client sampling date / time	25-Aug-2025 14:05	25-Aug-2025 15:15	----	----	----
						BF2500296-001	BF2500296-002	----	----	----
						Result	Result	----	----	----
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/WT	0.0010	mg/L		0.0034	0.0038	----	----	----
Antimony, dissolved	7440-36-0	E421/WT	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Arsenic, dissolved	7440-38-2	E421/WT	0.00010	mg/L		0.00012	<0.00010	----	----	----
Barium, dissolved	7440-39-3	E421/WT	0.00010	mg/L		0.00482	0.00756	----	----	----
Beryllium, dissolved	7440-41-7	E421/WT	0.000020	mg/L		<0.000020	<0.000020	----	----	----
Bismuth, dissolved	7440-69-9	E421/WT	0.000050	mg/L		<0.000050	<0.000050	----	----	----
Boron, dissolved	7440-42-8	E421/WT	0.010	mg/L		<0.010	<0.010	----	----	----
Cadmium, dissolved	7440-43-9	E421/WT	0.0000050	mg/L		<0.0000050	<0.0000050	----	----	----
Calcium, dissolved	7440-70-2	E421/WT	0.050	mg/L		31.0	27.5	----	----	----
Cesium, dissolved	7440-46-2	E421/WT	0.000010	mg/L		<0.000010	<0.000010	----	----	----
Chromium, dissolved	7440-47-3	E421/WT	0.00050	mg/L		<0.00050	<0.00050	----	----	----
Cobalt, dissolved	7440-48-4	E421/WT	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Copper, dissolved	7440-50-8	E421/WT	0.00020	mg/L		0.00108	0.00184	----	----	----
Iron, dissolved	7439-89-6	E421/WT	0.010	mg/L		<0.010	<0.010	----	----	----
Lead, dissolved	7439-92-1	E421/WT	0.000050	mg/L		<0.000050	<0.000050	----	----	----
Lithium, dissolved	7439-93-2	E421/WT	0.0010	mg/L		0.0017	0.0013	----	----	----
Magnesium, dissolved	7439-95-4	E421/WT	0.0050	mg/L		18.9	17.3	----	----	----
Manganese, dissolved	7439-96-5	E421/WT	0.00010	mg/L		0.00042	0.00012	----	----	----
Mercury, dissolved	7439-97-6	E509/WT	0.0000050	mg/L		<0.0000050	<0.0000050	----	----	----
Molybdenum, dissolved	7439-98-7	E421/WT	0.000050	mg/L		<0.000050	0.000123	----	----	----
Nickel, dissolved	7440-02-0	E421/WT	0.00050	mg/L		0.00207	0.00106	----	----	----

Analytical Results

Sub-Matrix: Groundwater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP23-09_2025-08-25 ----	LF-KP23-08_2025-08-25 ----	----	----	----
					Client sampling date / time	25-Aug-2025 14:05	25-Aug-2025 15:15	----	----	----
						BF2500296-001	BF2500296-002	----	----	----
						Result	Result	----	----	----
Dissolved Metals										
Phosphorus, dissolved	7723-14-0	E421/WT	0.050	mg/L		<0.050	<0.050	----	----	----
Potassium, dissolved	7440-09-7	E421/WT	0.050	mg/L		0.731	0.659	----	----	----
Rubidium, dissolved	7440-17-7	E421/WT	0.00020	mg/L		0.00049	0.00157	----	----	----
Selenium, dissolved	7782-49-2	E421/WT	0.000050	mg/L		<0.000050	<0.000050	----	----	----
Silicon, dissolved	7440-21-3	E421/WT	0.050	mg/L		1.97	1.78	----	----	----
Silver, dissolved	7440-22-4	E421/WT	0.000010	mg/L		<0.000010	<0.000010	----	----	----
Sodium, dissolved	7440-23-5	E421/WT	0.050	mg/L		2.61	0.934	----	----	----
Strontium, dissolved	7440-24-6	E421/WT	0.00020	mg/L		0.0172	0.0136	----	----	----
Sulfur, dissolved	7704-34-9	E421/WT	0.50	mg/L		<0.50	<0.50	----	----	----
Tellurium, dissolved	13494-80-9	E421/WT	0.00020	mg/L		<0.00020	<0.00020	----	----	----
Thallium, dissolved	7440-28-0	E421/WT	0.000010	mg/L		<0.000010	<0.000010	----	----	----
Thorium, dissolved	7440-29-1	E421/WT	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Tin, dissolved	7440-31-5	E421/WT	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Titanium, dissolved	7440-32-6	E421/WT	0.00030	mg/L		<0.00030	<0.00030	----	----	----
Tungsten, dissolved	7440-33-7	E421/WT	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Uranium, dissolved	7440-61-1	E421/WT	0.000010	mg/L		0.000248	0.000361	----	----	----
Vanadium, dissolved	7440-62-2	E421/WT	0.00050	mg/L		<0.00050	<0.00050	----	----	----
Zinc, dissolved	7440-66-6	E421/WT	0.0010	mg/L		<0.0010	0.0011	----	----	----
Zirconium, dissolved	7440-67-7	E421/WT	0.00030	mg/L		0.00031	0.00045	----	----	----
Dissolved mercury filtration location	----	EP509/WT	-	-		Field	Field	----	----	----
Dissolved metals filtration location	----	EP421/WT	-	-		Field	Field	----	----	----

Analytical Results

Sub-Matrix: Groundwater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP23-09_2025-08-25 ----	LF-KP23-08_2025-08-25 ----	----	----	----
					Client sampling date / time	25-Aug-2025 14:05	25-Aug-2025 15:15	----	----	----
						BF2500296-001	BF2500296-002	----	----	----
						Result	Result	----	----	----
Volatile Organic Compounds										
Acetone	67-64-1	E611D/WT	20	µg/L		<20	<20	----	----	----
Benzene	71-43-2	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Bromodichloromethane	75-27-4	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Bromoform	75-25-2	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Bromomethane	74-83-9	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
BTEX, total	----	E611D/WT	1.0	µg/L		<1.0	<1.0	----	----	----
Carbon disulfide	75-15-0	E611D/WT	1.0	µg/L		<1.0	<1.0	----	----	----
Carbon tetrachloride	56-23-5	E611D/WT	0.20	µg/L		<0.20	<0.20	----	----	----
Chlorobenzene	108-90-7	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Chloroethane	75-00-3	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Chloroform	67-66-3	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Chloromethane	74-87-3	E611D/WT	2.0	µg/L		<2.0	<2.0	----	----	----
Dibromochloromethane	124-48-1	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dibromoethane, 1,2-	106-93-4	E611D/WT	0.20	µg/L		<0.20	<0.20	----	----	----
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dichlorodifluoromethane	75-71-8	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloroethane, 1,1-	75-34-3	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloroethane, 1,2-	107-06-2	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloroethylene, 1,1-	75-35-4	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----

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Analytical Results

Sub-Matrix: Groundwater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP23-09_2025-08-25 ----	LF-KP23-08_2025-08-25 ----	----	----	----
					Client sampling date / time	25-Aug-2025 14:05	25-Aug-2025 15:15	----	----	----
						BF2500296-001	BF2500296-002	----	----	----
						Result	Result	----	----	----
Volatile Organic Compounds										
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloroethylene, cis+trans-1,2-	540-59-0	E611D/WT	0.71	µg/L		<0.71	<0.71	----	----	----
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloromethane	75-09-2	E611D/WT	1.0	µg/L		<1.0	<1.0	----	----	----
Dichloropropane, 1,2-	78-87-5	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	0.30	µg/L		<0.30	<0.30	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	0.50	µg/L		<0.5	<0.5	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	0.30	µg/L		<0.30	<0.30	----	----	----
Ethylbenzene	100-41-4	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Hexane, n-	110-54-3	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Hexanone, 2-	591-78-6	E611D/WT	20	µg/L		<20	<20	----	----	----
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	20	µg/L		<20	<20	----	----	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	20	µg/L		<20	<20	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Styrene	100-42-5	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Tetrachloroethylene	127-18-4	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Toluene	108-88-3	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----

Analytical Results

Sub-Matrix: Groundwater
(Matrix: Water)

					Client sample ID	LF-KP23-09_2025-08-25 ----	LF-KP23-08_2025-08-25 ----	----	----	----
					Client sampling date / time	25-Aug-2025 14:05	25-Aug-2025 15:15	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		BF2500296-001	BF2500296-002	----	----	----
						Result	Result	----	----	----
Volatile Organic Compounds										
Trichloroethylene	79-01-6	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Trichlorofluoromethane	75-69-4	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Trihalomethanes [THMs], total	----	E611D/WT	1.0	µg/L		<1.0	<1.0	----	----	----
Vinyl chloride	75-01-4	E611D/WT	0.20	µg/L		<0.20	<0.20	----	----	----
Xylene, m+p-	179601-23-1	E611D/WT	0.40	µg/L		<0.40	<0.40	----	----	----
Xylene, o-	95-47-6	E611D/WT	0.30	µg/L		<0.30	<0.30	----	----	----
Xylenes, total	1330-20-7	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Hydrocarbons										
F1 (C6-C10)	----	E581.F1-L/WT	25	µg/L		<25	<25	----	----	----
F2 (C10-C16)	----	E601/WT	100	µg/L		<100	<100	----	----	----
F3 (C16-C34)	----	E601/WT	250	µg/L		<250	<250	----	----	----
F4 (C34-C50)	----	E601/WT	250	µg/L		<250	<250	----	----	----
F1-BTEX	----	EC580/WT	25	µg/L		<25	<25	----	----	----
Hydrocarbons, total (C6-C50)	n/a	EC581/WT	370	µg/L		<370	<370	----	----	----
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/WT	1.0	%		92.8	95.7	----	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.F1-L/WT	1.0	%		126	123	----	----	----
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611D/WT	1.0	%		95.3	95.4	----	----	----
Difluorobenzene, 1,4-	540-36-3	E611D/WT	1.0	%		98.8	98.5	----	----	----

Analytical Results

Sub-Matrix: Groundwater (Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP23-09_2025-08-25 ----	LF-KP23-08_2025-08-25 ----	----	----	----
					Client sampling date / time	25-Aug-2025 14:05	25-Aug-2025 15:15	----	----	----
						BF2500296-001	BF2500296-002	----	----	----
						Result	Result	----	----	----
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Acenaphthylene	208-96-8	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Acridine	260-94-6	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Anthracene	120-12-7	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Benz(a)anthracene	56-55-3	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Benzo(a)pyrene	50-32-8	E641A-L/WT	0.0050	µg/L		<0.0050	<0.0050	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Benzo(b+j+k)fluoranthene	n/a	E641A-L/WT	0.015	µg/L		<0.015	<0.015	----	----	----
Benzo(g,h,i)perylene	191-24-2	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Benzo(k)fluoranthene	207-08-9	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Chrysene	218-01-9	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A-L/WT	0.0050	µg/L		<0.0050	<0.0050	----	----	----
Fluoranthene	206-44-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Fluorene	86-73-7	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Methylnaphthalene, 1+2-	----	E641A-L/WT	0.015	µg/L		<0.015	<0.015	----	----	----
Methylnaphthalene, 2-	91-57-6	E641A-L/WT	0.010	µg/L		0.014	0.011	----	----	----
Naphthalene	91-20-3	E641A-L/WT	0.010	µg/L		0.014	0.011	----	----	----
Perylene	198-55-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Phenanthrene	85-01-8	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----

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Analytical Results

Sub-Matrix: Groundwater (Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP23-09_2025-08-25 ----	LF-KP23-08_2025-08-25 ----	----	----	----
					Client sampling date / time	25-Aug-2025 14:05	25-Aug-2025 15:15	----	----	----
						BF2500296-001	BF2500296-002	----	----	----
						Result	Result	----	----	----
Polycyclic Aromatic Hydrocarbons										
Pyrene	129-00-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Quinoline	91-22-5	E641A-L/WT	0.010	µg/L		<0.010	0.019	----	----	----
B(a)P total potency equivalents [B(a)P TPE]	----	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A-L/WT	0.1	%		103	104	----	----	----
Naphthalene-d8	1146-65-2	E641A-L/WT	0.1	%		102	107	----	----	----
Phenanthrene-d10	1517-22-2	E641A-L/WT	0.1	%		100	102	----	----	----

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

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QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **BF2500296**	Page	: 1 of 15
Client	: **Baffinland Iron Mines Corporation**	Laboratory	: ALS Environmental - Baffin Island
Contact	: Environmental Lab Results	Account Manager	: Rick Hawthorne
Address	: 360 Oakville Place Dr Suite 300 Oakville ON Canada L6H 6K8	Address	: Mary River, Qikqtani Region Baffin Island, Nunavut Canada
Telephone	: ----	Telephone	: ----
Project	: GW_Landfill	Date Samples Received	: 26-Aug-2025 19:30
PO	: 4500156571	Issue Date	: 05-Sep-2025 16:15
C-O-C number	: 25 08 25_GW_Landfill		
Sampler	: LG/AG		
Site	: MS		
Quote number	: 2024-2025 Scope of Work		
No. of samples received	: 2		
No. of samples analysed	: 2		

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

Key

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

Workorder Comments

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

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

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

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Analysis Holding Time Compliance

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

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

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

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

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) LF-KP23-08_2025-08-25	E298	25-Aug-2025	02-Sep-2025	28 days	8 days	✓	04-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) LF-KP23-09_2025-08-25	E298	25-Aug-2025	02-Sep-2025	28 days	8 days	✓	04-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE LF-KP23-08_2025-08-25	E235.Br	25-Aug-2025	30-Aug-2025	28 days	5 days	✓	03-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE LF-KP23-09_2025-08-25	E235.Br	25-Aug-2025	30-Aug-2025	28 days	5 days	✓	03-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE LF-KP23-08_2025-08-25	E235.Cl	25-Aug-2025	30-Aug-2025	28 days	5 days	✓	03-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE LF-KP23-09_2025-08-25	E235.Cl	25-Aug-2025	30-Aug-2025	28 days	5 days	✓	03-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE LF-KP23-08_2025-08-25	E235.F	25-Aug-2025	30-Aug-2025	28 days	5 days	✓	03-Sep-2025	28 days	5 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
LF-KP23-09_2025-08-25	E235.F	25-Aug-2025	30-Aug-2025	28 days	5 days	✓	03-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Nitrate in Water by IC										
HDPE										
LF-KP23-08_2025-08-25	E235.NO3	25-Aug-2025	30-Aug-2025	3 days	5 days	× EHT	03-Sep-2025	3 days	5 days	× EHT
Anions and Nutrients : Nitrate in Water by IC										
HDPE										
LF-KP23-09_2025-08-25	E235.NO3	25-Aug-2025	30-Aug-2025	3 days	5 days	× EHT	03-Sep-2025	3 days	5 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE										
LF-KP23-08_2025-08-25	E235.NO2	25-Aug-2025	30-Aug-2025	3 days	5 days	× EHT	03-Sep-2025	3 days	5 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE										
LF-KP23-09_2025-08-25	E235.NO2	25-Aug-2025	30-Aug-2025	3 days	5 days	× EHT	03-Sep-2025	3 days	5 days	× EHT
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
LF-KP23-08_2025-08-25	E235.SO4	25-Aug-2025	30-Aug-2025	28 days	5 days	✓	03-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
LF-KP23-09_2025-08-25	E235.SO4	25-Aug-2025	30-Aug-2025	28 days	5 days	✓	03-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass - dissolved (field filtered/sulfuric acid)										
LF-KP23-08_2025-08-25	E375-T	25-Aug-2025	03-Sep-2025	28 days	9 days	✓	04-Sep-2025	28 days	9 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass - dissolved (field filtered/sulfuric acid)										
LF-KP23-09_2025-08-25	E375-T	25-Aug-2025	03-Sep-2025	28 days	9 days	✓	04-Sep-2025	28 days	9 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
LF-KP23-08_2025-08-25	E318	25-Aug-2025	03-Sep-2025	28 days	9 days	✓	03-Sep-2025	28 days	9 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
LF-KP23-09_2025-08-25	E318	25-Aug-2025	03-Sep-2025	28 days	9 days	✓	03-Sep-2025	28 days	9 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
LF-KP23-08_2025-08-25	E372-U	25-Aug-2025	02-Sep-2025	28 days	8 days	✓	03-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
LF-KP23-09_2025-08-25	E372-U	25-Aug-2025	02-Sep-2025	28 days	8 days	✓	03-Sep-2025	28 days	8 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
LF-KP23-08_2025-08-25	E509	25-Aug-2025	03-Sep-2025	28 days	9 days	✓	04-Sep-2025	28 days	9 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
LF-KP23-09_2025-08-25	E509	25-Aug-2025	03-Sep-2025	28 days	9 days	✓	04-Sep-2025	28 days	9 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
LF-KP23-08_2025-08-25	E421	25-Aug-2025	29-Aug-2025	180 days	4 days	✓	29-Aug-2025	180 days	4 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
LF-KP23-09_2025-08-25	E421	25-Aug-2025	29-Aug-2025	180 days	4 days	✓	29-Aug-2025	180 days	4 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate)										
LF-KP23-08_2025-08-25	E581.F1-L	25-Aug-2025	02-Sep-2025	14 days	8 days	✓	02-Sep-2025	14 days	8 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate)										
LF-KP23-09_2025-08-25	E581.F1-L	25-Aug-2025	02-Sep-2025	14 days	8 days	✓	02-Sep-2025	14 days	8 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
LF-KP23-08_2025-08-25	E601	25-Aug-2025	02-Sep-2025	14 days	8 days	✓	04-Sep-2025	40 days	2 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
LF-KP23-09_2025-08-25	E601	25-Aug-2025	02-Sep-2025	14 days	8 days	✓	04-Sep-2025	40 days	2 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
LF-KP23-08_2025-08-25	E358-L	25-Aug-2025	31-Aug-2025	28 days	6 days	✓	04-Sep-2025	28 days	6 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
LF-KP23-09_2025-08-25	E358-L	25-Aug-2025	31-Aug-2025	28 days	6 days	✓	04-Sep-2025	28 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
LF-KP23-08_2025-08-25	E290	25-Aug-2025	30-Aug-2025	14 days	5 days	✓	02-Sep-2025	14 days	5 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
LF-KP23-09_2025-08-25	E290	25-Aug-2025	30-Aug-2025	14 days	5 days	✓	02-Sep-2025	14 days	5 days	✓
Physical Tests : Conductivity in Water										
HDPE										
LF-KP23-08_2025-08-25	E100	25-Aug-2025	30-Aug-2025	28 days	5 days	✓	02-Sep-2025	28 days	5 days	✓
Physical Tests : Conductivity in Water										
HDPE										
LF-KP23-09_2025-08-25	E100	25-Aug-2025	30-Aug-2025	28 days	5 days	✓	02-Sep-2025	28 days	5 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : pH by Meter										
HDPE										
LF-KP23-08_2025-08-25	E108	25-Aug-2025	26-Aug-2025	0.25 hrs	30 hrs	× EHTR-FM	26-Aug-2025	0.25 hrs	30 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE										
LF-KP23-09_2025-08-25	E108	25-Aug-2025	26-Aug-2025	0.25 hrs	31 hrs	× EHTR-FM	26-Aug-2025	0.25 hrs	31 hrs	× EHTR-FM
Physical Tests : TDS by Gravimetry										
HDPE										
LF-KP23-08_2025-08-25	E162	25-Aug-2025	----	----	----		27-Aug-2025	7 days	1 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
LF-KP23-09_2025-08-25	E162	25-Aug-2025	----	----	----		27-Aug-2025	7 days	1 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE										
LF-KP23-08_2025-08-25	E160-L	25-Aug-2025	----	----	----		27-Aug-2025	7 days	1 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE										
LF-KP23-09_2025-08-25	E160-L	25-Aug-2025	----	----	----		27-Aug-2025	7 days	2 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE										
LF-KP23-08_2025-08-25	E121	25-Aug-2025	----	----	----		26-Aug-2025	3 days	1 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE										
LF-KP23-09_2025-08-25	E121	25-Aug-2025	----	----	----		26-Aug-2025	3 days	1 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate)										
LF-KP23-09_2025-08-25	E641A-L	25-Aug-2025	02-Sep-2025	14 days	8 days	✓	03-Sep-2025	40 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
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate)										
LF-KP23-08_2025-08-25	E641A-L	25-Aug-2025	02-Sep-2025	14 days	8 days	✓	03-Sep-2025	40 days	1 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
LF-KP23-08_2025-08-25	E611D	25-Aug-2025	02-Sep-2025	14 days	8 days	✓	02-Sep-2025	14 days	8 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
LF-KP23-09_2025-08-25	E611D	25-Aug-2025	02-Sep-2025	14 days	8 days	✓	02-Sep-2025	14 days	8 days	✓

Legend & Qualifier Definitions

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

EHT: Exceeded ALS recommended hold time prior to analysis.

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

Quality Control Parameter Frequency Compliance

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

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Conductivity in Water	E100	2192483	1	11	9.0	5.0	✓
pH by Meter	E108	2183790	1	20	5.0	5.0	✓
Turbidity by Nephelometry	E121	2183793	1	20	5.0	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	2183897	1	20	5.0	5.0	✓
TDS by Gravimetry	E162	2183898	1	20	5.0	5.0	✓
Bromide in Water by IC	E235.Br	2192491	1	6	16.6	5.0	✓
Chloride in Water by IC	E235.Cl	2192487	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2192490	1	6	16.6	5.0	✓
Nitrite in Water by IC	E235.NO2	2192488	1	10	10.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2192486	1	12	8.3	5.0	✓
Sulfate in Water by IC	E235.SO4	2192489	1	18	5.5	5.0	✓
Alkalinity Species by Titration	E290	2192484	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	2193821	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2193819	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2193097	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2193820	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2197121	1	18	5.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2190641	1	15	6.6	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2194592	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2194685	1	7	14.2	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2194684	1	20	5.0	5.0	✓
Laboratory Control Samples (LCS)							
Conductivity in Water	E100	2192483	1	11	9.0	5.0	✓
pH by Meter	E108	2183790	1	20	5.0	5.0	✓
Turbidity by Nephelometry	E121	2183793	1	20	5.0	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	2183897	1	20	5.0	5.0	✓
TDS by Gravimetry	E162	2183898	1	20	5.0	5.0	✓
Bromide in Water by IC	E235.Br	2192491	1	6	16.6	5.0	✓
Chloride in Water by IC	E235.Cl	2192487	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2192490	1	6	16.6	5.0	✓
Nitrite in Water by IC	E235.NO2	2192488	1	10	10.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2192486	1	12	8.3	5.0	✓
Sulfate in Water by IC	E235.SO4	2192489	1	18	5.5	5.0	✓
Alkalinity Species by Titration	E290	2192484	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	2193821	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2193819	1	20	5.0	5.0	✓

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Control Samples (LCS) - Continued							
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2193097	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2193820	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2197121	1	18	5.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2190641	1	15	6.6	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2194592	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2194685	1	7	14.2	5.0	✓
CCME PHCs - F2-F4 by GC-FID	E601	2194594	1	7	14.2	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2194684	1	20	5.0	5.0	✓
PAHs in Water by Hexane LVI GC-MS (Low Level)	E641A-L	2194595	1	7	14.2	5.0	✓
Method Blanks (MB)							
Conductivity in Water	E100	2192483	1	11	9.0	5.0	✓
Turbidity by Nephelometry	E121	2183793	1	20	5.0	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	2183897	1	20	5.0	5.0	✓
TDS by Gravimetry	E162	2183898	1	20	5.0	5.0	✓
Bromide in Water by IC	E235.Br	2192491	1	6	16.6	5.0	✓
Chloride in Water by IC	E235.Cl	2192487	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2192490	1	6	16.6	5.0	✓
Nitrite in Water by IC	E235.NO2	2192488	1	10	10.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2192486	1	12	8.3	5.0	✓
Sulfate in Water by IC	E235.SO4	2192489	1	18	5.5	5.0	✓
Alkalinity Species by Titration	E290	2192484	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	2193821	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2193819	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2193097	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2193820	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2197121	1	18	5.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2190641	1	15	6.6	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2194592	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2194685	1	7	14.2	5.0	✓
CCME PHCs - F2-F4 by GC-FID	E601	2194594	1	7	14.2	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2194684	1	20	5.0	5.0	✓
PAHs in Water by Hexane LVI GC-MS (Low Level)	E641A-L	2194595	1	7	14.2	5.0	✓
Matrix Spikes (MS)							
Bromide in Water by IC	E235.Br	2192491	1	6	16.6	5.0	✓
Chloride in Water by IC	E235.Cl	2192487	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2192490	1	6	16.6	5.0	✓
Nitrite in Water by IC	E235.NO2	2192488	1	10	10.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2192486	1	12	8.3	5.0	✓
Sulfate in Water by IC	E235.SO4	2192489	1	18	5.5	5.0	✓

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Matrix Spikes (MS) - Continued							
Ammonia by Fluorescence	E298	2193821	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2193819	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2193097	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2193820	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2197121	1	18	5.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2190641	1	15	6.6	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2194592	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2194685	1	7	14.2	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2194684	1	20	5.0	5.0	✓

Methodology References and Summaries

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

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

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Nitrate in Water by IC	E235.NO3 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Sulfate in Water by IC	E235.SO4 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Alkalinity Species by Titration	E290 ALS Environmental - Waterloo	Water	APHA 2320 B (mod)	Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.
Ammonia by Fluorescence	E298 ALS Environmental - Waterloo	Water	Method Fialab 100, 2018	Ammonia in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021)
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318 ALS Environmental - Waterloo	Water	Method Fialab 100, 2018	TKN in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021).
Dissolved Organic Carbon by Combustion (Low Level)	E358-L ALS Environmental - Waterloo	Water	APHA 5310 B (mod)	Dissolved Organic Carbon (Non-Purgeable), also known as NPOC (dissolved), is a direct measurement of DOC after a filtered (0.45 micron) sample has been acidified and purged to remove inorganic carbon (IC). Analysis is by high temperature combustion with infrared detection of CO2. NPOC does not include volatile organic species that are purged off with IC. For samples where the majority of DC (dissolved carbon) is comprised of IC (which is common), this method is more accurate and more reliable than the DOC by subtraction method (i.e. DC minus DIC).
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Total Phosphorus is determined colourimetrically using a discrete analyzer after heated persulfate digestion of the sample.
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Total Dissolved Phosphorus is determined colourimetrically using a discrete analyzer after filtration through a 0.45 micron filter followed by heated persulfate digestion of the sample.
Dissolved Metals in Water by CRC ICPMS	E421 ALS Environmental - Waterloo	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Dissolved Mercury in Water by CVAAS	E509 ALS Environmental - Waterloo	Water	APHA 3030B/EPA 1631E (mod)	Water samples are filtered (0.45 um), preserved with HCl, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1 (mod)	CCME Fraction 1 (F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
CCME PHCs - F2-F4 by GC-FID	E601 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	Sample extracts are analyzed by GC-FID for CCME hydrocarbon fractions (F2-F4). Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
VOCs (Eastern Canada List) by Headspace GC-MS	E611D ALS Environmental - Waterloo	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PAHs in Water by Hexane LVI GC-MS (Low Level)	E641A-L ALS Environmental - Waterloo	Water	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS.
F1-BTEX	EC580 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).
Sum F1 to F4 (C6-C50)	EC581 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	Hydrocarbons, total (C6-C50) is the sum of CCME Fractions F1(C6-C10), F2(C10-C16), F3(C16-C34), and F4(C34-C50). F4G-sg is not used within this calculation due to overlap with other fractions.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Ammonia	EP298 ALS Environmental - Waterloo	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Digestion for TKN in water	EP318 ALS Environmental - Waterloo	Water	APHA 4500-Norg D (mod)	Samples are digested at high temperature using Sulfuric Acid with Copper catalyst, which converts organic nitrogen sources to Ammonia, which is then quantified by the analytical method as TKN. This method is unsuitable for samples containing high levels of nitrate. If nitrate exceeds TKN concentration by ten times or more, results may be biased low.
Preparation for Dissolved Organic Carbon for Combustion	EP358 ALS Environmental - Waterloo	Water	APHA 5310 B (mod)	Preparation for Dissolved Organic Carbon

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Digestion for Total Phosphorus in water	EP372 ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Samples are heated with a persulfate digestion reagent.
Digestion for Dissolved Phosphorus in water	EP375 ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Samples are filtered through a 0.45 micron membrane filter and then heated with a persulfate digestion reagent.
Dissolved Metals Water Filtration	EP421 ALS Environmental - Waterloo	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO3.
Dissolved Mercury Water Filtration	EP509 ALS Environmental - Waterloo	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HCl.
VOCs Preparation for Headspace Analysis	EP581 ALS Environmental - Waterloo	Water	EPA 5021A (mod)	Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler. An aliquot of the headspace is then injected into a GC-MS-FID.
PHCs and PAHs Hexane Extraction	EP601 ALS Environmental - Waterloo	Water	EPA 3511 (mod)	Petroleum Hydrocarbons (PHCs) and Polycyclic Aromatic Hydrocarbons (PAHs) are extracted using a hexane liquid-liquid extraction.

ALS Canada Ltd.

QUALITY CONTROL REPORT

Work Order	: **BF2500296**	Page	: 1 of 19
Client	: Baffinland Iron Mines Corporation	Laboratory	: ALS Environmental - Baffin Island
Contact	: Environmental Lab Results	Account Manager	: Rick Hawthorne
Address	: 360 Oakville Place Dr Suite 300 Oakville ON Canada L6H 6K8	Address	: Mary River, Qikqtani Region Baffin Island, Nunavut Canada
Telephone	: ----	Telephone	:
Project	: GW_Landfill	Date Samples Received	: 26-Aug-2025 19:30
PO	: 4500156571	Date Analysis Commenced	: 26-Aug-2025
C-O-C number	: 25 08 25_GW_Landfill	Issue Date	: 05-Sep-2025 16:15
Sampler	: LG/AG		
Site	: MS		
Quote number	: 2024-2025 Scope of Work		
No. of samples received	: 2		
No. of samples analysed	: 2		

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Laboratory Department*
Adam Jodoin	Team Leader - Inorganics	Baffin Island Inorganics, Baffin Island, Nunavut
Cedrick Velasco	Lab Manager	Baffin Island Inorganics, Baffin Island, Nunavut
Danielle Gravel	Supervisor - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
David Tremblett	VOC Section Supervisor	Waterloo VOC, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Centralized Prep, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Inorganics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Metals, Waterloo, Ontario

General Comments

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

Key :

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

Workorder Comments

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Physical Tests (QC Lot: 2183790)											
BF2500295-001	Anonymous	pH	----	E108	0.10	pH units	7.77	7.79	0.257%	4%	----
Physical Tests (QC Lot: 2183793)											
BF2500295-002	Anonymous	Turbidity	----	E121	0.10	NTU	0.23	0.24	0.01	Diff <2x LOR	----
Physical Tests (QC Lot: 2183897)											
BF2500295-004	Anonymous	Solids, total suspended [TSS]	----	E160-L	1.2	mg/L	<1.3	<1.2	1.2	Diff <2x LOR	----
Physical Tests (QC Lot: 2183898)											
BF2500295-005	Anonymous	Solids, total dissolved [TDS]	----	E162	17	mg/L	63	73	10	Diff <2x LOR	----
Physical Tests (QC Lot: 2192483)											
BF2500281-001	Anonymous	Conductivity	----	E100	1.0	µS/cm	360	356	1.12%	10%	----
Physical Tests (QC Lot: 2192484)											
BF2500281-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	2.0	mg/L	171	176	3.25%	20%	----
Anions and Nutrients (QC Lot: 2192486)											
BF2500295-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	0.026	0.026	0.0004	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2192487)											
BF2500295-001	Anonymous	Chloride	16887-00-6	E235.Cl	0.50	mg/L	<0.50	<0.50	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2192488)											
BF2500295-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2192489)											
BF2500290-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	1.50	mg/L	565	550	2.75%	20%	----
Anions and Nutrients (QC Lot: 2192490)											
BF2500290-001	Anonymous	Fluoride	16984-48-8	E235.F	0.100	mg/L	<0.100	<0.100	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2192491)											
BF2500295-001	Anonymous	Bromide	24959-67-9	E235.Br	0.10	mg/L	<0.10	<0.10	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2193819)											
BF2500296-001	LF-KP23-09_2025-08-25	Kjeldahl nitrogen, total [TKN]	----	E318	0.050	mg/L	0.182	0.211	0.029	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2193820)											
BF2500296-002	LF-KP23-08_2025-08-25	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0842	0.0846	0.522%	20%	----
Anions and Nutrients (QC Lot: 2193821)											
WT2523815-005	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.172	0.171	0.932%	20%	----
Anions and Nutrients (QC Lot: 2197121)											

Sub-Matrix: **Water**

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Laboratory Duplicate (DUP) Report						
					LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Anions and Nutrients (QC Lot: 2197121) - continued											
BF2500296-001	LF-KP23-09_2025-08-25	Phosphorus, total dissolved	7723-14-0	E375-T	0.0020	mg/L	0.0115	0.0118	0.0002	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 2193097)											
BF2500274-004	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	1.72	1.74	0.02	Diff <2x LOR	----
Dissolved Metals (QC Lot: 2190641)											
BF2500296-001	LF-KP23-09_2025-08-25	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0034	0.0033	0.00009	Diff <2x LOR	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00012	0.00010	0.00002	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.00482	0.00482	0.0104%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	31.0	30.9	0.375%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00108	0.00111	0.00003	Diff <2x LOR	----
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0017	0.0017	0.00003	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	18.9	18.8	0.456%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.00042	0.00040	0.00002	Diff <2x LOR	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.00207	0.00210	0.00003	Diff <2x LOR	----
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.050	mg/L	0.731	0.736	0.658%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00049	0.00044	0.00006	Diff <2x LOR	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	1.97	1.96	0.411%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.050	mg/L	2.61	2.60	0.613%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.0172	0.0172	0.00989%	20%	----
		Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Dissolved Metals (QC Lot: 2190641) - continued											
BF2500296-001	LF-KP23-09_2025-08-25	Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.000248	0.000250	0.883%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	0.00031	0.00032	0.000009	Diff <2x LOR	----
Dissolved Metals (QC Lot: 2194592)											
BF2500274-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Volatile Organic Compounds (QC Lot: 2194684)											
BF2500296-001	LF-KP23-09_2025-08-25	Acetone	67-64-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Benzene	71-43-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromodichloromethane	75-27-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromoform	75-25-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromomethane	74-83-9	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Carbon disulfide	75-15-0	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Carbon tetrachloride	56-23-5	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Chlorobenzene	108-90-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroethane	75-00-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroform	67-66-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloromethane	74-87-3	E611D	2.0	µg/L	<2.0	<2.0	0	Diff <2x LOR	----
		Dibromochloromethane	124-48-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dibromoethane, 1,2-	106-93-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorodifluoromethane	75-71-8	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,1-	75-34-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,2-	107-06-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, 1,1-	75-35-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Volatile Organic Compounds (QC Lot: 2194684) - continued											
BF2500296-001	LF-KP23-09_2025-08-25	Dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Dichloropropane, 1,2-	78-87-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Hexane, n-	110-54-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Hexanone, 2-	591-78-6	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethylene	127-18-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Toluene	108-88-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichlorofluoromethane	75-69-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Vinyl chloride	75-01-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 2194685)											
BF2500296-001	LF-KP23-09_2025-08-25	F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	<25	0	Diff <2x LOR	----

Method Blank (MB) Report

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

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 2183793)						
Turbidity	----	E121	0.1	NTU	<0.10	----
Physical Tests (QCLot: 2183897)						
Solids, total suspended [TSS]	----	E160-L	1	mg/L	<1.0	----
Physical Tests (QCLot: 2183898)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Physical Tests (QCLot: 2192483)						
Conductivity	----	E100	1	µS/cm	1.1	----
Physical Tests (QCLot: 2192484)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Anions and Nutrients (QCLot: 2192486)						
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 2192487)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 2192488)						
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	<0.010	----
Anions and Nutrients (QCLot: 2192489)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 2192490)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 2192491)						
Bromide	24959-67-9	E235.Br	0.1	mg/L	<0.10	----
Anions and Nutrients (QCLot: 2193819)						
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 2193820)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 2193821)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 2197121)						
Phosphorus, total dissolved	7723-14-0	E375-T	0.002	mg/L	<0.0020	----
Organic / Inorganic Carbon (QCLot: 2193097)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Dissolved Metals (QCLot: 2190641)						

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 2190641) - continued						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 2190641) - continued						
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 2194592)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Volatile Organic Compounds (QCLot: 2194684)						
Acetone	67-64-1	E611D	20	µg/L	<20	----
Benzene	71-43-2	E611D	0.5	µg/L	<0.50	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	<0.50	----
Bromoform	75-25-2	E611D	0.5	µg/L	<0.50	----
Bromomethane	74-83-9	E611D	0.5	µg/L	<0.50	----
Carbon disulfide	75-15-0	E611D	1	µg/L	<1.0	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	<0.20	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	<0.50	----
Chloroethane	75-00-3	E611D	0.5	µg/L	<0.50	----
Chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----
Chloromethane	74-87-3	E611D	2	µg/L	<2.0	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	<0.50	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	<0.20	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	<0.50	----
Dichloromethane	75-09-2	E611D	1	µg/L	<1.0	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	<0.50	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	<0.30	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	<0.50	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 2194684) - continued						
Hexanone, 2-	591-78-6	E611D	20	µg/L	<20	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	<0.50	----
Styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----
Toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	<0.50	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	<0.50	----
Vinyl chloride	75-01-4	E611D	0.2	µg/L	<0.20	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----
Hydrocarbons (QCLot: 2194594)						
F2 (C10-C16)	----	E601	100	µg/L	<100	----
F3 (C16-C34)	----	E601	250	µg/L	<250	----
F4 (C34-C50)	----	E601	250	µg/L	<250	----
Hydrocarbons (QCLot: 2194685)						
F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	----
Polycyclic Aromatic Hydrocarbons (QCLot: 2194595)						
Acenaphthene	83-32-9	E641A-L	0.01	µg/L	<0.010	----
Acenaphthylene	208-96-8	E641A-L	0.01	µg/L	<0.010	----
Acridine	260-94-6	E641A-L	0.01	µg/L	<0.010	----
Anthracene	120-12-7	E641A-L	0.01	µg/L	<0.010	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	µg/L	<0.010	----
Benzo(a)pyrene	50-32-8	E641A-L	0.005	µg/L	<0.0050	----
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	µg/L	<0.010	----
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	µg/L	<0.010	----
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	µg/L	<0.010	----
Chrysene	218-01-9	E641A-L	0.01	µg/L	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	µg/L	<0.0050	----
Fluoranthene	206-44-0	E641A-L	0.01	µg/L	<0.010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 2194595) - continued						
Fluorene	86-73-7	E641A-L	0.01	µg/L	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	µg/L	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	µg/L	<0.010	----
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	µg/L	<0.010	----
Naphthalene	91-20-3	E641A-L	0.01	µg/L	<0.010	----
Perylene	198-55-0	E641A-L	0.01	µg/L	<0.010	----
Phenanthrene	85-01-8	E641A-L	0.01	µg/L	<0.010	----
Pyrene	129-00-0	E641A-L	0.01	µg/L	<0.010	----
Quinoline	91-22-5	E641A-L	0.01	µg/L	<0.010	----

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
Physical Tests (QCLot: 2183790)									
pH	----	E108	----	pH units	7 pH units	100	98.0	102	----
Physical Tests (QCLot: 2183793)									
Turbidity	----	E121	0.1	NTU	200 NTU	99.0	85.0	115	----
Physical Tests (QCLot: 2183897)									
Solids, total suspended [TSS]	----	E160-L	1	mg/L	250 mg/L	99.0	85.0	115	----
Physical Tests (QCLot: 2183898)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	850 mg/L	100	85.0	115	----
Physical Tests (QCLot: 2192483)									
Conductivity	----	E100	1	µS/cm	1410 µS/cm	97.2	90.0	110	----
Physical Tests (QCLot: 2192484)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	150 mg/L	99.2	85.0	115	----
Anions and Nutrients (QCLot: 2192486)									
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	2.5 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 2192487)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	100.0	90.0	110	----
Anions and Nutrients (QCLot: 2192488)									
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	0.5 mg/L	99.8	90.0	110	----
Anions and Nutrients (QCLot: 2192489)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 2192490)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	104	90.0	110	----
Anions and Nutrients (QCLot: 2192491)									
Bromide	24959-67-9	E235.Br	0.1	mg/L	0.5 mg/L	99.4	85.0	115	----
Anions and Nutrients (QCLot: 2193819)									
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	4 mg/L	110	75.0	125	----
Anions and Nutrients (QCLot: 2193820)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.333 mg/L	98.2	80.0	120	----
Anions and Nutrients (QCLot: 2193821)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	103	85.0	115	----
Anions and Nutrients (QCLot: 2197121)									
Phosphorus, total dissolved	7723-14-0	E375-T	0.002	mg/L	0.333 mg/L	96.6	80.0	120	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Organic / Inorganic Carbon (QCLot: 2193097)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	100	80.0	120	----
Dissolved Metals (QCLot: 2190641)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	0.1 mg/L	103	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	0.05 mg/L	101	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	0.05 mg/L	103	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.012 mg/L	105	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.005 mg/L	103	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	0.05 mg/L	104	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	0.05 mg/L	92.9	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.005 mg/L	103	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	2.5 mg/L	98.6	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.002 mg/L	104	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.012 mg/L	96.8	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.012 mg/L	95.5	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.012 mg/L	94.7	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	0.05 mg/L	92.7	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.025 mg/L	105	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.012 mg/L	96.1	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	2.5 mg/L	95.7	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.012 mg/L	103	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.012 mg/L	99.4	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.025 mg/L	94.0	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	0.5 mg/L	97.3	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	2.5 mg/L	97.3	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.005 mg/L	107	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	0.05 mg/L	94.0	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	0.5 mg/L	96.2	60.0	140	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.005 mg/L	100	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	2.5 mg/L	92.0	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.012 mg/L	103	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	2.5 mg/L	95.7	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.005 mg/L	103	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	0.05 mg/L	104	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.005 mg/L	104	80.0	120	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 2190641) - continued									
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.025 mg/L	102	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.012 mg/L	95.6	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.005 mg/L	98.1	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0 mg/L	108	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.025 mg/L	96.4	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.025 mg/L	96.8	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.005 mg/L	98.1	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	97.7	80.0	120	----
Volatile Organic Compounds (QCLot: 2194684)									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	114	70.0	130	----
Benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	99.3	70.0	130	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	97.1	70.0	130	----
Bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	82.9	70.0	130	----
Bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	78.7	60.0	140	----
Carbon disulfide	75-15-0	E611D	1	µg/L	100 µg/L	90.0	70.0	130	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	94.3	70.0	130	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	96.6	70.0	130	----
Chloroethane	75-00-3	E611D	0.5	µg/L	100 µg/L	99.8	60.0	140	----
Chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	97.6	70.0	130	----
Chloromethane	74-87-3	E611D	2	µg/L	100 µg/L	107	60.0	140	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	94.5	70.0	130	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	87.7	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	98.0	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	95.8	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	96.1	70.0	130	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	117	60.0	140	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	98.0	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	90.1	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	96.6	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	100	70.0	130	----
Dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	97.4	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	95.7	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	90.5	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	85.6	70.0	130	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 2194684) - continued									
Ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	93.0	70.0	130	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	98.7	70.0	130	----
Hexanone, 2-	591-78-6	E611D	20	µg/L	100 µg/L	78.9	70.0	130	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	87.6	70.0	130	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	83.9	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	97.1	70.0	130	----
Styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	93.0	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	94.2	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	84.2	70.0	130	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	94.1	70.0	130	----
Toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	92.7	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	93.7	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	90.2	70.0	130	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	99.2	70.0	130	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	99.4	60.0	140	----
Vinyl chloride	75-01-4	E611D	0.2	µg/L	100 µg/L	103	60.0	140	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	97.0	70.0	130	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	95.7	70.0	130	----
Hydrocarbons (QCLot: 2194594)									
F2 (C10-C16)	----	E601	100	µg/L	3770 µg/L	86.7	70.0	130	----
F3 (C16-C34)	----	E601	250	µg/L	7760 µg/L	98.3	70.0	130	----
F4 (C34-C50)	----	E601	250	µg/L	4200 µg/L	112	70.0	130	----
Hydrocarbons (QCLot: 2194685)									
F1 (C6-C10)	----	E581.F1-L	25	µg/L	2000 µg/L	110	80.0	120	----
Polycyclic Aromatic Hydrocarbons (QCLot: 2194595)									
Acenaphthene	83-32-9	E641A-L	0.01	µg/L	0.526 µg/L	97.2	50.0	140	----
Acenaphthylene	208-96-8	E641A-L	0.01	µg/L	0.526 µg/L	91.2	50.0	140	----
Acridine	260-94-6	E641A-L	0.01	µg/L	0.526 µg/L	89.6	50.0	140	----
Anthracene	120-12-7	E641A-L	0.01	µg/L	0.526 µg/L	83.2	50.0	140	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	µg/L	0.526 µg/L	113	50.0	140	----
Benzo(a)pyrene	50-32-8	E641A-L	0.005	µg/L	0.526 µg/L	102	50.0	140	----
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	µg/L	0.526 µg/L	110	50.0	140	----
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	µg/L	0.526 µg/L	113	50.0	140	----
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	µg/L	0.526 µg/L	109	50.0	140	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 2194595) - continued									
Chrysene	218-01-9	E641A-L	0.01	µg/L	0.526 µg/L	109	50.0	140	----
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	µg/L	0.526 µg/L	82.7	50.0	140	----
Fluoranthene	206-44-0	E641A-L	0.01	µg/L	0.526 µg/L	97.3	50.0	140	----
Fluorene	86-73-7	E641A-L	0.01	µg/L	0.526 µg/L	94.8	50.0	140	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	µg/L	0.526 µg/L	106	50.0	140	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	µg/L	0.526 µg/L	103	50.0	140	----
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	µg/L	0.526 µg/L	98.8	50.0	140	----
Naphthalene	91-20-3	E641A-L	0.01	µg/L	0.526 µg/L	92.1	50.0	140	----
Perylene	198-55-0	E641A-L	0.01	µg/L	0.526 µg/L	111	50.0	140	----
Phenanthrene	85-01-8	E641A-L	0.01	µg/L	0.526 µg/L	105	50.0	140	----
Pyrene	129-00-0	E641A-L	0.01	µg/L	0.526 µg/L	100	50.0	140	----
Quinoline	91-22-5	E641A-L	0.01	µg/L	0.526 µg/L	104	50.0	140	----

Matrix Spike (MS) Report

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

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 2192486)										
BF2500295-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	2.43 mg/L	2.5 mg/L	97.4	75.0	125	----
Anions and Nutrients (QCLot: 2192487)										
BF2500295-001	Anonymous	Chloride	16887-00-6	E235.Cl	97.8 mg/L	100 mg/L	97.8	75.0	125	----
Anions and Nutrients (QCLot: 2192488)										
BF2500295-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.489 mg/L	0.5 mg/L	97.8	75.0	125	----
Anions and Nutrients (QCLot: 2192489)										
BF2500290-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	ND mg/L	----	ND	75.0	125	----
Anions and Nutrients (QCLot: 2192490)										
BF2500290-001	Anonymous	Fluoride	16984-48-8	E235.F	4.57 mg/L	5 mg/L	91.4	75.0	125	----
Anions and Nutrients (QCLot: 2192491)										
BF2500295-001	Anonymous	Bromide	24959-67-9	E235.Br	0.52 mg/L	0.5 mg/L	105	75.0	125	----
Anions and Nutrients (QCLot: 2193819)										
BF2500296-001	LF-KP23-09_2025-08-25	Kjeldahl nitrogen, total [TKN]	----	E318	2.97 mg/L	2.5 mg/L	119	70.0	130	----
Anions and Nutrients (QCLot: 2193820)										
BF2500296-002	LF-KP23-08_2025-08-25	Phosphorus, total	7723-14-0	E372-U	0.0970 mg/L	0.1 mg/L	97.0	70.0	130	----
Anions and Nutrients (QCLot: 2193821)										
WT2523815-005	Anonymous	Ammonia, total (as N)	7664-41-7	E298	ND mg/L	----	ND	75.0	125	----
Anions and Nutrients (QCLot: 2197121)										
BF2500296-001	LF-KP23-09_2025-08-25	Phosphorus, total dissolved	7723-14-0	E375-T	0.101 mg/L	0.1 mg/L	101	70.0	130	----
Organic / Inorganic Carbon (QCLot: 2193097)										
BF2500274-004	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	4.95 mg/L	5 mg/L	98.9	70.0	130	----
Dissolved Metals (QCLot: 2190641)										
BF2500296-002	LF-KP23-08_2025-08-25	Aluminum, dissolved	7429-90-5	E421	0.101 mg/L	0.1 mg/L	101	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0525 mg/L	0.05 mg/L	105	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0545 mg/L	0.05 mg/L	109	70.0	130	----
		Barium, dissolved	7440-39-3	E421	0.0126 mg/L	0.012 mg/L	101	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.00545 mg/L	0.005 mg/L	109	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.0472 mg/L	0.05 mg/L	94.5	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.046 mg/L	0.05 mg/L	92.8	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00526 mg/L	0.005 mg/L	105	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.00269 mg/L	0.002 mg/L	108	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0119 mg/L	0.012 mg/L	95.1	70.0	130	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 2190641) - continued										
BF2500296-002	LF-KP23-08_2025-08-25	Cobalt, dissolved	7440-48-4	E421	0.0117 mg/L	0.012 mg/L	93.7	70.0	130	----
		Copper, dissolved	7440-50-8	E421	0.0114 mg/L	0.012 mg/L	91.7	70.0	130	----
		Iron, dissolved	7439-89-6	E421	0.044 mg/L	0.05 mg/L	88.8	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0257 mg/L	0.025 mg/L	103	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.0131 mg/L	0.012 mg/L	105	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	ND mg/L	----	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	0.0124 mg/L	0.012 mg/L	99.6	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.0127 mg/L	0.012 mg/L	102	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0228 mg/L	0.025 mg/L	91.2	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	0.536 mg/L	0.5 mg/L	107	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	2.41 mg/L	2.5 mg/L	96.3	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.00520 mg/L	0.005 mg/L	104	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0539 mg/L	0.05 mg/L	108	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	ND mg/L	----	ND	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00502 mg/L	0.005 mg/L	100	70.0	130	----
		Sodium, dissolved	7440-23-5	E421	2.26 mg/L	2.5 mg/L	90.4	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	ND mg/L	----	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	2.54 mg/L	2.5 mg/L	102	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.00568 mg/L	0.005 mg/L	114	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.0514 mg/L	0.05 mg/L	103	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.00505 mg/L	0.005 mg/L	101	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0260 mg/L	0.025 mg/L	104	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0122 mg/L	0.012 mg/L	97.8	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.00488 mg/L	0.005 mg/L	97.7	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	ND mg/L	----	ND	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.0246 mg/L	0.025 mg/L	98.3	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.0251 mg/L	0.025 mg/L	100	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.00503 mg/L	0.005 mg/L	101	70.0	130	----
Dissolved Metals (QCLot: 2194592)										
BF2500274-002	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000952 mg/L	0 mg/L	95.2	70.0	130	----
Volatile Organic Compounds (QCLot: 2194684)										
BF2500296-001	LF-KP23-09_2025-08-25	Acetone	67-64-1	E611D	100 µg/L	100 µg/L	99.8	60.0	140	----
		Benzene	71-43-2	E611D	98.6 µg/L	100 µg/L	98.6	60.0	140	----
		Bromodichloromethane	75-27-4	E611D	96.4 µg/L	100 µg/L	96.4	60.0	140	----
		Bromoform	75-25-2	E611D	83.0 µg/L	100 µg/L	83.0	60.0	140	----
		Bromomethane	74-83-9	E611D	79.3 µg/L	100 µg/L	79.3	60.0	140	----
		Carbon disulfide	75-15-0	E611D	94.3 µg/L	100 µg/L	94.3	60.0	140	----
		Carbon tetrachloride	56-23-5	E611D	91.4 µg/L	100 µg/L	91.4	60.0	140	----
		Chlorobenzene	108-90-7	E611D	96.1 µg/L	100 µg/L	96.1	60.0	140	----
		Chloroethane	75-00-3	E611D	98.0 µg/L	100 µg/L	98.0	60.0	140	----
		Chloroform	67-66-3	E611D	96.1 µg/L	100 µg/L	96.1	60.0	140	----
		Chloromethane	74-87-3	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		Dibromochloromethane	124-48-1	E611D	94.0 µg/L	100 µg/L	94.0	60.0	140	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 2194684) - continued										
BF2500296-001	LF-KP23-09_2025-08-25	Dibromoethane, 1,2-	106-93-4	E611D	87.6 µg/L	100 µg/L	87.6	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	97.3 µg/L	100 µg/L	97.3	60.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	94.3 µg/L	100 µg/L	94.3	60.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	94.9 µg/L	100 µg/L	94.9	60.0	140	----
		Dichlorodifluoromethane	75-71-8	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611D	87.8 µg/L	100 µg/L	87.8	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611D	89.8 µg/L	100 µg/L	89.8	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611D	99.5 µg/L	100 µg/L	99.5	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	95.8 µg/L	100 µg/L	95.8	60.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	98.9 µg/L	100 µg/L	98.9	60.0	140	----
		Dichloromethane	75-09-2	E611D	96.4 µg/L	100 µg/L	96.4	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611D	94.8 µg/L	100 µg/L	94.8	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	89.9 µg/L	100 µg/L	89.9	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	85.9 µg/L	100 µg/L	85.9	60.0	140	----
		Ethylbenzene	100-41-4	E611D	92.2 µg/L	100 µg/L	92.2	60.0	140	----
		Hexane, n-	110-54-3	E611D	88.9 µg/L	100 µg/L	88.9	60.0	140	----
		Hexanone, 2-	591-78-6	E611D	81 µg/L	100 µg/L	81.0	60.0	140	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	97 µg/L	100 µg/L	97.0	60.0	140	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	85 µg/L	100 µg/L	85.1	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	95.7 µg/L	100 µg/L	95.7	60.0	140	----
		Styrene	100-42-5	E611D	92.4 µg/L	100 µg/L	92.4	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	94.6 µg/L	100 µg/L	94.6	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	85.0 µg/L	100 µg/L	85.0	60.0	140	----
		Tetrachloroethylene	127-18-4	E611D	92.3 µg/L	100 µg/L	92.3	60.0	140	----
		Toluene	108-88-3	E611D	92.4 µg/L	100 µg/L	92.4	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	91.4 µg/L	100 µg/L	91.4	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	89.8 µg/L	100 µg/L	89.8	60.0	140	----
		Trichloroethylene	79-01-6	E611D	97.3 µg/L	100 µg/L	97.3	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611D	94.5 µg/L	100 µg/L	94.5	60.0	140	----
		Vinyl chloride	75-01-4	E611D	100 µg/L	100 µg/L	100	60.0	140	----
		Xylene, m+p-	179601-23-1	E611D	193 µg/L	200 µg/L	96.5	60.0	140	----
		Xylene, o-	95-47-6	E611D	95.8 µg/L	100 µg/L	95.8	60.0	140	----
Hydrocarbons (QCLot: 2194685)										
BF2500296-001	LF-KP23-09_2025-08-25	F1 (C6-C10)	----	E581.F1-L	1850 µg/L	2000 µg/L	92.6	60.0	140	----

Chain of Custody: 25 08 25_GW_Landfill

Client Info	Project Info	Laboratory Info	
Baffinland Iron Mine Corporation 2275 Upper Middle Rd E, Suite 300 Oakville, ON, L6H 0C3 **Phone:** 647-253-0596 x6016/6039/4131 **Email:** environment.coordinators@baffinland.com; environment.superintendents@baffinland.com	**Job Reference (Project):** GW_Landfill **Task:** , GW_Landfill_250825 **Site:** MS	**Lab Name:** ALS Waterloo **Contact:** Rick Hawthorne **Phone:** 519.886.6910 **Email:** Rick.Hawthorne@ALSGlobal.com	**Address:** Unit 1 - 60 Northland Road Waterloo, ON,N2V 2B8
Email Invoice: ap@baffinland.com; environment.superintendents@baffinland.com **Email EDD:** bim.equissa@baffinland.com **Email COA:** environment.labresults@baffinland.com	**Turn around Time:** Routine (R) **Sampler 1:** LG **Sampler 2:** AG **Sampler 3:**	**ALS Quote #:** WT2020BIMC1000001 **ALS PO #:** 4500156571	**Lab Work Order #** (lab use only):

Sample Details				Field Data			Analysis Requested											
Sample ID (sys_sample_code)	**Location (sys_loc_code)**	**Sample Date and Time**	**Matrix**	**pH, Field (pH units)**	**Temperature, Field (deg C)**	**Total # of Containers**	**ALS_GW_Landfill**											
LF-KP23-09_2025-08-25	**LF-KP23-09**	**8/25/2025 2:05:00 PM**	**WG**	**6.91**	**1.8**	**9**	**X**											
LF-KP23-08_2025-08-25	**LF-KP23-08**	**8/25/2025 3:15:00 PM**	**WG**	**2.9**	**7.8**	**9**	**X**											

Relinquished by:	Bradley Rasmussen	**Date:**	8/25/2025 4:51:00 PM
Additional Comments			
Initial Shipment Reception (lab use only)		**Final Shipment Reception** (lab use only)	
Received by:		**Received by:**	
Date/Time:		**Date/Time:**	

Baffinland

Chain of Custody: 25 08 25_GW_Landfill

Client Info	Project Info	Laboratory Info	
Baffinland Iron Mine Corporation 2275 Upper Middle Rd E, Suite 300 Oakville, ON, L6H 0C3 **Phone:** 647-253-0596 x6016/6039/4131 **Email:** environment.coordinators@baffinland.com; environment.superintendents@baffinland.com	**Job Reference (Project):** GW_Landfill **Task:** , GW_Landfill_250825 **Site:** MS	**Lab Name:** ALS Waterloo **Contact:** Rick Hawthorne **Phone:** 519.886.6910 **Email:** Rick.Hawthorne@ALSGlobal.com	**Address:** Unit 1 - 60 Northland Road Waterloo, ON,N2V 2B8
Email Invoice: ap@baffinland.com; environment.superintendents@baffinland.com **Email EDD:** bim.equissa@baffinland.com **Email COA:** environment.labresults@baffinland.com	**Turn around Time:** Routine (R) **Sampler 1:** LG **Sampler 2:** AG **Sampler 3:**	**ALS Quote #:** WT2020BIMC1000001 **ALS PO #:** 4500156571	**Lal**

Environmental Division
Baffin Island
Work Order Reference
BF2500296

Telephone

Sample Details				Field Data			Ana										
Sample ID (sys_sample_code)	**Location (sys_loc_code)**	**Sample Date and Time**	**Matrix**	**pH, Field (pH units)**	**Temperature, Field (deg C)**	**Total # of Containers**	**ALS_GW_Landfill**										
LF-KP23-09_2025-08-25	**LF-KP23-09**	**8/25/2025 2:05:00 PM**	**WG**	**6.91**	**1.8**	**9**	**X**										
LF-KP23-08_2025-08-25	**LF-KP23-08**	**8/25/2025 3:15:00 PM**	**WG**	**2.9**	**7.8**	**9**	**X**										

Relinquished by:	Bradley Rasmussen	**Date:**	8/25/2025 4:51:00 PM
Additional Comments			
Initial Shipment Reception (lab use only)		**Final Shipment Reception** (lab use only)	
Received by:		**Received by:**	
Date/Time:		**Date/Time:**	29 AUG 25 9:15

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CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	:	**BF2500297**		
Client	:	**Baffinland Iron Mines Corporation**	Laboratory	: ALS Environmental - Baffin Island
Contact	:	Environmental Lab Results	Account Manager	: Rick Hawthorne
Address	:	360 Oakville Place Dr Suite 300 Oakville Ontario Canada L6H 6K8	Address	: Mary River, Qikqtani Region Baffin Island NU Canada
Telephone	:	----	Telephone	:
Project	:	MS_Landfill_Groundwater	Date Samples Received	: 26-Aug-2025 19:30
PO	:	4500156571	Date Analysis Commenced	: 26-Aug-2025
C-O-C number	:	25 08 26_MS_Landfill_Groundwater	Issue Date	: 08-Sep-2025 16:05
Sampler	:	LG/JM		
Site	:	MS		
Quote number	:	2024-2025 Scope of Work		
No. of samples received	:	5		
No. of samples analysed	:	5		

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
- Guideline Comparison

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*
Adam Jodoin		Inorganics, Baffin Island, Nunavut
Cedrick Velasco		Inorganics, Baffin Island, Nunavut
Danielle Gravel		Organics, Waterloo, Ontario
David Tremblett		VOC, Waterloo, Ontario
Walt Kippenhuck		Inorganics, Waterloo, Ontario
Walt Kippenhuck		Metals, Waterloo, Ontario
Walt Kippenhuck		Centralized Prep, Waterloo, Ontario

Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
LF-KP22-05_2025-08-26 ----	Water	Solids, total suspended [TSS]		NWB_LFILL (Table 7 Effluent)	----	51.8 mg/L	30 mg/L

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.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key: LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units
µg/L	micrograms per litre
µS/cm	microsiemens per centimetre

>: greater than.
<: less than.

Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).
For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit.

Qualifiers

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

Analytical Results Evaluation

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-06_2025-08-26 ----	LF-KP23-07_2025-08-26 ----	LF-KP23-11_2025-08-26 ----	LF-KP22-05_2025-08-26 ----	LF-KP23-01_2025-08-26 ----	----	----
				Client sampling date / time	26-Aug-2025 11:05	26-Aug-2025 12:00	26-Aug-2025 14:05	26-Aug-2025 15:45	26-Aug-2025 17:00	----	----
				Sub-Matrix	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	----	----
					BF2500297-001	BF2500297-002	BF2500297-003	BF2500297-004	BF2500297-005	----	----
					Result	Result	Result	Result	Result	----	----
Sample Preparation											
Dissolved carbon filtration location	----	EP358/WT	-		field	lab	field	field	field	----	----
Physical Tests											
Conductivity	----	E100/WT	µS/cm		311	285	321	583	438	----	----
pH	----	E108/BF	pH units		7.76	7.60	7.57	6.99	7.33	----	----
Solids, total dissolved [TDS]	----	E162/BF	mg/L		160	136	166	304	243	----	----
Solids, total suspended [TSS]	----	E160-L/BF	mg/L		4.8	12.0	23.2	51.8	6.7	----	----
Turbidity	----	E121/BF	NTU		1.47	3.84	10.5	35.5	3.87	----	----
Alkalinity, total (as CaCO3)	----	E290/WT	mg/L		150	140	166	200	161	----	----
Anions and Nutrients											
Ammonia, total (as N)	7664-41-7	E298/WT	mg/L		<0.0050	<0.0050	<0.0050	0.701	0.0146	----	----
Bromide	24959-67-9	E235.Br/WT	mg/L		<0.10	<0.10	<0.10	0.21	0.13	----	----
Chloride	16887-00-6	E235.Cl/WT	mg/L		2.64	0.74	3.06	57.3	9.28	----	----
Fluoride	16984-48-8	E235.F/WT	mg/L		0.040	0.090	0.094	0.078	0.063	----	----
Kjeldahl nitrogen, total [TKN]	----	E318/WT	mg/L		0.187	0.193	0.089	1.08	0.347	----	----
Nitrate (as N)	14797-55-8	E235.NO3/WT	mg/L		0.144	<0.020	<0.020	<0.020	0.965	----	----
Nitrite (as N)	14797-65-0	E235.NO2/WT	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	----	----
Phosphorus, total	7723-14-0	E372-U/WT	mg/L		0.0051	0.0114	0.0349	0.214	0.0113	----	----
Phosphorus, total dissolved	7723-14-0	E375-T/WT	mg/L		0.0033	0.0024	<0.0020	0.0085	0.0044	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	mg/L		12.8	1.30	1.66	14.4	45.1	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-06_2025-08-26 ----	LF-KP23-07_2025-08-26 ----	LF-KP23-11_2025-08-26 ----	LF-KP22-05_2025-08-26 ----	LF-KP23-01_2025-08-26 ----	----	----
				Client sampling date / time	26-Aug-2025 11:05	26-Aug-2025 12:00	26-Aug-2025 14:05	26-Aug-2025 15:45	26-Aug-2025 17:00	----	----
				Sub-Matrix	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	----	----
					BF2500297-001	BF2500297-002	BF2500297-003	BF2500297-004	BF2500297-005	----	----
					Result	Result	Result	Result	Result	----	----
Organic / Inorganic Carbon											
Carbon, dissolved organic [DOC]	----	E358-L/WT	mg/L		4.19	3.68	2.13	8.46	3.31	----	----
Dissolved Metals											
Aluminum, dissolved	7429-90-5	E421/WT	mg/L		0.0071	0.0040	0.0061	0.0072	0.0044	----	----
Antimony, dissolved	7440-36-0	E421/WT	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	----	----
Arsenic, dissolved	7440-38-2	E421/WT	mg/L		0.00028	0.00016	0.00010	0.00288	0.00044	----	----
Barium, dissolved	7440-39-3	E421/WT	mg/L		0.0262	0.0112	0.0271	0.0281	0.0510	----	----
Beryllium, dissolved	7440-41-7	E421/WT	mg/L		<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	----	----
Bismuth, dissolved	7440-69-9	E421/WT	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	----	----
Boron, dissolved	7440-42-8	E421/WT	mg/L		0.145	<0.010	0.014	0.047	0.460	----	----
Cadmium, dissolved	7440-43-9	E421/WT	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000067	----	----
Calcium, dissolved	7440-70-2	E421/WT	mg/L		27.8	30.9	33.4	39.0	46.6	----	----
Cesium, dissolved	7440-46-2	E421/WT	mg/L		0.000014	<0.000010	<0.000010	<0.000010	<0.000010	----	----
Chromium, dissolved	7440-47-3	E421/WT	mg/L		0.00182	<0.00050	<0.00050	<0.00050	0.00146	----	----
Cobalt, dissolved	7440-48-4	E421/WT	mg/L		<0.00010	<0.00010	<0.00010	0.00614	0.00158	----	----
Copper, dissolved	7440-50-8	E421/WT	mg/L		0.00381	0.00235	0.00124	0.00047	0.00170	----	----
Iron, dissolved	7439-89-6	E421/WT	mg/L		0.014	<0.010	0.021	5.18	0.024	----	----
Lead, dissolved	7439-92-1	E421/WT	mg/L		0.000053	<0.000050	<0.000050	0.000053	<0.000050	----	----
Lithium, dissolved	7439-93-2	E421/WT	mg/L		0.0012	0.0018	0.0022	0.0029	0.0175	----	----
Magnesium, dissolved	7439-95-4	E421/WT	mg/L		23.4	19.6	19.8	20.6	23.4	----	----
Manganese, dissolved	7439-96-5	E421/WT	mg/L		0.00104	<0.00010	0.0281	1.99	0.269	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-06_2025-08-26 ----	LF-KP23-07_2025-08-26 ----	LF-KP23-11_2025-08-26 ----	LF-KP22-05_2025-08-26 ----	LF-KP23-01_2025-08-26 ----	----	----
				Client sampling date / time	26-Aug-2025 11:05	26-Aug-2025 12:00	26-Aug-2025 14:05	26-Aug-2025 15:45	26-Aug-2025 17:00	----	----
				Sub-Matrix	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	----	----
					BF2500297-001	BF2500297-002	BF2500297-003	BF2500297-004	BF2500297-005	----	----
					Result	Result	Result	Result	Result	----	----
Dissolved Metals											
Mercury, dissolved	7439-97-6	E509/WT	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	----	----
Molybdenum, dissolved	7439-98-7	E421/WT	mg/L		0.000524	0.000310	0.000489	0.000463	0.00137	----	----
Nickel, dissolved	7440-02-0	E421/WT	mg/L		0.00683	0.00477	0.00084	0.00384	0.00790	----	----
Phosphorus, dissolved	7723-14-0	E421/WT	mg/L		<0.050	<0.050	<0.050	0.087	<0.050	----	----
Potassium, dissolved	7440-09-7	E421/WT	mg/L		1.20	1.22	2.16	2.62	3.03	----	----
Rubidium, dissolved	7440-17-7	E421/WT	mg/L		0.00607	0.00268	0.00101	0.00034	0.00592	----	----
Selenium, dissolved	7782-49-2	E421/WT	mg/L		0.000053	<0.000050	<0.000050	0.00421	0.000139	----	----
Silicon, dissolved	7440-21-3	E421/WT	mg/L		5.07	1.94	2.84	3.15	3.74	----	----
Silver, dissolved	7440-22-4	E421/WT	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	----	----
Sodium, dissolved	7440-23-5	E421/WT	mg/L		1.85	0.405	5.23	50.5	5.19	----	----
Strontium, dissolved	7440-24-6	E421/WT	mg/L		0.0150	0.0158	0.0356	0.0404	0.0372	----	----
Sulfur, dissolved	7704-34-9	E421/WT	mg/L		4.69	<0.50	0.71	6.63	17.7	----	----
Tellurium, dissolved	13494-80-9	E421/WT	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	----	----
Thallium, dissolved	7440-28-0	E421/WT	mg/L		0.000014	0.000012	<0.000010	<0.000010	0.000016	----	----
Thorium, dissolved	7440-29-1	E421/WT	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	----	----
Tin, dissolved	7440-31-5	E421/WT	mg/L		0.00017	<0.00010	<0.00010	<0.00010	<0.00010	----	----
Titanium, dissolved	7440-32-6	E421/WT	mg/L		<0.00030	<0.00030	<0.00030	0.00036	<0.00030	----	----
Tungsten, dissolved	7440-33-7	E421/WT	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	----	----
Uranium, dissolved	7440-61-1	E421/WT	mg/L		0.000558	0.000925	0.00213	0.000416	0.00343	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-06_2025-08-26 ----	LF-KP23-07_2025-08-26 ----	LF-KP23-11_2025-08-26 ----	LF-KP22-05_2025-08-26 ----	LF-KP23-01_2025-08-26 ----	----	----
				Client sampling date / time	26-Aug-2025 11:05	26-Aug-2025 12:00	26-Aug-2025 14:05	26-Aug-2025 15:45	26-Aug-2025 17:00	----	----
				Sub-Matrix	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	----	----
					BF2500297-001	BF2500297-002	BF2500297-003	BF2500297-004	BF2500297-005	----	----
					Result	Result	Result	Result	Result	----	----
Dissolved Metals											
Vanadium, dissolved	7440-62-2	E421/WT	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	----	----
Zinc, dissolved	7440-66-6	E421/WT	mg/L		0.0011	<0.0010	0.0011	<0.0010	<0.0010	----	----
Zirconium, dissolved	7440-67-7	E421/WT	mg/L		0.00036	0.00058	<0.00030	0.00041	<0.00030	----	----
Dissolved mercury filtration location	----	EP509/WT	-		Field	Field	Field	Field	Field	----	----
Dissolved metals filtration location	----	EP421/WT	-		Field	Field	Field	Field	Field	----	----
Volatile Organic Compounds											
Acetone	67-64-1	E611D/WT	µg/L		<20	<20	<20	68	<20	----	----
Benzene	71-43-2	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	----	----
Bromodichloromethane	75-27-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	----	----
Bromoform	75-25-2	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	----	----
Bromomethane	74-83-9	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	----	----
BTEX, total	----	E611D/WT	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0	----	----
Carbon disulfide	75-15-0	E611D/WT	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0	----	----
Carbon tetrachloride	56-23-5	E611D/WT	µg/L		<0.20	<0.20	<0.20	<0.20	<0.20	----	----
Chlorobenzene	108-90-7	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	----	----
Chloroethane	75-00-3	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	----	----
Chloroform	67-66-3	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	----	----
Chloromethane	74-87-3	E611D/WT	µg/L		<2.0	<2.0	<2.0	<2.0	<2.0	----	----
Dibromochloromethane	124-48-1	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	----	----
Dibromoethane, 1,2-	106-93-4	E611D/WT	µg/L		<0.20	<0.20	<0.20	<0.20	<0.20	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-06_2025-08-26 ----	LF-KP23-07_2025-08-26 ----	LF-KP23-11_2025-08-26 ----	LF-KP22-05_2025-08-26 ----	LF-KP23-01_2025-08-26 ----	----	----
				Client sampling date / time	26-Aug-2025 11:05	26-Aug-2025 12:00	26-Aug-2025 14:05	26-Aug-2025 15:45	26-Aug-2025 17:00	----	----
				Sub-Matrix	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	----	----
					BF2500297-001	BF2500297-002	BF2500297-003	BF2500297-004	BF2500297-005	----	----
					Result	Result	Result	Result	Result	----	----
Volatile Organic Compounds											
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	----	----
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	----	----
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	----	----
Dichlorodifluoromethane	75-71-8	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	----	----
Dichloroethane, 1,1-	75-34-3	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	----	----
Dichloroethane, 1,2-	107-06-2	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	----	----
Dichloroethylene, 1,1-	75-35-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	----	----
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	2.20	----	----
Dichloroethylene, cis+trans-1,2-	540-59-0	E611D/WT	µg/L		<0.71	<0.71	<0.71	<0.71	2.20	----	----
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	----	----
Dichloromethane	75-09-2	E611D/WT	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0	----	----
Dichloropropane, 1,2-	78-87-5	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	----	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	µg/L		<0.30	<0.30	<0.30	<0.30	<0.30	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5	----	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	µg/L		<0.30	<0.30	<0.30	<0.30	<0.30	----	----
Ethylbenzene	100-41-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	----	----
Hexane, n-	110-54-3	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	----	----
Hexanone, 2-	591-78-6	E611D/WT	µg/L		<20	<20	<20	<20	<20	----	----
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	µg/L		<20	<20	<20	<20	<20	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-06_2025-08-26 ----	LF-KP23-07_2025-08-26 ----	LF-KP23-11_2025-08-26 ----	LF-KP22-05_2025-08-26 ----	LF-KP23-01_2025-08-26 ----	----	----
				Client sampling date / time	26-Aug-2025 11:05	26-Aug-2025 12:00	26-Aug-2025 14:05	26-Aug-2025 15:45	26-Aug-2025 17:00	----	----
				Sub-Matrix	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	----	----
					BF2500297-001	BF2500297-002	BF2500297-003	BF2500297-004	BF2500297-005	----	----
					Result	Result	Result	Result	Result	----	----
Volatile Organic Compounds											
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	µg/L		<20	<20	<20	<20	<20	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	----	----
Styrene	100-42-5	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	----	----
Tetrachloroethylene	127-18-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	----	----
Toluene	108-88-3	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	----	----
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	----	----
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	----	----
Trichloroethylene	79-01-6	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	----	----
Trichlorofluoromethane	75-69-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	----	----
Trihalomethanes [THMs], total	----	E611D/WT	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0	----	----
Vinyl chloride	75-01-4	E611D/WT	µg/L		<0.20	<0.20	<0.20	<0.20	<0.20	----	----
Xylene, m+p-	179601-23-1	E611D/WT	µg/L		<0.40	<0.40	<0.40	<0.40	<0.40	----	----
Xylene, o-	95-47-6	E611D/WT	µg/L		<0.30	<0.30	<0.30	<0.30	<0.30	----	----
Xylenes, total	1330-20-7	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	----	----
Hydrocarbons											
F1 (C6-C10)	----	E581.F1-L/WT	µg/L		<25	<25	<25	<25	<25	----	----
F2 (C10-C16)	----	E601/WT	µg/L		<100	<100	<100	<100	<100	----	----
F3 (C16-C34)	----	E601/WT	µg/L		<250	<250	<250	<250	<250	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-06_2025-08-26 ----	LF-KP23-07_2025-08-26 ----	LF-KP23-11_2025-08-26 ----	LF-KP22-05_2025-08-26 ----	LF-KP23-01_2025-08-26 ----	----	----
				Client sampling date / time	26-Aug-2025 11:05	26-Aug-2025 12:00	26-Aug-2025 14:05	26-Aug-2025 15:45	26-Aug-2025 17:00	----	----
				Sub-Matrix	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	----	----
					BF2500297-001	BF2500297-002	BF2500297-003	BF2500297-004	BF2500297-005	----	----
					Result	Result	Result	Result	Result	----	----
Hydrocarbons											
F4 (C34-C50)	----	E601/WT	µg/L		<250	<250	<250	<250	<250	----	----
F1-BTEX	----	EC580/WT	µg/L		<25	<25	<25	<25	<25	----	----
Hydrocarbons, total (C6-C50)	n/a	EC581/WT	µg/L		<370	<370	<370	<370	<370	----	----
Hydrocarbons Surrogates											
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/WT	%		88.6	90.9	87.1	91.1	88.9	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.F1-L/WT	%		132	123	132	128	115	----	----
Volatile Organic Compounds Surrogates											
Bromofluorobenzene, 4-	460-00-4	E611D/WT	%		95.6	95.4	95.2	95.4	93.7	----	----
Difluorobenzene, 1,4-	540-36-3	E611D/WT	%		98.0	98.2	98.4	98.2	98.6	----	----
Polycyclic Aromatic Hydrocarbons											
Acenaphthene	83-32-9	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010	----	----
Acenaphthylene	208-96-8	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010	----	----
Acridine	260-94-6	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010	----	----
Anthracene	120-12-7	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010	----	----
Benz(a)anthracene	56-55-3	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010	----	----
Benzo(a)pyrene	50-32-8	E641A-L/WT	µg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	----	----
Benzo(b+j)fluoranthene	n/a	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010	----	----
Benzo(b+j+k)fluoranthene	n/a	E641A-L/WT	µg/L		<0.015	<0.015	<0.015	<0.015	<0.015	----	----
Benzo(g,h,i)perylene	191-24-2	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-06_2025-08-26 ----	LF-KP23-07_2025-08-26 ----	LF-KP23-11_2025-08-26 ----	LF-KP22-05_2025-08-26 ----	LF-KP23-01_2025-08-26 ----	----	----
				Client sampling date / time	26-Aug-2025 11:05	26-Aug-2025 12:00	26-Aug-2025 14:05	26-Aug-2025 15:45	26-Aug-2025 17:00	----	----
				Sub-Matrix	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	----	----
					BF2500297-001	BF2500297-002	BF2500297-003	BF2500297-004	BF2500297-005	----	----
					Result	Result	Result	Result	Result	----	----
Polycyclic Aromatic Hydrocarbons											
Benzo(k)fluoranthene	207-08-9	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010	----	----
Chrysene	218-01-9	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010	----	----
Dibenz(a,h)anthracene	53-70-3	E641A-L/WT	µg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	----	----
Fluoranthene	206-44-0	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010	----	----
Fluorene	86-73-7	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010	----	----
Methylnaphthalene, 1-	90-12-0	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010	----	----
Methylnaphthalene, 1+2-	----	E641A-L/WT	µg/L		<0.015	<0.015	<0.015	<0.015	<0.015	----	----
Methylnaphthalene, 2-	91-57-6	E641A-L/WT	µg/L		<0.010	<0.010	0.013	<0.010	0.013	----	----
Naphthalene	91-20-3	E641A-L/WT	µg/L		<0.010	<0.010	0.015	0.010	0.024	----	----
Perylene	198-55-0	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010	----	----
Phenanthrene	85-01-8	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010	----	----
Pyrene	129-00-0	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010	----	----
Quinoline	91-22-5	E641A-L/WT	µg/L		<0.010	<0.010	0.017	<0.010	<0.023 DLM	----	----
B(a)P total potency equivalents [B(a)P TPE]	----	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010	----	----
Polycyclic Aromatic Hydrocarbons Surrogates											
Chrysene-d12	1719-03-5	E641A-L/WT	%		101	105	100	107	96.6	----	----
Naphthalene-d8	1146-65-2	E641A-L/WT	%		103	108	96.9	105	95.2	----	----
Phenanthrene-d10	1517-22-2	E641A-L/WT	%		99.2	104	95.1	104	93.6	----	----

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

Summary of Guideline Limits

Analyte	CAS Number	Unit	FEQG_BTEX	NWB_LFILL (Table 7 Effluent)					
Sample Preparation									
Dissolved carbon filtration location	----	-	----	----	----	----	----	----	----
Physical Tests									
Conductivity	----	µS/cm	----	----	----	----	----	----	----
pH	----	pH units	----	**6 - 9.5 pH units**	----	----	----	----	----
Solids, total dissolved [TDS]		mg/L	----	----	----	----	----	----	----
Solids, total suspended [TSS]		mg/L	----	**30 mg/L**	----	----	----	----	----
Turbidity	----	NTU	----	----	----	----	----	----	----
Alkalinity, total (as CaCO3)		mg/L	----	----	----	----	----	----	----
Anions and Nutrients									
Ammonia, total (as N)	7664-41-7	mg/L	----	----	----	----	----	----	----
Bromide	24959-67-9	mg/L	----	----	----	----	----	----	----
Chloride	16887-00-6	mg/L	----	----	----	----	----	----	----
Fluoride	16984-48-8	mg/L	----	----	----	----	----	----	----
Kjeldahl nitrogen, total [TKN]		mg/L	----	----	----	----	----	----	----
Nitrate (as N)	14797-55-8	mg/L	----	----	----	----	----	----	----
Nitrite (as N)	14797-65-0	mg/L	----	----	----	----	----	----	----
Phosphorus, total	7723-14-0	mg/L	----	----	----	----	----	----	----
Phosphorus, total dissolved	7723-14-0	mg/L	----	----	----	----	----	----	----
Sulfate (as SO4)	14808-79-8	mg/L	----	----	----	----	----	----	----
Organic / Inorganic Carbon									
Carbon, dissolved organic [DOC]		mg/L	----	----	----	----	----	----	----
Dissolved Metals									
Aluminum, dissolved	7429-90-5	mg/L	----	----	----	----	----	----	----

Antimony, dissolved	7440-36-0	mg/L	----	----	----	----	----	----	----	----
Arsenic, dissolved	7440-38-2	mg/L	----	----	----	----	----	----	----	----
Barium, dissolved	7440-39-3	mg/L	----	----	----	----	----	----	----	----
Beryllium, dissolved	7440-41-7	mg/L	----	----	----	----	----	----	----	----
Bismuth, dissolved	7440-69-9	mg/L	----	----	----	----	----	----	----	----
Boron, dissolved	7440-42-8	mg/L	----	----	----	----	----	----	----	----
Cadmium, dissolved	7440-43-9	mg/L	----	----	----	----	----	----	----	----
Calcium, dissolved	7440-70-2	mg/L	----	----	----	----	----	----	----	----
Cesium, dissolved	7440-46-2	mg/L	----	----	----	----	----	----	----	----
Chromium, dissolved	7440-47-3	mg/L	----	----	----	----	----	----	----	----
Cobalt, dissolved	7440-48-4	mg/L	----	----	----	----	----	----	----	----
Copper, dissolved	7440-50-8	mg/L	----	----	----	----	----	----	----	----
Iron, dissolved	7439-89-6	mg/L	----	----	----	----	----	----	----	----
Lead, dissolved	7439-92-1	mg/L	----	----	----	----	----	----	----	----
Lithium, dissolved	7439-93-2	mg/L	----	----	----	----	----	----	----	----
Magnesium, dissolved	7439-95-4	mg/L	----	----	----	----	----	----	----	----
Manganese, dissolved	7439-96-5	mg/L	----	----	----	----	----	----	----	----
Mercury, dissolved	7439-97-6	mg/L	----	----	----	----	----	----	----	----
Molybdenum, dissolved	7439-98-7	mg/L	----	----	----	----	----	----	----	----
Nickel, dissolved	7440-02-0	mg/L	----	----	----	----	----	----	----	----
Phosphorus, dissolved	7723-14-0	mg/L	----	----	----	----	----	----	----	----
Potassium, dissolved	7440-09-7	mg/L	----	----	----	----	----	----	----	----
Rubidium, dissolved	7440-17-7	mg/L	----	----	----	----	----	----	----	----
Selenium, dissolved	7782-49-2	mg/L	----	----	----	----	----	----	----	----
Silicon, dissolved	7440-21-3	mg/L	----	----	----	----	----	----	----	----
Silver, dissolved	7440-22-4	mg/L	----	----	----	----	----	----	----	----
Sodium, dissolved	7440-23-5	mg/L	----	----	----	----	----	----	----	----

Strontium, dissolved	7440-24-6	mg/L	----	----	----	----	----	----	----
Sulfur, dissolved	7704-34-9	mg/L	----	----	----	----	----	----	----
Tellurium, dissolved	13494-80-9	mg/L	----	----	----	----	----	----	----
Thallium, dissolved	7440-28-0	mg/L	----	----	----	----	----	----	----
Thorium, dissolved	7440-29-1	mg/L	----	----	----	----	----	----	----
Tin, dissolved	7440-31-5	mg/L	----	----	----	----	----	----	----
Titanium, dissolved	7440-32-6	mg/L	----	----	----	----	----	----	----
Tungsten, dissolved	7440-33-7	mg/L	----	----	----	----	----	----	----
Uranium, dissolved	7440-61-1	mg/L	----	----	----	----	----	----	----
Vanadium, dissolved	7440-62-2	mg/L	----	----	----	----	----	----	----
Zinc, dissolved	7440-66-6	mg/L	----	----	----	----	----	----	----
Zirconium, dissolved	7440-67-7	mg/L	----	----	----	----	----	----	----
Dissolved mercury filtration location	----	-	----	----	----	----	----	----	----
Dissolved metals filtration location	----	-	----	----	----	----	----	----	----
Volatile Organic Compounds									
Acetone	67-64-1	µg/L	----	----	----	----	----	----	----
Benzene	71-43-2	µg/L	**590 µg/L**	----	----	----	----	----	----
Bromodichloromethane	75-27-4	µg/L	----	----	----	----	----	----	----
Bromoform	75-25-2	µg/L	----	----	----	----	----	----	----
Bromomethane	74-83-9	µg/L	----	----	----	----	----	----	----
BTEX, total		µg/L	----	----	----	----	----	----	----
Carbon disulfide	75-15-0	µg/L	----	----	----	----	----	----	----
Carbon tetrachloride	56-23-5	µg/L	----	----	----	----	----	----	----
Chlorobenzene	108-90-7	µg/L	----	----	----	----	----	----	----
Chloroethane	75-00-3	µg/L	----	----	----	----	----	----	----
Chloroform	67-66-3	µg/L	----	----	----	----	----	----	----
Chloromethane	74-87-3	µg/L	----	----	----	----	----	----	----

Dibromochloromethane	124-48-1	µg/L	----	----	----	----	----	----	----	----
Dibromoethane, 1,2-	106-93-4	µg/L	----	----	----	----	----	----	----	----
Dichlorobenzene, 1,2-	95-50-1	µg/L	----	----	----	----	----	----	----	----
Dichlorobenzene, 1,3-	541-73-1	µg/L	----	----	----	----	----	----	----	----
Dichlorobenzene, 1,4-	106-46-7	µg/L	----	----	----	----	----	----	----	----
Dichlorodifluoromethane	75-71-8	µg/L	----	----	----	----	----	----	----	----
Dichloroethane, 1,1-	75-34-3	µg/L	----	----	----	----	----	----	----	----
Dichloroethane, 1,2-	107-06-2	µg/L	----	----	----	----	----	----	----	----
Dichloroethylene, 1,1-	75-35-4	µg/L	----	----	----	----	----	----	----	----
Dichloroethylene, cis-1,2-	156-59-2	µg/L	----	----	----	----	----	----	----	----
Dichloroethylene, cis+trans-1,2-	540-59-0	µg/L	----	----	----	----	----	----	----	----
Dichloroethylene, trans-1,2-	156-60-5	µg/L	----	----	----	----	----	----	----	----
Dichloromethane	75-09-2	µg/L	----	----	----	----	----	----	----	----
Dichloropropane, 1,2-	78-87-5	µg/L	----	----	----	----	----	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	µg/L	----	----	----	----	----	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	µg/L	----	----	----	----	----	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	µg/L	----	----	----	----	----	----	----	----
Ethylbenzene	100-41-4	µg/L	**70 µg/L**	----	----	----	----	----	----	----
Hexane, n-	110-54-3	µg/L	----	----	----	----	----	----	----	----
Hexanone, 2-	591-78-6	µg/L	----	----	----	----	----	----	----	----
Methyl ethyl ketone [MEK]	78-93-3	µg/L	----	----	----	----	----	----	----	----
Methyl isobutyl ketone [MIBK]	108-10-1	µg/L	----	----	----	----	----	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	µg/L	----	----	----	----	----	----	----	----
Styrene	100-42-5	µg/L	----	----	----	----	----	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	µg/L	----	----	----	----	----	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	µg/L	----	----	----	----	----	----	----	----
Tetrachloroethylene	127-18-4	µg/L	----	----	----	----	----	----	----	----

Toluene	108-88-3	µg/L	**30 µg/L**	----	----	----	----	----	----
Trichloroethane, 1,1,1-	71-55-6	µg/L	----	----	----	----	----	----	----
Trichloroethane, 1,1,2-	79-00-5	µg/L	----	----	----	----	----	----	----
Trichloroethylene	79-01-6	µg/L	----	----	----	----	----	----	----
Trichlorofluoromethane	75-69-4	µg/L	----	----	----	----	----	----	----
Trihalomethanes [THMs], total		µg/L	----	----	----	----	----	----	----
Vinyl chloride	75-01-4	µg/L	----	----	----	----	----	----	----
Xylene, m+p-	179601-23-1	µg/L	**70 µg/L**	----	----	----	----	----	----
Xylene, o-	95-47-6	µg/L	**70 µg/L**	----	----	----	----	----	----
Xylenes, total	1330-20-7	µg/L	**70 µg/L**	----	----	----	----	----	----
Hydrocarbons									
F1 (C6-C10)		µg/L	----	----	----	----	----	----	----
F2 (C10-C16)	----	µg/L	----	----	----	----	----	----	----
F3 (C16-C34)	----	µg/L	----	----	----	----	----	----	----
F4 (C34-C50)	----	µg/L	----	----	----	----	----	----	----
F1-BTEX		µg/L	----	----	----	----	----	----	----
Hydrocarbons, total (C6-C50)	n/a	µg/L	----	----	----	----	----	----	----
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	%	----	----	----	----	----	----	----
Bromofluorobenzene, 4-	460-00-4	%	----	----	----	----	----	----	----
Dichlorotoluene, 3,4-	95-75-0	%	----	----	----	----	----	----	----
Difluorobenzene, 1,4-	540-36-3	%	----	----	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons									
Acenaphthene	83-32-9	µg/L	----	----	----	----	----	----	----
Acenaphthylene	208-96-8	µg/L	----	----	----	----	----	----	----
Acridine	260-94-6	µg/L	----	----	----	----	----	----	----
Anthracene	120-12-7	µg/L	----	----	----	----	----	----	----
Benz(a)anthracene	56-55-3	µg/L	----	----	----	----	----	----	----

Benzo(a)pyrene	50-32-8	µg/L	----	----	----	----	----	----	----
Benzo(b+j)fluoranthene	n/a	µg/L	----	----	----	----	----	----	----
Benzo(b+j+k)fluoranthene	n/a	µg/L	----	----	----	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	µg/L	----	----	----	----	----	----	----
Benzo(k)fluoranthene	207-08-9	µg/L	----	----	----	----	----	----	----
Chrysene	218-01-9	µg/L	----	----	----	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	µg/L	----	----	----	----	----	----	----
Fluoranthene	206-44-0	µg/L	----	----	----	----	----	----	----
Fluorene	86-73-7	µg/L	----	----	----	----	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	µg/L	----	----	----	----	----	----	----
Methylnaphthalene, 1-	90-12-0	µg/L	----	----	----	----	----	----	----
Methylnaphthalene, 1+2-	----	µg/L	----	----	----	----	----	----	----
Methylnaphthalene, 2-	91-57-6	µg/L	----	----	----	----	----	----	----
Naphthalene	91-20-3	µg/L	----	----	----	----	----	----	----
Perylene	198-55-0	µg/L	----	----	----	----	----	----	----
Phenanthrene	85-01-8	µg/L	----	----	----	----	----	----	----
Pyrene	129-00-0	µg/L	----	----	----	----	----	----	----
Quinoline	91-22-5	µg/L	----	----	----	----	----	----	----
B(a)P total potency equivalents [B(a)P TPE]		µg/L	----	----	----	----	----	----	----
Chrysene-d12	1719-03-5	%	----	----	----	----	----	----	----
Naphthalene-d8	1146-65-2	%	----	----	----	----	----	----	----
Phenanthrene-d10	1517-22-2	%	----	----	----	----	----	----	----

CERTIFICATE OF ANALYSIS

Work Order	:	**BF2500297**			
Client	:	**Baffinland Iron Mines Corporation**	Laboratory	:	ALS Environmental - Baffin Island
Contact	:	Environmental Lab Results	Account Manager	:	Rick Hawthorne
Address	:	360 Oakville Place Dr Suite 300 Oakville Ontario Canada L6H 6K8	Address	:	Mary River, Qikqtani Region Baffin Island NU Canada
Telephone	:	----	E-mail	:	Rick.Hawthorne@ALSGlobal.com
Project	:	MS_Landfill_Groundwater	Telephone	:	
PO	:	4500156571	Date Samples Received	:	26-Aug-2025 19:30
C-O-C number	:	25 08 26_MS_Landfill_Groundwater	Date Analysis Commenced	:	26-Aug-2025
Sampler	:	LG/JM	Issue Date	:	08-Sep-2025 16:05
Site	:	MS			
Quote number	:	2024-2025 Scope of Work			
No. of samples received	:	5			
No. of samples analysed	:	5			

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

Signatories	*Position*	*Laboratory Department*
Adam Jodoin		Inorganics, Baffin Island, Nunavut
Cedrick Velasco		Inorganics, Baffin Island, Nunavut
Danielle Gravel		Organics, Waterloo, Ontario
David Tremblett		VOC, Waterloo, Ontario
Walt Kippenhuck		Inorganics, Waterloo, Ontario
Walt Kippenhuck		Metals, Waterloo, Ontario
Walt Kippenhuck		Centralized Prep, Waterloo, Ontario

General Comments

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

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

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

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

Key: CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.
LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units
µg/L	micrograms per litre
µS/cm	microsiemens per centimetre

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

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Qualifiers

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

Analytical Results

Sub-Matrix: Groundwater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP23-06_2025-08-26 ----	LF-KP23-07_2025-08-26 ----	LF-KP23-11_2025-08-26 ----	LF-KP22-05_2025-08-26 ----	LF-KP23-01_2025-08-26 ----
					Client sampling date / time	26-Aug-2025 11:05	26-Aug-2025 12:00	26-Aug-2025 14:05	26-Aug-2025 15:45	26-Aug-2025 17:00
						BF2500297-001	BF2500297-002	BF2500297-003	BF2500297-004	BF2500297-005
						Result	Result	Result	Result	Result
Sample Preparation										
Dissolved carbon filtration location	----	EP358/WT	-	-		field	lab	field	field	field
Physical Tests										
Conductivity	----	E100/WT	1.0	µS/cm		311	285	321	583	438
pH	----	E108/BF	0.10	pH units		7.76	7.60	7.57	6.99	7.33
Solids, total dissolved [TDS]	----	E162/BF	10	mg/L		160	136	166	304	243
Solids, total suspended [TSS]	----	E160-L/BF	1.0	mg/L		4.8	12.0	23.2	51.8	6.7
Turbidity	----	E121/BF	0.10	NTU		1.47	3.84	10.5	35.5	3.87
Alkalinity, total (as CaCO3)	----	E290/WT	2.0	mg/L		150	140	166	200	161
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/WT	0.0050	mg/L		<0.0050	<0.0050	<0.0050	0.701	0.0146
Bromide	24959-67-9	E235.Br/WT	0.10	mg/L		<0.10	<0.10	<0.10	0.21	0.13
Chloride	16887-00-6	E235.Cl/WT	0.50	mg/L		2.64	0.74	3.06	57.3	9.28
Fluoride	16984-48-8	E235.F/WT	0.020	mg/L		0.040	0.090	0.094	0.078	0.063
Kjeldahl nitrogen, total [TKN]	----	E318/WT	0.050	mg/L		0.187	0.193	0.089	1.08	0.347
Nitrate (as N)	14797-55-8	E235.NO3/WT	0.020	mg/L		0.144	<0.020	<0.020	<0.020	0.965
Nitrite (as N)	14797-65-0	E235.NO2/WT	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Phosphorus, total	7723-14-0	E372-U/WT	0.0020	mg/L		0.0051	0.0114	0.0349	0.214	0.0113
Phosphorus, total dissolved	7723-14-0	E375-T/WT	0.0020	mg/L		0.0033	0.0024	<0.0020	0.0085	0.0044
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	0.30	mg/L		12.8	1.30	1.66	14.4	45.1
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/WT	0.50	mg/L		4.19	3.68	2.13	8.46	3.31

Analytical Results

Sub-Matrix: Groundwater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP23-06_2025-08-26 ----	LF-KP23-07_2025-08-26 ----	LF-KP23-11_2025-08-26 ----	LF-KP22-05_2025-08-26 ----	LF-KP23-01_2025-08-26 ----
					Client sampling date / time	26-Aug-2025 11:05	26-Aug-2025 12:00	26-Aug-2025 14:05	26-Aug-2025 15:45	26-Aug-2025 17:00
						BF2500297-001	BF2500297-002	BF2500297-003	BF2500297-004	BF2500297-005
						Result	Result	Result	Result	Result
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/WT	0.0010	mg/L		0.0071	0.0040	0.0061	0.0072	0.0044
Antimony, dissolved	7440-36-0	E421/WT	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic, dissolved	7440-38-2	E421/WT	0.00010	mg/L		0.00028	0.00016	0.00010	0.00288	0.00044
Barium, dissolved	7440-39-3	E421/WT	0.00010	mg/L		0.0262	0.0112	0.0271	0.0281	0.0510
Beryllium, dissolved	7440-41-7	E421/WT	0.000020	mg/L		<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Bismuth, dissolved	7440-69-9	E421/WT	0.000050	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron, dissolved	7440-42-8	E421/WT	0.010	mg/L		0.145	<0.010	0.014	0.047	0.460
Cadmium, dissolved	7440-43-9	E421/WT	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000067
Calcium, dissolved	7440-70-2	E421/WT	0.050	mg/L		27.8	30.9	33.4	39.0	46.6
Cesium, dissolved	7440-46-2	E421/WT	0.000010	mg/L		0.000014	<0.000010	<0.000010	<0.000010	<0.000010
Chromium, dissolved	7440-47-3	E421/WT	0.00050	mg/L		0.00182	<0.00050	<0.00050	<0.00050	0.00146
Cobalt, dissolved	7440-48-4	E421/WT	0.00010	mg/L		<0.00010	<0.00010	<0.00010	0.00614	0.00158
Copper, dissolved	7440-50-8	E421/WT	0.00020	mg/L		0.00381	0.00235	0.00124	0.00047	0.00170
Iron, dissolved	7439-89-6	E421/WT	0.010	mg/L		0.014	<0.010	0.021	5.18	0.024
Lead, dissolved	7439-92-1	E421/WT	0.000050	mg/L		0.000053	<0.000050	<0.000050	0.000053	<0.000050
Lithium, dissolved	7439-93-2	E421/WT	0.0010	mg/L		0.0012	0.0018	0.0022	0.0029	0.0175
Magnesium, dissolved	7439-95-4	E421/WT	0.0050	mg/L		23.4	19.6	19.8	20.6	23.4
Manganese, dissolved	7439-96-5	E421/WT	0.00010	mg/L		0.00104	<0.00010	0.0281	1.99	0.269
Mercury, dissolved	7439-97-6	E509/WT	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, dissolved	7439-98-7	E421/WT	0.000050	mg/L		0.000524	0.000310	0.000489	0.000463	0.00137
Nickel, dissolved	7440-02-0	E421/WT	0.00050	mg/L		0.00683	0.00477	0.00084	0.00384	0.00790

Analytical Results

Sub-Matrix: Groundwater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP23-06_2025-08-26 ----	LF-KP23-07_2025-08-26 ----	LF-KP23-11_2025-08-26 ----	LF-KP22-05_2025-08-26 ----	LF-KP23-01_2025-08-26 ----
					Client sampling date / time	26-Aug-2025 11:05	26-Aug-2025 12:00	26-Aug-2025 14:05	26-Aug-2025 15:45	26-Aug-2025 17:00
					BF2500297-001	BF2500297-002	BF2500297-003	BF2500297-004	BF2500297-005	
					Result	Result	Result	Result	Result	
Dissolved Metals										
Phosphorus, dissolved	7723-14-0	E421/WT	0.050	mg/L	<0.050	<0.050	<0.050	0.087	<0.050	
Potassium, dissolved	7440-09-7	E421/WT	0.050	mg/L	1.20	1.22	2.16	2.62	3.03	
Rubidium, dissolved	7440-17-7	E421/WT	0.00020	mg/L	0.00607	0.00268	0.00101	0.00034	0.00592	
Selenium, dissolved	7782-49-2	E421/WT	0.000050	mg/L	0.000053	<0.000050	<0.000050	0.00421	0.000139	
Silicon, dissolved	7440-21-3	E421/WT	0.050	mg/L	5.07	1.94	2.84	3.15	3.74	
Silver, dissolved	7440-22-4	E421/WT	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Sodium, dissolved	7440-23-5	E421/WT	0.050	mg/L	1.85	0.405	5.23	50.5	5.19	
Strontium, dissolved	7440-24-6	E421/WT	0.00020	mg/L	0.0150	0.0158	0.0356	0.0404	0.0372	
Sulfur, dissolved	7704-34-9	E421/WT	0.50	mg/L	4.69	<0.50	0.71	6.63	17.7	
Tellurium, dissolved	13494-80-9	E421/WT	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Thallium, dissolved	7440-28-0	E421/WT	0.000010	mg/L	0.000014	0.000012	<0.000010	<0.000010	0.000016	
Thorium, dissolved	7440-29-1	E421/WT	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Tin, dissolved	7440-31-5	E421/WT	0.00010	mg/L	0.00017	<0.00010	<0.00010	<0.00010	<0.00010	
Titanium, dissolved	7440-32-6	E421/WT	0.00030	mg/L	<0.00030	<0.00030	<0.00030	0.00036	<0.00030	
Tungsten, dissolved	7440-33-7	E421/WT	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Uranium, dissolved	7440-61-1	E421/WT	0.000010	mg/L	0.000558	0.000925	0.00213	0.000416	0.00343	
Vanadium, dissolved	7440-62-2	E421/WT	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Zinc, dissolved	7440-66-6	E421/WT	0.0010	mg/L	0.0011	<0.0010	0.0011	<0.0010	<0.0010	
Zirconium, dissolved	7440-67-7	E421/WT	0.00030	mg/L	0.00036	0.00058	<0.00030	0.00041	<0.00030	
Dissolved mercury filtration location	----	EP509/WT	-	-	Field	Field	Field	Field	Field	
Dissolved metals filtration location	----	EP421/WT	-	-	Field	Field	Field	Field	Field	

Analytical Results

Sub-Matrix: Groundwater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP23-06_2025-08-26 ----	LF-KP23-07_2025-08-26 ----	LF-KP23-11_2025-08-26 ----	LF-KP22-05_2025-08-26 ----	LF-KP23-01_2025-08-26 ----
					Client sampling date / time	26-Aug-2025 11:05	26-Aug-2025 12:00	26-Aug-2025 14:05	26-Aug-2025 15:45	26-Aug-2025 17:00
						BF2500297-001	BF2500297-002	BF2500297-003	BF2500297-004	BF2500297-005
						Result	Result	Result	Result	Result
Volatile Organic Compounds										
Acetone	67-64-1	E611D/WT	20	µg/L		<20	<20	<20	68	<20
Benzene	71-43-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Bromodichloromethane	75-27-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Bromoform	75-25-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Bromomethane	74-83-9	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
BTEX, total	----	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Carbon disulfide	75-15-0	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Carbon tetrachloride	56-23-5	E611D/WT	0.20	µg/L		<0.20	<0.20	<0.20	<0.20	<0.20
Chlorobenzene	108-90-7	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Chloroethane	75-00-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Chloroform	67-66-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Chloromethane	74-87-3	E611D/WT	2.0	µg/L		<2.0	<2.0	<2.0	<2.0	<2.0
Dibromochloromethane	124-48-1	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dibromoethane, 1,2-	106-93-4	E611D/WT	0.20	µg/L		<0.20	<0.20	<0.20	<0.20	<0.20
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorodifluoromethane	75-71-8	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethane, 1,1-	75-34-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethane, 1,2-	107-06-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethylene, 1,1-	75-35-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50

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Analytical Results

Sub-Matrix: Groundwater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP23-06_2025-08-26 ----	LF-KP23-07_2025-08-26 ----	LF-KP23-11_2025-08-26 ----	LF-KP22-05_2025-08-26 ----	LF-KP23-01_2025-08-26 ----
					Client sampling date / time	26-Aug-2025 11:05	26-Aug-2025 12:00	26-Aug-2025 14:05	26-Aug-2025 15:45	26-Aug-2025 17:00
						BF2500297-001	BF2500297-002	BF2500297-003	BF2500297-004	BF2500297-005
						Result	Result	Result	Result	Result
Volatile Organic Compounds										
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	2.20
Dichloroethylene, cis+trans-1,2-	540-59-0	E611D/WT	0.71	µg/L		<0.71	<0.71	<0.71	<0.71	2.20
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloromethane	75-09-2	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Dichloropropane, 1,2-	78-87-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	<0.30
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	0.50	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	<0.30
Ethylbenzene	100-41-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Hexane, n-	110-54-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Hexanone, 2-	591-78-6	E611D/WT	20	µg/L		<20	<20	<20	<20	<20
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	20	µg/L		<20	<20	<20	<20	<20
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	20	µg/L		<20	<20	<20	<20	<20
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Styrene	100-42-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethylene	127-18-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Toluene	108-88-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50

Analytical Results

Sub-Matrix: Groundwater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP23-06_2025-08-26 ----	LF-KP23-07_2025-08-26 ----	LF-KP23-11_2025-08-26 ----	LF-KP22-05_2025-08-26 ----	LF-KP23-01_2025-08-26 ----
					Client sampling date / time	26-Aug-2025 11:05	26-Aug-2025 12:00	26-Aug-2025 14:05	26-Aug-2025 15:45	26-Aug-2025 17:00
						BF2500297-001	BF2500297-002	BF2500297-003	BF2500297-004	BF2500297-005
						Result	Result	Result	Result	Result
Volatile Organic Compounds										
Trichloroethylene	79-01-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Trichlorofluoromethane	75-69-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Trihalomethanes [THMs], total	----	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl chloride	75-01-4	E611D/WT	0.20	µg/L		<0.20	<0.20	<0.20	<0.20	<0.20
Xylene, m+p-	179601-23-1	E611D/WT	0.40	µg/L		<0.40	<0.40	<0.40	<0.40	<0.40
Xylene, o-	95-47-6	E611D/WT	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	<0.30
Xylenes, total	1330-20-7	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Hydrocarbons										
F1 (C6-C10)	----	E581.F1-L/WT	25	µg/L		<25	<25	<25	<25	<25
F2 (C10-C16)	----	E601/WT	100	µg/L		<100	<100	<100	<100	<100
F3 (C16-C34)	----	E601/WT	250	µg/L		<250	<250	<250	<250	<250
F4 (C34-C50)	----	E601/WT	250	µg/L		<250	<250	<250	<250	<250
F1-BTEX	----	EC580/WT	25	µg/L		<25	<25	<25	<25	<25
Hydrocarbons, total (C6-C50)	n/a	EC581/WT	370	µg/L		<370	<370	<370	<370	<370
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/WT	1.0	%		88.6	90.9	87.1	91.1	88.9
Dichlorotoluene, 3,4-	95-75-0	E581.F1-L/WT	1.0	%		132	123	132	128	115
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611D/WT	1.0	%		95.6	95.4	95.2	95.4	93.7
Difluorobenzene, 1,4-	540-36-3	E611D/WT	1.0	%		98.0	98.2	98.4	98.2	98.6

Analytical Results

Sub-Matrix: Groundwater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP23-06_2025-08-26 ----	LF-KP23-07_2025-08-26 ----	LF-KP23-11_2025-08-26 ----	LF-KP22-05_2025-08-26 ----	LF-KP23-01_2025-08-26 ----
					Client sampling date / time	26-Aug-2025 11:05	26-Aug-2025 12:00	26-Aug-2025 14:05	26-Aug-2025 15:45	26-Aug-2025 17:00
						BF2500297-001	BF2500297-002	BF2500297-003	BF2500297-004	BF2500297-005
						Result	Result	Result	Result	Result
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Acenaphthylene	208-96-8	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Acridine	260-94-6	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Anthracene	120-12-7	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benz(a)anthracene	56-55-3	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(a)pyrene	50-32-8	E641A-L/WT	0.0050	µg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(b+j)fluoranthene	n/a	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b+j+k)fluoranthene	n/a	E641A-L/WT	0.015	µg/L		<0.015	<0.015	<0.015	<0.015	<0.015
Benzo(g,h,i)perylene	191-24-2	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(k)fluoranthene	207-08-9	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Chrysene	218-01-9	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Dibenz(a,h)anthracene	53-70-3	E641A-L/WT	0.0050	µg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	206-44-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Fluorene	86-73-7	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Methylnaphthalene, 1-	90-12-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Methylnaphthalene, 1+2-	----	E641A-L/WT	0.015	µg/L		<0.015	<0.015	<0.015	<0.015	<0.015
Methylnaphthalene, 2-	91-57-6	E641A-L/WT	0.010	µg/L		<0.010	<0.010	0.013	<0.010	0.013
Naphthalene	91-20-3	E641A-L/WT	0.010	µg/L		<0.010	<0.010	0.015	0.010	0.024
Perylene	198-55-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Phenanthrene	85-01-8	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010

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Analytical Results

Sub-Matrix: Groundwater
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP23-06_2025-08-26 ----	LF-KP23-07_2025-08-26 ----	LF-KP23-11_2025-08-26 ----	LF-KP22-05_2025-08-26 ----	LF-KP23-01_2025-08-26 ----
					Client sampling date / time	26-Aug-2025 11:05	26-Aug-2025 12:00	26-Aug-2025 14:05	26-Aug-2025 15:45	26-Aug-2025 17:00
						BF2500297-001	BF2500297-002	BF2500297-003	BF2500297-004	BF2500297-005
						Result	Result	Result	Result	Result
Polycyclic Aromatic Hydrocarbons										
Pyrene	129-00-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Quinoline	91-22-5	E641A-L/WT	0.010	µg/L		<0.010	<0.010	0.017	<0.010	<0.023 DLM
B(a)P total potency equivalents [B(a)P TPE]	----	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A-L/WT	0.1	%		101	105	100	107	96.6
Naphthalene-d8	1146-65-2	E641A-L/WT	0.1	%		103	108	96.9	105	95.2
Phenanthrene-d10	1517-22-2	E641A-L/WT	0.1	%		99.2	104	95.1	104	93.6

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

ALS Canada Ltd.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **BF2500297**	Page	: 1 of 23
Client	: **Baffinland Iron Mines Corporation**	Laboratory	: ALS Environmental - Baffin Island
Contact	: Environmental Lab Results	Account Manager	: Rick Hawthorne
Address	: 360 Oakville Place Dr Suite 300 Oakville ON Canada L6H 6K8	Address	: Mary River, Qikqtani Region Baffin Island, Nunavut Canada
Telephone	: ----	Telephone	: ----
Project	: MS_Landfill_Groundwater	Date Samples Received	: 26-Aug-2025 19:30
PO	: 4500156571	Issue Date	: 08-Sep-2025 16:05
C-O-C number	: 25 08 26_MS_Landfill_Groundwater		
Sampler	: LG/JM		
Site	: MS		
Quote number	: 2024-2025 Scope of Work		
No. of samples received	: 5		
No. of samples analysed	: 5		

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

Key

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

Workorder Comments

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

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

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

Outliers : Frequency of Quality Control Samples

- Quality Control Sample Frequency Outliers occur - please see following pages for full details.

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
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) LF-KP22-05_2025-08-26	E298	26-Aug-2025	02-Sep-2025	28 days	7 days	✓	04-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) LF-KP23-01_2025-08-26	E298	26-Aug-2025	02-Sep-2025	28 days	7 days	✓	04-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) LF-KP23-06_2025-08-26	E298	26-Aug-2025	02-Sep-2025	28 days	7 days	✓	04-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) LF-KP23-07_2025-08-26	E298	26-Aug-2025	02-Sep-2025	28 days	7 days	✓	04-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) LF-KP23-11_2025-08-26	E298	26-Aug-2025	02-Sep-2025	28 days	7 days	✓	04-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE LF-KP22-05_2025-08-26	E235.Br	26-Aug-2025	30-Aug-2025	28 days	4 days	✓	03-Sep-2025	28 days	4 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE LF-KP23-01_2025-08-26	E235.Br	26-Aug-2025	30-Aug-2025	28 days	4 days	✓	03-Sep-2025	28 days	4 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Bromide in Water by IC										
HDPE										
LF-KP23-06_2025-08-26	E235.Br	26-Aug-2025	30-Aug-2025	28 days	4 days	✓	03-Sep-2025	28 days	4 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE										
LF-KP23-07_2025-08-26	E235.Br	26-Aug-2025	30-Aug-2025	28 days	4 days	✓	03-Sep-2025	28 days	4 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE										
LF-KP23-11_2025-08-26	E235.Br	26-Aug-2025	30-Aug-2025	28 days	4 days	✓	03-Sep-2025	28 days	4 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
LF-KP22-05_2025-08-26	E235.Cl	26-Aug-2025	30-Aug-2025	28 days	4 days	✓	03-Sep-2025	28 days	4 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
LF-KP23-01_2025-08-26	E235.Cl	26-Aug-2025	30-Aug-2025	28 days	4 days	✓	03-Sep-2025	28 days	4 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
LF-KP23-06_2025-08-26	E235.Cl	26-Aug-2025	30-Aug-2025	28 days	4 days	✓	03-Sep-2025	28 days	4 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
LF-KP23-07_2025-08-26	E235.Cl	26-Aug-2025	30-Aug-2025	28 days	4 days	✓	03-Sep-2025	28 days	4 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
LF-KP23-11_2025-08-26	E235.Cl	26-Aug-2025	30-Aug-2025	28 days	4 days	✓	03-Sep-2025	28 days	4 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
LF-KP22-05_2025-08-26	E235.F	26-Aug-2025	30-Aug-2025	28 days	4 days	✓	03-Sep-2025	28 days	4 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
LF-KP23-01_2025-08-26	E235.F	26-Aug-2025	30-Aug-2025	28 days	4 days	✓	03-Sep-2025	28 days	4 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
LF-KP23-06_2025-08-26	E235.F	26-Aug-2025	30-Aug-2025	28 days	4 days	✓	03-Sep-2025	28 days	4 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
LF-KP23-07_2025-08-26	E235.F	26-Aug-2025	30-Aug-2025	28 days	4 days	✓	03-Sep-2025	28 days	4 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
LF-KP23-11_2025-08-26	E235.F	26-Aug-2025	30-Aug-2025	28 days	4 days	✓	03-Sep-2025	28 days	4 days	✓
Anions and Nutrients : Nitrate in Water by IC										
HDPE										
LF-KP22-05_2025-08-26	E235.NO3	26-Aug-2025	30-Aug-2025	3 days	4 days	× EHT	03-Sep-2025	3 days	4 days	× EHT
Anions and Nutrients : Nitrate in Water by IC										
HDPE										
LF-KP23-01_2025-08-26	E235.NO3	26-Aug-2025	30-Aug-2025	3 days	4 days	× EHT	03-Sep-2025	3 days	4 days	× EHT
Anions and Nutrients : Nitrate in Water by IC										
HDPE										
LF-KP23-06_2025-08-26	E235.NO3	26-Aug-2025	30-Aug-2025	3 days	4 days	× EHT	03-Sep-2025	3 days	4 days	× EHT
Anions and Nutrients : Nitrate in Water by IC										
HDPE										
LF-KP23-07_2025-08-26	E235.NO3	26-Aug-2025	30-Aug-2025	3 days	4 days	× EHT	03-Sep-2025	3 days	4 days	× EHT
Anions and Nutrients : Nitrate in Water by IC										
HDPE										
LF-KP23-11_2025-08-26	E235.NO3	26-Aug-2025	30-Aug-2025	3 days	4 days	× EHT	03-Sep-2025	3 days	4 days	× EHT

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Nitrite in Water by IC										
HDPE										
LF-KP22-05_2025-08-26	E235.NO2	26-Aug-2025	30-Aug-2025	3 days	4 days	× EHT	03-Sep-2025	3 days	4 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE										
LF-KP23-01_2025-08-26	E235.NO2	26-Aug-2025	30-Aug-2025	3 days	4 days	× EHT	03-Sep-2025	3 days	4 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE										
LF-KP23-06_2025-08-26	E235.NO2	26-Aug-2025	30-Aug-2025	3 days	4 days	× EHT	03-Sep-2025	3 days	4 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE										
LF-KP23-07_2025-08-26	E235.NO2	26-Aug-2025	30-Aug-2025	3 days	4 days	× EHT	03-Sep-2025	3 days	4 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE										
LF-KP23-11_2025-08-26	E235.NO2	26-Aug-2025	30-Aug-2025	3 days	4 days	× EHT	03-Sep-2025	3 days	4 days	× EHT
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
LF-KP22-05_2025-08-26	E235.SO4	26-Aug-2025	30-Aug-2025	28 days	4 days	✓	03-Sep-2025	28 days	4 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
LF-KP23-01_2025-08-26	E235.SO4	26-Aug-2025	30-Aug-2025	28 days	4 days	✓	03-Sep-2025	28 days	4 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
LF-KP23-06_2025-08-26	E235.SO4	26-Aug-2025	30-Aug-2025	28 days	4 days	✓	03-Sep-2025	28 days	4 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
LF-KP23-07_2025-08-26	E235.SO4	26-Aug-2025	30-Aug-2025	28 days	4 days	✓	03-Sep-2025	28 days	4 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
LF-KP23-11_2025-08-26	E235.SO4	26-Aug-2025	30-Aug-2025	28 days	4 days	✓	03-Sep-2025	28 days	4 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass - dissolved (field filtered/sulfuric acid)										
LF-KP22-05_2025-08-26	E375-T	26-Aug-2025	03-Sep-2025	28 days	8 days	✓	04-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass - dissolved (field filtered/sulfuric acid)										
LF-KP23-01_2025-08-26	E375-T	26-Aug-2025	03-Sep-2025	28 days	8 days	✓	04-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass - dissolved (field filtered/sulfuric acid)										
LF-KP23-06_2025-08-26	E375-T	26-Aug-2025	03-Sep-2025	28 days	8 days	✓	04-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass - dissolved (field filtered/sulfuric acid)										
LF-KP23-07_2025-08-26	E375-T	26-Aug-2025	03-Sep-2025	28 days	8 days	✓	04-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass - dissolved (field filtered/sulfuric acid)										
LF-KP23-11_2025-08-26	E375-T	26-Aug-2025	03-Sep-2025	28 days	8 days	✓	04-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
LF-KP22-05_2025-08-26	E318	26-Aug-2025	03-Sep-2025	28 days	8 days	✓	03-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
LF-KP23-01_2025-08-26	E318	26-Aug-2025	03-Sep-2025	28 days	8 days	✓	03-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
LF-KP23-06_2025-08-26	E318	26-Aug-2025	03-Sep-2025	28 days	8 days	✓	03-Sep-2025	28 days	8 days	✓

Matrix: **Water**

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Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
LF-KP23-07_2025-08-26	E318	26-Aug-2025	03-Sep-2025	28 days	8 days	✓	03-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
LF-KP23-11_2025-08-26	E318	26-Aug-2025	03-Sep-2025	28 days	8 days	✓	03-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
LF-KP22-05_2025-08-26	E372-U	26-Aug-2025	02-Sep-2025	28 days	7 days	✓	03-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
LF-KP23-01_2025-08-26	E372-U	26-Aug-2025	02-Sep-2025	28 days	7 days	✓	03-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
LF-KP23-06_2025-08-26	E372-U	26-Aug-2025	02-Sep-2025	28 days	7 days	✓	03-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
LF-KP23-07_2025-08-26	E372-U	26-Aug-2025	02-Sep-2025	28 days	7 days	✓	03-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
LF-KP23-11_2025-08-26	E372-U	26-Aug-2025	02-Sep-2025	28 days	7 days	✓	03-Sep-2025	28 days	7 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
LF-KP23-06_2025-08-26	E509	26-Aug-2025	03-Sep-2025	28 days	8 days	✓	04-Sep-2025	28 days	8 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
LF-KP23-07_2025-08-26	E509	26-Aug-2025	03-Sep-2025	28 days	8 days	✓	04-Sep-2025	28 days	8 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
LF-KP22-05_2025-08-26	E509	26-Aug-2025	04-Sep-2025	28 days	9 days	✓	04-Sep-2025	28 days	9 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
LF-KP23-01_2025-08-26	E509	26-Aug-2025	04-Sep-2025	28 days	9 days	✓	04-Sep-2025	28 days	9 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
LF-KP23-11_2025-08-26	E509	26-Aug-2025	04-Sep-2025	28 days	9 days	✓	04-Sep-2025	28 days	9 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
LF-KP22-05_2025-08-26	E421	26-Aug-2025	29-Aug-2025	180 days	3 days	✓	29-Aug-2025	180 days	3 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
LF-KP23-01_2025-08-26	E421	26-Aug-2025	29-Aug-2025	180 days	3 days	✓	29-Aug-2025	180 days	3 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
LF-KP23-06_2025-08-26	E421	26-Aug-2025	29-Aug-2025	180 days	3 days	✓	29-Aug-2025	180 days	3 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
LF-KP23-07_2025-08-26	E421	26-Aug-2025	29-Aug-2025	180 days	3 days	✓	29-Aug-2025	180 days	3 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
LF-KP23-11_2025-08-26	E421	26-Aug-2025	29-Aug-2025	180 days	3 days	✓	29-Aug-2025	180 days	3 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate)										
LF-KP22-05_2025-08-26	E581.F1-L	26-Aug-2025	02-Sep-2025	14 days	7 days	✓	02-Sep-2025	14 days	7 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) LF-KP23-01_2025-08-26	E581.F1-L	26-Aug-2025	02-Sep-2025	14 days	7 days	✓	02-Sep-2025	14 days	7 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) LF-KP23-06_2025-08-26	E581.F1-L	26-Aug-2025	02-Sep-2025	14 days	7 days	✓	02-Sep-2025	14 days	7 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) LF-KP23-07_2025-08-26	E581.F1-L	26-Aug-2025	02-Sep-2025	14 days	7 days	✓	02-Sep-2025	14 days	7 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) LF-KP23-11_2025-08-26	E581.F1-L	26-Aug-2025	02-Sep-2025	14 days	7 days	✓	02-Sep-2025	14 days	7 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) LF-KP22-05_2025-08-26	E601	26-Aug-2025	02-Sep-2025	14 days	7 days	✓	04-Sep-2025	40 days	2 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) LF-KP23-01_2025-08-26	E601	26-Aug-2025	02-Sep-2025	14 days	7 days	✓	04-Sep-2025	40 days	2 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) LF-KP23-06_2025-08-26	E601	26-Aug-2025	02-Sep-2025	14 days	7 days	✓	04-Sep-2025	40 days	2 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) LF-KP23-07_2025-08-26	E601	26-Aug-2025	02-Sep-2025	14 days	7 days	✓	04-Sep-2025	40 days	2 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) LF-KP23-11_2025-08-26	E601	26-Aug-2025	02-Sep-2025	14 days	7 days	✓	04-Sep-2025	40 days	2 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
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
LF-KP22-05_2025-08-26	E358-L	26-Aug-2025	31-Aug-2025	28 days	5 days	✓	04-Sep-2025	28 days	5 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
LF-KP23-01_2025-08-26	E358-L	26-Aug-2025	31-Aug-2025	28 days	5 days	✓	04-Sep-2025	28 days	5 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
LF-KP23-07_2025-08-26	E358-L	26-Aug-2025	31-Aug-2025	28 days	5 days	✓	04-Sep-2025	28 days	5 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
LF-KP23-11_2025-08-26	E358-L	26-Aug-2025	31-Aug-2025	28 days	5 days	✓	04-Sep-2025	28 days	5 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
LF-KP23-06_2025-08-26	E358-L	26-Aug-2025	31-Aug-2025	28 days	6 days	✓	04-Sep-2025	28 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
LF-KP22-05_2025-08-26	E290	26-Aug-2025	30-Aug-2025	14 days	4 days	✓	03-Sep-2025	14 days	4 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
LF-KP23-01_2025-08-26	E290	26-Aug-2025	30-Aug-2025	14 days	4 days	✓	03-Sep-2025	14 days	4 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
LF-KP23-06_2025-08-26	E290	26-Aug-2025	30-Aug-2025	14 days	4 days	✓	03-Sep-2025	14 days	4 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
LF-KP23-07_2025-08-26	E290	26-Aug-2025	30-Aug-2025	14 days	4 days	✓	03-Sep-2025	14 days	4 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
Physical Tests : Alkalinity Species by Titration										
HDPE										
LF-KP23-11_2025-08-26	E290	26-Aug-2025	30-Aug-2025	14 days	4 days	✓	03-Sep-2025	14 days	4 days	✓
Physical Tests : Conductivity in Water										
HDPE										
LF-KP22-05_2025-08-26	E100	26-Aug-2025	30-Aug-2025	28 days	4 days	✓	03-Sep-2025	28 days	4 days	✓
Physical Tests : Conductivity in Water										
HDPE										
LF-KP23-01_2025-08-26	E100	26-Aug-2025	30-Aug-2025	28 days	4 days	✓	03-Sep-2025	28 days	4 days	✓
Physical Tests : Conductivity in Water										
HDPE										
LF-KP23-06_2025-08-26	E100	26-Aug-2025	30-Aug-2025	28 days	4 days	✓	03-Sep-2025	28 days	4 days	✓
Physical Tests : Conductivity in Water										
HDPE										
LF-KP23-07_2025-08-26	E100	26-Aug-2025	30-Aug-2025	28 days	4 days	✓	03-Sep-2025	28 days	4 days	✓
Physical Tests : Conductivity in Water										
HDPE										
LF-KP23-11_2025-08-26	E100	26-Aug-2025	30-Aug-2025	28 days	4 days	✓	03-Sep-2025	28 days	4 days	✓
Physical Tests : pH by Meter										
HDPE										
LF-KP23-06_2025-08-26	E108	26-Aug-2025	26-Aug-2025	0.25 hrs	10 hrs	× EHTR-FM	26-Aug-2025	0.25 hrs	10 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE										
LF-KP23-01_2025-08-26	E108	26-Aug-2025	26-Aug-2025	0.25 hrs	4 hrs	× EHTR-FM	26-Aug-2025	0.25 hrs	4 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE										
LF-KP22-05_2025-08-26	E108	26-Aug-2025	26-Aug-2025	0.25 hrs	6 hrs	× EHTR-FM	26-Aug-2025	0.25 hrs	6 hrs	× EHTR-FM

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
Physical Tests : pH by Meter										
HDPE										
LF-KP23-11_2025-08-26	E108	26-Aug-2025	26-Aug-2025	0.25 hrs	7 hrs	× EHTR-FM	26-Aug-2025	0.25 hrs	7 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE										
LF-KP23-07_2025-08-26	E108	26-Aug-2025	26-Aug-2025	0.25 hrs	9 hrs	× EHTR-FM	26-Aug-2025	0.25 hrs	9 hrs	× EHTR-FM
Physical Tests : TDS by Gravimetry										
HDPE										
LF-KP23-11_2025-08-26	E162	26-Aug-2025	----	----	----		27-Aug-2025	7 days	0 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
LF-KP23-06_2025-08-26	E162	26-Aug-2025	----	----	----		27-Aug-2025	7 days	1 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
LF-KP23-07_2025-08-26	E162	26-Aug-2025	----	----	----		27-Aug-2025	7 days	1 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
LF-KP22-05_2025-08-26	E162	26-Aug-2025	----	----	----		28-Aug-2025	7 days	2 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
LF-KP23-01_2025-08-26	E162	26-Aug-2025	----	----	----		28-Aug-2025	7 days	2 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE										
LF-KP23-06_2025-08-26	E160-L	26-Aug-2025	----	----	----		27-Aug-2025	7 days	1 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE										
LF-KP23-07_2025-08-26	E160-L	26-Aug-2025	----	----	----		27-Aug-2025	7 days	1 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE										
LF-KP23-11_2025-08-26	E160-L	26-Aug-2025	----	----	----		27-Aug-2025	7 days	1 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE										
LF-KP22-05_2025-08-26	E160-L	26-Aug-2025	----	----	----		28-Aug-2025	7 days	2 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE										
LF-KP23-01_2025-08-26	E160-L	26-Aug-2025	----	----	----		28-Aug-2025	7 days	2 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE										
LF-KP22-05_2025-08-26	E121	26-Aug-2025	----	----	----		26-Aug-2025	3 days	0 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE										
LF-KP23-01_2025-08-26	E121	26-Aug-2025	----	----	----		26-Aug-2025	3 days	0 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE										
LF-KP23-06_2025-08-26	E121	26-Aug-2025	----	----	----		26-Aug-2025	3 days	0 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE										
LF-KP23-07_2025-08-26	E121	26-Aug-2025	----	----	----		26-Aug-2025	3 days	0 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE										
LF-KP23-11_2025-08-26	E121	26-Aug-2025	----	----	----		26-Aug-2025	3 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate)										
LF-KP22-05_2025-08-26	E641A-L	26-Aug-2025	02-Sep-2025	14 days	7 days	✓	03-Sep-2025	40 days	1 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate)										
LF-KP23-01_2025-08-26	E641A-L	26-Aug-2025	02-Sep-2025	14 days	7 days	✓	03-Sep-2025	40 days	1 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate)										
LF-KP23-06_2025-08-26	E641A-L	26-Aug-2025	02-Sep-2025	14 days	7 days	✓	03-Sep-2025	40 days	1 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate)										
LF-KP23-07_2025-08-26	E641A-L	26-Aug-2025	02-Sep-2025	14 days	7 days	✓	03-Sep-2025	40 days	1 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate)										
LF-KP23-11_2025-08-26	E641A-L	26-Aug-2025	02-Sep-2025	14 days	7 days	✓	03-Sep-2025	40 days	1 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
LF-KP22-05_2025-08-26	E611D	26-Aug-2025	02-Sep-2025	14 days	7 days	✓	02-Sep-2025	14 days	7 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
LF-KP23-01_2025-08-26	E611D	26-Aug-2025	02-Sep-2025	14 days	7 days	✓	02-Sep-2025	14 days	7 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
LF-KP23-06_2025-08-26	E611D	26-Aug-2025	02-Sep-2025	14 days	7 days	✓	02-Sep-2025	14 days	7 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
LF-KP23-07_2025-08-26	E611D	26-Aug-2025	02-Sep-2025	14 days	7 days	✓	02-Sep-2025	14 days	7 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
LF-KP23-11_2025-08-26	E611D	26-Aug-2025	02-Sep-2025	14 days	7 days	✓	02-Sep-2025	14 days	7 days	✓

Legend & Qualifier Definitions

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

EHT: Exceeded ALS recommended hold time prior to analysis.

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

Quality Control Parameter Frequency Compliance

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

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Conductivity in Water	E100	2192524	1	15	6.6	5.0	✓
pH by Meter	E108	2183790	2	22	9.0	5.0	✓
Turbidity by Nephelometry	E121	2183793	2	22	9.0	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	2183897	2	34	5.8	5.0	✓
TDS by Gravimetry	E162	2183898	2	34	5.8	5.0	✓
Bromide in Water by IC	E235.Br	2192516	1	14	7.1	5.0	✓
Chloride in Water by IC	E235.Cl	2192522	1	19	5.2	5.0	✓
Fluoride in Water by IC	E235.F	2192523	1	7	14.2	5.0	✓
Nitrite in Water by IC	E235.NO2	2192518	1	17	5.8	5.0	✓
Nitrate in Water by IC	E235.NO3	2192517	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2192520	1	17	5.8	5.0	✓
Alkalinity Species by Titration	E290	2192525	1	17	5.8	5.0	✓
Ammonia by Fluorescence	E298	2193869	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2193867	1	22	4.5	5.0	✗
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2193097	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2193868	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2197121	1	18	5.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2190641	1	15	6.6	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2194592	2	40	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2194685	1	7	14.2	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2194684	1	20	5.0	5.0	✓
Laboratory Control Samples (LCS)							
Conductivity in Water	E100	2192524	1	15	6.6	5.0	✓
pH by Meter	E108	2183790	2	22	9.0	5.0	✓
Turbidity by Nephelometry	E121	2183793	2	22	9.0	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	2183897	2	34	5.8	5.0	✓
TDS by Gravimetry	E162	2183898	2	34	5.8	5.0	✓
Bromide in Water by IC	E235.Br	2192516	1	14	7.1	5.0	✓
Chloride in Water by IC	E235.Cl	2192522	1	19	5.2	5.0	✓
Fluoride in Water by IC	E235.F	2192523	1	7	14.2	5.0	✓
Nitrite in Water by IC	E235.NO2	2192518	1	17	5.8	5.0	✓
Nitrate in Water by IC	E235.NO3	2192517	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2192520	1	17	5.8	5.0	✓
Alkalinity Species by Titration	E290	2192525	1	17	5.8	5.0	✓
Ammonia by Fluorescence	E298	2193869	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2193867	2	22	9.0	5.0	✓

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Control Samples (LCS) - Continued							
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2193097	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2193868	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2197121	1	18	5.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2190641	1	15	6.6	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2194592	2	40	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2194685	1	7	14.2	5.0	✓
CCME PHCs - F2-F4 by GC-FID	E601	2194594	1	7	14.2	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2194684	1	20	5.0	5.0	✓
PAHs in Water by Hexane LVI GC-MS (Low Level)	E641A-L	2194595	1	7	14.2	5.0	✓
Method Blanks (MB)							
Conductivity in Water	E100	2192524	1	15	6.6	5.0	✓
Turbidity by Nephelometry	E121	2183793	2	22	9.0	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	2183897	2	34	5.8	5.0	✓
TDS by Gravimetry	E162	2183898	2	34	5.8	5.0	✓
Bromide in Water by IC	E235.Br	2192516	1	14	7.1	5.0	✓
Chloride in Water by IC	E235.Cl	2192522	1	19	5.2	5.0	✓
Fluoride in Water by IC	E235.F	2192523	1	7	14.2	5.0	✓
Nitrite in Water by IC	E235.NO2	2192518	1	17	5.8	5.0	✓
Nitrate in Water by IC	E235.NO3	2192517	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2192520	1	17	5.8	5.0	✓
Alkalinity Species by Titration	E290	2192525	1	17	5.8	5.0	✓
Ammonia by Fluorescence	E298	2193869	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2193867	2	22	9.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2193097	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2193868	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2197121	1	18	5.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2190641	1	15	6.6	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2194592	2	40	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2194685	1	7	14.2	5.0	✓
CCME PHCs - F2-F4 by GC-FID	E601	2194594	1	7	14.2	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2194684	1	20	5.0	5.0	✓
PAHs in Water by Hexane LVI GC-MS (Low Level)	E641A-L	2194595	1	7	14.2	5.0	✓
Matrix Spikes (MS)							
Bromide in Water by IC	E235.Br	2192516	1	14	7.1	5.0	✓
Chloride in Water by IC	E235.Cl	2192522	1	19	5.2	5.0	✓
Fluoride in Water by IC	E235.F	2192523	1	7	14.2	5.0	✓
Nitrite in Water by IC	E235.NO2	2192518	1	17	5.8	5.0	✓
Nitrate in Water by IC	E235.NO3	2192517	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2192520	1	17	5.8	5.0	✓

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Matrix Spikes (MS) - Continued							
Ammonia by Fluorescence	E298	2193869	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2193867	1	22	4.5	5.0	×
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2193097	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2193868	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2197121	1	18	5.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2190641	1	15	6.6	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2194592	2	40	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2194685	1	7	14.2	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2194684	1	20	5.0	5.0	✓

Methodology References and Summaries

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

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

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Nitrate in Water by IC	E235.NO3 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Sulfate in Water by IC	E235.SO4 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Alkalinity Species by Titration	E290 ALS Environmental - Waterloo	Water	APHA 2320 B (mod)	Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.
Ammonia by Fluorescence	E298 ALS Environmental - Waterloo	Water	Method Fialab 100, 2018	Ammonia in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021)
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318 ALS Environmental - Waterloo	Water	Method Fialab 100, 2018	TKN in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021).
Dissolved Organic Carbon by Combustion (Low Level)	E358-L ALS Environmental - Waterloo	Water	APHA 5310 B (mod)	Dissolved Organic Carbon (Non-Purgeable), also known as NPOC (dissolved), is a direct measurement of DOC after a filtered (0.45 micron) sample has been acidified and purged to remove inorganic carbon (IC). Analysis is by high temperature combustion with infrared detection of CO2. NPOC does not include volatile organic species that are purged off with IC. For samples where the majority of DC (dissolved carbon) is comprised of IC (which is common), this method is more accurate and more reliable than the DOC by subtraction method (i.e. DC minus DIC).
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Total Phosphorus is determined colourimetrically using a discrete analyzer after heated persulfate digestion of the sample.
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Total Dissolved Phosphorus is determined colourimetrically using a discrete analyzer after filtration through a 0.45 micron filter followed by heated persulfate digestion of the sample.
Dissolved Metals in Water by CRC ICPMS	E421 ALS Environmental - Waterloo	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Dissolved Mercury in Water by CVAAS	E509 ALS Environmental - Waterloo	Water	APHA 3030B/EPA 1631E (mod)	Water samples are filtered (0.45 um), preserved with HCl, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1 (mod)	CCME Fraction 1 (F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
CCME PHCs - F2-F4 by GC-FID	E601 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	Sample extracts are analyzed by GC-FID for CCME hydrocarbon fractions (F2-F4). Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
VOCs (Eastern Canada List) by Headspace GC-MS	E611D ALS Environmental - Waterloo	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PAHs in Water by Hexane LVI GC-MS (Low Level)	E641A-L ALS Environmental - Waterloo	Water	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS.
F1-BTEX	EC580 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).
Sum F1 to F4 (C6-C50)	EC581 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	Hydrocarbons, total (C6-C50) is the sum of CCME Fractions F1(C6-C10), F2(C10-C16), F3(C16-C34), and F4(C34-C50). F4G-sg is not used within this calculation due to overlap with other fractions.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Ammonia	EP298 ALS Environmental - Waterloo	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Digestion for TKN in water	EP318 ALS Environmental - Waterloo	Water	APHA 4500-Norg D (mod)	Samples are digested at high temperature using Sulfuric Acid with Copper catalyst, which converts organic nitrogen sources to Ammonia, which is then quantified by the analytical method as TKN. This method is unsuitable for samples containing high levels of nitrate. If nitrate exceeds TKN concentration by ten times or more, results may be biased low.
Preparation for Dissolved Organic Carbon for Combustion	EP358 ALS Environmental - Waterloo	Water	APHA 5310 B (mod)	Preparation for Dissolved Organic Carbon

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Digestion for Total Phosphorus in water	EP372 ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Samples are heated with a persulfate digestion reagent.
Digestion for Dissolved Phosphorus in water	EP375 ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Samples are filtered through a 0.45 micron membrane filter and then heated with a persulfate digestion reagent.
Dissolved Metals Water Filtration	EP421 ALS Environmental - Waterloo	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO3.
Dissolved Mercury Water Filtration	EP509 ALS Environmental - Waterloo	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HCl.
VOCs Preparation for Headspace Analysis	EP581 ALS Environmental - Waterloo	Water	EPA 5021A (mod)	Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler. An aliquot of the headspace is then injected into a GC-MS-FID.
PHCs and PAHs Hexane Extraction	EP601 ALS Environmental - Waterloo	Water	EPA 3511 (mod)	Petroleum Hydrocarbons (PHCs) and Polycyclic Aromatic Hydrocarbons (PAHs) are extracted using a hexane liquid-liquid extraction.

ALS Canada Ltd.

QUALITY CONTROL REPORT

Work Order	: **BF2500297**	Page	: 1 of 19
Client	: Baffinland Iron Mines Corporation	Laboratory	: ALS Environmental - Baffin Island
Contact	: Environmental Lab Results	Account Manager	: Rick Hawthorne
Address	: 360 Oakville Place Dr Suite 300 Oakville ON Canada L6H 6K8	Address	: Mary River, Qikqtani Region Baffin Island, Nunavut Canada
Telephone	: ----	Telephone	:
Project	: MS_Landfill_Groundwater	Date Samples Received	: 26-Aug-2025 19:30
PO	: 4500156571	Date Analysis Commenced	: 26-Aug-2025
C-O-C number	: 25 08 26_MS_Landfill_Groundwater	Issue Date	: 08-Sep-2025 16:05
Sampler	: LG/JM		
Site	: MS		
Quote number	: 2024-2025 Scope of Work		
No. of samples received	: 5		
No. of samples analysed	: 5		

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Laboratory Department*
Adam Jodoin	Team Leader - Inorganics	Baffin Island Inorganics, Baffin Island, Nunavut
Cedrick Velasco	Lab Manager	Baffin Island Inorganics, Baffin Island, Nunavut
Danielle Gravel	Supervisor - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
David Tremblett	VOC Section Supervisor	Waterloo VOC, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Centralized Prep, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Inorganics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Metals, Waterloo, Ontario

General Comments

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

Key :

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

Workorder Comments

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 2183790)											
BF2500295-001	Anonymous	pH	----	E108	0.10	pH units	7.77	7.79	0.257%	4%	----
Physical Tests (QC Lot: 2183792)											
BF2500297-004	LF-KP22-05_2025-08-26	pH	----	E108	0.10	pH units	6.99	7.00	0.143%	4%	----
Physical Tests (QC Lot: 2183793)											
BF2500295-002	Anonymous	Turbidity	----	E121	0.10	NTU	0.23	0.24	0.01	Diff <2x LOR	----
Physical Tests (QC Lot: 2183795)											
BF2500297-005	LF-KP23-01_2025-08-26	Turbidity	----	E121	0.10	NTU	3.87	3.97	2.55%	15%	----
Physical Tests (QC Lot: 2183897)											
BF2500295-004	Anonymous	Solids, total suspended [TSS]	----	E160-L	1.2	mg/L	<1.3	<1.2	1.2	Diff <2x LOR	----
Physical Tests (QC Lot: 2183898)											
BF2500295-005	Anonymous	Solids, total dissolved [TDS]	----	E162	17	mg/L	63	73	10	Diff <2x LOR	----
Physical Tests (QC Lot: 2186948)											
BF2500297-004	LF-KP22-05_2025-08-26	Solids, total suspended [TSS]	----	E160-L	1.5	mg/L	51.8	53.0	2.36%	20%	----
Physical Tests (QC Lot: 2186985)											
BF2500297-004	LF-KP22-05_2025-08-26	Solids, total dissolved [TDS]	----	E162	21	mg/L	304	252	18.8%	20%	----
Physical Tests (QC Lot: 2192524)											
BF2500295-007	Anonymous	Conductivity	----	E100	1.0	µS/cm	156	156	0.00%	10%	----
Physical Tests (QC Lot: 2192525)											
BF2500295-007	Anonymous	Alkalinity, total (as CaCO3)	----	E290	2.0	mg/L	101	112	9.92%	20%	----
Anions and Nutrients (QC Lot: 2192516)											
BF2500297-001	LF-KP23-06_2025-08-26	Bromide	24959-67-9	E235.Br	0.10	mg/L	<0.10	<0.10	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2192517)											
BF2500297-001	LF-KP23-06_2025-08-26	Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	0.144	0.144	0.0004	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2192518)											
BF2500297-001	LF-KP23-06_2025-08-26	Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2192520)											
BF2500297-001	LF-KP23-06_2025-08-26	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	12.8	12.9	0.387%	20%	----
Anions and Nutrients (QC Lot: 2192522)											
BF2500297-001	LF-KP23-06_2025-08-26	Chloride	16887-00-6	E235.Cl	0.50	mg/L	2.64	2.63	0.007	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2192523)											

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Anions and Nutrients (QC Lot: 2192523) - continued											
BF2500297-001	LF-KP23-06_2025-08-26	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.040	0.040	0.00008	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2193867)											
BF2500297-001	LF-KP23-06_2025-08-26	Kjeldahl nitrogen, total [TKN]	----	E318	0.050	mg/L	0.187	0.208	0.020	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2193868)											
BF2500297-002	LF-KP23-07_2025-08-26	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0114	0.0116	0.0002	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2193869)											
BF2500297-003	LF-KP23-11_2025-08-26	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2197121)											
BF2500296-001	Anonymous	Phosphorus, total dissolved	7723-14-0	E375-T	0.0020	mg/L	0.0115	0.0118	0.0002	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 2193097)											
BF2500274-004	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	1.72	1.74	0.02	Diff <2x LOR	----
Dissolved Metals (QC Lot: 2190641)											
BF2500296-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0034	0.0033	0.00009	Diff <2x LOR	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00012	0.00010	0.00002	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.00482	0.00482	0.0104%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	31.0	30.9	0.375%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00108	0.00111	0.00003	Diff <2x LOR	----
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0017	0.0017	0.00003	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	18.9	18.8	0.456%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.00042	0.00040	0.00002	Diff <2x LOR	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.00207	0.00210	0.00003	Diff <2x LOR	----
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.050	mg/L	0.731	0.736	0.658%	20%	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Dissolved Metals (QC Lot: 2190641) - continued											
BF2500296-001	Anonymous	Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00049	0.00044	0.00006	Diff <2x LOR	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	1.97	1.96	0.411%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.050	mg/L	2.61	2.60	0.613%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.0172	0.0172	0.00989%	20%	----
		Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.000248	0.000250	0.883%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	0.00031	0.00032	0.000009	Diff <2x LOR	----
Dissolved Metals (QC Lot: 2194592)											
BF2500274-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 2197190)											
BF2500297-003	LF-KP23-11_2025-08-26	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Volatile Organic Compounds (QC Lot: 2194684)											
BF2500296-001	Anonymous	Acetone	67-64-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Benzene	71-43-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromodichloromethane	75-27-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromoform	75-25-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromomethane	74-83-9	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Carbon disulfide	75-15-0	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Carbon tetrachloride	56-23-5	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Chlorobenzene	108-90-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroethane	75-00-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroform	67-66-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloromethane	74-87-3	E611D	2.0	µg/L	<2.0	<2.0	0	Diff <2x LOR	----
		Dibromochloromethane	124-48-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Volatile Organic Compounds (QC Lot: 2194684) - continued											
BF2500296-001	Anonymous	Dibromoethane, 1,2-	106-93-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorodifluoromethane	75-71-8	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,1-	75-34-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,2-	107-06-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, 1,1-	75-35-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Dichloropropane, 1,2-	78-87-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Hexane, n-	110-54-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Hexanone, 2-	591-78-6	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethylene	127-18-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Toluene	108-88-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichlorofluoromethane	75-69-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Vinyl chloride	75-01-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 2194685)											
BF2500296-001	Anonymous	F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	<25	0	Diff <2x LOR	----

Method Blank (MB) Report

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

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 2183793)						
Turbidity	----	E121	0.1	NTU	<0.10	----
Physical Tests (QCLot: 2183795)						
Turbidity	----	E121	0.1	NTU	<0.10	----
Physical Tests (QCLot: 2183897)						
Solids, total suspended [TSS]	----	E160-L	1	mg/L	<1.0	----
Physical Tests (QCLot: 2183898)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Physical Tests (QCLot: 2186948)						
Solids, total suspended [TSS]	----	E160-L	1	mg/L	<1.0	----
Physical Tests (QCLot: 2186985)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Physical Tests (QCLot: 2192524)						
Conductivity	----	E100	1	µS/cm	1.3	----
Physical Tests (QCLot: 2192525)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	1.8	----
Anions and Nutrients (QCLot: 2192516)						
Bromide	24959-67-9	E235.Br	0.1	mg/L	<0.10	----
Anions and Nutrients (QCLot: 2192517)						
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 2192518)						
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	<0.010	----
Anions and Nutrients (QCLot: 2192520)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 2192522)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 2192523)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 2193867)						
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 2193868)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Anions and Nutrients (QCLot: 2193869)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 2197121)						
Phosphorus, total dissolved	7723-14-0	E375-T	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 2198749)						
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	<0.050	----
Organic / Inorganic Carbon (QCLot: 2193097)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Dissolved Metals (QCLot: 2190641)						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 2190641) - continued						
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 2194592)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Dissolved Metals (QCLot: 2197190)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Volatile Organic Compounds (QCLot: 2194684)						
Acetone	67-64-1	E611D	20	µg/L	<20	----
Benzene	71-43-2	E611D	0.5	µg/L	<0.50	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	<0.50	----
Bromoform	75-25-2	E611D	0.5	µg/L	<0.50	----
Bromomethane	74-83-9	E611D	0.5	µg/L	<0.50	----
Carbon disulfide	75-15-0	E611D	1	µg/L	<1.0	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	<0.20	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	<0.50	----
Chloroethane	75-00-3	E611D	0.5	µg/L	<0.50	----
Chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----
Chloromethane	74-87-3	E611D	2	µg/L	<2.0	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	<0.50	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	<0.20	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	<0.50	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 2194684) - continued						
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	<0.50	----
Dichloromethane	75-09-2	E611D	1	µg/L	<1.0	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	<0.50	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	<0.30	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	<0.50	----
Hexanone, 2-	591-78-6	E611D	20	µg/L	<20	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	<0.50	----
Styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----
Toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	<0.50	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	<0.50	----
Vinyl chloride	75-01-4	E611D	0.2	µg/L	<0.20	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----
Hydrocarbons (QCLot: 2194594)						
F2 (C10-C16)	----	E601	100	µg/L	<100	----
F3 (C16-C34)	----	E601	250	µg/L	<250	----
F4 (C34-C50)	----	E601	250	µg/L	<250	----
Hydrocarbons (QCLot: 2194685)						
F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	----
Polycyclic Aromatic Hydrocarbons (QCLot: 2194595)						
Acenaphthene	83-32-9	E641A-L	0.01	µg/L	<0.010	----
Acenaphthylene	208-96-8	E641A-L	0.01	µg/L	<0.010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 2194595) - continued						
Acridine	260-94-6	E641A-L	0.01	µg/L	<0.010	----
Anthracene	120-12-7	E641A-L	0.01	µg/L	<0.010	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	µg/L	<0.010	----
Benzo(a)pyrene	50-32-8	E641A-L	0.005	µg/L	<0.0050	----
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	µg/L	<0.010	----
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	µg/L	<0.010	----
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	µg/L	<0.010	----
Chrysene	218-01-9	E641A-L	0.01	µg/L	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	µg/L	<0.0050	----
Fluoranthene	206-44-0	E641A-L	0.01	µg/L	<0.010	----
Fluorene	86-73-7	E641A-L	0.01	µg/L	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	µg/L	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	µg/L	<0.010	----
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	µg/L	<0.010	----
Naphthalene	91-20-3	E641A-L	0.01	µg/L	<0.010	----
Perylene	198-55-0	E641A-L	0.01	µg/L	<0.010	----
Phenanthrene	85-01-8	E641A-L	0.01	µg/L	<0.010	----
Pyrene	129-00-0	E641A-L	0.01	µg/L	<0.010	----
Quinoline	91-22-5	E641A-L	0.01	µg/L	<0.010	----

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
Physical Tests (QCLot: 2183790)									
pH	----	E108	----	pH units	7 pH units	100	98.0	102	----
Physical Tests (QCLot: 2183792)									
pH	----	E108	----	pH units	7 pH units	100	98.0	102	----
Physical Tests (QCLot: 2183793)									
Turbidity	----	E121	0.1	NTU	200 NTU	99.0	85.0	115	----
Physical Tests (QCLot: 2183795)									
Turbidity	----	E121	0.1	NTU	200 NTU	99.0	85.0	115	----
Physical Tests (QCLot: 2183897)									
Solids, total suspended [TSS]	----	E160-L	1	mg/L	250 mg/L	99.0	85.0	115	----
Physical Tests (QCLot: 2183898)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	850 mg/L	100	85.0	115	----
Physical Tests (QCLot: 2186948)									
Solids, total suspended [TSS]	----	E160-L	1	mg/L	250 mg/L	99.0	85.0	115	----
Physical Tests (QCLot: 2186985)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	850 mg/L	98.8	85.0	115	----
Physical Tests (QCLot: 2192524)									
Conductivity	----	E100	1	µS/cm	1410 µS/cm	104	90.0	110	----
Physical Tests (QCLot: 2192525)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	150 mg/L	104	85.0	115	----
Anions and Nutrients (QCLot: 2192516)									
Bromide	24959-67-9	E235.Br	0.1	mg/L	0.5 mg/L	97.1	85.0	115	----
Anions and Nutrients (QCLot: 2192517)									
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	2.5 mg/L	98.8	90.0	110	----
Anions and Nutrients (QCLot: 2192518)									
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	0.5 mg/L	96.5	90.0	110	----
Anions and Nutrients (QCLot: 2192520)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	99.8	90.0	110	----
Anions and Nutrients (QCLot: 2192522)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	99.9	90.0	110	----
Anions and Nutrients (QCLot: 2192523)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	102	90.0	110	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Anions and Nutrients (QCLot: 2193867)									
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	4 mg/L	105	75.0	125	----
Anions and Nutrients (QCLot: 2193868)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.333 mg/L	98.8	80.0	120	----
Anions and Nutrients (QCLot: 2193869)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	99.8	85.0	115	----
Anions and Nutrients (QCLot: 2197121)									
Phosphorus, total dissolved	7723-14-0	E375-T	0.002	mg/L	0.333 mg/L	96.6	80.0	120	----
Anions and Nutrients (QCLot: 2198749)									
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	4 mg/L	99.6	75.0	125	----
Organic / Inorganic Carbon (QCLot: 2193097)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	100	80.0	120	----
Dissolved Metals (QCLot: 2190641)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	0.1 mg/L	103	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	0.05 mg/L	101	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	0.05 mg/L	103	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.012 mg/L	105	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.005 mg/L	103	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	0.05 mg/L	104	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	0.05 mg/L	92.9	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.005 mg/L	103	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	2.5 mg/L	98.6	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.002 mg/L	104	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.012 mg/L	96.8	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.012 mg/L	95.5	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.012 mg/L	94.7	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	0.05 mg/L	92.7	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.025 mg/L	105	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.012 mg/L	96.1	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	2.5 mg/L	95.7	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.012 mg/L	103	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.012 mg/L	99.4	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.025 mg/L	94.0	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	0.5 mg/L	97.3	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	2.5 mg/L	97.3	80.0	120	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 2190641) - continued									
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.005 mg/L	107	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	0.05 mg/L	94.0	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	0.5 mg/L	96.2	60.0	140	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.005 mg/L	100	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	2.5 mg/L	92.0	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.012 mg/L	103	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	2.5 mg/L	95.7	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.005 mg/L	103	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	0.05 mg/L	104	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.005 mg/L	104	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.025 mg/L	102	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.012 mg/L	95.6	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.005 mg/L	98.1	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0 mg/L	108	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.025 mg/L	96.4	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.025 mg/L	96.8	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.005 mg/L	98.1	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	97.7	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	103	80.0	120	----
Volatile Organic Compounds (QCLot: 2194684)									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	114	70.0	130	----
Benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	99.3	70.0	130	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	97.1	70.0	130	----
Bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	82.9	70.0	130	----
Bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	78.7	60.0	140	----
Carbon disulfide	75-15-0	E611D	1	µg/L	100 µg/L	90.0	70.0	130	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	94.3	70.0	130	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	96.6	70.0	130	----
Chloroethane	75-00-3	E611D	0.5	µg/L	100 µg/L	99.8	60.0	140	----
Chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	97.6	70.0	130	----
Chloromethane	74-87-3	E611D	2	µg/L	100 µg/L	107	60.0	140	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	94.5	70.0	130	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	87.7	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	98.0	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	95.8	70.0	130	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 2194684) - continued									
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	96.1	70.0	130	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	117	60.0	140	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	98.0	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	90.1	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	96.6	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	100	70.0	130	----
Dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	97.4	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	95.7	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	90.5	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	85.6	70.0	130	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	93.0	70.0	130	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	98.7	70.0	130	----
Hexanone, 2-	591-78-6	E611D	20	µg/L	100 µg/L	78.9	70.0	130	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	87.6	70.0	130	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	83.9	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	97.1	70.0	130	----
Styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	93.0	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	94.2	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	84.2	70.0	130	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	94.1	70.0	130	----
Toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	92.7	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	93.7	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	90.2	70.0	130	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	99.2	70.0	130	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	99.4	60.0	140	----
Vinyl chloride	75-01-4	E611D	0.2	µg/L	100 µg/L	103	60.0	140	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	97.0	70.0	130	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	95.7	70.0	130	----
Hydrocarbons (QCLot: 2194594)									
F2 (C10-C16)	----	E601	100	µg/L	3770 µg/L	86.7	70.0	130	----
F3 (C16-C34)	----	E601	250	µg/L	7760 µg/L	98.3	70.0	130	----
F4 (C34-C50)	----	E601	250	µg/L	4200 µg/L	112	70.0	130	----
Hydrocarbons (QCLot: 2194685)									
F1 (C6-C10)	----	E581.F1-L	25	µg/L	2000 µg/L	110	80.0	120	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 2194595)									
Acenaphthene	83-32-9	E641A-L	0.01	µg/L	0.526 µg/L	97.2	50.0	140	----
Acenaphthylene	208-96-8	E641A-L	0.01	µg/L	0.526 µg/L	91.2	50.0	140	----
Acridine	260-94-6	E641A-L	0.01	µg/L	0.526 µg/L	89.6	50.0	140	----
Anthracene	120-12-7	E641A-L	0.01	µg/L	0.526 µg/L	83.2	50.0	140	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	µg/L	0.526 µg/L	113	50.0	140	----
Benzo(a)pyrene	50-32-8	E641A-L	0.005	µg/L	0.526 µg/L	102	50.0	140	----
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	µg/L	0.526 µg/L	110	50.0	140	----
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	µg/L	0.526 µg/L	113	50.0	140	----
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	µg/L	0.526 µg/L	109	50.0	140	----
Chrysene	218-01-9	E641A-L	0.01	µg/L	0.526 µg/L	109	50.0	140	----
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	µg/L	0.526 µg/L	82.7	50.0	140	----
Fluoranthene	206-44-0	E641A-L	0.01	µg/L	0.526 µg/L	97.3	50.0	140	----
Fluorene	86-73-7	E641A-L	0.01	µg/L	0.526 µg/L	94.8	50.0	140	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	µg/L	0.526 µg/L	106	50.0	140	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	µg/L	0.526 µg/L	103	50.0	140	----
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	µg/L	0.526 µg/L	98.8	50.0	140	----
Naphthalene	91-20-3	E641A-L	0.01	µg/L	0.526 µg/L	92.1	50.0	140	----
Perylene	198-55-0	E641A-L	0.01	µg/L	0.526 µg/L	111	50.0	140	----
Phenanthrene	85-01-8	E641A-L	0.01	µg/L	0.526 µg/L	105	50.0	140	----
Pyrene	129-00-0	E641A-L	0.01	µg/L	0.526 µg/L	100	50.0	140	----
Quinoline	91-22-5	E641A-L	0.01	µg/L	0.526 µg/L	104	50.0	140	----

Matrix Spike (MS) Report

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

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 2192516)										
BF2500297-001	LF-KP23-06_2025-08-26	Bromide	24959-67-9	E235.Br	0.44 mg/L	0.5 mg/L	88.5	75.0	125	----
Anions and Nutrients (QCLot: 2192517)										
BF2500297-001	LF-KP23-06_2025-08-26	Nitrate (as N)	14797-55-8	E235.NO3	2.30 mg/L	2.5 mg/L	92.1	75.0	125	----
Anions and Nutrients (QCLot: 2192518)										
BF2500297-001	LF-KP23-06_2025-08-26	Nitrite (as N)	14797-65-0	E235.NO2	0.452 mg/L	0.5 mg/L	90.4	75.0	125	----
Anions and Nutrients (QCLot: 2192520)										
BF2500297-001	LF-KP23-06_2025-08-26	Sulfate (as SO4)	14808-79-8	E235.SO4	92.1 mg/L	100 mg/L	92.1	75.0	125	----
Anions and Nutrients (QCLot: 2192522)										
BF2500297-001	LF-KP23-06_2025-08-26	Chloride	16887-00-6	E235.Cl	92.8 mg/L	100 mg/L	92.8	75.0	125	----
Anions and Nutrients (QCLot: 2192523)										
BF2500297-001	LF-KP23-06_2025-08-26	Fluoride	16984-48-8	E235.F	0.832 mg/L	1 mg/L	83.2	75.0	125	----
Anions and Nutrients (QCLot: 2193867)										
BF2500297-001	LF-KP23-06_2025-08-26	Kjeldahl nitrogen, total [TKN]	----	E318	2.34 mg/L	2.5 mg/L	93.7	70.0	130	----
Anions and Nutrients (QCLot: 2193868)										
BF2500297-002	LF-KP23-07_2025-08-26	Phosphorus, total	7723-14-0	E372-U	0.0976 mg/L	0.1 mg/L	97.6	70.0	130	----
Anions and Nutrients (QCLot: 2193869)										
BF2500297-003	LF-KP23-11_2025-08-26	Ammonia, total (as N)	7664-41-7	E298	0.105 mg/L	0.1 mg/L	105	75.0	125	----
Anions and Nutrients (QCLot: 2197121)										
BF2500296-001	Anonymous	Phosphorus, total dissolved	7723-14-0	E375-T	0.101 mg/L	0.1 mg/L	101	70.0	130	----
Organic / Inorganic Carbon (QCLot: 2193097)										
BF2500274-004	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	4.95 mg/L	5 mg/L	98.9	70.0	130	----
Dissolved Metals (QCLot: 2190641)										
BF2500296-002	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.101 mg/L	0.1 mg/L	101	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0525 mg/L	0.05 mg/L	105	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0545 mg/L	0.05 mg/L	109	70.0	130	----
		Barium, dissolved	7440-39-3	E421	0.0126 mg/L	0.012 mg/L	101	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.00545 mg/L	0.005 mg/L	109	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.0472 mg/L	0.05 mg/L	94.5	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.046 mg/L	0.05 mg/L	92.8	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00526 mg/L	0.005 mg/L	105	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.00269 mg/L	0.002 mg/L	108	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0119 mg/L	0.012 mg/L	95.1	70.0	130	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 2190641) - continued										
BF2500296-002	Anonymous	Cobalt, dissolved	7440-48-4	E421	0.0117 mg/L	0.012 mg/L	93.7	70.0	130	----
		Copper, dissolved	7440-50-8	E421	0.0114 mg/L	0.012 mg/L	91.7	70.0	130	----
		Iron, dissolved	7439-89-6	E421	0.044 mg/L	0.05 mg/L	88.8	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0257 mg/L	0.025 mg/L	103	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.0131 mg/L	0.012 mg/L	105	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	ND mg/L	----	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	0.0124 mg/L	0.012 mg/L	99.6	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.0127 mg/L	0.012 mg/L	102	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0228 mg/L	0.025 mg/L	91.2	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	0.536 mg/L	0.5 mg/L	107	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	2.41 mg/L	2.5 mg/L	96.3	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.00520 mg/L	0.005 mg/L	104	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0539 mg/L	0.05 mg/L	108	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	ND mg/L	----	ND	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00502 mg/L	0.005 mg/L	100	70.0	130	----
		Sodium, dissolved	7440-23-5	E421	2.26 mg/L	2.5 mg/L	90.4	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	ND mg/L	----	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	2.54 mg/L	2.5 mg/L	102	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.00568 mg/L	0.005 mg/L	114	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.0514 mg/L	0.05 mg/L	103	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.00505 mg/L	0.005 mg/L	101	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0260 mg/L	0.025 mg/L	104	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0122 mg/L	0.012 mg/L	97.8	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.00488 mg/L	0.005 mg/L	97.7	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	ND mg/L	----	ND	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.0246 mg/L	0.025 mg/L	98.3	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.0251 mg/L	0.025 mg/L	100	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.00503 mg/L	0.005 mg/L	101	70.0	130	----
Dissolved Metals (QCLot: 2194592)										
BF2500274-002	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000952 mg/L	0 mg/L	95.2	70.0	130	----
Dissolved Metals (QCLot: 2197190)										
BF2500297-004	LF-KP22-05_2025-08-26	Mercury, dissolved	7439-97-6	E509	0.0000947 mg/L	0 mg/L	94.7	70.0	130	----
Volatile Organic Compounds (QCLot: 2194684)										
BF2500296-001	Anonymous	Acetone	67-64-1	E611D	100 µg/L	100 µg/L	99.8	60.0	140	----
		Benzene	71-43-2	E611D	98.6 µg/L	100 µg/L	98.6	60.0	140	----
		Bromodichloromethane	75-27-4	E611D	96.4 µg/L	100 µg/L	96.4	60.0	140	----
		Bromoform	75-25-2	E611D	83.0 µg/L	100 µg/L	83.0	60.0	140	----
		Bromomethane	74-83-9	E611D	79.3 µg/L	100 µg/L	79.3	60.0	140	----
		Carbon disulfide	75-15-0	E611D	94.3 µg/L	100 µg/L	94.3	60.0	140	----
		Carbon tetrachloride	56-23-5	E611D	91.4 µg/L	100 µg/L	91.4	60.0	140	----
		Chlorobenzene	108-90-7	E611D	96.1 µg/L	100 µg/L	96.1	60.0	140	----
		Chloroethane	75-00-3	E611D	98.0 µg/L	100 µg/L	98.0	60.0	140	----
		Chloroform	67-66-3	E611D	96.1 µg/L	100 µg/L	96.1	60.0	140	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 2194684) - continued										
BF2500296-001	Anonymous	Chloromethane	74-87-3	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		Dibromochloromethane	124-48-1	E611D	94.0 µg/L	100 µg/L	94.0	60.0	140	----
		Dibromoethane, 1,2-	106-93-4	E611D	87.6 µg/L	100 µg/L	87.6	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	97.3 µg/L	100 µg/L	97.3	60.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	94.3 µg/L	100 µg/L	94.3	60.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	94.9 µg/L	100 µg/L	94.9	60.0	140	----
		Dichlorodifluoromethane	75-71-8	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611D	87.8 µg/L	100 µg/L	87.8	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611D	89.8 µg/L	100 µg/L	89.8	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611D	99.5 µg/L	100 µg/L	99.5	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	95.8 µg/L	100 µg/L	95.8	60.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	98.9 µg/L	100 µg/L	98.9	60.0	140	----
		Dichloromethane	75-09-2	E611D	96.4 µg/L	100 µg/L	96.4	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611D	94.8 µg/L	100 µg/L	94.8	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	89.9 µg/L	100 µg/L	89.9	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	85.9 µg/L	100 µg/L	85.9	60.0	140	----
		Ethylbenzene	100-41-4	E611D	92.2 µg/L	100 µg/L	92.2	60.0	140	----
		Hexane, n-	110-54-3	E611D	88.9 µg/L	100 µg/L	88.9	60.0	140	----
		Hexanone, 2-	591-78-6	E611D	81 µg/L	100 µg/L	81.0	60.0	140	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	97 µg/L	100 µg/L	97.0	60.0	140	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	85 µg/L	100 µg/L	85.1	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	95.7 µg/L	100 µg/L	95.7	60.0	140	----
		Styrene	100-42-5	E611D	92.4 µg/L	100 µg/L	92.4	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	94.6 µg/L	100 µg/L	94.6	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	85.0 µg/L	100 µg/L	85.0	60.0	140	----
		Tetrachloroethylene	127-18-4	E611D	92.3 µg/L	100 µg/L	92.3	60.0	140	----
		Toluene	108-88-3	E611D	92.4 µg/L	100 µg/L	92.4	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	91.4 µg/L	100 µg/L	91.4	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	89.8 µg/L	100 µg/L	89.8	60.0	140	----
		Trichloroethylene	79-01-6	E611D	97.3 µg/L	100 µg/L	97.3	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611D	94.5 µg/L	100 µg/L	94.5	60.0	140	----
		Vinyl chloride	75-01-4	E611D	100 µg/L	100 µg/L	100	60.0	140	----
		Xylene, m+p-	179601-23-1	E611D	193 µg/L	200 µg/L	96.5	60.0	140	----
		Xylene, o-	95-47-6	E611D	95.8 µg/L	100 µg/L	95.8	60.0	140	----
Hydrocarbons (QCLot: 2194685)										
BF2500296-001	Anonymous	F1 (C6-C10)	----	E581.F1-L	1850 µg/L	2000 µg/L	92.6	60.0	140	----

Chain of Custody: 25 08 26_MS_Landfill_Groundwater

Client Info	Project Info	Laboratory Info	
Baffinland Iron Mine Corporation 2275 Upper Middle Rd E, Suite 300 Oakville, ON, L6H 0C3 **Phone:** 647-253-0596 x6016/6039/4131 **Email:** environment.coordinators@baffinland.com; environment.superintendents@baffinland.com	**Job Reference (Project):** MS_Landfill_Groundwater **Task:** , GW_Landfill_250825 **Site:** MS	**Lab Name:** ALS Waterloo **Contact:** Rick Hawthorne **Phone:** 519.886.6910 **Email:** Rick.Hawthorne@ALSGlobal.com	**Address:** Unit 1 - 60 Northland Road Waterloo, ON,N2V 2B8
Email Invoice: ap@baffinland.com; environment.superintendents@baffinland.com **Email EDD:** bim.equissa@baffinland.com **Email COA:** environment.labresults@baffinland.com	**Turn around Time:** Routine (R) **Sampler 1:** LG **Sampler 2:** JM **Sampler 3:**	**ALS Quote #:** WT2020BIMC1000001 **ALS PO #:** 4500156571	**Lab Work Order #** (lab use only):

Sample Details				Field Data			Analysis Requested											
Sample ID (sys_sample_code)	**Location (sys_loc_code)**	**Sample Date and Time**	**Matrix**	**pH, Field (pH units)**	**Temperature, Field (deg C)**	**Total # of Containers**	**ALS_GW_Landfill**											
LF-KP23-06_2025-08-26	**LF-KP23-06**	**8/26/2025 11:05:00 AM**	**WG**	**7.49**	**1.7**	**10**	**X**											
LF-KP23-07_2025-08-26	**LF-KP23-07**	**8/26/2025 12:00:00 PM**	**WG**	**7.73**	**2**	**10**	**X**											
LF-KP23-11_2025-08-26	**LF-KP23-11**	**8/26/2025 2:05:00 PM**	**WG**	**1.8**	**7.3**	**10**	**X**											
LF-KP22-05_2025-08-26	**LF-KP22-05**	**8/26/2025 3:45:00 PM**	**WG**	**6.95**	**3**	**10**	**X**											
LF-KP23-01_2025-08-26	**LF-KP23-01**	**8/26/2025 5:00:00 PM**	**WG**	**7.02**	**2.2**	**10**	**X**											

Relinquished by:	Bradley Rasmussen	**Date:**	
Additional Comments			
Initial Shipment Reception (lab use only)		**Final Shipment Reception** (lab use only)	
Received by:		**Received by:**	
Date/Time:		**Date/Time:**	

Baffinland

Chain of Custody: 25 08 26_MS_Landfill_Groundwater

Client Info	Project Info	Laboratory Info	
Baffinland Iron Mine Corporation 2275 Upper Middle Rd E, Suite 300 Oakville, ON, L6H 0C3 **Phone:** 647-253-0596 x6016/6039/4131 **Email:** environment.coordinators@baffinland.com; environment.superintendents@baffinland.com	**Job Reference (Project):** MS_Landfill_Groundwater **Task:** , GW_Landfill_250825 **Site:** MS	**Lab Name:** ALS Waterloo **Contact:** Rick Hawthorne **Phone:** 519.886.6910 **Email:** Rick.Hawthorne@ALSGlobal.com	**Address:** Unit 1 - 60 Northland Road Waterloo, ON,N2V 2B8
Email Invoice: ap@baffinland.com; environment.superintendents@baffinland.com **Email EDD:** bim.equissa@baffinland.com **Email COA:** environment.labresults@baffinland.com	**Turn around Time:** Routine (R) **Sampler 1:** LG **Sampler 2:** JM **Sampler 3:**	**ALS Quote #:** WT2020BIMC1000001 **ALS PO #:** 4500156571	

Environmental Division
Baffin Island
Work Order Reference
BF2500297

elephone

Sample Details				Field Data														
Sample ID (sys_sample_code)	Location (sys_loc_code)	Sample Date and Time	Matrix	pH, Field (pH units)	Temperature, Field (deg C)	Total # of Containers	ALS_GW_Landfill											
LF-KP23-06_2025-08-26	LF-KP23-06	8/26/2025 11:05:00 AM	WG	7.49	1.7	10	X											
LF-KP23-07_2025-08-26	LF-KP23-07	8/26/2025 12:00:00 PM	WG	7.73	2	10	X											
LF-KP23-11_2025-08-26	LF-KP23-11	8/26/2025 2:05:00 PM	WG	1.8	7.3	10	X											
LF-KP22-05_2025-08-26	LF-KP22-05	8/26/2025 3:45:00 PM	WG	6.95	3	10	X											
LF-KP23-01_2025-08-26	LF-KP23-01	8/26/2025 5:00:00 PM	WG	7.02	2.2	10	X											

Relinquished by:	Bradley Rasmussen	**Date:**	
Additional Comments			
Initial Shipment Reception (lab use only)		**Final Shipment Reception** (lab use only)	
Received by:		**Received by:**	
Date/Time:		**Date/Time:**	29 AUG 25 9:15

UV-287 MM-414 GC-713
OR-009 N-172

9.1°C

CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	:	**BF2500299**			
Client	:	**Baffinland Iron Mines Corporation**	Laboratory	:	ALS Environmental - Baffin Island
Contact	:	Environmental Lab Results	Account Manager	:	Rick Hawthorne
Address	:	360 Oakville Place Dr Suite 300 Oakville Ontario Canada L6H 6K8	Address	:	Mary River, Qikqtani Region Baffin Island NU Canada
Telephone	:	----	Telephone	:	
Project	:	MS_Landfill_Groundwater	Date Samples Received	:	28-Aug-2025 08:27
PO	:	4500156571	Date Analysis Commenced	:	28-Aug-2025
C-O-C number	:	25 08 27_MS_Landfill_GW1	Issue Date	:	12-Sep-2025 12:42
Sampler	:	JJ, LG			
Site	:	Baffinland Iron Mines (Nunavut) Mary River and Milne Port			
Quote number	:	2024-2025 Scope of Work			
No. of samples received	:	3			
No. of samples analysed	:	3			

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
- Guideline Comparison

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*
Andrea Armstrong		VOC, Waterloo, Ontario
Cedrick Velasco		Inorganics, Baffin Island, Nunavut
Danielle Gravel		Organics, Waterloo, Ontario
David Tremblett		VOC, Waterloo, Ontario
Nik Perkio		Metals, Waterloo, Ontario
Walt Kippenhuck		Inorganics, Waterloo, Ontario
Walt Kippenhuck		Metals, Waterloo, Ontario
Walt Kippenhuck		Centralized Prep, Waterloo, Ontario

No Breaches Found

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.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key: LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units
µg/L	micrograms per litre
µS/cm	microsiemens per centimetre

>: greater than.
<: less than.

Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).
For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit.

Analytical Results Evaluation

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-05_2025-08-27 ----	LF-KP-22-03_2025-08-27 ----	QD-BT3_2025-08-27 ----	----	----	----	----
				Client sampling date / time	27-Aug-2025 12:20	27-Aug-2025 16:10	27-Aug-2025 16:10	----	----	----	----
				Sub-Matrix	Water	Water	Water	----	----	----	----
					BF2500299-001	BF2500299-002	BF2500299-003	----	----	----	----
					Result	Result	Result	----	----	----	----
Sample Preparation											
Dissolved carbon filtration location	----	EP358/WT	-		field	field	field	----	----	----	----
Physical Tests											
Conductivity	----	E100/WT	µS/cm		345	659	1.2	----	----	----	----
pH	----	E108/BF	pH units		7.84	7.35	6.45	----	----	----	----
Solids, total dissolved [TDS]	----	E162/BF	mg/L		190	367	<20	----	----	----	----
Solids, total suspended [TSS]	----	E160-L/BF	mg/L		15.6	1.5	<1.0	----	----	----	----
Turbidity	----	E121/BF	NTU		9.01	0.37	<0.10	----	----	----	----
Alkalinity, total (as CaCO3)	----	E290/WT	mg/L		153	208	<2.0	----	----	----	----
Anions and Nutrients											
Ammonia, total (as N)	7664-41-7	E298/WT	mg/L		0.0157	0.0553	<0.0050	----	----	----	----
Bromide	24959-67-9	E235.Br/WT	mg/L		<0.10	<0.10	<0.10	----	----	----	----
Chloride	16887-00-6	E235.Cl/WT	mg/L		4.21	41.7	<0.50	----	----	----	----
Fluoride	16984-48-8	E235.F/WT	mg/L		0.085	0.050	<0.020	----	----	----	----
Kjeldahl nitrogen, total [TKN]	----	E318/WT	mg/L		0.206	0.343	<0.050	----	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3/WT	mg/L		0.210	0.810	<0.020	----	----	----	----
Nitrite (as N)	14797-65-0	E235.NO2/WT	mg/L		<0.010	<0.010	<0.010	----	----	----	----
Phosphorus, total	7723-14-0	E372-U/WT	mg/L		0.0184	0.0082	<0.0020	----	----	----	----
Phosphorus, total dissolved	7723-14-0	E375-T/WT	mg/L		0.0026	0.0080	<0.0020	----	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	mg/L		20.4	67.9	<0.30	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-05_2025-08-27 ----	LF-KP-22-03_2025-08-27 ----	QD-BT3_2025-08-27 ----	----	----	----	----
				Client sampling date / time	27-Aug-2025 12:20	27-Aug-2025 16:10	27-Aug-2025 16:10	----	----	----	----
				Sub-Matrix	Water	Water	Water	----	----	----	----
					BF2500299-001	BF2500299-002	BF2500299-003	----	----	----	----
					Result	Result	Result	----	----	----	----
Organic / Inorganic Carbon											
Carbon, dissolved organic [DOC]	----	E358-L/WT	mg/L		3.81	3.54	0.82	----	----	----	----
Dissolved Metals											
Aluminum, dissolved	7429-90-5	E421/WT	mg/L		0.0117	0.0016	<0.0010	----	----	----	----
Antimony, dissolved	7440-36-0	E421/WT	mg/L		<0.00010	<0.00010	<0.00010	----	----	----	----
Arsenic, dissolved	7440-38-2	E421/WT	mg/L		0.00023	0.00023	<0.00010	----	----	----	----
Barium, dissolved	7440-39-3	E421/WT	mg/L		0.0282	0.0431	<0.00010	----	----	----	----
Beryllium, dissolved	7440-41-7	E421/WT	mg/L		<0.000020	<0.000020	<0.000020	----	----	----	----
Bismuth, dissolved	7440-69-9	E421/WT	mg/L		<0.000050	<0.000050	<0.000050	----	----	----	----
Boron, dissolved	7440-42-8	E421/WT	mg/L		0.150	0.560	<0.010	----	----	----	----
Cadmium, dissolved	7440-43-9	E421/WT	mg/L		0.0000077	0.0000089	0.0000054	----	----	----	----
Calcium, dissolved	7440-70-2	E421/WT	mg/L		29.9	60.7	<0.050	----	----	----	----
Cesium, dissolved	7440-46-2	E421/WT	mg/L		<0.000010	0.000023	<0.000010	----	----	----	----
Chromium, dissolved	7440-47-3	E421/WT	mg/L		0.00120	0.00110	<0.00050	----	----	----	----
Cobalt, dissolved	7440-48-4	E421/WT	mg/L		<0.00010	<0.00010	<0.00010	----	----	----	----
Copper, dissolved	7440-50-8	E421/WT	mg/L		0.00302	0.00168	<0.00020	----	----	----	----
Iron, dissolved	7439-89-6	E421/WT	mg/L		<0.010	<0.010	<0.010	----	----	----	----
Lead, dissolved	7439-92-1	E421/WT	mg/L		<0.000050	<0.000050	<0.000050	----	----	----	----
Lithium, dissolved	7439-93-2	E421/WT	mg/L		0.0017	0.0989	<0.0010	----	----	----	----
Magnesium, dissolved	7439-95-4	E421/WT	mg/L		25.8	36.9	<0.0050	----	----	----	----
Manganese, dissolved	7439-96-5	E421/WT	mg/L		0.00622	0.00860	<0.00010	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-05_2025-08-27 ----	LF-KP-22-03_2025-08-27 ----	QD-BT3_2025-08-27 ----	----	----	----	----
				Client sampling date / time	27-Aug-2025 12:20	27-Aug-2025 16:10	27-Aug-2025 16:10	----	----	----	----
				Sub-Matrix	Water	Water	Water	----	----	----	----
					BF2500299-001	BF2500299-002	BF2500299-003	----	----	----	----
					Result	Result	Result	----	----	----	----
Dissolved Metals											
Mercury, dissolved	7439-97-6	E509/WT	mg/L		<0.0000050	<0.0000050	<0.0000050	----	----	----	----
Molybdenum, dissolved	7439-98-7	E421/WT	mg/L		0.000455	0.00688	<0.000050	----	----	----	----
Nickel, dissolved	7440-02-0	E421/WT	mg/L		0.00531	0.0115	<0.00050	----	----	----	----
Phosphorus, dissolved	7723-14-0	E421/WT	mg/L		<0.050	<0.050	<0.050	----	----	----	----
Potassium, dissolved	7440-09-7	E421/WT	mg/L		1.45	4.44	<0.050	----	----	----	----
Rubidium, dissolved	7440-17-7	E421/WT	mg/L		0.00603	0.0122	<0.00020	----	----	----	----
Selenium, dissolved	7782-49-2	E421/WT	mg/L		<0.000050	0.000099	<0.000050	----	----	----	----
Silicon, dissolved	7440-21-3	E421/WT	mg/L		4.76	5.75	<0.050	----	----	----	----
Silver, dissolved	7440-22-4	E421/WT	mg/L		<0.000010	<0.000010	<0.000010	----	----	----	----
Sodium, dissolved	7440-23-5	E421/WT	mg/L		3.21	17.5	<0.050	----	----	----	----
Strontium, dissolved	7440-24-6	E421/WT	mg/L		0.0166	0.0601	<0.00020	----	----	----	----
Sulfur, dissolved	7704-34-9	E421/WT	mg/L		7.27	24.1	<0.50	----	----	----	----
Tellurium, dissolved	13494-80-9	E421/WT	mg/L		<0.00020	<0.00020	<0.00020	----	----	----	----
Thallium, dissolved	7440-28-0	E421/WT	mg/L		0.000015	0.000031	<0.000010	----	----	----	----
Thorium, dissolved	7440-29-1	E421/WT	mg/L		<0.00010	<0.00010	<0.00010	----	----	----	----
Tin, dissolved	7440-31-5	E421/WT	mg/L		<0.00010	<0.00010	<0.00010	----	----	----	----
Titanium, dissolved	7440-32-6	E421/WT	mg/L		<0.00030	<0.00030	<0.00030	----	----	----	----
Tungsten, dissolved	7440-33-7	E421/WT	mg/L		<0.00010	<0.00010	<0.00010	----	----	----	----
Uranium, dissolved	7440-61-1	E421/WT	mg/L		0.00103	0.00761	<0.000010	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-05_2025-08-27 ----	LF-KP-22-03_2025-08-27 ----	QD-BT3_2025-08-27 ----	----	----	----	----
				Client sampling date / time	27-Aug-2025 12:20	27-Aug-2025 16:10	27-Aug-2025 16:10	----	----	----	----
				Sub-Matrix	Water	Water	Water	----	----	----	----
					BF2500299-001	BF2500299-002	BF2500299-003	----	----	----	----
					Result	Result	Result	----	----	----	----
Dissolved Metals											
Vanadium, dissolved	7440-62-2	E421/WT	mg/L		<0.00050	<0.00050	<0.00050	----	----	----	----
Zinc, dissolved	7440-66-6	E421/WT	mg/L		<0.0010	<0.0010	<0.0010	----	----	----	----
Zirconium, dissolved	7440-67-7	E421/WT	mg/L		0.00033	<0.00030	<0.00030	----	----	----	----
Dissolved mercury filtration location	----	EP509/WT	-		Field	Field	Field	----	----	----	----
Dissolved metals filtration location	----	EP421/WT	-		Field	Field	Field	----	----	----	----
Volatile Organic Compounds											
Acetone	67-64-1	E611D/WT	µg/L		<20	<20	<20	----	----	----	----
Benzene	71-43-2	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Bromodichloromethane	75-27-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Bromoform	75-25-2	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Bromomethane	74-83-9	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
BTEX, total	----	E611D/WT	µg/L		<1.0	<1.0	<1.0	----	----	----	----
Carbon disulfide	75-15-0	E611D/WT	µg/L		<1.0	<1.0	<1.0	----	----	----	----
Carbon tetrachloride	56-23-5	E611D/WT	µg/L		<0.20	<0.20	<0.20	----	----	----	----
Chlorobenzene	108-90-7	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Chloroethane	75-00-3	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Chloroform	67-66-3	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Chloromethane	74-87-3	E611D/WT	µg/L		<2.0	<2.0	<2.0	----	----	----	----
Dibromochloromethane	124-48-1	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Dibromoethane, 1,2-	106-93-4	E611D/WT	µg/L		<0.20	<0.20	<0.20	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-05_2025-08-27 ----	LF-KP-22-03_2025-08-27 ----	QD-BT3_2025-08-27 ----	----	----	----	----
				Client sampling date / time	27-Aug-2025 12:20	27-Aug-2025 16:10	27-Aug-2025 16:10	----	----	----	----
				Sub-Matrix	Water	Water	Water	----	----	----	----
					BF2500299-001	BF2500299-002	BF2500299-003	----	----	----	----
					Result	Result	Result	----	----	----	----
Volatile Organic Compounds											
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Dichlorodifluoromethane	75-71-8	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Dichloroethane, 1,1-	75-34-3	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Dichloroethane, 1,2-	107-06-2	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Dichloroethylene, 1,1-	75-35-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Dichloroethylene, cis+trans-1,2-	540-59-0	E611D/WT	µg/L		<0.71	<0.71	<0.71	----	----	----	----
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Dichloromethane	75-09-2	E611D/WT	µg/L		<1.0	<1.0	<1.0	----	----	----	----
Dichloropropane, 1,2-	78-87-5	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	µg/L		<0.30	<0.30	<0.30	----	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	µg/L		<0.5	<0.5	<0.5	----	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	µg/L		<0.30	<0.30	<0.30	----	----	----	----
Ethylbenzene	100-41-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Hexane, n-	110-54-3	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Hexanone, 2-	591-78-6	E611D/WT	µg/L		<20	<20	<20	----	----	----	----
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	µg/L		<20	<20	<20	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-05_2025-08-27 ----	LF-KP-22-03_2025-08-27 ----	QD-BT3_2025-08-27 ----	----	----	----	----
				Client sampling date / time	27-Aug-2025 12:20	27-Aug-2025 16:10	27-Aug-2025 16:10	----	----	----	----
				Sub-Matrix	Water	Water	Water	----	----	----	----
					BF2500299-001	BF2500299-002	BF2500299-003	----	----	----	----
					Result	Result	Result	----	----	----	----
Volatile Organic Compounds											
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	µg/L		<20	<20	<20	----	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Styrene	100-42-5	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Tetrachloroethylene	127-18-4	E611D/WT	µg/L		<0.50	4.64	<0.50	----	----	----	----
Toluene	108-88-3	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Trichloroethylene	79-01-6	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Trichlorofluoromethane	75-69-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Trihalomethanes [THMs], total	----	E611D/WT	µg/L		<1.0	<1.0	<1.0	----	----	----	----
Vinyl chloride	75-01-4	E611D/WT	µg/L		<0.20	<0.20	<0.20	----	----	----	----
Xylene, m+p-	179601-23-1	E611D/WT	µg/L		<0.40	<0.40	<0.40	----	----	----	----
Xylene, o-	95-47-6	E611D/WT	µg/L		<0.30	<0.30	<0.30	----	----	----	----
Xylenes, total	1330-20-7	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Hydrocarbons											
F1 (C6-C10)	----	E581.F1-L/WT	µg/L		<25	<25	<25	----	----	----	----
F2 (C10-C16)	----	E601/WT	µg/L		<100	<100	<100	----	----	----	----
F3 (C16-C34)	----	E601/WT	µg/L		<250	<250	<250	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-05_2025-08-27 ----	LF-KP-22-03_2025-08-27 ----	QD-BT3_2025-08-27 ----	----	----	----	----
				Client sampling date / time	27-Aug-2025 12:20	27-Aug-2025 16:10	27-Aug-2025 16:10	----	----	----	----
				Sub-Matrix	Water	Water	Water	----	----	----	----
					BF2500299-001	BF2500299-002	BF2500299-003	----	----	----	----
					Result	Result	Result	----	----	----	----
Hydrocarbons											
F4 (C34-C50)	----	E601/WT	µg/L		<250	<250	<250	----	----	----	----
F1-BTEX	----	EC580/WT	µg/L		<25	<25	<25	----	----	----	----
Hydrocarbons, total (C6-C50)	n/a	EC581/WT	µg/L		<370	<370	<370	----	----	----	----
Hydrocarbons Surrogates											
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/WT	%		93.5	90.0	95.2	----	----	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.F1-L/WT	%		95.0	90.6	93.0	----	----	----	----
Volatile Organic Compounds Surrogates											
Bromofluorobenzene, 4-	460-00-4	E611D/WT	%		96.1	95.3	95.0	----	----	----	----
Difluorobenzene, 1,4-	540-36-3	E611D/WT	%		97.4	96.5	96.7	----	----	----	----
Polycyclic Aromatic Hydrocarbons											
Acenaphthene	83-32-9	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
Acenaphthylene	208-96-8	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
Acridine	260-94-6	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
Anthracene	120-12-7	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
Benz(a)anthracene	56-55-3	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
Benzo(a)pyrene	50-32-8	E641A-L/WT	µg/L		<0.0050	<0.0050	<0.0050	----	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
Benzo(b+j+k)fluoranthene	n/a	E641A-L/WT	µg/L		<0.015	<0.015	<0.015	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-05_2025-08-27 ----	LF-KP-22-03_2025-08-27 ----	QD-BT3_2025-08-27 ----	----	----	----	----
				Client sampling date / time	27-Aug-2025 12:20	27-Aug-2025 16:10	27-Aug-2025 16:10	----	----	----	----
				Sub-Matrix	Water	Water	Water	----	----	----	----
					BF2500299-001	BF2500299-002	BF2500299-003	----	----	----	----
					Result	Result	Result	----	----	----	----
Polycyclic Aromatic Hydrocarbons											
Benzo(k)fluoranthene	207-08-9	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
Chrysene	218-01-9	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A-L/WT	µg/L		<0.0050	<0.0050	<0.0050	----	----	----	----
Fluoranthene	206-44-0	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
Fluorene	86-73-7	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A-L/WT	µg/L		0.010	<0.010	<0.010	----	----	----	----
Methylnaphthalene, 1+2-	----	E641A-L/WT	µg/L		0.033	<0.015	<0.015	----	----	----	----
Methylnaphthalene, 2-	91-57-6	E641A-L/WT	µg/L		0.023	<0.010	<0.010	----	----	----	----
Naphthalene	91-20-3	E641A-L/WT	µg/L		0.038	<0.010	<0.010	----	----	----	----
Perylene	198-55-0	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
Phenanthrene	85-01-8	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
Pyrene	129-00-0	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
Quinoline	91-22-5	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
B(a)P total potency equivalents [B(a)P TPE]	----	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates											
Chrysene-d12	1719-03-5	E641A-L/WT	%		105	100	104	----	----	----	----
Naphthalene-d8	1146-65-2	E641A-L/WT	%		114	111	112	----	----	----	----
Phenanthrene-d10	1517-22-2	E641A-L/WT	%		110	110	110	----	----	----	----

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

Summary of Guideline Limits

Analyte	CAS Number	Unit	FEQG_BTEX						
Sample Preparation									
Dissolved carbon filtration location	----	-	----	----	----	----	----	----	----
Physical Tests									
Conductivity	----	µS/cm	----	----	----	----	----	----	----
pH	----	pH units	----	----	----	----	----	----	----
Solids, total dissolved [TDS]		mg/L	----	----	----	----	----	----	----
Solids, total suspended [TSS]		mg/L	----	----	----	----	----	----	----
Turbidity	----	NTU	----	----	----	----	----	----	----
Alkalinity, total (as CaCO3)		mg/L	----	----	----	----	----	----	----
Anions and Nutrients									
Ammonia, total (as N)	7664-41-7	mg/L	----	----	----	----	----	----	----
Bromide	24959-67-9	mg/L	----	----	----	----	----	----	----
Chloride	16887-00-6	mg/L	----	----	----	----	----	----	----
Fluoride	16984-48-8	mg/L	----	----	----	----	----	----	----
Kjeldahl nitrogen, total [TKN]		mg/L	----	----	----	----	----	----	----
Nitrate (as N)	14797-55-8	mg/L	----	----	----	----	----	----	----
Nitrite (as N)	14797-65-0	mg/L	----	----	----	----	----	----	----
Phosphorus, total	7723-14-0	mg/L	----	----	----	----	----	----	----
Phosphorus, total dissolved	7723-14-0	mg/L	----	----	----	----	----	----	----
Sulfate (as SO4)	14808-79-8	mg/L	----	----	----	----	----	----	----
Organic / Inorganic Carbon									
Carbon, dissolved organic [DOC]		mg/L	----	----	----	----	----	----	----
Dissolved Metals									
Aluminum, dissolved	7429-90-5	mg/L	----	----	----	----	----	----	----
Antimony, dissolved	7440-36-0	mg/L	----	----	----	----	----	----	----

Arsenic, dissolved	7440-38-2	mg/L	----	----	----	----	----	----	----
Barium, dissolved	7440-39-3	mg/L	----	----	----	----	----	----	----
Beryllium, dissolved	7440-41-7	mg/L	----	----	----	----	----	----	----
Bismuth, dissolved	7440-69-9	mg/L	----	----	----	----	----	----	----
Boron, dissolved	7440-42-8	mg/L	----	----	----	----	----	----	----
Cadmium, dissolved	7440-43-9	mg/L	----	----	----	----	----	----	----
Calcium, dissolved	7440-70-2	mg/L	----	----	----	----	----	----	----
Cesium, dissolved	7440-46-2	mg/L	----	----	----	----	----	----	----
Chromium, dissolved	7440-47-3	mg/L	----	----	----	----	----	----	----
Cobalt, dissolved	7440-48-4	mg/L	----	----	----	----	----	----	----
Copper, dissolved	7440-50-8	mg/L	----	----	----	----	----	----	----
Iron, dissolved	7439-89-6	mg/L	----	----	----	----	----	----	----
Lead, dissolved	7439-92-1	mg/L	----	----	----	----	----	----	----
Lithium, dissolved	7439-93-2	mg/L	----	----	----	----	----	----	----
Magnesium, dissolved	7439-95-4	mg/L	----	----	----	----	----	----	----
Manganese, dissolved	7439-96-5	mg/L	----	----	----	----	----	----	----
Mercury, dissolved	7439-97-6	mg/L	----	----	----	----	----	----	----
Molybdenum, dissolved	7439-98-7	mg/L	----	----	----	----	----	----	----
Nickel, dissolved	7440-02-0	mg/L	----	----	----	----	----	----	----
Phosphorus, dissolved	7723-14-0	mg/L	----	----	----	----	----	----	----
Potassium, dissolved	7440-09-7	mg/L	----	----	----	----	----	----	----
Rubidium, dissolved	7440-17-7	mg/L	----	----	----	----	----	----	----
Selenium, dissolved	7782-49-2	mg/L	----	----	----	----	----	----	----
Silicon, dissolved	7440-21-3	mg/L	----	----	----	----	----	----	----
Silver, dissolved	7440-22-4	mg/L	----	----	----	----	----	----	----
Sodium, dissolved	7440-23-5	mg/L	----	----	----	----	----	----	----
Strontium, dissolved	7440-24-6	mg/L	----	----	----	----	----	----	----

Sulfur, dissolved	7704-34-9	mg/L	----	----	----	----	----	----	----
Tellurium, dissolved	13494-80-9	mg/L	----	----	----	----	----	----	----
Thallium, dissolved	7440-28-0	mg/L	----	----	----	----	----	----	----
Thorium, dissolved	7440-29-1	mg/L	----	----	----	----	----	----	----
Tin, dissolved	7440-31-5	mg/L	----	----	----	----	----	----	----
Titanium, dissolved	7440-32-6	mg/L	----	----	----	----	----	----	----
Tungsten, dissolved	7440-33-7	mg/L	----	----	----	----	----	----	----
Uranium, dissolved	7440-61-1	mg/L	----	----	----	----	----	----	----
Vanadium, dissolved	7440-62-2	mg/L	----	----	----	----	----	----	----
Zinc, dissolved	7440-66-6	mg/L	----	----	----	----	----	----	----
Zirconium, dissolved	7440-67-7	mg/L	----	----	----	----	----	----	----
Dissolved mercury filtration location	----	-	----	----	----	----	----	----	----
Dissolved metals filtration location	----	-	----	----	----	----	----	----	----
Volatile Organic Compounds									
Acetone	67-64-1	µg/L	----	----	----	----	----	----	----
Benzene	71-43-2	µg/L	**590 µg/L**	----	----	----	----	----	----
Bromodichloromethane	75-27-4	µg/L	----	----	----	----	----	----	----
Bromoform	75-25-2	µg/L	----	----	----	----	----	----	----
Bromomethane	74-83-9	µg/L	----	----	----	----	----	----	----
BTEX, total		µg/L	----	----	----	----	----	----	----
Carbon disulfide	75-15-0	µg/L	----	----	----	----	----	----	----
Carbon tetrachloride	56-23-5	µg/L	----	----	----	----	----	----	----
Chlorobenzene	108-90-7	µg/L	----	----	----	----	----	----	----
Chloroethane	75-00-3	µg/L	----	----	----	----	----	----	----
Chloroform	67-66-3	µg/L	----	----	----	----	----	----	----
Chloromethane	74-87-3	µg/L	----	----	----	----	----	----	----
Dibromochloromethane	124-48-1	µg/L	----	----	----	----	----	----	----

Dibromoethane, 1,2-	106-93-4	µg/L	----	----	----	----	----	----	----	
Dichlorobenzene, 1,2-	95-50-1	µg/L	----	----	----	----	----	----	----	
Dichlorobenzene, 1,3-	541-73-1	µg/L	----	----	----	----	----	----	----	
Dichlorobenzene, 1,4-	106-46-7	µg/L	----	----	----	----	----	----	----	
Dichlorodifluoromethane	75-71-8	µg/L	----	----	----	----	----	----	----	
Dichloroethane, 1,1-	75-34-3	µg/L	----	----	----	----	----	----	----	
Dichloroethane, 1,2-	107-06-2	µg/L	----	----	----	----	----	----	----	
Dichloroethylene, 1,1-	75-35-4	µg/L	----	----	----	----	----	----	----	
Dichloroethylene, cis-1,2-	156-59-2	µg/L	----	----	----	----	----	----	----	
Dichloroethylene, cis+trans-1,2-	540-59-0	µg/L	----	----	----	----	----	----	----	
Dichloroethylene, trans-1,2-	156-60-5	µg/L	----	----	----	----	----	----	----	
Dichloromethane	75-09-2	µg/L	----	----	----	----	----	----	----	
Dichloropropane, 1,2-	78-87-5	µg/L	----	----	----	----	----	----	----	
Dichloropropylene, cis-1,3-	10061-01-5	µg/L	----	----	----	----	----	----	----	
Dichloropropylene, cis+trans-1,3-	542-75-6	µg/L	----	----	----	----	----	----	----	
Dichloropropylene, trans-1,3-	10061-02-6	µg/L	----	----	----	----	----	----	----	
Ethylbenzene	100-41-4	µg/L	**70 µg/L**	----	----	----	----	----	----	
Hexane, n-	110-54-3	µg/L	----	----	----	----	----	----	----	
Hexanone, 2-	591-78-6	µg/L	----	----	----	----	----	----	----	
Methyl ethyl ketone [MEK]	78-93-3	µg/L	----	----	----	----	----	----	----	
Methyl isobutyl ketone [MIBK]	108-10-1	µg/L	----	----	----	----	----	----	----	
Methyl-tert-butyl ether [MTBE]	1634-04-4	µg/L	----	----	----	----	----	----	----	
Styrene	100-42-5	µg/L	----	----	----	----	----	----	----	
Tetrachloroethane, 1,1,1,2-	630-20-6	µg/L	----	----	----	----	----	----	----	
Tetrachloroethane, 1,1,2,2-	79-34-5	µg/L	----	----	----	----	----	----	----	
Tetrachloroethylene	127-18-4	µg/L	----	----	----	----	----	----	----	
Toluene	108-88-3	µg/L	**30 µg/L**	----	----	----	----	----	----	

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Trichloroethane, 1,1,1-	71-55-6	µg/L	----	----	----	----	----	----	----
Trichloroethane, 1,1,2-	79-00-5	µg/L	----	----	----	----	----	----	----
Trichloroethylene	79-01-6	µg/L	----	----	----	----	----	----	----
Trichlorofluoromethane	75-69-4	µg/L	----	----	----	----	----	----	----
Trihalomethanes [THMs], total		µg/L	----	----	----	----	----	----	----
Vinyl chloride	75-01-4	µg/L	----	----	----	----	----	----	----
Xylene, m+p-	179601-23-1	µg/L	**70 µg/L**	----	----	----	----	----	----
Xylene, o-	95-47-6	µg/L	**70 µg/L**	----	----	----	----	----	----
Xylenes, total	1330-20-7	µg/L	**70 µg/L**	----	----	----	----	----	----
Hydrocarbons										
F1 (C6-C10)		µg/L	----	----	----	----	----	----	----
F2 (C10-C16)	----	µg/L	----	----	----	----	----	----	----
F3 (C16-C34)	----	µg/L	----	----	----	----	----	----	----
F4 (C34-C50)	----	µg/L	----	----	----	----	----	----	----
F1-BTEX		µg/L	----	----	----	----	----	----	----
Hydrocarbons, total (C6-C50)	n/a	µg/L	----	----	----	----	----	----	----
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	%	----	----	----	----	----	----	----
Bromofluorobenzene, 4-	460-00-4	%	----	----	----	----	----	----	----
Dichlorotoluene, 3,4-	95-75-0	%	----	----	----	----	----	----	----
Difluorobenzene, 1,4-	540-36-3	%	----	----	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	µg/L	----	----	----	----	----	----	----
Acenaphthylene	208-96-8	µg/L	----	----	----	----	----	----	----
Acridine	260-94-6	µg/L	----	----	----	----	----	----	----
Anthracene	120-12-7	µg/L	----	----	----	----	----	----	----
Benz(a)anthracene	56-55-3	µg/L	----	----	----	----	----	----	----
Benzo(a)pyrene	50-32-8	µg/L	----	----	----	----	----	----	----

Benzo(b+j)fluoranthene	n/a	µg/L	----	----	----	----	----	----	----	----
Benzo(b+j+k)fluoranthene	n/a	µg/L	----	----	----	----	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	µg/L	----	----	----	----	----	----	----	----
Benzo(k)fluoranthene	207-08-9	µg/L	----	----	----	----	----	----	----	----
Chrysene	218-01-9	µg/L	----	----	----	----	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	µg/L	----	----	----	----	----	----	----	----
Fluoranthene	206-44-0	µg/L	----	----	----	----	----	----	----	----
Fluorene	86-73-7	µg/L	----	----	----	----	----	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	µg/L	----	----	----	----	----	----	----	----
Methylnaphthalene, 1-	90-12-0	µg/L	----	----	----	----	----	----	----	----
Methylnaphthalene, 1+2-	----	µg/L	----	----	----	----	----	----	----	----
Methylnaphthalene, 2-	91-57-6	µg/L	----	----	----	----	----	----	----	----
Naphthalene	91-20-3	µg/L	----	----	----	----	----	----	----	----
Perylene	198-55-0	µg/L	----	----	----	----	----	----	----	----
Phenanthrene	85-01-8	µg/L	----	----	----	----	----	----	----	----
Pyrene	129-00-0	µg/L	----	----	----	----	----	----	----	----
Quinoline	91-22-5	µg/L	----	----	----	----	----	----	----	----
B(a)P total potency equivalents [B(a)P TPE]		µg/L	----	----	----	----	----	----	----	----
Chrysene-d12	1719-03-5	%	----	----	----	----	----	----	----	----
Naphthalene-d8	1146-65-2	%	----	----	----	----	----	----	----	----
Phenanthrene-d10	1517-22-2	%	----	----	----	----	----	----	----	----

CERTIFICATE OF ANALYSIS

Work Order	:	**BF2500299**			
Client	:	**Baffinland Iron Mines Corporation**	Laboratory	:	ALS Environmental - Baffin Island
Contact	:	Environmental Lab Results	Account Manager	:	Rick Hawthorne
Address	:	360 Oakville Place Dr Suite 300 Oakville Ontario Canada L6H 6K8	Address	:	Mary River, Qikqtani Region Baffin Island NU Canada
Telephone	:	----	E-mail	:	Rick.Hawthorne@ALSGlobal.com
Project	:	MS_Landfill_Groundwater	Telephone	:	
PO	:	4500156571	Date Samples Received	:	28-Aug-2025 08:27
C-O-C number	:	25 08 27_MS_Landfill_GW1	Date Analysis Commenced	:	28-Aug-2025
Sampler	:	JJ, LG	Issue Date	:	12-Sep-2025 12:42
Site	:	Baffinland Iron Mines (Nunavut) Mary River and Milne Port			
Quote number	:	2024-2025 Scope of Work			
No. of samples received	:	3			
No. of samples analysed	:	3			

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

Signatories	*Position*	*Laboratory Department*
Andrea Armstrong		VOC, Waterloo, Ontario
Cedrick Velasco		Inorganics, Baffin Island, Nunavut
Danielle Gravel		Organics, Waterloo, Ontario
David Tremblett		VOC, Waterloo, Ontario
Nik Perkio		Metals, Waterloo, Ontario
Walt Kippenhuck		Inorganics, Waterloo, Ontario
Walt Kippenhuck		Metals, Waterloo, Ontario
Walt Kippenhuck		Centralized Prep, Waterloo, Ontario

General Comments

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

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

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

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

Key: CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.
LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units
µg/L	micrograms per litre
µS/cm	microsiemens per centimetre

<: 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)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP23-05_2025-08-27 ----	LF-KP-22-03_2025-08-27 ----	QD-BT3_2025-08-27 ----	----	----
					Client sampling date / time	27-Aug-2025 12:20	27-Aug-2025 16:10	27-Aug-2025 16:10	----	----
						BF2500299-001	BF2500299-002	BF2500299-003	----	----
						Result	Result	Result	----	----
Sample Preparation										
Dissolved carbon filtration location	----	EP358/WT	-	-		field	field	field	----	----
Physical Tests										
Conductivity	----	E100/WT	1.0	µS/cm		345	659	1.2	----	----
pH	----	E108/BF	0.10	pH units		7.84	7.35	6.45	----	----
Solids, total dissolved [TDS]	----	E162/BF	10	mg/L		190	367	<20	----	----
Solids, total suspended [TSS]	----	E160-L/BF	1.0	mg/L		15.6	1.5	<1.0	----	----
Turbidity	----	E121/BF	0.10	NTU		9.01	0.37	<0.10	----	----
Alkalinity, total (as CaCO3)	----	E290/WT	2.0	mg/L		153	208	<2.0	----	----
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/WT	0.0050	mg/L		0.0157	0.0553	<0.0050	----	----
Bromide	24959-67-9	E235.Br/WT	0.10	mg/L		<0.10	<0.10	<0.10	----	----
Chloride	16887-00-6	E235.Cl/WT	0.50	mg/L		4.21	41.7	<0.50	----	----
Fluoride	16984-48-8	E235.F/WT	0.020	mg/L		0.085	0.050	<0.020	----	----
Kjeldahl nitrogen, total [TKN]	----	E318/WT	0.050	mg/L		0.206	0.343	<0.050	----	----
Nitrate (as N)	14797-55-8	E235.NO3/WT	0.020	mg/L		0.210	0.810	<0.020	----	----
Nitrite (as N)	14797-65-0	E235.NO2/WT	0.010	mg/L		<0.010	<0.010	<0.010	----	----
Phosphorus, total	7723-14-0	E372-U/WT	0.0020	mg/L		0.0184	0.0082	<0.0020	----	----
Phosphorus, total dissolved	7723-14-0	E375-T/WT	0.0020	mg/L		0.0026	0.0080	<0.0020	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	0.30	mg/L		20.4	67.9	<0.30	----	----
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/WT	0.50	mg/L		3.81	3.54	0.82	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP23-05_2025-08-27 ----	LF-KP-22-03_2025-08-27 ----	QD-BT3_2025-08-27 ----	----	----
					Client sampling date / time	27-Aug-2025 12:20	27-Aug-2025 16:10	27-Aug-2025 16:10	----	----
						BF2500299-001	BF2500299-002	BF2500299-003	----	----
						Result	Result	Result	----	----
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/WT	0.0010	mg/L		0.0117	0.0016	<0.0010	----	----
Antimony, dissolved	7440-36-0	E421/WT	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Arsenic, dissolved	7440-38-2	E421/WT	0.00010	mg/L		0.00023	0.00023	<0.00010	----	----
Barium, dissolved	7440-39-3	E421/WT	0.00010	mg/L		0.0282	0.0431	<0.00010	----	----
Beryllium, dissolved	7440-41-7	E421/WT	0.000020	mg/L		<0.000020	<0.000020	<0.000020	----	----
Bismuth, dissolved	7440-69-9	E421/WT	0.000050	mg/L		<0.000050	<0.000050	<0.000050	----	----
Boron, dissolved	7440-42-8	E421/WT	0.010	mg/L		0.150	0.560	<0.010	----	----
Cadmium, dissolved	7440-43-9	E421/WT	0.0000050	mg/L		0.0000077	0.0000089	0.0000054	----	----
Calcium, dissolved	7440-70-2	E421/WT	0.050	mg/L		29.9	60.7	<0.050	----	----
Cesium, dissolved	7440-46-2	E421/WT	0.000010	mg/L		<0.000010	0.000023	<0.000010	----	----
Chromium, dissolved	7440-47-3	E421/WT	0.00050	mg/L		0.00120	0.00110	<0.00050	----	----
Cobalt, dissolved	7440-48-4	E421/WT	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Copper, dissolved	7440-50-8	E421/WT	0.00020	mg/L		0.00302	0.00168	<0.00020	----	----
Iron, dissolved	7439-89-6	E421/WT	0.010	mg/L		<0.010	<0.010	<0.010	----	----
Lead, dissolved	7439-92-1	E421/WT	0.000050	mg/L		<0.000050	<0.000050	<0.000050	----	----
Lithium, dissolved	7439-93-2	E421/WT	0.0010	mg/L		0.0017	0.0989	<0.0010	----	----
Magnesium, dissolved	7439-95-4	E421/WT	0.0050	mg/L		25.8	36.9	<0.0050	----	----
Manganese, dissolved	7439-96-5	E421/WT	0.00010	mg/L		0.00622	0.00860	<0.00010	----	----
Mercury, dissolved	7439-97-6	E509/WT	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	----	----
Molybdenum, dissolved	7439-98-7	E421/WT	0.000050	mg/L		0.000455	0.00688	<0.000050	----	----
Nickel, dissolved	7440-02-0	E421/WT	0.00050	mg/L		0.00531	0.0115	<0.00050	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP23-05_2025-08-27 ----	LF-KP-22-03_2025-08-27 ----	QD-BT3_2025-08-27 ----	----	----
					Client sampling date / time	27-Aug-2025 12:20	27-Aug-2025 16:10	27-Aug-2025 16:10	----	----
						BF2500299-001	BF2500299-002	BF2500299-003	----	----
						Result	Result	Result	----	----
Dissolved Metals										
Phosphorus, dissolved	7723-14-0	E421/WT	0.050	mg/L		<0.050	<0.050	<0.050	----	----
Potassium, dissolved	7440-09-7	E421/WT	0.050	mg/L		1.45	4.44	<0.050	----	----
Rubidium, dissolved	7440-17-7	E421/WT	0.00020	mg/L		0.00603	0.0122	<0.00020	----	----
Selenium, dissolved	7782-49-2	E421/WT	0.000050	mg/L		<0.000050	0.000099	<0.000050	----	----
Silicon, dissolved	7440-21-3	E421/WT	0.050	mg/L		4.76	5.75	<0.050	----	----
Silver, dissolved	7440-22-4	E421/WT	0.000010	mg/L		<0.000010	<0.000010	<0.000010	----	----
Sodium, dissolved	7440-23-5	E421/WT	0.050	mg/L		3.21	17.5	<0.050	----	----
Strontium, dissolved	7440-24-6	E421/WT	0.00020	mg/L		0.0166	0.0601	<0.00020	----	----
Sulfur, dissolved	7704-34-9	E421/WT	0.50	mg/L		7.27	24.1	<0.50	----	----
Tellurium, dissolved	13494-80-9	E421/WT	0.00020	mg/L		<0.00020	<0.00020	<0.00020	----	----
Thallium, dissolved	7440-28-0	E421/WT	0.000010	mg/L		0.000015	0.000031	<0.000010	----	----
Thorium, dissolved	7440-29-1	E421/WT	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Tin, dissolved	7440-31-5	E421/WT	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Titanium, dissolved	7440-32-6	E421/WT	0.00030	mg/L		<0.00030	<0.00030	<0.00030	----	----
Tungsten, dissolved	7440-33-7	E421/WT	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Uranium, dissolved	7440-61-1	E421/WT	0.000010	mg/L		0.00103	0.00761	<0.000010	----	----
Vanadium, dissolved	7440-62-2	E421/WT	0.00050	mg/L		<0.00050	<0.00050	<0.00050	----	----
Zinc, dissolved	7440-66-6	E421/WT	0.0010	mg/L		<0.0010	<0.0010	<0.0010	----	----
Zirconium, dissolved	7440-67-7	E421/WT	0.00030	mg/L		0.00033	<0.00030	<0.00030	----	----
Dissolved mercury filtration location	----	EP509/WT	-	-		Field	Field	Field	----	----
Dissolved metals filtration location	----	EP421/WT	-	-		Field	Field	Field	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP23-05_2025-08-27 ----	LF-KP-22-03_2025-08-27 ----	QD-BT3_2025-08-27 ----	----	----
					Client sampling date / time	27-Aug-2025 12:20	27-Aug-2025 16:10	27-Aug-2025 16:10	----	----
						BF2500299-001	BF2500299-002	BF2500299-003	----	----
						Result	Result	Result	----	----
Volatile Organic Compounds										
Acetone	67-64-1	E611D/WT	20	µg/L		<20	<20	<20	----	----
Benzene	71-43-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Bromodichloromethane	75-27-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Bromoform	75-25-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Bromomethane	74-83-9	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
BTEX, total	----	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	----	----
Carbon disulfide	75-15-0	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	----	----
Carbon tetrachloride	56-23-5	E611D/WT	0.20	µg/L		<0.20	<0.20	<0.20	----	----
Chlorobenzene	108-90-7	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Chloroethane	75-00-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Chloroform	67-66-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Chloromethane	74-87-3	E611D/WT	2.0	µg/L		<2.0	<2.0	<2.0	----	----
Dibromochloromethane	124-48-1	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Dibromoethane, 1,2-	106-93-4	E611D/WT	0.20	µg/L		<0.20	<0.20	<0.20	----	----
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Dichlorodifluoromethane	75-71-8	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Dichloroethane, 1,1-	75-34-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Dichloroethane, 1,2-	107-06-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Dichloroethylene, 1,1-	75-35-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----

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Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP23-05_2025-08-27 ----	LF-KP-22-03_2025-08-27 ----	QD-BT3_2025-08-27 ----	----	----
					Client sampling date / time	27-Aug-2025 12:20	27-Aug-2025 16:10	27-Aug-2025 16:10	----	----
						BF2500299-001	BF2500299-002	BF2500299-003	----	----
						Result	Result	Result	----	----
Volatile Organic Compounds										
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Dichloroethylene, cis+trans-1,2-	540-59-0	E611D/WT	0.71	µg/L		<0.71	<0.71	<0.71	----	----
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Dichloromethane	75-09-2	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	----	----
Dichloropropane, 1,2-	78-87-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	0.30	µg/L		<0.30	<0.30	<0.30	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	0.50	µg/L		<0.5	<0.5	<0.5	----	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	0.30	µg/L		<0.30	<0.30	<0.30	----	----
Ethylbenzene	100-41-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Hexane, n-	110-54-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Hexanone, 2-	591-78-6	E611D/WT	20	µg/L		<20	<20	<20	----	----
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	20	µg/L		<20	<20	<20	----	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	20	µg/L		<20	<20	<20	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Styrene	100-42-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Tetrachloroethylene	127-18-4	E611D/WT	0.50	µg/L		<0.50	4.64	<0.50	----	----
Toluene	108-88-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP23-05_2025-08-27 ----	LF-KP-22-03_2025-08-27 ----	QD-BT3_2025-08-27 ----	----	----
					Client sampling date / time	27-Aug-2025 12:20	27-Aug-2025 16:10	27-Aug-2025 16:10	----	----
						BF2500299-001	BF2500299-002	BF2500299-003	----	----
						Result	Result	Result	----	----
Volatile Organic Compounds										
Trichloroethylene	79-01-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Trichlorofluoromethane	75-69-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Trihalomethanes [THMs], total	----	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	----	----
Vinyl chloride	75-01-4	E611D/WT	0.20	µg/L		<0.20	<0.20	<0.20	----	----
Xylene, m+p-	179601-23-1	E611D/WT	0.40	µg/L		<0.40	<0.40	<0.40	----	----
Xylene, o-	95-47-6	E611D/WT	0.30	µg/L		<0.30	<0.30	<0.30	----	----
Xylenes, total	1330-20-7	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Hydrocarbons										
F1 (C6-C10)	----	E581.F1-L/WT	25	µg/L		<25	<25	<25	----	----
F2 (C10-C16)	----	E601/WT	100	µg/L		<100	<100	<100	----	----
F3 (C16-C34)	----	E601/WT	250	µg/L		<250	<250	<250	----	----
F4 (C34-C50)	----	E601/WT	250	µg/L		<250	<250	<250	----	----
F1-BTEX	----	EC580/WT	25	µg/L		<25	<25	<25	----	----
Hydrocarbons, total (C6-C50)	n/a	EC581/WT	370	µg/L		<370	<370	<370	----	----
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/WT	1.0	%		93.5	90.0	95.2	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.F1-L/WT	1.0	%		95.0	90.6	93.0	----	----
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611D/WT	1.0	%		96.1	95.3	95.0	----	----
Difluorobenzene, 1,4-	540-36-3	E611D/WT	1.0	%		97.4	96.5	96.7	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP23-05_2025-08-27 ----	LF-KP-22-03_2025-08-27 ----	QD-BT3_2025-08-27 ----	----	----
					Client sampling date / time	27-Aug-2025 12:20	27-Aug-2025 16:10	27-Aug-2025 16:10	----	----
						BF2500299-001	BF2500299-002	BF2500299-003	----	----
						Result	Result	Result	----	----
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----
Acenaphthylene	208-96-8	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----
Acridine	260-94-6	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----
Anthracene	120-12-7	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----
Benz(a)anthracene	56-55-3	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----
Benzo(a)pyrene	50-32-8	E641A-L/WT	0.0050	µg/L		<0.0050	<0.0050	<0.0050	----	----
Benzo(b+j)fluoranthene	n/a	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----
Benzo(b+j+k)fluoranthene	n/a	E641A-L/WT	0.015	µg/L		<0.015	<0.015	<0.015	----	----
Benzo(g,h,i)perylene	191-24-2	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----
Benzo(k)fluoranthene	207-08-9	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----
Chrysene	218-01-9	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----
Dibenz(a,h)anthracene	53-70-3	E641A-L/WT	0.0050	µg/L		<0.0050	<0.0050	<0.0050	----	----
Fluoranthene	206-44-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----
Fluorene	86-73-7	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----
Methylnaphthalene, 1-	90-12-0	E641A-L/WT	0.010	µg/L		0.010	<0.010	<0.010	----	----
Methylnaphthalene, 1+2-	----	E641A-L/WT	0.015	µg/L		0.033	<0.015	<0.015	----	----
Methylnaphthalene, 2-	91-57-6	E641A-L/WT	0.010	µg/L		0.023	<0.010	<0.010	----	----
Naphthalene	91-20-3	E641A-L/WT	0.010	µg/L		0.038	<0.010	<0.010	----	----
Perylene	198-55-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----
Phenanthrene	85-01-8	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

					Client sample ID	LF-KP23-05_2025-08-27 ----	LF-KP-22-03_2025-08-27 ----	QD-BT3_2025-08-27 ----	----	----
					Client sampling date / time	27-Aug-2025 12:20	27-Aug-2025 16:10	27-Aug-2025 16:10	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		BF2500299-001	BF2500299-002	BF2500299-003	----	----
						Result	Result	Result	----	----
Polycyclic Aromatic Hydrocarbons										
Pyrene	129-00-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----
Quinoline	91-22-5	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----
B(a)P total potency equivalents [B(a)P TPE]	----	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A-L/WT	0.1	%		105	100	104	----	----
Naphthalene-d8	1146-65-2	E641A-L/WT	0.1	%		114	111	112	----	----
Phenanthrene-d10	1517-22-2	E641A-L/WT	0.1	%		110	110	110	----	----

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

ALS Canada Ltd.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **BF2500299**	Page	: 1 of 17
Client	: **Baffinland Iron Mines Corporation**	Laboratory	: ALS Environmental - Baffin Island
Contact	: Environmental Lab Results	Account Manager	: Rick Hawthorne
Address	: 360 Oakville Place Dr Suite 300 Oakville ON Canada L6H 6K8	Address	: Mary River, Qikqtani Region Baffin Island, Nunavut Canada
Telephone	: ----	Telephone	: ----
Project	: MS_Landfill_Groundwater	Date Samples Received	: 28-Aug-2025 08:27
PO	: 4500156571	Issue Date	: 12-Sep-2025 12:42
C-O-C number	: 25 08 27_MS_Landfill_GW1		
Sampler	: JJ, LG		
Site	: Baffinland Iron Mines (Nunavut) Mary River and Milne Port		
Quote number	: 2024-2025 Scope of Work		
No. of samples received	: 3		
No. of samples analysed	: 3		

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

Key

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

Workorder Comments

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

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

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

Outliers : Frequency of Quality Control Samples

- Quality Control Sample Frequency Outliers occur - please see following pages for full details.

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
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) LF-KP-22-03_2025-08-27	E298	27-Aug-2025	06-Sep-2025	28 days	10 days	✓	09-Sep-2025	28 days	10 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) LF-KP23-05_2025-08-27	E298	27-Aug-2025	06-Sep-2025	28 days	10 days	✓	09-Sep-2025	28 days	10 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) QD-BT3_2025-08-27	E298	27-Aug-2025	06-Sep-2025	28 days	10 days	✓	09-Sep-2025	28 days	10 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE LF-KP-22-03_2025-08-27	E235.Br	27-Aug-2025	04-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE LF-KP23-05_2025-08-27	E235.Br	27-Aug-2025	04-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE QD-BT3_2025-08-27	E235.Br	27-Aug-2025	04-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE LF-KP-22-03_2025-08-27	E235.Cl	27-Aug-2025	04-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Chloride in Water by IC										
HDPE LF-KP23-05_2025-08-27	E235.Cl	27-Aug-2025	04-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE QD-BT3_2025-08-27	E235.Cl	27-Aug-2025	04-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE LF-KP-22-03_2025-08-27	E235.F	27-Aug-2025	04-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE LF-KP23-05_2025-08-27	E235.F	27-Aug-2025	04-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE QD-BT3_2025-08-27	E235.F	27-Aug-2025	04-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Nitrate in Water by IC										
HDPE LF-KP-22-03_2025-08-27	E235.NO3	27-Aug-2025	04-Sep-2025	3 days	7 days	× EHT	08-Sep-2025	3 days	7 days	× EHT
Anions and Nutrients : Nitrate in Water by IC										
HDPE QD-BT3_2025-08-27	E235.NO3	27-Aug-2025	04-Sep-2025	3 days	7 days	× EHT	08-Sep-2025	3 days	7 days	× EHT
Anions and Nutrients : Nitrate in Water by IC										
HDPE LF-KP23-05_2025-08-27	E235.NO3	27-Aug-2025	04-Sep-2025	3 days	8 days	× EHT	08-Sep-2025	3 days	8 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE LF-KP-22-03_2025-08-27	E235.NO2	27-Aug-2025	04-Sep-2025	3 days	7 days	× EHT	08-Sep-2025	3 days	7 days	× EHT

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Nitrite in Water by IC										
HDPE										
QD-BT3_2025-08-27	E235.NO2	27-Aug-2025	04-Sep-2025	3 days	7 days	× EHT	08-Sep-2025	3 days	7 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE										
LF-KP23-05_2025-08-27	E235.NO2	27-Aug-2025	04-Sep-2025	3 days	8 days	× EHT	08-Sep-2025	3 days	8 days	× EHT
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
LF-KP-22-03_2025-08-27	E235.SO4	27-Aug-2025	04-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
LF-KP23-05_2025-08-27	E235.SO4	27-Aug-2025	04-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
QD-BT3_2025-08-27	E235.SO4	27-Aug-2025	04-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass - dissolved (field filtered/sulfuric acid)										
LF-KP-22-03_2025-08-27	E375-T	27-Aug-2025	06-Sep-2025	28 days	10 days	✓	08-Sep-2025	28 days	10 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass - dissolved (field filtered/sulfuric acid)										
LF-KP23-05_2025-08-27	E375-T	27-Aug-2025	06-Sep-2025	28 days	10 days	✓	08-Sep-2025	28 days	10 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass - dissolved (field filtered/sulfuric acid)										
QD-BT3_2025-08-27	E375-T	27-Aug-2025	06-Sep-2025	28 days	10 days	✓	08-Sep-2025	28 days	10 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
LF-KP-22-03_2025-08-27	E318	27-Aug-2025	09-Sep-2025	28 days	13 days	✓	09-Sep-2025	28 days	13 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
LF-KP23-05_2025-08-27	E318	27-Aug-2025	09-Sep-2025	28 days	13 days	✓	09-Sep-2025	28 days	13 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
QD-BT3_2025-08-27	E318	27-Aug-2025	09-Sep-2025	28 days	13 days	✓	09-Sep-2025	28 days	13 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
LF-KP-22-03_2025-08-27	E372-U	27-Aug-2025	08-Sep-2025	28 days	12 days	✓	09-Sep-2025	28 days	12 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
LF-KP23-05_2025-08-27	E372-U	27-Aug-2025	08-Sep-2025	28 days	12 days	✓	09-Sep-2025	28 days	12 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
QD-BT3_2025-08-27	E372-U	27-Aug-2025	08-Sep-2025	28 days	12 days	✓	09-Sep-2025	28 days	12 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
LF-KP-22-03_2025-08-27	E509	27-Aug-2025	09-Sep-2025	28 days	13 days	✓	11-Sep-2025	28 days	13 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
LF-KP23-05_2025-08-27	E509	27-Aug-2025	09-Sep-2025	28 days	13 days	✓	11-Sep-2025	28 days	13 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
QD-BT3_2025-08-27	E509	27-Aug-2025	09-Sep-2025	28 days	13 days	✓	11-Sep-2025	28 days	13 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
LF-KP-22-03_2025-08-27	E421	27-Aug-2025	05-Sep-2025	180 days	9 days	✓	05-Sep-2025	180 days	9 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
LF-KP23-05_2025-08-27	E421	27-Aug-2025	05-Sep-2025	180 days	9 days	✓	05-Sep-2025	180 days	9 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
QD-BT3_2025-08-27	E421	27-Aug-2025	05-Sep-2025	180 days	9 days	✓	05-Sep-2025	180 days	9 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate)										
LF-KP-22-03_2025-08-27	E581.F1-L	27-Aug-2025	07-Sep-2025	14 days	11 days	✓	07-Sep-2025	14 days	11 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate)										
LF-KP23-05_2025-08-27	E581.F1-L	27-Aug-2025	07-Sep-2025	14 days	11 days	✓	07-Sep-2025	14 days	11 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate)										
QD-BT3_2025-08-27	E581.F1-L	27-Aug-2025	07-Sep-2025	14 days	11 days	✓	07-Sep-2025	14 days	11 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
LF-KP-22-03_2025-08-27	E601	27-Aug-2025	09-Sep-2025	14 days	13 days	✓	11-Sep-2025	40 days	2 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
LF-KP23-05_2025-08-27	E601	27-Aug-2025	09-Sep-2025	14 days	13 days	✓	11-Sep-2025	40 days	2 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
QD-BT3_2025-08-27	E601	27-Aug-2025	09-Sep-2025	14 days	13 days	✓	11-Sep-2025	40 days	2 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
LF-KP-22-03_2025-08-27	E358-L	27-Aug-2025	06-Sep-2025	28 days	10 days	✓	08-Sep-2025	28 days	10 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
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
LF-KP23-05_2025-08-27	E358-L	27-Aug-2025	06-Sep-2025	28 days	10 days	✓	08-Sep-2025	28 days	10 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
QD-BT3_2025-08-27	E358-L	27-Aug-2025	06-Sep-2025	28 days	10 days	✓	08-Sep-2025	28 days	10 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
LF-KP-22-03_2025-08-27	E290	27-Aug-2025	04-Sep-2025	14 days	8 days	✓	05-Sep-2025	14 days	8 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
LF-KP23-05_2025-08-27	E290	27-Aug-2025	04-Sep-2025	14 days	8 days	✓	05-Sep-2025	14 days	8 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
QD-BT3_2025-08-27	E290	27-Aug-2025	04-Sep-2025	14 days	8 days	✓	05-Sep-2025	14 days	8 days	✓
Physical Tests : Conductivity in Water										
HDPE										
LF-KP-22-03_2025-08-27	E100	27-Aug-2025	04-Sep-2025	28 days	8 days	✓	05-Sep-2025	28 days	8 days	✓
Physical Tests : Conductivity in Water										
HDPE										
LF-KP23-05_2025-08-27	E100	27-Aug-2025	04-Sep-2025	28 days	8 days	✓	05-Sep-2025	28 days	8 days	✓
Physical Tests : Conductivity in Water										
HDPE										
QD-BT3_2025-08-27	E100	27-Aug-2025	04-Sep-2025	28 days	8 days	✓	05-Sep-2025	28 days	8 days	✓
Physical Tests : pH by Meter										
HDPE										
LF-KP-22-03_2025-08-27	E108	27-Aug-2025	28-Aug-2025	0.25 hrs	16 hrs	× EHTR-FM	28-Aug-2025	0.25 hrs	16 hrs	× EHTR-FM

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
Physical Tests : pH by Meter										
HDPE										
QD-BT3_2025-08-27	E108	27-Aug-2025	28-Aug-2025	0.25 hrs	16 hrs	× EHTR-FM	28-Aug-2025	0.25 hrs	16 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE										
LF-KP23-05_2025-08-27	E108	27-Aug-2025	28-Aug-2025	0.25 hrs	20 hrs	× EHTR-FM	28-Aug-2025	0.25 hrs	20 hrs	× EHTR-FM
Physical Tests : TDS by Gravimetry										
HDPE										
LF-KP-22-03_2025-08-27	E162	27-Aug-2025	----	----	----		28-Aug-2025	7 days	1 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
LF-KP23-05_2025-08-27	E162	27-Aug-2025	----	----	----		28-Aug-2025	7 days	1 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
QD-BT3_2025-08-27	E162	27-Aug-2025	----	----	----		28-Aug-2025	7 days	1 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE										
LF-KP-22-03_2025-08-27	E160-L	27-Aug-2025	----	----	----		28-Aug-2025	7 days	1 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE										
LF-KP23-05_2025-08-27	E160-L	27-Aug-2025	----	----	----		28-Aug-2025	7 days	1 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE										
QD-BT3_2025-08-27	E160-L	27-Aug-2025	----	----	----		28-Aug-2025	7 days	1 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE										
LF-KP-22-03_2025-08-27	E121	27-Aug-2025	----	----	----		28-Aug-2025	3 days	1 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : Turbidity by Nephelometry										
HDPE										
LF-KP23-05_2025-08-27	E121	27-Aug-2025	----	----	----		28-Aug-2025	3 days	1 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE										
QD-BT3_2025-08-27	E121	27-Aug-2025	----	----	----		28-Aug-2025	3 days	1 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate)										
LF-KP-22-03_2025-08-27	E641A-L	27-Aug-2025	09-Sep-2025	14 days	13 days	✓	10-Sep-2025	40 days	1 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate)										
LF-KP23-05_2025-08-27	E641A-L	27-Aug-2025	09-Sep-2025	14 days	13 days	✓	09-Sep-2025	40 days	1 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate)										
QD-BT3_2025-08-27	E641A-L	27-Aug-2025	09-Sep-2025	14 days	13 days	✓	10-Sep-2025	40 days	1 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
LF-KP-22-03_2025-08-27	E611D	27-Aug-2025	07-Sep-2025	14 days	11 days	✓	07-Sep-2025	14 days	11 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
LF-KP23-05_2025-08-27	E611D	27-Aug-2025	07-Sep-2025	14 days	11 days	✓	07-Sep-2025	14 days	11 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
QD-BT3_2025-08-27	E611D	27-Aug-2025	07-Sep-2025	14 days	11 days	✓	07-Sep-2025	14 days	11 days	✓

Legend & Qualifier Definitions

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

EHT: Exceeded ALS recommended hold time prior to analysis.

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

Quality Control Parameter Frequency Compliance

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

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Conductivity in Water	E100	2199569	1	16	6.2	5.0	✓
pH by Meter	E108	2186924	1	12	8.3	5.0	✓
Turbidity by Nephelometry	E121	2186931	1	12	8.3	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	2186948	1	14	7.1	5.0	✓
TDS by Gravimetry	E162	2186985	1	14	7.1	5.0	✓
Bromide in Water by IC	E235.Br	2199570	1	16	6.2	5.0	✓
Chloride in Water by IC	E235.Cl	2199574	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2199571	1	20	5.0	5.0	✓
Nitrite in Water by IC	E235.NO2	2199573	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2199572	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2199575	1	20	5.0	5.0	✓
Alkalinity Species by Titration	E290	2199568	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	2203757	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2203754	0	19	0.0	5.0	×
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2203517	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2203756	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2203389	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2201261	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2207226	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2204337	1	6	16.6	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2204336	1	20	5.0	5.0	✓
Laboratory Control Samples (LCS)							
Conductivity in Water	E100	2199569	1	16	6.2	5.0	✓
pH by Meter	E108	2186924	1	12	8.3	5.0	✓
Turbidity by Nephelometry	E121	2186931	1	12	8.3	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	2186948	1	14	7.1	5.0	✓
TDS by Gravimetry	E162	2186985	1	14	7.1	5.0	✓
Bromide in Water by IC	E235.Br	2199570	1	16	6.2	5.0	✓
Chloride in Water by IC	E235.Cl	2199574	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2199571	1	20	5.0	5.0	✓
Nitrite in Water by IC	E235.NO2	2199573	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2199572	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2199575	1	20	5.0	5.0	✓
Alkalinity Species by Titration	E290	2199568	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	2203757	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2203754	1	19	5.2	5.0	✓

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Control Samples (LCS) - Continued							
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2203517	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2203756	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2203389	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2201261	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2207226	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2204337	1	6	16.6	5.0	✓
CCME PHCs - F2-F4 by GC-FID	E601	2206866	1	4	25.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2204336	1	20	5.0	5.0	✓
PAHs in Water by Hexane LVI GC-MS (Low Level)	E641A-L	2206867	1	8	12.5	5.0	✓
Method Blanks (MB)							
Conductivity in Water	E100	2199569	1	16	6.2	5.0	✓
Turbidity by Nephelometry	E121	2186931	1	12	8.3	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	2186948	1	14	7.1	5.0	✓
TDS by Gravimetry	E162	2186985	1	14	7.1	5.0	✓
Bromide in Water by IC	E235.Br	2199570	1	16	6.2	5.0	✓
Chloride in Water by IC	E235.Cl	2199574	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2199571	1	20	5.0	5.0	✓
Nitrite in Water by IC	E235.NO2	2199573	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2199572	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2199575	1	20	5.0	5.0	✓
Alkalinity Species by Titration	E290	2199568	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	2203757	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2203754	1	19	5.2	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2203517	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2203756	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2203389	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2201261	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2207226	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2204337	1	6	16.6	5.0	✓
CCME PHCs - F2-F4 by GC-FID	E601	2206866	1	4	25.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2204336	1	20	5.0	5.0	✓
PAHs in Water by Hexane LVI GC-MS (Low Level)	E641A-L	2206867	1	8	12.5	5.0	✓
Matrix Spikes (MS)							
Bromide in Water by IC	E235.Br	2199570	1	16	6.2	5.0	✓
Chloride in Water by IC	E235.Cl	2199574	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2199571	1	20	5.0	5.0	✓
Nitrite in Water by IC	E235.NO2	2199573	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2199572	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2199575	1	20	5.0	5.0	✓

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Matrix Spikes (MS) - Continued							
Ammonia by Fluorescence	E298	2203757	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2203754	0	19	0.0	5.0	×
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2203517	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2203756	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2203389	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2201261	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2207226	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2204337	1	6	16.6	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2204336	1	20	5.0	5.0	✓

Methodology References and Summaries

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

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

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Nitrate in Water by IC	E235.NO3 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Sulfate in Water by IC	E235.SO4 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Alkalinity Species by Titration	E290 ALS Environmental - Waterloo	Water	APHA 2320 B (mod)	Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.
Ammonia by Fluorescence	E298 ALS Environmental - Waterloo	Water	Method Fialab 100, 2018	Ammonia in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021)
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318 ALS Environmental - Waterloo	Water	Method Fialab 100, 2018	TKN in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021).
Dissolved Organic Carbon by Combustion (Low Level)	E358-L ALS Environmental - Waterloo	Water	APHA 5310 B (mod)	Dissolved Organic Carbon (Non-Purgeable), also known as NPOC (dissolved), is a direct measurement of DOC after a filtered (0.45 micron) sample has been acidified and purged to remove inorganic carbon (IC). Analysis is by high temperature combustion with infrared detection of CO2. NPOC does not include volatile organic species that are purged off with IC. For samples where the majority of DC (dissolved carbon) is comprised of IC (which is common), this method is more accurate and more reliable than the DOC by subtraction method (i.e. DC minus DIC).
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Total Phosphorus is determined colourimetrically using a discrete analyzer after heated persulfate digestion of the sample.
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Total Dissolved Phosphorus is determined colourimetrically using a discrete analyzer after filtration through a 0.45 micron filter followed by heated persulfate digestion of the sample.
Dissolved Metals in Water by CRC ICPMS	E421 ALS Environmental - Waterloo	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Dissolved Mercury in Water by CVAAS	E509 ALS Environmental - Waterloo	Water	APHA 3030B/EPA 1631E (mod)	Water samples are filtered (0.45 um), preserved with HCl, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1 (mod)	CCME Fraction 1 (F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
CCME PHCs - F2-F4 by GC-FID	E601 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	Sample extracts are analyzed by GC-FID for CCME hydrocarbon fractions (F2-F4). Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
VOCs (Eastern Canada List) by Headspace GC-MS	E611D ALS Environmental - Waterloo	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PAHs in Water by Hexane LVI GC-MS (Low Level)	E641A-L ALS Environmental - Waterloo	Water	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS.
F1-BTEX	EC580 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).
Sum F1 to F4 (C6-C50)	EC581 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	Hydrocarbons, total (C6-C50) is the sum of CCME Fractions F1(C6-C10), F2(C10-C16), F3(C16-C34), and F4(C34-C50). F4G-sg is not used within this calculation due to overlap with other fractions.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Ammonia	EP298 ALS Environmental - Waterloo	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Digestion for TKN in water	EP318 ALS Environmental - Waterloo	Water	APHA 4500-Norg D (mod)	Samples are digested at high temperature using Sulfuric Acid with Copper catalyst, which converts organic nitrogen sources to Ammonia, which is then quantified by the analytical method as TKN. This method is unsuitable for samples containing high levels of nitrate. If nitrate exceeds TKN concentration by ten times or more, results may be biased low.
Preparation for Dissolved Organic Carbon for Combustion	EP358 ALS Environmental - Waterloo	Water	APHA 5310 B (mod)	Preparation for Dissolved Organic Carbon

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Digestion for Total Phosphorus in water	EP372 ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Samples are heated with a persulfate digestion reagent.
Digestion for Dissolved Phosphorus in water	EP375 ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Samples are filtered through a 0.45 micron membrane filter and then heated with a persulfate digestion reagent.
Dissolved Metals Water Filtration	EP421 ALS Environmental - Waterloo	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO3.
Dissolved Mercury Water Filtration	EP509 ALS Environmental - Waterloo	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HCl.
VOCs Preparation for Headspace Analysis	EP581 ALS Environmental - Waterloo	Water	EPA 5021A (mod)	Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler. An aliquot of the headspace is then injected into a GC-MS-FID.
PHCs and PAHs Hexane Extraction	EP601 ALS Environmental - Waterloo	Water	EPA 3511 (mod)	Petroleum Hydrocarbons (PHCs) and Polycyclic Aromatic Hydrocarbons (PAHs) are extracted using a hexane liquid-liquid extraction.

ALS Canada Ltd.

QUALITY CONTROL REPORT

Work Order	: **BF2500299**	Page	: 1 of 19
Client	: Baffinland Iron Mines Corporation	Laboratory	: ALS Environmental - Baffin Island
Contact	: Environmental Lab Results	Account Manager	: Rick Hawthorne
Address	: 360 Oakville Place Dr Suite 300 Oakville ON Canada L6H 6K8	Address	: Mary River, Qikqtani Region Baffin Island, Nunavut Canada
Telephone	: ----	Telephone	:
Project	: MS_Landfill_Groundwater	Date Samples Received	: 28-Aug-2025 08:27
PO	: 4500156571	Date Analysis Commenced	: 28-Aug-2025
C-O-C number	: 25 08 27_MS_Landfill_GW1	Issue Date	: 12-Sep-2025 12:42
Sampler	: JJ, LG		
Site	: Baffinland Iron Mines (Nunavut) Mary River and Milne Port		
Quote number	: 2024-2025 Scope of Work		
No. of samples received	: 3		
No. of samples analysed	: 3		

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Laboratory Department*
Andrea Armstrong	Department Manager - Air Quality and Volatiles	Waterloo VOC, Waterloo, Ontario
Cedrick Velasco	Lab Manager	Baffin Island Inorganics, Baffin Island, Nunavut
Danielle Gravel	Supervisor - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
David Tremblett	VOC Section Supervisor	Waterloo VOC, Waterloo, Ontario
Nik Perkio	Senior Analyst	Waterloo Metals, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Centralized Prep, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Inorganics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Metals, Waterloo, Ontario

General Comments

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

Key :

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

Workorder Comments

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Physical Tests (QC Lot: 2186924)											
BF2500298-001	Anonymous	pH	----	E108	0.10	pH units	7.88	7.90	0.253%	4%	----
Physical Tests (QC Lot: 2186931)											
BF2500298-001	Anonymous	Turbidity	----	E121	0.10	NTU	5.41	5.36	0.928%	15%	----
Physical Tests (QC Lot: 2186948)											
BF2500297-004	Anonymous	Solids, total suspended [TSS]	----	E160-L	1.5	mg/L	51.8	53.0	2.36%	20%	----
Physical Tests (QC Lot: 2186985)											
BF2500297-004	Anonymous	Solids, total dissolved [TDS]	----	E162	21	mg/L	304	252	18.8%	20%	----
Physical Tests (QC Lot: 2199568)											
BF2500299-001	LF-KP23-05_2025-08-27	Alkalinity, total (as CaCO3)	----	E290	2.0	mg/L	153	153	0.0782%	20%	----
Physical Tests (QC Lot: 2199569)											
BF2500299-001	LF-KP23-05_2025-08-27	Conductivity	----	E100	1.0	µS/cm	345	347	0.578%	10%	----
Anions and Nutrients (QC Lot: 2199570)											
BF2500299-001	LF-KP23-05_2025-08-27	Bromide	24959-67-9	E235.Br	0.10	mg/L	<0.10	<0.10	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2199571)											
BF2500299-001	LF-KP23-05_2025-08-27	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.085	0.081	0.004	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2199572)											
BF2500299-001	LF-KP23-05_2025-08-27	Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	0.210	0.206	1.78%	20%	----
Anions and Nutrients (QC Lot: 2199573)											
BF2500299-001	LF-KP23-05_2025-08-27	Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2199574)											
BF2500299-001	LF-KP23-05_2025-08-27	Chloride	16887-00-6	E235.Cl	0.50	mg/L	4.21	3.99	0.22	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2199575)											
BF2500299-001	LF-KP23-05_2025-08-27	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	20.4	20.2	0.788%	20%	----
Anions and Nutrients (QC Lot: 2203389)											
BF2500299-001	LF-KP23-05_2025-08-27	Phosphorus, total dissolved	7723-14-0	E375-T	0.0020	mg/L	0.0026	0.0023	0.0003	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2203756)											
BF2500299-001	LF-KP23-05_2025-08-27	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0184	0.0192	0.0008	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2203757)											
BF2500299-002	LF-KP-22-03_2025-08-27	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.0553	0.0557	0.721%	20%	----
Organic / Inorganic Carbon (QC Lot: 2203517)											

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Organic / Inorganic Carbon (QC Lot: 2203517) - continued											
BF2500298-008	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	3.24	3.24	0.008	Diff <2x LOR	----
Dissolved Metals (QC Lot: 2201261)											
BF2500299-001	LF-KP23-05_2025-08-27	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0117	0.0134	13.0%	20%	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00023	0.00025	0.00001	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0282	0.0283	0.266%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	0.150	0.152	1.54%	20%	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.0000077	0.0000058	0.0000019	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	29.9	29.8	0.237%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	0.00120	0.00120	0.0000003	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00302	0.00300	0.587%	20%	----
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0017	0.0017	0.000009	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	25.8	25.9	0.456%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.00622	0.00626	0.505%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000455	0.000457	0.000002	Diff <2x LOR	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.00531	0.00532	0.209%	20%	----
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.050	mg/L	1.45	1.46	0.721%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00603	0.00614	1.84%	20%	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	4.76	4.79	0.688%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.050	mg/L	3.21	3.22	0.364%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.0166	0.0166	0.326%	20%	----
		Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	7.27	7.31	0.581%	20%	----
		Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	0.000015	0.000015	0.0000004	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Dissolved Metals (QC Lot: 2201261) - continued											
BF2500299-001	LF-KP23-05_2025-08-27	Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.00103	0.00103	0.408%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	0.00033	0.00033	0.000003	Diff <2x LOR	----
Dissolved Metals (QC Lot: 2207226)											
BF2500287-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Volatile Organic Compounds (QC Lot: 2204336)											
BF2500299-001	LF-KP23-05_2025-08-27	Acetone	67-64-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Benzene	71-43-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromodichloromethane	75-27-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromoform	75-25-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromomethane	74-83-9	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Carbon disulfide	75-15-0	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Carbon tetrachloride	56-23-5	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Chlorobenzene	108-90-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroethane	75-00-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroform	67-66-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloromethane	74-87-3	E611D	2.0	µg/L	<2.0	<2.0	0	Diff <2x LOR	----
		Dibromochloromethane	124-48-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dibromoethane, 1,2-	106-93-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorodifluoromethane	75-71-8	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,1-	75-34-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,2-	107-06-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, 1,1-	75-35-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Dichloropropane, 1,2-	78-87-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Volatile Organic Compounds (QC Lot: 2204336) - continued											
BF2500299-001	LF-KP23-05_2025-08-27	Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Hexane, n-	110-54-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Hexanone, 2-	591-78-6	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethylene	127-18-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Toluene	108-88-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichlorofluoromethane	75-69-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Vinyl chloride	75-01-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 2204337)											
BF2500299-001	LF-KP23-05_2025-08-27	F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	<25	0	Diff <2x LOR	----

Method Blank (MB) Report

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

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 2186931)						
Turbidity	----	E121	0.1	NTU	<0.10	----
Physical Tests (QCLot: 2186948)						
Solids, total suspended [TSS]	----	E160-L	1	mg/L	<1.0	----
Physical Tests (QCLot: 2186985)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Physical Tests (QCLot: 2199568)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	1.5	----
Physical Tests (QCLot: 2199569)						
Conductivity	----	E100	1	µS/cm	1.4	----
Anions and Nutrients (QCLot: 2199570)						
Bromide	24959-67-9	E235.Br	0.1	mg/L	<0.10	----
Anions and Nutrients (QCLot: 2199571)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 2199572)						
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 2199573)						
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	<0.010	----
Anions and Nutrients (QCLot: 2199574)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 2199575)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 2203389)						
Phosphorus, total dissolved	7723-14-0	E375-T	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 2203754)						
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 2203756)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 2203757)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Organic / Inorganic Carbon (QCLot: 2203517)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Dissolved Metals (QCLot: 2201261)						

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 2201261) - continued						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 2201261) - continued						
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 2207226)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Volatile Organic Compounds (QCLot: 2204336)						
Acetone	67-64-1	E611D	20	µg/L	<20	----
Benzene	71-43-2	E611D	0.5	µg/L	<0.50	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	<0.50	----
Bromoform	75-25-2	E611D	0.5	µg/L	<0.50	----
Bromomethane	74-83-9	E611D	0.5	µg/L	<0.50	----
Carbon disulfide	75-15-0	E611D	1	µg/L	<1.0	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	<0.20	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	<0.50	----
Chloroethane	75-00-3	E611D	0.5	µg/L	<0.50	----
Chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----
Chloromethane	74-87-3	E611D	2	µg/L	<2.0	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	<0.50	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	<0.20	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	<0.50	----
Dichloromethane	75-09-2	E611D	1	µg/L	<1.0	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	<0.50	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	<0.30	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	<0.50	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 2204336) - continued						
Hexanone, 2-	591-78-6	E611D	20	µg/L	<20	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	<0.50	----
Styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----
Toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	<0.50	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	<0.50	----
Vinyl chloride	75-01-4	E611D	0.2	µg/L	<0.20	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----
Hydrocarbons (QCLot: 2204337)						
F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	----
Hydrocarbons (QCLot: 2206866)						
F2 (C10-C16)	----	E601	100	µg/L	<100	----
F3 (C16-C34)	----	E601	250	µg/L	<250	----
F4 (C34-C50)	----	E601	250	µg/L	<250	----
Polycyclic Aromatic Hydrocarbons (QCLot: 2206867)						
Acenaphthene	83-32-9	E641A-L	0.01	µg/L	<0.010	----
Acenaphthylene	208-96-8	E641A-L	0.01	µg/L	<0.010	----
Acridine	260-94-6	E641A-L	0.01	µg/L	<0.010	----
Anthracene	120-12-7	E641A-L	0.01	µg/L	<0.010	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	µg/L	<0.010	----
Benzo(a)pyrene	50-32-8	E641A-L	0.005	µg/L	<0.0050	----
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	µg/L	<0.010	----
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	µg/L	<0.010	----
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	µg/L	<0.010	----
Chrysene	218-01-9	E641A-L	0.01	µg/L	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	µg/L	<0.0050	----
Fluoranthene	206-44-0	E641A-L	0.01	µg/L	<0.010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 2206867) - continued						
Fluorene	86-73-7	E641A-L	0.01	µg/L	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	µg/L	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	µg/L	<0.010	----
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	µg/L	<0.010	----
Naphthalene	91-20-3	E641A-L	0.01	µg/L	<0.010	----
Perylene	198-55-0	E641A-L	0.01	µg/L	<0.010	----
Phenanthrene	85-01-8	E641A-L	0.01	µg/L	<0.010	----
Pyrene	129-00-0	E641A-L	0.01	µg/L	<0.010	----
Quinoline	91-22-5	E641A-L	0.01	µg/L	<0.010	----

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
Physical Tests (QCLot: 2186924)									
pH	----	E108	----	pH units	7 pH units	100	98.0	102	----
Physical Tests (QCLot: 2186931)									
Turbidity	----	E121	0.1	NTU	200 NTU	100	85.0	115	----
Physical Tests (QCLot: 2186948)									
Solids, total suspended [TSS]	----	E160-L	1	mg/L	250 mg/L	99.0	85.0	115	----
Physical Tests (QCLot: 2186985)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	850 mg/L	98.8	85.0	115	----
Physical Tests (QCLot: 2199568)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	150 mg/L	102	85.0	115	----
Physical Tests (QCLot: 2199569)									
Conductivity	----	E100	1	µS/cm	1410 µS/cm	99.0	90.0	110	----
Anions and Nutrients (QCLot: 2199570)									
Bromide	24959-67-9	E235.Br	0.1	mg/L	0.5 mg/L	97.2	85.0	115	----
Anions and Nutrients (QCLot: 2199571)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 2199572)									
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	2.5 mg/L	98.8	90.0	110	----
Anions and Nutrients (QCLot: 2199573)									
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	0.5 mg/L	94.8	90.0	110	----
Anions and Nutrients (QCLot: 2199574)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	99.1	90.0	110	----
Anions and Nutrients (QCLot: 2199575)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 2203389)									
Phosphorus, total dissolved	7723-14-0	E375-T	0.002	mg/L	0.333 mg/L	105	80.0	120	----
Anions and Nutrients (QCLot: 2203754)									
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	4 mg/L	103	75.0	125	----
Anions and Nutrients (QCLot: 2203756)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.333 mg/L	103	80.0	120	----
Anions and Nutrients (QCLot: 2203757)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	101	85.0	115	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Organic / Inorganic Carbon (QCLot: 2203517)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	102	80.0	120	----
Dissolved Metals (QCLot: 2201261)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	0.1 mg/L	103	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	0.05 mg/L	103	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	0.05 mg/L	104	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.012 mg/L	110	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.005 mg/L	101	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	0.05 mg/L	102	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	0.05 mg/L	99.2	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.005 mg/L	104	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	2.5 mg/L	98.0	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.002 mg/L	98.0	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.012 mg/L	99.8	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.012 mg/L	95.6	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.012 mg/L	96.9	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	0.05 mg/L	97.2	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.025 mg/L	104	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.012 mg/L	106	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	2.5 mg/L	109	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.012 mg/L	99.9	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.012 mg/L	102	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.025 mg/L	97.6	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	0.5 mg/L	98.5	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	2.5 mg/L	98.6	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.005 mg/L	104	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	0.05 mg/L	99.1	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	0.5 mg/L	100.0	60.0	140	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.005 mg/L	102	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	2.5 mg/L	99.6	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.012 mg/L	105	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	2.5 mg/L	99.5	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.005 mg/L	101	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	0.05 mg/L	103	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.005 mg/L	102	80.0	120	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 2201261) - continued									
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.025 mg/L	105	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.012 mg/L	95.3	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.005 mg/L	101	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0 mg/L	100	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.025 mg/L	101	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.025 mg/L	101	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.005 mg/L	93.6	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	99.3	80.0	120	----
Volatile Organic Compounds (QCLot: 2204336)									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	99.8	70.0	130	----
Benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
Bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	109	70.0	130	----
Bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	85.0	60.0	140	----
Carbon disulfide	75-15-0	E611D	1	µg/L	100 µg/L	101	70.0	130	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	100	70.0	130	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
Chloroethane	75-00-3	E611D	0.5	µg/L	100 µg/L	103	60.0	140	----
Chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Chloromethane	74-87-3	E611D	2	µg/L	100 µg/L	107	60.0	140	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	110	70.0	130	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	96.1	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	102	60.0	140	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	99.8	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	95.6	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	106	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	99.0	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	87.9	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	85.4	70.0	130	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 2204336) - continued									
Ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	109	70.0	130	----
Hexanone, 2-	591-78-6	E611D	20	µg/L	100 µg/L	81.4	70.0	130	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	87.7	70.0	130	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	80.1	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	97.8	70.0	130	----
Styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	96.3	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	100	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	107	70.0	130	----
Toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	93.1	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	97.3	70.0	130	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	107	70.0	130	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	100	60.0	140	----
Vinyl chloride	75-01-4	E611D	0.2	µg/L	100 µg/L	96.7	60.0	140	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	97.7	70.0	130	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	101	70.0	130	----
Hydrocarbons (QCLot: 2204337)									
F1 (C6-C10)	----	E581.F1-L	25	µg/L	2000 µg/L	94.7	80.0	120	----
Hydrocarbons (QCLot: 2206866)									
F2 (C10-C16)	----	E601	100	µg/L	3770 µg/L	95.2	70.0	130	----
F3 (C16-C34)	----	E601	250	µg/L	7760 µg/L	104	70.0	130	----
F4 (C34-C50)	----	E601	250	µg/L	4200 µg/L	107	70.0	130	----
Polycyclic Aromatic Hydrocarbons (QCLot: 2206867)									
Acenaphthene	83-32-9	E641A-L	0.01	µg/L	0.526 µg/L	107	50.0	140	----
Acenaphthylene	208-96-8	E641A-L	0.01	µg/L	0.526 µg/L	98.0	50.0	140	----
Acridine	260-94-6	E641A-L	0.01	µg/L	0.526 µg/L	119	50.0	140	----
Anthracene	120-12-7	E641A-L	0.01	µg/L	0.526 µg/L	91.8	50.0	140	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	µg/L	0.526 µg/L	107	50.0	140	----
Benzo(a)pyrene	50-32-8	E641A-L	0.005	µg/L	0.526 µg/L	93.4	50.0	140	----
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	µg/L	0.526 µg/L	84.7	50.0	140	----
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	µg/L	0.526 µg/L	123	50.0	140	----
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	µg/L	0.526 µg/L	102	50.0	140	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 2206867) - continued									
Chrysene	218-01-9	E641A-L	0.01	µg/L	0.526 µg/L	124	50.0	140	----
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	µg/L	0.526 µg/L	114	50.0	140	----
Fluoranthene	206-44-0	E641A-L	0.01	µg/L	0.526 µg/L	110	50.0	140	----
Fluorene	86-73-7	E641A-L	0.01	µg/L	0.526 µg/L	106	50.0	140	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	µg/L	0.526 µg/L	108	50.0	140	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	µg/L	0.526 µg/L	104	50.0	140	----
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	µg/L	0.526 µg/L	109	50.0	140	----
Naphthalene	91-20-3	E641A-L	0.01	µg/L	0.526 µg/L	105	50.0	140	----
Perylene	198-55-0	E641A-L	0.01	µg/L	0.526 µg/L	103	50.0	140	----
Phenanthrene	85-01-8	E641A-L	0.01	µg/L	0.526 µg/L	111	50.0	140	----
Pyrene	129-00-0	E641A-L	0.01	µg/L	0.526 µg/L	111	50.0	140	----
Quinoline	91-22-5	E641A-L	0.01	µg/L	0.526 µg/L	110	50.0	140	----

Matrix Spike (MS) Report

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

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 2199570)										
BF2500299-001	LF-KP23-05_2025-08-27	Bromide	24959-67-9	E235.Br	0.46 mg/L	0.5 mg/L	91.3	75.0	125	----
Anions and Nutrients (QCLot: 2199571)										
BF2500299-001	LF-KP23-05_2025-08-27	Fluoride	16984-48-8	E235.F	0.901 mg/L	1 mg/L	90.1	75.0	125	----
Anions and Nutrients (QCLot: 2199572)										
BF2500299-001	LF-KP23-05_2025-08-27	Nitrate (as N)	14797-55-8	E235.NO3	2.40 mg/L	2.5 mg/L	96.1	75.0	125	----
Anions and Nutrients (QCLot: 2199573)										
BF2500299-001	LF-KP23-05_2025-08-27	Nitrite (as N)	14797-65-0	E235.NO2	0.466 mg/L	0.5 mg/L	93.3	75.0	125	----
Anions and Nutrients (QCLot: 2199574)										
BF2500299-001	LF-KP23-05_2025-08-27	Chloride	16887-00-6	E235.Cl	97.0 mg/L	100 mg/L	97.0	75.0	125	----
Anions and Nutrients (QCLot: 2199575)										
BF2500299-001	LF-KP23-05_2025-08-27	Sulfate (as SO4)	14808-79-8	E235.SO4	96.4 mg/L	100 mg/L	96.4	75.0	125	----
Anions and Nutrients (QCLot: 2203389)										
BF2500299-001	LF-KP23-05_2025-08-27	Phosphorus, total dissolved	7723-14-0	E375-T	0.0939 mg/L	0.1 mg/L	93.9	70.0	130	----
Anions and Nutrients (QCLot: 2203756)										
BF2500299-001	LF-KP23-05_2025-08-27	Phosphorus, total	7723-14-0	E372-U	0.100 mg/L	0.1 mg/L	100	70.0	130	----
Anions and Nutrients (QCLot: 2203757)										
BF2500299-002	LF-KP-22-03_2025-08-27	Ammonia, total (as N)	7664-41-7	E298	0.107 mg/L	0.1 mg/L	107	75.0	125	----
Organic / Inorganic Carbon (QCLot: 2203517)										
BF2500298-008	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	4.95 mg/L	5 mg/L	99.0	70.0	130	----
Dissolved Metals (QCLot: 2201261)										
BF2500299-002	LF-KP-22-03_2025-08-27	Aluminum, dissolved	7429-90-5	E421	0.105 mg/L	0.1 mg/L	105	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0534 mg/L	0.05 mg/L	107	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0557 mg/L	0.05 mg/L	111	70.0	130	----
		Barium, dissolved	7440-39-3	E421	ND mg/L	----	ND	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.00511 mg/L	0.005 mg/L	102	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.0461 mg/L	0.05 mg/L	92.2	70.0	130	----
		Boron, dissolved	7440-42-8	E421	ND mg/L	----	ND	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00536 mg/L	0.005 mg/L	107	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.00253 mg/L	0.002 mg/L	101	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0124 mg/L	0.012 mg/L	98.9	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0117 mg/L	0.012 mg/L	93.8	70.0	130	----
		Copper, dissolved	7440-50-8	E421	0.0116 mg/L	0.012 mg/L	93.1	70.0	130	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 2201261) - continued										
BF2500299-002	LF-KP-22-03_2025-08-27	Iron, dissolved	7439-89-6	E421	0.047 mg/L	0.05 mg/L	94.7	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0247 mg/L	0.025 mg/L	98.8	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	ND mg/L	----	ND	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	ND mg/L	----	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	0.0120 mg/L	0.012 mg/L	96.0	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.0130 mg/L	0.012 mg/L	104	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0228 mg/L	0.025 mg/L	91.3	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	0.538 mg/L	0.5 mg/L	108	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	ND mg/L	----	ND	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	ND mg/L	----	ND	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0557 mg/L	0.05 mg/L	111	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	ND mg/L	----	ND	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00429 mg/L	0.005 mg/L	85.9	70.0	130	----
		Sodium, dissolved	7440-23-5	E421	ND mg/L	----	ND	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	ND mg/L	----	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	ND mg/L	----	ND	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.00538 mg/L	0.005 mg/L	108	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.0497 mg/L	0.05 mg/L	99.4	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.00497 mg/L	0.005 mg/L	99.4	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0265 mg/L	0.025 mg/L	106	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0124 mg/L	0.012 mg/L	99.0	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.00505 mg/L	0.005 mg/L	101	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	ND mg/L	----	ND	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.0257 mg/L	0.025 mg/L	103	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.0249 mg/L	0.025 mg/L	99.7	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.00488 mg/L	0.005 mg/L	97.6	70.0	130	----
Dissolved Metals (QCLot: 2207226)										
BF2500287-002	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000932 mg/L	0 mg/L	93.2	70.0	130	----
Volatile Organic Compounds (QCLot: 2204336)										
BF2500299-001	LF-KP23-05_2025-08-27	Acetone	67-64-1	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		Benzene	71-43-2	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		Bromodichloromethane	75-27-4	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		Bromoform	75-25-2	E611D	107 µg/L	100 µg/L	107	60.0	140	----
		Bromomethane	74-83-9	E611D	80.9 µg/L	100 µg/L	80.9	60.0	140	----
		Carbon disulfide	75-15-0	E611D	94.8 µg/L	100 µg/L	94.8	60.0	140	----
		Carbon tetrachloride	56-23-5	E611D	97.1 µg/L	100 µg/L	97.1	60.0	140	----
		Chlorobenzene	108-90-7	E611D	98.8 µg/L	100 µg/L	98.8	60.0	140	----
		Chloroethane	75-00-3	E611D	97.5 µg/L	100 µg/L	97.5	60.0	140	----
		Chloroform	67-66-3	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		Chloromethane	74-87-3	E611D	96.3 µg/L	100 µg/L	96.3	60.0	140	----
		Dibromochloromethane	124-48-1	E611D	109 µg/L	100 µg/L	109	60.0	140	----
		Dibromoethane, 1,2-	106-93-4	E611D	96.5 µg/L	100 µg/L	96.5	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	102 µg/L	100 µg/L	102	60.0	140	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 2204336) - continued										
BF2500299-001	LF-KP23-05_2025-08-27	Dichlorobenzene, 1,3-	541-73-1	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	98.4 µg/L	100 µg/L	98.4	60.0	140	----
		Dichlorodifluoromethane	75-71-8	E611D	84.4 µg/L	100 µg/L	84.4	60.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611D	98.6 µg/L	100 µg/L	98.6	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611D	97.1 µg/L	100 µg/L	97.1	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611D	97.1 µg/L	100 µg/L	97.1	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	99.6 µg/L	100 µg/L	99.6	60.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		Dichloromethane	75-09-2	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611D	99.4 µg/L	100 µg/L	99.4	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	90.1 µg/L	100 µg/L	90.1	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	86.3 µg/L	100 µg/L	86.3	60.0	140	----
		Ethylbenzene	100-41-4	E611D	97.6 µg/L	100 µg/L	97.6	60.0	140	----
		Hexane, n-	110-54-3	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		Hexanone, 2-	591-78-6	E611D	89 µg/L	100 µg/L	89.4	60.0	140	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	98 µg/L	100 µg/L	98.4	60.0	140	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	87 µg/L	100 µg/L	87.1	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	96.2 µg/L	100 µg/L	96.2	60.0	140	----
		Styrene	100-42-5	E611D	94.6 µg/L	100 µg/L	94.6	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	98.7 µg/L	100 µg/L	98.7	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		Tetrachloroethylene	127-18-4	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		Toluene	108-88-3	E611D	99.1 µg/L	100 µg/L	99.1	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	90.4 µg/L	100 µg/L	90.4	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	96.9 µg/L	100 µg/L	96.9	60.0	140	----
		Trichloroethylene	79-01-6	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611D	93.2 µg/L	100 µg/L	93.2	60.0	140	----
		Vinyl chloride	75-01-4	E611D	87.3 µg/L	100 µg/L	87.3	60.0	140	----
		Xylene, m+p-	179601-23-1	E611D	188 µg/L	200 µg/L	93.9	60.0	140	----
		Xylene, o-	95-47-6	E611D	98.1 µg/L	100 µg/L	98.1	60.0	140	----
Hydrocarbons (QCLot: 2204337)										
BF2500299-001	LF-KP23-05_2025-08-27	F1 (C6-C10)	----	E581.F1-L	1640 µg/L	2000 µg/L	81.8	60.0	140	----

Chain of Custody: 25 08 27_MS_Landfill_GW1

Client Info	Project Info	Laboratory Info	
Baffinland Iron Mine Corporation 2275 Upper Middle Rd E, Suite 300 Oakville, ON, L6H 0C3 **Phone:** 647-253-0596 x6016/6039/4131 **Email:** environment.coordinators@baffinland.com; environment.superintendents@baffinland.com	**Job Reference (Project):** MS_Landfill_GW1 **Task:** , GW_Landfill_250825 **Site:** MS	**Lab Name:** ALS Waterloo **Contact:** Rick Hawthorne **Phone:** 519.886.6910 **Email:** Rick.Hawthorne@ALSGlobal.com	**Address:** Unit 1 - 60 Northland Road Waterloo, ON,N2V 2B8
Email Invoice: ap@baffinland.com; environment.superintendents@baffinland.com **Email EDD:** bim.equissa@baffinland.com **Email COA:** environment.labresults@baffinland.com	**Turn around Time:** Routine (R) **Sampler 1:** LG **Sampler 2:** JJ **Sampler 3:**	**ALS Quote #:** WT2020BIMC1000001 **ALS PO #:** 4500156571	**Lab Work Order #** (lab use only):

Sample Details				Field Data			Analysis Requested											
Sample ID (sys_sample_code)	**Location (sys_loc_code)**	**Sample Date and Time**	**Matrix**	**Temperature, Field (deg C)**	**pH, Field (pH units)**	**Total # of Containers**	**ALS_GW_Landfill**											
LF-KP23-05_2025-08-27	**LF-KP23-05**	**8/27/2025 12:20:00 PM**	**WG**	**3**	**7.48**	**9**	**X**											
LF-KP-22-03_2025-08-27	**LF-KP-22-03**	**8/27/2025 4:10:00 PM**	**WG**	**1.2**	**7.14**	**9**	**X**											
QD-BT3_2025-08-27	**LF-KP-22-03**	**8/27/2025 4:10:00 PM**	**WG**			**9**	**X**											

Relinquished by:	Bradley Rasmussen	**Date:**	
Additional Comments			
Initial Shipment Reception (lab use only)		**Final Shipment Reception** (lab use only)	
Received by:		**Received by:**	
Date/Time:		**Date/Time:**	

Baffinland

Chain of Custody: 25 08 27_MS_Landfill_GW1

Client Info	Project Info	Laboratory Info	
Baffinland Iron Mine Corporation 2275 Upper Middle Rd E, Suite 300 Oakville, ON, L6H 0C3 **Phone:** 647-253-0596 x6016/6039/4131 **Email:** environment.coordinators@baffinland.com; environment.superintendents@baffinland.com	**Job Reference (Project):** MS_Landfill_GW1 **Task:** , GW_Landfill_250825 **Site:** MS	**Lab Name:** ALS Waterloo **Contact:** Rick Hawthorne **Phone:** 519.886.6910 **Email:** Rick.Hawthorne@ALSGlobal.com	**Address:** Unit 1 - 60 Northland Road Waterloo, ON,N2V 2B8
Email Invoice: ap@baffinland.com; environment.superintendents@baffinland.com **Email EDD:** bim.equissa@baffinland.com **Email COA:** environment.labresults@baffinland.com	**Turn around Time:** Routine (R) **Sampler 1:** LG **Sampler 2:** JJ **Sampler 3:**	**ALS Quote #:** WT2020BIMC1000001 **ALS PO #:** 4500156571	**Lab Work Order #:**

Environmental Division
Baffin Island
Work Order Reference
BF2500299

Telephone

Sample Details				Field Data			A											
Sample ID (sys_sample_code)	Location (sys_loc_code)	Sample Date and Time	Matrix	Temperature, Field (deg C)	pH, Field (pH units)	Total # of Containers	ALS_GW_Landfill											
LF-KP23-05_2025-08-27	LF-KP23-05	8/27/2025 12:20:00 PM	WG	3	7.48	9	X											
LF-KP-22-03_2025-08-27	LF-KP-22-03	8/27/2025 4:10:00 PM	WG	1.2	7.14	9	X											
QD-BT3_2025-08-27	LF-KP-22-03	8/27/2025 4:10:00 PM	WG			9	X											

Relinquished by:	Bradley Rasmussen	**Date:**	
Additional Comments			
Initial Shipment Reception (lab use only)		**Final Shipment Reception** (lab use only)	
Received by:		**Received by:**	
Date/Time:		**Date/Time:**	4-Sept-25 9:00

9.8°C

UW-003
OR 27 N181
MM-428
MC-742

CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	:	**BF2500300**			
Client	:	**Baffinland Iron Mines Corporation**	Laboratory	:	ALS Environmental - Baffin Island
Contact	:	Environmental Lab Results	Account Manager	:	Rick Hawthorne
Address	:	360 Oakville Place Dr Suite 300 Oakville Ontario Canada L6H 6K8	Address	:	Mary River, Qikqtani Region Baffin Island NU Canada
Telephone	:	----	Telephone	:	
Project	:	MS_Landfill_Groundwater	Date Samples Received	:	28-Aug-2025 08:40
PO	:	4500156571	Date Analysis Commenced	:	28-Aug-2025
C-O-C number	:	25 08 27_MS_Landfill_GW2	Issue Date	:	12-Sep-2025 12:43
Sampler	:	JJ, LG			
Site	:	----			
Quote number	:	2024-2025 Scope of Work			
No. of samples received	:	1			
No. of samples analysed	:	1			

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
- Guideline Comparison

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*
Andrea Armstrong		VOC, Waterloo, Ontario
Cedrick Velasco		Inorganics, Baffin Island, Nunavut
Danielle Gravel		Organics, Waterloo, Ontario
Nik Perkio		Metals, Waterloo, Ontario
Nik Perkio		Inorganics, Waterloo, Ontario
Walt Kippenhuck		Inorganics, Waterloo, Ontario
Walt Kippenhuck		Centralized Prep, Waterloo, Ontario

No Breaches Found

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.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key: LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units
µg/L	micrograms per litre
µS/cm	microsiemens per centimetre

>: greater than.
<: less than.

Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).
For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit.

Analytical Results Evaluation

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-LF-GW3_2025-08-27 ----	----	----	----	----	----	----
				Client sampling date / time	27-Aug-2025 14:35	----	----	----	----	----	----
				Sub-Matrix	Water	----	----	----	----	----	----
					BF2500300-001	----	----	----	----	----	----
					Result	----	----	----	----	----	----
Sample Preparation											
Dissolved carbon filtration location	----	EP358/WT	-		field	----	----	----	----	----	----
Physical Tests											
Conductivity	----	E100/WT	µS/cm		581	----	----	----	----	----	----
pH	----	E108/BF	pH units		7.28	----	----	----	----	----	----
Solids, total dissolved [TDS]	----	E162/BF	mg/L		327	----	----	----	----	----	----
Solids, total suspended [TSS]	----	E160-L/BF	mg/L		30.4	----	----	----	----	----	----
Turbidity	----	E121/BF	NTU		15.2	----	----	----	----	----	----
Alkalinity, total (as CaCO3)	----	E290/WT	mg/L		214	----	----	----	----	----	----
Anions and Nutrients											
Ammonia, total (as N)	7664-41-7	E298/WT	mg/L		0.0092	----	----	----	----	----	----
Bromide	24959-67-9	E235.Br/WT	mg/L		<0.10	----	----	----	----	----	----
Chloride	16887-00-6	E235.Cl/WT	mg/L		17.4	----	----	----	----	----	----
Fluoride	16984-48-8	E235.F/WT	mg/L		0.039	----	----	----	----	----	----
Kjeldahl nitrogen, total [TKN]	----	E318/WT	mg/L		0.260	----	----	----	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3/WT	mg/L		0.511	----	----	----	----	----	----
Nitrite (as N)	14797-65-0	E235.NO2/WT	mg/L		<0.010	----	----	----	----	----	----
Phosphorus, total	7723-14-0	E372-U/WT	mg/L		0.0198	----	----	----	----	----	----
Phosphorus, total dissolved	7723-14-0	E375-T/WT	mg/L		0.0073	----	----	----	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	mg/L		63.8	----	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-LF-GW3_2025-08-27 ----	----	----	----	----	----	----
				Client sampling date / time	27-Aug-2025 14:35	----	----	----	----	----	----
				Sub-Matrix	Water	----	----	----	----	----	----
					BF2500300-001	----	----	----	----	----	----
					Result	----	----	----	----	----	----
Organic / Inorganic Carbon											
Carbon, dissolved organic [DOC]	----	E358-L/WT	mg/L		3.28	----	----	----	----	----	----
Dissolved Metals											
Aluminum, dissolved	7429-90-5	E421/WT	mg/L		<0.0010	----	----	----	----	----	----
Antimony, dissolved	7440-36-0	E421/WT	mg/L		<0.00010	----	----	----	----	----	----
Arsenic, dissolved	7440-38-2	E421/WT	mg/L		0.00022	----	----	----	----	----	----
Barium, dissolved	7440-39-3	E421/WT	mg/L		0.0403	----	----	----	----	----	----
Beryllium, dissolved	7440-41-7	E421/WT	mg/L		<0.000020	----	----	----	----	----	----
Bismuth, dissolved	7440-69-9	E421/WT	mg/L		<0.000050	----	----	----	----	----	----
Boron, dissolved	7440-42-8	E421/WT	mg/L		0.605	----	----	----	----	----	----
Cadmium, dissolved	7440-43-9	E421/WT	mg/L		0.0000088	----	----	----	----	----	----
Calcium, dissolved	7440-70-2	E421/WT	mg/L		53.9	----	----	----	----	----	----
Cesium, dissolved	7440-46-2	E421/WT	mg/L		0.000030	----	----	----	----	----	----
Chromium, dissolved	7440-47-3	E421/WT	mg/L		0.00077	----	----	----	----	----	----
Cobalt, dissolved	7440-48-4	E421/WT	mg/L		<0.00010	----	----	----	----	----	----
Copper, dissolved	7440-50-8	E421/WT	mg/L		0.00206	----	----	----	----	----	----
Iron, dissolved	7439-89-6	E421/WT	mg/L		<0.010	----	----	----	----	----	----
Lead, dissolved	7439-92-1	E421/WT	mg/L		<0.000050	----	----	----	----	----	----
Lithium, dissolved	7439-93-2	E421/WT	mg/L		0.104	----	----	----	----	----	----
Magnesium, dissolved	7439-95-4	E421/WT	mg/L		34.6	----	----	----	----	----	----
Manganese, dissolved	7439-96-5	E421/WT	mg/L		0.00017	----	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID: MS-LF-GW3_2025-08-27 ----	----	----	----	----	----	----
				Client sampling date / time: 27-Aug-2025 14:35	----	----	----	----	----	----
				Sub-Matrix: Water	----	----	----	----	----	----
				BF2500300-001	----	----	----	----	----	----
				Result	----	----	----	----	----	----
Dissolved Metals										
Mercury, dissolved	7439-97-6	E509/WT	mg/L	<0.0000050	----	----	----	----	----	----
Molybdenum, dissolved	7439-98-7	E421/WT	mg/L	0.00239	----	----	----	----	----	----
Nickel, dissolved	7440-02-0	E421/WT	mg/L	0.0126	----	----	----	----	----	----
Phosphorus, dissolved	7723-14-0	E421/WT	mg/L	<0.050	----	----	----	----	----	----
Potassium, dissolved	7440-09-7	E421/WT	mg/L	3.48	----	----	----	----	----	----
Rubidium, dissolved	7440-17-7	E421/WT	mg/L	0.0121	----	----	----	----	----	----
Selenium, dissolved	7782-49-2	E421/WT	mg/L	0.000054	----	----	----	----	----	----
Silicon, dissolved	7440-21-3	E421/WT	mg/L	5.55	----	----	----	----	----	----
Silver, dissolved	7440-22-4	E421/WT	mg/L	<0.000010	----	----	----	----	----	----
Sodium, dissolved	7440-23-5	E421/WT	mg/L	16.1	----	----	----	----	----	----
Strontium, dissolved	7440-24-6	E421/WT	mg/L	0.0415	----	----	----	----	----	----
Sulfur, dissolved	7704-34-9	E421/WT	mg/L	23.3	----	----	----	----	----	----
Tellurium, dissolved	13494-80-9	E421/WT	mg/L	<0.00020	----	----	----	----	----	----
Thallium, dissolved	7440-28-0	E421/WT	mg/L	0.000044	----	----	----	----	----	----
Thorium, dissolved	7440-29-1	E421/WT	mg/L	<0.00010	----	----	----	----	----	----
Tin, dissolved	7440-31-5	E421/WT	mg/L	<0.00010	----	----	----	----	----	----
Titanium, dissolved	7440-32-6	E421/WT	mg/L	<0.00030	----	----	----	----	----	----
Tungsten, dissolved	7440-33-7	E421/WT	mg/L	<0.00010	----	----	----	----	----	----
Uranium, dissolved	7440-61-1	E421/WT	mg/L	0.00605	----	----	----	----	----	----
Vanadium, dissolved	7440-62-2	E421/WT	mg/L	<0.00050	----	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-LF-GW3_2025-08-27 ----	----	----	----	----	----	----
				Client sampling date / time	27-Aug-2025 14:35	----	----	----	----	----	----
				Sub-Matrix	Water	----	----	----	----	----	----
					BF2500300-001	----	----	----	----	----	----
					Result	----	----	----	----	----	----
Dissolved Metals											
Zinc, dissolved	7440-66-6	E421/WT	mg/L		<0.0010	----	----	----	----	----	----
Zirconium, dissolved	7440-67-7	E421/WT	mg/L		<0.00030	----	----	----	----	----	----
Dissolved mercury filtration location	----	EP509/WT	-		Field	----	----	----	----	----	----
Dissolved metals filtration location	----	EP421/WT	-		Field	----	----	----	----	----	----
Volatile Organic Compounds											
Acetone	67-64-1	E611D/WT	µg/L		<20	----	----	----	----	----	----
Benzene	71-43-2	E611D/WT	µg/L		<0.50	----	----	----	----	----	----
Bromodichloromethane	75-27-4	E611D/WT	µg/L		<0.50	----	----	----	----	----	----
Bromoform	75-25-2	E611D/WT	µg/L		<0.50	----	----	----	----	----	----
Bromomethane	74-83-9	E611D/WT	µg/L		<0.50	----	----	----	----	----	----
BTEX, total	----	E611D/WT	µg/L		<1.0	----	----	----	----	----	----
Carbon disulfide	75-15-0	E611D/WT	µg/L		<1.0	----	----	----	----	----	----
Carbon tetrachloride	56-23-5	E611D/WT	µg/L		<0.20	----	----	----	----	----	----
Chlorobenzene	108-90-7	E611D/WT	µg/L		<0.50	----	----	----	----	----	----
Chloroethane	75-00-3	E611D/WT	µg/L		<0.50	----	----	----	----	----	----
Chloroform	67-66-3	E611D/WT	µg/L		<0.50	----	----	----	----	----	----
Chloromethane	74-87-3	E611D/WT	µg/L		<2.0	----	----	----	----	----	----
Dibromochloromethane	124-48-1	E611D/WT	µg/L		<0.50	----	----	----	----	----	----
Dibromoethane, 1,2-	106-93-4	E611D/WT	µg/L		<0.20	----	----	----	----	----	----
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	µg/L		<0.50	----	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-LF-GW3_2025-08-27 ----	----	----	----	----	----	----
				Client sampling date / time	27-Aug-2025 14:35	----	----	----	----	----	----
				Sub-Matrix	Water	----	----	----	----	----	----
					BF2500300-001	----	----	----	----	----	----
					Result	----	----	----	----	----	----
Volatile Organic Compounds											
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	µg/L		<0.50	----	----	----	----	----	----
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	µg/L		<0.50	----	----	----	----	----	----
Dichlorodifluoromethane	75-71-8	E611D/WT	µg/L		<0.50	----	----	----	----	----	----
Dichloroethane, 1,1-	75-34-3	E611D/WT	µg/L		<0.50	----	----	----	----	----	----
Dichloroethane, 1,2-	107-06-2	E611D/WT	µg/L		<0.50	----	----	----	----	----	----
Dichloroethylene, 1,1-	75-35-4	E611D/WT	µg/L		<0.50	----	----	----	----	----	----
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	µg/L		<0.50	----	----	----	----	----	----
Dichloroethylene, cis+trans-1,2-	540-59-0	E611D/WT	µg/L		<0.71	----	----	----	----	----	----
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	µg/L		<0.50	----	----	----	----	----	----
Dichloromethane	75-09-2	E611D/WT	µg/L		<1.0	----	----	----	----	----	----
Dichloropropane, 1,2-	78-87-5	E611D/WT	µg/L		<0.50	----	----	----	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	µg/L		<0.30	----	----	----	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	µg/L		<0.5	----	----	----	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	µg/L		<0.30	----	----	----	----	----	----
Ethylbenzene	100-41-4	E611D/WT	µg/L		<0.50	----	----	----	----	----	----
Hexane, n-	110-54-3	E611D/WT	µg/L		<0.50	----	----	----	----	----	----
Hexanone, 2-	591-78-6	E611D/WT	µg/L		<20	----	----	----	----	----	----
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	µg/L		<20	----	----	----	----	----	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	µg/L		<20	----	----	----	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	µg/L		<0.50	----	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-LF-GW3_2025-08-27 ----	----	----	----	----	----	----
				Client sampling date / time	27-Aug-2025 14:35	----	----	----	----	----	----
				Sub-Matrix	Water	----	----	----	----	----	----
					BF2500300-001	----	----	----	----	----	----
					Result	----	----	----	----	----	----
Volatile Organic Compounds											
Styrene	100-42-5	E611D/WT	µg/L		<0.50	----	----	----	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	µg/L		<0.50	----	----	----	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	µg/L		<0.50	----	----	----	----	----	----
Tetrachloroethylene	127-18-4	E611D/WT	µg/L		4.52	----	----	----	----	----	----
Toluene	108-88-3	E611D/WT	µg/L		<0.50	----	----	----	----	----	----
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	µg/L		<0.50	----	----	----	----	----	----
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	µg/L		<0.50	----	----	----	----	----	----
Trichloroethylene	79-01-6	E611D/WT	µg/L		<0.50	----	----	----	----	----	----
Trichlorofluoromethane	75-69-4	E611D/WT	µg/L		<0.50	----	----	----	----	----	----
Trihalomethanes [THMs], total	----	E611D/WT	µg/L		<1.0	----	----	----	----	----	----
Vinyl chloride	75-01-4	E611D/WT	µg/L		<0.20	----	----	----	----	----	----
Xylene, m+p-	179601-23-1	E611D/WT	µg/L		<0.40	----	----	----	----	----	----
Xylene, o-	95-47-6	E611D/WT	µg/L		<0.30	----	----	----	----	----	----
Xylenes, total	1330-20-7	E611D/WT	µg/L		<0.50	----	----	----	----	----	----
Hydrocarbons											
F1 (C6-C10)	----	E581.F1-L/WT	µg/L		<25	----	----	----	----	----	----
F2 (C10-C16)	----	E601/WT	µg/L		<100	----	----	----	----	----	----
F3 (C16-C34)	----	E601/WT	µg/L		<250	----	----	----	----	----	----
F4 (C34-C50)	----	E601/WT	µg/L		<250	----	----	----	----	----	----
F1-BTEX	----	EC580/WT	µg/L		<25	----	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-LF-GW3_2025-08-27 ----	----	----	----	----	----	----
				Client sampling date / time	27-Aug-2025 14:35	----	----	----	----	----	----
				Sub-Matrix	Water	----	----	----	----	----	----
					BF2500300-001	----	----	----	----	----	----
					Result	----	----	----	----	----	----
Hydrocarbons											
Hydrocarbons, total (C6-C50)	n/a	EC581/WT	µg/L		<370	----	----	----	----	----	----
Hydrocarbons Surrogates											
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/WT	%		91.4	----	----	----	----	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.F1-L/WT	%		85.8	----	----	----	----	----	----
Volatile Organic Compounds Surrogates											
Bromofluorobenzene, 4-	460-00-4	E611D/WT	%		94.3	----	----	----	----	----	----
Difluorobenzene, 1,4-	540-36-3	E611D/WT	%		96.4	----	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons											
Acenaphthene	83-32-9	E641A-L/WT	µg/L		<0.010	----	----	----	----	----	----
Acenaphthylene	208-96-8	E641A-L/WT	µg/L		<0.010	----	----	----	----	----	----
Acridine	260-94-6	E641A-L/WT	µg/L		<0.010	----	----	----	----	----	----
Anthracene	120-12-7	E641A-L/WT	µg/L		<0.010	----	----	----	----	----	----
Benz(a)anthracene	56-55-3	E641A-L/WT	µg/L		<0.010	----	----	----	----	----	----
Benzo(a)pyrene	50-32-8	E641A-L/WT	µg/L		<0.0050	----	----	----	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A-L/WT	µg/L		<0.010	----	----	----	----	----	----
Benzo(b+j+k)fluoranthene	n/a	E641A-L/WT	µg/L		<0.015	----	----	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	E641A-L/WT	µg/L		<0.010	----	----	----	----	----	----
Benzo(k)fluoranthene	207-08-9	E641A-L/WT	µg/L		<0.010	----	----	----	----	----	----
Chrysene	218-01-9	E641A-L/WT	µg/L		<0.010	----	----	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A-L/WT	µg/L		<0.0050	----	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID: MS-LF-GW3_2025-08-27 ----	----	----	----	----	----	----
				Client sampling date / time: 27-Aug-2025 14:35	----	----	----	----	----	----
				Sub-Matrix: Water	----	----	----	----	----	----
				BF2500300-001	----	----	----	----	----	----
				Result	----	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons										
Fluoranthene	206-44-0	E641A-L/WT	µg/L	<0.010	----	----	----	----	----	----
Fluorene	86-73-7	E641A-L/WT	µg/L	<0.010	----	----	----	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L/WT	µg/L	<0.010	----	----	----	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A-L/WT	µg/L	<0.010	----	----	----	----	----	----
Methylnaphthalene, 1+2-	----	E641A-L/WT	µg/L	<0.015	----	----	----	----	----	----
Methylnaphthalene, 2-	91-57-6	E641A-L/WT	µg/L	<0.010	----	----	----	----	----	----
Naphthalene	91-20-3	E641A-L/WT	µg/L	<0.010	----	----	----	----	----	----
Perylene	198-55-0	E641A-L/WT	µg/L	<0.010	----	----	----	----	----	----
Phenanthrene	85-01-8	E641A-L/WT	µg/L	<0.010	----	----	----	----	----	----
Pyrene	129-00-0	E641A-L/WT	µg/L	<0.010	----	----	----	----	----	----
Quinoline	91-22-5	E641A-L/WT	µg/L	<0.010	----	----	----	----	----	----
B(a)P total potency equivalents [B(a)P TPE]	----	E641A-L/WT	µg/L	<0.010	----	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A-L/WT	%	99.6	----	----	----	----	----	----
Naphthalene-d8	1146-65-2	E641A-L/WT	%	112	----	----	----	----	----	----
Phenanthrene-d10	1517-22-2	E641A-L/WT	%	108	----	----	----	----	----	----

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

Summary of Guideline Limits

Analyte	CAS Number	Unit	FEQG_BTEX						
Sample Preparation									
Dissolved carbon filtration location	----	-	----	----	----	----	----	----	----
Physical Tests									
Conductivity	----	µS/cm	----	----	----	----	----	----	----
pH	----	pH units	----	----	----	----	----	----	----
Solids, total dissolved [TDS]		mg/L	----	----	----	----	----	----	----
Solids, total suspended [TSS]		mg/L	----	----	----	----	----	----	----
Turbidity	----	NTU	----	----	----	----	----	----	----
Alkalinity, total (as CaCO3)		mg/L	----	----	----	----	----	----	----
Anions and Nutrients									
Ammonia, total (as N)	7664-41-7	mg/L	----	----	----	----	----	----	----
Bromide	24959-67-9	mg/L	----	----	----	----	----	----	----
Chloride	16887-00-6	mg/L	----	----	----	----	----	----	----
Fluoride	16984-48-8	mg/L	----	----	----	----	----	----	----
Kjeldahl nitrogen, total [TKN]		mg/L	----	----	----	----	----	----	----
Nitrate (as N)	14797-55-8	mg/L	----	----	----	----	----	----	----
Nitrite (as N)	14797-65-0	mg/L	----	----	----	----	----	----	----
Phosphorus, total	7723-14-0	mg/L	----	----	----	----	----	----	----
Phosphorus, total dissolved	7723-14-0	mg/L	----	----	----	----	----	----	----
Sulfate (as SO4)	14808-79-8	mg/L	----	----	----	----	----	----	----
Organic / Inorganic Carbon									
Carbon, dissolved organic [DOC]		mg/L	----	----	----	----	----	----	----
Dissolved Metals									
Aluminum, dissolved	7429-90-5	mg/L	----	----	----	----	----	----	----
Antimony, dissolved	7440-36-0	mg/L	----	----	----	----	----	----	----

Arsenic, dissolved	7440-38-2	mg/L	----	----	----	----	----	----	----
Barium, dissolved	7440-39-3	mg/L	----	----	----	----	----	----	----
Beryllium, dissolved	7440-41-7	mg/L	----	----	----	----	----	----	----
Bismuth, dissolved	7440-69-9	mg/L	----	----	----	----	----	----	----
Boron, dissolved	7440-42-8	mg/L	----	----	----	----	----	----	----
Cadmium, dissolved	7440-43-9	mg/L	----	----	----	----	----	----	----
Calcium, dissolved	7440-70-2	mg/L	----	----	----	----	----	----	----
Cesium, dissolved	7440-46-2	mg/L	----	----	----	----	----	----	----
Chromium, dissolved	7440-47-3	mg/L	----	----	----	----	----	----	----
Cobalt, dissolved	7440-48-4	mg/L	----	----	----	----	----	----	----
Copper, dissolved	7440-50-8	mg/L	----	----	----	----	----	----	----
Iron, dissolved	7439-89-6	mg/L	----	----	----	----	----	----	----
Lead, dissolved	7439-92-1	mg/L	----	----	----	----	----	----	----
Lithium, dissolved	7439-93-2	mg/L	----	----	----	----	----	----	----
Magnesium, dissolved	7439-95-4	mg/L	----	----	----	----	----	----	----
Manganese, dissolved	7439-96-5	mg/L	----	----	----	----	----	----	----
Mercury, dissolved	7439-97-6	mg/L	----	----	----	----	----	----	----
Molybdenum, dissolved	7439-98-7	mg/L	----	----	----	----	----	----	----
Nickel, dissolved	7440-02-0	mg/L	----	----	----	----	----	----	----
Phosphorus, dissolved	7723-14-0	mg/L	----	----	----	----	----	----	----
Potassium, dissolved	7440-09-7	mg/L	----	----	----	----	----	----	----
Rubidium, dissolved	7440-17-7	mg/L	----	----	----	----	----	----	----
Selenium, dissolved	7782-49-2	mg/L	----	----	----	----	----	----	----
Silicon, dissolved	7440-21-3	mg/L	----	----	----	----	----	----	----
Silver, dissolved	7440-22-4	mg/L	----	----	----	----	----	----	----
Sodium, dissolved	7440-23-5	mg/L	----	----	----	----	----	----	----
Strontium, dissolved	7440-24-6	mg/L	----	----	----	----	----	----	----

Sulfur, dissolved	7704-34-9	mg/L	----	----	----	----	----	----	----
Tellurium, dissolved	13494-80-9	mg/L	----	----	----	----	----	----	----
Thallium, dissolved	7440-28-0	mg/L	----	----	----	----	----	----	----
Thorium, dissolved	7440-29-1	mg/L	----	----	----	----	----	----	----
Tin, dissolved	7440-31-5	mg/L	----	----	----	----	----	----	----
Titanium, dissolved	7440-32-6	mg/L	----	----	----	----	----	----	----
Tungsten, dissolved	7440-33-7	mg/L	----	----	----	----	----	----	----
Uranium, dissolved	7440-61-1	mg/L	----	----	----	----	----	----	----
Vanadium, dissolved	7440-62-2	mg/L	----	----	----	----	----	----	----
Zinc, dissolved	7440-66-6	mg/L	----	----	----	----	----	----	----
Zirconium, dissolved	7440-67-7	mg/L	----	----	----	----	----	----	----
Dissolved mercury filtration location	----	-	----	----	----	----	----	----	----
Dissolved metals filtration location	----	-	----	----	----	----	----	----	----
Volatile Organic Compounds									
Acetone	67-64-1	µg/L	----	----	----	----	----	----	----
Benzene	71-43-2	µg/L	**590 µg/L**	----	----	----	----	----	----
Bromodichloromethane	75-27-4	µg/L	----	----	----	----	----	----	----
Bromoform	75-25-2	µg/L	----	----	----	----	----	----	----
Bromomethane	74-83-9	µg/L	----	----	----	----	----	----	----
BTEX, total		µg/L	----	----	----	----	----	----	----
Carbon disulfide	75-15-0	µg/L	----	----	----	----	----	----	----
Carbon tetrachloride	56-23-5	µg/L	----	----	----	----	----	----	----
Chlorobenzene	108-90-7	µg/L	----	----	----	----	----	----	----
Chloroethane	75-00-3	µg/L	----	----	----	----	----	----	----
Chloroform	67-66-3	µg/L	----	----	----	----	----	----	----
Chloromethane	74-87-3	µg/L	----	----	----	----	----	----	----
Dibromochloromethane	124-48-1	µg/L	----	----	----	----	----	----	----

Dibromoethane, 1,2-	106-93-4	µg/L	----	----	----	----	----	----	----
Dichlorobenzene, 1,2-	95-50-1	µg/L	----	----	----	----	----	----	----
Dichlorobenzene, 1,3-	541-73-1	µg/L	----	----	----	----	----	----	----
Dichlorobenzene, 1,4-	106-46-7	µg/L	----	----	----	----	----	----	----
Dichlorodifluoromethane	75-71-8	µg/L	----	----	----	----	----	----	----
Dichloroethane, 1,1-	75-34-3	µg/L	----	----	----	----	----	----	----
Dichloroethane, 1,2-	107-06-2	µg/L	----	----	----	----	----	----	----
Dichloroethylene, 1,1-	75-35-4	µg/L	----	----	----	----	----	----	----
Dichloroethylene, cis-1,2-	156-59-2	µg/L	----	----	----	----	----	----	----
Dichloroethylene, cis+trans-1,2-	540-59-0	µg/L	----	----	----	----	----	----	----
Dichloroethylene, trans-1,2-	156-60-5	µg/L	----	----	----	----	----	----	----
Dichloromethane	75-09-2	µg/L	----	----	----	----	----	----	----
Dichloropropane, 1,2-	78-87-5	µg/L	----	----	----	----	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	µg/L	----	----	----	----	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	µg/L	----	----	----	----	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	µg/L	----	----	----	----	----	----	----
Ethylbenzene	100-41-4	µg/L	**70 µg/L**	----	----	----	----	----	----
Hexane, n-	110-54-3	µg/L	----	----	----	----	----	----	----
Hexanone, 2-	591-78-6	µg/L	----	----	----	----	----	----	----
Methyl ethyl ketone [MEK]	78-93-3	µg/L	----	----	----	----	----	----	----
Methyl isobutyl ketone [MIBK]	108-10-1	µg/L	----	----	----	----	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	µg/L	----	----	----	----	----	----	----
Styrene	100-42-5	µg/L	----	----	----	----	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	µg/L	----	----	----	----	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	µg/L	----	----	----	----	----	----	----
Tetrachloroethylene	127-18-4	µg/L	----	----	----	----	----	----	----
Toluene	108-88-3	µg/L	**30 µg/L**	----	----	----	----	----	----

Trichloroethane, 1,1,1-	71-55-6	µg/L	----	----	----	----	----	----	----	----
Trichloroethane, 1,1,2-	79-00-5	µg/L	----	----	----	----	----	----	----	----
Trichloroethylene	79-01-6	µg/L	----	----	----	----	----	----	----	----
Trichlorofluoromethane	75-69-4	µg/L	----	----	----	----	----	----	----	----
Trihalomethanes [THMs], total		µg/L	----	----	----	----	----	----	----	----
Vinyl chloride	75-01-4	µg/L	----	----	----	----	----	----	----	----
Xylene, m+p-	179601-23-1	µg/L	**70 µg/L**	----	----	----	----	----	----	----
Xylene, o-	95-47-6	µg/L	**70 µg/L**	----	----	----	----	----	----	----
Xylenes, total	1330-20-7	µg/L	**70 µg/L**	----	----	----	----	----	----	----
Hydrocarbons										
F1 (C6-C10)		µg/L	----	----	----	----	----	----	----	----
F2 (C10-C16)	----	µg/L	----	----	----	----	----	----	----	----
F3 (C16-C34)	----	µg/L	----	----	----	----	----	----	----	----
F4 (C34-C50)	----	µg/L	----	----	----	----	----	----	----	----
F1-BTEX		µg/L	----	----	----	----	----	----	----	----
Hydrocarbons, total (C6-C50)	n/a	µg/L	----	----	----	----	----	----	----	----
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	%	----	----	----	----	----	----	----	----
Bromofluorobenzene, 4-	460-00-4	%	----	----	----	----	----	----	----	----
Dichlorotoluene, 3,4-	95-75-0	%	----	----	----	----	----	----	----	----
Difluorobenzene, 1,4-	540-36-3	%	----	----	----	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	µg/L	----	----	----	----	----	----	----	----
Acenaphthylene	208-96-8	µg/L	----	----	----	----	----	----	----	----
Acridine	260-94-6	µg/L	----	----	----	----	----	----	----	----
Anthracene	120-12-7	µg/L	----	----	----	----	----	----	----	----
Benz(a)anthracene	56-55-3	µg/L	----	----	----	----	----	----	----	----
Benzo(a)pyrene	50-32-8	µg/L	----	----	----	----	----	----	----	----

Benzo(b+j)fluoranthene	n/a	µg/L	----	----	----	----	----	----	----	----
Benzo(b+j+k)fluoranthene	n/a	µg/L	----	----	----	----	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	µg/L	----	----	----	----	----	----	----	----
Benzo(k)fluoranthene	207-08-9	µg/L	----	----	----	----	----	----	----	----
Chrysene	218-01-9	µg/L	----	----	----	----	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	µg/L	----	----	----	----	----	----	----	----
Fluoranthene	206-44-0	µg/L	----	----	----	----	----	----	----	----
Fluorene	86-73-7	µg/L	----	----	----	----	----	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	µg/L	----	----	----	----	----	----	----	----
Methylnaphthalene, 1-	90-12-0	µg/L	----	----	----	----	----	----	----	----
Methylnaphthalene, 1+2-	----	µg/L	----	----	----	----	----	----	----	----
Methylnaphthalene, 2-	91-57-6	µg/L	----	----	----	----	----	----	----	----
Naphthalene	91-20-3	µg/L	----	----	----	----	----	----	----	----
Perylene	198-55-0	µg/L	----	----	----	----	----	----	----	----
Phenanthrene	85-01-8	µg/L	----	----	----	----	----	----	----	----
Pyrene	129-00-0	µg/L	----	----	----	----	----	----	----	----
Quinoline	91-22-5	µg/L	----	----	----	----	----	----	----	----
B(a)P total potency equivalents [B(a)P TPE]		µg/L	----	----	----	----	----	----	----	----
Chrysene-d12	1719-03-5	%	----	----	----	----	----	----	----	----
Naphthalene-d8	1146-65-2	%	----	----	----	----	----	----	----	----
Phenanthrene-d10	1517-22-2	%	----	----	----	----	----	----	----	----

CERTIFICATE OF ANALYSIS

Work Order	:	**BF2500300**			
Client	:	**Baffinland Iron Mines Corporation**	Laboratory	:	ALS Environmental - Baffin Island
Contact	:	Environmental Lab Results	Account Manager	:	Rick Hawthorne
Address	:	360 Oakville Place Dr Suite 300 Oakville Ontario Canada L6H 6K8	Address	:	Mary River, Qikqtani Region Baffin Island NU Canada
Telephone	:	----	E-mail	:	Rick.Hawthorne@ALSGlobal.com
Project	:	MS_Landfill_Groundwater	Telephone	:	
PO	:	4500156571	Date Samples Received	:	28-Aug-2025 08:40
C-O-C number	:	25 08 27_MS_Landfill_GW2	Date Analysis Commenced	:	28-Aug-2025
Sampler	:	JJ, LG	Issue Date	:	12-Sep-2025 12:43
Site	:	----			
Quote number	:	2024-2025 Scope of Work			
No. of samples received	:	1			
No. of samples analysed	:	1			

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

Signatories	*Position*	*Laboratory Department*
Andrea Armstrong		VOC, Waterloo, Ontario
Cedrick Velasco		Inorganics, Baffin Island, Nunavut
Danielle Gravel		Organics, Waterloo, Ontario
Nik Perkio		Metals, Waterloo, Ontario
Nik Perkio		Inorganics, Waterloo, Ontario
Walt Kippenhuck		Inorganics, Waterloo, Ontario
Walt Kippenhuck		Centralized Prep, Waterloo, Ontario

General Comments

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

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

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

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

Key: CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.
LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units
µg/L	micrograms per litre
µS/cm	microsiemens per centimetre

<: 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)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-LF-GW3_2025-08-27 ----	----	----	----	----
					Client sampling date / time	27-Aug-2025 14:35	----	----	----	----
						BF2500300-001	----	----	----	----
						Result	----	----	----	----
Sample Preparation										
Dissolved carbon filtration location	----	EP358/WT	-	-		field	----	----	----	----
Physical Tests										
Conductivity	----	E100/WT	1.0	µS/cm		581	----	----	----	----
pH	----	E108/BF	0.10	pH units		7.28	----	----	----	----
Solids, total dissolved [TDS]	----	E162/BF	10	mg/L		327	----	----	----	----
Solids, total suspended [TSS]	----	E160-L/BF	1.0	mg/L		30.4	----	----	----	----
Turbidity	----	E121/BF	0.10	NTU		15.2	----	----	----	----
Alkalinity, total (as CaCO3)	----	E290/WT	2.0	mg/L		214	----	----	----	----
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/WT	0.0050	mg/L		0.0092	----	----	----	----
Bromide	24959-67-9	E235.Br/WT	0.10	mg/L		<0.10	----	----	----	----
Chloride	16887-00-6	E235.Cl/WT	0.50	mg/L		17.4	----	----	----	----
Fluoride	16984-48-8	E235.F/WT	0.020	mg/L		0.039	----	----	----	----
Kjeldahl nitrogen, total [TKN]	----	E318/WT	0.050	mg/L		0.260	----	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3/WT	0.020	mg/L		0.511	----	----	----	----
Nitrite (as N)	14797-65-0	E235.NO2/WT	0.010	mg/L		<0.010	----	----	----	----
Phosphorus, total	7723-14-0	E372-U/WT	0.0020	mg/L		0.0198	----	----	----	----
Phosphorus, total dissolved	7723-14-0	E375-T/WT	0.0020	mg/L		0.0073	----	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	0.30	mg/L		63.8	----	----	----	----
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/WT	0.50	mg/L		3.28	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-LF-GW3_2025-08-27 ----	----	----	----	----
					Client sampling date / time	27-Aug-2025 14:35	----	----	----	----
						BF2500300-001	----	----	----	----
						Result	----	----	----	----
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/WT	0.0010	mg/L		<0.0010	----	----	----	----
Antimony, dissolved	7440-36-0	E421/WT	0.00010	mg/L		<0.00010	----	----	----	----
Arsenic, dissolved	7440-38-2	E421/WT	0.00010	mg/L		0.00022	----	----	----	----
Barium, dissolved	7440-39-3	E421/WT	0.00010	mg/L		0.0403	----	----	----	----
Beryllium, dissolved	7440-41-7	E421/WT	0.000020	mg/L		<0.000020	----	----	----	----
Bismuth, dissolved	7440-69-9	E421/WT	0.000050	mg/L		<0.000050	----	----	----	----
Boron, dissolved	7440-42-8	E421/WT	0.010	mg/L		0.605	----	----	----	----
Cadmium, dissolved	7440-43-9	E421/WT	0.0000050	mg/L		0.0000088	----	----	----	----
Calcium, dissolved	7440-70-2	E421/WT	0.050	mg/L		53.9	----	----	----	----
Cesium, dissolved	7440-46-2	E421/WT	0.000010	mg/L		0.000030	----	----	----	----
Chromium, dissolved	7440-47-3	E421/WT	0.00050	mg/L		0.00077	----	----	----	----
Cobalt, dissolved	7440-48-4	E421/WT	0.00010	mg/L		<0.00010	----	----	----	----
Copper, dissolved	7440-50-8	E421/WT	0.00020	mg/L		0.00206	----	----	----	----
Iron, dissolved	7439-89-6	E421/WT	0.010	mg/L		<0.010	----	----	----	----
Lead, dissolved	7439-92-1	E421/WT	0.000050	mg/L		<0.000050	----	----	----	----
Lithium, dissolved	7439-93-2	E421/WT	0.0010	mg/L		0.104	----	----	----	----
Magnesium, dissolved	7439-95-4	E421/WT	0.0050	mg/L		34.6	----	----	----	----
Manganese, dissolved	7439-96-5	E421/WT	0.00010	mg/L		0.00017	----	----	----	----
Mercury, dissolved	7439-97-6	E509/WT	0.0000050	mg/L		<0.0000050	----	----	----	----
Molybdenum, dissolved	7439-98-7	E421/WT	0.000050	mg/L		0.00239	----	----	----	----
Nickel, dissolved	7440-02-0	E421/WT	0.00050	mg/L		0.0126	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-LF-GW3_2025-08-27 ----	----	----	----	----
					Client sampling date / time	27-Aug-2025 14:35	----	----	----	----
						BF2500300-001	----	----	----	----
						Result	----	----	----	----
Dissolved Metals										
Phosphorus, dissolved	7723-14-0	E421/WT	0.050	mg/L		<0.050	----	----	----	----
Potassium, dissolved	7440-09-7	E421/WT	0.050	mg/L		3.48	----	----	----	----
Rubidium, dissolved	7440-17-7	E421/WT	0.00020	mg/L		0.0121	----	----	----	----
Selenium, dissolved	7782-49-2	E421/WT	0.000050	mg/L		0.000054	----	----	----	----
Silicon, dissolved	7440-21-3	E421/WT	0.050	mg/L		5.55	----	----	----	----
Silver, dissolved	7440-22-4	E421/WT	0.000010	mg/L		<0.000010	----	----	----	----
Sodium, dissolved	7440-23-5	E421/WT	0.050	mg/L		16.1	----	----	----	----
Strontium, dissolved	7440-24-6	E421/WT	0.00020	mg/L		0.0415	----	----	----	----
Sulfur, dissolved	7704-34-9	E421/WT	0.50	mg/L		23.3	----	----	----	----
Tellurium, dissolved	13494-80-9	E421/WT	0.00020	mg/L		<0.00020	----	----	----	----
Thallium, dissolved	7440-28-0	E421/WT	0.000010	mg/L		0.000044	----	----	----	----
Thorium, dissolved	7440-29-1	E421/WT	0.00010	mg/L		<0.00010	----	----	----	----
Tin, dissolved	7440-31-5	E421/WT	0.00010	mg/L		<0.00010	----	----	----	----
Titanium, dissolved	7440-32-6	E421/WT	0.00030	mg/L		<0.00030	----	----	----	----
Tungsten, dissolved	7440-33-7	E421/WT	0.00010	mg/L		<0.00010	----	----	----	----
Uranium, dissolved	7440-61-1	E421/WT	0.000010	mg/L		0.00605	----	----	----	----
Vanadium, dissolved	7440-62-2	E421/WT	0.00050	mg/L		<0.00050	----	----	----	----
Zinc, dissolved	7440-66-6	E421/WT	0.0010	mg/L		<0.0010	----	----	----	----
Zirconium, dissolved	7440-67-7	E421/WT	0.00030	mg/L		<0.00030	----	----	----	----
Dissolved mercury filtration location	----	EP509/WT	-	-		Field	----	----	----	----
Dissolved metals filtration location	----	EP421/WT	-	-		Field	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-LF-GW3_2025-08-27 ----	----	----	----	----
					Client sampling date / time	27-Aug-2025 14:35	----	----	----	----
						BF2500300-001	----	----	----	----
						Result	----	----	----	----
Volatile Organic Compounds										
Acetone	67-64-1	E611D/WT	20	µg/L		<20	----	----	----	----
Benzene	71-43-2	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Bromodichloromethane	75-27-4	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Bromoform	75-25-2	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Bromomethane	74-83-9	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
BTEX, total	----	E611D/WT	1.0	µg/L		<1.0	----	----	----	----
Carbon disulfide	75-15-0	E611D/WT	1.0	µg/L		<1.0	----	----	----	----
Carbon tetrachloride	56-23-5	E611D/WT	0.20	µg/L		<0.20	----	----	----	----
Chlorobenzene	108-90-7	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Chloroethane	75-00-3	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Chloroform	67-66-3	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Chloromethane	74-87-3	E611D/WT	2.0	µg/L		<2.0	----	----	----	----
Dibromochloromethane	124-48-1	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Dibromoethane, 1,2-	106-93-4	E611D/WT	0.20	µg/L		<0.20	----	----	----	----
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Dichlorodifluoromethane	75-71-8	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Dichloroethane, 1,1-	75-34-3	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Dichloroethane, 1,2-	107-06-2	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Dichloroethylene, 1,1-	75-35-4	E611D/WT	0.50	µg/L		<0.50	----	----	----	----

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Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-LF-GW3_2025-08-27 ----	----	----	----	----
					Client sampling date / time	27-Aug-2025 14:35	----	----	----	----
						BF2500300-001	----	----	----	----
						Result	----	----	----	----
Volatile Organic Compounds										
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Dichloroethylene, cis+trans-1,2-	540-59-0	E611D/WT	0.71	µg/L		<0.71	----	----	----	----
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Dichloromethane	75-09-2	E611D/WT	1.0	µg/L		<1.0	----	----	----	----
Dichloropropane, 1,2-	78-87-5	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	0.30	µg/L		<0.30	----	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	0.50	µg/L		<0.5	----	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	0.30	µg/L		<0.30	----	----	----	----
Ethylbenzene	100-41-4	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Hexane, n-	110-54-3	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Hexanone, 2-	591-78-6	E611D/WT	20	µg/L		<20	----	----	----	----
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	20	µg/L		<20	----	----	----	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	20	µg/L		<20	----	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Styrene	100-42-5	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Tetrachloroethylene	127-18-4	E611D/WT	0.50	µg/L		4.52	----	----	----	----
Toluene	108-88-3	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	0.50	µg/L		<0.50	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-LF-GW3_2025-08-27 ----	----	----	----	----
					Client sampling date / time	27-Aug-2025 14:35	----	----	----	----
						BF2500300-001	----	----	----	----
						Result	----	----	----	----
Volatile Organic Compounds										
Trichloroethylene	79-01-6	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Trichlorofluoromethane	75-69-4	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Trihalomethanes [THMs], total	----	E611D/WT	1.0	µg/L		<1.0	----	----	----	----
Vinyl chloride	75-01-4	E611D/WT	0.20	µg/L		<0.20	----	----	----	----
Xylene, m+p-	179601-23-1	E611D/WT	0.40	µg/L		<0.40	----	----	----	----
Xylene, o-	95-47-6	E611D/WT	0.30	µg/L		<0.30	----	----	----	----
Xylenes, total	1330-20-7	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Hydrocarbons										
F1 (C6-C10)	----	E581.F1-L/WT	25	µg/L		<25	----	----	----	----
F2 (C10-C16)	----	E601/WT	100	µg/L		<100	----	----	----	----
F3 (C16-C34)	----	E601/WT	250	µg/L		<250	----	----	----	----
F4 (C34-C50)	----	E601/WT	250	µg/L		<250	----	----	----	----
F1-BTEX	----	EC580/WT	25	µg/L		<25	----	----	----	----
Hydrocarbons, total (C6-C50)	n/a	EC581/WT	370	µg/L		<370	----	----	----	----
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/WT	1.0	%		91.4	----	----	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.F1-L/WT	1.0	%		85.8	----	----	----	----
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611D/WT	1.0	%		94.3	----	----	----	----
Difluorobenzene, 1,4-	540-36-3	E611D/WT	1.0	%		96.4	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-LF-GW3_2025-08-27 ----	----	----	----	----
					Client sampling date / time	27-Aug-2025 14:35	----	----	----	----
						BF2500300-001	----	----	----	----
						Result	----	----	----	----
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
Acenaphthylene	208-96-8	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
Acridine	260-94-6	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
Anthracene	120-12-7	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
Benz(a)anthracene	56-55-3	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
Benzo(a)pyrene	50-32-8	E641A-L/WT	0.0050	µg/L		<0.0050	----	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
Benzo(b+j+k)fluoranthene	n/a	E641A-L/WT	0.015	µg/L		<0.015	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
Benzo(k)fluoranthene	207-08-9	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
Chrysene	218-01-9	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A-L/WT	0.0050	µg/L		<0.0050	----	----	----	----
Fluoranthene	206-44-0	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
Fluorene	86-73-7	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
Methylnaphthalene, 1+2-	----	E641A-L/WT	0.015	µg/L		<0.015	----	----	----	----
Methylnaphthalene, 2-	91-57-6	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
Naphthalene	91-20-3	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
Perylene	198-55-0	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
Phenanthrene	85-01-8	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-LF-GW3_2025-08-27 ----	----	----	----	----
					Client sampling date / time	27-Aug-2025 14:35	----	----	----	----
						BF2500300-001	----	----	----	----
						Result	----	----	----	----
Polycyclic Aromatic Hydrocarbons										
Pyrene	129-00-0	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
Quinoline	91-22-5	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
B(a)P total potency equivalents [B(a)P TPE]	----	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A-L/WT	0.1	%		99.6	----	----	----	----
Naphthalene-d8	1146-65-2	E641A-L/WT	0.1	%		112	----	----	----	----
Phenanthrene-d10	1517-22-2	E641A-L/WT	0.1	%		108	----	----	----	----

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

ALS Canada Ltd.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **BF2500300**	Page	: 1 of 12
Client	: **Baffinland Iron Mines Corporation**	Laboratory	: ALS Environmental - Baffin Island
Contact	: Environmental Lab Results	Account Manager	: Rick Hawthorne
Address	: 360 Oakville Place Dr Suite 300 Oakville ON Canada L6H 6K8	Address	: Mary River, Qikqtani Region Baffin Island, Nunavut Canada
Telephone	: ----	Telephone	: ----
Project	: MS_Landfill_Groundwater	Date Samples Received	: 28-Aug-2025 08:40
PO	: 4500156571	Issue Date	: 12-Sep-2025 12:43
C-O-C number	: 25 08 27_MS_Landfill_GW2		
Sampler	: JJ, LG		
Site	: ----		
Quote number	: 2024-2025 Scope of Work		
No. of samples received	: 1		
No. of samples analysed	: 1		

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

Key

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

Workorder Comments

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

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

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

Outliers : Frequency of Quality Control Samples

- Quality Control Sample Frequency Outliers occur - please see following pages for full details.

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
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) MS-LF-GW3_2025-08-27	E298	27-Aug-2025	06-Sep-2025	28 days	10 days	✓	09-Sep-2025	28 days	10 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE MS-LF-GW3_2025-08-27	E235.Br	27-Aug-2025	04-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE MS-LF-GW3_2025-08-27	E235.Cl	27-Aug-2025	04-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE MS-LF-GW3_2025-08-27	E235.F	27-Aug-2025	04-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Nitrate in Water by IC										
HDPE MS-LF-GW3_2025-08-27	E235.NO3	27-Aug-2025	04-Sep-2025	3 days	8 days	× EHT	08-Sep-2025	3 days	8 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE MS-LF-GW3_2025-08-27	E235.NO2	27-Aug-2025	04-Sep-2025	3 days	8 days	× EHT	08-Sep-2025	3 days	8 days	× EHT
Anions and Nutrients : Sulfate in Water by IC										
HDPE MS-LF-GW3_2025-08-27	E235.SO4	27-Aug-2025	04-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass - dissolved (field filtered/sulfuric acid)										
MS-LF-GW3_2025-08-27	E375-T	27-Aug-2025	10-Sep-2025	28 days	14 days	✓	11-Sep-2025	28 days	14 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
MS-LF-GW3_2025-08-27	E318	27-Aug-2025	09-Sep-2025	28 days	13 days	✓	09-Sep-2025	28 days	13 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
MS-LF-GW3_2025-08-27	E372-U	27-Aug-2025	08-Sep-2025	28 days	12 days	✓	09-Sep-2025	28 days	12 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
MS-LF-GW3_2025-08-27	E509	27-Aug-2025	09-Sep-2025	28 days	13 days	✓	11-Sep-2025	28 days	13 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
MS-LF-GW3_2025-08-27	E421	27-Aug-2025	05-Sep-2025	180 days	9 days	✓	05-Sep-2025	180 days	9 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate)										
MS-LF-GW3_2025-08-27	E581.F1-L	27-Aug-2025	07-Sep-2025	14 days	11 days	✓	07-Sep-2025	14 days	11 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
MS-LF-GW3_2025-08-27	E601	27-Aug-2025	09-Sep-2025	14 days	13 days	✓	11-Sep-2025	40 days	2 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
MS-LF-GW3_2025-08-27	E358-L	27-Aug-2025	04-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
MS-LF-GW3_2025-08-27	E290	27-Aug-2025	04-Sep-2025	14 days	8 days	✓	05-Sep-2025	14 days	8 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	*Method*	*Sampling Date*	*Extraction / Preparation*				*Analysis*			
			Preparation Date	*Holding Times* Rec	*Holding Times* Actual	*Eval*	*Analysis Date*	*Holding Times* Rec	*Holding Times* Actual	*Eval*
Physical Tests : Conductivity in Water										
HDPE MS-LF-GW3_2025-08-27	E100	27-Aug-2025	04-Sep-2025	28 days	8 days	✓	05-Sep-2025	28 days	8 days	✓
Physical Tests : pH by Meter										
HDPE MS-LF-GW3_2025-08-27	E108	27-Aug-2025	28-Aug-2025	0.25 hrs	18 hrs	× EHTR-FM	28-Aug-2025	0.25 hrs	18 hrs	× EHTR-FM
Physical Tests : TDS by Gravimetry										
HDPE MS-LF-GW3_2025-08-27	E162	27-Aug-2025	----	----	----		28-Aug-2025	7 days	1 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE MS-LF-GW3_2025-08-27	E160-L	27-Aug-2025	----	----	----		28-Aug-2025	7 days	1 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE MS-LF-GW3_2025-08-27	E121	27-Aug-2025	----	----	----		28-Aug-2025	3 days	1 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate) MS-LF-GW3_2025-08-27	E641A-L	27-Aug-2025	09-Sep-2025	14 days	13 days	✓	10-Sep-2025	40 days	1 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) MS-LF-GW3_2025-08-27	E611D	27-Aug-2025	07-Sep-2025	14 days	11 days	✓	07-Sep-2025	14 days	11 days	✓

Legend & Qualifier Definitions

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

EHT: Exceeded ALS recommended hold time prior to analysis.

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

Quality Control Parameter Frequency Compliance

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

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Conductivity in Water	E100	2199569	1	16	6.2	5.0	✓
pH by Meter	E108	2186924	1	12	8.3	5.0	✓
Turbidity by Nephelometry	E121	2186931	1	12	8.3	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	2186948	1	14	7.1	5.0	✓
TDS by Gravimetry	E162	2186985	1	14	7.1	5.0	✓
Bromide in Water by IC	E235.Br	2199570	1	16	6.2	5.0	✓
Chloride in Water by IC	E235.Cl	2199574	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2199571	1	20	5.0	5.0	✓
Nitrite in Water by IC	E235.NO2	2199573	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2199572	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2199575	1	20	5.0	5.0	✓
Alkalinity Species by Titration	E290	2199568	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	2203757	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2203754	0	19	0.0	5.0	×
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2200025	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2203756	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2211040	1	1	100.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2201261	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2207226	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2204337	1	6	16.6	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2204336	1	20	5.0	5.0	✓
Laboratory Control Samples (LCS)							
Conductivity in Water	E100	2199569	1	16	6.2	5.0	✓
pH by Meter	E108	2186924	1	12	8.3	5.0	✓
Turbidity by Nephelometry	E121	2186931	1	12	8.3	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	2186948	1	14	7.1	5.0	✓
TDS by Gravimetry	E162	2186985	1	14	7.1	5.0	✓
Bromide in Water by IC	E235.Br	2199570	1	16	6.2	5.0	✓
Chloride in Water by IC	E235.Cl	2199574	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2199571	1	20	5.0	5.0	✓
Nitrite in Water by IC	E235.NO2	2199573	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2199572	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2199575	1	20	5.0	5.0	✓
Alkalinity Species by Titration	E290	2199568	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	2203757	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2203754	1	19	5.2	5.0	✓

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Control Samples (LCS) - Continued							
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2200025	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2203756	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2211040	1	1	100.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2201261	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2207226	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2204337	1	6	16.6	5.0	✓
CCME PHCs - F2-F4 by GC-FID	E601	2206866	1	4	25.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2204336	1	20	5.0	5.0	✓
PAHs in Water by Hexane LVI GC-MS (Low Level)	E641A-L	2206867	1	8	12.5	5.0	✓
Method Blanks (MB)							
Conductivity in Water	E100	2199569	1	16	6.2	5.0	✓
Turbidity by Nephelometry	E121	2186931	1	12	8.3	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	2186948	1	14	7.1	5.0	✓
TDS by Gravimetry	E162	2186985	1	14	7.1	5.0	✓
Bromide in Water by IC	E235.Br	2199570	1	16	6.2	5.0	✓
Chloride in Water by IC	E235.Cl	2199574	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2199571	1	20	5.0	5.0	✓
Nitrite in Water by IC	E235.NO2	2199573	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2199572	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2199575	1	20	5.0	5.0	✓
Alkalinity Species by Titration	E290	2199568	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	2203757	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2203754	1	19	5.2	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2200025	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2203756	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2211040	1	1	100.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2201261	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2207226	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2204337	1	6	16.6	5.0	✓
CCME PHCs - F2-F4 by GC-FID	E601	2206866	1	4	25.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2204336	1	20	5.0	5.0	✓
PAHs in Water by Hexane LVI GC-MS (Low Level)	E641A-L	2206867	1	8	12.5	5.0	✓
Matrix Spikes (MS)							
Bromide in Water by IC	E235.Br	2199570	1	16	6.2	5.0	✓
Chloride in Water by IC	E235.Cl	2199574	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2199571	1	20	5.0	5.0	✓
Nitrite in Water by IC	E235.NO2	2199573	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2199572	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2199575	1	20	5.0	5.0	✓

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Matrix Spikes (MS) - Continued							
Ammonia by Fluorescence	E298	2203757	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2203754	0	19	0.0	5.0	×
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2200025	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2203756	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2211040	1	1	100.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2201261	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2207226	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2204337	1	6	16.6	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2204336	1	20	5.0	5.0	✓

Methodology References and Summaries

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

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

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Nitrate in Water by IC	E235.NO3 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Sulfate in Water by IC	E235.SO4 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Alkalinity Species by Titration	E290 ALS Environmental - Waterloo	Water	APHA 2320 B (mod)	Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.
Ammonia by Fluorescence	E298 ALS Environmental - Waterloo	Water	Method Fialab 100, 2018	Ammonia in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021)
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318 ALS Environmental - Waterloo	Water	Method Fialab 100, 2018	TKN in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021).
Dissolved Organic Carbon by Combustion (Low Level)	E358-L ALS Environmental - Waterloo	Water	APHA 5310 B (mod)	Dissolved Organic Carbon (Non-Purgeable), also known as NPOC (dissolved), is a direct measurement of DOC after a filtered (0.45 micron) sample has been acidified and purged to remove inorganic carbon (IC). Analysis is by high temperature combustion with infrared detection of CO2. NPOC does not include volatile organic species that are purged off with IC. For samples where the majority of DC (dissolved carbon) is comprised of IC (which is common), this method is more accurate and more reliable than the DOC by subtraction method (i.e. DC minus DIC).
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Total Phosphorus is determined colourimetrically using a discrete analyzer after heated persulfate digestion of the sample.
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Total Dissolved Phosphorus is determined colourimetrically using a discrete analyzer after filtration through a 0.45 micron filter followed by heated persulfate digestion of the sample.
Dissolved Metals in Water by CRC ICPMS	E421 ALS Environmental - Waterloo	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Dissolved Mercury in Water by CVAAS	E509 ALS Environmental - Waterloo	Water	APHA 3030B/EPA 1631E (mod)	Water samples are filtered (0.45 um), preserved with HCl, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1 (mod)	CCME Fraction 1 (F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
CCME PHCs - F2-F4 by GC-FID	E601 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	Sample extracts are analyzed by GC-FID for CCME hydrocarbon fractions (F2-F4). Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
VOCs (Eastern Canada List) by Headspace GC-MS	E611D ALS Environmental - Waterloo	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PAHs in Water by Hexane LVI GC-MS (Low Level)	E641A-L ALS Environmental - Waterloo	Water	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS.
F1-BTEX	EC580 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).
Sum F1 to F4 (C6-C50)	EC581 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	Hydrocarbons, total (C6-C50) is the sum of CCME Fractions F1(C6-C10), F2(C10-C16), F3(C16-C34), and F4(C34-C50). F4G-sg is not used within this calculation due to overlap with other fractions.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Ammonia	EP298 ALS Environmental - Waterloo	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Digestion for TKN in water	EP318 ALS Environmental - Waterloo	Water	APHA 4500-Norg D (mod)	Samples are digested at high temperature using Sulfuric Acid with Copper catalyst, which converts organic nitrogen sources to Ammonia, which is then quantified by the analytical method as TKN. This method is unsuitable for samples containing high levels of nitrate. If nitrate exceeds TKN concentration by ten times or more, results may be biased low.
Preparation for Dissolved Organic Carbon for Combustion	EP358 ALS Environmental - Waterloo	Water	APHA 5310 B (mod)	Preparation for Dissolved Organic Carbon

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Digestion for Total Phosphorus in water	EP372 ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Samples are heated with a persulfate digestion reagent.
Digestion for Dissolved Phosphorus in water	EP375 ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Samples are filtered through a 0.45 micron membrane filter and then heated with a persulfate digestion reagent.
Dissolved Metals Water Filtration	EP421 ALS Environmental - Waterloo	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO3.
Dissolved Mercury Water Filtration	EP509 ALS Environmental - Waterloo	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HCl.
VOCs Preparation for Headspace Analysis	EP581 ALS Environmental - Waterloo	Water	EPA 5021A (mod)	Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler. An aliquot of the headspace is then injected into a GC-MS-FID.
PHCs and PAHs Hexane Extraction	EP601 ALS Environmental - Waterloo	Water	EPA 3511 (mod)	Petroleum Hydrocarbons (PHCs) and Polycyclic Aromatic Hydrocarbons (PAHs) are extracted using a hexane liquid-liquid extraction.

ALS Canada Ltd.

QUALITY CONTROL REPORT

Work Order	: **BF2500300**	Page	: 1 of 19
Client	: Baffinland Iron Mines Corporation	Laboratory	: ALS Environmental - Baffin Island
Contact	: Environmental Lab Results	Account Manager	: Rick Hawthorne
Address	: 360 Oakville Place Dr Suite 300 Oakville ON Canada L6H 6K8	Address	: Mary River, Qikqtani Region Baffin Island, Nunavut Canada
Telephone	: ----	Telephone	:
Project	: MS_Landfill_Groundwater	Date Samples Received	: 28-Aug-2025 08:40
PO	: 4500156571	Date Analysis Commenced	: 28-Aug-2025
C-O-C number	: 25 08 27_MS_Landfill_GW2	Issue Date	: 12-Sep-2025 12:43
Sampler	: JJ, LG		
Site	: ----		
Quote number	: 2024-2025 Scope of Work		
No. of samples received	: 1		
No. of samples analysed	: 1		

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Laboratory Department*
Andrea Armstrong	Department Manager - Air Quality and Volatiles	Waterloo VOC, Waterloo, Ontario
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Danielle Gravel	Supervisor - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
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General Comments

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

Key :

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

Workorder Comments

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Physical Tests (QC Lot: 2186924)											
BF2500298-001	Anonymous	pH	----	E108	0.10	pH units	7.88	7.90	0.253%	4%	----
Physical Tests (QC Lot: 2186931)											
BF2500298-001	Anonymous	Turbidity	----	E121	0.10	NTU	5.41	5.36	0.928%	15%	----
Physical Tests (QC Lot: 2186948)											
BF2500297-004	Anonymous	Solids, total suspended [TSS]	----	E160-L	1.5	mg/L	51.8	53.0	2.36%	20%	----
Physical Tests (QC Lot: 2186985)											
BF2500297-004	Anonymous	Solids, total dissolved [TDS]	----	E162	21	mg/L	304	252	18.8%	20%	----
Physical Tests (QC Lot: 2199568)											
BF2500299-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	2.0	mg/L	153	153	0.0782%	20%	----
Physical Tests (QC Lot: 2199569)											
BF2500299-001	Anonymous	Conductivity	----	E100	1.0	µS/cm	345	347	0.578%	10%	----
Anions and Nutrients (QC Lot: 2199570)											
BF2500299-001	Anonymous	Bromide	24959-67-9	E235.Br	0.10	mg/L	<0.10	<0.10	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2199571)											
BF2500299-001	Anonymous	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.085	0.081	0.004	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2199572)											
BF2500299-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	0.210	0.206	1.78%	20%	----
Anions and Nutrients (QC Lot: 2199573)											
BF2500299-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2199574)											
BF2500299-001	Anonymous	Chloride	16887-00-6	E235.Cl	0.50	mg/L	4.21	3.99	0.22	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2199575)											
BF2500299-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	20.4	20.2	0.788%	20%	----
Anions and Nutrients (QC Lot: 2203756)											
BF2500299-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0184	0.0192	0.0008	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2203757)											
BF2500299-002	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.0553	0.0557	0.721%	20%	----
Anions and Nutrients (QC Lot: 2211040)											
BF2500300-001	MS-LF-GW3_2025-08-27	Phosphorus, total dissolved	7723-14-0	E375-T	0.0020	mg/L	0.0073	0.0072	0.0002	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 2200025)											

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Organic / Inorganic Carbon (QC Lot: 2200025) - continued											
BF2500300-001	MS-LF-GW3_2025-08-27	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	3.28	3.35	0.07	Diff <2x LOR	----
Dissolved Metals (QC Lot: 2201261)											
BF2500299-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0117	0.0134	13.0%	20%	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00023	0.00025	0.00001	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0282	0.0283	0.266%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	0.150	0.152	1.54%	20%	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.0000077	0.0000058	0.0000019	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	29.9	29.8	0.237%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	0.00120	0.00120	0.0000003	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00302	0.00300	0.587%	20%	----
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0017	0.0017	0.000009	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	25.8	25.9	0.456%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.00622	0.00626	0.505%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000455	0.000457	0.000002	Diff <2x LOR	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.00531	0.00532	0.209%	20%	----
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.050	mg/L	1.45	1.46	0.721%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00603	0.00614	1.84%	20%	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	4.76	4.79	0.688%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.050	mg/L	3.21	3.22	0.364%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.0166	0.0166	0.326%	20%	----
		Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	7.27	7.31	0.581%	20%	----
		Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	0.000015	0.000015	0.0000004	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Dissolved Metals (QC Lot: 2201261) - continued											
BF2500299-001	Anonymous	Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.00103	0.00103	0.408%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	0.00033	0.00033	0.000003	Diff <2x LOR	----
Dissolved Metals (QC Lot: 2207226)											
BF2500287-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Volatile Organic Compounds (QC Lot: 2204336)											
BF2500299-001	Anonymous	Acetone	67-64-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Benzene	71-43-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromodichloromethane	75-27-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromoform	75-25-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromomethane	74-83-9	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Carbon disulfide	75-15-0	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Carbon tetrachloride	56-23-5	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Chlorobenzene	108-90-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroethane	75-00-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroform	67-66-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloromethane	74-87-3	E611D	2.0	µg/L	<2.0	<2.0	0	Diff <2x LOR	----
		Dibromochloromethane	124-48-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dibromoethane, 1,2-	106-93-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorodifluoromethane	75-71-8	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,1-	75-34-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,2-	107-06-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, 1,1-	75-35-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Dichloropropane, 1,2-	78-87-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Volatile Organic Compounds (QC Lot: 2204336) - continued											
BF2500299-001	Anonymous	Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Hexane, n-	110-54-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Hexanone, 2-	591-78-6	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethylene	127-18-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Toluene	108-88-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichlorofluoromethane	75-69-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Vinyl chloride	75-01-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 2204337)											
BF2500299-001	Anonymous	F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	<25	0	Diff <2x LOR	----

Method Blank (MB) Report

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

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 2186931)						
Turbidity	----	E121	0.1	NTU	<0.10	----
Physical Tests (QCLot: 2186948)						
Solids, total suspended [TSS]	----	E160-L	1	mg/L	<1.0	----
Physical Tests (QCLot: 2186985)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Physical Tests (QCLot: 2199568)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	1.5	----
Physical Tests (QCLot: 2199569)						
Conductivity	----	E100	1	µS/cm	1.4	----
Anions and Nutrients (QCLot: 2199570)						
Bromide	24959-67-9	E235.Br	0.1	mg/L	<0.10	----
Anions and Nutrients (QCLot: 2199571)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 2199572)						
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 2199573)						
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	<0.010	----
Anions and Nutrients (QCLot: 2199574)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 2199575)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 2203754)						
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 2203756)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 2203757)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 2211040)						
Phosphorus, total dissolved	7723-14-0	E375-T	0.002	mg/L	<0.0020	----
Organic / Inorganic Carbon (QCLot: 2200025)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Dissolved Metals (QCLot: 2201261)						

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 2201261) - continued						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 2201261) - continued						
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 2207226)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Volatile Organic Compounds (QCLot: 2204336)						
Acetone	67-64-1	E611D	20	µg/L	<20	----
Benzene	71-43-2	E611D	0.5	µg/L	<0.50	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	<0.50	----
Bromoform	75-25-2	E611D	0.5	µg/L	<0.50	----
Bromomethane	74-83-9	E611D	0.5	µg/L	<0.50	----
Carbon disulfide	75-15-0	E611D	1	µg/L	<1.0	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	<0.20	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	<0.50	----
Chloroethane	75-00-3	E611D	0.5	µg/L	<0.50	----
Chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----
Chloromethane	74-87-3	E611D	2	µg/L	<2.0	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	<0.50	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	<0.20	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	<0.50	----
Dichloromethane	75-09-2	E611D	1	µg/L	<1.0	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	<0.50	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	<0.30	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	<0.50	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 2204336) - continued						
Hexanone, 2-	591-78-6	E611D	20	µg/L	<20	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	<0.50	----
Styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----
Toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	<0.50	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	<0.50	----
Vinyl chloride	75-01-4	E611D	0.2	µg/L	<0.20	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----
Hydrocarbons (QCLot: 2204337)						
F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	----
Hydrocarbons (QCLot: 2206866)						
F2 (C10-C16)	----	E601	100	µg/L	<100	----
F3 (C16-C34)	----	E601	250	µg/L	<250	----
F4 (C34-C50)	----	E601	250	µg/L	<250	----
Polycyclic Aromatic Hydrocarbons (QCLot: 2206867)						
Acenaphthene	83-32-9	E641A-L	0.01	µg/L	<0.010	----
Acenaphthylene	208-96-8	E641A-L	0.01	µg/L	<0.010	----
Acridine	260-94-6	E641A-L	0.01	µg/L	<0.010	----
Anthracene	120-12-7	E641A-L	0.01	µg/L	<0.010	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	µg/L	<0.010	----
Benzo(a)pyrene	50-32-8	E641A-L	0.005	µg/L	<0.0050	----
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	µg/L	<0.010	----
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	µg/L	<0.010	----
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	µg/L	<0.010	----
Chrysene	218-01-9	E641A-L	0.01	µg/L	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	µg/L	<0.0050	----
Fluoranthene	206-44-0	E641A-L	0.01	µg/L	<0.010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 2206867) - continued						
Fluorene	86-73-7	E641A-L	0.01	µg/L	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	µg/L	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	µg/L	<0.010	----
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	µg/L	<0.010	----
Naphthalene	91-20-3	E641A-L	0.01	µg/L	<0.010	----
Perylene	198-55-0	E641A-L	0.01	µg/L	<0.010	----
Phenanthrene	85-01-8	E641A-L	0.01	µg/L	<0.010	----
Pyrene	129-00-0	E641A-L	0.01	µg/L	<0.010	----
Quinoline	91-22-5	E641A-L	0.01	µg/L	<0.010	----

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
Physical Tests (QCLot: 2186924)									
pH	----	E108	----	pH units	7 pH units	100	98.0	102	----
Physical Tests (QCLot: 2186931)									
Turbidity	----	E121	0.1	NTU	200 NTU	100	85.0	115	----
Physical Tests (QCLot: 2186948)									
Solids, total suspended [TSS]	----	E160-L	1	mg/L	250 mg/L	99.0	85.0	115	----
Physical Tests (QCLot: 2186985)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	850 mg/L	98.8	85.0	115	----
Physical Tests (QCLot: 2199568)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	150 mg/L	102	85.0	115	----
Physical Tests (QCLot: 2199569)									
Conductivity	----	E100	1	µS/cm	1410 µS/cm	99.0	90.0	110	----
Anions and Nutrients (QCLot: 2199570)									
Bromide	24959-67-9	E235.Br	0.1	mg/L	0.5 mg/L	97.2	85.0	115	----
Anions and Nutrients (QCLot: 2199571)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 2199572)									
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	2.5 mg/L	98.8	90.0	110	----
Anions and Nutrients (QCLot: 2199573)									
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	0.5 mg/L	94.8	90.0	110	----
Anions and Nutrients (QCLot: 2199574)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	99.1	90.0	110	----
Anions and Nutrients (QCLot: 2199575)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 2203754)									
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	4 mg/L	103	75.0	125	----
Anions and Nutrients (QCLot: 2203756)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.333 mg/L	103	80.0	120	----
Anions and Nutrients (QCLot: 2203757)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	101	85.0	115	----
Anions and Nutrients (QCLot: 2211040)									
Phosphorus, total dissolved	7723-14-0	E375-T	0.002	mg/L	0.333 mg/L	97.2	80.0	120	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Organic / Inorganic Carbon (QCLot: 2200025)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	99.6	80.0	120	----
Dissolved Metals (QCLot: 2201261)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	0.1 mg/L	103	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	0.05 mg/L	103	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	0.05 mg/L	104	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.012 mg/L	110	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.005 mg/L	101	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	0.05 mg/L	102	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	0.05 mg/L	99.2	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.005 mg/L	104	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	2.5 mg/L	98.0	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.002 mg/L	98.0	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.012 mg/L	99.8	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.012 mg/L	95.6	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.012 mg/L	96.9	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	0.05 mg/L	97.2	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.025 mg/L	104	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.012 mg/L	106	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	2.5 mg/L	109	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.012 mg/L	99.9	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.012 mg/L	102	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.025 mg/L	97.6	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	0.5 mg/L	98.5	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	2.5 mg/L	98.6	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.005 mg/L	104	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	0.05 mg/L	99.1	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	0.5 mg/L	100.0	60.0	140	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.005 mg/L	102	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	2.5 mg/L	99.6	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.012 mg/L	105	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	2.5 mg/L	99.5	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.005 mg/L	101	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	0.05 mg/L	103	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.005 mg/L	102	80.0	120	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 2201261) - continued									
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.025 mg/L	105	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.012 mg/L	95.3	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.005 mg/L	101	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0 mg/L	100	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.025 mg/L	101	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.025 mg/L	101	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.005 mg/L	93.6	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	99.3	80.0	120	----
Volatile Organic Compounds (QCLot: 2204336)									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	99.8	70.0	130	----
Benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
Bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	109	70.0	130	----
Bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	85.0	60.0	140	----
Carbon disulfide	75-15-0	E611D	1	µg/L	100 µg/L	101	70.0	130	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	100	70.0	130	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
Chloroethane	75-00-3	E611D	0.5	µg/L	100 µg/L	103	60.0	140	----
Chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Chloromethane	74-87-3	E611D	2	µg/L	100 µg/L	107	60.0	140	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	110	70.0	130	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	96.1	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	102	60.0	140	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	99.8	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	95.6	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	106	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	99.0	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	87.9	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	85.4	70.0	130	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report: Spike: Target Concentration	Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High	Qualifier
Volatile Organic Compounds (QCLot: 2204336) - continued									
Ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	109	70.0	130	----
Hexanone, 2-	591-78-6	E611D	20	µg/L	100 µg/L	81.4	70.0	130	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	87.7	70.0	130	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	80.1	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	97.8	70.0	130	----
Styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	96.3	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	100	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	107	70.0	130	----
Toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	93.1	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	97.3	70.0	130	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	107	70.0	130	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	100	60.0	140	----
Vinyl chloride	75-01-4	E611D	0.2	µg/L	100 µg/L	96.7	60.0	140	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	97.7	70.0	130	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	101	70.0	130	----
Hydrocarbons (QCLot: 2204337)									
F1 (C6-C10)	----	E581.F1-L	25	µg/L	2000 µg/L	94.7	80.0	120	----
Hydrocarbons (QCLot: 2206866)									
F2 (C10-C16)	----	E601	100	µg/L	3770 µg/L	95.2	70.0	130	----
F3 (C16-C34)	----	E601	250	µg/L	7760 µg/L	104	70.0	130	----
F4 (C34-C50)	----	E601	250	µg/L	4200 µg/L	107	70.0	130	----
Polycyclic Aromatic Hydrocarbons (QCLot: 2206867)									
Acenaphthene	83-32-9	E641A-L	0.01	µg/L	0.526 µg/L	107	50.0	140	----
Acenaphthylene	208-96-8	E641A-L	0.01	µg/L	0.526 µg/L	98.0	50.0	140	----
Acridine	260-94-6	E641A-L	0.01	µg/L	0.526 µg/L	119	50.0	140	----
Anthracene	120-12-7	E641A-L	0.01	µg/L	0.526 µg/L	91.8	50.0	140	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	µg/L	0.526 µg/L	107	50.0	140	----
Benzo(a)pyrene	50-32-8	E641A-L	0.005	µg/L	0.526 µg/L	93.4	50.0	140	----
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	µg/L	0.526 µg/L	84.7	50.0	140	----
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	µg/L	0.526 µg/L	123	50.0	140	----
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	µg/L	0.526 µg/L	102	50.0	140	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 2206867) - continued									
Chrysene	218-01-9	E641A-L	0.01	µg/L	0.526 µg/L	124	50.0	140	----
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	µg/L	0.526 µg/L	114	50.0	140	----
Fluoranthene	206-44-0	E641A-L	0.01	µg/L	0.526 µg/L	110	50.0	140	----
Fluorene	86-73-7	E641A-L	0.01	µg/L	0.526 µg/L	106	50.0	140	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	µg/L	0.526 µg/L	108	50.0	140	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	µg/L	0.526 µg/L	104	50.0	140	----
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	µg/L	0.526 µg/L	109	50.0	140	----
Naphthalene	91-20-3	E641A-L	0.01	µg/L	0.526 µg/L	105	50.0	140	----
Perylene	198-55-0	E641A-L	0.01	µg/L	0.526 µg/L	103	50.0	140	----
Phenanthrene	85-01-8	E641A-L	0.01	µg/L	0.526 µg/L	111	50.0	140	----
Pyrene	129-00-0	E641A-L	0.01	µg/L	0.526 µg/L	111	50.0	140	----
Quinoline	91-22-5	E641A-L	0.01	µg/L	0.526 µg/L	110	50.0	140	----

Matrix Spike (MS) Report

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

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 2199570)										
BF2500299-001	Anonymous	Bromide	24959-67-9	E235.Br	0.46 mg/L	0.5 mg/L	91.3	75.0	125	----
Anions and Nutrients (QCLot: 2199571)										
BF2500299-001	Anonymous	Fluoride	16984-48-8	E235.F	0.901 mg/L	1 mg/L	90.1	75.0	125	----
Anions and Nutrients (QCLot: 2199572)										
BF2500299-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	2.40 mg/L	2.5 mg/L	96.1	75.0	125	----
Anions and Nutrients (QCLot: 2199573)										
BF2500299-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.466 mg/L	0.5 mg/L	93.3	75.0	125	----
Anions and Nutrients (QCLot: 2199574)										
BF2500299-001	Anonymous	Chloride	16887-00-6	E235.Cl	97.0 mg/L	100 mg/L	97.0	75.0	125	----
Anions and Nutrients (QCLot: 2199575)										
BF2500299-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	96.4 mg/L	100 mg/L	96.4	75.0	125	----
Anions and Nutrients (QCLot: 2203756)										
BF2500299-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.100 mg/L	0.1 mg/L	100	70.0	130	----
Anions and Nutrients (QCLot: 2203757)										
BF2500299-002	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.107 mg/L	0.1 mg/L	107	75.0	125	----
Anions and Nutrients (QCLot: 2211040)										
BF2500300-001	MS-LF-GW3_2025-08-27	Phosphorus, total dissolved	7723-14-0	E375-T	0.0973 mg/L	0.1 mg/L	97.3	70.0	130	----
Organic / Inorganic Carbon (QCLot: 2200025)										
BF2500300-001	MS-LF-GW3_2025-08-27	Carbon, dissolved organic [DOC]	----	E358-L	5.04 mg/L	5 mg/L	101	70.0	130	----
Dissolved Metals (QCLot: 2201261)										
BF2500299-002	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.105 mg/L	0.1 mg/L	105	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0534 mg/L	0.05 mg/L	107	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0557 mg/L	0.05 mg/L	111	70.0	130	----
		Barium, dissolved	7440-39-3	E421	ND mg/L	----	ND	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.00511 mg/L	0.005 mg/L	102	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.0461 mg/L	0.05 mg/L	92.2	70.0	130	----
		Boron, dissolved	7440-42-8	E421	ND mg/L	----	ND	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00536 mg/L	0.005 mg/L	107	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.00253 mg/L	0.002 mg/L	101	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0124 mg/L	0.012 mg/L	98.9	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0117 mg/L	0.012 mg/L	93.8	70.0	130	----
		Copper, dissolved	7440-50-8	E421	0.0116 mg/L	0.012 mg/L	93.1	70.0	130	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 2201261) - continued										
BF2500299-002	Anonymous	Iron, dissolved	7439-89-6	E421	0.047 mg/L	0.05 mg/L	94.7	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0247 mg/L	0.025 mg/L	98.8	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	ND mg/L	----	ND	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	ND mg/L	----	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	0.0120 mg/L	0.012 mg/L	96.0	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.0130 mg/L	0.012 mg/L	104	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0228 mg/L	0.025 mg/L	91.3	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	0.538 mg/L	0.5 mg/L	108	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	ND mg/L	----	ND	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	ND mg/L	----	ND	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0557 mg/L	0.05 mg/L	111	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	ND mg/L	----	ND	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00429 mg/L	0.005 mg/L	85.9	70.0	130	----
		Sodium, dissolved	7440-23-5	E421	ND mg/L	----	ND	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	ND mg/L	----	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	ND mg/L	----	ND	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.00538 mg/L	0.005 mg/L	108	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.0497 mg/L	0.05 mg/L	99.4	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.00497 mg/L	0.005 mg/L	99.4	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0265 mg/L	0.025 mg/L	106	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0124 mg/L	0.012 mg/L	99.0	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.00505 mg/L	0.005 mg/L	101	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	ND mg/L	----	ND	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.0257 mg/L	0.025 mg/L	103	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.0249 mg/L	0.025 mg/L	99.7	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.00488 mg/L	0.005 mg/L	97.6	70.0	130	----
Dissolved Metals (QCLot: 2207226)										
BF2500287-002	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000932 mg/L	0 mg/L	93.2	70.0	130	----
Volatile Organic Compounds (QCLot: 2204336)										
BF2500299-001	Anonymous	Acetone	67-64-1	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		Benzene	71-43-2	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		Bromodichloromethane	75-27-4	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		Bromoform	75-25-2	E611D	107 µg/L	100 µg/L	107	60.0	140	----
		Bromomethane	74-83-9	E611D	80.9 µg/L	100 µg/L	80.9	60.0	140	----
		Carbon disulfide	75-15-0	E611D	94.8 µg/L	100 µg/L	94.8	60.0	140	----
		Carbon tetrachloride	56-23-5	E611D	97.1 µg/L	100 µg/L	97.1	60.0	140	----
		Chlorobenzene	108-90-7	E611D	98.8 µg/L	100 µg/L	98.8	60.0	140	----
		Chloroethane	75-00-3	E611D	97.5 µg/L	100 µg/L	97.5	60.0	140	----
		Chloroform	67-66-3	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		Chloromethane	74-87-3	E611D	96.3 µg/L	100 µg/L	96.3	60.0	140	----
		Dibromochloromethane	124-48-1	E611D	109 µg/L	100 µg/L	109	60.0	140	----
		Dibromoethane, 1,2-	106-93-4	E611D	96.5 µg/L	100 µg/L	96.5	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	102 µg/L	100 µg/L	102	60.0	140	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 2204336) - continued										
BF2500299-001	Anonymous	Dichlorobenzene, 1,3-	541-73-1	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	98.4 µg/L	100 µg/L	98.4	60.0	140	----
		Dichlorodifluoromethane	75-71-8	E611D	84.4 µg/L	100 µg/L	84.4	60.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611D	98.6 µg/L	100 µg/L	98.6	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611D	97.1 µg/L	100 µg/L	97.1	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611D	97.1 µg/L	100 µg/L	97.1	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	99.6 µg/L	100 µg/L	99.6	60.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		Dichloromethane	75-09-2	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611D	99.4 µg/L	100 µg/L	99.4	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	90.1 µg/L	100 µg/L	90.1	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	86.3 µg/L	100 µg/L	86.3	60.0	140	----
		Ethylbenzene	100-41-4	E611D	97.6 µg/L	100 µg/L	97.6	60.0	140	----
		Hexane, n-	110-54-3	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		Hexanone, 2-	591-78-6	E611D	89 µg/L	100 µg/L	89.4	60.0	140	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	98 µg/L	100 µg/L	98.4	60.0	140	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	87 µg/L	100 µg/L	87.1	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	96.2 µg/L	100 µg/L	96.2	60.0	140	----
		Styrene	100-42-5	E611D	94.6 µg/L	100 µg/L	94.6	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	98.7 µg/L	100 µg/L	98.7	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		Tetrachloroethylene	127-18-4	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		Toluene	108-88-3	E611D	99.1 µg/L	100 µg/L	99.1	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	90.4 µg/L	100 µg/L	90.4	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	96.9 µg/L	100 µg/L	96.9	60.0	140	----
		Trichloroethylene	79-01-6	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611D	93.2 µg/L	100 µg/L	93.2	60.0	140	----
		Vinyl chloride	75-01-4	E611D	87.3 µg/L	100 µg/L	87.3	60.0	140	----
		Xylene, m+p-	179601-23-1	E611D	188 µg/L	200 µg/L	93.9	60.0	140	----
		Xylene, o-	95-47-6	E611D	98.1 µg/L	100 µg/L	98.1	60.0	140	----
Hydrocarbons (QCLot: 2204337)										
BF2500299-001	Anonymous	F1 (C6-C10)	----	E581.F1-L	1640 µg/L	2000 µg/L	81.8	60.0	140	----

Chain of Custody: 25 08 27_MS_Landfill_GW2

Client Info	Project Info	Laboratory Info	
Baffinland Iron Mine Corporation 2275 Upper Middle Rd E, Suite 300 Oakville, ON, L6H 0C3 **Phone:** 647-253-0596 x6016/6039/4131 **Email:** environment.coordinators@baffinland.com; environment.superintendents@baffinland.com	**Job Reference (Project):** MS_Landfill_GW2 **Task:** , Groundwater_MS_250827 **Site:** MS	**Lab Name:** ALS Waterloo **Contact:** Rick Hawthorne **Phone:** 519.886.6910 **Email:** Rick.Hawthorne@ALSGlobal.com	**Address:** Unit 1 - 60 Northland Road Waterloo, ON,N2V 2B8
Email Invoice: ap@baffinland.com; environment.superintendents@baffinland.com **Email EDD:** bim.equissa@baffinland.com **Email COA:** environment.labresults@baffinland.com	**Turn around Time:** Routine (R) **Sampler 1:** LG **Sampler 2:** JJ **Sampler 3:**	**ALS Quote #:** WT2020BIMC1000001 **ALS PO #:** 4500156571	**Lab Work Order #** (lab use only):

Sample Details				Field Data			Analysis Requested											
Sample ID (sys_sample_code)	**Location (sys_loc_code)**	**Sample Date and Time**	**Matrix**	**pH, Field (pH units)**	**Temperature, Field (deg C)**	**Total # of Containers**	**ALS_GW_Landfill**											
MS-LF-GW3_2025-08-27	**MS-LF-GW3**	**8/27/2025 2:35:00 PM**	**WG**	**7.19**	**2.2**	**10**	**X**											

Relinquished by:	Bradley Rasmussen	**Date:**	
Additional Comments			
Initial Shipment Reception (lab use only)		**Final Shipment Reception** (lab use only)	
Received by:		**Received by:**	
Date/Time:		**Date/Time:**	

Baffinland

Chain of Custody: 25 08 27_MS_Landfill_GW2

Client Info	Project Info	Laboratory Info	
Baffinland Iron Mine Corporation 2275 Upper Middle Rd E, Suite 300 Oakville, ON, L6H 0C3 **Phone:** 647-253-0596 x6016/6039/4131 **Email:** environment.coordinators@baffinland.com; environment.superintendents@baffinland.com	**Job Reference (Project):** MS_Landfill_GW2 **Task:** , Groundwater_MS_250827 **Site:** MS	**Lab Name:** ALS Waterloo **Contact:** Rick Hawthorne **Phone:** 519.886.6910 **Email:** Rick.Hawthorne@ALSGlobal.com	**Address:** Unit 1 - 60 Northland Road Waterloo, ON,N2V 2B8
Email Invoice: ap@baffinland.com; environment.superintendents@baffinland.com **Email EDD:** bim.equissa@baffinland.com **Email COA:** environment.labresults@baffinland.com	**Turn around Time:** Routine (R) **Sampler 1:** LG **Sampler 2:** JJ **Sampler 3:**	**ALS Quote #:** WT2020BIMC1000001 **ALS PO #:** 4500156571	

Environmental Division
Baffin Island
Work Order Reference
BF2500300

Telephone

Sample Details				Field Data														
Sample ID (sys_sample_code)	Location (sys_loc_code)	Sample Date and Time	Matrix	pH, Field (pH units)	Temperature, Field (deg C)	Total # of Containers	ALS_GW_Landfill											
MS-LF-GW3_2025-08-27	MS-LF-GW3	8/27/2025 2:35:00 PM	WG	7.19	2.2	10	X											

Relinquished by:	Bradley Rasmussen	**Date:**	
Additional Comments			
Initial Shipment Reception (lab use only)		**Final Shipment Reception** (lab use only)	
Received by:		**Received by:**	
Date/Time:		**Date/Time:**	4-Sept-25 9:00

17.6°C

MM-428
GL-742
W-181
OR 027
UW.003

CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	:	**BF2500303**			
Client	:	**Baffinland Iron Mines Corporation**	Laboratory	:	ALS Environmental - Baffin Island
Contact	:	Environmental Lab Results	Account Manager	:	Rick Hawthorne
Address	:	360 Oakville Place Dr Suite 300 Oakville Ontario Canada L6H 6K8	Address	:	Mary River, Qikqtani Region Baffin Island NU Canada
Telephone	:	----	Telephone	:	
Project	:	MS_Landfill_Groundwater	Date Samples Received	:	29-Aug-2025 07:38
PO	:	4500156571	Date Analysis Commenced	:	29-Aug-2025
C-O-C number	:	25 08 28_MS_Landfill_GW1	Issue Date	:	11-Sep-2025 09:42
Sampler	:	JJ, LG			
Site	:	----			
Quote number	:	2024-2025 Scope of Work			
No. of samples received	:	2			
No. of samples analysed	:	2			

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
- Guideline Comparison

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*
Amaninder Dhillon		Organics, Waterloo, Ontario
Andrea Armstrong		VOC, Waterloo, Ontario
Cedrick Velasco		Inorganics, Baffin Island, Nunavut
Danielle Gravel		Organics, Waterloo, Ontario
Jeremy Gingras		Organics, Waterloo, Ontario
Nik Perkio		Inorganics, Waterloo, Ontario
Nik Perkio		Centralized Prep, Waterloo, Ontario
Nik Perkio		Metals, Waterloo, Ontario
Walt Kippenhuck		Inorganics, Waterloo, Ontario
Walt Kippenhuck		Metals, Waterloo, Ontario
Walt Kippenhuck		Centralized Prep, Waterloo, Ontario

No Breaches Found

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.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key: LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units
µg/L	micrograms per litre
µS/cm	microsiemens per centimetre

>: greater than.
<: less than.

Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).
For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit.

Workorder Comments

E641 BF2500303-001 RRR: Detection limit raised due to high analyte recovery in the method blank.

Qualifiers

Qualifier	Description
DLDS	Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity.
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
RRR	Refer to report comments for issues regarding this analysis.

Analytical Results Evaluation

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-13_2025-08-28 ----	MS-LF-GW1_2025-08-28 ----	----	----	----	----	----
				Client sampling date / time	28-Aug-2025 12:05	28-Aug-2025 14:00	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
					BF2500303-001	BF2500303-002	----	----	----	----	----
					Result	Result	----	----	----	----	----
Sample Preparation											
Dissolved carbon filtration location	----	EP358/WT	-		field	field	----	----	----	----	----
Physical Tests											
Conductivity	----	E100/WT	µS/cm		418	1880	----	----	----	----	----
pH	----	E108/BF	pH units		7.57	7.03	----	----	----	----	----
Solids, total dissolved [TDS]	----	E162/BF	mg/L		240	1500	----	----	----	----	----
Solids, total suspended [TSS]	----	E160-L/BF	mg/L		1.9	5.7	----	----	----	----	----
Turbidity	----	E121/BF	NTU		1.98	3.00	----	----	----	----	----
Alkalinity, total (as CaCO3)	----	E290/WT	mg/L		194	288	----	----	----	----	----
Anions and Nutrients											
Ammonia, total (as N)	7664-41-7	E298/WT	mg/L		0.0139	1.48	----	----	----	----	----
Bromide	24959-67-9	E235.Br/WT	mg/L		<0.10	<0.50 DLDS	----	----	----	----	----
Chloride	16887-00-6	E235.Cl/WT	mg/L		5.53	68.8 DLDS	----	----	----	----	----
Fluoride	16984-48-8	E235.F/WT	mg/L		0.173	<0.100 DLDS	----	----	----	----	----
Kjeldahl nitrogen, total [TKN]	----	E318/WT	mg/L		0.162	2.17	----	----	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3/WT	mg/L		0.560	<0.100 DLDS	----	----	----	----	----
Nitrite (as N)	14797-65-0	E235.NO2/WT	mg/L		<0.010	<0.050 DLDS	----	----	----	----	----
Phosphorus, total	7723-14-0	E372-U/WT	mg/L		0.0050	0.0490	----	----	----	----	----
Phosphorus, total dissolved	7723-14-0	E375-T/WT	mg/L		0.0032	0.0469	----	----	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	mg/L		16.8	703 DLDS	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-13_2025-08-28 ----	MS-LF-GW1_2025-08-28 ----	----	----	----	----	----
				Client sampling date / time	28-Aug-2025 12:05	28-Aug-2025 14:00	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
					BF2500303-001	**BF2500303-002**	----	----	----	----	----
					Result	Result	----	----	----	----	----
Organic / Inorganic Carbon											
Carbon, dissolved organic [DOC]	----	E358-L/WT	mg/L		2.65	8.04	----	----	----	----	----
Dissolved Metals											
Aluminum, dissolved	7429-90-5	E421/WT	mg/L		0.0061	<0.0100 DLHC	----	----	----	----	----
Antimony, dissolved	7440-36-0	E421/WT	mg/L		<0.00010	<0.00100 DLHC	----	----	----	----	----
Arsenic, dissolved	7440-38-2	E421/WT	mg/L		0.00050	<0.00100 DLHC	----	----	----	----	----
Barium, dissolved	7440-39-3	E421/WT	mg/L		0.0266	0.0512 DLHC	----	----	----	----	----
Beryllium, dissolved	7440-41-7	E421/WT	mg/L		<0.000020	<0.000200 DLHC	----	----	----	----	----
Bismuth, dissolved	7440-69-9	E421/WT	mg/L		<0.000050	<0.000500 DLHC	----	----	----	----	----
Boron, dissolved	7440-42-8	E421/WT	mg/L		0.020	1.22 DLHC	----	----	----	----	----
Cadmium, dissolved	7440-43-9	E421/WT	mg/L		<0.0000050	0.000135 DLHC	----	----	----	----	----
Calcium, dissolved	7440-70-2	E421/WT	mg/L		43.1	348 DLHC	----	----	----	----	----
Cesium, dissolved	7440-46-2	E421/WT	mg/L		<0.000010	<0.000100 DLHC	----	----	----	----	----
Chromium, dissolved	7440-47-3	E421/WT	mg/L		<0.00050	<0.00500 DLHC	----	----	----	----	----
Cobalt, dissolved	7440-48-4	E421/WT	mg/L		0.00046	0.00404 DLHC	----	----	----	----	----
Copper, dissolved	7440-50-8	E421/WT	mg/L		0.00160	<0.00200 DLHC	----	----	----	----	----
Iron, dissolved	7439-89-6	E421/WT	mg/L		<0.010	<0.100 DLHC	----	----	----	----	----
Lead, dissolved	7439-92-1	E421/WT	mg/L		<0.000050	<0.000500 DLHC	----	----	----	----	----
Lithium, dissolved	7439-93-2	E421/WT	mg/L		0.0023	0.0714 DLHC	----	----	----	----	----
Magnesium, dissolved	7439-95-4	E421/WT	mg/L		22.9	32.7 DLHC	----	----	----	----	----
Manganese, dissolved	7439-96-5	E421/WT	mg/L		0.195	0.997 DLHC	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-13_2025-08-28 ----	MS-LF-GW1_2025-08-28 ----	----	----	----	----	----
				Client sampling date / time	28-Aug-2025 12:05	28-Aug-2025 14:00	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
					BF2500303-001	BF2500303-002	----	----	----	----	----
					Result	Result	----	----	----	----	----
Dissolved Metals											
Mercury, dissolved	7439-97-6	E509/WT	mg/L	<0.0000050	<0.0000050		----	----	----	----	----
Molybdenum, dissolved	7439-98-7	E421/WT	mg/L	0.00326	0.00397 DLHC		----	----	----	----	----
Nickel, dissolved	7440-02-0	E421/WT	mg/L	0.00366	0.0855 DLHC		----	----	----	----	----
Phosphorus, dissolved	7723-14-0	E421/WT	mg/L	<0.050	<0.500 DLHC		----	----	----	----	----
Potassium, dissolved	7440-09-7	E421/WT	mg/L	2.50	16.9 DLHC		----	----	----	----	----
Rubidium, dissolved	7440-17-7	E421/WT	mg/L	0.00534	0.00756 DLHC		----	----	----	----	----
Selenium, dissolved	7782-49-2	E421/WT	mg/L	<0.000050	<0.000500 DLHC		----	----	----	----	----
Silicon, dissolved	7440-21-3	E421/WT	mg/L	2.15	5.46 DLHC		----	----	----	----	----
Silver, dissolved	7440-22-4	E421/WT	mg/L	<0.000010	<0.000100 DLHC		----	----	----	----	----
Sodium, dissolved	7440-23-5	E421/WT	mg/L	8.90	33.9 DLHC		----	----	----	----	----
Strontium, dissolved	7440-24-6	E421/WT	mg/L	0.0324	1.15 DLHC		----	----	----	----	----
Sulfur, dissolved	7704-34-9	E421/WT	mg/L	6.50	246 DLHC		----	----	----	----	----
Tellurium, dissolved	13494-80-9	E421/WT	mg/L	<0.00020	<0.00200 DLHC		----	----	----	----	----
Thallium, dissolved	7440-28-0	E421/WT	mg/L	0.000018	0.000128 DLHC		----	----	----	----	----
Thorium, dissolved	7440-29-1	E421/WT	mg/L	<0.00010	<0.00100 DLHC		----	----	----	----	----
Tin, dissolved	7440-31-5	E421/WT	mg/L	<0.00010	<0.00100 DLHC		----	----	----	----	----
Titanium, dissolved	7440-32-6	E421/WT	mg/L	<0.00030	<0.00300 DLHC		----	----	----	----	----
Tungsten, dissolved	7440-33-7	E421/WT	mg/L	<0.00010	<0.00100 DLHC		----	----	----	----	----
Uranium, dissolved	7440-61-1	E421/WT	mg/L	0.00446	0.0222 DLHC		----	----	----	----	----
Vanadium, dissolved	7440-62-2	E421/WT	mg/L	<0.00050	<0.00500 DLHC		----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-13_2025-08-28 ----	MS-LF-GW1_2025-08-28 ----	----	----	----	----	----
				Client sampling date / time	28-Aug-2025 12:05	28-Aug-2025 14:00	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
					BF2500303-001	BF2500303-002	----	----	----	----	----
					Result	Result	----	----	----	----	----
Dissolved Metals											
Zinc, dissolved	7440-66-6	E421/WT	mg/L		<0.0010	<0.0100 DLHC	----	----	----	----	----
Zirconium, dissolved	7440-67-7	E421/WT	mg/L		<0.00030	<0.00300 DLHC	----	----	----	----	----
Dissolved mercury filtration location	----	EP509/WT	-		Field	Field	----	----	----	----	----
Dissolved metals filtration location	----	EP421/WT	-		Field	Field	----	----	----	----	----
Volatile Organic Compounds											
Acetone	67-64-1	E611D/WT	µg/L		<20	<20	----	----	----	----	----
Benzene	71-43-2	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Bromodichloromethane	75-27-4	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Bromoform	75-25-2	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Bromomethane	74-83-9	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
BTEX, total	----	E611D/WT	µg/L		<1.0	<1.0	----	----	----	----	----
Carbon disulfide	75-15-0	E611D/WT	µg/L		<1.0	<1.0	----	----	----	----	----
Carbon tetrachloride	56-23-5	E611D/WT	µg/L		<0.20	<0.20	----	----	----	----	----
Chlorobenzene	108-90-7	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Chloroethane	75-00-3	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Chloroform	67-66-3	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Chloromethane	74-87-3	E611D/WT	µg/L		<2.0	<2.0	----	----	----	----	----
Dibromochloromethane	124-48-1	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Dibromoethane, 1,2-	106-93-4	E611D/WT	µg/L		<0.20	<0.20	----	----	----	----	----
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-13_2025-08-28 ----	MS-LF-GW1_2025-08-28 ----	----	----	----	----	----
				Client sampling date / time	28-Aug-2025 12:05	28-Aug-2025 14:00	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
					BF2500303-001	BF2500303-002	----	----	----	----	----
					Result	Result	----	----	----	----	----
Volatile Organic Compounds											
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----
Dichlorodifluoromethane	75-71-8	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----
Dichloroethane, 1,1-	75-34-3	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----
Dichloroethane, 1,2-	107-06-2	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----
Dichloroethylene, 1,1-	75-35-4	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	µg/L	0.94	1.03	----	----	----	----	----
Dichloroethylene, cis+trans-1,2-	540-59-0	E611D/WT	µg/L	0.94	1.03	----	----	----	----	----
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----
Dichloromethane	75-09-2	E611D/WT	µg/L	<1.0	<1.0	----	----	----	----	----
Dichloropropane, 1,2-	78-87-5	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	µg/L	<0.30	<0.30	----	----	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	µg/L	<0.5	<0.5	----	----	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	µg/L	<0.30	<0.30	----	----	----	----	----
Ethylbenzene	100-41-4	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----
Hexane, n-	110-54-3	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----
Hexanone, 2-	591-78-6	E611D/WT	µg/L	<20	<20	----	----	----	----	----
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	µg/L	<20	<20	----	----	----	----	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	µg/L	<20	<20	----	----	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-13_2025-08-28 ----	MS-LF-GW1_2025-08-28 ----	----	----	----	----	----
				Client sampling date / time	28-Aug-2025 12:05	28-Aug-2025 14:00	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
					BF2500303-001	BF2500303-002	----	----	----	----	----
					Result	Result	----	----	----	----	----
Volatile Organic Compounds											
Styrene	100-42-5	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Tetrachloroethylene	127-18-4	E611D/WT	µg/L		<0.50	12.0	----	----	----	----	----
Toluene	108-88-3	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Trichloroethylene	79-01-6	E611D/WT	µg/L		<0.50	9.74	----	----	----	----	----
Trichlorofluoromethane	75-69-4	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Trihalomethanes [THMs], total	----	E611D/WT	µg/L		<1.0	<1.0	----	----	----	----	----
Vinyl chloride	75-01-4	E611D/WT	µg/L		<0.20	<0.20	----	----	----	----	----
Xylene, m+p-	179601-23-1	E611D/WT	µg/L		<0.40	<0.40	----	----	----	----	----
Xylene, o-	95-47-6	E611D/WT	µg/L		<0.30	<0.30	----	----	----	----	----
Xylenes, total	1330-20-7	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Hydrocarbons											
F1 (C6-C10)	----	E581.F1-L/WT	µg/L		<25	<25	----	----	----	----	----
F2 (C10-C16)	----	E601/WT	µg/L		<100	<100	----	----	----	----	----
F3 (C16-C34)	----	E601/WT	µg/L		<250	<250	----	----	----	----	----
F4 (C34-C50)	----	E601/WT	µg/L		<250	<250	----	----	----	----	----
F1-BTEX	----	EC580/WT	µg/L		<25	<25	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-13_2025-08-28 ----	MS-LF-GW1_2025-08-28 ----	----	----	----	----	----
				Client sampling date / time	28-Aug-2025 12:05	28-Aug-2025 14:00	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
					BF2500303-001	BF2500303-002	----	----	----	----	----
					Result	Result	----	----	----	----	----
Hydrocarbons											
Hydrocarbons, total (C6-C50)	n/a	EC581/WT	µg/L		<370	<370	----	----	----	----	----
Hydrocarbons Surrogates											
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/WT	%		100	102	----	----	----	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.F1-L/WT	%		74.0	71.6	----	----	----	----	----
Volatile Organic Compounds Surrogates											
Bromofluorobenzene, 4-	460-00-4	E611D/WT	%		90.3	89.4	----	----	----	----	----
Difluorobenzene, 1,4-	540-36-3	E611D/WT	%		97.9	97.6	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons											
Acenaphthene	83-32-9	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Acenaphthylene	208-96-8	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Acridine	260-94-6	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Anthracene	120-12-7	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Benz(a)anthracene	56-55-3	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Benzo(a)pyrene	50-32-8	E641A-L/WT	µg/L		<0.0050	<0.0050	----	----	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Benzo(b+j+k)fluoranthene	n/a	E641A-L/WT	µg/L		<0.015	<0.015	----	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Benzo(k)fluoranthene	207-08-9	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Chrysene	218-01-9	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A-L/WT	µg/L		<0.0050	<0.0050	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP23-13_2025-08-28 ----	MS-LF-GW1_2025-08-28 ----	----	----	----	----	----
				Client sampling date / time	28-Aug-2025 12:05	28-Aug-2025 14:00	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
					BF2500303-001	BF2500303-002	----	----	----	----	----
					Result	Result	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons											
Fluoranthene	206-44-0	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Fluorene	86-73-7	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Methylnaphthalene, 1+2-	----	E641A-L/WT	µg/L		<0.015	<0.015	----	----	----	----	----
Methylnaphthalene, 2-	91-57-6	E641A-L/WT	µg/L		0.014	<0.010	----	----	----	----	----
Naphthalene	91-20-3	E641A-L/WT	µg/L		0.072	<0.028 DLM	----	----	----	----	----
Perylene	198-55-0	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Phenanthrene	85-01-8	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Pyrene	129-00-0	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Quinoline	91-22-5	E641A-L/WT	µg/L		<0.022 DLM, RRR	0.052	----	----	----	----	----
B(a)P total potency equivalents [B(a)P TPE]	----	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates											
Chrysene-d12	1719-03-5	E641A-L/WT	%		88.4	105	----	----	----	----	----
Naphthalene-d8	1146-65-2	E641A-L/WT	%		97.1	112	----	----	----	----	----
Phenanthrene-d10	1517-22-2	E641A-L/WT	%		94.0	111	----	----	----	----	----

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

Summary of Guideline Limits

Analyte	CAS Number	Unit	FEQG_BTEX	NWB_LFILL (Table 7 Effluent)					
Sample Preparation									
Dissolved carbon filtration location	----	-	----	----	----	----	----	----	----
Physical Tests									
Conductivity	----	µS/cm	----	----	----	----	----	----	----
pH	----	pH units	----	**6 - 9.5 pH units**	----	----	----	----	----
Solids, total dissolved [TDS]		mg/L	----	----	----	----	----	----	----
Solids, total suspended [TSS]		mg/L	----	**30 mg/L**	----	----	----	----	----
Turbidity	----	NTU	----	----	----	----	----	----	----
Alkalinity, total (as CaCO3)		mg/L	----	----	----	----	----	----	----
Anions and Nutrients									
Ammonia, total (as N)	7664-41-7	mg/L	----	----	----	----	----	----	----
Bromide	24959-67-9	mg/L	----	----	----	----	----	----	----
Chloride	16887-00-6	mg/L	----	----	----	----	----	----	----
Fluoride	16984-48-8	mg/L	----	----	----	----	----	----	----
Kjeldahl nitrogen, total [TKN]		mg/L	----	----	----	----	----	----	----
Nitrate (as N)	14797-55-8	mg/L	----	----	----	----	----	----	----
Nitrite (as N)	14797-65-0	mg/L	----	----	----	----	----	----	----
Phosphorus, total	7723-14-0	mg/L	----	----	----	----	----	----	----
Phosphorus, total dissolved	7723-14-0	mg/L	----	----	----	----	----	----	----
Sulfate (as SO4)	14808-79-8	mg/L	----	----	----	----	----	----	----
Organic / Inorganic Carbon									
Carbon, dissolved organic [DOC]		mg/L	----	----	----	----	----	----	----
Dissolved Metals									
Aluminum, dissolved	7429-90-5	mg/L	----	----	----	----	----	----	----

Antimony, dissolved	7440-36-0	mg/L	----	----	----	----	----	----	----
Arsenic, dissolved	7440-38-2	mg/L	----	----	----	----	----	----	----
Barium, dissolved	7440-39-3	mg/L	----	----	----	----	----	----	----
Beryllium, dissolved	7440-41-7	mg/L	----	----	----	----	----	----	----
Bismuth, dissolved	7440-69-9	mg/L	----	----	----	----	----	----	----
Boron, dissolved	7440-42-8	mg/L	----	----	----	----	----	----	----
Cadmium, dissolved	7440-43-9	mg/L	----	----	----	----	----	----	----
Calcium, dissolved	7440-70-2	mg/L	----	----	----	----	----	----	----
Cesium, dissolved	7440-46-2	mg/L	----	----	----	----	----	----	----
Chromium, dissolved	7440-47-3	mg/L	----	----	----	----	----	----	----
Cobalt, dissolved	7440-48-4	mg/L	----	----	----	----	----	----	----
Copper, dissolved	7440-50-8	mg/L	----	----	----	----	----	----	----
Iron, dissolved	7439-89-6	mg/L	----	----	----	----	----	----	----
Lead, dissolved	7439-92-1	mg/L	----	----	----	----	----	----	----
Lithium, dissolved	7439-93-2	mg/L	----	----	----	----	----	----	----
Magnesium, dissolved	7439-95-4	mg/L	----	----	----	----	----	----	----
Manganese, dissolved	7439-96-5	mg/L	----	----	----	----	----	----	----
Mercury, dissolved	7439-97-6	mg/L	----	----	----	----	----	----	----
Molybdenum, dissolved	7439-98-7	mg/L	----	----	----	----	----	----	----
Nickel, dissolved	7440-02-0	mg/L	----	----	----	----	----	----	----
Phosphorus, dissolved	7723-14-0	mg/L	----	----	----	----	----	----	----
Potassium, dissolved	7440-09-7	mg/L	----	----	----	----	----	----	----
Rubidium, dissolved	7440-17-7	mg/L	----	----	----	----	----	----	----
Selenium, dissolved	7782-49-2	mg/L	----	----	----	----	----	----	----
Silicon, dissolved	7440-21-3	mg/L	----	----	----	----	----	----	----
Silver, dissolved	7440-22-4	mg/L	----	----	----	----	----	----	----
Sodium, dissolved	7440-23-5	mg/L	----	----	----	----	----	----	----

Strontium, dissolved	7440-24-6	mg/L	----	----	----	----	----	----	----
Sulfur, dissolved	7704-34-9	mg/L	----	----	----	----	----	----	----
Tellurium, dissolved	13494-80-9	mg/L	----	----	----	----	----	----	----
Thallium, dissolved	7440-28-0	mg/L	----	----	----	----	----	----	----
Thorium, dissolved	7440-29-1	mg/L	----	----	----	----	----	----	----
Tin, dissolved	7440-31-5	mg/L	----	----	----	----	----	----	----
Titanium, dissolved	7440-32-6	mg/L	----	----	----	----	----	----	----
Tungsten, dissolved	7440-33-7	mg/L	----	----	----	----	----	----	----
Uranium, dissolved	7440-61-1	mg/L	----	----	----	----	----	----	----
Vanadium, dissolved	7440-62-2	mg/L	----	----	----	----	----	----	----
Zinc, dissolved	7440-66-6	mg/L	----	----	----	----	----	----	----
Zirconium, dissolved	7440-67-7	mg/L	----	----	----	----	----	----	----
Dissolved mercury filtration location	----	-	----	----	----	----	----	----	----
Dissolved metals filtration location	----	-	----	----	----	----	----	----	----
Volatile Organic Compounds									
Acetone	67-64-1	µg/L	----	----	----	----	----	----	----
Benzene	71-43-2	µg/L	**590 µg/L**	----	----	----	----	----	----
Bromodichloromethane	75-27-4	µg/L	----	----	----	----	----	----	----
Bromoform	75-25-2	µg/L	----	----	----	----	----	----	----
Bromomethane	74-83-9	µg/L	----	----	----	----	----	----	----
BTEX, total		µg/L	----	----	----	----	----	----	----
Carbon disulfide	75-15-0	µg/L	----	----	----	----	----	----	----
Carbon tetrachloride	56-23-5	µg/L	----	----	----	----	----	----	----
Chlorobenzene	108-90-7	µg/L	----	----	----	----	----	----	----
Chloroethane	75-00-3	µg/L	----	----	----	----	----	----	----
Chloroform	67-66-3	µg/L	----	----	----	----	----	----	----
Chloromethane	74-87-3	µg/L	----	----	----	----	----	----	----

Dibromochloromethane	124-48-1	µg/L	----	----	----	----	----	----	----	----
Dibromoethane, 1,2-	106-93-4	µg/L	----	----	----	----	----	----	----	----
Dichlorobenzene, 1,2-	95-50-1	µg/L	----	----	----	----	----	----	----	----
Dichlorobenzene, 1,3-	541-73-1	µg/L	----	----	----	----	----	----	----	----
Dichlorobenzene, 1,4-	106-46-7	µg/L	----	----	----	----	----	----	----	----
Dichlorodifluoromethane	75-71-8	µg/L	----	----	----	----	----	----	----	----
Dichloroethane, 1,1-	75-34-3	µg/L	----	----	----	----	----	----	----	----
Dichloroethane, 1,2-	107-06-2	µg/L	----	----	----	----	----	----	----	----
Dichloroethylene, 1,1-	75-35-4	µg/L	----	----	----	----	----	----	----	----
Dichloroethylene, cis-1,2-	156-59-2	µg/L	----	----	----	----	----	----	----	----
Dichloroethylene, cis+trans-1,2-	540-59-0	µg/L	----	----	----	----	----	----	----	----
Dichloroethylene, trans-1,2-	156-60-5	µg/L	----	----	----	----	----	----	----	----
Dichloromethane	75-09-2	µg/L	----	----	----	----	----	----	----	----
Dichloropropane, 1,2-	78-87-5	µg/L	----	----	----	----	----	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	µg/L	----	----	----	----	----	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	µg/L	----	----	----	----	----	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	µg/L	----	----	----	----	----	----	----	----
Ethylbenzene	100-41-4	µg/L	**70 µg/L**	----	----	----	----	----	----	----
Hexane, n-	110-54-3	µg/L	----	----	----	----	----	----	----	----
Hexanone, 2-	591-78-6	µg/L	----	----	----	----	----	----	----	----
Methyl ethyl ketone [MEK]	78-93-3	µg/L	----	----	----	----	----	----	----	----
Methyl isobutyl ketone [MIBK]	108-10-1	µg/L	----	----	----	----	----	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	µg/L	----	----	----	----	----	----	----	----
Styrene	100-42-5	µg/L	----	----	----	----	----	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	µg/L	----	----	----	----	----	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	µg/L	----	----	----	----	----	----	----	----
Tetrachloroethylene	127-18-4	µg/L	----	----	----	----	----	----	----	----

Toluene	108-88-3	µg/L	**30 µg/L**	----	----	----	----	----	----
Trichloroethane, 1,1,1-	71-55-6	µg/L	----	----	----	----	----	----	----
Trichloroethane, 1,1,2-	79-00-5	µg/L	----	----	----	----	----	----	----
Trichloroethylene	79-01-6	µg/L	----	----	----	----	----	----	----
Trichlorofluoromethane	75-69-4	µg/L	----	----	----	----	----	----	----
Trihalomethanes [THMs], total		µg/L	----	----	----	----	----	----	----
Vinyl chloride	75-01-4	µg/L	----	----	----	----	----	----	----
Xylene, m+p-	179601-23-1	µg/L	**70 µg/L**	----	----	----	----	----	----
Xylene, o-	95-47-6	µg/L	**70 µg/L**	----	----	----	----	----	----
Xylenes, total	1330-20-7	µg/L	**70 µg/L**	----	----	----	----	----	----
Hydrocarbons									
F1 (C6-C10)		µg/L	----	----	----	----	----	----	----
F2 (C10-C16)	----	µg/L	----	----	----	----	----	----	----
F3 (C16-C34)	----	µg/L	----	----	----	----	----	----	----
F4 (C34-C50)	----	µg/L	----	----	----	----	----	----	----
F1-BTEX		µg/L	----	----	----	----	----	----	----
Hydrocarbons, total (C6-C50)	n/a	µg/L	----	----	----	----	----	----	----
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	%	----	----	----	----	----	----	----
Bromofluorobenzene, 4-	460-00-4	%	----	----	----	----	----	----	----
Dichlorotoluene, 3,4-	95-75-0	%	----	----	----	----	----	----	----
Difluorobenzene, 1,4-	540-36-3	%	----	----	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons									
Acenaphthene	83-32-9	µg/L	----	----	----	----	----	----	----
Acenaphthylene	208-96-8	µg/L	----	----	----	----	----	----	----
Acridine	260-94-6	µg/L	----	----	----	----	----	----	----
Anthracene	120-12-7	µg/L	----	----	----	----	----	----	----
Benz(a)anthracene	56-55-3	µg/L	----	----	----	----	----	----	----

Benzo(a)pyrene	50-32-8	µg/L	----	----	----	----	----	----	----
Benzo(b+j)fluoranthene	n/a	µg/L	----	----	----	----	----	----	----
Benzo(b+j+k)fluoranthene	n/a	µg/L	----	----	----	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	µg/L	----	----	----	----	----	----	----
Benzo(k)fluoranthene	207-08-9	µg/L	----	----	----	----	----	----	----
Chrysene	218-01-9	µg/L	----	----	----	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	µg/L	----	----	----	----	----	----	----
Fluoranthene	206-44-0	µg/L	----	----	----	----	----	----	----
Fluorene	86-73-7	µg/L	----	----	----	----	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	µg/L	----	----	----	----	----	----	----
Methylnaphthalene, 1-	90-12-0	µg/L	----	----	----	----	----	----	----
Methylnaphthalene, 1+2-	----	µg/L	----	----	----	----	----	----	----
Methylnaphthalene, 2-	91-57-6	µg/L	----	----	----	----	----	----	----
Naphthalene	91-20-3	µg/L	----	----	----	----	----	----	----
Perylene	198-55-0	µg/L	----	----	----	----	----	----	----
Phenanthrene	85-01-8	µg/L	----	----	----	----	----	----	----
Pyrene	129-00-0	µg/L	----	----	----	----	----	----	----
Quinoline	91-22-5	µg/L	----	----	----	----	----	----	----
B(a)P total potency equivalents [B(a)P TPE]		µg/L	----	----	----	----	----	----	----
Chrysene-d12	1719-03-5	%	----	----	----	----	----	----	----
Naphthalene-d8	1146-65-2	%	----	----	----	----	----	----	----
Phenanthrene-d10	1517-22-2	%	----	----	----	----	----	----	----

CERTIFICATE OF ANALYSIS

Work Order	:	**BF2500303**			
Client	:	**Baffinland Iron Mines Corporation**	Laboratory	:	ALS Environmental - Baffin Island
Contact	:	Environmental Lab Results	Account Manager	:	Rick Hawthorne
Address	:	360 Oakville Place Dr Suite 300 Oakville Ontario Canada L6H 6K8	Address	:	Mary River, Qikqtani Region Baffin Island NU Canada
Telephone	:	----	E-mail	:	Rick.Hawthorne@ALSGlobal.com
Project	:	MS_Landfill_Groundwater	Telephone	:	
PO	:	4500156571	Date Samples Received	:	29-Aug-2025 07:38
C-O-C number	:	25 08 28_MS_Landfill_GW1	Date Analysis Commenced	:	29-Aug-2025
Sampler	:	JJ, LG	Issue Date	:	11-Sep-2025 09:42
Site	:	----			
Quote number	:	2024-2025 Scope of Work			
No. of samples received	:	2			
No. of samples analysed	:	2			

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

Signatories	*Position*	*Laboratory Department*
Amaninder Dhillon		Organics, Waterloo, Ontario
Andrea Armstrong		VOC, Waterloo, Ontario
Cedrick Velasco		Inorganics, Baffin Island, Nunavut
Danielle Gravel		Organics, Waterloo, Ontario
Jeremy Gingras		Organics, Waterloo, Ontario
Nik Perkio		Inorganics, Waterloo, Ontario
Nik Perkio		Centralized Prep, Waterloo, Ontario
Nik Perkio		Metals, Waterloo, Ontario
Walt Kippenhuck		Inorganics, Waterloo, Ontario
Walt Kippenhuck		Metals, Waterloo, Ontario
Walt Kippenhuck		Centralized Prep, Waterloo, Ontario

General Comments

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

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

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

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

Key: CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.
LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units
µg/L	micrograms per litre
µS/cm	microsiemens per centimetre

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

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Workorder Comments

E641 BF2500303-001 RRR: Detection limit raised due to high analyte recovery in the method blank.

Qualifiers

Qualifier	Description
DLDS	Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity.
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
RRR	Refer to report comments for issues regarding this analysis.

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP23-13_2025-08-28 ----	MS-LF-GW1_2025-08-28 ----	----	----	----
					Client sampling date / time	28-Aug-2025 12:05	28-Aug-2025 14:00	----	----	----
						BF2500303-001	BF2500303-002	----	----	----
						Result	Result	----	----	----
Sample Preparation										
Dissolved carbon filtration location	----	EP358/WT	-	-		field	field	----	----	----
Physical Tests										
Conductivity	----	E100/WT	1.0	µS/cm		418	1880	----	----	----
pH	----	E108/BF	0.10	pH units		7.57	7.03	----	----	----
Solids, total dissolved [TDS]	----	E162/BF	10	mg/L		240	1500	----	----	----
Solids, total suspended [TSS]	----	E160-L/BF	1.0	mg/L		1.9	5.7	----	----	----
Turbidity	----	E121/BF	0.10	NTU		1.98	3.00	----	----	----
Alkalinity, total (as CaCO3)	----	E290/WT	2.0	mg/L		194	288	----	----	----
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/WT	0.0050	mg/L		0.0139	1.48	----	----	----
Bromide	24959-67-9	E235.Br/WT	0.10	mg/L		<0.10	<0.50 DLDS	----	----	----
Chloride	16887-00-6	E235.Cl/WT	0.50	mg/L		5.53	68.8 DLDS	----	----	----
Fluoride	16984-48-8	E235.F/WT	0.020	mg/L		0.173	<0.100 DLDS	----	----	----
Kjeldahl nitrogen, total [TKN]	----	E318/WT	0.050	mg/L		0.162	2.17	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3/WT	0.020	mg/L		0.560	<0.100 DLDS	----	----	----
Nitrite (as N)	14797-65-0	E235.NO2/WT	0.010	mg/L		<0.010	<0.050 DLDS	----	----	----
Phosphorus, total	7723-14-0	E372-U/WT	0.0020	mg/L		0.0050	0.0490	----	----	----
Phosphorus, total dissolved	7723-14-0	E375-T/WT	0.0020	mg/L		0.0032	0.0469	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	0.30	mg/L		16.8	703 DLDS	----	----	----
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/WT	0.50	mg/L		2.65	8.04	----	----	----

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Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP23-13_2025-08-28 ----	MS-LF-GW1_2025-08-28 ----	----	----	----
					Client sampling date / time	28-Aug-2025 12:05	28-Aug-2025 14:00	----	----	----
						BF2500303-001	BF2500303-002	----	----	----
						Result	Result	----	----	----
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/WT	0.0010	mg/L		0.0061	<0.0100 DLHC	----	----	----
Antimony, dissolved	7440-36-0	E421/WT	0.00010	mg/L		<0.00010	<0.00100 DLHC	----	----	----
Arsenic, dissolved	7440-38-2	E421/WT	0.00010	mg/L		0.00050	<0.00100 DLHC	----	----	----
Barium, dissolved	7440-39-3	E421/WT	0.00010	mg/L		0.0266	0.0512 DLHC	----	----	----
Beryllium, dissolved	7440-41-7	E421/WT	0.000020	mg/L		<0.000020	<0.000200 DLHC	----	----	----
Bismuth, dissolved	7440-69-9	E421/WT	0.000050	mg/L		<0.000050	<0.000500 DLHC	----	----	----
Boron, dissolved	7440-42-8	E421/WT	0.010	mg/L		0.020	1.22 DLHC	----	----	----
Cadmium, dissolved	7440-43-9	E421/WT	0.0000050	mg/L		<0.0000050	0.000135 DLHC	----	----	----
Calcium, dissolved	7440-70-2	E421/WT	0.050	mg/L		43.1	348 DLHC	----	----	----
Cesium, dissolved	7440-46-2	E421/WT	0.000010	mg/L		<0.000010	<0.000100 DLHC	----	----	----
Chromium, dissolved	7440-47-3	E421/WT	0.00050	mg/L		<0.00050	<0.00500 DLHC	----	----	----
Cobalt, dissolved	7440-48-4	E421/WT	0.00010	mg/L		0.00046	0.00404 DLHC	----	----	----
Copper, dissolved	7440-50-8	E421/WT	0.00020	mg/L		0.00160	<0.00200 DLHC	----	----	----
Iron, dissolved	7439-89-6	E421/WT	0.010	mg/L		<0.010	<0.100 DLHC	----	----	----
Lead, dissolved	7439-92-1	E421/WT	0.000050	mg/L		<0.000050	<0.000500 DLHC	----	----	----
Lithium, dissolved	7439-93-2	E421/WT	0.0010	mg/L		0.0023	0.0714 DLHC	----	----	----
Magnesium, dissolved	7439-95-4	E421/WT	0.0050	mg/L		22.9	32.7 DLHC	----	----	----
Manganese, dissolved	7439-96-5	E421/WT	0.00010	mg/L		0.195	0.997 DLHC	----	----	----
Mercury, dissolved	7439-97-6	E509/WT	0.0000050	mg/L		<0.0000050	<0.0000050	----	----	----
Molybdenum, dissolved	7439-98-7	E421/WT	0.000050	mg/L		0.00326	0.00397 DLHC	----	----	----
Nickel, dissolved	7440-02-0	E421/WT	0.00050	mg/L		0.00366	0.0855 DLHC	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP23-13_2025-08-28 ----	MS-LF-GW1_2025-08-28 ----	----	----	----
					Client sampling date / time	28-Aug-2025 12:05	28-Aug-2025 14:00	----	----	----
						BF2500303-001	BF2500303-002	----	----	----
						Result	Result	----	----	----
Dissolved Metals										
Phosphorus, dissolved	7723-14-0	E421/WT	0.050	mg/L		<0.050	<0.500 DLHC	----	----	----
Potassium, dissolved	7440-09-7	E421/WT	0.050	mg/L		2.50	16.9 DLHC	----	----	----
Rubidium, dissolved	7440-17-7	E421/WT	0.00020	mg/L		0.00534	0.00756 DLHC	----	----	----
Selenium, dissolved	7782-49-2	E421/WT	0.000050	mg/L		<0.000050	<0.000500 DLHC	----	----	----
Silicon, dissolved	7440-21-3	E421/WT	0.050	mg/L		2.15	5.46 DLHC	----	----	----
Silver, dissolved	7440-22-4	E421/WT	0.000010	mg/L		<0.000010	<0.000100 DLHC	----	----	----
Sodium, dissolved	7440-23-5	E421/WT	0.050	mg/L		8.90	33.9 DLHC	----	----	----
Strontium, dissolved	7440-24-6	E421/WT	0.00020	mg/L		0.0324	1.15 DLHC	----	----	----
Sulfur, dissolved	7704-34-9	E421/WT	0.50	mg/L		6.50	246 DLHC	----	----	----
Tellurium, dissolved	13494-80-9	E421/WT	0.00020	mg/L		<0.00020	<0.00200 DLHC	----	----	----
Thallium, dissolved	7440-28-0	E421/WT	0.000010	mg/L		0.000018	0.000128 DLHC	----	----	----
Thorium, dissolved	7440-29-1	E421/WT	0.00010	mg/L		<0.00010	<0.00100 DLHC	----	----	----
Tin, dissolved	7440-31-5	E421/WT	0.00010	mg/L		<0.00010	<0.00100 DLHC	----	----	----
Titanium, dissolved	7440-32-6	E421/WT	0.00030	mg/L		<0.00030	<0.00300 DLHC	----	----	----
Tungsten, dissolved	7440-33-7	E421/WT	0.00010	mg/L		<0.00010	<0.00100 DLHC	----	----	----
Uranium, dissolved	7440-61-1	E421/WT	0.000010	mg/L		0.00446	0.0222 DLHC	----	----	----
Vanadium, dissolved	7440-62-2	E421/WT	0.00050	mg/L		<0.00050	<0.00500 DLHC	----	----	----
Zinc, dissolved	7440-66-6	E421/WT	0.0010	mg/L		<0.0010	<0.0100 DLHC	----	----	----
Zirconium, dissolved	7440-67-7	E421/WT	0.00030	mg/L		<0.00030	<0.00300 DLHC	----	----	----
Dissolved mercury filtration location	----	EP509/WT	-	-		Field	Field	----	----	----
Dissolved metals filtration location	----	EP421/WT	-	-		Field	Field	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP23-13_2025-08-28 ----	MS-LF-GW1_2025-08-28 ----	----	----	----
					Client sampling date / time	28-Aug-2025 12:05	28-Aug-2025 14:00	----	----	----
						BF2500303-001	BF2500303-002	----	----	----
						Result	Result	----	----	----
Volatile Organic Compounds										
Acetone	67-64-1	E611D/WT	20	µg/L		<20	<20	----	----	----
Benzene	71-43-2	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Bromodichloromethane	75-27-4	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Bromoform	75-25-2	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Bromomethane	74-83-9	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
BTEX, total	----	E611D/WT	1.0	µg/L		<1.0	<1.0	----	----	----
Carbon disulfide	75-15-0	E611D/WT	1.0	µg/L		<1.0	<1.0	----	----	----
Carbon tetrachloride	56-23-5	E611D/WT	0.20	µg/L		<0.20	<0.20	----	----	----
Chlorobenzene	108-90-7	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Chloroethane	75-00-3	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Chloroform	67-66-3	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Chloromethane	74-87-3	E611D/WT	2.0	µg/L		<2.0	<2.0	----	----	----
Dibromochloromethane	124-48-1	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dibromoethane, 1,2-	106-93-4	E611D/WT	0.20	µg/L		<0.20	<0.20	----	----	----
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dichlorodifluoromethane	75-71-8	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloroethane, 1,1-	75-34-3	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloroethane, 1,2-	107-06-2	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloroethylene, 1,1-	75-35-4	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----

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Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP23-13_2025-08-28 ----	MS-LF-GW1_2025-08-28 ----	----	----	----
					Client sampling date / time	28-Aug-2025 12:05	28-Aug-2025 14:00	----	----	----
						BF2500303-001	BF2500303-002	----	----	----
						Result	Result	----	----	----
Volatile Organic Compounds										
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	0.50	µg/L		0.94	1.03	----	----	----
Dichloroethylene, cis+trans-1,2-	540-59-0	E611D/WT	0.71	µg/L		0.94	1.03	----	----	----
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloromethane	75-09-2	E611D/WT	1.0	µg/L		<1.0	<1.0	----	----	----
Dichloropropane, 1,2-	78-87-5	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	0.30	µg/L		<0.30	<0.30	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	0.50	µg/L		<0.5	<0.5	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	0.30	µg/L		<0.30	<0.30	----	----	----
Ethylbenzene	100-41-4	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Hexane, n-	110-54-3	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Hexanone, 2-	591-78-6	E611D/WT	20	µg/L		<20	<20	----	----	----
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	20	µg/L		<20	<20	----	----	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	20	µg/L		<20	<20	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Styrene	100-42-5	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Tetrachloroethylene	127-18-4	E611D/WT	0.50	µg/L		<0.50	12.0	----	----	----
Toluene	108-88-3	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

					Client sample ID	LF-KP23-13_2025-08-28 ----	MS-LF-GW1_2025-08-28 ----	----	----	----
					Client sampling date / time	28-Aug-2025 12:05	28-Aug-2025 14:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		BF2500303-001	BF2500303-002	----	----	----
						Result	Result	----	----	----
Volatile Organic Compounds										
Trichloroethylene	79-01-6	E611D/WT	0.50	µg/L		<0.50	9.74	----	----	----
Trichlorofluoromethane	75-69-4	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Trihalomethanes [THMs], total	----	E611D/WT	1.0	µg/L		<1.0	<1.0	----	----	----
Vinyl chloride	75-01-4	E611D/WT	0.20	µg/L		<0.20	<0.20	----	----	----
Xylene, m+p-	179601-23-1	E611D/WT	0.40	µg/L		<0.40	<0.40	----	----	----
Xylene, o-	95-47-6	E611D/WT	0.30	µg/L		<0.30	<0.30	----	----	----
Xylenes, total	1330-20-7	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Hydrocarbons										
F1 (C6-C10)	----	E581.F1-L/WT	25	µg/L		<25	<25	----	----	----
F2 (C10-C16)	----	E601/WT	100	µg/L		<100	<100	----	----	----
F3 (C16-C34)	----	E601/WT	250	µg/L		<250	<250	----	----	----
F4 (C34-C50)	----	E601/WT	250	µg/L		<250	<250	----	----	----
F1-BTEX	----	EC580/WT	25	µg/L		<25	<25	----	----	----
Hydrocarbons, total (C6-C50)	n/a	EC581/WT	370	µg/L		<370	<370	----	----	----
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/WT	1.0	%		100	102	----	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.F1-L/WT	1.0	%		74.0	71.6	----	----	----
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611D/WT	1.0	%		90.3	89.4	----	----	----
Difluorobenzene, 1,4-	540-36-3	E611D/WT	1.0	%		97.9	97.6	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP23-13_2025-08-28 ----	MS-LF-GW1_2025-08-28 ----	----	----	----
					Client sampling date / time	28-Aug-2025 12:05	28-Aug-2025 14:00	----	----	----
						BF2500303-001	BF2500303-002	----	----	----
						Result	Result	----	----	----
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Acenaphthylene	208-96-8	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Acridine	260-94-6	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Anthracene	120-12-7	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Benz(a)anthracene	56-55-3	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Benzo(a)pyrene	50-32-8	E641A-L/WT	0.0050	µg/L		<0.0050	<0.0050	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Benzo(b+j+k)fluoranthene	n/a	E641A-L/WT	0.015	µg/L		<0.015	<0.015	----	----	----
Benzo(g,h,i)perylene	191-24-2	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Benzo(k)fluoranthene	207-08-9	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Chrysene	218-01-9	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A-L/WT	0.0050	µg/L		<0.0050	<0.0050	----	----	----
Fluoranthene	206-44-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Fluorene	86-73-7	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Methylnaphthalene, 1+2-	----	E641A-L/WT	0.015	µg/L		<0.015	<0.015	----	----	----
Methylnaphthalene, 2-	91-57-6	E641A-L/WT	0.010	µg/L		0.014	<0.010	----	----	----
Naphthalene	91-20-3	E641A-L/WT	0.010	µg/L		0.072	<0.028 DLM	----	----	----
Perylene	198-55-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Phenanthrene	85-01-8	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

					Client sample ID	LF-KP23-13_2025-08-28 ----	MS-LF-GW1_2025-08-28 ----	----	----	----
					Client sampling date / time	28-Aug-2025 12:05	28-Aug-2025 14:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		BF2500303-001	BF2500303-002	----	----	----
						Result	Result	----	----	----
Polycyclic Aromatic Hydrocarbons										
Pyrene	129-00-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Quinoline	91-22-5	E641A-L/WT	0.010	µg/L		<0.022 DLM, RRR	0.052	----	----	----
B(a)P total potency equivalents [B(a)P TPE]	----	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A-L/WT	0.1	%		88.4	105	----	----	----
Naphthalene-d8	1146-65-2	E641A-L/WT	0.1	%		97.1	112	----	----	----
Phenanthrene-d10	1517-22-2	E641A-L/WT	0.1	%		94.0	111	----	----	----

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

ALS Canada Ltd.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **BF2500303**	Page	: 1 of 16
Client	: **Baffinland Iron Mines Corporation**	Laboratory	: ALS Environmental - Baffin Island
Contact	: Environmental Lab Results	Account Manager	: Rick Hawthorne
Address	: 360 Oakville Place Dr Suite 300 Oakville ON Canada L6H 6K8	Address	: Mary River, Qikqtani Region Baffin Island, Nunavut Canada
Telephone	: ----	Telephone	: ----
Project	: MS_Landfill_Groundwater	Date Samples Received	: 29-Aug-2025 07:38
PO	: 4500156571	Issue Date	: 11-Sep-2025 09:42
C-O-C number	: 25 08 28_MS_Landfill_GW1		
Sampler	: JJ, LG		
Site	: ----		
Quote number	: 2024-2025 Scope of Work		
No. of samples received	: 2		
No. of samples analysed	: 2		

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

Key

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

Workorder Comments

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

Summary of Outliers

Outliers : Quality Control Samples

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

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

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

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Method Blank (MB) Values								
Polycyclic Aromatic Hydrocarbons	QC-MRG4-2204975 001	----	Quinoline	91-22-5	E641A-L	0.015 µg/L MB-LOR	0.01 µg/L	Blank result exceeds permitted value

Result Qualifiers

Qualifier	Description
MB-LOR	*Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.*

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
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) LF-KP23-13_2025-08-28	E298	28-Aug-2025	05-Sep-2025	28 days	8 days	✓	07-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) MS-LF-GW1_2025-08-28	E298	28-Aug-2025	05-Sep-2025	28 days	8 days	✓	07-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE LF-KP23-13_2025-08-28	E235.Br	28-Aug-2025	04-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE MS-LF-GW1_2025-08-28	E235.Br	28-Aug-2025	04-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE LF-KP23-13_2025-08-28	E235.Cl	28-Aug-2025	04-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE MS-LF-GW1_2025-08-28	E235.Cl	28-Aug-2025	04-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE LF-KP23-13_2025-08-28	E235.F	28-Aug-2025	04-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
MS-LF-GW1_2025-08-28	E235.F	28-Aug-2025	04-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Nitrate in Water by IC										
HDPE										
LF-KP23-13_2025-08-28	E235.NO3	28-Aug-2025	04-Sep-2025	3 days	7 days	× EHT	08-Sep-2025	3 days	7 days	× EHT
Anions and Nutrients : Nitrate in Water by IC										
HDPE										
MS-LF-GW1_2025-08-28	E235.NO3	28-Aug-2025	04-Sep-2025	3 days	7 days	× EHT	08-Sep-2025	3 days	7 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE										
LF-KP23-13_2025-08-28	E235.NO2	28-Aug-2025	04-Sep-2025	3 days	7 days	× EHT	08-Sep-2025	3 days	7 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE										
MS-LF-GW1_2025-08-28	E235.NO2	28-Aug-2025	04-Sep-2025	3 days	7 days	× EHT	08-Sep-2025	3 days	7 days	× EHT
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
LF-KP23-13_2025-08-28	E235.SO4	28-Aug-2025	04-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
MS-LF-GW1_2025-08-28	E235.SO4	28-Aug-2025	04-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass - dissolved (field filtered/sulfuric acid)										
LF-KP23-13_2025-08-28	E375-T	28-Aug-2025	06-Sep-2025	28 days	9 days	✓	08-Sep-2025	28 days	9 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass - dissolved (field filtered/sulfuric acid)										
MS-LF-GW1_2025-08-28	E375-T	28-Aug-2025	06-Sep-2025	28 days	9 days	✓	08-Sep-2025	28 days	9 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
LF-KP23-13_2025-08-28	E318	28-Aug-2025	06-Sep-2025	28 days	9 days	✓	08-Sep-2025	28 days	9 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
MS-LF-GW1_2025-08-28	E318	28-Aug-2025	06-Sep-2025	28 days	9 days	✓	08-Sep-2025	28 days	9 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
LF-KP23-13_2025-08-28	E372-U	28-Aug-2025	06-Sep-2025	28 days	9 days	✓	08-Sep-2025	28 days	9 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
MS-LF-GW1_2025-08-28	E372-U	28-Aug-2025	06-Sep-2025	28 days	9 days	✓	08-Sep-2025	28 days	9 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
LF-KP23-13_2025-08-28	E509	28-Aug-2025	08-Sep-2025	28 days	11 days	✓	08-Sep-2025	28 days	11 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
MS-LF-GW1_2025-08-28	E509	28-Aug-2025	08-Sep-2025	28 days	11 days	✓	08-Sep-2025	28 days	11 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
LF-KP23-13_2025-08-28	E421	28-Aug-2025	05-Sep-2025	180 days	8 days	✓	05-Sep-2025	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
MS-LF-GW1_2025-08-28	E421	28-Aug-2025	05-Sep-2025	180 days	8 days	✓	05-Sep-2025	180 days	8 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate)										
LF-KP23-13_2025-08-28	E581.F1-L	28-Aug-2025	04-Sep-2025	14 days	7 days	✓	04-Sep-2025	14 days	7 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate)										
MS-LF-GW1_2025-08-28	E581.F1-L	28-Aug-2025	04-Sep-2025	14 days	7 days	✓	04-Sep-2025	14 days	7 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
LF-KP23-13_2025-08-28	E601	28-Aug-2025	08-Sep-2025	14 days	11 days	✓	09-Sep-2025	40 days	1 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
MS-LF-GW1_2025-08-28	E601	28-Aug-2025	09-Sep-2025	14 days	12 days	✓	09-Sep-2025	40 days	0 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
LF-KP23-13_2025-08-28	E358-L	28-Aug-2025	04-Sep-2025	28 days	7 days	✓	05-Sep-2025	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
MS-LF-GW1_2025-08-28	E358-L	28-Aug-2025	05-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
LF-KP23-13_2025-08-28	E290	28-Aug-2025	04-Sep-2025	14 days	7 days	✓	05-Sep-2025	14 days	7 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
MS-LF-GW1_2025-08-28	E290	28-Aug-2025	04-Sep-2025	14 days	7 days	✓	05-Sep-2025	14 days	7 days	✓
Physical Tests : Conductivity in Water										
HDPE										
LF-KP23-13_2025-08-28	E100	28-Aug-2025	04-Sep-2025	28 days	7 days	✓	05-Sep-2025	28 days	7 days	✓
Physical Tests : Conductivity in Water										
HDPE										
MS-LF-GW1_2025-08-28	E100	28-Aug-2025	04-Sep-2025	28 days	7 days	✓	05-Sep-2025	28 days	7 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : pH by Meter										
HDPE MS-LF-GW1_2025-08-28	E108	28-Aug-2025	29-Aug-2025	0.25 hrs	17 hrs	× EHTR-FM	29-Aug-2025	0.25 hrs	17 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE LF-KP23-13_2025-08-28	E108	28-Aug-2025	29-Aug-2025	0.25 hrs	19 hrs	× EHTR-FM	29-Aug-2025	0.25 hrs	19 hrs	× EHTR-FM
Physical Tests : TDS by Gravimetry										
HDPE LF-KP23-13_2025-08-28	E162	28-Aug-2025	----	----	----		29-Aug-2025	7 days	1 days	✓
Physical Tests : TDS by Gravimetry										
HDPE MS-LF-GW1_2025-08-28	E162	28-Aug-2025	----	----	----		29-Aug-2025	7 days	1 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE LF-KP23-13_2025-08-28	E160-L	28-Aug-2025	----	----	----		29-Aug-2025	7 days	1 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE MS-LF-GW1_2025-08-28	E160-L	28-Aug-2025	----	----	----		29-Aug-2025	7 days	1 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE LF-KP23-13_2025-08-28	E121	28-Aug-2025	----	----	----		29-Aug-2025	3 days	1 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE MS-LF-GW1_2025-08-28	E121	28-Aug-2025	----	----	----		29-Aug-2025	3 days	1 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate) LF-KP23-13_2025-08-28	E641A-L	28-Aug-2025	08-Sep-2025	14 days	11 days	✓	08-Sep-2025	40 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
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate)										
MS-LF-GW1_2025-08-28	E641A-L	28-Aug-2025	09-Sep-2025	14 days	12 days	✓	09-Sep-2025	40 days	0 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
LF-KP23-13_2025-08-28	E611D	28-Aug-2025	04-Sep-2025	14 days	7 days	✓	04-Sep-2025	14 days	7 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
MS-LF-GW1_2025-08-28	E611D	28-Aug-2025	04-Sep-2025	14 days	7 days	✓	04-Sep-2025	14 days	7 days	✓

Legend & Qualifier Definitions

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

EHT: Exceeded ALS recommended hold time prior to analysis.

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

Quality Control Parameter Frequency Compliance

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

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Conductivity in Water	E100	2199569	1	16	6.2	5.0	✓
pH by Meter	E108	2189564	1	19	5.2	5.0	✓
Turbidity by Nephelometry	E121	2189567	1	19	5.2	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	2189569	1	19	5.2	5.0	✓
TDS by Gravimetry	E162	2189572	1	19	5.2	5.0	✓
Bromide in Water by IC	E235.Br	2199570	1	16	6.2	5.0	✓
Chloride in Water by IC	E235.Cl	2199574	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2199571	1	20	5.0	5.0	✓
Nitrite in Water by IC	E235.NO2	2199573	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2199572	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2199575	1	20	5.0	5.0	✓
Alkalinity Species by Titration	E290	2199568	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	2201872	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2201870	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2200027	2	40	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2201871	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2203389	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2200849	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2201321	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2199634	1	20	5.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2199633	1	20	5.0	5.0	✓
Laboratory Control Samples (LCS)							
Conductivity in Water	E100	2199569	1	16	6.2	5.0	✓
pH by Meter	E108	2189564	1	19	5.2	5.0	✓
Turbidity by Nephelometry	E121	2189567	1	19	5.2	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	2189569	1	19	5.2	5.0	✓
TDS by Gravimetry	E162	2189572	1	19	5.2	5.0	✓
Bromide in Water by IC	E235.Br	2199570	1	16	6.2	5.0	✓
Chloride in Water by IC	E235.Cl	2199574	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2199571	1	20	5.0	5.0	✓
Nitrite in Water by IC	E235.NO2	2199573	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2199572	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2199575	1	20	5.0	5.0	✓
Alkalinity Species by Titration	E290	2199568	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	2201872	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2201870	1	20	5.0	5.0	✓

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Control Samples (LCS) - Continued							
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2200027	2	40	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2201871	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2203389	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2200849	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2201321	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2199634	1	20	5.0	5.0	✓
CCME PHCs - F2-F4 by GC-FID	E601	2204975	2	25	8.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2199633	1	20	5.0	5.0	✓
PAHs in Water by Hexane LVI GC-MS (Low Level)	E641A-L	2204976	2	23	8.7	5.0	✓
Method Blanks (MB)							
Conductivity in Water	E100	2199569	1	16	6.2	5.0	✓
Turbidity by Nephelometry	E121	2189567	1	19	5.2	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	2189569	1	19	5.2	5.0	✓
TDS by Gravimetry	E162	2189572	1	19	5.2	5.0	✓
Bromide in Water by IC	E235.Br	2199570	1	16	6.2	5.0	✓
Chloride in Water by IC	E235.Cl	2199574	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2199571	1	20	5.0	5.0	✓
Nitrite in Water by IC	E235.NO2	2199573	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2199572	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2199575	1	20	5.0	5.0	✓
Alkalinity Species by Titration	E290	2199568	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	2201872	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2201870	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2200027	2	40	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2201871	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2203389	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2200849	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2201321	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2199634	1	20	5.0	5.0	✓
CCME PHCs - F2-F4 by GC-FID	E601	2204975	2	25	8.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2199633	1	20	5.0	5.0	✓
PAHs in Water by Hexane LVI GC-MS (Low Level)	E641A-L	2204976	2	23	8.7	5.0	✓
Matrix Spikes (MS)							
Bromide in Water by IC	E235.Br	2199570	1	16	6.2	5.0	✓
Chloride in Water by IC	E235.Cl	2199574	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2199571	1	20	5.0	5.0	✓
Nitrite in Water by IC	E235.NO2	2199573	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2199572	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2199575	1	20	5.0	5.0	✓

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Matrix Spikes (MS) - Continued							
Ammonia by Fluorescence	E298	2201872	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2201870	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2200027	2	40	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2201871	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2203389	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2200849	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2201321	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2199634	1	20	5.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2199633	1	20	5.0	5.0	✓

Methodology References and Summaries

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

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

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Nitrate in Water by IC	E235.NO3 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Sulfate in Water by IC	E235.SO4 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Alkalinity Species by Titration	E290 ALS Environmental - Waterloo	Water	APHA 2320 B (mod)	Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.
Ammonia by Fluorescence	E298 ALS Environmental - Waterloo	Water	Method Fialab 100, 2018	Ammonia in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021)
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318 ALS Environmental - Waterloo	Water	Method Fialab 100, 2018	TKN in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021).
Dissolved Organic Carbon by Combustion (Low Level)	E358-L ALS Environmental - Waterloo	Water	APHA 5310 B (mod)	Dissolved Organic Carbon (Non-Purgeable), also known as NPOC (dissolved), is a direct measurement of DOC after a filtered (0.45 micron) sample has been acidified and purged to remove inorganic carbon (IC). Analysis is by high temperature combustion with infrared detection of CO2. NPOC does not include volatile organic species that are purged off with IC. For samples where the majority of DC (dissolved carbon) is comprised of IC (which is common), this method is more accurate and more reliable than the DOC by subtraction method (i.e. DC minus DIC).
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Total Phosphorus is determined colourimetrically using a discrete analyzer after heated persulfate digestion of the sample.
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Total Dissolved Phosphorus is determined colourimetrically using a discrete analyzer after filtration through a 0.45 micron filter followed by heated persulfate digestion of the sample.
Dissolved Metals in Water by CRC ICPMS	E421 ALS Environmental - Waterloo	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Dissolved Mercury in Water by CVAAS	E509 ALS Environmental - Waterloo	Water	APHA 3030B/EPA 1631E (mod)	Water samples are filtered (0.45 um), preserved with HCl, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1 (mod)	CCME Fraction 1 (F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
CCME PHCs - F2-F4 by GC-FID	E601 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	Sample extracts are analyzed by GC-FID for CCME hydrocarbon fractions (F2-F4). Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
VOCs (Eastern Canada List) by Headspace GC-MS	E611D ALS Environmental - Waterloo	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PAHs in Water by Hexane LVI GC-MS (Low Level)	E641A-L ALS Environmental - Waterloo	Water	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS.
F1-BTEX	EC580 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).
Sum F1 to F4 (C6-C50)	EC581 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	Hydrocarbons, total (C6-C50) is the sum of CCME Fractions F1(C6-C10), F2(C10-C16), F3(C16-C34), and F4(C34-C50). F4G-sg is not used within this calculation due to overlap with other fractions.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Ammonia	EP298 ALS Environmental - Waterloo	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Digestion for TKN in water	EP318 ALS Environmental - Waterloo	Water	APHA 4500-Norg D (mod)	Samples are digested at high temperature using Sulfuric Acid with Copper catalyst, which converts organic nitrogen sources to Ammonia, which is then quantified by the analytical method as TKN. This method is unsuitable for samples containing high levels of nitrate. If nitrate exceeds TKN concentration by ten times or more, results may be biased low.
Preparation for Dissolved Organic Carbon for Combustion	EP358 ALS Environmental - Waterloo	Water	APHA 5310 B (mod)	Preparation for Dissolved Organic Carbon

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Digestion for Total Phosphorus in water	EP372 ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Samples are heated with a persulfate digestion reagent.
Digestion for Dissolved Phosphorus in water	EP375 ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Samples are filtered through a 0.45 micron membrane filter and then heated with a persulfate digestion reagent.
Dissolved Metals Water Filtration	EP421 ALS Environmental - Waterloo	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO3.
Dissolved Mercury Water Filtration	EP509 ALS Environmental - Waterloo	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HCl.
VOCs Preparation for Headspace Analysis	EP581 ALS Environmental - Waterloo	Water	EPA 5021A (mod)	Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler. An aliquot of the headspace is then injected into a GC-MS-FID.
PHCs and PAHs Hexane Extraction	EP601 ALS Environmental - Waterloo	Water	EPA 3511 (mod)	Petroleum Hydrocarbons (PHCs) and Polycyclic Aromatic Hydrocarbons (PAHs) are extracted using a hexane liquid-liquid extraction.

ALS Canada Ltd.

QUALITY CONTROL REPORT

Work Order	: **BF2500303**	Page	: 1 of 21
Client	: Baffinland Iron Mines Corporation	Laboratory	: ALS Environmental - Baffin Island
Contact	: Environmental Lab Results	Account Manager	: Rick Hawthorne
Address	: 360 Oakville Place Dr Suite 300 Oakville ON Canada L6H 6K8	Address	: Mary River, Qikqtani Region Baffin Island, Nunavut Canada
Telephone	: ----	Telephone	:
Project	: MS_Landfill_Groundwater	Date Samples Received	: 29-Aug-2025 07:38
PO	: 4500156571	Date Analysis Commenced	: 29-Aug-2025
C-O-C number	: 25 08 28_MS_Landfill_GW1	Issue Date	: 11-Sep-2025 09:41
Sampler	: JJ, LG		
Site	: ----		
Quote number	: 2024-2025 Scope of Work		
No. of samples received	: 2		
No. of samples analysed	: 2		

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Laboratory Department*
Amaninder Dhillon	Team Lead - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
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Nik Perkio	Senior Analyst	Waterloo Inorganics, Waterloo, Ontario
Nik Perkio	Senior Analyst	Waterloo Metals, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Centralized Prep, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Inorganics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Metals, Waterloo, Ontario

General Comments

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

Key :

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

Workorder Comments

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 2189564)											
BF2500301-001	Anonymous	pH	----	E108	0.10	pH units	7.86	7.93	0.887%	4%	----
Physical Tests (QC Lot: 2189567)											
BF2500301-001	Anonymous	Turbidity	----	E121	0.10	NTU	0.35	0.47	0.12	Diff <2x LOR	----
Physical Tests (QC Lot: 2189569)											
BF2500301-002	Anonymous	Solids, total suspended [TSS]	----	E160-L	1.3	mg/L	<1.3	<1.3	0	Diff <2x LOR	----
Physical Tests (QC Lot: 2189572)											
BF2500301-003	Anonymous	Solids, total dissolved [TDS]	----	E162	19	mg/L	91	87	4	Diff <2x LOR	----
Physical Tests (QC Lot: 2199568)											
BF2500299-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	2.0	mg/L	153	153	0.0782%	20%	----
Physical Tests (QC Lot: 2199569)											
BF2500299-001	Anonymous	Conductivity	----	E100	1.0	µS/cm	345	347	0.578%	10%	----
Anions and Nutrients (QC Lot: 2199570)											
BF2500299-001	Anonymous	Bromide	24959-67-9	E235.Br	0.10	mg/L	<0.10	<0.10	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2199571)											
BF2500299-001	Anonymous	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.085	0.081	0.004	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2199572)											
BF2500299-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	0.210	0.206	1.78%	20%	----
Anions and Nutrients (QC Lot: 2199573)											
BF2500299-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2199574)											
BF2500299-001	Anonymous	Chloride	16887-00-6	E235.Cl	0.50	mg/L	4.21	3.99	0.22	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2199575)											
BF2500299-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	20.4	20.2	0.788%	20%	----
Anions and Nutrients (QC Lot: 2201870)											
BF2500303-002	MS-LF-GW1_2025-08-28	Kjeldahl nitrogen, total [TKN]	----	E318	0.050	mg/L	2.17	2.13	2.05%	20%	----
Anions and Nutrients (QC Lot: 2201871)											
BF2500303-001	LF-KP23-13_2025-08-28	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0050	0.0051	0.0001	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2201872)											
BF2500304-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0500	mg/L	2.20	2.28	3.29%	20%	----
Anions and Nutrients (QC Lot: 2203389)											

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Anions and Nutrients (QC Lot: 2203389) - continued											
BF2500299-001	Anonymous	Phosphorus, total dissolved	7723-14-0	E375-T	0.0020	mg/L	0.0026	0.0023	0.0003	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 2200027)											
BF2500303-001	LF-KP23-13_2025-08-28	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	2.65	2.49	0.16	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 2202722)											
BF2500298-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	1.64	1.37	0.27	Diff <2x LOR	----
Dissolved Metals (QC Lot: 2200849)											
BF2500298-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0139	0.0150	7.26%	20%	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.00952	0.00991	3.94%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	14.9	14.9	0.317%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00083	0.00084	0.000008	Diff <2x LOR	----
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.012	0.013	0.0007	Diff <2x LOR	----
		Lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	9.37	9.52	1.61%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.00076	0.00080	0.00004	Diff <2x LOR	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000483	0.000470	0.000013	Diff <2x LOR	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.00051	0.00051	0.000004	Diff <2x LOR	----
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.050	mg/L	1.08	1.08	0.577%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00154	0.00158	0.00004	Diff <2x LOR	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	0.837	0.854	2.06%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.050	mg/L	2.68	2.72	1.15%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.0155	0.0154	0.494%	20%	----

Sub-Matrix: **Water**

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Laboratory Duplicate (DUP) Report						
					LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Dissolved Metals (QC Lot: 2200849) - continued											
BF2500298-001	Anonymous	Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	2.11	2.07	0.04	Diff <2x LOR	----
		Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	0.00045	0.00036	0.00009	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.00279	0.00278	0.334%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 2201321)											
BF2500303-001	LF-KP23-13_2025-08-28	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Volatile Organic Compounds (QC Lot: 2199633)											
BF2500303-001	LF-KP23-13_2025-08-28	Acetone	67-64-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Benzene	71-43-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromodichloromethane	75-27-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromoform	75-25-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromomethane	74-83-9	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Carbon disulfide	75-15-0	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Carbon tetrachloride	56-23-5	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Chlorobenzene	108-90-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroethane	75-00-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroform	67-66-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloromethane	74-87-3	E611D	2.0	µg/L	<2.0	<2.0	0	Diff <2x LOR	----
		Dibromochloromethane	124-48-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dibromoethane, 1,2-	106-93-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorodifluoromethane	75-71-8	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,1-	75-34-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,2-	107-06-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, 1,1-	75-35-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Volatile Organic Compounds (QC Lot: 2199633) - continued											
BF2500303-001	LF-KP23-13_2025-08-28	Dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	0.94	0.92	0.02	Diff <2x LOR	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Dichloropropane, 1,2-	78-87-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Hexane, n-	110-54-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Hexanone, 2-	591-78-6	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethylene	127-18-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Toluene	108-88-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichlorofluoromethane	75-69-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Vinyl chloride	75-01-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 2199634)											
BF2500303-001	LF-KP23-13_2025-08-28	F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	<25	0	Diff <2x LOR	----

Method Blank (MB) Report

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

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 2189567)						
Turbidity	----	E121	0.1	NTU	<0.10	----
Physical Tests (QCLot: 2189569)						
Solids, total suspended [TSS]	----	E160-L	1	mg/L	<1.0	----
Physical Tests (QCLot: 2189572)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Physical Tests (QCLot: 2199568)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	1.5	----
Physical Tests (QCLot: 2199569)						
Conductivity	----	E100	1	µS/cm	1.4	----
Anions and Nutrients (QCLot: 2199570)						
Bromide	24959-67-9	E235.Br	0.1	mg/L	<0.10	----
Anions and Nutrients (QCLot: 2199571)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 2199572)						
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 2199573)						
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	<0.010	----
Anions and Nutrients (QCLot: 2199574)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 2199575)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 2201870)						
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 2201871)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 2201872)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 2203389)						
Phosphorus, total dissolved	7723-14-0	E375-T	0.002	mg/L	<0.0020	----
Organic / Inorganic Carbon (QCLot: 2200027)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Organic / Inorganic Carbon (QCLot: 2202722)						

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Organic / Inorganic Carbon (QCLot: 2202722) - continued						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Dissolved Metals (QCLot: 2200849)						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 2200849) - continued						
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 2201321)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Volatile Organic Compounds (QCLot: 2199633)						
Acetone	67-64-1	E611D	20	µg/L	<20	----
Benzene	71-43-2	E611D	0.5	µg/L	<0.50	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	<0.50	----
Bromoform	75-25-2	E611D	0.5	µg/L	<0.50	----
Bromomethane	74-83-9	E611D	0.5	µg/L	<0.50	----
Carbon disulfide	75-15-0	E611D	1	µg/L	<1.0	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	<0.20	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	<0.50	----
Chloroethane	75-00-3	E611D	0.5	µg/L	<0.50	----
Chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----
Chloromethane	74-87-3	E611D	2	µg/L	<2.0	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	<0.50	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	<0.20	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	<0.50	----
Dichloromethane	75-09-2	E611D	1	µg/L	<1.0	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	<0.50	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	<0.30	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 2199633) - continued						
Ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	<0.50	----
Hexanone, 2-	591-78-6	E611D	20	µg/L	<20	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	<0.50	----
Styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----
Toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	<0.50	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	<0.50	----
Vinyl chloride	75-01-4	E611D	0.2	µg/L	<0.20	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----
Hydrocarbons (QCLot: 2199634)						
F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	----
Hydrocarbons (QCLot: 2204975)						
F2 (C10-C16)	----	E601	100	µg/L	<100	----
F3 (C16-C34)	----	E601	250	µg/L	<250	----
F4 (C34-C50)	----	E601	250	µg/L	<250	----
Hydrocarbons (QCLot: 2205708)						
F2 (C10-C16)	----	E601	100	µg/L	<100	----
F3 (C16-C34)	----	E601	250	µg/L	<250	----
F4 (C34-C50)	----	E601	250	µg/L	<250	----
Polycyclic Aromatic Hydrocarbons (QCLot: 2204976)						
Acenaphthene	83-32-9	E641A-L	0.01	µg/L	<0.010	----
Acenaphthylene	208-96-8	E641A-L	0.01	µg/L	<0.010	----
Acridine	260-94-6	E641A-L	0.01	µg/L	<0.010	----
Anthracene	120-12-7	E641A-L	0.01	µg/L	<0.010	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	µg/L	<0.010	----
Benzo(a)pyrene	50-32-8	E641A-L	0.005	µg/L	<0.0050	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 2204976) - continued						
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	µg/L	<0.010	----
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	µg/L	<0.010	----
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	µg/L	<0.010	----
Chrysene	218-01-9	E641A-L	0.01	µg/L	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	µg/L	<0.0050	----
Fluoranthene	206-44-0	E641A-L	0.01	µg/L	<0.010	----
Fluorene	86-73-7	E641A-L	0.01	µg/L	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	µg/L	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	µg/L	<0.010	----
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	µg/L	<0.010	----
Naphthalene	91-20-3	E641A-L	0.01	µg/L	<0.010	----
Perylene	198-55-0	E641A-L	0.01	µg/L	<0.010	----
Phenanthrene	85-01-8	E641A-L	0.01	µg/L	<0.010	----
Pyrene	129-00-0	E641A-L	0.01	µg/L	<0.010	----
Quinoline	91-22-5	E641A-L	0.01	µg/L	# 0.015	MB-LOR
Polycyclic Aromatic Hydrocarbons (QCLot: 2205709)						
Acenaphthene	83-32-9	E641A-L	0.01	µg/L	<0.010	----
Acenaphthylene	208-96-8	E641A-L	0.01	µg/L	<0.010	----
Acridine	260-94-6	E641A-L	0.01	µg/L	<0.010	----
Anthracene	120-12-7	E641A-L	0.01	µg/L	<0.010	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	µg/L	<0.010	----
Benzo(a)pyrene	50-32-8	E641A-L	0.005	µg/L	<0.0050	----
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	µg/L	<0.010	----
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	µg/L	<0.010	----
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	µg/L	<0.010	----
Chrysene	218-01-9	E641A-L	0.01	µg/L	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	µg/L	<0.0050	----
Fluoranthene	206-44-0	E641A-L	0.01	µg/L	<0.010	----
Fluorene	86-73-7	E641A-L	0.01	µg/L	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	µg/L	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	µg/L	<0.010	----
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	µg/L	<0.010	----
Naphthalene	91-20-3	E641A-L	0.01	µg/L	<0.010	----
Perylene	198-55-0	E641A-L	0.01	µg/L	<0.010	----
Phenanthrene	85-01-8	E641A-L	0.01	µg/L	<0.010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 2205709) - continued						
Pyrene	129-00-0	E641A-L	0.01	µg/L	<0.010	----
Quinoline	91-22-5	E641A-L	0.01	µg/L	<0.010	----

Qualifiers

Qualifier	Description
MB-LOR	*Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.*

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
Physical Tests (QCLot: 2189564)									
pH	----	E108	----	pH units	7 pH units	100	98.0	102	----
Physical Tests (QCLot: 2189567)									
Turbidity	----	E121	0.1	NTU	200 NTU	100	85.0	115	----
Physical Tests (QCLot: 2189569)									
Solids, total suspended [TSS]	----	E160-L	1	mg/L	250 mg/L	99.0	85.0	115	----
Physical Tests (QCLot: 2189572)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	850 mg/L	99.6	85.0	115	----
Physical Tests (QCLot: 2199568)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	150 mg/L	102	85.0	115	----
Physical Tests (QCLot: 2199569)									
Conductivity	----	E100	1	µS/cm	1410 µS/cm	99.0	90.0	110	----
Anions and Nutrients (QCLot: 2199570)									
Bromide	24959-67-9	E235.Br	0.1	mg/L	0.5 mg/L	97.2	85.0	115	----
Anions and Nutrients (QCLot: 2199571)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 2199572)									
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	2.5 mg/L	98.8	90.0	110	----
Anions and Nutrients (QCLot: 2199573)									
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	0.5 mg/L	94.8	90.0	110	----
Anions and Nutrients (QCLot: 2199574)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	99.1	90.0	110	----
Anions and Nutrients (QCLot: 2199575)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 2201870)									
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	4 mg/L	99.8	75.0	125	----
Anions and Nutrients (QCLot: 2201871)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.333 mg/L	99.6	80.0	120	----
Anions and Nutrients (QCLot: 2201872)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	97.5	85.0	115	----
Anions and Nutrients (QCLot: 2203389)									
Phosphorus, total dissolved	7723-14-0	E375-T	0.002	mg/L	0.333 mg/L	105	80.0	120	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Organic / Inorganic Carbon (QCLot: 2200027)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	95.5	80.0	120	----
Organic / Inorganic Carbon (QCLot: 2202722)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	100	80.0	120	----
Dissolved Metals (QCLot: 2200849)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	0.1 mg/L	103	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	0.05 mg/L	102	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	0.05 mg/L	105	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.012 mg/L	104	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.005 mg/L	104	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	0.05 mg/L	101	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	0.05 mg/L	101	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.005 mg/L	102	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	2.5 mg/L	102	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.002 mg/L	109	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.012 mg/L	104	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.012 mg/L	102	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.012 mg/L	101	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	0.05 mg/L	104	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.025 mg/L	102	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.012 mg/L	102	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	2.5 mg/L	108	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.012 mg/L	101	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.012 mg/L	104	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.025 mg/L	102	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	0.5 mg/L	102	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	2.5 mg/L	98.5	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.005 mg/L	104	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	0.05 mg/L	101	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	0.5 mg/L	100	60.0	140	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.005 mg/L	106	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	2.5 mg/L	103	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.012 mg/L	103	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	2.5 mg/L	105	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.005 mg/L	98.4	80.0	120	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report: Spike: Target Concentration	Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High	Qualifier
Dissolved Metals (QCLot: 2200849) - continued									
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	0.05 mg/L	99.9	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.005 mg/L	98.0	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.025 mg/L	100	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.012 mg/L	100	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.005 mg/L	101	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0 mg/L	102	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.025 mg/L	103	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.025 mg/L	102	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.005 mg/L	98.1	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	91.0	80.0	120	----
Volatile Organic Compounds (QCLot: 2199633)									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	127	70.0	130	----
Benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
Bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
Bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	76.2	60.0	140	----
Carbon disulfide	75-15-0	E611D	1	µg/L	100 µg/L	92.9	70.0	130	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	102	70.0	130	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Chloroethane	75-00-3	E611D	0.5	µg/L	100 µg/L	100	60.0	140	----
Chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Chloromethane	74-87-3	E611D	2	µg/L	100 µg/L	104	60.0	140	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	89.4	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	94.5	60.0	140	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	98.0	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 2199633) - continued									
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	98.0	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	97.1	70.0	130	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
Hexanone, 2-	591-78-6	E611D	20	µg/L	100 µg/L	91.4	70.0	130	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	116	70.0	130	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	91.5	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	98.3	70.0	130	----
Styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	99.6	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	96.5	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	97.8	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	92.5	70.0	130	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	101	60.0	140	----
Vinyl chloride	75-01-4	E611D	0.2	µg/L	100 µg/L	101	60.0	140	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	104	70.0	130	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	106	70.0	130	----
Hydrocarbons (QCLot: 2199634)									
F1 (C6-C10)	----	E581.F1-L	25	µg/L	2000 µg/L	97.7	80.0	120	----
Hydrocarbons (QCLot: 2204975)									
F2 (C10-C16)	----	E601	100	µg/L	3770 µg/L	110	70.0	130	----
F3 (C16-C34)	----	E601	250	µg/L	7760 µg/L	120	70.0	130	----
F4 (C34-C50)	----	E601	250	µg/L	4200 µg/L	109	70.0	130	----
Hydrocarbons (QCLot: 2205708)									
F2 (C10-C16)	----	E601	100	µg/L	3770 µg/L	97.8	70.0	130	----
F3 (C16-C34)	----	E601	250	µg/L	7760 µg/L	106	70.0	130	----
F4 (C34-C50)	----	E601	250	µg/L	4200 µg/L	113	70.0	130	----
Polycyclic Aromatic Hydrocarbons (QCLot: 2204976)									
Acenaphthene	83-32-9	E641A-L	0.01	µg/L	0.526 µg/L	96.8	50.0	140	----
Acenaphthylene	208-96-8	E641A-L	0.01	µg/L	0.526 µg/L	89.5	50.0	140	----
Acridine	260-94-6	E641A-L	0.01	µg/L	0.526 µg/L	109	50.0	140	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report: Spike: Target Concentration	Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 2204976) - continued									
Anthracene	120-12-7	E641A-L	0.01	µg/L	0.526 µg/L	86.4	50.0	140	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	µg/L	0.526 µg/L	106	50.0	140	----
Benzo(a)pyrene	50-32-8	E641A-L	0.005	µg/L	0.526 µg/L	86.1	50.0	140	----
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	µg/L	0.526 µg/L	79.5	50.0	140	----
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	µg/L	0.526 µg/L	109	50.0	140	----
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	µg/L	0.526 µg/L	83.2	50.0	140	----
Chrysene	218-01-9	E641A-L	0.01	µg/L	0.526 µg/L	104	50.0	140	----
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	µg/L	0.526 µg/L	113	50.0	140	----
Fluoranthene	206-44-0	E641A-L	0.01	µg/L	0.526 µg/L	100	50.0	140	----
Fluorene	86-73-7	E641A-L	0.01	µg/L	0.526 µg/L	96.7	50.0	140	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	µg/L	0.526 µg/L	121	50.0	140	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	µg/L	0.526 µg/L	94.5	50.0	140	----
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	µg/L	0.526 µg/L	99.7	50.0	140	----
Naphthalene	91-20-3	E641A-L	0.01	µg/L	0.526 µg/L	94.8	50.0	140	----
Perylene	198-55-0	E641A-L	0.01	µg/L	0.526 µg/L	97.2	50.0	140	----
Phenanthrene	85-01-8	E641A-L	0.01	µg/L	0.526 µg/L	102	50.0	140	----
Pyrene	129-00-0	E641A-L	0.01	µg/L	0.526 µg/L	100	50.0	140	----
Quinoline	91-22-5	E641A-L	0.01	µg/L	0.526 µg/L	108	50.0	140	----
Polycyclic Aromatic Hydrocarbons (QCLot: 2205709)									
Acenaphthene	83-32-9	E641A-L	0.01	µg/L	0.526 µg/L	103	50.0	140	----
Acenaphthylene	208-96-8	E641A-L	0.01	µg/L	0.526 µg/L	95.5	50.0	140	----
Acridine	260-94-6	E641A-L	0.01	µg/L	0.526 µg/L	122	50.0	140	----
Anthracene	120-12-7	E641A-L	0.01	µg/L	0.526 µg/L	88.7	50.0	140	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	µg/L	0.526 µg/L	102	50.0	140	----
Benzo(a)pyrene	50-32-8	E641A-L	0.005	µg/L	0.526 µg/L	82.5	50.0	140	----
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	µg/L	0.526 µg/L	76.0	50.0	140	----
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	µg/L	0.526 µg/L	102	50.0	140	----
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	µg/L	0.526 µg/L	87.3	50.0	140	----
Chrysene	218-01-9	E641A-L	0.01	µg/L	0.526 µg/L	111	50.0	140	----
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	µg/L	0.526 µg/L	89.5	50.0	140	----
Fluoranthene	206-44-0	E641A-L	0.01	µg/L	0.526 µg/L	107	50.0	140	----
Fluorene	86-73-7	E641A-L	0.01	µg/L	0.526 µg/L	104	50.0	140	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	µg/L	0.526 µg/L	95.4	50.0	140	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	µg/L	0.526 µg/L	100	50.0	140	----
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	µg/L	0.526 µg/L	105	50.0	140	----
Naphthalene	91-20-3	E641A-L	0.01	µg/L	0.526 µg/L	100	50.0	140	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 2205709) - continued									
Perylene	198-55-0	E641A-L	0.01	µg/L	0.526 µg/L	91.8	50.0	140	----
Phenanthrene	85-01-8	E641A-L	0.01	µg/L	0.526 µg/L	109	50.0	140	----
Pyrene	129-00-0	E641A-L	0.01	µg/L	0.526 µg/L	107	50.0	140	----
Quinoline	91-22-5	E641A-L	0.01	µg/L	0.526 µg/L	107	50.0	140	----

Matrix Spike (MS) Report

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

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 2199570)										
BF2500299-001	Anonymous	Bromide	24959-67-9	E235.Br	0.46 mg/L	0.5 mg/L	91.3	75.0	125	----
Anions and Nutrients (QCLot: 2199571)										
BF2500299-001	Anonymous	Fluoride	16984-48-8	E235.F	0.901 mg/L	1 mg/L	90.1	75.0	125	----
Anions and Nutrients (QCLot: 2199572)										
BF2500299-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	2.40 mg/L	2.5 mg/L	96.1	75.0	125	----
Anions and Nutrients (QCLot: 2199573)										
BF2500299-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.466 mg/L	0.5 mg/L	93.3	75.0	125	----
Anions and Nutrients (QCLot: 2199574)										
BF2500299-001	Anonymous	Chloride	16887-00-6	E235.Cl	97.0 mg/L	100 mg/L	97.0	75.0	125	----
Anions and Nutrients (QCLot: 2199575)										
BF2500299-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	96.4 mg/L	100 mg/L	96.4	75.0	125	----
Anions and Nutrients (QCLot: 2201870)										
BF2500303-002	MS-LF-GW1_2025-08-28	Kjeldahl nitrogen, total [TKN]	----	E318	2.62 mg/L	2.5 mg/L	105	70.0	130	----
Anions and Nutrients (QCLot: 2201871)										
BF2500303-001	LF-KP23-13_2025-08-28	Phosphorus, total	7723-14-0	E372-U	0.0965 mg/L	0.1 mg/L	96.5	70.0	130	----
Anions and Nutrients (QCLot: 2201872)										
BF2500304-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	ND mg/L	----	ND	75.0	125	----
Anions and Nutrients (QCLot: 2203389)										
BF2500299-001	Anonymous	Phosphorus, total dissolved	7723-14-0	E375-T	0.0939 mg/L	0.1 mg/L	93.9	70.0	130	----
Organic / Inorganic Carbon (QCLot: 2200027)										
BF2500303-001	LF-KP23-13_2025-08-28	Carbon, dissolved organic [DOC]	----	E358-L	4.85 mg/L	5 mg/L	97.0	70.0	130	----
Organic / Inorganic Carbon (QCLot: 2202722)										
BF2500298-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	4.72 mg/L	5 mg/L	94.3	70.0	130	----
Dissolved Metals (QCLot: 2200849)										
BF2500298-002	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.101 mg/L	0.1 mg/L	101	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0516 mg/L	0.05 mg/L	103	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0564 mg/L	0.05 mg/L	113	70.0	130	----
		Barium, dissolved	7440-39-3	E421	0.0127 mg/L	0.012 mg/L	101	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.00536 mg/L	0.005 mg/L	107	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.0439 mg/L	0.05 mg/L	87.9	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.050 mg/L	0.05 mg/L	101	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00535 mg/L	0.005 mg/L	107	70.0	130	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 2200849) - continued										
BF2500298-002	Anonymous	Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.00269 mg/L	0.002 mg/L	108	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0126 mg/L	0.012 mg/L	101	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0124 mg/L	0.012 mg/L	99.0	70.0	130	----
		Copper, dissolved	7440-50-8	E421	0.0124 mg/L	0.012 mg/L	99.5	70.0	130	----
		Iron, dissolved	7439-89-6	E421	0.052 mg/L	0.05 mg/L	104	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0251 mg/L	0.025 mg/L	100	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.0128 mg/L	0.012 mg/L	102	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	ND mg/L	----	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	0.0123 mg/L	0.012 mg/L	98.4	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.0129 mg/L	0.012 mg/L	103	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0247 mg/L	0.025 mg/L	98.7	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	0.578 mg/L	0.5 mg/L	116	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	2.61 mg/L	2.5 mg/L	104	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.00526 mg/L	0.005 mg/L	105	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0616 mg/L	0.05 mg/L	123	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	ND mg/L	----	ND	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00507 mg/L	0.005 mg/L	101	70.0	130	----
		Sodium, dissolved	7440-23-5	E421	ND mg/L	----	ND	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	ND mg/L	----	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	2.65 mg/L	2.5 mg/L	106	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.00556 mg/L	0.005 mg/L	111	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.0492 mg/L	0.05 mg/L	98.5	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.00470 mg/L	0.005 mg/L	93.9	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0256 mg/L	0.025 mg/L	103	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0125 mg/L	0.012 mg/L	100.0	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.00496 mg/L	0.005 mg/L	99.3	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	ND mg/L	----	ND	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.0256 mg/L	0.025 mg/L	102	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.0272 mg/L	0.025 mg/L	109	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.00473 mg/L	0.005 mg/L	94.6	70.0	130	----
Dissolved Metals (QCLot: 2201321)										
BF2500303-002	MS-LF-GW1_2025-08-28	Mercury, dissolved	7439-97-6	E509	0.0000899 mg/L	0 mg/L	89.9	70.0	130	----
Volatile Organic Compounds (QCLot: 2199633)										
BF2500303-001	LF-KP23-13_2025-08-28	Acetone	67-64-1	E611D	110 µg/L	100 µg/L	110	60.0	140	----
		Benzene	71-43-2	E611D	95.1 µg/L	100 µg/L	95.1	60.0	140	----
		Bromodichloromethane	75-27-4	E611D	86.9 µg/L	100 µg/L	86.9	60.0	140	----
		Bromoform	75-25-2	E611D	94.0 µg/L	100 µg/L	94.0	60.0	140	----
		Bromomethane	74-83-9	E611D	63.0 µg/L	100 µg/L	63.0	60.0	140	----
		Carbon disulfide	75-15-0	E611D	80.5 µg/L	100 µg/L	80.5	60.0	140	----
		Carbon tetrachloride	56-23-5	E611D	92.8 µg/L	100 µg/L	92.8	60.0	140	----
		Chlorobenzene	108-90-7	E611D	91.6 µg/L	100 µg/L	91.6	60.0	140	----
		Chloroethane	75-00-3	E611D	84.5 µg/L	100 µg/L	84.5	60.0	140	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 2199633) - continued										
BF2500303-001	LF-KP23-13_2025-08-28	Chloroform	67-66-3	E611D	89.6 µg/L	100 µg/L	89.6	60.0	140	----
		Chloromethane	74-87-3	E611D	82.7 µg/L	100 µg/L	82.7	60.0	140	----
		Dibromochloromethane	124-48-1	E611D	88.8 µg/L	100 µg/L	88.8	60.0	140	----
		Dibromoethane, 1,2-	106-93-4	E611D	74.6 µg/L	100 µg/L	74.6	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	94.1 µg/L	100 µg/L	94.1	60.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	96.1 µg/L	100 µg/L	96.1	60.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	96.7 µg/L	100 µg/L	96.7	60.0	140	----
		Dichlorodifluoromethane	75-71-8	E611D	72.2 µg/L	100 µg/L	72.2	60.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611D	88.9 µg/L	100 µg/L	88.9	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611D	84.0 µg/L	100 µg/L	84.0	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611D	90.6 µg/L	100 µg/L	90.6	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	89.0 µg/L	100 µg/L	89.0	60.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	91.6 µg/L	100 µg/L	91.6	60.0	140	----
		Dichloromethane	75-09-2	E611D	83.4 µg/L	100 µg/L	83.4	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611D	86.6 µg/L	100 µg/L	86.6	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	82.4 µg/L	100 µg/L	82.4	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	82.8 µg/L	100 µg/L	82.8	60.0	140	----
		Ethylbenzene	100-41-4	E611D	97.2 µg/L	100 µg/L	97.2	60.0	140	----
		Hexane, n-	110-54-3	E611D	90.3 µg/L	100 µg/L	90.3	60.0	140	----
		Hexanone, 2-	591-78-6	E611D	70 µg/L	100 µg/L	69.8	60.0	140	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	89 µg/L	100 µg/L	89.1	60.0	140	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	70 µg/L	100 µg/L	69.6	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	92.1 µg/L	100 µg/L	92.1	60.0	140	----
		Styrene	100-42-5	E611D	87.5 µg/L	100 µg/L	87.5	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	85.1 µg/L	100 µg/L	85.1	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	93.3 µg/L	100 µg/L	93.3	60.0	140	----
		Tetrachloroethylene	127-18-4	E611D	95.8 µg/L	100 µg/L	95.8	60.0	140	----
		Toluene	108-88-3	E611D	95.7 µg/L	100 µg/L	95.7	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	87.8 µg/L	100 µg/L	87.8	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	78.0 µg/L	100 µg/L	78.0	60.0	140	----
		Trichloroethylene	79-01-6	E611D	91.8 µg/L	100 µg/L	91.8	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611D	87.3 µg/L	100 µg/L	87.3	60.0	140	----
		Vinyl chloride	75-01-4	E611D	82.8 µg/L	100 µg/L	82.8	60.0	140	----
		Xylene, m+p-	179601-23-1	E611D	191 µg/L	200 µg/L	95.6	60.0	140	----
		Xylene, o-	95-47-6	E611D	95.8 µg/L	100 µg/L	95.8	60.0	140	----
Hydrocarbons (QCLot: 2199634)										
BF2500303-001	LF-KP23-13_2025-08-28	F1 (C6-C10)	----	E581.F1-L	1780 µg/L	2000 µg/L	88.8	60.0	140	----

Chain of Custody: 25 08 28_MS_Landfill_GW1

Client Info	Project Info	Laboratory Info	
Baffinland Iron Mine Corporation 2275 Upper Middle Rd E, Suite 300 Oakville, ON, L6H 0C3 **Phone:** 647-253-0596 x6016/6039/4131 **Email:** environment.coordinators@baffinland.com; environment.superintendents@baffinland.com	**Job Reference (Project):** MS_Landfill_GW1 **Task:** , Groundwater_MS_250827 **Site:** MS	**Lab Name:** ALS Waterloo **Contact:** Rick Hawthorne **Phone:** 519.886.6910 **Email:** Rick.Hawthorne@ALSGlobal.com	**Address:** Unit 1 - 60 Northland Road Waterloo, ON,N2V 2B8
Email Invoice: ap@baffinland.com; environment.superintendents@baffinland.com **Email EDD:** bim.equissa@baffinland.com **Email COA:** environment.labresults@baffinland.com	**Turn around Time:** Routine (R) **Sampler 1:** LG **Sampler 2:** JJ **Sampler 3:**	**ALS Quote #:** WT2020BIMC1000001 **ALS PO #:** 4500156571	**Lab Work Order #** (lab use only):

Sample Details				Field Data			Analysis Requested											
Sample ID (sys_sample_code)	**Location (sys_loc_code)**	**Sample Date and Time**	**Matrix**	**pH, Field (pH units)**	**Temperature, Field (deg C)**	**Total # of Containers**	**ALS_GW_Landfill**											
LF-KP23-13_2025-08-28	**LF-KP23-13**	**8/28/2025 12:05:00 PM**	**WG**	**7.34**	**2.8**	**10**	**X**											
MS-LF-GW1_2025-08-28	**MS-LF-GW1**	**8/28/2025 2:00:00 PM**	**WG**	**6.99**	**3.8**	**10**	**X**											

Relinquished by:	Bradley Rasmussen	**Date:**	
Additional Comments			
Initial Shipment Reception (lab use only)		**Final Shipment Reception** (lab use only)	
Received by:		**Received by:**	
Date/Time:		**Date/Time:**	

Baffinland

Chain of Custody: 25 08 28_MS_Landfill_GW1

Client Info	Project Info	Laboratory Info	
Baffinland Iron Mine Corporation 2275 Upper Middle Rd E, Suite 300 Oakville, ON, L6H 0C3 **Phone:** 647-253-0596 x6016/6039/4131 **Email:** environment.coordinators@baffinland.com; environment.superintendents@baffinland.com	**Job Reference (Project):** MS_Landfill_GW1 **Task:** , Groundwater_MS_250827 **Site:** MS	**Lab Name:** ALS Waterloo **Contact:** Rick Hawthorne **Phone:** 519.886.6910 **Email:** Rick.Hawthorne@ALSGlobal.com	**Address:** Unit 1 - 60 Northland Road Waterloo, ON,N2V 2B8
Email Invoice: ap@baffinland.com; environment.superintendents@baffinland.com **Email EDD:** bim.equissa@baffinland.com **Email COA:** environment.labresults@baffinland.com	**Turn around Time:** Routine (R) **Sampler 1:** LG **Sampler 2:** JJ **Sampler 3:**	**ALS Quote #:** WT2020BIMC1000001 **ALS PO #:** 4500156571	**La**

Environmental Division
Baffin Island
Work Order Reference
BF2500303

Telephone

Sample Details				Field Data			Analysis											
Sample ID (sys_sample_code)	**Location (sys_loc_code)**	**Sample Date and Time**	**Matrix**	**pH, Field (pH units)**	**Temperature, Field (deg C)**	**Total # of Containers**	**ALS_GW_Landfill**											
LF-KP23-13_2025-08-28	**LF-KP23-13**	**8/28/2025 12:05:00 PM**	**WG**	**7.34**	**2.8**	**10**	**X**											
MS-LF-GW1_2025-08-28	**MS-LF-GW1**	**8/28/2025 2:00:00 PM**	**WG**	**6.99**	**3.8**	**10**	**X**											

Relinquished by:	Bradley Rasmussen	**Date:**	
Additional Comments			
Initial Shipment Reception (lab use only)		**Final Shipment Reception** (lab use only)	
Received by:		**Received by:**	
Date/Time:		**Date/Time:**	4 Sept 25 9:00

6.6°C

mm-428
GC-740
N-181
OR-027
WW-003

CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	:	**BF2500304**			
Client	:	**Baffinland Iron Mines Corporation**	Laboratory	:	ALS Environmental - Baffin Island
Contact	:	Environmental Lab Results	Account Manager	:	Rick Hawthorne
Address	:	360 Oakville Place Dr Suite 300 Oakville Ontario Canada L6H 6K8	Address	:	Mary River, Qikqtani Region Baffin Island NU Canada
Telephone	:	----	Telephone	:	
Project	:	MS_Landfill_Groundwater	Date Samples Received	:	29-Aug-2025 07:45
PO	:	4500156571	Date Analysis Commenced	:	29-Aug-2025
C-O-C number	:	25 08 28_MS_Landfill_GW2	Issue Date	:	11-Sep-2025 09:42
Sampler	:	JJ, LG			
Site	:	----			
Quote number	:	2024-2025 Scope of Work			
No. of samples received	:	2			
No. of samples analysed	:	2			

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
- Guideline Comparison

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*
Andrea Armstrong		VOC, Waterloo, Ontario
Cedrick Velasco		Inorganics, Baffin Island, Nunavut
Danielle Gravel		Organics, Waterloo, Ontario
Jeremy Gingras		Organics, Waterloo, Ontario
Walt Kippenhuck		Inorganics, Waterloo, Ontario
Walt Kippenhuck		Metals, Waterloo, Ontario
Walt Kippenhuck		Centralized Prep, Waterloo, Ontario

No Breaches Found

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.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key: LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units
µg/L	micrograms per litre
µS/cm	microsiemens per centimetre

>: greater than.
<: less than.

Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).
For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit.

Qualifiers

Qualifier	Description
DLDS	Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity.
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).

Analytical Results Evaluation

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP22-01_2025-08-28 ----	QD-CC3_2025-08-28 ----	----	----	----	----	----
				Client sampling date / time	28-Aug-2025 15:25	28-Aug-2025 15:25	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
					BF2500304-001	BF2500304-002	----	----	----	----	----
					Result	Result	----	----	----	----	----
Sample Preparation											
Dissolved carbon filtration location	----	EP358/WT	-		field	field	----	----	----	----	----
Physical Tests											
Conductivity	----	E100/WT	µS/cm		2430	2410	----	----	----	----	----
pH	----	E108/BF	pH units		7.06	7.01	----	----	----	----	----
Solids, total dissolved [TDS]	----	E162/BF	mg/L		2020	2100	----	----	----	----	----
Solids, total suspended [TSS]	----	E160-L/BF	mg/L		<1.2	<1.2	----	----	----	----	----
Turbidity	----	E121/BF	NTU		1.40	1.47	----	----	----	----	----
Alkalinity, total (as CaCO3)	----	E290/WT	mg/L		325	327	----	----	----	----	----
Anions and Nutrients											
Ammonia, total (as N)	7664-41-7	E298/WT	mg/L		2.20	2.24	----	----	----	----	----
Bromide	24959-67-9	E235.Br/WT	mg/L		<0.50 DLDS	<0.50 DLDS	----	----	----	----	----
Chloride	16887-00-6	E235.Cl/WT	mg/L		88.4 DLDS	89.6 DLDS	----	----	----	----	----
Fluoride	16984-48-8	E235.F/WT	mg/L		<0.100 DLDS	<0.100 DLDS	----	----	----	----	----
Kjeldahl nitrogen, total [TKN]	----	E318/WT	mg/L		2.99	3.16	----	----	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3/WT	mg/L		<0.100 DLDS	<0.100 DLDS	----	----	----	----	----
Nitrite (as N)	14797-65-0	E235.NO2/WT	mg/L		<0.050 DLDS	<0.050 DLDS	----	----	----	----	----
Phosphorus, total	7723-14-0	E372-U/WT	mg/L		0.0817	0.0804	----	----	----	----	----
Phosphorus, total dissolved	7723-14-0	E375-T/WT	mg/L		0.0746	0.0754	----	----	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	mg/L		1030 DLDS	1040 DLDS	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP22-01_2025-08-28 ----	QD-CC3_2025-08-28 ----	----	----	----	----	----
				Client sampling date / time	28-Aug-2025 15:25	28-Aug-2025 15:25	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
					BF2500304-001	**BF2500304-002**	----	----	----	----	----
					Result	Result	----	----	----	----	----
Organic / Inorganic Carbon											
Carbon, dissolved organic [DOC]	----	E358-L/WT	mg/L		10.7	10.8	----	----	----	----	----
Dissolved Metals											
Aluminum, dissolved	7429-90-5	E421/WT	mg/L		<0.0100 DLHC	<0.0100 DLHC	----	----	----	----	----
Antimony, dissolved	7440-36-0	E421/WT	mg/L		<0.00100 DLHC	<0.00100 DLHC	----	----	----	----	----
Arsenic, dissolved	7440-38-2	E421/WT	mg/L		0.00107 DLHC	0.00115 DLHC	----	----	----	----	----
Barium, dissolved	7440-39-3	E421/WT	mg/L		0.0518 DLHC	0.0520 DLHC	----	----	----	----	----
Beryllium, dissolved	7440-41-7	E421/WT	mg/L		<0.000200 DLHC	<0.000200 DLHC	----	----	----	----	----
Bismuth, dissolved	7440-69-9	E421/WT	mg/L		<0.000500 DLHC	<0.000500 DLHC	----	----	----	----	----
Boron, dissolved	7440-42-8	E421/WT	mg/L		1.76 DLHC	1.77 DLHC	----	----	----	----	----
Cadmium, dissolved	7440-43-9	E421/WT	mg/L		0.0000620 DLHC	0.0000810 DLHC	----	----	----	----	----
Calcium, dissolved	7440-70-2	E421/WT	mg/L		485 DLHC	488 DLHC	----	----	----	----	----
Cesium, dissolved	7440-46-2	E421/WT	mg/L		<0.000100 DLHC	<0.000100 DLHC	----	----	----	----	----
Chromium, dissolved	7440-47-3	E421/WT	mg/L		<0.00500 DLHC	<0.00500 DLHC	----	----	----	----	----
Cobalt, dissolved	7440-48-4	E421/WT	mg/L		0.00682 DLHC	0.00668 DLHC	----	----	----	----	----
Copper, dissolved	7440-50-8	E421/WT	mg/L		<0.00200 DLHC	<0.00200 DLHC	----	----	----	----	----
Iron, dissolved	7439-89-6	E421/WT	mg/L		0.242 DLHC	0.233 DLHC	----	----	----	----	----
Lead, dissolved	7439-92-1	E421/WT	mg/L		<0.000500 DLHC	<0.000500 DLHC	----	----	----	----	----
Lithium, dissolved	7439-93-2	E421/WT	mg/L		0.143 DLHC	0.135 DLHC	----	----	----	----	----
Magnesium, dissolved	7439-95-4	E421/WT	mg/L		45.8 DLHC	47.7 DLHC	----	----	----	----	----
Manganese, dissolved	7439-96-5	E421/WT	mg/L		1.76 DLHC	1.76 DLHC	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP22-01_2025-08-28 ----	QD-CC3_2025-08-28 ----	----	----	----	----	----
				Client sampling date / time	28-Aug-2025 15:25	28-Aug-2025 15:25	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
					BF2500304-001	**BF2500304-002**	----	----	----	----	----
					Result	Result	----	----	----	----	----
Dissolved Metals											
Mercury, dissolved	7439-97-6	E509/WT	mg/L		<0.0000050	<0.0000050	----	----	----	----	----
Molybdenum, dissolved	7439-98-7	E421/WT	mg/L		0.00639 DLHC	0.00639 DLHC	----	----	----	----	----
Nickel, dissolved	7440-02-0	E421/WT	mg/L		0.0738 DLHC	0.0742 DLHC	----	----	----	----	----
Phosphorus, dissolved	7723-14-0	E421/WT	mg/L		<0.500 DLHC	<0.500 DLHC	----	----	----	----	----
Potassium, dissolved	7440-09-7	E421/WT	mg/L		20.0 DLHC	20.5 DLHC	----	----	----	----	----
Rubidium, dissolved	7440-17-7	E421/WT	mg/L		0.00972 DLHC	0.00915 DLHC	----	----	----	----	----
Selenium, dissolved	7782-49-2	E421/WT	mg/L		<0.000500 DLHC	<0.000500 DLHC	----	----	----	----	----
Silicon, dissolved	7440-21-3	E421/WT	mg/L		5.63 DLHC	5.57 DLHC	----	----	----	----	----
Silver, dissolved	7440-22-4	E421/WT	mg/L		<0.000100 DLHC	<0.000100 DLHC	----	----	----	----	----
Sodium, dissolved	7440-23-5	E421/WT	mg/L		45.5 DLHC	46.6 DLHC	----	----	----	----	----
Strontium, dissolved	7440-24-6	E421/WT	mg/L		1.38 DLHC	1.40 DLHC	----	----	----	----	----
Sulfur, dissolved	7704-34-9	E421/WT	mg/L		372 DLHC	367 DLHC	----	----	----	----	----
Tellurium, dissolved	13494-80-9	E421/WT	mg/L		<0.00200 DLHC	<0.00200 DLHC	----	----	----	----	----
Thallium, dissolved	7440-28-0	E421/WT	mg/L		<0.000100 DLHC	<0.000100 DLHC	----	----	----	----	----
Thorium, dissolved	7440-29-1	E421/WT	mg/L		<0.00100 DLHC	<0.00100 DLHC	----	----	----	----	----
Tin, dissolved	7440-31-5	E421/WT	mg/L		<0.00100 DLHC	<0.00100 DLHC	----	----	----	----	----
Titanium, dissolved	7440-32-6	E421/WT	mg/L		<0.00300 DLHC	<0.00300 DLHC	----	----	----	----	----
Tungsten, dissolved	7440-33-7	E421/WT	mg/L		<0.00100 DLHC	<0.00100 DLHC	----	----	----	----	----
Uranium, dissolved	7440-61-1	E421/WT	mg/L		0.0321 DLHC	0.0324 DLHC	----	----	----	----	----
Vanadium, dissolved	7440-62-2	E421/WT	mg/L		<0.00500 DLHC	<0.00500 DLHC	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP22-01_2025-08-28 ----	QD-CC3_2025-08-28 ----	----	----	----	----	----
				Client sampling date / time	28-Aug-2025 15:25	28-Aug-2025 15:25	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
					BF2500304-001	**BF2500304-002**	----	----	----	----	----
					Result	Result	----	----	----	----	----
Dissolved Metals											
Zinc, dissolved	7440-66-6	E421/WT	mg/L		<0.0100 DLHC	<0.0100 DLHC	----	----	----	----	----
Zirconium, dissolved	7440-67-7	E421/WT	mg/L		<0.00300 DLHC	<0.00300 DLHC	----	----	----	----	----
Dissolved mercury filtration location	----	EP509/WT	-		Field	Field	----	----	----	----	----
Dissolved metals filtration location	----	EP421/WT	-		Field	Field	----	----	----	----	----
Volatile Organic Compounds											
Acetone	67-64-1	E611D/WT	µg/L		<20	<20	----	----	----	----	----
Benzene	71-43-2	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Bromodichloromethane	75-27-4	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Bromoform	75-25-2	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Bromomethane	74-83-9	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
BTEX, total	----	E611D/WT	µg/L		<1.0	<1.0	----	----	----	----	----
Carbon disulfide	75-15-0	E611D/WT	µg/L		<1.0	<1.0	----	----	----	----	----
Carbon tetrachloride	56-23-5	E611D/WT	µg/L		<0.20	<0.20	----	----	----	----	----
Chlorobenzene	108-90-7	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Chloroethane	75-00-3	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Chloroform	67-66-3	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Chloromethane	74-87-3	E611D/WT	µg/L		<2.0	<2.0	----	----	----	----	----
Dibromochloromethane	124-48-1	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Dibromoethane, 1,2-	106-93-4	E611D/WT	µg/L		<0.20	<0.20	----	----	----	----	----
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP22-01_2025-08-28 ----	QD-CC3_2025-08-28 ----	----	----	----	----	----
				Client sampling date / time	28-Aug-2025 15:25	28-Aug-2025 15:25	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
					BF2500304-001	BF2500304-002	----	----	----	----	----
					Result	Result	----	----	----	----	----
Volatile Organic Compounds											
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----
Dichlorodifluoromethane	75-71-8	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----
Dichloroethane, 1,1-	75-34-3	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----
Dichloroethane, 1,2-	107-06-2	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----
Dichloroethylene, 1,1-	75-35-4	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	µg/L	1.04	1.03	----	----	----	----	----
Dichloroethylene, cis+trans-1,2-	540-59-0	E611D/WT	µg/L	1.70	1.68	----	----	----	----	----
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	µg/L	0.66	0.65	----	----	----	----	----
Dichloromethane	75-09-2	E611D/WT	µg/L	<1.0	<1.0	----	----	----	----	----
Dichloropropane, 1,2-	78-87-5	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	µg/L	<0.30	<0.30	----	----	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	µg/L	<0.5	<0.5	----	----	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	µg/L	<0.30	<0.30	----	----	----	----	----
Ethylbenzene	100-41-4	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----
Hexane, n-	110-54-3	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----
Hexanone, 2-	591-78-6	E611D/WT	µg/L	<20	<20	----	----	----	----	----
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	µg/L	<20	<20	----	----	----	----	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	µg/L	<20	<20	----	----	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	µg/L	<0.50	<0.50	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP22-01_2025-08-28 ----	QD-CC3_2025-08-28 ----	----	----	----	----	----
				Client sampling date / time	28-Aug-2025 15:25	28-Aug-2025 15:25	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
					BF2500304-001	BF2500304-002	----	----	----	----	----
					Result	Result	----	----	----	----	----
Volatile Organic Compounds											
Styrene	100-42-5	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Tetrachloroethylene	127-18-4	E611D/WT	µg/L		14.7	14.4	----	----	----	----	----
Toluene	108-88-3	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Trichloroethylene	79-01-6	E611D/WT	µg/L		7.53	7.33	----	----	----	----	----
Trichlorofluoromethane	75-69-4	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Trihalomethanes [THMs], total	----	E611D/WT	µg/L		<1.0	<1.0	----	----	----	----	----
Vinyl chloride	75-01-4	E611D/WT	µg/L		<0.20	<0.20	----	----	----	----	----
Xylene, m+p-	179601-23-1	E611D/WT	µg/L		<0.40	<0.40	----	----	----	----	----
Xylene, o-	95-47-6	E611D/WT	µg/L		<0.30	<0.30	----	----	----	----	----
Xylenes, total	1330-20-7	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Hydrocarbons											
F1 (C6-C10)	----	E581.F1-L/WT	µg/L		<25	<25	----	----	----	----	----
F2 (C10-C16)	----	E601/WT	µg/L		<100	<100	----	----	----	----	----
F3 (C16-C34)	----	E601/WT	µg/L		<250	<250	----	----	----	----	----
F4 (C34-C50)	----	E601/WT	µg/L		<250	<250	----	----	----	----	----
F1-BTEX	----	EC580/WT	µg/L		<25	<25	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP22-01_2025-08-28 ----	QD-CC3_2025-08-28 ----	----	----	----	----	----
				Client sampling date / time	28-Aug-2025 15:25	28-Aug-2025 15:25	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
					BF2500304-001	BF2500304-002	----	----	----	----	----
					Result	Result	----	----	----	----	----
Hydrocarbons											
Hydrocarbons, total (C6-C50)	n/a	EC581/WT	µg/L		<370	<370	----	----	----	----	----
Hydrocarbons Surrogates											
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/WT	%		91.8	91.4	----	----	----	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.F1-L/WT	%		68.8	70.2	----	----	----	----	----
Volatile Organic Compounds Surrogates											
Bromofluorobenzene, 4-	460-00-4	E611D/WT	%		89.6	89.7	----	----	----	----	----
Difluorobenzene, 1,4-	540-36-3	E611D/WT	%		97.7	97.9	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons											
Acenaphthene	83-32-9	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Acenaphthylene	208-96-8	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Acridine	260-94-6	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Anthracene	120-12-7	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Benz(a)anthracene	56-55-3	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Benzo(a)pyrene	50-32-8	E641A-L/WT	µg/L		<0.0050	<0.0050	----	----	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Benzo(b+j+k)fluoranthene	n/a	E641A-L/WT	µg/L		<0.015	<0.015	----	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Benzo(k)fluoranthene	207-08-9	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Chrysene	218-01-9	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A-L/WT	µg/L		<0.0050	<0.0050	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	LF-KP22-01_2025-08-28 ----	QD-CC3_2025-08-28 ----	----	----	----	----	----
				Client sampling date / time	28-Aug-2025 15:25	28-Aug-2025 15:25	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
					BF2500304-001	BF2500304-002	----	----	----	----	----
					Result	Result	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons											
Fluoranthene	206-44-0	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Fluorene	86-73-7	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A-L/WT	µg/L		0.040	0.042	----	----	----	----	----
Methylnaphthalene, 1+2-	----	E641A-L/WT	µg/L		0.051	0.054	----	----	----	----	----
Methylnaphthalene, 2-	91-57-6	E641A-L/WT	µg/L		0.011	0.012	----	----	----	----	----
Naphthalene	91-20-3	E641A-L/WT	µg/L		<0.078 DLM	<0.085 DLM	----	----	----	----	----
Perylene	198-55-0	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Phenanthrene	85-01-8	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Pyrene	129-00-0	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Quinoline	91-22-5	E641A-L/WT	µg/L		<0.094 DLM	<0.094 DLM	----	----	----	----	----
B(a)P total potency equivalents [B(a)P TPE]	----	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates											
Chrysene-d12	1719-03-5	E641A-L/WT	%		100	102	----	----	----	----	----
Naphthalene-d8	1146-65-2	E641A-L/WT	%		104	106	----	----	----	----	----
Phenanthrene-d10	1517-22-2	E641A-L/WT	%		104	106	----	----	----	----	----

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

Summary of Guideline Limits

Analyte	CAS Number	Unit	FEQG_BTEX	NWB_LFILL (Table 7 Effluent)					
Sample Preparation									
Dissolved carbon filtration location	----	-	----	----	----	----	----	----	----
Physical Tests									
Conductivity	----	µS/cm	----	----	----	----	----	----	----
pH	----	pH units	----	**6 - 9.5 pH units**	----	----	----	----	----
Solids, total dissolved [TDS]		mg/L	----	----	----	----	----	----	----
Solids, total suspended [TSS]		mg/L	----	**30 mg/L**	----	----	----	----	----
Turbidity	----	NTU	----	----	----	----	----	----	----
Alkalinity, total (as CaCO3)		mg/L	----	----	----	----	----	----	----
Anions and Nutrients									
Ammonia, total (as N)	7664-41-7	mg/L	----	----	----	----	----	----	----
Bromide	24959-67-9	mg/L	----	----	----	----	----	----	----
Chloride	16887-00-6	mg/L	----	----	----	----	----	----	----
Fluoride	16984-48-8	mg/L	----	----	----	----	----	----	----
Kjeldahl nitrogen, total [TKN]		mg/L	----	----	----	----	----	----	----
Nitrate (as N)	14797-55-8	mg/L	----	----	----	----	----	----	----
Nitrite (as N)	14797-65-0	mg/L	----	----	----	----	----	----	----
Phosphorus, total	7723-14-0	mg/L	----	----	----	----	----	----	----
Phosphorus, total dissolved	7723-14-0	mg/L	----	----	----	----	----	----	----
Sulfate (as SO4)	14808-79-8	mg/L	----	----	----	----	----	----	----
Organic / Inorganic Carbon									
Carbon, dissolved organic [DOC]		mg/L	----	----	----	----	----	----	----
Dissolved Metals									
Aluminum, dissolved	7429-90-5	mg/L	----	----	----	----	----	----	----

Antimony, dissolved	7440-36-0	mg/L	----	----	----	----	----	----	----
Arsenic, dissolved	7440-38-2	mg/L	----	----	----	----	----	----	----
Barium, dissolved	7440-39-3	mg/L	----	----	----	----	----	----	----
Beryllium, dissolved	7440-41-7	mg/L	----	----	----	----	----	----	----
Bismuth, dissolved	7440-69-9	mg/L	----	----	----	----	----	----	----
Boron, dissolved	7440-42-8	mg/L	----	----	----	----	----	----	----
Cadmium, dissolved	7440-43-9	mg/L	----	----	----	----	----	----	----
Calcium, dissolved	7440-70-2	mg/L	----	----	----	----	----	----	----
Cesium, dissolved	7440-46-2	mg/L	----	----	----	----	----	----	----
Chromium, dissolved	7440-47-3	mg/L	----	----	----	----	----	----	----
Cobalt, dissolved	7440-48-4	mg/L	----	----	----	----	----	----	----
Copper, dissolved	7440-50-8	mg/L	----	----	----	----	----	----	----
Iron, dissolved	7439-89-6	mg/L	----	----	----	----	----	----	----
Lead, dissolved	7439-92-1	mg/L	----	----	----	----	----	----	----
Lithium, dissolved	7439-93-2	mg/L	----	----	----	----	----	----	----
Magnesium, dissolved	7439-95-4	mg/L	----	----	----	----	----	----	----
Manganese, dissolved	7439-96-5	mg/L	----	----	----	----	----	----	----
Mercury, dissolved	7439-97-6	mg/L	----	----	----	----	----	----	----
Molybdenum, dissolved	7439-98-7	mg/L	----	----	----	----	----	----	----
Nickel, dissolved	7440-02-0	mg/L	----	----	----	----	----	----	----
Phosphorus, dissolved	7723-14-0	mg/L	----	----	----	----	----	----	----
Potassium, dissolved	7440-09-7	mg/L	----	----	----	----	----	----	----
Rubidium, dissolved	7440-17-7	mg/L	----	----	----	----	----	----	----
Selenium, dissolved	7782-49-2	mg/L	----	----	----	----	----	----	----
Silicon, dissolved	7440-21-3	mg/L	----	----	----	----	----	----	----
Silver, dissolved	7440-22-4	mg/L	----	----	----	----	----	----	----
Sodium, dissolved	7440-23-5	mg/L	----	----	----	----	----	----	----

Strontium, dissolved	7440-24-6	mg/L	----	----	----	----	----	----	----
Sulfur, dissolved	7704-34-9	mg/L	----	----	----	----	----	----	----
Tellurium, dissolved	13494-80-9	mg/L	----	----	----	----	----	----	----
Thallium, dissolved	7440-28-0	mg/L	----	----	----	----	----	----	----
Thorium, dissolved	7440-29-1	mg/L	----	----	----	----	----	----	----
Tin, dissolved	7440-31-5	mg/L	----	----	----	----	----	----	----
Titanium, dissolved	7440-32-6	mg/L	----	----	----	----	----	----	----
Tungsten, dissolved	7440-33-7	mg/L	----	----	----	----	----	----	----
Uranium, dissolved	7440-61-1	mg/L	----	----	----	----	----	----	----
Vanadium, dissolved	7440-62-2	mg/L	----	----	----	----	----	----	----
Zinc, dissolved	7440-66-6	mg/L	----	----	----	----	----	----	----
Zirconium, dissolved	7440-67-7	mg/L	----	----	----	----	----	----	----
Dissolved mercury filtration location	----	-	----	----	----	----	----	----	----
Dissolved metals filtration location	----	-	----	----	----	----	----	----	----
Volatile Organic Compounds									
Acetone	67-64-1	µg/L	----	----	----	----	----	----	----
Benzene	71-43-2	µg/L	**590 µg/L**	----	----	----	----	----	----
Bromodichloromethane	75-27-4	µg/L	----	----	----	----	----	----	----
Bromoform	75-25-2	µg/L	----	----	----	----	----	----	----
Bromomethane	74-83-9	µg/L	----	----	----	----	----	----	----
BTEX, total		µg/L	----	----	----	----	----	----	----
Carbon disulfide	75-15-0	µg/L	----	----	----	----	----	----	----
Carbon tetrachloride	56-23-5	µg/L	----	----	----	----	----	----	----
Chlorobenzene	108-90-7	µg/L	----	----	----	----	----	----	----
Chloroethane	75-00-3	µg/L	----	----	----	----	----	----	----
Chloroform	67-66-3	µg/L	----	----	----	----	----	----	----
Chloromethane	74-87-3	µg/L	----	----	----	----	----	----	----

Dibromochloromethane	124-48-1	µg/L	----	----	----	----	----	----	----	----
Dibromoethane, 1,2-	106-93-4	µg/L	----	----	----	----	----	----	----	----
Dichlorobenzene, 1,2-	95-50-1	µg/L	----	----	----	----	----	----	----	----
Dichlorobenzene, 1,3-	541-73-1	µg/L	----	----	----	----	----	----	----	----
Dichlorobenzene, 1,4-	106-46-7	µg/L	----	----	----	----	----	----	----	----
Dichlorodifluoromethane	75-71-8	µg/L	----	----	----	----	----	----	----	----
Dichloroethane, 1,1-	75-34-3	µg/L	----	----	----	----	----	----	----	----
Dichloroethane, 1,2-	107-06-2	µg/L	----	----	----	----	----	----	----	----
Dichloroethylene, 1,1-	75-35-4	µg/L	----	----	----	----	----	----	----	----
Dichloroethylene, cis-1,2-	156-59-2	µg/L	----	----	----	----	----	----	----	----
Dichloroethylene, cis+trans-1,2-	540-59-0	µg/L	----	----	----	----	----	----	----	----
Dichloroethylene, trans-1,2-	156-60-5	µg/L	----	----	----	----	----	----	----	----
Dichloromethane	75-09-2	µg/L	----	----	----	----	----	----	----	----
Dichloropropane, 1,2-	78-87-5	µg/L	----	----	----	----	----	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	µg/L	----	----	----	----	----	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	µg/L	----	----	----	----	----	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	µg/L	----	----	----	----	----	----	----	----
Ethylbenzene	100-41-4	µg/L	**70 µg/L**	----	----	----	----	----	----	----
Hexane, n-	110-54-3	µg/L	----	----	----	----	----	----	----	----
Hexanone, 2-	591-78-6	µg/L	----	----	----	----	----	----	----	----
Methyl ethyl ketone [MEK]	78-93-3	µg/L	----	----	----	----	----	----	----	----
Methyl isobutyl ketone [MIBK]	108-10-1	µg/L	----	----	----	----	----	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	µg/L	----	----	----	----	----	----	----	----
Styrene	100-42-5	µg/L	----	----	----	----	----	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	µg/L	----	----	----	----	----	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	µg/L	----	----	----	----	----	----	----	----
Tetrachloroethylene	127-18-4	µg/L	----	----	----	----	----	----	----	----

Toluene	108-88-3	µg/L	**30 µg/L**	----	----	----	----	----	----
Trichloroethane, 1,1,1-	71-55-6	µg/L	----	----	----	----	----	----	----
Trichloroethane, 1,1,2-	79-00-5	µg/L	----	----	----	----	----	----	----
Trichloroethylene	79-01-6	µg/L	----	----	----	----	----	----	----
Trichlorofluoromethane	75-69-4	µg/L	----	----	----	----	----	----	----
Trihalomethanes [THMs], total		µg/L	----	----	----	----	----	----	----
Vinyl chloride	75-01-4	µg/L	----	----	----	----	----	----	----
Xylene, m+p-	179601-23-1	µg/L	**70 µg/L**	----	----	----	----	----	----
Xylene, o-	95-47-6	µg/L	**70 µg/L**	----	----	----	----	----	----
Xylenes, total	1330-20-7	µg/L	**70 µg/L**	----	----	----	----	----	----
Hydrocarbons									
F1 (C6-C10)		µg/L	----	----	----	----	----	----	----
F2 (C10-C16)	----	µg/L	----	----	----	----	----	----	----
F3 (C16-C34)	----	µg/L	----	----	----	----	----	----	----
F4 (C34-C50)	----	µg/L	----	----	----	----	----	----	----
F1-BTEX		µg/L	----	----	----	----	----	----	----
Hydrocarbons, total (C6-C50)	n/a	µg/L	----	----	----	----	----	----	----
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	%	----	----	----	----	----	----	----
Bromofluorobenzene, 4-	460-00-4	%	----	----	----	----	----	----	----
Dichlorotoluene, 3,4-	95-75-0	%	----	----	----	----	----	----	----
Difluorobenzene, 1,4-	540-36-3	%	----	----	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons									
Acenaphthene	83-32-9	µg/L	----	----	----	----	----	----	----
Acenaphthylene	208-96-8	µg/L	----	----	----	----	----	----	----
Acridine	260-94-6	µg/L	----	----	----	----	----	----	----
Anthracene	120-12-7	µg/L	----	----	----	----	----	----	----
Benz(a)anthracene	56-55-3	µg/L	----	----	----	----	----	----	----

Benzo(a)pyrene	50-32-8	µg/L	----	----	----	----	----	----	----
Benzo(b+j)fluoranthene	n/a	µg/L	----	----	----	----	----	----	----
Benzo(b+j+k)fluoranthene	n/a	µg/L	----	----	----	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	µg/L	----	----	----	----	----	----	----
Benzo(k)fluoranthene	207-08-9	µg/L	----	----	----	----	----	----	----
Chrysene	218-01-9	µg/L	----	----	----	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	µg/L	----	----	----	----	----	----	----
Fluoranthene	206-44-0	µg/L	----	----	----	----	----	----	----
Fluorene	86-73-7	µg/L	----	----	----	----	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	µg/L	----	----	----	----	----	----	----
Methylnaphthalene, 1-	90-12-0	µg/L	----	----	----	----	----	----	----
Methylnaphthalene, 1+2-	----	µg/L	----	----	----	----	----	----	----
Methylnaphthalene, 2-	91-57-6	µg/L	----	----	----	----	----	----	----
Naphthalene	91-20-3	µg/L	----	----	----	----	----	----	----
Perylene	198-55-0	µg/L	----	----	----	----	----	----	----
Phenanthrene	85-01-8	µg/L	----	----	----	----	----	----	----
Pyrene	129-00-0	µg/L	----	----	----	----	----	----	----
Quinoline	91-22-5	µg/L	----	----	----	----	----	----	----
B(a)P total potency equivalents [B(a)P TPE]		µg/L	----	----	----	----	----	----	----
Chrysene-d12	1719-03-5	%	----	----	----	----	----	----	----
Naphthalene-d8	1146-65-2	%	----	----	----	----	----	----	----
Phenanthrene-d10	1517-22-2	%	----	----	----	----	----	----	----

CERTIFICATE OF ANALYSIS

Work Order	:	**BF2500304**			
Client	:	**Baffinland Iron Mines Corporation**	Laboratory	:	ALS Environmental - Baffin Island
Contact	:	Environmental Lab Results	Account Manager	:	Rick Hawthorne
Address	:	360 Oakville Place Dr Suite 300 Oakville Ontario Canada L6H 6K8	Address	:	Mary River, Qikqtani Region Baffin Island NU Canada
Telephone	:	----	E-mail	:	Rick.Hawthorne@ALSGlobal.com
Project	:	MS_Landfill_Groundwater	Telephone	:	
PO	:	4500156571	Date Samples Received	:	29-Aug-2025 07:45
C-O-C number	:	25 08 28_MS_Landfill_GW2	Date Analysis Commenced	:	29-Aug-2025
Sampler	:	JJ, LG	Issue Date	:	11-Sep-2025 09:42
Site	:	----			
Quote number	:	2024-2025 Scope of Work			
No. of samples received	:	2			
No. of samples analysed	:	2			

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

Signatories	*Position*	*Laboratory Department*
Andrea Armstrong		VOC, Waterloo, Ontario
Cedrick Velasco		Inorganics, Baffin Island, Nunavut
Danielle Gravel		Organics, Waterloo, Ontario
Jeremy Gingras		Organics, Waterloo, Ontario
Walt Kippenhuck		Inorganics, Waterloo, Ontario
Walt Kippenhuck		Metals, Waterloo, Ontario
Walt Kippenhuck		Centralized Prep, Waterloo, Ontario

General Comments

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

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

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

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

Key: CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.
LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units
µg/L	micrograms per litre
µS/cm	microsiemens per centimetre

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

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Qualifiers

Qualifier	Description
DLDS	Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity.
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP22-01_2025-08-28 ----	QD-CC3_2025-08-28 ----	----	----	----
					Client sampling date / time	28-Aug-2025 15:25	28-Aug-2025 15:25	----	----	----
						BF2500304-001	BF2500304-002	----	----	----
						Result	Result	----	----	----
Sample Preparation										
Dissolved carbon filtration location	----	EP358/WT	-	-		field	field	----	----	----
Physical Tests										
Conductivity	----	E100/WT	1.0	µS/cm		2430	2410	----	----	----
pH	----	E108/BF	0.10	pH units		7.06	7.01	----	----	----
Solids, total dissolved [TDS]	----	E162/BF	10	mg/L		2020	2100	----	----	----
Solids, total suspended [TSS]	----	E160-L/BF	1.0	mg/L		<1.2	<1.2	----	----	----
Turbidity	----	E121/BF	0.10	NTU		1.40	1.47	----	----	----
Alkalinity, total (as CaCO3)	----	E290/WT	2.0	mg/L		325	327	----	----	----
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/WT	0.0050	mg/L		2.20	2.24	----	----	----
Bromide	24959-67-9	E235.Br/WT	0.10	mg/L		<0.50 DLDS	<0.50 DLDS	----	----	----
Chloride	16887-00-6	E235.Cl/WT	0.50	mg/L		88.4 DLDS	89.6 DLDS	----	----	----
Fluoride	16984-48-8	E235.F/WT	0.020	mg/L		<0.100 DLDS	<0.100 DLDS	----	----	----
Kjeldahl nitrogen, total [TKN]	----	E318/WT	0.050	mg/L		2.99	3.16	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3/WT	0.020	mg/L		<0.100 DLDS	<0.100 DLDS	----	----	----
Nitrite (as N)	14797-65-0	E235.NO2/WT	0.010	mg/L		<0.050 DLDS	<0.050 DLDS	----	----	----
Phosphorus, total	7723-14-0	E372-U/WT	0.0020	mg/L		0.0817	0.0804	----	----	----
Phosphorus, total dissolved	7723-14-0	E375-T/WT	0.0020	mg/L		0.0746	0.0754	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	0.30	mg/L		1030 DLDS	1040 DLDS	----	----	----
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/WT	0.50	mg/L		10.7	10.8	----	----	----

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Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP22-01_2025-08-28 ----	QD-CC3_2025-08-28 ----	----	----	----
					Client sampling date / time	28-Aug-2025 15:25	28-Aug-2025 15:25	----	----	----
						BF2500304-001	BF2500304-002	----	----	----
						Result	Result	----	----	----
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/WT	0.0010	mg/L		<0.0100 DLHC	<0.0100 DLHC	----	----	----
Antimony, dissolved	7440-36-0	E421/WT	0.00010	mg/L		<0.00100 DLHC	<0.00100 DLHC	----	----	----
Arsenic, dissolved	7440-38-2	E421/WT	0.00010	mg/L		0.00107 DLHC	0.00115 DLHC	----	----	----
Barium, dissolved	7440-39-3	E421/WT	0.00010	mg/L		0.0518 DLHC	0.0520 DLHC	----	----	----
Beryllium, dissolved	7440-41-7	E421/WT	0.000020	mg/L		<0.000200 DLHC	<0.000200 DLHC	----	----	----
Bismuth, dissolved	7440-69-9	E421/WT	0.000050	mg/L		<0.000500 DLHC	<0.000500 DLHC	----	----	----
Boron, dissolved	7440-42-8	E421/WT	0.010	mg/L		1.76 DLHC	1.77 DLHC	----	----	----
Cadmium, dissolved	7440-43-9	E421/WT	0.0000050	mg/L		0.0000620 DLHC	0.0000810 DLHC	----	----	----
Calcium, dissolved	7440-70-2	E421/WT	0.050	mg/L		485 DLHC	488 DLHC	----	----	----
Cesium, dissolved	7440-46-2	E421/WT	0.000010	mg/L		<0.000100 DLHC	<0.000100 DLHC	----	----	----
Chromium, dissolved	7440-47-3	E421/WT	0.00050	mg/L		<0.00500 DLHC	<0.00500 DLHC	----	----	----
Cobalt, dissolved	7440-48-4	E421/WT	0.00010	mg/L		0.00682 DLHC	0.00668 DLHC	----	----	----
Copper, dissolved	7440-50-8	E421/WT	0.00020	mg/L		<0.00200 DLHC	<0.00200 DLHC	----	----	----
Iron, dissolved	7439-89-6	E421/WT	0.010	mg/L		0.242 DLHC	0.233 DLHC	----	----	----
Lead, dissolved	7439-92-1	E421/WT	0.000050	mg/L		<0.000500 DLHC	<0.000500 DLHC	----	----	----
Lithium, dissolved	7439-93-2	E421/WT	0.0010	mg/L		0.143 DLHC	0.135 DLHC	----	----	----
Magnesium, dissolved	7439-95-4	E421/WT	0.0050	mg/L		45.8 DLHC	47.7 DLHC	----	----	----
Manganese, dissolved	7439-96-5	E421/WT	0.00010	mg/L		1.76 DLHC	1.76 DLHC	----	----	----
Mercury, dissolved	7439-97-6	E509/WT	0.0000050	mg/L		<0.0000050	<0.0000050	----	----	----
Molybdenum, dissolved	7439-98-7	E421/WT	0.000050	mg/L		0.00639 DLHC	0.00639 DLHC	----	----	----
Nickel, dissolved	7440-02-0	E421/WT	0.00050	mg/L		0.0738 DLHC	0.0742 DLHC	----	----	----

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Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP22-01_2025-08-28 ----	QD-CC3_2025-08-28 ----	----	----	----
					Client sampling date / time	28-Aug-2025 15:25	28-Aug-2025 15:25	----	----	----
						BF2500304-001	BF2500304-002	----	----	----
						Result	Result	----	----	----
Dissolved Metals										
Phosphorus, dissolved	7723-14-0	E421/WT	0.050	mg/L		<0.500 DLHC	<0.500 DLHC	----	----	----
Potassium, dissolved	7440-09-7	E421/WT	0.050	mg/L		20.0 DLHC	20.5 DLHC	----	----	----
Rubidium, dissolved	7440-17-7	E421/WT	0.00020	mg/L		0.00972 DLHC	0.00915 DLHC	----	----	----
Selenium, dissolved	7782-49-2	E421/WT	0.000050	mg/L		<0.000500 DLHC	<0.000500 DLHC	----	----	----
Silicon, dissolved	7440-21-3	E421/WT	0.050	mg/L		5.63 DLHC	5.57 DLHC	----	----	----
Silver, dissolved	7440-22-4	E421/WT	0.000010	mg/L		<0.000100 DLHC	<0.000100 DLHC	----	----	----
Sodium, dissolved	7440-23-5	E421/WT	0.050	mg/L		45.5 DLHC	46.6 DLHC	----	----	----
Strontium, dissolved	7440-24-6	E421/WT	0.00020	mg/L		1.38 DLHC	1.40 DLHC	----	----	----
Sulfur, dissolved	7704-34-9	E421/WT	0.50	mg/L		372 DLHC	367 DLHC	----	----	----
Tellurium, dissolved	13494-80-9	E421/WT	0.00020	mg/L		<0.00200 DLHC	<0.00200 DLHC	----	----	----
Thallium, dissolved	7440-28-0	E421/WT	0.000010	mg/L		<0.000100 DLHC	<0.000100 DLHC	----	----	----
Thorium, dissolved	7440-29-1	E421/WT	0.00010	mg/L		<0.00100 DLHC	<0.00100 DLHC	----	----	----
Tin, dissolved	7440-31-5	E421/WT	0.00010	mg/L		<0.00100 DLHC	<0.00100 DLHC	----	----	----
Titanium, dissolved	7440-32-6	E421/WT	0.00030	mg/L		<0.00300 DLHC	<0.00300 DLHC	----	----	----
Tungsten, dissolved	7440-33-7	E421/WT	0.00010	mg/L		<0.00100 DLHC	<0.00100 DLHC	----	----	----
Uranium, dissolved	7440-61-1	E421/WT	0.000010	mg/L		0.0321 DLHC	0.0324 DLHC	----	----	----
Vanadium, dissolved	7440-62-2	E421/WT	0.00050	mg/L		<0.00500 DLHC	<0.00500 DLHC	----	----	----
Zinc, dissolved	7440-66-6	E421/WT	0.0010	mg/L		<0.0100 DLHC	<0.0100 DLHC	----	----	----
Zirconium, dissolved	7440-67-7	E421/WT	0.00030	mg/L		<0.00300 DLHC	<0.00300 DLHC	----	----	----
Dissolved mercury filtration location	----	EP509/WT	-	-		Field	Field	----	----	----
Dissolved metals filtration location	----	EP421/WT	-	-		Field	Field	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP22-01_2025-08-28 ----	QD-CC3_2025-08-28 ----	----	----	----
					Client sampling date / time	28-Aug-2025 15:25	28-Aug-2025 15:25	----	----	----
						BF2500304-001	BF2500304-002	----	----	----
						Result	Result	----	----	----
Volatile Organic Compounds										
Acetone	67-64-1	E611D/WT	20	µg/L		<20	<20	----	----	----
Benzene	71-43-2	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Bromodichloromethane	75-27-4	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Bromoform	75-25-2	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Bromomethane	74-83-9	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
BTEX, total	----	E611D/WT	1.0	µg/L		<1.0	<1.0	----	----	----
Carbon disulfide	75-15-0	E611D/WT	1.0	µg/L		<1.0	<1.0	----	----	----
Carbon tetrachloride	56-23-5	E611D/WT	0.20	µg/L		<0.20	<0.20	----	----	----
Chlorobenzene	108-90-7	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Chloroethane	75-00-3	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Chloroform	67-66-3	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Chloromethane	74-87-3	E611D/WT	2.0	µg/L		<2.0	<2.0	----	----	----
Dibromochloromethane	124-48-1	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dibromoethane, 1,2-	106-93-4	E611D/WT	0.20	µg/L		<0.20	<0.20	----	----	----
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dichlorodifluoromethane	75-71-8	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloroethane, 1,1-	75-34-3	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloroethane, 1,2-	107-06-2	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloroethylene, 1,1-	75-35-4	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP22-01_2025-08-28 ----	QD-CC3_2025-08-28 ----	----	----	----
					Client sampling date / time	28-Aug-2025 15:25	28-Aug-2025 15:25	----	----	----
						BF2500304-001	BF2500304-002	----	----	----
						Result	Result	----	----	----
Volatile Organic Compounds										
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	0.50	µg/L		1.04	1.03	----	----	----
Dichloroethylene, cis+trans-1,2-	540-59-0	E611D/WT	0.71	µg/L		1.70	1.68	----	----	----
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	0.50	µg/L		0.66	0.65	----	----	----
Dichloromethane	75-09-2	E611D/WT	1.0	µg/L		<1.0	<1.0	----	----	----
Dichloropropane, 1,2-	78-87-5	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	0.30	µg/L		<0.30	<0.30	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	0.50	µg/L		<0.5	<0.5	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	0.30	µg/L		<0.30	<0.30	----	----	----
Ethylbenzene	100-41-4	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Hexane, n-	110-54-3	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Hexanone, 2-	591-78-6	E611D/WT	20	µg/L		<20	<20	----	----	----
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	20	µg/L		<20	<20	----	----	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	20	µg/L		<20	<20	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Styrene	100-42-5	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Tetrachloroethylene	127-18-4	E611D/WT	0.50	µg/L		14.7	14.4	----	----	----
Toluene	108-88-3	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP22-01_2025-08-28 ----	QD-CC3_2025-08-28 ----	----	----	----
					Client sampling date / time	28-Aug-2025 15:25	28-Aug-2025 15:25	----	----	----
						BF2500304-001	BF2500304-002	----	----	----
						Result	Result	----	----	----
Volatile Organic Compounds										
Trichloroethylene	79-01-6	E611D/WT	0.50	µg/L		7.53	7.33	----	----	----
Trichlorofluoromethane	75-69-4	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Trihalomethanes [THMs], total	----	E611D/WT	1.0	µg/L		<1.0	<1.0	----	----	----
Vinyl chloride	75-01-4	E611D/WT	0.20	µg/L		<0.20	<0.20	----	----	----
Xylene, m+p-	179601-23-1	E611D/WT	0.40	µg/L		<0.40	<0.40	----	----	----
Xylene, o-	95-47-6	E611D/WT	0.30	µg/L		<0.30	<0.30	----	----	----
Xylenes, total	1330-20-7	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Hydrocarbons										
F1 (C6-C10)	----	E581.F1-L/WT	25	µg/L		<25	<25	----	----	----
F2 (C10-C16)	----	E601/WT	100	µg/L		<100	<100	----	----	----
F3 (C16-C34)	----	E601/WT	250	µg/L		<250	<250	----	----	----
F4 (C34-C50)	----	E601/WT	250	µg/L		<250	<250	----	----	----
F1-BTEX	----	EC580/WT	25	µg/L		<25	<25	----	----	----
Hydrocarbons, total (C6-C50)	n/a	EC581/WT	370	µg/L		<370	<370	----	----	----
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/WT	1.0	%		91.8	91.4	----	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.F1-L/WT	1.0	%		68.8	70.2	----	----	----
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611D/WT	1.0	%		89.6	89.7	----	----	----
Difluorobenzene, 1,4-	540-36-3	E611D/WT	1.0	%		97.7	97.9	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	LF-KP22-01_2025-08-28 ----	QD-CC3_2025-08-28 ----	----	----	----
					Client sampling date / time	28-Aug-2025 15:25	28-Aug-2025 15:25	----	----	----
						BF2500304-001	BF2500304-002	----	----	----
						Result	Result	----	----	----
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Acenaphthylene	208-96-8	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Acridine	260-94-6	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Anthracene	120-12-7	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Benz(a)anthracene	56-55-3	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Benzo(a)pyrene	50-32-8	E641A-L/WT	0.0050	µg/L		<0.0050	<0.0050	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Benzo(b+j+k)fluoranthene	n/a	E641A-L/WT	0.015	µg/L		<0.015	<0.015	----	----	----
Benzo(g,h,i)perylene	191-24-2	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Benzo(k)fluoranthene	207-08-9	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Chrysene	218-01-9	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A-L/WT	0.0050	µg/L		<0.0050	<0.0050	----	----	----
Fluoranthene	206-44-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Fluorene	86-73-7	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A-L/WT	0.010	µg/L		0.040	0.042	----	----	----
Methylnaphthalene, 1+2-	----	E641A-L/WT	0.015	µg/L		0.051	0.054	----	----	----
Methylnaphthalene, 2-	91-57-6	E641A-L/WT	0.010	µg/L		0.011	0.012	----	----	----
Naphthalene	91-20-3	E641A-L/WT	0.010	µg/L		<0.078 DLM	<0.085 DLM	----	----	----
Perylene	198-55-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Phenanthrene	85-01-8	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----

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Analytical Results

Sub-Matrix: Water
(Matrix: Water)

					Client sample ID	LF-KP22-01_2025-08-28 ----	QD-CC3_2025-08-28 ----	----	----	----
					Client sampling date / time	28-Aug-2025 15:25	28-Aug-2025 15:25	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		BF2500304-001	BF2500304-002	----	----	----
						Result	Result	----	----	----
Polycyclic Aromatic Hydrocarbons										
Pyrene	129-00-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Quinoline	91-22-5	E641A-L/WT	0.010	µg/L		<0.094 DLM	<0.094 DLM	----	----	----
B(a)P total potency equivalents [B(a)P TPE]	----	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A-L/WT	0.1	%		100	102	----	----	----
Naphthalene-d8	1146-65-2	E641A-L/WT	0.1	%		104	106	----	----	----
Phenanthrene-d10	1517-22-2	E641A-L/WT	0.1	%		104	106	----	----	----

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

ALS Canada Ltd.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **BF2500304**	Page	: 1 of 16
Client	: **Baffinland Iron Mines Corporation**	Laboratory	: ALS Environmental - Baffin Island
Contact	: Environmental Lab Results	Account Manager	: Rick Hawthorne
Address	: 360 Oakville Place Dr Suite 300 Oakville ON Canada L6H 6K8	Address	: Mary River, Qikqtani Region Baffin Island, Nunavut Canada
Telephone	: ----	Telephone	: ----
Project	: MS_Landfill_Groundwater	Date Samples Received	: 29-Aug-2025 07:45
PO	: 4500156571	Issue Date	: 11-Sep-2025 09:42
C-O-C number	: 25 08 28_MS_Landfill_GW2		
Sampler	: JJ, LG		
Site	: ----		
Quote number	: 2024-2025 Scope of Work		
No. of samples received	: 2		
No. of samples analysed	: 2		

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

Key

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

Workorder Comments

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

Summary of Outliers

Outliers : Quality Control Samples

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

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

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

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Method Blank (MB) Values								
Polycyclic Aromatic Hydrocarbons	QC-MRG4-2204975 001	----	Quinoline	91-22-5	E641A-L	0.015 µg/L MB-LOR	0.01 µg/L	Blank result exceeds permitted value

Result Qualifiers

Qualifier	Description
MB-LOR	*Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.*

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
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) LF-KP22-01_2025-08-28	E298	28-Aug-2025	05-Sep-2025	28 days	8 days	✓	07-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) QD-CC3_2025-08-28	E298	28-Aug-2025	05-Sep-2025	28 days	8 days	✓	07-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE LF-KP22-01_2025-08-28	E235.Br	28-Aug-2025	04-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE QD-CC3_2025-08-28	E235.Br	28-Aug-2025	04-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE LF-KP22-01_2025-08-28	E235.Cl	28-Aug-2025	04-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE QD-CC3_2025-08-28	E235.Cl	28-Aug-2025	04-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE LF-KP22-01_2025-08-28	E235.F	28-Aug-2025	04-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	*Method*	*Sampling Date*	*Extraction / Preparation*				*Analysis*			
			Preparation Date	*Holding Times* Rec	*Holding Times* Actual	*Eval*	*Analysis Date*	*Holding Times* Rec	*Holding Times* Actual	*Eval*
Anions and Nutrients : Fluoride in Water by IC										
HDPE QD-CC3_2025-08-28	E235.F	28-Aug-2025	04-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Nitrate in Water by IC										
HDPE LF-KP22-01_2025-08-28	E235.NO3	28-Aug-2025	04-Sep-2025	3 days	7 days	× EHT	08-Sep-2025	3 days	7 days	× EHT
Anions and Nutrients : Nitrate in Water by IC										
HDPE QD-CC3_2025-08-28	E235.NO3	28-Aug-2025	04-Sep-2025	3 days	7 days	× EHT	08-Sep-2025	3 days	7 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE LF-KP22-01_2025-08-28	E235.NO2	28-Aug-2025	04-Sep-2025	3 days	7 days	× EHT	08-Sep-2025	3 days	7 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE QD-CC3_2025-08-28	E235.NO2	28-Aug-2025	04-Sep-2025	3 days	7 days	× EHT	08-Sep-2025	3 days	7 days	× EHT
Anions and Nutrients : Sulfate in Water by IC										
HDPE LF-KP22-01_2025-08-28	E235.SO4	28-Aug-2025	04-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE QD-CC3_2025-08-28	E235.SO4	28-Aug-2025	04-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass - dissolved (field filtered/sulfuric acid) LF-KP22-01_2025-08-28	E375-T	28-Aug-2025	06-Sep-2025	28 days	9 days	✓	08-Sep-2025	28 days	9 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass - dissolved (field filtered/sulfuric acid) QD-CC3_2025-08-28	E375-T	28-Aug-2025	06-Sep-2025	28 days	9 days	✓	08-Sep-2025	28 days	9 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
LF-KP22-01_2025-08-28	E318	28-Aug-2025	06-Sep-2025	28 days	9 days	✓	08-Sep-2025	28 days	9 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
QD-CC3_2025-08-28	E318	28-Aug-2025	06-Sep-2025	28 days	9 days	✓	08-Sep-2025	28 days	9 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
LF-KP22-01_2025-08-28	E372-U	28-Aug-2025	06-Sep-2025	28 days	9 days	✓	08-Sep-2025	28 days	9 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
QD-CC3_2025-08-28	E372-U	28-Aug-2025	06-Sep-2025	28 days	9 days	✓	08-Sep-2025	28 days	9 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
LF-KP22-01_2025-08-28	E509	28-Aug-2025	08-Sep-2025	28 days	11 days	✓	08-Sep-2025	28 days	11 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
QD-CC3_2025-08-28	E509	28-Aug-2025	08-Sep-2025	28 days	11 days	✓	08-Sep-2025	28 days	11 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
LF-KP22-01_2025-08-28	E421	28-Aug-2025	05-Sep-2025	180 days	8 days	✓	05-Sep-2025	180 days	8 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
QD-CC3_2025-08-28	E421	28-Aug-2025	05-Sep-2025	180 days	8 days	✓	05-Sep-2025	180 days	8 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate)										
LF-KP22-01_2025-08-28	E581.F1-L	28-Aug-2025	04-Sep-2025	14 days	7 days	✓	04-Sep-2025	14 days	7 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate)										
QD-CC3_2025-08-28	E581.F1-L	28-Aug-2025	04-Sep-2025	14 days	7 days	✓	04-Sep-2025	14 days	7 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
LF-KP22-01_2025-08-28	E601	28-Aug-2025	08-Sep-2025	14 days	11 days	✓	09-Sep-2025	40 days	1 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
QD-CC3_2025-08-28	E601	28-Aug-2025	08-Sep-2025	14 days	11 days	✓	09-Sep-2025	40 days	1 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
LF-KP22-01_2025-08-28	E358-L	28-Aug-2025	05-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
QD-CC3_2025-08-28	E358-L	28-Aug-2025	05-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
LF-KP22-01_2025-08-28	E290	28-Aug-2025	04-Sep-2025	14 days	7 days	✓	05-Sep-2025	14 days	7 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
QD-CC3_2025-08-28	E290	28-Aug-2025	04-Sep-2025	14 days	7 days	✓	05-Sep-2025	14 days	7 days	✓
Physical Tests : Conductivity in Water										
HDPE										
LF-KP22-01_2025-08-28	E100	28-Aug-2025	04-Sep-2025	28 days	7 days	✓	05-Sep-2025	28 days	7 days	✓
Physical Tests : Conductivity in Water										
HDPE										
QD-CC3_2025-08-28	E100	28-Aug-2025	04-Sep-2025	28 days	7 days	✓	05-Sep-2025	28 days	7 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : pH by Meter										
HDPE LF-KP22-01_2025-08-28	E108	28-Aug-2025	29-Aug-2025	0.25 hrs	16 hrs	× EHTR-FM	29-Aug-2025	0.25 hrs	16 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE QD-CC3_2025-08-28	E108	28-Aug-2025	29-Aug-2025	0.25 hrs	16 hrs	× EHTR-FM	29-Aug-2025	0.25 hrs	16 hrs	× EHTR-FM
Physical Tests : TDS by Gravimetry										
HDPE LF-KP22-01_2025-08-28	E162	28-Aug-2025	----	----	----		29-Aug-2025	7 days	1 days	✓
Physical Tests : TDS by Gravimetry										
HDPE QD-CC3_2025-08-28	E162	28-Aug-2025	----	----	----		29-Aug-2025	7 days	1 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE LF-KP22-01_2025-08-28	E160-L	28-Aug-2025	----	----	----		29-Aug-2025	7 days	1 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE QD-CC3_2025-08-28	E160-L	28-Aug-2025	----	----	----		29-Aug-2025	7 days	1 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE LF-KP22-01_2025-08-28	E121	28-Aug-2025	----	----	----		29-Aug-2025	3 days	1 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE QD-CC3_2025-08-28	E121	28-Aug-2025	----	----	----		29-Aug-2025	3 days	1 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate) LF-KP22-01_2025-08-28	E641A-L	28-Aug-2025	08-Sep-2025	14 days	11 days	✓	08-Sep-2025	40 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
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate)										
QD-CC3_2025-08-28	E641A-L	28-Aug-2025	08-Sep-2025	14 days	11 days	✓	08-Sep-2025	40 days	0 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
LF-KP22-01_2025-08-28	E611D	28-Aug-2025	04-Sep-2025	14 days	7 days	✓	04-Sep-2025	14 days	7 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
QD-CC3_2025-08-28	E611D	28-Aug-2025	04-Sep-2025	14 days	7 days	✓	04-Sep-2025	14 days	7 days	✓

Legend & Qualifier Definitions

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

EHT: Exceeded ALS recommended hold time prior to analysis.

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

Quality Control Parameter Frequency Compliance

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

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Conductivity in Water	E100	2199569	1	16	6.2	5.0	✓
pH by Meter	E108	2189564	1	19	5.2	5.0	✓
Turbidity by Nephelometry	E121	2189567	1	19	5.2	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	2189569	1	19	5.2	5.0	✓
TDS by Gravimetry	E162	2189572	1	19	5.2	5.0	✓
Bromide in Water by IC	E235.Br	2199570	1	16	6.2	5.0	✓
Chloride in Water by IC	E235.Cl	2199574	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2199571	1	20	5.0	5.0	✓
Nitrite in Water by IC	E235.NO2	2199573	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2199572	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2199575	1	20	5.0	5.0	✓
Alkalinity Species by Titration	E290	2199568	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	2201872	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2201870	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2202722	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2201871	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2203389	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2200849	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2201321	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2199634	1	20	5.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2199633	1	20	5.0	5.0	✓
Laboratory Control Samples (LCS)							
Conductivity in Water	E100	2199569	1	16	6.2	5.0	✓
pH by Meter	E108	2189564	1	19	5.2	5.0	✓
Turbidity by Nephelometry	E121	2189567	1	19	5.2	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	2189569	1	19	5.2	5.0	✓
TDS by Gravimetry	E162	2189572	1	19	5.2	5.0	✓
Bromide in Water by IC	E235.Br	2199570	1	16	6.2	5.0	✓
Chloride in Water by IC	E235.Cl	2199574	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2199571	1	20	5.0	5.0	✓
Nitrite in Water by IC	E235.NO2	2199573	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2199572	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2199575	1	20	5.0	5.0	✓
Alkalinity Species by Titration	E290	2199568	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	2201872	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2201870	1	20	5.0	5.0	✓

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Control Samples (LCS) - Continued							
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2202722	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2201871	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2203389	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2200849	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2201321	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2199634	1	20	5.0	5.0	✓
CCME PHCs - F2-F4 by GC-FID	E601	2204975	1	8	12.5	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2199633	1	20	5.0	5.0	✓
PAHs in Water by Hexane LVI GC-MS (Low Level)	E641A-L	2204976	1	8	12.5	5.0	✓
Method Blanks (MB)							
Conductivity in Water	E100	2199569	1	16	6.2	5.0	✓
Turbidity by Nephelometry	E121	2189567	1	19	5.2	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	2189569	1	19	5.2	5.0	✓
TDS by Gravimetry	E162	2189572	1	19	5.2	5.0	✓
Bromide in Water by IC	E235.Br	2199570	1	16	6.2	5.0	✓
Chloride in Water by IC	E235.Cl	2199574	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2199571	1	20	5.0	5.0	✓
Nitrite in Water by IC	E235.NO2	2199573	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2199572	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2199575	1	20	5.0	5.0	✓
Alkalinity Species by Titration	E290	2199568	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	2201872	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2201870	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2202722	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2201871	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2203389	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2200849	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2201321	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2199634	1	20	5.0	5.0	✓
CCME PHCs - F2-F4 by GC-FID	E601	2204975	1	8	12.5	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2199633	1	20	5.0	5.0	✓
PAHs in Water by Hexane LVI GC-MS (Low Level)	E641A-L	2204976	1	8	12.5	5.0	✓
Matrix Spikes (MS)							
Bromide in Water by IC	E235.Br	2199570	1	16	6.2	5.0	✓
Chloride in Water by IC	E235.Cl	2199574	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2199571	1	20	5.0	5.0	✓
Nitrite in Water by IC	E235.NO2	2199573	1	20	5.0	5.0	✓
Nitrate in Water by IC	E235.NO3	2199572	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2199575	1	20	5.0	5.0	✓

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Matrix Spikes (MS) - Continued							
Ammonia by Fluorescence	E298	2201872	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2201870	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2202722	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2201871	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2203389	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2200849	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2201321	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2199634	1	20	5.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2199633	1	20	5.0	5.0	✓

Methodology References and Summaries

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

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

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Nitrate in Water by IC	E235.NO3 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Sulfate in Water by IC	E235.SO4 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Alkalinity Species by Titration	E290 ALS Environmental - Waterloo	Water	APHA 2320 B (mod)	Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.
Ammonia by Fluorescence	E298 ALS Environmental - Waterloo	Water	Method Fialab 100, 2018	Ammonia in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021)
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318 ALS Environmental - Waterloo	Water	Method Fialab 100, 2018	TKN in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021).
Dissolved Organic Carbon by Combustion (Low Level)	E358-L ALS Environmental - Waterloo	Water	APHA 5310 B (mod)	Dissolved Organic Carbon (Non-Purgeable), also known as NPOC (dissolved), is a direct measurement of DOC after a filtered (0.45 micron) sample has been acidified and purged to remove inorganic carbon (IC). Analysis is by high temperature combustion with infrared detection of CO2. NPOC does not include volatile organic species that are purged off with IC. For samples where the majority of DC (dissolved carbon) is comprised of IC (which is common), this method is more accurate and more reliable than the DOC by subtraction method (i.e. DC minus DIC).
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Total Phosphorus is determined colourimetrically using a discrete analyzer after heated persulfate digestion of the sample.
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Total Dissolved Phosphorus is determined colourimetrically using a discrete analyzer after filtration through a 0.45 micron filter followed by heated persulfate digestion of the sample.
Dissolved Metals in Water by CRC ICPMS	E421 ALS Environmental - Waterloo	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Dissolved Mercury in Water by CVAAS	E509 ALS Environmental - Waterloo	Water	APHA 3030B/EPA 1631E (mod)	Water samples are filtered (0.45 um), preserved with HCl, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1 (mod)	CCME Fraction 1 (F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
CCME PHCs - F2-F4 by GC-FID	E601 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	Sample extracts are analyzed by GC-FID for CCME hydrocarbon fractions (F2-F4). Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
VOCs (Eastern Canada List) by Headspace GC-MS	E611D ALS Environmental - Waterloo	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PAHs in Water by Hexane LVI GC-MS (Low Level)	E641A-L ALS Environmental - Waterloo	Water	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS.
F1-BTEX	EC580 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).
Sum F1 to F4 (C6-C50)	EC581 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	Hydrocarbons, total (C6-C50) is the sum of CCME Fractions F1(C6-C10), F2(C10-C16), F3(C16-C34), and F4(C34-C50). F4G-sg is not used within this calculation due to overlap with other fractions.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Ammonia	EP298 ALS Environmental - Waterloo	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Digestion for TKN in water	EP318 ALS Environmental - Waterloo	Water	APHA 4500-Norg D (mod)	Samples are digested at high temperature using Sulfuric Acid with Copper catalyst, which converts organic nitrogen sources to Ammonia, which is then quantified by the analytical method as TKN. This method is unsuitable for samples containing high levels of nitrate. If nitrate exceeds TKN concentration by ten times or more, results may be biased low.
Preparation for Dissolved Organic Carbon for Combustion	EP358 ALS Environmental - Waterloo	Water	APHA 5310 B (mod)	Preparation for Dissolved Organic Carbon

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Digestion for Total Phosphorus in water	EP372 ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Samples are heated with a persulfate digestion reagent.
Digestion for Dissolved Phosphorus in water	EP375 ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Samples are filtered through a 0.45 micron membrane filter and then heated with a persulfate digestion reagent.
Dissolved Metals Water Filtration	EP421 ALS Environmental - Waterloo	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO3.
Dissolved Mercury Water Filtration	EP509 ALS Environmental - Waterloo	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HCl.
VOCs Preparation for Headspace Analysis	EP581 ALS Environmental - Waterloo	Water	EPA 5021A (mod)	Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler. An aliquot of the headspace is then injected into a GC-MS-FID.
PHCs and PAHs Hexane Extraction	EP601 ALS Environmental - Waterloo	Water	EPA 3511 (mod)	Petroleum Hydrocarbons (PHCs) and Polycyclic Aromatic Hydrocarbons (PAHs) are extracted using a hexane liquid-liquid extraction.

ALS Canada Ltd.

