MANITOBA ENVIRONMENT AND CLIMATE CHANGE

OAM Subprogram – Sherridon Mine Site 2022 Water Quality Summary Report

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EXECUTIVE SUMMARY

Kontzamanis Graumann Smith MacMillan Inc. (KGS Group) was contracted by the Orphaned and Abandoned Mines (OAM) Program of Manitoba Environment and Climate Change (MECC) for engineering services for the management of the Sherridon Mine Site. The 2022 scope of services for the Sherridon Mine Site included surface water quality monitoring on a biweekly basis during open water season within the following water bodies: Sherlett Creek, Camp Lake and Camp Lake discharge, Mixing Zone within Cold Lake, and Cold Lake (part of Kississing Lake). Additionally, one groundwater monitoring and sampling event at 12 on-site monitoring wells in fall and additional Sherlett Creek sampling occurring during three sampling trips in fall was included in the 2022 monitoring program.

This report describes and provides the results of the 2022 water quality monitoring program for the project. The 2022 water quality monitoring program was the first year of monitoring following the completion of construction activities in August 2021, and represents the fourth full year of Sherlett Creek flow through Camp Lake in the absence of lime treatment.

The Sherridon Reclamation Project was initiated in 2006 with the commissioning of a reclamation plan and associated design for the site by the Province of Manitoba, which included four phases. Before reclamation was initiated, a baseline environmental study was performed in 2008 to assess site conditions prior to the start of reclamation activities, in areas affected and unaffected by the historical discharge from Camp Lake. From 2009 to 2012, reclamation activities commenced at the site and consisted of the relocation of 47 hectares of Sherridon tailings to Camp Lake, and the diversion of Sherlett Creek around Camp Lake to enable the deposition of tailings. From 2012 to 2021, reclamation activities involved the removal of remnant mine waste to decrease acid-generating sources contributing to the degradation of water quality within Camp Lake, as well as monitoring the water quality within Camp Lake to target further reclamation works. Batch lime treatments were used to neutralize pH and manage water quality until August 2018, when flow from Sherlett Creek was reestablished. Water quality modelling completed for the Sherridon Mine Site projects that water quality within Camp Lake will approach that of the inflowing Sherlett Creek over a three to four year period. The model was based on several input terms, including precipitation and flow inputs, which can be variable and may affect the accuracy of the timeline.

Surface water quality in Manitoba is evaluated using the Manitoba Water Quality Standards, Objectives, and Guidelines (MWQSOG), which is composed of Tier I standards, Tier II objectives, and Tier III guidelines. For the Sherridon Mine Site, the water sampling results are compared against the MWQSOG Tier II objectives and Tier III guidelines. The water sampling results for Camp Lake and the Camp Lake discharge are also compared to the Camp Lake Water Quality Performance Objectives (CLWQPO), which were developed within the Adaptive Management Plan (AMP) that governs the post-construction and post-closure periods of the reclamation project. The CLWQPO represent proposed targets that have been estimated to be achieved within three to four years post-construction. Sherlett Creek and Cold Lake water sampling results are compared against the MWQSOG Tier II objectives and Tier III guidelines.

Since monitoring began in 2017, distinct correlations were observed between concentrations of key water quality parameters in Camp Lake and the amount of precipitation, and subsequently, flow through Sherlett Creek. Compared to the last 10 years, the 2021-2022 water generating year was the driest year and the

second consecutive year of lower-than-average precipitation in the region. The 2022 open water sampling season was also deficient in heavy precipitation events. Consequently, the flow through Sherlett Creek was negligible from late July to the end of open water monitoring in mid-late October.

In 2022, a condition was present on Camp Lake where the water level on the lake was artificially raised due to an unannounced installation of stop logs at the Camp Lake discharge weir, which occurred sometime after March 18, 2022 and prior to the start of open water season sampling on May 31, 2022. In combination with the reduced precipitation relative to previous years, the installation of the stop logs resulted in reduced inflows from Sherlett Creek into Camp Lake. Between July 12 and July 25, 2022, additional stop logs are known to have been placed at the discharge weir. The additional stop logs ended the discharge flow over the Camp Lake weir.

Sherlett Creek represents the background surface water quality before the creek inflows into Camp Lake. Sherlett Creek is essential to the water quality within Camp Lake for several reasons including the continuous supply of alkalinity for neutralizing pH within Camp Lake. In 2022, field pH levels and alkalinity concentrations at the background monitoring station on Sherlett Creek (SC-1) were consistent with previous years. As creek flows became reduced in late summer, field pH levels declined slightly whereas alkalinity concentrations increased slightly. Total aluminum and total iron concentrations were similar to previous years and were below MWQSOG Tier III guidelines except for iron concentrations measured up to 0.53 mg/L during the period of low flow conditions between August and October (MWQSOG Tier III guideline is 0.30 mg/L). Total suspended solids (TSS) and turbidity results in 2022 showed no seasonal increase during low flow. Consistent since 2017, total cadmium, copper, and zinc concentrations were above their respective MWQSOG Tier II objectives for most of the 2022 open water sampling events. Overall, the metal concentrations at all Sherlett Creek stations were lower in 2022 relative to 2021, suggesting that the decreased flows in 2022 did not directly result in increased metal concentrations within the creek.

An important factor to consider in understanding water quality in Camp Lake and its potential effect on water quality in Cold Lake is the magnitude of inflow from Sherlett Creek entering the lake. The winter sampling event completed on March 18, 2022 was the first winter sampling event where water quality did not substantially improve under ice cover, which is attributed to the substantially reduced flows from Sherlett Creek observed in late summer through to fall of 2021. The result of the higher concentrations in winter were starting concentrations in spring that were similar to or slightly higher than concentrations measured during previous springs for many of the key total metals, including aluminum, cadmium, copper, and zinc. A comparison of metal concentrations between winter 2021/2022 and spring 2022 showed that, with the exception of iron, all key metals increased, but the increases were generally lower than previous years, which suggests that runoff had less of an effect on metal concentrations during spring melt. From spring to mid-summer, concentrations of TSS, turbidity, and the key total metals decreased due to maintained flow from Sherlett Creek into Camp Lake until late July, after which concentrations plateaued or slightly increased until the end of open water sampling. Field pH and turbidity measurements, as well as total iron concentrations, were above the CLWQPO during all sampling events, whereas TSS remained well below the CLWQPO. Total aluminum, cadmium, copper, and zinc were above the CLWQPO in spring until mid-August to early-September, after which they dropped below the CLWQPO and remained below until the end of open water sampling.

Discharge flow over the Camp Lake weir ended by the time of the July 26, 2022 monitoring event due to another unannounced addition of stop logs. As a result of the lack of discharge flow, water quality within Cold Lake could not have been affected by discharge water quality on and after July 26, 2022. Stations included in the Cold Lake mixing zone all had field pH values within the MWQSOG Tier III guideline range throughout open water sampling, while stations located outside the mixing zone varied with some values trending below the Tier III guideline in July to September. Alkalinity concentrations at all Cold Lake stations were maintained at a consistent level throughout 2022. TSS concentrations were also consistent throughout Cold Lake and measured well below the Tier II chronic objective. In spring, turbidity levels in the mixing zone appeared to be affected by the discharge; however, the higher levels did not affect any of the Cold Lake stations outside the mixing zone. Total iron, cadmium, copper, and zinc within the mixing zone were generally higher in spring (compared to summer/fall), indicating influence from the discharge. Based on comparison to measured background concentrations for the project, only total copper appeared to have an effect on Cold Lake water quality beyond the mixing zone, and this effect was limited to spring and select sampling stations CL-2, CL-4, and CL-5.

Groundwater samples were collected from 11 of the 12 wells on site during the fall sampling event. This was the second time that the groundwater monitoring wells have been sampled since installation in January and February 2022. The wells located in the wetland area adjacent to Sherlett Creek, in the vicinity of the historic East Mine Workings Area, showed water quality parameters potentially indicative of exposure to naturally mineralized zones or potential mine waste, with the remaining wells to the north of Sherlett Creek and southwest along the bedrock ridge showing freshwater indicators. Elevated metal concentrations were observed in most of the monitoring wells; however, no pattern to the distribution could be identified.

The detailed sampling program on Sherlett Creek included sampling of five additional stations (SC-2 to SC-6) during the last three open water monitoring events in fall. The sampling stations are located upstream of background monitoring station SC-1, with SC-6 located at the mouth of Sherlett Lake. Previous sampling events on Sherlett Creek have indicated that there is a souce of metal contamination that enters the creek downstream of SC-4, and that the highest concentrations are present during periods of lower flows. In 2022, a similar pattern of higher concentrations downstream of SC-4 was noted.

One of the primary objectives of the Sherridon Reclamation Project is to prevent further degradation of Kississing Lake water quality related to runoff and discharge of mining impacted water from the former Sherridon Mine Site. During the 2022 open water season, the mean concentrations of metals in the Camp Lake discharge were lower than concentrations measured in September 2008 (between 63% and 92% lower), and the mean discharge pH was higher (pH of 6.8 compared to 3.4) relative to September 2008.

Recommendations for 2023 include continued environmental monitoring and capturing water levels on Camp Lake, as per the requirements of the AMP. No reduction in the sampling frequency is proposed for the 2023 monitoring year.

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STATEMENT OF LIMITATIONS AND CONDITIONS

Limitations

This report has been prepared for Manitoba Environment and Climate Change in accordance with the agreement between KGS Group and Manitoba Environment and Climate Change (the "Agreement"). This report represents KGS Group's professional judgment and exercising due care consistent with the preparation of similar reports. The information, data, recommendations and conclusions in this report are subject to the constraints and limitations in the Agreement and the qualifications in this report. This report must be read as a whole, and sections or parts should not be read out of context.

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1.0 INTRODUCTION

Kontzamanis Graumann Smith MacMillan Inc. (KGS Group) was contracted by the Orphaned and Abandoned Mines (OAM) Program of Manitoba Environment and Climate Change for engineering services for the management of the Sherridon Mine Site under the OAM Subprogram (Stage 2 RFP #6629-2021-22). This report details the environmental monitoring conducted during the 2022 open water season at the Sherridon Mine Site (the site).

The Sherridon Mine Site is located on the east shore of Camp Lake, approximately 65 km northeast of Flin Flon, Manitoba (Figure 1). The copper-zinc mine was operated by Sherritt Gordon Mines between 1928 and 1952. The communities of Cold Lake and Sherridon developed in the early 20th century in conjunction with development and operation of the Sherridon Mine. The mine site is since abandoned and is now the responsibility of the Province of Manitoba.

The Sherridon Mine Site underwent a site-wide reclamation that consisted of the relocation of 47 hectares of land-based tailings into Camp Lake commencing in 2009. The final reclamation activities were completed in August 2021. The project is now in post-reclamation phase. The 2022 environmental monitoring year is the first year of water sampling in the post-reclamation phase and builds on the water quality monitoring completed at the site since 2017.

1.1 Scope of Work

The scope of services to satisfy the conditions outlined in KGS Group Technical Proposal No. 20-000-1991 (dated February 12, 2021) and through subsequent Change Orders for the Sherridon Mine Site, are listed as follows:

- Environmental Monitoring (starting in 2022 at spring melt):
  - Water quality monitoring on a biweekly basis during open water season at four separate areas identified in the Terms of Reference: Sherlett Creek (background water quality), Camp Lake, Camp Lake discharge and Mixing Zone within Cold Lake, and Cold Lake.
  - Comparison of water quality results to the Manitoba Water Quality Standards Objectives and Guidelines (MWQSOG).
  - One groundwater monitoring and sampling program (in fall) at 12 monitoring wells on site.
  - Water sampling at additional stations on Sherlett Creek on the following dates: September 20, October 4, and October 18, 2022.
- Preparation of an annual water quality report to include all water sampling results in tabulated format, a discussion of the results relative to historical data, recommendations for future monitoring, and GPS coordinates for each sampling location.

2.0 SITE INFORMATION

2.1 Site Location

The Sherridon Mine Site (the site), is located approximately 65 km northeast of Flin Flon, Manitoba, on the east shore of Camp Lake. The communities of Cold Lake and Sherridon were developed in conjunction with the development and operation of the mine and are still populated despite the closure of the mine in 1952. The communities are accessed by the all-weather road Highway 800, which is an approximately 80 km stretch north from Provincial Trunk Highway (PTH) 10.

The post-reclamation water monitoring program includes the sampling of three distinct water bodies:

- Camp Lake (tailings lake)
- Cold Lake (arm of larger Kississing Lake)
- Sherlett Creek

A site plan for the Sherridon Mine Site is included as Figure 1.

2.2 Background Information

2.2.1 PHASING OF RECLAMATION PROJECT

The Sherridon Reclamation Project was initiated in 2006 with the commissioning of a reclamation plan and associated design for the site by the Province of Manitoba. The overall project commenced with pre-planning investigations followed by design study and selection of a recommended approach for long-term site management. The reclamation plan was the product of a multi-step design and approval process, in which several potentially applicable reclamation approaches were evaluated and compared, leading to recommendation of sub-aqueous disposal as the preferred approach (AMP, 2022).

The overall reclamation project includes four phases, which are described as follows (AMP, 2022):

Pre-Construction Phase – A baseline environmental study was conducted to document environmental conditions in Kississing Lake in the 2008 open water season immediately before reclamation work commenced. The pre-construction study was designed to document conditions at that time, identifying ecologically appropriate reference areas in Kississing Lake that have not been affected by the historical discharge from Camp Lake and therefore enabling quantitative assessment of the effects to date and geographic extent of the effects.

Construction Phase – The on-site reclamation activities commenced in 2009 and were completed in 2021. The reclamation activities consisted of relocating the majority of the 47 hectares of acid-generating mine waste to Camp Lake, the majority of which was completed between 2009 and 2012. Construction of a cofferdam at the inlet of Sherlett Creek to Camp Lake was required to divert the creek around the lake (through a constructed drainage channel) to enable the tailings disposal to occur. Batch lime treatments were used to manage water quality in Camp Lake after the lake was refilled in 2013.

From 2012 to 2021, construction activities focused on eliminating the pockets of remnant mine waste that remained on-site and continued to contribute to the degradation of water quality within Camp Lake. Monitoring was instrumental during this phase to identify issues associated with the remaining adjacent mine waste and to target further reclamation work. Measuring water quality within Camp Lake was also important in determining the suitability of discharging the treated water from Camp Lake into Cold Lake. Controlled discharges from Camp Lake first began in 2016 and continued until the last batch application of lime in late winter 2018. Flow from Sherlett Creek was reestablished in August 2018, which eliminated the need for batch lime treatments.

Post-Construction Phase – The post construction phase is estimated to span from 2022 to 2026 on the basis of water quality modelling completed for the Sherridon Mine Site by SENES (2008). The water quality model estimated that water quality in Camp Lake will approach that of the inflowing Sherlett Creek over a 3-4 year period after the completion of site reclamation activities (SENES, 2008). The inputs to the model incorporated several factors, including precipitation (hydraulic flows) and background water quality. Therefore, the timeline for the post-construction phase may be subject to change based on seasonal variations and/or unforeseen alterations. The 2022 water quality monitoring year was the first year that the site was in post-construction.

Final Closure – Final closure of the site will be completed following demonstration of stable operation of the remediated site.

2.2.2 SUMMARY OF RECLAMATION WORKS

An up-to-date chronology of reclamation work at Sherridon Mine Site as detailed by DJRC (2022) is provided below:

2009 – 2012 – The bulk of the 7 million tonnes of acid-generating mine waste in the Sherridon tailings pile was relocated to the adjacent Camp Lake over the years from 2009 to 2012. The lake was refilled with water from Kississing Lake in 2013. Since remaining mine waste continued to contribute to water quality degradation in Camp Lake, water treatment was used to manage water quality in the lake until Sherlett Creek flow was returned to the lake. Water treatment plant (WTP) sludge that had been deposited in the North basin earlier in the reclamation project was a further contributor to water quality degradation.

2016 – The summer 2016 construction program removed the WTP sludge from the North basin to Trap Lake (located east of Camp Lake). Mill site and causeway waste materials were placed in Camp Lake.

2017 – No reclamation work was completed in 2017.

2018 – Work completed in 2018 included:

- Removal of mine waste adjacent to the access road in a former ore load-out area;
- Construction of a dam to isolate a Glory Hole adjacent to the South basin, where there was the potential for exchange of acid mine drainage (AMD) influenced groundwater with the South basin;
- Earthworks reinforcement and overflow spillway construction at the outlet of Fox Lake, which periodically flows south into the East basin of Camp Lake and contains submerged tailings material;
- Identification and removal of mine waste on the discharge pathway between Fox Lake and Camp Lake;
- Identification and partial removal of remnant mine waste along the north shore of the East basin of Camp Lake;

- Removal of tailings berm (constructed of mine waste) across the inlet to Camp Lake from Sherlett Creek;
- Notching of the cofferdam at the inlet of Camp Lake to restore flows of Sherlett Creek into and though Camp Lake beginning August 12, 2018; and,
- Installation of flow limitation plates on the inlets of the diversion channel culverts to split Sherlett Creek flow between Camp Lake (normally 85% of flow) and Portage Lake/lower Sherlett Creek (normally 15% of flow).
    - Note: The splitting of flows was a change from the originally proposed project design, which involved routing the entire flow of Sherlett Creek through Camp Lake. The change was initiated as it was documented that fish species had started to use the constructed diversion channel, which prompted the local community to request that flow be maintained through the diversion upon completion of the project.

A total of approximately 15,000 m^3 of mine waste was removed in 2018.

2019 – No reclamation work was completed in 2019.

2020 – Work in 2020 focused on removal of remnant mine waste along the north shore of the East basin of Camp Lake and around the peninsula separating the East basin from the North basin of Camp Lake (runoff to the East basin primarily, but also to the North and Central basins). A total of approximately 35,000 m^3 of mine waste was removed in 2020.

2021 – Work in 2021 focused on completing removal of remnant mine waste adjacent to the East basin and removal of the access road. All planned construction work was completed in mid-September 2021. A total of approximately 4,000 m^3 of remaining mine waste was removed in 2021.

2022 – The 2022 monitoring year was the first year of post-reclamation monitoring.

2.2.3 WATER QUALITY PROGRAM

The environmental management requirements for managing water quality in Camp Lake have evolved considerably since their inception in 2013. At this time, discharges from Camp Lake into Cold Lake were not occurring and pH was the primary indicator of project performance. In preparation for a planned controlled discharge of treated water from Camp Lake, the sampling and analytical program was expanded in 2015 to include a wider range of water quality parameters (metals, total suspended solids, alkalinity, and toxicity). Sampling was conducted both within Camp Lake and Cold Lake.

The first controlled discharge was conducted in 2016, which triggered an expansion of the water quality program to include evaluation of data against guidelines selected for reference comparison; the Metal Mining Effluent Regulations (now the Metal and Diamond Mining Effluent Regulations (MDMER)) were selected to manage all discharged water quality. Monitoring included frequent sampling during active discharge and less frequent sampling during a period of post-discharge monitoring within Cold Lake. In 2017, further discharge quality parameters were added to the program based on the results of the 2016 discharge sampling (turbidity and iron) and addition of the MWQSOG for reference comparison (aluminum and cadmium). The sampling program included stations within Camp Lake and Cold Lake and began shortly following ice-out and continued throughout the open water season. In 2017, the mixing zone in Cold Lake was established immediately downstream of the discharge. Sampling frequency during discharge periods was increased.

Once flow from Sherlett Creek was re-established in August 2018, sampling in Camp Lake, the Camp Lake discharge, and the mixing zone was completed during the open water season on a weekly basis due to the construction activities and potential for variations in the water quality. Presently, the water quality program at Sherridon Mine occurs biweekly at seven stations within Cold Lake, nine stations within Camp Lake (including the discharge) and one station within Sherlett Creek. As the water quality improves within Camp Lake, water sampling frequency and parameter analysis will decrease in accordance with the AMP.

3.0 2022 ENVIRONMENTAL MONITORING PROGRAM

3.1 Biweekly Water Monitoring Program

The post-construction water monitoring program included a total of 11 water sampling events completed biweekly from May 29 to October 18, 2022. Sample location, frequency, depth, and analytical parameters are detailed in Table 1.

TABLE 1: BIWEEKLY SURFACE WATER QUALITY MONITORING PROGRAM

Sample ID	Frequency	Depth	Analytical Parameters
Sherlett Creek (SC-1)	Biweekly from May 29 to October 18, 2022.	Surface	pH, alkalinity, total suspended solids, turbidity, total metals, & dissolved metals.
Sherlett Creek – Additional Stations (SC-2 to SC-6)	Sampled during the last three monitoring events: September 20, October 4, & October 18, 2022.	Surface	pH, alkalinity, total suspended solids, turbidity, total metals, & dissolved metals.
Camp Lake (SB-1, SB-2, CB-1, CB-2, NB-1, NB-2, EB-1, and EB-2)	Biweekly from May 29 to October 18, 2022.	0.3 m below surface	pH, alkalinity, total suspended solids, turbidity, total metals, & dissolved metals.
Camp Lake Discharge [(1)]	Biweekly from May 29 to October 18, 2022.	Surface	pH, alkalinity, total suspended solids, turbidity, total metals, & dissolved metals. Toxicity – sampled monthly from May 29 to October 18.
Cold Lake Mixing Zone (CL-3, CL-7, and CL-8)	Biweekly from May 29 to October 18, 2022.	0.5 m above lake bottom	pH, alkalinity, total suspended solids, turbidity, total metals, & dissolved metals.
Cold Lake (CL-2, CL-4, CL-5, and CL-6)	Biweekly from May 29 to October 18, 2022.	0.5 m above lake bottom	pH, alkalinity, total suspended solids, turbidity, total metals, & dissolved metals.

Note:

1. Camp Lake discharge samples were collected from the discharge flow over the weir until mid-July (July 12, 2022). Thereafter, samples were collected from the upstream side of the weir due to there being no discharge over the weir.

Field chemistry parameters including pH, temperature, electrical conductivity (EC), dissolved oxygen (DO), oxidation-reduction potential (ORP), and turbidity were measured at each sample location.

Water samples collected for laboratory analysis were placed in laboratory supplied containers or sterile carboys and stored immediately on ice in cooler chests for transport to Bureau Veritas (BV) Laboratory in Winnipeg, Manitoba, a Standards Council of Canada (SCC) accredited laboratory. All samples were collected using a fresh pair of disposable nitrile gloves and disinfecting methods were used on sampling equipment between sampling locations to avoid cross contamination between samples.

The water quality results for the Camp Lake stations (including Camp Lake discharge) are compared to the Camp Lake Water Quality Performance Objectives (CLWQPO) developed within the Adaptive Management Plan (Tetra Tech; final dated August 16, 2022). The objectives are target levels for water quality parameters in Camp Lake that have been estimated to be achieved within four years following completion of construction (AMP, 2022). The CLWQPO criteria were developed using the background “plus” approach for many parameters to accommodate the considerable variation in parameter concentrations that occurs in Sherlett Creek. The Adaptive Management Plan is included in Appendix A.

The water quality results for Camp Lake as well as Cold Lake and Sherlett Creek are also compared to Manitoba Water Quality Standards, Objectives, and Guidelines (MWQSOG) Tier II objectives and Tier III guidelines for the Protection of Aquatic Life (updated July 2011).

3.2 Groundwater Sampling

Groundwater monitoring and sampling during the 2022 open water season included one event completed on September 20, 2022. The groundwater sampling program included 12 monitoring wells located mainly along the north and south shores of Sherlett Creek (Figure 2). The monitoring wells were installed between January 26 and February 5, 2022 (Tetra Tech; April 27, 2022 Memo). There are five wells completed in the overburden (suffix “OB”) and seven wells completed in bedrock (suffix “BR”).

The overburden wells were installed in a wetland area south of the creek and one near the shoreline north of the creek. The distribution of these wells was to evaluate soil conditions on both sides of the creek and the potential interaction of surface water and shallow groundwater in the wetland area and a portion of Sherlett Creek previously noted to have elevated metals concentrations (discussed in Section 4.2.2). The bedrock wells were installed north and south of the creek, as well as in the historic East Mine Working Areas extending to the southeast of Sherlett Creek (Figure 2). The distribution of these monitoring wells was to assess the area of changes in groundwater quality within and away from the historic mine workings, and potential interactions with the surface water systems in the wetland and Sherlett Creek.

At the time of the September 2022 groundwater monitoring event, all protective steel well casings were assessed and determined to be in good condition and PVC well stick-ups had sealed protective caps, with the exception of monitoring wells MW-09-OB, MW-10-OB, and MW-11-OB. These three wells consisted only of PVC stick-ups with sealed caps and did not have steel protective casings. All monitoring wells with steel protective casings were locked with new locks in 2022. Well logs for the monitoring wells are provided in Appendix B.

Sample ID, frequency, well depth, and analytical parameters are detailed in Table 2.

TABLE 2: GROUNDWATER MONITORING PROGRAM

Sample ID	Location	Frequency	Well Depth (mbgs) (1)	Analytical Parameters
MW-01-BR	180 m NE of SC-1	Fall	10.69	General water chemistry, total dissolved solids, total metals, & dissolved metals.
MW-02-BR	140 m SE of MW-01-BR	Fall	9.47	General water chemistry, total dissolved solids, total metals, & dissolved metals.
MW-03-OB	65 m S of MW-02-BR	Fall	8.66	General water chemistry, total dissolved solids, total metals, & dissolved metals.
MW-04-BR	115 m NW of MW-03-OB	Fall	13.31	General water chemistry, total dissolved solids, total metals, & dissolved metals.
MW-04-OB	114 m NW of MW-03-OB	Fall	7.92	General water chemistry, total dissolved solids, total metals, & dissolved metals.
MW-05-BR	158 m W of MW-04-OB	Fall	15.24	General water chemistry, total dissolved solids, total metals, & dissolved metals.
MW-06-BR	250 m SE of MW-05-BR	Fall	6.60	General water chemistry, total dissolved solids, total metals, & dissolved metals.
MW-07-BR	390 m SE of MW-06-BR	Fall	9.40	General water chemistry, total dissolved solids, total metals, & dissolved metals.
MW-08-BR	128 m S of MW-07-BR	Fall	15.09	General water chemistry, total dissolved solids, total metals, & dissolved metals.
MW-09-OB	500 m NW of MW-08-BR	Fall	5.50	General water chemistry, total dissolved solids, total metals, & dissolved metals.
MW-10-OB	30 m S of MW-09-OB	Fall	5.18	General water chemistry, total dissolved solids, total metals, & dissolved metals.
MW-11-OB	40 m NW of MW-10-OB	Fall	6.80	General water chemistry, total dissolved solids, total metals, & dissolved metals.

Note:

1. Well depth is in metres below ground surface (mbgs).

Water level measurements and field chemistry parameters including pH, temperature, EC, DO, ORP, and turbidity were measured at each of the 12 monitoring wells.

Each groundwater well was purged a minimum of three well volumes or until dry using dedicated disposable bailers. Water levels were allowed to recover to at least 80% of their original levels before groundwater samples were collected. Field equipment was cleaned with isopropyl alcohol and rinsed with distilled water between samples and new latex or nitrile gloves were used at each well to reduce the potential for cross

contamination so that representative samples could be obtained. Field instruments were tested and calibrated at the beginning of each day.

QA/QC assessment for the groundwater program included one field duplicate taken from MW-07-BR, a field blank, and a trip blank.

Water samples collected for laboratory analysis were placed in laboratory supplied containers and stored immediately on ice in cooler chests for transport to BV Laboratory in Winnipeg, Manitoba, an SCC accredited laboratory.

The results of the groundwater analysis are compared to the MWQSOG, updated July 2011. Since the wetland water and the water observed in the bedrock openings is assumed to flow towards Sherlett Creek, these guidelines are considered to be an appropriate reference for comparison. Similarly, the shallow groundwater in the overburden and the bedrock is assumed to flow towards Sherlett Creek, thereby interacting with local surface water systems.

The results of the September 2022 groundwater sampling event are discussed in Section 4.6.

3.2.1 GROUNDWATER ELEVATIONS

Ground elevations and top of well casing elevations were surveyed during the February 1, 2022 sampling event to determine groundwater flow direction (Tetra Tech; April 27, 2022 Memo). The water level measurements taken in the overburden wells suggested a northerly flow direction in the wetland area, towards Sherlett Creek. The water level measurements taken in the bedrock wells suggested that groundwater flow on the north side of the creek was to the south, towards the creek, while flow on the south side was northerly and easterly, all flowing inwards towards the creek.

Depth to water measurements collected in September 2022 were similar to measurements collected in February 2022 and, therefore, groundwater flow direction is anticipated to remain the same.

4.0 RESULTS AND DISCUSSION

The 2022 water quality monitoring program was the first year of monitoring following the completion of construction activities in August 2021. The monitoring program represents the fourth full year of Sherlett Creek flow through Camp Lake in the absence of lime treatment.

The water sampling results for Camp Lake and the Camp Lake discharge are compared against the Camp Lake Water Quality Performance Objectives (CLWQPO), outlined in the Final Adaptive Management Plan (AMP) for the Sherridon Mine Site (dated August 16, 2022) and to the Manitoba Water Quality Standards Objectives and Guidelines (MWQSOG) Tier II objectives and Tier III guidelines, updated July 2011. Water sampling results collected for Sherlett Creek and Cold Lake are compared against the MWQSOG Tier II objectives and Tier III guidelines.

The focus of the following sections is on the key water quality parameters of pH, alkalinity, TSS, turbidity, and total fractions of the metals, iron, aluminum, cadmium, copper, and zinc. The results of toxicity testing of the Camp Lake discharge are also provided. The 2022 results for field chemistry are provided in Table 3, general water quality results are provided in Table 4, dissolved metals in Table 5, total metals in Table 6, and toxicity results in Table 7. The laboratory Certificates of Analysis (CoA) are included in Appendix C.1 for water quality and in Appendix C.2 for toxicity.

4.1 Precipitation and Observations of Flow

Analyzing annual precipitation patterns has become an important factor in interpreting water quality in Camp Lake and the Camp Lake discharge since environmental monitoring began in 2017. There has been an observable correlation in concentrations of the key water quality parameters in Camp Lake to the amount of flow through Sherlett Creek. Monthly estimated precipitation amounts for the years 2010 to 2022 are summarized in Table 8.