QUALITY CONTROL REPORT

Work Order	: **BF2500304**	Page	: 1 of 19
Client	: Baffinland Iron Mines Corporation	Laboratory	: ALS Environmental - Baffin Island
Contact	: Environmental Lab Results	Account Manager	: Rick Hawthorne
Address	: 360 Oakville Place Dr Suite 300 Oakville ON Canada L6H 6K8	Address	: Mary River, Qikqtani Region Baffin Island, Nunavut Canada
Telephone	: ----	Telephone	:
Project	: MS_Landfill_Groundwater	Date Samples Received	: 29-Aug-2025 07:45
PO	: 4500156571	Date Analysis Commenced	: 29-Aug-2025
C-O-C number	: 25 08 28_MS_Landfill_GW2	Issue Date	: 11-Sep-2025 09:42
Sampler	: JJ, LG		
Site	: ----		
Quote number	: 2024-2025 Scope of Work		
No. of samples received	: 2		
No. of samples analysed	: 2		

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Laboratory Department*
Andrea Armstrong	Department Manager - Air Quality and Volatiles	Waterloo VOC, Waterloo, Ontario
Cedrick Velasco	Lab Manager	Baffin Island Inorganics, Baffin Island, Nunavut
Danielle Gravel	Supervisor - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Jeremy Gingras	Supervisor - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Centralized Prep, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Inorganics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Metals, Waterloo, Ontario

General Comments

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

Key :

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

Workorder Comments

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 2189564)											
BF2500301-001	Anonymous	pH	----	E108	0.10	pH units	7.86	7.93	0.887%	4%	----
Physical Tests (QC Lot: 2189567)											
BF2500301-001	Anonymous	Turbidity	----	E121	0.10	NTU	0.35	0.47	0.12	Diff <2x LOR	----
Physical Tests (QC Lot: 2189569)											
BF2500301-002	Anonymous	Solids, total suspended [TSS]	----	E160-L	1.3	mg/L	<1.3	<1.3	0	Diff <2x LOR	----
Physical Tests (QC Lot: 2189572)											
BF2500301-003	Anonymous	Solids, total dissolved [TDS]	----	E162	19	mg/L	91	87	4	Diff <2x LOR	----
Physical Tests (QC Lot: 2199568)											
BF2500299-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	2.0	mg/L	153	153	0.0782%	20%	----
Physical Tests (QC Lot: 2199569)											
BF2500299-001	Anonymous	Conductivity	----	E100	1.0	µS/cm	345	347	0.578%	10%	----
Anions and Nutrients (QC Lot: 2199570)											
BF2500299-001	Anonymous	Bromide	24959-67-9	E235.Br	0.10	mg/L	<0.10	<0.10	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2199571)											
BF2500299-001	Anonymous	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.085	0.081	0.004	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2199572)											
BF2500299-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	0.210	0.206	1.78%	20%	----
Anions and Nutrients (QC Lot: 2199573)											
BF2500299-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2199574)											
BF2500299-001	Anonymous	Chloride	16887-00-6	E235.Cl	0.50	mg/L	4.21	3.99	0.22	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2199575)											
BF2500299-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	20.4	20.2	0.788%	20%	----
Anions and Nutrients (QC Lot: 2201870)											
BF2500303-002	Anonymous	Kjeldahl nitrogen, total [TKN]	----	E318	0.050	mg/L	2.17	2.13	2.05%	20%	----
Anions and Nutrients (QC Lot: 2201871)											
BF2500303-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0050	0.0051	0.0001	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2201872)											
BF2500304-001	LF-KP22-01_2025-08-28	Ammonia, total (as N)	7664-41-7	E298	0.0500	mg/L	2.20	2.28	3.29%	20%	----
Anions and Nutrients (QC Lot: 2203389)											

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Anions and Nutrients (QC Lot: 2203389) - continued											
BF2500299-001	Anonymous	Phosphorus, total dissolved	7723-14-0	E375-T	0.0020	mg/L	0.0026	0.0023	0.0003	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 2202722)											
BF2500298-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	1.64	1.37	0.27	Diff <2x LOR	----
Dissolved Metals (QC Lot: 2200849)											
BF2500298-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0139	0.0150	7.26%	20%	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.00952	0.00991	3.94%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	14.9	14.9	0.317%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00083	0.00084	0.000008	Diff <2x LOR	----
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.012	0.013	0.0007	Diff <2x LOR	----
		Lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	9.37	9.52	1.61%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.00076	0.00080	0.00004	Diff <2x LOR	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000483	0.000470	0.000013	Diff <2x LOR	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.00051	0.00051	0.000004	Diff <2x LOR	----
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.050	mg/L	1.08	1.08	0.577%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00154	0.00158	0.00004	Diff <2x LOR	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	0.837	0.854	2.06%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.050	mg/L	2.68	2.72	1.15%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.0155	0.0154	0.494%	20%	----
		Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	2.11	2.07	0.04	Diff <2x LOR	----
		Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----

Sub-Matrix: **Water**

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Laboratory Duplicate (DUP) Report						
					LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Dissolved Metals (QC Lot: 2200849) - continued											
BF2500298-001	Anonymous	Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	0.00045	0.00036	0.00009	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.00279	0.00278	0.334%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 2201321)											
BF2500303-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Volatile Organic Compounds (QC Lot: 2199633)											
BF2500303-001	Anonymous	Acetone	67-64-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Benzene	71-43-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromodichloromethane	75-27-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromoform	75-25-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromomethane	74-83-9	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Carbon disulfide	75-15-0	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Carbon tetrachloride	56-23-5	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Chlorobenzene	108-90-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroethane	75-00-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroform	67-66-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloromethane	74-87-3	E611D	2.0	µg/L	<2.0	<2.0	0	Diff <2x LOR	----
		Dibromochloromethane	124-48-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dibromoethane, 1,2-	106-93-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorodifluoromethane	75-71-8	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,1-	75-34-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,2-	107-06-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, 1,1-	75-35-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	0.94	0.92	0.02	Diff <2x LOR	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Volatile Organic Compounds (QC Lot: 2199633) - continued											
BF2500303-001	Anonymous	Dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Dichloropropane, 1,2-	78-87-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Hexane, n-	110-54-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Hexanone, 2-	591-78-6	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethylene	127-18-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Toluene	108-88-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichlorofluoromethane	75-69-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Vinyl chloride	75-01-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 2199634)											
BF2500303-001	Anonymous	F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	<25	0	Diff <2x LOR	----

Method Blank (MB) Report

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

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 2189567)						
Turbidity	----	E121	0.1	NTU	<0.10	----
Physical Tests (QCLot: 2189569)						
Solids, total suspended [TSS]	----	E160-L	1	mg/L	<1.0	----
Physical Tests (QCLot: 2189572)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Physical Tests (QCLot: 2199568)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	1.5	----
Physical Tests (QCLot: 2199569)						
Conductivity	----	E100	1	µS/cm	1.4	----
Anions and Nutrients (QCLot: 2199570)						
Bromide	24959-67-9	E235.Br	0.1	mg/L	<0.10	----
Anions and Nutrients (QCLot: 2199571)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 2199572)						
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 2199573)						
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	<0.010	----
Anions and Nutrients (QCLot: 2199574)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 2199575)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 2201870)						
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 2201871)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 2201872)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 2203389)						
Phosphorus, total dissolved	7723-14-0	E375-T	0.002	mg/L	<0.0020	----
Organic / Inorganic Carbon (QCLot: 2202722)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Dissolved Metals (QCLot: 2200849)						

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 2200849) - continued						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 2200849) - continued						
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 2201321)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Volatile Organic Compounds (QCLot: 2199633)						
Acetone	67-64-1	E611D	20	µg/L	<20	----
Benzene	71-43-2	E611D	0.5	µg/L	<0.50	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	<0.50	----
Bromoform	75-25-2	E611D	0.5	µg/L	<0.50	----
Bromomethane	74-83-9	E611D	0.5	µg/L	<0.50	----
Carbon disulfide	75-15-0	E611D	1	µg/L	<1.0	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	<0.20	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	<0.50	----
Chloroethane	75-00-3	E611D	0.5	µg/L	<0.50	----
Chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----
Chloromethane	74-87-3	E611D	2	µg/L	<2.0	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	<0.50	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	<0.20	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	<0.50	----
Dichloromethane	75-09-2	E611D	1	µg/L	<1.0	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	<0.50	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	<0.30	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	<0.50	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 2199633) - continued						
Hexanone, 2-	591-78-6	E611D	20	µg/L	<20	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	<0.50	----
Styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----
Toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	<0.50	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	<0.50	----
Vinyl chloride	75-01-4	E611D	0.2	µg/L	<0.20	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----
Hydrocarbons (QCLot: 2199634)						
F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	----
Hydrocarbons (QCLot: 2204975)						
F2 (C10-C16)	----	E601	100	µg/L	<100	----
F3 (C16-C34)	----	E601	250	µg/L	<250	----
F4 (C34-C50)	----	E601	250	µg/L	<250	----
Polycyclic Aromatic Hydrocarbons (QCLot: 2204976)						
Acenaphthene	83-32-9	E641A-L	0.01	µg/L	<0.010	----
Acenaphthylene	208-96-8	E641A-L	0.01	µg/L	<0.010	----
Acridine	260-94-6	E641A-L	0.01	µg/L	<0.010	----
Anthracene	120-12-7	E641A-L	0.01	µg/L	<0.010	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	µg/L	<0.010	----
Benzo(a)pyrene	50-32-8	E641A-L	0.005	µg/L	<0.0050	----
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	µg/L	<0.010	----
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	µg/L	<0.010	----
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	µg/L	<0.010	----
Chrysene	218-01-9	E641A-L	0.01	µg/L	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	µg/L	<0.0050	----
Fluoranthene	206-44-0	E641A-L	0.01	µg/L	<0.010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 2204976) - continued						
Fluorene	86-73-7	E641A-L	0.01	µg/L	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	µg/L	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	µg/L	<0.010	----
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	µg/L	<0.010	----
Naphthalene	91-20-3	E641A-L	0.01	µg/L	<0.010	----
Perylene	198-55-0	E641A-L	0.01	µg/L	<0.010	----
Phenanthrene	85-01-8	E641A-L	0.01	µg/L	<0.010	----
Pyrene	129-00-0	E641A-L	0.01	µg/L	<0.010	----
Quinoline	91-22-5	E641A-L	0.01	µg/L	# 0.015	MB-LOR

Qualifiers

Qualifier	Description
MB-LOR	*Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.*

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
Physical Tests (QCLot: 2189564)									
pH	----	E108	----	pH units	7 pH units	100	98.0	102	----
Physical Tests (QCLot: 2189567)									
Turbidity	----	E121	0.1	NTU	200 NTU	100	85.0	115	----
Physical Tests (QCLot: 2189569)									
Solids, total suspended [TSS]	----	E160-L	1	mg/L	250 mg/L	99.0	85.0	115	----
Physical Tests (QCLot: 2189572)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	850 mg/L	99.6	85.0	115	----
Physical Tests (QCLot: 2199568)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	150 mg/L	102	85.0	115	----
Physical Tests (QCLot: 2199569)									
Conductivity	----	E100	1	µS/cm	1410 µS/cm	99.0	90.0	110	----
Anions and Nutrients (QCLot: 2199570)									
Bromide	24959-67-9	E235.Br	0.1	mg/L	0.5 mg/L	97.2	85.0	115	----
Anions and Nutrients (QCLot: 2199571)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 2199572)									
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	2.5 mg/L	98.8	90.0	110	----
Anions and Nutrients (QCLot: 2199573)									
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	0.5 mg/L	94.8	90.0	110	----
Anions and Nutrients (QCLot: 2199574)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	99.1	90.0	110	----
Anions and Nutrients (QCLot: 2199575)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 2201870)									
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	4 mg/L	99.8	75.0	125	----
Anions and Nutrients (QCLot: 2201871)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.333 mg/L	99.6	80.0	120	----
Anions and Nutrients (QCLot: 2201872)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	97.5	85.0	115	----
Anions and Nutrients (QCLot: 2203389)									
Phosphorus, total dissolved	7723-14-0	E375-T	0.002	mg/L	0.333 mg/L	105	80.0	120	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Organic / Inorganic Carbon (QCLot: 2202722)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	100	80.0	120	----
Dissolved Metals (QCLot: 2200849)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	0.1 mg/L	103	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	0.05 mg/L	102	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	0.05 mg/L	105	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.012 mg/L	104	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.005 mg/L	104	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	0.05 mg/L	101	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	0.05 mg/L	101	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.005 mg/L	102	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	2.5 mg/L	102	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.002 mg/L	109	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.012 mg/L	104	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.012 mg/L	102	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.012 mg/L	101	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	0.05 mg/L	104	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.025 mg/L	102	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.012 mg/L	102	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	2.5 mg/L	108	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.012 mg/L	101	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.012 mg/L	104	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.025 mg/L	102	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	0.5 mg/L	102	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	2.5 mg/L	98.5	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.005 mg/L	104	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	0.05 mg/L	101	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	0.5 mg/L	100	60.0	140	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.005 mg/L	106	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	2.5 mg/L	103	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.012 mg/L	103	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	2.5 mg/L	105	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.005 mg/L	98.4	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	0.05 mg/L	99.9	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.005 mg/L	98.0	80.0	120	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 2200849) - continued									
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.025 mg/L	100	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.012 mg/L	100	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.005 mg/L	101	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0 mg/L	102	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.025 mg/L	103	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.025 mg/L	102	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.005 mg/L	98.1	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	91.0	80.0	120	----
Volatile Organic Compounds (QCLot: 2199633)									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	127	70.0	130	----
Benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
Bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
Bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	76.2	60.0	140	----
Carbon disulfide	75-15-0	E611D	1	µg/L	100 µg/L	92.9	70.0	130	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	102	70.0	130	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Chloroethane	75-00-3	E611D	0.5	µg/L	100 µg/L	100	60.0	140	----
Chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Chloromethane	74-87-3	E611D	2	µg/L	100 µg/L	104	60.0	140	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	89.4	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	94.5	60.0	140	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	98.0	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	98.0	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	97.1	70.0	130	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 2199633) - continued									
Ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
Hexanone, 2-	591-78-6	E611D	20	µg/L	100 µg/L	91.4	70.0	130	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	116	70.0	130	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	91.5	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	98.3	70.0	130	----
Styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	99.6	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	96.5	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	97.8	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	92.5	70.0	130	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	101	60.0	140	----
Vinyl chloride	75-01-4	E611D	0.2	µg/L	100 µg/L	101	60.0	140	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	104	70.0	130	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	106	70.0	130	----
Hydrocarbons (QCLot: 2199634)									
F1 (C6-C10)	----	E581.F1-L	25	µg/L	2000 µg/L	97.7	80.0	120	----
Hydrocarbons (QCLot: 2204975)									
F2 (C10-C16)	----	E601	100	µg/L	3770 µg/L	110	70.0	130	----
F3 (C16-C34)	----	E601	250	µg/L	7760 µg/L	120	70.0	130	----
F4 (C34-C50)	----	E601	250	µg/L	4200 µg/L	109	70.0	130	----
Polycyclic Aromatic Hydrocarbons (QCLot: 2204976)									
Acenaphthene	83-32-9	E641A-L	0.01	µg/L	0.526 µg/L	96.8	50.0	140	----
Acenaphthylene	208-96-8	E641A-L	0.01	µg/L	0.526 µg/L	89.5	50.0	140	----
Acridine	260-94-6	E641A-L	0.01	µg/L	0.526 µg/L	109	50.0	140	----
Anthracene	120-12-7	E641A-L	0.01	µg/L	0.526 µg/L	86.4	50.0	140	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	µg/L	0.526 µg/L	106	50.0	140	----
Benzo(a)pyrene	50-32-8	E641A-L	0.005	µg/L	0.526 µg/L	86.1	50.0	140	----
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	µg/L	0.526 µg/L	79.5	50.0	140	----
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	µg/L	0.526 µg/L	109	50.0	140	----
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	µg/L	0.526 µg/L	83.2	50.0	140	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 2204976) - continued									
Chrysene	218-01-9	E641A-L	0.01	µg/L	0.526 µg/L	104	50.0	140	----
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	µg/L	0.526 µg/L	113	50.0	140	----
Fluoranthene	206-44-0	E641A-L	0.01	µg/L	0.526 µg/L	100	50.0	140	----
Fluorene	86-73-7	E641A-L	0.01	µg/L	0.526 µg/L	96.7	50.0	140	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	µg/L	0.526 µg/L	121	50.0	140	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	µg/L	0.526 µg/L	94.5	50.0	140	----
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	µg/L	0.526 µg/L	99.7	50.0	140	----
Naphthalene	91-20-3	E641A-L	0.01	µg/L	0.526 µg/L	94.8	50.0	140	----
Perylene	198-55-0	E641A-L	0.01	µg/L	0.526 µg/L	97.2	50.0	140	----
Phenanthrene	85-01-8	E641A-L	0.01	µg/L	0.526 µg/L	102	50.0	140	----
Pyrene	129-00-0	E641A-L	0.01	µg/L	0.526 µg/L	100	50.0	140	----
Quinoline	91-22-5	E641A-L	0.01	µg/L	0.526 µg/L	108	50.0	140	----

Matrix Spike (MS) Report

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

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 2199570)										
BF2500299-001	Anonymous	Bromide	24959-67-9	E235.Br	0.46 mg/L	0.5 mg/L	91.3	75.0	125	----
Anions and Nutrients (QCLot: 2199571)										
BF2500299-001	Anonymous	Fluoride	16984-48-8	E235.F	0.901 mg/L	1 mg/L	90.1	75.0	125	----
Anions and Nutrients (QCLot: 2199572)										
BF2500299-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	2.40 mg/L	2.5 mg/L	96.1	75.0	125	----
Anions and Nutrients (QCLot: 2199573)										
BF2500299-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.466 mg/L	0.5 mg/L	93.3	75.0	125	----
Anions and Nutrients (QCLot: 2199574)										
BF2500299-001	Anonymous	Chloride	16887-00-6	E235.Cl	97.0 mg/L	100 mg/L	97.0	75.0	125	----
Anions and Nutrients (QCLot: 2199575)										
BF2500299-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	96.4 mg/L	100 mg/L	96.4	75.0	125	----
Anions and Nutrients (QCLot: 2201870)										
BF2500303-002	Anonymous	Kjeldahl nitrogen, total [TKN]	----	E318	2.62 mg/L	2.5 mg/L	105	70.0	130	----
Anions and Nutrients (QCLot: 2201871)										
BF2500303-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0965 mg/L	0.1 mg/L	96.5	70.0	130	----
Anions and Nutrients (QCLot: 2201872)										
BF2500304-001	LF-KP22-01_2025-08-28	Ammonia, total (as N)	7664-41-7	E298	ND mg/L	----	ND	75.0	125	----
Anions and Nutrients (QCLot: 2203389)										
BF2500299-001	Anonymous	Phosphorus, total dissolved	7723-14-0	E375-T	0.0939 mg/L	0.1 mg/L	93.9	70.0	130	----
Organic / Inorganic Carbon (QCLot: 2202722)										
BF2500298-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	4.72 mg/L	5 mg/L	94.3	70.0	130	----
Dissolved Metals (QCLot: 2200849)										
BF2500298-002	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.101 mg/L	0.1 mg/L	101	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0516 mg/L	0.05 mg/L	103	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0564 mg/L	0.05 mg/L	113	70.0	130	----
		Barium, dissolved	7440-39-3	E421	0.0127 mg/L	0.012 mg/L	101	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.00536 mg/L	0.005 mg/L	107	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.0439 mg/L	0.05 mg/L	87.9	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.050 mg/L	0.05 mg/L	101	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00535 mg/L	0.005 mg/L	107	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.00269 mg/L	0.002 mg/L	108	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0126 mg/L	0.012 mg/L	101	70.0	130	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 2200849) - continued										
BF2500298-002	Anonymous	Cobalt, dissolved	7440-48-4	E421	0.0124 mg/L	0.012 mg/L	99.0	70.0	130	----
		Copper, dissolved	7440-50-8	E421	0.0124 mg/L	0.012 mg/L	99.5	70.0	130	----
		Iron, dissolved	7439-89-6	E421	0.052 mg/L	0.05 mg/L	104	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0251 mg/L	0.025 mg/L	100	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.0128 mg/L	0.012 mg/L	102	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	ND mg/L	----	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	0.0123 mg/L	0.012 mg/L	98.4	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.0129 mg/L	0.012 mg/L	103	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0247 mg/L	0.025 mg/L	98.7	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	0.578 mg/L	0.5 mg/L	116	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	2.61 mg/L	2.5 mg/L	104	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.00526 mg/L	0.005 mg/L	105	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0616 mg/L	0.05 mg/L	123	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	ND mg/L	----	ND	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00507 mg/L	0.005 mg/L	101	70.0	130	----
		Sodium, dissolved	7440-23-5	E421	ND mg/L	----	ND	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	ND mg/L	----	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	2.65 mg/L	2.5 mg/L	106	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.00556 mg/L	0.005 mg/L	111	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.0492 mg/L	0.05 mg/L	98.5	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.00470 mg/L	0.005 mg/L	93.9	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0256 mg/L	0.025 mg/L	103	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0125 mg/L	0.012 mg/L	100.0	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.00496 mg/L	0.005 mg/L	99.3	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	ND mg/L	----	ND	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.0256 mg/L	0.025 mg/L	102	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.0272 mg/L	0.025 mg/L	109	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.00473 mg/L	0.005 mg/L	94.6	70.0	130	----
Dissolved Metals (QCLot: 2201321)										
BF2500303-002	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000899 mg/L	0 mg/L	89.9	70.0	130	----
Volatile Organic Compounds (QCLot: 2199633)										
BF2500303-001	Anonymous	Acetone	67-64-1	E611D	110 µg/L	100 µg/L	110	60.0	140	----
		Benzene	71-43-2	E611D	95.1 µg/L	100 µg/L	95.1	60.0	140	----
		Bromodichloromethane	75-27-4	E611D	86.9 µg/L	100 µg/L	86.9	60.0	140	----
		Bromoform	75-25-2	E611D	94.0 µg/L	100 µg/L	94.0	60.0	140	----
		Bromomethane	74-83-9	E611D	63.0 µg/L	100 µg/L	63.0	60.0	140	----
		Carbon disulfide	75-15-0	E611D	80.5 µg/L	100 µg/L	80.5	60.0	140	----
		Carbon tetrachloride	56-23-5	E611D	92.8 µg/L	100 µg/L	92.8	60.0	140	----
		Chlorobenzene	108-90-7	E611D	91.6 µg/L	100 µg/L	91.6	60.0	140	----
		Chloroethane	75-00-3	E611D	84.5 µg/L	100 µg/L	84.5	60.0	140	----
		Chloroform	67-66-3	E611D	89.6 µg/L	100 µg/L	89.6	60.0	140	----
		Chloromethane	74-87-3	E611D	82.7 µg/L	100 µg/L	82.7	60.0	140	----
		Dibromochloromethane	124-48-1	E611D	88.8 µg/L	100 µg/L	88.8	60.0	140	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 2199633) - continued										
BF2500303-001	Anonymous	Dibromoethane, 1,2-	106-93-4	E611D	74.6 µg/L	100 µg/L	74.6	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	94.1 µg/L	100 µg/L	94.1	60.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	96.1 µg/L	100 µg/L	96.1	60.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	96.7 µg/L	100 µg/L	96.7	60.0	140	----
		Dichlorodifluoromethane	75-71-8	E611D	72.2 µg/L	100 µg/L	72.2	60.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611D	88.9 µg/L	100 µg/L	88.9	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611D	84.0 µg/L	100 µg/L	84.0	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611D	90.6 µg/L	100 µg/L	90.6	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	89.0 µg/L	100 µg/L	89.0	60.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	91.6 µg/L	100 µg/L	91.6	60.0	140	----
		Dichloromethane	75-09-2	E611D	83.4 µg/L	100 µg/L	83.4	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611D	86.6 µg/L	100 µg/L	86.6	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	82.4 µg/L	100 µg/L	82.4	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	82.8 µg/L	100 µg/L	82.8	60.0	140	----
		Ethylbenzene	100-41-4	E611D	97.2 µg/L	100 µg/L	97.2	60.0	140	----
		Hexane, n-	110-54-3	E611D	90.3 µg/L	100 µg/L	90.3	60.0	140	----
		Hexanone, 2-	591-78-6	E611D	70 µg/L	100 µg/L	69.8	60.0	140	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	89 µg/L	100 µg/L	89.1	60.0	140	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	70 µg/L	100 µg/L	69.6	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	92.1 µg/L	100 µg/L	92.1	60.0	140	----
		Styrene	100-42-5	E611D	87.5 µg/L	100 µg/L	87.5	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	85.1 µg/L	100 µg/L	85.1	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	93.3 µg/L	100 µg/L	93.3	60.0	140	----
		Tetrachloroethylene	127-18-4	E611D	95.8 µg/L	100 µg/L	95.8	60.0	140	----
		Toluene	108-88-3	E611D	95.7 µg/L	100 µg/L	95.7	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	87.8 µg/L	100 µg/L	87.8	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	78.0 µg/L	100 µg/L	78.0	60.0	140	----
		Trichloroethylene	79-01-6	E611D	91.8 µg/L	100 µg/L	91.8	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611D	87.3 µg/L	100 µg/L	87.3	60.0	140	----
		Vinyl chloride	75-01-4	E611D	82.8 µg/L	100 µg/L	82.8	60.0	140	----
		Xylene, m+p-	179601-23-1	E611D	191 µg/L	200 µg/L	95.6	60.0	140	----
		Xylene, o-	95-47-6	E611D	95.8 µg/L	100 µg/L	95.8	60.0	140	----
Hydrocarbons (QCLot: 2199634)										
BF2500303-001	Anonymous	F1 (C6-C10)	----	E581.F1-L	1780 µg/L	2000 µg/L	88.8	60.0	140	----

Chain of Custody: 25 08 28_MS_Landfill_GW2

Client Info	Project Info	Laboratory Info	
Baffinland Iron Mine Corporation 2275 Upper Middle Rd E, Suite 300 Oakville, ON, L6H 0C3 **Phone:** 647-253-0596 x6016/6039/4131 **Email:** environment.coordinators@baffinland.com; environment.superintendents@baffinland.com	**Job Reference (Project):** MS_Landfill_GW2 **Task:** , GW_Landfill_250825 **Site:** MS	**Lab Name:** ALS Waterloo **Contact:** Rick Hawthorne **Phone:** 519.886.6910 **Email:** Rick.Hawthorne@ALSGlobal.com	**Address:** Unit 1 - 60 Northland Road Waterloo, ON,N2V 2B8
Email Invoice: ap@baffinland.com; environment.superintendents@baffinland.com **Email EDD:** bim.equissa@baffinland.com **Email COA:** environment.labresults@baffinland.com	**Turn around Time:** Routine (R) **Sampler 1:** LG **Sampler 2:** JJ **Sampler 3:**	**ALS Quote #:** WT2020BIMC1000001 **ALS PO #:** 4500156571	**Lab Work Order #** (lab use only):

Sample Details				Field Data			Analysis Requested											
Sample ID (sys_sample_code)	**Location (sys_loc_code)**	**Sample Date and Time**	**Matrix**	**pH, Field (pH units)**	**Temperature, Field (deg C)**	**Total # of Containers**	**ALS_GW_Landfill**											
LF-KP22-01_2025-08-28	**LF-KP22-01**	**8/28/2025 3:25:00 PM**	**WG**	**7.06**	**1.9**	**9**	**X**											
QD-CC3_2025-08-28	**LF-KP22-01**	**8/28/2025 3:25:00 PM**	**WG**			**9**	**X**											

Relinquished by:	Bradley Rasmussen	**Date:**	
Additional Comments			
Initial Shipment Reception (lab use only)		**Final Shipment Reception** (lab use only)	
Received by:		**Received by:**	
Date/Time:		**Date/Time:**	

Baffinland

Chain of Custody: 25 08 28_MS_Landfill_GW2

Client Info	Project Info	Laboratory Info	
Baffinland Iron Mine Corporation 2275 Upper Middle Rd E, Suite 300 Oakville, ON, L6H 0C3 **Phone:** 647-253-0596 x6016/6039/4131 **Email:** environment.coordinators@baffinland.com; environment.superintendents@baffinland.com	**Job Reference (Project):** MS_Landfill_GW2 **Task:** , GW_Landfill_250825 **Site:** MS	**Lab Name:** ALS Waterloo **Contact:** Rick Hawthorne **Phone:** 519.886.6910 **Email:** Rick.Hawthorne@ALSGlobal.com	**Address:** Unit 1 - 60 Northland Road Waterloo, ON,N2V 2B8
Email Invoice: ap@baffinland.com; environment.superintendents@baffinland.com **Email EDD:** bim.equissa@baffinland.com **Email COA:** environment.labresults@baffinland.com	**Turn around Time:** Routine (R) **Sampler 1:** LG **Sampler 2:** JJ **Sampler 3:**	**ALS Quote #:** WT2020BIMC1000001 **ALS PO #:** 4500156571	**L**

Environmental Division
Baffin Island
Work Order Reference
BF2500304

elephone

Sample Details				Field Data														
Sample ID (sys_sample_code)	**Location (sys_loc_code)**	**Sample Date and Time**	**Matrix**	**pH, Field (pH units)**	**Temperature, Field (deg C)**	**Total # of Containers**	**ALS_GW_Landfill**											
LF-KP22-01_2025-08-28	**LF-KP22-01**	**8/28/2025 3:25:00 PM**	**WG**	**7.06**	**1.9**	**9**	**X**											
QD-CC3_2025-08-28	**LF-KP22-01**	**8/28/2025 3:25:00 PM**	**WG**			**9**	**X**											

Relinquished by:	Bradley Rasmussen	**Date:**	
Additional Comments			
Initial Shipment Reception (lab use only)		**Final Shipment Reception** (lab use only)	
Received by:		**Received by:**	AP
Date/Time:		**Date/Time:**	4 Sept 25 9:00

10.3°C

mm-428
GC-710
N-181
OR027
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CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	:	**BF2500306**			
Client	:	**Baffinland Iron Mines Corporation**	Laboratory	:	ALS Environmental - Baffin Island
Contact	:	Environmental Lab Results	Account Manager	:	Rick Hawthorne
Address	:	360 Oakville Place Dr Suite 300 Oakville Ontario Canada L6H 6K8	Address	:	Mary River, Qikqtani Region Baffin Island NU Canada
Telephone	:	----	Telephone	:	
Project	:	GW_Landfill	Date Samples Received	:	29-Aug-2025 18:00
PO	:	4500156571	Date Analysis Commenced	:	30-Aug-2025
C-O-C number	:	250829_GW_LANDFILL	Issue Date	:	11-Sep-2025 09:42
Sampler	:	AG, LG			
Site	:	MS			
Quote number	:	2024-2025 Scope of Work			
No. of samples received	:	2			
No. of samples analysed	:	2			

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
- Guideline Comparison

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*
Amaninder Dhillon		Organics, Waterloo, Ontario
Andrea Armstrong		VOC, Waterloo, Ontario
Cedrick Velasco		Inorganics, Baffin Island, Nunavut
Danielle Gravel		Organics, Waterloo, Ontario
Jeremy Gingras		Organics, Waterloo, Ontario
Walt Kippenhuck		Inorganics, Baffin Island, Nunavut
Walt Kippenhuck		Inorganics, Waterloo, Ontario
Walt Kippenhuck		Metals, Waterloo, Ontario
Walt Kippenhuck		Centralized Prep, Waterloo, Ontario

No Breaches Found

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.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key: LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units
µg/L	micrograms per litre
µS/cm	microsiemens per centimetre

>: greater than.
<: less than.

Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).
For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit.

Workorder Comments

E641 BF2500306-001 RRR: Detection limit raised due to high analyte recovery in the method blank.

Qualifiers

Qualifier	Description
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
RRR	Refer to report comments for issues regarding this analysis.

Analytical Results Evaluation

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-LF-GW2_2025-08-29 ----	LF-KP23-04_2025-08-29 ----	----	----	----	----	----
				Client sampling date / time	29-Aug-2025 09:55	29-Aug-2025 11:20	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
					BF2500306-001	BF2500306-002	----	----	----	----	----
					Result	Result	----	----	----	----	----
Sample Preparation											
Dissolved carbon filtration location	----	EP358/WT	-		field	field	----	----	----	----	----
Physical Tests											
Conductivity	----	E100/WT	µS/cm		790	502	----	----	----	----	----
pH	----	E108/BF	pH units		7.19	7.57	----	----	----	----	----
Solids, total dissolved [TDS]	----	E162/BF	mg/L		442	266	----	----	----	----	----
Solids, total suspended [TSS]	----	E160-L/BF	mg/L		28.5	3.4	----	----	----	----	----
Turbidity	----	E121/BF	NTU		11.8	2.60	----	----	----	----	----
Alkalinity, total (as CaCO3)	----	E290/WT	mg/L		269	181	----	----	----	----	----
Anions and Nutrients											
Ammonia, total (as N)	7664-41-7	E298/WT	mg/L		0.359	0.0086	----	----	----	----	----
Bromide	24959-67-9	E235.Br/WT	mg/L		<0.10	<0.10	----	----	----	----	----
Chloride	16887-00-6	E235.Cl/WT	mg/L		49.0	15.7	----	----	----	----	----
Fluoride	16984-48-8	E235.F/WT	mg/L		0.099	0.076	----	----	----	----	----
Kjeldahl nitrogen, total [TKN]	----	E318/WT	mg/L		1.21	0.190	----	----	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3/WT	mg/L		0.201	0.219	----	----	----	----	----
Nitrite (as N)	14797-65-0	E235.NO2/WT	mg/L		<0.010	<0.010	----	----	----	----	----
Phosphorus, total	7723-14-0	E372-U/WT	mg/L		0.0900	0.0090	----	----	----	----	----
Phosphorus, total dissolved	7723-14-0	E375-T/WT	mg/L		0.0445	0.0064	----	----	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	mg/L		58.4	54.1	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-LF-GW2_2025-08-29 ----	LF-KP23-04_2025-08-29 ----	----	----	----	----	----
				Client sampling date / time	29-Aug-2025 09:55	29-Aug-2025 11:20	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
					BF2500306-001	BF2500306-002	----	----	----	----	----
					Result	Result	----	----	----	----	----
Organic / Inorganic Carbon											
Carbon, dissolved organic [DOC]	----	E358-L/WT	mg/L		7.32	3.61	----	----	----	----	----
Dissolved Metals											
Aluminum, dissolved	7429-90-5	E421/WT	mg/L		0.0010	0.0066	----	----	----	----	----
Antimony, dissolved	7440-36-0	E421/WT	mg/L		0.00035	<0.00010	----	----	----	----	----
Arsenic, dissolved	7440-38-2	E421/WT	mg/L		0.00040	0.00021	----	----	----	----	----
Barium, dissolved	7440-39-3	E421/WT	mg/L		0.0552	0.0290	----	----	----	----	----
Beryllium, dissolved	7440-41-7	E421/WT	mg/L		<0.000020	<0.000020	----	----	----	----	----
Bismuth, dissolved	7440-69-9	E421/WT	mg/L		<0.000050	<0.000050	----	----	----	----	----
Boron, dissolved	7440-42-8	E421/WT	mg/L		0.452	0.393	----	----	----	----	----
Cadmium, dissolved	7440-43-9	E421/WT	mg/L		0.000126	0.0000052	----	----	----	----	----
Calcium, dissolved	7440-70-2	E421/WT	mg/L		74.9	47.5	----	----	----	----	----
Cesium, dissolved	7440-46-2	E421/WT	mg/L		<0.000010	<0.000010	----	----	----	----	----
Chromium, dissolved	7440-47-3	E421/WT	mg/L		0.00057	0.00052	----	----	----	----	----
Cobalt, dissolved	7440-48-4	E421/WT	mg/L		0.00044	<0.00010	----	----	----	----	----
Copper, dissolved	7440-50-8	E421/WT	mg/L		0.00438	0.00329	----	----	----	----	----
Iron, dissolved	7439-89-6	E421/WT	mg/L		0.011	0.032	----	----	----	----	----
Lead, dissolved	7439-92-1	E421/WT	mg/L		0.000148	<0.000050	----	----	----	----	----
Lithium, dissolved	7439-93-2	E421/WT	mg/L		0.0604	0.0409	----	----	----	----	----
Magnesium, dissolved	7439-95-4	E421/WT	mg/L		26.7	32.3	----	----	----	----	----
Manganese, dissolved	7439-96-5	E421/WT	mg/L		0.144	0.00672	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-LF-GW2_2025-08-29 ----	LF-KP23-04_2025-08-29 ----	----	----	----	----	----
				Client sampling date / time	29-Aug-2025 09:55	29-Aug-2025 11:20	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
					BF2500306-001	BF2500306-002	----	----	----	----	----
					Result	Result	----	----	----	----	----
Dissolved Metals											
Mercury, dissolved	7439-97-6	E509/WT	mg/L		<0.0000050	<0.0000050	----	----	----	----	----
Molybdenum, dissolved	7439-98-7	E421/WT	mg/L		0.00627	0.00205	----	----	----	----	----
Nickel, dissolved	7440-02-0	E421/WT	mg/L		0.0304	0.00476	----	----	----	----	----
Phosphorus, dissolved	7723-14-0	E421/WT	mg/L		<0.050	<0.050	----	----	----	----	----
Potassium, dissolved	7440-09-7	E421/WT	mg/L		17.7	2.43	----	----	----	----	----
Rubidium, dissolved	7440-17-7	E421/WT	mg/L		0.00561	0.00474	----	----	----	----	----
Selenium, dissolved	7782-49-2	E421/WT	mg/L		0.000098	<0.000050	----	----	----	----	----
Silicon, dissolved	7440-21-3	E421/WT	mg/L		4.64	4.36	----	----	----	----	----
Silver, dissolved	7440-22-4	E421/WT	mg/L		<0.000010	<0.000010	----	----	----	----	----
Sodium, dissolved	7440-23-5	E421/WT	mg/L		37.2	10.9	----	----	----	----	----
Strontium, dissolved	7440-24-6	E421/WT	mg/L		0.128	0.0276	----	----	----	----	----
Sulfur, dissolved	7704-34-9	E421/WT	mg/L		21.1	20.7	----	----	----	----	----
Tellurium, dissolved	13494-80-9	E421/WT	mg/L		<0.00020	<0.00020	----	----	----	----	----
Thallium, dissolved	7440-28-0	E421/WT	mg/L		0.000041	0.000016	----	----	----	----	----
Thorium, dissolved	7440-29-1	E421/WT	mg/L		<0.00010	<0.00010	----	----	----	----	----
Tin, dissolved	7440-31-5	E421/WT	mg/L		<0.00010	0.00029	----	----	----	----	----
Titanium, dissolved	7440-32-6	E421/WT	mg/L		<0.00030	<0.00030	----	----	----	----	----
Tungsten, dissolved	7440-33-7	E421/WT	mg/L		<0.00010	<0.00010	----	----	----	----	----
Uranium, dissolved	7440-61-1	E421/WT	mg/L		0.00520	0.00375	----	----	----	----	----
Vanadium, dissolved	7440-62-2	E421/WT	mg/L		<0.00050	<0.00050	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-LF-GW2_2025-08-29 ----	LF-KP23-04_2025-08-29 ----	----	----	----	----	----
				Client sampling date / time	29-Aug-2025 09:55	29-Aug-2025 11:20	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
					BF2500306-001	BF2500306-002	----	----	----	----	----
					Result	Result	----	----	----	----	----
Dissolved Metals											
Zinc, dissolved	7440-66-6	E421/WT	mg/L		<0.0010	0.0017	----	----	----	----	----
Zirconium, dissolved	7440-67-7	E421/WT	mg/L		<0.00030	0.00054	----	----	----	----	----
Dissolved mercury filtration location	----	EP509/WT	-		Field	Field	----	----	----	----	----
Dissolved metals filtration location	----	EP421/WT	-		Field	Field	----	----	----	----	----
Volatile Organic Compounds											
Acetone	67-64-1	E611D/WT	µg/L		<20	<20	----	----	----	----	----
Benzene	71-43-2	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Bromodichloromethane	75-27-4	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Bromoform	75-25-2	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Bromomethane	74-83-9	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
BTEX, total	----	E611D/WT	µg/L		<1.0	<1.0	----	----	----	----	----
Carbon disulfide	75-15-0	E611D/WT	µg/L		<1.0	<1.0	----	----	----	----	----
Carbon tetrachloride	56-23-5	E611D/WT	µg/L		<0.20	<0.20	----	----	----	----	----
Chlorobenzene	108-90-7	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Chloroethane	75-00-3	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Chloroform	67-66-3	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Chloromethane	74-87-3	E611D/WT	µg/L		<2.0	<2.0	----	----	----	----	----
Dibromochloromethane	124-48-1	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Dibromoethane, 1,2-	106-93-4	E611D/WT	µg/L		<0.20	<0.20	----	----	----	----	----
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-LF-GW2_2025-08-29 ----	LF-KP23-04_2025-08-29 ----	----	----	----	----	----
				Client sampling date / time	29-Aug-2025 09:55	29-Aug-2025 11:20	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
					BF2500306-001	BF2500306-002	----	----	----	----	----
					Result	Result	----	----	----	----	----
Volatile Organic Compounds											
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Dichlorodifluoromethane	75-71-8	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Dichloroethane, 1,1-	75-34-3	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Dichloroethane, 1,2-	107-06-2	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Dichloroethylene, 1,1-	75-35-4	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	µg/L		1.56	<0.50	----	----	----	----	----
Dichloroethylene, cis+trans-1,2-	540-59-0	E611D/WT	µg/L		2.35	<0.71	----	----	----	----	----
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	µg/L		0.79	<0.50	----	----	----	----	----
Dichloromethane	75-09-2	E611D/WT	µg/L		<1.0	<1.0	----	----	----	----	----
Dichloropropane, 1,2-	78-87-5	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	µg/L		<0.30	<0.30	----	----	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	µg/L		<0.5	<0.5	----	----	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	µg/L		<0.30	<0.30	----	----	----	----	----
Ethylbenzene	100-41-4	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Hexane, n-	110-54-3	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Hexanone, 2-	591-78-6	E611D/WT	µg/L		<20	<20	----	----	----	----	----
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	µg/L		<20	<20	----	----	----	----	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	µg/L		<20	<20	----	----	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-LF-GW2_2025-08-29 ----	LF-KP23-04_2025-08-29 ----	----	----	----	----	----
				Client sampling date / time	29-Aug-2025 09:55	29-Aug-2025 11:20	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
					BF2500306-001	BF2500306-002	----	----	----	----	----
					Result	Result	----	----	----	----	----
Volatile Organic Compounds											
Styrene	100-42-5	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Tetrachloroethylene	127-18-4	E611D/WT	µg/L		13.1	1.59	----	----	----	----	----
Toluene	108-88-3	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Trichloroethylene	79-01-6	E611D/WT	µg/L		0.78	<0.50	----	----	----	----	----
Trichlorofluoromethane	75-69-4	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Trihalomethanes [THMs], total	----	E611D/WT	µg/L		<1.0	<1.0	----	----	----	----	----
Vinyl chloride	75-01-4	E611D/WT	µg/L		<0.20	<0.20	----	----	----	----	----
Xylene, m+p-	179601-23-1	E611D/WT	µg/L		<0.40	<0.40	----	----	----	----	----
Xylene, o-	95-47-6	E611D/WT	µg/L		<0.30	<0.30	----	----	----	----	----
Xylenes, total	1330-20-7	E611D/WT	µg/L		<0.50	<0.50	----	----	----	----	----
Hydrocarbons											
F1 (C6-C10)	----	E581.F1-L/WT	µg/L		<25	<25	----	----	----	----	----
F2 (C10-C16)	----	E601/WT	µg/L		<100	<100	----	----	----	----	----
F3 (C16-C34)	----	E601/WT	µg/L		<250	<250	----	----	----	----	----
F4 (C34-C50)	----	E601/WT	µg/L		<250	<250	----	----	----	----	----
F1-BTEX	----	EC580/WT	µg/L		<25	<25	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-LF-GW2_2025-08-29 ----	LF-KP23-04_2025-08-29 ----	----	----	----	----	----
				Client sampling date / time	29-Aug-2025 09:55	29-Aug-2025 11:20	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
					BF2500306-001	BF2500306-002	----	----	----	----	----
					Result	Result	----	----	----	----	----
Hydrocarbons											
Hydrocarbons, total (C6-C50)	n/a	EC581/WT	µg/L		<370	<370	----	----	----	----	----
Hydrocarbons Surrogates											
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/WT	%		100	91.1	----	----	----	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.F1-L/WT	%		74.7	78.3	----	----	----	----	----
Volatile Organic Compounds Surrogates											
Bromofluorobenzene, 4-	460-00-4	E611D/WT	%		89.7	89.4	----	----	----	----	----
Difluorobenzene, 1,4-	540-36-3	E611D/WT	%		97.3	97.1	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons											
Acenaphthene	83-32-9	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Acenaphthylene	208-96-8	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Acridine	260-94-6	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Anthracene	120-12-7	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Benz(a)anthracene	56-55-3	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Benzo(a)pyrene	50-32-8	E641A-L/WT	µg/L		<0.0050	<0.0050	----	----	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Benzo(b+j+k)fluoranthene	n/a	E641A-L/WT	µg/L		<0.015	<0.015	----	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Benzo(k)fluoranthene	207-08-9	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Chrysene	218-01-9	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A-L/WT	µg/L		<0.0050	<0.0050	----	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-LF-GW2_2025-08-29 ----	LF-KP23-04_2025-08-29 ----	----	----	----	----	----
				Client sampling date / time	29-Aug-2025 09:55	29-Aug-2025 11:20	----	----	----	----	----
				Sub-Matrix	Water	Water	----	----	----	----	----
					BF2500306-001	BF2500306-002	----	----	----	----	----
					Result	Result	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons											
Fluoranthene	206-44-0	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Fluorene	86-73-7	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Methylnaphthalene, 1+2-	----	E641A-L/WT	µg/L		<0.015	<0.015	----	----	----	----	----
Methylnaphthalene, 2-	91-57-6	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Naphthalene	91-20-3	E641A-L/WT	µg/L		<0.011 DLM	<0.010	----	----	----	----	----
Perylene	198-55-0	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Phenanthrene	85-01-8	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Pyrene	129-00-0	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Quinoline	91-22-5	E641A-L/WT	µg/L		<0.021 DLM, RRR	<0.029 DLM	----	----	----	----	----
B(a)P total potency equivalents [B(a)P TPE]	----	E641A-L/WT	µg/L		<0.010	<0.010	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates											
Chrysene-d12	1719-03-5	E641A-L/WT	%		84.7	98.2	----	----	----	----	----
Naphthalene-d8	1146-65-2	E641A-L/WT	%		88.7	111	----	----	----	----	----
Phenanthrene-d10	1517-22-2	E641A-L/WT	%		89.2	105	----	----	----	----	----

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

Summary of Guideline Limits

CERTIFICATE OF ANALYSIS

Work Order	:	**BF2500306**			
Client	:	**Baffinland Iron Mines Corporation**	Laboratory	:	ALS Environmental - Baffin Island
Contact	:	Environmental Lab Results	Account Manager	:	Rick Hawthorne
Address	:	360 Oakville Place Dr Suite 300 Oakville Ontario Canada L6H 6K8	Address	:	Mary River, Qikqtani Region Baffin Island NU Canada
Telephone	:	----	E-mail	:	Rick.Hawthorne@ALSGlobal.com
Project	:	GW_Landfill	Telephone	:	
PO	:	4500156571	Date Samples Received	:	29-Aug-2025 18:00
C-O-C number	:	250829_GW_LANDFILL	Date Analysis Commenced	:	30-Aug-2025
Sampler	:	AG, LG	Issue Date	:	11-Sep-2025 09:42
Site	:	MS			
Quote number	:	2024-2025 Scope of Work			
No. of samples received	:	2			
No. of samples analysed	:	2			

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

Signatories	*Position*	*Laboratory Department*
Amaninder Dhillon		Organics, Waterloo, Ontario
Andrea Armstrong		VOC, Waterloo, Ontario
Cedrick Velasco		Inorganics, Baffin Island, Nunavut
Danielle Gravel		Organics, Waterloo, Ontario
Jeremy Gingras		Organics, Waterloo, Ontario
Walt Kippenhuck		Inorganics, Baffin Island, Nunavut
Walt Kippenhuck		Inorganics, Waterloo, Ontario
Walt Kippenhuck		Metals, Waterloo, Ontario
Walt Kippenhuck		Centralized Prep, Waterloo, Ontario

General Comments

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

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

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

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

Key: CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.
LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units
µg/L	micrograms per litre
µS/cm	microsiemens per centimetre

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

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Workorder Comments

E641 BF2500306-001 RRR: Detection limit raised due to high analyte recovery in the method blank.

Qualifiers

Qualifier	Description
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
RRR	Refer to report comments for issues regarding this analysis.

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: MS-LF-GW2_2025-08-29 ----	Client sample ID: LF-KP23-04_2025-08-29 ----	----	----	----
Client sampling date / time					29-Aug-2025 09:55	29-Aug-2025 11:20	----	----	----
					BF2500306-001	BF2500306-002	----	----	----
					Result	Result	----	----	----
Sample Preparation									
Dissolved carbon filtration location	----	EP358/WT	-	-	field	field	----	----	----
Physical Tests									
Conductivity	----	E100/WT	1.0	µS/cm	790	502	----	----	----
pH	----	E108/BF	0.10	pH units	7.19	7.57	----	----	----
Solids, total dissolved [TDS]	----	E162/BF	10	mg/L	442	266	----	----	----
Solids, total suspended [TSS]	----	E160-L/BF	1.0	mg/L	28.5	3.4	----	----	----
Turbidity	----	E121/BF	0.10	NTU	11.8	2.60	----	----	----
Alkalinity, total (as CaCO3)	----	E290/WT	2.0	mg/L	269	181	----	----	----
Anions and Nutrients									
Ammonia, total (as N)	7664-41-7	E298/WT	0.0050	mg/L	0.359	0.0086	----	----	----
Bromide	24959-67-9	E235.Br/WT	0.10	mg/L	<0.10	<0.10	----	----	----
Chloride	16887-00-6	E235.Cl/WT	0.50	mg/L	49.0	15.7	----	----	----
Fluoride	16984-48-8	E235.F/WT	0.020	mg/L	0.099	0.076	----	----	----
Kjeldahl nitrogen, total [TKN]	----	E318/WT	0.050	mg/L	1.21	0.190	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3/WT	0.020	mg/L	0.201	0.219	----	----	----
Nitrite (as N)	14797-65-0	E235.NO2/WT	0.010	mg/L	<0.010	<0.010	----	----	----
Phosphorus, total	7723-14-0	E372-U/WT	0.0020	mg/L	0.0900	0.0090	----	----	----
Phosphorus, total dissolved	7723-14-0	E375-T/WT	0.0020	mg/L	0.0445	0.0064	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	0.30	mg/L	58.4	54.1	----	----	----
Organic / Inorganic Carbon									
Carbon, dissolved organic [DOC]	----	E358-L/WT	0.50	mg/L	7.32	3.61	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-LF-GW2_2025-08-29 ----	LF-KP23-04_2025-08-29 ----	----	----	----
					Client sampling date / time	29-Aug-2025 09:55	29-Aug-2025 11:20	----	----	----
						BF2500306-001	BF2500306-002	----	----	----
						Result	Result	----	----	----
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/WT	0.0010	mg/L		0.0010	0.0066	----	----	----
Antimony, dissolved	7440-36-0	E421/WT	0.00010	mg/L		0.00035	<0.00010	----	----	----
Arsenic, dissolved	7440-38-2	E421/WT	0.00010	mg/L		0.00040	0.00021	----	----	----
Barium, dissolved	7440-39-3	E421/WT	0.00010	mg/L		0.0552	0.0290	----	----	----
Beryllium, dissolved	7440-41-7	E421/WT	0.000020	mg/L		<0.000020	<0.000020	----	----	----
Bismuth, dissolved	7440-69-9	E421/WT	0.000050	mg/L		<0.000050	<0.000050	----	----	----
Boron, dissolved	7440-42-8	E421/WT	0.010	mg/L		0.452	0.393	----	----	----
Cadmium, dissolved	7440-43-9	E421/WT	0.0000050	mg/L		0.000126	0.0000052	----	----	----
Calcium, dissolved	7440-70-2	E421/WT	0.050	mg/L		74.9	47.5	----	----	----
Cesium, dissolved	7440-46-2	E421/WT	0.000010	mg/L		<0.000010	<0.000010	----	----	----
Chromium, dissolved	7440-47-3	E421/WT	0.00050	mg/L		0.00057	0.00052	----	----	----
Cobalt, dissolved	7440-48-4	E421/WT	0.00010	mg/L		0.00044	<0.00010	----	----	----
Copper, dissolved	7440-50-8	E421/WT	0.00020	mg/L		0.00438	0.00329	----	----	----
Iron, dissolved	7439-89-6	E421/WT	0.010	mg/L		0.011	0.032	----	----	----
Lead, dissolved	7439-92-1	E421/WT	0.000050	mg/L		0.000148	<0.000050	----	----	----
Lithium, dissolved	7439-93-2	E421/WT	0.0010	mg/L		0.0604	0.0409	----	----	----
Magnesium, dissolved	7439-95-4	E421/WT	0.0050	mg/L		26.7	32.3	----	----	----
Manganese, dissolved	7439-96-5	E421/WT	0.00010	mg/L		0.144	0.00672	----	----	----
Mercury, dissolved	7439-97-6	E509/WT	0.0000050	mg/L		<0.0000050	<0.0000050	----	----	----
Molybdenum, dissolved	7439-98-7	E421/WT	0.000050	mg/L		0.00627	0.00205	----	----	----
Nickel, dissolved	7440-02-0	E421/WT	0.00050	mg/L		0.0304	0.00476	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

					Client sample ID	MS-LF-GW2_2025-08-29 ----	LF-KP23-04_2025-08-29 ----	----	----	----
					Client sampling date / time	29-Aug-2025 09:55	29-Aug-2025 11:20	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		BF2500306-001	BF2500306-002	----	----	----
						Result	Result	----	----	----
Dissolved Metals										
Phosphorus, dissolved	7723-14-0	E421/WT	0.050	mg/L		<0.050	<0.050	----	----	----
Potassium, dissolved	7440-09-7	E421/WT	0.050	mg/L		17.7	2.43	----	----	----
Rubidium, dissolved	7440-17-7	E421/WT	0.00020	mg/L		0.00561	0.00474	----	----	----
Selenium, dissolved	7782-49-2	E421/WT	0.000050	mg/L		0.000098	<0.000050	----	----	----
Silicon, dissolved	7440-21-3	E421/WT	0.050	mg/L		4.64	4.36	----	----	----
Silver, dissolved	7440-22-4	E421/WT	0.000010	mg/L		<0.000010	<0.000010	----	----	----
Sodium, dissolved	7440-23-5	E421/WT	0.050	mg/L		37.2	10.9	----	----	----
Strontium, dissolved	7440-24-6	E421/WT	0.00020	mg/L		0.128	0.0276	----	----	----
Sulfur, dissolved	7704-34-9	E421/WT	0.50	mg/L		21.1	20.7	----	----	----
Tellurium, dissolved	13494-80-9	E421/WT	0.00020	mg/L		<0.00020	<0.00020	----	----	----
Thallium, dissolved	7440-28-0	E421/WT	0.000010	mg/L		0.000041	0.000016	----	----	----
Thorium, dissolved	7440-29-1	E421/WT	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Tin, dissolved	7440-31-5	E421/WT	0.00010	mg/L		<0.00010	0.00029	----	----	----
Titanium, dissolved	7440-32-6	E421/WT	0.00030	mg/L		<0.00030	<0.00030	----	----	----
Tungsten, dissolved	7440-33-7	E421/WT	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Uranium, dissolved	7440-61-1	E421/WT	0.000010	mg/L		0.00520	0.00375	----	----	----
Vanadium, dissolved	7440-62-2	E421/WT	0.00050	mg/L		<0.00050	<0.00050	----	----	----
Zinc, dissolved	7440-66-6	E421/WT	0.0010	mg/L		<0.0010	0.0017	----	----	----
Zirconium, dissolved	7440-67-7	E421/WT	0.00030	mg/L		<0.00030	0.00054	----	----	----
Dissolved mercury filtration location	----	EP509/WT	-	-		Field	Field	----	----	----
Dissolved metals filtration location	----	EP421/WT	-	-		Field	Field	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-LF-GW2_2025-08-29 ----	LF-KP23-04_2025-08-29 ----	----	----	----
					Client sampling date / time	29-Aug-2025 09:55	29-Aug-2025 11:20	----	----	----
						BF2500306-001	BF2500306-002	----	----	----
						Result	Result	----	----	----
Volatile Organic Compounds										
Acetone	67-64-1	E611D/WT	20	µg/L		<20	<20	----	----	----
Benzene	71-43-2	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Bromodichloromethane	75-27-4	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Bromoform	75-25-2	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Bromomethane	74-83-9	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
BTEX, total	----	E611D/WT	1.0	µg/L		<1.0	<1.0	----	----	----
Carbon disulfide	75-15-0	E611D/WT	1.0	µg/L		<1.0	<1.0	----	----	----
Carbon tetrachloride	56-23-5	E611D/WT	0.20	µg/L		<0.20	<0.20	----	----	----
Chlorobenzene	108-90-7	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Chloroethane	75-00-3	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Chloroform	67-66-3	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Chloromethane	74-87-3	E611D/WT	2.0	µg/L		<2.0	<2.0	----	----	----
Dibromochloromethane	124-48-1	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dibromoethane, 1,2-	106-93-4	E611D/WT	0.20	µg/L		<0.20	<0.20	----	----	----
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dichlorodifluoromethane	75-71-8	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloroethane, 1,1-	75-34-3	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloroethane, 1,2-	107-06-2	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloroethylene, 1,1-	75-35-4	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----

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Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-LF-GW2_2025-08-29 ----	LF-KP23-04_2025-08-29 ----	----	----	----
					Client sampling date / time	29-Aug-2025 09:55	29-Aug-2025 11:20	----	----	----
						BF2500306-001	BF2500306-002	----	----	----
						Result	Result	----	----	----
Volatile Organic Compounds										
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	0.50	µg/L		1.56	<0.50	----	----	----
Dichloroethylene, cis+trans-1,2-	540-59-0	E611D/WT	0.71	µg/L		2.35	<0.71	----	----	----
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	0.50	µg/L		0.79	<0.50	----	----	----
Dichloromethane	75-09-2	E611D/WT	1.0	µg/L		<1.0	<1.0	----	----	----
Dichloropropane, 1,2-	78-87-5	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	0.30	µg/L		<0.30	<0.30	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	0.50	µg/L		<0.5	<0.5	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	0.30	µg/L		<0.30	<0.30	----	----	----
Ethylbenzene	100-41-4	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Hexane, n-	110-54-3	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Hexanone, 2-	591-78-6	E611D/WT	20	µg/L		<20	<20	----	----	----
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	20	µg/L		<20	<20	----	----	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	20	µg/L		<20	<20	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Styrene	100-42-5	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Tetrachloroethylene	127-18-4	E611D/WT	0.50	µg/L		13.1	1.59	----	----	----
Toluene	108-88-3	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

					Client sample ID	MS-LF-GW2_2025-08-29 ----	LF-KP23-04_2025-08-29 ----	----	----	----
					Client sampling date / time	29-Aug-2025 09:55	29-Aug-2025 11:20	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		BF2500306-001	BF2500306-002	----	----	----
						Result	Result	----	----	----
Volatile Organic Compounds										
Trichloroethylene	79-01-6	E611D/WT	0.50	µg/L		0.78	<0.50	----	----	----
Trichlorofluoromethane	75-69-4	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Trihalomethanes [THMs], total	----	E611D/WT	1.0	µg/L		<1.0	<1.0	----	----	----
Vinyl chloride	75-01-4	E611D/WT	0.20	µg/L		<0.20	<0.20	----	----	----
Xylene, m+p-	179601-23-1	E611D/WT	0.40	µg/L		<0.40	<0.40	----	----	----
Xylene, o-	95-47-6	E611D/WT	0.30	µg/L		<0.30	<0.30	----	----	----
Xylenes, total	1330-20-7	E611D/WT	0.50	µg/L		<0.50	<0.50	----	----	----
Hydrocarbons										
F1 (C6-C10)	----	E581.F1-L/WT	25	µg/L		<25	<25	----	----	----
F2 (C10-C16)	----	E601/WT	100	µg/L		<100	<100	----	----	----
F3 (C16-C34)	----	E601/WT	250	µg/L		<250	<250	----	----	----
F4 (C34-C50)	----	E601/WT	250	µg/L		<250	<250	----	----	----
F1-BTEX	----	EC580/WT	25	µg/L		<25	<25	----	----	----
Hydrocarbons, total (C6-C50)	n/a	EC581/WT	370	µg/L		<370	<370	----	----	----
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/WT	1.0	%		100	91.1	----	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.F1-L/WT	1.0	%		74.7	78.3	----	----	----
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611D/WT	1.0	%		89.7	89.4	----	----	----
Difluorobenzene, 1,4-	540-36-3	E611D/WT	1.0	%		97.3	97.1	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-LF-GW2_2025-08-29 ----	LF-KP23-04_2025-08-29 ----	----	----	----
					Client sampling date / time	29-Aug-2025 09:55	29-Aug-2025 11:20	----	----	----
						BF2500306-001	BF2500306-002	----	----	----
						Result	Result	----	----	----
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Acenaphthylene	208-96-8	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Acridine	260-94-6	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Anthracene	120-12-7	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Benz(a)anthracene	56-55-3	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Benzo(a)pyrene	50-32-8	E641A-L/WT	0.0050	µg/L		<0.0050	<0.0050	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Benzo(b+j+k)fluoranthene	n/a	E641A-L/WT	0.015	µg/L		<0.015	<0.015	----	----	----
Benzo(g,h,i)perylene	191-24-2	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Benzo(k)fluoranthene	207-08-9	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Chrysene	218-01-9	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A-L/WT	0.0050	µg/L		<0.0050	<0.0050	----	----	----
Fluoranthene	206-44-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Fluorene	86-73-7	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Methylnaphthalene, 1+2-	----	E641A-L/WT	0.015	µg/L		<0.015	<0.015	----	----	----
Methylnaphthalene, 2-	91-57-6	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Naphthalene	91-20-3	E641A-L/WT	0.010	µg/L		<0.011 DLM	<0.010	----	----	----
Perylene	198-55-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Phenanthrene	85-01-8	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----

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Analytical Results

Sub-Matrix: Water
(Matrix: Water)

					Client sample ID	MS-LF-GW2_2025-08-29 ----	LF-KP23-04_2025-08-29 ----	----	----	----
					Client sampling date / time	29-Aug-2025 09:55	29-Aug-2025 11:20	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		BF2500306-001	BF2500306-002	----	----	----
						Result	Result	----	----	----
Polycyclic Aromatic Hydrocarbons										
Pyrene	129-00-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Quinoline	91-22-5	E641A-L/WT	0.010	µg/L		<0.021 DLM, RRR	<0.029 DLM	----	----	----
B(a)P total potency equivalents [B(a)P TPE]	----	E641A-L/WT	0.010	µg/L		<0.010	<0.010	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A-L/WT	0.1	%		84.7	98.2	----	----	----
Naphthalene-d8	1146-65-2	E641A-L/WT	0.1	%		88.7	111	----	----	----
Phenanthrene-d10	1517-22-2	E641A-L/WT	0.1	%		89.2	105	----	----	----

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

ALS Canada Ltd.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **BF2500306**	Page	: 1 of 16
Client	: **Baffinland Iron Mines Corporation**	Laboratory	: ALS Environmental - Baffin Island
Contact	: Environmental Lab Results	Account Manager	: Rick Hawthorne
Address	: 360 Oakville Place Dr Suite 300 Oakville ON Canada L6H 6K8	Address	: Mary River, Qikqtani Region Baffin Island, Nunavut Canada
Telephone	: ----	Telephone	: ----
Project	: GW_Landfill	Date Samples Received	: 29-Aug-2025 18:00
PO	: 4500156571	Issue Date	: 11-Sep-2025 09:43
C-O-C number	: 250829_GW_LANDFILL		
Sampler	: AG, LG		
Site	: MS		
Quote number	: 2024-2025 Scope of Work		
No. of samples received	: 2		
No. of samples analysed	: 2		

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

Key

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

Workorder Comments

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

Summary of Outliers

Outliers : Quality Control Samples

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

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

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

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Method Blank (MB) Values								
Polycyclic Aromatic Hydrocarbons	QC-MRG4-2204975 001	----	Quinoline	91-22-5	E641A-L	0.015 µg/L MB-LOR	0.01 µg/L	Blank result exceeds permitted value

Result Qualifiers

Qualifier	Description
MB-LOR	*Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.*

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
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) LF-KP23-04_2025-08-29	E298	29-Aug-2025	05-Sep-2025	28 days	7 days	✓	07-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) MS-LF-GW2_2025-08-29	E298	29-Aug-2025	05-Sep-2025	28 days	7 days	✓	07-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE [ON MECP] LF-KP23-04_2025-08-29	E235.Br	29-Aug-2025	04-Sep-2025	28 days	6 days	✓	08-Sep-2025	28 days	6 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE [ON MECP] MS-LF-GW2_2025-08-29	E235.Br	29-Aug-2025	04-Sep-2025	28 days	6 days	✓	08-Sep-2025	28 days	6 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE [ON MECP] LF-KP23-04_2025-08-29	E235.Cl	29-Aug-2025	04-Sep-2025	28 days	6 days	✓	08-Sep-2025	28 days	6 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE [ON MECP] MS-LF-GW2_2025-08-29	E235.Cl	29-Aug-2025	04-Sep-2025	28 days	6 days	✓	08-Sep-2025	28 days	6 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE [ON MECP] LF-KP23-04_2025-08-29	E235.F	29-Aug-2025	04-Sep-2025	28 days	6 days	✓	08-Sep-2025	28 days	6 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Fluoride in Water by IC										
HDPE [ON MECP]										
MS-LF-GW2_2025-08-29	E235.F	29-Aug-2025	04-Sep-2025	28 days	6 days	✓	08-Sep-2025	28 days	6 days	✓
Anions and Nutrients : Nitrate in Water by IC										
HDPE [ON MECP]										
LF-KP23-04_2025-08-29	E235.NO3	29-Aug-2025	04-Sep-2025	7 days	6 days	✓	08-Sep-2025	7 days	6 days	× EHT
Anions and Nutrients : Nitrate in Water by IC										
HDPE [ON MECP]										
MS-LF-GW2_2025-08-29	E235.NO3	29-Aug-2025	04-Sep-2025	7 days	6 days	✓	08-Sep-2025	7 days	6 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE [ON MECP]										
LF-KP23-04_2025-08-29	E235.NO2	29-Aug-2025	04-Sep-2025	7 days	6 days	✓	08-Sep-2025	7 days	6 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE [ON MECP]										
MS-LF-GW2_2025-08-29	E235.NO2	29-Aug-2025	04-Sep-2025	7 days	6 days	✓	08-Sep-2025	7 days	6 days	× EHT
Anions and Nutrients : Sulfate in Water by IC										
HDPE [ON MECP]										
LF-KP23-04_2025-08-29	E235.SO4	29-Aug-2025	04-Sep-2025	28 days	6 days	✓	08-Sep-2025	28 days	6 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE [ON MECP]										
MS-LF-GW2_2025-08-29	E235.SO4	29-Aug-2025	04-Sep-2025	28 days	6 days	✓	08-Sep-2025	28 days	6 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass dissolved (sulfuric acid) [ON MECP]										
LF-KP23-04_2025-08-29	E375-T	29-Aug-2025	06-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass dissolved (sulfuric acid) [ON MECP]										
MS-LF-GW2_2025-08-29	E375-T	29-Aug-2025	06-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
LF-KP23-04_2025-08-29	E318	29-Aug-2025	06-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
MS-LF-GW2_2025-08-29	E318	29-Aug-2025	06-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
LF-KP23-04_2025-08-29	E372-U	29-Aug-2025	06-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
MS-LF-GW2_2025-08-29	E372-U	29-Aug-2025	06-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
LF-KP23-04_2025-08-29	E509	29-Aug-2025	08-Sep-2025	28 days	10 days	✓	08-Sep-2025	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
MS-LF-GW2_2025-08-29	E509	29-Aug-2025	08-Sep-2025	28 days	10 days	✓	08-Sep-2025	28 days	10 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
LF-KP23-04_2025-08-29	E421	29-Aug-2025	05-Sep-2025	180 days	7 days	✓	05-Sep-2025	180 days	7 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
MS-LF-GW2_2025-08-29	E421	29-Aug-2025	05-Sep-2025	180 days	7 days	✓	05-Sep-2025	180 days	7 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate)										
LF-KP23-04_2025-08-29	E581.F1-L	29-Aug-2025	04-Sep-2025	14 days	6 days	✓	04-Sep-2025	14 days	6 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate)										
MS-LF-GW2_2025-08-29	E581.F1-L	29-Aug-2025	04-Sep-2025	14 days	6 days	✓	04-Sep-2025	14 days	6 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
MS-LF-GW2_2025-08-29	E601	29-Aug-2025	08-Sep-2025	14 days	10 days	✓	09-Sep-2025	40 days	1 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
LF-KP23-04_2025-08-29	E601	29-Aug-2025	09-Sep-2025	14 days	11 days	✓	09-Sep-2025	40 days	0 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) [ON MECP]										
LF-KP23-04_2025-08-29	E358-L	29-Aug-2025	05-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) [ON MECP]										
MS-LF-GW2_2025-08-29	E358-L	29-Aug-2025	05-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE [ON MECP]										
LF-KP23-04_2025-08-29	E290	29-Aug-2025	04-Sep-2025	14 days	6 days	✓	05-Sep-2025	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE [ON MECP]										
MS-LF-GW2_2025-08-29	E290	29-Aug-2025	04-Sep-2025	14 days	6 days	✓	05-Sep-2025	14 days	6 days	✓
Physical Tests : Conductivity in Water										
HDPE [ON MECP]										
LF-KP23-04_2025-08-29	E100	29-Aug-2025	04-Sep-2025	28 days	6 days	✓	05-Sep-2025	28 days	6 days	✓
Physical Tests : Conductivity in Water										
HDPE [ON MECP]										
MS-LF-GW2_2025-08-29	E100	29-Aug-2025	04-Sep-2025	28 days	6 days	✓	05-Sep-2025	28 days	6 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : pH by Meter										
HDPE [ON MECP]										
LF-KP23-04_2025-08-29	E108	29-Aug-2025	30-Aug-2025	14 days	1 days	✓	30-Aug-2025	14 days	1 days	✓
Physical Tests : pH by Meter										
HDPE [ON MECP]										
MS-LF-GW2_2025-08-29	E108	29-Aug-2025	30-Aug-2025	14 days	1 days	✓	30-Aug-2025	14 days	1 days	✓
Physical Tests : TDS by Gravimetry										
HDPE [ON MECP]										
LF-KP23-04_2025-08-29	E162	29-Aug-2025	----	----	----		31-Aug-2025	7 days	2 days	✓
Physical Tests : TDS by Gravimetry										
HDPE [ON MECP]										
MS-LF-GW2_2025-08-29	E162	29-Aug-2025	----	----	----		31-Aug-2025	7 days	2 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [ON MECP]										
LF-KP23-04_2025-08-29	E160-L	29-Aug-2025	----	----	----		30-Aug-2025	7 days	1 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [ON MECP]										
MS-LF-GW2_2025-08-29	E160-L	29-Aug-2025	----	----	----		30-Aug-2025	7 days	1 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE [ON MECP]										
LF-KP23-04_2025-08-29	E121	29-Aug-2025	----	----	----		30-Aug-2025	48 hrs	22 hrs	✓
Physical Tests : Turbidity by Nephelometry										
HDPE [ON MECP]										
MS-LF-GW2_2025-08-29	E121	29-Aug-2025	----	----	----		30-Aug-2025	48 hrs	23 hrs	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate)										
MS-LF-GW2_2025-08-29	E641A-L	29-Aug-2025	08-Sep-2025	14 days	10 days	✓	08-Sep-2025	40 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
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate)										
LF-KP23-04_2025-08-29	E641A-L	29-Aug-2025	09-Sep-2025	14 days	11 days	✓	09-Sep-2025	40 days	0 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
LF-KP23-04_2025-08-29	E611D	29-Aug-2025	04-Sep-2025	14 days	6 days	✓	04-Sep-2025	14 days	6 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
MS-LF-GW2_2025-08-29	E611D	29-Aug-2025	04-Sep-2025	14 days	6 days	✓	04-Sep-2025	14 days	6 days	✓

Legend & Qualifier Definitions

EHT: Exceeded ALS recommended hold time prior to analysis.

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

Quality Control Parameter Frequency Compliance

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

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Conductivity in Water	E100	2199621	1	18	5.5	5.0	✓
pH by Meter	E108	2191835	1	8	12.5	5.0	✓
Turbidity by Nephelometry	E121	2191836	1	8	12.5	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	2191849	1	8	12.5	5.0	✓
TDS by Gravimetry	E162	2191850	1	8	12.5	5.0	✓
Bromide in Water by IC	E235.Br	2199624	1	6	16.6	5.0	✓
Chloride in Water by IC	E235.Cl	2199628	1	10	10.0	5.0	✓
Fluoride in Water by IC	E235.F	2199625	1	10	10.0	5.0	✓
Nitrite in Water by IC	E235.NO2	2199627	1	8	12.5	5.0	✓
Nitrate in Water by IC	E235.NO3	2199626	1	18	5.5	5.0	✓
Sulfate in Water by IC	E235.SO4	2199629	1	9	11.1	5.0	✓
Alkalinity Species by Titration	E290	2199622	1	8	12.5	5.0	✓
Ammonia by Fluorescence	E298	2201872	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2201870	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2202722	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2201871	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2203389	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2200849	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2201321	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2199634	1	20	5.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2199633	1	20	5.0	5.0	✓
Laboratory Control Samples (LCS)							
Conductivity in Water	E100	2199621	1	18	5.5	5.0	✓
pH by Meter	E108	2191835	1	8	12.5	5.0	✓
Turbidity by Nephelometry	E121	2191836	1	8	12.5	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	2191849	1	8	12.5	5.0	✓
TDS by Gravimetry	E162	2191850	1	8	12.5	5.0	✓
Bromide in Water by IC	E235.Br	2199624	1	6	16.6	5.0	✓
Chloride in Water by IC	E235.Cl	2199628	1	10	10.0	5.0	✓
Fluoride in Water by IC	E235.F	2199625	1	10	10.0	5.0	✓
Nitrite in Water by IC	E235.NO2	2199627	1	8	12.5	5.0	✓
Nitrate in Water by IC	E235.NO3	2199626	1	18	5.5	5.0	✓
Sulfate in Water by IC	E235.SO4	2199629	1	9	11.1	5.0	✓
Alkalinity Species by Titration	E290	2199622	1	8	12.5	5.0	✓
Ammonia by Fluorescence	E298	2201872	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2201870	1	20	5.0	5.0	✓

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Control Samples (LCS) - Continued							
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2202722	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2201871	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2203389	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2200849	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2201321	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2199634	1	20	5.0	5.0	✓
CCME PHCs - F2-F4 by GC-FID	E601	2204975	2	25	8.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2199633	1	20	5.0	5.0	✓
PAHs in Water by Hexane LVI GC-MS (Low Level)	E641A-L	2204976	2	23	8.7	5.0	✓
Method Blanks (MB)							
Conductivity in Water	E100	2199621	1	18	5.5	5.0	✓
Turbidity by Nephelometry	E121	2191836	1	8	12.5	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	2191849	1	8	12.5	5.0	✓
TDS by Gravimetry	E162	2191850	1	8	12.5	5.0	✓
Bromide in Water by IC	E235.Br	2199624	1	6	16.6	5.0	✓
Chloride in Water by IC	E235.Cl	2199628	1	10	10.0	5.0	✓
Fluoride in Water by IC	E235.F	2199625	1	10	10.0	5.0	✓
Nitrite in Water by IC	E235.NO2	2199627	1	8	12.5	5.0	✓
Nitrate in Water by IC	E235.NO3	2199626	1	18	5.5	5.0	✓
Sulfate in Water by IC	E235.SO4	2199629	1	9	11.1	5.0	✓
Alkalinity Species by Titration	E290	2199622	1	8	12.5	5.0	✓
Ammonia by Fluorescence	E298	2201872	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2201870	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2202722	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2201871	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2203389	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2200849	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2201321	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2199634	1	20	5.0	5.0	✓
CCME PHCs - F2-F4 by GC-FID	E601	2204975	2	25	8.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2199633	1	20	5.0	5.0	✓
PAHs in Water by Hexane LVI GC-MS (Low Level)	E641A-L	2204976	2	23	8.7	5.0	✓
Matrix Spikes (MS)							
Bromide in Water by IC	E235.Br	2199624	1	6	16.6	5.0	✓
Chloride in Water by IC	E235.Cl	2199628	1	10	10.0	5.0	✓
Fluoride in Water by IC	E235.F	2199625	1	10	10.0	5.0	✓
Nitrite in Water by IC	E235.NO2	2199627	1	8	12.5	5.0	✓
Nitrate in Water by IC	E235.NO3	2199626	1	18	5.5	5.0	✓
Sulfate in Water by IC	E235.SO4	2199629	1	9	11.1	5.0	✓

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Matrix Spikes (MS) - Continued							
Ammonia by Fluorescence	E298	2201872	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2201870	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2202722	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2201871	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2203389	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2200849	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2201321	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2199634	1	20	5.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2199633	1	20	5.0	5.0	✓

Methodology References and Summaries

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

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

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Nitrate in Water by IC	E235.NO3 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Sulfate in Water by IC	E235.SO4 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Alkalinity Species by Titration	E290 ALS Environmental - Waterloo	Water	APHA 2320 B (mod)	Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.
Ammonia by Fluorescence	E298 ALS Environmental - Waterloo	Water	Method Fialab 100, 2018	Ammonia in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021)
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318 ALS Environmental - Waterloo	Water	Method Fialab 100, 2018	TKN in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021).
Dissolved Organic Carbon by Combustion (Low Level)	E358-L ALS Environmental - Waterloo	Water	APHA 5310 B (mod)	Dissolved Organic Carbon (Non-Purgeable), also known as NPOC (dissolved), is a direct measurement of DOC after a filtered (0.45 micron) sample has been acidified and purged to remove inorganic carbon (IC). Analysis is by high temperature combustion with infrared detection of CO2. NPOC does not include volatile organic species that are purged off with IC. For samples where the majority of DC (dissolved carbon) is comprised of IC (which is common), this method is more accurate and more reliable than the DOC by subtraction method (i.e. DC minus DIC).
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Total Phosphorus is determined colourimetrically using a discrete analyzer after heated persulfate digestion of the sample.
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Total Dissolved Phosphorus is determined colourimetrically using a discrete analyzer after filtration through a 0.45 micron filter followed by heated persulfate digestion of the sample.
Dissolved Metals in Water by CRC ICPMS	E421 ALS Environmental - Waterloo	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Dissolved Mercury in Water by CVAAS	E509 ALS Environmental - Waterloo	Water	APHA 3030B/EPA 1631E (mod)	Water samples are filtered (0.45 um), preserved with HCl, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1 (mod)	CCME Fraction 1 (F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
CCME PHCs - F2-F4 by GC-FID	E601 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	Sample extracts are analyzed by GC-FID for CCME hydrocarbon fractions (F2-F4). Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
VOCs (Eastern Canada List) by Headspace GC-MS	E611D ALS Environmental - Waterloo	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PAHs in Water by Hexane LVI GC-MS (Low Level)	E641A-L ALS Environmental - Waterloo	Water	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS.
F1-BTEX	EC580 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).
Sum F1 to F4 (C6-C50)	EC581 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	Hydrocarbons, total (C6-C50) is the sum of CCME Fractions F1(C6-C10), F2(C10-C16), F3(C16-C34), and F4(C34-C50). F4G-sg is not used within this calculation due to overlap with other fractions.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Ammonia	EP298 ALS Environmental - Waterloo	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Digestion for TKN in water	EP318 ALS Environmental - Waterloo	Water	APHA 4500-Norg D (mod)	Samples are digested at high temperature using Sulfuric Acid with Copper catalyst, which converts organic nitrogen sources to Ammonia, which is then quantified by the analytical method as TKN. This method is unsuitable for samples containing high levels of nitrate. If nitrate exceeds TKN concentration by ten times or more, results may be biased low.
Preparation for Dissolved Organic Carbon for Combustion	EP358 ALS Environmental - Waterloo	Water	APHA 5310 B (mod)	Preparation for Dissolved Organic Carbon

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Digestion for Total Phosphorus in water	EP372 ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Samples are heated with a persulfate digestion reagent.
Digestion for Dissolved Phosphorus in water	EP375 ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Samples are filtered through a 0.45 micron membrane filter and then heated with a persulfate digestion reagent.
Dissolved Metals Water Filtration	EP421 ALS Environmental - Waterloo	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO3.
Dissolved Mercury Water Filtration	EP509 ALS Environmental - Waterloo	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HCl.
VOCs Preparation for Headspace Analysis	EP581 ALS Environmental - Waterloo	Water	EPA 5021A (mod)	Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler. An aliquot of the headspace is then injected into a GC-MS-FID.
PHCs and PAHs Hexane Extraction	EP601 ALS Environmental - Waterloo	Water	EPA 3511 (mod)	Petroleum Hydrocarbons (PHCs) and Polycyclic Aromatic Hydrocarbons (PAHs) are extracted using a hexane liquid-liquid extraction.

QUALITY CONTROL REPORT

Work Order	: **BF2500306**	Page	: 1 of 21
Client	: Baffinland Iron Mines Corporation	Laboratory	: ALS Environmental - Baffin Island
Contact	: Environmental Lab Results	Account Manager	: Rick Hawthorne
Address	: 360 Oakville Place Dr Suite 300 Oakville ON Canada L6H 6K8	Address	: Mary River, Qikqtani Region Baffin Island, Nunavut Canada
Telephone	: ----	Telephone	:
Project	: GW_Landfill	Date Samples Received	: 29-Aug-2025 18:00
PO	: 4500156571	Date Analysis Commenced	: 30-Aug-2025
C-O-C number	: 250829_GW_LANDFILL	Issue Date	: 11-Sep-2025 09:42
Sampler	: AG, LG		
Site	: MS		
Quote number	: 2024-2025 Scope of Work		
No. of samples received	: 2		
No. of samples analysed	: 2		

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Laboratory Department*
Amaninder Dhillon	Team Lead - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Andrea Armstrong	Department Manager - Air Quality and Volatiles	Waterloo VOC, Waterloo, Ontario
Cedrick Velasco	Lab Manager	Baffin Island Inorganics, Baffin Island, Nunavut
Danielle Gravel	Supervisor - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Jeremy Gingras	Supervisor - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Centralized Prep, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Inorganics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Metals, Waterloo, Ontario
Walt Kippenhuck	Team Leader - Inorganics	Baffin Island Inorganics, Baffin Island, Nunavut

General Comments

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

Key :

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

Workorder Comments

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 2191835)											
BF2500305-001	Anonymous	pH	----	E108	0.10	pH units	5.28	5.29	0.189%	4%	----
Physical Tests (QC Lot: 2191836)											
BF2500305-002	Anonymous	Turbidity	----	E121	0.10	NTU	15.4	15.6	1.29%	15%	----
Physical Tests (QC Lot: 2191849)											
BF2500306-001	MS-LF-GW2_2025-08-29	Solids, total suspended [TSS]	----	E160-L	1.3	mg/L	28.5	29.7	4.13%	20%	----
Physical Tests (QC Lot: 2191850)											
BF2500306-002	LF-KP23-04_2025-08-29	Solids, total dissolved [TDS]	----	E162	13	mg/L	266	285	6.78%	20%	----
Physical Tests (QC Lot: 2199621)											
WT2524354-001	Anonymous	Conductivity	----	E100	2.0	µS/cm	872	874	0.229%	10%	----
Physical Tests (QC Lot: 2199622)											
WT2524354-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	2.0	mg/L	294	288	2.09%	20%	----
Anions and Nutrients (QC Lot: 2199624)											
BF2500306-001	MS-LF-GW2_2025-08-29	Bromide	24959-67-9	E235.Br	0.10	mg/L	<0.10	<0.10	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2199625)											
BF2500306-001	MS-LF-GW2_2025-08-29	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.099	0.091	0.008	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2199626)											
BF2500306-001	MS-LF-GW2_2025-08-29	Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	0.201	0.196	0.005	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2199627)											
BF2500306-001	MS-LF-GW2_2025-08-29	Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2199628)											
BF2500306-001	MS-LF-GW2_2025-08-29	Chloride	16887-00-6	E235.Cl	0.50	mg/L	49.0	48.6	0.758%	20%	----
Anions and Nutrients (QC Lot: 2199629)											
BF2500306-001	MS-LF-GW2_2025-08-29	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	58.4	58.3	0.234%	20%	----
Anions and Nutrients (QC Lot: 2201870)											
BF2500303-002	Anonymous	Kjeldahl nitrogen, total [TKN]	----	E318	0.050	mg/L	2.17	2.13	2.05%	20%	----
Anions and Nutrients (QC Lot: 2201871)											
BF2500303-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0050	0.0051	0.0001	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2201872)											
BF2500304-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0500	mg/L	2.20	2.28	3.29%	20%	----
Anions and Nutrients (QC Lot: 2203389)											

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Anions and Nutrients (QC Lot: 2203389) - continued											
BF2500299-001	Anonymous	Phosphorus, total dissolved	7723-14-0	E375-T	0.0020	mg/L	0.0026	0.0023	0.0003	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 2202722)											
BF2500298-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	1.64	1.37	0.27	Diff <2x LOR	----
Dissolved Metals (QC Lot: 2200849)											
BF2500298-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0139	0.0150	7.26%	20%	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.00952	0.00991	3.94%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	14.9	14.9	0.317%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00083	0.00084	0.000008	Diff <2x LOR	----
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.012	0.013	0.0007	Diff <2x LOR	----
		Lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	9.37	9.52	1.61%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.00076	0.00080	0.00004	Diff <2x LOR	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000483	0.000470	0.000013	Diff <2x LOR	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.00051	0.00051	0.000004	Diff <2x LOR	----
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.050	mg/L	1.08	1.08	0.577%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00154	0.00158	0.00004	Diff <2x LOR	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	0.837	0.854	2.06%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.050	mg/L	2.68	2.72	1.15%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.0155	0.0154	0.494%	20%	----
		Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	2.11	2.07	0.04	Diff <2x LOR	----
		Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----

Sub-Matrix: **Water**

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Laboratory Duplicate (DUP) Report						
					LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Dissolved Metals (QC Lot: 2200849) - continued											
BF2500298-001	Anonymous	Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	0.00045	0.00036	0.00009	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.00279	0.00278	0.334%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 2201321)											
BF2500303-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Volatile Organic Compounds (QC Lot: 2199633)											
BF2500303-001	Anonymous	Acetone	67-64-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Benzene	71-43-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromodichloromethane	75-27-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromoform	75-25-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromomethane	74-83-9	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Carbon disulfide	75-15-0	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Carbon tetrachloride	56-23-5	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Chlorobenzene	108-90-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroethane	75-00-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroform	67-66-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloromethane	74-87-3	E611D	2.0	µg/L	<2.0	<2.0	0	Diff <2x LOR	----
		Dibromochloromethane	124-48-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dibromoethane, 1,2-	106-93-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorodifluoromethane	75-71-8	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,1-	75-34-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,2-	107-06-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, 1,1-	75-35-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	0.94	0.92	0.02	Diff <2x LOR	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Volatile Organic Compounds (QC Lot: 2199633) - continued											
BF2500303-001	Anonymous	Dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Dichloropropane, 1,2-	78-87-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Hexane, n-	110-54-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Hexanone, 2-	591-78-6	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethylene	127-18-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Toluene	108-88-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichlorofluoromethane	75-69-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Vinyl chloride	75-01-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 2199634)											
BF2500303-001	Anonymous	F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	<25	0	Diff <2x LOR	----

Method Blank (MB) Report

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

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 2191836)						
Turbidity	----	E121	0.1	NTU	<0.10	----
Physical Tests (QCLot: 2191849)						
Solids, total suspended [TSS]	----	E160-L	1	mg/L	<1.0	----
Physical Tests (QCLot: 2191850)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Physical Tests (QCLot: 2199621)						
Conductivity	----	E100	1	µS/cm	1.5	----
Physical Tests (QCLot: 2199622)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Anions and Nutrients (QCLot: 2199624)						
Bromide	24959-67-9	E235.Br	0.1	mg/L	<0.10	----
Anions and Nutrients (QCLot: 2199625)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 2199626)						
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 2199627)						
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	<0.010	----
Anions and Nutrients (QCLot: 2199628)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 2199629)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 2201870)						
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 2201871)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 2201872)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 2203389)						
Phosphorus, total dissolved	7723-14-0	E375-T	0.002	mg/L	<0.0020	----
Organic / Inorganic Carbon (QCLot: 2202722)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Dissolved Metals (QCLot: 2200849)						

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 2200849) - continued						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 2200849) - continued						
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 2201321)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Volatile Organic Compounds (QCLot: 2199633)						
Acetone	67-64-1	E611D	20	µg/L	<20	----
Benzene	71-43-2	E611D	0.5	µg/L	<0.50	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	<0.50	----
Bromoform	75-25-2	E611D	0.5	µg/L	<0.50	----
Bromomethane	74-83-9	E611D	0.5	µg/L	<0.50	----
Carbon disulfide	75-15-0	E611D	1	µg/L	<1.0	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	<0.20	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	<0.50	----
Chloroethane	75-00-3	E611D	0.5	µg/L	<0.50	----
Chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----
Chloromethane	74-87-3	E611D	2	µg/L	<2.0	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	<0.50	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	<0.20	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	<0.50	----
Dichloromethane	75-09-2	E611D	1	µg/L	<1.0	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	<0.50	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	<0.30	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	<0.50	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 2199633) - continued						
Hexanone, 2-	591-78-6	E611D	20	µg/L	<20	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	<0.50	----
Styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----
Toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	<0.50	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	<0.50	----
Vinyl chloride	75-01-4	E611D	0.2	µg/L	<0.20	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----
Hydrocarbons (QCLot: 2199634)						
F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	----
Hydrocarbons (QCLot: 2204975)						
F2 (C10-C16)	----	E601	100	µg/L	<100	----
F3 (C16-C34)	----	E601	250	µg/L	<250	----
F4 (C34-C50)	----	E601	250	µg/L	<250	----
Hydrocarbons (QCLot: 2205708)						
F2 (C10-C16)	----	E601	100	µg/L	<100	----
F3 (C16-C34)	----	E601	250	µg/L	<250	----
F4 (C34-C50)	----	E601	250	µg/L	<250	----
Polycyclic Aromatic Hydrocarbons (QCLot: 2204976)						
Acenaphthene	83-32-9	E641A-L	0.01	µg/L	<0.010	----
Acenaphthylene	208-96-8	E641A-L	0.01	µg/L	<0.010	----
Acridine	260-94-6	E641A-L	0.01	µg/L	<0.010	----
Anthracene	120-12-7	E641A-L	0.01	µg/L	<0.010	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	µg/L	<0.010	----
Benzo(a)pyrene	50-32-8	E641A-L	0.005	µg/L	<0.0050	----
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	µg/L	<0.010	----
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	µg/L	<0.010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 2204976) - continued						
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	µg/L	<0.010	----
Chrysene	218-01-9	E641A-L	0.01	µg/L	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	µg/L	<0.0050	----
Fluoranthene	206-44-0	E641A-L	0.01	µg/L	<0.010	----
Fluorene	86-73-7	E641A-L	0.01	µg/L	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	µg/L	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	µg/L	<0.010	----
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	µg/L	<0.010	----
Naphthalene	91-20-3	E641A-L	0.01	µg/L	<0.010	----
Perylene	198-55-0	E641A-L	0.01	µg/L	<0.010	----
Phenanthrene	85-01-8	E641A-L	0.01	µg/L	<0.010	----
Pyrene	129-00-0	E641A-L	0.01	µg/L	<0.010	----
Quinoline	91-22-5	E641A-L	0.01	µg/L	# 0.015	MB-LOR
Polycyclic Aromatic Hydrocarbons (QCLot: 2205709)						
Acenaphthene	83-32-9	E641A-L	0.01	µg/L	<0.010	----
Acenaphthylene	208-96-8	E641A-L	0.01	µg/L	<0.010	----
Acridine	260-94-6	E641A-L	0.01	µg/L	<0.010	----
Anthracene	120-12-7	E641A-L	0.01	µg/L	<0.010	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	µg/L	<0.010	----
Benzo(a)pyrene	50-32-8	E641A-L	0.005	µg/L	<0.0050	----
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	µg/L	<0.010	----
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	µg/L	<0.010	----
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	µg/L	<0.010	----
Chrysene	218-01-9	E641A-L	0.01	µg/L	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	µg/L	<0.0050	----
Fluoranthene	206-44-0	E641A-L	0.01	µg/L	<0.010	----
Fluorene	86-73-7	E641A-L	0.01	µg/L	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	µg/L	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	µg/L	<0.010	----
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	µg/L	<0.010	----
Naphthalene	91-20-3	E641A-L	0.01	µg/L	<0.010	----
Perylene	198-55-0	E641A-L	0.01	µg/L	<0.010	----
Phenanthrene	85-01-8	E641A-L	0.01	µg/L	<0.010	----
Pyrene	129-00-0	E641A-L	0.01	µg/L	<0.010	----
Quinoline	91-22-5	E641A-L	0.01	µg/L	<0.010	----

Qualifiers

Qualifier	Description
MB-LOR	Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.

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
Physical Tests (QCLot: 2191835)									
pH	----	E108	----	pH units	7 pH units	100	98.0	102	----
Physical Tests (QCLot: 2191836)									
Turbidity	----	E121	0.1	NTU	200 NTU	99.0	85.0	115	----
Physical Tests (QCLot: 2191849)									
Solids, total suspended [TSS]	----	E160-L	1	mg/L	250 mg/L	101	85.0	115	----
Physical Tests (QCLot: 2191850)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	850 mg/L	97.3	85.0	115	----
Physical Tests (QCLot: 2199621)									
Conductivity	----	E100	1	µS/cm	1410 µS/cm	103	90.0	110	----
Physical Tests (QCLot: 2199622)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	150 mg/L	98.7	85.0	115	----
Anions and Nutrients (QCLot: 2199624)									
Bromide	24959-67-9	E235.Br	0.1	mg/L	0.5 mg/L	96.8	85.0	115	----
Anions and Nutrients (QCLot: 2199625)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	105	90.0	110	----
Anions and Nutrients (QCLot: 2199626)									
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	2.5 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 2199627)									
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	0.5 mg/L	98.6	90.0	110	----
Anions and Nutrients (QCLot: 2199628)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	100.0	90.0	110	----
Anions and Nutrients (QCLot: 2199629)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 2201870)									
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	4 mg/L	99.8	75.0	125	----
Anions and Nutrients (QCLot: 2201871)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.333 mg/L	99.6	80.0	120	----
Anions and Nutrients (QCLot: 2201872)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	97.5	85.0	115	----
Anions and Nutrients (QCLot: 2203389)									
Phosphorus, total dissolved	7723-14-0	E375-T	0.002	mg/L	0.333 mg/L	105	80.0	120	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Organic / Inorganic Carbon (QCLot: 2202722)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	100	80.0	120	----
Dissolved Metals (QCLot: 2200849)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	0.1 mg/L	103	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	0.05 mg/L	102	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	0.05 mg/L	105	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.012 mg/L	104	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.005 mg/L	104	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	0.05 mg/L	101	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	0.05 mg/L	101	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.005 mg/L	102	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	2.5 mg/L	102	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.002 mg/L	109	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.012 mg/L	104	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.012 mg/L	102	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.012 mg/L	101	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	0.05 mg/L	104	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.025 mg/L	102	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.012 mg/L	102	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	2.5 mg/L	108	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.012 mg/L	101	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.012 mg/L	104	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.025 mg/L	102	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	0.5 mg/L	102	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	2.5 mg/L	98.5	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.005 mg/L	104	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	0.05 mg/L	101	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	0.5 mg/L	100	60.0	140	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.005 mg/L	106	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	2.5 mg/L	103	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.012 mg/L	103	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	2.5 mg/L	105	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.005 mg/L	98.4	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	0.05 mg/L	99.9	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.005 mg/L	98.0	80.0	120	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 2200849) - continued									
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.025 mg/L	100	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.012 mg/L	100	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.005 mg/L	101	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0 mg/L	102	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.025 mg/L	103	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.025 mg/L	102	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.005 mg/L	98.1	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	91.0	80.0	120	----
Volatile Organic Compounds (QCLot: 2199633)									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	127	70.0	130	----
Benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
Bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
Bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	76.2	60.0	140	----
Carbon disulfide	75-15-0	E611D	1	µg/L	100 µg/L	92.9	70.0	130	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	102	70.0	130	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Chloroethane	75-00-3	E611D	0.5	µg/L	100 µg/L	100	60.0	140	----
Chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Chloromethane	74-87-3	E611D	2	µg/L	100 µg/L	104	60.0	140	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	89.4	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	94.5	60.0	140	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	98.0	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	98.0	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	97.1	70.0	130	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report: Spike: Target Concentration	Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High	Qualifier
Volatile Organic Compounds (QCLot: 2199633) - continued									
Ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
Hexanone, 2-	591-78-6	E611D	20	µg/L	100 µg/L	91.4	70.0	130	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	116	70.0	130	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	91.5	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	98.3	70.0	130	----
Styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	99.6	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	96.5	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	97.8	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	92.5	70.0	130	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	101	60.0	140	----
Vinyl chloride	75-01-4	E611D	0.2	µg/L	100 µg/L	101	60.0	140	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	104	70.0	130	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	106	70.0	130	----
Hydrocarbons (QCLot: 2199634)									
F1 (C6-C10)	----	E581.F1-L	25	µg/L	2000 µg/L	97.7	80.0	120	----
Hydrocarbons (QCLot: 2204975)									
F2 (C10-C16)	----	E601	100	µg/L	3770 µg/L	110	70.0	130	----
F3 (C16-C34)	----	E601	250	µg/L	7760 µg/L	120	70.0	130	----
F4 (C34-C50)	----	E601	250	µg/L	4200 µg/L	109	70.0	130	----
Hydrocarbons (QCLot: 2205708)									
F2 (C10-C16)	----	E601	100	µg/L	3770 µg/L	97.8	70.0	130	----
F3 (C16-C34)	----	E601	250	µg/L	7760 µg/L	106	70.0	130	----
F4 (C34-C50)	----	E601	250	µg/L	4200 µg/L	113	70.0	130	----
Polycyclic Aromatic Hydrocarbons (QCLot: 2204976)									
Acenaphthene	83-32-9	E641A-L	0.01	µg/L	0.526 µg/L	96.8	50.0	140	----
Acenaphthylene	208-96-8	E641A-L	0.01	µg/L	0.526 µg/L	89.5	50.0	140	----
Acridine	260-94-6	E641A-L	0.01	µg/L	0.526 µg/L	109	50.0	140	----
Anthracene	120-12-7	E641A-L	0.01	µg/L	0.526 µg/L	86.4	50.0	140	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	µg/L	0.526 µg/L	106	50.0	140	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 2204976) - continued									
Benzo(a)pyrene	50-32-8	E641A-L	0.005	µg/L	0.526 µg/L	86.1	50.0	140	----
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	µg/L	0.526 µg/L	79.5	50.0	140	----
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	µg/L	0.526 µg/L	109	50.0	140	----
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	µg/L	0.526 µg/L	83.2	50.0	140	----
Chrysene	218-01-9	E641A-L	0.01	µg/L	0.526 µg/L	104	50.0	140	----
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	µg/L	0.526 µg/L	113	50.0	140	----
Fluoranthene	206-44-0	E641A-L	0.01	µg/L	0.526 µg/L	100	50.0	140	----
Fluorene	86-73-7	E641A-L	0.01	µg/L	0.526 µg/L	96.7	50.0	140	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	µg/L	0.526 µg/L	121	50.0	140	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	µg/L	0.526 µg/L	94.5	50.0	140	----
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	µg/L	0.526 µg/L	99.7	50.0	140	----
Naphthalene	91-20-3	E641A-L	0.01	µg/L	0.526 µg/L	94.8	50.0	140	----
Perylene	198-55-0	E641A-L	0.01	µg/L	0.526 µg/L	97.2	50.0	140	----
Phenanthrene	85-01-8	E641A-L	0.01	µg/L	0.526 µg/L	102	50.0	140	----
Pyrene	129-00-0	E641A-L	0.01	µg/L	0.526 µg/L	100	50.0	140	----
Quinoline	91-22-5	E641A-L	0.01	µg/L	0.526 µg/L	108	50.0	140	----
Polycyclic Aromatic Hydrocarbons (QCLot: 2205709)									
Acenaphthene	83-32-9	E641A-L	0.01	µg/L	0.526 µg/L	103	50.0	140	----
Acenaphthylene	208-96-8	E641A-L	0.01	µg/L	0.526 µg/L	95.5	50.0	140	----
Acridine	260-94-6	E641A-L	0.01	µg/L	0.526 µg/L	122	50.0	140	----
Anthracene	120-12-7	E641A-L	0.01	µg/L	0.526 µg/L	88.7	50.0	140	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	µg/L	0.526 µg/L	102	50.0	140	----
Benzo(a)pyrene	50-32-8	E641A-L	0.005	µg/L	0.526 µg/L	82.5	50.0	140	----
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	µg/L	0.526 µg/L	76.0	50.0	140	----
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	µg/L	0.526 µg/L	102	50.0	140	----
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	µg/L	0.526 µg/L	87.3	50.0	140	----
Chrysene	218-01-9	E641A-L	0.01	µg/L	0.526 µg/L	111	50.0	140	----
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	µg/L	0.526 µg/L	89.5	50.0	140	----
Fluoranthene	206-44-0	E641A-L	0.01	µg/L	0.526 µg/L	107	50.0	140	----
Fluorene	86-73-7	E641A-L	0.01	µg/L	0.526 µg/L	104	50.0	140	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	µg/L	0.526 µg/L	95.4	50.0	140	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	µg/L	0.526 µg/L	100	50.0	140	----
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	µg/L	0.526 µg/L	105	50.0	140	----
Naphthalene	91-20-3	E641A-L	0.01	µg/L	0.526 µg/L	100	50.0	140	----
Perylene	198-55-0	E641A-L	0.01	µg/L	0.526 µg/L	91.8	50.0	140	----
Phenanthrene	85-01-8	E641A-L	0.01	µg/L	0.526 µg/L	109	50.0	140	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 2205709) - continued									
Pyrene	129-00-0	E641A-L	0.01	µg/L	0.526 µg/L	107	50.0	140	----
Quinoline	91-22-5	E641A-L	0.01	µg/L	0.526 µg/L	107	50.0	140	----

Matrix Spike (MS) Report

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

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 2199624)										
BF2500306-001	MS-LF-GW2_2025-08-29	Bromide	24959-67-9	E235.Br	0.48 mg/L	0.5 mg/L	95.5	75.0	125	----
Anions and Nutrients (QCLot: 2199625)										
BF2500306-001	MS-LF-GW2_2025-08-29	Fluoride	16984-48-8	E235.F	0.907 mg/L	1 mg/L	90.7	75.0	125	----
Anions and Nutrients (QCLot: 2199626)										
BF2500306-001	MS-LF-GW2_2025-08-29	Nitrate (as N)	14797-55-8	E235.NO3	2.43 mg/L	2.5 mg/L	97.1	75.0	125	----
Anions and Nutrients (QCLot: 2199627)										
BF2500306-001	MS-LF-GW2_2025-08-29	Nitrite (as N)	14797-65-0	E235.NO2	0.469 mg/L	0.5 mg/L	93.8	75.0	125	----
Anions and Nutrients (QCLot: 2199628)										
BF2500306-001	MS-LF-GW2_2025-08-29	Chloride	16887-00-6	E235.Cl	98.6 mg/L	100 mg/L	98.6	75.0	125	----
Anions and Nutrients (QCLot: 2199629)										
BF2500306-001	MS-LF-GW2_2025-08-29	Sulfate (as SO4)	14808-79-8	E235.SO4	97.8 mg/L	100 mg/L	97.8	75.0	125	----
Anions and Nutrients (QCLot: 2201870)										
BF2500303-002	Anonymous	Kjeldahl nitrogen, total [TKN]	----	E318	2.62 mg/L	2.5 mg/L	105	70.0	130	----
Anions and Nutrients (QCLot: 2201871)										
BF2500303-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0965 mg/L	0.1 mg/L	96.5	70.0	130	----
Anions and Nutrients (QCLot: 2201872)										
BF2500304-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	ND mg/L	----	ND	75.0	125	----
Anions and Nutrients (QCLot: 2203389)										
BF2500299-001	Anonymous	Phosphorus, total dissolved	7723-14-0	E375-T	0.0939 mg/L	0.1 mg/L	93.9	70.0	130	----
Organic / Inorganic Carbon (QCLot: 2202722)										
BF2500298-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	4.72 mg/L	5 mg/L	94.3	70.0	130	----
Dissolved Metals (QCLot: 2200849)										
BF2500298-002	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.101 mg/L	0.1 mg/L	101	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0516 mg/L	0.05 mg/L	103	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0564 mg/L	0.05 mg/L	113	70.0	130	----
		Barium, dissolved	7440-39-3	E421	0.0127 mg/L	0.012 mg/L	101	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.00536 mg/L	0.005 mg/L	107	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.0439 mg/L	0.05 mg/L	87.9	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.050 mg/L	0.05 mg/L	101	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00535 mg/L	0.005 mg/L	107	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.00269 mg/L	0.002 mg/L	108	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0126 mg/L	0.012 mg/L	101	70.0	130	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 2200849) - continued										
BF2500298-002	Anonymous	Cobalt, dissolved	7440-48-4	E421	0.0124 mg/L	0.012 mg/L	99.0	70.0	130	----
		Copper, dissolved	7440-50-8	E421	0.0124 mg/L	0.012 mg/L	99.5	70.0	130	----
		Iron, dissolved	7439-89-6	E421	0.052 mg/L	0.05 mg/L	104	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0251 mg/L	0.025 mg/L	100	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.0128 mg/L	0.012 mg/L	102	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	ND mg/L	----	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	0.0123 mg/L	0.012 mg/L	98.4	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.0129 mg/L	0.012 mg/L	103	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0247 mg/L	0.025 mg/L	98.7	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	0.578 mg/L	0.5 mg/L	116	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	2.61 mg/L	2.5 mg/L	104	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.00526 mg/L	0.005 mg/L	105	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0616 mg/L	0.05 mg/L	123	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	ND mg/L	----	ND	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00507 mg/L	0.005 mg/L	101	70.0	130	----
		Sodium, dissolved	7440-23-5	E421	ND mg/L	----	ND	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	ND mg/L	----	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	2.65 mg/L	2.5 mg/L	106	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.00556 mg/L	0.005 mg/L	111	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.0492 mg/L	0.05 mg/L	98.5	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.00470 mg/L	0.005 mg/L	93.9	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0256 mg/L	0.025 mg/L	103	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0125 mg/L	0.012 mg/L	100.0	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.00496 mg/L	0.005 mg/L	99.3	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	ND mg/L	----	ND	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.0256 mg/L	0.025 mg/L	102	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.0272 mg/L	0.025 mg/L	109	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.00473 mg/L	0.005 mg/L	94.6	70.0	130	----
Dissolved Metals (QCLot: 2201321)										
BF2500303-002	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000899 mg/L	0 mg/L	89.9	70.0	130	----
Volatile Organic Compounds (QCLot: 2199633)										
BF2500303-001	Anonymous	Acetone	67-64-1	E611D	110 µg/L	100 µg/L	110	60.0	140	----
		Benzene	71-43-2	E611D	95.1 µg/L	100 µg/L	95.1	60.0	140	----
		Bromodichloromethane	75-27-4	E611D	86.9 µg/L	100 µg/L	86.9	60.0	140	----
		Bromoform	75-25-2	E611D	94.0 µg/L	100 µg/L	94.0	60.0	140	----
		Bromomethane	74-83-9	E611D	63.0 µg/L	100 µg/L	63.0	60.0	140	----
		Carbon disulfide	75-15-0	E611D	80.5 µg/L	100 µg/L	80.5	60.0	140	----
		Carbon tetrachloride	56-23-5	E611D	92.8 µg/L	100 µg/L	92.8	60.0	140	----
		Chlorobenzene	108-90-7	E611D	91.6 µg/L	100 µg/L	91.6	60.0	140	----
		Chloroethane	75-00-3	E611D	84.5 µg/L	100 µg/L	84.5	60.0	140	----
		Chloroform	67-66-3	E611D	89.6 µg/L	100 µg/L	89.6	60.0	140	----
		Chloromethane	74-87-3	E611D	82.7 µg/L	100 µg/L	82.7	60.0	140	----
		Dibromochloromethane	124-48-1	E611D	88.8 µg/L	100 µg/L	88.8	60.0	140	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 2199633) - continued										
BF2500303-001	Anonymous	Dibromoethane, 1,2-	106-93-4	E611D	74.6 µg/L	100 µg/L	74.6	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	94.1 µg/L	100 µg/L	94.1	60.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	96.1 µg/L	100 µg/L	96.1	60.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	96.7 µg/L	100 µg/L	96.7	60.0	140	----
		Dichlorodifluoromethane	75-71-8	E611D	72.2 µg/L	100 µg/L	72.2	60.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611D	88.9 µg/L	100 µg/L	88.9	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611D	84.0 µg/L	100 µg/L	84.0	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611D	90.6 µg/L	100 µg/L	90.6	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	89.0 µg/L	100 µg/L	89.0	60.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	91.6 µg/L	100 µg/L	91.6	60.0	140	----
		Dichloromethane	75-09-2	E611D	83.4 µg/L	100 µg/L	83.4	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611D	86.6 µg/L	100 µg/L	86.6	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	82.4 µg/L	100 µg/L	82.4	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	82.8 µg/L	100 µg/L	82.8	60.0	140	----
		Ethylbenzene	100-41-4	E611D	97.2 µg/L	100 µg/L	97.2	60.0	140	----
		Hexane, n-	110-54-3	E611D	90.3 µg/L	100 µg/L	90.3	60.0	140	----
		Hexanone, 2-	591-78-6	E611D	70 µg/L	100 µg/L	69.8	60.0	140	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	89 µg/L	100 µg/L	89.1	60.0	140	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	70 µg/L	100 µg/L	69.6	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	92.1 µg/L	100 µg/L	92.1	60.0	140	----
		Styrene	100-42-5	E611D	87.5 µg/L	100 µg/L	87.5	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	85.1 µg/L	100 µg/L	85.1	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	93.3 µg/L	100 µg/L	93.3	60.0	140	----
		Tetrachloroethylene	127-18-4	E611D	95.8 µg/L	100 µg/L	95.8	60.0	140	----
		Toluene	108-88-3	E611D	95.7 µg/L	100 µg/L	95.7	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	87.8 µg/L	100 µg/L	87.8	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	78.0 µg/L	100 µg/L	78.0	60.0	140	----
		Trichloroethylene	79-01-6	E611D	91.8 µg/L	100 µg/L	91.8	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611D	87.3 µg/L	100 µg/L	87.3	60.0	140	----
		Vinyl chloride	75-01-4	E611D	82.8 µg/L	100 µg/L	82.8	60.0	140	----
		Xylene, m+p-	179601-23-1	E611D	191 µg/L	200 µg/L	95.6	60.0	140	----
		Xylene, o-	95-47-6	E611D	95.8 µg/L	100 µg/L	95.8	60.0	140	----
Hydrocarbons (QCLot: 2199634)										
BF2500303-001	Anonymous	F1 (C6-C10)	----	E581.F1-L	1780 µg/L	2000 µg/L	88.8	60.0	140	----

Baffinland

Chain of Custody: 250829_GW_LANDFILL

Client Info	Project Info	Laboratory Info	
Baffinland Iron Mine Corporation 2275 Upper Middle Rd E, Suite 300 Oakville, ON, L6H 0C3 **Phone:** 647-253-0596 x6016/6039/4131 **Email:** environment.coordinators@baffinland.com; environment.superintendents@baffinland.com	**Job Reference (Project):** GW_LANDFILL **Task:** , GW_Landfill_250825 **Site:** MS	**Lab Name:** ALS Waterloo **Contact:** Rick Hawthorne **Phone:** 519.886.6910 **Email:** Rick.Hawthorne@ALSGlobal.com	**Address:** Unit 1 - 60 Northland Road Waterloo, ON,N2V 2B8
Email Invoice: ap@baffinland.com; environment.superintendents@baffinland.com **Email EDD:** bim.equissa@baffinland.com **Email COA:** environment.labresults@baffinland.com	**Turn around Time:** Routine (R) **Sampler 1:** LG **Sampler 2:** AG **Sampler 3:**	**ALS Quote #:** WT2020BIMC1000001 **ALS PO #:** 4500156571	**Lab Work Order # (lab use only):**

Environmental Division
Baffin Island
Work Order Reference
BF2500306

Telephone

Sample Details				Field Data			A											
Sample ID (sys_sample_code)	**Location (sys_loc_code)**	**Sample Date and Time**	**Matrix**	**pH, Field (pH units)**	**Temperature, Field (deg C)**	**Total # of Containers**	**ALS_GW_Landfill**											
MS-LF-GW2_2025-08-29	MS-LF-GW2	8/29/2025 9:55:00 AM	WG	6.84	0.9		X											
LF-KP23-04_2025-08-29	LF-KP23-04	8/29/2025 11:20:00 AM	WG	7.23	1		X											

Relinquished by:	Bradley Rasmussen	**Date:**	8/29/2025 5:43:00 PM
Additional Comments			
Initial Shipment Reception (lab use only)		**Final Shipment Reception** (lab use only)	
Received by:		**Received by:**	
Date/Time:		**Date/Time:**	4 Sept 25 900

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UW605
OK27
MM430
GC743
N·183

Chain of Custody: 250829_GW_LANDFILL

Client Info	Project Info	Laboratory Info	
Baffinland Iron Mine Corporation 2275 Upper Middle Rd E, Suite 300 Oakville, ON, L6H 0C3 **Phone:** 647-253-0596 x6016/6039/4131 **Email:** environment.coordinators@baffinland.com; environment.superintendents@baffinland.com	**Job Reference (Project):** GW_LANDFILL **Task:** , GW_Landfill_250825 **Site:** MS	**Lab Name:** ALS Waterloo **Contact:** Rick Hawthorne **Phone:** 519.886.6910 **Email:** Rick.Hawthorne@ALSGlobal.com	**Address:** Unit 1 - 60 Northland Road Waterloo, ON,N2V 2B8
Email Invoice: ap@baffinland.com; environment.superintendents@baffinland.com **Email EDD:** bim.equissa@baffinland.com **Email COA:** environment.labresults@baffinland.com	**Turn around Time:** Routine (R) **Sampler 1:** LG **Sampler 2:** AG **Sampler 3:**	**ALS Quote #:** WT2020BIMC1000001 **ALS PO #:** 4500156571	**Lab Work Order #** (lab use only):

Sample Details				Field Data			Analysis Requested											
Sample ID (sys_sample_code)	**Location (sys_loc_code)**	**Sample Date and Time**	**Matrix**	**pH, Field (pH units)**	**Temperature, Field (deg C)**	**Total # of Containers**	**ALS_GW_Landfill**											
MS-LF-GW2_2025-08-29	**MS-LF-GW2**	**8/29/2025 9:55:00 AM**	**WG**	**6.84**	**0.9**		**X**											
LF-KP23-04_2025-08-29	**LF-KP23-04**	**8/29/2025 11:20:00 AM**	**WG**	**7.23**	**1**		**X**											

Relinquished by:	Bradley Rasmussen	**Date:**	8/29/2025 5:43:00 PM
Additional Comments			
Initial Shipment Reception (lab use only)		**Final Shipment Reception** (lab use only)	
Received by:		**Received by:**	
Date/Time:		**Date/Time:**	

CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	:	**BF2500307**		
Client	:	**Baffinland Iron Mines Corporation**	Laboratory	: ALS Environmental - Baffin Island
Contact	:	Environmental Lab Results	Account Manager	: Rick Hawthorne
Address	:	360 Oakville Place Dr Suite 300 Oakville Ontario Canada L6H 6K8	Address	: Mary River, Qikqtani Region Baffin Island NU Canada
Telephone	:	----	Telephone	:
Project	:	Landfill_Seep_Investigation	Date Samples Received	: 29-Aug-2025 18:00
PO	:	4500156571	Date Analysis Commenced	: 30-Aug-2025
C-O-C number	:	25 08 29_Landfill_Seep_Investigation	Issue Date	: 11-Sep-2025 09:43
Sampler	:	AG, LG		
Site	:	MS		
Quote number	:	2024-2025 Scope of Work		
No. of samples received	:	4		
No. of samples analysed	:	4		

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
- Guideline Comparison

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*
Amaninder Dhillon		Organics, Waterloo, Ontario
Andrea Armstrong		VOC, Waterloo, Ontario
Cedrick Velasco		Inorganics, Baffin Island, Nunavut
Danielle Gravel		Organics, Waterloo, Ontario
Jeremy Gingras		Organics, Waterloo, Ontario
Walt Kippenhuck		Inorganics, Baffin Island, Nunavut
Walt Kippenhuck		Inorganics, Waterloo, Ontario
Walt Kippenhuck		Metals, Waterloo, Ontario
Walt Kippenhuck		Centralized Prep, Waterloo, Ontario

No Breaches Found

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.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key: LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units
µg/L	micrograms per litre
µS/cm	microsiemens per centimetre

>: greater than.
<: less than.

Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).
For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit.

Workorder Comments

E641 BF2500307-001 RRR: Detection limit raised due to high analyte recovery in the method blank.

Qualifiers

Qualifier	Description
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
RRR	Refer to report comments for issues regarding this analysis.

Analytical Results Evaluation

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-MRY-13B_2025-08-29 ----	MS-MRY-13C_2025-08-29 ----	LF-DS-SEEP-01_2025-08-29 ----	LF-US-POND-01_2025-08-29 ----	----	----	----
				Client sampling date / time	29-Aug-2025 15:05	29-Aug-2025 15:30	29-Aug-2025 16:10	29-Aug-2025 04:55	----	----	----
				Sub-Matrix	Water	Water	Water	Water	----	----	----
					BF2500307-001	BF2500307-002	BF2500307-003	BF2500307-004	----	----	----
					Result	Result	Result	Result	----	----	----
Sample Preparation											
Dissolved carbon filtration location	----	EP358/WT	-		field	field	field	field	----	----	----
Physical Tests											
Conductivity	----	E100/WT	µS/cm		923	660	381	218	----	----	----
pH	----	E108/BF	pH units		8.09	7.65	7.93	7.78	----	----	----
Solids, total dissolved [TDS]	----	E162/BF	mg/L		569	390	202	97	----	----	----
Solids, total suspended [TSS]	----	E160-L/BF	mg/L		<1.1	9.1	1.7	<1.0	----	----	----
Turbidity	----	E121/BF	NTU		0.51	2.91	2.37	1.20	----	----	----
Alkalinity, total (as CaCO3)	----	E290/WT	mg/L		202	175	161	107	----	----	----
Anions and Nutrients											
Ammonia, total (as N)	7664-41-7	E298/WT	mg/L		0.0331	0.0235	<0.0050	0.0077	----	----	----
Bromide	24959-67-9	E235.Br/WT	mg/L		0.17	0.12	<0.10	<0.10	----	----	----
Chloride	16887-00-6	E235.Cl/WT	mg/L		56.4	28.4	7.40	4.02	----	----	----
Fluoride	16984-48-8	E235.F/WT	mg/L		0.027	0.053	0.076	0.056	----	----	----
Kjeldahl nitrogen, total [TKN]	----	E318/WT	mg/L		0.595	0.301	0.136	0.126	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3/WT	mg/L		1.68	0.704	0.052	<0.020	----	----	----
Nitrite (as N)	14797-65-0	E235.NO2/WT	mg/L		<0.010	<0.010	<0.010	<0.010	----	----	----
Phosphorus, total	7723-14-0	E372-U/WT	mg/L		0.0220	0.0062	0.0037	0.0020	----	----	----
Phosphorus, total dissolved	7723-14-0	E375-T/WT	mg/L		0.0235	0.0071	0.0030	<0.0020	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	mg/L		183	117	27.7	1.64	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-MRY-13B_2025-08-29 ----	MS-MRY-13C_2025-08-29 ----	LF-DS-SEEP-01_2025-08-29 ----	LF-US-POND-01_2025-08-29 ----	----	----	----
				Client sampling date / time	29-Aug-2025 15:05	29-Aug-2025 15:30	29-Aug-2025 16:10	29-Aug-2025 04:55	----	----	----
				Sub-Matrix	Water	Water	Water	Water	----	----	----
					BF2500307-001	BF2500307-002	BF2500307-003	BF2500307-004	----	----	----
					Result	Result	Result	Result	----	----	----
Organic / Inorganic Carbon											
Carbon, dissolved organic [DOC]	----	E358-L/WT	mg/L		5.30	3.44	2.64	2.43	----	----	----
Dissolved Metals											
Aluminum, dissolved	7429-90-5	E421/WT	mg/L		0.0014	<0.0010	0.0017	<0.0010	----	----	----
Antimony, dissolved	7440-36-0	E421/WT	mg/L		0.00032	0.00018	<0.00010	<0.00010	----	----	----
Arsenic, dissolved	7440-38-2	E421/WT	mg/L		0.00022	0.00015	<0.00010	<0.00010	----	----	----
Barium, dissolved	7440-39-3	E421/WT	mg/L		0.0537	0.0378	0.0189	0.00325	----	----	----
Beryllium, dissolved	7440-41-7	E421/WT	mg/L		<0.000020	<0.000020	<0.000020	<0.000020	----	----	----
Bismuth, dissolved	7440-69-9	E421/WT	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	----	----	----
Boron, dissolved	7440-42-8	E421/WT	mg/L		0.696	0.351	0.044	0.022	----	----	----
Cadmium, dissolved	7440-43-9	E421/WT	mg/L		0.0000250	0.0000107	<0.0000050	<0.0000050	----	----	----
Calcium, dissolved	7440-70-2	E421/WT	mg/L		107	94.7	39.0	20.4	----	----	----
Cesium, dissolved	7440-46-2	E421/WT	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	----	----	----
Chromium, dissolved	7440-47-3	E421/WT	mg/L		0.00064	<0.00050	<0.00050	<0.00050	----	----	----
Cobalt, dissolved	7440-48-4	E421/WT	mg/L		0.00025	0.00013	0.00010	<0.00010	----	----	----
Copper, dissolved	7440-50-8	E421/WT	mg/L		0.00189	0.00084	0.00092	<0.00020	----	----	----
Iron, dissolved	7439-89-6	E421/WT	mg/L		<0.010	<0.010	0.016	0.030	----	----	----
Lead, dissolved	7439-92-1	E421/WT	mg/L		0.000057	<0.000050	<0.000050	<0.000050	----	----	----
Lithium, dissolved	7439-93-2	E421/WT	mg/L		0.0737	0.0387	0.0044	0.0020	----	----	----
Magnesium, dissolved	7439-95-4	E421/WT	mg/L		36.8	19.1	18.1	12.4	----	----	----
Manganese, dissolved	7439-96-5	E421/WT	mg/L		0.00074	0.00055	0.0297	0.00758	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-MRY-13B_2025-08-29 ----	MS-MRY-13C_2025-08-29 ----	LF-DS-SEEP-01_2025-08-29 ----	LF-US-POND-01_2025-08-29 ----	----	----	----
				Client sampling date / time	29-Aug-2025 15:05	29-Aug-2025 15:30	29-Aug-2025 16:10	29-Aug-2025 04:55	----	----	----
				Sub-Matrix	Water	Water	Water	Water	----	----	----
					BF2500307-001	BF2500307-002	BF2500307-003	BF2500307-004	----	----	----
					Result	Result	Result	Result	----	----	----
Dissolved Metals											
Mercury, dissolved	7439-97-6	E509/WT	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	----	----	----
Molybdenum, dissolved	7439-98-7	E421/WT	mg/L		0.00100	0.00270	0.00128	0.000094	----	----	----
Nickel, dissolved	7440-02-0	E421/WT	mg/L		0.00995	0.00558	0.00115	<0.00050	----	----	----
Phosphorus, dissolved	7723-14-0	E421/WT	mg/L		<0.050	<0.050	<0.050	<0.050	----	----	----
Potassium, dissolved	7440-09-7	E421/WT	mg/L		8.22	6.55	2.79	1.77	----	----	----
Rubidium, dissolved	7440-17-7	E421/WT	mg/L		0.00565	0.00598	0.00532	0.00154	----	----	----
Selenium, dissolved	7782-49-2	E421/WT	mg/L		0.000096	<0.000050	<0.000050	<0.000050	----	----	----
Silicon, dissolved	7440-21-3	E421/WT	mg/L		4.48	3.31	1.70	1.66	----	----	----
Silver, dissolved	7440-22-4	E421/WT	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	----	----	----
Sodium, dissolved	7440-23-5	E421/WT	mg/L		31.4	14.7	8.46	5.38	----	----	----
Strontium, dissolved	7440-24-6	E421/WT	mg/L		0.200	0.240	0.0562	0.0202	----	----	----
Sulfur, dissolved	7704-34-9	E421/WT	mg/L		71.5	44.6	9.21	0.71	----	----	----
Tellurium, dissolved	13494-80-9	E421/WT	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	----	----	----
Thallium, dissolved	7440-28-0	E421/WT	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	----	----	----
Thorium, dissolved	7440-29-1	E421/WT	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	----	----	----
Tin, dissolved	7440-31-5	E421/WT	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	----	----	----
Titanium, dissolved	7440-32-6	E421/WT	mg/L		<0.00030	<0.00030	<0.00030	<0.00030	----	----	----
Tungsten, dissolved	7440-33-7	E421/WT	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	----	----	----
Uranium, dissolved	7440-61-1	E421/WT	mg/L		0.0120	0.00821	0.00205	0.000138	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-MRY-13B_2025-08-29 ----	MS-MRY-13C_2025-08-29 ----	LF-DS-SEEP-01_2025-08-29 ----	LF-US-POND-01_2025-08-29 ----	----	----	----
				Client sampling date / time	29-Aug-2025 15:05	29-Aug-2025 15:30	29-Aug-2025 16:10	29-Aug-2025 04:55	----	----	----
				Sub-Matrix	Water	Water	Water	Water	----	----	----
					BF2500307-001	BF2500307-002	BF2500307-003	BF2500307-004	----	----	----
					Result	Result	Result	Result	----	----	----
Dissolved Metals											
Vanadium, dissolved	7440-62-2	E421/WT	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	----	----	----
Zinc, dissolved	7440-66-6	E421/WT	mg/L		<0.0010	0.0015	0.0031	<0.0010	----	----	----
Zirconium, dissolved	7440-67-7	E421/WT	mg/L		<0.00030	<0.00030	<0.00030	<0.00030	----	----	----
Dissolved mercury filtration location	----	EP509/WT	-		Field	Field	Field	Field	----	----	----
Dissolved metals filtration location	----	EP421/WT	-		Field	Field	Field	Field	----	----	----
Volatile Organic Compounds											
Acetone	67-64-1	E611D/WT	µg/L		<20	<20	<20	<20	----	----	----
Benzene	71-43-2	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Bromodichloromethane	75-27-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Bromoform	75-25-2	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Bromomethane	74-83-9	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
BTEX, total	----	E611D/WT	µg/L		<1.0	<1.0	<1.0	<1.0	----	----	----
Carbon disulfide	75-15-0	E611D/WT	µg/L		<1.0	<1.0	<1.0	<1.0	----	----	----
Carbon tetrachloride	56-23-5	E611D/WT	µg/L		<0.20	<0.20	<0.20	<0.20	----	----	----
Chlorobenzene	108-90-7	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Chloroethane	75-00-3	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Chloroform	67-66-3	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Chloromethane	74-87-3	E611D/WT	µg/L		<2.0	<2.0	<2.0	<2.0	----	----	----
Dibromochloromethane	124-48-1	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Dibromoethane, 1,2-	106-93-4	E611D/WT	µg/L		<0.20	<0.20	<0.20	<0.20	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-MRY-13B_2025-08-29 ----	MS-MRY-13C_2025-08-29 ----	LF-DS-SEEP-01_2025-08-29 ----	LF-US-POND-01_2025-08-29 ----	----	----	----
				Client sampling date / time	29-Aug-2025 15:05	29-Aug-2025 15:30	29-Aug-2025 16:10	29-Aug-2025 04:55	----	----	----
				Sub-Matrix	Water	Water	Water	Water	----	----	----
					BF2500307-001	BF2500307-002	BF2500307-003	BF2500307-004	----	----	----
					Result	Result	Result	Result	----	----	----
Volatile Organic Compounds											
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Dichlorodifluoromethane	75-71-8	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Dichloroethane, 1,1-	75-34-3	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Dichloroethane, 1,2-	107-06-2	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Dichloroethylene, 1,1-	75-35-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Dichloroethylene, cis+trans-1,2-	540-59-0	E611D/WT	µg/L		<0.71	<0.71	<0.71	<0.71	----	----	----
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Dichloromethane	75-09-2	E611D/WT	µg/L		<1.0	<1.0	<1.0	<1.0	----	----	----
Dichloropropane, 1,2-	78-87-5	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	µg/L		<0.30	<0.30	<0.30	<0.30	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	µg/L		<0.5	<0.5	<0.5	<0.5	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	µg/L		<0.30	<0.30	<0.30	<0.30	----	----	----
Ethylbenzene	100-41-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Hexane, n-	110-54-3	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Hexanone, 2-	591-78-6	E611D/WT	µg/L		<20	<20	<20	<20	----	----	----
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	µg/L		<20	<20	<20	<20	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-MRY-13B_2025-08-29 ----	MS-MRY-13C_2025-08-29 ----	LF-DS-SEEP-01_2025-08-29 ----	LF-US-POND-01_2025-08-29 ----	----	----	----
				Client sampling date / time	29-Aug-2025 15:05	29-Aug-2025 15:30	29-Aug-2025 16:10	29-Aug-2025 04:55	----	----	----
				Sub-Matrix	Water	Water	Water	Water	----	----	----
					BF2500307-001	BF2500307-002	BF2500307-003	BF2500307-004	----	----	----
					Result	Result	Result	Result	----	----	----
Volatile Organic Compounds											
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	µg/L		<20	<20	<20	<20	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Styrene	100-42-5	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Tetrachloroethylene	127-18-4	E611D/WT	µg/L		<0.50	0.66	<0.50	<0.50	----	----	----
Toluene	108-88-3	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Trichloroethylene	79-01-6	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Trichlorofluoromethane	75-69-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Trihalomethanes [THMs], total	----	E611D/WT	µg/L		<1.0	<1.0	<1.0	<1.0	----	----	----
Vinyl chloride	75-01-4	E611D/WT	µg/L		<0.20	<0.20	<0.20	<0.20	----	----	----
Xylene, m+p-	179601-23-1	E611D/WT	µg/L		<0.40	<0.40	<0.40	<0.40	----	----	----
Xylene, o-	95-47-6	E611D/WT	µg/L		<0.30	<0.30	<0.30	<0.30	----	----	----
Xylenes, total	1330-20-7	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Hydrocarbons											
F1 (C6-C10)	----	E581.F1-L/WT	µg/L		<25	<25	<25	<25	----	----	----
F2 (C10-C16)	----	E601/WT	µg/L		<100	<100	<100	<100	----	----	----
F3 (C16-C34)	----	E601/WT	µg/L		<250	<250	<250	<250	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-MRY-13B_2025-08-29 ----	MS-MRY-13C_2025-08-29 ----	LF-DS-SEEP-01_2025-08-29 ----	LF-US-POND-01_2025-08-29 ----	----	----	----
				Client sampling date / time	29-Aug-2025 15:05	29-Aug-2025 15:30	29-Aug-2025 16:10	29-Aug-2025 04:55	----	----	----
				Sub-Matrix	Water	Water	Water	Water	----	----	----
					BF2500307-001	BF2500307-002	BF2500307-003	BF2500307-004	----	----	----
					Result	Result	Result	Result	----	----	----
Hydrocarbons											
F4 (C34-C50)	----	E601/WT	µg/L		<250	<250	<250	<250	----	----	----
F1-BTEX	----	EC580/WT	µg/L		<25	<25	<25	<25	----	----	----
Hydrocarbons, total (C6-C50)	n/a	EC581/WT	µg/L		<370	<370	<370	<370	----	----	----
Hydrocarbons Surrogates											
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/WT	%		92.1	93.2	92.3	94.4	----	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.F1-L/WT	%		75.1	70.8	74.2	73.9	----	----	----
Volatile Organic Compounds Surrogates											
Bromofluorobenzene, 4-	460-00-4	E611D/WT	%		88.9	88.4	88.4	88.2	----	----	----
Difluorobenzene, 1,4-	540-36-3	E611D/WT	%		97.3	97.6	97.2	97.1	----	----	----
Polycyclic Aromatic Hydrocarbons											
Acenaphthene	83-32-9	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	----	----	----
Acenaphthylene	208-96-8	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	----	----	----
Acridine	260-94-6	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	----	----	----
Anthracene	120-12-7	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	----	----	----
Benz(a)anthracene	56-55-3	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	----	----	----
Benzo(a)pyrene	50-32-8	E641A-L/WT	µg/L		<0.0050	<0.0050	<0.0050	<0.0050	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	----	----	----
Benzo(b+j+k)fluoranthene	n/a	E641A-L/WT	µg/L		<0.015	<0.015	<0.015	<0.015	----	----	----
Benzo(g,h,i)perylene	191-24-2	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-MRY-13B_2025-08-29 ----	MS-MRY-13C_2025-08-29 ----	LF-DS-SEEP-01_2025-08-29 ----	LF-US-POND-01_2025-08-29 ----	----	----	----
				Client sampling date / time	29-Aug-2025 15:05	29-Aug-2025 15:30	29-Aug-2025 16:10	29-Aug-2025 04:55	----	----	----
				Sub-Matrix	Water	Water	Water	Water	----	----	----
					BF2500307-001	BF2500307-002	BF2500307-003	BF2500307-004	----	----	----
					Result	Result	Result	Result	----	----	----
Polycyclic Aromatic Hydrocarbons											
Benzo(k)fluoranthene	207-08-9	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	----	----	----
Chrysene	218-01-9	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A-L/WT	µg/L		<0.0050	<0.0050	<0.0050	<0.0050	----	----	----
Fluoranthene	206-44-0	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	----	----	----
Fluorene	86-73-7	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	----	----	----
Methylnaphthalene, 1+2-	----	E641A-L/WT	µg/L		<0.015	<0.015	<0.015	<0.015	----	----	----
Methylnaphthalene, 2-	91-57-6	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	----	----	----
Naphthalene	91-20-3	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	----	----	----
Perylene	198-55-0	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	----	----	----
Phenanthrene	85-01-8	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	----	----	----
Pyrene	129-00-0	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	----	----	----
Quinoline	91-22-5	E641A-L/WT	µg/L		<0.027 DLM, RRR	<0.029 DLM	<0.018 DLM	<0.020 DLM	----	----	----
B(a)P total potency equivalents [B(a)P TPE]	----	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates											
Chrysene-d12	1719-03-5	E641A-L/WT	%		103	103	91.8	94.4	----	----	----
Naphthalene-d8	1146-65-2	E641A-L/WT	%		105	116	112	112	----	----	----
Phenanthrene-d10	1517-22-2	E641A-L/WT	%		105	114	106	107	----	----	----

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

Summary of Guideline Limits

Analyte	CAS Number	Unit	NWB_LFILL (Table 7 Effluent)						
Sample Preparation									
Dissolved carbon filtration location	----	-	----	----	----	----	----	----	----
Physical Tests									
Conductivity	----	µS/cm	----	----	----	----	----	----	----
pH	----	pH units	**6 - 9.5 pH units**	----	----	----	----	----	----
Solids, total dissolved [TDS]		mg/L	----	----	----	----	----	----	----
Solids, total suspended [TSS]		mg/L	**30 mg/L**	----	----	----	----	----	----
Turbidity	----	NTU	----	----	----	----	----	----	----
Alkalinity, total (as CaCO3)		mg/L	----	----	----	----	----	----	----
Anions and Nutrients									
Ammonia, total (as N)	7664-41-7	mg/L	----	----	----	----	----	----	----
Bromide	24959-67-9	mg/L	----	----	----	----	----	----	----
Chloride	16887-00-6	mg/L	----	----	----	----	----	----	----
Fluoride	16984-48-8	mg/L	----	----	----	----	----	----	----
Kjeldahl nitrogen, total [TKN]		mg/L	----	----	----	----	----	----	----
Nitrate (as N)	14797-55-8	mg/L	----	----	----	----	----	----	----
Nitrite (as N)	14797-65-0	mg/L	----	----	----	----	----	----	----
Phosphorus, total	7723-14-0	mg/L	----	----	----	----	----	----	----
Phosphorus, total dissolved	7723-14-0	mg/L	----	----	----	----	----	----	----
Sulfate (as SO4)	14808-79-8	mg/L	----	----	----	----	----	----	----
Organic / Inorganic Carbon									
Carbon, dissolved organic [DOC]		mg/L	----	----	----	----	----	----	----
Dissolved Metals									
Aluminum, dissolved	7429-90-5	mg/L	----	----	----	----	----	----	----

Antimony, dissolved	7440-36-0	mg/L	----	----	----	----	----	----	----	----
Arsenic, dissolved	7440-38-2	mg/L	----	----	----	----	----	----	----	----
Barium, dissolved	7440-39-3	mg/L	----	----	----	----	----	----	----	----
Beryllium, dissolved	7440-41-7	mg/L	----	----	----	----	----	----	----	----
Bismuth, dissolved	7440-69-9	mg/L	----	----	----	----	----	----	----	----
Boron, dissolved	7440-42-8	mg/L	----	----	----	----	----	----	----	----
Cadmium, dissolved	7440-43-9	mg/L	----	----	----	----	----	----	----	----
Calcium, dissolved	7440-70-2	mg/L	----	----	----	----	----	----	----	----
Cesium, dissolved	7440-46-2	mg/L	----	----	----	----	----	----	----	----
Chromium, dissolved	7440-47-3	mg/L	----	----	----	----	----	----	----	----
Cobalt, dissolved	7440-48-4	mg/L	----	----	----	----	----	----	----	----
Copper, dissolved	7440-50-8	mg/L	----	----	----	----	----	----	----	----
Iron, dissolved	7439-89-6	mg/L	----	----	----	----	----	----	----	----
Lead, dissolved	7439-92-1	mg/L	----	----	----	----	----	----	----	----
Lithium, dissolved	7439-93-2	mg/L	----	----	----	----	----	----	----	----
Magnesium, dissolved	7439-95-4	mg/L	----	----	----	----	----	----	----	----
Manganese, dissolved	7439-96-5	mg/L	----	----	----	----	----	----	----	----
Mercury, dissolved	7439-97-6	mg/L	----	----	----	----	----	----	----	----
Molybdenum, dissolved	7439-98-7	mg/L	----	----	----	----	----	----	----	----
Nickel, dissolved	7440-02-0	mg/L	----	----	----	----	----	----	----	----
Phosphorus, dissolved	7723-14-0	mg/L	----	----	----	----	----	----	----	----
Potassium, dissolved	7440-09-7	mg/L	----	----	----	----	----	----	----	----
Rubidium, dissolved	7440-17-7	mg/L	----	----	----	----	----	----	----	----
Selenium, dissolved	7782-49-2	mg/L	----	----	----	----	----	----	----	----
Silicon, dissolved	7440-21-3	mg/L	----	----	----	----	----	----	----	----
Silver, dissolved	7440-22-4	mg/L	----	----	----	----	----	----	----	----
Sodium, dissolved	7440-23-5	mg/L	----	----	----	----	----	----	----	----

Strontium, dissolved	7440-24-6	mg/L	----	----	----	----	----	----	----	
Sulfur, dissolved	7704-34-9	mg/L	----	----	----	----	----	----	----	
Tellurium, dissolved	13494-80-9	mg/L	----	----	----	----	----	----	----	
Thallium, dissolved	7440-28-0	mg/L	----	----	----	----	----	----	----	
Thorium, dissolved	7440-29-1	mg/L	----	----	----	----	----	----	----	
Tin, dissolved	7440-31-5	mg/L	----	----	----	----	----	----	----	
Titanium, dissolved	7440-32-6	mg/L	----	----	----	----	----	----	----	
Tungsten, dissolved	7440-33-7	mg/L	----	----	----	----	----	----	----	
Uranium, dissolved	7440-61-1	mg/L	----	----	----	----	----	----	----	
Vanadium, dissolved	7440-62-2	mg/L	----	----	----	----	----	----	----	
Zinc, dissolved	7440-66-6	mg/L	----	----	----	----	----	----	----	
Zirconium, dissolved	7440-67-7	mg/L	----	----	----	----	----	----	----	
Dissolved mercury filtration location	----	-	----	----	----	----	----	----	----	
Dissolved metals filtration location	----	-	----	----	----	----	----	----	----	
Volatile Organic Compounds										
Acetone	67-64-1	µg/L	----	----	----	----	----	----	----	
Benzene	71-43-2	µg/L	----	----	----	----	----	----	----	
Bromodichloromethane	75-27-4	µg/L	----	----	----	----	----	----	----	
Bromoform	75-25-2	µg/L	----	----	----	----	----	----	----	
Bromomethane	74-83-9	µg/L	----	----	----	----	----	----	----	
BTEX, total		µg/L	----	----	----	----	----	----	----	
Carbon disulfide	75-15-0	µg/L	----	----	----	----	----	----	----	
Carbon tetrachloride	56-23-5	µg/L	----	----	----	----	----	----	----	
Chlorobenzene	108-90-7	µg/L	----	----	----	----	----	----	----	
Chloroethane	75-00-3	µg/L	----	----	----	----	----	----	----	
Chloroform	67-66-3	µg/L	----	----	----	----	----	----	----	
Chloromethane	74-87-3	µg/L	----	----	----	----	----	----	----	

Dibromochloromethane	124-48-1	µg/L	----	----	----	----	----	----	----	----
Dibromoethane, 1,2-	106-93-4	µg/L	----	----	----	----	----	----	----	----
Dichlorobenzene, 1,2-	95-50-1	µg/L	----	----	----	----	----	----	----	----
Dichlorobenzene, 1,3-	541-73-1	µg/L	----	----	----	----	----	----	----	----
Dichlorobenzene, 1,4-	106-46-7	µg/L	----	----	----	----	----	----	----	----
Dichlorodifluoromethane	75-71-8	µg/L	----	----	----	----	----	----	----	----
Dichloroethane, 1,1-	75-34-3	µg/L	----	----	----	----	----	----	----	----
Dichloroethane, 1,2-	107-06-2	µg/L	----	----	----	----	----	----	----	----
Dichloroethylene, 1,1-	75-35-4	µg/L	----	----	----	----	----	----	----	----
Dichloroethylene, cis-1,2-	156-59-2	µg/L	----	----	----	----	----	----	----	----
Dichloroethylene, cis+trans-1,2-	540-59-0	µg/L	----	----	----	----	----	----	----	----
Dichloroethylene, trans-1,2-	156-60-5	µg/L	----	----	----	----	----	----	----	----
Dichloromethane	75-09-2	µg/L	----	----	----	----	----	----	----	----
Dichloropropane, 1,2-	78-87-5	µg/L	----	----	----	----	----	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	µg/L	----	----	----	----	----	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	µg/L	----	----	----	----	----	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	µg/L	----	----	----	----	----	----	----	----
Ethylbenzene	100-41-4	µg/L	----	----	----	----	----	----	----	----
Hexane, n-	110-54-3	µg/L	----	----	----	----	----	----	----	----
Hexanone, 2-	591-78-6	µg/L	----	----	----	----	----	----	----	----
Methyl ethyl ketone [MEK]	78-93-3	µg/L	----	----	----	----	----	----	----	----
Methyl isobutyl ketone [MIBK]	108-10-1	µg/L	----	----	----	----	----	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	µg/L	----	----	----	----	----	----	----	----
Styrene	100-42-5	µg/L	----	----	----	----	----	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	µg/L	----	----	----	----	----	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	µg/L	----	----	----	----	----	----	----	----
Tetrachloroethylene	127-18-4	µg/L	----	----	----	----	----	----	----	----

Toluene	108-88-3	µg/L	----	----	----	----	----	----	----	----
Trichloroethane, 1,1,1-	71-55-6	µg/L	----	----	----	----	----	----	----	----
Trichloroethane, 1,1,2-	79-00-5	µg/L	----	----	----	----	----	----	----	----
Trichloroethylene	79-01-6	µg/L	----	----	----	----	----	----	----	----
Trichlorofluoromethane	75-69-4	µg/L	----	----	----	----	----	----	----	----
Trihalomethanes [THMs], total		µg/L	----	----	----	----	----	----	----	----
Vinyl chloride	75-01-4	µg/L	----	----	----	----	----	----	----	----
Xylene, m+p-	179601-23-1	µg/L	----	----	----	----	----	----	----	----
Xylene, o-	95-47-6	µg/L	----	----	----	----	----	----	----	----
Xylenes, total	1330-20-7	µg/L	----	----	----	----	----	----	----	----
Hydrocarbons										
F1 (C6-C10)		µg/L	----	----	----	----	----	----	----	----
F2 (C10-C16)	----	µg/L	----	----	----	----	----	----	----	----
F3 (C16-C34)	----	µg/L	----	----	----	----	----	----	----	----
F4 (C34-C50)	----	µg/L	----	----	----	----	----	----	----	----
F1-BTEX		µg/L	----	----	----	----	----	----	----	----
Hydrocarbons, total (C6-C50)	n/a	µg/L	----	----	----	----	----	----	----	----
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	%	----	----	----	----	----	----	----	----
Bromofluorobenzene, 4-	460-00-4	%	----	----	----	----	----	----	----	----
Dichlorotoluene, 3,4-	95-75-0	%	----	----	----	----	----	----	----	----
Difluorobenzene, 1,4-	540-36-3	%	----	----	----	----	----	----	----	----
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	µg/L	----	----	----	----	----	----	----	----
Acenaphthylene	208-96-8	µg/L	----	----	----	----	----	----	----	----
Acridine	260-94-6	µg/L	----	----	----	----	----	----	----	----
Anthracene	120-12-7	µg/L	----	----	----	----	----	----	----	----
Benz(a)anthracene	56-55-3	µg/L	----	----	----	----	----	----	----	----

Benzo(a)pyrene	50-32-8	µg/L	----	----	----	----	----	----	----
Benzo(b+j)fluoranthene	n/a	µg/L	----	----	----	----	----	----	----
Benzo(b+j+k)fluoranthene	n/a	µg/L	----	----	----	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	µg/L	----	----	----	----	----	----	----
Benzo(k)fluoranthene	207-08-9	µg/L	----	----	----	----	----	----	----
Chrysene	218-01-9	µg/L	----	----	----	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	µg/L	----	----	----	----	----	----	----
Fluoranthene	206-44-0	µg/L	----	----	----	----	----	----	----
Fluorene	86-73-7	µg/L	----	----	----	----	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	µg/L	----	----	----	----	----	----	----
Methylnaphthalene, 1-	90-12-0	µg/L	----	----	----	----	----	----	----
Methylnaphthalene, 1+2-	----	µg/L	----	----	----	----	----	----	----
Methylnaphthalene, 2-	91-57-6	µg/L	----	----	----	----	----	----	----
Naphthalene	91-20-3	µg/L	----	----	----	----	----	----	----
Perylene	198-55-0	µg/L	----	----	----	----	----	----	----
Phenanthrene	85-01-8	µg/L	----	----	----	----	----	----	----
Pyrene	129-00-0	µg/L	----	----	----	----	----	----	----
Quinoline	91-22-5	µg/L	----	----	----	----	----	----	----
B(a)P total potency equivalents [B(a)P TPE]		µg/L	----	----	----	----	----	----	----
Chrysene-d12	1719-03-5	%	----	----	----	----	----	----	----
Naphthalene-d8	1146-65-2	%	----	----	----	----	----	----	----
Phenanthrene-d10	1517-22-2	%	----	----	----	----	----	----	----

CERTIFICATE OF ANALYSIS

Work Order	:	**BF2500307**			
Client	:	**Baffinland Iron Mines Corporation**	Laboratory	:	ALS Environmental - Baffin Island
Contact	:	Environmental Lab Results	Account Manager	:	Rick Hawthorne
Address	:	360 Oakville Place Dr Suite 300 Oakville Ontario Canada L6H 6K8	Address	:	Mary River, Qikqtani Region Baffin Island NU Canada
Telephone	:	----	E-mail	:	Rick.Hawthorne@ALSGlobal.com
Project	:	Landfill_Seep_Investigation	Telephone	:	
PO	:	4500156571	Date Samples Received	:	29-Aug-2025 18:00
C-O-C number	:	25 08 29_Landfill_Seep_Investigation	Date Analysis Commenced	:	30-Aug-2025
Sampler	:	AG, LG	Issue Date	:	11-Sep-2025 09:43
Site	:	MS			
Quote number	:	2024-2025 Scope of Work			
No. of samples received	:	4			
No. of samples analysed	:	4			

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

Signatories	*Position*	*Laboratory Department*
Amaninder Dhillon		Organics, Waterloo, Ontario
Andrea Armstrong		VOC, Waterloo, Ontario
Cedrick Velasco		Inorganics, Baffin Island, Nunavut
Danielle Gravel		Organics, Waterloo, Ontario
Jeremy Gingras		Organics, Waterloo, Ontario
Walt Kippenhuck		Inorganics, Baffin Island, Nunavut
Walt Kippenhuck		Inorganics, Waterloo, Ontario
Walt Kippenhuck		Metals, Waterloo, Ontario
Walt Kippenhuck		Centralized Prep, Waterloo, Ontario

General Comments

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

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

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

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

Key: CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.
LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units
µg/L	micrograms per litre
µS/cm	microsiemens per centimetre

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

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Workorder Comments

E641 BF2500307-001 RRR: Detection limit raised due to high analyte recovery in the method blank.

Qualifiers

Qualifier	Description
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
RRR	Refer to report comments for issues regarding this analysis.

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-MRY-13B_2025-08-29 ----	MS-MRY-13C_2025-08-29 ----	LF-DS-SEEP-01_2025-08-29 ----	LF-US-POND-01_2025-08-29 ----	----
					Client sampling date / time	29-Aug-2025 15:05	29-Aug-2025 15:30	29-Aug-2025 16:10	29-Aug-2025 04:55	----
						BF2500307-001	BF2500307-002	BF2500307-003	BF2500307-004	----
						Result	Result	Result	Result	----
Sample Preparation										
Dissolved carbon filtration location	----	EP358/WT	-	-		field	field	field	field	----
Physical Tests										
Conductivity	----	E100/WT	1.0	µS/cm		923	660	381	218	----
pH	----	E108/BF	0.10	pH units		8.09	7.65	7.93	7.78	----
Solids, total dissolved [TDS]	----	E162/BF	10	mg/L		569	390	202	97	----
Solids, total suspended [TSS]	----	E160-L/BF	1.0	mg/L		<1.1	9.1	1.7	<1.0	----
Turbidity	----	E121/BF	0.10	NTU		0.51	2.91	2.37	1.20	----
Alkalinity, total (as CaCO3)	----	E290/WT	2.0	mg/L		202	175	161	107	----
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/WT	0.0050	mg/L		0.0331	0.0235	<0.0050	0.0077	----
Bromide	24959-67-9	E235.Br/WT	0.10	mg/L		0.17	0.12	<0.10	<0.10	----
Chloride	16887-00-6	E235.Cl/WT	0.50	mg/L		56.4	28.4	7.40	4.02	----
Fluoride	16984-48-8	E235.F/WT	0.020	mg/L		0.027	0.053	0.076	0.056	----
Kjeldahl nitrogen, total [TKN]	----	E318/WT	0.050	mg/L		0.595	0.301	0.136	0.126	----
Nitrate (as N)	14797-55-8	E235.NO3/WT	0.020	mg/L		1.68	0.704	0.052	<0.020	----
Nitrite (as N)	14797-65-0	E235.NO2/WT	0.010	mg/L		<0.010	<0.010	<0.010	<0.010	----
Phosphorus, total	7723-14-0	E372-U/WT	0.0020	mg/L		0.0220	0.0062	0.0037	0.0020	----
Phosphorus, total dissolved	7723-14-0	E375-T/WT	0.0020	mg/L		0.0235	0.0071	0.0030	<0.0020	----
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	0.30	mg/L		183	117	27.7	1.64	----
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/WT	0.50	mg/L		5.30	3.44	2.64	2.43	----

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Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-MRY-13B_2025-08-29 ----	MS-MRY-13C_2025-08-29 ----	LF-DS-SEEP-01_2025-08-29 ----	LF-US-POND-01_2025-08-29 ----	----
					Client sampling date / time	29-Aug-2025 15:05	29-Aug-2025 15:30	29-Aug-2025 16:10	29-Aug-2025 04:55	----
						BF2500307-001	BF2500307-002	BF2500307-003	BF2500307-004	----
						Result	Result	Result	Result	----
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/WT	0.0010	mg/L		0.0014	<0.0010	0.0017	<0.0010	----
Antimony, dissolved	7440-36-0	E421/WT	0.00010	mg/L		0.00032	0.00018	<0.00010	<0.00010	----
Arsenic, dissolved	7440-38-2	E421/WT	0.00010	mg/L		0.00022	0.00015	<0.00010	<0.00010	----
Barium, dissolved	7440-39-3	E421/WT	0.00010	mg/L		0.0537	0.0378	0.0189	0.00325	----
Beryllium, dissolved	7440-41-7	E421/WT	0.000020	mg/L		<0.000020	<0.000020	<0.000020	<0.000020	----
Bismuth, dissolved	7440-69-9	E421/WT	0.000050	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	----
Boron, dissolved	7440-42-8	E421/WT	0.010	mg/L		0.696	0.351	0.044	0.022	----
Cadmium, dissolved	7440-43-9	E421/WT	0.0000050	mg/L		0.0000250	0.0000107	<0.0000050	<0.0000050	----
Calcium, dissolved	7440-70-2	E421/WT	0.050	mg/L		107	94.7	39.0	20.4	----
Cesium, dissolved	7440-46-2	E421/WT	0.000010	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	----
Chromium, dissolved	7440-47-3	E421/WT	0.00050	mg/L		0.00064	<0.00050	<0.00050	<0.00050	----
Cobalt, dissolved	7440-48-4	E421/WT	0.00010	mg/L		0.00025	0.00013	0.00010	<0.00010	----
Copper, dissolved	7440-50-8	E421/WT	0.00020	mg/L		0.00189	0.00084	0.00092	<0.00020	----
Iron, dissolved	7439-89-6	E421/WT	0.010	mg/L		<0.010	<0.010	0.016	0.030	----
Lead, dissolved	7439-92-1	E421/WT	0.000050	mg/L		0.000057	<0.000050	<0.000050	<0.000050	----
Lithium, dissolved	7439-93-2	E421/WT	0.0010	mg/L		0.0737	0.0387	0.0044	0.0020	----
Magnesium, dissolved	7439-95-4	E421/WT	0.0050	mg/L		36.8	19.1	18.1	12.4	----
Manganese, dissolved	7439-96-5	E421/WT	0.00010	mg/L		0.00074	0.00055	0.0297	0.00758	----
Mercury, dissolved	7439-97-6	E509/WT	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	----
Molybdenum, dissolved	7439-98-7	E421/WT	0.000050	mg/L		0.00100	0.00270	0.00128	0.000094	----
Nickel, dissolved	7440-02-0	E421/WT	0.00050	mg/L		0.00995	0.00558	0.00115	<0.00050	----

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Analytical Results

Sub-Matrix: Water
(Matrix: Water)

					Client sample ID	MS-MRY-13B_2025-08-29 ----	MS-MRY-13C_2025-08-29 ----	LF-DS-SEEP-01_2025-08-29 ----	LF-US-POND-01_2025-08-29 ----	----
					Client sampling date / time	29-Aug-2025 15:05	29-Aug-2025 15:30	29-Aug-2025 16:10	29-Aug-2025 04:55	----
Analyte	CAS Number	Method/Lab	LOR	Unit		BF2500307-001	BF2500307-002	BF2500307-003	BF2500307-004	----
						Result	Result	Result	Result	----
Dissolved Metals										
Phosphorus, dissolved	7723-14-0	E421/WT	0.050	mg/L		<0.050	<0.050	<0.050	<0.050	----
Potassium, dissolved	7440-09-7	E421/WT	0.050	mg/L		8.22	6.55	2.79	1.77	----
Rubidium, dissolved	7440-17-7	E421/WT	0.00020	mg/L		0.00565	0.00598	0.00532	0.00154	----
Selenium, dissolved	7782-49-2	E421/WT	0.000050	mg/L		0.000096	<0.000050	<0.000050	<0.000050	----
Silicon, dissolved	7440-21-3	E421/WT	0.050	mg/L		4.48	3.31	1.70	1.66	----
Silver, dissolved	7440-22-4	E421/WT	0.000010	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	----
Sodium, dissolved	7440-23-5	E421/WT	0.050	mg/L		31.4	14.7	8.46	5.38	----
Strontium, dissolved	7440-24-6	E421/WT	0.00020	mg/L		0.200	0.240	0.0562	0.0202	----
Sulfur, dissolved	7704-34-9	E421/WT	0.50	mg/L		71.5	44.6	9.21	0.71	----
Tellurium, dissolved	13494-80-9	E421/WT	0.00020	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	----
Thallium, dissolved	7440-28-0	E421/WT	0.000010	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	----
Thorium, dissolved	7440-29-1	E421/WT	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	----
Tin, dissolved	7440-31-5	E421/WT	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	----
Titanium, dissolved	7440-32-6	E421/WT	0.00030	mg/L		<0.00030	<0.00030	<0.00030	<0.00030	----
Tungsten, dissolved	7440-33-7	E421/WT	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	----
Uranium, dissolved	7440-61-1	E421/WT	0.000010	mg/L		0.0120	0.00821	0.00205	0.000138	----
Vanadium, dissolved	7440-62-2	E421/WT	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	----
Zinc, dissolved	7440-66-6	E421/WT	0.0010	mg/L		<0.0010	0.0015	0.0031	<0.0010	----
Zirconium, dissolved	7440-67-7	E421/WT	0.00030	mg/L		<0.00030	<0.00030	<0.00030	<0.00030	----
Dissolved mercury filtration location	----	EP509/WT	-	-		Field	Field	Field	Field	----
Dissolved metals filtration location	----	EP421/WT	-	-		Field	Field	Field	Field	----

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Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-MRY-13B_2025-08-29 ----	MS-MRY-13C_2025-08-29 ----	LF-DS-SEEP-01_2025-08-29 ----	LF-US-POND-01_2025-08-29 ----	----
					Client sampling date / time	29-Aug-2025 15:05	29-Aug-2025 15:30	29-Aug-2025 16:10	29-Aug-2025 04:55	----
						BF2500307-001	BF2500307-002	BF2500307-003	BF2500307-004	----
						Result	Result	Result	Result	----
Volatile Organic Compounds										
Acetone	67-64-1	E611D/WT	20	µg/L		<20	<20	<20	<20	----
Benzene	71-43-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Bromodichloromethane	75-27-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Bromoform	75-25-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Bromomethane	74-83-9	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
BTEX, total	----	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	----
Carbon disulfide	75-15-0	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	----
Carbon tetrachloride	56-23-5	E611D/WT	0.20	µg/L		<0.20	<0.20	<0.20	<0.20	----
Chlorobenzene	108-90-7	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Chloroethane	75-00-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Chloroform	67-66-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Chloromethane	74-87-3	E611D/WT	2.0	µg/L		<2.0	<2.0	<2.0	<2.0	----
Dibromochloromethane	124-48-1	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dibromoethane, 1,2-	106-93-4	E611D/WT	0.20	µg/L		<0.20	<0.20	<0.20	<0.20	----
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dichlorodifluoromethane	75-71-8	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dichloroethane, 1,1-	75-34-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dichloroethane, 1,2-	107-06-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dichloroethylene, 1,1-	75-35-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----

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Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-MRY-13B_2025-08-29 ----	MS-MRY-13C_2025-08-29 ----	LF-DS-SEEP-01_2025-08-29 ----	LF-US-POND-01_2025-08-29 ----	----
					Client sampling date / time	29-Aug-2025 15:05	29-Aug-2025 15:30	29-Aug-2025 16:10	29-Aug-2025 04:55	----
						BF2500307-001	BF2500307-002	BF2500307-003	BF2500307-004	----
						Result	Result	Result	Result	----
Volatile Organic Compounds										
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dichloroethylene, cis+trans-1,2-	540-59-0	E611D/WT	0.71	µg/L		<0.71	<0.71	<0.71	<0.71	----
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dichloromethane	75-09-2	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	----
Dichloropropane, 1,2-	78-87-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	0.50	µg/L		<0.5	<0.5	<0.5	<0.5	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	----
Ethylbenzene	100-41-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Hexane, n-	110-54-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Hexanone, 2-	591-78-6	E611D/WT	20	µg/L		<20	<20	<20	<20	----
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	20	µg/L		<20	<20	<20	<20	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	20	µg/L		<20	<20	<20	<20	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Styrene	100-42-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Tetrachloroethylene	127-18-4	E611D/WT	0.50	µg/L		<0.50	0.66	<0.50	<0.50	----
Toluene	108-88-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: MS-MRY-13B_2025-08-29 ----	MS-MRY-13C_2025-08-29 ----	LF-DS-SEEP-01_2025-08-29 ----	LF-US-POND-01_2025-08-29 ----	----
				Client sampling date / time	29-Aug-2025 15:05	29-Aug-2025 15:30	29-Aug-2025 16:10	29-Aug-2025 04:55	----
					BF2500307-001	BF2500307-002	BF2500307-003	BF2500307-004	----
					Result	Result	Result	Result	----
Volatile Organic Compounds									
Trichloroethylene	79-01-6	E611D/WT	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	----
Trichlorofluoromethane	75-69-4	E611D/WT	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	----
Trihalomethanes [THMs], total	----	E611D/WT	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Vinyl chloride	75-01-4	E611D/WT	0.20	µg/L	<0.20	<0.20	<0.20	<0.20	----
Xylene, m+p-	179601-23-1	E611D/WT	0.40	µg/L	<0.40	<0.40	<0.40	<0.40	----
Xylene, o-	95-47-6	E611D/WT	0.30	µg/L	<0.30	<0.30	<0.30	<0.30	----
Xylenes, total	1330-20-7	E611D/WT	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	----
Hydrocarbons									
F1 (C6-C10)	----	E581.F1-L/WT	25	µg/L	<25	<25	<25	<25	----
F2 (C10-C16)	----	E601/WT	100	µg/L	<100	<100	<100	<100	----
F3 (C16-C34)	----	E601/WT	250	µg/L	<250	<250	<250	<250	----
F4 (C34-C50)	----	E601/WT	250	µg/L	<250	<250	<250	<250	----
F1-BTEX	----	EC580/WT	25	µg/L	<25	<25	<25	<25	----
Hydrocarbons, total (C6-C50)	n/a	EC581/WT	370	µg/L	<370	<370	<370	<370	----
Hydrocarbons Surrogates									
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/WT	1.0	%	92.1	93.2	92.3	94.4	----
Dichlorotoluene, 3,4-	95-75-0	E581.F1-L/WT	1.0	%	75.1	70.8	74.2	73.9	----
Volatile Organic Compounds Surrogates									
Bromofluorobenzene, 4-	460-00-4	E611D/WT	1.0	%	88.9	88.4	88.4	88.2	----
Difluorobenzene, 1,4-	540-36-3	E611D/WT	1.0	%	97.3	97.6	97.2	97.1	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-MRY-13B_2025-08-29 ----	MS-MRY-13C_2025-08-29 ----	LF-DS-SEEP-01_2025-08-29 ----	LF-US-POND-01_2025-08-29 ----	----
					Client sampling date / time	29-Aug-2025 15:05	29-Aug-2025 15:30	29-Aug-2025 16:10	29-Aug-2025 04:55	----
						BF2500307-001	BF2500307-002	BF2500307-003	BF2500307-004	----
						Result	Result	Result	Result	----
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	----
Acenaphthylene	208-96-8	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	----
Acridine	260-94-6	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	----
Anthracene	120-12-7	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	----
Benz(a)anthracene	56-55-3	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	----
Benzo(a)pyrene	50-32-8	E641A-L/WT	0.0050	µg/L		<0.0050	<0.0050	<0.0050	<0.0050	----
Benzo(b+j)fluoranthene	n/a	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	----
Benzo(b+j+k)fluoranthene	n/a	E641A-L/WT	0.015	µg/L		<0.015	<0.015	<0.015	<0.015	----
Benzo(g,h,i)perylene	191-24-2	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	----
Benzo(k)fluoranthene	207-08-9	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	----
Chrysene	218-01-9	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A-L/WT	0.0050	µg/L		<0.0050	<0.0050	<0.0050	<0.0050	----
Fluoranthene	206-44-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	----
Fluorene	86-73-7	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	----
Methylnaphthalene, 1+2-	----	E641A-L/WT	0.015	µg/L		<0.015	<0.015	<0.015	<0.015	----
Methylnaphthalene, 2-	91-57-6	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	----
Naphthalene	91-20-3	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	----
Perylene	198-55-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	----
Phenanthrene	85-01-8	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	----

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Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: MS-MRY-13B_2025-08-29 ----	MS-MRY-13C_2025-08-29 ----	LF-DS-SEEP-01_2025-08-29 ----	LF-US-POND-01_2025-08-29 ----	----
Client sampling date / time					29-Aug-2025 15:05	29-Aug-2025 15:30	29-Aug-2025 16:10	29-Aug-2025 04:55	----
					BF2500307-001	BF2500307-002	BF2500307-003	BF2500307-004	----
					Result	Result	Result	Result	----
Polycyclic Aromatic Hydrocarbons									
Pyrene	129-00-0	E641A-L/WT	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----
Quinoline	91-22-5	E641A-L/WT	0.010	µg/L	<0.027 DLM, RRR	<0.029 DLM	<0.018 DLM	<0.020 DLM	----
B(a)P total potency equivalents [B(a)P TPE]	----	E641A-L/WT	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----
Polycyclic Aromatic Hydrocarbons Surrogates									
Chrysene-d12	1719-03-5	E641A-L/WT	0.1	%	103	103	91.8	94.4	----
Naphthalene-d8	1146-65-2	E641A-L/WT	0.1	%	105	116	112	112	----
Phenanthrene-d10	1517-22-2	E641A-L/WT	0.1	%	105	114	106	107	----

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

ALS Canada Ltd.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **BF2500307**	Page	: 1 of 21
Client	: **Baffinland Iron Mines Corporation**	Laboratory	: ALS Environmental - Baffin Island
Contact	: Environmental Lab Results	Account Manager	: Rick Hawthorne
Address	: 360 Oakville Place Dr Suite 300 Oakville ON Canada L6H 6K8	Address	: Mary River, Qikqtani Region Baffin Island, Nunavut Canada
Telephone	: ----	Telephone	: ----
Project	: Landfill_Seep_Investigation	Date Samples Received	: 29-Aug-2025 18:00
PO	: 4500156571	Issue Date	: 11-Sep-2025 09:43
C-O-C number	: 25 08 29_Landfill_Seep_Investigation		
Sampler	: AG, LG		
Site	: MS		
Quote number	: 2024-2025 Scope of Work		
No. of samples received	: 4		
No. of samples analysed	: 4		

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

Key

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

Workorder Comments

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

Summary of Outliers

Outliers : Quality Control Samples

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

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

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

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Method Blank (MB) Values								
Polycyclic Aromatic Hydrocarbons	QC-MRG4-2204975 001	----	Quinoline	91-22-5	E641A-L	0.015 µg/L MB-LOR	0.01 µg/L	Blank result exceeds permitted value

Result Qualifiers

Qualifier	Description
MB-LOR	*Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.*

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
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) LF-DS-SEEP-01_2025-08-29	E298	29-Aug-2025	05-Sep-2025	28 days	7 days	✓	07-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) LF-US-POND-01_2025-08-29	E298	29-Aug-2025	05-Sep-2025	28 days	7 days	✓	07-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) MS-MRY-13B_2025-08-29	E298	29-Aug-2025	05-Sep-2025	28 days	7 days	✓	07-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) MS-MRY-13C_2025-08-29	E298	29-Aug-2025	05-Sep-2025	28 days	7 days	✓	07-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE [ON MECP] LF-DS-SEEP-01_2025-08-29	E235.Br	29-Aug-2025	04-Sep-2025	28 days	6 days	✓	08-Sep-2025	28 days	6 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE [ON MECP] MS-MRY-13B_2025-08-29	E235.Br	29-Aug-2025	04-Sep-2025	28 days	6 days	✓	08-Sep-2025	28 days	6 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE [ON MECP] MS-MRY-13C_2025-08-29	E235.Br	29-Aug-2025	04-Sep-2025	28 days	6 days	✓	08-Sep-2025	28 days	6 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Bromide in Water by IC										
HDPE [ON MECP]										
LF-US-POND-01_2025-08-29	E235.Br	29-Aug-2025	04-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE [ON MECP]										
LF-DS-SEEP-01_2025-08-29	E235.Cl	29-Aug-2025	04-Sep-2025	28 days	6 days	✓	08-Sep-2025	28 days	6 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE [ON MECP]										
MS-MRY-13B_2025-08-29	E235.Cl	29-Aug-2025	04-Sep-2025	28 days	6 days	✓	08-Sep-2025	28 days	6 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE [ON MECP]										
MS-MRY-13C_2025-08-29	E235.Cl	29-Aug-2025	04-Sep-2025	28 days	6 days	✓	08-Sep-2025	28 days	6 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE [ON MECP]										
LF-US-POND-01_2025-08-29	E235.Cl	29-Aug-2025	04-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE [ON MECP]										
LF-DS-SEEP-01_2025-08-29	E235.F	29-Aug-2025	04-Sep-2025	28 days	6 days	✓	08-Sep-2025	28 days	6 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE [ON MECP]										
MS-MRY-13B_2025-08-29	E235.F	29-Aug-2025	04-Sep-2025	28 days	6 days	✓	08-Sep-2025	28 days	6 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE [ON MECP]										
MS-MRY-13C_2025-08-29	E235.F	29-Aug-2025	04-Sep-2025	28 days	6 days	✓	08-Sep-2025	28 days	6 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE [ON MECP]										
LF-US-POND-01_2025-08-29	E235.F	29-Aug-2025	04-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Nitrate in Water by IC										
HDPE [ON MECP]										
LF-DS-SEEP-01_2025-08-29	E235.NO3	29-Aug-2025	04-Sep-2025	7 days	6 days	✓	08-Sep-2025	7 days	6 days	× EHT
Anions and Nutrients : Nitrate in Water by IC										
HDPE [ON MECP]										
MS-MRY-13B_2025-08-29	E235.NO3	29-Aug-2025	04-Sep-2025	7 days	6 days	✓	08-Sep-2025	7 days	6 days	× EHT
Anions and Nutrients : Nitrate in Water by IC										
HDPE [ON MECP]										
MS-MRY-13C_2025-08-29	E235.NO3	29-Aug-2025	04-Sep-2025	7 days	6 days	✓	08-Sep-2025	7 days	6 days	× EHT
Anions and Nutrients : Nitrate in Water by IC										
HDPE [ON MECP]										
LF-US-POND-01_2025-08-29	E235.NO3	29-Aug-2025	04-Sep-2025	7 days	7 days	✓	08-Sep-2025	7 days	7 days	✓
Anions and Nutrients : Nitrite in Water by IC										
HDPE [ON MECP]										
LF-DS-SEEP-01_2025-08-29	E235.NO2	29-Aug-2025	04-Sep-2025	7 days	6 days	✓	08-Sep-2025	7 days	6 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE [ON MECP]										
MS-MRY-13B_2025-08-29	E235.NO2	29-Aug-2025	04-Sep-2025	7 days	6 days	✓	08-Sep-2025	7 days	6 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE [ON MECP]										
MS-MRY-13C_2025-08-29	E235.NO2	29-Aug-2025	04-Sep-2025	7 days	6 days	✓	08-Sep-2025	7 days	6 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE [ON MECP]										
LF-US-POND-01_2025-08-29	E235.NO2	29-Aug-2025	04-Sep-2025	7 days	7 days	✓	08-Sep-2025	7 days	7 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE [ON MECP]										
LF-DS-SEEP-01_2025-08-29	E235.SO4	29-Aug-2025	04-Sep-2025	28 days	6 days	✓	08-Sep-2025	28 days	6 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Sulfate in Water by IC										
HDPE [ON MECP]										
MS-MRY-13B_2025-08-29	E235.SO4	29-Aug-2025	04-Sep-2025	28 days	6 days	✓	08-Sep-2025	28 days	6 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE [ON MECP]										
MS-MRY-13C_2025-08-29	E235.SO4	29-Aug-2025	04-Sep-2025	28 days	6 days	✓	08-Sep-2025	28 days	6 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE [ON MECP]										
LF-US-POND-01_2025-08-29	E235.SO4	29-Aug-2025	04-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass dissolved (sulfuric acid) [ON MECP]										
LF-DS-SEEP-01_2025-08-29	E375-T	29-Aug-2025	06-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass dissolved (sulfuric acid) [ON MECP]										
LF-US-POND-01_2025-08-29	E375-T	29-Aug-2025	06-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass dissolved (sulfuric acid) [ON MECP]										
MS-MRY-13B_2025-08-29	E375-T	29-Aug-2025	06-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass dissolved (sulfuric acid) [ON MECP]										
MS-MRY-13C_2025-08-29	E375-T	29-Aug-2025	06-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
LF-DS-SEEP-01_2025-08-29	E318	29-Aug-2025	06-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
LF-US-POND-01_2025-08-29	E318	29-Aug-2025	06-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
MS-MRY-13B_2025-08-29	E318	29-Aug-2025	06-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
MS-MRY-13C_2025-08-29	E318	29-Aug-2025	06-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
LF-DS-SEEP-01_2025-08-29	E372-U	29-Aug-2025	06-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
LF-US-POND-01_2025-08-29	E372-U	29-Aug-2025	06-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
MS-MRY-13B_2025-08-29	E372-U	29-Aug-2025	06-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
MS-MRY-13C_2025-08-29	E372-U	29-Aug-2025	06-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
LF-DS-SEEP-01_2025-08-29	E509	29-Aug-2025	08-Sep-2025	28 days	10 days	✓	08-Sep-2025	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
LF-US-POND-01_2025-08-29	E509	29-Aug-2025	08-Sep-2025	28 days	10 days	✓	08-Sep-2025	28 days	10 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
MS-MRY-13B_2025-08-29	E509	29-Aug-2025	08-Sep-2025	28 days	10 days	✓	08-Sep-2025	28 days	10 days	✓

Matrix: **Water**

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Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
MS-MRY-13C_2025-08-29	E509	29-Aug-2025	08-Sep-2025	28 days	10 days	✓	08-Sep-2025	28 days	10 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
LF-DS-SEEP-01_2025-08-29	E421	29-Aug-2025	05-Sep-2025	180 days	7 days	✓	05-Sep-2025	180 days	7 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
LF-US-POND-01_2025-08-29	E421	29-Aug-2025	05-Sep-2025	180 days	7 days	✓	05-Sep-2025	180 days	7 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
MS-MRY-13B_2025-08-29	E421	29-Aug-2025	05-Sep-2025	180 days	7 days	✓	05-Sep-2025	180 days	7 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
MS-MRY-13C_2025-08-29	E421	29-Aug-2025	05-Sep-2025	180 days	7 days	✓	05-Sep-2025	180 days	7 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate)										
LF-DS-SEEP-01_2025-08-29	E581.F1-L	29-Aug-2025	04-Sep-2025	14 days	6 days	✓	04-Sep-2025	14 days	6 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate)										
MS-MRY-13B_2025-08-29	E581.F1-L	29-Aug-2025	04-Sep-2025	14 days	6 days	✓	04-Sep-2025	14 days	6 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate)										
MS-MRY-13C_2025-08-29	E581.F1-L	29-Aug-2025	04-Sep-2025	14 days	6 days	✓	04-Sep-2025	14 days	6 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate)										
LF-US-POND-01_2025-08-29	E581.F1-L	29-Aug-2025	04-Sep-2025	14 days	7 days	✓	04-Sep-2025	14 days	7 days	✓

Matrix: **Water**

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Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
MS-MRY-13B_2025-08-29	E601	29-Aug-2025	08-Sep-2025	14 days	10 days	✓	09-Sep-2025	40 days	1 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
LF-DS-SEEP-01_2025-08-29	E601	29-Aug-2025	09-Sep-2025	14 days	11 days	✓	09-Sep-2025	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
LF-US-POND-01_2025-08-29	E601	29-Aug-2025	09-Sep-2025	14 days	11 days	✓	09-Sep-2025	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
MS-MRY-13C_2025-08-29	E601	29-Aug-2025	09-Sep-2025	14 days	11 days	✓	09-Sep-2025	40 days	0 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) [ON MECP]										
LF-DS-SEEP-01_2025-08-29	E358-L	29-Aug-2025	05-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) [ON MECP]										
MS-MRY-13B_2025-08-29	E358-L	29-Aug-2025	05-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) [ON MECP]										
MS-MRY-13C_2025-08-29	E358-L	29-Aug-2025	05-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) [ON MECP]										
LF-US-POND-01_2025-08-29	E358-L	29-Aug-2025	05-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE [ON MECP]										
LF-DS-SEEP-01_2025-08-29	E290	29-Aug-2025	04-Sep-2025	14 days	6 days	✓	05-Sep-2025	14 days	6 days	✓

Matrix: **Water**

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Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : Alkalinity Species by Titration										
HDPE [ON MECP]										
MS-MRY-13B_2025-08-29	E290	29-Aug-2025	04-Sep-2025	14 days	6 days	✓	05-Sep-2025	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE [ON MECP]										
MS-MRY-13C_2025-08-29	E290	29-Aug-2025	04-Sep-2025	14 days	6 days	✓	05-Sep-2025	14 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE [ON MECP]										
LF-US-POND-01_2025-08-29	E290	29-Aug-2025	04-Sep-2025	14 days	7 days	✓	05-Sep-2025	14 days	7 days	✓
Physical Tests : Conductivity in Water										
HDPE [ON MECP]										
LF-DS-SEEP-01_2025-08-29	E100	29-Aug-2025	04-Sep-2025	28 days	6 days	✓	05-Sep-2025	28 days	6 days	✓
Physical Tests : Conductivity in Water										
HDPE [ON MECP]										
MS-MRY-13B_2025-08-29	E100	29-Aug-2025	04-Sep-2025	28 days	6 days	✓	05-Sep-2025	28 days	6 days	✓
Physical Tests : Conductivity in Water										
HDPE [ON MECP]										
MS-MRY-13C_2025-08-29	E100	29-Aug-2025	04-Sep-2025	28 days	6 days	✓	05-Sep-2025	28 days	6 days	✓
Physical Tests : Conductivity in Water										
HDPE [ON MECP]										
LF-US-POND-01_2025-08-29	E100	29-Aug-2025	04-Sep-2025	28 days	7 days	✓	05-Sep-2025	28 days	7 days	✓
Physical Tests : pH by Meter										
HDPE [ON MECP]										
LF-DS-SEEP-01_2025-08-29	E108	29-Aug-2025	30-Aug-2025	14 days	1 days	✓	30-Aug-2025	14 days	1 days	✓
Physical Tests : pH by Meter										
HDPE [ON MECP]										
LF-US-POND-01_2025-08-29	E108	29-Aug-2025	30-Aug-2025	14 days	1 days	✓	30-Aug-2025	14 days	1 days	✓

Matrix: **Water**

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Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : pH by Meter										
HDPE [ON MECP]										
MS-MRY-13B_2025-08-29	E108	29-Aug-2025	30-Aug-2025	14 days	1 days	✓	30-Aug-2025	14 days	1 days	✓
Physical Tests : pH by Meter										
HDPE [ON MECP]										
MS-MRY-13C_2025-08-29	E108	29-Aug-2025	30-Aug-2025	14 days	1 days	✓	30-Aug-2025	14 days	1 days	✓
Physical Tests : TDS by Gravimetry										
HDPE [ON MECP]										
LF-DS-SEEP-01_2025-08-29	E162	29-Aug-2025	----	----	----		31-Aug-2025	7 days	2 days	✓
Physical Tests : TDS by Gravimetry										
HDPE [ON MECP]										
LF-US-POND-01_2025-08-29	E162	29-Aug-2025	----	----	----		31-Aug-2025	7 days	2 days	✓
Physical Tests : TDS by Gravimetry										
HDPE [ON MECP]										
MS-MRY-13B_2025-08-29	E162	29-Aug-2025	----	----	----		31-Aug-2025	7 days	2 days	✓
Physical Tests : TDS by Gravimetry										
HDPE [ON MECP]										
MS-MRY-13C_2025-08-29	E162	29-Aug-2025	----	----	----		31-Aug-2025	7 days	2 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [ON MECP]										
LF-DS-SEEP-01_2025-08-29	E160-L	29-Aug-2025	----	----	----		30-Aug-2025	7 days	1 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [ON MECP]										
LF-US-POND-01_2025-08-29	E160-L	29-Aug-2025	----	----	----		30-Aug-2025	7 days	1 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [ON MECP]										
MS-MRY-13B_2025-08-29	E160-L	29-Aug-2025	----	----	----		30-Aug-2025	7 days	1 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE [ON MECP] MS-MRY-13C_2025-08-29	E160-L	29-Aug-2025	----	----	----		30-Aug-2025	7 days	1 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE [ON MECP] LF-DS-SEEP-01_2025-08-29	E121	29-Aug-2025	----	----	----		30-Aug-2025	48 hrs	17 hrs	✓
Physical Tests : Turbidity by Nephelometry										
HDPE [ON MECP] MS-MRY-13C_2025-08-29	E121	29-Aug-2025	----	----	----		30-Aug-2025	48 hrs	17 hrs	✓
Physical Tests : Turbidity by Nephelometry										
HDPE [ON MECP] MS-MRY-13B_2025-08-29	E121	29-Aug-2025	----	----	----		30-Aug-2025	48 hrs	18 hrs	✓
Physical Tests : Turbidity by Nephelometry										
HDPE [ON MECP] LF-US-POND-01_2025-08-29	E121	29-Aug-2025	----	----	----		30-Aug-2025	48 hrs	28 hrs	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate) MS-MRY-13B_2025-08-29	E641A-L	29-Aug-2025	08-Sep-2025	14 days	10 days	✓	08-Sep-2025	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate) LF-DS-SEEP-01_2025-08-29	E641A-L	29-Aug-2025	09-Sep-2025	14 days	11 days	✓	09-Sep-2025	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate) LF-US-POND-01_2025-08-29	E641A-L	29-Aug-2025	09-Sep-2025	14 days	11 days	✓	09-Sep-2025	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate) MS-MRY-13C_2025-08-29	E641A-L	29-Aug-2025	09-Sep-2025	14 days	11 days	✓	09-Sep-2025	40 days	0 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	*Method*	*Sampling Date*	*Extraction / Preparation*				*Analysis*			
			Preparation Date	*Holding Times*		*Eval*	*Analysis Date*	*Holding Times*		*Eval*
				Rec	*Actual*			*Rec*	*Actual*	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) LF-DS-SEEP-01_2025-08-29	E611D	29-Aug-2025	04-Sep-2025	14 days	6 days	✓	04-Sep-2025	14 days	6 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) MS-MRY-13B_2025-08-29	E611D	29-Aug-2025	04-Sep-2025	14 days	6 days	✓	04-Sep-2025	14 days	6 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) MS-MRY-13C_2025-08-29	E611D	29-Aug-2025	04-Sep-2025	14 days	6 days	✓	04-Sep-2025	14 days	6 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) LF-US-POND-01_2025-08-29	E611D	29-Aug-2025	04-Sep-2025	14 days	7 days	✓	04-Sep-2025	14 days	7 days	✓

Legend & Qualifier Definitions

EHT: Exceeded ALS recommended hold time prior to analysis.