TABLE 8: ESTIMATED MONTHLY PRECIPITATION FOR SHERRIDON, MANITOBA

Month/ Year	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	2018/ 2019	2019/ 2020	2020/ 2021	2021/ 2022
October	61.5	66.4	159.7	29.8	59.9	66.3	228.5	82.8	52.8	51.5	65.2	14.8
November	29.6	35.4	41.3	89.9	31.3	61.1	36.8	56.0	32.6	31.7	44.4	33.4
December	34.2	38.5	25.6	28.3	9.8	39.3	26.2	20.3	27.5	33.0	26.6	34.3
January	51.6	45.3	49.3	53.1	34.2	23.5	25.0	71.0	40.1	52.0	63.2	24.5
February	39.7	20.7	19.7	12.1	23.1	33.4	20.1	14.8	19.1	19.5	29.5	14.1
March	40.2	83.1	23.5	37.5	63.7	74.2	126.0	58.3	19.2	54.9	65.6	28.2
April	85.3	90.2	69.9	67.1	62.2	42.7	97.2	33.6	54.7	98.3	29.9	3.4

Month/ Year	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017	2017/ 2018	2018/ 2019	2019/ 2020	2020/ 2021	2021/ 2022
May	98.2	38.5	42.1	69.2	51.8	73.1	122.8	45.5	61.2	79.7	77.6	84.1
June	68.7	147.1	150.0	152.8	74.8	179.1	202.3	145.1	127.9	251.4	101.7	32.1
July	163.0	76.3	86.2	74.2	172.9	125.7	29.7	265.7	109.3	208.0	40.4	47.1
August	118.4	106.6	24.4	22.9	87.7	49.7	23.7	43.2	64.1	64.2	17.1	72.3
September	23.0	34.0	37.6	54.8	122.6	127.7	108.8	78.6	69.9	65.0	12.9	33.3
Total	**813.4**	**782**	**729.3**	**691.6**	**793.9**	**895.9**	**1047**	**914.9**	**678.4**	**1009**	**574.1**	**421.6**

Notes:

a. Units in millimetres (mm).

b. A water year in the northern hemisphere starts on October 1 and runs to September 30 of the following year (i.e., the 2022 water year started on October 1, 2021; American Meteorological Society, 2012). A water year is defined as the period of precipitation contributing to surface runoff each year, accounting for accumulation of snowfall over winter and release to runoff in spring.

Data and observations of precipitation for 2022 are summarized as follows:

- The 2021-2022 water generating year is the lowest precipitation year of the last 10 years and the second consecutive year of lower-than-average precipitation in the region. The 10-year average for precipitation for the region is 776 mm; total annual precipitation from October 2021 to September 2022 was 422 mm and total annual precipitation for the previous year was 574 mm (Environmental Canada).
- No heavy precipitation events were recorded on any of the sampling dates in 2022.

Due to low precipitation in 2022, the flow through Sherlett Creek was negligible from late July to the end of open water monitoring in mid-late October.

4.1.1 CAMP LAKE WATER LEVELS

Water levels on Camp Lake were not monitored as part of the 2022 environmental monitoring program for the Sherridon Mine Site.

In 2022, a condition was present on Camp Lake where the water level on the lake was raised artificially high due to an unannounced installation of stop logs at the Camp Lake discharge weir. The result of this installation of the stop logs was reduced inflows from Sherlett Creek into Camp Lake, which were already reduced relative to previous years on the basis of precipitation. Based on a review of available photographs, site observations, precipitation data, and historical water levels measured at the discharge weir, it is deduced that stop logs were added sometime after the winter sampling event completed on March 18, 2022, but prior to the start of 2022 open water season sampling on May 31, 2022. The number of stop logs in place at the start of monitoring is not known due to the presence of high flows over the weir, which restricted observations. Additionally, a minimum of two stop logs were added sometime between the July 12 and July 26, 2022 monitoring events.

The addition of the stop logs between July 12 and July 26, 2022 effectively ended the discharge flow over the Camp Lake weir. No discharge was present from between these dates until the end of open water sampling.

4.2 Sherlett Creek

Key modelling completed for Sherridon Mine Reclamation Project has predicted that water quality in Sherlett Creek will take on a leading role in determining water quality in Camp Lake during the post-construction monitoring phase of the project. As the project moves from the construction phase to post-construction monitoring, water quality in Camp Lake has been estimated to approach that in Sherlett Creek over a period of three to four years (Final AMP; August 16, 2022).

As hydraulic flows were an input term for the water quality modelling, seasonal variations such as low flow/precipitation years or altered water levels may extend the three to four year projection.

4.2.1 SC-1

4.2.1.1 pH and Total Alkalinity

Field pH at SC-1 ranged between 6.66 and 7.44 during the 2022 open water season and in winter 2022 was measured at 7.26 (Figure 3). The 2022 field pH values are consistent with field pH values measured previously, which have ranged from 6.5 to 8.0 since 2017.

There has previously been indication of declining pH values during late summer and early fall of 2017 and 2021. Similar to 2022, these years have been characterized by low flows starting in or around late summer (DJRC, 2022). A similar seasonal trend was observed in 2022, where a slight decrease in pH values was noted starting with the reduction in flows. Despite the lower flows, all field pH values in 2022 were within the MWQSOG Tier III guideline range (6.5 to 9.0). In all three years, the lower pH values in late summer have recovered over the following winter.

Alkalinity concentrations followed an apparent increasing trend throughout the 2022 open water season, as also observed in 2021 (Figure 4). The measured alkalinities were generally within the typical range previously reported (20-30 mg $CaCO_3$/L) except for a single slightly higher concentration measured on September 20, 2022 (31 mg $CaCO_3$/L). Concentrations that have been higher than the typical range were also recorded in 2017 (up to 37 mg $CaCO_3$/L) and in winter 2021 (up to 33 mg $CaCO_3$/L). The single low value measured on September 13, 2021 (5.1 mg $CaCO_3$/L) was determined to be anomalous (DJRC, 2022).

4.2.1.2 TSS and Turbidity

Total suspended solid concentrations at SC-1 have typically been at or below 4 mg/L since 2017 (DJRC, 2022). Notably, the laboratory analytical detection limit for TSS was lowered from 4 mg/L to 1 mg/L beginning in June 2019 and has remained at 1 mg/L through present.

In 2022, TSS concentrations during low flow periods were comparable to concentrations measured during high flow periods, ranging from <1.0 mg/L to 2.1 mg/L (Figure 5). TSS concentrations therefore appeared to be unaffected by the period of lower flows in late summer to fall of 2022. There has been no apparent relation between flow volume and TSS at SC-1 in any of the low flow years including 2022. All measured TSS concentrations in 2022 were well below the MWQSOG Tier II chronic objective of 11.5 mg/L.

Historically, turbidity values have been below 4 NTU, except during the two open water season low flow periods, in 2017 and 2021. All turbidity results in 2022 were below 2.6 NTU and no seasonal increase during low flow was observed (Figure 6).

In 2022, field turbidity was consistent with laboratory turbidity results, albeit slightly lower (highest value was 2.14 NTU vs. 2.6 NTU).

4.2.1.3 Total Metals

The key total metals of iron, aluminum, cadmium, copper, and zinc are discussed in the following sections. Hardness provides protection against the toxicity of some metals. Starting in 2021, the total concentrations of cadmium, copper, and zinc are compared to MWQSOG Tier II aquatic life criteria using the annual average hardness calculated for Sherlett Creek (using SC-1 hardness) instead of the 2016 average Cold Lake hardness (59.4 mg $CaCO_3$/L), which was used in previous years' reports. The change was initiated due to elevated concentrations of metals identified within Sherlett Creek in years previous, which necessitated the evaluation of metals using creek-specific hardness (DJRC, 2022). The use of Sherlett Creek SC-1 hardness is followed for 2022.

The average SC-1 hardness in 2022 was calculated to be 30.8 mg $CaCO_3$/L, which is similar to the hardness calculated in 2021 (31.0 mg $CaCO_3$/L). The resulting Tier II chronic and acute objectives are presented in Table 6.

Iron

Over the past six years of monitoring (2017-2022), total iron concentrations at SC-1 have typically been below 0.4 mg/L (Figure 7).

High total iron concentrations have been observed during low flow periods. For example, in 2017 and 2021, total iron concentrations up to 1.0 mg/L were observed; however, a high concentration (0.61 mg/L) was also measured on September 11, 2018, around the time of a heavy rainfall event (DJRC, 2022).

In 2022, peaks up to 0.52 mg/L were observed in the low flow conditions between August to October. Otherwise, total iron concentrations were below the MWQSOG Tier III guideline of 0.30 mg/L.

Aluminum

Total aluminum concentrations have generally ranged between 0.02 mg/L and 0.10 mg/L over the last six years of monitoring (Figure 8). In 2017 and 2021, during low flow periods in September and October, aluminum concentrations were high (up to 0.27 mg/L). High concentrations were noted on August 6, 2018 and September 11, 2018 (0.26 mg/L; DJRC, 2022). The high concentration measured on September 11, 2018 was attributed to a heavy rainfall event on the basis of similarly high concentrations recorded for iron, cadmium, copper, and zinc (DJRC, 2022).

All concentrations in 2022 were below the MWQSOG Tier III guideline (0.10 mg/L for pH ≥ 6.5 and 0.005 mg/L for pH < 6.5).

Cadmium

Outside of low flow conditions, total cadmium concentrations have generally ranged between 0.00010 mg/L and 0.00050 mg/L over the last six years of monitoring (Figure 9). In 2022, higher concentrations (up to 0.00067 mg/L) were measured during the period of lower flows. During the 2021 low flow period,

concentrations were observed up to 0.00075 mg/L and during the 2017 low flow period, concentrations were up to 0.00017 mg/L. It has been noted that occasionally higher concentrations were measured in 2018 (on July 24 and September 11 and 13) and 2019 (July 31), which were not correlated to low flow conditions but rather to heavy rainfall events (DJRC, 2022). The higher concentrations were reported to be driven by surface runoff likely from the area of the former East Mine Workings.

Total cadmium concentrations in 2022 were generally above the MWQSOG Tier II chronic objective of 0.00011 mg/L and below the acute objective of 0.00064 mg/L, which is consistent with results since 2017.

Copper

Total copper concentrations have generally ranged between 0.0030 mg/L and 0.020 mg/L over the last six years of monitoring (Figure 10). Total copper concentrations have been generally above the MWQSOG Tier II chronic and acute objectives since 2017. Higher concentrations were noted during low flow periods or heavy rainfall events as noted for the other metals.

In 2022, concentrations ranged from 0.0060 mg/L to 0.014 mg/L outside of the period of lower flows and increased up to 0.029 mg/L in fall. The higher concentrations in fall were similar to concentrations reported in 2017, while concentrations in 2021 appeared to be unaffected by low flows.

Zinc

Total zinc concentrations have generally ranged between 0.024 mg/L and 0.20 mg/L independent of any low flow or heavy rainfall condition (Figure 11). Concentrations in 2022 were generally above the MWQSOG Tier II chronic and acute objectives (0.04417 mg/L).

Summary

Overall, key parameter concentrations within Sherlett Creek have shown minor variations since monitoring began in 2017. Turbidity and metals have been found to increase with lower flows through the creek and then decrease and stabilize throughout the winter months and into the following open water season. Surface runoff had less of an effect on the creek in 2022 due to extremely low precipitation and no major rainfall events recorded during sampling events. It should be noted that the variations observed in Sherlett Creek throughout the year are on a very small scale when compared to the variations observed in Camp Lake.

4.2.2 ADDITIONAL CREEK SAMPLING STATIONS (SC-2 TO SC-6)

Five additional sampling stations (SC-2 to SC-6) were previously established on Sherlett Creek for the purpose of providing water quality information for the reach of Sherlett Creek between Sherlett Lake and SC-1. The five additional sampling locations are all upstream of SC-1, with SC-6 located at the mouth of Sherlett Lake (Figure 1).

These stations were initially sampled in 2006 to support project planning and subsequently in 2009, 2017, and 2018 to investigate the potential source(s) of elevated metals concentrations in Sherlett Creek (DJRC, 2022). A more detailed sampling program was completed in 2021 and February 2022 due to receipt of a report from a Sherridon resident of overland flow from the vicinity of the East Mine Workings Area (DJRC, 2022). All available data for SC-1 has indicated that total concentrations of cadmium, copper, and zinc have generally been above one or both of the MWQSOG Tier II chronic and acute objectives consistently throughout open water season monitoring. The higher concentrations have occurred regardless of

precipitation or local runoff conditions and have been most notable during periods of low flows, which suggests that there may be another metal source influencing the creek (DJRC, 2022).

The results of the detailed monitoring program conducted in 2021 concluded that the source of metal contamination to the creek appears to be a sub-surface source that enters the creek downstream of SC-4 (DJRC, 2022). The source has been identified as either an inflow of metal contaminated groundwater or direct contact of the creek with the naturally occurring mineralized zone of the Sherridon deposit, which passes directly beneath the creek in this location.

In 2022, total cadmium, copper, and zinc concentrations at stations SC-3, SC-2, and SC-1 were higher than at stations SC-4, SC-5, and SC-6 on all open water sampling dates; however, total metal concentrations at all stations were lower compared to 2021 concentrations, which indicates that the lower flows in 2022 did not result in increased influence on metals concentrations.

4.3 Camp Lake and Camp Lake Discharge

The Camp Lake Water Quality Performance Objectives (CLWQPO) were created as a means for evaluating the performance of the reclamation works in comparison to the expectations developed during project planning (AMP, 2022). They are not regulatory limits. The AMP (2022) states that once construction is completed (September 2021), water quality within Camp Lake is expected to gradually approach the objectives over an estimated three to four year period.

An important factor to consider in understanding water quality in Camp Lake and its potential effect on water quality in Cold Lake is the magnitude of Sherlett Creek flow entering the lake. During the 2022 open water season, flows in Sherlett Creek became greatly reduced by late July and were negligible from early August to the end of open water sampling, reflecting low seasonal precipitation. A condition was also present where Camp Lake water level was artificially raised due to addition of stop logs at the Camp Lake discharge weir by an unannounced party. For the purpose of this report, the addition of the stop logs is estimated to have occurred sometime between March 18, 2022 and the start of 2022 open water monitoring on May 31, 2022. The low seasonal precipitation and stop log addition resulted in significantly reduced inflows to Camp Lake from Sherlett Creek. By July 25, 2022, additional stop log placement resulted in no water flowing over the Camp Lake discharge weir. The lack of flow over the weir continued until the end of open water sampling.

4.3.1 PH AND TOTAL ALKALINITY

4.3.1.1 pH

Throughout the 2022 open water season, field pH within Camp Lake generally remained near neutral (neutral pH = 7.0) (Figure 12). Field pH was measured between 6.77 and 6.99 shortly after ice out at the end of May. Measured values increased slightly from May into June with inflowing of water from Sherlett Creek. The pH levels remained fairly steady until late July, when values started to decline together with reduced flows through Camp Lake.

A similar drop in field pH in fall of 2021 was attributed to lower precipitation-based flows in Sherlett Creek from late August through the end of sampling in October (DJRC, 2022). The drop in pH in 2022 is attributed to lower precipitation-based flows from Sherlett Creek coupled with the stop log addition.

A review of available information and photographs from the 2022 monitoring program determined that stop logs were added to the Camp Lake discharge weir sometime after March 18, 2022 and before the start of 2022 open water monitoring on May 31, 2022. The stop logs were added by an individual(s) not known to the project team and resulted in a lake level that was higher than would have been in place if the weir was operated as intended (i.e., without stop logs).

The higher lake level restricted flow into Camp Lake and appeared to contribute to a decline in pH observed in late July through to fall. However, a decline in field pH values has also been observed in late July during other years (e.g. 2021).

In both years (2021 and 2022), field pH values were generally maintained above 6.5 (the minimum MWQSOG Tier III guideline), with the exception of the final sampling event completed on October 18, 2022, where field pH levels dropped below the guideline (values ranged from 5.59 to 6.09).

Generally, field pH levels in Camp Lake closely tracked the pH of the inflowing Sherlett Creek. Field pH values at the Camp Lake discharge averaged 0.25 pH units lower than the SC-1 pH (compared to 0.2 pH units lower in 2021).

The maintenance of a fairly neutral pH (6.5) in Camp Lake, even during unforeseen low flows, indicates that alkalinity was present in sufficient concentrations needed to neutralize remaining acid sources to the lake. Reduction in acid sources to the lake, as a result of mine waste removed from the shores of Camp Lake through the Sherridon Reclamation Project, coupled with a small amount of surface runoff in 2022, are also key factors in the maintenance of the near-neutral pH.

4.3.1.2 Alkalinity

Total alkalinity at SC-1 and all stations in Camp Lake was generally highest under winter ice cover; however, compared to previous years, alkalinity measured during the winter sampling event on March 18, 2022 was lower than average, ranging from 9.2 mg $CaCO_3$/L to 22 mg $CaCO_3$/L compared to 34 mg $CaCO_3$/L to 80 mg $CaCO_3$/L in February 2021 (Figure 13). In other words, under ice alkalinity restoration during winter 2021/2022 did not appear to occur to the extent that it has in previous years. The lower alkalinity concentrations in March 2022 are likely due to negligible inflows from Sherlett Creek in fall 2021 and continuing through winter. Negligible flow over the Camp Lake weir was present at the time of the March 2022 winter sampling event, which indicates that available flow through Sherlett Creek was also negligible. In the absence of flows under ice cover, in-lake processes would be solely responsible for regenerating alkalinity within Camp Lake. It has been suggested by DJRC (2022) that bacterial reduction of sulphate may be a predominant source of alkalinity regeneration over winter in the absence of material flows.

In 2021, alkalinity concentrations dropped drastically from winter to spring as a result of metal and acid-contaminated spring runoff, and then slowly regenerated with continued flow from Sherlett Creek, peaking in July. As flow through Sherlett Creek decreased, alkalinity concentrations also decreased. This pattern was observed in 2022 on a much smaller scale. Spring runoff did not cause a drastic drop in alkalinity, which is attributed to construction activities and remnant mine waste removal ending in 2021. Concentrations regenerated slightly through summer, however, only peaking at 13 $CaCO_3$/L compared to 22 $CaCO_3$/L in 2021, and never reaching concentrations similar to Sherlett Creek during the summer months, which typically has occurred in the past. The lesser extent of alkalinity regeneration in spring through summer is likely due to comparatively lesser inflows from Sherlett Creek, as SC-1 alkalinity remained similar between the two years.

In 2022, Sherlett Creek flow became negligible a month earlier compared to 2021, and inflows prior to that are assumed to be lesser based on precipitation data and knowledge of the lake level being higher than operationally intended.

At the end of the 2022 open water monitoring season, alkalinity concentrations at all Camp Lake stations, including the Camp Lake discharge, declined to at or near zero, which was only observed in 2017 and 2018 when flow from Sherlett Creek had not yet been re-established. These low concentrations are notable and are most likely caused by the lower-than-average precipitation levels and reduced Sherlett Creek flows, coupled with the artificially high lake level which further reduced flows.

Despite the lower alkalinity levels measured throughout 2022, an overall steady neutral pH was maintained within Camp Lake for the majority of the open water season. The exception was in late fall when pH dropped to below 6.5 which is directly attributed to the reduction of inflows and depletion of alkalinity to near-zero. The alkalinity supply was otherwise sufficient in neutralizing residual acid sources to the lake.

4.3.2 TSS, TURBIDITY, AND IRON

Since the start of the Sherridon Mine Reclamation Project, local residents have expressed considerable concern regarding the effect of discharges from Camp Lake on the appearance of water in the Cold Lake arm of Kississing Lake, with specific concerns regarding the potential for red staining of boats. Three of the key parameters measured – TSS, turbidity, and iron – are indicators of water appearance, with iron being a source of red staining.

Prior to August 2018, lime treatments were applied to Camp Lake to manage water quality during the reclamation phase of the project. The lime treatments created a floc that settled on the lake bottom during calm periods but would be resuspended during high wind events and create a red-colored turbidity in the lake (due to particulate iron associated with the floc). Lime has not been used since Sherlett Creek flow was reestablished through Camp Lake in August 2018; however, remnant mine waste remained a source of dissolved and particulate iron to Camp Lake. Since construction and targeted removal of mine waste was completed in 2021, the amount of dissolved and particulate iron, and potentially TSS and turbidity, introduced to Camp Lake from this source is expected to be greatly reduced (DJRC, 2022).

4.3.2.1 TSS

TSS concentrations in 2022 followed a U-shaped pattern, with high concentrations during spring (late May and early June) and in late summer and fall (Figure 14). TSS concentrations in spring 2022 were notably lower and remained below 5 mg/L versus 10 mg/L in spring 2021. Lower spring concentrations are attributed to the absence of active construction occurring on-site and specifically around the East basin where the highest concentrations were observed in 2020 and 2021. TSS concentrations declined throughout the open water season, meeting background Sherlett Creek concentrations at most stations by the end of August. By September, concentrations started to increase due to negligible inflow from Sherlett Creek, however, still remaining well below the CLWQPO and MWQSOG Tier II chronic objective of 11.5 mg/L. Notably, TSS concentrations during the last sampling event in October 2022 were higher than those measured in late fall of 2021.

TSS concentrations at the Camp Lake discharge were below 3.2 mg/L with the exception of the concentration measured on July 26, 2022 (7.8 mg/L), which is considered anomalous (approximately 2.5 to 8 times greater

than other concentrations measured in 2022). Overall, TSS levels at the discharge weir were lower in 2022 compared to previous years and below the CLWQPO and MWQSOG Tier II chronic objective.

4.3.2.2 Turbidity

Turbidity in spring in all parts of Camp Lake appeared to be influenced by elevated turbidity levels measured in the fall of 2021 (Figure 15). Turbidity levels remained elevated over winter, ranging from 16 NTU to 27 NTU compared to <4 NTU during previous winter sampling events. The higher levels appeared to persist into spring, with turbidity ranging from 16-23 NTU compared to 0.39-13 NTU in 2021. The higher levels in winter and spring are attributed to negligible flows under winter ice cover. Higher turbidity was measured in the fall of 2019, a year of closer to average precipitation and flows; however, turbidity reduced over winter and remained low until spring melt of the following year. The mechanism for the maintenance of higher turbidities under ice cover is the lack of flushing effect from Sherlett Creek and increased residence time of the lake water with the submerged tailings.

Turbidity levels in 2022 did not increase during spring runoff (as observed in 2019, 2020, and 2021), instead staying consistent with winter levels. Consistent with previous years, as flow through Sherlett Creek was established, turbidity decreased; however, in 2022, levels came close but never reached background creek concentrations. Beginning in September, turbidity at all stations on Camp Lake, including the discharge, begins to reflect the effects of negligible flow from Sherlett Creek, and levels steadily increased until the end of open water sampling.

The CLWQPO for turbidity is ambient SC-1 + 25%; calculated CLWQPO values ranged between 2.1 NTU and 3.0 NTU. All turbidity values measured during the 2022 open water monitoring season were above the CLWQPO, with values in mid-summer up to 5 times greater than the SC-1 value and values in spring and fall up to 31 and 25 times greater, respectively, than that of SC-1.

Overall, the elevated turbidity in Camp Lake characteristic of the previous years has diminished, although has not been eliminated, and turbidity levels are directly affected by the lack of inflow from Sherlett Creek (observed in 2021 and 2022).

4.3.2.3 Iron

Iron is the metal attributed to the discolored water on Camp Lake and staining of boats noted by local residents and is therefore a parameter of particular interest to the project. Staining was a regular occurrence through 2008, prior to the start of reclamation activities (DJRC, 2022). The staining stopped from 2009 through 2017, but then resumed following the resumption of discharges from Camp Lake (DJRC, 2022). No reports of staining were received by the project team during the 2022 monitoring year.

Total iron concentrations in Camp Lake in 2022 were highest in spring and fall, which is consistent with observations made in 2019, 2020, and 2021 (Figure 16). Compared to previous years, 2022 iron concentrations showed less variability and were generally lower.

Spring 2022 concentrations ranged from 3.4 mg/L to 6.2 mg/L, compared to 3.9 mg/L to 8.0 mg/L in spring 2021. As a distinct change from previous years, no seasonal increase occurred from winter to spring. Total iron concentrations on March 18, 2022, were reduced from concentrations measured in late fall of 2021; however, the winter concentrations were higher than concentrations measured during previous winter sampling events. The lack of increase in concentrations from winter to spring indicates a substantial

reduction in iron loading to the lake during spring runoff compared to previous years. The higher concentrations in winter are the result of low to negligible inflows over the winter 2021/2022 season.

A sharp decline in concentrations through summer is observed as a result of higher inflows from Sherlett Creek. Concentrations declined to the open water season minima by the end of August, when concentrations were measured between 1.8 mg/L and 4.0 mg/L; however, not reaching background SC-1 concentrations. In 2021, concentrations measured during the open water season minima (which occurred in early-to-mid July) ranged from 1.4 mg/L to 1.8 mg/L, also not reaching background SC-1 concentrations. The slightly higher open water season minima concentrations observed in August 2022 (compared to 2021 open water season minima) likely represent the effects of the reduced inflows from Sherlett Creek to Camp Lake present throughout 2022.

While total iron concentrations increased in fall, the increases were lesser in magnitude compared to the increases that occurred in 2021, despite the longer period of low inflows present in 2022. The high peaks in concentrations at the end of 2021 were the result of construction works related to removal of mine waste adjacent to the East basin and removal of a tailings-based access road that generated runoff to the South basin (DJRC, 2022).

Total iron concentrations were above the CLWQPO (ambient SC-1 + 25%) during all sampling events and for all stations (including the Camp Lake discharge) in 2022. The concentrations in late August were approximately 6-11 times that of the CLWQPO, while the highest concentrations in spring and fall were approximately 22-32 and 6-16 times that of the CLWQPO, respectively. No concentrations were notably higher in any one station. All concentrations were above the MWQSOG Tier III guideline of 0.3 mg/L.

Total iron concentrations in the Camp Lake discharge were consistently within the range observed in Camp Lake (2.1 mg/L to 6.0 mg/L) and therefore were also above the CLWQPO and MWQSOG Tier II guidelines.

4.3.3 TOTAL METALS

4.3.3.1 Aluminum

Total aluminum concentrations followed a U-shaped pattern over the 2022 open water season, similar to 2021. The highest concentrations occurred at the beginning and end of the open water season and the lowest concentrations occurred in mid-summer (Figure 17).

The highest concentrations at nearly all stations along Camp Lake occurred in spring, shortly following ice out. In the South, Central, and North basins (the main axis of the lake), the highest spring concentrations ranged from 0.15 mg/L (CB-1) to 0.20 mg/L (SB-2) and were above the MWQSOG Tier III guideline (0.1 mg/L at pH ≥ 6.5). Concentrations at East basin stations EB-1 (0.25 mg/L) and EB-2 (0.31 mg/L) were notably higher than in the other basins and also above the MWQSOG Tier III guideline. Concentrations in all four basins declined from June to end of August, with the lowest concentrations generally occurring around mid-to-late August.

Unlike in previous years, concentrations in spring appear to have been affected by higher concentrations measured over winter (as measured on March 18, 2022). Total aluminum concentrations in winter 2021/2022 did not decline to the same extent as previous winters. Only a slight increase in concentrations from winter 2021/2022 to spring 2022 was observed; however, as the winter concentrations were elevated, concentrations measured in spring 2022 were similar to or slightly higher than concentrations measured in

spring 2021. The negligible flows at the end of 2021 persisting through winter (as evidenced by negligible outflow from the Camp Lake discharge weir) are the likely cause of the higher concentrations.

The spring concentrations at all stations (including the Camp Lake discharge) were higher than winter concentrations; however, the increases were generally slightly less than previous increases in spring, indicating reduced runoff effect in 2022. Despite the higher spring concentrations, concentrations at most stations in late August were lower than concentrations measured in any year since the re-establishment of Sherlett Creek flow to Camp Lake.

Concentrations declined to the CLWQPO (ambient SC-1 + 25%) at all main lake axis stations, as well as the Camp Lake discharge, by or mid to late August. Most concentrations also remained below the CLWQPO until the end of open water sampling. At EB-1 and EB-2, concentrations were almost consistently above the CLWQPO throughout the duration of open water sampling.

The MWQSOG Tier III guideline for total aluminum is dependent on pH and is 0.1 mg/L for pH ≥ 6.5 and 0.005 mg/L for pH < 6.5. Concentrations dropped to below the MWQSOG Tier III guideline at nearly all stations along the main lake axis by the end of June and generally remained below the guideline until the last open water sampling event on October 18, 2022. Concentrations within the East basin were above the guideline over the duration of open water sampling except on August 23, 2022.

4.3.3.2 Cadmium

The highest total cadmium concentrations of 2022 occurred in all basins of Camp Lake early in the open water season, shortly after ice-out (Figure 18). Concentrations declined rapidly from spring through mid July, and then declined more slowly through September, similar to the pattern observed in 2021. The open water season minima were reached at most stations by late August, at which point concentrations ranged between 0.0045 mg/L (SB-1 and CB-1) and 0.0065 mg/L (EB-2). Total cadmium concentrations in all basins of the lake then gradually increased through to the end of the open water season.

The concentrations measured in August 2021 were the lowest open water season concentrations measured since Sherlett Creek flow was restored to the lake in 2018 (DJRC, 2022). The lowest concentrations in 2022 were slightly higher than these concentrations and more similar to concentrations measured in 2019 and 2020. The slightly higher concentrations are attributed only in part to the lower inflows into Camp Lake from Sherlett Creek. Higher concentrations in spring, compared to concentrations measured during spring 2021, appeared to be another factor in the higher concentrations. Similar to aluminum, concentrations in spring 2022 were slightly higher than concentrations measured in spring of 2021, at most stations on Camp Lake, despite residual sources of acid and metal generating material being removed by the end of 2021. The net result of the higher concentrations in spring, coupled with the lower inflows from the creek, was concentrations in August that were slightly higher than the lowest concentrations measured in 2021.

The higher spring concentrations are the direct result of winter concentrations that did not decline to the same extent as previous years (due to negligible flows over winter); however, despite these higher concentrations and the lower inflows, concentrations at all main lake axis stations declined to below the CLWQPO (ambient SC-1 + 25%) by early September. Within the East basin, concentrations were above the CLWQPO for the majority of open water sampling.

Concentrations in all basins of the lake gradually increased from the summer minimums through to the end of the open water season; however, the extent of the increases was far less than that observed for total

aluminum and total iron. The highest concentrations in fall ranged between 0.00043 mg/L (CB-1) and 0.00074 mg/L (EB-2) compared to the highest concentrations in spring, which ranged from 0.00087 mg/L (CB-1) to 0.0017 mg/L (EB-2). The concentrations in fall 2022 also did not increase to the extent that they did in fall 2021. The increase in concentrations at the end of open water monitoring in 2021 was attributed to construction activities that were still ongoing in the fall of 2021 (DJRC, 2022).

It is notable that total cadmium concentrations measured in the inflowing Sherlett Creek were lower than concentrations measured in Camp Lake at the start of open water sampling, but, by August, concentrations were as high, or higher, than concentrations at many Camp Lake stations. The continued decline in concentrations in Camp Lake may have been stalled by these higher concentrations; however, with limited inflows in late summer and early fall, the effect of the higher concentrations was likely reduced, and increases in Camp Lake in fall were likely more so related to a small degree of cadmium loading either from within the lake or the adjacent watershed.

Concentrations within the main lake axis stations and the Camp Lake discharge were consistently below the MWQSOG Tier II acute objective (0.00125 mg/L) other than one concentration measured at SB-1 on June 28, 2022. Concentrations dropped below the acute and chronic objective by September 9, 2022, and remained below this objective until the last sampling event in fall. The East basin stations had concentrations above the acute objective in spring; however, concentrations generally remained above only the chronic objective over the duration of open water sampling.

4.3.3.3 Copper

Total copper concentrations along Camp Lake followed an L-shaped seasonal pattern as also observed in 2021 (Figure 19). Concentrations were highest shortly after ice-out and declined rapidly through to mid July, and then continued to decline more slowly through mid September when the open water season minima occurred in all lake basins. Unlike iron and aluminum, and to a lesser extent for cadmium, a distinct increase in concentrations through fall was not observed. This is consistent with the pattern observed in 2021. Contrast in 2021, concentrations in the East basin were not substantially higher than concentrations at the main lake axis stations except for the first two monitoring events in spring. Total copper concentrations in all parts of Camp Lake were above the Tier II chronic and acute objectives throughout the 2022 open water season.

As also observed for aluminum and cadmium, spring concentrations were higher than concentrations measured in winter; however, the increases occurred to a lesser extent than in prior springs at most stations, and this is attributed to reduced runoff effects compared to previous years. Similar to the other key metals, the spring concentrations were affected by higher concentrations in winter as a direct result of negligible flows through the 2021/2022 winter season.

Concentrations in the main lake axis stations and the Camp Lake discharge declined to below the CLWQPO (ambient SC-1 + 30%) by the beginning of August and were mostly within the CLWQPO in summer and fall for the East basin stations. Similar to aluminum, the total copper concentrations in late summer were generally lower than concentrations measured in any year since the re-establishment of Sherlett Creek flow to Camp Lake.

Total copper concentrations at SC-1 increased to above concentrations at many stations on Camp Lake by early August; however, the concentrations in Camp Lake are unlikely to have been affected by these higher concentrations due to lower inflows from Sherlett Creek to Camp Lake in late summer through fall.

4.3.3.4 Zinc

Total zinc concentrations along Camp Lake followed an L-shaped seasonal pattern as similarly observed in 2021 (Figure 20). Concentrations were highest shortly after ice-out and declined rapidly through to early August, and then continued to decline more slowly through to late September when the open water season minima occurred in all lake basins. Similar to cadmium, only a slight increase in concentrations is observed in fall. Concentrations in 2021 followed a similar pattern; however, during fall 2021, concentrations in the East basin increased from 0.12 mg/L (open water minima) to 0.28 mg/L by the end of October. Consistent with the other key metals, the spring concentrations at all lake basins were affected by higher concentrations in winter as a direct result of negligible flows through the 2021/2022 winter season.

Concentrations in the main lake axis stations and the Camp Lake discharge declined to below the CLWQPO (ambient SC-1 + 25%) by the end of July. Stations in the East basin declined to below the CLWQPO by the end of August. Concentrations at all lake basins including Camp Lake discharge were consistently above the MWQSOG Tier II acute and chronic objectives (0.0771 mg/L) throughout the 2022 open water season, with the exception of the concentration at EB-1 on August 23, 2022 (0.027 mg/L); however, this result appears anomalous as a duplicate sample was taken at the same location and a concentration of 0.18 mg/L was measured.

Similar to cadmium and copper, total zinc concentrations at SC-1 increased to at or above concentrations at many stations on Camp Lake by early August. The higher concentrations are unlikely to have affected concentrations in Camp Lake due to the lower inflows from Sherlett Creek to Camp Lake in late summer through fall.

4.4 Cold Lake

In the absence of flow over the discharge weir, the Camp Lake water quality could not affect water quality in Cold Lake from late July to October 2022. Although this period of no discharge cannot be considered as representing background conditions, the monitoring results are nevertheless helpful to further understand water quality in Cold Lake in the absence of a discharge.

4.4.1 PH AND ALKALINITY

The field pH and alkalinity within the Camp Lake discharge closely tracked that of the North basin of Camp Lake, and Camp Lake overall. The field pH of the discharge was above the CLWQPO and the MWQSOG Tier III guideline of pH = 6.5 (minimum) from the start of open water season monitoring on May 31, 2022 until July 25, 2022, when the discharge was ended over the weir.

Stations included in the Camp Lake mixing zone (CL-3, CL-7, and CL-8) all had field pH values within the Tier III guideline range, ranging from 6.54 to 7.56 (Figure 21). Field pH values in the Cold Lake stations located outside the mixing zone (CL-2, CL-4, CL-5, and CL-6) showed variability with some values trending below the MWQSOG Tier III guideline in July to September (Figure 22). Alkalinity within Cold Lake was maintained at a generally consistent level ranging from 15 mg $CaCO_3$/L to 36 mg $CaCO_3$/L (Figures 23 and 24). A single low

value of 4.9 mg $CaCO_3$/L was recorded at CL-8 in October 2022; however, this value is considered anomalous and not representative of conditions within Cold Lake in 2022.

4.4.2 TSS, TURBIDITY AND IRON

4.4.2.1 TSS

TSS concentrations in the Camp Lake discharge followed a similar U-shaped pattern to that of the rest of Camp Lake and closely tracked concentrations within the North basin and Camp Lake overall. TSS at the Camp Lake discharge ranged from from <1 mg/L to 3.2 mg/L not including one anomalous value measured on July 26, 2022 (7.8 mg/L).

TSS concentrations in the Camp Lake mixing zone in 2019, 2020, and 2022 showed initial higher concentrations, in spring, due to high flows from the discharge during spring runoff (Figure 25). This trend was not observed in 2022, with all concentrations being below 2.2 mg/L throughout the duration of open water sampling. The consistently low concentrations in 2022 are associated with the completion of construction activities by the end of 2021 and consistently low concentrations in the discharge (i.e., well below the MWQSOG Tier II chronic objective). No flow over the Camp Lake discharge weir was present by July 26, 2022, which contributed to the low concentrations in the mixing zone on and after this date.

TSS concentrations within the Cold Lake stations outside the mixing zone followed a similar trend to that of the mixing zone, with concentrations being generally below 3.5 mg/L throughout open water sampling (Figure 26). The Camp Lake discharge had no effect on TSS concentrations at any station in Cold Lake in 2022.

It is notable that seasonal patterns prior to 2019 are not known due to the 4 mg/L analytical detection limit previously employed. TSS concentrations in the mixing zone and wider Cold Lake stations have remained well below the MWQSOG Tier II chronic objective of 11.5 mg/L since 2017.

4.4.2.2 Turbidity

The Camp Lake discharge followed the same pattern for turbidity as TSS (“U-shape”), with higher values measured in late May and early June and also in late summer and into fall. Turbidity in the Camp Lake discharge ranged from lows of approximately 5 to 6 NTU in mid-summer to highs of 22 NTU in spring and 33 NTU in fall.

Turbidity in the mixing zone followed the same U-shaped pattern observed in the discharge and was generally below 5 NTU (Figure 27). A higher turbidity value was measured at CL-3 on May 31, 2022 (13 NTU); however, the value is well outside of the range of turbidity measured previously and is therefore considered to be anomalous. The U-shaped pattern seen for turbidity has been a consistent observation since the re-establishment of the continuous discharge from Camp Lake, and therefore appears to indicate some influence of the turbidity in discharge flows on the mixing zone. The higher values in the Camp Lake discharge in late summer and fall could not affect the mixing zone as there were no flows over the Camp Lake discharge weir during this time.

Turbidity at the Cold Lake stations located outside the mixing zone did not appear to be affected by turbidity in the mixing zone (Figure 28). Turbidity levels at all stations showed a wider range but were generally between <1 NTU and 8 NTU. There were near-bottom samples at CL-2, CL-4, and CL-6 that recorded higher-than-normal values in late July to early September, ranging from 14-51 mg/L. Higher-than-normal values have also been measured on near-bottom samples in previous monitoring years. The Camp Lake discharge had

higher turbidity levels beginning in late summer; however, the discharge was ended by July 26, 2022, and therefore the discharge was not the source of the elevated turbidity. Bottom disturbance during sampling is a likely source of the elevated levels at these stations on these dates.

4.4.2.3 Iron

Total iron concentrations in the Camp Lake discharge closely tracked concentrations in Camp Lake and were the highest in spring and fall (similar to TSS and turbidity). Concentrations ranged between 2.1 mg/L and 6.0 mg/L and were above the MWQSOG Tier III guideline (0.3 mg/L) throughout the duration of open water sampling.

In 2022, the concentrations of total iron at the mixing zone stations were highest in spring (1.0 mg/L to 3.5 mg/L), when concentrations and flow from the discharge were the highest and declined to lower concentrations (0.3 mg/L to 0.6 mg/L) by July 9, 2022, after discharge over the Camp Lake discharge weir was ended (Figure 29). Higher concentrations were noted at CL-3 than at CL-7 or CL-8 initially, in spring, but then declined to comparable concentrations across all stations. The higher concentrations in the spring suggest that there was impact from the discharge on the mixing zone in spring. Higher concentrations at CL-3 indicate a more notable impact at CL-3 than at the limits of the mixing zone.

The increase in concentrations in the mixing zone in fall is not related to the discharge because of no flow over the discharge since at least the July 26, 2022, sampling event. Increases in concentrations in fall in previous years may be due to autumnal mixing of the water column with increased water temperatures – enabling flow mixing to the bottom of the lake and resuspension of iron that is released from lake sediments under anoxic conditions (DJRC, 2022).

With the exception of one sample (CL-7 on August 23, 2022), total iron concentrations within the mixing zone stations were higher than the MWQSOG Tier III guideline. Total iron concentrations within the Cold Lake stations located outside the mixing zone were highly variable and higher than that of the mixing zone, ranging between 0.2 mg/L and 5.5 mg/L (Figure 30). With the exception of four concentrations measured at CL-6, total iron concentrations in Cold Lake were higher than the MWQSOG Tier III guideline.

During the period of time that Sherlett Creek was diverted from Camp Lake and water treatment was being used to manage water quality in Camp Lake, concentrations of total iron in Cold Lake were measured as high as 2.29 mg/L on near-bottom samples (DJRC, 2022). In comparison to this highest measured background concentration, total iron concentrations in 2022 were higher at only two stations (CL-2 and CL-4) and only on select sampling dates in July through September. Since the discharge had no apparent effect on the mixing zone outside of spring, it does not appear that the higher concentrations at these stations were the result of the Camp Lake discharge – again suggesting another source of iron to the lake such as iron release from sediments.

4.4.3 TOTAL METALS

4.4.3.1 Aluminum

The Camp Lake discharge appeared to have no effect on total aluminum concentrations in the Cold Lake mixing zone throughout most of 2022; the concentrations of total aluminum within the mixing zone stations were generally consistent throughout the 2022 open water season, generally ranging from approximately 0.05 mg/L to approximately 0.1 mg/L, despite variability in the concentration and magnitude of the discharge

flow (Figure 31). The only exception is a higher concentration at CL-3 on May 31, 2022 (0.15 mg/L), which was above the MWQSOG Tier III guideline of 0.1 mg/L and appeared to be result of higher concentrations present within the discharge flow on this day.

Total aluminum concentrations within the Cold Lake stations located outside the mixing zone were higher than that of the mixing zone (between 0.05 mg/L and 0.18 mg/L; Figure 32). Concentrations above the MWQSOG Tier III guideline were frequent at all stations outside the mixing zone; however, this is partially attributed to lower pH values outside the mixing zone (Tier III guideline is 0.005 mg/L for pH <6.5 and 0.1 for pH ≥ 6.5). The highest concentration measured in Cold Lake in the absence of a discharge from Camp Lake (i.e., background concentration for the project) was 0.15 mg/L at CL-6 in August 2018 (bottom sample; DRJC, 2022). In 2022, the only concentrations above this background concentration were measured at CL-4, on July 12, 2022, and October 18, 2022; however, since the discharge had no apparent effect on the mixing zone outside of spring, the higher concentrations are not considered to be due to the discharge.

4.4.3.2 Cadmium, Copper, and Zinc

In 2022, the concentrations of total cadmium, total copper, and total zinc within the mixing zone were generally higher in spring than in summer or fall and initially higher at CL-3 than at CL-7 or CL-8, similar to total iron (Figures 33, 35, and 37). The concentrations of total cadmium and total zinc at CL-3 decreased to below MWQSOG Tier II objectives by June 28, 2022, while the concentrations of total cadmium and total zinc at CL-7 decreased to below Tier II objectives by July 12 and June 28, 2022, respectively. At CL-8, total cadmium concentrations were above the MWQSOG Tier II chronic objective only on May 31, 2022, and all total zinc concentrations were below Tier II objectives. For total copper, concentrations above the Tier II chronic and/or acute objectives were present within the mixing zone throughout open water sampling; however, background concentrations for total copper within Cold Lake have been identified above the Tier II chronic objective and occasionally above the Tier II acute objective (DJRC, 2022). Therefore, the identified copper concentrations may not indicate impacts from the Camp Lake discharge.

Total cadmium, copper, and zinc concentrations within the Cold Lake stations located outside the mixing zone were marginally higher in spring than in summer or fall with concentrations being generally comparable to or lower than that of the mixing zone (Figures 34, 36, and 38). Total cadmium and/or total zinc concentrations in Cold Lake outside the mixing zone were above the Tier II chronic objective at only two stations (CL-2 and CL-5) and only in May and June. Meanwhile, total copper concentrations above the Tier II chronic and/or acute objectives were present at all Cold Lake stations throughout open water sampling. In the absence of the Camp Lake discharge, total cadmium concentrations in Cold Lake have been measured as high as 0.00034 mg/L while total zinc concentrations have been measured as high as 0.098 mg/L (DJRC, 2022). The concentrations of total cadmium and total zinc at all Cold Lake stations outside the mixing zone in 2022 are well below these values and therefore no impacts from the discharge on total cadmium or total zinc were apparent in 2022. Total copper concentrations in Cold Lake have ranged as high as 0.011 mg/L (i.e., above the Tier II acute objective) outside of any discharge event (DJRC, 2022). Several concentrations in spring at CL-2, CL-4, and CL-5 (0.012 mg/L to 0.017 mg/L) in 2022 were higher than this maximum background concentration, and therefore it appears that the discharge may have had an effect on total copper concentrations in Cold Lake, but only in spring.

4.5 Discharge Toxicity

Water samples were collected from the Camp Lake discharge weir for testing of acute toxicity (96-hour LC_{50}) to juvenile rainbow trout on six dates in 2022 (May 31, June 14, July 12, August 9, September 9, and October 4, 2022). This toxicity test is one of the standard toxicity tests specified in the Metal and Diamond Mining Effluent Regulations (MDMER), which is not applicable to the Sherridon project but is completed to demonstrate whether the discharge water quality presents a toxicity risk to the aquatic environment. Rainbow trout are one of the standard test organisms because they are more sensitive to potentially toxic materials than many other fish species.

The LC_{50} is the effluent concentration that is lethal to 50% of the fish tested. An LC_{50} result of >100% indicates that the discharge is not acutely toxic to fish. All six tests in 2022 returned an LC_{50} > 100% result (Table 7), with 0% mortality and 0% atypical behavior noted over the 96-hour test. The Camp Lake discharge was therefore not acutely toxic to fish at any time over the six-month open water monitoring period.

4.6 Groundwater Monitoring and Sampling

The following sections discuss the field and laboratory results for the groundwater monitoring event completed on September 20, 2022. The September 20, 2022, monitoring event was the second time that the onsite groundwater monitoring wells have been sampled since installation in January and February 2022.

The groundwater results are compared to the MWQSOG, which were the reference criteria utilized for comparison of the February 2022 data (Tetra Tech; April 27, 2022 Memo). The groundwater results are compared to the MWQSOG based on sample specific hardness values measured for each groundwater sample.

Groundwater samples were collected from 11 of the 12 wells, as no water was recovered from MW-08-BR due to a bailer being lost down the well and restricting access. A total of 12 samples, including one field duplicate sample, was submitted to BV Laboratory in Winnipeg, Manitoba for laboratory analyses of general water chemistry, total metals, and dissolved metals. For comparison purposes, the groundwater analytical results are described below in terms of overburden and bedrock monitoring wells.

The 2022 results for field chemistry are provided in Table 9, general water quality in Table 10, dissolved metals in Table 11, and total metals in Table 12. The groundwater CoA is included in Appendix D.

4.6.1 ROUTINE AND FIELD PARAMETERS

Field chemistry data was not obtained during the February 2022 sampling event; therefore, lab pH will be used for comparison of the September 2022 data to the February 2022 event. However, the results of field pH testing for the September 2022 event will still be provided for comparison of future groundwater monitoring data. Field pH results are shown in Table 9 and general water chemistry results are provided in Table 10.

Bedrock Groundwater

Field pH measured for the bedrock monitoring wells MW-01-BR, MW-02-BR, and MW-04-BR showed consistent neutral pH levels between 6.96 and 8.30 (i.e., within the MWQSOG Tier III guideline range), while MW-05-BR, MW-06-BR, and MW-07-BR had slightly acidic pH levels between 5.55 and 6.41 (all below the

minimum MWQSOG Tier III guideline). Lab pH values were measured within a wider range of 7.62 to 7.90 for MW-01-BR, MW-02-BR, and MW-03-BR and 4.54 to 5.94 for MW-05-BR, MW-06-BR, and MW-07-BR. The September 2022 lab pH results were within the ranges reported for February 2022 for all monitoring wells. Monitoring wells MW-06-BR and MW-07-BR are located within the vicinity of the former shaft and glory hole sites associated with the historic East Mine Workings Area (Figure 2), which likely explains the slightly acidic conditions observed within these wells.

The remaining general chemistry parameters showed some variation in water quality within the bedrock wells with higher concentrations of total alkalinity and TDS in the wells north of Sherlett Creek (MW-01-BR, MW-02-BR, and MW-04-BR) during both February and September events. MW-05-BR had the lowest concentrations of total hardness, TDS, and sulphate for both sampling events.

Overburden Groundwater

Field pH measurements for the groundwater samples collected from the overburden groundwater wells showed consistent near neutral levels ranging from 6.51 to 7.57. Lab pH was similar with a slightly larger range of 6.20 to 7.81. The groundwater samples collected from two monitoring wells (MW-09-OB and MW-10-OB) had field pH values that were below the MWQSOG Tier III guideline (6.5) with pH values of 6.20 and 6.39, respectively. MW-09-OB and MW-10-OB are both located within a wetland area downgradient of the former East Mine Workings Area (Figure 2) which likely explains the slightly acidic conditions observed within these wells. The lab pH values for September 2022 were comparable to lab pH measured in February 2022 for all overburden wells.

Other general chemistry parameters including alkalinity, TDS, sulphate, and hardness were comparable between the September and February 2022 sampling events.

4.6.2 DISSOLVED METALS

The September 2022 results for dissolved metals in groundwater are included in Table 11.

Bedrock Groundwater

- ***Cadmium:*** Dissolved concentrations ranged from non-detectable (<0.000020 mg/L) to 0.1 mg/L within the bedrock monitoring wells. Concentrations were above the MWQSOG Tier II chronic and acute objectives at MW-06-BR and MW-07-BR (0.1 mg/L and 0.066 mg/L, respectively). During the February 2022 sampling event, MW-06-BR and MW-07-BR also had concentrations above the Tier II acute and/or chronic objectives (0.039 mg/L and 0.019 mg/L, respectively).
- ***Copper:*** Dissolved concentrations ranged from non-detectable (<0.0010 mg/L) to 5.8 mg/L within the bedrock monitoring wells. Concentrations were above the MWQSOG Tier II chronic and acute objectives at MW-05-BR, MW-06-BR, and MW-07-BR (0.014 mg/L, 0.22 mg/L, and 5.8 mg/L, respectively). During the February 2022 sampling event, MW-06-BR and MW-07-BR had concentrations above the Tier II chronic and/or acute objectives (0.025 mg/L and 0.69 mg/L, respectively) while the concentration at MW-05-BR was below one or both objectives (0.0044 mg/L). MW-08-BR was not sampled during the September 2022 sampling event; however, the February 2022 concentration (0.011 mg/L) was above one or both objectives.
- ***Zinc:*** Dissolved concentrations ranged from non-detectable (<0.0030 mg/L) to 27 mg/L within the bedrock monitoring wells. Concentrations were above MWQSOG Tier II chronic and acute objectives at

MW-06-BR and MW-07-BR (27 mg/L and 17 mg/L, respectively). During the February 2022 sampling event, MW-06-BR and MW-07-BR also had concentrations above the Tier II chronic and/or acute objectives (8.5 mg/L and 5.0 mg/L, respectively).

- The concentrations of the remaining dissolved metals parameters in groundwater samples collected from the bedrock monitoring wells were below the MWQSOG Tier II objectives and Tier III guidelines for both February and September 2022 sampling events.

Overburden Groundwater

- ***Cadmium:*** Dissolved concentrations ranged from non-detectable (<0.000020 mg/L) to 0.0021 mg/L within the overburden monitoring wells. Concentrations were above the MWQSOG Tier II chronic objective but below the Tier II acute objective at MW-10-OB (0.0021 mg/L). During the February 2022 sampling event, MW-10-OB also had a concentration above the Tier II chronic and/or acute objectives (0.0093 mg/L).
- ***Zinc:*** Dissolved concentrations ranged from non-detectable (<0.0030 mg/L) to 24 mg/L within the overburden monitoring wells. Concentrations were above the MWQSOG Tier II chronic and acute objectives at MW-09-OB and MW-10-OB (24 mg/L and 9.1 mg/L, respectively). During the February 2022 sampling event, MW-09-OB and MW-10-OB also had concentrations above the Tier II chronic and/or acute objectives (18 mg/L and 15 mg/L, respectively).
- The concentrations of the remaining dissolved metals parameters in groundwater samples collected from the overburden monitoring wells were below the MWQSOG Tier II objectives and Tier III guidelines for both February and September 2022 sampling events.

4.6.3 TOTAL METALS

The September 2022 results for total metals in groundwater are included in Table 12.

Bedrock Groundwater

- ***Aluminum:*** Total concentrations ranged from 0.13 mg/L to 3.4 mg/L within the bedrock monitoring wells. All six sampled bedrock wells had concentrations above the MWQSOG Tier III guideline for total aluminum. During the February 2022 sampling event, concentrations ranged from 0.34 mg/L to 8.7 mg/L (i.e., slightly higher than September). Concentrations at all seven sampled wells were also all above the Tier III guideline.
- ***Cadmium:*** Total concentrations ranged from non-detectable (<0.000020 mg/L) to 0.10 mg/L within the bedrock monitoring wells. Concentrations were above the MWQSOG Tier II chronic and acute objectives at MW-06-BR and MW-07-BR (0.10 mg/L and 0.064 mg/L, respectively). During the February 2022 sampling event, concentrations were above the Tier II chronic and/or acute objectives at MW-06-BR and MW-07-BR (0.040 mg/L and 0.018 mg/L, respectively).
- ***Copper:*** Total concentrations ranged from 0.0019 mg/L to 5.6 mg/L within the bedrock monitoring wells. Concentrations were above the MWQSOG Tier II chronic and acute objectives at MW-05-BR, MW-06-BR, and MW-07-BR (0.015 mg/L, 0.34 mg/L, and 5.6 mg/L, respectively). During the February 2022 sampling event, concentrations were above the Tier II chronic and/or acute objectives at MW-05-BR, MW-06-BR, MW-07-BR, and MW-08-BR (0.017 mg/L, 0.065 mg/L, 0.77 mg/L, and 0.079 mg/L, respectively).
- ***Iron:*** Total concentrations ranged from 0.094 mg/L to 6.1 mg/L within the bedrock monitoring wells. Concentrations were above the MWQSOG Tier III guideline (0.3 mg/L) at MW-01-BR, MW-04-BR, and

MW-06-BR (3.1 mg/L, 1.5 mg/L, and 6.1 mg/L, respectively). During the February 2022 sampling event, concentrations were above the Tier III guideline at all seven sampled wells and ranged from 0.51 mg/L (MW-07-BR) to 5.9 mg/L (MW-08-BR).

- ***Selenium:*** Total concentrations ranged from non-detectable (<0.00020 mg/L) to 0.0067 mg/L within the bedrock monitoring wells. Concentrations were above the MWQSOG Tier III guideline (0.001 mg/L) at MW-01-BR and MW-07-BR (0.0067 mg/L and 0.0014 mg/L, respectively). During the February 2022 sampling event, concentrations were above the Tier III guideline at MW-01-BR (0.0031 mg/L).
- ***Uranium:*** Total concentrations ranged from 0.00075 mg/L to 0.053 mg/L within the bedrock monitoring wells. Concentrations were above the MWQSOG Tier III guideline (0.015 mg/L) at MW-01-BR (0.053 mg/L). During the February 2022 sampling event, concentrations were above the Tier III guideline also at MW-01-BR (0.029 mg/L).
- ***Zinc:*** Total concentrations ranged from non-detectable (<0.0030 mg/L) to 27 mg/L within the bedrock monitoring wells. Concentrations were above the MWQSOG Tier II chronic and acute objectives at MW-06-BR and MW-07-BR (27 mg/L and 17 mg/L, respectively). During the February 2022 sampling event, concentrations were above the Tier II chronic and/or acute objectives also at MW-06-BR and MW-07-BR (8.9 mg/L and 4.6 mg/L, respectively).
- The concentrations of the remaining total metals parameters in groundwater samples collected from the bedrock monitoring wells were below the MWQSOG Tier II objectives and Tier III guidelines for both February and September 2022 sampling events.

Overburden Groundwater

- ***Aluminum:*** Total concentrations ranged from 1.7 mg/L to 20 mg/L within overburden monitoring wells. All five overburden wells had concentrations above the MWQSOG Tier III guideline for total aluminum. During the February 2022 sampling event, all five wells also had concentrations above the Tier III guideline with concentrations ranging from 0.8 mg/L to 36 mg/L.
- ***Cadmium:*** Total concentrations ranged from 0.000070 mg/L to 0.0038 mg/L within the overburden monitoring wells. MW-10-OB had a concentration above the MWQSOG Tier II chronic objective for total cadmium (0.0038 mg/L). During the February 2022 sampling event, MW-10-OB also had a concentration above the Tier II chronic and/or acute objectives with a concentration of 0.026 mg/L.
- ***Copper:*** Total concentrations ranged from 0.0027 mg/L to 0.033 mg/L within the overburden monitoring wells. MW-03-OB had a concentration above the MWQSOG Tier II chronic objective (0.033 mg/L). During the February 2022 sampling event, MW-03-OB and MW-10-OB had concentrations above the Tier II chronic and/or acute objectives (0.11 mg/L at both wells).
- ***Iron:*** Total concentrations ranged from 3.6 mg/L to 25 mg/L within the overburden monitoring wells. All five overburden wells had concentrations above the Tier III guideline for total iron (0.3 mg/L). During the February 2022 sampling event, total concentrations ranged slightly higher from 14 mg/L to 75 mg/L. Similarly, all five overburden wells had concentrations above the Tier III guideline for total iron.
- ***Zinc:*** Total concentrations ranged from 0.013 mg/L to 26 mg/L within the overburden monitoring wells. Concentrations were above the MWQSOG Tier II chronic and acute objectives at MW-03-OB, MW-09-OB, MW-10-OB, and MW-11-OB (1.6 mg/L, 26 mg/L, 10 mg/L, and 0.56 mg/L, respectively). During the February 2022 sampling event, concentrations ranged consistent with September values (2.6 mg/L to 19 mg/L), and MW-03-OB, MW-09-OB, and MW-10-OB had concentrations above Tier II chronic and/or acute objectives (2.6 mg/L, 18 mg/L, and 19 mg/L, respectively).

- The concentrations of the remaining total metals parameters in groundwater samples collected from the overburden monitoring wells were below the MWQSOG Tier II objectives and Tier III guidelines for both February and September sampling events.

The results of the September 2022 groundwater monitoring showed elevated metals concentrations in most of the monitoring wells; however, no pattern to the distribution could be identified. When the September 2022 results were compared against the results of the February 2022 groundwater monitoring, generally higher concentrations of key metal and water quality parameters were observed in September. To understand the groundwater quality at the site, it will be important to complete groundwater sampling events in spring and fall to increase the available data set. As knowledge of the groundwater at the site becomes more comprehensive, it may be able to determine if the groundwater is a source of elevated metals concentrations observed in Sherlett Creek.

4.7 QA/QC

A total of two field duplicate samples were collected during each biweekly surface water sampling event, one from Camp Lake and one from Cold Lake, and one trip blank was also submitted for each trip. During the groundwater sampling event, one field duplicate sample was collected (from MW-07-BR) and a field blank and trip blank were also submitted for laboratory analysis.

QA/QC assessment includes calculation of relative percent difference (RPD) for original and duplicate sample results, calculated as:

$$RPD = \frac{(A - B) \times 100}{(A + B) / 2}$$

Where: A = concentration of constituent in the original sample

B = concentration of constituent in the duplicate sample

Relative Percent Difference (RPD) was calculated for each duplicate and results are shown in Tables 4 to 6 for surface water and Table 10 to 12 for groundwater. General accepted protocols allow for a 30% RPD for water sample results that are greater than five times the detection limit of the analysis. Overall, QA/QC results show a high consistency between original and duplicate samples collected in 2022 for both surface water and groundwater.

5.0 PROGRESS TOWARD PROTECTION OF KISSISSING LAKE

One of the primary objectives of the Sherridon Reclamation Project is to prevent further degradation of Kississing Lake water quality related to runoff and discharge of mining impacted water from the former Sherridon Mine Site (AMP, 2022). Water quality monitoring within Kississing Lake was completed in September 2008 as part of a baseline study completed prior to the start of construction activities for site reclamation (Tetra Tech WEI, 2016). The September 2008 water quality results enable comparison of the current monitoring data to this data set to evaluate the degree of improvement that has been achieved through site reclamation works. It is important to continue to evaluate water quality in order to assess ongoing progress towards improvement of water quality within Kississing Lake.

During the 2022 open water season, the mean concentrations of the key total metals and key dissolved metals in the Camp Lake discharge were 63% to 92% lower and 71% to 98% lower, respectively, then concentrations measured in September 2008 (Table 13). From 2008 to 2022, the mean discharge pH increased from 3.4 to 6.8 (Table 13). From the 2021 to 2022 open water seasons, the mean concentrations of total and dissolved aluminum and copper showed no distinct changes, whereas cadmium concentrations increased by 9% (dissolved) and 12% (total) and zinc increased by 8% (dissolved) and 9% (total). Total iron concentrations showed a 3% decrease from 2021 concentrations and dissolved iron concentration showed an 8% decrease from 2021 concentrations.

The percent reduction in the mean concentrations of aluminum, cadmium, copper, and zinc at Cold Lake stations CL-2, CL-3, CL-4, and CL-5 correlate with the percent reduction in the mean metal concentrations occurring in the Camp Lake discharge (Table 14). Station CL-6 indicated a smaller percent reduction relative to the other stations; however, CL-6 contained lower mean metal concentrations relative to the other stations in 2008 (due to being farther from the historical discharge), which explains the lower percent reduction. Due to the reduced metal concentrations in the Camp Lake discharge, the mean concentrations of total cadmium and total zinc across Cold Lake were below the MWQSOG Tier II chronic exposure objectives (0.00018 mg/L and 0.0771 mg/L, respectively) in 2022. The mean concentrations of total aluminum across the lake, excluding CL-4, were below the MWQSOG Tier III guideline (0.1 mg/L) in 2022.