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

Quality Control Parameter Frequency Compliance

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

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Conductivity in Water	E100	2199621	1	18	5.5	5.0	✓
pH by Meter	E108	2191835	1	8	12.5	5.0	✓
Turbidity by Nephelometry	E121	2191836	1	8	12.5	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	2191849	1	8	12.5	5.0	✓
TDS by Gravimetry	E162	2191850	1	8	12.5	5.0	✓
Bromide in Water by IC	E235.Br	2199624	1	6	16.6	5.0	✓
Chloride in Water by IC	E235.Cl	2199628	1	10	10.0	5.0	✓
Fluoride in Water by IC	E235.F	2199625	1	10	10.0	5.0	✓
Nitrite in Water by IC	E235.NO2	2199627	1	8	12.5	5.0	✓
Nitrate in Water by IC	E235.NO3	2199626	1	18	5.5	5.0	✓
Sulfate in Water by IC	E235.SO4	2199629	1	9	11.1	5.0	✓
Alkalinity Species by Titration	E290	2199622	1	8	12.5	5.0	✓
Ammonia by Fluorescence	E298	2201872	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2201870	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2202722	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2201871	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2203389	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2200849	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2201321	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2199634	1	20	5.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2199633	1	20	5.0	5.0	✓
Laboratory Control Samples (LCS)							
Conductivity in Water	E100	2199621	1	18	5.5	5.0	✓
pH by Meter	E108	2191835	1	8	12.5	5.0	✓
Turbidity by Nephelometry	E121	2191836	1	8	12.5	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	2191849	1	8	12.5	5.0	✓
TDS by Gravimetry	E162	2191850	1	8	12.5	5.0	✓
Bromide in Water by IC	E235.Br	2199624	1	6	16.6	5.0	✓
Chloride in Water by IC	E235.Cl	2199628	1	10	10.0	5.0	✓
Fluoride in Water by IC	E235.F	2199625	1	10	10.0	5.0	✓
Nitrite in Water by IC	E235.NO2	2199627	1	8	12.5	5.0	✓
Nitrate in Water by IC	E235.NO3	2199626	1	18	5.5	5.0	✓
Sulfate in Water by IC	E235.SO4	2199629	1	9	11.1	5.0	✓
Alkalinity Species by Titration	E290	2199622	1	8	12.5	5.0	✓
Ammonia by Fluorescence	E298	2201872	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2201870	1	20	5.0	5.0	✓

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Control Samples (LCS) - Continued							
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2202722	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2201871	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2203389	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2200849	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2201321	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2199634	1	20	5.0	5.0	✓
CCME PHCs - F2-F4 by GC-FID	E601	2204975	2	25	8.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2199633	1	20	5.0	5.0	✓
PAHs in Water by Hexane LVI GC-MS (Low Level)	E641A-L	2204976	2	23	8.7	5.0	✓
Method Blanks (MB)							
Conductivity in Water	E100	2199621	1	18	5.5	5.0	✓
Turbidity by Nephelometry	E121	2191836	1	8	12.5	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	2191849	1	8	12.5	5.0	✓
TDS by Gravimetry	E162	2191850	1	8	12.5	5.0	✓
Bromide in Water by IC	E235.Br	2199624	1	6	16.6	5.0	✓
Chloride in Water by IC	E235.Cl	2199628	1	10	10.0	5.0	✓
Fluoride in Water by IC	E235.F	2199625	1	10	10.0	5.0	✓
Nitrite in Water by IC	E235.NO2	2199627	1	8	12.5	5.0	✓
Nitrate in Water by IC	E235.NO3	2199626	1	18	5.5	5.0	✓
Sulfate in Water by IC	E235.SO4	2199629	1	9	11.1	5.0	✓
Alkalinity Species by Titration	E290	2199622	1	8	12.5	5.0	✓
Ammonia by Fluorescence	E298	2201872	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2201870	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2202722	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2201871	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2203389	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2200849	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2201321	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2199634	1	20	5.0	5.0	✓
CCME PHCs - F2-F4 by GC-FID	E601	2204975	2	25	8.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2199633	1	20	5.0	5.0	✓
PAHs in Water by Hexane LVI GC-MS (Low Level)	E641A-L	2204976	2	23	8.7	5.0	✓
Matrix Spikes (MS)							
Bromide in Water by IC	E235.Br	2199624	1	6	16.6	5.0	✓
Chloride in Water by IC	E235.Cl	2199628	1	10	10.0	5.0	✓
Fluoride in Water by IC	E235.F	2199625	1	10	10.0	5.0	✓
Nitrite in Water by IC	E235.NO2	2199627	1	8	12.5	5.0	✓
Nitrate in Water by IC	E235.NO3	2199626	1	18	5.5	5.0	✓
Sulfate in Water by IC	E235.SO4	2199629	1	9	11.1	5.0	✓

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Matrix Spikes (MS) - Continued							
Ammonia by Fluorescence	E298	2201872	1	20	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2201870	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2202722	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2201871	1	20	5.0	5.0	✓
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T	2203389	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2200849	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2201321	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2199634	1	20	5.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2199633	1	20	5.0	5.0	✓

Methodology References and Summaries

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

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

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Nitrate in Water by IC	E235.NO3 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Sulfate in Water by IC	E235.SO4 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Alkalinity Species by Titration	E290 ALS Environmental - Waterloo	Water	APHA 2320 B (mod)	Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.
Ammonia by Fluorescence	E298 ALS Environmental - Waterloo	Water	Method Fialab 100, 2018	Ammonia in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021)
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318 ALS Environmental - Waterloo	Water	Method Fialab 100, 2018	TKN in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021).
Dissolved Organic Carbon by Combustion (Low Level)	E358-L ALS Environmental - Waterloo	Water	APHA 5310 B (mod)	Dissolved Organic Carbon (Non-Purgeable), also known as NPOC (dissolved), is a direct measurement of DOC after a filtered (0.45 micron) sample has been acidified and purged to remove inorganic carbon (IC). Analysis is by high temperature combustion with infrared detection of CO2. NPOC does not include volatile organic species that are purged off with IC. For samples where the majority of DC (dissolved carbon) is comprised of IC (which is common), this method is more accurate and more reliable than the DOC by subtraction method (i.e. DC minus DIC).
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Total Phosphorus is determined colourimetrically using a discrete analyzer after heated persulfate digestion of the sample.
Total Dissolved Phosphorus by Colourimetry (0.002 mg/L)	E375-T ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Total Dissolved Phosphorus is determined colourimetrically using a discrete analyzer after filtration through a 0.45 micron filter followed by heated persulfate digestion of the sample.
Dissolved Metals in Water by CRC ICPMS	E421 ALS Environmental - Waterloo	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Dissolved Mercury in Water by CVAAS	E509 ALS Environmental - Waterloo	Water	APHA 3030B/EPA 1631E (mod)	Water samples are filtered (0.45 um), preserved with HCl, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1 (mod)	CCME Fraction 1 (F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
CCME PHCs - F2-F4 by GC-FID	E601 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	Sample extracts are analyzed by GC-FID for CCME hydrocarbon fractions (F2-F4). Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
VOCs (Eastern Canada List) by Headspace GC-MS	E611D ALS Environmental - Waterloo	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PAHs in Water by Hexane LVI GC-MS (Low Level)	E641A-L ALS Environmental - Waterloo	Water	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS.
F1-BTEX	EC580 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).
Sum F1 to F4 (C6-C50)	EC581 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	Hydrocarbons, total (C6-C50) is the sum of CCME Fractions F1(C6-C10), F2(C10-C16), F3(C16-C34), and F4(C34-C50). F4G-sg is not used within this calculation due to overlap with other fractions.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Ammonia	EP298 ALS Environmental - Waterloo	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Digestion for TKN in water	EP318 ALS Environmental - Waterloo	Water	APHA 4500-Norg D (mod)	Samples are digested at high temperature using Sulfuric Acid with Copper catalyst, which converts organic nitrogen sources to Ammonia, which is then quantified by the analytical method as TKN. This method is unsuitable for samples containing high levels of nitrate. If nitrate exceeds TKN concentration by ten times or more, results may be biased low.
Preparation for Dissolved Organic Carbon for Combustion	EP358 ALS Environmental - Waterloo	Water	APHA 5310 B (mod)	Preparation for Dissolved Organic Carbon

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Digestion for Total Phosphorus in water	EP372 ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Samples are heated with a persulfate digestion reagent.
Digestion for Dissolved Phosphorus in water	EP375 ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Samples are filtered through a 0.45 micron membrane filter and then heated with a persulfate digestion reagent.
Dissolved Metals Water Filtration	EP421 ALS Environmental - Waterloo	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO3.
Dissolved Mercury Water Filtration	EP509 ALS Environmental - Waterloo	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HCl.
VOCs Preparation for Headspace Analysis	EP581 ALS Environmental - Waterloo	Water	EPA 5021A (mod)	Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler. An aliquot of the headspace is then injected into a GC-MS-FID.
PHCs and PAHs Hexane Extraction	EP601 ALS Environmental - Waterloo	Water	EPA 3511 (mod)	Petroleum Hydrocarbons (PHCs) and Polycyclic Aromatic Hydrocarbons (PAHs) are extracted using a hexane liquid-liquid extraction.

ALS Canada Ltd.

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QUALITY CONTROL REPORT

Work Order	: **BF2500307**	Page	: 1 of 21
Client	: Baffinland Iron Mines Corporation	Laboratory	: ALS Environmental - Baffin Island
Contact	: Environmental Lab Results	Account Manager	: Rick Hawthorne
Address	: 360 Oakville Place Dr Suite 300 Oakville ON Canada L6H 6K8	Address	: Mary River, Qikqtani Region Baffin Island, Nunavut Canada
Telephone	: ----	Telephone	:
Project	: Landfill_Seep_Investigation	Date Samples Received	: 29-Aug-2025 18:00
PO	: 4500156571	Date Analysis Commenced	: 30-Aug-2025
C-O-C number	: 25 08 29_Landfill_Seep_Investigation	Issue Date	: 11-Sep-2025 09:43
Sampler	: AG, LG		
Site	: MS		
Quote number	: 2024-2025 Scope of Work		
No. of samples received	: 4		
No. of samples analysed	: 4		

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Laboratory Department*
Amaninder Dhillon	Team Lead - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Andrea Armstrong	Department Manager - Air Quality and Volatiles	Waterloo VOC, Waterloo, Ontario
Cedrick Velasco	Lab Manager	Baffin Island Inorganics, Baffin Island, Nunavut
Danielle Gravel	Supervisor - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Jeremy Gingras	Supervisor - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Centralized Prep, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Inorganics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Metals, Waterloo, Ontario
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General Comments

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

Key :

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

Workorder Comments

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Physical Tests (QC Lot: 2191835)											
BF2500305-001	Anonymous	pH	----	E108	0.10	pH units	5.28	5.29	0.189%	4%	----
Physical Tests (QC Lot: 2191836)											
BF2500305-002	Anonymous	Turbidity	----	E121	0.10	NTU	15.4	15.6	1.29%	15%	----
Physical Tests (QC Lot: 2191849)											
BF2500306-001	Anonymous	Solids, total suspended [TSS]	----	E160-L	1.3	mg/L	28.5	29.7	4.13%	20%	----
Physical Tests (QC Lot: 2191850)											
BF2500306-002	Anonymous	Solids, total dissolved [TDS]	----	E162	13	mg/L	266	285	6.78%	20%	----
Physical Tests (QC Lot: 2199621)											
WT2524354-001	Anonymous	Conductivity	----	E100	2.0	µS/cm	872	874	0.229%	10%	----
Physical Tests (QC Lot: 2199622)											
WT2524354-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	2.0	mg/L	294	288	2.09%	20%	----
Anions and Nutrients (QC Lot: 2199624)											
BF2500306-001	Anonymous	Bromide	24959-67-9	E235.Br	0.10	mg/L	<0.10	<0.10	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2199625)											
BF2500306-001	Anonymous	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.099	0.091	0.008	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2199626)											
BF2500306-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	0.201	0.196	0.005	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2199627)											
BF2500306-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2199628)											
BF2500306-001	Anonymous	Chloride	16887-00-6	E235.Cl	0.50	mg/L	49.0	48.6	0.758%	20%	----
Anions and Nutrients (QC Lot: 2199629)											
BF2500306-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	58.4	58.3	0.234%	20%	----
Anions and Nutrients (QC Lot: 2201870)											
BF2500303-002	Anonymous	Kjeldahl nitrogen, total [TKN]	----	E318	0.050	mg/L	2.17	2.13	2.05%	20%	----
Anions and Nutrients (QC Lot: 2201871)											
BF2500303-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0050	0.0051	0.0001	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2201872)											
BF2500304-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0500	mg/L	2.20	2.28	3.29%	20%	----
Anions and Nutrients (QC Lot: 2203389)											

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Anions and Nutrients (QC Lot: 2203389) - continued											
BF2500299-001	Anonymous	Phosphorus, total dissolved	7723-14-0	E375-T	0.0020	mg/L	0.0026	0.0023	0.0003	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 2202722)											
BF2500298-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	1.64	1.37	0.27	Diff <2x LOR	----
Dissolved Metals (QC Lot: 2200849)											
BF2500298-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0139	0.0150	7.26%	20%	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.00952	0.00991	3.94%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	14.9	14.9	0.317%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00083	0.00084	0.000008	Diff <2x LOR	----
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.012	0.013	0.0007	Diff <2x LOR	----
		Lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	9.37	9.52	1.61%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.00076	0.00080	0.00004	Diff <2x LOR	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000483	0.000470	0.000013	Diff <2x LOR	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.00051	0.00051	0.000004	Diff <2x LOR	----
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.050	mg/L	1.08	1.08	0.577%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00154	0.00158	0.00004	Diff <2x LOR	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	0.837	0.854	2.06%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.050	mg/L	2.68	2.72	1.15%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.0155	0.0154	0.494%	20%	----
		Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	2.11	2.07	0.04	Diff <2x LOR	----
		Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Dissolved Metals (QC Lot: 2200849) - continued											
BF2500298-001	Anonymous	Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	0.00045	0.00036	0.00009	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.00279	0.00278	0.334%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 2201321)											
BF2500303-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Volatile Organic Compounds (QC Lot: 2199633)											
BF2500303-001	Anonymous	Acetone	67-64-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Benzene	71-43-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromodichloromethane	75-27-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromoform	75-25-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromomethane	74-83-9	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Carbon disulfide	75-15-0	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Carbon tetrachloride	56-23-5	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Chlorobenzene	108-90-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroethane	75-00-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroform	67-66-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloromethane	74-87-3	E611D	2.0	µg/L	<2.0	<2.0	0	Diff <2x LOR	----
		Dibromochloromethane	124-48-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dibromoethane, 1,2-	106-93-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorodifluoromethane	75-71-8	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,1-	75-34-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,2-	107-06-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, 1,1-	75-35-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	0.94	0.92	0.02	Diff <2x LOR	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Volatile Organic Compounds (QC Lot: 2199633) - continued											
BF2500303-001	Anonymous	Dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Dichloropropane, 1,2-	78-87-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Hexane, n-	110-54-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Hexanone, 2-	591-78-6	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethylene	127-18-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Toluene	108-88-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichlorofluoromethane	75-69-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Vinyl chloride	75-01-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 2199634)											
BF2500303-001	Anonymous	F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	<25	0	Diff <2x LOR	----

Method Blank (MB) Report

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

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 2191836)						
Turbidity	----	E121	0.1	NTU	<0.10	----
Physical Tests (QCLot: 2191849)						
Solids, total suspended [TSS]	----	E160-L	1	mg/L	<1.0	----
Physical Tests (QCLot: 2191850)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Physical Tests (QCLot: 2199621)						
Conductivity	----	E100	1	µS/cm	1.5	----
Physical Tests (QCLot: 2199622)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Anions and Nutrients (QCLot: 2199624)						
Bromide	24959-67-9	E235.Br	0.1	mg/L	<0.10	----
Anions and Nutrients (QCLot: 2199625)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 2199626)						
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 2199627)						
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	<0.010	----
Anions and Nutrients (QCLot: 2199628)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 2199629)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 2201870)						
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 2201871)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 2201872)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 2203389)						
Phosphorus, total dissolved	7723-14-0	E375-T	0.002	mg/L	<0.0020	----
Organic / Inorganic Carbon (QCLot: 2202722)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Dissolved Metals (QCLot: 2200849)						

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 2200849) - continued						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 2200849) - continued						
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 2201321)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Volatile Organic Compounds (QCLot: 2199633)						
Acetone	67-64-1	E611D	20	µg/L	<20	----
Benzene	71-43-2	E611D	0.5	µg/L	<0.50	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	<0.50	----
Bromoform	75-25-2	E611D	0.5	µg/L	<0.50	----
Bromomethane	74-83-9	E611D	0.5	µg/L	<0.50	----
Carbon disulfide	75-15-0	E611D	1	µg/L	<1.0	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	<0.20	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	<0.50	----
Chloroethane	75-00-3	E611D	0.5	µg/L	<0.50	----
Chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----
Chloromethane	74-87-3	E611D	2	µg/L	<2.0	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	<0.50	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	<0.20	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	<0.50	----
Dichloromethane	75-09-2	E611D	1	µg/L	<1.0	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	<0.50	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	<0.30	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	<0.50	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 2199633) - continued						
Hexanone, 2-	591-78-6	E611D	20	µg/L	<20	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	<0.50	----
Styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----
Toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	<0.50	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	<0.50	----
Vinyl chloride	75-01-4	E611D	0.2	µg/L	<0.20	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----
Hydrocarbons (QCLot: 2199634)						
F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	----
Hydrocarbons (QCLot: 2204975)						
F2 (C10-C16)	----	E601	100	µg/L	<100	----
F3 (C16-C34)	----	E601	250	µg/L	<250	----
F4 (C34-C50)	----	E601	250	µg/L	<250	----
Hydrocarbons (QCLot: 2205708)						
F2 (C10-C16)	----	E601	100	µg/L	<100	----
F3 (C16-C34)	----	E601	250	µg/L	<250	----
F4 (C34-C50)	----	E601	250	µg/L	<250	----
Polycyclic Aromatic Hydrocarbons (QCLot: 2204976)						
Acenaphthene	83-32-9	E641A-L	0.01	µg/L	<0.010	----
Acenaphthylene	208-96-8	E641A-L	0.01	µg/L	<0.010	----
Acridine	260-94-6	E641A-L	0.01	µg/L	<0.010	----
Anthracene	120-12-7	E641A-L	0.01	µg/L	<0.010	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	µg/L	<0.010	----
Benzo(a)pyrene	50-32-8	E641A-L	0.005	µg/L	<0.0050	----
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	µg/L	<0.010	----
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	µg/L	<0.010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 2204976) - continued						
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	µg/L	<0.010	----
Chrysene	218-01-9	E641A-L	0.01	µg/L	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	µg/L	<0.0050	----
Fluoranthene	206-44-0	E641A-L	0.01	µg/L	<0.010	----
Fluorene	86-73-7	E641A-L	0.01	µg/L	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	µg/L	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	µg/L	<0.010	----
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	µg/L	<0.010	----
Naphthalene	91-20-3	E641A-L	0.01	µg/L	<0.010	----
Perylene	198-55-0	E641A-L	0.01	µg/L	<0.010	----
Phenanthrene	85-01-8	E641A-L	0.01	µg/L	<0.010	----
Pyrene	129-00-0	E641A-L	0.01	µg/L	<0.010	----
Quinoline	91-22-5	E641A-L	0.01	µg/L	# 0.015	MB-LOR
Polycyclic Aromatic Hydrocarbons (QCLot: 2205709)						
Acenaphthene	83-32-9	E641A-L	0.01	µg/L	<0.010	----
Acenaphthylene	208-96-8	E641A-L	0.01	µg/L	<0.010	----
Acridine	260-94-6	E641A-L	0.01	µg/L	<0.010	----
Anthracene	120-12-7	E641A-L	0.01	µg/L	<0.010	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	µg/L	<0.010	----
Benzo(a)pyrene	50-32-8	E641A-L	0.005	µg/L	<0.0050	----
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	µg/L	<0.010	----
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	µg/L	<0.010	----
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	µg/L	<0.010	----
Chrysene	218-01-9	E641A-L	0.01	µg/L	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	µg/L	<0.0050	----
Fluoranthene	206-44-0	E641A-L	0.01	µg/L	<0.010	----
Fluorene	86-73-7	E641A-L	0.01	µg/L	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	µg/L	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	µg/L	<0.010	----
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	µg/L	<0.010	----
Naphthalene	91-20-3	E641A-L	0.01	µg/L	<0.010	----
Perylene	198-55-0	E641A-L	0.01	µg/L	<0.010	----
Phenanthrene	85-01-8	E641A-L	0.01	µg/L	<0.010	----
Pyrene	129-00-0	E641A-L	0.01	µg/L	<0.010	----
Quinoline	91-22-5	E641A-L	0.01	µg/L	<0.010	----

Qualifiers

Qualifier	Description
MB-LOR	Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.

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
Physical Tests (QCLot: 2191835)									
pH	----	E108	----	pH units	7 pH units	100	98.0	102	----
Physical Tests (QCLot: 2191836)									
Turbidity	----	E121	0.1	NTU	200 NTU	99.0	85.0	115	----
Physical Tests (QCLot: 2191849)									
Solids, total suspended [TSS]	----	E160-L	1	mg/L	250 mg/L	101	85.0	115	----
Physical Tests (QCLot: 2191850)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	850 mg/L	97.3	85.0	115	----
Physical Tests (QCLot: 2199621)									
Conductivity	----	E100	1	µS/cm	1410 µS/cm	103	90.0	110	----
Physical Tests (QCLot: 2199622)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	150 mg/L	98.7	85.0	115	----
Anions and Nutrients (QCLot: 2199624)									
Bromide	24959-67-9	E235.Br	0.1	mg/L	0.5 mg/L	96.8	85.0	115	----
Anions and Nutrients (QCLot: 2199625)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	105	90.0	110	----
Anions and Nutrients (QCLot: 2199626)									
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	2.5 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 2199627)									
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	0.5 mg/L	98.6	90.0	110	----
Anions and Nutrients (QCLot: 2199628)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	100.0	90.0	110	----
Anions and Nutrients (QCLot: 2199629)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 2201870)									
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	4 mg/L	99.8	75.0	125	----
Anions and Nutrients (QCLot: 2201871)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.333 mg/L	99.6	80.0	120	----
Anions and Nutrients (QCLot: 2201872)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	97.5	85.0	115	----
Anions and Nutrients (QCLot: 2203389)									
Phosphorus, total dissolved	7723-14-0	E375-T	0.002	mg/L	0.333 mg/L	105	80.0	120	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Organic / Inorganic Carbon (QCLot: 2202722)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	100	80.0	120	----
Dissolved Metals (QCLot: 2200849)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	0.1 mg/L	103	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	0.05 mg/L	102	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	0.05 mg/L	105	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.012 mg/L	104	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.005 mg/L	104	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	0.05 mg/L	101	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	0.05 mg/L	101	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.005 mg/L	102	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	2.5 mg/L	102	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.002 mg/L	109	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.012 mg/L	104	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.012 mg/L	102	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.012 mg/L	101	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	0.05 mg/L	104	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.025 mg/L	102	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.012 mg/L	102	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	2.5 mg/L	108	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.012 mg/L	101	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.012 mg/L	104	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.025 mg/L	102	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	0.5 mg/L	102	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	2.5 mg/L	98.5	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.005 mg/L	104	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	0.05 mg/L	101	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	0.5 mg/L	100	60.0	140	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.005 mg/L	106	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	2.5 mg/L	103	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.012 mg/L	103	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	2.5 mg/L	105	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.005 mg/L	98.4	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	0.05 mg/L	99.9	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.005 mg/L	98.0	80.0	120	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 2200849) - continued									
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.025 mg/L	100	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.012 mg/L	100	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.005 mg/L	101	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0 mg/L	102	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.025 mg/L	103	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.025 mg/L	102	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.005 mg/L	98.1	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	91.0	80.0	120	----
Volatile Organic Compounds (QCLot: 2199633)									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	127	70.0	130	----
Benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
Bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
Bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	76.2	60.0	140	----
Carbon disulfide	75-15-0	E611D	1	µg/L	100 µg/L	92.9	70.0	130	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	102	70.0	130	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Chloroethane	75-00-3	E611D	0.5	µg/L	100 µg/L	100	60.0	140	----
Chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Chloromethane	74-87-3	E611D	2	µg/L	100 µg/L	104	60.0	140	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	89.4	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	94.5	60.0	140	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	98.0	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	98.0	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	97.1	70.0	130	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 2199633) - continued									
Ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
Hexanone, 2-	591-78-6	E611D	20	µg/L	100 µg/L	91.4	70.0	130	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	116	70.0	130	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	91.5	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	98.3	70.0	130	----
Styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	99.6	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	96.5	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	97.8	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	92.5	70.0	130	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	101	60.0	140	----
Vinyl chloride	75-01-4	E611D	0.2	µg/L	100 µg/L	101	60.0	140	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	104	70.0	130	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	106	70.0	130	----
Hydrocarbons (QCLot: 2199634)									
F1 (C6-C10)	----	E581.F1-L	25	µg/L	2000 µg/L	97.7	80.0	120	----
Hydrocarbons (QCLot: 2204975)									
F2 (C10-C16)	----	E601	100	µg/L	3770 µg/L	110	70.0	130	----
F3 (C16-C34)	----	E601	250	µg/L	7760 µg/L	120	70.0	130	----
F4 (C34-C50)	----	E601	250	µg/L	4200 µg/L	109	70.0	130	----
Hydrocarbons (QCLot: 2205708)									
F2 (C10-C16)	----	E601	100	µg/L	3770 µg/L	97.8	70.0	130	----
F3 (C16-C34)	----	E601	250	µg/L	7760 µg/L	106	70.0	130	----
F4 (C34-C50)	----	E601	250	µg/L	4200 µg/L	113	70.0	130	----
Polycyclic Aromatic Hydrocarbons (QCLot: 2204976)									
Acenaphthene	83-32-9	E641A-L	0.01	µg/L	0.526 µg/L	96.8	50.0	140	----
Acenaphthylene	208-96-8	E641A-L	0.01	µg/L	0.526 µg/L	89.5	50.0	140	----
Acridine	260-94-6	E641A-L	0.01	µg/L	0.526 µg/L	109	50.0	140	----
Anthracene	120-12-7	E641A-L	0.01	µg/L	0.526 µg/L	86.4	50.0	140	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	µg/L	0.526 µg/L	106	50.0	140	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 2204976) - continued									
Benzo(a)pyrene	50-32-8	E641A-L	0.005	µg/L	0.526 µg/L	86.1	50.0	140	----
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	µg/L	0.526 µg/L	79.5	50.0	140	----
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	µg/L	0.526 µg/L	109	50.0	140	----
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	µg/L	0.526 µg/L	83.2	50.0	140	----
Chrysene	218-01-9	E641A-L	0.01	µg/L	0.526 µg/L	104	50.0	140	----
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	µg/L	0.526 µg/L	113	50.0	140	----
Fluoranthene	206-44-0	E641A-L	0.01	µg/L	0.526 µg/L	100	50.0	140	----
Fluorene	86-73-7	E641A-L	0.01	µg/L	0.526 µg/L	96.7	50.0	140	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	µg/L	0.526 µg/L	121	50.0	140	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	µg/L	0.526 µg/L	94.5	50.0	140	----
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	µg/L	0.526 µg/L	99.7	50.0	140	----
Naphthalene	91-20-3	E641A-L	0.01	µg/L	0.526 µg/L	94.8	50.0	140	----
Perylene	198-55-0	E641A-L	0.01	µg/L	0.526 µg/L	97.2	50.0	140	----
Phenanthrene	85-01-8	E641A-L	0.01	µg/L	0.526 µg/L	102	50.0	140	----
Pyrene	129-00-0	E641A-L	0.01	µg/L	0.526 µg/L	100	50.0	140	----
Quinoline	91-22-5	E641A-L	0.01	µg/L	0.526 µg/L	108	50.0	140	----
Polycyclic Aromatic Hydrocarbons (QCLot: 2205709)									
Acenaphthene	83-32-9	E641A-L	0.01	µg/L	0.526 µg/L	103	50.0	140	----
Acenaphthylene	208-96-8	E641A-L	0.01	µg/L	0.526 µg/L	95.5	50.0	140	----
Acridine	260-94-6	E641A-L	0.01	µg/L	0.526 µg/L	122	50.0	140	----
Anthracene	120-12-7	E641A-L	0.01	µg/L	0.526 µg/L	88.7	50.0	140	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	µg/L	0.526 µg/L	102	50.0	140	----
Benzo(a)pyrene	50-32-8	E641A-L	0.005	µg/L	0.526 µg/L	82.5	50.0	140	----
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	µg/L	0.526 µg/L	76.0	50.0	140	----
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	µg/L	0.526 µg/L	102	50.0	140	----
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	µg/L	0.526 µg/L	87.3	50.0	140	----
Chrysene	218-01-9	E641A-L	0.01	µg/L	0.526 µg/L	111	50.0	140	----
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	µg/L	0.526 µg/L	89.5	50.0	140	----
Fluoranthene	206-44-0	E641A-L	0.01	µg/L	0.526 µg/L	107	50.0	140	----
Fluorene	86-73-7	E641A-L	0.01	µg/L	0.526 µg/L	104	50.0	140	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	µg/L	0.526 µg/L	95.4	50.0	140	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	µg/L	0.526 µg/L	100	50.0	140	----
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	µg/L	0.526 µg/L	105	50.0	140	----
Naphthalene	91-20-3	E641A-L	0.01	µg/L	0.526 µg/L	100	50.0	140	----
Perylene	198-55-0	E641A-L	0.01	µg/L	0.526 µg/L	91.8	50.0	140	----
Phenanthrene	85-01-8	E641A-L	0.01	µg/L	0.526 µg/L	109	50.0	140	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 2205709) - continued									
Pyrene	129-00-0	E641A-L	0.01	µg/L	0.526 µg/L	107	50.0	140	----
Quinoline	91-22-5	E641A-L	0.01	µg/L	0.526 µg/L	107	50.0	140	----

Matrix Spike (MS) Report

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

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 2199624)										
BF2500306-001	Anonymous	Bromide	24959-67-9	E235.Br	0.48 mg/L	0.5 mg/L	95.5	75.0	125	----
Anions and Nutrients (QCLot: 2199625)										
BF2500306-001	Anonymous	Fluoride	16984-48-8	E235.F	0.907 mg/L	1 mg/L	90.7	75.0	125	----
Anions and Nutrients (QCLot: 2199626)										
BF2500306-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	2.43 mg/L	2.5 mg/L	97.1	75.0	125	----
Anions and Nutrients (QCLot: 2199627)										
BF2500306-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.469 mg/L	0.5 mg/L	93.8	75.0	125	----
Anions and Nutrients (QCLot: 2199628)										
BF2500306-001	Anonymous	Chloride	16887-00-6	E235.Cl	98.6 mg/L	100 mg/L	98.6	75.0	125	----
Anions and Nutrients (QCLot: 2199629)										
BF2500306-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	97.8 mg/L	100 mg/L	97.8	75.0	125	----
Anions and Nutrients (QCLot: 2201870)										
BF2500303-002	Anonymous	Kjeldahl nitrogen, total [TKN]	----	E318	2.62 mg/L	2.5 mg/L	105	70.0	130	----
Anions and Nutrients (QCLot: 2201871)										
BF2500303-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0965 mg/L	0.1 mg/L	96.5	70.0	130	----
Anions and Nutrients (QCLot: 2201872)										
BF2500304-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	ND mg/L	----	ND	75.0	125	----
Anions and Nutrients (QCLot: 2203389)										
BF2500299-001	Anonymous	Phosphorus, total dissolved	7723-14-0	E375-T	0.0939 mg/L	0.1 mg/L	93.9	70.0	130	----
Organic / Inorganic Carbon (QCLot: 2202722)										
BF2500298-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	4.72 mg/L	5 mg/L	94.3	70.0	130	----
Dissolved Metals (QCLot: 2200849)										
BF2500298-002	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.101 mg/L	0.1 mg/L	101	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0516 mg/L	0.05 mg/L	103	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0564 mg/L	0.05 mg/L	113	70.0	130	----
		Barium, dissolved	7440-39-3	E421	0.0127 mg/L	0.012 mg/L	101	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.00536 mg/L	0.005 mg/L	107	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.0439 mg/L	0.05 mg/L	87.9	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.050 mg/L	0.05 mg/L	101	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00535 mg/L	0.005 mg/L	107	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.00269 mg/L	0.002 mg/L	108	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0126 mg/L	0.012 mg/L	101	70.0	130	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 2200849) - continued										
BF2500298-002	Anonymous	Cobalt, dissolved	7440-48-4	E421	0.0124 mg/L	0.012 mg/L	99.0	70.0	130	----
		Copper, dissolved	7440-50-8	E421	0.0124 mg/L	0.012 mg/L	99.5	70.0	130	----
		Iron, dissolved	7439-89-6	E421	0.052 mg/L	0.05 mg/L	104	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0251 mg/L	0.025 mg/L	100	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.0128 mg/L	0.012 mg/L	102	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	ND mg/L	----	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	0.0123 mg/L	0.012 mg/L	98.4	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.0129 mg/L	0.012 mg/L	103	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0247 mg/L	0.025 mg/L	98.7	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	0.578 mg/L	0.5 mg/L	116	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	2.61 mg/L	2.5 mg/L	104	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.00526 mg/L	0.005 mg/L	105	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0616 mg/L	0.05 mg/L	123	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	ND mg/L	----	ND	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00507 mg/L	0.005 mg/L	101	70.0	130	----
		Sodium, dissolved	7440-23-5	E421	ND mg/L	----	ND	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	ND mg/L	----	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	2.65 mg/L	2.5 mg/L	106	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.00556 mg/L	0.005 mg/L	111	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.0492 mg/L	0.05 mg/L	98.5	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.00470 mg/L	0.005 mg/L	93.9	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0256 mg/L	0.025 mg/L	103	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0125 mg/L	0.012 mg/L	100.0	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.00496 mg/L	0.005 mg/L	99.3	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	ND mg/L	----	ND	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.0256 mg/L	0.025 mg/L	102	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.0272 mg/L	0.025 mg/L	109	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.00473 mg/L	0.005 mg/L	94.6	70.0	130	----
Dissolved Metals (QCLot: 2201321)										
BF2500303-002	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000899 mg/L	0 mg/L	89.9	70.0	130	----
Volatile Organic Compounds (QCLot: 2199633)										
BF2500303-001	Anonymous	Acetone	67-64-1	E611D	110 µg/L	100 µg/L	110	60.0	140	----
		Benzene	71-43-2	E611D	95.1 µg/L	100 µg/L	95.1	60.0	140	----
		Bromodichloromethane	75-27-4	E611D	86.9 µg/L	100 µg/L	86.9	60.0	140	----
		Bromoform	75-25-2	E611D	94.0 µg/L	100 µg/L	94.0	60.0	140	----
		Bromomethane	74-83-9	E611D	63.0 µg/L	100 µg/L	63.0	60.0	140	----
		Carbon disulfide	75-15-0	E611D	80.5 µg/L	100 µg/L	80.5	60.0	140	----
		Carbon tetrachloride	56-23-5	E611D	92.8 µg/L	100 µg/L	92.8	60.0	140	----
		Chlorobenzene	108-90-7	E611D	91.6 µg/L	100 µg/L	91.6	60.0	140	----
		Chloroethane	75-00-3	E611D	84.5 µg/L	100 µg/L	84.5	60.0	140	----
		Chloroform	67-66-3	E611D	89.6 µg/L	100 µg/L	89.6	60.0	140	----
		Chloromethane	74-87-3	E611D	82.7 µg/L	100 µg/L	82.7	60.0	140	----
		Dibromochloromethane	124-48-1	E611D	88.8 µg/L	100 µg/L	88.8	60.0	140	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 2199633) - continued										
BF2500303-001	Anonymous	Dibromoethane, 1,2-	106-93-4	E611D	74.6 µg/L	100 µg/L	74.6	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	94.1 µg/L	100 µg/L	94.1	60.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	96.1 µg/L	100 µg/L	96.1	60.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	96.7 µg/L	100 µg/L	96.7	60.0	140	----
		Dichlorodifluoromethane	75-71-8	E611D	72.2 µg/L	100 µg/L	72.2	60.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611D	88.9 µg/L	100 µg/L	88.9	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611D	84.0 µg/L	100 µg/L	84.0	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611D	90.6 µg/L	100 µg/L	90.6	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	89.0 µg/L	100 µg/L	89.0	60.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	91.6 µg/L	100 µg/L	91.6	60.0	140	----
		Dichloromethane	75-09-2	E611D	83.4 µg/L	100 µg/L	83.4	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611D	86.6 µg/L	100 µg/L	86.6	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	82.4 µg/L	100 µg/L	82.4	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	82.8 µg/L	100 µg/L	82.8	60.0	140	----
		Ethylbenzene	100-41-4	E611D	97.2 µg/L	100 µg/L	97.2	60.0	140	----
		Hexane, n-	110-54-3	E611D	90.3 µg/L	100 µg/L	90.3	60.0	140	----
		Hexanone, 2-	591-78-6	E611D	70 µg/L	100 µg/L	69.8	60.0	140	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	89 µg/L	100 µg/L	89.1	60.0	140	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	70 µg/L	100 µg/L	69.6	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	92.1 µg/L	100 µg/L	92.1	60.0	140	----
		Styrene	100-42-5	E611D	87.5 µg/L	100 µg/L	87.5	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	85.1 µg/L	100 µg/L	85.1	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	93.3 µg/L	100 µg/L	93.3	60.0	140	----
		Tetrachloroethylene	127-18-4	E611D	95.8 µg/L	100 µg/L	95.8	60.0	140	----
		Toluene	108-88-3	E611D	95.7 µg/L	100 µg/L	95.7	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	87.8 µg/L	100 µg/L	87.8	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	78.0 µg/L	100 µg/L	78.0	60.0	140	----
		Trichloroethylene	79-01-6	E611D	91.8 µg/L	100 µg/L	91.8	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611D	87.3 µg/L	100 µg/L	87.3	60.0	140	----
		Vinyl chloride	75-01-4	E611D	82.8 µg/L	100 µg/L	82.8	60.0	140	----
		Xylene, m+p-	179601-23-1	E611D	191 µg/L	200 µg/L	95.6	60.0	140	----
		Xylene, o-	95-47-6	E611D	95.8 µg/L	100 µg/L	95.8	60.0	140	----
Hydrocarbons (QCLot: 2199634)										
BF2500303-001	Anonymous	F1 (C6-C10)	----	E581.F1-L	1780 µg/L	2000 µg/L	88.8	60.0	140	----

Baffinland

Chain of Custody: 25 08 29_Landfill_Seep_Investigation

Client Info	Project Info	Laboratory Info	
Baffinland Iron Mine Corporation 2275 Upper Middle Rd E, Suite 300 Oakville, ON, L6H 0C3 **Phone:** 647-253-0596 x6016/6039/4131 **Email:** environment.coordinators@baffinland.com; environment.superintendents@baffinland.com	**Job Reference (Project):** Landfill_Seep_Investigation **Task:** , Landfill_Explore_MS_250829 **Site:** MS	**Lab Name:** ALS Waterloo **Contact:** Rick Hawthorne **Phone:** 519.886.6910 **Email:** Rick.Hawthorne@ALSGlobal.com	**Address:** Unit 1 - 60 Northland Road Waterloo, ON,N2V 2B8
Email Invoice: ap@baffinland.com; environment.superintendents@baffinland.com **Email EDD:** bim.equissa@baffinland.com **Email COA:** environment.labresults@baffinland.com	**Turn around Time:** Routine (R) **Sampler 1:** LG **Sampler 2:** AG **Sampler 3:**	**ALS Quote #:** WT2020BIMC1000001 **ALS PO #:** 4500156571	**Lab**

Environmental Division
Baffin Island
Work Order Reference
BF2500307

Telephone

Sample Details				Field Data			An:											
Sample ID (sys_sample_code)	**Location (sys_loc_code)**	**Sample Date and Time**	**Matrix**	**pH, Field (pH units)**	**Temperature, Field (deg C)**	**Total # of Containers**	**ALS_GW_Landfill**											
MS-MRY-13B_2025-08-29	MS-MRY-13B	8/29/2025 3:05:00 PM	WS	8.1	3.9	10	X											
MS-MRY-13C_2025-08-29	MS-MRY-13C	8/29/2025 3:30:00 PM	WS	7.74	1.8	10	X											
LF-DS-SEEP-01_2025-08-29	LF-DS-SEEP-01	8/29/2025 4:10:00 PM	WS	7.98	2	10	X											
LF-US-POND-01_2025-08-29	LF-US-POND-01	8/29/2025 4:55:00 PM	WS	7.75	1.5	10	X											

Relinquished by:	Bradley Rasmussen	**Date:**	
Additional Comments			
Initial Shipment Reception (lab use only)		**Final Shipment Reception** (lab use only)	
Received by:		**Received by:**	
Date/Time:		**Date/Time:**	4 Sep 25 9:00

JW-003 GC-740 1741
MM-428 N-181
OR-27

9.3°C

Chain of Custody: 25 08 29_Landfill_Seep_Investigation

Client Info	Project Info	Laboratory Info	
Baffinland Iron Mine Corporation 2275 Upper Middle Rd E, Suite 300 Oakville, ON, L6H 0C3 **Phone:** 647-253-0596 x6016/6039/4131 **Email:** environment.coordinators@baffinland.com; environment.superintendents@baffinland.com	**Job Reference (Project):** Landfill_Seep_Investigation **Task:** , Landfill_Explore_MS_250829 **Site:** MS	**Lab Name:** ALS Waterloo **Contact:** Rick Hawthorne **Phone:** 519.886.6910 **Email:** Rick.Hawthorne@ALSGlobal.com	**Address:** Unit 1 - 60 Northland Road Waterloo, ON,N2V 2B8
Email Invoice: ap@baffinland.com; environment.superintendents@baffinland.com **Email EDD:** bim.equissa@baffinland.com **Email COA:** environment.labresults@baffinland.com	**Turn around Time:** Routine (R) **Sampler 1:** LG **Sampler 2:** AG **Sampler 3:**	**ALS Quote #:** WT2020BIMC1000001 **ALS PO #:** 4500156571	**Lab Work Order #** (lab use only):

Sample Details				Field Data			Analysis Requested											
Sample ID (sys_sample_code)	**Location (sys_loc_code)**	**Sample Date and Time**	**Matrix**	**pH, Field (pH units)**	**Temperature, Field (deg C)**	**Total # of Containers**	**ALS_GW_Landfill**											
MS-MRY-13B_2025-08-29	**MS-MRY-13B**	**8/29/2025 3:05:00 PM**	**WS**	**8.1**	**3.9**	**10**	**X**											
MS-MRY-13C_2025-08-29	**MS-MRY-13C**	**8/29/2025 3:30:00 PM**	**WS**	**7.74**	**1.8**	**10**	**X**											
LF-DS-SEEP-01_2025-08-29	**LF-DS-SEEP-01**	**8/29/2025 4:10:00 PM**	**WS**	**7.98**	**2**	**10**	**X**											
LF-US-POND-01_2025-08-29	**LF-US-POND-01**	**8/29/2025 4:55:00 PM**	**WS**	**7.75**	**1.5**	**10**	**X**											

Relinquished by:	Bradley Rasmussen	**Date:**	
Additional Comments			
Initial Shipment Reception (lab use only)		**Final Shipment Reception** (lab use only)	
Received by:		**Received by:**	
Date/Time:		**Date/Time:**	

CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	:	**BF2500308**			
Client	:	**Baffinland Iron Mines Corporation**	Laboratory	:	ALS Environmental - Baffin Island
Contact	:	Environmental Lab Results	Account Manager	:	Rick Hawthorne
Address	:	360 Oakville Place Dr Suite 300 Oakville Ontario Canada L6H 6K8	Address	:	Mary River, Qikqtani Region Baffin Island NU Canada
Telephone	:	----	Telephone	:	
Project	:	HWB Groundwater	Date Samples Received	:	01-Sep-2025 17:25
PO	:	4500156571	Date Analysis Commenced	:	02-Sep-2025
C-O-C number	:	25 08 30_MS_HWB_GW	Issue Date	:	11-Sep-2025 09:45
Sampler	:	AG, JJ, LG			
Site	:	MS			
Quote number	:	2024-2025 Scope of Work			
No. of samples received	:	11			
No. of samples analysed	:	11			

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
- Guideline Comparison

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*
Amaninder Dhillon		Organics, Waterloo, Ontario
Cedrick Velasco		Inorganics, Baffin Island, Nunavut
Danielle Gravel		Organics, Waterloo, Ontario
David Tremblett		VOC, Waterloo, Ontario
Jeremy Gingras		Organics, Waterloo, Ontario
Rachel Cameron		Organics, Waterloo, Ontario
Walt Kippenhuck		Inorganics, Waterloo, Ontario
Walt Kippenhuck		Metals, Waterloo, Ontario

No Breaches Found

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.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key: LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units
µg/L	micrograms per litre
µS/cm	microsiemens per centimetre

>: greater than.
<: less than.

Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).
For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit.

Workorder Comments

E641 BF2500308-001 RRR: Detection limit raised due to high analyte recovery in the method blank.
E641 BF2500308-003 RRR: Detection limit raised due to high analyte recovery in the method blank.

Qualifiers

Qualifier	Description
DLDS	Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity.
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
RRR	Refer to report comments for issues regarding this analysis.
TKNI	TKN result may be biased low due to Nitrate interference. Nitrate -N is > 10x TKN.

Analytical Results Evaluation

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-HWB-GW-REF3_2025-08-30 ----	HWB-KP23-01_2025-08-30 ----	HWB-KP22-01_2025-08-30 ----	MS-HWB-GW5_2025-08-30 ----	HWB-KP22-03_2025-08-30 ----	HWB-KP23-02_2025-08-30 ----	QD-CC4_2025-08-30 ----
				Client sampling date / time	30-Aug-2025 09:25	30-Aug-2025 10:00	30-Aug-2025 10:50	30-Aug-2025 11:20	30-Aug-2025 12:20	30-Aug-2025 13:45	30-Aug-2025 13:45
				Sub-Matrix	Water	Water	Water	Water	Water	Water	Water
					BF2500308-001	BF2500308-002	BF2500308-003	BF2500308-004	BF2500308-005	BF2500308-006	BF2500308-007
					Result	Result	Result	Result	Result	Result	Result
Physical Tests											
Conductivity	----	E100/WT	µS/cm		3030	582	952	503	572	703	725
pH	----	E108/BF	pH units		7.25	7.38	6.94	7.38	7.25	7.08	7.02
Solids, total dissolved [TDS]	----	E162/BF	mg/L		2000	314	552	295	329	450	435
Solids, total suspended [TSS]	----	E160-L/BF	mg/L		4.2	3.4	14.2	10.7	<1.0	1.3	1.1
Turbidity	----	E121/BF	NTU		1.92	5.33	37.1	6.60	1.65	3.98	2.84
Alkalinity, total (as CaCO3)	----	E290/WT	mg/L		214	217	518	208	278	193	198
Anions and Nutrients											
Ammonia, total (as N)	7664-41-7	E298/WT	mg/L		0.264	0.940	1.55	0.319	0.959	0.319	0.304
Bromide	24959-67-9	E235.Br/WT	mg/L		6.24 DLDS	<0.10	<0.20 DLDS	<0.10	<0.10	<0.10	<0.10
Chloride	16887-00-6	E235.Cl/WT	mg/L		854 DLDS	39.0	18.9 DLDS	21.4	15.9	97.2	100
Fluoride	16984-48-8	E235.F/WT	mg/L		<0.100 DLDS	0.066	0.045 DLDS	<0.020	0.062	0.226	0.136
Kjeldahl nitrogen, total [TKN]	----	E318/WT	mg/L		0.542	1.61	2.24	0.975	1.69	0.686	0.682
Nitrate (as N)	14797-55-8	E235.NO3/WT	mg/L		0.597 DLDS	3.78	<0.040 DLDS	3.31	0.181	0.162	0.176
Nitrite (as N)	14797-65-0	E235.NO2/WT	mg/L		<0.050 DLDS	0.064	<0.020 DLDS	0.184	<0.010	0.017	0.019
Phosphorus, total	7723-14-0	E372-U/WT	mg/L		0.0096	0.0226	0.0974	0.0174	0.0412	0.0156	0.0153
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	mg/L		21.8 DLDS	19.9	8.56 DLDS	18.3	12.4	11.0	12.2
Dissolved Metals											
Aluminum, dissolved	7429-90-5	E421/WT	mg/L		<0.0100 DLHC	0.0049	0.0337 DLHC	0.0029	<0.0100 DLM	0.0098	0.0114
Antimony, dissolved	7440-36-0	E421/WT	mg/L		<0.00100 DLHC	<0.00010	<0.00100 DLHC	<0.00010	<0.00100 DLM	<0.00010	<0.00010

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-HWB-GW-REF3_2025-08-30 ----	HWB-KP23-01_2025-08-30 ----	HWB-KP22-01_2025-08-30 ----	MS-HWB-GW5_2025-08-30 ----	HWB-KP22-03_2025-08-30 ----	HWB-KP23-02_2025-08-30 ----	QD-CC4_2025-08-30 ----
				Client sampling date / time	30-Aug-2025 09:25	30-Aug-2025 10:00	30-Aug-2025 10:50	30-Aug-2025 11:20	30-Aug-2025 12:20	30-Aug-2025 13:45	30-Aug-2025 13:45
				Sub-Matrix	Water	Water	Water	Water	Water	Water	Water
					BF2500308-001	BF2500308-002	BF2500308-003	BF2500308-004	BF2500308-005	BF2500308-006	BF2500308-007
					Result	Result	Result	Result	Result	Result	Result
Dissolved Metals											
Arsenic, dissolved	7440-38-2	E421/WT	mg/L		<0.00100 DLHC	0.00028	0.00264 DLHC	0.00028	0.00240 DLM	0.00051	0.00060
Barium, dissolved	7440-39-3	E421/WT	mg/L		0.100 DLHC	0.0545	0.0859 DLHC	0.0395	0.0500 DLM	0.0880	0.0749
Beryllium, dissolved	7440-41-7	E421/WT	mg/L		<0.000200 DLHC	<0.000020	<0.000200 DLHC	<0.000020	<0.000200 DLM	<0.000020	<0.000020
Bismuth, dissolved	7440-69-9	E421/WT	mg/L		<0.000500 DLHC	<0.000050	<0.000500 DLHC	<0.000050	<0.000500 DLM	<0.000050	<0.000050
Boron, dissolved	7440-42-8	E421/WT	mg/L		<0.100 DLHC	0.030	<0.100 DLHC	0.024	<0.100 DLM	0.025	0.020
Cadmium, dissolved	7440-43-9	E421/WT	mg/L		0.0000670 DLHC	0.0000193	<0.0000500 DLHC	0.0000134	<0.0000500 DLM	0.0000163	0.0000119
Calcium, dissolved	7440-70-2	E421/WT	mg/L		197 DLHC	40.9	72.1 DLHC	33.4	36.1 DLM	70.5	58.8
Cesium, dissolved	7440-46-2	E421/WT	mg/L		<0.000100 DLHC	0.000014	<0.000100 DLHC	0.000014	<0.000100 DLM	<0.000010	<0.000010
Chromium, dissolved	7440-47-3	E421/WT	mg/L		<0.00500 DLHC	0.00084	0.00531 DLHC	0.00091	<0.00500 DLM	0.00150	0.00160
Cobalt, dissolved	7440-48-4	E421/WT	mg/L		<0.00100 DLHC	0.00086	0.00806 DLHC	0.00069	0.00246 DLM	0.00472	0.00442
Copper, dissolved	7440-50-8	E421/WT	mg/L		0.00274 DLHC	0.00409	<0.00200 DLHC	0.00351	<0.00200 DLM	0.00222	0.00213
Iron, dissolved	7439-89-6	E421/WT	mg/L		<0.100 DLHC	0.025	8.44 DLHC	<0.010	0.102 DLM	1.16	1.53
Lead, dissolved	7439-92-1	E421/WT	mg/L		<0.000500 DLHC	0.000078	0.000597 DLHC	0.000072	0.000560 DLM	<0.000050	<0.000050
Lithium, dissolved	7439-93-2	E421/WT	mg/L		0.0123 DLHC	0.0052	<0.0100 DLHC	0.0045	<0.0100 DLM	0.0260	0.0203
Magnesium, dissolved	7439-95-4	E421/WT	mg/L		217 DLHC	45.2	79.2 DLHC	43.9	49.8 DLM	49.8	45.1
Manganese, dissolved	7439-96-5	E421/WT	mg/L		0.216 DLHC	0.209	3.67 DLHC	0.0802	1.42 DLM	1.48	1.43
Mercury, dissolved	7439-97-6	E509/WT	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, dissolved	7439-98-7	E421/WT	mg/L		0.000540 DLHC	0.00144	0.00170 DLHC	0.000529	0.00905 DLM	0.00112	0.00123
Nickel, dissolved	7440-02-0	E421/WT	mg/L		0.0215 DLHC	0.0213	0.0366 DLHC	0.0178	0.0222 DLM	0.0466	0.0422

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-HWB-GW-REF3_2025-08-30 ----	HWB-KP23-01_2025-08-30 ----	HWB-KP22-01_2025-08-30 ----	MS-HWB-GW5_2025-08-30 ----	HWB-KP22-03_2025-08-30 ----	HWB-KP23-02_2025-08-30 ----	QD-CC4_2025-08-30 ----
				Client sampling date / time	30-Aug-2025 09:25	30-Aug-2025 10:00	30-Aug-2025 10:50	30-Aug-2025 11:20	30-Aug-2025 12:20	30-Aug-2025 13:45	30-Aug-2025 13:45
				Sub-Matrix	Water	Water	Water	Water	Water	Water	Water
					BF2500308-001	BF2500308-002	BF2500308-003	BF2500308-004	BF2500308-005	BF2500308-006	BF2500308-007
					Result	Result	Result	Result	Result	Result	Result
Dissolved Metals											
Phosphorus, dissolved	7723-14-0	E421/WT	mg/L		<0.500 DLHC	<0.050	<0.500 DLHC	<0.050	<0.500 DLM	<0.050	<0.050
Potassium, dissolved	7440-09-7	E421/WT	mg/L		9.82 DLHC	2.25	5.62 DLHC	1.49	4.40 DLM	4.37	3.86
Rubidium, dissolved	7440-17-7	E421/WT	mg/L		0.0132 DLHC	0.00480	0.00685 DLHC	0.00508	0.00329 DLM	0.00581	0.00537
Selenium, dissolved	7782-49-2	E421/WT	mg/L		<0.000500 DLHC	0.000093	<0.000500 DLHC	0.000100	<0.000500 DLM	0.000069	0.000062
Silicon, dissolved	7440-21-3	E421/WT	mg/L		5.74 DLHC	5.26	11.3 DLHC	5.04	5.29 DLM	7.00	6.93
Silver, dissolved	7440-22-4	E421/WT	mg/L		<0.000100 DLHC	<0.000010	<0.000100 DLHC	<0.000010	<0.000100 DLM	<0.000010	0.000010
Sodium, dissolved	7440-23-5	E421/WT	mg/L		15.7 DLHC	7.47	17.8 DLHC	4.60	16.1 DLM	8.64	7.09
Strontium, dissolved	7440-24-6	E421/WT	mg/L		0.349 DLHC	0.105	0.0531 DLHC	0.116	0.0281 DLM	0.554	0.450
Sulfur, dissolved	7704-34-9	E421/WT	mg/L		8.75 DLHC	7.64	<5.00 DLHC	6.92	5.12 DLM	5.66	4.81
Tellurium, dissolved	13494-80-9	E421/WT	mg/L		<0.00200 DLHC	<0.00020	<0.00200 DLHC	<0.00020	<0.00200 DLM	<0.00020	<0.00020
Thallium, dissolved	7440-28-0	E421/WT	mg/L		<0.000100 DLHC	0.000014	<0.000100 DLHC	0.000016	<0.000100 DLM	0.000018	0.000014
Thorium, dissolved	7440-29-1	E421/WT	mg/L		<0.00100 DLHC	<0.00010	<0.00100 DLHC	<0.00010	<0.00100 DLM	<0.00010	0.00010
Tin, dissolved	7440-31-5	E421/WT	mg/L		<0.00100 DLHC	<0.00010	<0.00100 DLHC	<0.00010	<0.00100 DLM	<0.00010	<0.00010
Titanium, dissolved	7440-32-6	E421/WT	mg/L		<0.00300 DLHC	<0.00030	<0.00300 DLHC	<0.00030	<0.00300 DLM	<0.00030	<0.00030
Tungsten, dissolved	7440-33-7	E421/WT	mg/L		<0.00100 DLHC	<0.00010	<0.00100 DLHC	<0.00010	<0.00100 DLM	<0.00010	<0.00010
Uranium, dissolved	7440-61-1	E421/WT	mg/L		0.00585 DLHC	0.00184	0.00244 DLHC	0.00115	0.00458 DLM	0.00323	0.00269
Vanadium, dissolved	7440-62-2	E421/WT	mg/L		<0.00500 DLHC	<0.00050	<0.00500 DLHC	<0.00050	<0.00500 DLM	<0.00050	<0.00050
Zinc, dissolved	7440-66-6	E421/WT	mg/L		<0.0100 DLHC	0.0013	<0.0100 DLHC	<0.0010	<0.0100 DLM	<0.0010	<0.0010
Zirconium, dissolved	7440-67-7	E421/WT	mg/L		<0.00300 DLHC	0.00054	<0.00300 DLHC	0.00057	<0.00300 DLM	0.00092	0.00089

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-HWB-GW-REF3_2025-08-30 ----	HWB-KP23-01_2025-08-30 ----	HWB-KP22-01_2025-08-30 ----	MS-HWB-GW5_2025-08-30 ----	HWB-KP22-03_2025-08-30 ----	HWB-KP23-02_2025-08-30 ----	QD-CC4_2025-08-30 ----
				Client sampling date / time	30-Aug-2025 09:25	30-Aug-2025 10:00	30-Aug-2025 10:50	30-Aug-2025 11:20	30-Aug-2025 12:20	30-Aug-2025 13:45	30-Aug-2025 13:45
				Sub-Matrix	Water	Water	Water	Water	Water	Water	Water
					BF2500308-001	BF2500308-002	BF2500308-003	BF2500308-004	BF2500308-005	BF2500308-006	BF2500308-007
					Result	Result	Result	Result	Result	Result	Result
Dissolved Metals											
Dissolved mercury filtration location	----	EP509/WT	-		Field	Field	Field	Field	Field	Field	Field
Dissolved metals filtration location	----	EP421/WT	-		Field	Field	Field	Field	Field	Field	Field
Aggregate Organics											
Oil & grease (gravimetric)	----	E567/WT	mg/L		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Volatile Organic Compounds											
Acetone	67-64-1	E611D/WT	µg/L		<20	<20	35	<20	<20	<20	<20
Benzene	71-43-2	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	0.50	0.51
Bromodichloromethane	75-27-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromoform	75-25-2	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromomethane	74-83-9	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
BTEX, total	----	E611D/WT	µg/L		<1.0	3.5	48.4	<1.0	<1.0	85.3	73.2
Carbon disulfide	75-15-0	E611D/WT	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Carbon tetrachloride	56-23-5	E611D/WT	µg/L		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chlorobenzene	108-90-7	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloroethane	75-00-3	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloroform	67-66-3	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloromethane	74-87-3	E611D/WT	µg/L		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dibromochloromethane	124-48-1	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dibromoethane, 1,2-	106-93-4	E611D/WT	µg/L		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-HWB-GW-REF3_2025-08-30 ----	HWB-KP23-01_2025-08-30 ----	HWB-KP22-01_2025-08-30 ----	MS-HWB-GW5_2025-08-30 ----	HWB-KP22-03_2025-08-30 ----	HWB-KP23-02_2025-08-30 ----	QD-CC4_2025-08-30 ----
				Client sampling date / time	30-Aug-2025 09:25	30-Aug-2025 10:00	30-Aug-2025 10:50	30-Aug-2025 11:20	30-Aug-2025 12:20	30-Aug-2025 13:45	30-Aug-2025 13:45
				Sub-Matrix	Water	Water	Water	Water	Water	Water	Water
					BF2500308-001	BF2500308-002	BF2500308-003	BF2500308-004	BF2500308-005	BF2500308-006	BF2500308-007
					Result	Result	Result	Result	Result	Result	Result
Volatile Organic Compounds											
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorodifluoromethane	75-71-8	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethane, 1,1-	75-34-3	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethane, 1,2-	107-06-2	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethylene, 1,1-	75-35-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	3.22	<0.50	<0.50
Dichloroethylene, cis+trans-1,2-	540-59-0	E611D/WT	µg/L		<0.71	<0.71	<0.71	<0.71	3.22	<0.71	<0.71
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichloromethane	75-09-2	E611D/WT	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichloropropane, 1,2-	78-87-5	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	µg/L		<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	µg/L		<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Ethylbenzene	100-41-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	6.05	5.45
Hexane, n-	110-54-3	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Hexanone, 2-	591-78-6	E611D/WT	µg/L		<20	<20	<20	<20	<20	<20	<20
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	µg/L		<20	<20	<20	<20	<20	<20	<20
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	µg/L		<20	<20	<20	<20	<20	<20	<20

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-HWB-GW-REF3_2025-08-30 ----	HWB-KP23-01_2025-08-30 ----	HWB-KP22-01_2025-08-30 ----	MS-HWB-GW5_2025-08-30 ----	HWB-KP22-03_2025-08-30 ----	HWB-KP23-02_2025-08-30 ----	QD-CC4_2025-08-30 ----
				Client sampling date / time	30-Aug-2025 09:25	30-Aug-2025 10:00	30-Aug-2025 10:50	30-Aug-2025 11:20	30-Aug-2025 12:20	30-Aug-2025 13:45	30-Aug-2025 13:45
				Sub-Matrix	Water	Water	Water	Water	Water	Water	Water
					BF2500308-001	BF2500308-002	BF2500308-003	BF2500308-004	BF2500308-005	BF2500308-006	BF2500308-007
					Result	Result	Result	Result	Result	Result	Result
Volatile Organic Compounds											
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Styrene	100-42-5	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethylene	127-18-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	0.69	0.57	<0.50	<0.50
Toluene	108-88-3	E611D/WT	µg/L		<0.50	<0.50	48.4	<0.50	<0.50	0.58	<0.50
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethylene	79-01-6	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trichlorofluoromethane	75-69-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trihalomethanes [THMs], total	----	E611D/WT	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl chloride	75-01-4	E611D/WT	µg/L		<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Xylene, m+p-	179601-23-1	E611D/WT	µg/L		<0.40	<0.40	<0.40	<0.40	<0.40	21.9	16.7
Xylene, o-	95-47-6	E611D/WT	µg/L		<0.30	3.52	<0.30	<0.30	0.86	56.3	50.5
Xylenes, total	1330-20-7	E611D/WT	µg/L		<0.50	3.52	<0.50	<0.50	0.86	78.2	67.2
Hydrocarbons											
F1 (C6-C10)	----	E581.F1-L/WT	µg/L		<25	<25	31	<25	<25	157	152
F2 (C10-C16)	----	E601/WT	µg/L		<100	140	<100	100	860	440	400
F3 (C16-C34)	----	E601/WT	µg/L		<250	<250	<250	<250	560	<250	<250
F4 (C34-C50)	----	E601/WT	µg/L		<250	<250	<250	<250	<250	<250	<250

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-HWB-GW-REF3_2025-08-30 ----	HWB-KP23-01_2025-08-30 ----	HWB-KP22-01_2025-08-30 ----	MS-HWB-GW5_2025-08-30 ----	HWB-KP22-03_2025-08-30 ----	HWB-KP23-02_2025-08-30 ----	QD-CC4_2025-08-30 ----
				Client sampling date / time	30-Aug-2025 09:25	30-Aug-2025 10:00	30-Aug-2025 10:50	30-Aug-2025 11:20	30-Aug-2025 12:20	30-Aug-2025 13:45	30-Aug-2025 13:45
				Sub-Matrix	Water	Water	Water	Water	Water	Water	Water
					BF2500308-001	BF2500308-002	BF2500308-003	BF2500308-004	BF2500308-005	BF2500308-006	BF2500308-007
					Result	Result	Result	Result	Result	Result	Result
Hydrocarbons											
F1-BTEX	----	EC580/WT	µg/L		<25	<25	<25	<25	<25	72	79
Hydrocarbons, total (C6-C50)	n/a	EC581/WT	µg/L		<370	<370	<370	<370	1420	600	550
Hydrocarbons Surrogates											
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/WT	%		91.0	97.4	92.6	95.9	101	100	100
Dichlorotoluene, 3,4-	95-75-0	E581.F1-L/WT	%		71.0	71.4	68.0	81.0	73.3	69.1	76.7
Volatile Organic Compounds Surrogates											
Bromofluorobenzene, 4-	460-00-4	E611D/WT	%		88.7	88.5	88.5	88.9	88.8	93.7	94.3
Difluorobenzene, 1,4-	540-36-3	E611D/WT	%		97.6	97.4	97.0	97.2	97.4	97.5	97.2
Polycyclic Aromatic Hydrocarbons											
Acenaphthene	83-32-9	E641A-L/WT	µg/L		<0.010	<0.053 DLM	<0.010	<0.059 DLM	<0.281 DLM	<0.089 DLM	<0.084 DLM
Acenaphthylene	208-96-8	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	<0.084 DLM	<0.025 DLM	<0.024 DLM
Acridine	260-94-6	E641A-L/WT	µg/L		<0.010	<0.033 DLM	<0.010	<0.035 DLM	<0.054 DLM	<0.013 DLM	<0.013 DLM
Anthracene	120-12-7	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	<0.042 DLM	<0.010	<0.010
Benz(a)anthracene	56-55-3	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	<0.042 DLM	<0.010	<0.010
Benzo(a)pyrene	50-32-8	E641A-L/WT	µg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(b+j)fluoranthene	n/a	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b+j+k)fluoranthene	n/a	E641A-L/WT	µg/L		<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Benzo(g,h,i)perylene	191-24-2	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(k)fluoranthene	207-08-9	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-HWB-GW-REF3_2025-08-30 ----	HWB-KP23-01_2025-08-30 ----	HWB-KP22-01_2025-08-30 ----	MS-HWB-GW5_2025-08-30 ----	HWB-KP22-03_2025-08-30 ----	HWB-KP23-02_2025-08-30 ----	QD-CC4_2025-08-30 ----
				Client sampling date / time	30-Aug-2025 09:25	30-Aug-2025 10:00	30-Aug-2025 10:50	30-Aug-2025 11:20	30-Aug-2025 12:20	30-Aug-2025 13:45	30-Aug-2025 13:45
				Sub-Matrix	Water	Water	Water	Water	Water	Water	Water
					BF2500308-001	BF2500308-002	BF2500308-003	BF2500308-004	BF2500308-005	BF2500308-006	BF2500308-007
					Result	Result	Result	Result	Result	Result	Result
Polycyclic Aromatic Hydrocarbons											
Chrysene	218-01-9	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Dibenz(a,h)anthracene	53-70-3	E641A-L/WT	µg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	206-44-0	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	<0.042 DLM	<0.010	<0.010
Fluorene	86-73-7	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.011 DLM	<0.042 DLM	0.132	0.122
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Methylnaphthalene, 1-	90-12-0	E641A-L/WT	µg/L		0.146	0.178	<0.010	0.051	0.883	7.44	6.35
Methylnaphthalene, 1+2-	----	E641A-L/WT	µg/L		0.170	0.324	<0.015	0.088	1.30	17.1	14.1
Methylnaphthalene, 2-	91-57-6	E641A-L/WT	µg/L		0.024	0.146	<0.010	0.037	0.422	9.63	7.76
Naphthalene	91-20-3	E641A-L/WT	µg/L		<0.010	<0.114 DLM	<0.010	<0.011 DLM	<0.191 DLM	13.6	13.0
Perylene	198-55-0	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Phenanthrene	85-01-8	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	<0.042 DLM	0.025	0.029
Pyrene	129-00-0	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	<0.042 DLM	<0.010	<0.010
Quinoline	91-22-5	E641A-L/WT	µg/L		<0.036 DLM, RRR	<0.104 DLM	<0.019 DLM, RRR	<0.435 DLM	<2.65 DLM	<0.838 DLM	<0.767 DLM
B(a)P total potency equivalents [B(a)P TPE]	----	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Polycyclic Aromatic Hydrocarbons Surrogates											
Chrysene-d12	1719-03-5	E641A-L/WT	%		99.9	109	102	102	96.4	101	101
Naphthalene-d8	1146-65-2	E641A-L/WT	%		105	108	108	112	106	103	102
Phenanthrene-d10	1517-22-2	E641A-L/WT	%		100	111	107	112	86.8	92.3	95.8

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

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	HWB-KP22-04_2025-08-30 ----	HWB-KP23-03_2025-08-30 ----	MS-HWB-GW-REF1_2025-08-30 ----	HWB-KP22-05_2025-08-30 ----	----	----	----
				Client sampling date / time	30-Aug-2025 14:55	30-Aug-2025 15:30	30-Aug-2025 16:45	30-Aug-2025 17:00	----	----	----
				Sub-Matrix	Water	Water	Water	Water	----	----	----
					BF2500308-008	BF2500308-009	BF2500308-010	BF2500308-011	----	----	----
					Result	Result	Result	Result	----	----	----
Physical Tests											
Conductivity	----	E100/WT	µS/cm		498	671	679	1880	----	----	----
pH	----	E108/BF	pH units		7.47	7.07	7.61	6.90	----	----	----
Solids, total dissolved [TDS]	----	E162/BF	mg/L		279	404	404	1230	----	----	----
Solids, total suspended [TSS]	----	E160-L/BF	mg/L		<1.0	5.5	24.5	6.0	----	----	----
Turbidity	----	E121/BF	NTU		1.08	3.55	17.5	24.6	----	----	----
Alkalinity, total (as CaCO3)	----	E290/WT	mg/L		242	278	174	197	----	----	----
Anions and Nutrients											
Ammonia, total (as N)	7664-41-7	E298/WT	mg/L		0.211	0.380	<0.0050	0.410	----	----	----
Bromide	24959-67-9	E235.Br/WT	mg/L		<0.10	<0.10	0.19	4.68 DLDS	----	----	----
Chloride	16887-00-6	E235.Cl/WT	mg/L		4.44	40.5	78.4	484 DLDS	----	----	----
Fluoride	16984-48-8	E235.F/WT	mg/L		0.092	0.085	0.025	<0.100 DLDS	----	----	----
Kjeldahl nitrogen, total [TKN]	----	E318/WT	mg/L		0.997	0.866	0.315 TKNI	0.782	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3/WT	mg/L		3.36	<0.020	4.79	<0.100 DLDS	----	----	----
Nitrite (as N)	14797-65-0	E235.NO2/WT	mg/L		0.487	<0.010	<0.010	<0.050 DLDS	----	----	----
Phosphorus, total	7723-14-0	E372-U/WT	mg/L		0.0166	0.0282	0.0083	0.0269	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	mg/L		8.85	10.9	29.3	9.42 DLDS	----	----	----
Dissolved Metals											
Aluminum, dissolved	7429-90-5	E421/WT	mg/L		0.0032	0.0140	0.0013	<0.0100 DLHC	----	----	----
Antimony, dissolved	7440-36-0	E421/WT	mg/L		<0.00010	<0.00010	<0.00010	<0.00100 DLHC	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	HWB-KP22-04_2025-08-30 ----	HWB-KP23-03_2025-08-30 ----	MS-HWB-GW-REF1_2025-08-30 ----	HWB-KP22-05_2025-08-30 ----	----	----	----
				Client sampling date / time	30-Aug-2025 14:55	30-Aug-2025 15:30	30-Aug-2025 16:45	30-Aug-2025 17:00	----	----	----
				Sub-Matrix	Water	Water	Water	Water	----	----	----
					BF2500308-008	BF2500308-009	BF2500308-010	BF2500308-011	----	----	----
					Result	Result	Result	Result	----	----	----
Dissolved Metals											
Arsenic, dissolved	7440-38-2	E421/WT	mg/L		0.00294	0.00111	<0.00010	0.00198 DLHC	----	----	----
Barium, dissolved	7440-39-3	E421/WT	mg/L		0.0301	0.0811	0.0440	0.207 DLHC	----	----	----
Beryllium, dissolved	7440-41-7	E421/WT	mg/L		<0.000020	<0.000020	<0.000020	<0.000200 DLHC	----	----	----
Bismuth, dissolved	7440-69-9	E421/WT	mg/L		<0.000050	<0.000050	<0.000050	<0.000500 DLHC	----	----	----
Boron, dissolved	7440-42-8	E421/WT	mg/L		<0.010	0.043	0.019	<0.100 DLHC	----	----	----
Cadmium, dissolved	7440-43-9	E421/WT	mg/L		0.0000149	0.0000126	0.0000054	<0.0000500 DLHC	----	----	----
Calcium, dissolved	7440-70-2	E421/WT	mg/L		29.3	72.9	63.0	177 DLHC	----	----	----
Cesium, dissolved	7440-46-2	E421/WT	mg/L		0.000010	<0.000010	<0.000010	<0.000100 DLHC	----	----	----
Chromium, dissolved	7440-47-3	E421/WT	mg/L		0.00070	0.00228	0.00084	<0.00500 DLHC	----	----	----
Cobalt, dissolved	7440-48-4	E421/WT	mg/L		0.00147	0.00372	<0.00010	0.0121 DLHC	----	----	----
Copper, dissolved	7440-50-8	E421/WT	mg/L		0.00168	0.00147	0.00228	<0.00200 DLHC	----	----	----
Iron, dissolved	7439-89-6	E421/WT	mg/L		<0.010	1.01	<0.010	2.51 DLHC	----	----	----
Lead, dissolved	7439-92-1	E421/WT	mg/L		0.000059	0.000494	<0.000050	<0.000500 DLHC	----	----	----
Lithium, dissolved	7439-93-2	E421/WT	mg/L		0.0026	0.0182	0.0075	0.0663 DLHC	----	----	----
Magnesium, dissolved	7439-95-4	E421/WT	mg/L		43.5	35.8	32.2	99.9 DLHC	----	----	----
Manganese, dissolved	7439-96-5	E421/WT	mg/L		0.473	1.60	0.00259	4.58 DLHC	----	----	----
Mercury, dissolved	7439-97-6	E509/WT	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	----	----	----
Molybdenum, dissolved	7439-98-7	E421/WT	mg/L		0.00148	0.00149	0.000741	0.00108 DLHC	----	----	----
Nickel, dissolved	7440-02-0	E421/WT	mg/L		0.0202	0.0372	0.00508	0.0443 DLHC	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	HWB-KP22-04_2025-08-30 ----	HWB-KP23-03_2025-08-30 ----	MS-HWB-GW-REF1_2025-08-30 ----	HWB-KP22-05_2025-08-30 ----	----	----	----
				Client sampling date / time	30-Aug-2025 14:55	30-Aug-2025 15:30	30-Aug-2025 16:45	30-Aug-2025 17:00	----	----	----
				Sub-Matrix	Water	Water	Water	Water	----	----	----
					BF2500308-008	BF2500308-009	BF2500308-010	BF2500308-011	----	----	----
					Result	Result	Result	Result	----	----	----
Dissolved Metals											
Phosphorus, dissolved	7723-14-0	E421/WT	mg/L		<0.050	<0.050	<0.050	<0.500 DLHC	----	----	----
Potassium, dissolved	7440-09-7	E421/WT	mg/L		2.86	6.35	3.04	5.96 DLHC	----	----	----
Rubidium, dissolved	7440-17-7	E421/WT	mg/L		0.00440	0.00383	0.00723	0.0140 DLHC	----	----	----
Selenium, dissolved	7782-49-2	E421/WT	mg/L		0.000069	0.000073	0.000076	<0.000500 DLHC	----	----	----
Silicon, dissolved	7440-21-3	E421/WT	mg/L		5.30	8.11	4.26	7.41 DLHC	----	----	----
Silver, dissolved	7440-22-4	E421/WT	mg/L		<0.000010	<0.000010	<0.000010	<0.000100 DLHC	----	----	----
Sodium, dissolved	7440-23-5	E421/WT	mg/L		2.65	6.83	16.2	11.7 DLHC	----	----	----
Strontium, dissolved	7440-24-6	E421/WT	mg/L		0.0268	0.818	0.166	0.580 DLHC	----	----	----
Sulfur, dissolved	7704-34-9	E421/WT	mg/L		3.23	3.85	10.9	<5.00 DLHC	----	----	----
Tellurium, dissolved	13494-80-9	E421/WT	mg/L		<0.00020	<0.00020	<0.00020	<0.00200 DLHC	----	----	----
Thallium, dissolved	7440-28-0	E421/WT	mg/L		0.000030	<0.000010	0.000015	<0.000100 DLHC	----	----	----
Thorium, dissolved	7440-29-1	E421/WT	mg/L		<0.00010	<0.00010	<0.00010	<0.00100 DLHC	----	----	----
Tin, dissolved	7440-31-5	E421/WT	mg/L		<0.00010	<0.00010	<0.00010	<0.00100 DLHC	----	----	----
Titanium, dissolved	7440-32-6	E421/WT	mg/L		<0.00030	0.00036	<0.00030	<0.00300 DLHC	----	----	----
Tungsten, dissolved	7440-33-7	E421/WT	mg/L		<0.00010	<0.00010	<0.00010	<0.00100 DLHC	----	----	----
Uranium, dissolved	7440-61-1	E421/WT	mg/L		0.00301	0.00458	0.00285	0.00464 DLHC	----	----	----
Vanadium, dissolved	7440-62-2	E421/WT	mg/L		<0.00050	0.00097	<0.00050	<0.00500 DLHC	----	----	----
Zinc, dissolved	7440-66-6	E421/WT	mg/L		<0.0010	<0.0010	<0.0010	<0.0100 DLHC	----	----	----
Zirconium, dissolved	7440-67-7	E421/WT	mg/L		0.00047	0.00157	0.00046	<0.00300 DLHC	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	HWB-KP22-04_2025-08-30 ----	HWB-KP23-03_2025-08-30 ----	MS-HWB-GW-REF1_2025-08-30 ----	HWB-KP22-05_2025-08-30 ----	----	----	----
				Client sampling date / time	30-Aug-2025 14:55	30-Aug-2025 15:30	30-Aug-2025 16:45	30-Aug-2025 17:00	----	----	----
				Sub-Matrix	Water	Water	Water	Water	----	----	----
					BF2500308-008	BF2500308-009	BF2500308-010	BF2500308-011	----	----	----
					Result	Result	Result	Result	----	----	----
Dissolved Metals											
Dissolved mercury filtration location	----	EP509/WT	-		Field	Field	Field	Field	----	----	----
Dissolved metals filtration location	----	EP421/WT	-		Field	Field	Field	Field	----	----	----
Aggregate Organics											
Oil & grease (gravimetric)	----	E567/WT	mg/L		<5.0	<5.0	<5.0	<5.0	----	----	----
Volatile Organic Compounds											
Acetone	67-64-1	E611D/WT	µg/L		<20	<20	<20	<20	----	----	----
Benzene	71-43-2	E611D/WT	µg/L		<0.50	2.94	<0.50	0.82	----	----	----
Bromodichloromethane	75-27-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Bromoform	75-25-2	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Bromomethane	74-83-9	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
BTEX, total	----	E611D/WT	µg/L		3.0	80.9	<1.0	4.3	----	----	----
Carbon disulfide	75-15-0	E611D/WT	µg/L		<1.0	<1.0	<1.0	<1.0	----	----	----
Carbon tetrachloride	56-23-5	E611D/WT	µg/L		<0.20	<0.20	<0.20	<0.20	----	----	----
Chlorobenzene	108-90-7	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Chloroethane	75-00-3	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Chloroform	67-66-3	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Chloromethane	74-87-3	E611D/WT	µg/L		<2.0	<2.0	<2.0	<2.0	----	----	----
Dibromochloromethane	124-48-1	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Dibromoethane, 1,2-	106-93-4	E611D/WT	µg/L		<0.20	<0.20	<0.20	<0.20	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	HWB-KP22-04_2025-08-30 ----	HWB-KP23-03_2025-08-30 ----	MS-HWB-GW-REF1_2025-08-30 ----	HWB-KP22-05_2025-08-30 ----	----	----	----
				Client sampling date / time	30-Aug-2025 14:55	30-Aug-2025 15:30	30-Aug-2025 16:45	30-Aug-2025 17:00	----	----	----
				Sub-Matrix	Water	Water	Water	Water	----	----	----
					BF2500308-008	BF2500308-009	BF2500308-010	BF2500308-011	----	----	----
					Result	Result	Result	Result	----	----	----
Volatile Organic Compounds											
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Dichlorodifluoromethane	75-71-8	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Dichloroethane, 1,1-	75-34-3	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Dichloroethane, 1,2-	107-06-2	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Dichloroethylene, 1,1-	75-35-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Dichloroethylene, cis+trans-1,2-	540-59-0	E611D/WT	µg/L		<0.71	<0.71	<0.71	<0.71	----	----	----
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Dichloromethane	75-09-2	E611D/WT	µg/L		<1.0	<1.0	<1.0	<1.0	----	----	----
Dichloropropane, 1,2-	78-87-5	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	µg/L		<0.30	<0.30	<0.30	<0.30	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	µg/L		<0.5	<0.5	<0.5	<0.5	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	µg/L		<0.30	<0.30	<0.30	<0.30	----	----	----
Ethylbenzene	100-41-4	E611D/WT	µg/L		<0.50	4.40	<0.50	<0.50	----	----	----
Hexane, n-	110-54-3	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Hexanone, 2-	591-78-6	E611D/WT	µg/L		<20	<20	<20	<20	----	----	----
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	µg/L		<20	<20	<20	<20	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	HWB-KP22-04_2025-08-30 ----	HWB-KP23-03_2025-08-30 ----	MS-HWB-GW-REF1_2025-08-30 ----	HWB-KP22-05_2025-08-30 ----	----	----	----
				Client sampling date / time	30-Aug-2025 14:55	30-Aug-2025 15:30	30-Aug-2025 16:45	30-Aug-2025 17:00	----	----	----
				Sub-Matrix	Water	Water	Water	Water	----	----	----
					BF2500308-008	BF2500308-009	BF2500308-010	BF2500308-011	----	----	----
					Result	Result	Result	Result	----	----	----
Volatile Organic Compounds											
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	µg/L		<20	<20	<20	<20	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Styrene	100-42-5	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Tetrachloroethylene	127-18-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Toluene	108-88-3	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Trichloroethylene	79-01-6	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Trichlorofluoromethane	75-69-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	<0.50	----	----	----
Trihalomethanes [THMs], total	----	E611D/WT	µg/L		<1.0	<1.0	<1.0	<1.0	----	----	----
Vinyl chloride	75-01-4	E611D/WT	µg/L		<0.20	<0.20	<0.20	<0.20	----	----	----
Xylene, m+p-	179601-23-1	E611D/WT	µg/L		<0.40	18.1	<0.40	<0.40	----	----	----
Xylene, o-	95-47-6	E611D/WT	µg/L		2.96	55.5	<0.30	3.45	----	----	----
Xylenes, total	1330-20-7	E611D/WT	µg/L		2.96	73.6	<0.50	3.45	----	----	----
Hydrocarbons											
F1 (C6-C10)	----	E581.F1-L/WT	µg/L		<25	408	<25	26	----	----	----
F2 (C10-C16)	----	E601/WT	µg/L		140	810	<100	210	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	HWB-KP22-04_2025-08-30 ----	HWB-KP23-03_2025-08-30 ----	MS-HWB-GW-REF1_2025-08-30 ----	HWB-KP22-05_2025-08-30 ----	----	----	----
				Client sampling date / time	30-Aug-2025 14:55	30-Aug-2025 15:30	30-Aug-2025 16:45	30-Aug-2025 17:00	----	----	----
				Sub-Matrix	Water	Water	Water	Water	----	----	----
					BF2500308-008	BF2500308-009	BF2500308-010	BF2500308-011	----	----	----
					Result	Result	Result	Result	----	----	----
Hydrocarbons											
F3 (C16-C34)	----	E601/WT	µg/L		<250	<250	<250	<250	----	----	----
F4 (C34-C50)	----	E601/WT	µg/L		<250	<250	<250	<250	----	----	----
F1-BTEX	----	EC580/WT	µg/L		<25	327	<25	<25	----	----	----
Hydrocarbons, total (C6-C50)	n/a	EC581/WT	µg/L		<370	1220	<370	<370	----	----	----
Hydrocarbons Surrogates											
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/WT	%		93.8	101	93.5	97.5	----	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.F1-L/WT	%		77.8	73.0	73.9	85.1	----	----	----
Volatile Organic Compounds Surrogates											
Bromofluorobenzene, 4-	460-00-4	E611D/WT	%		90.3	96.8	89.7	93.1	----	----	----
Difluorobenzene, 1,4-	540-36-3	E611D/WT	%		96.7	97.4	96.8	98.0	----	----	----
Polycyclic Aromatic Hydrocarbons											
Acenaphthene	83-32-9	E641A-L/WT	µg/L		<0.010	<0.112 DLM	<0.010	<0.020 DLM	----	----	----
Acenaphthylene	208-96-8	E641A-L/WT	µg/L		<0.010	<0.035 DLM	<0.010	<0.010	----	----	----
Acridine	260-94-6	E641A-L/WT	µg/L		<0.010	<0.015 DLM	<0.010	<0.012 DLM	----	----	----
Anthracene	120-12-7	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	----	----	----
Benz(a)anthracene	56-55-3	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	----	----	----
Benzo(a)pyrene	50-32-8	E641A-L/WT	µg/L		<0.0050	<0.0050	<0.0050	<0.0050	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	----	----	----
Benzo(b+j+k)fluoranthene	n/a	E641A-L/WT	µg/L		<0.015	<0.015	<0.015	<0.015	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	HWB-KP22-04_2025-08-30 ----	HWB-KP23-03_2025-08-30 ----	MS-HWB-GW-REF1_2025-08-30 ----	HWB-KP22-05_2025-08-30 ----	----	----	----
				Client sampling date / time	30-Aug-2025 14:55	30-Aug-2025 15:30	30-Aug-2025 16:45	30-Aug-2025 17:00	----	----	----
				Sub-Matrix	Water	Water	Water	Water	----	----	----
					BF2500308-008	BF2500308-009	BF2500308-010	BF2500308-011	----	----	----
					Result	Result	Result	Result	----	----	----
Polycyclic Aromatic Hydrocarbons											
Benzo(g,h,i)perylene	191-24-2	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	----	----	----
Benzo(k)fluoranthene	207-08-9	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	----	----	----
Chrysene	218-01-9	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A-L/WT	µg/L		<0.0050	<0.0050	<0.0050	<0.0050	----	----	----
Fluoranthene	206-44-0	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	----	----	----
Fluorene	86-73-7	E641A-L/WT	µg/L		<0.010	0.169	<0.010	<0.010	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A-L/WT	µg/L		0.231	15.5	<0.010	2.92	----	----	----
Methylnaphthalene, 1+2-	----	E641A-L/WT	µg/L		0.411	40.5	<0.015	5.90	----	----	----
Methylnaphthalene, 2-	91-57-6	E641A-L/WT	µg/L		0.180	25.0	<0.010	2.98	----	----	----
Naphthalene	91-20-3	E641A-L/WT	µg/L		<0.412 DLM	36.8	<0.010	2.69	----	----	----
Perylene	198-55-0	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	----	----	----
Phenanthrene	85-01-8	E641A-L/WT	µg/L		<0.010	0.010	<0.010	<0.010	----	----	----
Pyrene	129-00-0	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	----	----	----
Quinoline	91-22-5	E641A-L/WT	µg/L		<0.081 DLM	<2.11 DLM	<0.011 DLM	<1.09 DLM	----	----	----
B(a)P total potency equivalents [B(a)P TPE]	----	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	<0.010	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates											
Chrysene-d12	1719-03-5	E641A-L/WT	%		92.9	98.3	92.4	101	----	----	----
Naphthalene-d8	1146-65-2	E641A-L/WT	%		113	104	111	106	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	HWB-KP22-04_2025-08-30 ----	HWB-KP23-03_2025-08-30 ----	MS-HWB-GW-REF1_2025-08-30 ----	HWB-KP22-05_2025-08-30 ----	----	----	----
				Client sampling date / time	30-Aug-2025 14:55	30-Aug-2025 15:30	30-Aug-2025 16:45	30-Aug-2025 17:00	----	----	----
				Sub-Matrix	Water	Water	Water	Water	----	----	----
					BF2500308-008	**BF2500308-009**	**BF2500308-010**	**BF2500308-011**	**----**	**----**	**----**
					Result	Result	Result	Result	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates											
Phenanthrene-d10	1517-22-2	E641A-L/WT	%		94.0	89.6	105	102	----	----	----

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

Summary of Guideline Limits

CERTIFICATE OF ANALYSIS

Work Order	: **BF2500308**		
Client	: **Baffinland Iron Mines Corporation**	Laboratory	: ALS Environmental - Baffin Island
Contact	: Environmental Lab Results	Account Manager	: Rick Hawthorne
Address	: 360 Oakville Place Dr Suite 300 Oakville Ontario Canada L6H 6K8	Address	: Mary River, Qikqtani Region Baffin Island NU Canada
Telephone	: ----	E-mail	: Rick.Hawthorne@ALSGlobal.com
Project	: HWB Groundwater	Telephone	:
PO	: 4500156571	Date Samples Received	: 01-Sep-2025 17:25
C-O-C number	: 25 08 30_MS_HWB_GW	Date Analysis Commenced	: 02-Sep-2025
Sampler	: AG, JJ, LG	Issue Date	: 11-Sep-2025 09:45
Site	: MS		
Quote number	: 2024-2025 Scope of Work		
No. of samples received	: 11		
No. of samples analysed	: 11		

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

Signatories	*Position*	*Laboratory Department*
Amaninder Dhillon		Organics, Waterloo, Ontario
Cedrick Velasco		Inorganics, Baffin Island, Nunavut
Danielle Gravel		Organics, Waterloo, Ontario
David Tremblett		VOC, Waterloo, Ontario
Jeremy Gingras		Organics, Waterloo, Ontario
Rachel Cameron		Organics, Waterloo, Ontario
Walt Kippenhuck		Inorganics, Waterloo, Ontario
Walt Kippenhuck		Metals, Waterloo, Ontario

General Comments

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

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

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

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

Key: CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.
LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units
µg/L	micrograms per litre
µS/cm	microsiemens per centimetre

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

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Workorder Comments

E641 BF2500308-001 RRR: Detection limit raised due to high analyte recovery in the method blank.
E641 BF2500308-003 RRR: Detection limit raised due to high analyte recovery in the method blank.

Qualifiers

Qualifier	Description
DLDS	Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity.
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
RRR	Refer to report comments for issues regarding this analysis.
TKNI	TKN result may be biased low due to Nitrate interference. Nitrate -N is > 10x TKN.

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-HWB-GW-REF3_2025-08-30 ----	HWB-KP23-01_2025-08-30 ----	HWB-KP22-01_2025-08-30 ----	MS-HWB-GW5_2025-08-30 ----	HWB-KP22-03_2025-08-30 ----
					Client sampling date / time	30-Aug-2025 09:25	30-Aug-2025 10:00	30-Aug-2025 10:50	30-Aug-2025 11:20	30-Aug-2025 12:20
						BF2500308-001	BF2500308-002	BF2500308-003	BF2500308-004	BF2500308-005
						Result	Result	Result	Result	Result
Physical Tests										
Conductivity	----	E100/WT	1.0	µS/cm		3030	582	952	503	572
pH	----	E108/BF	0.10	pH units		7.25	7.38	6.94	7.38	7.25
Solids, total dissolved [TDS]	----	E162/BF	10	mg/L		2000	314	552	295	329
Solids, total suspended [TSS]	----	E160-L/BF	1.0	mg/L		4.2	3.4	14.2	10.7	<1.0
Turbidity	----	E121/BF	0.10	NTU		1.92	5.33	37.1	6.60	1.65
Alkalinity, total (as CaCO3)	----	E290/WT	2.0	mg/L		214	217	518	208	278
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/WT	0.0050	mg/L		0.264	0.940	1.55	0.319	0.959
Bromide	24959-67-9	E235.Br/WT	0.10	mg/L		6.24 DLDS	<0.10	<0.20 DLDS	<0.10	<0.10
Chloride	16887-00-6	E235.Cl/WT	0.50	mg/L		854 DLDS	39.0	18.9 DLDS	21.4	15.9
Fluoride	16984-48-8	E235.F/WT	0.020	mg/L		<0.100 DLDS	0.066	0.045 DLDS	<0.020	0.062
Kjeldahl nitrogen, total [TKN]	----	E318/WT	0.050	mg/L		0.542	1.61	2.24	0.975	1.69
Nitrate (as N)	14797-55-8	E235.NO3/WT	0.020	mg/L		0.597 DLDS	3.78	<0.040 DLDS	3.31	0.181
Nitrite (as N)	14797-65-0	E235.NO2/WT	0.010	mg/L		<0.050 DLDS	0.064	<0.020 DLDS	0.184	<0.010
Phosphorus, total	7723-14-0	E372-U/WT	0.0020	mg/L		0.0096	0.0226	0.0974	0.0174	0.0412
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	0.30	mg/L		21.8 DLDS	19.9	8.56 DLDS	18.3	12.4
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/WT	0.0010	mg/L		<0.0100 DLHC	0.0049	0.0337 DLHC	0.0029	<0.0100 DLM
Antimony, dissolved	7440-36-0	E421/WT	0.00010	mg/L		<0.00100 DLHC	<0.00010	<0.00100 DLHC	<0.00010	<0.00100 DLM
Arsenic, dissolved	7440-38-2	E421/WT	0.00010	mg/L		<0.00100 DLHC	0.00028	0.00264 DLHC	0.00028	0.00240 DLM
Barium, dissolved	7440-39-3	E421/WT	0.00010	mg/L		0.100 DLHC	0.0545	0.0859 DLHC	0.0395	0.0500 DLM

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-HWB-GW-REF3_2025-08-30 ----	HWB-KP23-01_2025-08-30 ----	HWB-KP22-01_2025-08-30 ----	MS-HWB-GW5_2025-08-30 ----	HWB-KP22-03_2025-08-30 ----
					Client sampling date / time	30-Aug-2025 09:25	30-Aug-2025 10:00	30-Aug-2025 10:50	30-Aug-2025 11:20	30-Aug-2025 12:20
						BF2500308-001	BF2500308-002	BF2500308-003	BF2500308-004	BF2500308-005
						Result	Result	Result	Result	Result
Dissolved Metals										
Beryllium, dissolved	7440-41-7	E421/WT	0.000020	mg/L		<0.000200 DLHC	<0.000020	<0.000200 DLHC	<0.000020	<0.000200 DLM
Bismuth, dissolved	7440-69-9	E421/WT	0.000050	mg/L		<0.000500 DLHC	<0.000050	<0.000500 DLHC	<0.000050	<0.000500 DLM
Boron, dissolved	7440-42-8	E421/WT	0.010	mg/L		<0.100 DLHC	0.030	<0.100 DLHC	0.024	<0.100 DLM
Cadmium, dissolved	7440-43-9	E421/WT	0.0000050	mg/L		0.0000670 DLHC	0.0000193	<0.0000500 DLHC	0.0000134	<0.0000500 DLM
Calcium, dissolved	7440-70-2	E421/WT	0.050	mg/L		197 DLHC	40.9	72.1 DLHC	33.4	36.1 DLM
Cesium, dissolved	7440-46-2	E421/WT	0.000010	mg/L		<0.000100 DLHC	0.000014	<0.000100 DLHC	0.000014	<0.000100 DLM
Chromium, dissolved	7440-47-3	E421/WT	0.00050	mg/L		<0.00500 DLHC	0.00084	0.00531 DLHC	0.00091	<0.00500 DLM
Cobalt, dissolved	7440-48-4	E421/WT	0.00010	mg/L		<0.00100 DLHC	0.00086	0.00806 DLHC	0.00069	0.00246 DLM
Copper, dissolved	7440-50-8	E421/WT	0.00020	mg/L		0.00274 DLHC	0.00409	<0.00200 DLHC	0.00351	<0.00200 DLM
Iron, dissolved	7439-89-6	E421/WT	0.010	mg/L		<0.100 DLHC	0.025	8.44 DLHC	<0.010	0.102 DLM
Lead, dissolved	7439-92-1	E421/WT	0.000050	mg/L		<0.000500 DLHC	0.000078	0.000597 DLHC	0.000072	0.000560 DLM
Lithium, dissolved	7439-93-2	E421/WT	0.0010	mg/L		0.0123 DLHC	0.0052	<0.0100 DLHC	0.0045	<0.0100 DLM
Magnesium, dissolved	7439-95-4	E421/WT	0.0050	mg/L		217 DLHC	45.2	79.2 DLHC	43.9	49.8 DLM
Manganese, dissolved	7439-96-5	E421/WT	0.00010	mg/L		0.216 DLHC	0.209	3.67 DLHC	0.0802	1.42 DLM
Mercury, dissolved	7439-97-6	E509/WT	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, dissolved	7439-98-7	E421/WT	0.000050	mg/L		0.000540 DLHC	0.00144	0.00170 DLHC	0.000529	0.00905 DLM
Nickel, dissolved	7440-02-0	E421/WT	0.00050	mg/L		0.0215 DLHC	0.0213	0.0366 DLHC	0.0178	0.0222 DLM
Phosphorus, dissolved	7723-14-0	E421/WT	0.050	mg/L		<0.500 DLHC	<0.050	<0.500 DLHC	<0.050	<0.500 DLM
Potassium, dissolved	7440-09-7	E421/WT	0.050	mg/L		9.82 DLHC	2.25	5.62 DLHC	1.49	4.40 DLM
Rubidium, dissolved	7440-17-7	E421/WT	0.00020	mg/L		0.0132 DLHC	0.00480	0.00685 DLHC	0.00508	0.00329 DLM
Selenium, dissolved	7782-49-2	E421/WT	0.000050	mg/L		<0.000500 DLHC	0.000093	<0.000500 DLHC	0.000100	<0.000500 DLM

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-HWB-GW-REF3_2025-08-30 ----	HWB-KP23-01_2025-08-30 ----	HWB-KP22-01_2025-08-30 ----	MS-HWB-GW5_2025-08-30 ----	HWB-KP22-03_2025-08-30 ----
					Client sampling date / time	30-Aug-2025 09:25	30-Aug-2025 10:00	30-Aug-2025 10:50	30-Aug-2025 11:20	30-Aug-2025 12:20
						BF2500308-001	BF2500308-002	BF2500308-003	BF2500308-004	BF2500308-005
						Result	Result	Result	Result	Result
Dissolved Metals										
Silicon, dissolved	7440-21-3	E421/WT	0.050	mg/L		5.74 DLHC	5.26	11.3 DLHC	5.04	5.29 DLM
Silver, dissolved	7440-22-4	E421/WT	0.000010	mg/L		<0.000100 DLHC	<0.000010	<0.000100 DLHC	<0.000010	<0.000100 DLM
Sodium, dissolved	7440-23-5	E421/WT	0.050	mg/L		15.7 DLHC	7.47	17.8 DLHC	4.60	16.1 DLM
Strontium, dissolved	7440-24-6	E421/WT	0.00020	mg/L		0.349 DLHC	0.105	0.0531 DLHC	0.116	0.0281 DLM
Sulfur, dissolved	7704-34-9	E421/WT	0.50	mg/L		8.75 DLHC	7.64	<5.00 DLHC	6.92	5.12 DLM
Tellurium, dissolved	13494-80-9	E421/WT	0.00020	mg/L		<0.00200 DLHC	<0.00020	<0.00200 DLHC	<0.00020	<0.00200 DLM
Thallium, dissolved	7440-28-0	E421/WT	0.000010	mg/L		<0.000100 DLHC	0.000014	<0.000100 DLHC	0.000016	<0.000100 DLM
Thorium, dissolved	7440-29-1	E421/WT	0.00010	mg/L		<0.00100 DLHC	<0.00010	<0.00100 DLHC	<0.00010	<0.00100 DLM
Tin, dissolved	7440-31-5	E421/WT	0.00010	mg/L		<0.00100 DLHC	<0.00010	<0.00100 DLHC	<0.00010	<0.00100 DLM
Titanium, dissolved	7440-32-6	E421/WT	0.00030	mg/L		<0.00300 DLHC	<0.00030	<0.00300 DLHC	<0.00030	<0.00300 DLM
Tungsten, dissolved	7440-33-7	E421/WT	0.00010	mg/L		<0.00100 DLHC	<0.00010	<0.00100 DLHC	<0.00010	<0.00100 DLM
Uranium, dissolved	7440-61-1	E421/WT	0.000010	mg/L		0.00585 DLHC	0.00184	0.00244 DLHC	0.00115	0.00458 DLM
Vanadium, dissolved	7440-62-2	E421/WT	0.00050	mg/L		<0.00500 DLHC	<0.00050	<0.00500 DLHC	<0.00050	<0.00500 DLM
Zinc, dissolved	7440-66-6	E421/WT	0.0010	mg/L		<0.0100 DLHC	0.0013	<0.0100 DLHC	<0.0010	<0.0100 DLM
Zirconium, dissolved	7440-67-7	E421/WT	0.00030	mg/L		<0.00300 DLHC	0.00054	<0.00300 DLHC	0.00057	<0.00300 DLM
Dissolved mercury filtration location	----	EP509/WT	-	-		Field	Field	Field	Field	Field
Dissolved metals filtration location	----	EP421/WT	-	-		Field	Field	Field	Field	Field
Aggregate Organics										
Oil & grease (gravimetric)	----	E567/WT	5.0	mg/L		<5.0	<5.0	<5.0	<5.0	<5.0
Volatile Organic Compounds										
Acetone	67-64-1	E611D/WT	20	µg/L		<20	<20	35	<20	<20

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-HWB-GW-REF3_2025-08-30 ----	HWB-KP23-01_2025-08-30 ----	HWB-KP22-01_2025-08-30 ----	MS-HWB-GW5_2025-08-30 ----	HWB-KP22-03_2025-08-30 ----
					Client sampling date / time	30-Aug-2025 09:25	30-Aug-2025 10:00	30-Aug-2025 10:50	30-Aug-2025 11:20	30-Aug-2025 12:20
						BF2500308-001	BF2500308-002	BF2500308-003	BF2500308-004	BF2500308-005
						Result	Result	Result	Result	Result
Volatile Organic Compounds										
Benzene	71-43-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Bromodichloromethane	75-27-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Bromoform	75-25-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Bromomethane	74-83-9	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
BTEX, total	----	E611D/WT	1.0	µg/L		<1.0	3.5	48.4	<1.0	<1.0
Carbon disulfide	75-15-0	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Carbon tetrachloride	56-23-5	E611D/WT	0.20	µg/L		<0.20	<0.20	<0.20	<0.20	<0.20
Chlorobenzene	108-90-7	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Chloroethane	75-00-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Chloroform	67-66-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Chloromethane	74-87-3	E611D/WT	2.0	µg/L		<2.0	<2.0	<2.0	<2.0	<2.0
Dibromochloromethane	124-48-1	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dibromoethane, 1,2-	106-93-4	E611D/WT	0.20	µg/L		<0.20	<0.20	<0.20	<0.20	<0.20
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorodifluoromethane	75-71-8	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethane, 1,1-	75-34-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethane, 1,2-	107-06-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethylene, 1,1-	75-35-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	3.22

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-HWB-GW-REF3_2025-08-30 ----	HWB-KP23-01_2025-08-30 ----	HWB-KP22-01_2025-08-30 ----	MS-HWB-GW5_2025-08-30 ----	HWB-KP22-03_2025-08-30 ----
					Client sampling date / time	30-Aug-2025 09:25	30-Aug-2025 10:00	30-Aug-2025 10:50	30-Aug-2025 11:20	30-Aug-2025 12:20
						BF2500308-001	BF2500308-002	BF2500308-003	BF2500308-004	BF2500308-005
						Result	Result	Result	Result	Result
Volatile Organic Compounds										
Dichloroethylene, cis+trans-1,2-	540-59-0	E611D/WT	0.71	µg/L		<0.71	<0.71	<0.71	<0.71	3.22
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloromethane	75-09-2	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Dichloropropane, 1,2-	78-87-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	<0.30
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	0.50	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	<0.30
Ethylbenzene	100-41-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Hexane, n-	110-54-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Hexanone, 2-	591-78-6	E611D/WT	20	µg/L		<20	<20	<20	<20	<20
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	20	µg/L		<20	<20	<20	<20	<20
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	20	µg/L		<20	<20	<20	<20	<20
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Styrene	100-42-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethylene	127-18-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	0.69	0.57
Toluene	108-88-3	E611D/WT	0.50	µg/L		<0.50	<0.50	48.4	<0.50	<0.50
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethylene	79-01-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-HWB-GW-REF3_2025-08-30 ----	HWB-KP23-01_2025-08-30 ----	HWB-KP22-01_2025-08-30 ----	MS-HWB-GW5_2025-08-30 ----	HWB-KP22-03_2025-08-30 ----
					Client sampling date / time	30-Aug-2025 09:25	30-Aug-2025 10:00	30-Aug-2025 10:50	30-Aug-2025 11:20	30-Aug-2025 12:20
						BF2500308-001	BF2500308-002	BF2500308-003	BF2500308-004	BF2500308-005
						Result	Result	Result	Result	Result
Volatile Organic Compounds										
Trichlorofluoromethane	75-69-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Trihalomethanes [THMs], total	----	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl chloride	75-01-4	E611D/WT	0.20	µg/L		<0.20	<0.20	<0.20	<0.20	<0.20
Xylene, m+p-	179601-23-1	E611D/WT	0.40	µg/L		<0.40	<0.40	<0.40	<0.40	<0.40
Xylene, o-	95-47-6	E611D/WT	0.30	µg/L		<0.30	3.52	<0.30	<0.30	0.86
Xylenes, total	1330-20-7	E611D/WT	0.50	µg/L		<0.50	3.52	<0.50	<0.50	0.86
Hydrocarbons										
F1 (C6-C10)	----	E581.F1-L/WT	25	µg/L		<25	<25	31	<25	<25
F2 (C10-C16)	----	E601/WT	100	µg/L		<100	140	<100	100	860
F3 (C16-C34)	----	E601/WT	250	µg/L		<250	<250	<250	<250	560
F4 (C34-C50)	----	E601/WT	250	µg/L		<250	<250	<250	<250	<250
F1-BTEX	----	EC580/WT	25	µg/L		<25	<25	<25	<25	<25
Hydrocarbons, total (C6-C50)	n/a	EC581/WT	370	µg/L		<370	<370	<370	<370	1420
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/WT	1.0	%		91.0	97.4	92.6	95.9	101
Dichlorotoluene, 3,4-	95-75-0	E581.F1-L/WT	1.0	%		71.0	71.4	68.0	81.0	73.3
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611D/WT	1.0	%		88.7	88.5	88.5	88.9	88.8
Difluorobenzene, 1,4-	540-36-3	E611D/WT	1.0	%		97.6	97.4	97.0	97.2	97.4
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A-L/WT	0.010	µg/L		<0.010	<0.053 DLM	<0.010	<0.059 DLM	<0.281 DLM

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Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-HWB-GW-REF3_2025-08-30 ----	HWB-KP23-01_2025-08-30 ----	HWB-KP22-01_2025-08-30 ----	MS-HWB-GW5_2025-08-30 ----	HWB-KP22-03_2025-08-30 ----
					Client sampling date / time	30-Aug-2025 09:25	30-Aug-2025 10:00	30-Aug-2025 10:50	30-Aug-2025 11:20	30-Aug-2025 12:20
						BF2500308-001	BF2500308-002	BF2500308-003	BF2500308-004	BF2500308-005
						Result	Result	Result	Result	Result
Polycyclic Aromatic Hydrocarbons										
Acenaphthylene	208-96-8	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.084 DLM
Acridine	260-94-6	E641A-L/WT	0.010	µg/L		<0.010	<0.033 DLM	<0.010	<0.035 DLM	<0.054 DLM
Anthracene	120-12-7	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.042 DLM
Benz(a)anthracene	56-55-3	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.042 DLM
Benzo(a)pyrene	50-32-8	E641A-L/WT	0.0050	µg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(b+j)fluoranthene	n/a	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b+j+k)fluoranthene	n/a	E641A-L/WT	0.015	µg/L		<0.015	<0.015	<0.015	<0.015	<0.015
Benzo(g,h,i)perylene	191-24-2	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(k)fluoranthene	207-08-9	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Chrysene	218-01-9	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Dibenz(a,h)anthracene	53-70-3	E641A-L/WT	0.0050	µg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	206-44-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.042 DLM
Fluorene	86-73-7	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.011 DLM	<0.042 DLM
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Methylnaphthalene, 1-	90-12-0	E641A-L/WT	0.010	µg/L		0.146	0.178	<0.010	0.051	0.883
Methylnaphthalene, 1+2-	----	E641A-L/WT	0.015	µg/L		0.170	0.324	<0.015	0.088	1.30
Methylnaphthalene, 2-	91-57-6	E641A-L/WT	0.010	µg/L		0.024	0.146	<0.010	0.037	0.422
Naphthalene	91-20-3	E641A-L/WT	0.010	µg/L		<0.010	<0.114 DLM	<0.010	<0.011 DLM	<0.191 DLM
Perylene	198-55-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Phenanthrene	85-01-8	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.042 DLM
Pyrene	129-00-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.042 DLM

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-HWB-GW-REF3_2025-08-30 ----	HWB-KP23-01_2025-08-30 ----	HWB-KP22-01_2025-08-30 ----	MS-HWB-GW5_2025-08-30 ----	HWB-KP22-03_2025-08-30 ----
					Client sampling date / time	30-Aug-2025 09:25	30-Aug-2025 10:00	30-Aug-2025 10:50	30-Aug-2025 11:20	30-Aug-2025 12:20
						BF2500308-001	BF2500308-002	BF2500308-003	BF2500308-004	BF2500308-005
						Result	Result	Result	Result	Result
Polycyclic Aromatic Hydrocarbons										
Quinoline	91-22-5	E641A-L/WT	0.010	µg/L		<0.036 DLM, RRR	<0.104 DLM	<0.019 DLM, RRR	<0.435 DLM	<2.65 DLM
B(a)P total potency equivalents [B(a)P TPE]	----	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A-L/WT	0.1	%		99.9	109	102	102	96.4
Naphthalene-d8	1146-65-2	E641A-L/WT	0.1	%		105	108	108	112	106
Phenanthrene-d10	1517-22-2	E641A-L/WT	0.1	%		100	111	107	112	86.8

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

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	HWB-KP23-02_2025-08-30 ----	QD-CC4_2025-08-30 ----	HWB-KP22-04_2025-08-30 ----	HWB-KP23-03_2025-08-30 ----	MS-HWB-GW-REF1_2025-08-30 ----
					Client sampling date / time	30-Aug-2025 13:45	30-Aug-2025 13:45	30-Aug-2025 14:55	30-Aug-2025 15:30	30-Aug-2025 16:45
						BF2500308-006	BF2500308-007	BF2500308-008	BF2500308-009	BF2500308-010
						Result	Result	Result	Result	Result
Physical Tests										
Conductivity	----	E100/WT	1.0	µS/cm		703	725	498	671	679
pH	----	E108/BF	0.10	pH units		7.08	7.02	7.47	7.07	7.61
Solids, total dissolved [TDS]	----	E162/BF	10	mg/L		450	435	279	404	404
Solids, total suspended [TSS]	----	E160-L/BF	1.0	mg/L		1.3	1.1	<1.0	5.5	24.5
Turbidity	----	E121/BF	0.10	NTU		3.98	2.84	1.08	3.55	17.5
Alkalinity, total (as CaCO3)	----	E290/WT	2.0	mg/L		193	198	242	278	174
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/WT	0.0050	mg/L		0.319	0.304	0.211	0.380	<0.0050

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	HWB-KP23-02_2025-08-30 ----	QD-CC4_2025-08-30 ----	HWB-KP22-04_2025-08-30 ----	HWB-KP23-03_2025-08-30 ----	MS-HWB-GW-REF1_2025-08-30 ----
					Client sampling date / time	30-Aug-2025 13:45	30-Aug-2025 13:45	30-Aug-2025 14:55	30-Aug-2025 15:30	30-Aug-2025 16:45
						BF2500308-006	BF2500308-007	BF2500308-008	BF2500308-009	BF2500308-010
						Result	Result	Result	Result	Result
Anions and Nutrients										
Bromide	24959-67-9	E235.Br/WT	0.10	mg/L		<0.10	<0.10	<0.10	<0.10	0.19
Chloride	16887-00-6	E235.Cl/WT	0.50	mg/L		97.2	100	4.44	40.5	78.4
Fluoride	16984-48-8	E235.F/WT	0.020	mg/L		0.226	0.136	0.092	0.085	0.025
Kjeldahl nitrogen, total [TKN]	----	E318/WT	0.050	mg/L		0.686	0.682	0.997	0.866	0.315 TKNI
Nitrate (as N)	14797-55-8	E235.NO3/WT	0.020	mg/L		0.162	0.176	3.36	<0.020	4.79
Nitrite (as N)	14797-65-0	E235.NO2/WT	0.010	mg/L		0.017	0.019	0.487	<0.010	<0.010
Phosphorus, total	7723-14-0	E372-U/WT	0.0020	mg/L		0.0156	0.0153	0.0166	0.0282	0.0083
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	0.30	mg/L		11.0	12.2	8.85	10.9	29.3
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/WT	0.0010	mg/L		0.0098	0.0114	0.0032	0.0140	0.0013
Antimony, dissolved	7440-36-0	E421/WT	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic, dissolved	7440-38-2	E421/WT	0.00010	mg/L		0.00051	0.00060	0.00294	0.00111	<0.00010
Barium, dissolved	7440-39-3	E421/WT	0.00010	mg/L		0.0880	0.0749	0.0301	0.0811	0.0440
Beryllium, dissolved	7440-41-7	E421/WT	0.000020	mg/L		<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Bismuth, dissolved	7440-69-9	E421/WT	0.000050	mg/L		<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron, dissolved	7440-42-8	E421/WT	0.010	mg/L		0.025	0.020	<0.010	0.043	0.019
Cadmium, dissolved	7440-43-9	E421/WT	0.0000050	mg/L		0.0000163	0.0000119	0.0000149	0.0000126	0.0000054
Calcium, dissolved	7440-70-2	E421/WT	0.050	mg/L		70.5	58.8	29.3	72.9	63.0
Cesium, dissolved	7440-46-2	E421/WT	0.000010	mg/L		<0.000010	<0.000010	0.000010	<0.000010	<0.000010
Chromium, dissolved	7440-47-3	E421/WT	0.00050	mg/L		0.00150	0.00160	0.00070	0.00228	0.00084
Cobalt, dissolved	7440-48-4	E421/WT	0.00010	mg/L		0.00472	0.00442	0.00147	0.00372	<0.00010

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	HWB-KP23-02_2025-08-30 ----	QD-CC4_2025-08-30 ----	HWB-KP22-04_2025-08-30 ----	HWB-KP23-03_2025-08-30 ----	MS-HWB-GW-REF1_2025-08-30 ----
					Client sampling date / time	30-Aug-2025 13:45	30-Aug-2025 13:45	30-Aug-2025 14:55	30-Aug-2025 15:30	30-Aug-2025 16:45
						BF2500308-006	BF2500308-007	BF2500308-008	BF2500308-009	BF2500308-010
						Result	Result	Result	Result	Result
Dissolved Metals										
Copper, dissolved	7440-50-8	E421/WT	0.00020	mg/L		0.00222	0.00213	0.00168	0.00147	0.00228
Iron, dissolved	7439-89-6	E421/WT	0.010	mg/L		1.16	1.53	<0.010	1.01	<0.010
Lead, dissolved	7439-92-1	E421/WT	0.000050	mg/L		<0.000050	<0.000050	0.000059	0.000494	<0.000050
Lithium, dissolved	7439-93-2	E421/WT	0.0010	mg/L		0.0260	0.0203	0.0026	0.0182	0.0075
Magnesium, dissolved	7439-95-4	E421/WT	0.0050	mg/L		49.8	45.1	43.5	35.8	32.2
Manganese, dissolved	7439-96-5	E421/WT	0.00010	mg/L		1.48	1.43	0.473	1.60	0.00259
Mercury, dissolved	7439-97-6	E509/WT	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, dissolved	7439-98-7	E421/WT	0.000050	mg/L		0.00112	0.00123	0.00148	0.00149	0.000741
Nickel, dissolved	7440-02-0	E421/WT	0.00050	mg/L		0.0466	0.0422	0.0202	0.0372	0.00508
Phosphorus, dissolved	7723-14-0	E421/WT	0.050	mg/L		<0.050	<0.050	<0.050	<0.050	<0.050
Potassium, dissolved	7440-09-7	E421/WT	0.050	mg/L		4.37	3.86	2.86	6.35	3.04
Rubidium, dissolved	7440-17-7	E421/WT	0.00020	mg/L		0.00581	0.00537	0.00440	0.00383	0.00723
Selenium, dissolved	7782-49-2	E421/WT	0.000050	mg/L		0.000069	0.000062	0.000069	0.000073	0.000076
Silicon, dissolved	7440-21-3	E421/WT	0.050	mg/L		7.00	6.93	5.30	8.11	4.26
Silver, dissolved	7440-22-4	E421/WT	0.000010	mg/L		<0.000010	0.000010	<0.000010	<0.000010	<0.000010
Sodium, dissolved	7440-23-5	E421/WT	0.050	mg/L		8.64	7.09	2.65	6.83	16.2
Strontium, dissolved	7440-24-6	E421/WT	0.00020	mg/L		0.554	0.450	0.0268	0.818	0.166
Sulfur, dissolved	7704-34-9	E421/WT	0.50	mg/L		5.66	4.81	3.23	3.85	10.9
Tellurium, dissolved	13494-80-9	E421/WT	0.00020	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium, dissolved	7440-28-0	E421/WT	0.000010	mg/L		0.000018	0.000014	0.000030	<0.000010	0.000015
Thorium, dissolved	7440-29-1	E421/WT	0.00010	mg/L		<0.00010	0.00010	<0.00010	<0.00010	<0.00010

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	HWB-KP23-02_2025-08-30 ----	QD-CC4_2025-08-30 ----	HWB-KP22-04_2025-08-30 ----	HWB-KP23-03_2025-08-30 ----	MS-HWB-GW-REF1_2025-08-30 ----
					Client sampling date / time	30-Aug-2025 13:45	30-Aug-2025 13:45	30-Aug-2025 14:55	30-Aug-2025 15:30	30-Aug-2025 16:45
						BF2500308-006	BF2500308-007	BF2500308-008	BF2500308-009	BF2500308-010
						Result	Result	Result	Result	Result
Dissolved Metals										
Tin, dissolved	7440-31-5	E421/WT	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium, dissolved	7440-32-6	E421/WT	0.00030	mg/L		<0.00030	<0.00030	<0.00030	0.00036	<0.00030
Tungsten, dissolved	7440-33-7	E421/WT	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium, dissolved	7440-61-1	E421/WT	0.000010	mg/L		0.00323	0.00269	0.00301	0.00458	0.00285
Vanadium, dissolved	7440-62-2	E421/WT	0.00050	mg/L		<0.00050	<0.00050	<0.00050	0.00097	<0.00050
Zinc, dissolved	7440-66-6	E421/WT	0.0010	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zirconium, dissolved	7440-67-7	E421/WT	0.00030	mg/L		0.00092	0.00089	0.00047	0.00157	0.00046
Dissolved mercury filtration location	----	EP509/WT	-	-		Field	Field	Field	Field	Field
Dissolved metals filtration location	----	EP421/WT	-	-		Field	Field	Field	Field	Field
Aggregate Organics										
Oil & grease (gravimetric)	----	E567/WT	5.0	mg/L		<5.0	<5.0	<5.0	<5.0	<5.0
Volatile Organic Compounds										
Acetone	67-64-1	E611D/WT	20	µg/L		<20	<20	<20	<20	<20
Benzene	71-43-2	E611D/WT	0.50	µg/L		0.50	0.51	<0.50	2.94	<0.50
Bromodichloromethane	75-27-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Bromoform	75-25-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Bromomethane	74-83-9	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
BTEX, total	----	E611D/WT	1.0	µg/L		85.3	73.2	3.0	80.9	<1.0
Carbon disulfide	75-15-0	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Carbon tetrachloride	56-23-5	E611D/WT	0.20	µg/L		<0.20	<0.20	<0.20	<0.20	<0.20
Chlorobenzene	108-90-7	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	HWB-KP23-02_2025-08-30 ----	QD-CC4_2025-08-30 ----	HWB-KP22-04_2025-08-30 ----	HWB-KP23-03_2025-08-30 ----	MS-HWB-GW-REF1_2025-08-30 ----
					Client sampling date / time	30-Aug-2025 13:45	30-Aug-2025 13:45	30-Aug-2025 14:55	30-Aug-2025 15:30	30-Aug-2025 16:45
						BF2500308-006	BF2500308-007	BF2500308-008	BF2500308-009	BF2500308-010
						Result	Result	Result	Result	Result
Volatile Organic Compounds										
Chloroethane	75-00-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Chloroform	67-66-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Chloromethane	74-87-3	E611D/WT	2.0	µg/L		<2.0	<2.0	<2.0	<2.0	<2.0
Dibromochloromethane	124-48-1	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dibromoethane, 1,2-	106-93-4	E611D/WT	0.20	µg/L		<0.20	<0.20	<0.20	<0.20	<0.20
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorodifluoromethane	75-71-8	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethane, 1,1-	75-34-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethane, 1,2-	107-06-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethylene, 1,1-	75-35-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethylene, cis+trans-1,2-	540-59-0	E611D/WT	0.71	µg/L		<0.71	<0.71	<0.71	<0.71	<0.71
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloromethane	75-09-2	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Dichloropropane, 1,2-	78-87-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	<0.30
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	0.50	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	<0.30
Ethylbenzene	100-41-4	E611D/WT	0.50	µg/L		6.05	5.45	<0.50	4.40	<0.50

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	HWB-KP23-02_2025-08-30 ----	QD-CC4_2025-08-30 ----	HWB-KP22-04_2025-08-30 ----	HWB-KP23-03_2025-08-30 ----	MS-HWB-GW-REF1_2025-08-30 ----
					Client sampling date / time	30-Aug-2025 13:45	30-Aug-2025 13:45	30-Aug-2025 14:55	30-Aug-2025 15:30	30-Aug-2025 16:45
						BF2500308-006	BF2500308-007	BF2500308-008	BF2500308-009	BF2500308-010
						Result	Result	Result	Result	Result
Volatile Organic Compounds										
Hexane, n-	110-54-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Hexanone, 2-	591-78-6	E611D/WT	20	µg/L		<20	<20	<20	<20	<20
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	20	µg/L		<20	<20	<20	<20	<20
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	20	µg/L		<20	<20	<20	<20	<20
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Styrene	100-42-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethylene	127-18-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Toluene	108-88-3	E611D/WT	0.50	µg/L		0.58	<0.50	<0.50	<0.50	<0.50
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethylene	79-01-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Trichlorofluoromethane	75-69-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Trihalomethanes [THMs], total	----	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl chloride	75-01-4	E611D/WT	0.20	µg/L		<0.20	<0.20	<0.20	<0.20	<0.20
Xylene, m+p-	179601-23-1	E611D/WT	0.40	µg/L		21.9	16.7	<0.40	18.1	<0.40
Xylene, o-	95-47-6	E611D/WT	0.30	µg/L		56.3	50.5	2.96	55.5	<0.30
Xylenes, total	1330-20-7	E611D/WT	0.50	µg/L		78.2	67.2	2.96	73.6	<0.50
Hydrocarbons										
F1 (C6-C10)	----	E581.F1-L/WT	25	µg/L		157	152	<25	408	<25

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	HWB-KP23-02_2025-08-30 ----	QD-CC4_2025-08-30 ----	HWB-KP22-04_2025-08-30 ----	HWB-KP23-03_2025-08-30 ----	MS-HWB-GW-REF1_2025-08-30 ----
					Client sampling date / time	30-Aug-2025 13:45	30-Aug-2025 13:45	30-Aug-2025 14:55	30-Aug-2025 15:30	30-Aug-2025 16:45
						BF2500308-006	BF2500308-007	BF2500308-008	BF2500308-009	BF2500308-010
						Result	Result	Result	Result	Result
Hydrocarbons										
F2 (C10-C16)	----	E601/WT	100	µg/L		440	400	140	810	<100
F3 (C16-C34)	----	E601/WT	250	µg/L		<250	<250	<250	<250	<250
F4 (C34-C50)	----	E601/WT	250	µg/L		<250	<250	<250	<250	<250
F1-BTEX	----	EC580/WT	25	µg/L		72	79	<25	327	<25
Hydrocarbons, total (C6-C50)	n/a	EC581/WT	370	µg/L		600	550	<370	1220	<370
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/WT	1.0	%		100	100	93.8	101	93.5
Dichlorotoluene, 3,4-	95-75-0	E581.F1-L/WT	1.0	%		69.1	76.7	77.8	73.0	73.9
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611D/WT	1.0	%		93.7	94.3	90.3	96.8	89.7
Difluorobenzene, 1,4-	540-36-3	E611D/WT	1.0	%		97.5	97.2	96.7	97.4	96.8
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A-L/WT	0.010	µg/L		<0.089 DLM	<0.084 DLM	<0.010	<0.112 DLM	<0.010
Acenaphthylene	208-96-8	E641A-L/WT	0.010	µg/L		<0.025 DLM	<0.024 DLM	<0.010	<0.035 DLM	<0.010
Acridine	260-94-6	E641A-L/WT	0.010	µg/L		<0.013 DLM	<0.013 DLM	<0.010	<0.015 DLM	<0.010
Anthracene	120-12-7	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benz(a)anthracene	56-55-3	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(a)pyrene	50-32-8	E641A-L/WT	0.0050	µg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(b+j)fluoranthene	n/a	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b+j+k)fluoranthene	n/a	E641A-L/WT	0.015	µg/L		<0.015	<0.015	<0.015	<0.015	<0.015
Benzo(g,h,i)perylene	191-24-2	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010

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Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	HWB-KP23-02_2025-08-30 ----	QD-CC4_2025-08-30 ----	HWB-KP22-04_2025-08-30 ----	HWB-KP23-03_2025-08-30 ----	MS-HWB-GW-REF1_2025-08-30 ----
					Client sampling date / time	30-Aug-2025 13:45	30-Aug-2025 13:45	30-Aug-2025 14:55	30-Aug-2025 15:30	30-Aug-2025 16:45
						BF2500308-006	BF2500308-007	BF2500308-008	BF2500308-009	BF2500308-010
						Result	Result	Result	Result	Result
Polycyclic Aromatic Hydrocarbons										
Benzo(k)fluoranthene	207-08-9	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Chrysene	218-01-9	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Dibenz(a,h)anthracene	53-70-3	E641A-L/WT	0.0050	µg/L		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	206-44-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Fluorene	86-73-7	E641A-L/WT	0.010	µg/L		0.132	0.122	<0.010	0.169	<0.010
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Methylnaphthalene, 1-	90-12-0	E641A-L/WT	0.010	µg/L		7.44	6.35	0.231	15.5	<0.010
Methylnaphthalene, 1+2-	----	E641A-L/WT	0.015	µg/L		17.1	14.1	0.411	40.5	<0.015
Methylnaphthalene, 2-	91-57-6	E641A-L/WT	0.010	µg/L		9.63	7.76	0.180	25.0	<0.010
Naphthalene	91-20-3	E641A-L/WT	0.010	µg/L		13.6	13.0	<0.412 DLM	36.8	<0.010
Perylene	198-55-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Phenanthrene	85-01-8	E641A-L/WT	0.010	µg/L		0.025	0.029	<0.010	0.010	<0.010
Pyrene	129-00-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Quinoline	91-22-5	E641A-L/WT	0.010	µg/L		<0.838 DLM	<0.767 DLM	<0.081 DLM	<2.11 DLM	<0.011 DLM
B(a)P total potency equivalents [B(a)P TPE]	----	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A-L/WT	0.1	%		101	101	92.9	98.3	92.4
Naphthalene-d8	1146-65-2	E641A-L/WT	0.1	%		103	102	113	104	111
Phenanthrene-d10	1517-22-2	E641A-L/WT	0.1	%		92.3	95.8	94.0	89.6	105

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

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	HWB-KP22-05_2025-08-30 ----	----	----	----	----
					Client sampling date / time	30-Aug-2025 17:00	----	----	----	----
						BF2500308-011	----	----	----	----
						Result	----	----	----	----
Physical Tests										
Conductivity	----	E100/WT	1.0	µS/cm		1880	----	----	----	----
pH	----	E108/BF	0.10	pH units		6.90	----	----	----	----
Solids, total dissolved [TDS]	----	E162/BF	10	mg/L		1230	----	----	----	----
Solids, total suspended [TSS]	----	E160-L/BF	1.0	mg/L		6.0	----	----	----	----
Turbidity	----	E121/BF	0.10	NTU		24.6	----	----	----	----
Alkalinity, total (as CaCO3)	----	E290/WT	2.0	mg/L		197	----	----	----	----
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/WT	0.0050	mg/L		0.410	----	----	----	----
Bromide	24959-67-9	E235.Br/WT	0.10	mg/L		4.68 DLDS	----	----	----	----
Chloride	16887-00-6	E235.Cl/WT	0.50	mg/L		484 DLDS	----	----	----	----
Fluoride	16984-48-8	E235.F/WT	0.020	mg/L		<0.100 DLDS	----	----	----	----
Kjeldahl nitrogen, total [TKN]	----	E318/WT	0.050	mg/L		0.782	----	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3/WT	0.020	mg/L		<0.100 DLDS	----	----	----	----
Nitrite (as N)	14797-65-0	E235.NO2/WT	0.010	mg/L		<0.050 DLDS	----	----	----	----
Phosphorus, total	7723-14-0	E372-U/WT	0.0020	mg/L		0.0269	----	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	0.30	mg/L		9.42 DLDS	----	----	----	----
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/WT	0.0010	mg/L		<0.0100 DLHC	----	----	----	----
Antimony, dissolved	7440-36-0	E421/WT	0.00010	mg/L		<0.00100 DLHC	----	----	----	----
Arsenic, dissolved	7440-38-2	E421/WT	0.00010	mg/L		0.00198 DLHC	----	----	----	----
Barium, dissolved	7440-39-3	E421/WT	0.00010	mg/L		0.207 DLHC	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	HWB-KP22-05_2025-08-30 ----	----	----	----	----
					Client sampling date / time	30-Aug-2025 17:00	----	----	----	----
						BF2500308-011	----	----	----	----
						Result	----	----	----	----
Dissolved Metals										
Beryllium, dissolved	7440-41-7	E421/WT	0.000020	mg/L		<0.000200 DLHC	----	----	----	----
Bismuth, dissolved	7440-69-9	E421/WT	0.000050	mg/L		<0.000500 DLHC	----	----	----	----
Boron, dissolved	7440-42-8	E421/WT	0.010	mg/L		<0.100 DLHC	----	----	----	----
Cadmium, dissolved	7440-43-9	E421/WT	0.0000050	mg/L		<0.0000500 DLHC	----	----	----	----
Calcium, dissolved	7440-70-2	E421/WT	0.050	mg/L		177 DLHC	----	----	----	----
Cesium, dissolved	7440-46-2	E421/WT	0.000010	mg/L		<0.000100 DLHC	----	----	----	----
Chromium, dissolved	7440-47-3	E421/WT	0.00050	mg/L		<0.00500 DLHC	----	----	----	----
Cobalt, dissolved	7440-48-4	E421/WT	0.00010	mg/L		0.0121 DLHC	----	----	----	----
Copper, dissolved	7440-50-8	E421/WT	0.00020	mg/L		<0.00200 DLHC	----	----	----	----
Iron, dissolved	7439-89-6	E421/WT	0.010	mg/L		2.51 DLHC	----	----	----	----
Lead, dissolved	7439-92-1	E421/WT	0.000050	mg/L		<0.000500 DLHC	----	----	----	----
Lithium, dissolved	7439-93-2	E421/WT	0.0010	mg/L		0.0663 DLHC	----	----	----	----
Magnesium, dissolved	7439-95-4	E421/WT	0.0050	mg/L		99.9 DLHC	----	----	----	----
Manganese, dissolved	7439-96-5	E421/WT	0.00010	mg/L		4.58 DLHC	----	----	----	----
Mercury, dissolved	7439-97-6	E509/WT	0.0000050	mg/L		<0.0000050	----	----	----	----
Molybdenum, dissolved	7439-98-7	E421/WT	0.000050	mg/L		0.00108 DLHC	----	----	----	----
Nickel, dissolved	7440-02-0	E421/WT	0.00050	mg/L		0.0443 DLHC	----	----	----	----
Phosphorus, dissolved	7723-14-0	E421/WT	0.050	mg/L		<0.500 DLHC	----	----	----	----
Potassium, dissolved	7440-09-7	E421/WT	0.050	mg/L		5.96 DLHC	----	----	----	----
Rubidium, dissolved	7440-17-7	E421/WT	0.00020	mg/L		0.0140 DLHC	----	----	----	----
Selenium, dissolved	7782-49-2	E421/WT	0.000050	mg/L		<0.000500 DLHC	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

					Client sample ID	HWB-KP22-05_2025-08-30 ----	----	----	----	----
					Client sampling date / time	30-Aug-2025 17:00	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		BF2500308-011	----	----	----	----
						Result	----	----	----	----
Dissolved Metals										
Silicon, dissolved	7440-21-3	E421/WT	0.050	mg/L		7.41 DLHC	----	----	----	----
Silver, dissolved	7440-22-4	E421/WT	0.000010	mg/L		<0.000100 DLHC	----	----	----	----
Sodium, dissolved	7440-23-5	E421/WT	0.050	mg/L		11.7 DLHC	----	----	----	----
Strontium, dissolved	7440-24-6	E421/WT	0.00020	mg/L		0.580 DLHC	----	----	----	----
Sulfur, dissolved	7704-34-9	E421/WT	0.50	mg/L		<5.00 DLHC	----	----	----	----
Tellurium, dissolved	13494-80-9	E421/WT	0.00020	mg/L		<0.00200 DLHC	----	----	----	----
Thallium, dissolved	7440-28-0	E421/WT	0.000010	mg/L		<0.000100 DLHC	----	----	----	----
Thorium, dissolved	7440-29-1	E421/WT	0.00010	mg/L		<0.00100 DLHC	----	----	----	----
Tin, dissolved	7440-31-5	E421/WT	0.00010	mg/L		<0.00100 DLHC	----	----	----	----
Titanium, dissolved	7440-32-6	E421/WT	0.00030	mg/L		<0.00300 DLHC	----	----	----	----
Tungsten, dissolved	7440-33-7	E421/WT	0.00010	mg/L		<0.00100 DLHC	----	----	----	----
Uranium, dissolved	7440-61-1	E421/WT	0.000010	mg/L		0.00464 DLHC	----	----	----	----
Vanadium, dissolved	7440-62-2	E421/WT	0.00050	mg/L		<0.00500 DLHC	----	----	----	----
Zinc, dissolved	7440-66-6	E421/WT	0.0010	mg/L		<0.0100 DLHC	----	----	----	----
Zirconium, dissolved	7440-67-7	E421/WT	0.00030	mg/L		<0.00300 DLHC	----	----	----	----
Dissolved mercury filtration location	----	EP509/WT	-	-		Field	----	----	----	----
Dissolved metals filtration location	----	EP421/WT	-	-		Field	----	----	----	----
Aggregate Organics										
Oil & grease (gravimetric)	----	E567/WT	5.0	mg/L		<5.0	----	----	----	----
Volatile Organic Compounds										
Acetone	67-64-1	E611D/WT	20	µg/L		<20	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	HWB-KP22-05_2025-08-30 ----	----	----	----	----
					Client sampling date / time	30-Aug-2025 17:00	----	----	----	----
						BF2500308-011	----	----	----	----
						Result	----	----	----	----
Volatile Organic Compounds										
Benzene	71-43-2	E611D/WT	0.50	µg/L		0.82	----	----	----	----
Bromodichloromethane	75-27-4	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Bromoform	75-25-2	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Bromomethane	74-83-9	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
BTEX, total	----	E611D/WT	1.0	µg/L		4.3	----	----	----	----
Carbon disulfide	75-15-0	E611D/WT	1.0	µg/L		<1.0	----	----	----	----
Carbon tetrachloride	56-23-5	E611D/WT	0.20	µg/L		<0.20	----	----	----	----
Chlorobenzene	108-90-7	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Chloroethane	75-00-3	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Chloroform	67-66-3	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Chloromethane	74-87-3	E611D/WT	2.0	µg/L		<2.0	----	----	----	----
Dibromochloromethane	124-48-1	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Dibromoethane, 1,2-	106-93-4	E611D/WT	0.20	µg/L		<0.20	----	----	----	----
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Dichlorodifluoromethane	75-71-8	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Dichloroethane, 1,1-	75-34-3	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Dichloroethane, 1,2-	107-06-2	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Dichloroethylene, 1,1-	75-35-4	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	0.50	µg/L		<0.50	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	HWB-KP22-05_2025-08-30 ----	----	----	----	----
					Client sampling date / time	30-Aug-2025 17:00	----	----	----	----
						BF2500308-011	----	----	----	----
						Result	----	----	----	----
Volatile Organic Compounds										
Dichloroethylene, cis+trans-1,2-	540-59-0	E611D/WT	0.71	µg/L		<0.71	----	----	----	----
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Dichloromethane	75-09-2	E611D/WT	1.0	µg/L		<1.0	----	----	----	----
Dichloropropane, 1,2-	78-87-5	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	0.30	µg/L		<0.30	----	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	0.50	µg/L		<0.5	----	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	0.30	µg/L		<0.30	----	----	----	----
Ethylbenzene	100-41-4	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Hexane, n-	110-54-3	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Hexanone, 2-	591-78-6	E611D/WT	20	µg/L		<20	----	----	----	----
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	20	µg/L		<20	----	----	----	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	20	µg/L		<20	----	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Styrene	100-42-5	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Tetrachloroethylene	127-18-4	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Toluene	108-88-3	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Trichloroethylene	79-01-6	E611D/WT	0.50	µg/L		<0.50	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	HWB-KP22-05_2025-08-30 ----	----	----	----	----
					Client sampling date / time	30-Aug-2025 17:00	----	----	----	----
						BF2500308-011	----	----	----	----
						Result	----	----	----	----
Volatile Organic Compounds										
Trichlorofluoromethane	75-69-4	E611D/WT	0.50	µg/L		<0.50	----	----	----	----
Trihalomethanes [THMs], total	----	E611D/WT	1.0	µg/L		<1.0	----	----	----	----
Vinyl chloride	75-01-4	E611D/WT	0.20	µg/L		<0.20	----	----	----	----
Xylene, m+p-	179601-23-1	E611D/WT	0.40	µg/L		<0.40	----	----	----	----
Xylene, o-	95-47-6	E611D/WT	0.30	µg/L		3.45	----	----	----	----
Xylenes, total	1330-20-7	E611D/WT	0.50	µg/L		3.45	----	----	----	----
Hydrocarbons										
F1 (C6-C10)	----	E581.F1-L/WT	25	µg/L		26	----	----	----	----
F2 (C10-C16)	----	E601/WT	100	µg/L		210	----	----	----	----
F3 (C16-C34)	----	E601/WT	250	µg/L		<250	----	----	----	----
F4 (C34-C50)	----	E601/WT	250	µg/L		<250	----	----	----	----
F1-BTEX	----	EC580/WT	25	µg/L		<25	----	----	----	----
Hydrocarbons, total (C6-C50)	n/a	EC581/WT	370	µg/L		<370	----	----	----	----
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/WT	1.0	%		97.5	----	----	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.F1-L/WT	1.0	%		85.1	----	----	----	----
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611D/WT	1.0	%		93.1	----	----	----	----
Difluorobenzene, 1,4-	540-36-3	E611D/WT	1.0	%		98.0	----	----	----	----
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A-L/WT	0.010	µg/L		<0.020 DLM	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	HWB-KP22-05_2025-08-30 ----	----	----	----	----
					Client sampling date / time	30-Aug-2025 17:00	----	----	----	----
						BF2500308-011	----	----	----	----
						Result	----	----	----	----
Polycyclic Aromatic Hydrocarbons										
Acenaphthylene	208-96-8	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
Acridine	260-94-6	E641A-L/WT	0.010	µg/L		<0.012 DLM	----	----	----	----
Anthracene	120-12-7	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
Benz(a)anthracene	56-55-3	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
Benzo(a)pyrene	50-32-8	E641A-L/WT	0.0050	µg/L		<0.0050	----	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
Benzo(b+j+k)fluoranthene	n/a	E641A-L/WT	0.015	µg/L		<0.015	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
Benzo(k)fluoranthene	207-08-9	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
Chrysene	218-01-9	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A-L/WT	0.0050	µg/L		<0.0050	----	----	----	----
Fluoranthene	206-44-0	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
Fluorene	86-73-7	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A-L/WT	0.010	µg/L		2.92	----	----	----	----
Methylnaphthalene, 1+2-	----	E641A-L/WT	0.015	µg/L		5.90	----	----	----	----
Methylnaphthalene, 2-	91-57-6	E641A-L/WT	0.010	µg/L		2.98	----	----	----	----
Naphthalene	91-20-3	E641A-L/WT	0.010	µg/L		2.69	----	----	----	----
Perylene	198-55-0	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
Phenanthrene	85-01-8	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
Pyrene	129-00-0	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	HWB-KP22-05_2025-08-30 ----	----	----	----	----
					Client sampling date / time	30-Aug-2025 17:00	----	----	----	----
						BF2500308-011	----	----	----	----
						Result	----	----	----	----
Polycyclic Aromatic Hydrocarbons										
Quinoline	91-22-5	E641A-L/WT	0.010	µg/L		<1.09 DLM	----	----	----	----
B(a)P total potency equivalents [B(a)P TPE]	----	E641A-L/WT	0.010	µg/L		<0.010	----	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A-L/WT	0.1	%		101	----	----	----	----
Naphthalene-d8	1146-65-2	E641A-L/WT	0.1	%		106	----	----	----	----
Phenanthrene-d10	1517-22-2	E641A-L/WT	0.1	%		102	----	----	----	----

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

ALS Canada Ltd.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **BF2500308**	Page	: 1 of 38
Client	: **Baffinland Iron Mines Corporation**	Laboratory	: ALS Environmental - Baffin Island
Contact	: Environmental Lab Results	Account Manager	: Rick Hawthorne
Address	: 360 Oakville Place Dr Suite 300 Oakville ON Canada L6H 6K8	Address	: Mary River, Qikqtani Region Baffin Island, Nunavut Canada
Telephone	: ----	Telephone	: ----
Project	: HWB Groundwater	Date Samples Received	: 01-Sep-2025 17:25
PO	: 4500156571	Issue Date	: 11-Sep-2025 09:45
C-O-C number	: 25 08 30_MS_HWB_GW		
Sampler	: AG, JJ, LG		
Site	: MS		
Quote number	: 2024-2025 Scope of Work		
No. of samples received	: 11		
No. of samples analysed	: 11		

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

Key

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

Workorder Comments

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

Summary of Outliers

Outliers : Quality Control Samples

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

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

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

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Method Blank (MB) Values								
Polycyclic Aromatic Hydrocarbons	QC-MRG4-2204975 001	----	Quinoline	91-22-5	E641A-L	0.015 µg/L MB-LOR	0.01 µg/L	Blank result exceeds permitted value

Result Qualifiers

Qualifier	Description
MB-LOR	*Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.*

Laboratory Control Sample (LCS) Recoveries								
Volatile Organic Compounds	QC-MRG2-2199778 002	----	Acetone	67-64-1	E611D	141 % MES	70.0-130%	Recovery greater than upper control limit
Volatile Organic Compounds	QC-MRG2-2199778 002	----	Methyl ethyl ketone [MEK]	78-93-3	E611D	131 % MES	70.0-130%	Recovery greater than upper control limit

Result Qualifiers

Qualifier	Description
MES	*Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).*

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
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid)										
HWB-KP22-04_2025-08-30	E567	30-Aug-2025	08-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid)										
HWB-KP23-02_2025-08-30	E567	30-Aug-2025	08-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid)										
HWB-KP23-03_2025-08-30	E567	30-Aug-2025	08-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid)										
MS-HWB-GW-REF1_2025-08-30	E567	30-Aug-2025	08-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid)										
QD-CC4_2025-08-30	E567	30-Aug-2025	08-Sep-2025	28 days	8 days	✓	08-Sep-2025	28 days	8 days	✓
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid)										
HWB-KP22-01_2025-08-30	E567	30-Aug-2025	08-Sep-2025	28 days	9 days	✓	08-Sep-2025	28 days	9 days	✓
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid)										
HWB-KP22-03_2025-08-30	E567	30-Aug-2025	08-Sep-2025	28 days	9 days	✓	08-Sep-2025	28 days	9 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid)										
HWB-KP22-05_2025-08-30	E567	30-Aug-2025	08-Sep-2025	28 days	9 days	✓	09-Sep-2025	28 days	9 days	✓
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid)										
HWB-KP23-01_2025-08-30	E567	30-Aug-2025	08-Sep-2025	28 days	9 days	✓	08-Sep-2025	28 days	9 days	✓
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid)										
MS-HWB-GW5_2025-08-30	E567	30-Aug-2025	08-Sep-2025	28 days	9 days	✓	08-Sep-2025	28 days	9 days	✓
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid)										
MS-HWB-GW-REF3_2025-08-30	E567	30-Aug-2025	08-Sep-2025	28 days	9 days	✓	08-Sep-2025	28 days	9 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid)										
HWB-KP22-01_2025-08-30	E298	30-Aug-2025	05-Sep-2025	28 days	6 days	✓	07-Sep-2025	28 days	6 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid)										
HWB-KP22-03_2025-08-30	E298	30-Aug-2025	05-Sep-2025	28 days	6 days	✓	07-Sep-2025	28 days	6 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid)										
HWB-KP22-04_2025-08-30	E298	30-Aug-2025	05-Sep-2025	28 days	6 days	✓	07-Sep-2025	28 days	6 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid)										
HWB-KP22-05_2025-08-30	E298	30-Aug-2025	05-Sep-2025	28 days	6 days	✓	07-Sep-2025	28 days	6 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid)										
HWB-KP23-01_2025-08-30	E298	30-Aug-2025	05-Sep-2025	28 days	6 days	✓	07-Sep-2025	28 days	6 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) HWB-KP23-02_2025-08-30	E298	30-Aug-2025	05-Sep-2025	28 days	6 days	✓	07-Sep-2025	28 days	6 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) HWB-KP23-03_2025-08-30	E298	30-Aug-2025	05-Sep-2025	28 days	6 days	✓	07-Sep-2025	28 days	6 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) MS-HWB-GW5_2025-08-30	E298	30-Aug-2025	05-Sep-2025	28 days	6 days	✓	07-Sep-2025	28 days	6 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) MS-HWB-GW-REF1_2025-08-30	E298	30-Aug-2025	05-Sep-2025	28 days	6 days	✓	07-Sep-2025	28 days	6 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) MS-HWB-GW-REF3_2025-08-30	E298	30-Aug-2025	05-Sep-2025	28 days	6 days	✓	07-Sep-2025	28 days	6 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) QD-CC4_2025-08-30	E298	30-Aug-2025	05-Sep-2025	28 days	6 days	✓	07-Sep-2025	28 days	6 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE HWB-KP22-01_2025-08-30	E235.Br	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE HWB-KP22-03_2025-08-30	E235.Br	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE HWB-KP22-04_2025-08-30	E235.Br	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Bromide in Water by IC										
HDPE										
HWB-KP22-05_2025-08-30	E235.Br	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	05-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE										
HWB-KP23-01_2025-08-30	E235.Br	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE										
HWB-KP23-02_2025-08-30	E235.Br	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE										
HWB-KP23-03_2025-08-30	E235.Br	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	05-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE										
MS-HWB-GW5_2025-08-30	E235.Br	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE										
MS-HWB-GW-REF1_2025-08-30	E235.Br	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	05-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE										
MS-HWB-GW-REF3_2025-08-30	E235.Br	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE										
QD-CC4_2025-08-30	E235.Br	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
HWB-KP22-01_2025-08-30	E235.Cl	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Chloride in Water by IC										
HDPE										
HWB-KP22-03_2025-08-30	E235.Cl	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
HWB-KP22-04_2025-08-30	E235.Cl	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
HWB-KP22-05_2025-08-30	E235.Cl	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	05-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
HWB-KP23-01_2025-08-30	E235.Cl	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
HWB-KP23-02_2025-08-30	E235.Cl	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
HWB-KP23-03_2025-08-30	E235.Cl	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	05-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
MS-HWB-GW5_2025-08-30	E235.Cl	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
MS-HWB-GW-REF1_2025-08-30	E235.Cl	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	05-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
MS-HWB-GW-REF3_2025-08-30	E235.Cl	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Chloride in Water by IC										
HDPE										
QD-CC4_2025-08-30	E235.Cl	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
HWB-KP22-01_2025-08-30	E235.F	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
HWB-KP22-03_2025-08-30	E235.F	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
HWB-KP22-04_2025-08-30	E235.F	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
HWB-KP22-05_2025-08-30	E235.F	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	05-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
HWB-KP23-01_2025-08-30	E235.F	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
HWB-KP23-02_2025-08-30	E235.F	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
HWB-KP23-03_2025-08-30	E235.F	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	05-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
MS-HWB-GW5_2025-08-30	E235.F	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
MS-HWB-GW-REF1_2025-08-30	E235.F	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	05-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
MS-HWB-GW-REF3_2025-08-30	E235.F	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
QD-CC4_2025-08-30	E235.F	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Nitrate in Water by IC										
HDPE										
HWB-KP22-01_2025-08-30	E235.NO3	30-Aug-2025	04-Sep-2025	3 days	5 days	× EHT	08-Sep-2025	3 days	5 days	× EHT
Anions and Nutrients : Nitrate in Water by IC										
HDPE										
HWB-KP22-03_2025-08-30	E235.NO3	30-Aug-2025	04-Sep-2025	3 days	5 days	× EHT	08-Sep-2025	3 days	5 days	× EHT
Anions and Nutrients : Nitrate in Water by IC										
HDPE										
HWB-KP22-04_2025-08-30	E235.NO3	30-Aug-2025	04-Sep-2025	3 days	5 days	× EHT	08-Sep-2025	3 days	5 days	× EHT
Anions and Nutrients : Nitrate in Water by IC										
HDPE										
HWB-KP22-05_2025-08-30	E235.NO3	30-Aug-2025	04-Sep-2025	3 days	5 days	× EHT	05-Sep-2025	3 days	5 days	× EHT
Anions and Nutrients : Nitrate in Water by IC										
HDPE										
HWB-KP23-01_2025-08-30	E235.NO3	30-Aug-2025	04-Sep-2025	3 days	5 days	× EHT	08-Sep-2025	3 days	5 days	× EHT
Anions and Nutrients : Nitrate in Water by IC										
HDPE										
HWB-KP23-02_2025-08-30	E235.NO3	30-Aug-2025	04-Sep-2025	3 days	5 days	× EHT	08-Sep-2025	3 days	5 days	× EHT

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Nitrate in Water by IC										
HDPE										
HWB-KP23-03_2025-08-30	E235.NO3	30-Aug-2025	04-Sep-2025	3 days	5 days	× EHT	05-Sep-2025	3 days	5 days	× EHT
Anions and Nutrients : Nitrate in Water by IC										
HDPE										
MS-HWB-GW5_2025-08-30	E235.NO3	30-Aug-2025	04-Sep-2025	3 days	5 days	× EHT	08-Sep-2025	3 days	5 days	× EHT
Anions and Nutrients : Nitrate in Water by IC										
HDPE										
MS-HWB-GW-REF1_2025-08-30	E235.NO3	30-Aug-2025	04-Sep-2025	3 days	5 days	× EHT	05-Sep-2025	3 days	5 days	× EHT
Anions and Nutrients : Nitrate in Water by IC										
HDPE										
MS-HWB-GW-REF3_2025-08-30	E235.NO3	30-Aug-2025	04-Sep-2025	3 days	5 days	× EHT	08-Sep-2025	3 days	5 days	× EHT
Anions and Nutrients : Nitrate in Water by IC										
HDPE										
QD-CC4_2025-08-30	E235.NO3	30-Aug-2025	04-Sep-2025	3 days	5 days	× EHT	08-Sep-2025	3 days	5 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE										
HWB-KP22-01_2025-08-30	E235.NO2	30-Aug-2025	04-Sep-2025	3 days	5 days	× EHT	08-Sep-2025	3 days	5 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE										
HWB-KP22-03_2025-08-30	E235.NO2	30-Aug-2025	04-Sep-2025	3 days	5 days	× EHT	08-Sep-2025	3 days	5 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE										
HWB-KP22-04_2025-08-30	E235.NO2	30-Aug-2025	04-Sep-2025	3 days	5 days	× EHT	08-Sep-2025	3 days	5 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE										
HWB-KP22-05_2025-08-30	E235.NO2	30-Aug-2025	04-Sep-2025	3 days	5 days	× EHT	05-Sep-2025	3 days	5 days	× EHT

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Nitrite in Water by IC										
HDPE HWB-KP23-01_2025-08-30	E235.NO2	30-Aug-2025	04-Sep-2025	3 days	5 days	× EHT	08-Sep-2025	3 days	5 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE HWB-KP23-02_2025-08-30	E235.NO2	30-Aug-2025	04-Sep-2025	3 days	5 days	× EHT	08-Sep-2025	3 days	5 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE HWB-KP23-03_2025-08-30	E235.NO2	30-Aug-2025	04-Sep-2025	3 days	5 days	× EHT	05-Sep-2025	3 days	5 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE MS-HWB-GW5_2025-08-30	E235.NO2	30-Aug-2025	04-Sep-2025	3 days	5 days	× EHT	08-Sep-2025	3 days	5 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE MS-HWB-GW-REF1_2025-08-30	E235.NO2	30-Aug-2025	04-Sep-2025	3 days	5 days	× EHT	05-Sep-2025	3 days	5 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE MS-HWB-GW-REF3_2025-08-30	E235.NO2	30-Aug-2025	04-Sep-2025	3 days	5 days	× EHT	08-Sep-2025	3 days	5 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE QD-CC4_2025-08-30	E235.NO2	30-Aug-2025	04-Sep-2025	3 days	5 days	× EHT	08-Sep-2025	3 days	5 days	× EHT
Anions and Nutrients : Sulfate in Water by IC										
HDPE HWB-KP22-01_2025-08-30	E235.SO4	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE HWB-KP22-03_2025-08-30	E235.SO4	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓

Matrix: **Water**

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Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
HWB-KP22-04_2025-08-30	E235.SO4	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
HWB-KP22-05_2025-08-30	E235.SO4	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	05-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
HWB-KP23-01_2025-08-30	E235.SO4	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
HWB-KP23-02_2025-08-30	E235.SO4	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
HWB-KP23-03_2025-08-30	E235.SO4	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	05-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
MS-HWB-GW5_2025-08-30	E235.SO4	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
MS-HWB-GW-REF1_2025-08-30	E235.SO4	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	05-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
MS-HWB-GW-REF3_2025-08-30	E235.SO4	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
QD-CC4_2025-08-30	E235.SO4	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	08-Sep-2025	28 days	5 days	✓

Matrix: **Water**

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Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
HWB-KP22-01_2025-08-30	E318	30-Aug-2025	06-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
HWB-KP22-03_2025-08-30	E318	30-Aug-2025	06-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
HWB-KP22-04_2025-08-30	E318	30-Aug-2025	06-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
HWB-KP23-01_2025-08-30	E318	30-Aug-2025	06-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
HWB-KP23-02_2025-08-30	E318	30-Aug-2025	06-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
HWB-KP23-03_2025-08-30	E318	30-Aug-2025	06-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
MS-HWB-GW5_2025-08-30	E318	30-Aug-2025	06-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
MS-HWB-GW-REF3_2025-08-30	E318	30-Aug-2025	06-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
QD-CC4_2025-08-30	E318	30-Aug-2025	06-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓

Matrix: **Water**

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Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
HWB-KP22-05_2025-08-30	E318	30-Aug-2025	08-Sep-2025	28 days	9 days	✓	08-Sep-2025	28 days	9 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
MS-HWB-GW-REF1_2025-08-30	E318	30-Aug-2025	08-Sep-2025	28 days	9 days	✓	08-Sep-2025	28 days	9 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
HWB-KP22-01_2025-08-30	E372-U	30-Aug-2025	06-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
HWB-KP22-03_2025-08-30	E372-U	30-Aug-2025	06-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
HWB-KP22-04_2025-08-30	E372-U	30-Aug-2025	06-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
HWB-KP22-05_2025-08-30	E372-U	30-Aug-2025	06-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
HWB-KP23-01_2025-08-30	E372-U	30-Aug-2025	06-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
HWB-KP23-02_2025-08-30	E372-U	30-Aug-2025	06-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
HWB-KP23-03_2025-08-30	E372-U	30-Aug-2025	06-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓

Matrix: **Water**

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Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
MS-HWB-GW5_2025-08-30	E372-U	30-Aug-2025	06-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
MS-HWB-GW-REF1_2025-08-30	E372-U	30-Aug-2025	06-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
MS-HWB-GW-REF3_2025-08-30	E372-U	30-Aug-2025	06-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
QD-CC4_2025-08-30	E372-U	30-Aug-2025	06-Sep-2025	28 days	7 days	✓	08-Sep-2025	28 days	7 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
HWB-KP22-01_2025-08-30	E509	30-Aug-2025	08-Sep-2025	28 days	9 days	✓	08-Sep-2025	28 days	9 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
HWB-KP22-03_2025-08-30	E509	30-Aug-2025	08-Sep-2025	28 days	9 days	✓	08-Sep-2025	28 days	9 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
HWB-KP22-04_2025-08-30	E509	30-Aug-2025	08-Sep-2025	28 days	9 days	✓	08-Sep-2025	28 days	9 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
HWB-KP22-05_2025-08-30	E509	30-Aug-2025	08-Sep-2025	28 days	9 days	✓	09-Sep-2025	28 days	9 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
HWB-KP23-01_2025-08-30	E509	30-Aug-2025	08-Sep-2025	28 days	9 days	✓	08-Sep-2025	28 days	9 days	✓

Matrix: **Water**

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Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
HWB-KP23-02_2025-08-30	E509	30-Aug-2025	08-Sep-2025	28 days	9 days	✓	08-Sep-2025	28 days	9 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
HWB-KP23-03_2025-08-30	E509	30-Aug-2025	08-Sep-2025	28 days	9 days	✓	08-Sep-2025	28 days	9 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
MS-HWB-GW5_2025-08-30	E509	30-Aug-2025	08-Sep-2025	28 days	9 days	✓	08-Sep-2025	28 days	9 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
MS-HWB-GW-REF1_2025-08-30	E509	30-Aug-2025	08-Sep-2025	28 days	9 days	✓	09-Sep-2025	28 days	9 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
MS-HWB-GW-REF3_2025-08-30	E509	30-Aug-2025	08-Sep-2025	28 days	9 days	✓	08-Sep-2025	28 days	9 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
QD-CC4_2025-08-30	E509	30-Aug-2025	08-Sep-2025	28 days	9 days	✓	08-Sep-2025	28 days	9 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
HWB-KP22-01_2025-08-30	E421	30-Aug-2025	05-Sep-2025	180 days	6 days	✓	05-Sep-2025	180 days	6 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
HWB-KP22-03_2025-08-30	E421	30-Aug-2025	05-Sep-2025	180 days	6 days	✓	05-Sep-2025	180 days	6 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
HWB-KP22-04_2025-08-30	E421	30-Aug-2025	05-Sep-2025	180 days	6 days	✓	05-Sep-2025	180 days	6 days	✓

Matrix: **Water**

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Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
HWB-KP22-05_2025-08-30	E421	30-Aug-2025	05-Sep-2025	180 days	6 days	✓	05-Sep-2025	180 days	6 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
HWB-KP23-01_2025-08-30	E421	30-Aug-2025	05-Sep-2025	180 days	6 days	✓	05-Sep-2025	180 days	6 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
HWB-KP23-02_2025-08-30	E421	30-Aug-2025	05-Sep-2025	180 days	6 days	✓	05-Sep-2025	180 days	6 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
HWB-KP23-03_2025-08-30	E421	30-Aug-2025	05-Sep-2025	180 days	6 days	✓	05-Sep-2025	180 days	6 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
MS-HWB-GW5_2025-08-30	E421	30-Aug-2025	05-Sep-2025	180 days	6 days	✓	05-Sep-2025	180 days	6 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
MS-HWB-GW-REF1_2025-08-30	E421	30-Aug-2025	05-Sep-2025	180 days	6 days	✓	05-Sep-2025	180 days	6 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
MS-HWB-GW-REF3_2025-08-30	E421	30-Aug-2025	05-Sep-2025	180 days	6 days	✓	05-Sep-2025	180 days	6 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
QD-CC4_2025-08-30	E421	30-Aug-2025	05-Sep-2025	180 days	6 days	✓	05-Sep-2025	180 days	6 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate)										
HWB-KP22-01_2025-08-30	E581.F1-L	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	04-Sep-2025	14 days	5 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) HWB-KP22-03_2025-08-30	E581.F1-L	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	04-Sep-2025	14 days	5 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) HWB-KP22-04_2025-08-30	E581.F1-L	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	04-Sep-2025	14 days	5 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) HWB-KP22-05_2025-08-30	E581.F1-L	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	04-Sep-2025	14 days	5 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) HWB-KP23-01_2025-08-30	E581.F1-L	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	04-Sep-2025	14 days	5 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) HWB-KP23-02_2025-08-30	E581.F1-L	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	04-Sep-2025	14 days	5 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) HWB-KP23-03_2025-08-30	E581.F1-L	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	04-Sep-2025	14 days	5 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) MS-HWB-GW5_2025-08-30	E581.F1-L	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	04-Sep-2025	14 days	5 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) MS-HWB-GW-REF1_2025-08-30	E581.F1-L	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	04-Sep-2025	14 days	5 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) MS-HWB-GW-REF3_2025-08-30	E581.F1-L	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	04-Sep-2025	14 days	5 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) QD-CC4_2025-08-30	E581.F1-L	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	04-Sep-2025	14 days	5 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) HWB-KP22-03_2025-08-30	E601	30-Aug-2025	09-Sep-2025	14 days	10 days	✓	09-Sep-2025	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) HWB-KP22-04_2025-08-30	E601	30-Aug-2025	09-Sep-2025	14 days	10 days	✓	09-Sep-2025	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) HWB-KP22-05_2025-08-30	E601	30-Aug-2025	09-Sep-2025	14 days	10 days	✓	09-Sep-2025	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) HWB-KP23-02_2025-08-30	E601	30-Aug-2025	09-Sep-2025	14 days	10 days	✓	09-Sep-2025	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) HWB-KP23-03_2025-08-30	E601	30-Aug-2025	09-Sep-2025	14 days	10 days	✓	09-Sep-2025	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) MS-HWB-GW5_2025-08-30	E601	30-Aug-2025	09-Sep-2025	14 days	10 days	✓	09-Sep-2025	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) MS-HWB-GW-REF1_2025-08-30	E601	30-Aug-2025	09-Sep-2025	14 days	10 days	✓	09-Sep-2025	40 days	0 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) QD-CC4_2025-08-30	E601	30-Aug-2025	09-Sep-2025	14 days	10 days	✓	09-Sep-2025	40 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
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
HWB-KP22-01_2025-08-30	E601	30-Aug-2025	08-Sep-2025	14 days	9 days	✓	09-Sep-2025	40 days	1 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
HWB-KP23-01_2025-08-30	E601	30-Aug-2025	08-Sep-2025	14 days	9 days	✓	09-Sep-2025	40 days	1 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
MS-HWB-GW-REF3_2025-08-30	E601	30-Aug-2025	08-Sep-2025	14 days	9 days	✓	09-Sep-2025	40 days	1 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
HWB-KP22-01_2025-08-30	E290	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	05-Sep-2025	14 days	5 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
HWB-KP22-03_2025-08-30	E290	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	05-Sep-2025	14 days	5 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
HWB-KP22-04_2025-08-30	E290	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	05-Sep-2025	14 days	5 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
HWB-KP22-05_2025-08-30	E290	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	05-Sep-2025	14 days	5 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
HWB-KP23-01_2025-08-30	E290	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	05-Sep-2025	14 days	5 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
HWB-KP23-02_2025-08-30	E290	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	05-Sep-2025	14 days	5 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : Alkalinity Species by Titration										
HDPE										
HWB-KP23-03_2025-08-30	E290	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	05-Sep-2025	14 days	5 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
MS-HWB-GW5_2025-08-30	E290	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	05-Sep-2025	14 days	5 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
MS-HWB-GW-REF1_2025-08-30	E290	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	05-Sep-2025	14 days	5 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
MS-HWB-GW-REF3_2025-08-30	E290	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	05-Sep-2025	14 days	5 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
QD-CC4_2025-08-30	E290	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	05-Sep-2025	14 days	5 days	✓
Physical Tests : Conductivity in Water										
HDPE										
HWB-KP22-01_2025-08-30	E100	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	05-Sep-2025	28 days	5 days	✓
Physical Tests : Conductivity in Water										
HDPE										
HWB-KP22-03_2025-08-30	E100	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	05-Sep-2025	28 days	5 days	✓
Physical Tests : Conductivity in Water										
HDPE										
HWB-KP22-04_2025-08-30	E100	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	05-Sep-2025	28 days	5 days	✓
Physical Tests : Conductivity in Water										
HDPE										
HWB-KP22-05_2025-08-30	E100	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	05-Sep-2025	28 days	5 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : Conductivity in Water										
HDPE										
HWB-KP23-01_2025-08-30	E100	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	05-Sep-2025	28 days	5 days	✓
Physical Tests : Conductivity in Water										
HDPE										
HWB-KP23-02_2025-08-30	E100	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	05-Sep-2025	28 days	5 days	✓
Physical Tests : Conductivity in Water										
HDPE										
HWB-KP23-03_2025-08-30	E100	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	05-Sep-2025	28 days	5 days	✓
Physical Tests : Conductivity in Water										
HDPE										
MS-HWB-GW5_2025-08-30	E100	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	05-Sep-2025	28 days	5 days	✓
Physical Tests : Conductivity in Water										
HDPE										
MS-HWB-GW-REF1_2025-08-30	E100	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	05-Sep-2025	28 days	5 days	✓
Physical Tests : Conductivity in Water										
HDPE										
MS-HWB-GW-REF3_2025-08-30	E100	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	05-Sep-2025	28 days	5 days	✓
Physical Tests : Conductivity in Water										
HDPE										
QD-CC4_2025-08-30	E100	30-Aug-2025	04-Sep-2025	28 days	5 days	✓	05-Sep-2025	28 days	5 days	✓
Physical Tests : pH by Meter										
HDPE										
HWB-KP22-05_2025-08-30	E108	30-Aug-2025	02-Sep-2025	0.25 hrs	62 hrs	× EHTR-FM	02-Sep-2025	0.25 hrs	62 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE										
MS-HWB-GW-REF1_2025-08-30	E108	30-Aug-2025	02-Sep-2025	0.25 hrs	62 hrs	× EHTR-FM	02-Sep-2025	0.25 hrs	62 hrs	× EHTR-FM

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
Physical Tests : pH by Meter										
HDPE HWB-KP23-03_2025-08-30	E108	30-Aug-2025	02-Sep-2025	0.25 hrs	63 hrs	× EHTR-FM	02-Sep-2025	0.25 hrs	63 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE HWB-KP22-04_2025-08-30	E108	30-Aug-2025	02-Sep-2025	0.25 hrs	64 hrs	× EHTR-FM	02-Sep-2025	0.25 hrs	64 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE HWB-KP23-02_2025-08-30	E108	30-Aug-2025	02-Sep-2025	0.25 hrs	65 hrs	× EHTR-FM	02-Sep-2025	0.25 hrs	65 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE QD-CC4_2025-08-30	E108	30-Aug-2025	02-Sep-2025	0.25 hrs	65 hrs	× EHTR-FM	02-Sep-2025	0.25 hrs	65 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE HWB-KP22-03_2025-08-30	E108	30-Aug-2025	02-Sep-2025	0.25 hrs	66 hrs	× EHTR-FM	02-Sep-2025	0.25 hrs	66 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE MS-HWB-GW5_2025-08-30	E108	30-Aug-2025	02-Sep-2025	0.25 hrs	67 hrs	× EHTR-FM	02-Sep-2025	0.25 hrs	67 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE HWB-KP22-01_2025-08-30	E108	30-Aug-2025	02-Sep-2025	0.25 hrs	68 hrs	× EHTR-FM	02-Sep-2025	0.25 hrs	68 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE HWB-KP23-01_2025-08-30	E108	30-Aug-2025	02-Sep-2025	0.25 hrs	69 hrs	× EHTR-FM	02-Sep-2025	0.25 hrs	69 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE MS-HWB-GW-REF3_2025-08-30	E108	30-Aug-2025	02-Sep-2025	0.25 hrs	69 hrs	× EHTR-FM	02-Sep-2025	0.25 hrs	69 hrs	× EHTR-FM

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
Physical Tests : TDS by Gravimetry										
HDPE										
HWB-KP22-01_2025-08-30	E162	30-Aug-2025	----	----	----		04-Sep-2025	7 days	5 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
HWB-KP22-03_2025-08-30	E162	30-Aug-2025	----	----	----		04-Sep-2025	7 days	5 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
HWB-KP22-04_2025-08-30	E162	30-Aug-2025	----	----	----		04-Sep-2025	7 days	5 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
HWB-KP22-05_2025-08-30	E162	30-Aug-2025	----	----	----		04-Sep-2025	7 days	5 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
HWB-KP23-01_2025-08-30	E162	30-Aug-2025	----	----	----		04-Sep-2025	7 days	5 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
HWB-KP23-02_2025-08-30	E162	30-Aug-2025	----	----	----		04-Sep-2025	7 days	5 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
HWB-KP23-03_2025-08-30	E162	30-Aug-2025	----	----	----		04-Sep-2025	7 days	5 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
MS-HWB-GW5_2025-08-30	E162	30-Aug-2025	----	----	----		04-Sep-2025	7 days	5 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
MS-HWB-GW-REF1_2025-08-30	E162	30-Aug-2025	----	----	----		04-Sep-2025	7 days	5 days	✓

Matrix: **Water**

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Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : TDS by Gravimetry										
HDPE										
MS-HWB-GW-REF3_2025-08-30	E162	30-Aug-2025	----	----	----		04-Sep-2025	7 days	5 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
QD-CC4_2025-08-30	E162	30-Aug-2025	----	----	----		04-Sep-2025	7 days	5 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE										
HWB-KP22-01_2025-08-30	E160-L	30-Aug-2025	----	----	----		03-Sep-2025	7 days	4 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE										
HWB-KP22-03_2025-08-30	E160-L	30-Aug-2025	----	----	----		03-Sep-2025	7 days	4 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE										
HWB-KP22-04_2025-08-30	E160-L	30-Aug-2025	----	----	----		03-Sep-2025	7 days	4 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE										
HWB-KP22-05_2025-08-30	E160-L	30-Aug-2025	----	----	----		03-Sep-2025	7 days	4 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE										
HWB-KP23-01_2025-08-30	E160-L	30-Aug-2025	----	----	----		03-Sep-2025	7 days	4 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE										
HWB-KP23-02_2025-08-30	E160-L	30-Aug-2025	----	----	----		03-Sep-2025	7 days	4 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE										
HWB-KP23-03_2025-08-30	E160-L	30-Aug-2025	----	----	----		03-Sep-2025	7 days	4 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
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE MS-HWB-GW5_2025-08-30	E160-L	30-Aug-2025	----	----	----		03-Sep-2025	7 days	4 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE MS-HWB-GW-REF1_2025-08-30	E160-L	30-Aug-2025	----	----	----		03-Sep-2025	7 days	4 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE MS-HWB-GW-REF3_2025-08-30	E160-L	30-Aug-2025	----	----	----		03-Sep-2025	7 days	4 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE QD-CC4_2025-08-30	E160-L	30-Aug-2025	----	----	----		03-Sep-2025	7 days	4 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE HWB-KP22-01_2025-08-30	E121	30-Aug-2025	----	----	----		02-Sep-2025	3 days	3 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE HWB-KP22-03_2025-08-30	E121	30-Aug-2025	----	----	----		02-Sep-2025	3 days	3 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE HWB-KP22-04_2025-08-30	E121	30-Aug-2025	----	----	----		02-Sep-2025	3 days	3 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE HWB-KP22-05_2025-08-30	E121	30-Aug-2025	----	----	----		02-Sep-2025	3 days	3 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE HWB-KP23-01_2025-08-30	E121	30-Aug-2025	----	----	----		02-Sep-2025	3 days	3 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
Physical Tests : Turbidity by Nephelometry										
HDPE HWB-KP23-02_2025-08-30	E121	30-Aug-2025	----	----	----		02-Sep-2025	3 days	3 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE HWB-KP23-03_2025-08-30	E121	30-Aug-2025	----	----	----		02-Sep-2025	3 days	3 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE MS-HWB-GW5_2025-08-30	E121	30-Aug-2025	----	----	----		02-Sep-2025	3 days	3 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE MS-HWB-GW-REF1_2025-08-30	E121	30-Aug-2025	----	----	----		02-Sep-2025	3 days	3 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE MS-HWB-GW-REF3_2025-08-30	E121	30-Aug-2025	----	----	----		02-Sep-2025	3 days	3 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE QD-CC4_2025-08-30	E121	30-Aug-2025	----	----	----		02-Sep-2025	3 days	3 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate) HWB-KP22-03_2025-08-30	E641A-L	30-Aug-2025	09-Sep-2025	14 days	10 days	✓	09-Sep-2025	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate) HWB-KP22-04_2025-08-30	E641A-L	30-Aug-2025	09-Sep-2025	14 days	10 days	✓	09-Sep-2025	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate) HWB-KP22-05_2025-08-30	E641A-L	30-Aug-2025	09-Sep-2025	14 days	10 days	✓	09-Sep-2025	40 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
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate) HWB-KP23-02_2025-08-30	E641A-L	30-Aug-2025	09-Sep-2025	14 days	10 days	✓	09-Sep-2025	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate) HWB-KP23-03_2025-08-30	E641A-L	30-Aug-2025	09-Sep-2025	14 days	10 days	✓	09-Sep-2025	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate) MS-HWB-GW5_2025-08-30	E641A-L	30-Aug-2025	09-Sep-2025	14 days	10 days	✓	09-Sep-2025	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate) MS-HWB-GW-REF1_2025-08-30	E641A-L	30-Aug-2025	09-Sep-2025	14 days	10 days	✓	09-Sep-2025	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate) QD-CC4_2025-08-30	E641A-L	30-Aug-2025	09-Sep-2025	14 days	10 days	✓	09-Sep-2025	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate) HWB-KP22-01_2025-08-30	E641A-L	30-Aug-2025	08-Sep-2025	14 days	9 days	✓	08-Sep-2025	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate) HWB-KP23-01_2025-08-30	E641A-L	30-Aug-2025	08-Sep-2025	14 days	9 days	✓	08-Sep-2025	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate) MS-HWB-GW-REF3_2025-08-30	E641A-L	30-Aug-2025	08-Sep-2025	14 days	9 days	✓	08-Sep-2025	40 days	0 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) HWB-KP22-01_2025-08-30	E611D	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	04-Sep-2025	14 days	5 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) HWB-KP22-03_2025-08-30	E611D	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	04-Sep-2025	14 days	5 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) HWB-KP22-04_2025-08-30	E611D	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	04-Sep-2025	14 days	5 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) HWB-KP22-05_2025-08-30	E611D	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	04-Sep-2025	14 days	5 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) HWB-KP23-01_2025-08-30	E611D	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	04-Sep-2025	14 days	5 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) HWB-KP23-02_2025-08-30	E611D	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	04-Sep-2025	14 days	5 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) HWB-KP23-03_2025-08-30	E611D	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	04-Sep-2025	14 days	5 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) MS-HWB-GW5_2025-08-30	E611D	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	04-Sep-2025	14 days	5 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) MS-HWB-GW-REF1_2025-08-30	E611D	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	04-Sep-2025	14 days	5 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) MS-HWB-GW-REF3_2025-08-30	E611D	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	04-Sep-2025	14 days	5 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
QD-CC4_2025-08-30	E611D	30-Aug-2025	04-Sep-2025	14 days	5 days	✓	04-Sep-2025	14 days	5 days	✓

Legend & Qualifier Definitions

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

EHT: Exceeded ALS recommended hold time prior to analysis.