Reclamation of the Sherridon Mine Site has lowered the total and dissolved iron loading into Cold Lake via the Camp Lake discharge by 82% and 93%, respectively (Table 13); however, the reduced concentrations only resulted in decreases in the mean total iron concentrations at CL-2, CL-3, and CL-5 (and only up to 46% decrease), while the mean total iron concentrations at CL-4 and CL-6 represent an increase from 2008 concentrations (57% and 13% increase, respectively) (Table 14). Similarly, the mean dissolved iron concentrations at CL-2 and CL-3 decreased by only 47% and 44%, respectively, while the mean dissolved iron concentrations increased by 3%, 226%, and 240% at CL-6, CL-5, and CL-4, respectively.

The disproportionate decreases (and increases) in the mean concentrations of total and dissolved iron indicate that there is another source of iron to Cold Lake other than the Camp Lake discharge. The 2021 Water Quality Summary Report by DJRC (2022) stated that the most probable source of the additional iron is iron release from the Cold Lake sediments. Due to several decades of uncontrolled release of mining-impacted water from the Sherridon Mine Site, sediments within Cold Lake contain a considerable fraction of

iron, representing 25% to 28% of the total sediment mass at the time of the September 2008 Baseline Study. The release of iron from the Cold Lake sediments has been suggested to occur under oxygen-depleted conditions, such as those that develop on lake bottoms under winter ice cover and under thermally stratified conditions that remain in spring/summer (DJRC, 2022; Wetzel, 2001).

6.0 CONCLUSIONS

The 2022 monitoring year was the first year of water quality monitoring in the post-construction phase of the Sherridon Mine Reclamation Project. The 2022 monitoring year was also the first year that the water quality results for Camp Lake were compared to the Camp Lake Water Quality Performance Objectives (CLWQPO), which were developed within the Adaptive Management Plan (AMP) that governs the post-construction and post-closure periods of the reclamation project. The CLWQPO represents proposed targets that have been estimated to be achieved within three to four years of the completion of construction.

For the fourth consecutive year, Sherlett Creek provided sufficient alkalinity to maintain a near-neutral pH within Camp Lake, without the need for batch lime treatment, despite 2022 being the lowest year of precipitation in the last 10 years and the second consecutive year of low flows within Sherlett Creek. Flows were further reduced in 2022 due to the Camp Lake level being raised high through unannounced installation of stop logs at the discharge weir, sometime after the end of the 2021 open water monitoring program.

6.1 Sherlett Creek

Sherlett Creek documents the background surface water quality before the creek inflows into Camp Lake. Sherlett Creek is essential to the water quality within Camp Lake for several reasons including the continual supply of alkalinity for neutralizing pH within Camp Lake.

Field pH was near neutral and ranged from 6.66 to 7.44 during the 2022 open water season. This is consistent with field pH levels measured since 2017. Similar to 2017 and 2021, pH levels in 2022 declined slightly when flows were reduced through the creek (late summer). All three years have been characterized by low precipitation. Despite this, all field pH values in 2022 were within the MWQSOG Tier III guideline range (6.5 to 9.0). Alkalinity concentrations followed an increasing trend throughout the 2022 open water season, consistent with previous years.

In 2022, TSS concentrations during low flow periods were comparable to concentrations measured during high flow periods, ranging from <1.0 mg/L to 2.1 mg/L. There has been no apparent relation between flow volume and TSS at SC-1 in any of the low flow years including 2022. All measured concentrations in 2022 were well below the MWQSOG Tier II chronic objective of 11.5 mg/L. All turbidity results in 2022 were below 2.6 NTU and no seasonal increase during low flow was observed, unlike 2017 and 2021 in which results ranged from 4.9 NTU to 7.3 NTU.

Starting in 2021, the total concentrations of cadmium, copper, and zinc were compared to MWQSOG Tier II aquatic life criteria using an average hardness calculated for Sherlett Creek (using SC-1 hardness) instead of the average Cold Lake hardness (59.4 mg $CaCO_3$/L), which was used in previous years. The average SC-1 hardness in 2022 was calculated to be 30.8 mg $CaCO_3$/L, which is similar to the hardness calculated in 2021 (31.0 mg $CaCO_3$/L).

Over the past six years of monitoring (2017-2022), total iron concentrations at SC-1 have typically been below 0.4 mg/L. In 2022, concentrations during low flow periods reached 0.52 mg/L, while concentrations outside of the low flow months of August to October were below the MWQSOG Tier III guideline of 0.30 mg/L. Total aluminum concentrations have generally ranged between 0.02 mg/L and 0.10 mg/L over the last six years of

monitoring. All concentrations in 2022 were below the MWQSOG Tier III guideline (0.10 mg/L for pH ≥ 6.5 and 0.005 mg/L for pH < 6.5) and appeared to be unaffected by seasonal flow changes.

Total cadmium concentrations in 2022 were generally above the MWQSOG Tier II chronic objective of 0.00011 mg/L and below the acute objective of 0.00064 mg/L, which is consistent with results since 2017. Similar to iron, higher concentrations (up to 0.00067 mg/L) were measured during the period of lower flows, which was consistent with concentrations observed during low flow periods in 2017 and 2021. Higher concentrations of copper were observed during the low flow period as noted for the other metals. In 2022, concentrations ranged from 0.0060 mg/L to 0.014 mg/L outside of the period of lower flows and increased up to 0.029 mg/L in fall. The higher concentrations in fall were similar to concentrations reported in 2017, whereas concentrations in 2021 appeared to be unaffected by low flows. Total zinc concentrations in 2022 were generally above the MWQSOG Tier II chronic and acute objectives (0.04417 mg/L) throughout the open water season, which is consistent with previous years.

Overall, key parameter concentrations within SC-1 have shown minor variations since monitoring began in 2017. Surface runoff had less of an effect on the creek in 2022 due to extremely low precipitation and no major rainfall events recorded during sampling events.

Five additional surface water sampling locations (SC-2 to SC-6) were sampled upstream of SC-1 to gather further water quality information in the reach of Sherlett Creek between SC-1 and Sherlett Lake. In 2021, a detailed sampling event was conducted to investigate a potential sub-surface source of metal contamination that enters the creek downstream of SC-4. The source was identified as either an inflow of metal contaminated groundwater or direct contact of the creek with the mineralized zone of the Sherridon deposit, which passes directly beneath the creek in this location.

In 2022, total concentrations of cadmium, copper, and zinc at stations SC-3, SC-2, and SC-1 were higher than at stations SC-4, SC-5, and SC-6 on all open water sampling dates, which is consistent with the results from 2021; however, total metal concentrations at all stations were lower compared to 2021 concentrations, which indicates that the lower flows in 2022 did not result in increased influence on metals concentrations.

6.2 Camp Lake

An important factor to consider in understanding water quality in Camp Lake and its potential effect on water quality in Cold Lake is the magnitude of inflow from Sherlett Creek into the South basin of Camp Lake. During the 2022 open water sampling season, flows from Sherlett Creek into Camp Lake were negligible from late July to the end of open water monitoring in mid-late October.

The results and conclusions are stated first for the winter sampling event completed on March 18, 2022, as concentrations in spring are dependent on concentrations in winter, and specifically, water quality in winter must be understood in order to assess the effectiveness of reclamation activities in reducing concentrations in spring.

In previous monitoring years, water sampling events completed under winter ice cover indicated that water quality substantially improved over winter compared to water quality measured in fall. Flows maintained under winter ice cover reduce metals, TSS, and turbidity, and improve pH, and therefore provide an indication of water quality that can be achieved in the absence of runoff related effects but in the presence of flows. The winter sampling event completed on March 18, 2022, was the first winter sampling event where

water quality did not substantially improve under winter ice cover. Substantial reductions in metals, TSS, and turbidity that occurred over previous winters did not occur to the same extent over the 2021/2022 winter. Flows on Sherlett Creek had substantially reduced by late summer of 2021 and were negligible to zero over winter (DJRC, 2022). In the absence of flows under ice cover, water quality over winter could not improve to the same extent as it did in previous monitoring years, where flow was maintained.

The result of the higher concentrations in winter were concentrations in spring that were similar to or slightly higher than concentrations measured during previous springs for many of the key total metals, including aluminum, cadmium, copper, and zinc. This is despite reductions in remaining sources of acid and metal generating mine waste that were completed by the end of 2021.

A comparison of the metals concentrations between winter and spring provides an indication of the overall contribution of spring runoff to metals concentrations in Camp Lake. Concentrations of all key metals (except total iron) increased from winter to spring; however, the increases were generally less than that of previous years, indicating less metals loading to the lake from spring runoff in 2022. The improvements in water quality from winter to spring were most notable for total iron, where only a slight increase in concentrations was observed after spring runoff at some stations, while other stations showed no increase from runoff in spring. Iron therefore appeared to be less affected by spring runoff than the other metals and substantially less affected than in spring 2021. Overall, the monitoring results indicate that spring runoff still contributes a small degree of metals loading to the lake, although this is reduced compared to prior years. The increases that still occur in spring are likely due to very small quantities of residual sources of mine waste that remain onsite (which are likely not practical to remove), loading from natural metal-bearing rock in vicinity of Camp Lake, and/or interactions between the submerged tailings and the lake water.

Concentrations of metals, as well as TSS and turbidity, decreased from spring into mid-summer with flow from Sherlett Creek. The decreases occurred as long as Sherlett Creek flow was maintained to the lake, which occurred until approximately late July, after which inflows into Camp Lake became substantially reduced. Unlike in 2021, the cause of the lower inflows into Camp Lake was both lower flows on Sherlett Creek, and water levels on Camp Lake that were artificially raised due to stop logs installed at the discharge weir by an unknown, authorized party sometime after the end of 2021 open water monitoring. The lowest metals concentrations were generally measured on or shortly after inflows reduced. Metals then generally increased after inflows were reduced to near-zero. Despite the higher concentrations in spring and lower inflows in late summer and fall, the concentrations of total aluminum and total copper were some of the lowest measured concentrations since the re-establishment of Sherlett Creek flow to Camp Lake. This is attributed directly to the progress of the Sherridon Reclamation Project.

The following is a summary of the key parameters when compared against the CLWQPO for the 2022 open water season.

- ***Field pH:*** Levels at all stations were above the CLWQPO minimum during all sampling events with the exception of the last event in late October.
- ***TSS:*** Concentrations at all stations remained well below the CLWQPO (11.5 mg/L) for the entirety of the open water season.
- ***Turbidity:*** All turbidity levels measured during the 2022 open water season were above the CLWQPO.
- ***Iron:*** Concentrations were above the CLWQPO during all sampling events and for all stations in 2022; however, overall, concentrations were reduced when compared to concentrations measured in 2021.

- ***Aluminum:*** Concentrations at the main lake axis stations and the Camp Lake discharge were above the CLWQPO in spring until mid-to-late August, after which they dropped below the CLWQPO and remained below until the end of open water sampling. Concentrations at the East basin stations remained above the CLWQPO for the majority of the open water season.
- ***Cadmium:*** Concentrations at the main lake axis stations and the Camp Lake discharge were above the CLWQPO in spring until early September, after which they dropped below the CLWQPO and remained below until the end of open water sampling. Concentrations at the East basin stations were above the CLWQPO for the majority of the open water season.
- ***Copper:*** Concentrations at the main lake axis stations and Camp Lake discharge were above the CLWQPO in spring until early August, after which they dropped below the CLWQPO and remained below until the end of sampling. Concentrations at the East basin stations were above CLWQPO for the majority of the open water season, intermittently dropping below after late summer.
- ***Zinc:*** Concentrations at all Camp Lake stations, including the Camp Lake discharge, were above the CLWQPO in spring until early August, after which they dropped below the CLWQPO and remained below until the end of sampling.

Overall, the 2022 monitoring year results indicate water quality on Camp Lake that is achieved after two consecutive years of low precipitation and flows, with the 2022 open water season being the first year after completion of construction activities as part of site reclamation. The effect of two consecutive years of low precipitation and flows may cause an extension of the projected three to four year recovery period for water quality within Camp Lake.

6.3 Cold Lake

Due to addition of stop logs at the Camp Lake discharge weir, discharge flow over the Camp Lake weir was ended by the time of the July 26, 2022 monitoring event. No discharge was present over the weir from at least this date until the end of open water sampling.

The following are conclusions for water quality monitoring within Cold Lake:

- The stations located within Cold Lake outside the mixing zone had some pH values below the MWQSOG Tier III guideline in July to September, while stations in the Cold Lake mixing zone all had field pH values within the Tier III guideline.
- Alkalinity in Cold Lake was maintained at a fairly constant level throughout the 2022 open water season.
- TSS within Cold Lake both in and outside the mixing zone were consistently low (i.e., lower than in Camp Lake and well below the Tier II chronic objective).
- Turbidity on near-bottom samples within the mixing zone stations was below 5 NTU and appeared to be affected by the mixing zone in spring (due to higher concentrations present in the mixing zone in spring relative to mid-summer); however, turbidity outside the mixing zone did not appear to be affected by the discharge turbidity.
- Total aluminum concentrations in the Cold Lake mixing zone were generally consistent throughout the open water season and therefore did not appear to be affected by the discharge (other than one higher concentration at CL-3, in spring, that was higher that the concentrations at CL-7 and CL-8).
- Higher concentrations of total iron, total cadmium, total copper, and total zinc were measured in the Cold Lake mixing zone in spring versus summer/fall, with the highest concentrations measured at CL-3

versus CL-7 and CL-8; therefore, the discharge appears to have affected the mixing zone, but only in spring, and more notably at CL-3 than at CL-7 and CL-8 for these metals.

- For Cold Lake outside the mixing zone, total aluminum and total iron were periodically measured above the highest measured background concentrations for Cold Lake for the project, in summer and fall; however, since the discharge had no apparent effect on the mixing zone outside of spring, the higher concentrations are likely not due to the discharge.
- Based on a comparison of background concentrations for Cold Lake for total cadmium and total zinc, there was no apparent effect from the discharge on concentrations of these metals in Cold Lake outside the mixing zone in 2022.
- The concentrations of total copper in spring at CL-2, CL-4, and CL-5 were above Cold Lake background concentrations and therefore it appears that the discharge may have affected total copper concentrations in Cold Lake, but only in spring.

6.4 Groundwater

The monitoring wells located in the wetland area and to the southeast, in the vicinity of the historic East Mine workings, showed water quality parameters potentially indicative of exposure to naturally mineralized zones or potential mine waste, with the remaining wells to the north of the creek and southwest along the bedrock ridge showing freshwater indicators. Higher total and dissolved metal concentrations were observed within the vicinity of the wetland area, which is consistent with the results from February 2022.

The results of the September 2022 groundwater monitoring showed elevated metals concentrations in most of the monitoring wells; however, no pattern to the distribution could be identified. When the September 2022 results were compared against the results of the February 2022 groundwater monitoring, generally higher concentrations of key metal and water quality parameters were observed in September.

7.0 RECOMMENDATIONS

The environmental monitoring program is recommended to continue into 2023 (i.e., the second year of post-construction monitoring). The environmental monitoring should follow the requirements listed in the AMP for water quality monitoring, which includes addition of sulphate as a key water quality monitoring parameter. Water levels on Camp Lake are also recommended to be captured during the 2023 open water monitoring season as per the requirements of the AMP. No reduction in the sampling frequency is proposed for the 2023 monitoring year.

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TABLES

TABLE 3
2022 SURFACE WATER FIELD CHEMISTRY
SHERRIDON MINE SITE, MANITOBA

Sample ID	Date	Field Duplicate Sample ID	Time	Temperature (°C)	pH	EC (µS/cm)	DO		ORP (mV)	Turbidity (NTU)
							% L	mg/L		
Camp Lake										
SB-1	31-May-22		10:10	11.2	6.86	208.4	78.1	8.2	71.7	13.84
	14-Jun-22		9:45	17.5	7.23	187.4	110.1	10.1	73.7	13.24
	28-Jun-22		9:55	17.0	7.10	226.6	122.1	11.32	42.3	4.76
	12-Jul-22		9:30	20.3	7.11	246.6	99.3	8.64	65.3	3.00
	26-Jul-22	SW-103	9:25	19.8	6.89	268.9	77.6	6.77	51.9	4.13
	9-Aug-22		9:25	18.3	6.70	285.5	81.5	7.26	50.0	8.25
	23-Aug-22		9:15	20.3	6.82	304.7	66.1	5.70	76.6	4.45
	9-Sep-22		10:00	15.6	6.36	301.8	77.4	7.46	86.5	15.30
	20-Sep-22		14:45	14.5	6.67	306.6	-	8.35	77.4	11.94
	4-Oct-22		9:45	10.6	6.85	406.1	-	12.33	111.0	13.74
	18-Oct-22		9:20	2.4	5.59	355.9	132	17.42	92.8	30.70
SB-2	31-May-22		10:00	11.4	6.77	204.8	85.7	8.9	79.2	13.96
	14-Jun-22		9:35	16.8	7.13	178.2	109.1	10.03	74.7	13.13
	28-Jun-22		9:45	17.2	6.99	216.9	112.3	10.45	47.1	4.65
	12-Jul-22		9:25	19.4	7.00	243.5	103.5	9.17	66.7	3.10
	26-Jul-22		9:20	18.9	6.77	265.5	71.3	6.33	52.4	4.22
	9-Aug-22		9:20	18.2	6.51	283.0	76.5	6.93	54.5	8.73
	23-Aug-22		9:10	20.0	6.51	291.7	73.2	6.38	86.6	4.34
	9-Sep-22		9:30	14.5	6.19	298.9	75.6	7.39	91.5	16.05
	20-Sep-22		14:40	14.5	6.64	298.4	-	8.13	77.1	12.05
	4-Oct-22		9:40	10.2	6.94	395.8	-	12.64	113.0	14.36
	18-Oct-22	SW-104	9:10	2.8	5.76	347.6	125.3	16.38	92.7	32.00
CB-1	31-May-22	SW-100	10:15	11.1	6.90	212.8	77.5	8.15	71.9	13.33
	14-Jun-22		9:50	17.6	7.23	187.9	113.1	10.22	75.2	13.28
	28-Jun-22		10:00	17.7	7.11	236.4	114.6	10.5	39.9	4.95
	12-Jul-22		9:35	19.9	7.12	247.8	111.2	9.73	67.8	3.08
	26-Jul-22		9:35	20.0	6.92	270.0	70.7	6.13	52.5	4.03
	9-Aug-22		9:30	18.3	6.71	286.6	80.0	7.23	52.0	7.04
	23-Aug-22		9:20	20.5	6.86	308.8	74.7	6.42	76.1	4.36
	9-Sep-22		10:05	16.0	6.52	308.0	72.2	6.85	85.2	13.52
	20-Sep-22	SW-117	14:50	14.3	6.63	308.6	-	8.05	81.5	12.58
	4-Oct-22		9:50	10.6	6.74	406.9	-	12.68	115.5	13.13
	18-Oct-22		9:25	2.0	5.74	359.6	132.2	17.45	93.4	27.90
CB-2	31-May-22		10:25	11.7	6.84	226.4	77.4	8.04	73.4	14.94
	14-Jun-22		9:55	17.8	7.21	191.4	103.4	9.36	75.7	13.88
	28-Jun-22	SW-105	10:05	17.5	7.07	252.4	101.8	9.39	41.5	4.93
	12-Jul-22		9:40	20.4	7.11	252.8	100.1	8.78	67.4	3.28
	26-Jul-22		9:40	20.0	6.96	272.0	71.9	6.27	53.8	3.83
	9-Aug-22		9:35	18.1	6.74	286.9	76.1	6.87	53.3	7.00
	23-Aug-22		9:25	20.4	6.89	309.1	65.8	5.69	77.0	4.24
	9-Sep-22		10:15	15.9	6.59	308.6	74.7	7.08	84.8	13.30
	20-Sep-22		15:00	14.3	6.60	315.6	-	7.96	83.4	12.38
	4-Oct-22		9:55	10.7	6.71	411.0	-	12.21	113.9	12.78
	18-Oct-22		9:30	2.1	5.71	358.0	131.2	17.42	93.4	27.50
NB-1	31-May-22		11:00	12.3	6.86	249.9	83.5	8.48	88.3	15.24
	14-Jun-22		10:35	18.6	7.11	209.9	108.8	9.62	78.3	14.82
	28-Jun-22		10:40	17.6	7.05	277.7	108.6	10.03	48.1	4.97
	12-Jul-22		10:10	20.2	7.20	261.5	111.8	9.77	73.4	3.00
	26-Jul-22		10:05	20.2	6.94	282.5	75.4	6.58	58.6	3.38
	9-Aug-22		10:05	18.5	6.83	302.7	74.2	6.63	57.6	6.36
	23-Aug-22		9:55	20.9	6.88	326.4	65.5	5.65	83.8	3.98
	9-Sep-22	SW-106	11:35	16.0	6.52	339.6	71.7	6.80	90.3	11.21
	20-Sep-22		15:25	14.2	6.67	176.8	-	8.02	90.7	11.00
	4-Oct-22		10:20	10.4	6.69	439.6	-	12.52	120.1	12.91
	18-Oct-22		9:55	1.9	5.90	371.3	129.3	17.33	89.7	24.2
NB-2	31-May-22		10:55	11.9	6.99	238.4	78.8	8.14	86.5	14.26
	14-Jun-22	SW-107	10:25	18.3	7.12	208.9	100.6	8.75	77.3	14.65
	28-Jun-22		10:30	17.2	7.14	278.6	103.4	9.55	46.5	4.96
	12-Jul-22		10:05	20.5	7.09	261.2	98.2	8.52	71.1	3.07
	26-Jul-22		10:00	20.0	7.00	282.5	78.3	6.62	57.0	3.36
	9-Aug-22		9:57	18.7	6.84	303.5	74.5	6.63	57.4	6.22
	23-Aug-22		9:50	20.4	6.92	324.6	63.7	5.53	82.7	4.22
	9-Sep-22		11:30	15.6	6.61	331.8	77.9	7.56	103.6	9.56
	20-Sep-22		15:15	14.4	6.68	331.3	-	7.68	89.2	11.01
	4-Oct-22		10:15	10.2	6.76	438.6	-	12.25	121.7	12.49
	18-Oct-22		9:50	1.8	5.95	370.9	129.3	17.34	91.7	24.10

TABLE 3
2022 SURFACE WATER FIELD CHEMISTRY
SHERRIDON MINE SITE, MANITOBA

Sample ID	Date	Field Duplicate Sample ID	Time	Temperature (°C)	pH	EC (µS/cm)	DO		ORP (mV)	Turbidity (NTU)
							% L	mg/L		
EB-1	31-May-22		10:35	12.1	6.85	282.2	86.2	8.83	80.4	18.11
	14-Jun-22		10:00	18.4	7.16	228.7	103.5	9.20	78.7	15.77
	28-Jun-22		10:15	17.3	7.03	313.1	110.2	10.18	45.8	7.26
	12-Jul-22		9:45	19.9	7.06	287.6	105.4	9.20	71.9	4.50
	26-Jul-22		9:45	19.8	6.97	292.3	76.7	6.47	57.1	4.07
	9-Aug-22		9:45	18.3	6.75	307.7	75.3	6.54	55.4	5.59
	23-Aug-22	SW-108	9:40	20.2	6.90	337.3	63.2	5.57	80.6	3.87
	9-Sep-22		10:20	15.1	6.73	328.0	74.4	7.17	87.4	8.48
	20-Sep-22		15:05	14.2	6.60	332.9	-	8.34	85.8	9.35
	4-Oct-22		10:00	10.4	6.73	433.4	-	12.47	116.2	10.14
	18-Oct-22		9:35	1.5	5.94	367.3	132.9	17.99	93.0	21.50
EB-2	31-May-22		10:45	12.1	6.84	306.6	84.1	8.62	86.7	21.10
	14-Jun-22		10:10	18.4	7.15	232.6	104.7	9.31	78.9	15.94
	28-Jun-22		10:20	17.4	7.06	317.7	106.0	10.22	47.4	7.12
	12-Jul-22	SW-109	9:50	20.5	7.03	298.4	99.6	10.85	73.9	4.98
	26-Jul-22		9:50	19.6	7.00	296.7	78.6	6.79	55.6	5.06
	9-Aug-22		9:55	18.4	6.89	313.6	78.9	7.10	56.9	9.84
	23-Aug-22		9:45	20.5	6.91	342.1	59.9	5.72	82.6	3.93
	9-Sep-22		10:30	15.3	6.90	335.6	75.2	7.22	89.3	9.25
	20-Sep-22		15:10	14.7	6.67	333.9	-	8.06	86.9	9.11
	4-Oct-22		10:05	10.5	6.78	441.2	-	12.2	119.0	10.18
	18-Oct-22		9:40	1.6	6.09	371.2	141.5	19.26	93.9	19.85
Camp Lake Discharge	31-May-22		11:10	11.8	6.81	258.0	83.9	8.72	89.9	15.53
	14-Jun-22		10:40	18.7	7.10	210.9	109.4	9.56	79.0	14.74
	28-Jun-22		10:45	17.7	7.04	281.4	112.5	10.42	48.7	5.05
	12-Jul-22		10:15	20.0	7.06	260.8	103.4	8.94	75.1	2.86
	26-Jul-22		10:10	20.1	6.93	282.2	73.1	6.23	59.4	3.60
	9-Aug-22		10:10	18.6	6.76	164.7	74.8	6.62	61.1	6.57
	23-Aug-22		10:00	20.5	6.85	327.7	63.8	5.55	85.1	3.74
	9-Sep-22		11:45	16.3	6.61	342.1	69.6	6.57	91.5	9.52
	20-Sep-22		15:30	14.1	6.68	333.9	-	7.48	91.1	10.07
	4-Oct-22	SW-110	10:30	10.1	6.66	441.2	-	10.79	120.7	13.49
	18-Oct-22		10:00	1.9	5.93	372.3	127.6	17.09	87.8	24.40
Manitoba Water Quality Standards, Objectives, and Guidelines [1]										
Protection of Freshwater Aquatic Life										
Tier III Guideline					*6.5 - 9.0*					
Camp Lake Water Quality Performance Objectives [2]										
Sampling Event Dates	31-May-22				*6.5 - 9.0 [2a]*					*2.0 [2b, 2c]*
	14-Jun-22									*2.2 [2b, 2c]*
	28-Jun-22									*2.0 [2b, 2c]*
	12-Jul-22									*1.7 [2b, 2c]*
	26-Jul-22									*1.4 [2b, 2c]*
	9-Aug-22									*2.7 [2b, 2c]*
	23-Aug-22									*2.3 [2b, 2c]*
	9-Sep-22									*1.6 [2b, 2c]*
	20-Sep-22									*2.6 [2b, 2c]*
	4-Oct-22									*1.7 [2b, 2c]*
	18-Oct-22									*2.2 [2b, 2c]*

Notes:
"-" = no value
EC = Electrical Conductivity
ORP = Oxygen Reduction Potential
DO = Dissolved Oxygen
NTU = Nephelometric Turbidity Units

1. Manitoba Water Quality Standards, Objectives, and Guidelines (MWQSOG). Manitoba Water Stewardship, 2011.
2. Camp Lake Water Quality Performance Objectives (CLWQPO). Final Adaptive Management Plan - Sherridon Orphaned Mine Site Reclamation Project, August 16, 2022.
   a. The pH objective is the MWQSOG Tier III guideline. It has been determined to be reasonable based on pre-construction predictions and monitoring record.
   b. Turbidity objectives calculated as ambient SC-1 + 25%. Ambient SC-1 refers to the concentration measured at Sherlett Creek station SC-1 within the previous 7 days.
   c. The 25% allowance in the turbidity calculation is to account for sampling and analytical variation as per DJRC (2022).

- Values outside of MWQSOG range (pH).
BOLD - Values outside of CLWQPO range (pH) or above specified maximum value (turbidity).

TABLE 3
2022 SURFACE WATER FIELD CHEMISTRY
SHERRIDON MINE SITE, MANITOBA

Sample ID	Date	Field Duplicate Sample ID	Time	Temperature (°C)	pH	EC (µS/cm)	DO		ORP (mV)	Turbidity (NTU)
							% L	mg/L		
Sherlett Creek										
SC-1	31-May-22		11:45	11.0	6.99	62.6	82.5	8.71	85.8	1.56
	14-Jun-22		11:05	17.8	7.44	57.0	116.0	10.42	63.4	1.73
	28-Jun-22		11:00	18.5	7.23	81.6	115.2	10.42	33.5	1.63
	12-Jul-22		10:35	20.4	7.20	110.6	108.3	9.32	77.7	1.32
	26-Jul-22		10:30	19.7	7.07	73.3	70.5	6.07	47.5	1.15
	9-Aug-22	SW-102	10:35	18.1	7.03	73.6	74.9	6.73	39.1	2.14
	23-Aug-22		10:15	19.0	6.94	78.2	58.5	5.29	73.8	1.81
	9-Sep-22		12:20	14.8	6.66	80.1	67.3	6.61	59.0	1.31
	20-Sep-22		16:25	13.5	6.77	43.9	-	6.45	102.2	2.10
	4-Oct-22		10:55	9.8	6.81	117.7	-	10.46	118.7	1.39
	18-Oct-22		11:10	3.3	7.14	71.1	117.8	15.12	53.9	1.75
SC-2	20-Sep-22		16:05	13.8	6.69	62.8	-	6.04	88.8	1.57
	4-Oct-22		11:25	10.2	6.62	115.6	-	7.38	113.4	1.41
	18-Oct-22		10:50	3.3	6.77	69.2	101.8	13.12	59.6	1.46
SC-3	20-Sep-22		16:00	13.9	6.69	60.5	-	6.43	88.8	1.50
	4-Oct-22	SW-118	11:20	10.3	6.73	94.5	-	9.12	107.2	1.33
	18-Oct-22		10:40	2.5	6.72	65.8	101.7	13.66	57.8	1.02
SC-4	20-Sep-22		15:55	13.7	6.78	61.1	-	5.98	86.0	2.09
	4-Oct-22		11:15	10.4	6.75	77.5	-	8.79	107.2	1.33
	18-Oct-22	SW-119	10:30	2.9	6.75	75.9	102	13.27	58.0	1.42
SC-5	20-Sep-22		16:15	14.1	6.75	59.0	-	7.09	91.1	2.94
	4-Oct-22		11:35	10.8	6.71	75.9	-	9.49	106.9	2.71
	18-Oct-22		10:55	4.1	6.96	66.4	123.7	15.38	52.0	3.76
SC-6	20-Sep-22		16:20	14.8	6.83	58.4	-	8.46	94.2	1.62
	4-Oct-22		11:45	11.7	6.85	73.7	-	11.52	106.5	1.64
	18-Oct-22		11:00	4.7	7.12	60.4	145	18.73	46.6	1.49
Manitoba Water Quality Standards, Objectives, and Guidelines [1]										
Protection of Freshwater Aquatic Life										
Tier III Guideline					*6.5 - 9.0*					

Notes:
"-" = no value
EC = Electrical Conductivity
ORP = Oxygen Reduction Potential
DO = Dissolved Oxygen
NTU = Nephelometric Turbidity Units

1. Manitoba Water Quality Standards, Objectives, and Guidelines (MWQSOG). Manitoba Water Stewardship, 2011.

- Values outside of MWQSOG range (pH).

Sample ID	Date	Field Duplicate Sample ID	Time	Temperature (°C)	pH	EC (µS/cm)	DO		ORP (mV)	Turbidity (NTU)
							% L	mg/L		
Cold Lake										
CL-2	31-May-22		9:30	7.9	6.92	125.9	87.6	10.10	81.0	4.20
	14-Jun-22		9:10	9.3	7.54	110.2	131.4	14.58	67.3	3.68
	28-Jun-22		9:15	12.0	7.17	133.2	105.3	10.71	35.2	3.23
	12-Jul-22	SW-111	9:00	11.2	6.80	132.7	66.4	7.09	68.6	6.59
	26-Jul-22		9:00	11.7	6.63	121.5	40.9	4.13	48.4	5.99
	9-Aug-22		8:55	12.0	6.88	115.8	31.1	3.17	44.0	4.69
	23-Aug-22		8:55	14.2	6.76	116.0	23.9	2.38	53.2	4.33
	9-Sep-22		9:05	12.7	6.33	82.0	22.6	2.26	82.0	12.43
	20-Sep-22		14:20	12.7	6.49	65.1	-	4.16	70.2	11.02
	4-Oct-22		9:05	11.2	7.21	118.3	-	11.34	103.2	3.11
	18-Oct-22		8:40	6.5	6.58	95.7	116.4	13.8	88.8	3.00
CL-3	31-May-22		9:05	10.4	6.95	196.4	81.1	8.68	72.3	12.18
	14-Jun-22		8:55	14.8	7.42	110.4	115.5	11.13	61.8	4.20
	28-Jun-22		8:55	15.6	7.39	131.6	115.6	11.23	28.1	2.29
	12-Jul-22		8:45	19.2	7.42	122.1	112.4	9.94	53.0	1.89
	26-Jul-22		8:45	20.0	7.29	109.9	68.7	5.94	29.0	1.30
	9-Aug-22		8:40	18.5	7.21	98.3	72.2	6.48	28.7	1.63
	23-Aug-22	SW-112	8:30	20.4	7.22	103.2	66.1	5.81	39.5	1.25
	9-Sep-22		8:50	16.5	6.76	95.1	67.4	6.28	78.6	2.05
	20-Sep-22		14:05	14.9	6.59	53.6	-	8.33	82.1	1.97
	4-Oct-22		8:50	11.5	7.09	119.9	-	11.36	119.7	2.81
	18-Oct-22		8:30	5.8	6.54	97.4	123.2	19.91	96.4	3.06

TABLE 3
2022 SURFACE WATER FIELD CHEMISTRY
SHERRIDON MINE SITE, MANITOBA

Sample ID	Date	Field Duplicate Sample ID	Time	Temperature (°C)	pH	EC (µS/cm)	DO		ORP (mV)	Turbidity (NTU)
							% L	mg/L		
CL-4	31-May-22		8:45	7.7	6.89	105.4	74.6	8.65	67.5	5.06
	14-Jun-22	SW-113	8:35	9.6	7.17	101.8	103.0	11.12	67.5	9.38
	28-Jun-22		8:35	11.6	6.94	124.2	91	9.64	43.8	4.96
	12-Jul-22		8:30	11.1	6.73	122.7	60.6	6.34	66.2	19.29
	26-Jul-22		8:35	13.0	6.04	114.8	33.3	3.31	70.0	15.06
	9-Aug-22		8:30	12.7	5.97	113.2	21.2	2.00	70.3	21.10
	23-Aug-22		8:20	13.0	5.98	123.6	10.5	1.05	98.2	30.50
	9-Sep-22		8:35	15.9	6.56	94.5	61.4	5.82	80.6	4.82
	20-Sep-22		13:55	14.5	6.49	90.0	-	5.92	72.7	10.45
	4-Oct-22		8:35	11.7	7.02	116.9	-	11.26	131.5	2.97
	18-Oct-22		8:20	6.1	6.59	95.9	122.7	14.92	99.9	4.1
CL-5	31-May-22		8:30	9.5	6.87	109.7	84.8	9.30	67.4	4.02
	14-Jun-22		8:20	10.1	7.37	91.9	126.1	13.31	69.4	4.26
	28-Jun-22	SW-114	8:25	11.0	7.16	125.6	99.4	107.3	45.5	6.64
	12-Jul-22		8:20	12.5	6.61	122.5	93.0	9.38	84.1	7.14
	26-Jul-22		8:25	13.6	5.98	114.1	40.3	3.90	78.1	6.58
	9-Aug-22		8:25	15.0	6.11	108.1	52.9	4.94	75.2	5.37
	23-Aug-22		8:10	16.8	6.19	102.0	35.3	3.28	137.6	4.61
	9-Sep-22		8:25	16.0	6.62	92.1	71.1	6.72	79.1	2.60
	20-Sep-22		13:45	14.8	6.33	90.4	-	7.59	78.5	2.53
	4-Oct-22		8:25	11.5	7.17	122.0	-	11.87	142.4	2.93
	18-Oct-22		8:15	6.3	6.77	100.0	121.1	14.47	99.6	4.3
CL-6	31-May-22		8:15	10.7	7.10	105.6	91.8	9.77	54.0	3.92
	14-Jun-22		8:10	10.8	7.60	108.9	113.8	12.01	86.5	2.16
	28-Jun-22		8:10	12.0	7.43	150.0	88.2	9.13	55.1	4.00
	12-Jul-22		8:10	13.8	7.29	149.8	69.2	6.83	82.9	6.87
	26-Jul-22		8:15	15.9	6.18	119.9	45.1	4.20	79.0	5.59
	9-Aug-22	SW-115	8:15	16.6	6.27	112.5	50.0	4.65	69.6	11.35
	23-Aug-22		8:05	17.6	6.24	100.6	41.8	3.83	136.3	4.75
	9-Sep-22		8:20	15.7	6.49	88.6	72.6	6.89	88.6	2.56
	20-Sep-22		13:35	14.9	5.92	106.6	-	7.22	95.4	1.93
	4-Oct-22		8:15	11.5	7.95	352.2	-	12.01	144.3	2.14
	18-Oct-22		8:05	5.8	7.14	139.8	199.4	22.48	115.1	3.0
CL-7	31-May-22	SW-101	9:15	8.9	7.09	125.1	78.0	8.67	69.2	3.81
	14-Jun-22		9:00	16.7	7.56	103.9	113.3	10.45	58.9	3.58
	28-Jun-22		9:00	15.6	7.39	137.8	113.6	10.94	27.0	2.55
	12-Jul-22		8:50	19.5	7.43	126.3	105.2	9.21	48.6	1.82
	26-Jul-22		8:50	20.0	7.33	107.2	64.8	5.47	28.6	1.82
	9-Aug-22		8:45	18.4	7.29	98.3	65.0	5.95	27.4	1.88
	23-Aug-22		8:45	20.5	7.32	101.5	64.3	5.64	39.7	1.18
	9-Sep-22	SW-101	8:55	15.8	6.87	97.1	65.4	6.20	75.6	2.16
	20-Sep-22	SW-104	14:10	15.0	6.94	94.2	-	7.08	66.2	2.26
	4-Oct-22		8:55	11.3	7.13	118.7	-	11.16	105.8	2.68
	18-Oct-22		8:35	6.0	6.57	96.8	119.2	14.35	92.6	3.1
CL-8	31-May-22		9:00	8.8	6.95	120.1	95.5	10.74	68.7	4.06
	14-Jun-22		8:45	12.2	7.20	95.8	115.5	11.81	67.4	3.36
	28-Jun-22		8:45	15.2	7.31	129.8	112.0	10.91	25.8	2.40
	12-Jul-22		8:40	18.7	7.28	113.0	111.9	10.05	49.0	1.68
	26-Jul-22	SW-116	8:40	19.0	7.19	105.9	69.5	6.15	33.2	1.32
	9-Aug-22		8:35	18.1	6.81	99.0	77.2	7.07	37.5	2.29
	23-Aug-22		8:25	20.0	6.72	106.0	66.5	5.85	52.3	1.32
	9-Sep-22		8:45	16.2	6.67	95.9	72.6	6.82	80.3	2.30
	20-Sep-22		14:00	15.1	6.62	53.6	-	7.56	71.3	2.14
	4-Oct-22		8:45	11.4	7.05	119.0	-	11.37	123.9	2.88
	18-Oct-22		8:25	5.7	6.54	97.2	123.2	14.89	98.4	3.2
Manitoba Water Quality Standards, Objectives, and Guidelines [1]										
Protection of Freshwater Aquatic Life										
Tier III Guideline					6.5 - 9.0					

Notes:
"-" = no value
EC = Electrical Conductivity
ORP = Oxygen Reduction Potential
DO = Dissolved Oxygen
NTU = Nephelometric Turbidity Units

1. Manitoba Water Quality Standards, Objectives, and Guidelines (MWQSOG). Manitoba Water Stewardship, 2011.

- Values outside of MWQSOG range (pH).

TABLE 4
2022 SURFACE WATER GENERAL WATER QUALITY
SHERRIDON MINE SITE, MANITOBA

Sample ID	Date	Field Duplicate Sample ID	Parameters [1]									
			pH (units)	Turbidity (NTU)	Alkalinity PP as $CaCO_3$	Alkalinity Total as $CaCO_3$	Bicarbonate (HCO_3)	Carbonate (CO_3)	Hydroxide (OH)	Hardness as $CaCO_3$	Total Hardness as $CaCO_3$	TSS
Camp Lake												
SB-1	31-May-22		6.73	17	<1.0	10	13	<1.0	<1.0	91.8	89.1	2.4
	14-Jun-22		6.67	20	<1.0	8.7	11	<1.0	<1.0	100	91.8	2.4
	28-Jun-22		6.36	6.8	<1.0	13	15	<1.0	<1.0	93	82.0	1.8
	12-Jul-22		6.46	5.4	<1.0	9.5	12	<1.0	<1.0	100	94.2	<1.0
	26-Jul-22		6.01	6.2	<1.0	10	12	<1.0	<1.0	110	108	2.0
	26-Jul-22	SW-103	6.10	6.1	<1.0	8.7	11	<1.0	<1.0	110	110	<1.0
	RPD		*1%*	*2%*	*NC*	*14%*	*9%*	*NC*	*NC*	*0%*	*2%*	*NC*
	9-Aug-22		6.38	8.9	<1.0	8.2	10	<1.0	<1.0	130	125	1.6
	23-Aug-22		6.12	5.9	<1.0	7.2	8.8	<1.0	<1.0	140	131	1.2
	9-Sep-22		5.93	23	<1.0	3.9	4.8	<1.0	<1.0	140	133	3.1
	20-Sep-22		5.94	19	<1.0	6.7	8.2	<1.0	<1.0	150	153	1.7
	4-Oct-22		5.87	20	<1.0	3.7	4.6	<1.0	<1.0	160	155	3.1
	18-Oct-22		5.05	41	<1.0	<1.0	<1.0	<1.0	<1.0	160	160	6.8
SB-2	31-May-22		6.86	18	<1.0	12	14	<1.0	<1.0	86	87.3	3.9
	14-Jun-22		6.67	20	<1.0	8.7	11	<1.0	<1.0	99	91.5	2.3
	28-Jun-22		6.39	6.8	<1.0	13	16	<1.0	<1.0	87	79.0	<1.0
	12-Jul-22		6.43	5.3	<1.0	9.7	12	<1.0	<1.0	100	98.0	2.9
	26-Jul-22		6.09	6.2	<1.0	8.7	11	<1.0	<1.0	110	110	1.9
	9-Aug-22		6.25	12	<1.0	7	8.6	<1.0	<1.0	130	123	3.2
	23-Aug-22		6.14	6.1	<1.0	7.4	9.1	<1.0	<1.0	140	130	2.7
	9-Sep-22		5.92	26	<1.0	3.3	4.0	<1.0	<1.0	150	132	3.5
	20-Sep-22		5.95	20	<1.0	6.7	8.2	<1.0	<1.0	150	152	2.3
	4-Oct-22		5.88	20	<1.0	3.5	4.2	<1.0	<1.0	160	146	2.7
	18-Oct-22		4.87	42	<1.0	<1.0	<1.0	<1.0	<1.0	160	166	7.9
	18-Oct-22	SW-104	5.10	41	<1.0	<1.0	<1.0	<1.0	<1.0	160	163	6.5
	RPD		*5%*	*2%*	*NC*	*NC*	*NC*	*NC*	*NC*	*0%*	*2%*	*19%*
CB-1	31-May-22		7.03	16	<1.0	11	13	<1.0	<1.0	88	91.9	2.8
	31-May-22	SW-100	6.86	16	<1.0	10	13	<1.0	<1.0	93	89.1	3.6
	RPD		*2%*	*0%*	*NC*	*10%*	*0%*	*NC*	*NC*	*6%*	*3%*	*25%*
	14-Jun-22		6.62	20	<1.0	8.4	10	<1.0	<1.0	98	89.8	2.6
	28-Jun-22		6.35	6.4	<1.0	12	15	<1.0	<1.0	96	85.8	2.7
	12-Jul-22		6.44	5.3	<1.0	9.1	11	<1.0	<1.0	100	94.5	1.4
	26-Jul-22		6.11	6.0	<1.0	9.0	11	<1.0	<1.0	120	107	1.1
	9-Aug-22		6.23	9.7	<1.0	6.6	8.0	<1.0	<1.0	130	122	2.7
	23-Aug-22		6.13	5.8	<1.0	6.9	8.5	<1.0	<1.0	140	127	1.3
	9-Sep-22		5.99	19	<1.0	4.0	4.9	<1.0	<1.0	150	139	1.1
	20-Sep-22		5.83	19	<1.0	6.7	8.2	<1.0	<1.0	150	155	3.1
	20-Sep-22	SW-117	5.92	20	<1.0	6.3	7.7	<1.0	<1.0	150	151	2.3
	RPD		*2%*	*5%*	*NC*	*6%*	*6%*	*NC*	*NC*	*0%*	*3%*	*30%*
	4-Oct-22		5.89	19	<1.0	3.6	4.4	<1.0	<1.0	170	146	3.3
	18-Oct-22		5.08	37	<1.0	<1.0	<1.0	<1.0	<1.0	180	155	6
CB-2	31-May-22		7.07	18	<1.0	12	14	<1.0	<1.0	91	95.7	3.0
	14-Jun-22		6.65	18	<1.0	8.3	10	<1.0	<1.0	100	90.6	2.5
	28-Jun-22		6.35	7.3	<1.0	12	14	<1.0	<1.0	100	94.2	1.0
	28-Jun-22	SW-105	6.34	7.4	<1.0	11	14	<1.0	<1.0	100	90.2	1.0
	RPD		*0%*	*1%*	*NC*	*9%*	*0%*	*NC*	*NC*	*0%*	*4%*	*0%*
	12-Jul-22		6.46	5.5	<1.0	9.4	11	<1.0	<1.0	100	103	1.1
	26-Jul-22		6.11	5.9	<1.0	8.4	10	<1.0	<1.0	110	111	1.9
	9-Aug-22		6.37	8.7	<1.0	7.9	9.7	<1.0	<1.0	130	124	2.8
	23-Aug-22		6.13	5.8	<1.0	7.5	9.1	<1.0	<1.0	140	129	1.1
	9-Sep-22		6.01	19	<1.0	4.2	5.1	<1.0	<1.0	150	137	2.3
	20-Sep-22		5.86	19	<1.0	7.9	9.7	<1.0	<1.0	150	161	2.1
	4-Oct-22		5.89	19	<1.0	3.8	4.6	<1.0	<1.0	170	152	3.3
	18-Oct-22		5.54	35	<1.0	<1.0	<1.0	<1.0	<1.0	170	162	5.1
NB-1	31-May-22		6.80	19	<1.0	12	14	<1.0	<1.0	110	112	2.5
	14-Jun-22		6.56	22	<1.0	6.8	8.3	<1.0	<1.0	120	103	3.2
	28-Jun-22		6.31	7.6	<1.0	9.9	12	<1.0	<1.0	110	105	1.9
	12-Jul-22		6.43	4.6	<1.0	9.0	11	<1.0	<1.0	100	107	<0.97
	26-Jul-22		6.08	5.6	<1.0	8.0	9.8	<1.0	<1.0	120	116	1.5
	9-Aug-22		6.36	8.0	<1.0	7.1	8.7	<1.0	<1.0	140	134	1.9
	23-Aug-22		6.09	5.4	<1.0	6.7	8.2	<1.0	<1.0	140	141	<1.0
	9-Sep-22		5.98	17	<1.0	3.7	4.5	<1.0	<1.0	160	155	2.4
	9-Sep-22	SW-106	5.97	18	<1.0	3.6	4.4	<1.0	<1.0	160	156	1.5
	RPD		*0%*	*6%*	*NC*	*3%*	*2%*	*NC*	*NC*	*0%*	*1%*	*46%*
	20-Sep-22		5.92	15	<1.0	7.0	8.5	<1.0	<1.0	160	175	1.1
	4-Oct-22		5.84	19	<1.0	3.2	3.9	<1.0	<1.0	180	165	2.3
	18-Oct-22		5.56	34	<1.0	<1.0	<1.0	<1.0	<1.0	170	166	5.4
NB-2	31-May-22		7.11 [5]	17	<1.0	12	15	<1.0	<1.0	100	105	2.5
	14-Jun-22		6.58	21	<1.0	6.9	8.4	<1.0	<1.0	110	104	2.9
	14-Jun-22	SW-107	6.58	21	<1.0	7.4	9.0	<1.0	<1.0	110	102	2.7
	RPD		*0%*	*0%*	*NC*	*7%*	*7%*	*NC*	*NC*	*0%*	*2%*	*7%*
	28-Jun-22		6.31	7.4	<1.0	10	12	<1.0	<1.0	110	101	<1.0
	12-Jul-22		6.44	4.7	<1.0	8.7	11	<1.0	<1.0	110	103	1.0
	26-Jul-22		6.08	5.4	<1.0	8.3	10	<1.0	<1.0	120	119	0.99
	9-Aug-22		6.35	7.6	<1.0	9	11	<1.0	<1.0	140	132	3.1
	23-Aug-22		6.12	5.3	<1.0	6.4	7.8	<1.0	<1.0	150	136	<0.99
	9-Sep-22		6.03	13	<1.0	5.0	6.1	<1.0	<1.0	160	148	1.0
	20-Sep-22		5.94	16	<1.0	6.4	7.8	<1.0	<1.0	160	172	<1.0
	4-Oct-22		5.91	17	<1.0	3.8	4.6	<1.0	<1.0	180	168	1.6
	18-Oct-22		5.67	30	<1.0	<1.0	<1.0	<1.0	<1.0	170	175	3.8

TABLE 4
2022 SURFACE WATER GENERAL WATER QUALITY
SHERRIDON MINE SITE, MANITOBA

Sample ID	Date	Field Duplicate Sample ID	pH (units)	Parameters [1] Turbidity (NTU)	Alkalinity PP as $CaCO_3$	Alkalinity Total as $CaCO_3$	Bicarbonate (HCO_3)	Carbonate (CO_3)	Hydroxide (OH)	Hardness as $CaCO_3$	Total Hardness as $CaCO_3$	TSS
EB-1	31-May-22		6.88	21	<1.0	9.4	12	<1.0	<1.0	120	127	4.5
	14-Jun-22		6.56	21	<1.0	6.5	7.9	<1.0	<1.0	130	110	3.6
	28-Jun-22		6.20	8.3	<1.0	8.2	10	<1.0	<1.0	130	120	1.9
	12-Jul-22		6.39	6.4	<1.0	7.4	9.1	<1.0	<1.0	120	109	1.6
	26-Jul-22		6.06	5.9	<1.0	7.2	8.8	<1.0	<1.0	120	121	<0.97
	9-Aug-22		6.33	6.0	<1.0	8.3	10	<1.0	<1.0	140	141	2.0
	23-Aug-22		6.11	5.1	<1.0	7.4	9.0	<1.0	<1.0	160	148	1.6
	23-Aug-22	SW-108	6.10	5.4	<1.0	7.1	8.6	<1.0	<1.0	160	146	<0.99
	RPD		*0%*	*6%*	*NC*	*4%*	*5%*	*NC*	*NC*	*0%*	*1%*	*NC*
	9-Sep-22		6.08	12	<1.0	6.0	7.3	<1.0	<1.0	160	148	1.1
	20-Sep-22		5.98	13	<1.0	8.2	10	<1.0	<1.0	160	168	1.1
	4-Oct-22		6.40	14	<1.0	26	32	<1.0	<1.0	180	158	1.9
	18-Oct-22		5.82	29	<1.0	1.6	1.9	<1.0	<1.0	160	169	5.4
EB-2	31-May-22		6.82	23	<1.0	6.3	7.7	<1.0	<1.0	130	137	2.5
	14-Jun-22		6.56	22	<1.0	6.0	7.3	<1.0	<1.0	120	112	3.4
	28-Jun-22		6.21	9.0	<1.0	7.9	9.7	<1.0	<1.0	140	121	<1.0
	12-Jul-22		6.37	6.5	<1.0	7.4	9.0	<1.0	<1.0	120	119	1.7
	12-Jul-22	SW-109	6.34	6.0	<1.0	7.1	8.7	<1.0	<1.0	120	122	0.97
	RPD		*0%*	*8%*	*NC*	*4%*	*3%*	*NC*	*NC*	*0%*	*2%*	*55%*
	26-Jul-22		6.03	6.5	<1.0	6.6	8.1	<1.0	<1.0	130	123	2.6
	9-Aug-22		6.37	9.6	<1.0	7.1	8.7	<1.0	<1.0	150	147	4.7
	23-Aug-22		6.13	5.1	<1.0	6.9	8.4	<1.0	<1.0	160	150	1.4
	9-Sep-22		6.10	11	<1.0	6.8	8.3	<1.0	<1.0	160	155	1.9
	20-Sep-22		5.91	12	<1.0	8.6	10	<1.0	<1.0	160	172	1.3
	4-Oct-22		5.86	14	<1.0	4.8	5.8	<1.0	<1.0	180	171	2.7
	18-Oct-22		6.26	24	<1.0	3.3	4	<1.0	<1.0	180	169	6.1
CAMP LAKE DISCHARGE	31-May-22		7.01	19	<1.0	13	15	<1.0	<1.0	110	115	2.0
	14-Jun-22		6.60	22	<1.0	6.7	8.2	<1.0	<1.0	110	105	3.2
	28-Jun-22		6.29	8.0	<1.0	9.3	11	<1.0	<1.0	110	111	1.5
	12-Jul-22		6.41	5.1	<1.0	9.8	12	<1.0	<1.0	100	101	1.1
	26-Jul-22		6.09	7.0	<1.0	8.7	11	<1.0	<1.0	120	119	7.8
	9-Aug-22		6.39	5.7	<1.0	8.7	11	<1.0	<1.0	140	144	1.9
	23-Aug-22		6.02	5.5	<1.0	6.8	8.3	<1.0	<1.0	150	145	<1.0
	9-Sep-22		6.04	13	<1.0	5.1	6.2	<1.0	<1.0	170	157	<0.96
	20-Sep-22		5.93	15	<1.0	6.2	7.6	<1.0	<1.0	160	174	2.1
	4-Oct-22		5.90	17	<1.0	3.7	4.5	<1.0	<1.0	180	167	2.5
	4-Oct-22	SW-110	5.88	18	<1.0	4.0	4.9	<1.0	<1.0	190	168	1.5
	RPD		*0%*	*6%*	*NC*	*8%*	*9%*	*NC*	*NC*	*5%*	*1%*	*50%*
	18-Oct-22		5.68	33	<1.0	<1.0	<1.0	<1.0	<1.0	180	173	3
Laboratory Detection Limits			-	0.10	1.0	1.0	1.0	1.0	1.0	0.50	0.50	0.96 - 1.1
Manitoba Water Quality Standards, Objectives, and Guidelines [2]												
Protection of Aquatic Life and Wildlife												
Tier II Objective - Chronic												*11.5* [2a]
Tier II Objective - Acute												*31.5* [2a]
Protection of Freshwater Aquatic Life												
Tier III Guideline			*6.5 - 9.0*									
Camp Lake Water Quality Performance Objectives [3]												
Sampling Event Dates	31-May-22		*6.5 - 9.0* [3a]	*3.0* [3b, 3c]								*11.5* [3d]
	14-Jun-22			*2.8* [3b, 3c]								
	28-Jun-22			*2.6* [3b, 3c]								
	12-Jul-22			*2.8* [3b, 3c]								
	26-Jul-22			*2.3* [3b, 3c]								
	9-Aug-22			*2.8* [3b, 3c]								
	23-Aug-22			*2.5* [3b, 3c]								
	9-Sep-22			*2.1* [3b, 3c]								
	20-Sep-22			*2.4* [3b, 3c]								
	4-Oct-22			*2.5* [3b, 3c]								
	18-Oct-22			*2.4* [3b, 3c]								

Notes:
"-" = No Data
NC = Not Calculated
NTU = Nephelometric Turbidity Units
RPD = Relative Percent Difference
TSS = Total Suspended Solids

1. All values are expressed in milligrams per litre (mg/L) unless otherwise specified.
2. Manitoba Water Quality Standards, Objectives, and Guidelines (MWQSOG). Manitoba Water Stewardship, 2011.
   a. The MWQSOG Tier II objectives for TSS state an allowable 5 mg/L increase over background for chronic exposures and 25 mg/L increase over background for acute exposures. In the case of Sherlett Creek, analysis of all a indicates the maximum observed concentration is 6.5 mg/L, for a Tier II chronic exposure objective of 11.5 mg/L and a Tier II acute exposure objective of 31.5 mg/L. This objective has also been applied to Camp Lake and
3. Camp Lake Water Quality Performance Objectives (CLWQPO). Final Adaptive Management Plan - Sherridon Orphaned Mine Site Reclamation Project, August 16, 2022.
   a. The pH objective is the MWQSOG Tier III guideline. It has been determined to be reasonable based on pre-construction predictions and monitoring record.
   b. The turbidity objectives are calculated as ambient SC-1 + 25%; ambient SC-1 refers to the concentration measured at Sherlett Creek station SC-1 within the last 7 days.
   c. The 25% allowance in the turbidity calculations is to account for sampling and analytical variation as per DJRC, 2022.
   d. The TSS objective is the MWQSOG Tier II chronic objective - determined to be reasonable based on monitoring record.

- Values outside of MWQSOG range (pH) or specified maximum value (TSS).
BOLD - Values outside of CLWQPO range (pH) or above specified maximum value (turbidity and TSS).

TABLE 4
2022 SURFACE WATER GENERAL WATER QUALITY
SHERRIDON MINE SITE, MANITOBA

Sample ID	Date	Field Duplicate Sample ID	pH (units)	Parameters [1] Turbidity (NTU)	Alkalinity PP as $CaCO_3$	Alkalinity Total as $CaCO_3$	Bicarbonate (HCO_3)	Carbonate (CO_3)	Hydroxide (OH)	Hardness as $CaCO_3$	Total Hardness as $CaCO_3$	TSS
Sherlett Creek												
SC-1	31-May-22		7.08	2.4	<1.0	21	26	<1.0	<1.0	26	27.0	2.1
	14-Jun-22		6.99	2.2	<1.0	21	25	<1.0	<1.0	29	25.9	1.7
	28-Jun-22		6.60	2.1	<1.0	23	28	<1.0	<1.0	30	27.3	1.1
	12-Jul-22		6.74	2.2	<1.0	22	27	<1.0	<1.0	29	29.8	1.5
	26-Jul-22		6.47	1.8	<1.0	23	28	<1.0	<1.0	28	27.7	1.9
	9-Aug-22		6.61	2.2	<1.0	25	31	<1.0	<1.0	32	31.1	<1.0
	9-Aug-22	SW-102	6.72	2.6	<1.0	25	31	<1.0	<1.0	32	31.5	1.7
	RPD		*2%*	*17%*	*NC*	*0%*	*0%*	*NC*	*NC*	*0%*	*1%*	*NC*
	23-Aug-22		6.34	2.0	<1.0	23	28	<1.0	<1.0	31	32	1.9
	9-Sep-22		6.38	1.7	<1.0	25	31	<1.0	<1.0	33	31.9	<0.97
	20-Sep-22		6.36	1.9	<1.0	31	37	<1.0	<1.0	34	35.6	1.3
	4-Oct-22		6.38	2.0	<1.0	29	36	<1.0	<1.0	37	37.0	1.4
	18-Oct-22		7.05	1.9	<1.0	26	31	<1.0	<1.0	32	33.9	1.6
SC-2	20-Sep-22		6.38	2.8	<1.0	25	31	<1.0	<1.0	31	30.5	1.9
	4-Oct-22		6.31	1.9	<1.0	28	34	<1.0	<1.0	37	34.9	1.2
	18-Oct-22		7.06	1.8	<1.0	28	34	<1.0	<1.0	33	31.9	1.7
SC-3	20-Sep-22		6.39	2.0	<1.0	25	30	<1.0	<1.0	30	28.4	1.7
	4-Oct-22		6.39	2.0	<1.0	25	30	<1.0	<1.0	34	32.3	<0.99
	4-Oct-22	SW-118	6.40	2.1	<1.0	28	35	<1.0	<1.0	35	32.6	1.0
	RPD		*0%*	*5%*	*NC*	*11%*	*15%*	*NC*	*NC*	*3%*	*1%*	*NC*
	18-Oct-22		7.12	1.9	<1.0	27	33	<1.0	<1.0	31	31.1	<1.0
SC-4	20-Sep-22		6.39	2.2	<1.0	26	32	<1.0	<1.0	31	31.6	1.5
	4-Oct-22		6.40	2.4	<1.0	25	31	<1.0	<1.0	32	29.9	4.3
	18-Oct-22		7.14	1.9	<1.0	26	32	<1.0	<1.0	30	31.6	<1.0
	18-Oct-22	SW-119	7.09	2	<1.0	27	33	<1.0	<1.0	31	29.7	<1.0
	RPD		*1%*	*5%*	*NC*	*4%*	*3%*	*NC*	*NC*	*3%*	*6%*	*NC*
SC-5	20-Sep-22		6.40	1.8	<1.0	24	29	<1.0	<1.0	30	29.9	2.2
	4-Oct-22		6.41	3.8	<1.0	26	32	<1.0	<1.0	31	28.2	4.0
	18-Oct-22		7.11	2	<1.0	28	35	<1.0	<1.0	31	30.8	<1.0
SC-6	20-Sep-22		6.47	2.1	<1.0	24	29	<1.0	<1.0	31	30.1	<0.97
	4-Oct-22		6.33	1.8	<1.0	25	31	<1.0	<1.0	31	29.7	1.9
	18-Oct-22		7.15	1.8	<1.0	25	30	<1.0	<1.0	31	28.7	1
Laboratory Detection Limits			-	0.10 - 0.20	1.0	1.0	1.0	1.0	1.0	0.50	0.50	0.96 - 1.1
Manitoba Water Quality Standards, Objectives, and Guidelines [2]												
Protection of Aquatic Life and Wildlife												
Tier II Objective - Chronic												*11.5* [2a]
Tier II Objective - Acute												*31.5* [2a]
Protection of Freshwater Aquatic Life												
Tier III Guideline			*6.5 - 9.0*									

Notes:
"-" = No Data
NC = Not Calculated
NTU = Nephelometric Turbidity Units
RPD = Relative Percent Difference
TSS = Total Suspended Solids

1. All values are expressed in milligrams per litre (mg/L) unless otherwise specified.
2. Manitoba Water Quality Standards, Objectives, and Guidelines (MWQSOG). Manitoba Water Stewardship, 2011.
   a. The MWQSOG Tier II objectives for TSS state an allowable 5 mg/L increase over background for chronic exposures and 25 mg/L increase over background for acute exposures. In the case of Sherlett Creek, analysis of all a indicates the maximum observed concentration is 6.5 mg/L, for a Tier II chronic exposure objective of 11.5 mg/L and a Tier II acute exposure objective of 31.5 mg/L. This objective has also been applied to Camp Lake and

- Values outside of MWQSOG range (pH) or above specified maximum value (TSS).