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

Quality Control Parameter Frequency Compliance

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

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Conductivity in Water	E100	2199569	2	22	9.0	5.0	✓
pH by Meter	E108	2193664	1	20	5.0	5.0	✓
Turbidity by Nephelometry	E121	2193666	1	20	5.0	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	2193668	1	20	5.0	5.0	✓
TDS by Gravimetry	E162	2193670	1	20	5.0	5.0	✓
Bromide in Water by IC	E235.Br	2199570	2	25	8.0	5.0	✓
Chloride in Water by IC	E235.Cl	2199574	2	38	5.2	5.0	✓
Fluoride in Water by IC	E235.F	2199571	2	30	6.6	5.0	✓
Nitrite in Water by IC	E235.NO2	2199573	2	29	6.9	5.0	✓
Nitrate in Water by IC	E235.NO3	2199572	2	29	6.9	5.0	✓
Sulfate in Water by IC	E235.SO4	2199575	2	31	6.4	5.0	✓
Alkalinity Species by Titration	E290	2199568	2	34	5.8	5.0	✓
Ammonia by Fluorescence	E298	2201872	2	40	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2201870	2	37	5.4	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2201871	2	40	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2201064	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2201321	2	40	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2199634	2	30	6.6	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2199633	2	35	5.7	5.0	✓
Laboratory Control Samples (LCS)							
Conductivity in Water	E100	2199569	2	22	9.0	5.0	✓
pH by Meter	E108	2193664	1	20	5.0	5.0	✓
Turbidity by Nephelometry	E121	2193666	1	20	5.0	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	2193668	1	20	5.0	5.0	✓
TDS by Gravimetry	E162	2193670	1	20	5.0	5.0	✓
Bromide in Water by IC	E235.Br	2199570	2	25	8.0	5.0	✓
Chloride in Water by IC	E235.Cl	2199574	2	38	5.2	5.0	✓
Fluoride in Water by IC	E235.F	2199571	2	30	6.6	5.0	✓
Nitrite in Water by IC	E235.NO2	2199573	2	29	6.9	5.0	✓
Nitrate in Water by IC	E235.NO3	2199572	2	29	6.9	5.0	✓
Sulfate in Water by IC	E235.SO4	2199575	2	31	6.4	5.0	✓
Alkalinity Species by Titration	E290	2199568	2	34	5.8	5.0	✓
Ammonia by Fluorescence	E298	2201872	2	40	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2201870	2	37	5.4	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2201871	2	40	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2201064	1	20	5.0	5.0	✓

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Control Samples (LCS) - Continued							
Dissolved Mercury in Water by CVAAS	E509	2201321	2	40	5.0	5.0	✓
Oil & Grease by Gravimetry	E567	2204946	2	22	9.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2199634	2	30	6.6	5.0	✓
CCME PHCs - F2-F4 by GC-FID	E601	2204975	2	25	8.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2199633	2	35	5.7	5.0	✓
PAHs in Water by Hexane LVI GC-MS (Low Level)	E641A-L	2204976	2	23	8.7	5.0	✓
Method Blanks (MB)							
Conductivity in Water	E100	2199569	2	22	9.0	5.0	✓
Turbidity by Nephelometry	E121	2193666	1	20	5.0	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	2193668	1	20	5.0	5.0	✓
TDS by Gravimetry	E162	2193670	1	20	5.0	5.0	✓
Bromide in Water by IC	E235.Br	2199570	2	25	8.0	5.0	✓
Chloride in Water by IC	E235.Cl	2199574	2	38	5.2	5.0	✓
Fluoride in Water by IC	E235.F	2199571	2	30	6.6	5.0	✓
Nitrite in Water by IC	E235.NO2	2199573	2	29	6.9	5.0	✓
Nitrate in Water by IC	E235.NO3	2199572	2	29	6.9	5.0	✓
Sulfate in Water by IC	E235.SO4	2199575	2	31	6.4	5.0	✓
Alkalinity Species by Titration	E290	2199568	2	34	5.8	5.0	✓
Ammonia by Fluorescence	E298	2201872	2	40	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2201870	2	37	5.4	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2201871	2	40	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2201064	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2201321	2	40	5.0	5.0	✓
Oil & Grease by Gravimetry	E567	2204946	2	22	9.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2199634	2	30	6.6	5.0	✓
CCME PHCs - F2-F4 by GC-FID	E601	2204975	2	25	8.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2199633	2	35	5.7	5.0	✓
PAHs in Water by Hexane LVI GC-MS (Low Level)	E641A-L	2204976	2	23	8.7	5.0	✓
Matrix Spikes (MS)							
Bromide in Water by IC	E235.Br	2199570	2	25	8.0	5.0	✓
Chloride in Water by IC	E235.Cl	2199574	2	38	5.2	5.0	✓
Fluoride in Water by IC	E235.F	2199571	2	30	6.6	5.0	✓
Nitrite in Water by IC	E235.NO2	2199573	2	29	6.9	5.0	✓
Nitrate in Water by IC	E235.NO3	2199572	2	29	6.9	5.0	✓
Sulfate in Water by IC	E235.SO4	2199575	2	31	6.4	5.0	✓
Ammonia by Fluorescence	E298	2201872	2	40	5.0	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2201870	2	37	5.4	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2201871	2	40	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2201064	1	20	5.0	5.0	✓

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Matrix Spikes (MS) - Continued							
Dissolved Mercury in Water by CVAAS	E509	2201321	2	40	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2199634	2	30	6.6	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2199633	2	35	5.7	5.0	✓

Methodology References and Summaries

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

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

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Nitrate in Water by IC	E235.NO3 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Sulfate in Water by IC	E235.SO4 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Alkalinity Species by Titration	E290 ALS Environmental - Waterloo	Water	APHA 2320 B (mod)	Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.
Ammonia by Fluorescence	E298 ALS Environmental - Waterloo	Water	Method Fialab 100, 2018	Ammonia in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021)
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318 ALS Environmental - Waterloo	Water	Method Fialab 100, 2018	TKN in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021).
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Total Phosphorus is determined colourimetrically using a discrete analyzer after heated persulfate digestion of the sample.
Dissolved Metals in Water by CRC ICPMS	E421 ALS Environmental - Waterloo	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Dissolved Mercury in Water by CVAAS	E509 ALS Environmental - Waterloo	Water	APHA 3030B/EPA 1631E (mod)	Water samples are filtered (0.45 um), preserved with HCl, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.
Oil & Grease by Gravimetry	E567 ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane and the extract is evaporated to dryness. The residue is then weighed to determine Oil and Grease.
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1 (mod)	CCME Fraction 1 (F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
CCME PHCs - F2-F4 by GC-FID	E601 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	Sample extracts are analyzed by GC-FID for CCME hydrocarbon fractions (F2-F4). Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
VOCs (Eastern Canada List) by Headspace GC-MS	E611D ALS Environmental - Waterloo	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PAHs in Water by Hexane LVI GC-MS (Low Level)	E641A-L ALS Environmental - Waterloo	Water	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS.
F1-BTEX	EC580 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).
Sum F1 to F4 (C6-C50)	EC581 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	Hydrocarbons, total (C6-C50) is the sum of CCME Fractions F1(C6-C10), F2(C10-C16), F3(C16-C34), and F4(C34-C50). F4G-sg is not used within this calculation due to overlap with other fractions.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Ammonia	EP298 ALS Environmental - Waterloo	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Digestion for TKN in water	EP318 ALS Environmental - Waterloo	Water	APHA 4500-Norg D (mod)	Samples are digested at high temperature using Sulfuric Acid with Copper catalyst, which converts organic nitrogen sources to Ammonia, which is then quantified by the analytical method as TKN. This method is unsuitable for samples containing high levels of nitrate. If nitrate exceeds TKN concentration by ten times or more, results may be biased low.
Digestion for Total Phosphorus in water	EP372 ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Samples are heated with a persulfate digestion reagent.
Dissolved Metals Water Filtration	EP421 ALS Environmental - Waterloo	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO3.
Dissolved Mercury Water Filtration	EP509 ALS Environmental - Waterloo	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HCl.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Oil & Grease Extraction for Gravimetry	EP567 ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane by liquid-liquid extraction.
VOCs Preparation for Headspace Analysis	EP581 ALS Environmental - Waterloo	Water	EPA 5021A (mod)	Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler. An aliquot of the headspace is then injected into a GC-MS-FID.
PHCs and PAHs Hexane Extraction	EP601 ALS Environmental - Waterloo	Water	EPA 3511 (mod)	Petroleum Hydrocarbons (PHCs) and Polycyclic Aromatic Hydrocarbons (PAHs) are extracted using a hexane liquid-liquid extraction.

ALS Canada Ltd.

QUALITY CONTROL REPORT

Work Order	: **BF2500308**	Page	: 1 of 29
Client	: Baffinland Iron Mines Corporation	Laboratory	: ALS Environmental - Baffin Island
Contact	: Environmental Lab Results	Account Manager	: Rick Hawthorne
Address	: 360 Oakville Place Dr Suite 300 Oakville ON Canada L6H 6K8	Address	: Mary River, Qikqtani Region Baffin Island, Nunavut Canada
Telephone	: ----	Telephone	:
Project	: HWB Groundwater	Date Samples Received	: 01-Sep-2025 17:25
PO	: 4500156571	Date Analysis Commenced	: 02-Sep-2025
C-O-C number	: 25 08 30_MS_HWB_GW	Issue Date	: 11-Sep-2025 09:45
Sampler	: AG, JJ, LG		
Site	: MS		
Quote number	: 2024-2025 Scope of Work		
No. of samples received	: 11		
No. of samples analysed	: 11		

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Laboratory Department*
Amaninder Dhillon	Team Lead - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Cedrick Velasco	Lab Manager	Baffin Island Inorganics, Baffin Island, Nunavut
Danielle Gravel	Supervisor - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
David Tremblett	VOC Section Supervisor	Waterloo VOC, Waterloo, Ontario
Jeremy Gingras	Supervisor - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Rachel Cameron	Supervisor - Semi-Volatile Extractions	Waterloo Organics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Inorganics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Metals, Waterloo, Ontario

General Comments

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

Key :

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

Workorder Comments

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 2193664)											
BF2500308-001	MS-HWB-GW-REF3_2025-08-30	pH	----	E108	0.10	pH units	7.25	7.28	0.413%	4%	----
Physical Tests (QC Lot: 2193666)											
BF2500308-001	MS-HWB-GW-REF3_2025-08-30	Turbidity	----	E121	0.10	NTU	1.92	1.78	7.57%	15%	----
Physical Tests (QC Lot: 2193668)											
BF2500308-002	HWB-KP23-01_2025-08-30	Solids, total suspended [TSS]	----	E160-L	1.3	mg/L	3.4	3.2	0.2	Diff <2x LOR	----
Physical Tests (QC Lot: 2193670)											
BF2500308-001	MS-HWB-GW-REF3_2025-08-30	Solids, total dissolved [TDS]	----	E162	18	mg/L	2000	1980	0.980%	20%	----
Physical Tests (QC Lot: 2199568)											
BF2500299-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	2.0	mg/L	153	153	0.0782%	20%	----
Physical Tests (QC Lot: 2199569)											
BF2500299-001	Anonymous	Conductivity	----	E100	1.0	µS/cm	345	347	0.578%	10%	----
Physical Tests (QC Lot: 2199618)											
BF2500298-001	Anonymous	Conductivity	----	E100	1.0	µS/cm	166	165	0.784%	10%	----
Physical Tests (QC Lot: 2199619)											
BF2500298-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	2.0	mg/L	71.5	71.4	0.140%	20%	----
Anions and Nutrients (QC Lot: 2199570)											
BF2500299-001	Anonymous	Bromide	24959-67-9	E235.Br	0.10	mg/L	<0.10	<0.10	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2199571)											
BF2500299-001	Anonymous	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.085	0.081	0.004	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2199572)											
BF2500299-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	0.210	0.206	1.78%	20%	----
Anions and Nutrients (QC Lot: 2199573)											
BF2500299-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2199574)											
BF2500299-001	Anonymous	Chloride	16887-00-6	E235.Cl	0.50	mg/L	4.21	3.99	0.22	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2199575)											
BF2500299-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	20.4	20.2	0.788%	20%	----
Anions and Nutrients (QC Lot: 2199612)											

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Anions and Nutrients (QC Lot: 2199612) - continued											
BF2500308-009	HWB-KP23-03_2025-08-30	Bromide	24959-67-9	E235.Br	0.10	mg/L	<0.10	<0.10	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2199613)											
BF2500308-009	HWB-KP23-03_2025-08-30	Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	<0.020	<0.020	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2199614)											
BF2500308-009	HWB-KP23-03_2025-08-30	Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2199615)											
BF2500308-009	HWB-KP23-03_2025-08-30	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	10.9	11.1	1.83%	20%	----
Anions and Nutrients (QC Lot: 2199616)											
BF2500308-009	HWB-KP23-03_2025-08-30	Chloride	16887-00-6	E235.Cl	0.50	mg/L	40.5	41.1	1.45%	20%	----
Anions and Nutrients (QC Lot: 2199617)											
BF2500308-009	HWB-KP23-03_2025-08-30	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.085	0.086	0.0007	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2201870)											
BF2500303-002	Anonymous	Kjeldahl nitrogen, total [TKN]	----	E318	0.050	mg/L	2.17	2.13	2.05%	20%	----
Anions and Nutrients (QC Lot: 2201871)											
BF2500303-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0050	0.0051	0.0001	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2201872)											
BF2500304-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0500	mg/L	2.20	2.28	3.29%	20%	----
Anions and Nutrients (QC Lot: 2201885)											
BF2500308-011	HWB-KP22-05_2025-08-30	Kjeldahl nitrogen, total [TKN]	----	E318	0.050	mg/L	0.782	0.825	5.34%	20%	----
Anions and Nutrients (QC Lot: 2201887)											
BF2500308-010	MS-HWB-GW-REF1_2025-08-30	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0083	0.0096	0.0013	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2201891)											
BF2500311-008	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 2201064)											
BF2500308-001	MS-HWB-GW-REF3_2025-08-30	Aluminum, dissolved	7429-90-5	E421	0.0100	mg/L	<0.0100	<0.0100	0	Diff <2x LOR	----
		Antimony, dissolved	7440-36-0	E421	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00100	mg/L	0.100	0.102	1.91%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000200	mg/L	<0.000200	<0.000200	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000500	mg/L	<0.000500	<0.000500	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.100	mg/L	<0.100	<0.100	0	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000500	mg/L	0.0000670	0.0000620	0.0000050	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.500	mg/L	197	192	2.77%	20%	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Dissolved Metals (QC Lot: 2201064) - continued											
BF2500308-001	MS-HWB-GW-REF3_2025-08-30	Cesium, dissolved	7440-46-2	E421	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00500	mg/L	<0.00500	<0.00500	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00200	mg/L	0.00274	0.00255	0.00019	Diff <2x LOR	----
		Iron, dissolved	7439-89-6	E421	0.100	mg/L	<0.100	<0.100	0	Diff <2x LOR	----
		Lead, dissolved	7439-92-1	E421	0.000500	mg/L	<0.000500	<0.000500	0	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0100	mg/L	0.0123	0.0117	0.0006	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.0500	mg/L	217	215	0.890%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00100	mg/L	0.216	0.215	0.156%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000500	mg/L	0.000540	0.000570	0.000030	Diff <2x LOR	----
		Nickel, dissolved	7440-02-0	E421	0.00500	mg/L	0.0215	0.0208	0.00068	Diff <2x LOR	----
		Phosphorus, dissolved	7723-14-0	E421	0.500	mg/L	<0.500	<0.500	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.500	mg/L	9.82	9.62	2.01%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00200	mg/L	0.0132	0.0132	0.000003	Diff <2x LOR	----
		Selenium, dissolved	7782-49-2	E421	0.000500	mg/L	<0.000500	<0.000500	0	Diff <2x LOR	----
		Silicon, dissolved	7440-21-3	E421	0.500	mg/L	5.74	5.67	1.19%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.500	mg/L	15.7	15.6	1.15%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00200	mg/L	0.349	0.351	0.617%	20%	----
		Sulfur, dissolved	7704-34-9	E421	5.00	mg/L	8.75	8.20	0.55	Diff <2x LOR	----
		Tellurium, dissolved	13494-80-9	E421	0.00200	mg/L	<0.00200	<0.00200	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E421	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.00300	mg/L	<0.00300	<0.00300	0	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000100	mg/L	0.00585	0.00584	0.171%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00500	mg/L	<0.00500	<0.00500	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0100	mg/L	<0.0100	<0.0100	0	Diff <2x LOR	----
		Zirconium, dissolved	7440-67-7	E421	0.00300	mg/L	<0.00300	<0.00300	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 2201321)											
BF2500303-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 2201328)											
BF2500277-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Volatile Organic Compounds (QC Lot: 2199633)											
BF2500303-001	Anonymous	Acetone	67-64-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Benzene	71-43-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromodichloromethane	75-27-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromoform	75-25-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromomethane	74-83-9	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Carbon disulfide	75-15-0	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Carbon tetrachloride	56-23-5	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Chlorobenzene	108-90-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroethane	75-00-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroform	67-66-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloromethane	74-87-3	E611D	2.0	µg/L	<2.0	<2.0	0	Diff <2x LOR	----
		Dibromochloromethane	124-48-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dibromoethane, 1,2-	106-93-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorodifluoromethane	75-71-8	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,1-	75-34-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,2-	107-06-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, 1,1-	75-35-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	0.94	0.92	0.02	Diff <2x LOR	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Dichloropropane, 1,2-	78-87-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Hexane, n-	110-54-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Hexanone, 2-	591-78-6	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Volatile Organic Compounds (QC Lot: 2199633) - continued											
BF2500303-001	Anonymous	Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethylene	127-18-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Toluene	108-88-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichlorofluoromethane	75-69-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Vinyl chloride	75-01-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
Volatile Organic Compounds (QC Lot: 2199778)											
WT2524196-019	Anonymous	Acetone	67-64-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Benzene	71-43-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromodichloromethane	75-27-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromoform	75-25-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromomethane	74-83-9	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Carbon disulfide	75-15-0	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Carbon tetrachloride	56-23-5	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Chlorobenzene	108-90-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroethane	75-00-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroform	67-66-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloromethane	74-87-3	E611D	2.0	µg/L	<2.0	<2.0	0	Diff <2x LOR	----
		Dibromochloromethane	124-48-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dibromoethane, 1,2-	106-93-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorodifluoromethane	75-71-8	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,1-	75-34-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,2-	107-06-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, 1,1-	75-35-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Volatile Organic Compounds (QC Lot: 2199778) - continued											
WT2524196-019	Anonymous	Dichloropropane, 1,2-	78-87-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Hexane, n-	110-54-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Hexanone, 2-	591-78-6	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethylene	127-18-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Toluene	108-88-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichlorofluoromethane	75-69-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Vinyl chloride	75-01-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 2199634)											
BF2500303-001	Anonymous	F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	<25	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 2199779)											
WT2524196-019	Anonymous	F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	<25	0	Diff <2x LOR	----

Method Blank (MB) Report

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

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 2193666)						
Turbidity	----	E121	0.1	NTU	<0.10	----
Physical Tests (QCLot: 2193668)						
Solids, total suspended [TSS]	----	E160-L	1	mg/L	<1.0	----
Physical Tests (QCLot: 2193670)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Physical Tests (QCLot: 2199568)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	1.5	----
Physical Tests (QCLot: 2199569)						
Conductivity	----	E100	1	µS/cm	1.4	----
Physical Tests (QCLot: 2199618)						
Conductivity	----	E100	1	µS/cm	<1.0	----
Physical Tests (QCLot: 2199619)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Anions and Nutrients (QCLot: 2199570)						
Bromide	24959-67-9	E235.Br	0.1	mg/L	<0.10	----
Anions and Nutrients (QCLot: 2199571)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 2199572)						
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 2199573)						
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	<0.010	----
Anions and Nutrients (QCLot: 2199574)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 2199575)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 2199612)						
Bromide	24959-67-9	E235.Br	0.1	mg/L	<0.10	----
Anions and Nutrients (QCLot: 2199613)						
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 2199614)						
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	<0.010	----
Anions and Nutrients (QCLot: 2199615)						

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Anions and Nutrients (QCLot: 2199615) - continued						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 2199616)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 2199617)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 2201870)						
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 2201871)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 2201872)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 2201885)						
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 2201887)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 2201891)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Dissolved Metals (QCLot: 2201064)						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 2201064) - continued						
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 2201321)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Dissolved Metals (QCLot: 2201328)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Aggregate Organics (QCLot: 2204946)						
Oil & grease (gravimetric)	----	E567	5	mg/L	<5.0	----
Aggregate Organics (QCLot: 2206490)						
Oil & grease (gravimetric)	----	E567	5	mg/L	<5.0	----
Volatile Organic Compounds (QCLot: 2199633)						
Acetone	67-64-1	E611D	20	µg/L	<20	----
Benzene	71-43-2	E611D	0.5	µg/L	<0.50	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	<0.50	----
Bromoform	75-25-2	E611D	0.5	µg/L	<0.50	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 2199633) - continued						
Bromomethane	74-83-9	E611D	0.5	µg/L	<0.50	----
Carbon disulfide	75-15-0	E611D	1	µg/L	<1.0	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	<0.20	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	<0.50	----
Chloroethane	75-00-3	E611D	0.5	µg/L	<0.50	----
Chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----
Chloromethane	74-87-3	E611D	2	µg/L	<2.0	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	<0.50	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	<0.20	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	<0.50	----
Dichloromethane	75-09-2	E611D	1	µg/L	<1.0	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	<0.50	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	<0.30	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	<0.50	----
Hexanone, 2-	591-78-6	E611D	20	µg/L	<20	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	<0.50	----
Styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----
Toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	<0.50	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 2199633) - continued						
Trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	<0.50	----
Vinyl chloride	75-01-4	E611D	0.2	µg/L	<0.20	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----
Volatile Organic Compounds (QCLot: 2199778)						
Acetone	67-64-1	E611D	20	µg/L	<20	----
Benzene	71-43-2	E611D	0.5	µg/L	<0.50	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	<0.50	----
Bromoform	75-25-2	E611D	0.5	µg/L	<0.50	----
Bromomethane	74-83-9	E611D	0.5	µg/L	<0.50	----
Carbon disulfide	75-15-0	E611D	1	µg/L	<1.0	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	<0.20	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	<0.50	----
Chloroethane	75-00-3	E611D	0.5	µg/L	<0.50	----
Chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----
Chloromethane	74-87-3	E611D	2	µg/L	<2.0	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	<0.50	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	<0.20	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	<0.50	----
Dichloromethane	75-09-2	E611D	1	µg/L	<1.0	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	<0.50	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	<0.30	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	<0.50	----
Hexanone, 2-	591-78-6	E611D	20	µg/L	<20	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 2199778) - continued						
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	<0.50	----
Styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----
Toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	<0.50	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	<0.50	----
Vinyl chloride	75-01-4	E611D	0.2	µg/L	<0.20	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----
Hydrocarbons (QCLot: 2199634)						
F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	----
Hydrocarbons (QCLot: 2199779)						
F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	----
Hydrocarbons (QCLot: 2204975)						
F2 (C10-C16)	----	E601	100	µg/L	<100	----
F3 (C16-C34)	----	E601	250	µg/L	<250	----
F4 (C34-C50)	----	E601	250	µg/L	<250	----
Hydrocarbons (QCLot: 2205708)						
F2 (C10-C16)	----	E601	100	µg/L	<100	----
F3 (C16-C34)	----	E601	250	µg/L	<250	----
F4 (C34-C50)	----	E601	250	µg/L	<250	----
Polycyclic Aromatic Hydrocarbons (QCLot: 2204976)						
Acenaphthene	83-32-9	E641A-L	0.01	µg/L	<0.010	----
Acenaphthylene	208-96-8	E641A-L	0.01	µg/L	<0.010	----
Acridine	260-94-6	E641A-L	0.01	µg/L	<0.010	----
Anthracene	120-12-7	E641A-L	0.01	µg/L	<0.010	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	µg/L	<0.010	----
Benzo(a)pyrene	50-32-8	E641A-L	0.005	µg/L	<0.0050	----
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	µg/L	<0.010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 2204976) - continued						
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	µg/L	<0.010	----
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	µg/L	<0.010	----
Chrysene	218-01-9	E641A-L	0.01	µg/L	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	µg/L	<0.0050	----
Fluoranthene	206-44-0	E641A-L	0.01	µg/L	<0.010	----
Fluorene	86-73-7	E641A-L	0.01	µg/L	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	µg/L	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	µg/L	<0.010	----
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	µg/L	<0.010	----
Naphthalene	91-20-3	E641A-L	0.01	µg/L	<0.010	----
Perylene	198-55-0	E641A-L	0.01	µg/L	<0.010	----
Phenanthrene	85-01-8	E641A-L	0.01	µg/L	<0.010	----
Pyrene	129-00-0	E641A-L	0.01	µg/L	<0.010	----
Quinoline	91-22-5	E641A-L	0.01	µg/L	# 0.015	MB-LOR
Polycyclic Aromatic Hydrocarbons (QCLot: 2205709)						
Acenaphthene	83-32-9	E641A-L	0.01	µg/L	<0.010	----
Acenaphthylene	208-96-8	E641A-L	0.01	µg/L	<0.010	----
Acridine	260-94-6	E641A-L	0.01	µg/L	<0.010	----
Anthracene	120-12-7	E641A-L	0.01	µg/L	<0.010	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	µg/L	<0.010	----
Benzo(a)pyrene	50-32-8	E641A-L	0.005	µg/L	<0.0050	----
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	µg/L	<0.010	----
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	µg/L	<0.010	----
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	µg/L	<0.010	----
Chrysene	218-01-9	E641A-L	0.01	µg/L	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	µg/L	<0.0050	----
Fluoranthene	206-44-0	E641A-L	0.01	µg/L	<0.010	----
Fluorene	86-73-7	E641A-L	0.01	µg/L	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	µg/L	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	µg/L	<0.010	----
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	µg/L	<0.010	----
Naphthalene	91-20-3	E641A-L	0.01	µg/L	<0.010	----
Perylene	198-55-0	E641A-L	0.01	µg/L	<0.010	----
Phenanthrene	85-01-8	E641A-L	0.01	µg/L	<0.010	----
Pyrene	129-00-0	E641A-L	0.01	µg/L	<0.010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 2205709) - continued						
Quinoline	91-22-5	E641A-L	0.01	µg/L	<0.010	----

Qualifiers

Qualifier	Description
MB-LOR	*Method Blank exceeds ALS DQO. Limits of Reporting have been adjusted for samples with positive hits below 5x blank level.*

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
Physical Tests (QCLot: 2193664)									
pH	----	E108	----	pH units	7 pH units	100	98.0	102	----
Physical Tests (QCLot: 2193666)									
Turbidity	----	E121	0.1	NTU	200 NTU	102	85.0	115	----
Physical Tests (QCLot: 2193668)									
Solids, total suspended [TSS]	----	E160-L	1	mg/L	250 mg/L	99.0	85.0	115	----
Physical Tests (QCLot: 2193670)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	850 mg/L	100	85.0	115	----
Physical Tests (QCLot: 2199568)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	150 mg/L	102	85.0	115	----
Physical Tests (QCLot: 2199569)									
Conductivity	----	E100	1	µS/cm	1410 µS/cm	99.0	90.0	110	----
Physical Tests (QCLot: 2199618)									
Conductivity	----	E100	1	µS/cm	1410 µS/cm	98.9	90.0	110	----
Physical Tests (QCLot: 2199619)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	150 mg/L	100	85.0	115	----
Anions and Nutrients (QCLot: 2199570)									
Bromide	24959-67-9	E235.Br	0.1	mg/L	0.5 mg/L	97.2	85.0	115	----
Anions and Nutrients (QCLot: 2199571)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 2199572)									
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	2.5 mg/L	98.8	90.0	110	----
Anions and Nutrients (QCLot: 2199573)									
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	0.5 mg/L	94.8	90.0	110	----
Anions and Nutrients (QCLot: 2199574)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	99.1	90.0	110	----
Anions and Nutrients (QCLot: 2199575)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 2199612)									
Bromide	24959-67-9	E235.Br	0.1	mg/L	0.5 mg/L	97.3	85.0	115	----
Anions and Nutrients (QCLot: 2199613)									
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	2.5 mg/L	99.6	90.0	110	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Anions and Nutrients (QCLot: 2199614)									
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	0.5 mg/L	98.8	90.0	110	----
Anions and Nutrients (QCLot: 2199615)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 2199616)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	99.9	90.0	110	----
Anions and Nutrients (QCLot: 2199617)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	103	90.0	110	----
Anions and Nutrients (QCLot: 2201870)									
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	4 mg/L	99.8	75.0	125	----
Anions and Nutrients (QCLot: 2201871)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.333 mg/L	99.6	80.0	120	----
Anions and Nutrients (QCLot: 2201872)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	97.5	85.0	115	----
Anions and Nutrients (QCLot: 2201885)									
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	4 mg/L	109	75.0	125	----
Anions and Nutrients (QCLot: 2201887)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.033 mg/L	116	80.0	120	----
Anions and Nutrients (QCLot: 2201891)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	99.6	85.0	115	----
Dissolved Metals (QCLot: 2201064)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	0.1 mg/L	103	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	0.05 mg/L	105	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	0.05 mg/L	106	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.012 mg/L	103	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.005 mg/L	100	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	0.05 mg/L	101	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	0.05 mg/L	100	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.005 mg/L	104	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	2.5 mg/L	101	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.002 mg/L	110	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.012 mg/L	103	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.012 mg/L	100	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.012 mg/L	101	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	0.05 mg/L	104	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.025 mg/L	105	80.0	120	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 2201064) - continued									
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.012 mg/L	97.5	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	2.5 mg/L	106	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.012 mg/L	102	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.012 mg/L	104	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.025 mg/L	101	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	0.5 mg/L	104	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	2.5 mg/L	102	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.005 mg/L	102	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	0.05 mg/L	103	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	0.5 mg/L	98.2	60.0	140	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.005 mg/L	107	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	2.5 mg/L	102	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.012 mg/L	104	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	2.5 mg/L	104	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.005 mg/L	103	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	0.05 mg/L	102	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.005 mg/L	101	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.025 mg/L	103	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.012 mg/L	99.3	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.005 mg/L	102	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0 mg/L	102	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.025 mg/L	103	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.025 mg/L	101	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.005 mg/L	97.5	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	91.0	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	99.1	80.0	120	----
Aggregate Organics (QCLot: 2204946)									
Oil & grease (gravimetric)	----	E567	5	mg/L	200 mg/L	81.9	70.0	130	----
Aggregate Organics (QCLot: 2206490)									
Oil & grease (gravimetric)	----	E567	5	mg/L	200 mg/L	105	70.0	130	----
Volatile Organic Compounds (QCLot: 2199633)									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	127	70.0	130	----
Benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 2199633) - continued									
Bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
Bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	76.2	60.0	140	----
Carbon disulfide	75-15-0	E611D	1	µg/L	100 µg/L	92.9	70.0	130	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	102	70.0	130	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Chloroethane	75-00-3	E611D	0.5	µg/L	100 µg/L	100	60.0	140	----
Chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Chloromethane	74-87-3	E611D	2	µg/L	100 µg/L	104	60.0	140	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	89.4	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	94.5	60.0	140	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	98.0	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	101	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	98.0	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	97.1	70.0	130	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
Hexanone, 2-	591-78-6	E611D	20	µg/L	100 µg/L	91.4	70.0	130	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	116	70.0	130	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	91.5	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	98.3	70.0	130	----
Styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	99.6	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	96.5	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	97.8	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	92.5	70.0	130	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 2199633) - continued									
Trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	101	60.0	140	----
Vinyl chloride	75-01-4	E611D	0.2	µg/L	100 µg/L	101	60.0	140	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	104	70.0	130	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	106	70.0	130	----
Volatile Organic Compounds (QCLot: 2199778)									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	# 141	70.0	130	MES
Benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	99.6	70.0	130	----
Bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	109	70.0	130	----
Bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	73.7	60.0	140	----
Carbon disulfide	75-15-0	E611D	1	µg/L	100 µg/L	86.3	70.0	130	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	91.0	70.0	130	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	97.1	70.0	130	----
Chloroethane	75-00-3	E611D	0.5	µg/L	100 µg/L	92.7	60.0	140	----
Chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	97.3	70.0	130	----
Chloromethane	74-87-3	E611D	2	µg/L	100 µg/L	98.5	60.0	140	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	95.3	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	99.1	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	95.6	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	97.9	70.0	130	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	87.3	60.0	140	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	98.2	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	92.6	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	98.0	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	96.3	70.0	130	----
Dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	97.1	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	99.5	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	102	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	102	70.0	130	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	96.5	70.0	130	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	96.7	70.0	130	----
Hexanone, 2-	591-78-6	E611D	20	µg/L	100 µg/L	107	70.0	130	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	# 131	70.0	130	MES

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 2199778) - continued									
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	104	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	97.3	70.0	130	----
Styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	95.4	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	92.2	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	114	70.0	130	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	91.1	70.0	130	----
Toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	97.3	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	88.3	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	95.9	70.0	130	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	94.3	70.0	130	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	89.0	60.0	140	----
Vinyl chloride	75-01-4	E611D	0.2	µg/L	100 µg/L	92.0	60.0	140	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	93.4	70.0	130	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	97.1	70.0	130	----
Hydrocarbons (QCLot: 2199634)									
F1 (C6-C10)	----	E581.F1-L	25	µg/L	2000 µg/L	97.7	80.0	120	----
Hydrocarbons (QCLot: 2199779)									
F1 (C6-C10)	----	E581.F1-L	25	µg/L	2000 µg/L	101	80.0	120	----
Hydrocarbons (QCLot: 2204975)									
F2 (C10-C16)	----	E601	100	µg/L	3770 µg/L	110	70.0	130	----
F3 (C16-C34)	----	E601	250	µg/L	7760 µg/L	120	70.0	130	----
F4 (C34-C50)	----	E601	250	µg/L	4200 µg/L	109	70.0	130	----
Hydrocarbons (QCLot: 2205708)									
F2 (C10-C16)	----	E601	100	µg/L	3770 µg/L	97.8	70.0	130	----
F3 (C16-C34)	----	E601	250	µg/L	7760 µg/L	106	70.0	130	----
F4 (C34-C50)	----	E601	250	µg/L	4200 µg/L	113	70.0	130	----
Polycyclic Aromatic Hydrocarbons (QCLot: 2204976)									
Acenaphthene	83-32-9	E641A-L	0.01	µg/L	0.526 µg/L	96.8	50.0	140	----
Acenaphthylene	208-96-8	E641A-L	0.01	µg/L	0.526 µg/L	89.5	50.0	140	----
Acridine	260-94-6	E641A-L	0.01	µg/L	0.526 µg/L	109	50.0	140	----
Anthracene	120-12-7	E641A-L	0.01	µg/L	0.526 µg/L	86.4	50.0	140	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	µg/L	0.526 µg/L	106	50.0	140	----
Benzo(a)pyrene	50-32-8	E641A-L	0.005	µg/L	0.526 µg/L	86.1	50.0	140	----
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	µg/L	0.526 µg/L	79.5	50.0	140	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 2204976) - continued									
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	µg/L	0.526 µg/L	109	50.0	140	----
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	µg/L	0.526 µg/L	83.2	50.0	140	----
Chrysene	218-01-9	E641A-L	0.01	µg/L	0.526 µg/L	104	50.0	140	----
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	µg/L	0.526 µg/L	113	50.0	140	----
Fluoranthene	206-44-0	E641A-L	0.01	µg/L	0.526 µg/L	100	50.0	140	----
Fluorene	86-73-7	E641A-L	0.01	µg/L	0.526 µg/L	96.7	50.0	140	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	µg/L	0.526 µg/L	121	50.0	140	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	µg/L	0.526 µg/L	94.5	50.0	140	----
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	µg/L	0.526 µg/L	99.7	50.0	140	----
Naphthalene	91-20-3	E641A-L	0.01	µg/L	0.526 µg/L	94.8	50.0	140	----
Perylene	198-55-0	E641A-L	0.01	µg/L	0.526 µg/L	97.2	50.0	140	----
Phenanthrene	85-01-8	E641A-L	0.01	µg/L	0.526 µg/L	102	50.0	140	----
Pyrene	129-00-0	E641A-L	0.01	µg/L	0.526 µg/L	100	50.0	140	----
Quinoline	91-22-5	E641A-L	0.01	µg/L	0.526 µg/L	108	50.0	140	----
Polycyclic Aromatic Hydrocarbons (QCLot: 2205709)									
Acenaphthene	83-32-9	E641A-L	0.01	µg/L	0.526 µg/L	103	50.0	140	----
Acenaphthylene	208-96-8	E641A-L	0.01	µg/L	0.526 µg/L	95.5	50.0	140	----
Acridine	260-94-6	E641A-L	0.01	µg/L	0.526 µg/L	122	50.0	140	----
Anthracene	120-12-7	E641A-L	0.01	µg/L	0.526 µg/L	88.7	50.0	140	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	µg/L	0.526 µg/L	102	50.0	140	----
Benzo(a)pyrene	50-32-8	E641A-L	0.005	µg/L	0.526 µg/L	82.5	50.0	140	----
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	µg/L	0.526 µg/L	76.0	50.0	140	----
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	µg/L	0.526 µg/L	102	50.0	140	----
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	µg/L	0.526 µg/L	87.3	50.0	140	----
Chrysene	218-01-9	E641A-L	0.01	µg/L	0.526 µg/L	111	50.0	140	----
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	µg/L	0.526 µg/L	89.5	50.0	140	----
Fluoranthene	206-44-0	E641A-L	0.01	µg/L	0.526 µg/L	107	50.0	140	----
Fluorene	86-73-7	E641A-L	0.01	µg/L	0.526 µg/L	104	50.0	140	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	µg/L	0.526 µg/L	95.4	50.0	140	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	µg/L	0.526 µg/L	100	50.0	140	----
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	µg/L	0.526 µg/L	105	50.0	140	----
Naphthalene	91-20-3	E641A-L	0.01	µg/L	0.526 µg/L	100	50.0	140	----
Perylene	198-55-0	E641A-L	0.01	µg/L	0.526 µg/L	91.8	50.0	140	----
Phenanthrene	85-01-8	E641A-L	0.01	µg/L	0.526 µg/L	109	50.0	140	----
Pyrene	129-00-0	E641A-L	0.01	µg/L	0.526 µg/L	107	50.0	140	----
Quinoline	91-22-5	E641A-L	0.01	µg/L	0.526 µg/L	107	50.0	140	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier

Qualifiers

Qualifier	Description
MES	*Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).*

Matrix Spike (MS) Report

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

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 2199570)										
BF2500299-001	Anonymous	Bromide	24959-67-9	E235.Br	0.46 mg/L	0.5 mg/L	91.3	75.0	125	----
Anions and Nutrients (QCLot: 2199571)										
BF2500299-001	Anonymous	Fluoride	16984-48-8	E235.F	0.901 mg/L	1 mg/L	90.1	75.0	125	----
Anions and Nutrients (QCLot: 2199572)										
BF2500299-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	2.40 mg/L	2.5 mg/L	96.1	75.0	125	----
Anions and Nutrients (QCLot: 2199573)										
BF2500299-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.466 mg/L	0.5 mg/L	93.3	75.0	125	----
Anions and Nutrients (QCLot: 2199574)										
BF2500299-001	Anonymous	Chloride	16887-00-6	E235.Cl	97.0 mg/L	100 mg/L	97.0	75.0	125	----
Anions and Nutrients (QCLot: 2199575)										
BF2500299-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	96.4 mg/L	100 mg/L	96.4	75.0	125	----
Anions and Nutrients (QCLot: 2199612)										
BF2500308-009	HWB-KP23-03_2025-08-30	Bromide	24959-67-9	E235.Br	0.42 mg/L	0.5 mg/L	84.6	75.0	125	----
Anions and Nutrients (QCLot: 2199613)										
BF2500308-009	HWB-KP23-03_2025-08-30	Nitrate (as N)	14797-55-8	E235.NO3	2.39 mg/L	2.5 mg/L	95.8	75.0	125	----
Anions and Nutrients (QCLot: 2199614)										
BF2500308-009	HWB-KP23-03_2025-08-30	Nitrite (as N)	14797-65-0	E235.NO2	0.470 mg/L	0.5 mg/L	94.0	75.0	125	----
Anions and Nutrients (QCLot: 2199615)										
BF2500308-009	HWB-KP23-03_2025-08-30	Sulfate (as SO4)	14808-79-8	E235.SO4	99.1 mg/L	100 mg/L	99.1	75.0	125	----
Anions and Nutrients (QCLot: 2199616)										
BF2500308-009	HWB-KP23-03_2025-08-30	Chloride	16887-00-6	E235.Cl	99.3 mg/L	100 mg/L	99.3	75.0	125	----
Anions and Nutrients (QCLot: 2199617)										
BF2500308-009	HWB-KP23-03_2025-08-30	Fluoride	16984-48-8	E235.F	0.850 mg/L	1 mg/L	85.0	75.0	125	----
Anions and Nutrients (QCLot: 2201870)										
BF2500303-002	Anonymous	Kjeldahl nitrogen, total [TKN]	----	E318	2.62 mg/L	2.5 mg/L	105	70.0	130	----
Anions and Nutrients (QCLot: 2201871)										
BF2500303-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0965 mg/L	0.1 mg/L	96.5	70.0	130	----
Anions and Nutrients (QCLot: 2201872)										
BF2500304-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	ND mg/L	----	ND	75.0	125	----
Anions and Nutrients (QCLot: 2201885)										

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 2201885) - continued										
BF2500308-011	HWB-KP22-05_2025-08-30	Kjeldahl nitrogen, total [TKN]	----	E318	3.08 mg/L	2.5 mg/L	123	70.0	130	----
Anions and Nutrients (QCLot: 2201887)										
BF2500308-010	MS-HWB-GW-REF1_2025-08-30	Phosphorus, total	7723-14-0	E372-U	0.0948 mg/L	0.1 mg/L	94.8	70.0	130	----
Anions and Nutrients (QCLot: 2201891)										
BF2500311-008	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.107 mg/L	0.1 mg/L	107	75.0	125	----
Dissolved Metals (QCLot: 2201064)										
BF2500308-004	MS-HWB-GW5_2025-08-30	Aluminum, dissolved	7429-90-5	E421	0.102 mg/L	0.1 mg/L	102	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0502 mg/L	0.05 mg/L	100	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0568 mg/L	0.05 mg/L	114	70.0	130	----
		Barium, dissolved	7440-39-3	E421	ND mg/L	----	ND	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.00500 mg/L	0.005 mg/L	100	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.0447 mg/L	0.05 mg/L	89.3	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.044 mg/L	0.05 mg/L	87.9	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00533 mg/L	0.005 mg/L	106	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.00263 mg/L	0.002 mg/L	105	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0125 mg/L	0.012 mg/L	100	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0122 mg/L	0.012 mg/L	97.8	70.0	130	----
		Copper, dissolved	7440-50-8	E421	0.0121 mg/L	0.012 mg/L	96.9	70.0	130	----
		Iron, dissolved	7439-89-6	E421	0.049 mg/L	0.05 mg/L	97.5	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0243 mg/L	0.025 mg/L	97.1	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.0125 mg/L	0.012 mg/L	99.7	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	ND mg/L	----	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	ND mg/L	----	ND	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.0135 mg/L	0.012 mg/L	108	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0232 mg/L	0.025 mg/L	92.8	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	0.577 mg/L	0.5 mg/L	115	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	2.57 mg/L	2.5 mg/L	103	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	ND mg/L	----	ND	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0604 mg/L	0.05 mg/L	121	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	ND mg/L	----	ND	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00500 mg/L	0.005 mg/L	99.9	70.0	130	----
		Sodium, dissolved	7440-23-5	E421	ND mg/L	----	ND	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	ND mg/L	----	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	ND mg/L	----	ND	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.00542 mg/L	0.005 mg/L	108	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.0473 mg/L	0.05 mg/L	94.7	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.00466 mg/L	0.005 mg/L	93.2	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0255 mg/L	0.025 mg/L	102	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0123 mg/L	0.012 mg/L	98.4	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.00503 mg/L	0.005 mg/L	101	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	ND mg/L	----	ND	70.0	130	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 2201064) - continued										
BF2500308-004	MS-HWB-GW5_2025-08-30	Vanadium, dissolved	7440-62-2	E421	0.0258 mg/L	0.025 mg/L	103	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.0262 mg/L	0.025 mg/L	105	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.00497 mg/L	0.005 mg/L	99.4	70.0	130	----
Dissolved Metals (QCLot: 2201321)										
BF2500303-002	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000899 mg/L	0 mg/L	89.9	70.0	130	----
Dissolved Metals (QCLot: 2201328)										
BF2500278-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000828 mg/L	0 mg/L	82.8	70.0	130	----
Volatile Organic Compounds (QCLot: 2199633)										
BF2500303-001	Anonymous	Acetone	67-64-1	E611D	110 µg/L	100 µg/L	110	60.0	140	----
		Benzene	71-43-2	E611D	95.1 µg/L	100 µg/L	95.1	60.0	140	----
		Bromodichloromethane	75-27-4	E611D	86.9 µg/L	100 µg/L	86.9	60.0	140	----
		Bromoform	75-25-2	E611D	94.0 µg/L	100 µg/L	94.0	60.0	140	----
		Bromomethane	74-83-9	E611D	63.0 µg/L	100 µg/L	63.0	60.0	140	----
		Carbon disulfide	75-15-0	E611D	80.5 µg/L	100 µg/L	80.5	60.0	140	----
		Carbon tetrachloride	56-23-5	E611D	92.8 µg/L	100 µg/L	92.8	60.0	140	----
		Chlorobenzene	108-90-7	E611D	91.6 µg/L	100 µg/L	91.6	60.0	140	----
		Chloroethane	75-00-3	E611D	84.5 µg/L	100 µg/L	84.5	60.0	140	----
		Chloroform	67-66-3	E611D	89.6 µg/L	100 µg/L	89.6	60.0	140	----
		Chloromethane	74-87-3	E611D	82.7 µg/L	100 µg/L	82.7	60.0	140	----
		Dibromochloromethane	124-48-1	E611D	88.8 µg/L	100 µg/L	88.8	60.0	140	----
		Dibromoethane, 1,2-	106-93-4	E611D	74.6 µg/L	100 µg/L	74.6	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	94.1 µg/L	100 µg/L	94.1	60.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	96.1 µg/L	100 µg/L	96.1	60.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	96.7 µg/L	100 µg/L	96.7	60.0	140	----
		Dichlorodifluoromethane	75-71-8	E611D	72.2 µg/L	100 µg/L	72.2	60.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611D	88.9 µg/L	100 µg/L	88.9	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611D	84.0 µg/L	100 µg/L	84.0	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611D	90.6 µg/L	100 µg/L	90.6	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	89.0 µg/L	100 µg/L	89.0	60.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	91.6 µg/L	100 µg/L	91.6	60.0	140	----
		Dichloromethane	75-09-2	E611D	83.4 µg/L	100 µg/L	83.4	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611D	86.6 µg/L	100 µg/L	86.6	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	82.4 µg/L	100 µg/L	82.4	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	82.8 µg/L	100 µg/L	82.8	60.0	140	----
		Ethylbenzene	100-41-4	E611D	97.2 µg/L	100 µg/L	97.2	60.0	140	----
		Hexane, n-	110-54-3	E611D	90.3 µg/L	100 µg/L	90.3	60.0	140	----
		Hexanone, 2-	591-78-6	E611D	70 µg/L	100 µg/L	69.8	60.0	140	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	89 µg/L	100 µg/L	89.1	60.0	140	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	70 µg/L	100 µg/L	69.6	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	92.1 µg/L	100 µg/L	92.1	60.0	140	----
		Styrene	100-42-5	E611D	87.5 µg/L	100 µg/L	87.5	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	85.1 µg/L	100 µg/L	85.1	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	93.3 µg/L	100 µg/L	93.3	60.0	140	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 2199633) - continued										
BF2500303-001	Anonymous	Tetrachloroethylene	127-18-4	E611D	95.8 µg/L	100 µg/L	95.8	60.0	140	----
		Toluene	108-88-3	E611D	95.7 µg/L	100 µg/L	95.7	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	87.8 µg/L	100 µg/L	87.8	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	78.0 µg/L	100 µg/L	78.0	60.0	140	----
		Trichloroethylene	79-01-6	E611D	91.8 µg/L	100 µg/L	91.8	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611D	87.3 µg/L	100 µg/L	87.3	60.0	140	----
		Vinyl chloride	75-01-4	E611D	82.8 µg/L	100 µg/L	82.8	60.0	140	----
		Xylene, m+p-	179601-23-1	E611D	191 µg/L	200 µg/L	95.6	60.0	140	----
		Xylene, o-	95-47-6	E611D	95.8 µg/L	100 µg/L	95.8	60.0	140	----
Volatile Organic Compounds (QCLot: 2199778)										
WT2524196-019	Anonymous	Acetone	67-64-1	E611D	138 µg/L	100 µg/L	138	60.0	140	----
		Benzene	71-43-2	E611D	97.3 µg/L	100 µg/L	97.3	60.0	140	----
		Bromodichloromethane	75-27-4	E611D	95.6 µg/L	100 µg/L	95.6	60.0	140	----
		Bromoform	75-25-2	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		Bromomethane	74-83-9	E611D	67.7 µg/L	100 µg/L	67.7	60.0	140	----
		Carbon disulfide	75-15-0	E611D	79.5 µg/L	100 µg/L	79.5	60.0	140	----
		Carbon tetrachloride	56-23-5	E611D	86.0 µg/L	100 µg/L	86.0	60.0	140	----
		Chlorobenzene	108-90-7	E611D	92.3 µg/L	100 µg/L	92.3	60.0	140	----
		Chloroethane	75-00-3	E611D	85.9 µg/L	100 µg/L	85.9	60.0	140	----
		Chloroform	67-66-3	E611D	93.2 µg/L	100 µg/L	93.2	60.0	140	----
		Chloromethane	74-87-3	E611D	89.1 µg/L	100 µg/L	89.1	60.0	140	----
		Dibromochloromethane	124-48-1	E611D	99.8 µg/L	100 µg/L	99.8	60.0	140	----
		Dibromoethane, 1,2-	106-93-4	E611D	90.8 µg/L	100 µg/L	90.8	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	94.2 µg/L	100 µg/L	94.2	60.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	90.9 µg/L	100 µg/L	90.9	60.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	93.0 µg/L	100 µg/L	93.0	60.0	140	----
		Dichlorodifluoromethane	75-71-8	E611D	75.0 µg/L	100 µg/L	75.0	60.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611D	90.5 µg/L	100 µg/L	90.5	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611D	86.8 µg/L	100 µg/L	86.8	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	93.9 µg/L	100 µg/L	93.9	60.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	90.8 µg/L	100 µg/L	90.8	60.0	140	----
		Dichloromethane	75-09-2	E611D	92.7 µg/L	100 µg/L	92.7	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611D	94.8 µg/L	100 µg/L	94.8	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	94.9 µg/L	100 µg/L	94.9	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	95.4 µg/L	100 µg/L	95.4	60.0	140	----
		Ethylbenzene	100-41-4	E611D	91.4 µg/L	100 µg/L	91.4	60.0	140	----
		Hexane, n-	110-54-3	E611D	83.4 µg/L	100 µg/L	83.4	60.0	140	----
		Hexanone, 2-	591-78-6	E611D	98 µg/L	100 µg/L	98.6	60.0	140	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	127 µg/L	100 µg/L	127	60.0	140	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	100 µg/L	100 µg/L	99.7	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	92.0 µg/L	100 µg/L	92.0	60.0	140	----
		Styrene	100-42-5	E611D	90.0 µg/L	100 µg/L	90.0	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	87.5 µg/L	100 µg/L	87.5	60.0	140	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 2199778) - continued										
WT2524196-019	Anonymous	Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	108 µg/L	100 µg/L	108	60.0	140	----
		Tetrachloroethylene	127-18-4	E611D	86.2 µg/L	100 µg/L	86.2	60.0	140	----
		Toluene	108-88-3	E611D	92.3 µg/L	100 µg/L	92.3	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	83.4 µg/L	100 µg/L	83.4	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	91.3 µg/L	100 µg/L	91.3	60.0	140	----
		Trichloroethylene	79-01-6	E611D	89.1 µg/L	100 µg/L	89.1	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611D	82.2 µg/L	100 µg/L	82.2	60.0	140	----
		Vinyl chloride	75-01-4	E611D	83.6 µg/L	100 µg/L	83.6	60.0	140	----
		Xylene, m+p-	179601-23-1	E611D	178 µg/L	200 µg/L	89.0	60.0	140	----
		Xylene, o-	95-47-6	E611D	92.5 µg/L	100 µg/L	92.5	60.0	140	----
Hydrocarbons (QCLot: 2199634)										
BF2500303-001	Anonymous	F1 (C6-C10)	----	E581.F1-L	1780 µg/L	2000 µg/L	88.8	60.0	140	----
Hydrocarbons (QCLot: 2199779)										
WT2524196-019	Anonymous	F1 (C6-C10)	----	E581.F1-L	1660 µg/L	2000 µg/L	83.1	60.0	140	----

Chain of Custody: 25 08 30_MS_HWB_GW

Client Info	Project Info	Laboratory Info	
Baffinland Iron Mine Corporation 2275 Upper Middle Rd E, Suite 300 Oakville, ON, L6H 0C3 **Phone:** 647-253-0596 x6016/6039/4131 **Email:** environment.coordinators@baffinland.com; environment.superintendents@baffinland.com	**Job Reference (Project):** MS_HWB_GW **Task:** , GW_HWB_250825 **Site:** MS	**Lab Name:** ALS Waterloo **Contact:** Rick Hawthorne **Phone:** 519.886.6910 **Email:** Rick.Hawthorne@ALSGlobal.com	**Address:** Unit 1 - 60 Northland Road Waterloo, ON,N2V 2B8
Email Invoice: ap@baffinland.com; environment.superintendents@baffinland.com **Email EDD:** bim.equissa@baffinland.com **Email COA:** environment.labresults@baffinland.com	**Turn around Time:** Routine (R) **Sampler 1:** LG **Sampler 2:** AG **Sampler 3:** JJ	**ALS Quote #:** WT2020BIMC1000001 **ALS PO #:** 4500156571	**Lab Work Order #** (lab use only):

Sample Details				Field Data			Analysis Requested											
Sample ID (sys_sample_code)	Location (sys_loc_code)	Sample Date and Time	Matrix	Temperature, Field (deg C)	pH, Field (pH units)	Total # of Containers	ALS_GW_HWB											
MS-HWB-GW-REF3_2025-08-30	MS-HWB-GW-REF3	8/30/2025 9:25:00 AM	WG	0.5	6.97	11	X											
HWB-KP23-01_2025-08-30	HWB-KP23-01	8/30/2025 10:00:00 AM	WG	1.3	7.14	11	X											
HWB-KP22-01_2025-08-30	HWB-KP22-01	8/30/2025 10:50:00 AM	WG	1	6.9	11	X											
MS-HWB-GW5_2025-08-30	MS-HWB-GW5	8/30/2025 11:20:00 AM	WG	1.7	7.45	11	X											
HWB-KP22-03_2025-08-30	HWB-KP22-03	8/30/2025 12:20:00 PM	WG	1.4	7.09	11	X											
HWB-KP23-02_2025-08-30	HWB-KP23-02	8/30/2025 1:45:00 PM	WG	1.3	7.14	11	X											
QD-CC4_2025-08-30	HWB-KP23-02	8/30/2025 1:45:00 PM	WG			11	X											
HWB-KP22-04_2025-08-30	HWB-KP22-04	8/30/2025 2:55:00 PM	WG	0.9	7.25	11	X											

Sample Details				Field Data			Analysis Requested											
Sample ID (sys_sample_code)	Location (sys_loc_code)	Sample Date and Time	Matrix	Temperature, Field (deg C)	pH, Field (pH units)	Total # of Containers	ALS_GW_HWB											
HWB-KP23-03_2025-08-30	HWB-KP23-03	8/30/2025 3:30:00 PM	WG	1.3	7.14	11	X											
MS-HWB-GW-REF1_2025-08-30	MS-HWB-GW-REF1	8/30/2025 4:45:00 PM	WG	2.1	7.28	11	X											
HWB-KP22-05_2025-08-30	HWB-KP22-05	8/30/2025 5:00:00 PM	WG	2.2	7	11	X											

Relinquished by:	Bradley Rasmussen	**Date:**	
Additional Comments			
Initial Shipment Reception (lab use only)		**Final Shipment Reception** (lab use only)	
Received by:		**Received by:**	
Date/Time:		**Date/Time:**	

UW005 MM-431 GC-744
OR-31 OGG324 N-R3
825 1844

Baffinland

Chain of Custody: 25 08 30_MS_HWB_GW

Client Info	Project Info	Laboratory Info	
Baffinland Iron Mine Corporation 2275 Upper Middle Rd E, Suite 300 Oakville, ON, L6H 0C3 **Phone:** 647-253-0596 x6016/6039/4131 **Email:** environment.coordinators@baffinland.com; environment.superintendents@baffinland.com	**Job Reference (Project):** MS_HWB_GW **Task:** , GW_HWB_250825 **Site:** MS	**Lab Name:** ALS Waterloo **Contact:** Rick Hawthorne **Phone:** 519.886.6910 **Email:** Rick.Hawthorne@ALSGlobal.com	**Address:** Unit 1 - 60 Northland Road Waterloo, ON,N2V 2B8
Email Invoice: ap@baffinland.com; environment.superintendents@baffinland.com **Email EDD:** bim.equissa@baffinland.com **Email COA:** environment.labresults@baffinland.com	**Turn around Time:** Routine (R) **Sampler 1:** LG **Sampler 2:** AG **Sampler 3:** JJ	**ALS Quote #:** WT2020BIMC1000001 **ALS PO #:** 4500156571	**La**

Environmental Division
Baffin Island
Work Order Reference
BF2500308

Telephone

Sample Details				Field Data			Ai											
Sample ID (sys_sample_code)	Location (sys_loc_code)	Sample Date and Time	Matrix	Temperature, Field (deg C)	pH, Field (pH units)	Total # of Containers	ALS_GW_HWB											
MS-HWB-GW-REF3_2025-08-30	MS-HWB-GW-REF3	8/30/2025 9:25:00 AM	WG	0.5	6.97	11	X											
HWB-KP23-01_2025-08-30	HWB-KP23-01	8/30/2025 10:00:00 AM	WG	1.3	7.14	11	X											
HWB-KP22-01_2025-08-30	HWB-KP22-01	8/30/2025 10:50:00 AM	WG	1	6.9	11	X											
MS-HWB-GW5_2025-08-30	MS-HWB-GW5	8/30/2025 11:20:00 AM	WG	1.7	7.45	11	X											
HWB-KP22-03_2025-08-30	HWB-KP22-03	8/30/2025 12:20:00 PM	WG	1.4	7.09	11	X											
HWB-KP23-02_2025-08-30	HWB-KP23-02	8/30/2025 1:45:00 PM	WG	1.3	7.14	11	X											
QD-CC4_2025-08-30	HWB-KP23-02	8/30/2025 1:45:00 PM	WG			11	X											
HWB-KP22-04_2025-08-30	HWB-KP22-04	8/30/2025 2:55:00 PM	WG	0.9	7.25	11	X											

Baffinland

Sample Details				Field Data			Analysis Requested											
Sample ID (sys_sample_code)	Location (sys_loc_code)	Sample Date and Time	Matrix	Temperature, Field (deg C)	pH, Field (pH units)	Total # of Containers	ALS_GW_HWB											
HWB-KP23-03_2025-08-30	HWB-KP23-03	8/30/2025 3:30:00 PM	WG	1.3	7.14	11	X											
MS-HWB-GW-REF1_2025-08-30	MS-HWB-GW-REF1	8/30/2025 4:45:00 PM	WG	2.1	7.28	11	X											
HWB-KP22-05_2025-08-30	HWB-KP22-05	8/30/2025 5:00:00 PM	WG	2.2	7	11	X											

Relinquished by:	Bradley Rasmussen	**Date:**	
Additional Comments			
Initial Shipment Reception (lab use only)		**Final Shipment Reception** (lab use only)	
Received by:		**Received by:**	
Date/Time:		**Date/Time:**	4 Sept 25 9:00

5.3°C

CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	:	**BF2500317**			
Client	:	**Baffinland Iron Mines Corporation**	Laboratory	:	ALS Environmental - Baffin Island
Contact	:	Environmental Lab Results	Account Manager	:	Rick Hawthorne
Address	:	360 Oakville Place Dr Suite 300 Oakville Ontario Canada L6H 6K8	Address	:	Mary River, Qikqtani Region Baffin Island NU Canada
Telephone	:	----	Telephone	:	
Project	:	HWB Groundwater	Date Samples Received	:	04-Sep-2025 11:57
PO	:	4500156571	Date Analysis Commenced	:	05-Sep-2025
C-O-C number	:	25 09 02 - MS_HWB_GW	Issue Date	:	24-Sep-2025 13:24
Sampler	:	ET, LG			
Site	:	----			
Quote number	:	2024-2025 Scope of Work			
No. of samples received	:	3			
No. of samples analysed	:	3			

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
- Guideline Comparison

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*
Amaninder Dhillon	Team Lead - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
Cedrick Velasco	Lab Manager	Inorganics, Baffin Island, Nunavut
Danielle Gravel	Supervisor - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
David Tremblett	VOC Section Supervisor	VOC, Waterloo, Ontario
Jon Fisher	Laboratory Manager - Environmental	Inorganics, Waterloo, Ontario
Nik Perkio	Senior Analyst	Inorganics, Waterloo, Ontario
Rachel Cameron	Supervisor - Semi-Volatile Extractions	Organics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Metals, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Inorganics, Waterloo, Ontario

No Breaches Found

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.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key: LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units
µg/L	micrograms per litre
µS/cm	microsiemens per centimetre

>: greater than.
<: less than.

Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).
For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit.

Qualifiers

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

Analytical Results Evaluation

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-HWB-25-01_2025-09-02 ----	MS-HWB-25-03_2025-09-02 ----	HWB-KP22-06_2025-09-02 ----	----	----	----	----
				Client sampling date / time	02-Sep-2025 08:45	02-Sep-2025 10:25	02-Sep-2025 11:20	----	----	----	----
				Sub-Matrix	Water	Water	Water	----	----	----	----
					BF2500317-001	BF2500317-002	BF2500317-003	----	----	----	----
					Result	Result	Result	----	----	----	----
Physical Tests											
Conductivity	----	E100/WT	µS/cm		409	353	324	----	----	----	----
pH	----	E108/BF	pH units		7.82	8.07	8.00	----	----	----	----
Solids, total dissolved [TDS]	----	E162/BF	mg/L		163	200	178	----	----	----	----
Solids, total suspended [TSS]	----	E160-L/BF	mg/L		<1.0	1.4	1.9	----	----	----	----
Turbidity	----	E121/BF	NTU		0.79	2.06	2.21	----	----	----	----
Alkalinity, total (as CaCO3)	----	E290/WT	mg/L		197	155	153	----	----	----	----
Anions and Nutrients											
Ammonia, total (as N)	7664-41-7	E298/WT	mg/L		<0.0050	<0.0050	0.0082	----	----	----	----
Bromide	24959-67-9	E235.Br/WT	mg/L		<0.10	<0.10	<0.10	----	----	----	----
Chloride	16887-00-6	E235.Cl/WT	mg/L		15.3	6.80	5.04	----	----	----	----
Fluoride	16984-48-8	E235.F/WT	mg/L		0.032	0.049	0.042	----	----	----	----
Kjeldahl nitrogen, total [TKN]	----	E318/WT	mg/L		0.112	0.175	0.136	----	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3/WT	mg/L		0.082	1.00	0.573	----	----	----	----
Nitrite (as N)	14797-65-0	E235.NO2/WT	mg/L		<0.010	<0.010	<0.010	----	----	----	----
Phosphorus, total	7723-14-0	E372-U/WT	mg/L		0.0071	0.0070	0.0053	----	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	mg/L		9.65	23.7	16.3	----	----	----	----
Dissolved Metals											
Aluminum, dissolved	7429-90-5	E421/WT	mg/L		0.0024	0.0019	0.0017	----	----	----	----
Antimony, dissolved	7440-36-0	E421/WT	mg/L		<0.00010	<0.00010	<0.00010	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-HWB-25-01_2025-09-02 ----	MS-HWB-25-03_2025-09-02 ----	HWB-KP22-06_2025-09-02 ----	----	----	----	----
				Client sampling date / time	02-Sep-2025 08:45	02-Sep-2025 10:25	02-Sep-2025 11:20	----	----	----	----
				Sub-Matrix	Water	Water	Water	----	----	----	----
					BF2500317-001	BF2500317-002	BF2500317-003	----	----	----	----
					Result	Result	Result	----	----	----	----
Dissolved Metals											
Arsenic, dissolved	7440-38-2	E421/WT	mg/L		0.00026	0.00032	0.00022	----	----	----	----
Barium, dissolved	7440-39-3	E421/WT	mg/L		0.0195	0.0198	0.0198	----	----	----	----
Beryllium, dissolved	7440-41-7	E421/WT	mg/L		<0.000020	<0.000020	<0.000020	----	----	----	----
Bismuth, dissolved	7440-69-9	E421/WT	mg/L		<0.000050	<0.000050	<0.000050	----	----	----	----
Boron, dissolved	7440-42-8	E421/WT	mg/L		0.029	0.026	0.018	----	----	----	----
Cadmium, dissolved	7440-43-9	E421/WT	mg/L		0.0000060	<0.0000050	<0.0000050	----	----	----	----
Calcium, dissolved	7440-70-2	E421/WT	mg/L		29.7	21.0	21.9	----	----	----	----
Cesium, dissolved	7440-46-2	E421/WT	mg/L		<0.000010	<0.000010	<0.000010	----	----	----	----
Chromium, dissolved	7440-47-3	E421/WT	mg/L		0.00051	0.00088	0.00118	----	----	----	----
Cobalt, dissolved	7440-48-4	E421/WT	mg/L		<0.00010	<0.00010	<0.00010	----	----	----	----
Copper, dissolved	7440-50-8	E421/WT	mg/L		0.00203	0.00153	0.00138	----	----	----	----
Iron, dissolved	7439-89-6	E421/WT	mg/L		<0.010	<0.010	<0.010	----	----	----	----
Lead, dissolved	7439-92-1	E421/WT	mg/L		0.000056	<0.000050	0.000491	----	----	----	----
Lithium, dissolved	7439-93-2	E421/WT	mg/L		0.0032	0.0030	0.0023	----	----	----	----
Magnesium, dissolved	7439-95-4	E421/WT	mg/L		33.2	21.7	19.6	----	----	----	----
Manganese, dissolved	7439-96-5	E421/WT	mg/L		0.00223	0.00217	<0.00010	----	----	----	----
Mercury, dissolved	7439-97-6	E509/WT	mg/L		<0.0000050	<0.0000050	<0.0000050	----	----	----	----
Molybdenum, dissolved	7439-98-7	E421/WT	mg/L		0.00191	0.00154	0.00110	----	----	----	----
Nickel, dissolved	7440-02-0	E421/WT	mg/L		0.00615	0.00498	0.00460	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	MS-HWB-25-01_2025-09-02 ----	MS-HWB-25-03_2025-09-02 ----	HWB-KP22-06_2025-09-02 ----	----	----	----	----
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				Sub-Matrix	Water	Water	Water	----	----	----	----
					BF2500317-001	BF2500317-002	BF2500317-003	----	----	----	----
					Result	Result	Result	----	----	----	----
Dissolved Metals											
Phosphorus, dissolved	7723-14-0	E421/WT	mg/L		<0.050	<0.050	<0.050	----	----	----	----
Potassium, dissolved	7440-09-7	E421/WT	mg/L		2.02	3.10	2.43	----	----	----	----
Rubidium, dissolved	7440-17-7	E421/WT	mg/L		0.00369	0.00274	0.00539	----	----	----	----
Selenium, dissolved	7782-49-2	E421/WT	mg/L		0.000072	0.000169	0.000109	----	----	----	----
Silicon, dissolved	7440-21-3	E421/WT	mg/L		4.71	5.41	4.89	----	----	----	----
Silver, dissolved	7440-22-4	E421/WT	mg/L		<0.000010	<0.000010	<0.000010	----	----	----	----
Sodium, dissolved	7440-23-5	E421/WT	mg/L		4.07	18.7	15.7	----	----	----	----
Strontium, dissolved	7440-24-6	E421/WT	mg/L		0.0211	0.0192	0.0141	----	----	----	----
Sulfur, dissolved	7704-34-9	E421/WT	mg/L		3.91	8.82	5.91	----	----	----	----
Tellurium, dissolved	13494-80-9	E421/WT	mg/L		<0.00020	<0.00020	<0.00020	----	----	----	----
Thallium, dissolved	7440-28-0	E421/WT	mg/L		0.000012	<0.000010	0.000011	----	----	----	----
Thorium, dissolved	7440-29-1	E421/WT	mg/L		<0.00010	<0.00010	<0.00010	----	----	----	----
Tin, dissolved	7440-31-5	E421/WT	mg/L		0.00029	0.00036	0.00017	----	----	----	----
Titanium, dissolved	7440-32-6	E421/WT	mg/L		<0.00030	<0.00030	<0.00030	----	----	----	----
Tungsten, dissolved	7440-33-7	E421/WT	mg/L		<0.00010	<0.00010	<0.00010	----	----	----	----
Uranium, dissolved	7440-61-1	E421/WT	mg/L		0.00109	0.000696	0.000662	----	----	----	----
Vanadium, dissolved	7440-62-2	E421/WT	mg/L		<0.00050	<0.00050	<0.00050	----	----	----	----
Zinc, dissolved	7440-66-6	E421/WT	mg/L		<0.0010	<0.0010	<0.0010	----	----	----	----
Zirconium, dissolved	7440-67-7	E421/WT	mg/L		0.00040	<0.00030	<0.00030	----	----	----	----

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				Sub-Matrix	Water	Water	Water	----	----	----	----
					BF2500317-001	BF2500317-002	BF2500317-003	----	----	----	----
					Result	Result	Result	----	----	----	----
Dissolved Metals											
Dissolved mercury filtration location	----	EP509/WT	-		Field	Field	Field	----	----	----	----
Dissolved metals filtration location	----	EP421/WT	-		Field	Field	Field	----	----	----	----
Aggregate Organics											
Oil & grease (gravimetric)	----	E567/WT	mg/L		<5.0	<5.0	<5.0	----	----	----	----
Volatile Organic Compounds											
Acetone	67-64-1	E611D/WT	µg/L		<20	<20	<20	----	----	----	----
Benzene	71-43-2	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Bromodichloromethane	75-27-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Bromoform	75-25-2	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Bromomethane	74-83-9	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
BTEX, total	----	E611D/WT	µg/L		<1.0	<1.0	<1.0	----	----	----	----
Carbon disulfide	75-15-0	E611D/WT	µg/L		<1.0	<1.0	<1.0	----	----	----	----
Carbon tetrachloride	56-23-5	E611D/WT	µg/L		<0.20	<0.20	<0.20	----	----	----	----
Chlorobenzene	108-90-7	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Chloroethane	75-00-3	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Chloroform	67-66-3	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Chloromethane	74-87-3	E611D/WT	µg/L		<2.0	<2.0	<2.0	----	----	----	----
Dibromochloromethane	124-48-1	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Dibromoethane, 1,2-	106-93-4	E611D/WT	µg/L		<0.20	<0.20	<0.20	----	----	----	----
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----

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					BF2500317-001	BF2500317-002	BF2500317-003	----	----	----	----
					Result	Result	Result	----	----	----	----
Volatile Organic Compounds											
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Dichlorodifluoromethane	75-71-8	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Dichloroethane, 1,1-	75-34-3	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Dichloroethane, 1,2-	107-06-2	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Dichloroethylene, 1,1-	75-35-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Dichloroethylene, cis+trans-1,2-	540-59-0	E611D/WT	µg/L		<0.71	<0.71	<0.71	----	----	----	----
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Dichloromethane	75-09-2	E611D/WT	µg/L		<1.0	<1.0	<1.0	----	----	----	----
Dichloropropane, 1,2-	78-87-5	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	µg/L		<0.30	<0.30	<0.30	----	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	µg/L		<0.5	<0.5	<0.5	----	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	µg/L		<0.30	<0.30	<0.30	----	----	----	----
Ethylbenzene	100-41-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Hexane, n-	110-54-3	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Hexanone, 2-	591-78-6	E611D/WT	µg/L		<20	<20	<20	----	----	----	----
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	µg/L		<20	<20	<20	----	----	----	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	µg/L		<20	<20	<20	----	----	----	----

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					Result	Result	Result	----	----	----	----
Volatile Organic Compounds											
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Styrene	100-42-5	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Tetrachloroethylene	127-18-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Toluene	108-88-3	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Trichloroethylene	79-01-6	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Trichlorofluoromethane	75-69-4	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Trihalomethanes [THMs], total	----	E611D/WT	µg/L		<1.0	<1.0	<1.0	----	----	----	----
Vinyl chloride	75-01-4	E611D/WT	µg/L		<0.20	<0.20	<0.20	----	----	----	----
Xylene, m+p-	179601-23-1	E611D/WT	µg/L		<0.40	<0.40	<0.40	----	----	----	----
Xylene, o-	95-47-6	E611D/WT	µg/L		<0.30	<0.30	<0.30	----	----	----	----
Xylenes, total	1330-20-7	E611D/WT	µg/L		<0.50	<0.50	<0.50	----	----	----	----
Hydrocarbons											
F1 (C6-C10)	----	E581.F1-L/WT	µg/L		<25	<25	<25	----	----	----	----
F2 (C10-C16)	----	E601/WT	µg/L		<100	<100	<100	----	----	----	----
F3 (C16-C34)	----	E601/WT	µg/L		<250	<250	<250	----	----	----	----
F4 (C34-C50)	----	E601/WT	µg/L		<250	<250	<250	----	----	----	----

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					Result	Result	Result	----	----	----	----
Hydrocarbons											
F1-BTEX	----	EC580/WT	µg/L		<25	<25	<25	----	----	----	----
Hydrocarbons, total (C6-C50)	n/a	EC581/WT	µg/L		<370	<370	<370	----	----	----	----
Hydrocarbons Surrogates											
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/WT	%		94.4	88.9	90.1	----	----	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.F1-L/WT	%		94.4	92.9	94.0	----	----	----	----
Volatile Organic Compounds Surrogates											
Bromofluorobenzene, 4-	460-00-4	E611D/WT	%		106	105	105	----	----	----	----
Difluorobenzene, 1,4-	540-36-3	E611D/WT	%		102	101	101	----	----	----	----
Polycyclic Aromatic Hydrocarbons											
Acenaphthene	83-32-9	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
Acenaphthylene	208-96-8	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
Acridine	260-94-6	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
Anthracene	120-12-7	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
Benz(a)anthracene	56-55-3	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
Benzo(a)pyrene	50-32-8	E641A-L/WT	µg/L		<0.0050	<0.0050	<0.0050	----	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
Benzo(b+j+k)fluoranthene	n/a	E641A-L/WT	µg/L		<0.015	<0.015	<0.015	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
Benzo(k)fluoranthene	207-08-9	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----

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					Result	Result	Result	----	----	----	----
Polycyclic Aromatic Hydrocarbons											
Chrysene	218-01-9	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A-L/WT	µg/L		<0.0050	<0.0050	<0.0050	----	----	----	----
Fluoranthene	206-44-0	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
Fluorene	86-73-7	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A-L/WT	µg/L		0.155	<0.010	<0.010	----	----	----	----
Methylnaphthalene, 1+2-	----	E641A-L/WT	µg/L		0.155	<0.015	<0.015	----	----	----	----
Methylnaphthalene, 2-	91-57-6	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
Naphthalene	91-20-3	E641A-L/WT	µg/L		<0.024 DLM	<0.010	<0.010	----	----	----	----
Perylene	198-55-0	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
Phenanthrene	85-01-8	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
Pyrene	129-00-0	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
Quinoline	91-22-5	E641A-L/WT	µg/L		<0.072 DLM	<0.010	<0.010	----	----	----	----
B(a)P total potency equivalents [B(a)P TPE]	----	E641A-L/WT	µg/L		<0.010	<0.010	<0.010	----	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates											
Chrysene-d12	1719-03-5	E641A-L/WT	%		96.7	94.2	95.6	----	----	----	----
Naphthalene-d8	1146-65-2	E641A-L/WT	%		98.1	95.0	98.7	----	----	----	----
Phenanthrene-d10	1517-22-2	E641A-L/WT	%		108	103	107	----	----	----	----

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

Summary of Guideline Limits

CERTIFICATE OF ANALYSIS

Work Order	:	**BF2500317**			
Client	:	**Baffinland Iron Mines Corporation**	Laboratory	:	ALS Environmental - Baffin Island
Contact	:	Environmental Lab Results	Account Manager	:	Rick Hawthorne
Address	:	360 Oakville Place Dr Suite 300 Oakville Ontario Canada L6H 6K8	Address	:	Mary River, Qikqtani Region Baffin Island NU Canada
Telephone	:	----	E-mail	:	Rick.Hawthorne@ALSGlobal.com
Project	:	HWB Groundwater	Telephone	:	
PO	:	4500156571	Date Samples Received	:	04-Sep-2025 11:57
C-O-C number	:	25 09 02 - MS_HWB_GW	Date Analysis Commenced	:	05-Sep-2025
Sampler	:	ET, LG	Issue Date	:	24-Sep-2025 13:24
Site	:	----			
Quote number	:	2024-2025 Scope of Work			
No. of samples received	:	3			
No. of samples analysed	:	3			

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

Signatories	*Position*	*Laboratory Department*
Amaninder Dhillon	Team Lead - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
Cedrick Velasco	Lab Manager	Inorganics, Baffin Island, Nunavut
Danielle Gravel	Supervisor - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
David Tremblett	VOC Section Supervisor	VOC, Waterloo, Ontario
Jon Fisher	Laboratory Manager - Environmental	Inorganics, Waterloo, Ontario
Nik Perkio	Senior Analyst	Inorganics, Waterloo, Ontario
Rachel Cameron	Supervisor - Semi-Volatile Extractions	Organics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Metals, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Inorganics, Waterloo, Ontario

General Comments

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

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

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

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

Key: CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.
LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units
µg/L	micrograms per litre
µS/cm	microsiemens per centimetre

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

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Qualifiers

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

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: MS-HWB-25-01_2025-09-02 ----	MS-HWB-25-03_2025-09-02 ----	HWB-KP22-06_2025-09-02 ----	----	----
					Client sampling date / time: 02-Sep-2025 08:45	02-Sep-2025 10:25	02-Sep-2025 11:20	----	----
					BF2500317-001	BF2500317-002	BF2500317-003	----	----
					Result	Result	Result	----	----
Physical Tests									
Conductivity	----	E100/WT	1.0	µS/cm	409	353	324	----	----
pH	----	E108/BF	0.10	pH units	7.82	8.07	8.00	----	----
Solids, total dissolved [TDS]	----	E162/BF	10	mg/L	163	200	178	----	----
Solids, total suspended [TSS]	----	E160-L/BF	1.0	mg/L	<1.0	1.4	1.9	----	----
Turbidity	----	E121/BF	0.10	NTU	0.79	2.06	2.21	----	----
Alkalinity, total (as CaCO3)	----	E290/WT	2.0	mg/L	197	155	153	----	----
Anions and Nutrients									
Ammonia, total (as N)	7664-41-7	E298/WT	0.0050	mg/L	<0.0050	<0.0050	0.0082	----	----
Bromide	24959-67-9	E235.Br/WT	0.10	mg/L	<0.10	<0.10	<0.10	----	----
Chloride	16887-00-6	E235.Cl/WT	0.50	mg/L	15.3	6.80	5.04	----	----
Fluoride	16984-48-8	E235.F/WT	0.020	mg/L	0.032	0.049	0.042	----	----
Kjeldahl nitrogen, total [TKN]	----	E318/WT	0.050	mg/L	0.112	0.175	0.136	----	----
Nitrate (as N)	14797-55-8	E235.NO3/WT	0.020	mg/L	0.082	1.00	0.573	----	----
Nitrite (as N)	14797-65-0	E235.NO2/WT	0.010	mg/L	<0.010	<0.010	<0.010	----	----
Phosphorus, total	7723-14-0	E372-U/WT	0.0020	mg/L	0.0071	0.0070	0.0053	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/WT	0.30	mg/L	9.65	23.7	16.3	----	----
Dissolved Metals									
Aluminum, dissolved	7429-90-5	E421/WT	0.0010	mg/L	0.0024	0.0019	0.0017	----	----
Antimony, dissolved	7440-36-0	E421/WT	0.00010	mg/L	<0.00010	<0.00010	<0.00010	----	----
Arsenic, dissolved	7440-38-2	E421/WT	0.00010	mg/L	0.00026	0.00032	0.00022	----	----
Barium, dissolved	7440-39-3	E421/WT	0.00010	mg/L	0.0195	0.0198	0.0198	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-HWB-25-01_2025-09-02 ----	MS-HWB-25-03_2025-09-02 ----	HWB-KP22-06_2025-09-02 ----	----	----
					Client sampling date / time	02-Sep-2025 08:45	02-Sep-2025 10:25	02-Sep-2025 11:20	----	----
						BF2500317-001	BF2500317-002	BF2500317-003	----	----
						Result	Result	Result	----	----
Dissolved Metals										
Beryllium, dissolved	7440-41-7	E421/WT	0.000020	mg/L		<0.000020	<0.000020	<0.000020	----	----
Bismuth, dissolved	7440-69-9	E421/WT	0.000050	mg/L		<0.000050	<0.000050	<0.000050	----	----
Boron, dissolved	7440-42-8	E421/WT	0.010	mg/L		0.029	0.026	0.018	----	----
Cadmium, dissolved	7440-43-9	E421/WT	0.0000050	mg/L		0.0000060	<0.0000050	<0.0000050	----	----
Calcium, dissolved	7440-70-2	E421/WT	0.050	mg/L		29.7	21.0	21.9	----	----
Cesium, dissolved	7440-46-2	E421/WT	0.000010	mg/L		<0.000010	<0.000010	<0.000010	----	----
Chromium, dissolved	7440-47-3	E421/WT	0.00050	mg/L		0.00051	0.00088	0.00118	----	----
Cobalt, dissolved	7440-48-4	E421/WT	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Copper, dissolved	7440-50-8	E421/WT	0.00020	mg/L		0.00203	0.00153	0.00138	----	----
Iron, dissolved	7439-89-6	E421/WT	0.010	mg/L		<0.010	<0.010	<0.010	----	----
Lead, dissolved	7439-92-1	E421/WT	0.000050	mg/L		0.000056	<0.000050	0.000491	----	----
Lithium, dissolved	7439-93-2	E421/WT	0.0010	mg/L		0.0032	0.0030	0.0023	----	----
Magnesium, dissolved	7439-95-4	E421/WT	0.0050	mg/L		33.2	21.7	19.6	----	----
Manganese, dissolved	7439-96-5	E421/WT	0.00010	mg/L		0.00223	0.00217	<0.00010	----	----
Mercury, dissolved	7439-97-6	E509/WT	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	----	----
Molybdenum, dissolved	7439-98-7	E421/WT	0.000050	mg/L		0.00191	0.00154	0.00110	----	----
Nickel, dissolved	7440-02-0	E421/WT	0.00050	mg/L		0.00615	0.00498	0.00460	----	----
Phosphorus, dissolved	7723-14-0	E421/WT	0.050	mg/L		<0.050	<0.050	<0.050	----	----
Potassium, dissolved	7440-09-7	E421/WT	0.050	mg/L		2.02	3.10	2.43	----	----
Rubidium, dissolved	7440-17-7	E421/WT	0.00020	mg/L		0.00369	0.00274	0.00539	----	----
Selenium, dissolved	7782-49-2	E421/WT	0.000050	mg/L		0.000072	0.000169	0.000109	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-HWB-25-01_2025-09-02 ----	MS-HWB-25-03_2025-09-02 ----	HWB-KP22-06_2025-09-02 ----	----	----
					Client sampling date / time	02-Sep-2025 08:45	02-Sep-2025 10:25	02-Sep-2025 11:20	----	----
						BF2500317-001	BF2500317-002	BF2500317-003	----	----
						Result	Result	Result	----	----
Dissolved Metals										
Silicon, dissolved	7440-21-3	E421/WT	0.050	mg/L		4.71	5.41	4.89	----	----
Silver, dissolved	7440-22-4	E421/WT	0.000010	mg/L		<0.000010	<0.000010	<0.000010	----	----
Sodium, dissolved	7440-23-5	E421/WT	0.050	mg/L		4.07	18.7	15.7	----	----
Strontium, dissolved	7440-24-6	E421/WT	0.00020	mg/L		0.0211	0.0192	0.0141	----	----
Sulfur, dissolved	7704-34-9	E421/WT	0.50	mg/L		3.91	8.82	5.91	----	----
Tellurium, dissolved	13494-80-9	E421/WT	0.00020	mg/L		<0.00020	<0.00020	<0.00020	----	----
Thallium, dissolved	7440-28-0	E421/WT	0.000010	mg/L		0.000012	<0.000010	0.000011	----	----
Thorium, dissolved	7440-29-1	E421/WT	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Tin, dissolved	7440-31-5	E421/WT	0.00010	mg/L		0.00029	0.00036	0.00017	----	----
Titanium, dissolved	7440-32-6	E421/WT	0.00030	mg/L		<0.00030	<0.00030	<0.00030	----	----
Tungsten, dissolved	7440-33-7	E421/WT	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Uranium, dissolved	7440-61-1	E421/WT	0.000010	mg/L		0.00109	0.000696	0.000662	----	----
Vanadium, dissolved	7440-62-2	E421/WT	0.00050	mg/L		<0.00050	<0.00050	<0.00050	----	----
Zinc, dissolved	7440-66-6	E421/WT	0.0010	mg/L		<0.0010	<0.0010	<0.0010	----	----
Zirconium, dissolved	7440-67-7	E421/WT	0.00030	mg/L		0.00040	<0.00030	<0.00030	----	----
Dissolved mercury filtration location	----	EP509/WT	-	-		Field	Field	Field	----	----
Dissolved metals filtration location	----	EP421/WT	-	-		Field	Field	Field	----	----
Aggregate Organics										
Oil & grease (gravimetric)	----	E567/WT	5.0	mg/L		<5.0	<5.0	<5.0	----	----
Volatile Organic Compounds										
Acetone	67-64-1	E611D/WT	20	µg/L		<20	<20	<20	----	----

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Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-HWB-25-01_2025-09-02 ----	MS-HWB-25-03_2025-09-02 ----	HWB-KP22-06_2025-09-02 ----	----	----
					Client sampling date / time	02-Sep-2025 08:45	02-Sep-2025 10:25	02-Sep-2025 11:20	----	----
						BF2500317-001	BF2500317-002	BF2500317-003	----	----
						Result	Result	Result	----	----
Volatile Organic Compounds										
Benzene	71-43-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Bromodichloromethane	75-27-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Bromoform	75-25-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Bromomethane	74-83-9	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
BTEX, total	----	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	----	----
Carbon disulfide	75-15-0	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	----	----
Carbon tetrachloride	56-23-5	E611D/WT	0.20	µg/L		<0.20	<0.20	<0.20	----	----
Chlorobenzene	108-90-7	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Chloroethane	75-00-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Chloroform	67-66-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Chloromethane	74-87-3	E611D/WT	2.0	µg/L		<2.0	<2.0	<2.0	----	----
Dibromochloromethane	124-48-1	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Dibromoethane, 1,2-	106-93-4	E611D/WT	0.20	µg/L		<0.20	<0.20	<0.20	----	----
Dichlorobenzene, 1,2-	95-50-1	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Dichlorobenzene, 1,3-	541-73-1	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Dichlorobenzene, 1,4-	106-46-7	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Dichlorodifluoromethane	75-71-8	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Dichloroethane, 1,1-	75-34-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Dichloroethane, 1,2-	107-06-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Dichloroethylene, 1,1-	75-35-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Dichloroethylene, cis-1,2-	156-59-2	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-HWB-25-01_2025-09-02 ----	MS-HWB-25-03_2025-09-02 ----	HWB-KP22-06_2025-09-02 ----	----	----
					Client sampling date / time	02-Sep-2025 08:45	02-Sep-2025 10:25	02-Sep-2025 11:20	----	----
						BF2500317-001	BF2500317-002	BF2500317-003	----	----
						Result	Result	Result	----	----
Volatile Organic Compounds										
Dichloroethylene, cis+trans-1,2-	540-59-0	E611D/WT	0.71	µg/L		<0.71	<0.71	<0.71	----	----
Dichloroethylene, trans-1,2-	156-60-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Dichloromethane	75-09-2	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	----	----
Dichloropropane, 1,2-	78-87-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D/WT	0.30	µg/L		<0.30	<0.30	<0.30	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611D/WT	0.50	µg/L		<0.5	<0.5	<0.5	----	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D/WT	0.30	µg/L		<0.30	<0.30	<0.30	----	----
Ethylbenzene	100-41-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Hexane, n-	110-54-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Hexanone, 2-	591-78-6	E611D/WT	20	µg/L		<20	<20	<20	----	----
Methyl ethyl ketone [MEK]	78-93-3	E611D/WT	20	µg/L		<20	<20	<20	----	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D/WT	20	µg/L		<20	<20	<20	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Styrene	100-42-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Tetrachloroethylene	127-18-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Toluene	108-88-3	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Trichloroethane, 1,1,1-	71-55-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Trichloroethane, 1,1,2-	79-00-5	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Trichloroethylene	79-01-6	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-HWB-25-01_2025-09-02 ----	MS-HWB-25-03_2025-09-02 ----	HWB-KP22-06_2025-09-02 ----	----	----
					Client sampling date / time	02-Sep-2025 08:45	02-Sep-2025 10:25	02-Sep-2025 11:20	----	----
						BF2500317-001	BF2500317-002	BF2500317-003	----	----
						Result	Result	Result	----	----
Volatile Organic Compounds										
Trichlorofluoromethane	75-69-4	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Trihalomethanes [THMs], total	----	E611D/WT	1.0	µg/L		<1.0	<1.0	<1.0	----	----
Vinyl chloride	75-01-4	E611D/WT	0.20	µg/L		<0.20	<0.20	<0.20	----	----
Xylene, m+p-	179601-23-1	E611D/WT	0.40	µg/L		<0.40	<0.40	<0.40	----	----
Xylene, o-	95-47-6	E611D/WT	0.30	µg/L		<0.30	<0.30	<0.30	----	----
Xylenes, total	1330-20-7	E611D/WT	0.50	µg/L		<0.50	<0.50	<0.50	----	----
Hydrocarbons										
F1 (C6-C10)	----	E581.F1-L/WT	25	µg/L		<25	<25	<25	----	----
F2 (C10-C16)	----	E601/WT	100	µg/L		<100	<100	<100	----	----
F3 (C16-C34)	----	E601/WT	250	µg/L		<250	<250	<250	----	----
F4 (C34-C50)	----	E601/WT	250	µg/L		<250	<250	<250	----	----
F1-BTEX	----	EC580/WT	25	µg/L		<25	<25	<25	----	----
Hydrocarbons, total (C6-C50)	n/a	EC581/WT	370	µg/L		<370	<370	<370	----	----
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/WT	1.0	%		94.4	88.9	90.1	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.F1-L/WT	1.0	%		94.4	92.9	94.0	----	----
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611D/WT	1.0	%		106	105	105	----	----
Difluorobenzene, 1,4-	540-36-3	E611D/WT	1.0	%		102	101	101	----	----
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-HWB-25-01_2025-09-02 ----	MS-HWB-25-03_2025-09-02 ----	HWB-KP22-06_2025-09-02 ----	----	----
					Client sampling date / time	02-Sep-2025 08:45	02-Sep-2025 10:25	02-Sep-2025 11:20	----	----
						BF2500317-001	BF2500317-002	BF2500317-003	----	----
						Result	Result	Result	----	----
Polycyclic Aromatic Hydrocarbons										
Acenaphthylene	208-96-8	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----
Acridine	260-94-6	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----
Anthracene	120-12-7	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----
Benz(a)anthracene	56-55-3	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----
Benzo(a)pyrene	50-32-8	E641A-L/WT	0.0050	µg/L		<0.0050	<0.0050	<0.0050	----	----
Benzo(b+j)fluoranthene	n/a	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----
Benzo(b+j+k)fluoranthene	n/a	E641A-L/WT	0.015	µg/L		<0.015	<0.015	<0.015	----	----
Benzo(g,h,i)perylene	191-24-2	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----
Benzo(k)fluoranthene	207-08-9	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----
Chrysene	218-01-9	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----
Dibenz(a,h)anthracene	53-70-3	E641A-L/WT	0.0050	µg/L		<0.0050	<0.0050	<0.0050	----	----
Fluoranthene	206-44-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----
Fluorene	86-73-7	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----
Methylnaphthalene, 1-	90-12-0	E641A-L/WT	0.010	µg/L		0.155	<0.010	<0.010	----	----
Methylnaphthalene, 1+2-	----	E641A-L/WT	0.015	µg/L		0.155	<0.015	<0.015	----	----
Methylnaphthalene, 2-	91-57-6	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----
Naphthalene	91-20-3	E641A-L/WT	0.010	µg/L		<0.024 DLM	<0.010	<0.010	----	----
Perylene	198-55-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----
Phenanthrene	85-01-8	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----
Pyrene	129-00-0	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MS-HWB-25-01_2025-09-02 ----	MS-HWB-25-03_2025-09-02 ----	HWB-KP22-06_2025-09-02 ----	----	----
					Client sampling date / time	02-Sep-2025 08:45	02-Sep-2025 10:25	02-Sep-2025 11:20	----	----
						BF2500317-001	BF2500317-002	BF2500317-003	----	----
						Result	Result	Result	----	----
Polycyclic Aromatic Hydrocarbons										
Quinoline	91-22-5	E641A-L/WT	0.010	µg/L		<0.072 DLM	<0.010	<0.010	----	----
B(a)P total potency equivalents [B(a)P TPE]	----	E641A-L/WT	0.010	µg/L		<0.010	<0.010	<0.010	----	----
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A-L/WT	0.1	%		96.7	94.2	95.6	----	----
Naphthalene-d8	1146-65-2	E641A-L/WT	0.1	%		98.1	95.0	98.7	----	----
Phenanthrene-d10	1517-22-2	E641A-L/WT	0.1	%		108	103	107	----	----

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

ALS Canada Ltd.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **BF2500317**	Page	: 1 of 17
Client	: **Baffinland Iron Mines Corporation**	Laboratory	: ALS Environmental - Baffin Island
Contact	: Environmental Lab Results	Account Manager	: Rick Hawthorne
Address	: 360 Oakville Place Dr Suite 300 Oakville ON Canada L6H 6K8	Address	: Mary River, Qikqtani Region Baffin Island, Nunavut Canada
Telephone	: ----	Telephone	: ----
Project	: HWB Groundwater	Date Samples Received	: 04-Sep-2025 11:57
PO	: 4500156571	Issue Date	: 24-Sep-2025 13:24
C-O-C number	: 25 09 02 - MS_HWB_GW		
Sampler	: ET, LG		
Site	: ----		
Quote number	: 2024-2025 Scope of Work		
No. of samples received	: 3		
No. of samples analysed	: 3		

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

Key

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

Workorder Comments

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

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

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

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Analysis Holding Time Compliance

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

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

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

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

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

Analyte Group : 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
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid)										
HWB-KP22-06_2025-09-02	E567	02-Sep-2025	18-Sep-2025	28 days	16 days	✓	18-Sep-2025	28 days	16 days	✓
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid)										
MS-HWB-25-01_2025-09-02	E567	02-Sep-2025	18-Sep-2025	28 days	16 days	✓	18-Sep-2025	28 days	16 days	✓
Aggregate Organics : Oil & Grease by Gravimetry										
Amber glass (hydrochloric acid)										
MS-HWB-25-03_2025-09-02	E567	02-Sep-2025	18-Sep-2025	28 days	16 days	✓	18-Sep-2025	28 days	16 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid)										
HWB-KP22-06_2025-09-02	E298	02-Sep-2025	16-Sep-2025	28 days	14 days	✓	16-Sep-2025	28 days	14 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid)										
MS-HWB-25-01_2025-09-02	E298	02-Sep-2025	16-Sep-2025	28 days	14 days	✓	16-Sep-2025	28 days	14 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid)										
MS-HWB-25-03_2025-09-02	E298	02-Sep-2025	16-Sep-2025	28 days	14 days	✓	16-Sep-2025	28 days	14 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE										
HWB-KP22-06_2025-09-02	E235.Br	02-Sep-2025	11-Sep-2025	28 days	9 days	✓	15-Sep-2025	28 days	9 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Bromide in Water by IC										
HDPE										
MS-HWB-25-01_2025-09-02	E235.Br	02-Sep-2025	11-Sep-2025	28 days	9 days	✓	15-Sep-2025	28 days	9 days	✓
Anions and Nutrients : Bromide in Water by IC										
HDPE										
MS-HWB-25-03_2025-09-02	E235.Br	02-Sep-2025	11-Sep-2025	28 days	9 days	✓	15-Sep-2025	28 days	9 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
HWB-KP22-06_2025-09-02	E235.Cl	02-Sep-2025	11-Sep-2025	28 days	9 days	✓	15-Sep-2025	28 days	9 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
MS-HWB-25-01_2025-09-02	E235.Cl	02-Sep-2025	11-Sep-2025	28 days	9 days	✓	15-Sep-2025	28 days	9 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
MS-HWB-25-03_2025-09-02	E235.Cl	02-Sep-2025	11-Sep-2025	28 days	9 days	✓	15-Sep-2025	28 days	9 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
HWB-KP22-06_2025-09-02	E235.F	02-Sep-2025	11-Sep-2025	28 days	9 days	✓	15-Sep-2025	28 days	9 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
MS-HWB-25-01_2025-09-02	E235.F	02-Sep-2025	11-Sep-2025	28 days	9 days	✓	15-Sep-2025	28 days	9 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
MS-HWB-25-03_2025-09-02	E235.F	02-Sep-2025	11-Sep-2025	28 days	9 days	✓	15-Sep-2025	28 days	9 days	✓
Anions and Nutrients : Nitrate in Water by IC										
HDPE										
HWB-KP22-06_2025-09-02	E235.NO3	02-Sep-2025	11-Sep-2025	3 days	9 days	× EHT	15-Sep-2025	3 days	9 days	× EHT

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Nitrate in Water by IC										
HDPE										
MS-HWB-25-01_2025-09-02	E235.NO3	02-Sep-2025	11-Sep-2025	3 days	9 days	× EHT	15-Sep-2025	3 days	9 days	× EHT
Anions and Nutrients : Nitrate in Water by IC										
HDPE										
MS-HWB-25-03_2025-09-02	E235.NO3	02-Sep-2025	11-Sep-2025	3 days	9 days	× EHT	15-Sep-2025	3 days	9 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE										
HWB-KP22-06_2025-09-02	E235.NO2	02-Sep-2025	11-Sep-2025	3 days	9 days	× EHT	15-Sep-2025	3 days	9 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE										
MS-HWB-25-01_2025-09-02	E235.NO2	02-Sep-2025	11-Sep-2025	3 days	9 days	× EHT	15-Sep-2025	3 days	9 days	× EHT
Anions and Nutrients : Nitrite in Water by IC										
HDPE										
MS-HWB-25-03_2025-09-02	E235.NO2	02-Sep-2025	11-Sep-2025	3 days	9 days	× EHT	15-Sep-2025	3 days	9 days	× EHT
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
HWB-KP22-06_2025-09-02	E235.SO4	02-Sep-2025	11-Sep-2025	28 days	9 days	✓	15-Sep-2025	28 days	9 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
MS-HWB-25-01_2025-09-02	E235.SO4	02-Sep-2025	11-Sep-2025	28 days	9 days	✓	15-Sep-2025	28 days	9 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
MS-HWB-25-03_2025-09-02	E235.SO4	02-Sep-2025	11-Sep-2025	28 days	9 days	✓	15-Sep-2025	28 days	9 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
HWB-KP22-06_2025-09-02	E318	02-Sep-2025	16-Sep-2025	28 days	14 days	✓	16-Sep-2025	28 days	14 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
MS-HWB-25-01_2025-09-02	E318	02-Sep-2025	16-Sep-2025	28 days	14 days	✓	16-Sep-2025	28 days	14 days	✓
Anions and Nutrients : Total Kjeldahl Nitrogen by Fluorescence (Low Level)										
Amber glass total (sulfuric acid)										
MS-HWB-25-03_2025-09-02	E318	02-Sep-2025	16-Sep-2025	28 days	14 days	✓	16-Sep-2025	28 days	14 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
HWB-KP22-06_2025-09-02	E372-U	02-Sep-2025	16-Sep-2025	28 days	14 days	✓	17-Sep-2025	28 days	14 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
MS-HWB-25-01_2025-09-02	E372-U	02-Sep-2025	16-Sep-2025	28 days	14 days	✓	17-Sep-2025	28 days	14 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
MS-HWB-25-03_2025-09-02	E372-U	02-Sep-2025	16-Sep-2025	28 days	14 days	✓	17-Sep-2025	28 days	14 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
HWB-KP22-06_2025-09-02	E509	02-Sep-2025	15-Sep-2025	28 days	13 days	✓	16-Sep-2025	28 days	13 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
MS-HWB-25-01_2025-09-02	E509	02-Sep-2025	15-Sep-2025	28 days	13 days	✓	16-Sep-2025	28 days	13 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
MS-HWB-25-03_2025-09-02	E509	02-Sep-2025	15-Sep-2025	28 days	13 days	✓	16-Sep-2025	28 days	13 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
HWB-KP22-06_2025-09-02	E421	02-Sep-2025	12-Sep-2025	180 days	10 days	✓	12-Sep-2025	180 days	10 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
MS-HWB-25-03_2025-09-02	E421	02-Sep-2025	12-Sep-2025	180 days	10 days	✓	12-Sep-2025	180 days	10 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
MS-HWB-25-01_2025-09-02	E421	02-Sep-2025	12-Sep-2025	180 days	11 days	✓	12-Sep-2025	180 days	11 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate)										
HWB-KP22-06_2025-09-02	E581.F1-L	02-Sep-2025	15-Sep-2025	14 days	13 days	✓	15-Sep-2025	14 days	13 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate)										
MS-HWB-25-01_2025-09-02	E581.F1-L	02-Sep-2025	15-Sep-2025	14 days	13 days	✓	15-Sep-2025	14 days	13 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate)										
MS-HWB-25-03_2025-09-02	E581.F1-L	02-Sep-2025	15-Sep-2025	14 days	13 days	✓	15-Sep-2025	14 days	13 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
HWB-KP22-06_2025-09-02	E601	02-Sep-2025	15-Sep-2025	14 days	13 days	✓	17-Sep-2025	40 days	2 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
MS-HWB-25-01_2025-09-02	E601	02-Sep-2025	15-Sep-2025	14 days	13 days	✓	17-Sep-2025	40 days	2 days	✓
Hydrocarbons : CCME PHCs - F2-F4 by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
MS-HWB-25-03_2025-09-02	E601	02-Sep-2025	15-Sep-2025	14 days	13 days	✓	17-Sep-2025	40 days	2 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
HWB-KP22-06_2025-09-02	E290	02-Sep-2025	11-Sep-2025	14 days	9 days	✓	13-Sep-2025	14 days	9 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : Alkalinity Species by Titration										
HDPE										
MS-HWB-25-01_2025-09-02	E290	02-Sep-2025	11-Sep-2025	14 days	9 days	✓	13-Sep-2025	14 days	9 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
MS-HWB-25-03_2025-09-02	E290	02-Sep-2025	11-Sep-2025	14 days	9 days	✓	13-Sep-2025	14 days	9 days	✓
Physical Tests : Conductivity in Water										
HDPE										
HWB-KP22-06_2025-09-02	E100	02-Sep-2025	11-Sep-2025	28 days	9 days	✓	13-Sep-2025	28 days	9 days	✓
Physical Tests : Conductivity in Water										
HDPE										
MS-HWB-25-01_2025-09-02	E100	02-Sep-2025	11-Sep-2025	28 days	9 days	✓	13-Sep-2025	28 days	9 days	✓
Physical Tests : Conductivity in Water										
HDPE										
MS-HWB-25-03_2025-09-02	E100	02-Sep-2025	11-Sep-2025	28 days	9 days	✓	13-Sep-2025	28 days	9 days	✓
Physical Tests : pH by Meter										
HDPE										
HWB-KP22-06_2025-09-02	E108	02-Sep-2025	05-Sep-2025	0.25 hrs	68 hrs	✗ EHTR-FM	05-Sep-2025	0.25 hrs	68 hrs	✗ EHTR-FM
Physical Tests : pH by Meter										
HDPE										
MS-HWB-25-03_2025-09-02	E108	02-Sep-2025	05-Sep-2025	0.25 hrs	69 hrs	✗ EHTR-FM	05-Sep-2025	0.25 hrs	69 hrs	✗ EHTR-FM
Physical Tests : pH by Meter										
HDPE										
MS-HWB-25-01_2025-09-02	E108	02-Sep-2025	05-Sep-2025	0.25 hrs	70 hrs	✗ EHTR-FM	05-Sep-2025	0.25 hrs	70 hrs	✗ EHTR-FM
Physical Tests : TDS by Gravimetry										
HDPE										
HWB-KP22-06_2025-09-02	E162	02-Sep-2025	----	----	----		05-Sep-2025	7 days	3 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
Physical Tests : TDS by Gravimetry										
HDPE										
MS-HWB-25-01_2025-09-02	E162	02-Sep-2025	----	----	----		05-Sep-2025	7 days	3 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
MS-HWB-25-03_2025-09-02	E162	02-Sep-2025	----	----	----		05-Sep-2025	7 days	3 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE										
HWB-KP22-06_2025-09-02	E160-L	02-Sep-2025	----	----	----		05-Sep-2025	7 days	3 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE										
MS-HWB-25-01_2025-09-02	E160-L	02-Sep-2025	----	----	----		05-Sep-2025	7 days	3 days	✓
Physical Tests : TSS by Gravimetry (Low Level)										
HDPE										
MS-HWB-25-03_2025-09-02	E160-L	02-Sep-2025	----	----	----		05-Sep-2025	7 days	3 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE										
HWB-KP22-06_2025-09-02	E121	02-Sep-2025	----	----	----		05-Sep-2025	3 days	3 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE										
MS-HWB-25-01_2025-09-02	E121	02-Sep-2025	----	----	----		05-Sep-2025	3 days	3 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE										
MS-HWB-25-03_2025-09-02	E121	02-Sep-2025	----	----	----		05-Sep-2025	3 days	3 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate)										
HWB-KP22-06_2025-09-02	E641A-L	02-Sep-2025	15-Sep-2025	14 days	13 days	✓	15-Sep-2025	40 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
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate)										
MS-HWB-25-01_2025-09-02	E641A-L	02-Sep-2025	15-Sep-2025	14 days	13 days	✓	15-Sep-2025	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS (Low Level)										
Amber glass/Teflon lined cap (sodium bisulfate)										
MS-HWB-25-03_2025-09-02	E641A-L	02-Sep-2025	15-Sep-2025	14 days	13 days	✓	15-Sep-2025	40 days	0 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
HWB-KP22-06_2025-09-02	E611D	02-Sep-2025	15-Sep-2025	14 days	13 days	✓	15-Sep-2025	14 days	13 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
MS-HWB-25-01_2025-09-02	E611D	02-Sep-2025	15-Sep-2025	14 days	13 days	✓	15-Sep-2025	14 days	13 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
MS-HWB-25-03_2025-09-02	E611D	02-Sep-2025	15-Sep-2025	14 days	13 days	✓	15-Sep-2025	14 days	13 days	✓

Legend & Qualifier Definitions

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

EHT: Exceeded ALS recommended hold time prior to analysis.

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

Quality Control Parameter Frequency Compliance

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

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Conductivity in Water	E100	2213246	1	14	7.1	5.0	✓
pH by Meter	E108	2201030	1	6	16.6	5.0	✓
Turbidity by Nephelometry	E121	2201034	1	6	16.6	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	2201038	1	14	7.1	5.0	✓
TDS by Gravimetry	E162	2201039	1	6	16.6	5.0	✓
Bromide in Water by IC	E235.Br	2213244	1	7	14.2	5.0	✓
Chloride in Water by IC	E235.Cl	2213242	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2213243	1	13	7.6	5.0	✓
Nitrite in Water by IC	E235.NO2	2213245	1	9	11.1	5.0	✓
Nitrate in Water by IC	E235.NO3	2213240	1	11	9.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2213241	1	15	6.6	5.0	✓
Alkalinity Species by Titration	E290	2213247	1	15	6.6	5.0	✓
Ammonia by Fluorescence	E298	2220666	1	18	5.5	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2220667	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2220665	1	18	5.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2216499	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2218532	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2219301	1	5	20.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2219300	1	20	5.0	5.0	✓
Laboratory Control Samples (LCS)							
Conductivity in Water	E100	2213246	1	14	7.1	5.0	✓
pH by Meter	E108	2201030	1	6	16.6	5.0	✓
Turbidity by Nephelometry	E121	2201034	1	6	16.6	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	2201038	1	14	7.1	5.0	✓
TDS by Gravimetry	E162	2201039	1	6	16.6	5.0	✓
Bromide in Water by IC	E235.Br	2213244	1	7	14.2	5.0	✓
Chloride in Water by IC	E235.Cl	2213242	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2213243	1	13	7.6	5.0	✓
Nitrite in Water by IC	E235.NO2	2213245	1	9	11.1	5.0	✓
Nitrate in Water by IC	E235.NO3	2213240	1	11	9.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2213241	1	15	6.6	5.0	✓
Alkalinity Species by Titration	E290	2213247	1	15	6.6	5.0	✓
Ammonia by Fluorescence	E298	2220666	1	18	5.5	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2220667	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2220665	1	18	5.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2216499	1	20	5.0	5.0	✓

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Control Samples (LCS) - Continued							
Dissolved Mercury in Water by CVAAS	E509	2218532	1	20	5.0	5.0	✓
Oil & Grease by Gravimetry	E567	2225601	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2219301	1	5	20.0	5.0	✓
CCME PHCs - F2-F4 by GC-FID	E601	2219268	1	3	33.3	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2219300	1	20	5.0	5.0	✓
PAHs in Water by Hexane LVI GC-MS (Low Level)	E641A-L	2219269	1	6	16.6	5.0	✓
Method Blanks (MB)							
Conductivity in Water	E100	2213246	1	14	7.1	5.0	✓
Turbidity by Nephelometry	E121	2201034	1	6	16.6	5.0	✓
TSS by Gravimetry (Low Level)	E160-L	2201038	1	14	7.1	5.0	✓
TDS by Gravimetry	E162	2201039	1	6	16.6	5.0	✓
Bromide in Water by IC	E235.Br	2213244	1	7	14.2	5.0	✓
Chloride in Water by IC	E235.Cl	2213242	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2213243	1	13	7.6	5.0	✓
Nitrite in Water by IC	E235.NO2	2213245	1	9	11.1	5.0	✓
Nitrate in Water by IC	E235.NO3	2213240	1	11	9.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2213241	1	15	6.6	5.0	✓
Alkalinity Species by Titration	E290	2213247	1	15	6.6	5.0	✓
Ammonia by Fluorescence	E298	2220666	1	18	5.5	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2220667	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2220665	1	18	5.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2216499	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	2218532	1	20	5.0	5.0	✓
Oil & Grease by Gravimetry	E567	2225601	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2219301	1	5	20.0	5.0	✓
CCME PHCs - F2-F4 by GC-FID	E601	2219268	1	3	33.3	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2219300	1	20	5.0	5.0	✓
PAHs in Water by Hexane LVI GC-MS (Low Level)	E641A-L	2219269	1	6	16.6	5.0	✓
Matrix Spikes (MS)							
Bromide in Water by IC	E235.Br	2213244	1	7	14.2	5.0	✓
Chloride in Water by IC	E235.Cl	2213242	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	2213243	1	13	7.6	5.0	✓
Nitrite in Water by IC	E235.NO2	2213245	1	9	11.1	5.0	✓
Nitrate in Water by IC	E235.NO3	2213240	1	11	9.0	5.0	✓
Sulfate in Water by IC	E235.SO4	2213241	1	15	6.6	5.0	✓
Ammonia by Fluorescence	E298	2220666	1	18	5.5	5.0	✓
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318	2220667	1	20	5.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	2220665	1	18	5.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	2216499	1	20	5.0	5.0	✓

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Matrix Spikes (MS) - Continued							
Dissolved Mercury in Water by CVAAS	E509	2218532	1	20	5.0	5.0	✓
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	2219301	1	5	20.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	2219300	1	20	5.0	5.0	✓

Methodology References and Summaries

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

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

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Nitrate in Water by IC	E235.NO3 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Sulfate in Water by IC	E235.SO4 ALS Environmental - Waterloo	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Alkalinity Species by Titration	E290 ALS Environmental - Waterloo	Water	APHA 2320 B (mod)	Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.
Ammonia by Fluorescence	E298 ALS Environmental - Waterloo	Water	Method Fialab 100, 2018	Ammonia in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021)
Total Kjeldahl Nitrogen by Fluorescence (Low Level)	E318 ALS Environmental - Waterloo	Water	Method Fialab 100, 2018	TKN in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021).
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Total Phosphorus is determined colourimetrically using a discrete analyzer after heated persulfate digestion of the sample.
Dissolved Metals in Water by CRC ICPMS	E421 ALS Environmental - Waterloo	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Dissolved Mercury in Water by CVAAS	E509 ALS Environmental - Waterloo	Water	APHA 3030B/EPA 1631E (mod)	Water samples are filtered (0.45 um), preserved with HCl, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.
Oil & Grease by Gravimetry	E567 ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane and the extract is evaporated to dryness. The residue is then weighed to determine Oil and Grease.
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1 (mod)	CCME Fraction 1 (F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
CCME PHCs - F2-F4 by GC-FID	E601 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	Sample extracts are analyzed by GC-FID for CCME hydrocarbon fractions (F2-F4). Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
VOCs (Eastern Canada List) by Headspace GC-MS	E611D ALS Environmental - Waterloo	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PAHs in Water by Hexane LVI GC-MS (Low Level)	E641A-L ALS Environmental - Waterloo	Water	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS.
F1-BTEX	EC580 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).
Sum F1 to F4 (C6-C50)	EC581 ALS Environmental - Waterloo	Water	CCME PHC in Soil - Tier 1	Hydrocarbons, total (C6-C50) is the sum of CCME Fractions F1(C6-C10), F2(C10-C16), F3(C16-C34), and F4(C34-C50). F4G-sg is not used within this calculation due to overlap with other fractions.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Ammonia	EP298 ALS Environmental - Waterloo	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Digestion for TKN in water	EP318 ALS Environmental - Waterloo	Water	APHA 4500-Norg D (mod)	Samples are digested at high temperature using Sulfuric Acid with Copper catalyst, which converts organic nitrogen sources to Ammonia, which is then quantified by the analytical method as TKN. This method is unsuitable for samples containing high levels of nitrate. If nitrate exceeds TKN concentration by ten times or more, results may be biased low.
Digestion for Total Phosphorus in water	EP372 ALS Environmental - Waterloo	Water	APHA 4500-P E (mod).	Samples are heated with a persulfate digestion reagent.
Dissolved Metals Water Filtration	EP421 ALS Environmental - Waterloo	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO3.
Dissolved Mercury Water Filtration	EP509 ALS Environmental - Waterloo	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HCl.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Oil & Grease Extraction for Gravimetry	EP567 ALS Environmental - Waterloo	Water	BC MOE Lab Manual (Oil & Grease) (mod)	The entire water sample is extracted with hexane by liquid-liquid extraction.
VOCs Preparation for Headspace Analysis	EP581 ALS Environmental - Waterloo	Water	EPA 5021A (mod)	Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler. An aliquot of the headspace is then injected into a GC-MS-FID.
PHCs and PAHs Hexane Extraction	EP601 ALS Environmental - Waterloo	Water	EPA 3511 (mod)	Petroleum Hydrocarbons (PHCs) and Polycyclic Aromatic Hydrocarbons (PAHs) are extracted using a hexane liquid-liquid extraction.

ALS Canada Ltd.

QUALITY CONTROL REPORT

Work Order	: **BF2500317**	Page	: 1 of 19
Client	: Baffinland Iron Mines Corporation	Laboratory	: ALS Environmental - Baffin Island
Contact	: Environmental Lab Results	Account Manager	: Rick Hawthorne
Address	: 360 Oakville Place Dr Suite 300 Oakville ON Canada L6H 6K8	Address	: Mary River, Qikqtani Region Baffin Island, Nunavut Canada
Telephone	: ----	Telephone	:
Project	: HWB Groundwater	Date Samples Received	: 04-Sep-2025 11:57
PO	: 4500156571	Date Analysis Commenced	: 05-Sep-2025
C-O-C number	: 25 09 02 - MS_HWB_GW	Issue Date	: 24-Sep-2025 13:23
Sampler	: ET, LG		
Site	: ----		
Quote number	: 2024-2025 Scope of Work		
No. of samples received	: 3		
No. of samples analysed	: 3		

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Laboratory Department*
Amaninder Dhillon	Team Lead - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Cedrick Velasco	Lab Manager	Baffin Island Inorganics, Baffin Island, Nunavut
Danielle Gravel	Supervisor - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
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Jon Fisher	Laboratory Manager - Environmental	Waterloo Inorganics, Waterloo, Ontario
Nik Perkio	Senior Analyst	Waterloo Inorganics, Waterloo, Ontario
Rachel Cameron	Supervisor - Semi-Volatile Extractions	Waterloo Organics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Inorganics, Waterloo, Ontario
Walt Kippenhuck	Supervisor - Inorganic	Waterloo Metals, Waterloo, Ontario

General Comments

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

Key :

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

Workorder Comments

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Physical Tests (QC Lot: 2201030)											
BF2500316-001	Anonymous	pH	----	E108	0.10	pH units	8.09	8.02	0.869%	4%	----
Physical Tests (QC Lot: 2201034)											
BF2500316-001	Anonymous	Turbidity	----	E121	0.10	NTU	1.87	1.88	0.534%	15%	----
Physical Tests (QC Lot: 2201038)											
BF2500313-001	Anonymous	Solids, total suspended [TSS]	----	E160-L	1.2	mg/L	17.8	18.6	4.75%	20%	----
Physical Tests (QC Lot: 2201039)											
BF2500316-001	Anonymous	Solids, total dissolved [TDS]	----	E162	19	mg/L	100	95	5	Diff <2x LOR	----
Physical Tests (QC Lot: 2213246)											
WT2525276-013	Anonymous	Conductivity	----	E100	2.0	µS/cm	1080	1040	3.95%	10%	----
Physical Tests (QC Lot: 2213247)											
WT2525276-013	Anonymous	Alkalinity, total (as CaCO3)	----	E290	2.0	mg/L	142	149	5.05%	20%	----
Anions and Nutrients (QC Lot: 2213240)											
BF2500317-001	MS-HWB-25-01_2025-09-02	Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	0.082	0.082	0.0007	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2213241)											
BF2500317-001	MS-HWB-25-01_2025-09-02	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	9.65	9.64	0.0922%	20%	----
Anions and Nutrients (QC Lot: 2213242)											
BF2500317-001	MS-HWB-25-01_2025-09-02	Chloride	16887-00-6	E235.Cl	0.50	mg/L	15.3	15.2	0.107%	20%	----
Anions and Nutrients (QC Lot: 2213243)											
BF2500317-001	MS-HWB-25-01_2025-09-02	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.032	0.031	0.0006	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2213244)											
BF2500317-001	MS-HWB-25-01_2025-09-02	Bromide	24959-67-9	E235.Br	0.10	mg/L	<0.10	<0.10	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2213245)											
BF2500317-001	MS-HWB-25-01_2025-09-02	Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2220665)											
BF2500317-001	MS-HWB-25-01_2025-09-02	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0071	0.0068	0.0002	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2220666)											

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Anions and Nutrients (QC Lot: 2220666) - continued											
BF2500317-002	MS-HWB-25-03_2025-09-02	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 2220667)											
BF2500317-003	HWB-KP22-06_2025-09-02	Kjeldahl nitrogen, total [TKN]	----	E318	0.050	mg/L	0.136	0.131	0.005	Diff <2x LOR	----
Dissolved Metals (QC Lot: 2216499)											
BF2500317-001	MS-HWB-25-01_2025-09-02	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0024	0.0024	0.00004	Diff <2x LOR	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00026	0.00026	0.000006	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0195	0.0200	2.65%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	0.029	0.030	0.0008	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.0000060	0.0000061	0.0000001	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	29.7	30.0	1.06%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	0.00051	0.00052	0.000006	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00203	0.00205	0.696%	20%	----
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Lead, dissolved	7439-92-1	E421	0.000050	mg/L	0.000056	0.000056	0.0000004	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0032	0.0032	0.00004	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	33.2	34.4	3.44%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.00223	0.00230	3.01%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.00191	0.00185	3.12%	20%	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.00615	0.00618	0.451%	20%	----
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.050	mg/L	2.02	2.06	2.12%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00369	0.00358	3.10%	20%	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000072	0.000070	0.000002	Diff <2x LOR	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	4.71	4.79	1.70%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.050	mg/L	4.07	4.08	0.342%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.0211	0.0209	0.827%	20%	----
		Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	3.91	4.05	0.14	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Dissolved Metals (QC Lot: 2216499) - continued											
BF2500317-001	MS-HWB-25-01_2025-09-02	Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	0.000012	<0.000010	0.000002	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.00010	mg/L	0.00029	0.00030	0.000010	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.00109	0.00109	0.302%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	0.00040	0.00038	0.00002	Diff <2x LOR	----
Dissolved Metals (QC Lot: 2218532)											
BF2500301-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Volatile Organic Compounds (QC Lot: 2219300)											
BF2500317-001	MS-HWB-25-01_2025-09-02	Acetone	67-64-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Benzene	71-43-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromodichloromethane	75-27-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromoform	75-25-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromomethane	74-83-9	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Carbon disulfide	75-15-0	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Carbon tetrachloride	56-23-5	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Chlorobenzene	108-90-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroethane	75-00-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroform	67-66-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloromethane	74-87-3	E611D	2.0	µg/L	<2.0	<2.0	0	Diff <2x LOR	----
		Dibromochloromethane	124-48-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dibromoethane, 1,2-	106-93-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorodifluoromethane	75-71-8	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,1-	75-34-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,2-	107-06-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, 1,1-	75-35-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Volatile Organic Compounds (QC Lot: 2219300) - continued											
BF2500317-001	MS-HWB-25-01_2025-09-02	Dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Dichloropropane, 1,2-	78-87-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Hexane, n-	110-54-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Hexanone, 2-	591-78-6	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethylene	127-18-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Toluene	108-88-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichlorofluoromethane	75-69-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Vinyl chloride	75-01-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 2219301)											
BF2500317-001	MS-HWB-25-01_2025-09-02	F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	<25	0	Diff <2x LOR	----

Method Blank (MB) Report

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

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 2201034)						
Turbidity	----	E121	0.1	NTU	<0.10	----
Physical Tests (QCLot: 2201038)						
Solids, total suspended [TSS]	----	E160-L	1	mg/L	<1.0	----
Physical Tests (QCLot: 2201039)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Physical Tests (QCLot: 2213246)						
Conductivity	----	E100	1	µS/cm	1.0	----
Physical Tests (QCLot: 2213247)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Anions and Nutrients (QCLot: 2213240)						
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 2213241)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 2213242)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 2213243)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 2213244)						
Bromide	24959-67-9	E235.Br	0.1	mg/L	<0.10	----
Anions and Nutrients (QCLot: 2213245)						
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	<0.010	----
Anions and Nutrients (QCLot: 2220665)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 2220666)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 2220667)						
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	<0.050	----
Dissolved Metals (QCLot: 2216499)						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 2216499) - continued						
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 2218532)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Aggregate Organics (QCLot: 2225601)						
Oil & grease (gravimetric)	----	E567	5	mg/L	<5.0	----
Volatile Organic Compounds (QCLot: 2219300)						
Acetone	67-64-1	E611D	20	µg/L	<20	----
Benzene	71-43-2	E611D	0.5	µg/L	<0.50	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	<0.50	----
Bromoform	75-25-2	E611D	0.5	µg/L	<0.50	----
Bromomethane	74-83-9	E611D	0.5	µg/L	<0.50	----
Carbon disulfide	75-15-0	E611D	1	µg/L	<1.0	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	<0.20	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	<0.50	----
Chloroethane	75-00-3	E611D	0.5	µg/L	<0.50	----
Chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----
Chloromethane	74-87-3	E611D	2	µg/L	<2.0	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	<0.50	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	<0.20	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	<0.50	----
Dichloromethane	75-09-2	E611D	1	µg/L	<1.0	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	<0.50	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	<0.30	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	<0.50	----
Hexanone, 2-	591-78-6	E611D	20	µg/L	<20	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 2219300) - continued						
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	<0.50	----
Styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----
Toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	<0.50	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	<0.50	----
Vinyl chloride	75-01-4	E611D	0.2	µg/L	<0.20	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----
Hydrocarbons (QCLot: 2219268)						
F2 (C10-C16)	----	E601	100	µg/L	<100	----
F3 (C16-C34)	----	E601	250	µg/L	<250	----
F4 (C34-C50)	----	E601	250	µg/L	<250	----
Hydrocarbons (QCLot: 2219301)						
F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	----
Polycyclic Aromatic Hydrocarbons (QCLot: 2219269)						
Acenaphthene	83-32-9	E641A-L	0.01	µg/L	<0.010	----
Acenaphthylene	208-96-8	E641A-L	0.01	µg/L	<0.010	----
Acridine	260-94-6	E641A-L	0.01	µg/L	<0.010	----
Anthracene	120-12-7	E641A-L	0.01	µg/L	<0.010	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	µg/L	<0.010	----
Benzo(a)pyrene	50-32-8	E641A-L	0.005	µg/L	<0.0050	----
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	µg/L	<0.010	----
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	µg/L	<0.010	----
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	µg/L	<0.010	----
Chrysene	218-01-9	E641A-L	0.01	µg/L	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	µg/L	<0.0050	----
Fluoranthene	206-44-0	E641A-L	0.01	µg/L	<0.010	----
Fluorene	86-73-7	E641A-L	0.01	µg/L	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	µg/L	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	µg/L	<0.010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 2219269) - continued						
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	µg/L	<0.010	----
Naphthalene	91-20-3	E641A-L	0.01	µg/L	<0.010	----
Perylene	198-55-0	E641A-L	0.01	µg/L	<0.010	----
Phenanthrene	85-01-8	E641A-L	0.01	µg/L	<0.010	----
Pyrene	129-00-0	E641A-L	0.01	µg/L	<0.010	----
Quinoline	91-22-5	E641A-L	0.01	µg/L	<0.010	----

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
Physical Tests (QCLot: 2201030)									
pH	----	E108	----	pH units	7 pH units	100	98.0	102	----
Physical Tests (QCLot: 2201034)									
Turbidity	----	E121	0.1	NTU	200 NTU	99.5	85.0	115	----
Physical Tests (QCLot: 2201038)									
Solids, total suspended [TSS]	----	E160-L	1	mg/L	250 mg/L	98.0	85.0	115	----
Physical Tests (QCLot: 2201039)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	850 mg/L	101	85.0	115	----
Physical Tests (QCLot: 2213246)									
Conductivity	----	E100	1	µS/cm	1410 µS/cm	98.2	90.0	110	----
Physical Tests (QCLot: 2213247)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	150 mg/L	101	85.0	115	----
Anions and Nutrients (QCLot: 2213240)									
Nitrate (as N)	14797-55-8	E235.NO3	0.02	mg/L	2.5 mg/L	98.1	90.0	110	----
Anions and Nutrients (QCLot: 2213241)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	99.0	90.0	110	----
Anions and Nutrients (QCLot: 2213242)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	98.5	90.0	110	----
Anions and Nutrients (QCLot: 2213243)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	104	90.0	110	----
Anions and Nutrients (QCLot: 2213244)									
Bromide	24959-67-9	E235.Br	0.1	mg/L	0.5 mg/L	103	85.0	115	----
Anions and Nutrients (QCLot: 2213245)									
Nitrite (as N)	14797-65-0	E235.NO2	0.01	mg/L	0.5 mg/L	98.2	90.0	110	----
Anions and Nutrients (QCLot: 2220665)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.333 mg/L	91.6	80.0	120	----
Anions and Nutrients (QCLot: 2220666)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	98.5	85.0	115	----
Anions and Nutrients (QCLot: 2220667)									
Kjeldahl nitrogen, total [TKN]	----	E318	0.05	mg/L	4 mg/L	98.2	75.0	125	----
Dissolved Metals (QCLot: 2216499)									

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 2216499) - continued									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	0.1 mg/L	101	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	0.05 mg/L	102	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	0.05 mg/L	106	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.012 mg/L	105	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.005 mg/L	98.7	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	0.05 mg/L	101	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	0.05 mg/L	93.9	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.005 mg/L	104	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	2.5 mg/L	98.8	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.002 mg/L	107	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.012 mg/L	97.4	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.012 mg/L	96.8	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.012 mg/L	99.1	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	0.05 mg/L	98.9	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.025 mg/L	103	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.012 mg/L	101	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	2.5 mg/L	103	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.012 mg/L	102	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.012 mg/L	101	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.025 mg/L	99.9	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	0.5 mg/L	104	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	2.5 mg/L	109	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.005 mg/L	106	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	0.05 mg/L	102	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	0.5 mg/L	101	60.0	140	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.005 mg/L	107	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	2.5 mg/L	101	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.012 mg/L	103	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	2.5 mg/L	104	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.005 mg/L	102	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	0.05 mg/L	102	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.005 mg/L	99.6	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.025 mg/L	102	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.012 mg/L	99.5	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.005 mg/L	103	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0 mg/L	104	80.0	120	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 2216499) - continued									
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.025 mg/L	102	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.025 mg/L	99.8	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.005 mg/L	100	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	90.9	80.0	120	----
Aggregate Organics (QCLot: 2225601)									
Oil & grease (gravimetric)	----	E567	5	mg/L	200 mg/L	96.4	70.0	130	----
Volatile Organic Compounds (QCLot: 2219300)									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	110	70.0	130	----
Benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
Bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	97.7	70.0	130	----
Bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	88.9	60.0	140	----
Carbon disulfide	75-15-0	E611D	1	µg/L	100 µg/L	106	70.0	130	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	101	70.0	130	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
Chloroethane	75-00-3	E611D	0.5	µg/L	100 µg/L	102	60.0	140	----
Chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	107	70.0	130	----
Chloromethane	74-87-3	E611D	2	µg/L	100 µg/L	110	60.0	140	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	109	70.0	130	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	110	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	107	70.0	130	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	110	60.0	140	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
Dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	108	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	107	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	109	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	106	70.0	130	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 2219300) - continued									
Hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
Hexanone, 2-	591-78-6	E611D	20	µg/L	100 µg/L	104	70.0	130	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	112	70.0	130	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	107	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	108	70.0	130	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	105	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	107	70.0	130	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	109	70.0	130	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	103	60.0	140	----
Vinyl chloride	75-01-4	E611D	0.2	µg/L	100 µg/L	106	60.0	140	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	109	70.0	130	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	105	70.0	130	----
Hydrocarbons (QCLot: 2219268)									
F2 (C10-C16)	----	E601	100	µg/L	3770 µg/L	83.9	70.0	130	----
F3 (C16-C34)	----	E601	250	µg/L	7760 µg/L	91.6	70.0	130	----
F4 (C34-C50)	----	E601	250	µg/L	4200 µg/L	100	70.0	130	----
Hydrocarbons (QCLot: 2219301)									
F1 (C6-C10)	----	E581.F1-L	25	µg/L	2000 µg/L	113	80.0	120	----
Polycyclic Aromatic Hydrocarbons (QCLot: 2219269)									
Acenaphthene	83-32-9	E641A-L	0.01	µg/L	0.526 µg/L	92.9	50.0	140	----
Acenaphthylene	208-96-8	E641A-L	0.01	µg/L	0.526 µg/L	85.4	50.0	140	----
Acridine	260-94-6	E641A-L	0.01	µg/L	0.526 µg/L	98.8	50.0	140	----
Anthracene	120-12-7	E641A-L	0.01	µg/L	0.526 µg/L	80.6	50.0	140	----
Benz(a)anthracene	56-55-3	E641A-L	0.01	µg/L	0.526 µg/L	107	50.0	140	----
Benzo(a)pyrene	50-32-8	E641A-L	0.005	µg/L	0.526 µg/L	99.2	50.0	140	----
Benzo(b+j)fluoranthene	n/a	E641A-L	0.01	µg/L	0.526 µg/L	89.4	50.0	140	----
Benzo(g,h,i)perylene	191-24-2	E641A-L	0.01	µg/L	0.526 µg/L	88.1	50.0	140	----
Benzo(k)fluoranthene	207-08-9	E641A-L	0.01	µg/L	0.526 µg/L	82.5	50.0	140	----
Chrysene	218-01-9	E641A-L	0.01	µg/L	0.526 µg/L	105	50.0	140	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 2219269) - continued									
Dibenz(a,h)anthracene	53-70-3	E641A-L	0.005	µg/L	0.526 µg/L	77.9	50.0	140	----
Fluoranthene	206-44-0	E641A-L	0.01	µg/L	0.526 µg/L	98.4	50.0	140	----
Fluorene	86-73-7	E641A-L	0.01	µg/L	0.526 µg/L	94.8	50.0	140	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A-L	0.01	µg/L	0.526 µg/L	119	50.0	140	----
Methylnaphthalene, 1-	90-12-0	E641A-L	0.01	µg/L	0.526 µg/L	91.8	50.0	140	----
Methylnaphthalene, 2-	91-57-6	E641A-L	0.01	µg/L	0.526 µg/L	96.2	50.0	140	----
Naphthalene	91-20-3	E641A-L	0.01	µg/L	0.526 µg/L	93.2	50.0	140	----
Perylene	198-55-0	E641A-L	0.01	µg/L	0.526 µg/L	101	50.0	140	----
Phenanthrene	85-01-8	E641A-L	0.01	µg/L	0.526 µg/L	99.6	50.0	140	----
Pyrene	129-00-0	E641A-L	0.01	µg/L	0.526 µg/L	97.9	50.0	140	----
Quinoline	91-22-5	E641A-L	0.01	µg/L	0.526 µg/L	107	50.0	140	----

Matrix Spike (MS) Report

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

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 2213240)										
BF2500317-001	MS-HWB-25-01_2025-09-02	Nitrate (as N)	14797-55-8	E235.NO3	2.40 mg/L	2.5 mg/L	95.9	75.0	125	----
Anions and Nutrients (QCLot: 2213241)										
BF2500317-001	MS-HWB-25-01_2025-09-02	Sulfate (as SO4)	14808-79-8	E235.SO4	96.5 mg/L	100 mg/L	96.5	75.0	125	----
Anions and Nutrients (QCLot: 2213242)										
BF2500317-001	MS-HWB-25-01_2025-09-02	Chloride	16887-00-6	E235.Cl	97.7 mg/L	100 mg/L	97.7	75.0	125	----
Anions and Nutrients (QCLot: 2213243)										
BF2500317-001	MS-HWB-25-01_2025-09-02	Fluoride	16984-48-8	E235.F	0.941 mg/L	1 mg/L	94.1	75.0	125	----
Anions and Nutrients (QCLot: 2213244)										
BF2500317-001	MS-HWB-25-01_2025-09-02	Bromide	24959-67-9	E235.Br	0.48 mg/L	0.5 mg/L	96.1	75.0	125	----
Anions and Nutrients (QCLot: 2213245)										
BF2500317-001	MS-HWB-25-01_2025-09-02	Nitrite (as N)	14797-65-0	E235.NO2	0.495 mg/L	0.5 mg/L	99.1	75.0	125	----
Anions and Nutrients (QCLot: 2220665)										
BF2500317-001	MS-HWB-25-01_2025-09-02	Phosphorus, total	7723-14-0	E372-U	0.101 mg/L	0.1 mg/L	101	70.0	130	----
Anions and Nutrients (QCLot: 2220666)										
BF2500317-002	MS-HWB-25-03_2025-09-02	Ammonia, total (as N)	7664-41-7	E298	0.104 mg/L	0.1 mg/L	104	75.0	125	----
Anions and Nutrients (QCLot: 2220667)										
BF2500317-003	HWB-KP22-06_2025-09-02	Kjeldahl nitrogen, total [TKN]	----	E318	2.44 mg/L	2.5 mg/L	97.6	70.0	130	----
Dissolved Metals (QCLot: 2216499)										
BF2500317-003	HWB-KP22-06_2025-09-02	Aluminum, dissolved	7429-90-5	E421	0.104 mg/L	0.1 mg/L	104	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0547 mg/L	0.05 mg/L	109	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0594 mg/L	0.05 mg/L	119	70.0	130	----
		Barium, dissolved	7440-39-3	E421	ND mg/L	----	ND	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.00543 mg/L	0.005 mg/L	108	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.0464 mg/L	0.05 mg/L	92.8	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.049 mg/L	0.05 mg/L	98.5	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00536 mg/L	0.005 mg/L	107	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.00281 mg/L	0.002 mg/L	112	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0126 mg/L	0.012 mg/L	100	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0122 mg/L	0.012 mg/L	98.0	70.0	130	----
		Copper, dissolved	7440-50-8	E421	0.0124 mg/L	0.012 mg/L	98.8	70.0	130	----
		Iron, dissolved	7439-89-6	E421	0.050 mg/L	0.05 mg/L	99.6	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0255 mg/L	0.025 mg/L	102	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.0129 mg/L	0.012 mg/L	103	70.0	130	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 2216499) - continued										
BF2500317-003	HWB-KP22-06_2025-09-02	Magnesium, dissolved	7439-95-4	E421	ND mg/L	----	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	0.0129 mg/L	0.012 mg/L	103	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.0134 mg/L	0.012 mg/L	107	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0247 mg/L	0.025 mg/L	98.6	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	0.562 mg/L	0.5 mg/L	112	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	2.46 mg/L	2.5 mg/L	98.3	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	ND mg/L	----	ND	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0624 mg/L	0.05 mg/L	125	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	ND mg/L	----	ND	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00546 mg/L	0.005 mg/L	109	70.0	130	----
		Sodium, dissolved	7440-23-5	E421	ND mg/L	----	ND	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	ND mg/L	----	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	ND mg/L	----	ND	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.00582 mg/L	0.005 mg/L	116	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.0491 mg/L	0.05 mg/L	98.1	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.00495 mg/L	0.005 mg/L	99.0	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0266 mg/L	0.025 mg/L	106	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0126 mg/L	0.012 mg/L	101	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.00531 mg/L	0.005 mg/L	106	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	ND mg/L	----	ND	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.0265 mg/L	0.025 mg/L	106	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.0268 mg/L	0.025 mg/L	107	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.00532 mg/L	0.005 mg/L	106	70.0	130	----
Dissolved Metals (QCLot: 2218532)										
BF2500301-002	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000838 mg/L	0 mg/L	83.8	70.0	130	----
Volatile Organic Compounds (QCLot: 2219300)										
BF2500317-001	MS-HWB-25-01_2025-09-02	Acetone	67-64-1	E611D	107 µg/L	100 µg/L	107	60.0	140	----
		Benzene	71-43-2	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		Bromodichloromethane	75-27-4	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		Bromoform	75-25-2	E611D	93.0 µg/L	100 µg/L	93.0	60.0	140	----
		Bromomethane	74-83-9	E611D	83.0 µg/L	100 µg/L	83.0	60.0	140	----
		Carbon disulfide	75-15-0	E611D	97.4 µg/L	100 µg/L	97.4	60.0	140	----
		Carbon tetrachloride	56-23-5	E611D	93.8 µg/L	100 µg/L	93.8	60.0	140	----
		Chlorobenzene	108-90-7	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		Chloroethane	75-00-3	E611D	95.5 µg/L	100 µg/L	95.5	60.0	140	----
		Chloroform	67-66-3	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		Chloromethane	74-87-3	E611D	99.9 µg/L	100 µg/L	99.9	60.0	140	----
		Dibromochloromethane	124-48-1	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		Dibromoethane, 1,2-	106-93-4	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	103 µg/L	100 µg/L	103	60.0	140	----
		Dichlorodifluoromethane	75-71-8	E611D	90.2 µg/L	100 µg/L	90.2	60.0	140	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 2219300) - continued										
BF2500317-001	MS-HWB-25-01_2025-09-02	Dichloroethane, 1,1-	75-34-3	E611D	99.1 µg/L	100 µg/L	99.1	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611D	95.9 µg/L	100 µg/L	95.9	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	103 µg/L	100 µg/L	103	60.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	99.7 µg/L	100 µg/L	99.7	60.0	140	----
		Dichloromethane	75-09-2	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		Ethylbenzene	100-41-4	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		Hexane, n-	110-54-3	E611D	92.3 µg/L	100 µg/L	92.3	60.0	140	----
		Hexanone, 2-	591-78-6	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		Styrene	100-42-5	E611D	100 µg/L	100 µg/L	100	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	100 µg/L	100 µg/L	100	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	106 µg/L	100 µg/L	106	60.0	140	----
		Tetrachloroethylene	127-18-4	E611D	95.2 µg/L	100 µg/L	95.2	60.0	140	----
		Toluene	108-88-3	E611D	100 µg/L	100 µg/L	100	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	95.4 µg/L	100 µg/L	95.4	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		Trichloroethylene	79-01-6	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611D	91.9 µg/L	100 µg/L	91.9	60.0	140	----
		Vinyl chloride	75-01-4	E611D	94.4 µg/L	100 µg/L	94.4	60.0	140	----
		Xylene, m+p-	179601-23-1	E611D	210 µg/L	200 µg/L	105	60.0	140	----
		Xylene, o-	95-47-6	E611D	102 µg/L	100 µg/L	102	60.0	140	----
Hydrocarbons (QCLot: 2219301)										
BF2500317-001	MS-HWB-25-01_2025-09-02	F1 (C6-C10)	----	E581.F1-L	2020 µg/L	2000 µg/L	101	60.0	140	----

Chain of Custody: 25 09 02 - MS_HWB_GW

Client Info	Project Info	Laboratory Info	
Baffinland Iron Mine Corporation 2275 Upper Middle Rd E, Suite 300 Oakville, ON, L6H 0C3 **Phone:** 647-253-0596 x6016/6039/4131 **Email:** environment.coordinators@baffinland.com; environment.superintendents@baffinland.com	**Job Reference (Project):** MS_HWB_GW **Task:** , Groundwater_MS_250827 **Site:** MS	**Lab Name:** ALS Waterloo **Contact:** Rick Hawthorne **Phone:** 519.886.6910 **Email:** Rick.Hawthorne@ALSGlobal.com	**Address:** Unit 1 - 60 Northland Road Waterloo, ON,N2V 2B8
Email Invoice: ap@baffinland.com; environment.superintendents@baffinland.com **Email EDD:** bim.equissa@baffinland.com **Email COA:** environment.labresults@baffinland.com	**Turn around Time:** Routine (R) **Sampler 1:** LG **Sampler 2:** ET **Sampler 3:**	**ALS Quote #:** WT2020BIMC1000001 **ALS PO #:** 4500156571	**Lab Work Order #** (lab use only):

Sample Details				Field Data			Analysis Requested											
Sample ID (sys_sample_code)	**Location (sys_loc_code)**	**Sample Date and Time**	**Matrix**	**Temperature, Field (deg C)**	**pH, Field (pH units)**	**Total # of Containers**	**ALS_GW_HWB**											
MS-HWB-25-01_2025-09-02	**MS-HWB-25-01**	**9/2/2025 8:45:00 AM**	**WG**	**0.6**	**7.44**	11	**X**											
MS-HWB-25-03_2025-09-02	**MS-HWB-25-03**	**9/2/2025 10:25:00 AM**	**WG**	**0.3**	**7.81**	**11**	**X**											
HWB-KP22-06_2025-09-02	**HWB-KP22-06**	**9/2/2025 11:20:00 AM**	**WG**	1.5	**7.68**	**11**	**X**											

Relinquished by:	Bradley Rasmussen	**Date:**	9/2/2025 1:32:00 PM
Additional Comments			
Initial Shipment Reception (lab use only)		**Final Shipment Reception** (lab use only)	
Received by:		**Received by:**	
Date/Time:		**Date/Time:**	

MM-457 OK-61 N-204
UW-28 OG785, GC782

Baffinland

Chain of Custody: 25 09 02 - MS_HWB_GW

Client Info	Project Info	Laboratory Info	
Baffinland Iron Mine Corporation 2275 Upper Middle Rd E, Suite 300 Oakville, ON, L6H 0C3 **Phone:** 647-253-0596 x6016/6039/4131 **Email:** environment.coordinators@baffinland.com; environment.superintendents@baffinland.com	**Job Reference (Project):** MS_HWB_GW **Task:** , Groundwater_MS_250827 **Site:** MS	**Lab Name:** ALS Waterloo **Contact:** Rick Hawthorne **Phone:** 519.886.6910 **Email:** Rick.Hawthorne@ALSGlobal.com	**Address:** Unit 1 - 60 Northland Road Waterloo, ON,N2V 2B8
Email Invoice: ap@baffinland.com; environment.superintendents@baffinland.com **Email EDD:** bim.equissa@baffinland.com **Email COA:** environment.labresults@baffinland.com	**Turn around Time:** Routine (R) **Sampler 1:** LG **Sampler 2:** ET **Sampler 3:**	**ALS Quote #:** WT2020BIMC1000001 **ALS PO #:** 4500156571	**Lab**

Environmental Division
Baffin Island
Work Order Reference
BF2500317

Telephone

Sample Details				Field Data			Anal											
Sample ID (sys_sample_code)	Location (sys_loc_code)	Sample Date and Time	Matrix	Temperature, Field (deg C)	pH, Field (pH units)	Total # of Containers	ALS_GW_HWB											
MS-HWB-25-01_2025-09-02	MS-HWB-25-01	9/2/2025 8:45:00 AM	WG	0.6	7.44	11	X											
MS-HWB-25-03_2025-09-02	MS-HWB-25-03	9/2/2025 10:25:00 AM	WG	0.3	7.81	11	X											
HWB-KP22-06_2025-09-02	HWB-KP22-06	9/2/2025 11:20:00 AM	WG	1.5	7.68	11	X											

Relinquished by:	Bradley Rasmussen	**Date:**	9/2/2025 1:32:00 PM
Additional Comments			
Initial Shipment Reception (lab use only)		**Final Shipment Reception** (lab use only)	
Received by:		**Received by:**	AP
Date/Time:		**Date/Time:**	11-Sept-25 10:30

12.1°C

APPENDIX F

2023, 2024 and 2025 Groundwater Levels and Analytical Result Tables

Distance from Landfill Qualifier[a]		Source					Source				
Well Location		LF-KP22-01					LF-KP22-03				
Date (M/DD/YYYY)		9/19/2023[d]	9/4/2024[e]	9/7/2024[f]	10/11/2024[g]	8/28/2025[j]	9/19/2023[d]	9/4/2024[e]	9/7/2024[f]	10/11/2024[g]	8/27/2025[j]
COA number		-	-	BF2400323	-	BF2500304	-	-	BF2400323	-	BF2500299
Field Observations	**Unit**										
Weather		na	Sunny, overcast	Cloudy	Unknown the day of measurement, but was collected following the 1 in 1000-year rain event	Sunny, windy	na	Sunny, overcast	Cloudy, windy, rainy	Unknown the day of measurement, but was collected following the 1 in 1000-year rain event	Windy, rain and snow
Well PVC tubing height	mags	-	0.748	0.748	0.748	0.747	-	1.068	1.068	1.068	1.072
Depth to bottom	mbtPVC	-	3.11	3.015	2.965	3.168	-	3.00	2.95	2.92	2.93
Depth to water	mbtPVC	-	1.720	1.791	0.5	1.939	-	1.74	1.754	1.51	1.848
Well depth from ground surface	mbgs	2.43	2.362	2.267	2.217	2.421	1.95	1.93	1.89	1.85	1.86
Water depth from ground surface	mbgs	1.21	0.972	1.043	-0.248	1.192	0.870	0.672	0.686	0.442	0.776
PVC casing elevation[b]	masl	-	180.288	180.288	180.288	180.42	-	179.44	179.44	179.44	179.502
Ground surface elevation[c]	masl	179.58	179.54	179.54	179.54	179.612	178.37	178.372	178.372	178.372	178.328
Estimated groundwater elevation	masl	178.370	178.568	178.497	179.788	178.420	177.500	177.700	177.686	177.930	177.552

BIM: Baffinland Iron Mines, LF: Landfill Facility, mags: metres above ground surface, masl: meters above sea level, mg/L: milligram per litre, mbtPVC: metres below top of PVC (or riser for drive point piezometer), na: not available, PVC: Polyvinyl chloride

(a) Distance from Landfill Facility Qualifiers are defined as: Source = Station is located within active cells (Cells 1, 2, 3) in the landfill, Proximal= Station is within 20 metres from landfill limits, Downgradient = Station is located more than 20 m downgradient from the landfill's limits towards Sheardown Lake, Background = Station is located in the inactive cells (Cells 4, 5) of the landfill or upgradient of the landfill.

(b) PVC casing elevations surveyed by Baffinland Iron Mines in November 2024, and in November 2025 (with the exception of LF-KP22-05, LF-KP23-06, LF-KP23-07, LF-KP23-08 and LF-KP23-09 in 2025).

(c) Ground surface elevations were calculated based on PVC tubing height and surveyed casing elevations. Ground surface elevations for location that had not been surveyed in 2024 come from previous reports (Tetra Tech 2022, KP 2023, KP 2024) and include: MS-LF-GW2, MS-LF-GW3, MS-LF-GW-REF3, MS-LF-GW4, MS-LF-GW5, MS-LF-GW-REF1.

(d) Water level measurement collected during the 2023 Program by KP (KP, 2024)

(e) Water level measurement collected on 4-Sept-2024 by WSP to assess groundwater levels. No sample collected.

(f) Water level measurement collected prior to purging and collecting a sample in 2024.

(g) Water level measurement collected on 11-Oct-2024 by Baffinland Iron Mines. This water level measurement was collected after the 1 in a 1000 year rain event that occurred end of September 2024. No sample collected.

(h) Well is frozen.
(i) Water levels on 5-Sept-2024 had not been collected, but used water level measurements from 4-Sept-2024 for purging calculations

(j) Water level measurement collected prior to purging and collecting a sample in 2025.

Distance from Landfill Qualifier[a]		Source			Source		Source			Source	
Well Location		LF-KP23-13			MS-LF-GW1		MS-LF-GW3			MS-LF-GW-REF1	
Date (M/DD/YYYY)		9/4/2024[e]	9/7/2024[f]	8/28/2025[j]	9/19/2023[d]	8/28/2025[j]	9/19/2023[d]	9/4/2024[e]	8/27/2025[j]	9/4/2024[e]	8/28/2025[j]
COA number		-	BF2400323	BF2500303	BF2300307	BF2500303	-	-	BF2500300	-	-
Field Observations	**Unit**										
Weather		Sunny, overcast	Cloudy, rainy	Sunny, partly cloudy, windy	na	Sunny, windy	na	Sunny, overcast	Rain/snow, windy	Sunny, overcast	Partly cloudy, sunny, windy
Well PVC tubing height	mags	1.078	1.078	1.062	-	0.466	-	0.593	0.828	0.05	0.11
Depth to bottom	mbtPVC	2.725	2.63	2.736	-	1.829	-	1.740	1.749	0.821	0.91
Depth to water	mbtPVC	1.89	1.902	1.915	-	0.922	-	1.190	1.290	0.05	0.10
Well depth from ground surface	mbgs	1.65	1.55	1.67	1.36	1.363	0.98	1.147	0.921	0.77	0.80
Water depth from ground surface	mbgs	0.812	0.824	0.853	0.48	0.456	0.46	0.597	0.462	0.00	-0.01
PVC casing elevation[b]	masl	181.015	181.015	181.074	-	179.271	-	178.643	178.655	179.78	179.657
Ground surface elevation[c]	masl	179.937	179.937	179.995	179.23	179.19	178.05	178.05	177.966	179.73	179.22
Estimated groundwater elevation	masl	179.125	179.113	179.142	178.750	178.734	177.590	177.453	177.504	179.730	179.232

BIM: Baffinland Iron Mines, LF: Landfill Facility, mags: metres above ground surface, masl: meters above sea level, mg/L: milligram per litre, mbtPVC: metres below top of PVC (or riser for drive point piezometer), na: not available, PVC: Polyvinyl chloride

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(b) PVC casing elevations surveyed by Baffinland Iron Mines in November 2024, and in November 2025 (with the exception of LF-KP22-05, LF-KP23-06, LF-KP23-07, LF-KP23-08 and LF-KP23-09 in 2025).

(c) Ground surface elevations were calculated based on PVC tubing height and surveyed casing elevations. Ground surface elevations for location that had not been surveyed in 2024 come from previous reports (Tetra Tech 2022, KP 2023, KP 2024) and include: MS-LF-GW2, MS-LF-GW3, MS-LF-GW-REF3, MS-LF-GW4, MS-LF-GW5, MS-LF-GW-REF1.

(d) Water level measurement collected during the 2023 Program by KP (KP, 2024)

(e) Water level measurement collected on 4-Sept-2024 by WSP to assess groundwater levels. No sample collected.

(f) Water level measurement collected prior to purging and collecting a sample in 2024.

(g) Water level measurement collected on 11-Oct-2024 by Baffinland Iron Mines. This water level measurement was collected after the 1 in a 1000 year rain event that occurred end of September 2024. No sample collected.

(h) Well is frozen.
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(j) Water level measurement collected prior to purging and collecting a sample in 2025.

Distance from Landfill Qualifier[a]		Proximal					Proximal					Proximal			
Well Location		LF-KP22-05					LF-KP23-05					LF-KP23-11			
Date (M/DD/YYYY)		9/19/2023[d]	9/4/2024[e]	9/6/2024[f]	10/11/2024[g]	8/26/2025[j]	9/19/2023[d]	9/4/2024[e]	9/5/2024[f]	10/11/2024[g]	8/27/2025[j]	9/19/2023[d]	9/4/2024[e]	9/6/2024[f]	10/11/2024[g]
COA number		-	-	BF2400320	-	BF2500297	-	-	BF2400320	-	BF2500299	-	-	BF2400320	-
Field Observations	**Unit**														
Weather		na	Sunny, overcast	Rainy	Unknown the day of measurement, but was collected following the 1 in 1000-year rain event	Windy, mostly cloudy	na	Sunny, overcast	Sunny	Unknown the day of measurement, but was collected following the 1 in 1000-year rain event	Cloudy, windy, snowing	na	Sunny, overcast	Rainy	Unknown the day of measurement, but was collected following the 1 in 1000-year rain event
Well PVC tubing height	mags	-	1.145	1.145	1.145	1.16	-	1.169	1.169	1.169	1.162	-	1.162	1.162	1.162
Depth to bottom	mbtPVC	-	2.21	2.138	2.12	2.221	-	2.305	2.214	2.21	2.21	-	2.725	2.651	1.76 [h]
Depth to water	mbtPVC	-	1.765	1.636	1.475	1.656	-	1.876	1.875	1.61	1.986	-	1.635	1.62	1.415
Well depth from ground surface	mbgs	1.11	1.07	0.99	0.98	1.06	-	1.14	1.05	1.04	1.05	-	1.56	1.49	0.60
Water depth from ground surface	mbgs	0.660	0.620	0.491	0.330	0.496	1.070	0.707	0.706	0.441	0.824	0.690	0.473	0.458	0.253
PVC casing elevation[b]	masl	-	188.119	188.119	188.119	188.119	-	180.222	180.222	180.222	180.05	-	189.052	189.052	189.052
Ground surface elevation[c]	masl	187.06	186.974	186.974	186.974	186.959	178.99	179.053	179.053	179.053	178.869	187.7	187.89	187.89	187.89
Estimated groundwater elevation	masl	186.400	186.354	186.483	186.644	186.463	177.920	178.346	178.347	178.612	178.045	187.010	187.417	187.432	187.637

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(c) Ground surface elevations were calculated based on PVC tubing height and surveyed casing elevations. Ground surface elevations for location that had not been surveyed in 2024 come from previous reports (Tetra Tech 2022, KP 2023, KP 2024) and include: MS-LF-GW2, MS-LF-GW3, MS-LF-GW-REF3, MS-LF-GW4, MS-LF-GW5, MS-LF-GW-REF1.

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Distance from Landfill Qualifier[a]		
Well Location		
Date (M/DD/YYYY)		8/26/2025[j]
COA number		BF2500297
Field Observations	**Unit**	
Weather		Partly cloudy, windy
Well PVC tubing height	mags	1.201
Depth to bottom	mbtPVC	2.839
Depth to water	mbtPVC	1.738
Well depth from ground surface	mbgs	1.64
Water depth from ground surface	mbgs	0.537
PVC casing elevation[b]	masl	189.193
Ground surface elevation[c]	masl	187.986
Estimated groundwater elevation	masl	187.449

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(b) PVC casing elevations surveyed by Baffinland Iron Mines in November 2024, and in November 2025 (with the exception of LF-KP22-05, LF-KP23-06, LF-KP23-07, LF-KP23-08 and LF-KP23-09 in 2025).

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Distance from Landfill Qualifier[a]		Proximal					Proximal				Proximal		
Well Location		MS-LF-GW2					MS-LF-GW-REF2				LF-KP23-10		
Date (M/DD/YYYY)		9/19/2023[d]	9/4/2024[e]	9/7/2024[f]	10/11/2024[g]	8/29/2025[i]	9/19/2023[d]	9/4/2024[e]	9/6/2024[f]	8/27/2025[i]	9/19/2023[d]	9/4/2024[e]	8/26/2025[i]
COA number		-	-	BF2400323	-	BF2500306	-	-	BF2400320	-	-	-	-
Field Observations	**Unit**												
Weather		na	Sunny, overcast	Cloudy, 5°C	Unknown the day of measurement, but was collected following the 1 in 1000-year rain event	Windy, snowed overnight	na	Sunny, overcast	Cloudy, rainy, snowy, 0°C	Windy, rain and snow	na	Sunny, overcast	Partly cloudy, windy
Well PVC tubing height	mags	na	0.382	0.382	0.382	0.679	-	0.441	0.441	0.401	-	1.098	0.882
Depth to bottom	mbtPVC	na	1.89	1.742	1.74	1.75	-	1.795	1.741	1.872	-	2.655	2.814
Depth to water	mbtPVC	na	1.082	1.08	0.85	1.55	-	1.155	1.155	1.805	-	Dry	Dry
Well depth from ground surface	mbgs	1.23	1.51	1.36	1.36	1.07	1.08	1.35	1.30	1.47	na	1.56	1.93
Water depth from ground surface	mbgs	0.900	0.700	0.698	0.468	0.871	0.830	0.714	0.714	1.404	2.180	Dry	Dry
PVC casing elevation[b]	masl	-	178.512	178.512	178.512	178.853	-	179.731	179.731	179.608	-	188.88	188.937
Ground surface elevation[c]	masl	178.13	178.13	178.13	178.13	178.107	179.3	179.29	179.29	179.17	187.69	187.782	187.803
Estimated groundwater elevation	masl	177.230	177.430	177.432	177.662	177.236	178.470	178.576	178.576	177.766	185.510	-	-

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(b) PVC casing elevations surveyed by Baffinland Iron Mines in November 2024, and in November 2025 (with the exception of LF-KP22-05, LF-KP23-06, LF-KP23-07, LF-KP23-08 and LF-KP23-09 in 2025).

(c) Ground surface elevations were calculated based on PVC tubing height and surveyed casing elevations. Ground surface elevations for location that had not been surveyed in 2024 come from previous reports (Tetra Tech 2022, KP 2023, KP 2024) and include: MS-LF-GW2, MS-LF-GW3, MS-LF-GW-REF3, MS-LF-GW4, MS-LF-GW5, MS-LF-GW-REF1.