Sample ID	Date	Field Duplicate Sample ID	pH (units)	Parameters [1] Turbidity (NTU)	Alkalinity PP as $CaCO_3$	Alkalinity Total as $CaCO_3$	Bicarbonate (HCO_3)	Carbonate (CO_3)	Hydroxide (OH)	Hardness as $CaCO_3$	Total Hardness as $CaCO_3$	TSS
Cold Lake												
CL-2	31-May-22		7.05	4.7	<1.0	22	26	<1.0	<1.0	52	54.9	<1.0
	14-Jun-22		6.89	4.5	<1.0	21	25	<1.0	<1.0	57	54.2	1.2
	28-Jun-22		6.53	4.3	<1.0	22	26	<1.0	<1.0	53	51.4	<1.0
	12-Jul-22		6.60	8.1	<1.0	20	25	<1.0	<1.0	52	52.5	2.9
	12-Jul-22	SW-111	6.57	7.3	<1.0	22	26	<1.0	<1.0	52	54.2	<0.99
	RPD		*NC*	*10%*	*NC*	*NC*	*NC*	*NC*	*NC*	*NC*	*NC*	*NC*
	26-Jul-22		6.41	7.8	<1.0	21	26	<1.0	<1.0	48	49	1.7
	9-Aug-22		6.60	6.3	<1.0	23	28	<1.0	<1.0	53	50.7	<1.0
	23-Aug-22		6.30	6.5	<1.0	22	27	<1.0	<1.0	52	45.9	<1.0
	9-Sep-22		6.34	18	<1.0	26	31	<1.0	<1.0	53	48.1	1.7
	20-Sep-22		6.30	21	<1.0	32	39	<1.0	<1.0	52	52.9	5.4
	4-Oct-22		6.40	3.7	<1.0	25	30	<1.0	<1.0	46	44.5	<1.0
	18-Oct-22		7.27	3.7	<1.0	25	31	<1.0	<1.0	43	43.4	<0.99
CL-3	31-May-22		7.16	13	<1.0	15	19	<1.0	<1.0	85	93.8	<1.0
	14-Jun-22		6.93	4.7	<1.0	18	21	<1.0	<1.0	57	51.5	<0.96
	28-Jun-22		6.49	4.3	<1.0	22	27	<1.0	<1.0	52	49.4	2.0
	12-Jul-22		6.71	2.6	<1.0	21	26	<1.0	<1.0	50	50.0	<0.97
	26-Jul-22		6.44	1.9	<1.0	18	22	<1.0	<1.0	44	43.2	<1.0
	9-Aug-22		6.76	2.2	<1.0	25	31	<1.0	<1.0	45	43.0	<1.0
	23-Aug-22		6.43	1.7	<1.0	23	29	<1.0	<1.0	46	43.1	<0.99
	23-Aug-22	SW-112	6.43	1.7	<1.0	22	27	<1.0	<1.0	46	42.0	<0.99
	RPD		*NC*	*131%*	*NC*	*NC*	*NC*	*NC*	*NC*	*NC*	*NC*	*NC*
	9-Sep-22		6.36	2.9	<1.0	23	28	<1.0	<1.0	45	42.7	1.4
	20-Sep-22		6.38	3.4	<1.0	27	32	<1.0	<1.0	44	48.6	1.3
	4-Oct-22		6.43	3.6	<1.0	24	30	<1.0	<1.0	47	41.9	1.3
	18-Oct-22		7.2	4.3	<1.0	25	30	<1.0	<1.0	43	44.9	<0.99

TABLE 4
2022 SURFACE WATER GENERAL WATER QUALITY
SHERRIDON MINE SITE, MANITOBA

Sample ID	Date	Field Duplicate Sample ID	Parameters [1]									
			pH (units)	Turbidity (NTU)	Alkalinity PP as $CaCO_3$	Alkalinity Total as $CaCO_3$	Bicarbonate (HCO_3)	Carbonate (CO_3)	Hydroxide (OH)	Hardness as $CaCO_3$	Total Hardness as $CaCO_3$	TSS
CL-4	31-May-22		7.34	4.8	<1.0	23	28	<1.0	<1.0	42	46.3	1.9
	14-Jun-22		6.91	7.0	<1.0	21	25	<1.0	<1.0	51	48.3	1.1
	14-Jun-22	SW-113	6.92	7.4	<1.0	22	26	<1.0	<1.0	50	47.5	1.5
	RPD		*0%*	*6%*	*NC*	*5%*	*4%*	*NC*	*NC*	*2%*	*2%*	*31%*
	28-Jun-22		6.45	6.4	<1.0	23	28	<1.0	<1.0	49	48.2	3.0
	12-Jul-22		6.57	23	<1.0	23	28	<1.0	<1.0	49	47.7	2.6
	26-Jul-22		6.41	18	<1.0	22	27	<1.0	<1.0	47	46.3	2.3
	9-Aug-22		6.62	26	<1.0	26	31	<1.0	<1.0	51	47.3	4.6
	23-Aug-22		6.41	51	<1.0	28	34	<1.0	<1.0	53	50.1	7.7
	9-Sep-22		6.44	5.5	<1.0	25	31	<1.0	<1.0	45	42.0	<0.99
	20-Sep-22		6.35	14	<1.0	27	33	<1.0	<1.0	42	46.1	2.5
	4-Oct-22		6.33	3.9	<1.0	25	30	<1.0	<1.0	44	41.8	<0.99
	18-Oct-22		7.15	4.7	<1.0	28	35	<1.0	<1.0	42	43.7	1.2
CL-5	31-May-22		7.35	4.3	<1.0	22	27	<1.0	<1.0	44	47.0	1.2
	14-Jun-22		6.97	4.5	<1.0	21	25	<1.0	<1.0	46	44.0	<1.0
	28-Jun-22		6.45	7.9	<1.0	23	28	<1.0	<1.0	49	46.7	3.3
	28-Jun-22	SW-114	6.50	8.0	<1.0	24	30	<1.0	<1.0	49	45.2	1.2
	RPD		*1%*	*0%*	*NC*	*4%*	*7%*	*NC*	*NC*	*0%*	*3%*	*93%*
	12-Jul-22		6.52	8.1	<1.0	21	26	<1.0	<1.0	48	45.8	<0.97
	26-Jul-22		6.43	8.1	<1.0	18	22	<1.0	<1.0	45	43.3	2.2
	9-Aug-22		6.61	6.6	<1.0	23	28	<1.0	<1.0	49	47.2	1.7
	23-Aug-22		6.34	6.2	<1.0	24	29	<1.0	<1.0	45	43.2	1.2
	9-Sep-22		6.47	3.3	<1.0	24	29	<1.0	<1.0	44	40.1	<0.97
	20-Sep-22		6.39	3.1	<1.0	30	37	<1.0	<1.0	42	44.7	<0.99
	4-Oct-22		6.33	3.9	<1.0	25	31	<1.0	<1.0	44	41.6	<1.0
	18-Oct-22		7.23	4.6	<1.0	27	33	<1.0	<1.0	42	39.3	1.3
CL-6	31-May-22		7.06	3.8	<1.0	21	25	<1.0	<1.0	44	41.5	<1.0
	14-Jun-22		7.05	2.4	<1.0	25	30	<1.0	<1.0	39	36.0	1.0
	28-Jun-22		6.53	4.7	<1.0	23	29	<1.0	<1.0	47	41.6	2.8
	12-Jul-22		6.64	7.8	<1.0	22	27	<1.0	<1.0	48	44.6	1.9
	26-Jul-22		6.45	7.8	<1.0	22	27	<1.0	<1.0	43	42.7	2.2
	9-Aug-22		6.78	6.6	<1.0	26	32	<1.0	<1.0	42	45.5	2.5
	9-Aug-22	SW-115	6.72	5.1	<1.0	36	31	<1.0	<1.0	42	43.4	1.5
	RPD		*1%*	*0%*	*NC*	*32%*	*3%*	*NC*	*NC*	*0%*	*5%*	*50%*
	23-Aug-22		6.37	11	<1.0	25	31	<1.0	<1.0	43	38.7	2.7
	9-Sep-22		6.43	3.2	<1.0	24	30	<1.0	<1.0	41	38.6	<0.99
	20-Sep-22		6.37	2.6	<1.0	29	35	<1.0	<1.0	41	40.5	<1.0
	4-Oct-22		6.38	3.3	<1.0	26	31	<1.0	<1.0	43	40.5	1.3
	18-Oct-22		7.09	3.8	<1.0	27	33	<1.0	<1.0	40	39.2	<1.0
CL-7	31-May-22		7.27	4.4	<1.0	23	28	<1.0	<1.0	49	54.4	1.1
	31-May-22	SW-101	7.09	4.5	<1.0	22	27	<1.0	<1.0	59	52.2	<1.0
	RPD		*3%*	*2%*	*NC*	*4%*	*4%*	*NC*	*NC*	*19%*	*4%*	*NC*
	14-Jun-22		6.99	3.9	<1.0	18	22	<1.0	<1.0	54	50.5	1.1
	28-Jun-22		6.54	3.3	<1.0	22	27	<1.0	<1.0	56	51.8	<1.0
	12-Jul-22		6.67	2.3	<1.0	21	25	<1.0	<1.0	50	51.0	1.7
	26-Jul-22		6.46	1.7	<1.0	22	26	<1.0	<1.0	42	41.5	1.5
	9-Aug-22		6.76	2.2	<1.0	24	30	<1.0	<1.0	45	41.9	<0.96
	23-Aug-22		6.43	1.7	<1.0	23	27	<1.0	<1.0	45	41.1	<1.0
	9-Sep-22		6.41	3.1	<1.0	25	30	<1.0	<1.0	46	41.4	<0.96
	9-Sep-22	SW-101	6.43	3.0	<1.0	25	31	<1.0	<1.0	44	42.2	<0.99
	RPD		*0%*	*3%*	*NC*	*0%*	*3%*	*NC*	*NC*	*4%*	*2%*	*NC*
	20-Sep-22		6.37	4.2	<1.0	28	35	<1.0	<1.0	45	46.0	<0.97
	20-Sep-22	SW-104	6.37	2.6	<1.0	25	31	<1.0	<1.0	44	43.6	<0.99
	RPD		*0%*	*47%*	*NC*	*11%*	*12%*	*NC*	*NC*	*2%*	*5%*	*NC*
	4-Oct-22		6.40	3.7	<1.0	26	32	<1.0	<1.0	46	42.1	<0.99
	18-Oct-22		7.19	4.1	<1.0	25	31	<1.0	<1.0	44	44	<1.0
CL-8	31-May-22		7.35	4.7	<1.0	20	25	<1.0	<1.0	48	51.5	1.2
	14-Jun-22		6.99	3.7	<1.0	21	25	<1.0	<1.0	49	45.4	1.5
	28-Jun-22		6.54	2.8	<1.0	22	27	<1.0	<1.0	52	46.9	<0.99
	12-Jul-22		6.61	2.3	<1.0	20	25	<1.0	<1.0	46	46.4	<0.96
	26-Jul-22		6.46	1.7	<1.0	21	26	<1.0	<1.0	43	41.6	<0.99
	26-Jul-22	SW-116	6.45	1.9	<1.0	22	26	<1.0	<1.0	44	42.5	<0.98
	RPD		*0%*	*NC*	*NC*	*5%*	*0%*	*NC*	*NC*	*2%*	*2%*	*NC*
	9-Aug-22		6.76	1.8	<1.0	24	29	<1.0	<1.0	45	43.5	2.2
	23-Aug-22		6.39	1.6	<1.0	23	28	<1.0	<1.0	48	45.3	<0.99
	9-Sep-22		6.47	3.1	<1.0	24	30	<1.0	<1.0	46	41.1	<0.97
	20-Sep-22		6.36	2.8	<1.0	24	30	<1.0	<1.0	44	45.5	1.4
	4-Oct-22		5.95	3.6	<1.0	4.9	6.0	<1.0	<1.0	47	43.6	1.9
	18-Oct-22		7.13	4	<1.0	27	33	<1.0	<1.0	44	44.2	<1.0
Laboratory Detection Limits			-	0.10 - 0.20	1.0	1.0	1.0	1.0	1.0	0.50	0.50	0.96 - 1.1
Manitoba Water Quality Standards, Objectives, and Guidelines [2]												
Protection of Aquatic Life and Wildlife												
Tier II Objective - Chronic												*11.5* [2a]
Tier II Objective - Acute												*31.5* [2a]
Protection of Freshwater Aquatic Life												
Tier III Guideline			*6.5 - 9.0*									

TABLE 4
2022 SURFACE WATER GENERAL WATER QUALITY
SHERRIDON MINE SITE, MANITOBA

Sample ID	Date	Field Duplicate Sample ID	Parameters [1]									
			pH (units)	Turbidity (NTU)	Alkalinity PP as $CaCO_3$	Alkalinity Total as $CaCO_3$	Bicarbonate (HCO_3)	Carbonate (CO_3)	Hydroxide (OH)	Hardness as $CaCO_3$	Total Hardness as $CaCO_3$	TSS

Notes:
"-" = No Data
NC = Not Calculated
NTU = Nephelometric Turbidity Units
RPD = Relative Percent Difference
TSS = Total Suspended Solids

1. All values are expressed in milligrams per litre (mg/L) unless otherwise specified.
2. Manitoba Water Quality Standards, Objectives, and Guidelines (MWQSOG). Manitoba Water Stewardship, 2011.
   a. The MWQSOG Tier II objectives for TSS state an allowable 5 mg/L increase over background for chronic exposures and 25 mg/L increase over background for acute exposures. In the case of Sherlett Creek, analysis of all available TSS data for 2017-2022 indicates the maximum observed concentration is 6.5 mg/L, for a Tier II chronic exposure objective of 11.5 mg/L and a Tier II acute exposure objective of 31.5 mg/L. This objective has also been applied to Camp Lake and Cold Lake.

- Values outside of MWQSOG range (pH) or above specified maximum value (TSS).

Sample ID	Date	Field Duplicate Sample ID	Parameters [1]									
			pH (units)	Turbidity (NTU)	Alkalinity PP as $CaCO_3$	Alkalinity Total as $CaCO_3$	Bicarbonate as HCO_3	Carbonate as CO_3	Hydroxide as OH	Hardness as $CaCO_3$	Total Hardness as $CaCO_3$	TSS
TRIP BLANK	31-May-22		5.46	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	<1.0
	14-Jun-22		4.82	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	<0.98
	28-Jun-22		4.54	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	<1.0
	12-Jul-22		4.63	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	<0.97
	26-Jul-22		4.74	0.14	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	<0.99
	9-Aug-22		4.45	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	<0.97
	23-Aug-22		4.49	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	<1.0
	9-Sep-22		4.60	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	<0.99
	20-Sep-22		4.43	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	<0.96
	4-Oct-22		4.77	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	<0.98
	18-Oct-22		5.39	<0.10	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	<1.0
Laboratory Detection Limits			-	0.10 - 0.20	1.0	1.0	1.0	1.0	1.0	0.50	0.50	0.96 - 1.1

Notes:
"-" = No Data
NC = Not Calculated
NTU = Nephelometric Turbidity Units
RPD = Relative Percent Difference
TSS = Total Suspended Solids

1. All values are expressed in milligrams per litre (mg/L) unless otherwise specified.

TABLE 5
2022 DISSOLVED METALS IN SURFACE WATER
SHERRIDON MINE SITE, MANITOBA

Sample ID	Date	Field Duplicate Sample ID	Parameter [1]																														
			Aluminum (Al) Dissolved	Antimony (Sb) Dissolved	Arsenic (As) Dissolved	Barium (Ba) Dissolved	Beryllium (Be) Dissolved	Boron (B) Dissolved	Cadmium (Cd) Dissolved	Calcium (Ca) Dissolved	Chromium (Cr) Dissolved	Cobalt (Co) Dissolved	Copper (Cu) Dissolved	Iron (Fe) Dissolved	Lead (Pb) Dissolved	Lithium (Li) Dissolved	Magnesium (Mg) Dissolved	Manganese (Mn) Dissolved	Molybdenum (Mo) Dissolved	Nickel (Ni) Dissolved	Phosphorus (P) Dissolved	Potassium (K) Dissolved	Selenium (Se) Dissolved	Silicon (Si) Dissolved	Silver (Ag) Dissolved	Sodium (Na) Dissolved	Strontium (Sr) Dissolved	Sulphur (S) Dissolved	Thallium (Tl) Dissolved	Tin (Sn) Dissolved	Titanium (Ti) Dissolved	Uranium (U) Dissolved	Vanadium (V) Dissolved	Zinc (Zn) Dissolved
Camp Lake																																	
SB-1	31-May-22		0.055	<0.00060	0.00029	<0.010	<0.0010	<0.020	0.00065	28	<0.0010	0.0012	0.021	2.3	<0.00020	<0.020	5.3	0.14	<0.00020	0.00075	<0.10	2.5	<0.00020	1.4	<0.00010	2.3	0.037	26	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.20
	14-Jun-22		0.058	<0.00060	0.00021	0.011	<0.0010	<0.020	0.00073	32	<0.0010	0.00080	0.028	3.0	<0.00020	<0.020	6.2	0.12	<0.00020	0.0017	<0.10	2.7	<0.00020	1.6	<0.00010	2.8	0.04	29	<0.00020	<0.0010	0.001	<0.00010	<0.0010	0.22
	28-Jun-22		0.054	<0.00060	0.00034	0.014	<0.0010	<0.020	0.00060	28	<0.0010	0.00034	0.024	1.7	<0.00020	0.025	5.5	0.073	<0.00020	0.0015	<0.10	2.6	<0.00020	1.7	<0.00010	2.4	0.036	26	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.18
	12-Jul-22		0.049	<0.00060	0.00026	0.011	<0.0010	<0.020	0.00052	32	<0.0010	<0.00030	0.021	2.2	<0.00020	<0.020	6.1	0.04	<0.00020	0.0014	<0.10	2.9	<0.00020	1.5	<0.00010	2.4	0.038	29	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.16
	26-Jul-22		0.032	<0.00060	0.00020	0.011	<0.0010	<0.020	0.00052	34	<0.0010	<0.00030	0.016	1.7	<0.00020	0.026	6.0	0.051	<0.00020	0.00075	<0.10	2.9	<0.00020	1.3	<0.00010	2.4	0.039	32	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.14
		SW-103	0.032	<0.00060	0.00021	0.011	<0.0010	<0.020	0.00050	34	<0.0010	<0.00030	0.016	1.7	<0.00020	<0.020	5.9	0.05	<0.00020	0.00087	<0.10	2.9	<0.00020	1.3	<0.00010	2.4	0.039	33	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.14
	RPD		*0%*	*NC*	*5%*	*NC*	*NC*	*NC*	*4%*	*0%*	*NC*	*NC*	*0%*	*0%*	*NC*	*NC*	*2%*	*2%*	*NC*	*15%*	*NC*	*0%*	*NC*	*0%*	*NC*	*0%*	*0%*	*3%*	*NC*	*NC*	*NC*	*NC*	*NC*	*0%*
	9-Aug-22		0.026	<0.00060	0.00025	0.013	<0.0010	<0.020	0.00044	41	<0.0010	<0.00030	0.013	2.2	<0.00020	<0.020	7.1	0.054	<0.00020	0.0012	<0.10	3.6	<0.00020	1.3	<0.00010	2.7	0.049	37	<0.00020	<0.0010	0.0011	<0.00010	<0.0010	0.13
	23-Aug-22		0.017	<0.00060	0.00023	0.012	<0.0010	<0.020	0.00035	43	<0.0010	<0.00030	0.011	0.98	<0.00020	<0.020	7.5	0.045	<0.00020	0.0011	<0.10	3.7	<0.00020	1.3	<0.00010	2.8	0.048	40	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.11
	9-Sep-22		0.0086	<0.00060	0.00021	0.013	<0.0010	<0.020	0.00036	45	<0.0010	<0.00030	0.0070	1.1	<0.00020	<0.020	7.3	0.058	<0.00020	0.0011	<0.10	3.4	<0.00020	1.2	<0.00010	2.7	0.051	43	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.11
	20-Sep-22		0.0053	<0.00060	<0.00020	0.013	<0.0010	<0.020	0.00035	46	<0.0010	<0.00030	0.0067	0.88	<0.00020	<0.020	7.8	0.055	<0.00020	0.0006	<0.10	3.9	<0.00020	1.2	<0.00010	3.2	0.051	48	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.11
	4-Oct-22		0.0050	<0.00060	0.00021	0.011	<0.0010	<0.020	0.00035	51	<0.0010	<0.00030	0.0069	0.64	<0.00020	<0.020	8.7	0.061	<0.00020	0.0011	<0.10	4.3	<0.00020	1.2	<0.00010	3.0	0.05	50	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.11
	18-Oct-22		0.0057	<0.00060	0.00022	0.014	<0.0010	<0.020	0.00046	51	<0.0010	0.00039	0.007	1.4	<0.00020	<0.020	8.4	0.083	<0.00020	0.0013	<0.10	4.2	<0.00020	1.1	<0.00010	3	0.056	50	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.14
SB-2	31-May-22		0.056	<0.00060	0.00033	<0.010	<0.0010	<0.020	0.00065	26	<0.0010	0.0012	0.022	2.4	<0.00020	<0.020	4.8	0.14	<0.00020	0.00055	<0.10	2.2	<0.00020	1.4	<0.00010	2.1	0.035	27	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.20
	14-Jun-22		0.052	<0.00060	0.00032	<0.010	<0.0010	<0.020	0.00068	30	<0.0010	0.00078	0.027	3.0	<0.00020	<0.020	5.7	0.12	<0.00020	0.0016	<0.10	2.7	<0.00020	1.4	<0.00010	2.3	0.044	24	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.22
	28-Jun-22		0.049	<0.00060	0.00028	<0.010	<0.0010	<0.020	0.00053	26	<0.0010	<0.00030	0.023	1.6	<0.00020	<0.020	5.1	0.064	<0.00020	0.0012	<0.10	2.3	<0.00020	1.6	<0.00010	2.2	0.031	24	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.17
	12-Jul-22		0.047	<0.00060	0.00021	0.010	<0.0010	<0.020	0.00045	31	<0.0010	<0.00030	0.019	2.0	<0.00020	<0.020	5.9	0.033	<0.00020	0.0012	<0.10	2.8	<0.00020	1.4	<0.00010	2.4	0.037	28	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.15
	26-Jul-22		0.029	<0.00060	<0.00020	0.011	<0.0010	<0.020	0.00049	35	<0.0010	<0.00030	0.015	1.8	<0.00020	<0.020	6.2	0.052	<0.00020	0.00073	<0.10	3.0	<0.00020	1.3	<0.00010	2.5	0.044	32	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.14
	9-Aug-22		0.026	<0.00060	0.00021	0.012	<0.0010	<0.020	0.00041	40	<0.0010	<0.00030	0.014	2.5	<0.00020	<0.020	7.0	0.061	<0.00020	0.0012	<0.10	3.5	<0.00020	1.4	<0.00010	2.7	0.048	37	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.13
	23-Aug-22		0.016	<0.00060	0.00021	0.012	<0.0010	<0.020	0.00039	43	<0.0010	<0.00030	0.011	1.2	<0.00020	<0.020	7.4	0.043	<0.00020	0.0011	<0.10	3.7	<0.00020	1.3	<0.00010	2.8	0.048	41	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.11
	9-Sep-22		0.0058	<0.00060	0.00026	0.013	<0.0010	<0.020	0.00030	47	<0.0010	<0.00030	0.0074	1.2	<0.00020	<0.020	7.7	0.064	<0.00020	0.0011	<0.10	3.6	<0.00020	1.3	<0.00010	2.9	0.053	44	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.092
	20-Sep-22		0.0078	<0.00060	0.00028	0.012	<0.0010	<0.020	0.00036	46	<0.0010	<0.00030	0.0073	0.82	<0.00020	<0.020	7.6	0.054	<0.00020	0.00064	<0.10	3.8	<0.00020	1.2	<0.00010	2.9	0.050	46	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.10
	4-Oct-22		0.0046	<0.00060	0.00021	0.012	<0.0010	<0.020	0.00036	52	<0.0010	<0.00030	0.0065	0.74	<0.00020	<0.020	8.7	0.062	<0.00020	0.0010	<0.10	4.3	<0.00020	1.2	<0.00010	3.0	0.05	51	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.11
	18-Oct-22		0.0054	<0.00060	0.00021	0.014	<0.0010	<0.020	0.00046	51	<0.0010	0.00038	0.0072	2.1	<0.00020	<0.020	8.5	0.087	<0.00020	0.0013	<0.10	4.4	<0.00020	1.1	<0.00010	3.1	0.057	50	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.14
		SW-104	0.0059	<0.00060	0.00022	0.015	<0.0010	<0.020	0.00044	52	<0.0010	0.00037	0.0072	1.8	<0.00020	<0.020	8.7	0.088	<0.00020	0.0013	<0.10	4.5	<0.00020	1.1	<0.00010	3.1	0.057	49	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.13
	RPD		*9%*	*NC*	*5%*	*7%*	*NC*	*NC*	*4%*	*2%*	*NC*	*3%*	*0%*	*15%*	*NC*	*NC*	*2%*	*1%*	*NC*	*0%*	*NC*	*2%*	*NC*	*0%*	*NC*	*0%*	*0%*	*2%*	*NC*	*NC*	*NC*	*NC*	*NC*	*7%*
CB-1	31-May-22		0.061	<0.00060	0.00022	<0.010	<0.0010	<0.020	0.00073	27	<0.0010	0.0013	0.023	1.9	<0.00020	<0.020	4.9	0.14	<0.00020	0.00082	<0.10	2.2	<0.00020	1.4	<0.00010	2.1	0.036	28	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.21
		SW-100	0.072	<0.00060	0.00027	0.010	<0.0010	<0.020	0.00075	29	<0.0010	0.0013	0.030	1.9	<0.00020	<0.020	5.2	0.15	<0.00020	0.00085	<0.10	2.5	<0.00020	1.4	<0.00010	2.3	0.036	27	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.22
	RPD		*17%*	*NC*	*20%*	*NC*	*NC*	*NC*	*3%*	*7%*	*NC*	*0%*	*26%*	*0%*	*NC*	*NC*	*6%*	*7%*	*NC*	*4%*	*NC*	*13%*	*NC*	*0%*	*NC*	*9%*	*0%*	*4%*	*NC*	*NC*	*NC*	*NC*	*NC*	*5%*
	14-Jun-22		0.051	<0.00060	0.00023	<0.010	<0.0010	<0.020	0.00071	30	<0.0010	0.00071	0.025	2.8	<0.00020	<0.020	5.7	0.12	<0.00020	0.0015	<0.10	2.6	<0.00020	1.4	<0.00010	2.3	0.039	26	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.21
	28-Jun-22		0.053	<0.00060	0.00025	<0.010	<0.0010	<0.020	0.00060	29	<0.0010	0.00035	0.024	1.7	<0.00020	<0.020	5.5	0.074	<0.00020	0.0014	<0.10	2.6	<0.00020	1.6	<0.00010	2.3	0.033	27	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.18
	12-Jul-22		0.055	<0.00060	0.00023	0.010	<0.0010	<0.020	0.00050	31	<0.0010	<0.00030	0.020	2.2	<0.00020	<0.020	6.0	0.041	<0.00020	0.0014	<0.10	2.8	<0.00020	1.6	<0.00010	2.4	0.037	31	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.16
	26-Jul-22		0.036	<0.00060	0.00020	0.011	<0.0010	<0.020	0.00050	36	<0.0010	<0.00030	0.016	1.6	<0.00020	<0.020	6.4	0.051	<0.00020	0.00077	<0.10	3.1	<0.00020	1.3	<0.00010	2.6	0.045	32	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.14
	9-Aug-22		0.028	<0.00060	<0.00020	0.013	<0.0010	<0.020	0.00043	41	<0.0010	<0.00030	0.013	2.3	<0.00020	<0.020	7.1	0.056	<0.00020	0.0011	<0.10	3.5	<0.00020	1.3	<0.00010	2.7	0.049	37	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.13
	23-Aug-22		0.015	<0.00060	<0.00020	0.012	<0.0010	<0.020	0.00035	44	<0.0010	<0.00030	0.010	0.93	<0.00020	<0.020	7.5	0.046	<0.00020	0.0011	<0.10	3.7	<0.00020	1.3	<0.00010	2.8	0.049	42	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.11
	9-Sep-22		0.0098	<0.00060	<0.00020	0.013	<0.0010	<0.020	0.00036	47	<0.0010	<0.00030	0.0070	0.99	<0.00020	<0.020	7.6	0.057	<0.00020	0.0012	<0.10	3.6	<0.00020	1.2	<0.00010	2.8	0.052	45	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.11
	20-Sep-22		0.0099	<0.00060	0.00023	0.012	<0.0010	<0.020	0.00040	46	<0.0010	<0.00030	0.0066	1.1	<0.00020	<0.020	7.6	0.055	<0.00020	0.00083	<0.10	3.8	<0.00020	1.3	<0.00010	2.8	0.050	48	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.10
		SW-117	0.0060	<0.00060	0.00025	0.012	<0.0010	<0.020	0.00030	46	<0.0010	<0.00030	0.0067	0.78	<0.00020	<0.020	7.5	0.054	<0.00020	0.00089	<0.10	3.8	<0.00020	1.2	<0.00010	2.8	0.050	46	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.10
	RPD		*49%*	*NC*	*8%*	*0%*	*NC*	*NC*	*29%*	*0%*	*NC*	*NC*	*2%*	*34%*	*NC*	*NC*	*1%*	*2%*	*NC*	*7%*	*NC*	*0%*	*NC*	*8%*	*NC*	*0%*	*0%*	*4%*	*NC*	*NC*	*NC*	*NC*	*NC*	*0%*
	4-Oct-22		0.034	<0.00060	0.00023	0.011	<0.0010	<0.020	0.00038	52	<0.0010	<0.00030	0.0093	1.8	<0.00020	<0.020	8.8	0.06	<0.00020	0.0011	<0.10	4.3	<0.00020	1.2	<0.00010	3.0	0.051	50	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.13
	18-Oct-22		0.0049	<0.00060	0.00021	0.015	<0.0010	<0.020	0.00045	56	<0.0010	0.00035	0.0066	1.1	<0.00020	<0.020	9	0.079	<0.00020	0.0012	<0.10	4.5	<0.00020	1.1	<0.00010	3.1	0.058	52	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.14
CB-2	31-May-22		0.070	<0.00060	0.00032	<0.010	<0.0010	<0.020	0.00084	28	<0.0010	0.0015	0.027	1.9	<0.00020	<0.020	5.1	0.15	<0.00020	0.0012	<0.10	2.3	<0.00020	1.4	<0.00010	2.1	0.036	31	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.25
	14-Jun-22		0.054	<0.00060	0.00023	0.010	<0.0010	<0.020	0.00072	30	<0.0010	0.00085	0.027	2.9	<0.00020	<0.020	5.8	0.12	<0.00020	0.0017	<0.10	2.7	0.0002	1.4	<0.00010	2.3	0.040	26	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.23
	28-Jun-22		0.059	<0.00060	0.00024	<0.010	<0.0010	<0.020	0.00067	31	<0.0010	0.00047	0.027	1.7	<0.00020	<0.020	5.9	0.079	<0.00020	0.0016	<0.10	2.6	<0.00020	1.6	<0.00010	2.4	0.035	29	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.20
		SW-105	0.057	<0.00060	0.00026	<0.010	<0.0010	<0.020	0.00066	31	<0.0010	0.00049	0.026	2.4	<0.00020	<0.020	5.8	0.079	<0.00020	0.0017	<0.10	2.6	<0.00020	1.6	<0.00010	2.3	0.035	29	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.20
	RPD		*3%*	*NC*	*8%*	*NC*	*NC*	*NC*	*2%*	*0%*	*NC*	*4%*	*4%*	*34%*	*NC*	*NC*	*2%*	*0%*	*NC*	*6%*	*NC*	*0%*	*NC*	*0%*	*NC*	*4%*	*0%*	*0%*	*NC*	*NC*	*NC*	*NC*	*NC*	*0%*
	12-Jul-22		0.049	<0.00060	0.00024	0.011	<0.0010	<0.020	0.00059	31	<0.0010	<0.00030	0.020	2.1	<0.00020	<0.020	6.0	0.044	<0.00020	0.0014	<0.10	2.8	<0.00020	1.5	<0.00010	2.3	0.038	31	<0.00020	<0.0010	0.0012	<0.00010	<0.0010	0.17
	26-Jul-22		0.035	<0.00060	<0.00020	0.012	<0.0010	<0.020	0.00047	34	<0.0010	<0.00030	0.016	1.7	<0.00020	0.024	6.0	0.047	<0.00020	0.0011	<0.10	3.0	<0.00020	1.3	<0.00010	2.4	0.040	33	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.14
	9-Aug-22		0.029	<0.00060	0.00021	0.013	<0.0010	<0.020	0.00047	41	<0.0010	<0.00030	0.014	2.1	<0.00020	<0.020	7.1	0.051	<0.00020	0.0012	<0.10	3.5	<0.00020	1.3	<0.00010	2.7	0.049	38	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.13
	23-Aug-22		0.017	<0.00060	0.00021	0.012	<0.0010	<0.020	0.00035	44	<0.0010	<0.00030	0.010	1.1	<0.00020	<0.020	7.4	0.043	<0.00020	0.00099	<0.10	3.7	<0.00020	1.3	<0.00010	2.8	0.049	39	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.11
	9-Sep-22		0.0071	<0.00060	0.00028	0.013	<0.0010	<0.020	0.00032	48	<0.0010	<0.00030	0.0072	1.1	<0.00020	<0.020	7.7	0.058	<0.00020	0.0011	<0.10	3.7	<0.00020	1.2	<0.00010	2.8	0.053	44	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.094
	20-Sep-22		0.011	<0.00060	<0.00020	0.012	<0.0010	<0.020	0.00038	48	<0.0010	<0.00030	0.0091	0.65	<0.00020	<0.020	7.9	0.056	<0.00020	0.00084	<0.10	4.0	<0.00020	1.2	<0.00010	2.9	0.052	49	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.12
	4-Oct-22		0.0052	<0.00060	<0.00020	0.012	<0.0010	<0.020	0.00036	52	<0.0010	<0.00030	0.0068	0.6	<0.00020	<0.020	8.8	0.059	<0.00020	0.0011	<0.10	4.4	<0.00020	1.2	<0.00010	3.0	0.051	51	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.12
	18-Oct-22		0.0054	<0.00060	<0.00020	0.014	<0.0010	<0.020	0.00047	52	<0.0010	0.00038	0.007	0.74	<0.00020	<0.020	8.7	0.078	<0.00020	0.0013	<0.10	4.5	<0.00020	1	<0.00010	3.1	0.057	50	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.14
NB-1	31-May-22		0.067	<0.00060	0.00030	0.010	<0.0010	<0.020	0.00076	34	<0.0010	0.0013	0.024	2.1	<0.00020	<0.020	5.5	0.17	<0.00020	0.00081	<0.10	2.4	<0.00020	1.4	<0.00010	2.2	0.039	34	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.23
	14-Jun-22		0.055	<0.00060	0.00027	0.012	<0.0010	<0.020	0.00071	37	<0.0010	0.00093	0.027	3.5	<0.00020	<0.020	6.6	0.14	<0.00020	0.0016	<0.10	3.0	<0.00020	1.6	<0.00010	2.6	0.040	34	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.24
	28-Jun-22		0.060	<0.00060	0.00030	<0.010	<0.0010	<0.020	0.00070	35	<0.0010	0.00057	0.029	2.0	<0.00020	0.020	6.1	0.093	<0.00020	0.0019	<0.10	2.7	<0.00020	1.7	<0.00010	2.4	0.036	35	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.23
	12-Jul-22		0.057	<0.00060	0.00026	<0.010	<0.0010	<0.020	0.00055	31	<0.0010	<0.00030	0.022	2.1	<0.00020	<0.020	5.8	0.041	<0.00020	0.0013	<0.10	2.6	<0.00020	1.4	<0.00010	2.2	0.037	31	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.17
	26-Jul-22		0.038	<0.00060	<0.00020	0.010	<0.0010	<0.020	0.00047	36	<0.0010	<0.00030	0.017	1.5	<0.00020	<0.020	6.2	0.054	<0.00020	0.00077	<0.10	2.9	<0.00020	1.3	<0.00010	2.4	0.040	35	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.15
	9-Aug-22		0.027	<0.00060	0.00020	0.012	<0.0010	<0.020	0.00043	45	<0.0010	<0.00030	0.014	1.8	<0.00020	<0.020	7.4	0.062	<0.00020	0.0011	<0.10	3.5	<0.00020	1.4	<0.00010	2.7	0.050	40	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.13
	23-Aug-22		0.019	<0.00060	<0.00020	0.011	<0.0010	<0.020	0.00041	45	<0.0010	<0.00030	0.011	0.98	<0.00020	<0.020	7.4	0.054	<0.00020	0.0010	<0.10	3.6	<0.00020	1.4	<0.00010	2.7	0.049	44	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.12
	9-Sep-22		0.0055	<0.00060	<0.00020	0.012	<0.0010	<0.020	0.00036	52	<0.0010	<0.00030	0.0068	0.99	<0.00020	<0.020	8.0	0.066	<0.00020	0.0010	<0.10	3.6	<0.00020	1.2	<0.00010	2.7	0.055	49	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.11
		SW-106	0.0083	<0.00060	<0.00020	0.012	<0.0010	<0.020	0.00036	53	<0.0010	<0.00030	0.0070	0.86	<0.00020	<0.020	8.1	0.067	<0.00020	0.0011	<0.10	3.6	<0.00020	1.2	<0.00010	2.7	0.055	50	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.11
	RPD		*41%*	*NC*	*NC*	*0%*	*NC*	*NC*	*0%*	*2%*	*NC*	*NC*	*3%*	*14%*	*NC*	*NC*	*1%*	*2%*	*NC*	*10%*	*NC*	*0%*	*NC*	*0%*	*NC*	*0%*	*0%*	*2%*	*NC*	*NC*	*NC*	*NC*	*NC*	*0%*
	20-Sep-22		0.0077	<0.00060	<0.00020	0.012	<0.0010	<0.020	0.00036	51	<0.0010	<0.00030	0.0071	0.63	<0.00020	<0.020	8.1	0.057	<0.00020	0.00072	<0.10	3.9	<0.00020	1.2	<0.00010	2.8	0.052	52	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.11
	4-Oct-22		0.0044	<0.00060	0.00022	0.011	<0.0010	<0.020	0.00040	58	<0.0010	<0.00030	0.0069	0.48	<0.00020	<0.020	9.4	0.068	<0.00020	0.0011	<0.10	4.4	<0.00020	1.2	<0.00010	3.0	0.051	55	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.12
	18-Oct-22		0.0052	<0.00060	<0.00020	0.013	<0.0010	<0.020	0.00044	54	<0.0010	0.00037	0.0068	0.54	<0.00020	<0.020	8.9	0.089	<0.00020	0.0012	<0.10	4.3	<0.00020	1.1	<0.00010	3	0.058	52	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.13

TABLE 5
2022 DISSOLVED METALS IN SURFACE WATER
SHERRIDON MINE SITE, MANITOBA

Sample ID	Date	Field Duplicate Sample ID	Parameter [1]																														
			Aluminum (Al) Dissolved	Antimony (Sb) Dissolved	Arsenic (As) Dissolved	Barium (Ba) Dissolved	Beryllium (Be) Dissolved	Boron (B) Dissolved	Cadmium (Cd) Dissolved	Calcium (Ca) Dissolved	Chromium (Cr) Dissolved	Cobalt (Co) Dissolved	Copper (Cu) Dissolved	Iron (Fe) Dissolved	Lead (Pb) Dissolved	Lithium (Li) Dissolved	Magnesium (Mg) Dissolved	Manganese (Mn) Dissolved	Molybdenum (Mo) Dissolved	Nickel (Ni) Dissolved	Phosphorus (P) Dissolved	Potassium (K) Dissolved	Selenium (Se) Dissolved	Silicon (Si) Dissolved	Silver (Ag) Dissolved	Sodium (Na) Dissolved	Strontium (Sr) Dissolved	Sulphur (S) Dissolved	Thallium (Tl) Dissolved	Tin (Sn) Dissolved	Titanium (Ti) Dissolved	Uranium (U) Dissolved	Vanadium (V) Dissolved	Zinc (Zn) Dissolved
NB-2	31-May-22		0.075	<0.00060	0.00028	<0.010	<0.0010	<0.020	0.00077	32	<0.0010	0.0013	0.028	1.8	<0.00020	<0.020	5.3	0.15	<0.00020	0.00063	<0.10	2.4	<0.00020	1.4	<0.00010	2.2	0.038	32	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.23
	14-Jun-22		0.057	<0.00060	0.00037	0.010	<0.0010	<0.020	0.00075	34	<0.0010	0.0010	0.029	3.2	<0.00020	<0.020	6.2	0.14	<0.00020	0.0017	<0.10	2.8	<0.00020	1.4	<0.00010	2.4	0.042	29	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.24
		SW-107	0.067	<0.00060	0.00040	0.010	<0.0010	<0.020	0.00076	34	<0.0010	0.0009	0.028	3.2	<0.00020	<0.020	6.1	0.13	<0.00020	0.0015	<0.10	2.7	<0.00020	1.4	<0.00010	2.3	0.042	31	<0.00020	<0.0010	<0.0010	<0.00010	0.0017	0.22
	RPD		*16%*	*NC*	*8%*	*0%*	*NC*	*NC*	*1%*	*0%*	*NC*	*11%*	*4%*	*0%*	*NC*	*NC*	*2%*	*7%*	*NC*	*13%*	*NC*	*4%*	*NC*	*0%*	*NC*	*4%*	*0%*	*7%*	*NC*	*NC*	*NC*	*NC*	*NC*	*9%*
	28-Jun-22		0.060	<0.00060	0.00025	<0.010	<0.0010	<0.020	0.00072	34	<0.0010	0.00044	0.028	1.9	<0.00020	<0.020	6.1	0.087	<0.00020	0.0016	<0.10	2.6	<0.00020	1.7	<0.00010	2.4	0.036	34	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.22
	12-Jul-22		0.052	<0.00060	0.00027	0.011	<0.0010	<0.020	0.00053	33	<0.0010	<0.00030	0.026	2.0	<0.00020	<0.020	5.9	0.038	<0.00020	0.0014	<0.10	2.8	<0.00020	1.4	<0.00010	2.3	0.037	31	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.17
	26-Jul-22		0.034	<0.00060	<0.00020	0.011	<0.0010	<0.020	0.00050	37	<0.0010	<0.00030	0.016	1.6	<0.00020	0.024	6.4	0.051	<0.00020	0.00072	<0.10	2.9	<0.00020	1.3	<0.00010	2.4	0.040	34	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.14
	9-Aug-22		0.030	<0.00060	0.00021	0.012	<0.0010	<0.020	0.00045	44	<0.0010	<0.00030	0.014	1.8	<0.00020	<0.020	7.5	0.058	<0.00020	0.0011	<0.10	3.5	<0.00020	1.4	<0.00010	2.7	0.050	40	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.13
	23-Aug-22		0.018	<0.00060	<0.00020	0.012	<0.0010	<0.020	0.00035	47	<0.0010	<0.00030	0.011	1.2	<0.00020	<0.020	7.8	0.051	<0.00020	0.0011	<0.10	3.7	<0.00020	1.4	<0.00010	2.8	0.050	43	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.12
	9-Sep-22		0.0077	<0.00060	<0.00020	0.012	<0.0010	<0.020	0.00037	52	<0.0010	<0.00030	0.0071	0.86	<0.00020	<0.020	8.0	0.057	<0.00020	0.0010	<0.10	3.6	<0.00020	1.2	<0.00010	2.7	0.054	48	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.11
	20-Sep-22		0.0079	<0.00060	0.00022	0.012	<0.0010	<0.020	0.00029	51	<0.0010	<0.00030	0.0072	0.61	<0.00020	<0.020	8.1	0.054	<0.00020	0.00074	<0.10	3.9	<0.00020	1.2	<0.00010	2.9	0.053	53	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.10
	4-Oct-22		0.0047	<0.00060	0.00020	0.010	<0.0010	<0.020	0.00036	56	<0.0010	<0.00030	0.0069	0.47	<0.00020	<0.020	9.00	0.061	<0.00020	0.0011	<0.10	4.2	<0.00020	1.2	<0.00010	2.9	0.051	54	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.12
	18-Oct-22		0.0036	<0.00060	0.00022	0.014	<0.0010	<0.020	0.00047	55	<0.0010	0.00038	0.0066	0.62	<0.00020	<0.020	8.9	0.087	<0.00020	0.0012	<0.10	4.5	<0.00020	1.1	<0.00010	3.1	0.058	51	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.13
EB-1	31-May-22		0.062	<0.00060	0.00027	0.011	<0.0010	<0.020	0.0014	37	<0.0010	0.0028	0.024	1.0	<0.00020	<0.020	6.5	0.25	<0.00020	0.0018	<0.10	2.8	<0.00020	1.5	<0.00010	2.5	0.045	41	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.35
	14-Jun-22		0.050	<0.00060	0.00024	0.012	<0.0010	<0.020	0.0011	39	<0.0010	0.0017	0.026	2.3	<0.00020	<0.020	7.2	0.19	<0.00020	0.0023	<0.10	3.2	<0.00020	1.6	<0.00010	2.8	0.045	38	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.29
	28-Jun-22		0.044	<0.00060	0.00023	0.011	<0.0010	<0.020	0.00089	40	<0.0010	0.0011	0.023	1.1	<0.00020	0.021	7.2	0.13	<0.00020	0.0021	<0.10	3.1	<0.00020	1.6	<0.00010	2.7	0.042	39	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.25
	12-Jul-22		0.050	<0.00060	0.00023	0.011	<0.0010	<0.020	0.00070	36	<0.0010	<0.00030	0.021	1.5	<0.00020	<0.020	6.7	0.072	<0.00020	0.0017	<0.10	3.1	<0.00020	1.4	<0.00010	2.6	0.042	38	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.20
	26-Jul-22		0.031	<0.00060	0.00021	0.012	<0.0010	<0.020	0.00051	38	<0.0010	<0.00030	0.015	1.2	<0.00020	<0.020	6.5	0.046	<0.00020	0.0011	<0.10	3.1	<0.00020	1.2	<0.00010	2.5	0.042	36	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.16
	9-Aug-22		0.036	<0.00060	0.00023	0.014	<0.0010	<0.020	0.00058	45	<0.0010	0.00033	0.015	1.0	<0.00020	<0.020	7.6	0.043	<0.00020	0.0015	<0.10	3.7	<0.00020	1.2	<0.00010	2.8	0.053	41	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.16
	23-Aug-22		0.019	<0.00060	0.00021	0.013	<0.0010	<0.020	0.00060	49	<0.0010	<0.00030	0.013	0.81	<0.00020	<0.020	8.2	0.051	<0.00020	0.0015	<0.10	3.9	<0.00020	1.2	<0.00010	3.0	0.053	47	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.16
		SW-108	0.021	<0.00060	0.00022	0.013	<0.0010	<0.020	0.00054	49	<0.0010	<0.00030	0.013	0.80	<0.00020	<0.020	8.2	0.050	<0.00020	0.0014	<0.10	4.0	<0.00020	1.2	<0.00010	2.9	0.053	46	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.15
	RPD		*10%*	*NC*	*5%*	*0%*	*NC*	*NC*	*11%*	*0%*	*NC*	*NC*	*0%*	*1%*	*NC*	*NC*	*0%*	*2%*	*NC*	*7%*	*NC*	*3%*	*NC*	*0%*	*NC*	*3%*	*0%*	*2%*	*NC*	*NC*	*NC*	*NC*	*NC*	*6%*
	9-Sep-22		0.010	<0.00060	<0.00020	0.014	<0.0010	<0.020	0.00045	51	<0.0010	<0.00030	0.0079	0.62	<0.00020	<0.020	8.0	0.039	<0.00020	0.0013	<0.10	3.7	<0.00020	0.97	<0.00010	2.9	0.055	48	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.13
	20-Sep-22		0.0096	<0.00060	<0.00020	0.013	<0.0010	<0.020	0.00056	52	<0.0010	<0.00030	0.0082	0.48	<0.00020	<0.020	8.3	0.042	<0.00020	0.00095	<0.10	4.1	<0.00020	0.98	<0.00010	3.0	0.054	51	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.13
	4-Oct-22		0.0087	<0.00060	<0.00020	0.012	<0.0010	<0.020	0.00054	56	<0.0010	0.00030	0.0084	0.46	<0.00020	<0.020	9.2	0.048	<0.00020	0.0013	<0.10	4.4	<0.00020	1.0	<0.00010	3.1	0.053	55	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.15
	18-Oct-22		0.0039	<0.00060	<0.00020	0.014	<0.0010	<0.020	0.00056	51	<0.0010	0.00035	0.0075	0.33	<0.00020	<0.020	8.1	0.063	<0.00020	0.0014	<0.10	4.2	<0.00020	1	<0.00010	3	0.056	54	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.17
EB-2	31-May-22		0.064	<0.00060	0.00029	0.012	<0.0010	<0.020	0.0015	41	<0.0010	0.0033	0.023	0.88	<0.00020	<0.020	6.9	0.29	<0.00020	0.0024	<0.10	2.9	<0.00020	1.5	<0.00010	2.7	0.049	46	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.39
	14-Jun-22		0.055	<0.00060	0.00035	0.012	<0.0010	<0.020	0.0011	38	<0.0010	0.0018	0.025	1.9	<0.00020	<0.020	6.8	0.18	<0.00020	0.0025	<0.10	3.1	<0.00020	1.4	<0.00010	2.6	0.047	34	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.29
	28-Jun-22		0.049	<0.00060	<0.00020	0.012	<0.0010	<0.020	0.0010	42	<0.0010	0.0012	0.023	0.90	<0.00020	0.020	7.5	0.14	<0.00020	0.0023	<0.10	3.4	<0.00020	1.6	<0.00010	2.8	0.044	37	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.27
	12-Jul-22		0.048	<0.00060	<0.00020	0.012	<0.0010	<0.020	0.00073	38	<0.0010	0.00037	0.019	1.2	<0.00020	<0.020	7.0	0.082	<0.00020	0.0018	<0.10	3.2	<0.00020	1.4	<0.00010	2.6	0.042	40	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.20
		SW-109	0.052	<0.00060	0.00024	0.011	<0.0010	<0.020	0.00066	37	<0.0010	0.00033	0.019	1.1	<0.00020	0.031	6.7	0.073	<0.00020	0.0018	<0.10	3.2	<0.00020	1.3	<0.00010	2.6	0.041	38	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.20
	RPD		*8%*	*NC*	*NC*	*9%*	*NC*	*NC*	*10%*	*3%*	*NC*	*11%*	*0%*	*9%*	*NC*	*NC*	*4%*	*12%*	*NC*	*0%*	*NC*	*0%*	*NC*	*7%*	*NC*	*0%*	*2%*	*5%*	*NC*	*NC*	*NC*	*NC*	*NC*	*0%*
	26-Jul-22		0.033	<0.00060	<0.00020	0.012	<0.0010	<0.020	0.00062	39	<0.0010	<0.00030	0.014	1.1	<0.00020	<0.020	6.7	0.046	<0.00020	0.0010	<0.10	3.2	<0.00020	1.2	<0.00010	2.6	0.048	37	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.15
	9-Aug-22		0.029	<0.00060	0.00023	0.014	<0.0010	<0.020	0.00055	46	<0.0010	0.00035	0.012	1.1	<0.00020	<0.020	7.6	0.049	<0.00020	0.0014	<0.10	3.7	<0.00020	1.1	<0.00010	2.8	0.053	42	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.14
	23-Aug-22		0.017	<0.00060	0.00026	0.013	<0.0010	<0.020	0.00049	50	<0.0010	<0.00030	0.013	0.66	<0.00020	<0.020	8.1	0.053	<0.00020	0.0015	<0.10	4.0	<0.00020	1.2	<0.00010	3.0	0.053	47	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.15
	9-Sep-22		0.013	<0.00060	<0.00020	0.014	<0.0010	<0.020	0.00046	52	<0.0010	<0.00030	0.0078	0.41	<0.00020	<0.020	8.0	0.041	<0.00020	0.0014	<0.10	3.7	<0.00020	0.97	<0.00010	2.9	0.056	49	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.12
	20-Sep-22		0.0088	<0.00060	<0.00020	0.013	<0.0010	<0.020	0.00046	52	<0.0010	<0.00030	0.0075	0.43	<0.00020	<0.020	8.2	0.041	<0.00020	0.00079	<0.10	4.1	<0.00020	1.0	<0.00010	2.9	0.054	53	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.13
	4-Oct-22		0.0096	<0.00060	<0.00020	0.013	<0.0010	<0.020	0.00056	58	<0.0010	0.00035	0.0082	0.44	<0.00020	<0.020	9.3	0.049	<0.00020	0.0014	<0.10	4.5	<0.00020	0.97	<0.00010	3.2	0.054	53	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.16
	18-Oct-22		0.0052	<0.00060	0.00021	0.015	<0.0010	<0.020	0.00057	55	<0.0010	0.0004	0.0078	0.24	<0.00020	<0.020	9	0.053	<0.00020	0.0016	<0.10	4.4	<0.00020	0.95	<0.00010	3.1	0.059	52	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.17
CAMP LAKE DISCHARGE	31-May-22		0.063	<0.00060	0.00029	0.010	<0.0010	<0.020	0.00079	35	<0.0010	0.0013	0.025	2.3	<0.00020	<0.020	5.6	0.17	<0.00020	0.0014	<0.10	2.5	<0.00020	1.5	<0.00010	2.2	0.039	36	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.24
	14-Jun-22		0.069	<0.00060	0.00024	<0.010	<0.0010	<0.020	0.00077	35	<0.0010	0.00087	0.029	3.1	<0.00020	<0.020	6.2	0.13	<0.00020	0.0016	<0.10	2.8	0.0002	1.4	<0.00010	2.4	0.042	31	<0.00020	<0.0010	0.0011	<0.00010	<0.0010	0.24
	28-Jun-22		0.058	<0.00060	0.00033	<0.010	<0.0010	<0.020	0.00073	34	<0.0010	0.00055	0.028	2.7	<0.00020	<0.020	6.1	0.092	<0.00020	0.0017	<0.10	2.7	<0.00020	1.7	<0.00010	2.3	0.036	35	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.23
	12-Jul-22		0.048	<0.00060	0.00023	0.010	<0.0010	<0.020	0.00050	32	<0.0010	<0.00030	0.021	2.1	<0.00020	<0.020	5.8	0.034	<0.00020	0.0012	<0.10	2.8	<0.00020	1.5	<0.00010	2.3	0.037	31	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.17
	26-Jul-22		0.039	<0.00060	<0.00020	0.011	<0.0010	<0.020	0.00050	37	<0.0010	<0.00030	0.016	1.6	<0.00020	<0.020	6.3	0.043	<0.00020	0.00073	<0.10	2.9	<0.00020	1.3	<0.00010	2.4	0.044	34	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.14
	9-Aug-22		0.029	<0.00060	0.00020	0.013	<0.0010	<0.020	0.00045	45	<0.0010	<0.00030	0.015	1.6	<0.00020	<0.020	7.3	0.042	<0.00020	0.0012	<0.10	3.4	<0.00020	1.4	<0.00010	2.6	0.050	40	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.14
	23-Aug-22		0.016	<0.00060	<0.00020	0.012	<0.0010	<0.020	0.00032	47	<0.0010	<0.00030	0.0098	0.81	<0.00020	<0.020	7.8	0.038	<0.00020	0.0012	<0.10	3.7	<0.00020	1.4	<0.00010	2.8	0.050	44	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.11
	9-Sep-22		0.0069	<0.00060	<0.00020	0.012	<0.0010	<0.020	0.00035	53	<0.0010	<0.00030	0.0068	1.0	<0.00020	<0.020	8.0	0.057	<0.00020	0.00099	<0.10	3.6	<0.00020	1.2	<0.00010	2.7	0.054	50	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.11
	20-Sep-22		0.011	<0.00060	<0.00020	0.012	<0.0010	<0.020	0.00036	52	<0.0010	<0.00030	0.0075	0.32	<0.00020	<0.020	8.2	0.054	<0.00020	0.0019	<0.10	3.9	<0.00020	1.2	<0.00010	2.9	0.053	52	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.10
	4-Oct-22		0.0046	<0.00060	<0.00020	0.011	<0.0010	<0.020	0.00036	57	<0.0010	<0.00030	0.0066	0.46	<0.00020	<0.020	9.2	0.062	<0.00020	0.0011	<0.10	4.3	<0.00020	1.2	<0.00010	3.0	0.052	56	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.12
		SW-110	0.0045	<0.00060	0.00022	0.011	<0.0010	<0.020	0.00038	59	<0.0010	<0.00030	0.0065	0.55	<0.00020	<0.020	9.5	0.064	<0.00020	0.0010	<0.10	4.4	<0.00020	1.2	<0.00010	3.1	0.053	54	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.12
	RPD		*2%*	*NC*	*NC*	*0%*	*NC*	*NC*	*5%*	*3%*	*NC*	*NC*	*2%*	*18%*	*NC*	*NC*	*3%*	*3%*	*NC*	*10%*	*NC*	*2%*	*NC*	*0%*	*NC*	*3%*	*2%*	*4%*	*NC*	*NC*	*NC*	*NC*	*NC*	*0%*
	18-Oct-22		0.005	<0.00060	0.00023	0.014	<0.0010	<0.020	0.00049	55	<0.0010	0.00043	0.0065	0.51	<0.00020	<0.020	9	0.094	<0.00020	0.0013	<0.10	4.4	<0.00020	1.1	<0.00010	3	0.058	52	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.13
Laboratory Detection Limits			*0.0030*	*0.00060*	*0.00020*	*0.010*	*0.0010*	*0.020*	*0.000020*	*0.30*	*0.0010*	*0.00030*	*0.0010*	*0.060*	*0.00020*	*0.020*	*0.20*	*0.0040*	*0.00020*	*0.00050*	*0.10*	*0.30*	*0.00020*	*0.10*	*0.00010*	*0.50*	*0.020*	*0.20*	*0.00020*	*0.0010*	*0.0010*	*0.00010*	*0.0010*	*0.0030*
Manitoba Water Quality Standards, Objectives, and Guidelines [2]																																	
Protection of Aquatic Life and Wildlife																																	
Tier II Objective - Chronic					*0.150*				*0.00017 [2a]*		*0.048 [2a]*		*0.00574 [2a]*		*0.00142 [2a]*					*0.0335 [2a]*													*0.076 [2a]*
Tier II Objective - Acute					*0.340*				*0.00121 [2a]*		*0.372 [2a]*		*0.00823 [2a]*		*0.0365 [2a]*					*0.301 [2a]*													*0.0754 [2a]*

Notes:
"-" = No Data NC = Not Calculated RPD = Relative Percent Difference

1. All values are expressed in milligrams per litre (mg/L) unless otherwise specified.
2. Manitoba Water Quality Standards, Objectives, and Guidelines (MWQSOG). Manitoba Water Stewardship, 2011.
   a. Calculated as per Manitoba Conservation (2011) using mean total harness of 59.4 mg/L as $CaCO_3$ as measured in Cold Lake on May 11, 2016.

- Values above MWQSOG value.