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Distance from Landfill Qualifier[a]		Proximal			Downgradient					Downgradient				
Well Location		MS-LF-GW-REF3			LF-KP23-01					LF-KP23-04				
Date (M/DD/YYYY)		9/19/2023[d]	9/4/2024[e]	9/2/2025[j]	9/19/2023[d]	9/4/2024[e]	9/7/2024[f]	10/11/2024[g]	8/26/2025[j]	9/19/2023[d]	9/4/2024[e]	9/7/2024[f]	10/11/2024[g]	8/29/2025[j]
COA number		-	-	-	-	-	BF2400323	-	BF2500297	-	-	BF2400323	-	BF2500306
Field Observations	**Unit**													
Weather		na	Sunny, overcast	Overcast, windy	na	Sunny, overcast	Cloudy	Unknown the day of measurement, but was collected following the 1 in 1000-year rain event	Mostly cloudy, windy	na	Sunny, overcast	Cloudy	Unknown the day of measurement, but was collected following the 1 in 1000-year rain event	Windy, partly cloudy
Well PVC tubing height	mags	-	1.00	0.87	-	1.075	1.075	1.075	1.093	-	1.135	1.135	1.135	1.121
Depth to bottom	mbtPVC	-	1.74	1.823	-	2.57	2.494	2.49	2.575	-	2.385	2.308	2.3	2.636
Depth to water	mbtPVC	-	1.145	1.341	-	1.505	1.854	1.17	1.576	-	1.505	1.485	1.42	1.568
Well depth from ground surface	mbgs	0.96	0.74	0.95	-	1.50	1.42	1.42	1.48	-	1.25	1.17	1.17	1.52
Water depth from ground surface	mbgs	0.840	0.145	0.467	0.660	0.430	0.779	0.095	0.483	0.470	0.370	0.350	0.285	0.447
PVC casing elevation[b]	masl	-	187.98	187.82	-	170.774	170.774	170.774	170.628	-	178.236	178.236	178.236	178.125
Ground surface elevation[c]	masl	186.98	186.98	187.358	169.68	169.699	169.699	169.699	169.58	177.31	177.101	177.101	177.101	177.054
Estimated groundwater elevation	masl	186.140	186.835	186.891	169.020	169.269	168.920	169.604	169.097	176.840	176.731	176.751	176.816	176.607

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Distance from Landfill Qualifier[a]		Downgradient			Downgradient		Downgradient		Downgradient	Downgradient	Background				
Well Location		LF-KP23-03			MS-LF-GW4		MS-LF-GW5		MS-LF-25-01	MS-LF-25-02	LF-KP23-06				
Date (M/DD/YYYY)		9/19/2023[d]	9/4/2024[e]	8/28/2025[j]	9/4/2024[e]	8/29/2025[j]	9/4/2024[e]	8/29/2025[j]	8/29/2025[j]	8/29/2025[j]	9/19/2023[d]	9/4/2024[e]	9/5/2024[f]	10/11/2024[g]	8/26/2025[j]
COA number		-	-	-	-	-	-	-	-	-	-	-	BF2400320	-	BF2500297
Field Observations	**Unit**														
Weather		na	Sunny, overcast	Partly cloudy	Sunny, overcast	Windy, partly cloudy	Sunny, overcast	Windy, partly cloudy	Wind	Windy, snowing	na	Sunny, overcast	Sunny, overcast	Unknown the day of measurement, but was collected following the 1 in 1000-year rain event	Partly cloudy, windy
Well PVC tubing height	mags	-	1.096	1.048	0.53	0.539	0.62	0.62	1.303	1.41	-	0.935	0.935	0.935	0.91
Depth to bottom	mbtPVC	-	2.86	2.931	1.735	1.739	1.741	1.741	2.689	4.636	-	2.31	2.213	2.21	2.21
Depth to water	mbtPVC	-	Dry	Dry	1.248	1.599	1.622	Dry/frozen	Frozen	Dry or frozen	-	1.525	1.512	1.41	1.52
Well depth from ground surface	mbgs	-	1.76	1.88	1.21	1.20	1.12	1.12	1.39	3.23	-	1.38	1.28	1.28	1.30
Water depth from ground surface	mbgs	2.340 [h]	Dry	Dry	0.718	1.060	1.002	Dry/frozen	Frozen	Dry or frozen	0.610	0.590	0.577	0.475	0.610
PVC casing elevation[b]	masl	-	173.844	173.668	175.79	176.266	172.7	173.249	172.07	178.246	-	180.038	180.038	180.038	180.038
Ground surface elevation[c]	masl	172.67	172.748	172.637	175.26	175.863	172.08	172.767	171.242	176.675	179.05	179.103	179.103	179.103	179.128
Estimated groundwater elevation	masl	170.330	-	-	174.542	174.803	171.078	-	-	-	178.440	178.513	178.526	178.628	178.518

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Distance from Landfill Qualifier[a]		Background					Background					Background				
Well Location		LF-KP23-07					LF-KP23-08					LF-KP23-09				
Date (M/DD/YYYY)		9/19/2023[d]	9/4/2024[e]	9/5/2024[f]	10/11/2024[g]	8/26/2025[j]	9/19/2023[d]	9/4/2024[e]	9/5/2024[f]	10/11/2024[g]	8/25/2025[j]	9/19/2023[d]	9/4/2024[e]	9/6/2024[f]	10/11/2024[g]	8/25/2025[j]
COA number		-	-	BF2400320	-	BF2500297	-	-	BF2400320	-	BF2500296	-	-	BF2400320	-	BF2500296
Field Observations	**Unit**															
Weather		na	Sunny, overcast	Sunny, overcast	Unknown the day of measurement, but was collected following the 1 in 1000-year rain event	Partly cloudy, windy	na	Sunny, overcast	Sunny	Unknown the day of measurement, but was collected following the 1 in 1000-year rain event	Windy, raining	na	Sunny, overcast	Rainy	Unknown the day of measurement, but was collected following the 1 in 1000-year rain event	Windy
Well PVC tubing height	mags	-	1.024	1.024	1.024	1.039	-	0.958	0.958 [i]	0.958	0.962	-	0.925	0.925	0.925	0.911
Depth to bottom	mbtPVC	-	2.305	2.229	Frozen	2.31	-	2.305	2.305 [i]	2.225	2.31	-	2.295	2.219	2.22	2.303
Depth to water	mbtPVC	-	1.120	1.093	0.85	1.138	-	1.735	1.735 [i]	1.64	1.76	-	1.206	1.132	0.97	1.445
Well depth from ground surface	mbgs	-	1.28	1.21	-	1.27	-	1.35	1.35	1.27	1.35	-	1.37	1.29	1.30	1.39
Water depth from ground surface	mbgs	-0.160	0.096	0.069	-0.174	0.099	0.890	0.777	0.777	0.682	0.798	0.610	0.281	0.207	0.045	0.534
PVC casing elevation[b]	masl	-	179.744	179.744	179.744	179.744	-	180.205	180.205	180.205	180.205	-	187.958	187.958	187.958	187.958
Ground surface elevation[c]	masl	179	178.72	178.72	178.72	178.705	179.58	179.247	179.247	179.247	179.243	187.41	187.033	187.033	187.033	187.047
Estimated groundwater elevation	masl	179.160	178.624	178.651	178.894	178.606	178.690	178.470	178.470	178.565	178.445	186.800	186.752	186.826	186.988	186.513

BIM: Baffinland Iron Mines, LF: Landfill Facility, mags: metres above ground surface, masl: meters above sea level, mg/L: milligram per litre, mbtPVC: metres below top of PVC (or riser for drive point piezometer), na: not available, PVC: Polyvinyl chloride

(a) Distance from Landfill Facility Qualifiers are defined as: Source = Station is located within active cells (Cells 1, 2, 3) in the landfill, Proximal= Station is within 20 metres from landfill limits, Downgradient = Station is located more than 20 m downgradient from the landfill's limits towards Sheardown Lake, Background = Station is located in the inactive cells (Cells 4, 5) of the landfill or upgradient of the landfill.

(b) PVC casing elevations surveyed by Baffinland Iron Mines in November 2024, and in November 2025 (with the exception of LF-KP22-05, LF-KP23-06, LF-KP23-07, LF-KP23-08 and LF-KP23-09 in 2025).

(c) Ground surface elevations were calculated based on PVC tubing height and surveyed casing elevations. Ground surface elevations for location that had not been surveyed in 2024 come from previous reports (Tetra Tech 2022, KP 2023, KP 2024) and include: MS-LF-GW2, MS-LF-GW3, MS-LF-GW-REF3, MS-LF-GW4, MS-LF-GW5, MS-LF-GW-REF1.

(d) Water level measurement collected during the 2023 Program by KP (KP, 2024)

(e) Water level measurement collected on 4-Sept-2024 by WSP to assess groundwater levels. No sample collected.

(f) Water level measurement collected prior to purging and collecting a sample in 2024.

(g) Water level measurement collected on 11-Oct-2024 by Baffinland Iron Mines. This water level measurement was collected after the 1 in a 1000 year rain event that occurred end of September 2024. No sample collected.

(h) Well is frozen.
(i) Water levels on 5-Sept-2024 had not been collected, but used water level measurements from 4-Sept-2024 for purging calculations

(j) Water level measurement collected prior to purging and collecting a sample in 2025.

Table F-2: 2023, 2024 and 2025 Water level measurements collected at the Hazardous Waste Berm Facility, Mary River Mine

Distance from HWB Facilities Qualifier[a]		Source					Source					Source					Source				
Station		HWB-KP23-01					HWB-KP23-02					HWB-KP22-03					MS-HWB-GW5				
Date (M/DD/YYYY)		9/19/2023[d]	9/5/2024[e]	9/9/2024[f]	10/11/2024[g]	8/30/2025[j]	9/19/2023[d]	9/5/2024[e]	9/8/2024[f]	10/11/2024[g]	8/30/2025[j]	9/19/2023[d]	9/5/2024[e]	9/8/2024[f]	10/11/2024[g]	8/30/2025[j]	9/19/2023[d]	9/5/2024[e]	9/9/2024[f]	10/11/2024[g]	8/30/2025[j]
COA number		-	-	BF2400327	-	BF2500308	-	-	BF2400327	-	BF2500308	-	-	BF2400323	-	BF2500308	-	-	BF2400327	-	BF2500308
Field Observations	Unit																				
Weather		na	Sunny, overcast	Cloudy, very windy	Unknown the day of measurement, but was collected following the 1 in 1000-year rain event	Wind/light snow	na	Sunny, overcast	Cloudy, rainy	Unknown the day of measurement, but was collected following the 1 in 1000-year rain event	Wind/light snow	na	Sunny, overcast	Cloudy, rainy	Unknown the day of measurement, but was collected following the 1 in 1000-year rain event	Windy, overcast	na	Sunny, overcast	Cloudy, windy	Unknown the day of measurement, but was collected following the 1 in 1000-year rain event	Wind/light snow
Well PVC tubing height/drive point piezometer riser	mags	-	1.154	1.154	1.154	1.165	-	1.64	1.64	1.64	1.145	-	1.143	1.143	1.143	1.051	-	0.688	0.688 [i]	0.688	0.685
Depth to bottom	mbtPVC	-	2.57	2.475	2.475	2.56	-	2.62	2.542	2.555	2.633	-	2.620	2.548	2.545	2.549	-	1.811	1.811 [i]	1.735	1.815
Depth to water	mbtPVC	-	1.52	1.311	1.4	1.6	-	1.785	1.654	1.74	1.724	-	1.560	1.513	1.325	1.501	-	1.06	1.06 [i]	0.83	1.126
Well depth from ground surface	mbgs	-	1.416	1.321	1.321	1.395		0.98	0.902	0.915	1.488	-	1.477	1.405	1.402	1.498	-	1.123	1.123	1.047	1.13
Water depth from ground surface	mbgs	0.51	0.366	0.157	0.246	0.435	0.53	0.145	0.014	0.1	0.579	0.53	0.417	0.37	0.182	0.45	0.00	0.372	0.372	0.142	0.441
PVC casing elevation/drive point piezometer riser elevation [b]	masl	-	174.588	174.588	174.588	174.829	-	175.263	175.263	175.263	175.554	-	175.465	175.465	175.465	175.429	-	174.358	174.358	174.358	174.425
Ground surface elevation[c]	masl	173.67	173.434	173.434	173.434	173.639	175.07	173.623	173.623	173.623	174.247	174.47	174.322	174.322	174.322	174.158	173.67	173.67	173.67	173.67	173.658
Estimated groundwater elevation	masl	173.16	173.068	173.277	173.188	173.204	174.54	173.478	173.609	173.523	173.668	173.94	173.905	173.952	174.14	173.708	173.67	173.298	173.298	173.528	173.217

BIM: Baffinland Iron Mines, HWB: Hazard Waste Berm, GW: Groundwater, mags: metres above ground surface, masl: meters above sea level, mbtPVC: metres below top of PVC (or riser for drive point piezometer), na: not available, PVC: Polyvinyl chloride

(a) Distance from HWB Facility Qualifiers are defined as: Source = Station is located within HWB Facility limits or less than 20 m from the HWB Facility limits, Proximal =Station is located more than 20 metres from HWB Facility limits, Downgradient = Station is located more than 20 m downgradient from the HWB Facility towards Camp Lake , Background = Station is located upgradient or more than 20 m from HWB Facility limits.

(b) PVC casing elevations/drive point piezometer riser elevations surveyed by Baffinland Iron Mines in November 2024. PVC casing elevations/drive point piezometer riser elevations surveyed in November 2025 at locations where a water level measurement was collected in 2025.

(c) Ground surface elevations for measurements collected prior to 2024 were calculated based on PVC tubing height and surveyed casing elevations. Ground surface elevations for location that had not been surveyed in 2024 come from previous reports (Tetra Tech 2022, KP 2023, KP 2024) and include: MS-HWB-GW3, MS-HWB-GW4, MS-HWB-GW5, MS-HWB-GW6, HWB-KP23-03, MS-HWB-GW-REF1, MS-HWB-GW-REF2, MS-HWB-GW-REF3). Ground surface elevations surveyed in November 2025 at locations where a water level measurement was collected in 2025.

(d) Water level measurement collected during the 2023 Program by KP (KP, 2024).
(e) Water level measurement collected on 5-Sept-2024 to assess groundwater levels. No sample collected.
(f) Water level measurement collected prior to purging and sampling.
(g) Water level measurement collected on 11-Oct-2024 by Baffinland Iron Mines. This water level measurement was collected after the 1 in a 1000-year rain event that occurred end of September 2024. No sample collected.
(h) Well is frozen.
(i) Water levels on sampling day had not been collected, but used water level measurements from 5-Sept-2024 for purging calculations.
(j) Water level measurement collected by BIM prior to purging and collecting a sample in 2025.

Distance from HWB Facilities Qualifier[a]		Source				Proximal					Proximal					Proximal					Proximal		Downgradient
Station		MS-HWB-GW4				HWB-KP22-04					HWB-KP22-05					HWB-KP23-03					MS-HWB-GW3		MS-HWB-25-01
Date (M/DD/YYYY)		9/19/2023[d]	9/5/2024[e]	9/9/2024[f]	10/11/2024[g]	9/19/2023[d]	9/5/2024[e]	9/8/2024[f]	10/11/2024[g]	8/30/2025[j]	9/19/2023[d]	9/5/2024[e]	9/9/2024[f]	10/11/2024[g]	8/30/2025[j]	9/19/2023[d]	9/5/2024[e]	9/8/2024[f]	10/11/2024[g]	8/30/2025[j]	9/19/2023[d]	9/5/2024[e]	9/2/2025[j]
COA number		-	-	BF2400327	-	-	-	BF2400323	-	BF2500308	-	-	BF2400327	-	BF2500308	-	-	BF2400327	-	BF2500308	-	-	BF2500317
Field Observations	Unit																						
Weather		na	Sunny, overcast	Cloudy, very windy	Unknown the day of measurement, but was collected following the 1 in 1000-year rain event	na	Sunny, overcast	Cloudy, rainy	Unknown the day of measurement, but was collected following the 1 in 1000-year rain event	Windy, sun and clouds	na	Sunny, overcast	Cloudy, very windy	Unknown the day of measurement, but was collected following the 1 in 1000-year rain event	Wind/snow	na	Sunny, overcast	Cloudy, rainy, windy	Unknown the day of measurement, but was collected following the 1 in 1000-year rain event	Wind/snow	na	Sunny, overcast	Sunny, windy
Well PVC tubing height/drive point piezometer riser	mags	-	0.538	0.538 [(i)]	0.538	-	1.003	1.003	1.003	0.998	-	0.961	0.961	0.961	0.937	-	1.245	1.245	1.245	1.199	-	0.578	1.328
Depth to bottom	mbtPVC	-	1.811	1.811 [(i)]	1.73	-	2.495	2.42	2.42	2.508	-	2.575	2.465	2.49	2.666	-	2.67	2.575	2.58	2.649	-	1.811	3.261
Depth to water	mbtPVC	-	0.962	0.962 [(i)]	0.53	-	1.275	1.214	1.065	1.345	-	1.48	1.132	1.35	1.498	-	1.585	1.345	1.53	1.565	-	1.06	2.753
Well depth from ground surface	mbgs	-	1.273	1.273	1.192	-	1.492	1.417	1.417	1.51	-	1.614	1.504	1.529	1.729	-	1.425	1.33	1.335	1.45		1.233	1.933
Water depth from ground surface	mbgs	0.52	0.424	0.424	-0.008	0.55	0.272	0.211	0.062	0.347	0.71	0.519	0.171	0.389	0.561	0.48	0.34	0.1	0.285	0.366	0.66	0.482	1.425
PVC casing elevation/drive point piezometer riser elevation[(b)]	masl	-	174.808	174.808	174.808	-	174.681	174.681	174.681	175.328	-	174.706	174.706	174.706	175.072	-	175.25	175.25	175.25	175.34	-	174.958	174.826
Ground surface elevation[(c)]	masl	174.27	174.27	174.27	174.27	174.13	173.678	173.678	173.678	174.213	174.12	173.745	173.745	173.745	174.11	174.00	174.00	174.00	174.00	174.11	174.38	174.38	172.734
Estimated groundwater elevation	masl	173.75	173.846	173.846	174.278	173.58	173.406	173.467	173.616	173.866	173.41	173.226	173.574	173.356	173.549	173.52	173.66	173.90	173.72	173.74	173.72	173.898	171.309

BIM: Baffinland Iron Mines, HWB: Hazard Waste Berm, GW: Groundwater, mags: metres above ground surface, masl: meters above sea level, mbtPVC: metres below top of PVC (or riser for drive point piezometer), na: not available, PVC: Polyvinyl chloride

(a) Distance from HWB Facility Qualifiers are defined as: Source = Station is located within HWB Facility limits or less than 20 m from the HWB Facility limits, Proximal =Station is located more than 20 metres from HWB Facility limits, Downgradient = Station is located more than 20 m downgradient from the HWB Facility towards Camp Lake , Background = Station is located upgradient or more than 20 m from HWB Facility limits.

(b) PVC casing elevations/drive point piezometer riser elevations surveyed by Baffinland Iron Mines in November 2024. PVC casing elevations/drive point piezometer riser elevations surveyed in November 2025 at locations where a water level measurement was collected in 2025.

(c) Ground surface elevations for measurements collected prior to 2024 were calculated based on PVC tubing height and surveyed casing elevations. Ground surface elevations for location that had not been surveyed in 2024 come from previous reports (Tetra Tech 2022, KP 2023, KP 2024) and include: MS-HWB-GW3, MS-HWB-GW4, MS-HWB-GW5, MS-HWB-GW6, HWB-KP23-03, MS-HWB-GW-REF1, MS-HWB-GW-REF2, MS-HWB-GW-REF3). Ground surface elevations surveyed in November 2025 at locations where a water level measurement was collected in 2025.

(d) Water level measurement collected during the 2023 Program by KP (KP, 2024).
(e) Water level measurement collected on 5-Sept-2024 to assess groundwater levels. No sample collected.
(f) Water level measurement collected prior to purging and sampling.
(g) Water level measurement collected on 11-Oct-2024 by Baffinland Iron Mines. This water level measurement was collected after the 1 in a 1000-year rain event that occurred end of September 2024. No sample collected.
(h) Well is frozen.
(i) Water levels on sampling day had not been collected, but used water level measurements from 5-Sept-2024 for purging calculations.
(j) Water level measurement collected by BIM prior to purging and collecting a sample in 2025

Distance from HWB Facilities Qualifier[a]		Downgradient		Downgradient	Background					Background					Background			Background		Background		Background
Station		MS-HWB-GW6		MS-HWB-25-02	HWB-KP22-01					MS-HWB-GW-REF3					MS-HWB-GW-REF1			MS-HWB-GW-REF2		HWB-KP22-06		MS-HWB-25-03
Date (M/DD/YYYY)		9/5/2024[e]	9/2/2025[j]	8/29/2025[j]	9/19/2023[d]	9/5/2024[e]	9/8/2024[f]	10/11/2024[g]	8/30/2025[j]	9/19/2023[d]	9/5/2024[e]	9/8/2024[f]	10/11/2024[g]	8/30/2025[j]	9/5/2024[e]	9/9/2024[f]	8/30/2025[j]	9/5/2024[e]	8/30/2025[j]	9/5/2024[e]	9/2/2025[j]	9/2/2025[j]
COA number		-	-	-	-	-	BF2400323	-	BF2500308	-	-	BF2400323	-	BF2500308	-	BF2400330	BF2500308	-	-	-	BF2500317	BF2500317
Field Observations	Unit																					
Weather		Sunny, overcast	Sunny, windy	Wind/snow	na	Sunny, overcast	Rainy, windy	Unknown the day of measurement, but was collected following the 1 in 1000-year rain event	Cloudy, windy	na	Sunny, overcast	Rainy, windy	Unknown the day of measurement, but was collected following the 1 in 1000-year rain event	Cloudy, windy	Sunny, overcast	Cloudy, windy	Windy, sun and clouds	Sunny, overcast	Windy, cloudy	Sunny, overcast	Sunny, windy	Sunny, windy
Well PVC tubing height/drive point piezometer riser	mags	0.405	0.398	1.368	-	1.036	1.036	1.036	1.28	-	0.517	0.517 [i]	0.517	0.523	0.665	0.665	0.639	0.628	0.619	1.16	1.118	1.314
Depth to bottom	mbtPVC	1.815	0.927	4.616	-	2.505	2.432	2.43	2.431	-	1.75	1.75 [i]	- [h]	1.829	1.735	1.747	1.818	1.911	1.742	2.73	2.753	3.41
Depth to water	mbtPVC	Dry	Frozen	Dry	-	1.485	1.412	1.285	1.394	-	0.675	0.675 [i]	0.83	0.534	Dry	0.745	0.779	0.931	Dry	Dry	1.929	2.362
Well depth from ground surface	mbgs	1.41	0.529	3.248		1.469	1.396	1.394	1.151	-	1.233	1.233	-	1.306	1.07	1.082	1.179	1.283	1.123	1.57	1.635	2.096
Water depth from ground surface	mbgs	Dry	Frozen	Dry	0.5	0.449	0.376	0.249	0.114	0.00	0.158	0.158	0.313	0.011	Dry	0.08	0.14	0.303	Dry	Dry	0.811	1.048
PVC casing elevation/drive point piezometer riser elevation[b]	masl	173.425	173.546	175.501	-	175.394	175.394	175.394	175.357	-	174.657	174.657	-	174.536	173.355	173.355	173.151	174.918	174.952	na	174.908	175.405
Ground surface elevation[c]	masl	173.02	173.167	174.137	174.36	174.358	174.358	174.358	174.275	174.14	174.14	174.14	174.14	174.253	172.69	172.69	172.602	174.29	174.379	173.74	173.847	173.949
Estimated groundwater elevation	masl	-	-	-	173.86	173.909	173.982	174.109	174.16	174.14	173.982	173.982	173.827	174.242	-	172.61	172.462	173.987	-	-	173.036	172.901

BIM: Baffinland Iron Mines, HWB: Hazard Waste Berm, GW: Groundwater, mags: metres above ground surface, masl: meters above sea level, mbtPVC: metres below top of PVC (or riser for drive point piezometer), na: not available, PVC: Polyvinyl chloride

(a) Distance from HWB Facility Qualifiers are defined as: Source = Station is located within HWB Facility limits or less than 20 m from the HWB Facility limits, Proximal =Station is located more than 20 metres from HWB Facility limits, Downgradient = Station is located more than 20 m downgradient from the HWB Facility towards Camp Lake , Background = Station is located upgradient or more than 20 m from HWB Facility limits.

(b) PVC casing elevations/drive point piezometer riser elevations surveyed by Baffinland Iron Mines in November 2024. PVC casing elevations/drive point piezometer riser elevations surveyed in November 2025 at locations where a water level measurement was collected in 2025.

(c) Ground surface elevations for measurements collected prior to 2024 were calculated based on PVC tubing height and surveyed casing elevations. Ground surface elevations for location that had not been surveyed in 2024 come from previous reports (Tetra Tech 2022, KP 2023, KP 2024) and include: MS-HWB-GW3, MS-HWB-GW4, MS-HWB-GW5, MS-HWB-GW6, HWB-KP23-03, MS-HWB-GW-REF1, MS-HWB-GW-REF2, MS-HWB-GW-REF3). Ground surface elevations surveyed in November 2025 at locations where a water level measurement was collected in 2025.

(d) Water level measurement collected during the 2023 Program by KP (KP, 2024).
(e) Water level measurement collected on 5-Sept-2024 to assess groundwater levels. No sample collected.
(f) Water level measurement collected prior to purging and sampling.
(g) Water level measurement collected on 11-Oct-2024 by Baffinland Iron Mines. This water level measurement was collected after the 1 in a 1000-year rain event that occurred end of September 2024. No sample collected.

(h) Well is frozen.
(i) Water levels on sampling day had not been collected, but used water level measurements from 5-Sept-2024 for purging calculations.

(j) Water level measurement collected by BIM prior to purging and collecting a sample in 2025

Table F-3: 2023 to 2025 Groundwater and Seep Analytical Results collected at the Landfill Facility, Mary River Mine

Distance from Landfill Facility Qualifier[a]						Source				Source			Source		Source		Source			Source		Proximal			
Station		FIGQ Guideline[c] Commercial/Industrial	Yukon Contaminated Sites Regulation (CSR)[b]	Water Licence 2AM-MRY1325 Effluent Quality Discharge Limits[j]	Water Licence 2AM-MRY2540 Effluent Quality Discharge Limits[l]	LF-KP22-01				LF-KP22-03			LF-KP23-13		MS-LF-GW1		MS-LF-GW3		LF-DS-SEEP-01			LF-DS-SEEP-02		LF-KP22-05		
Sample Date (M/DD/YYYY)		Tier 2 Water Use/Pathway: Protection of Freshwater Aquatic Life (AW-F)	Protection of Freshwater Aquatic Life (AW-F)			9/03/2023	9/07/2024	8/28/2025	8/28/2025	9/03/2023	9/07/2024	8/27/2025	9/07/2024	8/28/2025	9/19/2023	8/28/2025	9/12/2023	8/27/2025	8/17/2024	9/07/2024	8/29/2025	8/17/2024	9/07/2024	9/03/2023	9/06/2024	8/26/2025
COA number		Soil Type: Coarse Grain				BF2300267	BF2400323	BF2500304	BF2500304	BF2300267	BF2400323	BF2500299	BF2400323	BF2500303	BF2300307	BF2500303	BF2300288	BF2500300	BF2400326	BF2400266	BF2500307	BF2400266	BF2400326	BF2300267	BF2400320	BF2500297
Matrix						GW				GW			GW		GW		GW		SP			SP		GW		
QA/QC				Maximum Concentration of Any Grab Sample	Maximum Concentration of Any Grab Sample	-	-	FDA	FD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Parameter	Unit																									
Field Observations																										
Weather	-	-	-	-	-	na	Cloudy	Sunny, windy	Sunny, windy	na	Cloudy, windy, rainy	Windy, rain and snow	Cloudy, rainy	Sunny, partly cloudy, windy	na	Sunny, windy	na	Rain/snow, windy	-	Cloudy	Mostly Cloudy,Windy	-	Cloudy	na	Rainy	Windy, mostly cloudy
Routine Parameters																										
Dissolved Oxygen, Field	mg/L	-	-	-	-	-	1.2	0.11	-	-	5.19	4.11	11.68	8.51	-	1.48	-	2.26	10.16	11.81	12.16	7.25	9.53	-	3.23	2.01
Dissolved Oxygen, Percent, Field	%	-	-	-	-	-	8.7	0.8	-	-	37.1	29.2	88.4	63.1	-	11.3	-	16.5	92.5	92.5	87.9	64.4	76.7	-	23.5	15.0
pH, Field	pH unit	6.5 - 9.0	-	6.5 - 9.0	6.5 - 9.0	-	7.01	7.06	-	-	7.16	7.14	7.66	7.34	-	6.99	-	7.19	7.56	7.77	7.98	7.09	7.14	-	7.07	6.95
pH, Lab	pH unit	6.5 - 9.0	-	6.5 - 9.0	6.5 - 9.0	7.1	7.01	7.06	7.01	7.37	7.18	7.45	7.78	7.57	7.21	7.03	7.01	7.28	7.73	7.58	7.93	7.15	7.15	7.06	7.13	6.99
Data Quality Objective (DQO) - pH	pH unit	-	-	-	-	-	0	0	-	-	0.02	0.31	0.12	0.23	-	0.04	-	0.09	0.17	0.19	0.05	0.06	0.01	-	0.06	0.04
Specific Conductivity, Field	µS/cm	-	-	-	-	-	2427	2440	-	-	713	648	471	414.7	-	1851	-	568	995	947	377.9	2558	2594	-	647	587
Conductivity, Lab	µS/cm	-	-	-	-	-	2480	2430	2410.0	-	746.0	659.0	521.0	418.0	2660.0	1880.0	712.0	581.0	1010.0	883.0	381.0	2600.0	2650.0	-	619.0	583.0
Data Quality Objective (DQO) - Conductivity	%	-	-	-	-	-	2.2	0.4	-	-	4.5	1.7	10.1	0.8	-	1.6	-	2.3	1.5	7.0	0.8	1.6	2.1	-	4.4	0.7
Temperature, Field	°C	-	-	-	-	-	0.9	1.9	-	-	0.8	1.2	2.9	2.8	-	3.8	-	2.2	10	4.2	2.0	8.8	5.1	-	1.3	3.0
Total Alkalinity	mg/L as CaCO	-	-	-	-	-	324	325	327	-	196	208	218	194	-	288	-	214	217	208	161	337	386	-	241	200
Total Suspended Solids	mg/L	-	-	- [k]	- [k]	23.9	2.9	< 1.2	< 1.2	18.8	1.9	1.5	1.6	1.9	1.9	5.7	11.2	30.4	1.5	4.1	1.7	23.3	16.5	98.9	94.4	51.8
Total Dissolved Solids	mg/L	-	-	-	-	1910	2170	2020	2100	475	438	367	298	240	2260	1500	418	327	733	670	202	2330	2380	445	332	304
Turbidity, Lab	NTU	-	-	-	-	12.1	2.9	1.4	1.47	4.45	0.4	0.37	0.9	1.98	2.75	3	2.96	15.2	4.49	4.15	2.37	61.4	38.9	33	38.5	35.5
Turbidity, Field	NTU	-	-	-	-	-	5.91	1.65	-	-	3.16	1.8	22.35	3.33	-	7.95	-	75.75	1.4	6.22	3.48	36.09	44.24	-	179.62	18.5
Hardness, as $CaCO_3$ (calculated)[b]	mg/L	-	-	-	-	1255	1399	1400	1415	350	329	304	262	202	1400	1004	360	277	509	455	172	1533	1559	226	210	182
Major Ions																										
Calcium	mg/L	-	-	-	-	417	455	485	488	70.4	63.1	60.7	52.7	43.1	458	348	64.6	53.9	157	143	39	538	550	46	41	39
Chloride	mg/L	120	-	-	-	-	56.5	88.4	89.6	-	66.1	41.7	11.3	5.53	76.8	68.8	37.9	17.4	23.3	16.8	7.4	60.6	92.4	-	45.4	57.3
Bromide	mg/L	-	-	-	-	-	< 0.5	< 0.5	< 0.5	-	0.28	< 0.1	< 0.1	< 0.1	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.1	< 0.1	1.05	< 0.5	-	< 0.1	0.21
Fluoride	mg/L	0.12	2.0 - 3.0 [g]	-	-	-	< 0.1	< 0.1	< 0.1	-	0.034	0.05	0.24	0.17	< 0.1	< 0.1	0.026	0.039	0.104	0.076	0.076	0.18	0.184	-	0.065	0.078
Magnesium	mg/L	-	-	-	-	51.9	63.9	45.8	47.7	42.2	41.6	36.9	31.6	22.9	62.3	32.7	48.3	34.6	28.3	23.9	18.1	46	45	26.9	26.1	20.6
Potassium	mg/L	-	-	-	-	35.5	23.7	20	20.5	3.45	3.99	4.44	3.61	2.5	31.8	16.9	3.31	3.48	6.64	5.68	2.79	21.3	21.8	2.63	2.71	2.62
Sodium	mg/L	-	-	-	-	75	50.2	45.5	46.6	20.7	19.3	17.5	10.6	8.9	58.4	33.9	17.9	16.1	18.8	16	8.46	44.6	55.1	66.4	51	50.5
Sulfate	mg/L	100	1,000	-	-	-	**1170**	**1030**	**1040**	-	87.5	67.9	36.9	16.8	**1120**	703	90.9	63.8	304	248	27.7	**1230**	**1200**	-	12	14.4
Nutrients																										
Nitrate	mg/L as N	2.9	400	-	-	-	< 0.1	< 0.1	< 0.1	-	1.33	0.81	1.43	0.56	< 0.1	< 0.1	2.4	0.511	0.126	0.054	0.052	< 0.1	< 0.1	-	< 0.02	< 0.02
Nitrite	mg/L as N	0.060	0.20 - 2.0 [i]	-	-	-	< 0.05	< 0.05	< 0.05	-	< 0.01	< 0.01	0.025	< 0.01	< 0.05	< 0.05	< 0.01	< 0.01	< 0.05	< 0.01	< 0.01	< 0.05	< 0.05	-	< 0.01	< 0.01
Total Ammonia	mg/L as N	0.017 - 190 [d]	1.31 - 18.5 [d]	-	-	4.92	3.02	2.2	2.24	0.0528	0.0326	0.0553	0.0447	0.0139	5.24	1.48	< 0.005	0.0092	0.122	0.094	< 0.005	1.46	1.19	0.262	0.742	0.701
Phosphorus, Nutrient	mg/L	-	-	-	-	0.132	0.0882	0.0746	0.0754	0.0113	0.0183	0.008	0.0151	0.0032	0.0632	0.0469	0.0185	0.0073	-	0.0185	0.003	-	0.14	0.044	0.285	0.0085
Phosphorus, total dissolved	mg/L	-	-	-	-	-	0.0737	0.0817	0.0804	-	0.0127	0.0082	0.0035	0.005	-	0.049	-	0.0198	0.0247	0.0261	0.0037	0.165	0.198	-	0.0137	0.214
Total Kjeldahl Nitrogen	mg/L	-	-	-	-	7.58	5.3	2.99	3.16	0.47	0.368	0.343	0.322	0.162	6.96	2.17	0.386	0.26	0.641	0.504	0.136	3.1	3.04	0.494	1.21	1.08
Organic Carbon																										
Dissolved Organic Carbon	mg/L	-	-	-	-	34.4	17.8	10.7	10.8	3.69	5.18	3.54	4.5	2.65	20	8.04	3.51	3.28	7.74	7.28	2.64	32.3	25.5	10.9	13.1	8.46
Total Organic Carbon	mg/L	-	-	-	-	32.3	-	-	-	3.56	-	-	-	-	23.4	-	3.51	-	7.5	-	-	29	-	10.5	-	-
Petroleums Hydrocarbons (PHCs) and BTEX																										
Benzene	µg/L	690	4000	-	-	0.98	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	µg/L	83	390	-	-	1.79	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.57	0.52	< 0.5	< 0.5	< 0.5
Ethylbenzene	µg/L	41000	2000	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Styrene	µg/L	72	720	-	-	-	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	-	< 0.5	-	-	< 0.5	-	-	-	< 0.5	< 0.5
o-Xylene	µg/L	-	-	-	-	0.52	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	0.61	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	0.31	0.31	< 0.3	< 0.3	< 0.3
m+p-Xylenes	µg/L	-	-	-	-	0.62	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	0.59	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
Total Xylenes	µg/L	18000	-	-	-	1.14	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
BTEX, Total	µg/L	-	-	-	-	3.9	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1.2	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
F1 (C6-C10)	µg/L	9800	-	-	-	46	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	40	25	< 25	< 25	< 25
F1(C6-C10)-BTEX	µg/L	-	-	-	-	42	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	40	25	< 25	< 25	< 25
F2 (C10-C16)	µg/L	1300	-	-	-	270	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	230	140	< 100	< 100	< 100
F3 (C16-C34)	µg/L	-	-	-	-	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250
F4 (C34-C50)	µg/L	-	-	-	-	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250
Total Petroleum Hydrocarbons	µg/L	-	-	-	-	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	-	< 370	< 370	-	< 370	< 370	< 370
Oil and Grease																										
Total Oil and Grease	mg/L	-	-	-	-	< 5	-	-	-	< 5	-	-	-	-	< 5	-	< 5	-	< 5	-	-	< 5	-	< 5	-	-
Volatile Organic Compounds (VOCs)																										
1,1,1,2-Tetrachloroethane	µg/L	2500	-	-	-	-	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	-	< 0.5	-	-	< 0.5	-	-	-	< 0.5	< 0.5
1,1,1-Trichloroethane	µg/L	1100	-	-	-	-	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	-	< 0.5	-	-	< 0.5	-	-	-	< 0.5	< 0.5
1,1,2,2-Tetrachloroethane	µg/L	3000	-	-	-	-	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	-	< 0.5	-	-	< 0.5	-	-	-	< 0.5	< 0.5
1,1,2-Trichloroethane	µg/L	12000	-	-	-	-	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	-	< 0.5	-	-	< 0.5	-	-	-	< 0.5	< 0.5
1,1-Dichloroethane	µg/L	260000	-	-	-	-	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	-	< 0.5	-	-	< 0.5	-	-	-	< 0.5	< 0.5
1,1-Dichloroethylene	µg/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
1,2-Dibromoethane (ethylene dibromide)	µg/L	12000	-	-	-	-	< 0.2	< 0.2	< 0.2	-	< 0.2	< 0.2	< 0.2	< 0.2	-	< 0.2	-	< 0.2	-	-	< 0.2	-	-	-	< 0.2	< 0.2
1,2-Dichlorobenzene	µg/L	0.7	-	-	-	-	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	-	< 0.5	-	-	< 0.5	-	-	-	< 0.5	< 0.5
1,2-Dichloroethane	µg/L	100	1000	-	-	-	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	-	< 0.5	-	-	< 0.5	-	-	-	< 0.5	< 0.5
1,2-Dichloropropane	µg/L	7200	-	-	-	-	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	-	< 0.5	-	-	< 0.5	-	-	-	< 0.5	< 0.5
1,3-Dichlorobenzene	µg/L	150	1500	-	-	-	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	-	< 0.5	-	-	< 0.5	-	-	-	< 0.5	< 0.5
1,3-Dichloropropene (cis & trans)	µg/L	310	-	-	-	-	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	-	< 0.5	-	-	< 0.5	-	-	-	< 0.5	< 0.5
1,4-Dichlorobenzene	µg/L	26	260	-	-	-	< 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 Ethyl Ketone	µg/L	150000	-	-	-	-	< 20	< 20	< 20	-	< 20	< 20	< 20	< 20	-	< 20	-	< 20	-	-	< 20	-	-	-	< 20	< 20
Methyl Isobutyl Ketone	µg/L	58000	-	-	-	-	< 20	< 20	< 20	-	< 20	< 20	< 20	< 20	-	< 20	-	< 20	-	-	< 20	-	-	-	< 20	< 20
Methyl t-butyl ether (MTBE)	µg/L	10000	-	-	-	-	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	-	< 0.5	-	-	< 0.5	-	-	-	< 0.5	< 0.5
Acetone	µg/L	13000	-	-	-	-	< 20	< 20	< 20	-	< 20	< 20	< 20	< 20	-	< 20	-	< 20	-	-	< 20	-	-	29	68	
Bromomethane	µg/L	400	-	-	-	-	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	-	< 0.5	-	-	< 0.5	-	-	-	< 0.5	< 0.5
cis-1,2-Dichloroethylene	µg/L	18000	-	-	-	-	1	1.04	1.03	-	< 0.5	< 0.5	< 0.5	0.94	-	1.03	-	< 0.5	-	-	< 0.5	-	-	-	< 0.5	< 0.5
trans-1,2-Dichloroethylene	µg/L	28000	-	-	-	-	0.99	0.66	0.65	-	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	-	< 0.5	-	-	< 0.5	-	-	-	< 0.5	< 0.5
Dichloroethylene, cis+trans-1,2-	µg/L	-	-	-	-	-	1.99	1.7	1.68	-	< 0.71	< 0.71	< 0.71	0.94	-	1.03	-	< 0.71	-	-	< 0.71	-	-	-	< 0.71	< 0.71
cis-1,3-Dichloropropene	µg/L	-	-	-	-	-	< 0.3	< 0.3	< 0.3	-	< 0.3	< 0.3	< 0.3	< 0.3	-	< 0.3	-	< 0.3	-	-	< 0.3	-	-	-	< 0.3	< 0.3
trans-1,3-Dichloropropene	µg/L	-	-	-	-	-	< 0.3	< 0.3	< 0.3	-	< 0.3	< 0.3	< 0.3	< 0.3	-	< 0.3	-	< 0.3	-	-	< 0.3	-	-	-	< 0.3	< 0.3
Dibromochloromethane	µg/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
Dichlorodifluoromethane	µg/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
Dichloromethane	µg/L	98	980	-	-	-	< 1	< 1	< 1	-	< 1	< 1	< 1	< 1	-	< 1	-	< 1	-	-	< 1	-	-	-	< 1	< 1
Chloromethane	µg/L	-	-	-	-	-	< 2	< 2	< 2	-	< 2	< 2	< 2	< 2	-	< 2	-	< 2	-	-	< 2	-	-	-	< 2	< 2

Distance from Landfill Facility Qualifier[a]						Source				Source			Source		Source		Source			Source		Source		Proximal		
Station		FIGQ Guideline[c] Commercial/Industrial	Yukon Contaminated Sites Regulation (CSR)[b]	Water Licence 2AM-MRY1325 Effluent Quality Discharge Limits[j]	Water Licence 2AM-MRY2540 Effluent Quality Discharge Limits[l]	LF-KP22-01				LF-KP22-03			LF-KP23-13		MS-LF-GW1		MS-LF-GW3		LF-DS-SEEP-01			LF-DS-SEEP-02		LF-KP22-05		
Sample Date (M/DD/YYYY)		Tier 2 Water Use/Pathway: Protection of Freshwater Aquatic Life (AW-F)	Protection of Freshwater Aquatic Life (AW-F)			9/03/2023	9/07/2024	8/28/2025	8/28/2025	9/03/2023	9/07/2024	8/27/2025	9/07/2024	8/28/2025	9/19/2023	8/28/2025	9/12/2023	8/27/2025	8/17/2024	9/07/2024	8/29/2025	8/17/2024	9/07/2024	9/03/2023	9/06/2024	8/26/2025
COA number						BF2300267	BF2400323	BF2500304	BF2500304	BF2300267	BF2400323	BF2500299	BF2400323	BF2500303	BF2300307	BF2500303	BF2300288	BF2500300	BF2400326	BF2400266	BF2500307	BF2400266	BF2400326	BF2300267	BF2400320	BF2500297
Matrix						GW				GW			GW		GW		GW		SP			SP		GW		
QA/QC		Soil Type: Coarse Grain		Maximum Concentration of Any Grab Sample	Maximum Concentration of Any Grab Sample	-	-	FDA	FD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Parameter	**Unit**																									
Tetrachloroethylene (PCE)	µg/L	110	1100	-	-	-	40.8	14.7	14.4	-	1.38	4.64	< 0.5	<0.50	-	12.0	-	4.52	-	-	<0.50	-	-	-	< 0.5	<0.50
Trichloroethylene (TCE)	µg/L	29	200	-	-	-	3.95	7.53	7.33	-	< 0.5	< 0.5	< 0.5	< 0.5	-	9.74	-	< 0.5	-	-	< 0.5	-	-	-	< 0.5	< 0.5
Trichlorofluoromethane	µg/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
Trihalomethanes, Total	µg/L	-	-	-	-	-	< 1	<1.0	<1.0	-	< 1	<1.0	< 1	<1.0	-	<1.0	-	<1.0	-	-	< 1	-	-	-	< 1	< 1
Chloroethane	µg/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
hexanone, 2-	µg/L	-	-	-	-	-	< 20	< 20	< 20	-	< 20	< 20	< 20	< 20	-	< 20	-	< 20	-	-	< 20	-	-	-	< 20	< 20
n-Hexane	µg/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
Bromodichloromethane	µg/L	8500	-	-	-	-	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	-	< 0.5	-	-	< 0.5	-	-	-	< 0.5	< 0.5
Vinyl chloride	µg/L	-	-	-	-	-	< 0.5	< 0.2	< 0.2	-	< 0.5	< 0.2	< 0.5	< 0.2	-	< 0.2	-	< 0.2	-	-	< 0.2	-	-	-	< 0.5	< 0.2
Bromoform	µg/L	3700	-	-	-	-	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	-	< 0.5	-	-	< 0.5	-	-	-	< 0.5	< 0.5
Chloroform	µg/L	1.8	20	-	-	-	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	-	< 0.5	-	-	< 0.5	-	-	-	< 0.5	< 0.5
Monochlorobenzene	µg/L	1.3	13	-	-	-	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	-	< 0.5	-	-	< 0.5	-	-	-	< 0.5	< 0.5
Carbon tetrachloride	µg/L	13	130	-	-	-	< 0.2	< 0.2	< 0.2	-	< 0.2	< 0.2	< 0.2	< 0.2	-	< 0.2	-	< 0.2	-	-	< 0.2	-	-	-	< 0.2	< 0.2
Carbon disulfide	µg/L	-	-	-	-	-	< 1	< 1	< 1	-	< 1	< 1	< 1	< 1	-	< 1	-	< 1	-	-	< 1	-	-	-	< 1	< 1
Polycyclic Aromatic Hydrocarbons (PAHs)																										
Acenaphthene	µg/L	5.8	-	-	-	-	< 0.01	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.042	< 0.01	-	< 0.01	-	< 0.01	-	-	< 0.01	-	-	-	< 0.01	< 0.01
Acenaphthylene	µg/L	46	-	-	-	-	< 0.01	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.042	< 0.01	-	< 0.01	-	< 0.01	-	-	< 0.01	-	-	-	< 0.013	< 0.01
Acridine	µg/L	0.05	0.5	-	-	-	< 0.01	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.01	< 0.01	-	< 0.01	-	< 0.01	-	-	< 0.01	-	-	-	< 0.01	< 0.01
Anthracene	µg/L	0.012	1	-	-	-	< 0.01	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.01	< 0.01	-	< 0.01	-	< 0.01	-	-	< 0.01	-	-	-	< 0.01	< 0.01
1+2-Methylnaphthalenes	µg/L	180	-	-	-	-	0.04	0.051	0.054	-	< 0.015	< 0.015	0.173	< 0.015	-	< 0.015	-	< 0.015	-	-	< 0.015	-	-	-	< 0.015	< 0.015
1-Methylnaphthalene	µg/L	-	-	-	-	-	0.027	0.04	0.042	-	< 0.01	< 0.01	0.173	< 0.01	-	< 0.01	-	< 0.01	-	-	< 0.01	-	-	-	< 0.01	< 0.01
2-Methylnaphthalene	µg/L	-	-	-	-	-	0.013	0.011	0.012	-	< 0.01	< 0.01	< 0.042	0.014	-	< 0.01	-	< 0.01	-	-	< 0.01	-	-	-	< 0.01	< 0.01
B(a)P Total Potency Equivalent	µg/L	-	-	-	-	-	< 0.01	< 0.01	< 0.01	-	< 0.01	< 0.01	0.025	< 0.01	-	< 0.01	-	< 0.01	-	-	< 0.01	-	-	-	< 0.01	< 0.01
Benzo(a)anthracene	µg/L	0.018	1	-	-	-	< 0.01	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.01	< 0.01	-	< 0.01	-	< 0.01	-	-	< 0.01	-	-	-	< 0.01	< 0.01
Benzo(a)pyrene	µg/L	0.015	0.1	-	-	-	< 0.005	< 0.005	< 0.005	-	< 0.005	< 0.005	< 0.005	< 0.005	-	< 0.005	-	< 0.005	-	-	< 0.005	-	-	-	< 0.005	< 0.005
Benzo(b&j)fluoranthene	µg/L	0.48	-	-	-	-	< 0.01	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.01	< 0.01	-	< 0.01	-	< 0.01	-	-	< 0.01	-	-	-	< 0.01	< 0.01
Benzo(b+j+k)fluoranthene	µg/L	-	-	-	-	-	< 0.015	< 0.015	< 0.015	-	< 0.015	< 0.015	< 0.015	< 0.015	-	< 0.015	-	< 0.015	-	-	< 0.015	-	-	-	< 0.015	< 0.015
Benzo(g,h,i)perylene	µg/L	0.17	-	-	-	-	< 0.01	< 0.01	< 0.01	-	< 0.01	< 0.01	0.016	< 0.01	-	< 0.01	-	< 0.01	-	-	< 0.01	-	-	-	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/L	0.48	-	-	-	-	< 0.01	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.01	< 0.01	-	< 0.01	-	< 0.01	-	-	< 0.01	-	-	-	< 0.01	< 0.01
Chrysene	µg/L	1.4	-	-	-	-	< 0.01	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.01	< 0.01	-	< 0.01	-	< 0.01	-	-	< 0.01	-	-	-	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/L	0.26	-	-	-	-	< 0.005	< 0.005	< 0.005	-	< 0.005	< 0.005	0.0196	< 0.005	-	< 0.005	-	< 0.005	-	-	< 0.005	-	-	-	< 0.005	< 0.005
Fluoranthene	µg/L	0.04	2	-	-	-	< 0.01	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.01	< 0.01	-	< 0.01	-	< 0.01	-	-	< 0.01	-	-	-	< 0.01	< 0.01
Fluorene	µg/L	3	120	-	-	-	< 0.01	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.042	< 0.01	-	< 0.01	-	< 0.01	-	-	< 0.01	-	-	-	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.21	-	-	-	-	< 0.01	< 0.01	< 0.01	-	< 0.01	< 0.01	0.016	< 0.01	-	< 0.01	-	< 0.01	-	-	< 0.01	-	-	-	< 0.01	< 0.01
Naphthalene	µg/L	1.1	10	-	-	-	< 0.034	< 0.078	< 0.085	-	< 0.01	< 0.01	0.051	0.072	-	< 0.028	-	< 0.01	-	-	< 0.01	-	-	-	< 0.01	0.01
Perylene	µg/L	-	-	-	-	-	< 0.01	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.01	< 0.01	-	< 0.01	-	< 0.01	-	-	< 0.01	-	-	-	< 0.01	< 0.01
Phenanthrene	µg/L	0.4	3	-	-	-	< 0.01	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.01	< 0.01	-	< 0.01	-	< 0.01	-	-	< 0.01	-	-	-	< 0.01	< 0.01
Pyrene	µg/L	0.025	0.2	-	-	-	< 0.01	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.01	< 0.01	-	< 0.01	-	< 0.01	-	-	< 0.01	-	-	-	< 0.01	< 0.01
Quinoline	µg/L	3.4	34	-	-	-	< 0.082	< 0.094	< 0.094	-	< 0.01	< 0.01	0.015	< 0.022	-	0.052	-	< 0.01	-	-	< 0.018	-	-	-	< 0.01	< 0.01
Total Metals																										
Aluminum	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0343	-	-	0.0565	-	-	-	-
Antimony	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00032	-	-	0.00155	-	-	-	-
Arsenic	mg/L	-	-	0.5	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00031	-	-	< 0.001	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0323	-	-	0.0452	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.00002	-	-	< 0.0002	-	-	-	-
Bismuth	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.00005	-	-	< 0.0005	-	-	-	-
Boron	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.233	-	-	1.58	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0000216	-	-	0.0000506	-	-	-	-
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	489	-	63.1	-	-	-	-	-	-	-	-	-
Cesium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.000011	-	-	< 0.0001	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00066	-	-	< 0.005	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00218	-	-	0.0164	-	-	-	-
Copper	mg/L	-	-	0.3	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00161	-	-	< 0.005	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.85	-	-	10	-	-	-	-
Lead	mg/L	-	-	0.2	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	0.000107	-	-	0.000594	-	-	-	-
Lithium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0127	-	-	0.238	-	-	-	-
Manganese	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.63	-	-	2.67	-	-	-	-
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	66.5	-	47.1	-	-	-	-	-	-	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.000005	-	-	< 0.000005	-	-	-	-
Molybdenum	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00303	-	-	0.0102	-	-	-	-
Nickel	mg/L	-	-	0.5	1	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00728	-	-	0.0327	-	-	-	-
Phosphorus	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.05	-	-	< 0.5	-	-	-	-
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	34.5	-	3.52	-	-	-	-	-	-	-	-	-
Rubidium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00678	-	-	0.00575	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.000086	-	-	< 0.0005	-	-	-	-
Silicon	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.44	-	-	6.71	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.00001	-	-	< 0.0001	-	-	-	-
Strontium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.516	-	-	1.53	-	-	-	-
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	65.8	-	17.2	-	-	-	-	-	-	-	-	-
Sulfur	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	111	-	-	446	-	-	-	-
Tellurium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0002	-	-	< 0.002	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.000011	-	-	< 0.0001	-	-	-	-
Thorium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0001	-	-	< 0.001	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0001	-	-	< 0.001	-	-	-	-
Titanium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.002	-	-	< 0.003	-	-	-	-
Tungsten	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0001	-	-	< 0.001	-	-	-	-
Uranium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00516	-	-	0.0153	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0005	-	-	< 0.005	-	-	-	-
Zinc	mg/L	-	-	0.5	1	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0586	-	-	0.332	-	-	-	-
Zirconium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00028	-	-	< 0.002	-	-	-	-
Dissolved Metals																										
Aluminum	mg/L	0.0050 - 0.10 [e]	-	-	-	0.0135	<0.01	< 0.01	< 0.01	< 0.01	0.0016	0.0016	0.011	0.0061	< 0.01	< 0.01	0.0164	< 0.001	0.0029	0.0025	0.0017	0.0111	< 0.01	0.128	0.013	0.0072
Antimony	mg/L	2.0	0.20	-	-	0.00122	<0.001	< 0.001	< 0.001	< 0.001	<0.0001	< 0.0001	0.00020	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.0001	0.00032	0.00026	< 0.0001	0.00144	0.00161	< 0.001	<0.0001	< 0.0001
Arsenic	mg/L	0.0050	0.050	0.5 [m]	0.6 [m]	0.0028	0.0020	0.00107	0.00115	< 0.001	0.00024	0.00023	0.00033	0.0005	0.00163	<0.001	< 0.001	0.00022	0.00027	0.00026	< 0.0001	< 0.001	< 0.001	< 0.001	0.0024	0.00288
Barium	mg/L	2.9	10	-	-	0.0604	0.036	0.0518	0.052	0.0368	0.036	0.0431	0.037	0.0266	0.057	0.0512	0.0455	0.0403	0.0311	0.025	0.0189	0.0412	0.037	0.0303	0.028	0.0281

Table F-3: 2023 to 2025 Groundwater and Seep Analytical Results collected at the Landfill Facility, Mary River Mine

Distance from Landfill Facility Qualifier[a]						Source				Source			Source		Source		Source		Source		Source		Proximal		
Station						LF-KP22-01				LF-KP22-03			LF-KP23-13		MS-LF-GW1		MS-LF-GW3		LF-DS-SEEP-01			LF-DS-SEEP-02			LF-KP22-05		
Sample Date (M/DD/YYYY)						9/03/2023	9/07/2024	8/28/2025	8/28/2025	9/03/2023	9/07/2024	8/27/2025	9/07/2024	8/28/2025	9/19/2023	8/28/2025	9/12/2023	8/27/2025	8/17/2024	9/07/2024	8/29/2025	8/17/2024	9/07/2024	9/03/2023	9/06/2024	8/26/2025
COA number						BF2300267	BF2400323	BF2500304	BF2500304	BF2300267	BF2400323	BF2500299	BF2400323	BF2500303	BF2300307	BF2500303	BF2300288	BF2500300	BF2400326	BF2400266	BF2500307	BF2400266	BF2400326	BF2300267	BF2400320	BF2500297
Matrix						GW				GW			GW		GW		GW		SP			SP		GW		
QA/QC						-	-	FDA	FD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Parameter	Unit	FIGQ Guideline[c] Commercial/Industrial Tier 2 Water Use/Pathway: Protection of Freshwater Aquatic Life (AW-F) Soil Type: Coarse Grain	Yukon Contaminated Sites Regulation (CSR)[h] Protection of Freshwater Aquatic Life (AW-F)	Water Licence 2AM-MRY1325 Effluent Quality Discharge Limits[j] Maximum Concentration of Any Grab Sample	Water Licence 2AM-MRY2540 Effluent Quality Discharge Limits[l] Maximum Concentration of Any Grab Sample																					
Beryllium	mg/L	0.0053	0.053	-	-	< 0.0002	<0.0002	< 0.0002	< 0.0002	< 0.0002	<0.00002	< 0.00002	<0.00002	< 0.00002	< 0.0002	< 0.0002	< 0.0002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.0002	< 0.0002	< 0.0002	<0.00002	< 0.00002
Bismuth	mg/L	-	-	-	-	< 0.0005	<0.0005	< 0.0005	< 0.0005	< 0.0005	<0.0005	< 0.0005	<0.0005	< 0.00005	< 0.0005	< 0.0005	< 0.0005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.0005	< 0.0005	< 0.0005	<0.00005	< 0.00005
Boron	mg/L	1.5	-	-	-	2.99	2.4	1.8	1.8	0.804	0.54	0.56	0.028	0.02	3.6	1.22	0.879	0.605	0.217	0.184	0.044	1.58	1.9	< 0.1	0.023	0.047
Cadmium	mg/L	0.240 (f)	0.00010 - 0.00060 (g)	-	-	0.000086	<0.00005	0.000062	0.000081	< 0.00005	0.0000088	0.0000089	0.0000081	< 0.000005	0.0000717	0.000135	< 0.00005	0.0000088	0.0000084	0.000005	< 0.000005	< 0.00005	< 0.00005	< 0.00005	<0.000005	< 0.000005
Cesium	mg/L	-	-	-	-	< 0.0001	<0.0001	< 0.0001	< 0.0001	< 0.0001	0.000023	0.000023	<0.00001	< 0.00001	< 0.0001	< 0.0001	< 0.0001	0.00003	< 0.00001	< 0.00001	< 0.00001	< 0.0001	< 0.0001	< 0.0001	<0.00001	< 0.00001
Chromium	mg/L	0.0089	0.010	-	-	< 0.005	<0.005	< 0.005	< 0.005	< 0.005	0.0011	0.0011	<0.0005	< 0.0005	< 0.005	< 0.005	< 0.005	0.00077	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.005	< 0.005	<0.0005	< 0.0005
Cobalt	mg/L	-	0.0090	-	-	**0.0172**	0.0077	0.00682	0.00668	< 0.001	0.00017	< 0.0001	0.0011	0.00046	**0.0126**	0.00404	< 0.001	< 0.0001	0.00214	0.00109	0.0001	**0.0158**	**0.00928**	**0.00983**	**0.0092**	0.00614
Copper	mg/L	0.0020 - 0.0040 (g)	0.020 - 0.090 (g)	0.3 (m)	0.6 (m)	< 0.002	<0.002	<0.002	<0.002	< 0.002	0.0017	0.00168	0.0010	0.0016	0.00354	<0.002	0.00247	0.00206	0.00111	0.00095	0.00092	< 0.002	< 0.002	< 0.002	0.00069	0.00047
Iron	mg/L	0.30	-	-	-	1.93	0.52	0.242	0.233	< 0.1	<0.01	< 0.01	0.017	< 0.01	0.247	< 0.1	< 0.1	< 0.01	0.466	0.881	0.016	5.42	0.566	2.01	4.8	5.2
Lead	mg/L	0.0010 - 0.0070 (g)	0.040 - 0.16 (g)	0.2 (m)	0.2 (m)	0.000839	<0.0005	<0.0005	<0.0005	< 0.0005	0.00032	< 0.00005	0.00014	< 0.00005	< 0.0005	<0.0005	< 0.0005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.0005	< 0.0005	< 0.0005	0.00014	0.000053
Lithium	mg/L	-	-	-	-	0.512	0.28	0.143	0.135	0.0669	0.069	0.0989	0.0015	0.0023	0.766	0.0714	0.0398	0.104	0.0133	0.0119	0.0044	0.241	0.298	< 0.01	0.0021	0.0029
Manganese	mg/L	-	-	-	-	6.22	3.3	1.76	1.76	0.029	0.030	0.0086	0.47	0.195	4.47	0.997	0.00128	0.00017	0.641	0.363	0.0297	2.91	1.94	2.18	3.0	1.99
Mercury	mg/L	0.000026	0.0010	-	-	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	0.00001	0.0000051	< 0.000005
Molybdenum	mg/L	0.073	10	-	-	0.0226	0.00838	0.00639	0.00639	0.00185	0.00395	0.00688	0.0124	0.00326	0.0118	0.00397	0.00082	0.00239	0.00313	0.00255	0.00128	0.0102	0.00664	< 0.0005	0.000446	0.000463
Nickel	mg/L	0.025 - 0.15 (g)	0.25 - 1.5 (g)	0.5 (m)	1 (m)	0.0949	0.0667	0.0738	0.0742	0.0161	0.0146	0.0115	0.00546	0.00366	0.126	0.0855	0.0176	0.0126	0.00697	0.00503	0.00115	0.0316	0.0238	0.00664	0.0049	0.00384
Phosphorus	mg/L	-	-	-	-	< 0.5	< 0.05	< 0.5	< 0.5	< 0.5	< 0.05	< 0.05	< 0.05	< 0.05	< 0.5	< 0.5	< 0.5	< 0.05	< 0.05	< 0.05	<0.050	< 0.5	< 0.5	< 0.5	0.078	0.087
Rubidium	mg/L	-	-	-	-	0.00945	0.00998	0.00972	0.00915	0.01	0.0108	0.0122	0.00508	0.00534	0.0156	0.00756	0.0124	0.0121	0.00653	0.00564	0.00532	0.0054	0.00522	< 0.002	0.00034	0.00034
Selenium	mg/L	0.0010	0.010	-	-	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.000124	0.000099	< 0.00005	< 0.00005	< 0.0005	< 0.0005	< 0.0005	0.000054	-	-	< 0.00005	-	-	< 0.0005	0.0017	0.0042
Silicon	mg/L	-	-	-	-	7.36	6.13	5.63	5.57	5.64	5.86	5.75	2.77	2.15	6.1	5.46	6.23	5.55	2.37	2.52	1.7	6.38	6.47	3.07	3.2	3.15
Silver	mg/L	0.00025	0.0005 - 0.015 (g)	-	-	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.0001	< 0.0001	< 0.0001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.0001	< 0.0001	< 0.0001	< 0.00001	< 0.00001
Strontium	mg/L	-	-	-	-	1.02	1.21	1.38	1.4	0.0527	0.0574	0.0601	0.0487	0.0324	1.18	1.15	0.0391	0.0415	0.521	0.472	0.0562	1.49	1.58	0.0382	0.0465	0.0404
Sulfur	mg/L	-	-	-	-	349	410	372	367	38.1	30.8	24.1	14.4	6.5	400	246	36.8	23.3	112	96.3	9.21	446	434	13.7	4.91	6.63
Tellurium	mg/L	-	-	-	-	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.002	< 0.002	< 0.002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.002	< 0.002	< 0.002	< 0.0002	< 0.0002
Thallium	mg/L	0.00080	0.0030	-	-	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.000028	0.000031	0.000018	0.000018	0.000156	0.000128	< 0.0001	0.000044	< 0.00001	< 0.00001	< 0.00001	< 0.0001	< 0.0001	< 0.0001	< 0.00001	< 0.00001
Thorium	mg/L	-	-	-	-	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Tin	mg/L	-	-	-	-	< 0.001	0.00228	< 0.001	< 0.001	< 0.001	0.00025	< 0.0001	0.00049	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001
Titanium	mg/L	0.10	1.0	-	-	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.003	< 0.003	< 0.003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.003	< 0.003	< 0.004	0.00108	0.00036
Tungsten	mg/L	-	-	-	-	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	0.00103	< 0.001	< 0.0001	< 0.0001
Uranium	mg/L	0.015	3.0	-	-	0.0208	0.036	0.032	0.032	0.00692	0.00752	0.00761	0.00769	0.00446	0.0408	0.022	0.00629	0.00605	0.00478	0.00343	0.00205	0.0145	0.0107	0.00074	0.000604	0.000416
Vanadium	mg/L	-	-	-	-	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.005	< 0.005	0.0005	< 0.0005
Zinc	mg/L	0.030	0.075 - 2.4 (g)	0.5 (m)	1 (m)	0.0146	< 0.01	<0.01	<0.01	< 0.01	< 0.01	<0.001	< 0.001	<0.001	< 0.01	<0.01	< 0.01	<0.001	0.0528	0.047	0.0031	0.28	0.273	< 0.01	< 0.001	<0.001
Zirconium	mg/L	-	-	-	-	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.003	< 0.003	< 0.003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.003	< 0.003	< 0.003	0.00042	0.00041

COA = certificate of analysis, as N: as Nitrogen, BIM: Baffinland Iron Mines, BTEX: Benzene Toluene Ethylbenzene Xylenes, $CaCO_3$: Calcium Carbonate, DQO: Data Quality Objective, FDA: Field Duplicate Available, FD: Field Duplicate, FIGQ: Federal Interim Groundwater Guideline, CSR: Contaminated Sites Regulation, mg/L: milligram per litre, GW: Groundwater, LF: Landfill Facility, na: not available, SP: Seep, T/D/N = Total/Dissolved/Normal, ug/L: microgram per litre, uS/cm: microsiemens per centimetre, °C: degrees Celsius, < = less than

(a) Distance from Landfill Facility Qualifiers are defined as: Source = Station is located within active cells (Cells 1, 2, 3) in the landfill, Proximal= Station is within 20 metres from landfill limits, Downgradient = Station is located more than 20 m downgradient from the landfill's limits towards Sheardown Lake, Background = Station is located in the inactive cells (Cells 4, 5) of the landfill or upgradient of the landfill.

(b) Hardness not provided by the laboratory. Hardness was calculated based on Magnesium (Mg) and Calcium (Ca) concentrations for each sample.

(c) Federal Interim Groundwater Quality Guideline from Federal Contaminated Sites Action Plan (FCSAP), 2016 (Rev 4) - Guidance Document on Federal Interim Groundwater Quality Guideline for Federal Contaminated Sites.

(d) Ammonia guideline is pH and temperature dependent. The guideline is calculated based on the individual field pH and temperature measurements for each sample.

(e) Guideline is pH dependent. The guideline is calculated based on the individual pH for each sample.

(f) Cadmium guideline is hardness dependent of the receiving environment and was calculated with the following equation (FIGQ, 2016): $10^{(0.83x(log(hardness))-2.46)}$. Hardness used for the calculation is the most conservative median concentration (ie, 51.75 mg/L) between Northwest and Southeast Sheardown Lake available in Table 2.4 of Aquatic Effects Monitoring Plan BIM-5200-PLA-0023 REV 2 (BIM, 2024).

(g) Guideline is hardness dependent. The guideline is calculated based on the individual hardness value for each sample.

(h) Yukon Contaminated Sites Regulation (CSR) (Environment Yukon 2002, in accordance with Yukon CSR Protocol 6 (Environment Yukon 2012). Yukon CSR does not apply to Nunavut, and is only used here for comparison purposes.

(i) Guideline is chloride dependent. The guideline is calculated based on the individual chloride concentration in each sample.

(j) Guideline from Nunavut Water Board - Water Licence 2AM-MRY1325. Provided for comparison purposes only. Water licence expired on 10-Jun-2025.

(k) Total Suspended Solids guideline (15 mg/L) does not apply to groundwater and was excluded from this table.

(l) Guideline from Nunavut Water Board - Water Licence 2AM-MRY2540. Provided for comparison purposes only. New water licence was issued on 28 April 2025. These new limits act as guidelines for the site to be used internally by Baffinland Iron Mines as adaptive management considerations.

(m) Guideline for total metals, for comparison purposes only.

Value	Value exceeding DQO for either pH or Conductivity
	DQO - 1 (pH units) for pH between laboratory and field measurements
	DQO - 20% for conductivity between laboratory and field measurements
Value	Result exceeds the FIGQ Commercial/Industrial Land Use - Tier 2 guideline or is outside the recommended
Value	Result exceeds Yukon CSR guideline.
Value	Result exceeds Water Licence 2AM-MRY1325, applicable only on 2023 and 2024 results.
Value	Result exceeds Water Licence 2AM-MRY2540, applicable only on 2025 results.

Table F-3: 2023 to 2025 Groundwater and Seep Analytical Results collected at the Landfill Facility, Mary River Mine

Distance from Landfill Facility Qualifier[a]		FIGQ Guideline[c] Commercial/Industrial	Yukon Contaminated Sites Regulation (CSR)[b]	Water Licence 2AM-MRY1325 Effluent Quality Discharge Limits[j]	Proximal			Proximal			Proximal			Proximal		Downgradient			Downgradient			Background			Background		
Station					LF-KP23-05			LF-KP23-11			MS-LF-GW2			MS-LF-GW-REF2		LF-KP23-01			LF-KP23-04			LF-KP23-06			LF-KP23-07		
Sample Date (M/DD/YYYY)					9/10/2023	9/05/2024	8/27/2025	9/08/2023	9/06/2024	8/26/2025	9/14/2023	9/07/2024	8/29/2025	9/15/2023	9/06/2024	9/11/2023	9/07/2024	8/26/2025	9/14/2023	9/07/2024	8/29/2025	9/10/2023	9/05/2024	8/26/2025	9/07/2023	9/05/2024	8/26/2025
COA number		Tier 2 Water Use/Pathway: Protection of Freshwater Aquatic Life (AW-F)	Protection of Freshwater Aquatic Life (AW-F)		BF2300280	BF2400320	BF2500299	BF2300277	BF2400320	BF2500297	BF2300292	BF2400323	BF2500306	BF2300298	BF2400320	BF2300287	BF2400323	BF2500297	BF2300292	BF2400323	BF2500306	BF2300280	BF2400320	BF2500297	BF2300277	BF2400320	BF2500297
Matrix					GW			GW			GW			GW		GW			GW			GW			GW		
QA/QC		Soil Type: Coarse Grain		Maximum Concentration of Any Grab Sample	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Parameter	**Unit**																											
Field Observations																												
Weather	-	-	-	-	na	Sunny	Windy, snowing	na	Rainy	Partly cloudy, windy	na	Cloudy, 5°C	Windy, snowed overnight	na	Cloudy, rainy, snowy, 0°C	na	Cloudy	Mostly cloudy, windy	na	Cloudy	Partly cloudy, windy	na	Sunny, overcast	Partly cloudy, windy	na	Sunny, overcast	Partly cloudy, windy
Routine Parameters																												
Dissolved Oxygen, Field	mg/L	-	-	-	-	11.77	10.49	-	9.5	9.74	-	2.25	3.31	-	10.45	-	9.15	9.92	-	11.5	5.55	-	12.06	9.6	-	10.03	9.8
Dissolved Oxygen, Percent, Field	%	-	-	-	-	89.5	78.0	-	69	70.1	-	16.5	23.3	-	75.8	-	66.6	72.1	-	83.3	39.1	-	87.7	68.9	-	73.6	71.0
pH, Field	pH unit	6.5 - 9.0	-	6.5 - 9.0	-	7.67	7.48	-	7.37	7.3	-	7.1	6.84	-	7.78	-	7.07	7.02	-	7.74	7.23	-	7.73	7.49	-	7.41	7.73
pH, Lab	pH unit	6.5 - 9.0	-	6.5 - 9.0	7.8	7.84	7.84	8.1	7.6	7.57	6.99	7.2	7.19	7.86	7.8	8.1	7.5	7.33	7.83	7.77	7.57	7.83	7.73	7.76	7.81	7.56	7.6
Data Quality Objective (DQO) - pH	pH unit	-	-	-	-	0.17	0.36	-	0.23	0.27	-	0.1	0.35		0.02	-	0.43	0.31	-	0.03	0.34	-	0	0.27	-	0.15	0.13
Specific Conductivity, Field	µS/cm	-	-	-	-	354.3	338.7	-	341.6	317.9	-	938	701		360.5	-	415.8	430.6	-	584	502	-	341.4	304.5	-	277.6	277.3
Conductivity, Lab	µS/cm	-	-	-	330.0	382.0	345.0	398.0	384.0	321.0	1510.0	975.0	790.0	380.0	394.0	485.0	419.0	438.0	286.0	566.0	502.0	339.0	361.0	311.0	290.0	295.0	285.0
Data Quality Objective (DQO) - Conductivity	%	-	-	-	-	7.5	1.8	-	11.7	1.0	-	3.9	11.9	-	8.9	-	0.8	1.7	-	3.1	0.0	-	5.6	2.1	-	6.1	2.7
Temperature, Field	°C	-	-	-	-	2.7	3.0	-	1.1	1.8	-	1.9	0.9	-	1.1	-	1.6	2.2	-	1.3	1.0	-	1.1	1.7	-	1.4	2.0
Total Alkalinity	mg/L as CaCO	-	-	-	-	150	153	-	188	166	-	284	269	-	156	-	173	161	-	178	181	-	149	150	-	154	140
Total Suspended Solids	mg/L	-	-	- [k]	10.4	740	15.6	13.7	41.8	23.2	2.7	3.9	28.5	2.7	26.4	160	77.1	6.7	8.6	16.4	3.4	5.3	6.7	4.8	10.4	4.8	12
Total Dissolved Solids	mg/L	-	-	-	193	204	190	217	175	166	1030	598	442	214	190	305	245	243	184	303	266	200	170	160	162	130	136
Turbidity, Lab	NTU	-	-	-	10.8	370	9.01	11.6	18.5	10.5	1.07	0.96	11.8	0.96	5.6	83.3	4.94	3.87	8.7	2.22	2.6	6.73	1.16	1.47		2.42	3.84
Turbidity, Field	NTU	-	-	-	-	77.74	23.23	-	21.92	13.36	-	4.45	11.44	-	21.15	-	4.71	3.49	-	9.1	4.48	-	5.11	3.44	4.68	8.71	5.21
Hardness, as $CaCO_3$ (calculated)[h]	mg/L	-	-	-	175	190	181	185	178	165	674	359	297	192	194	240	201	213	132	280	252	184	188	166	156	161	158
Major Ions																											
Calcium	mg/L	-	-	-	28.1	29.8	29.9	35.8	33.4	33.4	177	92.1	74.9	32	30.7	48.2	38.3	46.6	23.1	45	47.5	29.4	28.8	27.8	28.1	29.2	30.9
Chloride	mg/L	120	-	-	2.4	18.6	4.21	9.88	7.02	3.06	93.1	61.3	49	7.15	15.6	9.96	5.4	9.28	7.06	50.8	15.7	4.37	13.1	2.64	1.25	1.04	0.74
Bromide	mg/L	-	-	-	< 0.1	0.12	< 0.1	< 0.1	< 0.1	< 0.1	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	0.17	< 0.1	0.13	< 0.1	0.38	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoride	mg/L	0.12	2.0 - 3.0 [g]	-	0.041	0.099	0.085	0.095	0.098	0.094	< 0.1	< 0.1	0.099	0.03	0.023	0.055	0.108	0.063	0.061	0.052	0.076	0.044	0.039	0.04	0.093	0.106	0.09
Magnesium	mg/L	-	-	-	25.5	28	25.8	23.2	23	19.8	56.3	31.4	26.7	27.3	28.4	29.1	25.6	23.4	18.1	40.7	32.3	26.8	28.2	23.4	20.8	21.4	19.6
Potassium	mg/L	-	-	-	1.78	1.54	1.45	2.18	2.22	2.16	26.2	19.6	17.7	1.5	1.51	4.61	3.13	3.03	1.74	2.07	2.43	1.71	1.34	1.2	2.55	1.91	1.22
Sodium	mg/L	-	-	-	3.14	3.36	3.21	14	12.8	5.23	71.8	54.5	37.2	3.78	4.14	10.9	6.85	5.19	3.42	7.25	10.9	1.94	2.17	1.85	1.25	0.49	0.405
Sulfate	mg/L	100	1,000	-	24.2	20	20.4	7.38	2.6	1.66	351	135	58.4	26.3	23.8	73.2	34.9	45.1	30.8	39.2	54.1	21.8	18.8	12.8	3.52	1.8	1.3
Nutrients																											
Nitrate	mg/L as N	2.9	400	-	1.1	0.186	0.21	< 0.02	< 0.02	< 0.02	< 0.1	2.42	0.201	0.513	0.157	4.24	1.59	0.965	0.434	0.32	0.219	0.286	0.171	0.144	0.034	0.026	< 0.02
Nitrite	mg/L as N	0.060	0.20 - 2.0 [i]	-	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.05	< 0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total Ammonia	mg/L as N	0.017 - 190 [d]	1.31 - 18.5 [d]	-	0.0073	0.0061	0.0157	0.01	0.0163	< 0.005	1.89	0.87	0.359	< 0.005	0.0059	0.0218	0.0077	0.0146	0.0077	0.0269	0.0086	0.0093	0.0052	< 0.005	0.0235	< 0.005	< 0.005
Phosphorus, Nutrient	mg/L	-	-	-	0.019	0.0823	0.0026	0.0511	0.0628	< 0.002	0.194	0.121	0.0445	0.0102	0.043	0.0134	0.0152	0.0044	0.016	0.0172	0.0064	0.0066	0.0127	0.0033	0.0066	0.0181	0.0024
Phosphorus, total dissolved	mg/L	-	-	-	-	0.0055	0.0184	-	0.0034	0.0349	-	0.101	0.09	-	0.006	-	0.0061	0.0113	-	0.0060	0.009	-	0.0055	0.0051	-	0.0035	0.0114
Total Kjeldahl Nitrogen	mg/L	-	-	-	0.319	0.256	0.206	0.154	0.09	0.089	3.61	1.81	1.21	0.225	0.142	0.374	0.478	0.347	0.198	0.266	0.19	0.395	0.222	0.187	0.276	0.165	0.193
Organic Carbon																							-		-		
Dissolved Organic Carbon	mg/L	-	-	-	4.38	5	3.81	3.38	3.57	2.13	19.4	10.4	7.32	4.26	4.03	3.45	4.44	3.31	3.87	4.67	3.61	6.76	7.98	4.19	5.15	5.55	3.68
Total Organic Carbon	mg/L	-	-	-	4.65	-	-	4.1	-		21.1	-	-	4.95	-	3.52	-		4.68	-		7.71	-	-	5.58	-	
Petroleums Hydrocarbons (PHCs) and BTEX																											
Benzene	µg/L	690	4000	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	µg/L	83	390	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	µg/L	41000	2000	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Styrene	µg/L	72	720	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5
o-Xylene	µg/L	-	-	-	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
m+p-Xylenes	µg/L	-	-	-	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
Total Xylenes	µg/L	18000	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
BTEX, Total	µg/L	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
F1 (C6-C10)	µg/L	9800	-	-	< 25	< 25	< 25	< 25	< 25	< 25	29	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25
F1(C6-C10)-BTEX	µg/L	-	-	-	< 25	< 25	< 25	< 25	< 25	< 25	28	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25
F2 (C10-C16)	µg/L	1300	-	-	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
F3 (C16-C34)	µg/L	-	-	-	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250
F4 (C34-C50)	µg/L	-	-	-	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250
Total Petroleum Hydrocarbons	µg/L	-	-	-	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370
Oil and Grease																											
Total Oil and Grease	mg/L	-	-	-	< 5	-	-	< 5	-	-	< 5	-	-	< 5	-	< 5	-	-	< 5	-	-	< 5	-	-	< 5	-	-
Volatile Organic Compounds (VOCs)																											
1,1,1,2-Tetrachloroethane	µg/L	2500	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5
1,1,1-Trichloroethane	µg/L	1100	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5
1,1,2,2-Tetrachloroethane	µg/L	3000	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5
1,1,2-Trichloroethane	µg/L	12000	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5
1,1-Dichloroethane	µg/L	260000	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5
1,1-Dichloroethylene	µg/L	-	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5
1,2-Dibromoethane (ethylene dibromide)	µg/L	12000	-	-	-	< 0.2	< 0.2	-	< 0.2	< 0.2	-	< 0.2	< 0.2	-	< 0.2	-	< 0.2	< 0.2	-	< 0.2	< 0.2	-	< 0.2	< 0.2	-	< 0.2	< 0.2
1,2-Dichlorobenzene	µg/L	0.7	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5
1,2-Dichloroethane	µg/L	100	1000	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5
1,2-Dichloropropane	µg/L	7200	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5
1,3-Dichlorobenzene	µg/L	150	1500	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5
1,3-Dichloropropene (cis & trans)	µg/L	310	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5
1,4-Dichlorobenzene	µg/L	26	260	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5
Methyl Ethyl Ketone	µg/L	150000	-	-	-	< 20	< 20	-	< 20	< 20	-	< 20	< 20	-	< 20	-	< 20	< 20	-	< 20	< 20	-	< 20	< 20	-	< 20	< 20
Methyl Isobutyl Ketone	µg/L	58000	-	-	-	< 20	< 20	-	< 20	< 20	-	< 20	< 20	-	< 20	-	< 20	< 20	-	< 20	< 20	-	< 20	< 20	-	< 20	< 20
Methyl t-butyl ether (MTBE)	µg/L	10000	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5
Acetone	µg/L	13000	-	-	-	< 20	< 20	-	< 20	< 20	-	< 20	< 20	-	< 20	-	< 20	< 20	-	< 20	< 20	-	< 20	< 20	-	< 20	< 20
Bromomethane	µg/L	400	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5
cis-1,2-Dichloroethylene	µg/L	18000	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	1.56	-	< 0.5	-	< 0.5	2.2	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5
trans-1,2-Dichloroethylene	µg/L	28000	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	6.09	0.79	-	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5
Dichloroethylene, cis+trans-1,2-	µg/L	-	-	-	-	< 0.71	< 0.71	-	< 0.71	< 0.71	-	6.09	2.35	-	< 0.71	-	< 0.71	2.2	-	< 0.71	< 0.71	-	< 0.71	< 0.71	-	< 0.71	< 0.71
cis-1,3-Dichloropropene	µg/L	-	-	-	-	< 0.3	< 0.3	-	< 0.3	< 0.3	-	< 0.3	< 0.3	-	< 0.3	-	< 0.3	< 0.3	-	< 0.3	< 0.3	-	< 0.3	< 0.3	-	< 0.3	< 0.3
trans-1,3-Dichloropropene	µg/L	-	-	-	-	< 0.3	< 0.3	-	< 0.3	< 0.3	-	< 0.3	< 0.3	-	< 0.3	-	< 0.3	< 0.3	-	< 0.3	< 0.3	-	< 0.3	< 0.3	-	< 0.3	< 0.3
Dibromochloromethane	µg/L	-	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5
Dichlorodifluoromethane	µg/L	-	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5
Dichloromethane	µg/L	98	980	-	-	< 1	< 1	-	< 1	< 1	-	< 1	< 1	-	< 1	-	< 1	< 1	-	< 1	< 1	-	< 1	< 1	-	< 1	< 1
Chloromethane	µg/L	-	-	-	-	< 2	< 2	-	< 2	< 2	-	< 2	< 2	-	< 2	-	< 2	< 2	-	< 2	< 2	-	< 2	< 2	-	< 2	< 2

Distance from Landfill Facility Qualifier[a]					Proximal			Proximal			Proximal			Proximal		Downgradient			Downgradient			Background			Background		
Station		FIGQ Guideline[c] Commercial/Industrial	Yukon Contaminated Sites Regulation (CSR)[b]	Water Licence 2AM-MRY1325 Effluent Quality Discharge Limits[j]	LF-KP23-05			LF-KP23-11			MS-LF-GW2			MS-LF-GW-REF2		LF-KP23-01			LF-KP23-04			LF-KP23-06			LF-KP23-07		
Sample Date (M/DD/YYYY)		Tier 2 Water Use/Pathway: Protection of Freshwater Aquatic Life (AW-F)	Protection of Freshwater Aquatic Life (AW-F)	Maximum Concentration of Any Grab Sample	9/10/2023	9/05/2024	8/27/2025	9/08/2023	9/06/2024	8/26/2025	9/14/2023	9/07/2024	8/29/2025	9/15/2023	9/06/2024	9/11/2023	9/07/2024	8/26/2025	9/14/2023	9/07/2024	8/29/2025	9/10/2023	9/05/2024	8/26/2025	9/07/2023	9/05/2024	8/26/2025
COA number					BF2300280	BF2400320	BF2500299	BF2300277	BF2400320	BF2500297	BF2300292	BF2400323	BF2500306	BF2300298	BF2400320	BF2300287	BF2400323	BF2500297	BF2300292	BF2400323	BF2500306	BF2300280	BF2400320	BF2500297	BF2300277	BF2400320	BF2500297
Matrix					GW			GW			GW			GW		GW			GW			GW			GW		
QA/QC		Soil Type: Coarse Grain			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Parameter	**Unit**																											
Tetrachloroethylene (PCE)	µg/L	110	1100	-	-	< 0.5	<0.50	-	< 0.5	<0.50	-	16.7	13.1	-	< 0.5	-	< 0.5	<0.50	-	< 0.5	1.59	-	< 0.5	<0.50	-	< 0.5	<0.50
Trichloroethylene (TCE)	µg/L	29	200	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	0.78	-	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5
Trichlorofluoromethane	µg/L	-	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5
Trihalomethanes, Total	µg/L	-	-	-	-	< 1	< 1	-	< 1	< 1	-	< 1	< 1	-	< 1	-	< 1	< 1	-	< 1	< 1	-	< 1	< 1	-	< 1	< 1
Chloroethane	µg/L	-	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5
hexanone, 2-	µg/L	-	-	-	-	< 20	< 20	-	< 20	< 20	-	< 20	< 20	-	< 20	-	< 20	< 20	-	< 20	< 20	-	< 20	< 20	-	< 20	< 20
n-Hexane	µg/L	-	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5
Bromodichloromethane	µg/L	8500	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5
Vinyl chloride	µg/L	-	-	-	-	< 0.5	< 0.2	-	< 0.5	< 0.2	-	< 0.5	< 0.2	-	< 0.5	-	< 0.5	< 0.2	-	< 0.5	< 0.2	-	< 0.5	< 0.2	-	< 0.5	< 0.2
Bromoform	µg/L	3700	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5
Chloroform	µg/L	1.8	20	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5
Monochlorobenzene	µg/L	1.3	13	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5
Carbon tetrachloride	µg/L	13	130	-	-	< 0.2	< 0.2	-	< 0.2	< 0.2	-	< 0.2	< 0.2	-	< 0.2	-	< 0.2	< 0.2	-	< 0.2	< 0.2	-	< 0.2	< 0.2	-	< 0.2	< 0.2
Carbon disulfide	µg/L	-	-	-	-	< 1	< 1	-	< 1	< 1	-	< 1	< 1	-	< 1	-	< 1	< 1	-	< 1	< 1	-	< 1	< 1	-	< 1	< 1
Polycyclic Aromatic Hydrocarbons (PAHs)																											
Acenaphthene	µg/L	5.8	-	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01
Acenaphthylene	µg/L	46	-	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01
Acridine	µg/L	0.05	0.5	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01
Anthracene	µg/L	0.012	1	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01
1+2-Methylnaphthalenes	µg/L	180	-	-	-	< 0.015	0.033	-	< 0.015	< 0.015	-	< 0.015	< 0.015	-	< 0.015	-	< 0.015	< 0.015	-	< 0.015	< 0.015	-	< 0.015	< 0.015	-	< 0.015	< 0.015
1-Methylnaphthalene	µg/L	-	-	-	-	< 0.01	0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01
2-Methylnaphthalene	µg/L	-	-	-	-	< 0.01	0.023	-	0.012	0.013	-	< 0.01	< 0.01	-	< 0.01	-	< 0.01	0.013	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01
B(a)P Total Potency Equivalent	µg/L	-	-	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01
Benzo(a)anthracene	µg/L	0.018	1	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01
Benzo(a)pyrene	µg/L	0.015	0.1	-	-	< 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	-	< 0.005	< 0.005
Benzo(b&j)fluoranthene	µg/L	0.48	-	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01
Benzo(b+j+k)fluoranthene	µg/L	-	-	-	-	< 0.015	< 0.015	-	< 0.015	< 0.015	-	< 0.015	< 0.015	-	< 0.015	-	< 0.015	< 0.015	-	< 0.015	< 0.015	-	< 0.015	< 0.015	-	< 0.015	< 0.015
Benzo(g,h,i)perylene	µg/L	0.17	-	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/L	0.48	-	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01
Chrysene	µg/L	1.4	-	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/L	0.26	-	-	-	< 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	-	< 0.005	< 0.005
Fluoranthene	µg/L	0.04	2	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01
Fluorene	µg/L	3	120	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.21	-	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01
Naphthalene	µg/L	1.1	10	-	-	0.021	0.038	-	0.018	0.015	-	< 0.01	< 0.011	-	< 0.01	-	0.024	0.024	-	< 0.01	< 0.01	-	0.011	< 0.01	-	< 0.01	< 0.01
Perylene	µg/L	-	-	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01
Phenanthrene	µg/L	0.4	3	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01
Pyrene	µg/L	0.025	0.2	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01	-	< 0.01	< 0.01
Quinoline	µg/L	3.4	34	-	-	< 0.01	< 0.01	-	< 0.01	0.017	-	< 0.053	< 0.021	-	< 0.01	-	< 0.01	< 0.023	-	< 0.01	< 0.029	-	< 0.01	< 0.01	-	< 0.01	< 0.01
Total Metals																											
Aluminum	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bismuth	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	mg/L	-	-	-	29.2	-	-	37.4	-	-	171	-	-	32.2	-	48.1	-	-	23.6	-	-	30.2	-	-	29.4	-	-
Cesium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lithium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/L	-	-	-	27.3	-	-	24.6	-	-	59.5	-	-	29.3	-	28.8	-	-	20.9	-	-	27.4	-	-	21	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Molybdenum	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	mg/L	-	-	-	2.16	-	-	3.1	-	-	27.1	-	-	1.5	-	5.03	-	-	2.23	-	-	1.83	-	-	2.32	-	-
Rubidium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silicon	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Strontium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	mg/L	-	-	-	3.27	-	-	13.8	-	-	75.9	-	-	4.14	-	10.5	-	-	4.19	-	-	2	-	-	1.41	-	-
Sulfur	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tellurium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thorium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Titanium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tungsten	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Uranium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	mg/L	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zirconium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Metals																											
Aluminum	mg/L	0.0050 - 0.10 [e]	-	-	0.0076	0.011	0.0117	0.0083	0.0050	0.0061	< 0.01	0.0022	0.001	0.0023	0.0037	0.0475	0.010	0.0044	0.0537	0.022	0.0066	0.013	0.0085	0.0071	0.0119	0.0039	0.004
Antimony	mg/L	2.0	0.20	-	< 0.0001	<0.0001	< 0.0001	< 0.0001	<0.0001	< 0.0001	0.0019	0.00050	0.00035	< 0.0001	<0.0001	< 0.001	<0.0001	< 0.0001	< 0.0001	<0.0001	< 0.0001	< 0.0001	<0.0001	< 0.0001	< 0.0001	<0.0001	< 0.0001
Arsenic	mg/L	0.0050	0.050	0.5 [m]	0.00028	0.00022	0.00023	0.00015	0.00013	0.0001	< 0.001	0.00043	0.0004	0.00029	0.00029	< 0.001	0.00074	0.00044	0.00016	0.00015	0.00021	0.00036	0.00034	0.00028	0.00047	0.00016	0.00016
Barium	mg/L	2.9	10	-	0.0245	0.025	0.0282	0.0287	0.032	0.0271	0.044	0.035	0.0552	0.0287	0.027	0.027	0.037	0.051	0.00992	0.023	0.029	0.0266	0.026	0.0262	0.0124	0.011	0.0112

Distance from Landfill Facility Qualifier[a]					Proximal			Proximal			Proximal			Proximal		Downgradient			Downgradient			Background			Background		
Station		FIGQ Guideline[c] Commercial/Industrial	Yukon Contaminated Sites Regulation (CSR)[h]	Water Licence 2AM-MRY1325 Effluent Quality Discharge Limits[j]	LF-KP23-05			LF-KP23-11			MS-LF-GW2			MS-LF-GW-REF2		LF-KP23-01			LF-KP23-04			LF-KP23-06			LF-KP23-07		
Sample Date (M/DD/YYYY)		Tier 2 Water Use/Pathway: Protection of Freshwater Aquatic Life (AW-F)	Protection of Freshwater Aquatic Life (AW-F)	Maximum Concentration of Any Grab Sample	9/10/2023	9/05/2024	8/27/2025	9/08/2023	9/06/2024	8/26/2025	9/14/2023	9/07/2024	8/29/2025	9/15/2023	9/06/2024	9/11/2023	9/07/2024	8/26/2025	9/14/2023	9/07/2024	8/29/2025	9/10/2023	9/05/2024	8/26/2025	9/07/2023	9/05/2024	8/26/2025
COA number					BF2300280	BF2400320	BF2500299	BF2300277	BF2400320	BF2500297	BF2300292	BF2400323	BF2500306	BF2300298	BF2400320	BF2300287	BF2400323	BF2500297	BF2300292	BF2400323	BF2500306	BF2300280	BF2400320	BF2500297	BF2300277	BF2400320	BF2500297
Matrix					GW			GW			GW			GW		GW			GW			GW			GW		
QA/QC		Soil Type: Coarse Grain			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Parameter	Unit																											
Beryllium	mg/L	0.0053	0.053	-	< 0.00002	<0.00002	< 0.00002	< 0.00002	<0.00002	< 0.00002	< 0.0002	<0.00002	< 0.00002	< 0.00002	<0.00002	< 0.0002	<0.00002	< 0.00002	< 0.00002	<0.00002	< 0.00002	< 0.00002	<0.00002	< 0.00002	< 0.00002	<0.00002	< 0.00002	< 0.00002
Bismuth	mg/L	-	-	-	< 0.00005	<0.00005	< 0.00005	< 0.00005	<0.00005	< 0.00005	< 0.0005	<0.00005	< 0.00005	< 0.00005	<0.00005	< 0.0005	<0.00005	< 0.00005	< 0.00005	<0.00005	< 0.00005	< 0.00005	<0.00005	< 0.00005	< 0.00005	<0.00005	< 0.00005	< 0.00005
Boron	mg/L	1.5	-	-	0.245	0.16	0.15	0.025	0.021	0.014	1.07	0.49	0.452	0.216	0.18	0.889	0.62	0.46	0.303	0.30	0.393	0.227	0.18	0.145	< 0.01	<0.01	< 0.01
Cadmium	mg/L	0.240 (f)	0.00010 - 0.00060 (g)	-	0.0000071	0.0000072	0.0000077	0.0000083	<0.000005	< 0.000005	0.000541	0.00019	0.000126	0.0000057	0.0000067	< 0.00005	0.0000081	0.0000067	< 0.000005	0.0000052	0.0000052	0.0000053	<0.000005	< 0.000005	0.0000067	<0.000005	< 0.000005
Cesium	mg/L	-	-	-	< 0.00001	<0.00001	< 0.00001	< 0.00001	<0.00001	< 0.00001	< 0.0001	<0.00001	< 0.00001	< 0.00001	<0.00001	< 0.0001	<0.00001	< 0.00001	< 0.00001	<0.00001	< 0.00001	0.000012	0.000014	0.000014	0.000017	<0.00001	< 0.00001
Chromium	mg/L	0.0089	0.010	-	0.00148	0.0013	0.0012	< 0.0005	<0.0005	< 0.0005	< 0.005	0.00059	0.00057	0.00138	0.0014	< 0.005	0.0012	0.00146	0.00052	0.00055	0.00052	0.00213	0.0022	0.00182	0.00054	0.00063	< 0.0005
Cobalt	mg/L	-	0.0090	-	0.00026	0.00018	< 0.0001	0.00065	0.00013	< 0.0001	0.00386	0.0011	0.00044	< 0.0001	<0.0001	0.0011	0.00088	0.00158	0.00018	<0.0001	< 0.0001	0.00038	<0.0001	< 0.0001	0.00084	<0.0001	< 0.0001
Copper	mg/L	0.0020 - 0.0040 (g)	0.020 - 0.090 (g)	0.3 (m)	0.00342	0.0032	0.00302	0.00127	0.00088	0.00124	0.0117	0.0058	0.0044	0.0034	0.0033	0.00236	0.0020	0.0017	0.0037	0.0029	0.0033	0.00522	0.0043	0.0038	0.00185	0.0023	0.00235
Iron	mg/L	0.30	-	-	< 0.01	<0.01	< 0.01	< 0.01	<0.01	0.021	< 0.1	<0.01	0.011	< 0.01	<0.01	< 0.1	0.21	0.024	0.016	<0.01	0.032	0.014	0.011	0.014	0.02	<0.01	< 0.01
Lead	mg/L	0.0010 - 0.0070 (g)	0.040 - 0.16 (g)	0.2 (m)	< 0.00005	0.00021	< 0.00005	< 0.00005	0.00044	< 0.00005	0.000601	0.00024	0.000148	< 0.00005	0.00034	< 0.0005	0.00023	< 0.00005	< 0.00005	0.0011	< 0.00005	< 0.00005	0.0023	0.000053	< 0.00005	0.0034	< 0.00005
Lithium	mg/L	-	-	-	0.0014	<0.001	0.0017	0.003	0.0018	0.0022	0.113	0.064	0.0604	0.0016	0.0010	0.0249	0.019	0.0175	0.0061	0.0070	0.0409	0.0013	<0.001	0.0012	0.0026	0.0015	0.0018
Manganese	mg/L	-	-	-	0.016	0.036	0.00622	0.177	0.077	0.0281	0.644	0.36	0.144	0.0002	0.00037	0.0784	0.14	0.269	0.024	0.0039	0.00672	0.0334	0.0016	0.00104	0.144	0.00022	< 0.0001
Mercury	mg/L	0.000026	0.0010	-	< 0.000005	< 5E-06	< 5E-06	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005
Molybdenum	mg/L	0.073	10	-	0.00112	0.000862	0.000455	0.00302	0.000565	0.000489	0.00857	0.00314	0.00627	0.000378	0.000358	0.00728	0.00253	0.00137	0.0076	0.000485	0.00205	0.00257	0.000315	0.000524	0.017	0.000662	0.00031
Nickel	mg/L	0.025 - 0.15 (g)	0.25 - 1.5 (g)	0.5 (m)	0.00648	0.00661	0.00531	0.00288	0.0014	0.00084	0.0775	0.0383	0.0304	0.00501	0.005	0.0109	0.00944	0.0079	0.00411	0.00397	0.00476	0.01	0.00838	0.00683	0.00562	0.00567	0.00477
Phosphorus	mg/L	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.5	0.109	< 0.05	< 0.05	< 0.05	< 0.5	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Rubidium	mg/L	-	-	-	0.00635	0.00556	0.00603	0.00078	0.00102	0.00101	0.0141	0.00914	0.00561	0.00601	0.00611	0.00812	0.00541	0.00592	0.00233	0.00394	0.00474	0.00642	0.00594	0.00607	0.00418	0.00273	0.00268
Selenium	mg/L	0.0010	0.010	-	0.000071	< 0.00005	< 0.00005	0.000073	< 0.00005	< 0.00005	< 0.0005	0.000134	0.000098	< 0.0005	< 0.00005	< 0.0005	0.000095	0.000139	0.00005	0.000063	< 0.00005	0.000092	0.000072	0.000053	< 0.00005	< 0.00005	< 0.00005
Silicon	mg/L	-	-	-	4.97	4.68	4.76	2.94	3.11	2.84	5.25	4.94	4.64	5.16	5.04	3.98	4.28	3.74	3.03	3.68	4.36	5.51	5.23	5.07	2.52	2.11	1.94
Silver	mg/L	0.00025	0.0005 - 0.015 (g)	-	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.0001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.0001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Strontium	mg/L	-	-	-	0.0169	0.0179	0.0166	0.0352	0.0357	0.0356	0.282	0.154	0.128	0.0172	0.0178	0.0444	0.0294	0.0372	0.0151	0.0284	0.0276	0.0175	0.0171	0.015	0.0162	0.0171	0.0158
Sulfur	mg/L	-	-	-	8.93	6.99	7.27	2.84	1.09	0.71	130	46.8	21.1	9.44	8.34	28.2	12.9	17.7	10.2	14.4	20.7	8.24	6.86	4.69	1.15	0.57	< 0.5
Tellurium	mg/L	-	-	-	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Thallium	mg/L	0.00080	0.0030	-	0.000016	0.000012	0.000015	< 0.00001	< 0.00001	< 0.00001	0.000116	0.000057	0.000041	0.000014	0.000016	< 0.0001	< 0.00001	0.000016	< 0.00001	0.00001	0.000016	0.000019	0.000014	0.000014	0.000018	0.000011	0.000012
Thorium	mg/L	-	-	-	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Tin	mg/L	-	-	-	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	0.00015	0.00029	< 0.0001	0.00021	0.00017	< 0.0001	0.00016	< 0.0001
Titanium	mg/L	0.10	1.0	-	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.003	< 0.0003	< 0.0003	0.00031	< 0.0005	< 0.0003	< 0.0003	< 0.0003	< 0.0003	0.00067	< 0.0003	< 0.0003
Tungsten	mg/L	-	-	-	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Uranium	mg/L	0.015	3.0	-	0.00125	0.00093	0.00103	0.00174	0.00157	0.00213	0.0222	0.00956	0.0052	0.00112	0.00102	0.00507	0.0029	0.00343	0.00192	0.00269	0.00375	0.00095	0.000793	0.000558	0.00129	0.00103	0.000925
Vanadium	mg/L	-	-	-	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Zinc	mg/L	0.030	0.075 - 2.4 (g)	0.5 (m)	< 0.001	< 0.001	<0.001	0.0016	0.0014	0.0011	< 0.01	< 0.001	<0.001	< 0.001	< 0.001	< 0.01	< 0.001	<0.001	0.0044	< 0.001	0.0017	< 0.001	< 0.001	0.0011	0.0011	< 0.001	<0.001
Zirconium	mg/L	-	-	-	0.00034	< 0.0003	0.00033	< 0.0003	< 0.0003	< 0.0003	< 0.003	0.00033	< 0.0003	< 0.0003	0.0003	< 0.003	< 0.0003	< 0.0003	0.0005	0.00064	0.00054	0.00044	0.00041	0.00036	0.00039	0.00053	0.00058

COA = certificate of analysis, as N: as Nitrogen, BIM: Baffinland Iron Mines, BTEX: Benzene Toluene Ethylbenzene Xylenes, $CaCO_3$: Calcium Carbonate, DQO: Data Quality Objective, FDA: Field Duplicate Available, FD: Field Duplicate, FIGQ: Federal Interim Groundwater Guideline, CSR: Contaminated Sites Regulation, mg/L: milligram per litre, GW: Groundwater, LF: Landfill Facility, na: not available, SP: Seep, T/D/N = Total/Dissolved/Normal, ug/L: microgram per litre, uS/cm: microsiemens per centimetre, °C: degrees Celsius, < = less than

(a) Distance from Landfill Facility Qualifiers are defined as: Source = Station is located within active cells (Cells 1, 2, 3) in the landfill, Proximal= Station is within 20 metres from landfill limits, Downgradient = Station is located more than 20 m downgradient from the landfill's limits towards Sheardown Lake, Background = Station is located in the inactive cells (Cells 4, 5) of the landfill or upgradient of the landfill.

(b) Hardness not provided by the laboratory. Hardness was calculated based on Magnesium (Mg) and Calcium (Ca) concentrations for each sample.

(c) Federal Interim Groundwater Quality Guideline from Federal Contaminated Sites Action Plan (FCSAP), 2016 (Rev 4) - Guidance Document on Federal Interim Groundwater Quality Guideline for Federal Contaminated Sites.

(d) Ammonia guideline is pH and temperature dependent. The guideline is calculated based on the individual field pH and temperature measurements for each sample.

(e) Guideline is pH dependent. The guideline is calculated based on the individual pH for each sample.

(f) Cadmium guideline is hardness dependent of the receiving environment and was calculated with the following equation (FIGQ, 2016): $10^{(0.83x[\log(\text{hardness})]-2.46)}$. Hardness used for the calculation is the most conservative median concentration (ie, 51.75 mg/L) between Northwest and Southeast Sheardown Lake available in Table 2.4 of Aquatic Effects Monitoring Plan BIM-5200-PLA-0023 REV 2 (BIM, 2024).

(g) Guideline is hardness dependent. The guideline is calculated based on the individual hardness value for each sample.

(h) Yukon Contaminated Sites Regulation (CSR) (Environment Yukon 2002, in accordance with Yukon CSR Protocol 6 (Environment Yukon 2012). Yukon CSR does not apply to Nunavut, and is only used here for comparison purposes.

(i) Guideline is chloride dependent. The guideline is calculated based on the individual chloride concentration in each sample.

(j) Guideline from Nunavut Water Board - Water Licence 2AM-MRY1325. Provided for comparison purposes only. Water licence expired on 10-Jun-2025.

(k) Total Suspended Solids guideline (15 mg/L) does not apply to groundwater and was excluded from this table.

(l) Guideline from Nunavut Water Board - Water Licence 2AM-MRY2540. Provided for comparison purposes only. New water licence was issued on 28 April 2025. These new limits act as guidelines for the site to be used internally by Baffinland Iron Mines as adaptive management considerations.

(m) Guideline for total metals, for comparison purposes only.

Value	Value exceeding DQO for either pH or Conductivity
	DQO - 1 (pH units) for pH between laboratory and field measurements
	DQO - 20% for conductivity between laboratory and field measurements
Value	Result exceeds the FIGQ Commercial/Industrial Land Use - Tier 2 guideline or is outside the recommended
Value	Result exceeds Yukon CSR guideline.
Value	Result exceeds Water Licence 2AM-MRY1325, applicable only on 2023 and 2024 results.
Value	Result exceeds Water Licence 2AM-MRY2540, applicable only on 2025 results.

Table F-3: 2023 to 2025 Groundwater and Seep Analytical Results collected at the Landfill Facility, Mary River Mine

Distance from Landfill Facility Qualifier[a]		FIGQ Guideline[c] Commercial/Industrial	Yukon Contaminated Sites Regulation (CSR)[b]	Water Licence 2AM-MRY1325 Effluent Quality Discharge Limits[j]	Background			Background			
Station					LF-KP23-08			LF-KP23-09			
Sample Date (M/DD/YYYY)					9/07/2023	9/05/2024	8/25/2025	9/06/2023	9/06/2024	9/06/2024	8/25/2025
COA number		Tier 2 Water Use/Pathway: Protection of Freshwater Aquatic Life (AW-F)	Protection of Freshwater Aquatic Life (AW-F)		BF2300277	BF2400320	BF2500296	BF2300277	BF2400320	BF2400320	BF2500296
Matrix					GW			GW			
QA/QC		Soil Type: Coarse Grain		Maximum Concentration of Any Grab Sample	-	-	-	-	FDA	FD	-
Parameter	Unit										
Field Observations											
Weather	-	-	-	-	na	Sunny	Windy, raining	na	Rainy	Rainy	Windy
Routine Parameters											
Dissolved Oxygen, Field	mg/L	-	-	-	-	13.5	12.59	-	7.24	-	4.83
Dissolved Oxygen, Percent, Field	%	-	-	-	-	100.6	93.3	-	52.2	-	34.8
pH, Field	pH unit	6.5 - 9.0	-	6.5 - 9.0	-	7.53	7.8	-	6.81	-	6.91
pH, Lab	pH unit	6.5 - 9.0	-	6.5 - 9.0	7.68	7.66	7.67	7.98	7.02	6.95	6.94
Data Quality Objective (DQO) - pH	pH unit	-	-	-	-	0.13	0.13	-	0.21	-	0.03
Specific Conductivity, Field	µS/cm	-	-	-	-	263.4	271.5	-	309.8	-	304.2
Conductivity, Lab	µS/cm	-	-	-	269.0	275.0	248.0	318.0	348.0	347.0	279.0
Data Quality Objective (DQO) - Conductivity	%	-	-	-	-	4.3	9.0	-	11.6	-	8.6
Temperature, Field	°C	-	-	-	-	2	2.9	-	0.9	-	1.8
Total Alkalinity	mg/L as CaCO	-	-	-	-	147	131	-	180	186	147
Total Suspended Solids	mg/L	-	-	- [k]	24.3	30.4	18	22.9	53.3	25.2	65.4
Total Dissolved Solids	mg/L	-	-	-	156	117	131	181	177	164	138
Turbidity, Lab	NTU	-	-	-	19.3	10	11.7	20.9	37	15	24.7
Turbidity, Field	NTU	-	-	-	-	30.68	23.91	-	130.7	-	16.6
Hardness, as $CaCO_3$ (calculated)[b]	mg/L	-	-	-	147	148	140	170	184	183	155
Major Ions											
Calcium	mg/L	-	-	-	27.6	27.6	27.5	31.8	34.2	34.3	31
Chloride	mg/L	120	-	-	0.93	0.94	0.51	0.87	0.93	0.87	< 0.5
Bromide	mg/L	-	-	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoride	mg/L	0.12	2.0 - 3.0 [g]	-	0.047	0.043	0.039	0.083	0.061	0.059	0.06
Magnesium	mg/L	-	-	-	19	19.3	17.3	21.9	23.9	23.7	18.9
Potassium	mg/L	-	-	-	0.848	0.702	0.659	1.03	0.791	0.784	0.731
Sodium	mg/L	-	-	-	2.19	1.39	0.934	5.22	4.81	4.78	2.61
Sulfate	mg/L	100	1,000	-	1.68	1.5	1	0.96	<0.3	<0.3	< 0.3
Nutrients											
Nitrate	mg/L as N	2.9	400	-	0.027	< 0.02	< 0.02	0.047	0.028	0.028	0.056
Nitrite	mg/L as N	0.060	0.20 - 2.0 [i]	-	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Total Ammonia	mg/L as N	0.017 - 190 [d]	1.31 - 18.5 [d]	-	< 0.005	0.0076	< 0.005	0.0073	0.0089	0.0094	0.0108
Phosphorus, Nutrient	mg/L	-	-	-	0.135	0.133	0.0043	0.22	1.23	1.15	0.0115
Phosphorus, total dissolved	mg/L	-	-	-	-	0.0040	0.0842	-	0.0117	0.0085	0.319
Total Kjeldahl Nitrogen	mg/L	-	-	-	0.192	0.218	0.212	0.217	0.169	0.18	0.182
Organic Carbon											
Dissolved Organic Carbon	mg/L	-	-	-	4.45	4.8	3.2	4.33	3.32	3.72	3.04
Total Organic Carbon	mg/L	-	-	-	4.76	-		4.06	-	-	-
Petroleums Hydrocarbons (PHCs) and BTEX											
Benzene	µg/L	690	4000	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	µg/L	83	390	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	µg/L	41000	2000	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Styrene	µg/L	72	720	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5
o-Xylene	µg/L	-	-	-	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
m+p-Xylenes	µg/L	-	-	-	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
Total Xylenes	µg/L	18000	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
BTEX, Total	µg/L	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1	< 1
F1 (C6-C10)	µg/L	9800	-	-	< 25	< 25	< 25	< 25	< 25	< 25	< 25
F1(C6-C10)-BTEX	µg/L	-	-	-	< 25	< 25	< 25	< 25	< 25	< 25	< 25
F2 (C10-C16)	µg/L	1300	-	-	< 100	< 100	< 100	< 100	< 100	< 100	< 100
F3 (C16-C34)	µg/L	-	-	-	< 250	< 250	< 250	< 250	< 250	< 250	< 250
F4 (C34-C50)	µg/L	-	-	-	< 250	< 250	< 250	< 250	< 250	< 250	< 250
Total Petroleum Hydrocarbons	µg/L	-	-	-	< 370	< 370	< 370	< 370	< 370	< 370	< 370
Oil and Grease											
Total Oil and Grease	mg/L	-	-	-	< 5	-	-	< 5	-	-	-
Volatile Organic Compounds (VOCs)											
1,1,1,2-Tetrachloroethane	µg/L	2500	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5
1,1,1-Trichloroethane	µg/L	1100	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5
1,1,2,2-Tetrachloroethane	µg/L	3000	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5
1,1,2-Trichloroethane	µg/L	12000	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5
1,1-Dichloroethane	µg/L	260000	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5
1,1-Dichloroethylene	µg/L	-	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5
1,2-Dibromoethane (ethylene dibromide)	µg/L	12000	-	-	-	< 0.2	< 0.2	-	< 0.2	< 0.2	< 0.2
1,2-Dichlorobenzene	µg/L	0.7	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5
1,2-Dichloroethane	µg/L	100	1000	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5
1,2-Dichloropropane	µg/L	7200	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5
1,3-Dichlorobenzene	µg/L	150	1500	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5
1,3-Dichloropropene (cis & trans)	µg/L	310	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5
1,4-Dichlorobenzene	µg/L	26	260	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5
Methyl Ethyl Ketone	µg/L	150000	-	-	-	< 20	< 20	-	< 20	< 20	< 20
Methyl Isobutyl Ketone	µg/L	58000	-	-	-	< 20	< 20	-	< 20	< 20	< 20
Methyl t-butyl ether (MTBE)	µg/L	10000	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5
Acetone	µg/L	13000	-	-	-	< 20	< 20	-	< 20	< 20	< 20
Bromomethane	µg/L	400	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5
cis-1,2-Dichloroethylene	µg/L	18000	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5
trans-1,2-Dichloroethylene	µg/L	28000	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5
Dichloroethylene, cis+trans-1,2-	µg/L	-	-	-	-	< 0.71	< 0.71	-	< 0.71	< 0.71	< 0.71
cis-1,3-Dichloropropene	µg/L	-	-	-	-	< 0.3	< 0.3	-	< 0.3	< 0.3	< 0.3
trans-1,3-Dichloropropene	µg/L	-	-	-	-	< 0.3	< 0.3	-	< 0.3	< 0.3	< 0.3
Dibromochloromethane	µg/L	-	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	µg/L	-	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5
Dichloromethane	µg/L	98	980	-	-	< 1	< 1	-	< 1	< 1	< 1
Chloromethane	µg/L	-	-	-	-	< 2	< 2	-	< 2	< 2	< 2

Distance from Landfill Facility Qualifier[a]		FIGQ Guideline[c] Commercial/Industrial	Yukon Contaminated Sites Regulation (CSR)[b]	Water Licence 2AM-MRY1325 Effluent Quality Discharge Limits[j]	Background			Background			
Station					LF-KP23-08			LF-KP23-09			
Sample Date (M/DD/YYYY)					9/07/2023	9/05/2024	8/25/2025	9/06/2023	9/06/2024	9/06/2024	8/25/2025
COA number		Tier 2 Water Use/Pathway: Protection of Freshwater Aquatic Life (AW-F)	Protection of Freshwater Aquatic Life (AW-F)		BF2300277	BF2400320	BF2500296	BF2300277	BF2400320	BF2400320	BF2500296
Matrix					GW			GW			
QA/QC		Soil Type: Coarse Grain		Maximum Concentration of Any Grab Sample	-	-	-	-	FDA	FD	-
Parameter	**Unit**										
Tetrachloroethylene (PCE)	µg/L	110	1100	-	-	< 0.5	<0.50	-	< 0.5	< 0.5	<0.50
Trichloroethylene (TCE)	µg/L	29	200	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	µg/L	-	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5
Trihalomethanes, Total	µg/L	-	-	-	-	< 1	< 1	-	< 1	< 1	< 1
Chloroethane	µg/L	-	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5
hexanone, 2-	µg/L	-	-	-	-	< 20	< 20	-	< 20	< 20	< 20
n-Hexane	µg/L	-	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5
Bromodichloromethane	µg/L	8500	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5
Vinyl chloride	µg/L	-	-	-	-	< 0.5	< 0.2	-	< 0.5	< 0.5	< 0.2
Bromoform	µg/L	3700	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5
Chloroform	µg/L	1.8	20	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5
Monochlorobenzene	µg/L	1.3	13	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5
Carbon tetrachloride	µg/L	13	130	-	-	< 0.2	< 0.2	-	< 0.2	< 0.2	< 0.2
Carbon disulfide	µg/L	-	-	-	-	< 1	< 1	-	< 1	< 1	< 1
Polycyclic Aromatic Hydrocarbons (PAHs)											
Acenaphthene	µg/L	5.8	-	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/L	46	-	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.01
Acridine	µg/L	0.05	0.5	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.01
Anthracene	µg/L	0.012	1	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.01
1+2-Methylnaphthalenes	µg/L	180	-	-	-	< 0.015	< 0.015	-	< 0.015	< 0.015	< 0.015
1-Methylnaphthalene	µg/L	-	-	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.01
2-Methylnaphthalene	µg/L	-	-	-	-	< 0.01	0.011	-	< 0.01	< 0.01	0.014
B(a)P Total Potency Equivalent	µg/L	-	-	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/L	0.018	1	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/L	0.015	0.1	-	-	< 0.005	< 0.005	-	< 0.005	< 0.005	< 0.005
Benzo(b&j)fluoranthene	µg/L	0.48	-	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.01
Benzo(b+j+k)fluoranthene	µg/L	-	-	-	-	< 0.015	< 0.015	-	< 0.015	< 0.015	< 0.015
Benzo(g,h,i)perylene	µg/L	0.17	-	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/L	0.48	-	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.01
Chrysene	µg/L	1.4	-	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/L	0.26	-	-	-	< 0.005	< 0.005	-	< 0.005	< 0.005	< 0.005
Fluoranthene	µg/L	0.04	2	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.01
Fluorene	µg/L	3	120	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.21	-	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.01
Naphthalene	µg/L	1.1	10	-	-	< 0.01	0.011	-	< 0.01	< 0.01	0.014
Perylene	µg/L	-	-	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/L	0.4	3	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.01
Pyrene	µg/L	0.025	0.2	-	-	< 0.01	< 0.01	-	< 0.01	< 0.01	< 0.01
Quinoline	µg/L	3.4	34	-	-	< 0.01	0.019	-	< 0.01	< 0.01	< 0.01
Total Metals											
Aluminum	mg/L	-	-	-	-	-	-	-	-	-	-
Antimony	mg/L	-	-	-	-	-	-	-	-	-	-
Arsenic	mg/L	-	-	0.5	-	-	-	-	-	-	-
Barium	mg/L	-	-	-	-	-	-	-	-	-	-
Beryllium	mg/L	-	-	-	-	-	-	-	-	-	-
Bismuth	mg/L	-	-	-	-	-	-	-	-	-	-
Boron	mg/L	-	-	-	-	-	-	-	-	-	-
Cadmium	mg/L	-	-	-	-	-	-	-	-	-	-
Calcium	mg/L	-	-	-	28.5	-	-	34.7	-	-	-
Cesium	mg/L	-	-	-	-	-	-	-	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-	-	-
Cobalt	mg/L	-	-	-	-	-	-	-	-	-	-
Copper	mg/L	-	-	0.3	-	-	-	-	-	-	-
Iron	mg/L	-	-	-	-	-	-	-	-	-	-
Lead	mg/L	-	-	0.2	-	-	-	-	-	-	-
Lithium	mg/L	-	-	-	-	-	-	-	-	-	-
Manganese	mg/L	-	-	-	-	-	-	-	-	-	-
Magnesium	mg/L	-	-	-	20.4	-	-	22.6	-	-	-
Mercury	mg/L	-	-	-	-	-	-	-	-	-	-
Molybdenum	mg/L	-	-	-	-	-	-	-	-	-	-
Nickel	mg/L	-	-	0.5	-	-	-	-	-	-	-
Phosphorus	mg/L	-	-	-	-	-	-	-	-	-	-
Potassium	mg/L	-	-	-	1.71	-	-	2.6	-	-	-
Rubidium	mg/L	-	-	-	-	-	-	-	-	-	-
Selenium	mg/L	-	-	-	-	-	-	-	-	-	-
Silicon	mg/L	-	-	-	-	-	-	-	-	-	-
Silver	mg/L	-	-	-	-	-	-	-	-	-	-
Strontium	mg/L	-	-	-	-	-	-	-	-	-	-
Sodium	mg/L	-	-	-	2.38	-	-	5.19	-	-	-
Sulfur	mg/L	-	-	-	-	-	-	-	-	-	-
Tellurium	mg/L	-	-	-	-	-	-	-	-	-	-
Thallium	mg/L	-	-	-	-	-	-	-	-	-	-
Thorium	mg/L	-	-	-	-	-	-	-	-	-	-
Tin	mg/L	-	-	-	-	-	-	-	-	-	-
Titanium	mg/L	-	-	-	-	-	-	-	-	-	-
Tungsten	mg/L	-	-	-	-	-	-	-	-	-	-
Uranium	mg/L	-	-	-	-	-	-	-	-	-	-
Vanadium	mg/L	-	-	-	-	-	-	-	-	-	-
Zinc	mg/L	-	-	0.5	-	-	-	-	-	-	-
Zirconium	mg/L	-	-	-	-	-	-	-	-	-	-
Dissolved Metals											
Aluminum	mg/L	0.0050 - 0.10 [e]	-	-	0.0059	0.0044	0.0038	0.0064	0.0038	0.0040	0.0034
Antimony	mg/L	2.0	0.20	-	< 0.0001	<0.0001	< 0.0001	< 0.0001	<0.0001	<0.0001	< 0.0001
Arsenic	mg/L	0.0050	0.050	0.5 [m]	0.00012	<0.0001	< 0.0001	0.00016	0.00012	0.00012	0.00012
Barium	mg/L	2.9	10	-	0.00867	0.0074	0.00756	0.00682	0.0055	0.0056	0.00482

Table F-3: 2023 to 2025 Groundwater and Seep Analytical Results collected at the Landfill Facility, Mary River Mine

Distance from Landfill Facility Qualifier[a]		FIGQ Guideline[c] Commercial/Industrial	Yukon Contaminated Sites Regulation (CSR)[b]	Water Licence 2AM-MRY1325 Effluent Quality Discharge Limits[j]	Background			Background			
Station					LF-KP23-08			LF-KP23-09			
Sample Date (M/DD/YYYY)					9/07/2023	9/05/2024	8/25/2025	9/06/2023	9/06/2024	9/06/2024	8/25/2025
COA number		Tier 2 Water Use/Pathway: Protection of Freshwater Aquatic Life (AW-F)	Protection of Freshwater Aquatic Life (AW-F)		BF2300277	BF2400320	BF2500296	BF2300277	BF2400320	BF2400320	BF2500296
Matrix					GW			GW			
QA/QC		Soil Type: Coarse Grain		Maximum Concentration of Any Grab Sample	-	-	-	-	FDA	FD	-
Parameter	Unit										
Beryllium	mg/L	0.0053	0.053	-	< 0.00002	<0.00002	< 0.00002	< 0.00002	<0.00002	<0.00002	< 0.00002
Bismuth	mg/L	-	-	-	< 0.00005	<0.00005	< 0.00005	< 0.00005	<0.00005	<0.00005	< 0.00005
Boron	mg/L	1.5	-	-	< 0.01	<0.01	< 0.01	< 0.01	<0.01	<0.01	< 0.01
Cadmium	mg/L	0.240 (f)	0.00010 - 0.00060 (g)	-	< 0.000005	0.0000066	< 0.000005	0.0000106	0.0000060	0.0000058	< 0.000005
Cesium	mg/L	-	-	-	< 0.00001	<0.00001	< 0.00001	< 0.00001	<0.00001	<0.00001	< 0.00001
Chromium	mg/L	0.0089	0.010	-	< 0.0005	<0.0005	< 0.0005	< 0.0005	<0.0005	<0.0005	< 0.0005
Cobalt	mg/L	-	0.0090	-	0.00019	<0.0001	< 0.0001	0.0007	<0.0001	<0.0001	< 0.0001
Copper	mg/L	0.0020 - 0.0040 (g)	0.020 - 0.090 (g)	0.3 (m)	0.00203	0.0019	0.00184	0.00168	0.0011	0.0011	0.00108
Iron	mg/L	0.30	-	-	< 0.01	<0.01	< 0.01	0.029	<0.01	<0.01	< 0.01
Lead	mg/L	0.0010 - 0.0070 (g)	0.040 - 0.16 (g)	0.2 (m)	< 0.00005	<0.00005	< 0.00005	< 0.00005	0.000099	0.00013	< 0.00005
Lithium	mg/L	-	-	-	0.0012	<0.001	0.0013	0.0018	0.0012	0.0014	0.0017
Manganese	mg/L	-	-	-	0.0112	0.00014	0.00012	0.111	0.0020	0.0020	0.00042
Mercury	mg/L	0.000026	0.0010	-	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005
Molybdenum	mg/L	0.073	10	-	0.000289	0.000126	0.000123	0.00349	0.00007	0.000075	< 0.00005
Nickel	mg/L	0.025 - 0.15 (g)	0.25 - 1.5 (g)	0.5 (m)	0.00196	0.00158	0.00106	0.00399	0.00273	0.0027	0.00207
Phosphorus	mg/L	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Rubidium	mg/L	-	-	-	0.00191	0.00157	0.00157	0.0006	0.00047	0.00049	0.00049
Selenium	mg/L	0.0010	0.010	-	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Silicon	mg/L	-	-	-	1.77	1.8	1.78	2.27	2.34	2.33	1.97
Silver	mg/L	0.00025	0.0005 - 0.015 (g)	-	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Strontium	mg/L	-	-	-	0.0152	0.0146	0.0136	0.019	0.021	0.021	0.0172
Sulfur	mg/L	-	-	-	0.75	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Tellurium	mg/L	-	-	-	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Thallium	mg/L	0.00080	0.0030	-	0.000011	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Thorium	mg/L	-	-	-	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Tin	mg/L	-	-	-	< 0.0001	< 0.0001	< 0.0001	0.00012	< 0.0001	< 0.0001	< 0.0001
Titanium	mg/L	0.10	1.0	-	< 0.0003	< 0.0003	< 0.0003	0.00033	< 0.0003	< 0.0003	< 0.0003
Tungsten	mg/L	-	-	-	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Uranium	mg/L	0.015	3.0	-	0.000616	0.000429	0.000361	0.000443	0.000342	0.00035	0.000248
Vanadium	mg/L	-	-	-	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Zinc	mg/L	0.030	0.075 - 2.4 (g)	0.5 (m)	0.001	< 0.001	0.0011	0.0022	< 0.001	< 0.001	<0.001
Zirconium	mg/L	-	-	-	0.00055	0.00052	0.00045	0.0004	0.00033	0.00034	0.00031

COA = certificate of analysis, as N: as Nitrogen, BIM: Baffinland Iron Mines, BTEX: Benzene Toluene Ethylbenzene Xylenes, $CaCO_3$: Calcium Carbonate, DQO: Data Quality Objective, FDA: Field Duplicate Available, FD: Field Duplicate, FIGQ: Federal Interim Groundwater Guideline, CSR: Contaminated Sites Regulation, mg/L: milligram per litre, GW: Groundwater, LF: Landfill Facility, na: not available, SP: Seep, T/D/N = Total/Dissolved/Normal, ug/L: microgram per litre, uS/cm: microsiemens per centimetre, °C: degrees Celsius, < = less than

(a) Distance from Landfill Facility Qualifiers are defined as: Source = Station is located within active cells (Cells 1, 2, 3) in the landfill, Proximal= Station is within 20 metres from landfill limits, Downgradient = Station is located more than 20 m downgradient from the landfill's limits towards Sheardown Lake, Background = Station is located in the inactive cells (Cells 4, 5) of the landfill or upgradient of the landfill.

(b) Hardness not provided by the laboratory. Hardness was calculated based on Magnesium (Mg) and Calcium (Ca) concentrations for each sample.

(c) Federal Interim Groundwater Quality Guideline from Federal Contaminated Sites Action Plan (FCSAP), 2016 (Rev 4) - Guidance Document on Federal Interim Groundwater Quality Guideline for Federal Contaminated Sites.

(d) Ammonia guideline is pH and temperature dependent. The guideline is calculated based on the individual field pH and temperature measurements for each sample.

(e) Guideline is pH dependent. The guideline is calculated based on the individual pH for each sample.

(f) Cadmium guideline is hardness dependent of the receiving environment and was calculated with the following equation (FIGQ, 2016): $10^{(0.83x[\log(\text{hardness})]-2.46)}$. Hardness used for the calculation is the most conservative median concentration (ie, 51.75 mg/L) between Northwest and Southeast Sheardown Lake available in Table 2.4 of Aquatic Effects Monitoring Plan BIM-5200-PLA-0023 REV 2 (BIM, 2024).

(g) Guideline is hardness dependent. The guideline is calculated based on the individual hardness value for each sample.

(h) Yukon Contaminated Sites Regulation (CSR) (Environment Yukon 2002, in accordance with Yukon CSR Protocol 6 (Environment Yukon 2012). Yukon CSR does not apply to Nunavut, and is only used here for comparison purposes.

(i) Guideline is chloride dependent. The guideline is calculated based on the individual chloride concentration in each sample.

(j) Guideline from Nunavut Water Board - Water Licence 2AM-MRY1325. Provided for comparison purposes only. Water licence expired on 10-Jun-2025.

(k) Total Suspended Solids guideline (15 mg/L) does not apply to groundwater and was excluded from this table.

(l) Guideline from Nunavut Water Board - Water Licence 2AM-MRY2540. Provided for comparison purposes only. New water licence was issued on 28 April 2025. These new limits act as guidelines for the site to be used internally by Baffinland Iron Mines as adaptive management considerations.

(m) Guideline for total metals, for comparison purposes only.

Value	Value exceeding DQO for either pH or Conductivity
	DQO - 1 (pH units) for pH between laboratory and field measurements
	DQO - 20% for conductivity between laboratory and field measurements
Value	Result exceeds the FIGQ Commercial/Industrial Land Use - Tier 2 guideline or is outside the recommended
Value	Result exceeds Yukon CSR guideline.
Value	Result exceeds Water Licence 2AM-MRY1325, applicable only on 2023 and 2024 results.
Value	Result exceeds Water Licence 2AM-MRY2540, applicable only on 2025 results.

Distance from HWB Facilities Qualifier[a]						Source			Source				Source			Source			Source	
Station		FIGQ Guideline[c]	Yukon Contaminated Sites Regulation (CSR)[b]	Water Licence 2AM-MRY1325 Effluent Quality Discharge Limits[d]	Water Licence 2AM-MRY2540 Effluent Quality Discharge Limits[e]	HWB-KP23-01			HWB-KP23-02				HWB-KP22-03			MS-HWB-GW5			MS-HWB-GW4	
Sample Date (M/DD/YYYY)		Commercial/Industrial				9/16/2023	9/09/2024	8/30/2025	9/16/2023	9/08/2024	8/30/2025	8/30/2025	9/15/2023	9/08/2024	8/30/2025	9/19/2023	9/09/2024	8/30/2025	9/15/2023	9/09/2024
COA number		Tier 2 Water Use/Pathway: Freshwater Aquatic Life (AW-F)	Protection of Freshwater Aquatic Life (AW-F)			BF2300297	BF2400327	BF2500308	BF2300297	BF2400327	BF2500308	BF2500308	BF2300297	BF2400323	BF2500308	BF2300306	BF2400327	BF2500308	BF2300297	BF2400327
Matrix						GW			GW				GW			GW			GW	
QA/QC		Soil Type: Coarse Grain		Maximum Concentration of Any Grab Sample	Maximum Concentration of Any Grab Sample	-	-	-	-	-	FDA	FD	-	-	-	-	-	-	-	-
Parameter	**Unit**																			
Field Observations																				
Weather		-	-	-	-	na	Cloudy, very windy	Wind/light snow	na	Cloudy, rainy	Wind/light snow	Wind/light snow	na	Cloudy, rainy	Windy, overcast	na	Cloudy, windy	Wind/light snow	na	Cloudy, very windy
Routine Parameters																				
Dissolved Oxygen, Field	mg/L	-	-	-	-	-	2.59	5.61	-	2.21	4.95	-	-	0.9	0.86	-	0.21	4.18	-	0.38
Dissolved Oxygen, Percent, Field	%	-	-	-	-	-	18.7	39.2	-	15.9	35.2	-	-	6.5	6.1	-	1.5	30.1	-	2.7
pH, Field	pH unit	6.5 - 9.0	-	6.5 - 9.0	6.5 - 9.0	-	7.4	7.38	-	6.93	7.14	-	-	6.9	7.09	-	7.31	7.45	-	7.15
pH, Lab	pH unit	6.5 - 9.0	-	6.5 - 9.0	6.5 - 9.0	7.29	7.44	7.38	7.5	7.07	7.08	7.02	7.06	7.03	7.25	7.4	7.4	7.38	7.35	7.28
Data Quality Objective (DQO) - pH	pH unit	-	-	-	-	-	0.04	0	-	0.14	0.06	-	-	0.13	0.16	-	0.09	0.07	-	0.13
Specific Conductivity, Field	µS/cm	-	-	-	-	-	502	566	-	690	751	-	-	962	557	-	567	495.1	-	559
Conductivity, Lab	µS/cm	-	-	-	-	939	507	582	1050	690	703	725	1000	1030	572	926	570	503	547	577
Data Quality Objective (DQO) - Conductivity	%	-	-	-	-	-	1.0	2.8	-	0.0	6.6	-	-	6.8	2.7	-	0.5	1.6	-	3.2
Temperature, Field	°C	-	-	-	-	-	1.4	0.7	-	1.1	1.3	-	-	1.2	1.4	-	1.4	1.7	-	1
Total Alkalinity	mg/L as $CaCO_3$	-	-	-	-	-	203	217	-	272	193	198	-	372	278	-	217	208	-	291
Total Suspended Solids	mg/L	-	-	- [k]	- [k]	70.3	10.3	3.4	4.3	3.1	1.3	1.1	6.1	4.9	<1	<1.3	3.5	10.7	14.6	57.4
Total Dissolved Solids	mg/L	-	-	-	-	526	307	314	626	427	450	435	598	604	329	570	336	295	298	336
Turbidity, Lab	NTU	-	-	-	-	37.9	4.19	5.33	7.74	1.85	3.98	2.84	5.57	1.31	1.65	1.95	0.72	6.6	5.78	15.5
Turbidity, Field	NTU	-	-	-	-	-	8.59	4.07	-	11.62	1.04	-	-	4.73	2.42	-	7.57	14.16	-	20.91
Hardness, as $CaCO_3$ (calculated)[b]	mg/L	-	-	-	-	432	240	288	558	367	381	333	547	518	295	432	288	264	320	316
Major Ions																				
Calcium	mg/L	-	-	-	-	78.2	40.4	40.9	83.8	57.1	70.5	58.8	61.6	57.1	36.1	65.7	37.2	33.4	52.3	49.7
Chloride	mg/L	120	-	-	-	89.2	22.9	39	134	57.9	97.2	100	35.8	34.7	15.9	79.2	34.1	21.4	17	16.1
Bromide	mg/L	-	-	-	-	0.18	0.22	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.13	< 0.5	< 0.1	0.1	0.19	< 0.1	< 0.1	< 0.1
Fluoride	mg/L	0.12	2.0 - 3.0 [g]	-	-	0.024	0.074	0.066	0.047	0.17	0.23	0.14	0.038	< 0.1	0.062	<0.020	< 0.02	< 0.02	< 0.02	< 0.02
Magnesium	mg/L	-	-	-	-	57.4	33.7	45.2	84.6	54.4	49.8	45.1	95.4	91.1	49.8	65	47.5	43.9	45.9	46.6
Potassium	mg/L	-	-	-	-	3.75	3.43	2.25	5.65	4.21	4.37	3.86	6.06	6.06	4.4	3.18	2.06	1.49	1.68	1.68
Sodium	mg/L	-	-	-	-	4.91	9.41	7.47	5.62	3.76	8.64	7.09	25.5	27.7	16.1	4.25	8.94	4.6	4.1	5.39
Sulfate	mg/L	100	1,000	-	-	27.4	21.1	19.9	16.6	11.9	11	12.2	35.8	25.4	12.4	37.7	21.9	18.3	4.98	5.98
Nutrients																				
Nitrate	mg/L as N	2.9	400	-	-	25.9	2.7	3.78	4.42	0.619	0.162	0.176	0.797	29.4	0.181	25.7	3.25	3.31	0.88	0.509
Nitrite	mg/L as N	0.060	0.20 - 2.0 [c]	-	-	0.366	0.075	0.064	0.21	0.041	0.017	0.019	0.036	< 0.05	< 0.01	0.263	0.168	0.18	0.083	0.052
Total Ammonia	mg/L as N	0.017 - 190 [d]	1.31 - 18.5 [d]	-	-	3.79	1.99	0.94	0.657	0.358	0.319	0.304	1.12	1.13	0.959	2.26	1.15	0.319	0.0115	0.0234
Phosphorus, Nutrient	mg/L	-	-	-	-	0.0167	0.0181	-	0.0408	0.0328	-	-	0.113	0.0699	-	0.0176	0.0199	-	0.0292	0.0754
Phosphorus, total dissolved	mg/L	-	-	-	-	-	-	0.0226	-	-	0.0156	0.0153	-	-	0.0412	-	-	0.0174	-	-
Total Kjeldahl Nitrogen	mg/L	-	-	-	-	4.04	2.37	1.61	1.9	1.08	0.686	0.682	3.01	2.86	1.69	2.72	1.52	0.975	0.368	0.378
Organic Carbon																				
Dissolved Organic Carbon	mg/L	-	-	-	-	9.77	-	-	18.8	-	-	-	51.6	-	-	14.1	-	-	7.76	-
Total Organic Carbon	mg/L	-	-	-	-	9.89	-	-	21.2	-	-	-	62.5	-	-	14.9	-	-	7.8	-
Petroleums Hydrocarbons (PHCs) and BTEX																				
Benzene	µg/L	690	4000	-	-	<0.50	< 0.5	< 0.5	< 0.5	< 0.5	0.5	0.51	0.98	< 0.5	< 0.5	<0.50	< 0.5	< 0.5	40	21.5
Toluene	µg/L	83	390	-	-	<0.50	< 0.5	< 0.5	3.62	1.3	0.58	< 0.5	3.52	< 0.5	< 0.5	<0.50	< 0.5	< 0.5	7.09	0.99
Ethylbenzene	µg/L	41000	2000	-	-	<0.50	< 0.5	< 0.5	10.7	13.7	6.05	5.45	1.86	< 0.5	< 0.5	<0.50	< 0.5	< 0.5	0.65	5.05
Styrene	µg/L	72	720	-	-	<0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.50	< 0.5	< 0.5	< 0.5	< 0.5
o-Xylene	µg/L	-	-	-	-	0.73	0.37	3.52	62	114	56.3	50.5	13	3.03	0.86	<0.30	< 0.3	< 0.3	11.8	16.2
m+p-Xylenes	µg/L	-	-	-	-	0.53	< 0.4	< 0.4	51.3	82.6	21.9	16.7	15.6	2.09	< 0.4	<0.40	< 0.4	< 0.4	13.7	19.2
Total Xylenes	µg/L	18000	-	-	-	1.26	< 0.5	3.52	113	197	78.2	67.2	28.6	5.12	0.86	<0.50	< 0.5	< 0.5	25.5	35.4
BTEX, Total	µg/L	-	-	-	-	1.3	< 1	3.5	128	212	85.3	73.2	35	5.1	< 1	<1.0	< 1	< 1	73.2	62.9
F1 (C6-C10)	µg/L	9800	-	-	-	<25	< 25	< 25	447	348	157	152	85	< 25	< 25	<25	< 25	< 25	180	148
F1(C6-C10)-BTEX	µg/L	-	-	-	-	<25	< 25	< 25	319	136	72	79	50	< 25	< 25	<25	< 25	< 25	107	85
F2 (C10-C16)	µg/L	1300	-	-	-	<100	< 100	140	770	740	440	400	3520	2010	860	120	< 100	100	< 100	< 100
F3 (C16-C34)	µg/L	-	-	-	-	<250	< 250	< 250	< 250	< 250	< 250	< 250	1540	1080	560	<250	< 250	< 250	< 250	< 250
F4 (C34-C50)	µg/L	-	-	-	-	<250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	<250	< 250	< 250	< 250	< 250
Total Petroleum Hydrocarbons	µg/L	-	-	-	-	<370	< 370	< 370	1220	1090	600	550	5140	3090	1420	<370	< 370	< 370	< 370	< 370
Oil and Grease																				
Total Oil and Grease	mg/L	-	-	-	-	<5.0	< 10	< 5	< 5	< 10	< 5	< 5	< 5	< 10	< 5	< 5	< 10	< 5	< 5	< 10
Volatile Organic Compounds (VOCs)																				
1,1,1,2-Tetrachloroethane	µg/L	2500	-	-	-	<0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.50	< 0.5	< 0.5	< 0.5	< 0.5
1,1,1-Trichloroethane	µg/L	1100	-	-	-	<0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.50	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2,2-Tetrachloroethane	µg/L	3000	-	-	-	<0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.50	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2-Trichloroethane	µg/L	12000	-	-	-	<0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.50	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethane	µg/L	260000	-	-	-	<0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.50	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethylene	µg/L	-	-	-	-	<0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.50	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dibromoethane (ethylene dibromide)	µg/L	12000	-	-	-	<0.20	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	<0.20	< 0.2	< 0.2	< 0.2	< 0.2
1,2-Dichlorobenzene	µg/L	0.7	-	-	-	<0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.50	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichloroethane	µg/L	100	1000	-	-	<0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.50	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichloropropane	µg/L	7200	-	-	-	<0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.50	< 0.5	< 0.5	< 0.5	< 0.5
1,3-Dichlorobenzene	µg/L	150	1500	-	-	<0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.50	< 0.5	< 0.5	< 0.5	< 0.5
1,3-Dichloropropene (cis & trans)	µg/L	310	-	-	-	<0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.50	< 0.5	< 0.5	< 0.5	< 0.5
1,4-Dichlorobenzene	µg/L	26	260	-	-	<0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.50	< 0.5	< 0.5	< 0.5	< 0.5
Methyl Ethyl Ketone	µg/L	150000	-	-	-	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	<20	< 20	< 20	< 20	< 20
Methyl Isobutyl Ketone	µg/L	58000	-	-	-	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	<20	< 20	< 20	< 20	< 20
Methyl t-butyl ether (MTBE)	µg/L	10000	-	-	-	<0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.50	< 0.5	< 0.5	1.88	0.76
Acetone	µg/L	13000	-	-	-	<20	< 20	< 20	< 20	< 20	< 20	< 20	35	< 20	< 20	<20	< 20	< 20	24	< 20
Bromomethane	µg/L	400	-	-	-	<0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.50	< 0.5	< 0.5	< 0.5	< 0.5
cis-1,2-Dichloroethylene	µg/L	18000	-	-	-	<0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	16.7	7.18	3.22	<0.50	< 0.5	< 0.5	< 0.5
trans-1,2-Dichloroethylene	µg/L	28000	-	-	-	<0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.50	< 0.5	< 0.5	< 0.5
dichloroethylene, cis+trans-1,2-	µg/L	-	-	-	-	<0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	16.7	7.18	3.22	<0.71	< 0.71	< 0.71	< 0.71
cis-1,3-Dichloropropene	µg/L	-	-	-	-	<0.30	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	<0.30	< 0.3	< 0.3	< 0.3
trans-1,3-Dichloropropene	µg/L	-	-	-	-	<0.30	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	<0.30	< 0.3	< 0.3	< 0.3
Dibromochloromethane	µg/L	-	-	-	-	<0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.50	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	µg/L	-	-	-	-	<0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.50	< 0.5	< 0.5	< 0.5
Dichloromethane	µg/L	98	980	-	-	<1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	<1.0	< 1	< 1	< 1	< 1
Chloromethane	µg/L	-	-	-	-	<2.0	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	<2.0	< 2	< 2	< 2	< 2
Tetrachloroethylene (PCE)	µg/L	110	1100	-	-	0.77	< 0.5	<0.50	< 0.5	< 0.5	<0.50	<0.50	< 0.5	0.51	0.57	1.22	< 0.5	0.69	0.6	1.02
Trichloroethylene (TCE)	µg/L	29	200	-	-	<0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.50	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	µg/L	-	-	-	-	<0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.50	< 0.5	< 0.5	< 0.5	< 0.5
Trihalomethanes, Total	µg/L	-	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chloroethane	µg/L	-	-	-	-	<0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.50	< 0.5	< 0.5	< 0.5	< 0.5
hexanone, 2-	µg/L	-	-	-	-	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	<20	< 20	< 20	< 20	< 20
n-Hexane	µg/L	-	-	-	-	<0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.50	< 0.5	< 0.5	0.79	2.98
Bromodichloromethane	µg/L	8500	-	-	-	<0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.50	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	µg/L	-	-	-	-	<0.50	< 0.5	< 0.2	< 0.5	< 0.5	< 0.2	< 0.2	< 0.5	< 0.5	< 0.2	<0.50	< 0.5	< 0.2	< 0.5	< 0.5
Bromoform	µg/L	3700	-	-	-	<0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.50	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	µg/L	1.8	20	-	-	<0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.50	< 0.5	< 0.5	< 0.5	< 0.5
Monochlorobenzene	µg/L	1.3	13	-	-	<0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.50	< 0.5	< 0.5	< 0.5	< 0.5
Carbon tetrachloride	µg/L	13	130	-	-	<0.20	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	<0.20	< 0.2	< 0.2	< 0.2	< 0.2
Carbon disulfide	µg/L	-	-	-	-	<1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	<1	< 1	< 1	< 1	< 1

Table F-4: 2023 to 2025 Groundwater Analytical Results collected at the Hazardous Waste Berm Facility, Mary River Mine

Distance from HWB Facilities Qualifier[a]						Source			Source				Source			Source			Source	
Station		FIGQ Guideline[c]	Yukon Contaminated Sites Regulation (CSR)[h]	Water Licence 2AM-MRY1325 Effluent Quality Discharge Limits[j]	Water Licence 2AM-MRY2540 Effluent Quality Discharge Limits[k]	HWB-KP23-01			HWB-KP23-02				HWB-KP22-03			MS-HWB-GW5			MS-HWB-GW4	
Sample Date (M/DD/YYYY)		Commercial/Industrial				9/16/2023	9/09/2024	8/30/2025	9/16/2023	9/08/2024	8/30/2025	8/30/2025	9/15/2023	9/08/2024	8/30/2025	9/19/2023	9/09/2024	8/30/2025	9/15/2023	9/09/2024
COA number		Tier 2 Water Use/Pathway: Freshwater Aquatic Life (AW-F)				BF2300297	BF2400327	BF2500308	BF2300297	BF2400327	BF2500308	BF2500308	BF2300297	BF2400323	BF2500308	BF2300306	BF2400327	BF2500308	BF2300297	BF2400327
Matrix						GW			GW				GW			GW			GW	
QA/QC		Soil Type: Coarse Grain	Protection of Freshwater Aquatic Life (AW-F)	Maximum Concentration of Any Grab Sample	Maximum Concentration of Any Grab Sample	-	-	-	-	-	FDA	FD	-	-	-	-	-	-	-	-
Parameter	**Unit**																			
Polycyclic Aromatic Hydrocarbons (PAHs)																				
Acenaphthene	µg/L	5.8	-	-	-	<0.015	< 0.01	< 0.053	0.137	< 0.122	< 0.089	< 0.084	< 1.36	< 0.852	< 0.281	<0.029	< 0.01	< 0.059	< 0.01	< 0.07
Acenaphthylene	µg/L	46	-	-	-	<0.010	< 0.01	< 0.01	< 0.034	< 0.037	< 0.025	< 0.024	< 0.147	< 0.082	< 0.084	<0.010	< 0.01	< 0.01	< 0.01	< 0.01
Acridine	µg/L	0.05	0.5	-	-	<0.010	< 0.011	< 0.033	< 0.01	< 0.013	< 0.013	< 0.013	< 0.145	< 0.087	< 0.054	<0.011	< 0.013	< 0.035	< 0.01	< 0.012
Anthracene	µg/L	0.012	1	-	-	<0.010	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.058	< 0.042	< 0.042	<0.010	< 0.01	< 0.01	< 0.01	< 0.01
1+2-Methylnaphthalenes	µg/L	180	-	-	-	0.539	1.08	0.324	44.5	21.3	17.1	14.1	2.68	2.23	1.3	0.12	0.38	0.088	0.02	< 0.054
1-Methylnaphthalene	µg/L	-	-	-	-	0.234	0.549	0.178	18.3	9.44	7.44	6.35	1.7	1.59	0.883	0.061	0.21	0.051	0.02	< 0.045
2-Methylnaphthalene	µg/L	-	-	-	-	0.305	0.535	0.146	26.2	11.9	9.63	7.76	0.983	0.641	0.422	0.059	0.17	0.037	< 0.011	< 0.03
B(a)P Total Potency Equivalent	µg/L	-	-	-	-	<0.010	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	<0.010	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/L	0.018	1	-	-	<0.010	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.042	< 0.042	<0.010	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/L	0.015	0.1	-	-	<0.0050	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	<0.0050	< 0.005	< 0.005	< 0.005	< 0.005
Benzo(b&j)fluoranthene	µg/L	0.48	-	-	-	<0.010	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	<0.010	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b+j+k)fluoranthene	µg/L	-	-	-	-	<0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	<0.015	< 0.015	< 0.015	< 0.015	< 0.015
Benzo(g,h,i)perylene	µg/L	0.17	-	-	-	<0.010	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	<0.010	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/L	0.48	-	-	-	<0.010	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	<0.010	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/L	1.4	-	-	-	<0.010	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	<0.010	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/L	0.26	-	-	-	<0.0050	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	<0.0050	< 0.005	< 0.005	< 0.005	< 0.005
Fluoranthene	µg/L	0.04	2	-	-	<0.010	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.042	< 0.042	<0.010	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/L	3	120	-	-	<0.010	< 0.01	< 0.01	0.209	0.178	0.132	0.122	< 0.06	< 0.042	< 0.042	<0.010	< 0.01	< 0.011	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.21	-	-	-	<0.010	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	<0.010	< 0.01	< 0.01	< 0.01	< 0.01
Naphthalene	µg/L	1.1	10	-	-	0.312	< 0.349	< 0.114	31.8	14.9	13.6	13	< 0.321	< 0.316	< 0.191	0.069	< 0.126	< 0.011	0.046	0.232
Perylene	µg/L	-	-	-	-	<0.010	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	<0.010	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/L	0.4	3	-	-	<0.010	< 0.01	< 0.01	0.023	0.024	0.025	0.029	< 0.042	< 0.042	< 0.042	<0.010	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/L	0.025	0.2	-	-	<0.010	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.016	0.108	< 0.042	<0.010	< 0.01	< 0.01	< 0.01	< 0.01
Quinoline	µg/L	3.4	34	-	-	<0.104	< 0.279	< 0.104	< 1.8	< 1.36	< 0.838	< 0.767	< 4.91	< 3.58	< 2.65	<0.082	< 0.262	< 0.435	< 0.527	< 0.649
Glycols																				
Diethylene glycol	mg/L	-	-	-	-	<5.0	-	-	< 5	-	-	-	< 5	-	-	<5.0	-	-	< 5	-
Ethylene glycol	mg/L	190	1920	-	-	<5.0	-	-	< 5	-	-	-	< 5	-	-	<5.0	-	-	< 5	-
Propanediol, 1,3-	mg/L	-	-	-	-	<5.0	-	-	< 5	-	-	-	< 5	-	-	<5.0	-	-	< 5	-
Propylene glycol, 1,2-	mg/L	500	5000	-	-	<5.0	-	-	< 5	-	-	-	< 5	-	-	<5.0	-	-	< 5	-
Tetraethylene glycol	mg/L	-	-	-	-	<5.0	-	-	< 5	-	-	-	< 5	-	-	<5.0	-	-	< 5	-
Triethylene glycol	mg/L	-	-	-	-	<5.0	-	-	< 5	-	-	-	< 5	-	-	<5.0	-	-	< 5	-
Glycols, total (EG+DEG+PG)	mg/L	-	-	-	-	<10	-	-	< 10	-	-	-	< 10	-	-	<10	-	-	< 10	-
Total Metals																				
Calcium	mg/L	-	-	-	-	80.5	-	-	82	-	-	-	61.2	-	-	70	-	-	52	-
Magnesium	mg/L	-	-	-	-	59.2	-	-	80.1	-	-	-	89.8	-	-	69.6	-	-	41.5	-
Potassium	mg/L	-	-	-	-	4.09	-	-	5.68	-	-	-	6.24	-	-	3.38	-	-	1.59	-
Sodium	mg/L	-	-	-	-	4.82	-	-	5.38	-	-	-	24.6	-	-	4.48	-	-	3.72	-
Dissolved Metals																				
Aluminum	mg/L	0.0050 - 0.10 [e]	-	-	-	<0.0100	0.0063	0.0049	0.0172	0.0152	0.0098	0.0114	0.0221	0.0108	< 0.01	0.0028	0.0026	0.0029	0.0108	0.004
Antimony	mg/L	2.0	0.20	-	-	<0.00100	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	<0.00010	< 0.0001	< 0.0001	< 0.001	< 0.0001
Arsenic	mg/L	0.0050	0.050	0.5 [m]	0.6 [m]	<0.00100	0.0003	0.00028	< 0.001	0.00082	0.00051	0.0006	0.00376	0.002	0.0024	0.00029	0.00028	0.00028	< 0.001	0.00029
Barium	mg/L	2.9	10	-	-	0.0948	0.0529	0.0545	0.104	0.075	0.088	0.0749	0.124	0.0802	0.05	0.0949	0.0527	0.0395	0.0384	0.0394
Beryllium	mg/L	0.0053	0.053	-	-	<0.000200	< 0.00002	< 0.00002	< 0.0002	< 0.00002	< 0.00002	< 0.00002	< 0.0002	< 0.0002	< 0.0002	<0.000020	< 0.00002	< 0.00002	< 0.0002	< 0.00002
Bismuth	mg/L	-	-	-	-	<0.000500	< 0.00005	< 0.00005	< 0.0005	< 0.00005	< 0.00005	< 0.00005	< 0.0005	< 0.0005	< 0.0005	<0.000050	< 0.00005	< 0.00005	< 0.0005	< 0.00005
Boron	mg/L	1.5	-	-	-	<0.100	0.029	0.03	< 0.1	0.018	0.025	0.02	< 0.1	< 0.1	< 0.1	0.018	0.026	0.024	< 0.1	0.011
Cadmium	mg/L	0.270 [f]	0.00010 - 0.00060 [g]	-	-	<0.0000500	0.0000118	0.0000193	< 0.00005	0.0000163	0.0000163	0.0000119	< 0.00005	< 0.00005	< 0.00005	0.0000271	0.0000163	0.0000134	< 0.00005	0.0000165
Cesium	mg/L	-	-	-	-	<0.000100	0.000015	0.000014	< 0.0001	< 0.00001	< 0.00001	< 0.00001	< 0.0001	< 0.0001	< 0.0001	0.000019	0.000018	0.000014	< 0.0001	< 0.00001
Chromium	mg/L	0.0089	0.010	-	-	<0.0050	0.00083	0.00084	< 0.005	0.0022	0.0015	0.0016	< 0.005	< 0.005	< 0.005	0.00136	0.0009	0.00091	< 0.005	0.00068
Cobalt	mg/L	-	0.0090	-	-	0.00167	0.00053	0.00086	**0.00922**	0.00527	0.00472	0.00442	0.00859	0.00568	0.00246	0.00103	0.00075	0.00069	< 0.001	0.00023
Copper	mg/L	0.0020 - 0.0040 [g]	0.020 - 0.090 [g]	0.3 [m]	0.6 [m]	0.00358	0.0043	0.0041	0.00389	0.00332	0.00222	0.00213	< 0.002	< 0.002	<0.002	0.00463	0.00309	0.00351	0.00426	0.004
Iron	mg/L	0.30	-	-	-	0.179	0.049	0.025	1.9	1	1.2	1.5	1.77	< 0.1	0.102	<0.010	< 0.01	< 0.01	< 0.1	< 0.01
Lead	mg/L	0.0010 - 0.0070 [g]	0.040 - 0.16 [g]	0.2 [m]	0.2 [m]	<0.000500	0.00025	0.000078	< 0.0005	0.00026	< 0.00005	< 0.00005	< 0.0005	< 0.0005	0.00056	0.000107	0.000609	0.000072	< 0.0005	< 0.00005
Lithium	mg/L	-	-	-	-	<0.0100	0.0066	0.0052	0.0188	0.017	0.026	0.0203	< 0.01	< 0.01	< 0.01	0.0068	0.0054	0.0045	< 0.01	0.0062
Manganese	mg/L	-	-	-	-	0.367	0.16	0.209	1.93	1.8	1.48	1.43	3.51	2.88	1.42	0.135	0.105	0.0802	0.0238	0.0421
Mercury	mg/L	0.000026	0.0010	-	-	<0.0000050	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	<0.0000050	< 0.000005	< 0.000005	< 0.000005	< 0.000005
Molybdenum	mg/L	0.073	10	-	-	0.00459	0.0041	0.00144	0.00557	0.00394	0.00112	0.00123	0.00804	0.00728	0.00905	0.000372	0.000567	0.000529	< 0.0005	0.00038
Nickel	mg/L	0.025 - 0.15 [g]	0.25 - 1.5 [g]	0.5 [m]	1 [m]	0.0274	0.0141	0.0213	0.0877	0.05	0.0466	0.0422	0.0494	0.0394	0.0222	0.0236	0.0173	0.0178	0.012	0.0159
Phosphorus	mg/L	-	-	-	-	<0.50	< 0.05	<0.050	<0.50	< 0.05	<0.050	<0.050	<0.50	<0.50	<0.50	<0.050	< 0.05	<0.050	<0.50	< 0.05
Rubidium	mg/L	-	-	-	-	0.00606	0.00444	0.0048	0.00882	0.00437	0.00581	0.00537	0.00628	0.00534	0.00329	0.00683	0.00523	0.00508	0.00513	0.00535
Selenium	mg/L	0.0010	0.010	-	-	<0.000500	0.000083	0.000093	< 0.0005	0.0001	0.000069	0.000062	< 0.0005	< 0.0005	< 0.0005	0.000184	0.000111	0.0001	< 0.0005	0.000131
Silicon	mg/L	-	-	-	-	5.65	4.78	5.26	8.14	7.46	7	6.93	8.83	6.69	5.29	5.1	5.46	5.04	6.88	6.14
Silver	mg/L	0.00025	0.0005 - 0.015 [g]	-	-	<0.000100	< 0.00001	< 0.00001	< 0.0001	0.000014	< 0.00001	0.00001	< 0.0001	< 0.0001	< 0.0001	<0.000010	< 0.00001	< 0.00001	< 0.0001	0.000012
Strontium	mg/L	-	-	-	-	0.235	0.12	0.105	0.813	0.488	0.554	0.45	0.0533	0.0472	0.0281	0.156	0.0878	0.116	0.286	0.251
Sulfur	mg/L	-	-	-	-	10.9	7.58	7.64	6.19	4.73	5.66	4.81	14.5	9.62	5.12	13.8	8.22	6.92	< 5	2.57
Tellurium	mg/L	-	-	-	-	<0.00200	< 0.0002	< 0.0002	< 0.002	< 0.0002	< 0.0002	< 0.0002	< 0.002	< 0.002	< 0.002	<0.00020	< 0.0002	< 0.0002	< 0.002	< 0.0002
Thallium	mg/L	0.00080	0.0030	-	-	<0.000100	0.000016	0.000014	< 0.0001	0.000021	0.000018	0.000014	< 0.0001	< 0.0001	< 0.0001	0.000019	0.000014	0.000016	< 0.0001	0.000019
Thorium	mg/L	-	-	-	-	<0.00100	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001	0.0001	< 0.001	< 0.001	< 0.001	<0.00010	< 0.0001	< 0.0001	< 0.001	< 0.0001
Tin	mg/L	-	-	-	-	<0.00100	< 0.0001	< 0.0001	< 0.001	0.00061	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	<0.00010	< 0.0001	< 0.0001	< 0.001	< 0.0001
Titanium	mg/L	0.10	1.0	-	-	<0.00300	< 0.0003	< 0.0003	< 0.003	< 0.0005	< 0.0003	< 0.0003	< 0.003	< 0.003	< 0.003	<0.00030	< 0.0003	< 0.0003	< 0.003	< 0.0003
Tungsten	mg/L	-	-	-	-	<0.00100	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	<0.00010	< 0.0001	< 0.0001	< 0.001	< 0.0001
Uranium	mg/L	0.015	3.0	-	-	0.00308	0.00364	0.00184	0.00345	0.00366	0.00323	0.00269	0.0111	0.00842	0.00458	0.00327	0.00164	0.00115	0.00306	0.00275
Vanadium	mg/L	-	-	-	-	<0.00500	< 0.0005	< 0.0005	< 0.005	0.00059	< 0.0005	< 0.0005	< 0.005	< 0.005	< 0.005	<0.00050	< 0.0005	< 0.0005	< 0.005	< 0.0005
Zinc	mg/L	0.030	0.075 - 2.4 [g]	0.5 [m]	1 [m]	<0.0100	< 0.001	0.0013	< 0.01	0.0019	<0.001	<0.001	< 0.01	< 0.01	<0.01	<0.0010	< 0.001	<0.001	< 0.01	0.0011
Zirconium	mg/L	-	-	-	-	<0.00300	0.00035	0.00054	< 0.003	0.00102	0.00092	0.00089	< 0.003	< 0.003	< 0.003	0.00058	0.00067	0.00057	< 0.003	0.00133

COA: certifiate of analysis, as N: as Nitrogen, BIM: Baffinland Iron Mines, BTEX: Benzene Toluene Ethylbenzene Xylenes, CaCO3:Calcium Carbonate, DQO: Data Quality Objective, FDA: Field Duplicate Available, FD: Field Duplicate, FIGQ: Federal Interim Groundwater Guideline, CSR: Contaminated Sites Regulation, HWB: Hazard Waste Berm, GW: Groundwater, mg/L: milligram per litre, na: not available, T/D/N = Total/Dissolved/Normal, ug/L: microgram per litre, uS/cm: microsiemens per centimetre, °C: degrees Celsius, < = less than

(a) Distances from HWB Facility Qualifiers are defined as: Source = Station is located within HWB Facility limits or less than 20 m from the HWB Facility limits, Proximal =Station is located more than 20 metres from HWB Facility limits, Downgradient = Station is located more than 20 m downgradient from the HWB Facility towards Camp Lake , Background = Station is located upgradient or more than 20 m from HWB Facility limits.

(b) Hardness not provided by the laboratory. Hardness was calculated based on Magnesium (Mg) and Calcium (Ca) concentrations for each sample.
(c) Federal Interim Groundwater Quality Guideline from Federal Contaminated Sites Action Plan (FCSAP), 2016 (Rev 4) - Guidance Document on Federal Interim Groundwater
(d) Ammonia guideline is pH and temperature dependent. The guideline is calculated based on the individual field pH and temperature measurements for each sample.
(e) Guideline is pH dependent. The guideline is calculated based on the individual pH for each sample.

(f) Cadmium guideline is hardness dependent of the receiving environment and was calculated with the following equation (FIGQ, 2016): $10^{(0.83x(\log(hardness))-2.46)}$. Hardness used for the calculation is the median concentration (ie, 59.6 mg/L) at Camp Lake available in Table 2.4 of Aquatic Effects Monitoring Plan BIM-5200-PLA-0023 REV 2 (BIM, 2024).

(g) Guideline is hardness dependent. The guideline is calculated based on the individual hardness value for each sample.

(h) Yukon Contaminated Sites Regulation (CSR) (Environment Yukon 2002, in accordance with Yukon CSR Protocol 6 (Environment Yukon 2012)). Yukon CSR does not apply to Nunavut, and is only used here for comparison purposes.

(i) Guideline is chloride dependent. The guideline is calculated based on the individual chloride concentration in each sample.
(j) Guideline from Nunavut Water Board - Water Licence 2AM-MRY1325. Provided for comparison purposes only. Water licence expired on 10 June 2025.
(k) Total Suspended Solids guideline (15 mg/L or 30 mg/L) does not apply to groundwater and was excluded from this table.

(l) Guideline from Nunavut Water Board - Water Licence 2AM-MRY2540. Provided for comparison purposes only. New water licence was issued on 28 April 2025. These new limits act as guidelines for the site to be used internally by Baffinland Iron Mines as adaptive management considerations.

(m) Guideline for total metals, for comparison purposes only.

Value	Value exceeding DQO for either pH or Conductivity
	DQO < 1 (pH units) for pH between laboratory and field measurements
	DQO < 20% for conductivity between laboratory and field measurements
Value	Result exceeds the FIGQ Commercial/Industrial Land Use - Tier 2 guideline or is outside the recommended pH range.
Value	Result exceeds Water Licence 2AM-MRY1325, applicable only on 2023 and 2024 results.
Value	Result exceeds Water Licence 2AM-MRY2540, applicable only on 2025 results.

Table F-4: 2023 to 2025 Groundwater Analytical Results collected at the Hazardous Waste Berm Facility, Mary River Mine

Distance from HWB Facilities Qualifier[a]					Proximal			Proximal				Proximal			Downgradient	Background			Background	Background	Background		Background	
Station		FIGQ Guideline[c]	Yukon Contaminated Sites Regulation (CSR)[b]	Water Licence 2AM-MRY1325 Effluent Quality Discharge Limits[j]	HWB-KP22-04			HWB-KP22-05				HWB-KP23-03			MS-HWB-25-01	HWB-KP22-01			HWB-KP22-06	MS-HWB-25-03	MS-HWB-GW-REF3		MS-HWB-GW-REF1	
Sample Date (M/DD/YYYY)					9/16/2023	9/08/2024	8/30/2025	9/16/2023	9/09/2024	9/09/2024	8/30/2025	9/16/2023	9/08/2024	8/30/2025	9/02/2025	9/16/2023	9/08/2024	8/30/2025	9/02/2025	9/02/2025	9/08/2024	8/30/2025	9/09/2024	8/30/2025
COA number		Tier 2 Water Use/Pathway: Freshwater Aquatic Life (AW-F)	Protection of Freshwater Aquatic Life (AW-F)	Maximum Concentration of Any Grab Sample	BF2300297	BF2400323	BF2500308	BF2300297	BF2400327	BF2400327	BF2500308	BF2300297	BF2400327	BF2500308	BF2500317	BF2300297	BF2400323	BF2500308	BF2500317	BF2500317	BF2400323	BF2500308	BF2400330	BF2500308
Matrix					GW			GW				GW			GW	GW			GW	GW	GW		GW	
QA/QC		Soil Type: Coarse Grain			-	-	-	-	FDA	FD	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Parameter	Unit																							
Field Observations																								
Weather		-	-	-	na	Cloudy, rainy	Windy, sun and clouds	na	Cloudy, very windy	Cloudy, very windy	Wind/snow	na	Cloudy, rainy, windy	Wind/snow	Sunny, windy	na	Rainy, windy	Cloudy, windy	Sunny, windy	Sunny, windy	Rainy, windy	Cloudy, windy	Cloudy, windy	Windy, sun and clouds
Routine Parameters																								
Dissolved Oxygen, Field	mg/L	-	-	-	-	0.34	0.9	-	0.49	-	3.02	-	2.53	2.94	3.19	-	1.66	0.48	8.37	5.75	1.03	1.79	4.98	6.7
Dissolved Oxygen, Percent, Field	%	-	-	-	-	2.4	6.3	-	3.5	-	22.1	-	18.2	20.9	22.2	-	11.9	3.4	59.7	39.7	7.4	12.5	35.8	48.6
pH, Field	pH unit	6.5 - 9.0	-	6.5 - 9.0	-	7.25	7.25	-	6.91	-	7.0	-	7.05	7.14	7.44	-	6.86	6.9	7.68	7.81	7.37	6.97	7.37	7.28
pH, Lab	pH unit	6.5 - 9.0	-	6.5 - 9.0	7.25	7.35	7.47	7.07	6.96	6.95	6.9	7.24	7.11	7.07	7.82	6.95	6.91	6.94	8.0	8.07	7.45	7.25	7.55	7.61
Data Quality Objective (DQO) - pH	pH unit	-	-	-	-	0.1	0.22	-	0.05	-	0.1	-	0.06	0.07	0.38	-	0.05	0.04	0.32	0.26	0.08	0.28	0.18	0.33
Specific Conductivity, Field	µS/cm	-	-	-	-	475.9	462	-	1163	-	1890	-	614	655	422.1	-	1060	969	319.8	353.3	591	3069	712	659
Conductivity, Lab	µS/cm	-	-	-	626	499	498	741	1140	1140	1880	667	632	671	409	958	1120	952	324	353	604	3030	761	679
Data Quality Objective (DQO) - Conductivity	%	-	-	-	-	4.7	7.5	-	2.0	-	0.5	-	2.9	2.4	3.2	-	5.5	1.8	1.3	0.1	2.2	1.3	6.7	3.0
Temperature, Field	°C	-	-	-	-	1	0.9	-	0.9	-	2.2	-	1.1	1.3	0.6	-	0.8	1	1.5	0.3	1.2	0.5	1.1	2.1
Total Alkalinity	mg/L as $CaCO_3$	-	-	-	-	242	242	-	255	256	197	-	283	278	197	-	609	518	153	155	260	214	197	174
Total Suspended Solids	mg/L	-	-	- [k]	9.6	1.8	< 1	3.6	7.2	6.4	6	6.7	40.3	5.5	< 1	20.6	28.4	14.2	1.9	1.4	94.8	4.2	5.2	24.5
Total Dissolved Solids	mg/L	-	-	-	320	256	279	414	706	700	1230	388	375	404	163	561	640	552	178	200	365	2000	439	404
Turbidity, Lab	NTU	-	-	-	2.45	0.69	498	3.84	6.23	6.23	1880	9.31	27.5	3.55	0.79	17.6	54.9	37.1	2.21	2.06	5.68	1.92	1.8	17.5
Turbidity, Field	NTU	-	-	-	-	7.71	2.15	-	4.42	-	2.44	-	51.36	2.07	2.04	-	6.58	15.34	3.15	3.57	6.6	2.88	9.11	33.85
Hardness, as $CaCO_3$ (calculated)[h]	mg/L	-	-	-	374	266	252	375	556	535	853	335	305	329	211	518	597	506	135	142	303	1386	332	290
Major Ions																								
Calcium	mg/L	-	-	-	39.8	30.2	29.3	61.5	89.9	85.1	177	76.1	63	72.9	29.7	74.6	87	72.1	21.9	21	40.4	197	66.8	63
Chloride	mg/L	120	-	-	25.2	10.4	4.44	83.6	203	205	484	48	33	40.5	15.3	33	27	18.9	5.04	6.8	32.4	854	79.4	78.4
Bromide	mg/L	-	-	-	< 0.1	< 0.1	< 0.1	0.11	1.1	1.13	4.68	< 0.1	< 0.1	< 0.1	< 0.1	0.12	< 0.5	< 0.2	< 0.1	< 0.1	< 0.1	6.24	0.58	0.19
Fluoride	mg/L	0.12	2.0 - 3.0 [g]	-	0.038	0.056	0.092	0.04	< 0.1	< 0.1	< 0.1	< 0.02	0.088	0.085	0.032	< 0.02	< 0.1	0.045	0.042	0.049	0.031	< 0.1	< 0.02	0.025
Magnesium	mg/L	-	-	-	66.8	46.4	43.5	53.7	80.4	78.3	99.9	35.2	35.9	35.8	33.2	80.6	92.3	79.2	19.6	21.7	49	217	40.2	32.2
Potassium	mg/L	-	-	-	3.8	3.46	2.86	3.06	4.33	4.17	5.96	8.02	8.46	6.35	2.02	6.36	7.34	5.62	2.43	3.1	4.68	9.82	3.09	3.04
Sodium	mg/L	-	-	-	4.1	2.24	2.65	8.15	9.5	8.95	11.7	11.8	7.66	6.83	4.07	16	19.3	17.8	15.7	18.7	9.67	15.7	16.4	16.2
Sulfate	mg/L	100	1,000	-	6.26	9.44	8.85	12.5	12	11.9	9.42	10.9	12.6	10.9	9.65	38	8.51	8.56	16.3	23.7	18.5	21.8	37.8	29.3
Nutrients																								
Nitrate	mg/L as N	2.9	400	-	0.542	1.7	3.36	< 0.02	< 0.1	< 0.1	< 0.1	0.042	0.029	< 0.02	0.082	< 0.02	< 0.1	< 0.04	0.573	1	0.518	0.597	6.31	4.79
Nitrite	mg/L as N	0.060	0.20 - 2.0 [i]	-	0.024	0.015	0.49	< 0.01	< 0.05	< 0.05	< 0.05	0.015	< 0.01	< 0.01	< 0.01	0.012	< 0.05	< 0.02	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01	< 0.01
Total Ammonia	mg/L as N	0.017 - 190 [d]	1.31 - 18.5 [d]	-	0.207	0.337	0.211	0.36	0.377	0.393	0.41	0.547	0.441	0.38	< 0.005	0.756	0.955	1.55	0.0082	< 0.005	0.0362	0.264	< 0.005	< 0.005
Phosphorus, Nutrient	mg/L	-	-	-	0.0317	0.0188	-	0.0187	0.0292	0.0309	-	0.0284	0.106	-	-	0.0687	0.0964	-	-	-	0.0361	-	0.0144	-
Phosphorus, total dissolved	mg/L	-	-	-	-	-	0.0166	-	-	-	0.0269	-	-	0.0282	0.0071	-	-	0.0974	0.0053	0.007	-	0.0096	-	0.0083
Total Kjeldahl Nitrogen	mg/L	-	-	-	0.706	0.649	0.997	0.804	0.634	0.688	0.782	0.92	1.52	0.866	0.112	1.74	2.08	2.24	0.136	0.175	0.294	0.542	0.343	0.315
Organic Carbon																								
Dissolved Organic Carbon	mg/L	-	-	-	13.5	-	-	7.41	-	-	-	7.48	-	-	-	38.2	-	-	-	-	-	-	-	-
Total Organic Carbon	mg/L	-	-	-	16.2	-		7.54	-	-		7.65	-		-	39.4	-	-	-	-	-	-	-	-
Petroleums Hydrocarbons (PHCs) and BTEX																								
Benzene	µg/L	690	4000	-	< 0.5	< 0.5	< 0.5	3.81	4.33	4.2	0.82	2.47	3.27	2.94	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	µg/L	83	390	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	5.22	48.4	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	µg/L	41000	2000	-	< 0.5	< 0.5	< 0.5	1.27	1.18	1.19	< 0.5	2.49	1.57	4.4	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Styrene	µg/L	72	720	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
o-Xylene	µg/L	-	-	-	2.04	0.62	2.96	10.7	8.63	8.72	3.45	74.7	12.3	55.5	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
m+p-Xylenes	µg/L	-	-	-	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	17.6	6.29	18.1	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
Total Xylenes	µg/L	18000	-	-	2.04	0.62	2.96	10.7	8.63	8.72	3.45	92.3	18.6	73.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
BTEX, Total	µg/L	-	-	-	2	< 1	3	15.8	14.1	14.1	4.3	97.3	23.4	80.9	< 1	< 1	5.2	48.4	< 1	< 1	< 1	< 1	< 1	< 1
F1 (C6-C10)	µg/L	9800	-	-	< 25	< 25	< 25	57	33	36	26	631	157	408	< 25	< 25	< 25	31	< 25	< 25	< 25	< 25	< 25	< 25
F1(C6-C10)-BTEX	µg/L	-	-	-	< 25	< 25	< 25	41	< 25	< 25	< 25	534	134	327	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25
F2 (C10-C16)	µg/L	1300	-	-	500	180	140	200	200	200	160	210	1100	490	810	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
F3 (C16-C34)	µg/L	-	-	-	270	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250
F4 (C34-C50)	µg/L	-	-	-	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250
Total Petroleum Hydrocarbons	µg/L	-	-	-	770	< 370	< 370	< 370	< 370	< 370	< 370	1730	650	1220	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370
Oil and Grease																								
Total Oil and Grease	mg/L	-	-	-	< 5	< 10	< 5	< 5	< 10	< 10	< 5	< 5	< 10	< 5	< 5	< 5	< 10	< 5	< 5	< 5	< 10	< 5	< 5	< 5
Volatil Organic Compounds (VOCs)																								
1,1,1,2-Tetrachloroethane	µg/L	2500	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,1-Trichloroethane	µg/L	1100	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2,2-Tetrachloroethane	µg/L	3000	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2-Trichloroethane	µg/L	12000	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethane	µg/L	260000	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethylene	µg/L	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dibromoethane (ethylene dibromide)	µg/L	12000	-	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,2-Dichlorobenzene	µg/L	0.7	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichloroethane	µg/L	100	1000	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichloropropane	µg/L	7200	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,3-Dichlorobenzene	µg/L	150	1500	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,3-Dichloropropene (cis & trans)	µg/L	310	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,4-Dichlorobenzene	µg/L	26	260	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Methyl Ethyl Ketone	µg/L	150000	-	-	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Methyl Isobutyl Ketone	µg/L	58000	-	-	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Methyl t-butyl ether (MTBE)	µg/L	10000	-	-	< 0.5	< 0.5	< 0.5	1.02	0.82	0.81	< 0.5	1.47	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Acetone	µg/L	13000	-	-	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	155	74	35	< 20	< 20	< 20	< 20	< 20	< 20
Bromomethane	µg/L	400	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
cis-1,2-Dichloroethylene	µg/L	18000	-	-	1.16	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
trans-1,2-Dichloroethylene	µg/L	28000	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
dichloroethylene, cis+trans-1,2-	µg/L	-	-	-	1.16	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71
cis-1,3-Dichloropropene	µg/L	-	-	-	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
trans-1,3-Dichloropropene	µg/L	-	-	-	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Dibromochloromethane	µg/L	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	µg/L	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dichloromethane	µg/L	98	980	-	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chloromethane	µg/L	-	-	-	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Tetrachloroethylene (PCE)	µg/L	110	1100	-	< 0.5	< 0.5	<0.50	< 0.5	0.55	0.55	<0.50	< 0.5	< 0.5	<0.50	< 0.5	< 0.5	< 0.5	<0.50	< 0.5	< 0.5	< 0.5	<0.50	< 0.5	<0.50
Trichloroethylene (TCE)	µg/L	29	200	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	µg/L	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Trihalomethanes, Total	µg/L	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chloroethane	µg/L	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
hexanone, 2-	µg/L	-	-	-	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
n-Hexane	µg/L	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	µg/L	8500	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	µg/L	-	-	-	< 0.5	< 0.5	< 0.2	< 0.5	< 0.5	< 0.5	< 0.2	< 0.5	< 0.5	< 0.2	< 0.2	< 0.5	< 0.5	< 0.2	< 0.2	< 0.2	< 0.5	< 0.2	< 0.5	< 0.2
Bromoform	µg/L	3700	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	µg/L	1.8	20	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Monochlorobenzene	µg/L	1.3	13	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Carbon tetrachloride	µg/L	13	130	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Carbon disulfide	µg/L	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

Table F-4: 2023 to 2025 Groundwater Analytical Results collected at the Hazardous Waste Berm Facility, Mary River Mine

Distance from HWB Facilities Qualifier[a]					Proximal			Proximal				Proximal			Downgradient	Background			Background	Background	Background		Background	
Station		FIGQ Guideline[c] Commercial/Industrial	Yukon Contaminated Sites Regulation (CSR)[h]	Water Licence 2AM-MRY1325 Effluent Quality Discharge Limits[i]	HWB-KP22-04			HWB-KP22-05				HWB-KP23-03			MS-HWB-25-01	HWB-KP22-01			HWB-KP22-06	MS-HWB-25-03	MS-HWB-GW-REF3		MS-HWB-GW-REF1	
Sample Date (M/DD/YYYY)					9/16/2023	9/08/2024	8/30/2025	9/16/2023	9/09/2024	9/09/2024	8/30/2025	9/16/2023	9/08/2024	8/30/2025	9/02/2025	9/16/2023	9/08/2024	8/30/2025	9/02/2025	9/02/2025	9/08/2024	8/30/2025	9/09/2024	8/30/2025
COA number		Tier 2 Water Use/Pathway: Freshwater Aquatic Life (AW-F)	Protection of Freshwater Aquatic Life (AW-F)	Maximum Concentration of Any Grab Sample	BF2300297	BF2400323	BF2500308	BF2300297	BF2400327	BF2400327	BF2500308	BF2300297	BF2400327	BF2500308	BF2500317	BF2300297	BF2400323	BF2500308	BF2500317	BF2500317	BF2400323	BF2500308	BF2400330	BF2500308
Matrix					GW			GW				GW			GW	GW			GW	GW	GW		GW	
QA/QC		Soil Type: Coarse Grain			-	-	-	-	FDA	FD	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Parameter	**Unit**																							
Polycyclic Aromatic Hydrocarbons (PAHs)																								
Acenaphthene	µg/L	5.8	-	-	< 0.042	< 0.078	< 0.01	0.015	0.011	0.013	< 0.02	0.244	< 0.083	< 0.112	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.056	< 0.01	< 0.01	< 0.01
Acenaphthylene	µg/L	46	-	-	< 0.017	< 0.042	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.064	< 0.019	< 0.035	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acridine	µg/L	0.05	0.5	-	< 0.036	< 0.042	< 0.01	< 0.01	< 0.01	< 0.01	< 0.012	< 0.013	< 0.01	< 0.015	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/L	0.012	1	-	< 0.015	< 0.042	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1+2-Methylnaphthalenes	µg/L	180	-	-	0.954	0.448	0.411	6.34	5	6.34	5.9	65.3	16.3	40.5	0.155	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	0.152	0.17	< 0.015	< 0.015
1-Methylnaphthalene	µg/L	-	-	-	0.616	0.328	0.231	3.07	2.46	3.14	2.92	25.9	5.28	15.5	0.155	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.119	0.146	< 0.01	< 0.01
2-Methylnaphthalene	µg/L	-	-	-	0.338	0.12	0.18	3.27	2.54	3.2	2.98	39.4	11	25	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.033	0.024	< 0.01	< 0.01
B(a)P Total Potency Equivalent	µg/L	-	-	-	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	µg/L	0.018	1	-	< 0.01	< 0.042	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/L	0.015	0.1	-	< 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	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Benzo(b&j)fluoranthene	µg/L	0.48	-	-	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b+j+k)fluoranthene	µg/L	-	-	-	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015
Benzo(g,h,i)perylene	µg/L	0.17	-	-	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/L	0.48	-	-	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Chrysene	µg/L	1.4	-	-	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/L	0.26	-	-	< 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	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Fluoranthene	µg/L	0.04	2	-	< 0.01	< 0.042	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene	µg/L	3	120	-	< 0.03	< 0.042	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.343	0.101	0.169	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.21	-	-	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.024	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Naphthalene	µg/L	1.1	10	-	< 0.148	< 0.072	< 0.412	5.54	3.55	< 4.72	2.69	57.8	20.1	36.8	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Perylene	µg/L	-	-	-	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/L	0.4	3	-	< 0.01	< 0.042	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.024	< 0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Pyrene	µg/L	0.025	0.2	-	< 0.01	< 0.042	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Quinoline	µg/L	3.4	34	-	< 0.224	< 0.448	< 0.081	< 1.03	< 1.15	< 1.05	< 1.09	< 3.49	< 1.85	< 2.11	< 0.072	< 0.052	< 0.01	< 0.019	< 0.01	< 0.01	< 0.198	< 0.036	< 0.01	< 0.011
Glycols																								
Diethylene glycol	mg/L	-	-	-	< 5	-	-	< 5	-	-	-	< 5	-	-	-	< 5	-	-	-	-	-	-	-	-
Ethylene glycol	mg/L	190	1920	-	< 5	-	-	< 5	-	-	-	< 5	-	-	-	< 5	-	-	-	-	-	-	-	-
Propanediol, 1,3-	mg/L	-	-	-	< 5	-	-	< 5	-	-	-	< 5	-	-	-	< 5	-	-	-	-	-	-	-	-
Propylene glycol, 1,2-	mg/L	500	5000	-	< 5	-	-	< 5	-	-	-	< 5	-	-	-	< 5	-	-	-	-	-	-	-	-
Tetraethylene glycol	mg/L	-	-	-	< 5	-	-	< 5	-	-	-	< 5	-	-	-	< 5	-	-	-	-	-	-	-	-
Triethylene glycol	mg/L	-	-	-	< 5	-	-	< 5	-	-	-	< 5	-	-	-	< 5	-	-	-	-	-	-	-	-
Glycols, total (EG+DEG+PG)	mg/L	-	-	-	< 10	-	-	< 10	-	-	-	< 10	-	-	-	< 10	-	-	-	-	-	-	-	-
Total Metals																								
Calcium	mg/L	-	-	-	39.4	-	-	60.1	-	-	-	75.4	-	-	-	78.1	-	-	-	-	-	-	-	-
Magnesium	mg/L	-	-	-	60.7	-	-	52	-	-	-	33	-	-	-	78.6	-	-	-	-	-	-	-	-
Potassium	mg/L	-	-	-	3.69	-	-	3.06	-	-	-	8.08	-	-	-	6.67	-	-	-	-	-	-	-	-
Sodium	mg/L	-	-	-	3.88	-	-	7.73	-	-	-	11.1	-	-	-	15	-	-	-	-	-	-	-	-
Dissolved Metals																								
Aluminum	mg/L	0.0050 - 0.10 [(e)]	-	-	< 0.01	0.0038	0.0032	0.0056	0.0118	< 0.01	< 0.01	0.007	0.0163	0.014	0.0024	0.0209	0.0334	0.0337	0.0017	0.0019	0.0017	< 0.01	0.0021	0.0013
Antimony	mg/L	2.0	0.20	-	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.0001	0.00012	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001
Arsenic	mg/L	0.0050	0.050	0.5 [(m)]	0.00258	0.00269	0.00294	0.00223	0.00206	0.0018	0.00198	0.00057	0.00119	0.00111	0.00026	0.00174	0.00297	0.00264	0.00022	0.00032	0.00054	<0.001	0.00012	< 0.0001
Barium	mg/L	2.9	10	-	0.0466	0.0349	0.0301	0.063	0.0974	0.094	0.207	0.0761	0.0764	0.0811	0.0195	0.0806	0.091	0.0859	0.0198	0.0198	0.021	0.1	0.048	0.044
Beryllium	mg/L	0.0053	0.053	-	< 0.0002	< 0.00002	< 0.00002	< 0.00002	< 0.0002	< 0.0002	< 0.0002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.0002	< 0.0002	< 0.0002	< 0.00002	< 0.00002	< 0.00002	< 0.0002	< 0.00002	< 0.00002
Bismuth	mg/L	-	-	-	< 0.0005	< 0.00005	< 0.00005	< 0.00005	< 0.0005	< 0.0005	< 0.0005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.0005	< 0.0005	< 0.0005	< 0.00005	< 0.00005	< 0.00005	< 0.0005	< 0.00005	< 0.00005
Boron	mg/L	1.5	-	-	< 0.1	< 0.01	< 0.01	0.033	< 0.1	< 0.1	< 0.1	0.059	0.042	0.043	0.029	< 0.1	0.103	< 0.1	0.018	0.026	0.082	< 0.1	0.026	0.019
Cadmium	mg/L	0.270 [(f)]	0.00010 - 0.00060 [(g)]	-	< 0.00005	0.0000135	0.0000149	0.0000126	< 0.00005	< 0.00005	< 0.00005	0.0000263	0.0000098	0.0000126	0.000006	< 0.00005	< 0.00005	< 0.00005	< 0.000005	< 0.000005	0.00001	0.000067	0.0000089	0.0000054
Cesium	mg/L	-	-	-	< 0.0001	0.000014	0.00001	0.000012	< 0.0001	< 0.0001	< 0.0001	0.000011	< 0.00001	< 0.00001	< 0.00001	< 0.0001	< 0.0001	< 0.0001	< 0.00001	< 0.00001	< 0.00001	< 0.0001	< 0.00001	< 0.00001
Chromium	mg/L	0.0089	0.010	-	< 0.005	0.00065	0.0007	0.0018	< 0.005	< 0.005	< 0.005	0.00139	0.00146	0.00228	0.00051	< 0.005	< 0.005	0.00531	0.00118	0.00088	0.0006	< 0.005	0.00115	0.00084
Cobalt	mg/L	-	0.0090	-	0.00276	0.00125	0.00147	0.00653	0.00712	0.00689	**0.012**	0.0044	0.00267	0.00372	< 0.0001	**0.0148**	**0.013**	0.00806	< 0.0001	< 0.0001	0.00014	< 0.001	< 0.0001	< 0.0001
Copper	mg/L	0.0020 - 0.0040 [(d)]	0.020 - 0.090 [(g)]	0.3 [(m)]	0.0023	0.0013	0.00168	0.00043	< 0.002	< 0.002	<0.002	0.00278	0.00135	0.00147	0.00203	< 0.002	< 0.002	<0.002	0.00138	0.00153	0.00292	0.00274	0.0027	0.00228
Iron	mg/L	0.30	-	-	< 0.1	< 0.01	< 0.01	1.42	1.6	1.5	2.5	0.371	0.77	1	< 0.01	4.71	9.6	8.4	< 0.01	< 0.01	< 0.01	< 0.1	< 0.01	< 0.01
Lead	mg/L	0.0010 - 0.0070 [(d)]	0.040 - 0.16 [(g)]	0.2 [(m)]	< 0.0005	0.000089	0.000059	0.000093	< 0.0005	< 0.0005	<0.0005	0.000184	0.000123	0.000494	0.000056	< 0.0005	< 0.0005	0.000597	0.000491	< 0.00005	0.000668	<0.0005	0.000129	< 0.00005
Lithium	mg/L	-	-	-	< 0.01	0.0021	0.0026	0.0221	0.025	0.0222	0.0663	0.0233	0.0152	0.0182	0.0032	< 0.01	< 0.01	< 0.01	0.0023	0.003	0.0057	0.0123	0.0081	0.0075
Manganese	mg/L	-	-	-	0.79	0.532	0.473	2.89	3.46	3.33	4.58	1.17	1.4	1.6	0.00223	3.77	5.37	3.67	< 0.0001	0.00217	0.0405	0.216	0.00381	0.00259
Mercury	mg/L	0.000026	0.0010	-	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005
Molybdenum	mg/L	0.073	10	-	0.00147	0.0017	0.00148	0.00187	0.00172	0.00163	0.00108	0.00174	0.00527	0.00149	0.00191	0.00251	0.00206	0.0017	0.0011	0.00154	0.000738	0.00054	0.00081	0.000741
Nickel	mg/L	0.025 - 0.15 [(d)]	0.25 - 1.5 [(g)]	0.5 [(m)]	0.0321	0.022	0.0202	0.0275	0.0297	0.0286	0.0443	0.036	0.0243	0.0372	0.00615	0.0638	0.0543	0.0366	0.0046	0.00498	0.00821	0.0215	0.00565	0.00508
Phosphorus	mg/L	-	-	-	<0.50	< 0.05	<0.050	< 0.05	<0.50	<0.50	<0.50	< 0.05	< 0.05	<0.050	<0.050	<0.50	<0.50	<0.50	<0.050	<0.050	< 0.05	<0.50	< 0.05	<0.050
Rubidium	mg/L	-	-	-	0.00663	0.0061	0.0044	0.00786	0.0099	0.00929	0.014	0.00386	0.00297	0.00383	0.00369	0.0117	0.00721	0.00685	0.00539	0.00274	0.00536	0.0132	0.00681	0.00723
Selenium	mg/L	0.0010	0.010	-	< 0.0005	0.000097	0.000069	0.000071	< 0.0005	< 0.0005	< 0.0005	0.000063	0.000227	0.000073	0.000072	< 0.0005	0.000958	< 0.0005	0.000109	0.000169	0.000102	< 0.0005	0.000101	0.000076
Silicon	mg/L	-	-	-	6.12	5.02	5.3	8.27	7.75	7.39	7.41	8.65	7.32	8.11	4.71	10.4	13	11.3	4.89	5.41	5.55	5.74	4.47	4.26
Silver	mg/L	0.00025	0.0005 - 0.015 [(g)]	-	< 0.0001	0.000012	< 0.00001	< 0.00001	< 0.0001	< 0.0001	< 0.0001	0.000013	< 0.00001	< 0.00001	< 0.00001	< 0.0001	< 0.0001	< 0.0001	< 0.00001	< 0.00001	< 0.00001	< 0.0001	< 0.00001	< 0.00001
Strontium	mg/L	-	-	-	0.0374	0.0309	0.0268	0.047	0.13	0.124	0.58	1.04	0.708	0.818	0.0211	0.0538	0.0645	0.0531	0.0141	0.0192	0.0649	0.349	0.139	0.166
Sulfur	mg/L	-	-	-	< 5	3.32	3.23	5.33	< 5	< 5	< 5	4.8	5.07	3.85	3.91	15	< 5	< 5	5.91	8.82	6.33	8.75	14	10.9
Tellurium	mg/L	-	-	-	< 0.002	< 0.0002	< 0.0002	< 0.0002	< 0.002	< 0.002	< 0.002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.002	< 0.002	< 0.002	< 0.0002	< 0.0002	< 0.0002	< 0.002	< 0.0002	< 0.0002
Thallium	mg/L	0.00080	0.0030	-	< 0.0001	0.000036	0.00003	0.000017	< 0.0001	< 0.0001	< 0.0001	0.000028	< 0.00001	< 0.00001	0.000012	< 0.0001	< 0.0001	< 0.0001	0.000011	< 0.00001	0.000016	< 0.0001	0.000016	0.000015
Thorium	mg/L	-	-	-	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001
Tin	mg/L	-	-	-	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	0.00029	< 0.001	< 0.001	< 0.001	0.00017	0.00036	< 0.0001	< 0.001	< 0.0001	< 0.0001
Titanium	mg/L	0.10	1.0	-	< 0.003	< 0.0003	< 0.0003	< 0.0003	< 0.003	< 0.003	< 0.003	< 0.0003	< 0.0005	0.00036	< 0.0003	< 0.003	< 0.003	< 0.003	< 0.0003	< 0.0003	< 0.0003	< 0.003	< 0.0003	< 0.0003
Tungsten	mg/L	-	-	-	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001
Uranium	mg/L	0.015	3.0	-	0.00371	0.0034	0.00301	0.00347	0.00474	0.00451	0.00464	0.00322	0.00875	0.00458	0.00109	0.00624	0.00405	0.00244	0.000662	0.000696	0.00296	0.00585	0.00374	0.00285
Vanadium	mg/L	-	-	-	< 0.005	< 0.0005	< 0.0005	0.00075	< 0.005	< 0.005	< 0.005	0.00055	0.00051	0.00097	< 0.0005	< 0.005	< 0.005	< 0.005	< 0.0005	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005
Zinc	mg/L	0.030	0.075 - 2.4 [(g)]	0.5 [(m)]	< 0.01	0.0019	<0.001	0.001	< 0.01	< 0.01	<0.01	0.0017	0.0013	<0.001	<0.001	< 0.01	< 0.01	<0.01	<0.001	<0.001	0.0014	<0.01	0.0016	<0.001
Zirconium	mg/L	-	-	-	< 0.003	0.00045	0.00047	0.00077	< 0.003	< 0.003	< 0.003	0.00132	0.00085	0.00157	0.0004	< 0.003	< 0.003	< 0.003	< 0.0003	< 0.0003	0.00049	< 0.003	0.00046	0.00046

COA: certifiate of analysis, as N: as Nitrogen, BIM: Baffinland Iron Mines, BTEX: Benzene Toluene Ethylbenzene Xylenes, CaCO3:Calcium Carbonate, DQO: Data Quality Objective, FDA: Field Duplicate Available, FD: Field Duplicate, FIGQ: Federal Interim Groundwater Guideline, CSR: Contaminated Sites Regulation, HWB: Hazard Waste Berm, GW: Groundwater, mg/L: milligram per litre, na: not available, T/D/N = Total/Dissolved/Normal, ug/L: microgram per litre, uS/cm: microsiemens per centimetre, °C: degrees Celsius, < = less than

(a) Distances from HWB Facility Qualifiers are defined as: Source = Station is located within HWB Facility limits or less than 20 m from the HWB Facility limits, Proximal =Station is located more than 20 metres from HWB Facility limits, Downgradient = Station is located more than 20 m downgradient from the HWB Facility towards Camp Lake , Background = Station is located upgradient or more than 20 m from HWB Facility limits.

(b) Hardness not provided by the laboratory. Hardness was calculated based on Magnesium (Mg) and Calcium (Ca) concentrations for each sample.
(c) Federal Interim Groundwater Quality Guideline from Federal Contaminated Sites Action Plan (FCSAP), 2016 (Rev 4) - Guidance Document on Federal Interim Groundwater
(d) Ammonia guideline is pH and temperature dependent. The guideline is calculated based on the individual field pH and temperature measurements for each sample.
(e) Guideline is pH dependent. The guideline is calculated based on the individual pH for each sample.

(f) Cadmium guideline is hardness dependent of the receiving environment and was calculated with the following equation (FIGQ, 2016): $10^{(0.83x[\log(hardness)]-2.46)}$. Hardness used for the calculation is the median concentration (ie, 59.6 mg/L) at Camp Lake available in Table 2.4 of Aquatic Effects Monitoring Plan BIM-5200-PLA-0023 REV 2 (BIM, 2024).

(g) Guideline is hardness dependent. The guideline is calculated based on the individual hardness value for each sample.

(h) Yukon Contaminated Sites Regulation (CSR) (Environment Yukon 2002, in accordance with Yukon CSR Protocol 6 (Environment Yukon 2012)). Yukon CSR does not apply to Nunavut, and is only used here for comparison purposes.

(i) Guideline is chloride dependent. The guideline is calculated based on the individual chloride concentration in each sample.
(j) Guideline from Nunavut Water Board - Water Licence 2AM-MRY1325. Provided for comparison purposes only. Water licence expired on 10 June 2025.
(k) Total Suspended Solids guideline (15 mg/L or 30 mg/L) does not apply to groundwater and was excluded from this table.

(l) Guideline from Nunavut Water Board - Water Licence 2AM-MRY2540. Provided for comparison purposes only. New water licence was issued on 28 April 2025. These new limits act as guidelines for the site to be used internally by Baffinland Iron Mines as adaptive management considerations.

(m) Guideline for total metals, for comparison purposes only.

Value	Value exceeding DQO for either pH or Conductivity
	DQO < 1 (pH units) for pH between laboratory and field measurements
	DQO < 20% for conductivity between laboratory and field measurements
Value	Result exceeds the FIGQ Commercial/Industrial Land Use - Tier 2 guideline or is outside the recommended pH range.
Value	Result exceeds Water Licence 2AM-MRY1325, applicable only on 2023 and 2024 results.
Value	Result exceeds Water Licence 2AM-MRY2540, applicable only on 2025 results.

Table F-5: 2024 and 2025 Surface Water Analytical Results collected at the Landfill Facility, Mary River Mine

Distance from Landfill Facility Qualifier[a]					Proximal			Downgradient				Downgradient		
Station		CCME	Water Licence 2AM-MRY1325 Effluent Quality Discharge Limits[k]	Water Licence 2AM-MRY2540 Effluent Quality Discharge Limits[m]	LF-US-POND-01			MS-MRY-13B				MS-MRY-13C		
Sample Date (M/DD/YYYY)					8/17/2024	9/09/2024	8/29/2025	6/09/2024	7/01/2024	8/04/2024	8/29/2025	8/17/2024	9/07/2024	8/29/2025
COA number		Water Quality Guideline (WQG) for the Protection of Freshwater Aquatic Life (AW-F)[c]			BF2400266	BF2400326	BF2500307	BF2400096	BF2400155	BF2400225	BF2500307	BF2400266	BF2400326	BF2500307
Matrix			Maximum Concentration of Grab Sample	Maximum Concentration of Grab Sample	SW			SW				SW		
QA/QC		Long-term exposure			-	-	-	-	-	-	-	-	-	-
Parameter	**Unit**													
Field Observations														
Weather		-	-	-	-	Cloudy, slightly raining	Mostly Cloudy,Snow,Windy	-	-	-	Partly cloudy,windy	-	Cloudy	Partly cloudy,windy
Routine Parameters														
Dissolved Oxygen, Field	mg/L	6.5	-	-	10.29	12.76	13.16	12.32	10.61	11.26	12.86	9.64	10.82	11.4
Dissolved Oxygen, Percent, Field	%	-	-	-	98.9	98.1	93.8	94.6	1037	101.6	98.2	87.2	84.5	82.5
pH, Field	pH unit	6.5 - 9.0	6.5 - 9.0	6.5 - 9.0	7.47	7.74	7.75	7.72	7.74	7.88	8.1	7.63	7.53	7.74
pH, Lab	pH unit	6.5 - 9.0	6.5 - 9.0	6.5 - 9.0	7.68	7.83	7.78	7.32	7.97	7.89	8.09	7.7	7.63	7.65
Data Quality Objective (DQO) - pH	pH unit	-	-	-	0.21	0.09	0.03	0.4	0.23	0.01	0.01	0.07	0.1	0.09
Specific Conductivity, Field	µS/cm	-	-	-	253.9	209.1	210.3	297.2	864	707	913	1277	1099	656
Conductivity, Lab	µS/cm	-	-	-	260	219	218	291	910	762	923	1340	1150	660
Data Quality Objective (DQO) - Conductivity	%	-	-	-	2.4	4.6	3.60	2.1	5.2	7.5	1.1	4.8	4.5	0.6
Temperature, Field	°C	-	-	-	12.4	3.7	1.5	3.4	12.7	9.8	3.9	9.9	4.2	1.8
Total Alkalinity	mg/L as $CaCO_3$	-	-	-	136	109	107	79.1	193	163	202	190	196	175
Total Suspended Solids	mg/L	-	15	30	< 1.0	<1.0	< 1	1.2	1.2	1.3	< 1.1	< 1.0	<1.0	9.1
Total Dissolved Solids	mg/L	-	-	-	138	139	97	178	595	464	569	1020	830	390
Turbidity, Lab	NTU	-	-	-	0.53	2.66	1.2	1.32	0.54	1.42	0.51	0.13	0.11	2.91
Turbidity, Field	NTU	-	-	-	0.2	2.14	0.58	1.14	< 0.51	0.51	0.09	0.98	0.4	2.95
Hardness[b]	mg/L	-	-	-	121	108	102	122	433	323	419	683	574	315
Phenols														
Phenols	mg/L	0.004	-	-	-	-	-	0.001	< 0.001	< 0.001	-	-	-	-
Major Ions														
Calcium	mg/L	-	-	-	23.6	20.8	20.4	28.9	95.7	74.2	107	196	172	94.7
Chloride	mg/L	120	-	-	2.83	3.7	4.02	-	-	48.4	56.4	38.3	31.2	28.4
Bromide	mg/L	-	-	-	< 0.1	< 0.1	< 0.1	-	-	-	0.17	< 0.5	< 0.5	0.12
Fluoride	mg/L	0.12	-	-	0.059	0.048	0.056	-	-	0.027	0.027	< 0.1	< 0.1	0.053
Magnesium	mg/L	-	-	-	15	13.5	12.4	12.1	47.2	35.7	36.8	46.9	35	19.1
Potassium	mg/L	-	-	-	1.71	1.92	1.77	2.39	6.64	5.63	8.22	10.2	11.2	6.55
Sodium	mg/L	-	-	-	8.65	4.6	5.38	6.55	32.9	23.2	31.4	26.4	25.6	14.7
Sulfate	mg/L	-	-	-	1.02	1.98	1.64	-	-	142	183	496	392	117
Nutrients														
Nitrate	mg/L as N	2.9	-	-	< 0.02	< 0.02	< 0.02	-	-	1.44	1.68	1.06	1.32	0.704
Nitrite	mg/L as N	0.06	-	-	< 0.01	< 0.01	< 0.01	-	-	-	< 0.01	< 0.05	< 0.05	< 0.01
Total Ammonia	mg/L as N	0.017 - 190 [d]	-	-	< 0.005	< 0.005	0.0077	-	-	0.023	0.0331	0.0371	0.0161	0.0235
Phosphorus, Nutrient	mg/L	-	-	-	-	0.0026	< 0.002	-	-	-	0.0235	-	0.0121	0.0071
Phosphorus, total	mg/L	-	-	-	0.0033	0.0036	0.002	-	-	0.0105	0.022	0.0105	0.0127	0.0062
Total Kjeldahl Nitrogen	mg/L	-	-	-	0.166	0.129	0.126	-	-	0.504	0.595	0.746	0.455	0.301
Organic Carbon														
Dissolved Organic Carbon	mg/L	-	-	-	3.56	3.42	2.43	3.17	6.81	7.37	5.3	6.12	5.2	3.44
Total Organic Carbon	mg/L	-	-	-	3.75	-	-	3.71	6.76	5.73		5.74	-	
Petroleums Hydrocarbons (PHCs) and BTEX														
Benzene	µg/L	370	-	-	< 0.5	< 0.5	< 0.5	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	µg/L	2	-	-	< 0.5	< 0.5	< 0.5	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	µg/L	90	-	-	< 0.5	< 0.5	< 0.5	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5
o-Xylene	µg/L	-	-	-	< 0.3	< 0.3	< 0.3	-	-	-	< 0.3	< 0.3	< 0.3	< 0.3
m+p-Xylenes	µg/L	-	-	-	< 0.4	< 0.4	< 0.4	-	-	-	< 0.4	< 0.4	< 0.4	< 0.4
Total Xylenes	µg/L	-	-	-	< 0.5	< 0.5	< 0.5	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5
BTEX, Total	µg/L	-	-	-	< 1	< 1	< 1	-	-	-	< 1	< 1	< 1	< 1
Monochlorobenzene	µg/L	1.3	-	-	-	-	< 0.5	-	-	-	< 0.5	-	-	< 0.5
F1 (C6-C10)	µg/L	-	-	-	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25
F1(C6-C10)-BTEX	µg/L	-	-	-	< 25	< 25	< 25	-	-	-	< 25	< 25	< 25	< 25
F2 (C10-C16)	µg/L	-	-	-	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
F3 (C16-C34)	µg/L	-	-	-	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250
F4 (C34-C50)	µg/L	-	-	-	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250
Total Petroleum Hydrocarbons	µg/L	-	-	-	< 370	-	< 370	< 370	< 370	< 370	< 370	< 370	-	< 370
Oil and Grease														
Total Oil and Grease	mg/L	-	-	-	< 5	-	-	< 5	< 5	< 5	-	< 5	-	-
Total Metals														
Aluminum	mg/L	0.0050 - 0.10 [e]	-	-	0.0048	-	-	0.0226	0.0186	0.0066	-	< 0.03	-	-
Antimony	mg/L	-	-	-	< 0.0001	-	-	0.00014	0.00015	< 0.0001	-	< 0.001	-	-
Arsenic	mg/L	0.005	0.5	0.6	0.00013	-	-	0.00013	0.00027	0.00017	-	< 0.001	-	-
Barium	mg/L	-	-	-	0.00523	-	-	0.0159	0.0498	0.0358	-	0.0753	-	-
Beryllium	mg/L	-	-	-	< 0.00002	-	-	< 0.00002	< 0.00002	< 0.00002	-	< 0.0002	-	-
Bismuth	mg/L	-	-	-	< 0.00005	-	-	< 0.00005	< 0.00005	< 0.00005	-	< 0.0005	-	-
Boron	mg/L	1.5	-	-	0.03	-	-	0.403	1.16	0.797	-	1.03	-	-
Cadmium	mg/L	0.00004 - 0.00037 [f]	-	-	< 0.000005	-	-	0.0000095	0.0000216	0.0000145	-	< 0.00005	-	-
Cesium	mg/L	-	-	-	0.000011	-	-	< 0.00001	< 0.00001	< 0.00001	-	< 0.0001	-	-
Chromium	mg/L	0.0010 [g]	-	-	< 0.0005	-	-	< 0.0005	0.00064	0.00093	-	< 0.005[l]	-	-
Cobalt	mg/L	-	-	-	< 0.0001	-	-	< 0.0001	0.0004	0.00024	-	< 0.001	-	-
Copper	mg/L	0.0020 - 0.0040 [h]	0.3	0.6	< 0.0005	-	-	0.00104	0.00172	0.00168	-	< 0.005[l]	-	-
Iron	mg/L	0.3	-	-	0.084	-	-	0.025	0.062	0.018	-	< 0.1	-	-
Lead	mg/L	0.0010 - 0.0070 [h]	0.2	0.2	< 0.00005	-	-	< 0.00005	< 0.00005	< 0.00005	-	< 0.0005	-	-
Lithium	mg/L	-	-	-	0.0026	-	-	0.0222	0.0908	0.0509	-	0.101	-	-
Manganese	mg/L	-	-	-	0.0154	-	-	0.00164	0.017	0.00167	-	< 0.001	-	-
Mercury	mg/L	0.000026	-	-	< 0.000005	-	-	< 0.000005	< 0.000005	< 0.000005	-	< 0.000005	-	-
Molybdenum	mg/L	0.073	-	-	0.000134	-	-	0.000599	0.000479	0.000489	-	0.00267	-	-
Nickel	mg/L	0.025 - 0.15 [h]	0.5	1	0.00061	-	-	0.00654	0.0144	0.0102	-	0.012	-	-
Phosphorus	mg/L	-	-	-	< 0.05	-	-	< 0.05	< 0.05	< 0.05	-	< 0.5	-	-
Rubidium	mg/L	-	-	-	0.00284	-	-	0.00254	0.00676	0.00515	-	0.00881	-	-
Selenium	mg/L	0.001	-	-	< 0.00005	-	-	< 0.00005	0.000078	0.000073	-	< 0.0005	-	-
Silicon	mg/L	-	-	-	1.81	-	-	1.21	3.39	3.79	-	3.45	-	-
Silver	mg/L	0.00025	-	-	< 0.00001	-	-	< 0.00001	< 0.00001	< 0.00001	-	< 0.0001	-	-
Strontium	mg/L	-	-	-	0.0248	-	-	0.0424	0.138	0.112	-	0.486	-	-
Sulfur	mg/L	-	-	-	< 0.5	-	-	15.9	78.7	49.2	-	176	-	-
Tellurium	mg/L	-	-	-	< 0.0002	-	-	< 0.0002	< 0.0002	< 0.0002	-	< 0.002	-	-
Thallium	mg/L	0.0008	-	-	< 0.00001	-	-	< 0.00001	0.000018	< 0.00001	-	< 0.0001	-	-
Thorium	mg/L	-	-	-	< 0.0001	-	-	< 0.0001	< 0.0001	< 0.0001	-	< 0.001	-	-
Tin	mg/L	-	-	-	< 0.0001	-	-	< 0.0001	< 0.0001	< 0.0001	-	< 0.001	-	-
Titanium	mg/L	-	-	-	< 0.0003	-	-	< 0.0006	< 0.0009	< 0.0003	-	< 0.003	-	-
Tungsten	mg/L	-	-	-	< 0.0001	-	-	< 0.0001	< 0.0001	< 0.0001	-	< 0.001	-	-
Uranium	mg/L	0.015	-	-	0.000226	-	-	0.00191	0.0111	0.00708	-	0.0172	-	-
Vanadium	mg/L	-	-	-	< 0.0005	-	-	< 0.0005	< 0.0005	< 0.0005	-	< 0.005	-	-
Zinc	mg/L	-	0.5	1	< 0.003	-	-	< 0.003	< 0.003	< 0.003	-	< 0.03	-	-
Zirconium	mg/L	-	-	-	< 0.0002	-	-	< 0.0002	0.00024	< 0.0002	-	< 0.002	-	-
Dissolved Metals														
Aluminum	mg/L	-	-	-	0.0019	0.0038	< 0.001	-	-	0.0023	0.0014	< 0.01	0.001	< 0.001
Antimony	mg/L	-	-	-	< 0.0001	< 0.0001	< 0.0001	-	-	< 0.0001	0.00032	< 0.001	0.00027	0.00018
Arsenic	mg/L	-	0.5 [n]	0.6	0.00013	0.00011	< 0.0001	-	-	0.00017	0.00022	< 0.001	0.00022	0.00015
Barium	mg/L	-	-	-	0.0049	0.00613	0.00325	-	-	0.0349	0.0537	0.072	0.0552	0.0378
Beryllium	mg/L	-	-	-	< 0.00002	< 0.00002	< 0.00002	-	-	< 0.00002	< 0.00002	< 0.0002	< 0.00002	< 0.00002
Bismuth	mg/L	-	-	-	< 0.00005	< 0.00005	< 0.00005	-	-	< 0.00005	< 0.00005	< 0.0005	< 0.00005	< 0.00005
Boron	mg/L	-	-	-	0.026	0.013	0.022	-	-	0.846	0.696	1.03	0.903	0.351
Cadmium	mg/L	-	-	-	< 0.000005	< 0.000005	< 0.000005	-	-	0.0000132	0.000025	< 0.00005	0.0000196	0.0000107
Cesium	mg/L	-	-	-	0.000013	< 0.00001	< 0.00001	-	-	< 0.00001	< 0.00001	< 0.0001	< 0.00001	< 0.00001
Chromium	mg/L	-	-	-	< 0.0005	< 0.0005	< 0.0005	-	-	0.00058	0.00064	< 0.005	< 0.0005	< 0.0005
Cobalt	mg/L	-	-	-	< 0.0001	0.00027	< 0.0001	-	-	0.00023	0.00025	< 0.001	0.00031	0.00013
Copper	mg/L	-	0.3 [n]	0.6 [n]	0.00032	0.00032	< 0.0002	-	-	0.00166	0.00189	< 0.002	0.00115	0.00084
Iron	mg/L	-	-	-	0.047	0.165	0.03	-	-	< 0.01	< 0.01	< 0.1	< 0.01	< 0.01
Lead	mg/L	-	0.2 [n]	0.2 [n]	< 0.00005	< 0.00005	< 0.00005	-	-	< 0.00005	0.000057	< 0.0005	< 0.00005	< 0.00005
Lithium	mg/L	-	-	-	0.0027	0.0019	0.002	-	-	0.0547	0.0737	0.104	0.104	0.0387
Manganese	mg/L	0.19 - 1.5 [i]	-	-	0.015	0.176	0.00758	-	-	0.001	0.00074	< 0.001	0.00055	0.00055
Mercury	mg/L	-	-	-	< 0.000005	< 0.000005	< 0.000005	-	-	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005
Molybdenum	mg/L	-	-	-	0.000136	0.000132	0.000094	-	-	0.000546	0.001	0.00272	0.00258	0.0027
Nickel	mg/L	-	0.5 [n]	1 [n]	0.00057	0.00063	< 0.0005	-	-	0.0102	0.00995	0.0119	0.00911	0.00558
Phosphorus	mg/L	-	-	-	< 0.05	< 0.05	<0.050	-	-	< 0.05	<0.050	< 0.5	< 0.05	<0.050
Rubidium	mg/L	-	-	-	0.00278	0.00149	0.00154	-	-	0.00504	0.00565	0.00918	0.007	0.00598
Silicon	mg/L	-	-	-	1.74	1.7	1.66	-	-	3.84	4.48	3.47	4.06	3.31
Silver	mg/L	-	-	-	< 0.00001	< 0.00001	< 0.00001	-	-	< 0.00001	< 0.00001	< 0.0001	< 0.00001	< 0.00001
Strontium	mg/L	-	-	-	0.0242	0.0207	0.0202	-	-	0.114	0.2	0.472	0.408	0.24
Sulfur	mg/L	-	-	-	< 0.5	0.69	0.71	-	-	51.2	71.5	175	144	44.6
Tellurium	mg/L	-	-	-	< 0.0002	< 0.0002	< 0.0002	-	-	< 0.0002	< 0.0002	< 0.002	< 0.0002	< 0.0002
Thallium	mg/L	-	-	-	< 0.00001	< 0.00001	< 0.00001	-	-	< 0.00001	< 0.00001	< 0.0001	< 0.00001	< 0.00001
Thorium	mg/L	-	-	-	< 0.0001	< 0.0001	< 0.0001	-	-	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001
Tin	mg/L	-	-	-	< 0.0001	< 0.0001	< 0.0001	-	-	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001
Titanium	mg/L	-	-	-	< 0.0003	< 0.0003	< 0.0003	-	-	< 0.0003	< 0.0003	< 0.003	< 0.0003	< 0.0003
Tungsten	mg/L	-	-	-	< 0.0001	< 0.0001	< 0.0001	-	-	< 0.0001	< 0.0001	< 0.001	< 0.0001	< 0.0001
Uranium	mg/L	-	-	-	0.000207	0.000234	0.000138	-	-	0.0072	0.012	0.0157	0.0194	0.00821
Vanadium	mg/L	-	-	-	< 0.0005	< 0.0005	< 0.0005	-	-	< 0.0005	< 0.0005	< 0.005	< 0.0005	< 0.0005
Zinc	mg/L	0.002 - 0.515 [j]	0.5 [n]	1 [n]	< 0.001	0.0045	< 0.001	-	-	< 0.001	< 0.001	< 0.01	0.0042	0.0015
Zirconium	mg/L	-	-	-	< 0.0003	< 0.0003	< 0.0003	-	-	< 0.0003	< 0.0003	< 0.003	< 0.0003	< 0.0003
Polycyclic Aromatic Hydrocarbons (PAHs)														
Acenaphthene	ug/L	5.8	-	-	-	-	< 0.01	-	-	-	< 0.01	-	-	< 0.01
Acenaphthylene	ug/L	-	-	-	-	-	< 0.01	-	-	-	< 0.01	-	-	< 0.01
Acridine	ug/L	4.4	-	-	-	-	< 0.01	-	-	-	< 0.01	-	-	< 0.01
Anthracene	ug/L	0.012	-	-	-	-	< 0.01	-	-	-	< 0.01	-	-	< 0.01
1+2-methylnaphthalenes	ug/L	-	-	-	-	-	< 0.015	-	-	-	< 0.015	-	-	< 0.015
1-methylnaphthalene	ug/L	-	-	-	-	-	< 0.01	-	-	-	< 0.01	-	-	< 0.01
2-methylnaphthalene	ug/L	-	-	-	-	-	< 0.01	-	-	-	< 0.01	-	-	< 0.01
B(a)p total potency equivalent	ug/L	-	-	-	-	-	< 0.01	-	-	-	< 0.01	-	-	< 0.01
Benzo(a)anthracene	ug/L	0.018	-	-	-	-	< 0.01	-	-	-	< 0.01	-	-	< 0.01
Benzo(a)pyrene	ug/L	0.015	-	-	-	-	< 0.005	-	-	-	< 0.005	-	-	< 0.005
Benzo(b&j)fluoranthene	ug/L	-	-	-	-	-	< 0.01	-	-	-	< 0.01	-	-	< 0.01
Benzo(b+j+k)fluoranthene	ug/L	-	-	-	-	-	< 0.015	-	-	-	< 0.015	-	-	< 0.015
Benzo(g,h,i)perylene	ug/L	-	-	-	-	-	< 0.01	-	-	-	< 0.01	-	-	< 0.01
Benzo(k)fluoranthene	ug/L	-	-	-	-	-	< 0.01	-	-	-	< 0.01	-	-	< 0.01
Carbon disulfide	ug/L	-	-	-	-	-	< 1	-	-	-	< 1	-	-	< 1
Chrysene	ug/L	-	-	-	-	-	< 0.01	-	-	-	< 0.01	-	-	< 0.01
Fluoranthene	ug/L	0.04	-	-	-	-	< 0.01	-	-	-	< 0.01	-	-	< 0.01
Fluorene	ug/L	3	-	-	-	-	< 0.01	-	-	-	< 0.01	-	-	< 0.01
Naphthalene	ug/L	1.1	-	-	-	-	< 0.01	-	-	-	< 0.01	-	-	< 0.01
Perylene	ug/L	-	-	-	-	-	< 0.01	-	-	-	< 0.01	-	-	< 0.01
Phenanthrene	ug/L	0.4	-	-	-	-	< 0.01	-	-	-	< 0.01	-	-	< 0.01
Pyrene	ug/L	0.025	-	-	-	-	< 0.01	-	-	-	< 0.01	-	-	< 0.01
Quinoline	ug/L	3.4	-	-	-	-	< 0.02	-	-	-	< 0.027	-	-	< 0.029

Table F-5: 2024 and 2025 Surface Water Analytical Results collected at the Landfill Facility, Mary River Mine

Distance from Landfill Facility Qualifier[a]		CCME	Water Licence 2AM-MRY1325 Effluent Quality Discharge Limits[k]	Water Licence 2AM-MRY2540 Effluent Quality Discharge Limits[m]	Proximal			Downgradient				Downgradient		
Station					LF-US-POND-01			MS-MRY-13B				MS-MRY-13C		
Sample Date (M/DD/YYYY)					8/17/2024	9/09/2024	8/29/2025	6/09/2024	7/01/2024	8/04/2024	8/29/2025	8/17/2024	9/07/2024	8/29/2025
COA number		Water Quality Guideline (WQG) for the Protection of Freshwater Aquatic Life (AW-F)[c]			BF2400266	BF2400326	BF2500307	BF2400096	BF2400155	BF2400225	BF2500307	BF2400266	BF2400326	BF2500307
Matrix		Long-term exposure	Maximum Concentration of Grab Sample	Maximum Concentration of Grab Sample	SW			SW				SW		
QA/QC					-	-	-	-	-	-	-	-	-	-
Parameter	**Unit**													
Styrene	ug/L	72	-	-	-	-	< 0.5	-	-	-	< 0.5	-	-	< 0.5

Distance from Landfill Facility Qualifier[a]		CCME	Water Licence 2AM-MRY1325 Effluent Quality Discharge Limits[k]	Water Licence 2AM-MRY2540 Effluent Quality Discharge Limits[m]	Proximal			Downgradient				Downgradient		
Station					LF-US-POND-01			MS-MRY-13B				MS-MRY-13C		
Sample Date (M/DD/YYYY)					8/17/2024	9/09/2024	8/29/2025	6/09/2024	7/01/2024	8/04/2024	8/29/2025	8/17/2024	9/07/2024	8/29/2025
COA number		Water Quality Guideline (WQG) for the Protection of Freshwater Aquatic Life (AW-F)[c]			BF2400266	BF2400326	BF2500307	BF2400096	BF2400155	BF2400225	BF2500307	BF2400266	BF2400326	BF2500307
Matrix		Long-term exposure	Maximum Concentration of Grab Sample	Maximum Concentration of Grab Sample	SW			SW				SW		
QA/QC					-	-	-	-	-	-	-	-	-	-
Parameter	**Unit**													
Volatile Organics														
1,2-Dichlorobenzene	µg/L	0.7	-	-	-	-	< 0.5	-	-	-	< 0.5	-	-	< 0.5
1,2-Dichloroethane	µg/L	100	-	-	-	-	< 0.5	-	-	-	< 0.5	-	-	< 0.5
1,3-Dichlorobenzene	µg/L	150	-	-	-	-	< 0.5	-	-	-	< 0.5	-	-	< 0.5
Chloroform	µg/L	1.8	-	-	-	-	< 0.5	-	-	-	< 0.5	-	-	< 0.5
Carbon tetrachloride	ug/L	13.3	-	-	-	-	< 0.2	-	-	-	< 0.2	-	-	< 0.2
1,1,1,2-Tetrachloroethane	ug/L	-	-	-	-	-	< 0.5	-	-	-	< 0.5	-	-	< 0.5
1,1,1-Trichloroethane	ug/L	-	-	-	-	-	< 0.5	-	-	-	< 0.5	-	-	< 0.5
1,1,2,2-Tetrachloroethane	ug/L	-	-	-	-	-	< 0.5	-	-	-	< 0.5	-	-	< 0.5
1,1,2-Trichloroethane	ug/L	-	-	-	-	-	< 0.5	-	-	-	< 0.5	-	-	< 0.5
1,1-Dichloroethane	ug/L	-	-	-	-	-	< 0.5	-	-	-	< 0.5	-	-	< 0.5
1,1-Dichloroethylene	ug/L	-	-	-	-	-	< 0.5	-	-	-	< 0.5	-	-	< 0.5
1,2-Dibromoethane	ug/L	-	-	-	-	-	< 0.2	-	-	-	< 0.2	-	-	< 0.2
1,2-Dichloropropane	ug/L	-	-	-	-	-	< 0.5	-	-	-	< 0.5	-	-	< 0.5
1,3-Dichloropropene (cis & trans)	ug/L	-	-	-	-	-	< 0.5	-	-	-	< 0.5	-	-	< 0.5
1,4-Dichlorobenzene	ug/L	26	-	-	-	-	< 0.5	-	-	-	< 0.5	-	-	< 0.5
Indeno(1,2,3-cd)pyrene	ug/L	-	-	-	-	-	< 0.01	-	-	-	< 0.01	-	-	< 0.01
Methyl Ethyl Ketone	ug/L	-	-	-	-	-	< 20	-	-	-	< 20	-	-	< 20
Methyl Isobutyl Ketone	ug/L	-	-	-	-	-	< 20	-	-	-	< 20	-	-	< 20
Methyl t-butyl ether (MTBE)	ug/L	10000	-	-	-	-	< 0.5	-	-	-	< 0.5	-	-	< 0.5
Acetone	ug/L	-	-	-	-	-	< 20	-	-	-	< 20	-	-	< 20
Bromomethane	ug/L	-	-	-	-	-	< 0.5	-	-	-	< 0.5	-	-	< 0.5
cis-1,2-Dichloroethylene	ug/L	-	-	-	-	-	< 0.5	-	-	-	< 0.5	-	-	< 0.5
cis-1,3-Dichloropropene	ug/L	-	-	-	-	-	< 0.3	-	-	-	< 0.3	-	-	< 0.3
Dibenz(a,h)anthracene	ug/L	-	-	-	-	-	< 0.005	-	-	-	< 0.005	-	-	< 0.005
Dibromochloromethane	ug/L	-	-	-	-	-	< 0.5	-	-	-	< 0.5	-	-	< 0.5
Dichlorodifluoromethane	ug/L	-	-	-	-	-	< 0.5	-	-	-	< 0.5	-	-	< 0.5
Dichloroethylene, cis+trans-1,2-	ug/L	-	-	-	-	-	< 0.71	-	-	-	< 0.71	-	-	< 0.71
Dichloromethane	ug/L	98.1	-	-	-	-	< 1	-	-	-	< 1	-	-	< 1
Chloromethane	ug/L	-	-	-	-	-	< 2	-	-	-	< 2	-	-	< 2
Tetrachloroethylene (PCE)	ug/L	110	-	-	-	-	< 0.5	-	-	-	< 0.5	-	-	0.66
trans-1,2-Dichloroethylene	ug/L	-	-	-	-	-	< 0.5	-	-	-	< 0.5	-	-	< 0.5
trans-1,3-Dichloropropene	ug/L	-	-	-	-	-	< 0.3	-	-	-	< 0.3	-	-	< 0.3
Trichloroethylene (TCE)	ug/L	21	-	-	-	-	< 0.5	-	-	-	< 0.5	-	-	< 0.5
Trichlorofluoromethane	ug/L	-	-	-	-	-	< 0.5	-	-	-	< 0.5	-	-	< 0.5
Trihalomethanes	ug/L	-	-	-	-	-	< 1	-	-	-	< 1	-	-	< 1
Chloroethane	ug/L	-	-	-	-	-	< 0.5	-	-	-	< 0.5	-	-	< 0.5
hexanone, 2-	ug/L	-	-	-	-	-	< 20	-	-	-	< 20	-	-	< 20
n-Hexane	ug/L	-	-	-	-	-	< 0.5	-	-	-	< 0.5	-	-	< 0.5
Bromodichloromethane	ug/L	-	-	-	-	-	< 0.5	-	-	-	< 0.5	-	-	< 0.5
Vinyl chloride	ug/L	-	-	-	-	-	< 0.2	-	-	-	< 0.2	-	-	< 0.2
Bromoform	ug/L	-	-	-	-	-	< 0.5	-	-	-	< 0.5	-	-	< 0.5

COA: certificate of analysis, as N: as Nitrogen, BTEX: Benzene Toluene Ethylbenzene Xylenes, $CaCO_3$: Calcium Carbonate, CCME: Canadian Council of Ministers of the Environment, DOC: Dissolved Organic Carbon, DQO: Data Quality Objective, mg/L: milligram per litre, SW: Surface Water, T/D/N = Total/Dissolved/Normal, µg/L: microgram per litre, µS/cm: microsiemens per centimetre, °C: degrees Celsius, < = less than

(a) Distance from Landfill Facility Qualifiers are defined as: Source = Station is located within active cells (Cells 1, 2, 3) in the landfill, Proximal= Station is within 20 metres from landfill limits, Downgradient = Station is located more than 20 m downgradient from the landfill's limits towards Sheardown Lake, Background = Station is located in the inactive cells (Cells 4, 5) of the landfill or upgradient of the landfill.

(b) Hardness not provided by the laboratory at all locations. When not provided, hardness was calculated based on Magnesium (Mg) and Calcium (Ca) concentrations for each sample.
(c) Canadian Council of Ministers of the Environment, Water Quality Guideline for the Protection of Aquatic Life Freshwater - Long-Term guideline.
(d) Ammonia guideline is pH and temperature dependent. The guideline is calculated based on the individual field pH and temperature measurements for each sample.
(e) Guideline is pH dependent. The guideline is calculated based on the individual pH for each sample.
(f) Cadmium guideline is hardness dependent. The guideline is calculated based on the individual hardness value for each sample.
(g) The guideline is for chromium VI.
(h) Guideline is hardness dependent. The guideline is calculated based on the individual hardness value for each sample.
(i) The chronic dissolved manganese guideline is pH and hardness dependent. The guideline is calculated based on the individual pH and hardness measurements for each sample.

(j) The chronic dissolved zinc guideline is pH, hardness and DOC dependent. Guidelines calculated with pH, hardness and DOC values falling outside the defined range (i.e., pH 6.5 to 8.13, hardness 23.4 to 399 mg/L, and DOC 0.3 to 22.9 mg/L) should be used with caution, as the Water Quality Guideline does not necessarily accurately reflect toxic effects at the low and high pH, hardness and DOC extremes. Hardness is above the defined range for samples MS-MRY-13B on 7/1/2024 and MS-MRY-13C on 8/17/2025 and 9/7/2024. The guideline is calculated based on the individual pH, hardness and DOC measurements for each sample.

(k) Guideline from Nunavut Water Board - Water License 2AM-MRY1325. Water licence expired on 10-Jun-2025.
(l) Detection limit is above guideline. This may be caused by sample dilution done by the laboratory to run the analysis.
(m) Guideline from Nunavut Water Board - Water Licence 2AM-MRY2540, for comparison purposes only. New water licence issued on 28 April 2025. These new limits act as guidelines for the site to be used internally by Baffinland Iron Mines as adaptive management considerations.
(n) Guideline for total metals, for comparison purposes only.

Value	Value exceeding DQO for either pH or Conductivity
	DQO < 1 (pH units) for pH between laboratory and field measurements
	DQO < 20% for conductivity between laboratory and field measurements
Value	Result exceeds the CCME Water Quality Guideline for the Protection of Aquatic Life - Freshwater, Long-term or outside the recommended pH
Value	Result exceeds Water Licence 2AM-MRY1325, applicable only on 2023 and 2024 results.
Value	Result exceeds Water Licence 2AM-MRY2540, applicable only on 2025 results.

Table F-6: 2025 Groundwater program QA/QC Results at the Landfill Facility, Mary River Mine

Sample Type		Detection Limit	5*Detection Limit	Parent and Duplicate Sample			Travel Blank
Station				LF-KP22-01			LF-KP22-03
Sample Date (M/DD/YYYY)				8/28/2025	8/28/2025	RPD (%) [a]	8/27/2025
COA number				BF2500308	BF2500308		BF2500299
Matrix				GW			-
QA/QC							
Parameter	Unit			FDA	FD		TB
Routine Parameters							
Dissolved Oxygen, Field	mg/L	-		0.11	-	-	-
Dissolved Oxygen, Percent, Field	%	-	-	0.8	-	-	-
pH, Field	pH unit	-	-	7.06	-	-	-
pH, Lab	pH unit	0.1	0.5	7.06	7.01	1	6.45
Specific Conductivity, Field	µS/cm	-	-	2440	-	-	-
Conductivity, Lab	µS/cm	1	5	2430	2410.0	1	1.2
Temperature, Field	°C	-	-	1.9	-	-	-
Total Alkalinity	mg/L as $CaCO_3$	2	10	325	327	1	< 2
Total Suspended Solids	mg/L	1	5	< 1.2	< 1.2	n/a	< 1
Total Dissolved Solids	mg/L	10	50	2020	2100	4	< 20
Turbidity, Lab	NTU	0.1	0.5	1.4	1.47	5	< 0.1
Turbidity, Field	NTU	-	-	1.65	-	-	-
Hardness, as $CaCO_3$ (calculated)[b]	mg/L	-	-	1400	1415	-	-
Major Ions							
Calcium	mg/L	0.05	0.25	485	488	1	< 0.05
Chloride	mg/L	0.5	2.5	88.4	89.6	1	< 0.5
Bromide	mg/L	0.1	0.5	< 0.5	< 0.5	n/a	< 0.1
Fluoride	mg/L	0.02	0.1	< 0.1	< 0.1	n/a	< 0.02
Magnesium	mg/L	0.005	0.025	45.8	47.7	4	< 0.005
Potassium	mg/L	0.05	0.25	20	20.5	2	< 0.05
Sodium	mg/L	0.05	0.25	45.5	46.6	2	< 0.05
Sulfate	mg/L	0.3	1.5	1030	1040	1	< 0.3
Nutrients							
Nitrate	mg/L as N	0.02	0.1	< 0.1	< 0.1	n/a	< 0.02
Nitrite	mg/L as N	0.01	0.05	< 0.05	< 0.05	n/a	< 0.01
Total Ammonia	mg/L as N	0.005	0.025	2.2	2.24	2	< 0.005
Phosphorus, Nutrient	mg/L	0.002	-	0.0746	0.0754	1	< 0.002
Phosphorus, total	mg/L	0.002	-	0.0817	0.0804	2	< 0.002
Total Kjeldahl Nitrogen	mg/L	0.05	0.25	2.99	3.16	6	< 0.05
Organic Carbon							
Dissolved Organic Carbon	mg/L	0.5	2.5	10.7	10.8	1	0.82
Petroleums Hydrocarbons (PHCs) and BTEX							
Benzene	µg/L	0.5	2.5	< 0.5	< 0.5	n/a	< 0.5
Toluene	µg/L	0.5	2.5	< 0.5	< 0.5	n/a	< 0.5
Ethylbenzene	µg/L	0.5	2.5	< 0.5	< 0.5	n/a	< 0.5
o-Xylene	µg/L	0.3	1.5	< 0.3	< 0.3	n/a	< 0.3
m+p-Xylenes	µg/L	0.4	2	< 0.4	< 0.4	n/a	< 0.4
Total Xylenes	µg/L	0.5	2.5	< 0.5	< 0.5	n/a	< 0.5
BTEX, Total	µg/L	1	5	< 1	< 1	n/a	< 1
Monochlorobenzene	µg/L	0.5	2.5	< 0.5	< 0.5	n/a	< 0.5
F1 (C6-C10)	µg/L	25	125	< 25	< 25	n/a	< 25
F1(C6-C10)-BTEX	µg/L	25	125	< 25	< 25	n/a	< 25
F2 (C10-C16)	µg/L	100	500	< 100	< 100	n/a	< 100
F3 (C16-C34)	µg/L	250	1250	< 250	< 250	n/a	< 250
F4 (C34-C50)	µg/L	250	1250	< 250	< 250	n/a	< 250
Total Petroleum Hydrocarbons	µg/L	370	1850	< 370	< 370	n/a	< 370
Volatile Organic Compounds (VOCs)							
1,1,1,2-Tetrachloroethane	µg/L	0.5	2.5	< 0.5	< 0.5	n/a	< 0.5
1,1,1-Trichloroethane	µg/L	0.5	2.5	< 0.5	< 0.5	n/a	< 0.5
1,1,2,2-Tetrachloroethane	µg/L	0.5	2.5	< 0.5	< 0.5	n/a	< 0.5
1,1,2-Trichloroethane	µg/L	0.5	2.5	< 0.5	< 0.5	n/a	< 0.5
1,1-Dichloroethane	µg/L	0.5	2.5	< 0.5	< 0.5	n/a	< 0.5
1,1-Dichloroethylene	µg/L	0.5	2.5	< 0.5	< 0.5	n/a	< 0.5
1,2-Dibromoethane	µg/L	0.2	1	< 0.2	< 0.2	n/a	< 0.2
1,2-Dichlorobenzene	µg/L	0.5	2.5	< 0.5	< 0.5	n/a	< 0.5
1,2-Dichloroethane	µg/L	0.5	2.5	< 0.5	< 0.5	n/a	< 0.5
1,2-Dichloropropane	µg/L	0.5	2.5	< 0.5	< 0.5	n/a	< 0.5
1,3-Dichlorobenzene	µg/L	0.5	2.5	< 0.5	< 0.5	n/a	< 0.5
1,3-Dichloropropene (cis & trans)	µg/L	0.5	2.5	< 0.5	< 0.5	n/a	< 0.5
1,4-Dichlorobenzene	µg/L	0.5	2.5	< 0.5	< 0.5	n/a	< 0.5
Methyl Ethyl Ketone	µg/L	20	100	< 20	< 20	n/a	< 20
Methyl Isobutyl Ketone	µg/L	20	100	< 20	< 20	n/a	< 20
Methyl t-butyl ether (MTBE)	µg/L	0.5	2.5	< 0.5	< 0.5	n/a	< 0.5
Acetone	µg/L	20	100	< 20	< 20	n/a	< 20
Bromomethane	µg/L	0.5	2.5	< 0.5	< 0.5	n/a	< 0.5
cis-1,2-Dichloroethylene	µg/L	0.5	2.5	1.04	1.03	n/a	< 0.5
trans-1,2-Dichloroethylene	µg/L	0.5	2.5	0.66	0.65	n/a	< 0.5
Dichloroethylene, cis+trans-1,2-	µg/L	0.71	3.55	1.7	1.68	n/a	< 0.71
cis-1,3-Dichloropropene	µg/L	0.3	1.5	< 0.3	< 0.3	n/a	< 0.3
trans-1,3-Dichloropropene	µg/L	0.3	1.5	< 0.3	< 0.3	n/a	< 0.3
Dibromochloromethane	µg/L	0.5	2.5	< 0.5	< 0.5	n/a	< 0.5
Dichlorodifluoromethane	µg/L	0.5	2.5	< 0.5	< 0.5	n/a	< 0.5
Dichloromethane	µg/L	1	5	< 1	< 1	n/a	< 1
Chloromethane	µg/L	2	10	< 2	< 2	n/a	< 2
Tetrachloroethylene (PCE)	µg/L	0.5	2.5	14.7	14.4	2	< 0.5
Trichloroethylene (TCE)	µg/L	0.5	2.5	7.53	7.33	3	< 0.5
Trichlorofluoromethane	µg/L	0.5	2.5	< 0.5	< 0.5	n/a	< 0.5
Trihalomethanes, Total	µg/L	1	5	<1.0	<1.0	n/a	< 1
Chloroethane	µg/L	0.5	2.5	< 0.5	< 0.5	n/a	< 0.5
hexanone, 2-	µg/L	20	100	< 20	< 20	n/a	< 20
n-Hexane	µg/L	0.5	2.5	< 0.5	< 0.5	n/a	< 0.5
Bromodichloromethane	µg/L	0.5	2.5	< 0.5	< 0.5	n/a	< 0.5
Vinyl chloride	µg/L	0.2	1	< 0.2	< 0.2	n/a	< 0.2
Bromoform	µg/L	0.5	2.5	< 0.5	< 0.5	n/a	< 0.5
Chloroform	µg/L	0.5	2.5	< 0.5	< 0.5	n/a	< 0.5
Polycyclic Aromatic Hydrocarbons (PAHs)							
Acenaphthene	µg/L	0.01		< 0.01	< 0.01	n/a	< 0.01
Acenaphthylene	µg/L	0.01	0.05	< 0.01	< 0.01	n/a	< 0.01
Acridine	µg/L	0.01	0.05	< 0.01	< 0.01	n/a	< 0.01
Anthracene	µg/L	0.01	0.05	< 0.01	< 0.01	n/a	< 0.01
1+2-Methylnaphthalenes	µg/L	0.015	0.075	0.051	0.054	n/a	< 0.015
1-Methylnaphthalene	µg/L	0.01	0.05	0.04	0.042	n/a	< 0.01
2-Methylnaphthalene	µg/L	0.01	0.05	0.011	0.012	n/a	< 0.01
B(a)P Total Potency Equivalent	µg/L	0.01	0.05	< 0.01	< 0.01	n/a	< 0.01
Benzo(a)anthracene	µg/L	0.01	0.05	< 0.01	< 0.01	n/a	< 0.01
Benzo(a)pyrene	µg/L	0.005	0.025	< 0.005	< 0.005	n/a	< 0.005
Benzo(b&j)fluoranthene	µg/L	0.01	0.05	< 0.01	< 0.01	n/a	< 0.01
Benzo(b+j+k)fluoranthene	µg/L	0.015	0.075	< 0.015	< 0.015	n/a	< 0.015
Benzo(g,h,i)perylene	µg/L	0.01	0.05	< 0.01	< 0.01	n/a	< 0.01
Benzo(k)fluoranthene	µg/L	0.01	0.05	< 0.01	< 0.01	n/a	< 0.01
Carbon disulfide	µg/L	1	5	< 1	< 1	n/a	< 1
Carbon tetrachloride	µg/L	0.2	1	< 0.2	< 0.2	n/a	< 0.2
Chrysene	µg/L	0.01	0.05	< 0.01	< 0.01	n/a	< 0.01
Dibenz(a,h)anthracene	µg/L	0.005	0.025	< 0.005	< 0.005	n/a	< 0.005
Fluoranthene	µg/L	0.01	0.05	< 0.01	< 0.01	n/a	< 0.01
Fluorene	µg/L	0.01	0.05	< 0.01	< 0.01	n/a	< 0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.01	0.05	< 0.01	< 0.01	n/a	< 0.01
Naphthalene	µg/L	0.01	0.05	< 0.078	< 0.085	n/a	< 0.01
Perylene	µg/L	0.01	0.05	< 0.01	< 0.01	n/a	< 0.01
Phenanthrene	µg/L	0.01	0.05	< 0.01	< 0.01	n/a	< 0.01
Pyrene	µg/L	0.01	0.05	< 0.01	< 0.01	n/a	< 0.01
Quinoline	µg/L	0.01	0.05	< 0.094	< 0.094	n/a	< 0.01
Styrene	µg/L	0.5	2.5	< 0.5	< 0.5	n/a	< 0.5
Dissolved Metals							
Aluminum	mg/L	0.001	0.005	< 0.01	< 0.01	n/a	< 0.001
Antimony	mg/L	0.0001	0.0005	< 0.001	< 0.001	n/a	< 0.0001
Arsenic	mg/L	0.0001	0.0005	0.00107	0.00115	7	< 0.0001
Barium	mg/L	0.0001	0.0005	0.0518	0.052	0	< 0.0001
Beryllium	mg/L	0.00002	0.0001	< 0.0002	< 0.0002	n/a	< 0.00002
Bismuth	mg/L	0.00005	0.00025	< 0.0005	< 0.0005	n/a	< 0.00005
Boron	mg/L	0.01	0.05	1.8	1.8	0	< 0.01
Cadmium	mg/L	0.000005	0.000025	0.000062	0.000081	27	0.0000054
Cesium	mg/L	0.00001	0.00005	< 0.0001	< 0.0001	n/a	< 0.00001
Chromium	mg/L	0.0005	0.0025	< 0.005	< 0.005	n/a	< 0.0005
Cobalt	mg/L	0.0001	0.0005	0.00682	0.00668	2	< 0.0001
Copper	mg/L	0.0002	0.001	<0.002	<0.002	n/a	< 0.0002
Iron	mg/L	0.01	0.05	0.242	0.233	4	< 0.01
Lead	mg/L	0.00005	0.00025	<0.0005	<0.0005	n/a	< 0.00005
Lithium	mg/L	0.001	0.005	0.143	0.135	6	< 0.001
Manganese	mg/L	0.0001	0.0005	1.76	1.76	0	< 0.0001
Mercury	mg/L	0.000005	0.000025	< 0.000005	< 0.000005	n/a	< 0.000005
Molybdenum	mg/L	0.00005	0.00025	0.00639	0.00639	0	< 0.00005
Nickel	mg/L	0.0005	0.0025	0.0738	0.0742	1	< 0.0005
Phosphorus	mg/L	0.05	0.25	< 0.5	< 0.5	n/a	< 0.05
Rubidium	mg/L	0.0002	0.001	0.00972	0.00915	6	< 0.0002
Selenium	mg/L	0.00005	0.00025	< 0.0005	< 0.0005	n/a	< 0.00005
Silicon	mg/L	0.05	0.25	5.63	5.57	1	< 0.05
Silver	mg/L	0.00001	0.00005	< 0.0001	< 0.0001	n/a	< 0.00001
Strontium	mg/L	0.0002	0.001	1.38	1.4	1	< 0.0002
Sulfur	mg/L	0.5	2.5	372	367	1	< 0.5
Tellurium	mg/L	0.0002	0.001	< 0.002	< 0.002	n/a	< 0.0002
Thallium	mg/L	0.00001	0.00005	< 0.0001	< 0.0001	n/a	< 0.00001
Thorium	mg/L	0.0001	0.0005	< 0.001	< 0.001	n/a	< 0.0001
Tin	mg/L	0.0001	0.0005	< 0.001	< 0.001	n/a	< 0.0001
Titanium	mg/L	0.0003	0.0015	< 0.003	< 0.003	n/a	< 0.0003
Tungsten	mg/L	0.0001	0.0005	< 0.001	< 0.001	n/a	< 0.0001
Uranium	mg/L	0.00001	0.00005	0.032	0.032	0	< 0.00001
Vanadium	mg/L	0.0005	0.0025	< 0.005	< 0.005	n/a	< 0.0005
Zinc	mg/L	0.001	0.005	<0.01	<0.01	n/a	< 0.001
Zirconium	mg/L	0.0003	0.0015	< 0.003	< 0.003	n/a	< 0.0003

as N: as Nitrogen, $CaCO_3$: Calcium Carbonate, mg/L: milligram per litre, RPD: relative percent difference, µS/c: microsiemens per centimetre, NTU: nephelometric turbidity units, T/D/N: Total/Dissolved/Normal, < : less than, n/a: not applicable, °C: degrees Celsius; FDA: field duplicate available; FD: field duplicate; TB: travel blank

(a) RPDs were only calculated if one or more concentrations in duplicate samples were greater than five times the reported detection limit. The RPD was reported as 'not applicable'(na) in cases where the results did not meet the calculation criteria.

(b) Hardness not provided by the laboratory. Hardness was calculated based on Magnesium (Mg) and Calcium (Ca) concentrations for each sample.

Value	RPD greater than 20%
Value	Result above five times the detection limit in travel blank

Table F-7: 2025 Groundwater program QA/QC Results at the Hazardous Waste Berm Facility, Mary River Mine

Sample Type		Detection Limit	5*Detection Limit	Parent and Duplicate Sample		
Station				HWB-KP23-02		
Sample Date (M/DD/YYYY)				8/30/2025	8/30/2025	RPD (%) [a]
COA number				BF2500308	BF2500308	
Matrix				GW		
QA/QC				FDA	FD	
Parameter	Unit					
Routine Parameters						
Dissolved Oxygen, Field	mg/L	-	-	4.95	-	-
Dissolved Oxygen, Percent, Field	%	-	-	35.2	-	-
pH, Field	pH unit	-	-	7.14	-	-
pH, Lab	pH unit	0.1	0.5	7.08	7.02	1
Specific Conductivity, Field	µS/cm	-	-	751	-	-
Conductivity, Lab	µS/cm	1	5	703	725	3
Temperature, Field	°C	-	-	1.3	-	-
Total Alkalinity	mg/L as $CaCO_3$	2	10	193	198	3
Total Suspended Solids	mg/L	1	5	1.3	1.1	n/a
Total Dissolved Solids	mg/L	10	50	450	435	3
Turbidity, Lab	NTU	0.1	0.5	3.98	2.84	33
Turbidity, Field	NTU	-	-	1.04	-	-
Hardness, as $CaCO_3$ (calculated)[b]	mg/L	-	-	381	333	-
Major Ions						
Calcium	mg/L	0.05	0.25	70.5	58.8	18
Chloride	mg/L	0.5	2.5	97.2	100	3
Bromide	mg/L	0.1	0.5	< 0.1	< 0.1	n/a
Fluoride	mg/L	0.02	0.1	0.23	0.14	49
Magnesium	mg/L	0.005	0.025	49.8	45.1	10
Potassium	mg/L	0.05	0.25	4.37	3.86	12
Sodium	mg/L	0.05	0.25	8.64	7.09	20
Sulfate	mg/L	0.3	1.5	11	12.2	10
Nutrients						
Nitrate	mg/L as N	0.02	0.1	0.162	0.176	8
Nitrite	mg/L as N	0.01	0.05	0.017	0.019	n/a
Total Ammonia	mg/L as N	0.005	-	0.319	0.304	5
Phosphorus, Nutrient	mg/L	0.002	-	-	-	n/a
Phosphorus, total	mg/L	0.002	0.01	0.0156	0.0153	2
Total Kjeldahl Nitrogen	mg/L	0.05	0.25	0.686	0.682	1
Petroleums Hydrocarbons (PHCs) and BTEX						
Benzene	µg/L	0.5	2.5	0.5	0.51	n/a
Toluene	µg/L	0.5	2.5	0.58	< 0.5	n/a
Ethylbenzene	µg/L	0.5	2.5	6.05	5.45	10
o-Xylene	µg/L	0.3	1.5	56.3	50.5	11
m+p-Xylenes	µg/L	0.4	2	21.9	16.7	27
Total Xylenes	µg/L	0.5	2.5	78.2	67.2	15
BTEX, Total	µg/L	1	5	85.3	73.2	15
Monochlorobenzene	µg/L	0.5	2.5	< 0.5	< 0.5	n/a
F1 (C6-C10)	µg/L	25	125	157	152	3
F1(C6-C10)-BTEX	µg/L	25	125	72	79	n/a
F2 (C10-C16)	µg/L	100	500	440	400	n/a
F3 (C16-C34)	µg/L	250	1250	< 250	< 250	n/a
F4 (C34-C50)	µg/L	250	1250	< 250	< 250	n/a
Total Petroleum Hydrocarbons	µg/L	370	1850	600	550	n/a
Oil and Grease						
Total Oil and Grease	mg/L	5	25	< 5	< 5	n/a
Volatil Organic Compounds (VOCs)						
1,1,1,2-Tetrachloroethane	µg/L	0.5	2.5	< 0.5	< 0.5	n/a
1,1,1-Trichloroethane	µg/L	0.5	2.5	< 0.5	< 0.5	n/a
1,1,2,2-Tetrachloroethane	µg/L	0.5	2.5	< 0.5	< 0.5	n/a
1,1,2-Trichloroethane	µg/L	0.5	2.5	< 0.5	< 0.5	n/a
1,1-Dichloroethane	µg/L	0.5	2.5	< 0.5	< 0.5	n/a
1,1-Dichloroethylene	µg/L	0.5	2.5	< 0.5	< 0.5	n/a
1,2-Dibromoethane	µg/L	0.2	1	< 0.2	< 0.2	n/a
1,2-Dichlorobenzene	µg/L	0.5	2.5	< 0.5	< 0.5	n/a
1,2-Dichloroethane	µg/L	0.5	2.5	< 0.5	< 0.5	n/a
1,2-Dichloropropane	µg/L	0.5	2.5	< 0.5	< 0.5	n/a
1,3-Dichlorobenzene	µg/L	0.5	2.5	< 0.5	< 0.5	n/a
1,3-Dichloropropene (cis & trans)	µg/L	0.5	2.5	< 0.5	< 0.5	n/a
1,4-Dichlorobenzene	µg/L	0.5	2.5	< 0.5	< 0.5	n/a
Methyl Ethyl Ketone	µg/L	20	100	< 20	< 20	n/a
Methyl Isobutyl Ketone	µg/L	20	100	< 20	< 20	n/a
Methyl t-butyl ether (MTBE)	µg/L	0.5	2.5	< 0.5	< 0.5	n/a
Acetone	µg/L	20	100	< 20	< 20	n/a
Bromomethane	µg/L	0.5	2.5	< 0.5	< 0.5	n/a
cis-1,2-Dichloroethylene	µg/L	0.5	2.5	< 0.5	< 0.5	n/a
trans-1,2-Dichloroethylene	µg/L	0.5	2.5	< 0.5	< 0.5	n/a
dichloroethylene, cis+trans-1,2-	µg/L	0.71	3.55	< 0.71	< 0.71	n/a
cis-1,3-Dichloropropene	µg/L	0.3	1.5	< 0.3	< 0.3	n/a
trans-1,3-Dichloropropene	µg/L	0.3	1.5	< 0.3	< 0.3	n/a
Dibromochloromethane	µg/L	0.5	2.5	< 0.5	< 0.5	n/a
Dichlorodifluoromethane	µg/L	0.5	2.5	< 0.5	< 0.5	n/a
Dichloromethane	µg/L	1	5	< 1	< 1	n/a
Chloromethane	µg/L	2	10	< 2	< 2	n/a
Tetrachloroethylene (PCE)	µg/L	0.5	2.5	<0.50	<0.50	n/a
Trichloroethylene (TCE)	µg/L	0.5	2.5	< 0.5	< 0.5	n/a
Trichlorofluoromethane	µg/L	0.5	2.5	< 0.5	< 0.5	n/a
Trihalomethanes, Total	µg/L	1	5	<1.0	<1.0	n/a
Chloroethane	µg/L	0.5	2.5	< 0.5	< 0.5	n/a
hexanone, 2-	µg/L	20	100	< 20	< 20	n/a
n-Hexane	µg/L	0.5	2.5	< 0.5	< 0.5	n/a
Bromodichloromethane	µg/L	0.5	2.5	< 0.5	< 0.5	n/a
Vinyl chloride	µg/L	0.2	1	< 0.2	< 0.2	n/a
Bromoform	µg/L	0.5	2.5	< 0.5	< 0.5	n/a
Chloroform	µg/L	0.5	2.5	< 0.5	< 0.5	n/a
Polycyclic Aromatic Hydrocarbons (PAHs)						
Acenaphthene	µg/L	0.01	0.05	< 0.089	< 0.084	n/a
Acenaphthylene	µg/L	0.01	0.05	< 0.025	< 0.024	n/a
Acridine	µg/L	0.01	0.05	< 0.013	< 0.013	n/a
Anthracene	µg/L	0.01	0.05	< 0.01	< 0.01	n/a
1+2-Methylnaphthalenes	µg/L	0.015	0.075	17.1	14.1	19
1-Methylnaphthalene	µg/L	0.01	0.05	7.44	6.35	16
2-Methylnaphthalene	µg/L	0.01	0.05	9.63	7.76	22
B(a)P Total Potency Equivalent	µg/L	0.01	0.05	< 0.01	< 0.01	n/a
Benzo(a)anthracene	µg/L	0.01	0.05	< 0.01	< 0.01	n/a
Benzo(a)pyrene	µg/L	0.005	0.025	< 0.005	< 0.005	n/a
Benzo(b&j)fluoranthene	µg/L	0.01	0.05	< 0.01	< 0.01	n/a
Benzo(b+j+k)fluoranthene	µg/L	0.015	0.075	< 0.015	< 0.015	n/a
Benzo(g,h,i)perylene	µg/L	0.01	0.05	< 0.01	< 0.01	n/a
Benzo(k)fluoranthene	µg/L	0.01	0.05	< 0.01	< 0.01	n/a
Carbon tetrachloride	µg/L	0.2	1	< 0.2	< 0.2	n/a
Carbon disulfide	µg/L	1	5	< 1	< 1	n/a
Chrysene	µg/L	0.01	0.05	< 0.01	< 0.01	n/a
Dibenz(a,h)anthracene	µg/L	0.005	0.025	< 0.005	< 0.005	n/a
Fluoranthene	µg/L	0.01	0.05	< 0.01	< 0.01	n/a
Fluorene	µg/L	0.01	0.05	0.132	0.122	8
Indeno(1,2,3-cd)pyrene	µg/L	0.01	0.05	< 0.01	< 0.01	n/a
Naphthalene	µg/L	0.01	0.05	13.6	13	5
Perylene	µg/L	0.01	0.05	< 0.01	< 0.01	n/a
Phenanthrene	µg/L	0.01	0.05	0.025	0.029	n/a
Pyrene	µg/L	0.01	0.05	< 0.01	< 0.01	n/a
Quinoline	µg/L	0.01	0.05	< 0.838	< 0.767	n/a
Styrene	µg/L	0.5	2.5	< 0.5	< 0.5	n/a
Dissolved Metals						
Aluminum	mg/L	0.001	0.005	0.0098	0.0114	15
Antimony	mg/L	0.0001	0.0005	< 0.0001	< 0.0001	n/a
Arsenic	mg/L	0.0001	0.0005	0.00051	0.0006	16
Barium	mg/L	0.0001	0.0005	0.088	0.0749	16
Beryllium	mg/L	0.00002	0.0001	< 0.00002	< 0.00002	n/a
Bismuth	mg/L	0.00005	0.00025	< 0.00005	< 0.00005	n/a
Boron	mg/L	0.01	0.05	0.025	0.02	n/a
Cadmium	mg/L	0.000005	0.000025	0.0000163	0.0000119	n/a
Cesium	mg/L	0.00001	0.00005	< 0.00001	< 0.00001	n/a
Chromium	mg/L	0.0005	0.0025	0.0015	0.0016	n/a
Cobalt	mg/L	0.0001	0.0005	0.00472	0.00442	7
Copper	mg/L	0.0002	0.001	0.00222	0.00213	4
Iron	mg/L	0.01	0.05	1.2	1.5	22
Lead	mg/L	0.00005	0.00025	< 0.00005	< 0.00005	n/a
Lithium	mg/L	0.001	0.005	0.026	0.0203	25
Manganese	mg/L	0.0001	0.0005	1.48	1.43	3
Mercury	mg/L	0.000005	0.000025	< 0.000005	< 0.000005	n/a
Molybdenum	mg/L	0.00005	0.00025	0.00112	0.00123	9
Nickel	mg/L	0.0005	0.0025	0.0466	0.0422	10
Phosphorus	mg/L	0.05	0.25	<0.050	<0.050	n/a
Rubidium	mg/L	0.0002	0.001	0.00581	0.00537	8
Selenium	mg/L	0.00005	0.00025	0.000069	0.000062	n/a
Silicon	mg/L	0.05	0.25	7	6.93	1
Silver	mg/L	0.00001	0.00005	< 0.00001	0.00001	n/a
Strontium	mg/L	0.0002	0.001	0.554	0.45	21
Sulfur	mg/L	0.5	2.5	5.66	4.81	16
Tellurium	mg/L	0.0002	0.001	< 0.0002	< 0.0002	n/a
Thallium	mg/L	0.00001	0.00005	0.000018	0.000014	n/a
Thorium	mg/L	0.0001	0.0005	< 0.0001	0.0001	n/a
Tin	mg/L	0.0001	0.0005	< 0.0001	< 0.0001	n/a
Titanium	mg/L	0.0003	0.0015	< 0.0003	< 0.0003	n/a
Tungsten	mg/L	0.0001	0.0005	< 0.0001	< 0.0001	n/a
Uranium	mg/L	0.00001	0.00005	0.00323	0.00269	18
Vanadium	mg/L	0.0005	0.0025	< 0.0005	< 0.0005	n/a
Zinc	mg/L	0.001	0.005	<0.001	<0.001	n/a
Zirconium	mg/L	0.0003	0.0015	0.00092	0.00089	n/a

as N: as Nitrogen, $CaCO_3$: Calcium Carbonate, mg/L: milligram per litre, RPD: relative percent difference, µS/c: microsiemens per centimetre, NTU: nephelometric turbidity units, T/D/N: Total/Dissolved/Normal, < : less than, n/a: not applicable, °C: degrees Celsius; FDA: field duplicate available; FD: field duplicate

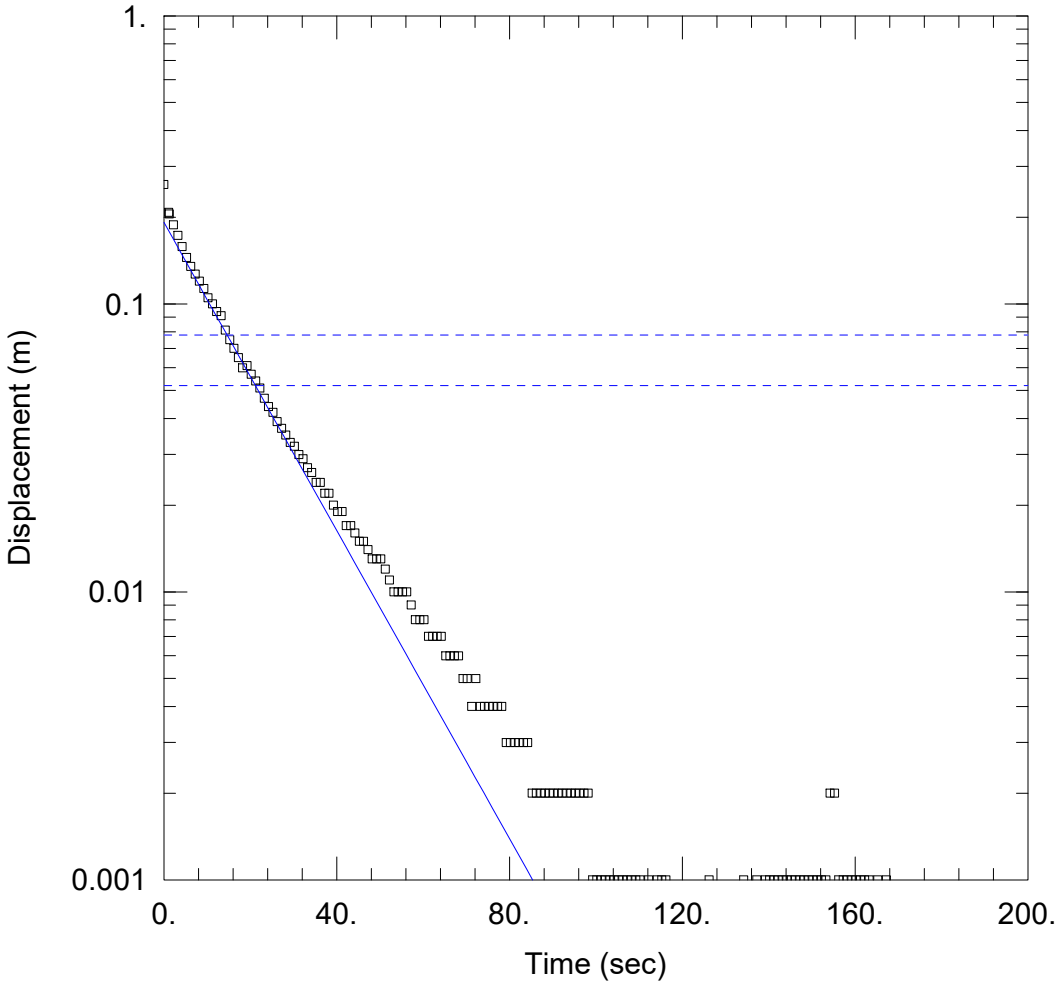
(a) RPDs were only calculated if one or more concentrations in duplicate samples were greater than five times the reported detection limit. The RPD was reported as 'not applicable'(na) in cases where the results did not meet the calculation criteria.

(b) Hardness not provided by the laboratory. Hardness was calculated based on Magnesium (Mg) and Calcium (Ca) concentrations for each sample.

Value RPD greater than 20%

APPENDIX G

Single Well Response Testing



WELL TEST ANALYSIS

Data Set: C:\...\HWB-KP22-03_QA_JP.aqt
Date: 12/01/25 Time: 13:19:01

PROJECT INFORMATION

Company: WSP
Test Well: HWB-KP22-03
Test Date: 05/09/2025

AQUIFER DATA

Saturated Thickness: 1.145 m Anisotropy Ratio (Kz/Kr): 0.1

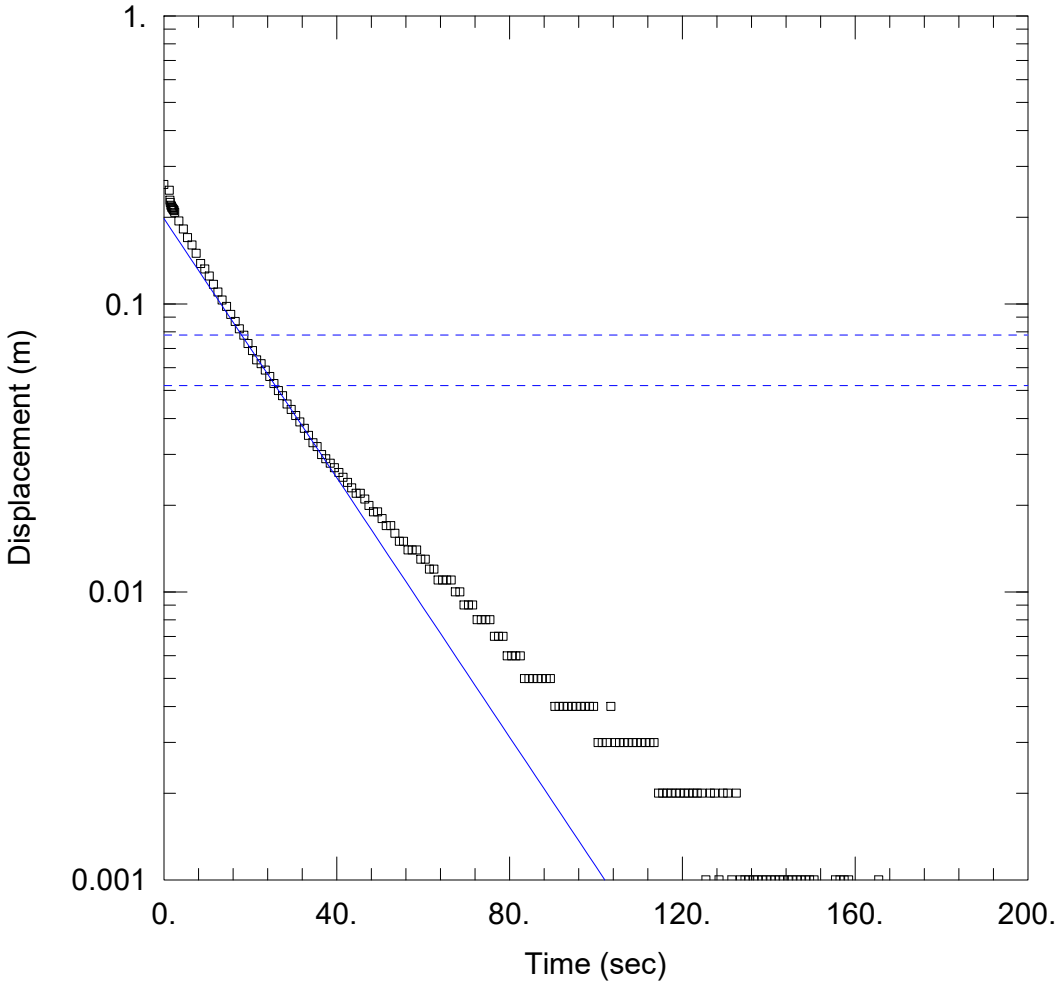
WELL DATA (HWB-KP22-03)

Initial Displacement: 0.26 m
Total Well Penetration Depth: 1.05 m
Casing Radius: 0.025 m
Static Water Column Height: 1.05 m
Screen Length: 1. m
Well Radius: 0.076 m

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 5.148E-5 m/sec
y0 = 0.1916 m



WELL TEST ANALYSIS

Data Set: C:\...\HWB-KP22-05_QA_JP.aqt
Date: 12/01/25 Time: 13:19:49

PROJECT INFORMATION

Company: WSP
Test Well: HWB-KP22-05
Test Date: 02/09/2025

AQUIFER DATA

Saturated Thickness: 1.12 m Anisotropy Ratio (Kz/Kr): 0.1

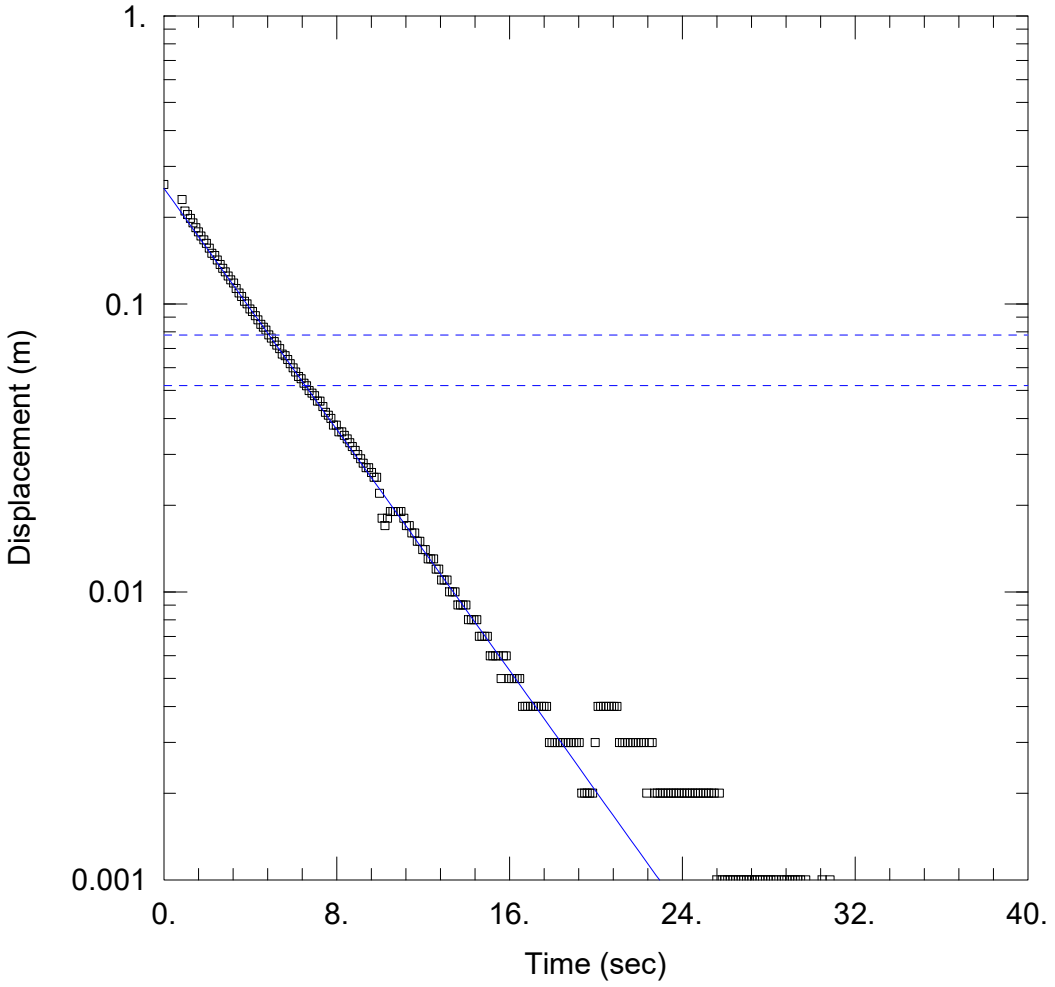
WELL DATA (HWB-KP22-05)

Initial Displacement: 0.26 m
Total Well Penetration Depth: 1.02 m
Casing Radius: 0.025 m
Static Water Column Height: 1.02 m
Screen Length: 1. m
Well Radius: 0.076 m

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 4.299E-5 m/sec
y0 = 0.1978 m



WELL TEST ANALYSIS

Data Set: C:\...\HWB-KP22-06_QA_JP.aqt
Date: 12/01/25 Time: 13:20:29

PROJECT INFORMATION

Company: WSP
Test Well: HWB-KP22-06
Test Date: 04/09/2025

AQUIFER DATA

Saturated Thickness: 0.83 m Anisotropy Ratio (Kz/Kr): 0.1

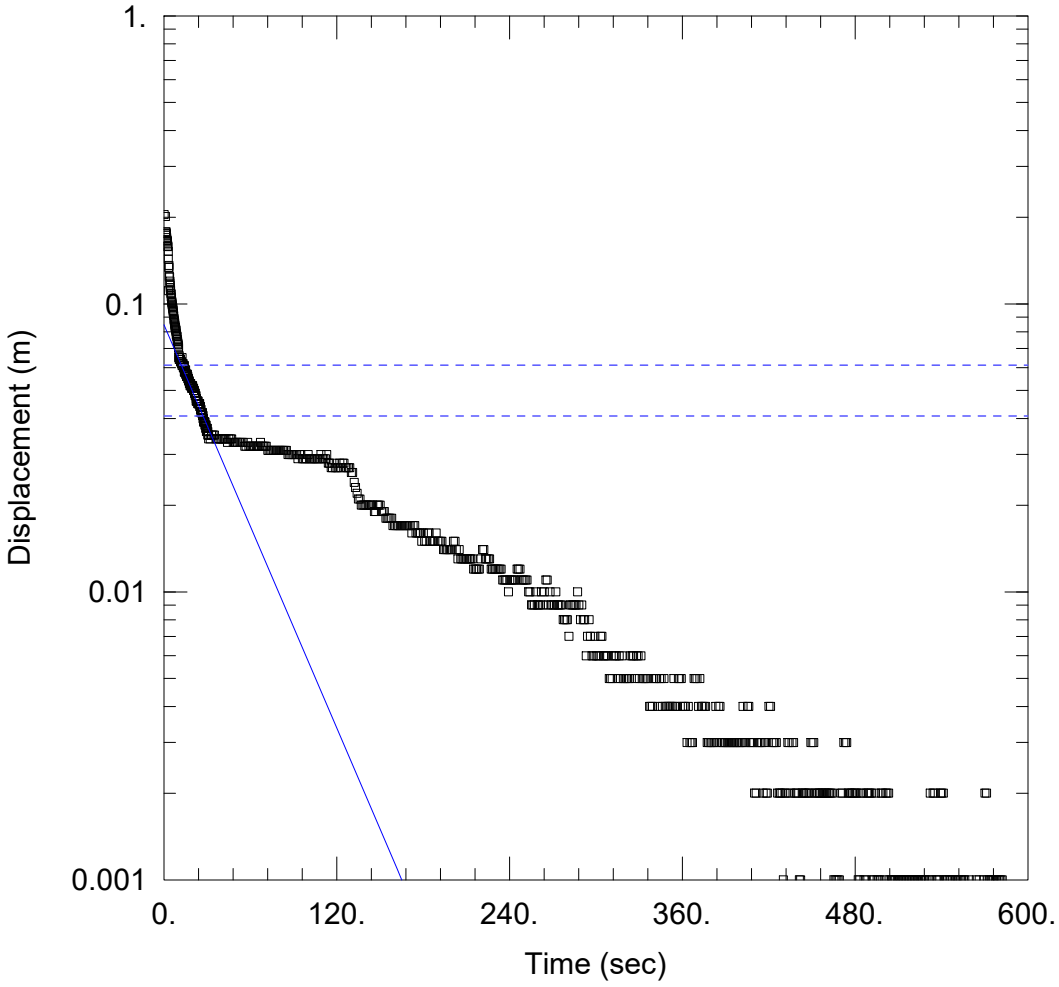
WELL DATA (HWB-KP22-06)

Initial Displacement: 0.26 m
Total Well Penetration Depth: 0.78 m
Casing Radius: 0.025 m
Static Water Column Height: 0.78 m
Screen Length: 0.75 m
Well Radius: 0.076 m

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 0.0002478 m/sec
y0 = 0.2517 m



WELL TEST ANALYSIS

Data Set: C:\...\HWB-KP23-02_QA_JP.aqt
Date: 12/01/25 Time: 13:21:03

PROJECT INFORMATION

Company: WSP
Test Well: HWB-KP23-02
Test Date: 05/09/2025

AQUIFER DATA

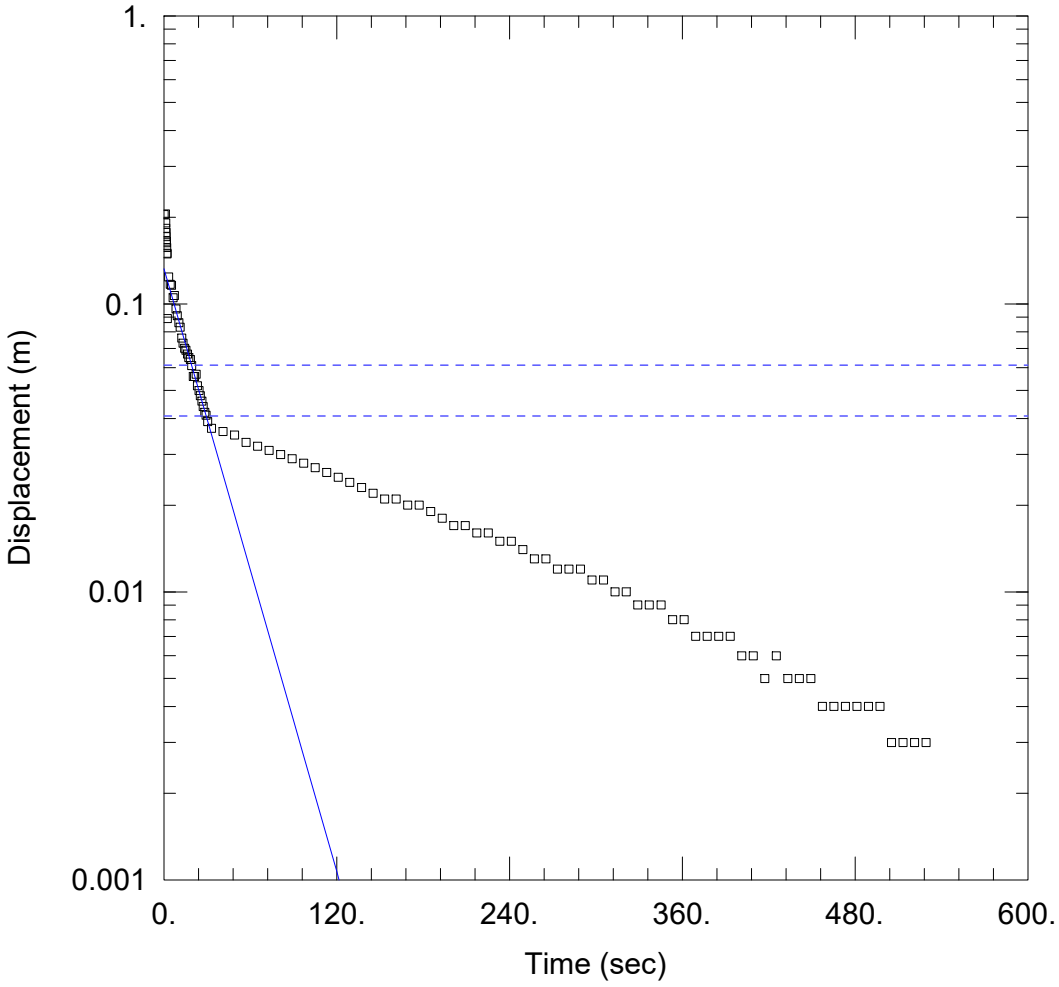
Saturated Thickness: 0.87 m Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (HWB-KP23-02)

Initial Displacement: 0.204 m
Total Well Penetration Depth: 0.87 m
Casing Radius: 0.013 m
Static Water Column Height: 0.87 m
Screen Length: 0.75 m
Well Radius: 0.033 m

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 1.023E-5 m/sec
y0 = 0.08462 m



WELL TEST ANALYSIS

Data Set: C:\...\LF-KP23-04_QA_JP.aqt
Date: 12/01/25 Time: 13:28:07

PROJECT INFORMATION

Company: WSP
Test Well: LK-KP23-04
Test Date: 05/09/2025

AQUIFER DATA

Saturated Thickness: 0.48 m Anisotropy Ratio (Kz/Kr): 0.1

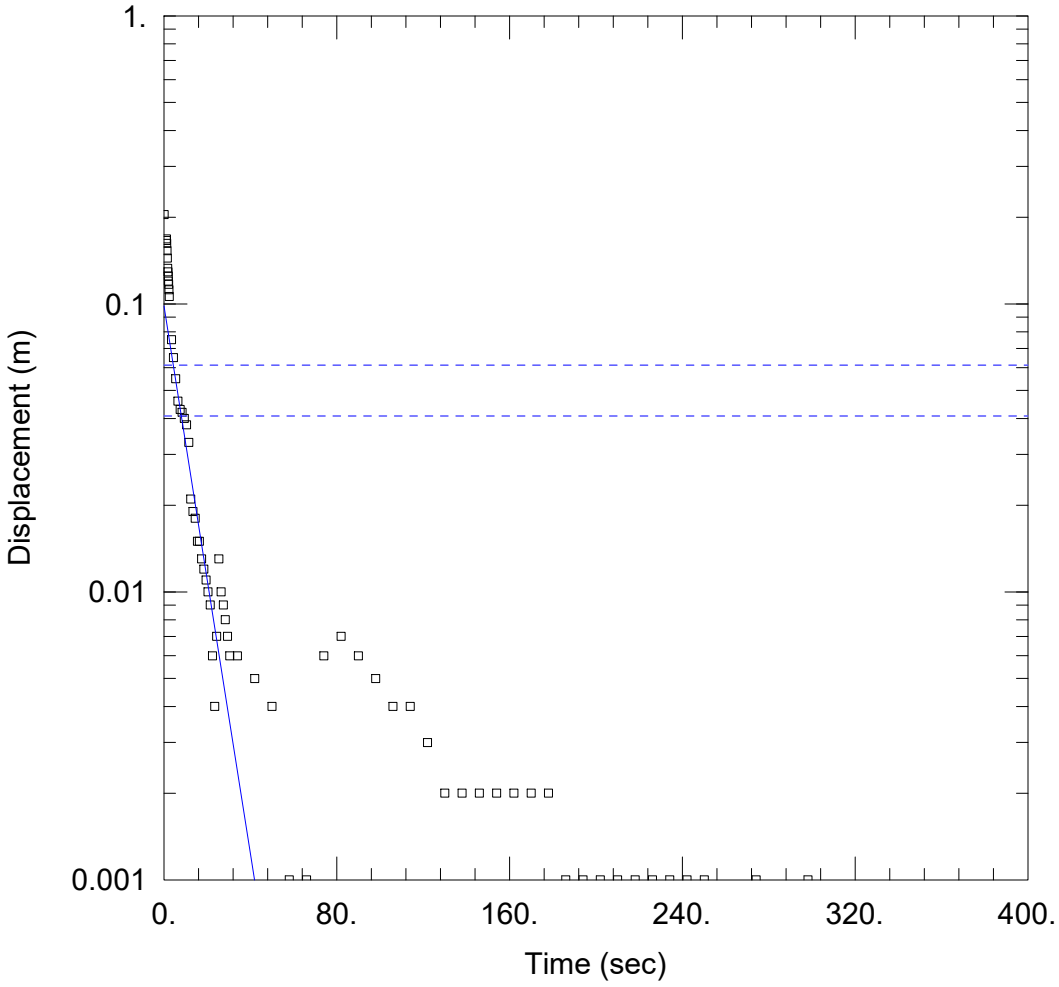
WELL DATA (LF-KP23-04)

Initial Displacement: 0.204 m
Total Well Penetration Depth: 0.84 m
Casing Radius: 0.013 m
Static Water Column Height: 0.84 m
Screen Length: 0.61 m
Well Radius: 0.033 m

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 1.6E-5 m/sec
y0 = 0.1323 m



WELL TEST ANALYSIS

Data Set: C:\...\LF-KP23-06_QA_JP.aqt
Date: 12/01/25 Time: 13:21:47

PROJECT INFORMATION

Company: WSP
Test Well: LK-KP23-06
Test Date: 05/09/2025

AQUIFER DATA

Saturated Thickness: 0.84 m Anisotropy Ratio (Kz/Kr): 0.1

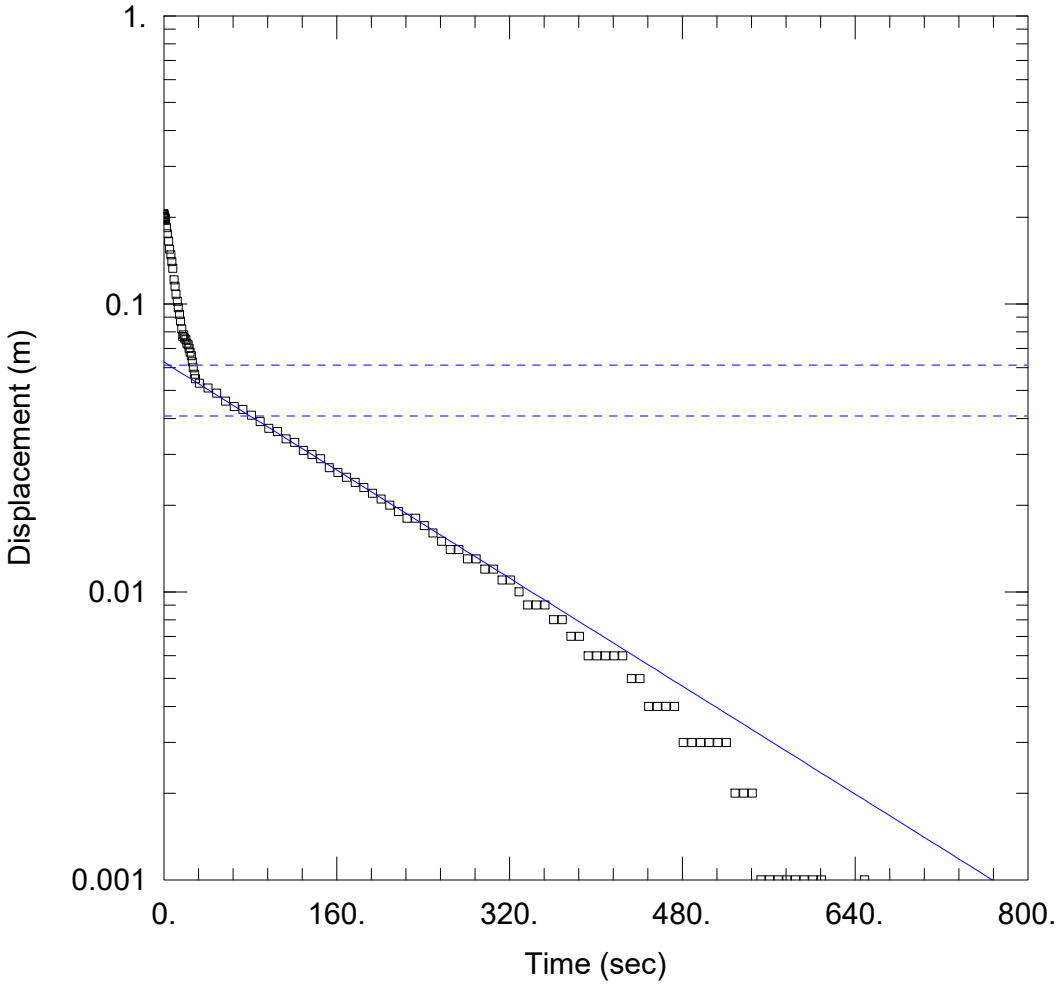
WELL DATA (LF-KP23-06)

Initial Displacement: 0.204 m
Total Well Penetration Depth: 0.75 m
Casing Radius: 0.013 m
Static Water Column Height: 0.74 m
Screen Length: 0.75 m
Well Radius: 0.033 m

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 3.772E-5 m/sec
y0 = 0.09824 m



WELL TEST ANALYSIS

Data Set: C:\...\LF-KP23-09_QA_JP.aqt
Date: 12/01/25 Time: 13:22:34

PROJECT INFORMATION

Company: WSP
Test Well: LK-KP23-09
Test Date: 05/09/2025

AQUIFER DATA

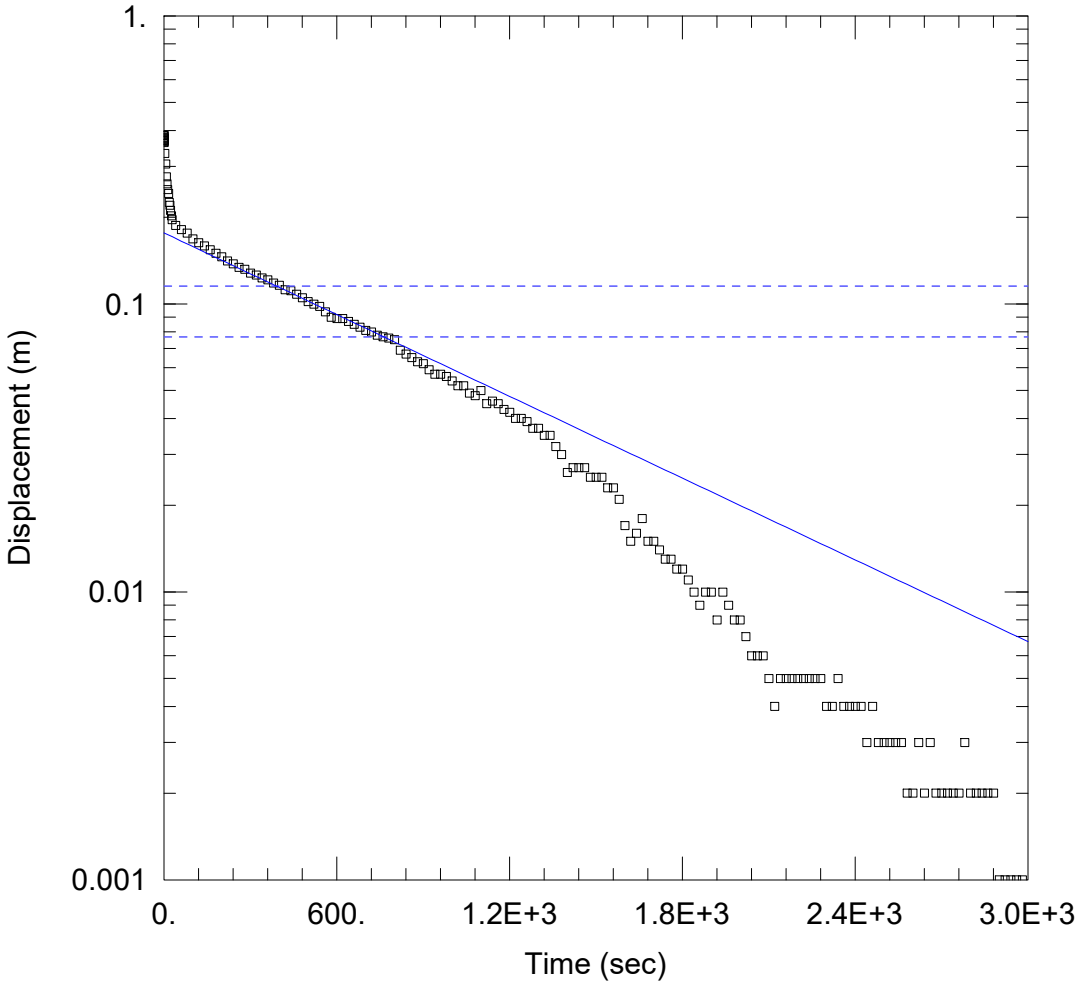
Saturated Thickness: 1.05 m Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (LF-KP23-09)

Initial Displacement: 0.204 m
Total Well Penetration Depth: 0.75 m
Casing Radius: 0.013 m
Static Water Column Height: 0.74 m
Screen Length: 0.75 m
Well Radius: 0.033 m

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 1.806E-6 m/sec
y0 = 0.06281 m



WELL TEST ANALYSIS

Data Set: C:\...\LF-KP23-11_QA_JP.aqt
Date: 12/01/25 Time: 13:23:23

PROJECT INFORMATION

Company: WSP
Test Well: LK-KP23-11
Test Date: 31/08/2025

AQUIFER DATA

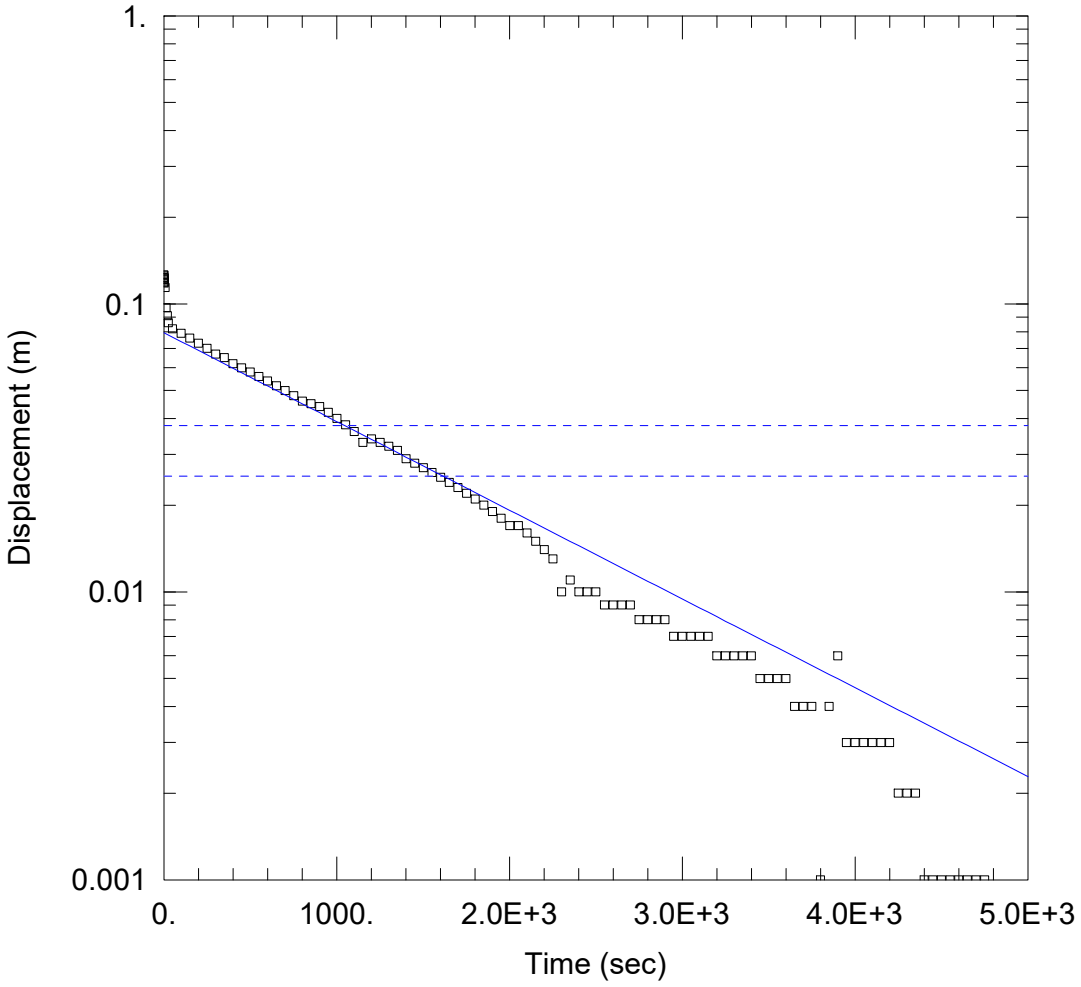
Saturated Thickness: 1.08 m Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (LF-KP23-11)

Initial Displacement: 0.384 m
Total Well Penetration Depth: 1.08 m
Casing Radius: 0.013 m
Static Water Column Height: 1.08 m
Screen Length: 0.75 m
Well Radius: 0.033 m

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 4.316E-7 m/sec
y0 = 0.1764 m



WELL TEST ANALYSIS

Data Set: C:\...\LF-KP23-13-QA_JP.aqt
Date: 12/01/25 Time: 13:24:08

PROJECT INFORMATION

Company: WSP
Test Well: LK-KP23-13
Test Date: 03/09/2025

AQUIFER DATA

Saturated Thickness: 0.33 m Anisotropy Ratio (Kz/Kr): 0.1

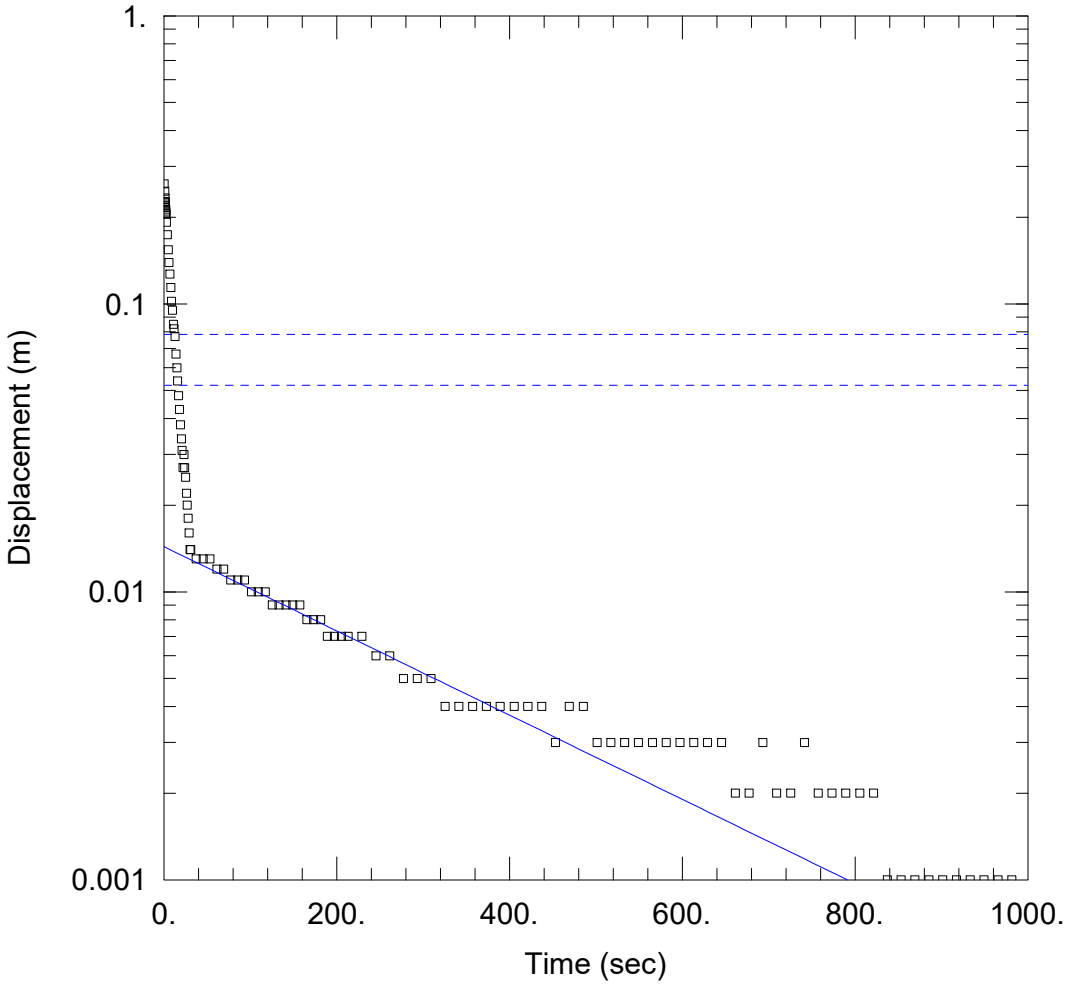
WELL DATA (LF-KP23-13)

Initial Displacement: 0.126 m
Total Well Penetration Depth: 0.75 m
Casing Radius: 0.013 m
Static Water Column Height: 0.63 m
Screen Length: 0.75 m
Well Radius: 0.033 m

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 3.782E-7 m/sec
y0 = 0.07937 m



WELL TEST ANALYSIS

Data Set: C:\...\MS-HWB-25-03 updated_QA_JP.aqt
Date: 12/01/25 Time: 13:27:05

PROJECT INFORMATION

Company: WSP
Test Well: MS-HWB-25-03
Test Date: 04/09/2025

AQUIFER DATA

Saturated Thickness: 0.97 m Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MS-HWB-25-03)

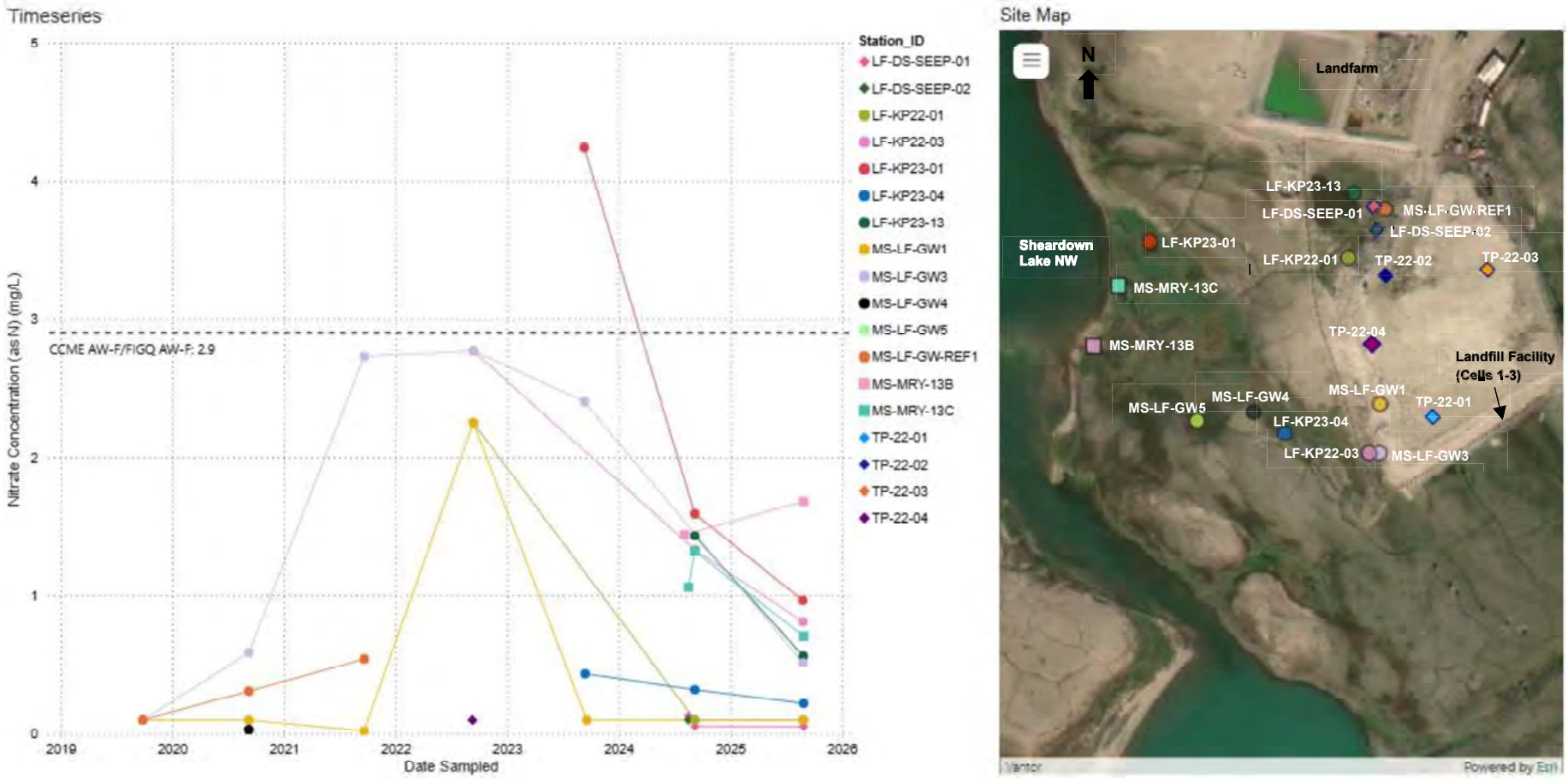
Initial Displacement: 0.261 m
Total Well Penetration Depth: 0.97 m
Casing Radius: 0.025 m
Static Water Column Height: 0.97 m
Screen Length: 0.97 m
Well Radius: 0.076 m

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice
K = 2.0E-6 m/sec
y0 = 0.01436 m

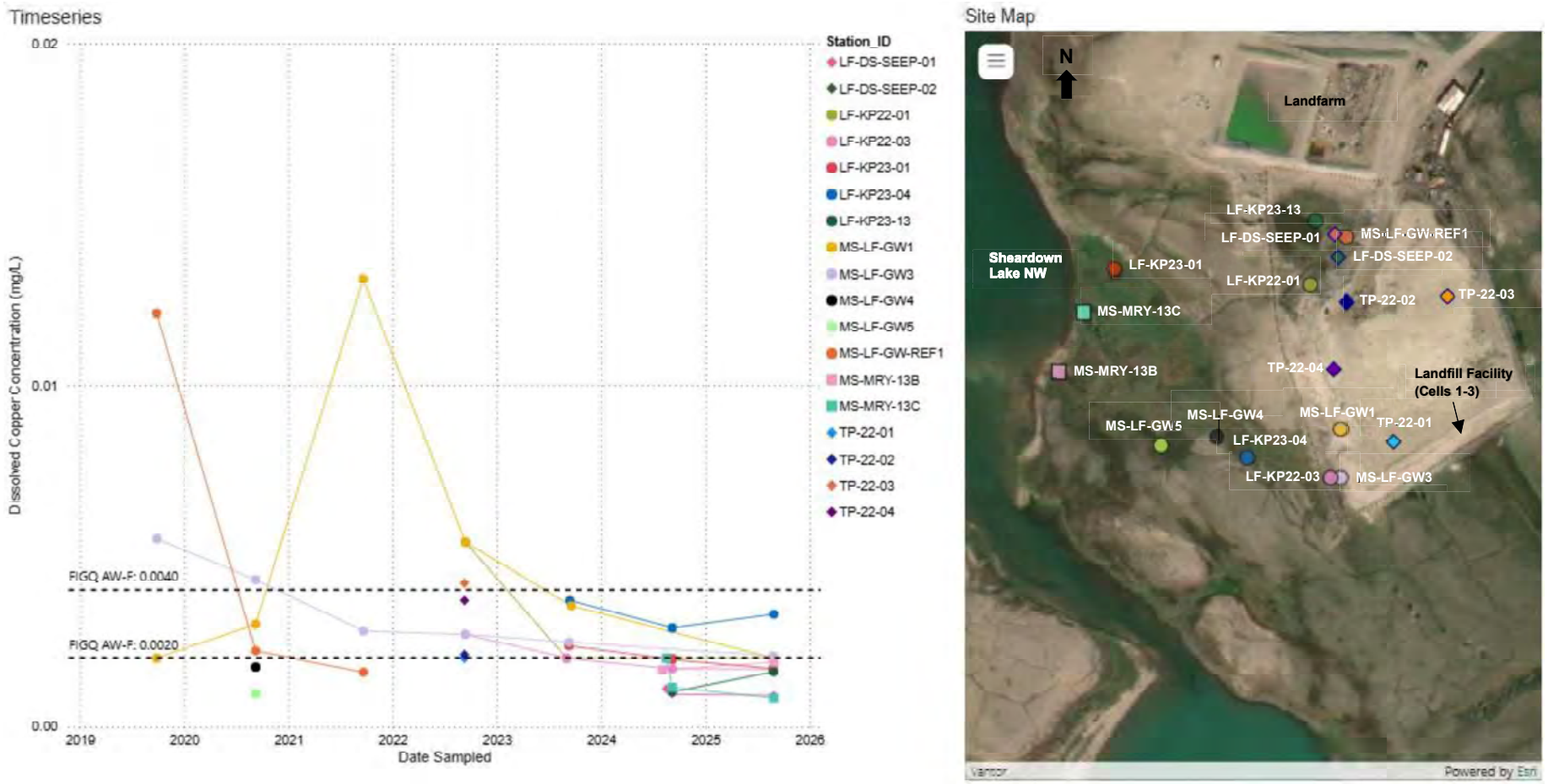
APPENDIX H

Timeseries



Appendix H-1: Nitrate Concentrations at Source and Downgradient Stations at the Landfill Facility

Notes: CCME AW-F = Canadian Council of Ministers of the Environment Freshwater Aquatic Life guideline; CSR = Contaminated Sites Regulation; FIGQ AW-F = Federal Interim Groundwater Quality Freshwater Aquatic Life guideline; NW = Northwest.
The nitrate Yukon CSR standard (400 mg/L) was not plotted in the timeseries.
Results below detection limits are showing at detection limit on the figure.
Square symbol = surface water station; Circle symbol = groundwater station (drive point piezometer, standpipe well without bentonite seal or standpipe well with bentonite seal), Diamond symbol = seep station
Downgradient stations: LF-KP23-01, LF-KP-23-04, MS-LF-GW4, MS-LF-GW5, MS-MRY-13B, MS-MRY-13C. Source stations: LF-DS-SEEP-01, LF-DS-SEEP-02, LF-KP22-01, LF-KP22-03, LF-KP23-13, MS-LF-GW1, MS-LF-GW3, MS-LF-GW-REF1, TP-22-01, TP-22-02, TP-22-03, TP-22-04.



Appendix H-2: Dissolved Copper Concentrations at Source and Downgradient Stations at the Landfill Facility

Notes: CCME AW-F: Canadian Council of Ministers of the Environment for the Protection of Freshwater Aquatic Life; CSR = Contaminated Sites Regulation; FIGQ AW-F = Federal Interim Groundwater Quality for the Protection of Freshwater Aquatic Life; NW = Northwest.

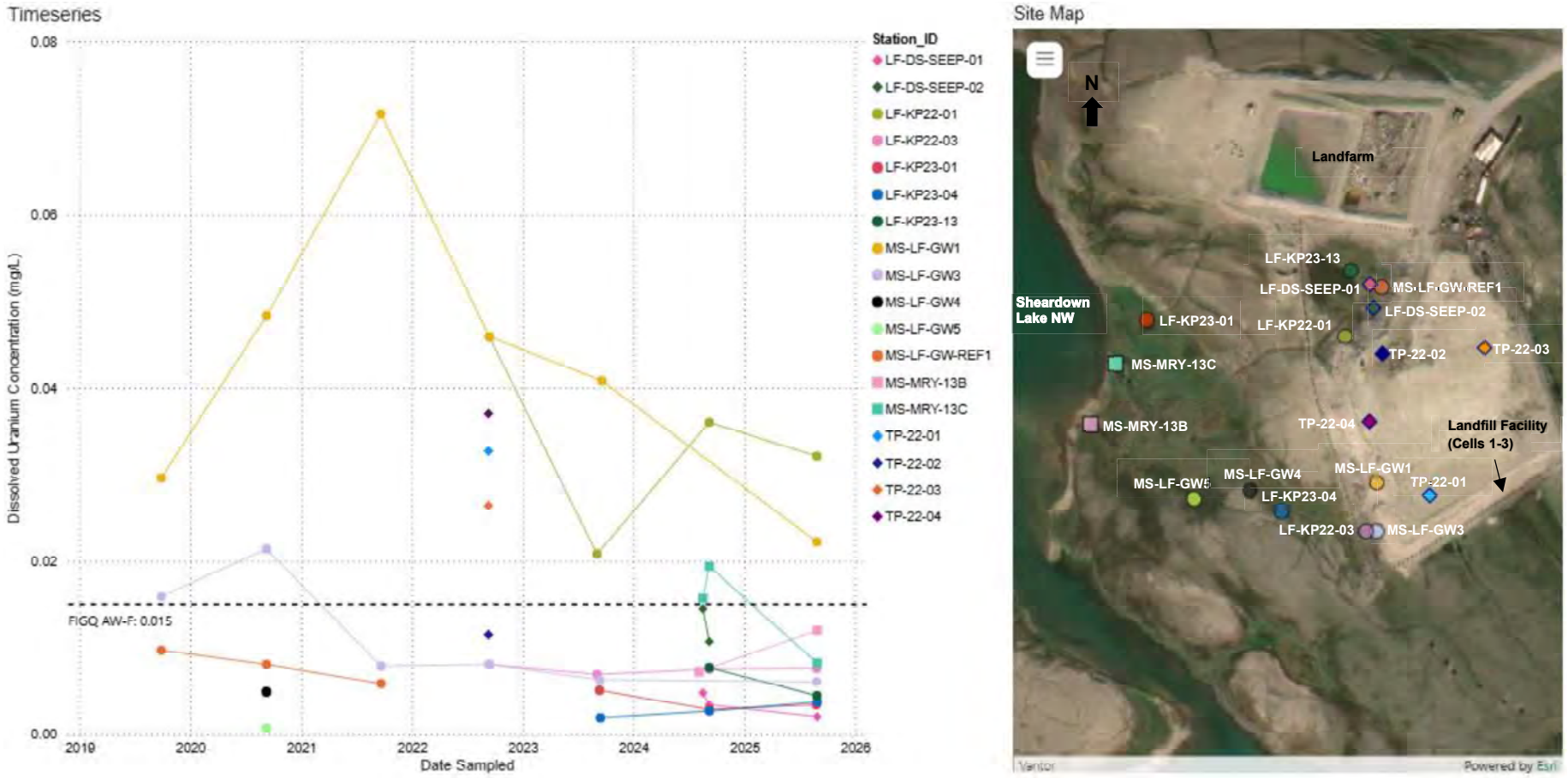
The dissolved copper FIGQ AW-F guideline is hardness dependent. The guideline is calculated based on the individual hardness value for each sample. There is no dissolved copper CCME AW-F guideline for surface water stations (ie, MS-MRY-13B and MS-MRY-13C). However, the total copper CCME AW-F guideline ranges from 0.0020 to 0.0040 mg/L.

The dissolved copper Yukon CSR standard (0.020 to 0.090 mg/L, hardness dependent) was not plotted in the timeseries.

Results below detection limits are showing at detection limit on the figure.

Square symbol = surface water station; Circle symbol = groundwater station (drive point piezometer or standpipe well without bentonite seal), Diamond symbol = seep station

Downgradient stations: LF-KP23-01, LF-KP-23-04, MS-LF-GW4, MS-LF-GW5, MS-MRY-13B, MS-MRY-13C. Source stations: LF-DS-SEEP-01, LF-DS-SEEP-02, LF-KP22-01, LF-KP22-03, LF-KP23-13, MS-LF-GW1, MS-LF-GW3, MS-LF-GW-REF1, TP-22-01, TP-22-02, TP-22-03, TP-22-04.



Appendix H-3: Dissolved Uranium Concentrations at Source and Downgradient Stations at the Landfill Facility

Notes: CCME AW-F: Canadian Council of Ministers of the Environment for Protection of Freshwater Aquatic Life; CSR = Contaminated Sites Regulation; FIGQ AW-F = Federal Interim Groundwater Quality for Protection of Freshwater Aquatic Life; NW = Northwest.
There are no dissolved uranium CCME AW-F guideline for surface water stations (ie, MS-MRY-13B and MS-MRY-13C). However, the total uranium CCME AW-F guideline is 0.015 mg/L.
The dissolved uranium Yukon CSR standard (3 mg/L) was not plotted in the timeseries.
Results below detection limits are showing at detection limit on the figure.
Square symbol = surface water station; Circle symbol = groundwater station (drive point piezometer or standpipe well without bentonite seal), Diamond symbol = seep station
Downgradient stations: LF-KP23-01, LF-KP-23-04, MS-LF-GW4, MS-LF-GW5, MS-MRY-13B, MS-MRY-13C. Source stations: LF-DS-SEEP-01, LF-DS-SEEP-02, LF-KP22-01, LF-KP22-03, LF-KP23-13, MS-LF-GW1, MS-LF-GW3, MS-LF-GW-REF1, TP-22-01, TP-22-02, TP-22-03, TP-22-04.

APPENDIX I

Heat maps

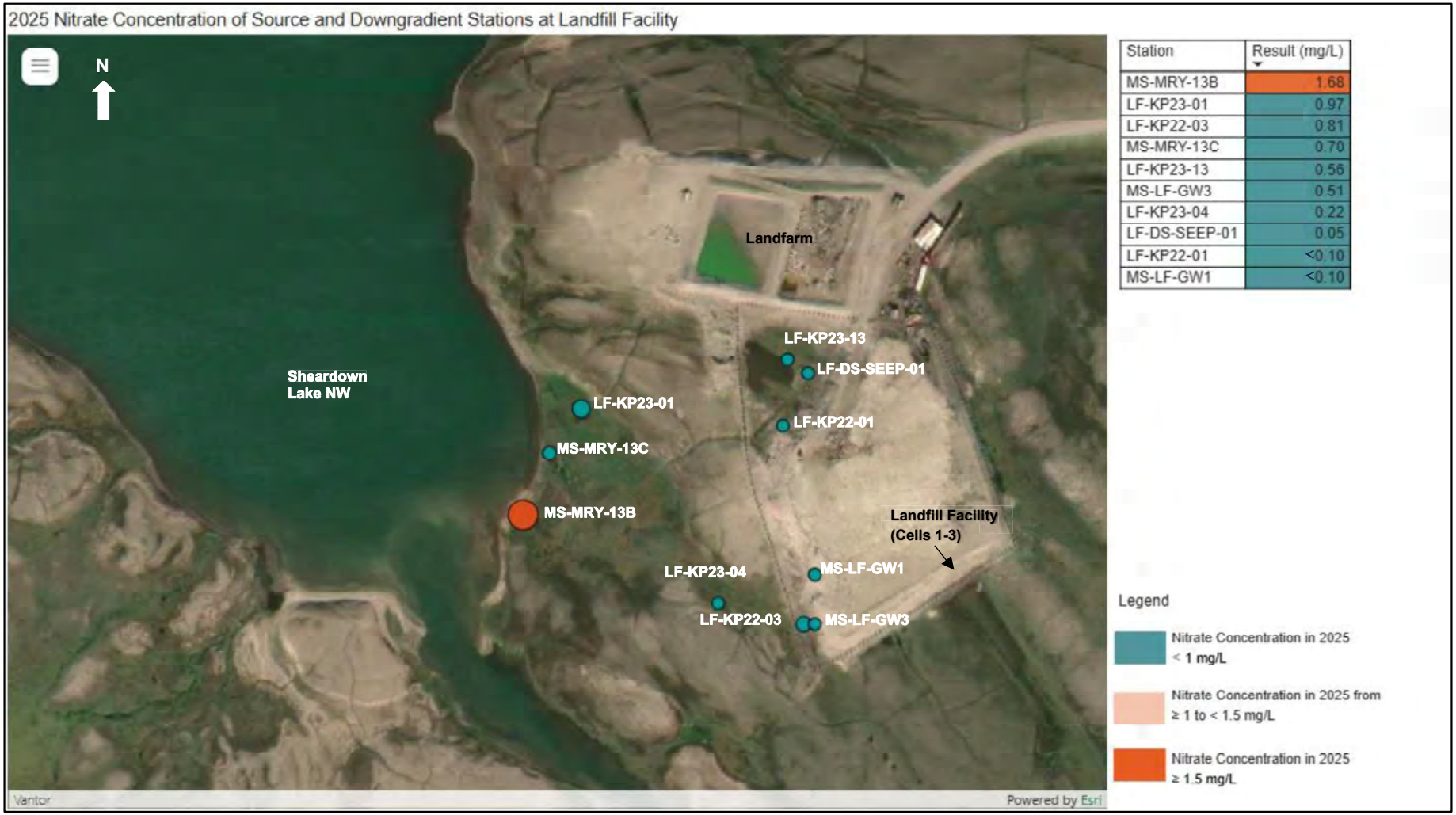


Figure I-1: Nitrate Concentration at Source, Proximal and Downgradient Stations at the Landfill Facility in 2025

Notes: Figure shows maximum concentration at each station in 2025.
Size and colour of the circle symbol indicate concentration distribution at the Landfill Facility.
Downgradient stations: LF-KP23-01, LF-KP-23-04, MS-MRY-13B, MS-MRY-13C. Source stations: LF-DS-SEEP-01, LF-KP22-01, LF-KP22-03, LF-KP23-13, MS-LF-GW1, MS-LF-GW3,
Surface water stations: MS-MRY-13B, MS-MRY-13B. Seep stations: LF-DS-SEEP-01. Groundwater stations: LF-KP22-01, LF-KP22-03, LF-KP23-01, LF-KP23-04, LF-KP23-13, MS-LF-GW1, MS-LF-GW3.



Figure I-2: Dissolved Copper Concentration at Source, Proximal and Downgradient Stations at the Landfill Facility in 2025

Notes: Figure shows maximum concentration at each station in 2025.
Size and colour of the circle symbol indicate concentration distribution at the Landfill Facility.
Downgradient stations: LF-KP23-01, LF-KP-23-04, MS-MRY-13B, MS-MRY-13C. Source stations: LF-DS-SEEP-01, LF-KP22-01, LF-KP22-03, LF-KP23-13, MS-LF-GW1, MS-LF-GW3,
Surface water stations: MS-MRY-13B, MS-MRY-13B. Seep stations: LF-DS-SEEP-01. Groundwater stations: LF-KP22-01, LF-KP22-03, LF-KP23-01, LF-KP23-04, LF-KP23-13, MS-LF-GW1, MS-LF-GW3.



Figure I-3: Dissolved Uranium Concentration at Source, Proximal and Downgradient Stations at the Landfill Facility in 2025

Notes: Figure shows maximum concentration at each station in 2025.
Size and colour of the circle symbol indicate concentration distribution at the Landfill Facility.
Downgradient stations: LF-KP23-01, LF-KP-23-04, MS-MRY-13B, MS-MRY-13C. Source stations: LF-DS-SEEP-01, LF-KP22-01, LF-KP22-03, LF-KP23-13, MS-LF-GW1, MS-LF-GW3,
Surface water stations: MS-MRY-13B, MS-MRY-13B. Seep stations: LF-DS-SEEP-01. Groundwater stations: LF-KP22-01, LF-KP22-03, LF-KP23-01, LF-KP23-04, LF-KP23-13, MS-LF-GW1, MS-LF-GW3.



Figure I-4: Chloride Concentration at Source, Proximal and Downgradient Stations at the Hazardous Waste Berm Facility in 2025

Notes: Figure shows maximum concentration at each station in 2025.
Size and colour of the circle symbol indicate concentration distribution at HWB Facility.
One downgradient station at the Hazardous Waste Berm Facility is MS-HWB-25-01. Therefore, proximal stations results are presented in the figure.
Downgradient station: MS-HWB-25-01. Proximal stations: HWB-KP22-04, HWB-KP22-05, HWB-KP23-03. Source stations: MS-HWB-GW5, HWB-KP22-03, HWB-KP23-01, HWB-KP23-02.
Groundwater stations: MS-HWB-GW5, HWB-KP22-03, HWB-KP22-04, HWB-KP22-05, HWB-KP23-01, HWB-KP23-02, HWB-KP23-03, MS-HWB-25-01.



Figure I-5: Naphthalene Concentration at Source, Proximal and Downgradient Stations at the Hazardous Waste Berm Facility in 2025

Notes: Figure shows maximum concentration at each station in 2025.
Size and colour of the circle symbol indicate concentration distribution at HWB Facility.
One downgradient station at the Hazardous Waste Berm Facility: MS-HWB-25-01. Therefore, proximal stations results are presented in the figure.
Downgradient station: MS-HWB-25-01. Proximal stations: HWB-KP22-04, HWB-KP22-05, HWB-KP23-03. Source stations: MS-HWB-GW5, HWB-KP22-03, HWB-KP23-01, HWB-KP23-02.
Groundwater stations: MS-HWB-GW5, HWB-KP22-03, HWB-KP22-04, HWB-KP22-05, HWB-KP23-01, HWB-KP23-02, HWB-KP23-03, MS-HWB-25-01.



Figure I-6: Petroleum Hydrocarbon (PHC) Fraction F2 (C10-C16) Concentration at Source, Proximal and Downgradient Stations at the Hazardous Waste Berm Facility in 2025

Notes: Figure shows maximum concentration at each station in 2025.
Size and colour of the circle symbol indicate concentration distribution at HWB Facility.
Only one downgradient station at the Hazardous Waste Berm Facility is MS-HWB-25-01. Therefore, proximal stations results are presented in the figure.
One downgradient station at the Hazardous Waste Berm Facility: MS-HWB-25-01. Therefore, proximal stations results are presented in the figure.
Downgradient station: MS-HWB-25-01. Proximal stations: HWB-KP22-04, HWB-KP22-05, HWB-KP23-03. Source stations: MS-HWB-GW5, HWB-KP22-03, HWB-KP23-01, HWB-KP23-02.
Groundwater stations: MS-HWB-GW5, HWB-KP22-03, HWB-KP22-04, HWB-KP22-05, HWB-KP23-01, HWB-KP23-02, HWB-KP23-03, MS-HWB-25-01.



Figure I-7: Nitrate Concentration at Source, Proximal and Downgradient Stations at the Hazardous Waste Berm Facility in 2025
Notes: Figure shows maximum concentration at each station in 2025.
Size and colour of the circle symbol indicate concentration distribution at HWB Facility.
One downgradient station at the Hazardous Waste Berm Facility: MS-HWB-25-01. Therefore, proximal stations results are presented in the figure.
Downgradient station: MS-HWB-25-01. Proximal stations: HWB-KP22-04, HWB-KP22-05, HWB-KP23-03. Source stations: MS-HWB-GW5, HWB-KP22-03, HWB-KP23-01, HWB-KP23-02.
Groundwater stations: MS-HWB-GW5, HWB-KP22-03, HWB-KP22-04, HWB-KP22-05, HWB-KP23-01, HWB-KP23-02, HWB-KP23-03, MS-HWB-25-01.

APPENDIX J

Thermistor Plots

Thermistor MS-LF-TH-01: Ground temperature vs time at different depths

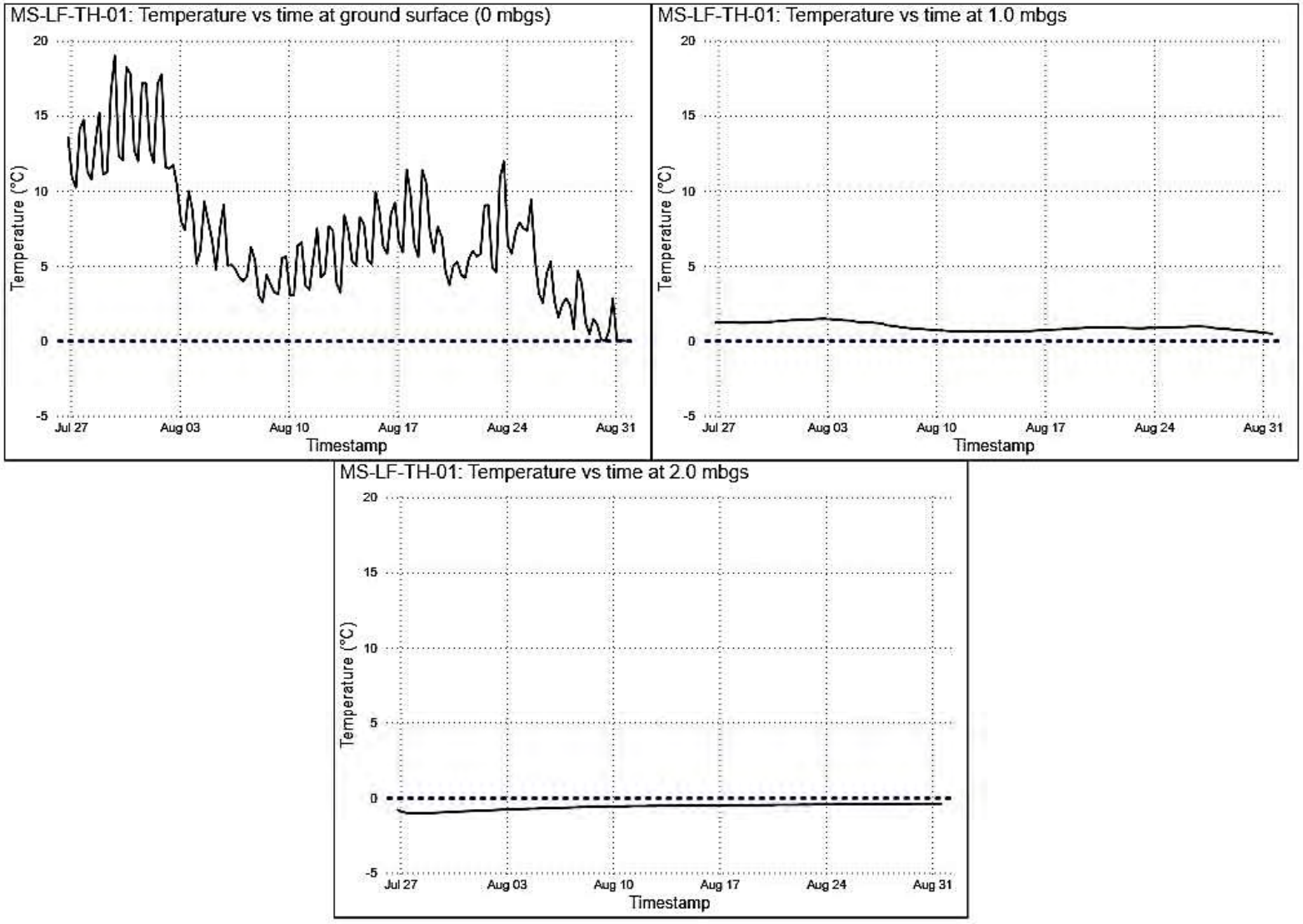
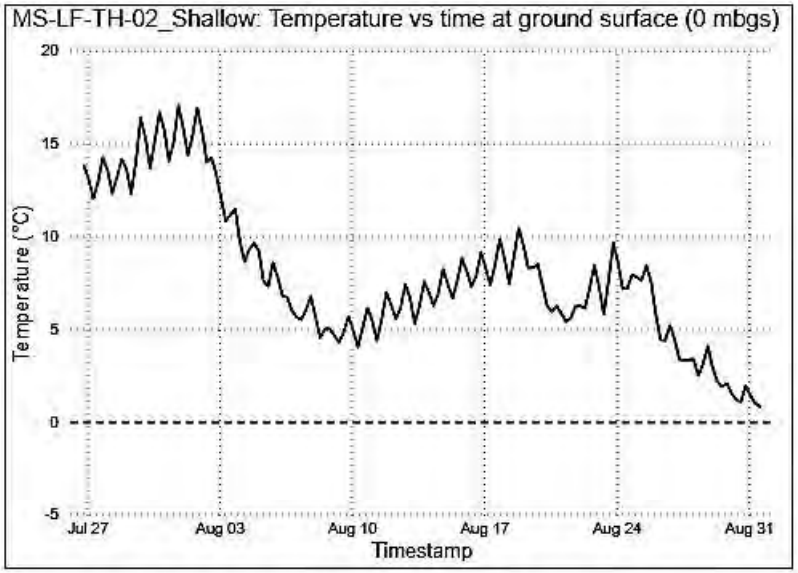
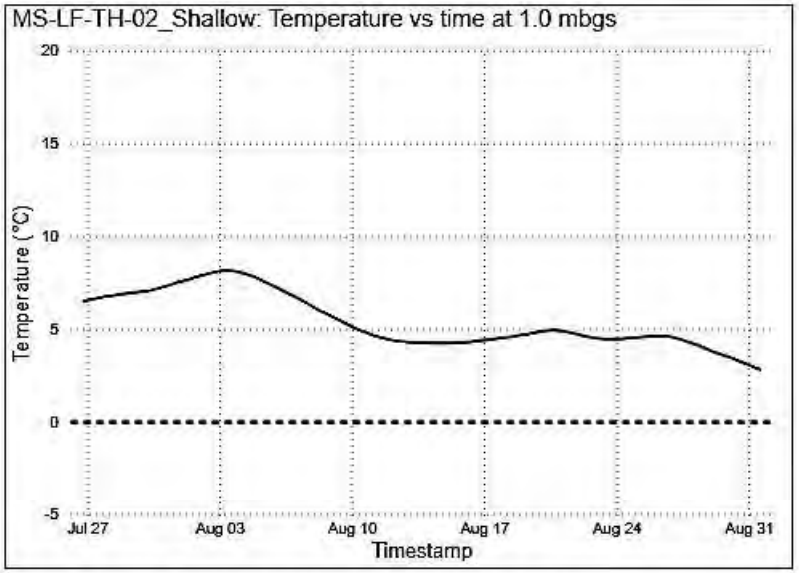
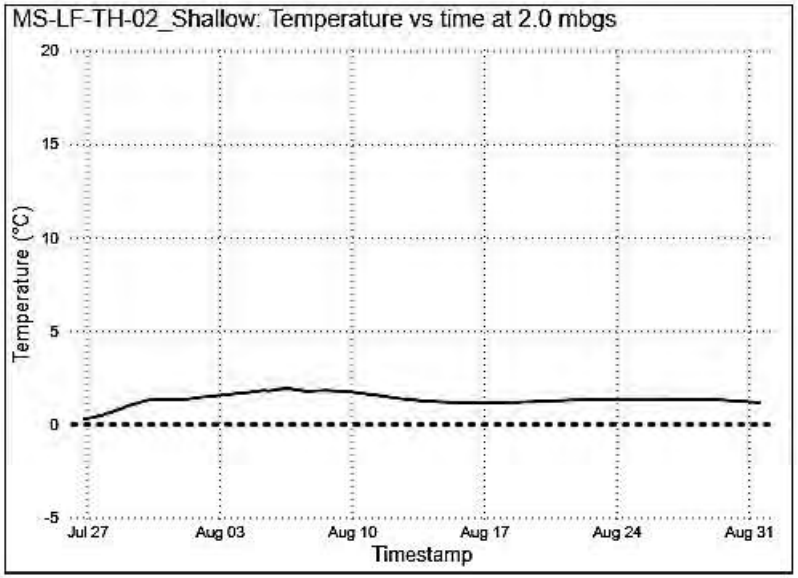


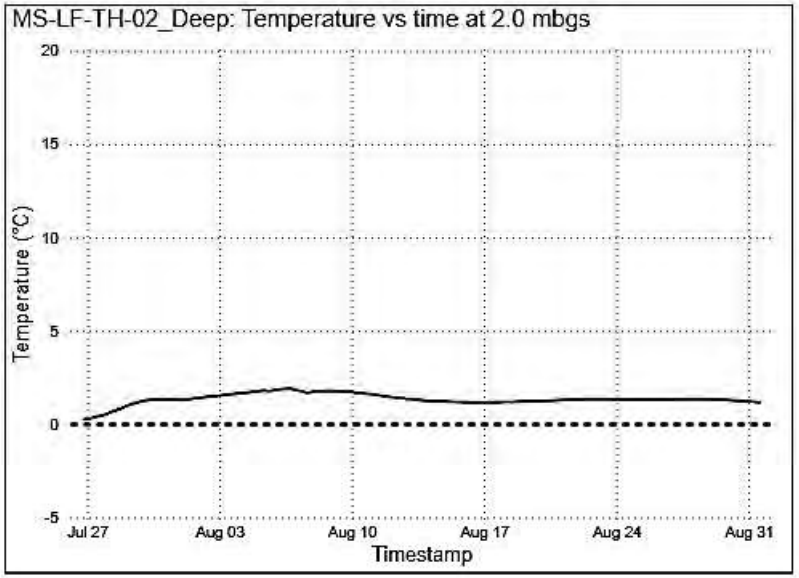
Figure J-1: Thermistor MS-LF-TH-01 – Ground temperature vs time at different depths.

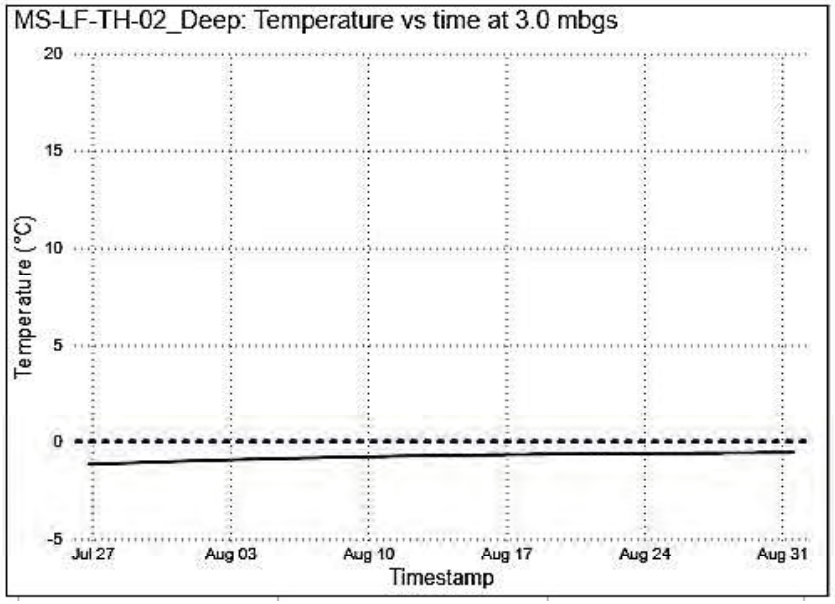
Thermistor MS-LF-TH-02: Ground temperature vs time at different depths











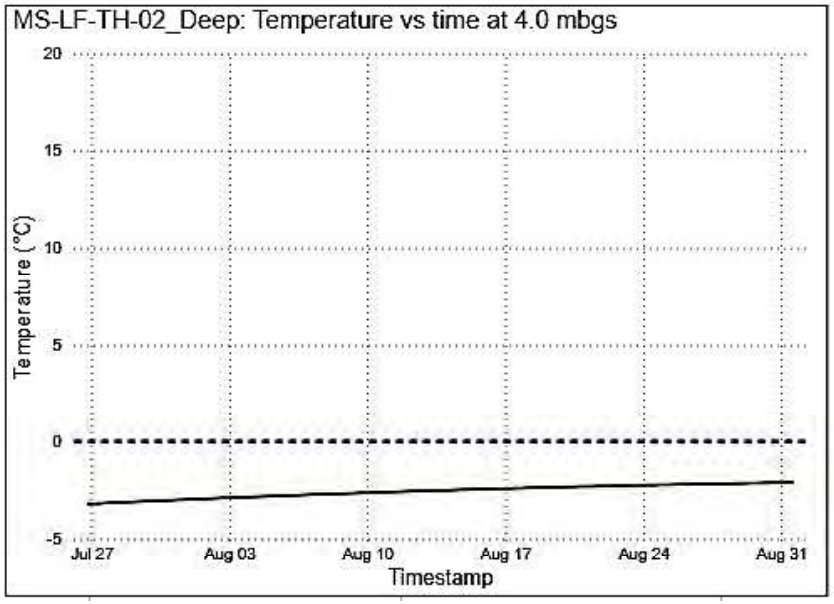


Figure J-2: Thermistor MS-LF-TH-02 – Ground temperature vs time at different depths.

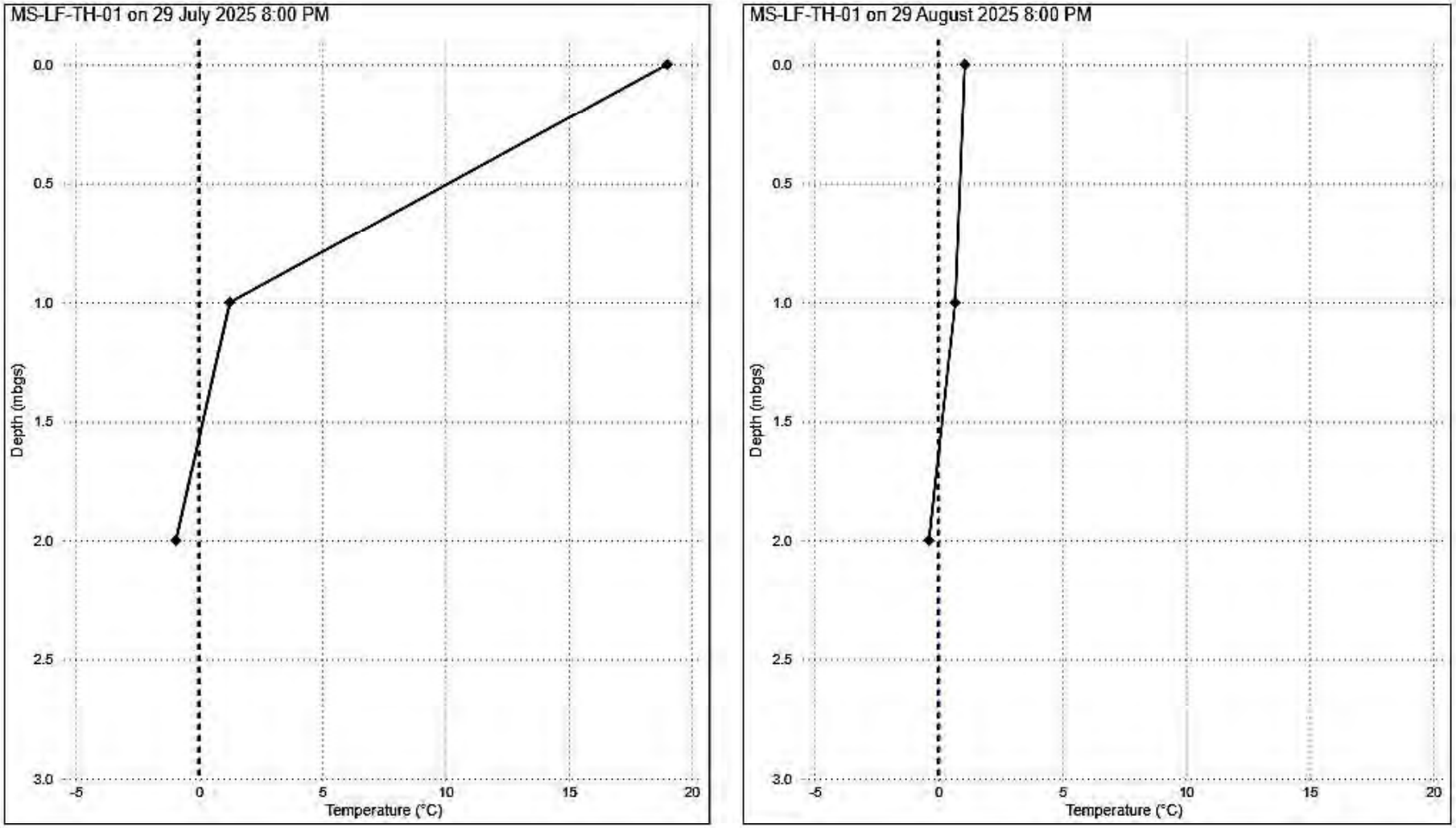


Figure J-3: Thermistor MS-LF-TH-01 – Ground temperature vs depth on July 29, 2025 and August 29, 2025.

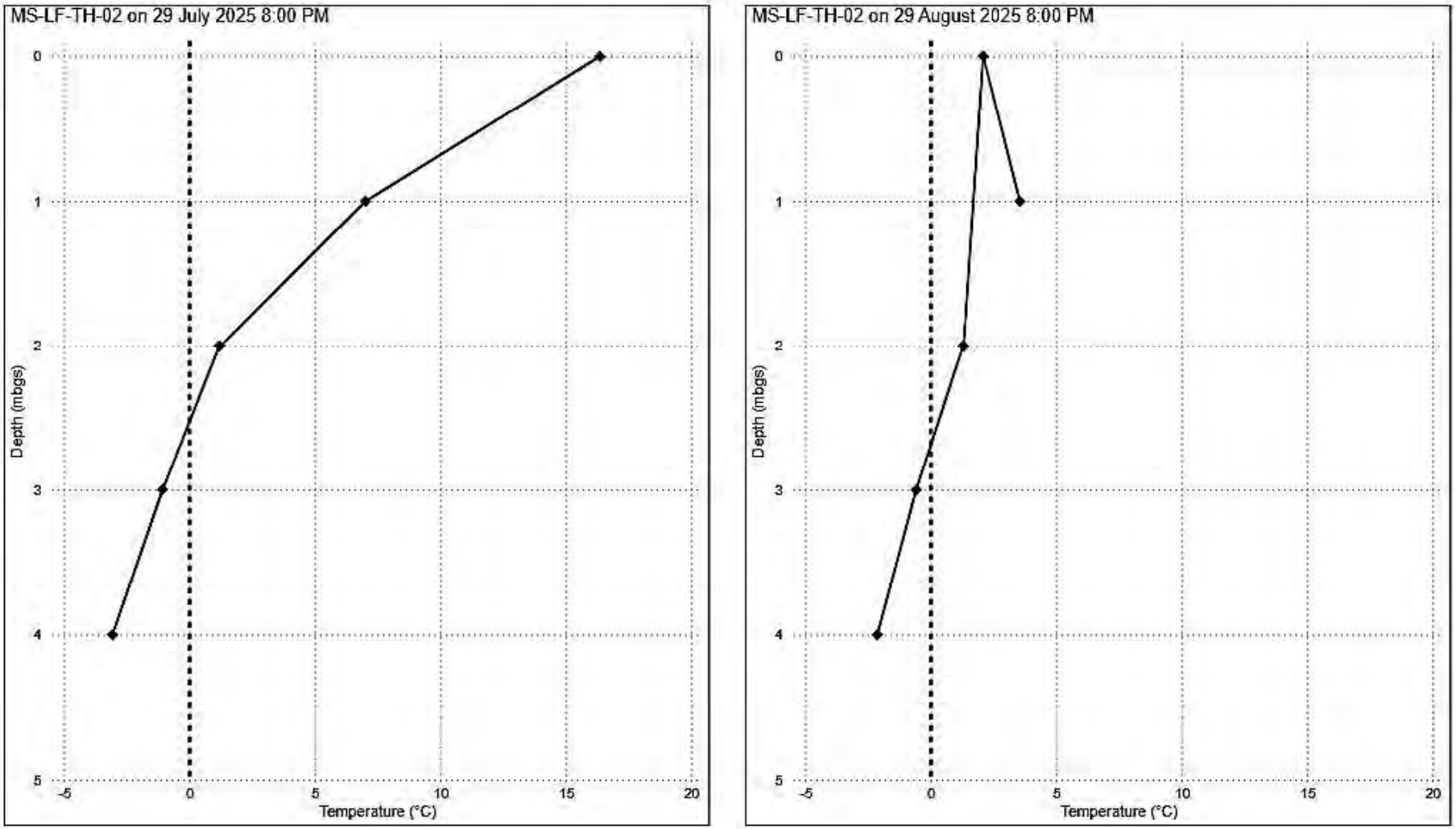


Figure J-4: Thermistor MS-LF-TH-02 – Ground temperature vs depth on July 29, 2025 and August 29, 2025.



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