TABLE 5
2022 DISSOLVED METALS IN SURFACE WATER
SHERRIDON MINE SITE, MANITOBA

Sample ID	Date	Field Duplicate Sample ID	Parameter [1]																														
			Aluminum (Al) Dissolved	Antimony (Sb) Dissolved	Arsenic (As) Dissolved	Barium (Ba) Dissolved	Beryllium (Be) Dissolved	Boron (B) Dissolved	Cadmium (Cd) Dissolved	Calcium (Ca) Dissolved	Chromium (Cr) Dissolved	Cobalt (Co) Dissolved	Copper (Cu) Dissolved	Iron (Fe) Dissolved	Lead (Pb) Dissolved	Lithium (Li) Dissolved	Magnesium (Mg) Dissolved	Manganese (Mn) Dissolved	Molybdenum (Mo) Dissolved	Nickel (Ni) Dissolved	Phosphorus (P) Dissolved	Potassium (K) Dissolved	Selenium (Se) Dissolved	Silicon (Si) Dissolved	Silver (Ag) Dissolved	Sodium (Na) Dissolved	Strontium (Sr) Dissolved	Sulphur (S) Dissolved	Thallium (Tl) Dissolved	Tin (Sn) Dissolved	Titanium (Ti) Dissolved	Uranium (U) Dissolved	Vanadium (V) Dissolved	Zinc (Zn) Dissolved
Sherlett Creek																																	
SC-1	31-May-22		0.045	<0.00060	0.00041	<0.010	<0.0010	<0.020	0.00026	6.9	<0.0010	<0.00030	0.0097	0.17	<0.00020	<0.020	2.1	0.011	<0.00020	<0.00050	<0.10	1.0	<0.00020	1.6	<0.00010	1.4	<0.020	1.6	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.083
	14-Jun-22		0.033	<0.00060	0.00050	<0.010	<0.0010	<0.020	0.00014	7.6	<0.0010	<0.00030	0.0082	0.18	<0.00020	<0.020	2.5	0.0087	<0.00020	<0.00050	<0.10	1.3	<0.00020	1.6	<0.00010	1.6	<0.020	1.5	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.051
	28-Jun-22		0.035	<0.00060	0.00037	<0.010	<0.0010	0.046	0.00012	7.8	<0.0010	<0.00030	0.0066	0.18	<0.00020	<0.020	2.5	0.009	<0.00020	0.00055	<0.10	1.2	<0.00020	1.5	<0.00010	2.1	<0.020	1.5	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.041
	12-Jul-22		0.032	<0.00060	0.00039	<0.010	<0.0010	<0.020	0.00013	7.7	<0.0010	<0.00030	0.0067	0.16	<0.00020	<0.020	2.4	0.0078	<0.00020	<0.00050	<0.10	1.2	<0.00020	1.3	<0.00010	1.9	<0.020	1.4	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.047
	26-Jul-22		0.019	<0.00060	0.00031	<0.010	<0.0010	<0.020	0.00012	7.4	<0.0010	<0.00030	0.0051	0.10	<0.00020	<0.020	2.3	<0.0040	<0.00020	<0.00050	<0.10	1.1	<0.00020	1.1	<0.00010	1.5	<0.020	1.1	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.037
	9-Aug-22		0.019	<0.00060	0.00031	<0.010	<0.0010	<0.020	0.00012	7.4	<0.0010	<0.00030	0.0051	0.10	<0.00020	<0.020	2.3	<0.0040	<0.00020	<0.00050	<0.10	1.1	<0.00020	1.1	<0.00010	1.5	<0.020	1.1	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.037
		SW-102	0.029	<0.00060	0.00041	<0.010	<0.0010	<0.020	0.00046	8.5	<0.0010	<0.00030	0.020	0.14	<0.00020	<0.020	2.6	0.0096	<0.00020	0.00054	<0.10	1.2	<0.00020	1.2	<0.00010	1.6	0.022	1.8	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.17
	RPD		*42%*	*NC*	*28%*	*NC*	*NC*	*NC*	*117%*	*14%*	*NC*	*NC*	*119%*	*33%*	*NC*	*NC*	*12%*	*NC*	*NC*	*NC*	*NC*	*9%*	*NC*	*9%*	*NC*	*6%*	*NC*	*48%*	*NC*	*NC*	*NC*	*NC*	*NC*	*129%*
	23-Aug-22		0.021	<0.00060	0.00045	<0.010	<0.0010	<0.020	0.00023	8.2	<0.0010	<0.00030	0.012	0.13	<0.00020	<0.020	2.5	0.019	<0.00020	0.0015	<0.10	1.2	<0.00020	1	<0.00010	1.7	0.021	1.4	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.10
	9-Sep-22		0.026	<0.00060	0.00032	<0.010	<0.0010	<0.020	0.00047	8.9	<0.0010	<0.00030	0.024	0.26	<0.00020	<0.020	2.7	0.023	<0.00020	0.00055	<0.10	1.3	<0.00020	1.5	<0.00010	1.8	0.023	1.9	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.19
	20-Sep-22		0.020	<0.00060	0.00032	<0.010	<0.0010	<0.020	0.00034	8.9	<0.0010	<0.00030	0.016	0.22	<0.00020	<0.020	2.8	0.012	<0.00020	<0.00050	<0.10	1.5	<0.00020	1.5	<0.00010	3.1	0.023	2.2	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.12
	4-Oct-22		0.031	<0.00060	0.00042	<0.010	<0.0010	<0.020	0.00045	9.8	<0.0010	<0.00030	0.019	0.30	<0.00020	<0.020	3.1	0.056	<0.00020	0.00052	<0.10	1.7	<0.00020	1.4	<0.00010	4.3	0.024	2.3	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.18
	18-Oct-22		0.018	<0.00060	0.00039	<0.010	<0.0010	<0.020	0.00017	8.4	<0.0010	<0.00030	0.0067	0.14	<0.00020	<0.020	2.7	0.027	<0.00020	0.00057	<0.10	1.4	<0.00020	1.1	<0.00010	2.1	0.022	1.6	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.071
SC-2	20-Sep-22		0.017	<0.00060	0.00045	<0.010	<0.0010	<0.020	0.00012	8.3	<0.0010	<0.00030	0.0077	0.20	<0.00020	<0.020	2.6	0.0065	<0.00020	<0.00050	<0.10	1.4	<0.00020	1.5	<0.00010	2.0	0.021	1.4	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.055
	4-Oct-22		0.031	<0.00060	0.00043	<0.010	<0.0010	<0.020	0.00060	9.9	<0.0010	<0.00030	0.021	0.30	<0.00020	<0.020	3.1	0.081	<0.00020	0.00055	<0.10	1.6	<0.00020	1.3	<0.00010	5.4	0.023	2.5	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.22
	18-Oct-22		0.017	<0.00060	0.00045	<0.010	<0.0010	<0.020	0.00016	8.5	<0.0010	<0.00030	0.0058	0.14	<0.00020	<0.020	2.7	0.029	<0.00020	<0.00050	<0.10	1.4	<0.00020	1.1	<0.00010	2	0.022	1.4	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.058
SC-3	20-Sep-22		0.017	<0.00060	0.00033	<0.010	<0.0010	<0.020	0.00010	8.00	<0.0010	<0.00030	0.011	0.17	<0.00020	0.037	2.5	0.0072	<0.00020	<0.00050	<0.10	1.4	<0.00020	1.4	<0.00010	1.5	<0.020	1.3	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.060
	4-Oct-22		0.025	<0.00060	0.00044	<0.010	<0.0010	<0.020	0.00035	8.8	<0.0010	<0.00030	0.012	0.22	<0.00020	<0.020	2.8	0.048	<0.00020	0.00053	<0.10	1.5	<0.00020	1.3	<0.00010	3.4	0.021	1.8	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.11
		SW-118	0.028	<0.00060	0.00045	<0.010	<0.0010	<0.020	0.00034	9.2	<0.0010	<0.00030	0.012	0.24	<0.00020	<0.020	2.9	0.050	<0.00020	<0.00050	<0.10	1.5	<0.00020	1.4	<0.00010	3.5	0.022	1.8	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.11
	RPD		*11%*	*NC*	*2%*	*NC*	*NC*	*NC*	*3%*	*4%*	*NC*	*NC*	*0%*	*9%*	*NC*	*NC*	*4%*	*NC*	*NC*	*NC*	*NC*	*0%*	*NC*	*7%*	*NC*	*3%*	*NC*	*0%*	*NC*	*NC*	*NC*	*NC*	*NC*	*0%*
	18-Oct-22		0.016	<0.00060	0.00041	<0.010	<0.0010	<0.020	0.000057	8.2	<0.0010	<0.00030	0.0036	0.13	<0.00020	<0.020	2.6	0.024	<0.00020	<0.00050	<0.10	1.4	<0.00020	1	<0.00010	1.6	0.021	1.2	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.026
SC-4	20-Sep-22		0.014	<0.00060	0.00046	<0.010	<0.0010	<0.020	<0.000020	8.1	<0.0010	<0.00030	0.0023	0.18	<0.00020	<0.020	2.5	<0.0040	<0.00020	<0.00050	<0.10	1.4	<0.00020	1.4	<0.00010	1.5	0.02	1.1	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.0031
	4-Oct-22		0.020	<0.00060	0.00049	<0.010	<0.0010	<0.020	0.000029	8.4	<0.0010	<0.00030	0.0031	0.21	<0.00020	<0.020	2.7	0.021	<0.00020	<0.00050	<0.10	1.5	<0.00020	1.3	<0.00010	1.8	0.02	1.2	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.018
	18-Oct-22		0.017	<0.00060	0.00041	<0.010	<0.0010	<0.020	0.000036	8	<0.0010	<0.00030	0.0029	0.13	<0.00020	<0.020	2.6	0.019	<0.00020	<0.00050	<0.10	1.3	<0.00020	1	<0.00010	1.5	0.021	1.1	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.005
		SW-119	0.016	<0.00060	0.00042	<0.010	<0.0010	<0.020	<0.000020	8.2	<0.0010	<0.00030	0.0029	0.18	<0.00020	<0.020	2.6	0.019	<0.00020	<0.00050	<0.10	1.3	<0.00020	1	<0.00010	1.6	0.021	1.1	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.0048
	RPD		*6%*	*NC*	*2%*	*NC*	*NC*	*NC*	*NC*	*2%*	*NC*	*NC*	*0%*	*32%*	*NC*	*NC*	*0%*	*0%*	*NC*	*NC*	*NC*	*0%*	*NC*	*0%*	*NC*	*6%*	*NC*	*0%*	*NC*	*NC*	*NC*	*NC*	*NC*	*4%*
SC-5	20-Sep-22		0.019	<0.00060	0.00045	<0.010	<0.0010	<0.020	<0.000020	7.9	<0.0010	<0.00030	0.0024	0.12	<0.00020	0.035	2.5	<0.0040	<0.00020	<0.00050	<0.10	1.3	<0.00020	1.4	<0.00010	1.5	<0.020	1.1	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.0039
	4-Oct-22		0.015	<0.00060	0.00044	<0.010	<0.0010	<0.020	<0.000020	8.1	<0.0010	<0.00030	0.0019	0.16	<0.00020	<0.020	2.6	0.016	<0.00020	<0.00050	<0.10	1.4	<0.00020	1.2	<0.00010	1.5	0.02	1.1	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	<0.0030
	18-Oct-22		0.014	<0.00060	0.00039	<0.010	<0.0010	<0.020	<0.000020	8.1	<0.0010	<0.00030	0.0030	0.11	<0.00020	<0.020	2.6	0.013	<0.00020	<0.00050	<0.10	1.3	<0.00020	1	<0.00010	1.6	0.022	1	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.0035
SC-6	20-Sep-22		0.010	<0.00060	0.00034	<0.010	<0.0010	<0.020	0.000023	8.1	<0.0010	<0.00030	0.0041	0.10	<0.00020	<0.020	2.5	<0.0040	<0.00020	<0.00050	<0.10	1.2	<0.00020	1.4	<0.00010	1.5	0.021	1.2	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.0085
	4-Oct-22		0.013	<0.00060	0.00039	<0.010	<0.0010	<0.020	<0.000020	8.1	<0.0010	<0.00030	0.0020	0.11	<0.00020	<0.020	2.6	0.0043	<0.00020	0.00056	<0.10	1.4	<0.00020	1.2	<0.00010	1.6	0.02	1.2	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.0031
	18-Oct-22		0.01	<0.00060	0.00037	<0.010	<0.0010	<0.020	<0.000020	8.1	<0.0010	<0.00030	0.0016	0.091	<0.00020	<0.020	2.6	<0.0040	<0.00020	<0.00050	<0.10	1.2	<0.00020	0.97	<0.00010	1.5	<0.020	1.1	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	<0.0030
Laboratory Detection Limits			*0.0030*	*0.00060*	*0.00020*	*0.010*	*0.0010*	*0.020*	*0.000020*	*0.30*	*0.0010*	*0.00030*	*0.0010*	*0.060*	*0.00020*	*0.020*	*0.20*	*0.0040*	*0.00020*	*0.00050*	*0.10*	*0.30*	*0.00020*	*0.10*	*0.00010*	*0.50*	*0.020*	*0.20*	*0.00020*	*0.0010*	*0.0010*	*0.00010*	*0.0010*	*0.0030*
Manitoba Water Quality Standards, Objectives, and Guidelines [2]																																	
Protection of Aquatic Life and Wildlife																																	
Tier II Objective - Chronic					*0.150*				*0.00011* [2a]		*0.0283* [2a]		*0.00327* [2a]		*0.00068* [2a]					*0.0192* [2a]													*0.0436* [2a]
Tier II Objective - Acute					*0.340*				*0.00064* [2a]		*0.217* [2a]		*0.00443* [2a]		*0.01755* [2a]					*0.1729* [2a]													*0.0432* [2a]

Notes:
"-" = No Data NC = Not Calculated RPD = Relative Percent Difference

1. All values are expressed in milligrams per litre (mg/L) unless otherwise specified.
2. Manitoba Water Quality Standards, Objectives, and Guidelines (MWQSOG). Manitoba Water Stewardship, 2011.
   a. Calculated as per Manitoba Conservation (2011) using mean total harness of 30.8 mg/L as $CaCO_3$ as measured at station SC-1 in 2022.

- Values above MWQSOG value.

Sample ID	Date	Field Duplicate Sample ID	Parameter [1]																														
			Aluminum (Al) Dissolved	Antimony (Sb) Dissolved	Arsenic (As) Dissolved	Barium (Ba) Dissolved	Beryllium (Be) Dissolved	Boron (B) Dissolved	Cadmium (Cd) Dissolved	Calcium (Ca) Dissolved	Chromium (Cr) Dissolved	Cobalt (Co) Dissolved	Copper (Cu) Dissolved	Iron (Fe) Dissolved	Lead (Pb) Dissolved	Lithium (Li) Dissolved	Magnesium (Mg) Dissolved	Manganese (Mn) Dissolved	Molybdenum (Mo) Dissolved	Nickel (Ni) Dissolved	Phosphorus (P) Dissolved	Potassium (K) Dissolved	Selenium (Se) Dissolved	Silicon (Si) Dissolved	Silver (Ag) Dissolved	Sodium (Na) Dissolved	Strontium (Sr) Dissolved	Sulphur (S) Dissolved	Thallium (Tl) Dissolved	Tin (Sn) Dissolved	Titanium (Ti) Dissolved	Uranium (U) Dissolved	Vanadium (V) Dissolved	Zinc (Zn) Dissolved
Cold Lake																																	
CL-2	31-May-22		0.049	<0.00060	0.00040	<0.010	<0.0010	<0.020	0.00017	15	<0.0010	<0.00030	0.0087	0.53	<0.00020	<0.020	3.4	0.037	<0.00020	<0.00050	<0.10	1.4	<0.00020	1.2	<0.00010	2.2	0.029	11	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.059
	14-Jun-22		0.048	<0.00060	0.00040	<0.010	<0.0010	<0.020	0.00017	17	<0.0010	<0.00030	0.011	0.68	<0.00020	<0.020	3.7	0.016	<0.00020	0.00052	<0.10	1.8	<0.00020	1.3	<0.00010	2.1	0.030	9.9	<0.00020	<0.0010	0.0010	<0.00010	<0.0010	0.064
	28-Jun-22		0.039	<0.00060	0.00038	<0.010	<0.0010	<0.020	0.000096	15	<0.0010	<0.00030	0.0090	0.47	<0.00020	<0.020	3.6	<0.0040	<0.00020	0.00079	<0.10	1.6	<0.00020	1.3	<0.00010	2.0	0.026	9.2	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.047
	12-Jul-22		0.048	<0.00060	0.00029	<0.010	<0.0010	<0.020	0.000095	15	<0.0010	<0.00030	0.0094	0.6	<0.00020	<0.020	3.5	<0.0040	<0.00020	0.00051	<0.10	1.6	<0.00020	1.5	<0.00010	2.0	0.027	9.8	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.048
		SW-111	0.040 [3]	<0.00060	0.00026	0.011	<0.0010	<0.020	0.000087	15	<0.0010	<0.00030	0.0087	0.71	<0.00020	<0.020	3.5	<0.0040	<0.00020	0.00055	<0.10	1.8	<0.00020	1.5	<0.00010	2.1	0.028	9.2	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.048
	RPD		*18%*	*NC*	*11%*	*NC*	*NC*	*NC*	*9%*	*0%*	*NC*	*NC*	*8%*	*17%*	*NC*	*NC*	*0%*	*NC*	*NC*	*8%*	*NC*	*12%*	*NC*	*0%*	*NC*	*5%*	*4%*	*6%*	*NC*	*NC*	*NC*	*NC*	*NC*	*0%*
	26-Jul-22		0.042	<0.00060	0.00031	<0.010	<0.0010	<0.020	0.00012	14	<0.0010	<0.00030	0.0083	0.72	<0.00020	0.024	3.2	0.052	<0.00020	<0.00050	<0.10	1.5	<0.00020	1.4	<0.00010	1.9	0.026	8.2	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.046
	9-Aug-22		0.044	<0.00060	0.00033	0.011	<0.0010	<0.020	0.00013	15	<0.0010	<0.00030	0.0083	0.80	<0.00020	<0.020	3.6	0.061	<0.00020	0.00052	<0.10	1.8	<0.00020	1.5	<0.00010	2.1	0.030	8.1	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.045
	23-Aug-22		0.041	<0.00060	0.00034	0.011	<0.0010	<0.020	0.000096	15	<0.0010	<0.00030	0.0084	0.76	<0.00020	<0.020	3.6	0.10	<0.00020	<0.00050	<0.10	1.7	<0.00020	1.5	<0.00010	2.0	0.028	8.0	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.043
	9-Sep-22		0.035	<0.00060	0.00036	0.013	<0.0010	<0.020	0.00010	15	<0.0010	<0.00030	0.0070	1.0	<0.00020	<0.020	3.5	0.24	<0.00020	<0.00050	<0.10	1.6	<0.00020	1.7	<0.00010	2.0	0.03	7.8	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.035
	20-Sep-22		0.030	<0.00060	0.00028	0.012	<0.0010	<0.020	0.00015	15	<0.0010	0.00049	0.0072	1.0	<0.00020	<0.020	3.5	0.40	<0.00020	<0.00050	<0.10	1.6	<0.00020	1.7	<0.00010	2.0	0.029	8.1	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.042
	4-Oct-22		0.029	<0.00060	0.00045	<0.010	<0.0010	<0.020	<0.000020	13	<0.0010	<0.00030	0.0055	0.32	<0.00020	<0.020	3.4	<0.0040	<0.00020	<0.00050	<0.10	1.7	<0.00020	0.89	<0.00010	2.0	0.026	6.0	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.011
	18-Oct-22		0.025	<0.00060	0.00038	<0.010	<0.0010	<0.020	0.000023	12	<0.0010	<0.00030	0.0050	0.27	<0.00020	<0.020	3.2	<0.0040	<0.00020	<0.00050	<0.10	1.5	<0.00020	0.81	<0.00010	2	0.027	5.6	<0.00020	<0.0010	0.001	<0.00010	<0.0010	0.0098

TABLE 5
2022 DISSOLVED METALS IN SURFACE WATER
SHERRIDON MINE SITE, MANITOBA

Sample ID	Date	Field Duplicate Sample ID	Parameter[1]																														
			Aluminum (Al) Dissolved	Antimony (Sb) Dissolved	Arsenic (As) Dissolved	Barium (Ba) Dissolved	Beryllium (Be) Dissolved	Boron (B) Dissolved	Cadmium (Cd) Dissolved	Calcium (Ca) Dissolved	Chromium (Cr) Dissolved	Cobalt (Co) Dissolved	Copper (Cu) Dissolved	Iron (Fe) Dissolved	Lead (Pb) Dissolved	Lithium (Li) Dissolved	Magnesium (Mg) Dissolved	Manganese (Mn) Dissolved	Molybdenum (Mo) Dissolved	Nickel (Ni) Dissolved	Phosphorus (P) Dissolved	Potassium (K) Dissolved	Selenium (Se) Dissolved	Silicon (Si) Dissolved	Silver (Ag) Dissolved	Sodium (Na) Dissolved	Strontium (Sr) Dissolved	Sulphur (S) Dissolved	Thallium (Tl) Dissolved	Tin (Sn) Dissolved	Titanium (Ti) Dissolved	Uranium (U) Dissolved	Vanadium (V) Dissolved	Zinc (Zn) Dissolved
CL-3	31-May-22		0.065	<0.00060	0.00031	<0.010	<0.0010	<0.020	0.00054	26	<0.0010	0.00087	0.022	1.5	<0.00020	<0.020	4.6	0.11	<0.00020	<0.00050	<0.10	2.1	<0.00020	1.4	<0.00010	2.2	0.034	25	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.17
	14-Jun-22		0.041	<0.00060	0.00046	<0.010	<0.0010	<0.020	0.00019	17	<0.0010	<0.00030	0.013	0.77	<0.00020	<0.020	3.7	0.0092	<0.00020	0.00083	<0.10	1.8	<0.00020	1.2	<0.00010	1.9	0.029	10	<0.00020	<0.0010	<0.0010	<0.00010	0.0018	0.069
	28-Jun-22		0.035	<0.00060	0.00036	<0.010	<0.0010	<0.020	0.00013	15	<0.0010	<0.00030	0.0099	0.38	<0.00020	<0.020	3.6	<0.0040	<0.00020	0.00079	<0.10	1.6	<0.00020	1.2	<0.00010	1.9	0.025	9.7	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.053
	12-Jul-22		0.037	<0.00060	0.00039	<0.010	<0.0010	<0.020	0.00010	14	<0.0010	<0.00030	0.0084	0.5	<0.00020	<0.020	3.5	<0.0040	<0.00020	0.00060	<0.10	1.6	<0.00020	1.1	<0.00010	1.9	0.026	9.1	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.042
	26-Jul-22		0.032	<0.00060	0.00031	<0.010	<0.0010	<0.020	0.000083	13	<0.0010	<0.00030	0.0068	0.26	<0.00020	0.022	3.1	<0.0040	<0.00020	<0.00050	<0.10	1.5	<0.00020	0.84	<0.00010	1.8	0.025	6.9	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.030
	9-Aug-22		0.024	<0.00060	0.00037	0.010	<0.0010	<0.020	0.000060	13	<0.0010	<0.00030	0.0057	0.22	<0.00020	<0.020	3.3	<0.0040	<0.00020	<0.00050	<0.10	1.6	<0.00020	0.86	<0.00010	2.0	0.028	5.9	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.022
	23-Aug-22		0.017	<0.00060	0.00037	<0.010	<0.0010	<0.020	0.000040	13	<0.0010	<0.00030	0.0055	0.18	<0.00020	<0.020	3.4	<0.0040	<0.00020	<0.00050	<0.10	1.6	<0.00020	0.82	<0.00010	2.0	0.027	6.2	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.017
		SW-112	0.020	<0.00060	0.00040	<0.010	<0.0010	<0.020	0.000055	13	<0.0010	<0.00030	0.0061	0.18	<0.00020	<0.020	3.4	<0.0040	<0.00020	<0.00050	<0.10	1.6	<0.00020	0.82	<0.00010	2.0	0.027	6.3	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.019
	RPD		*81%*	*NC*	*8%*	*NC*	*NC*	*NC*	*32%*	*0%*	*NC*	*NC*	*10%*	*0%*	*NC*	*NC*	*0%*	*NC*	*NC*	*NC*	*NC*	*0%*	*NC*	*0%*	*NC*	*0%*	*0%*	*2%*	*NC*	*NC*	*NC*	*NC*	*NC*	*11%*
	9-Sep-22		0.023	<0.00060	0.00042	<0.010	<0.0010	<0.020	0.000031	13	<0.0010	<0.00030	0.0048	0.24	<0.00020	<0.020	3.3	<0.0040	<0.00020	<0.00050	<0.10	1.5	<0.00020	0.88	<0.00010	1.9	0.028	5.8	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.012
	20-Sep-22		0.022	<0.00060	0.00041	<0.010	<0.0010	<0.020	0.000023	12	<0.0010	<0.00030	0.0054	0.24	<0.00020	<0.020	3.2	<0.0040	<0.00020	<0.00050	<0.10	1.5	0.00022	0.85	<0.00010	1.9	0.026	6.3	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.012
	4-Oct-22		0.073	<0.00060	0.00039	<0.010	<0.0010	<0.020	0.000024	13	<0.0010	<0.00030	0.0050	0.29	<0.00020	<0.020	3.5	<0.0040	<0.00020	0.00052	<0.10	1.7	<0.00020	0.84	<0.00010	2.0	0.027	6.0	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.012
	18-Oct-22		0.025	<0.00060	0.00035	<0.010	<0.0010	<0.020	<0.000020	12	<0.0010	<0.00030	0.0049	0.26	<0.00020	<0.020	3.2	<0.0040	<0.00020	<0.00050	<0.10	1.5	<0.00020	0.79	<0.00010	2	0.027	5.7	<0.00020	<0.0010	0.0011	<0.00010	<0.0010	0.0097
CL-4	31-May-22		0.043	<0.00060	0.00046	<0.010	<0.0010	<0.020	0.00013	12	<0.0010	<0.00030	0.0081	0.34	<0.00020	<0.020	2.9	0.028	<0.00020	<0.00050	<0.10	1.3	<0.00020	1.1	<0.00010	1.8	0.026	7.5	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.048
	14-Jun-22		0.045	<0.00060	0.00059	<0.010	<0.0010	<0.020	0.00013	14	<0.0010	<0.00030	0.0092	0.55	<0.00020	<0.020	3.5	0.024	<0.00020	0.00063	<0.10	1.7	<0.00020	1.2	<0.00010	2.0	0.028	8.0	<0.00020	<0.0010	<0.0010	<0.00010	0.0016	0.047
		SW-113	0.039	<0.00060	0.00045	<0.010	<0.0010	<0.020	0.00012	14	<0.0010	<0.00030	0.0091	0.65	<0.00020	<0.020	3.4	0.022	<0.00020	0.00073	<0.10	1.6	<0.00020	1.2	<0.00010	2.0	0.028	8.1	<0.00020	<0.0010	<0.0010	<0.00010	0.0018	0.047
	RPD		*14%*	*NC*	*27%*	*NC*	*NC*	*NC*	*8%*	*0%*	*NC*	*NC*	*1%*	*17%*	*NC*	*NC*	*3%*	*9%*	*NC*	*15%*	*NC*	*6%*	*NC*	*0%*	*NC*	*0%*	*0%*	*1%*	*NC*	*NC*	*NC*	*NC*	*12%*	*0%*
	28-Jun-22		0.035	<0.00060	0.00045	<0.010	<0.0010	0.025	0.000083	14	<0.0010	<0.00030	0.0079	0.49	<0.00020	<0.020	3.5	0.0054	<0.00020	0.0011	<0.10	1.6	<0.00020	1.2	<0.00010	2.0	0.026	8.0	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.040
	12-Jul-22		0.057	<0.00060	0.00030	0.010	<0.0010	<0.020	0.00010	14	<0.0010	<0.00030	0.0073	1.5	<0.00020	<0.020	3.5	0.051	<0.00020	<0.00050	<0.10	1.7	<0.00020	1.8	<0.00010	2.0	0.026	8.2	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.036
	26-Jul-22		0.057	<0.00060	0.00035	0.011	<0.0010	<0.020	0.00012	14	<0.0010	<0.00030	0.0078	1.2	<0.00020	<0.020	3.3	0.096	<0.00020	<0.00050	<0.10	1.5	<0.00020	1.6	<0.00010	1.9	0.028	7.1	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.040
	9-Aug-22		0.036	<0.00060	0.00034	0.012	<0.0010	<0.020	0.00011	15	<0.0010	<0.00030	0.0071	1.1	<0.00020	<0.020	3.5	0.18	<0.00020	0.00054	<0.10	1.7	<0.00020	1.7	<0.00010	2.0	0.030	7.2	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.038
	23-Aug-22		0.033	<0.00060	0.00041	0.012	<0.0010	<0.020	0.000082	15	<0.0010	0.00082	0.0067	1.7	<0.00020	<0.020	3.6	0.47	<0.00020	<0.00050	<0.10	1.7	<0.00020	2.1	<0.00010	2.0	0.029	7.1	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.034
	9-Sep-22		0.029	<0.00060	0.00038	<0.010	<0.0010	<0.020	0.000035	13	<0.0010	<0.00030	0.0053	0.25	<0.00020	<0.020	3.2	0.010	<0.00020	<0.00050	<0.10	1.5	<0.00020	0.96	<0.00010	2.0	0.028	5.5	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.014
	20-Sep-22		0.021	<0.00060	0.00031	<0.010	<0.0010	<0.020	0.000034	12	<0.0010	<0.00030	0.0050	0.49	<0.00020	<0.020	3.2	0.0061	<0.00020	<0.00050	<0.10	1.5	<0.00020	0.93	<0.00010	2.0	0.027	5.2	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.010
	4-Oct-22		0.028	<0.00060	0.00038	<0.010	<0.0010	<0.020	0.000028	12	<0.0010	<0.00030	0.0048	0.25	<0.00020	<0.020	3.3	<0.0040	<0.00020	<0.00050	<0.10	1.6	<0.00020	0.82	<0.00010	2.0	0.026	5.8	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.011
	18-Oct-22		0.029	<0.00060	0.00042	<0.010	<0.0010	<0.020	<0.000020	12	<0.0010	<0.00030	0.0051	0.2	<0.00020	<0.020	3.2	<0.0040	<0.00020	0.00061	<0.10	1.6	<0.00020	0.74	<0.00010	2	0.027	5	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.0093
CL-5	31-May-22		0.050	<0.00060	0.00040	<0.010	<0.0010	<0.020	0.00016	13	<0.0010	<0.00030	0.010	0.43	<0.00020	<0.020	3.0	0.029	0.00045	<0.00050	<0.10	1.4	<0.00020	1.2	<0.00010	1.8	0.026	8.7	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.060
	14-Jun-22		0.035	<0.00060	0.00062	<0.010	<0.0010	<0.020	0.000099	13	<0.0010	<0.00030	0.0084	0.40	<0.00020	<0.020	3.2	0.0045	<0.00020	0.00060	<0.10	1.6	<0.00020	0.91	<0.00010	1.9	0.027	7.3	<0.00020	<0.0010	<0.0010	<0.00010	0.0016	0.041
	28-Jun-22		0.032	<0.00060	0.00046	<0.010	<0.0010	0.020	0.000082	14	<0.0010	<0.00030	0.0075	0.53	<0.00020	<0.020	3.5	0.017	<0.00020	0.00059	<0.10	1.6	<0.00020	1.3	<0.00010	2.0	0.025	8.0	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.038
		SW-114	0.037	<0.00060	0.00035	<0.010	<0.0010	<0.020	0.000077	14	<0.0010	<0.00030	0.0071	0.57	<0.00020	<0.020	3.5	0.016	<0.00020	0.00060	<0.10	1.6	<0.00020	1.3	<0.00010	2.0	0.026	7.7	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.037
	RPD		*14%*	*NC*	*27%*	*NC*	*NC*	*NC*	*6%*	*0%*	*NC*	*NC*	*5%*	*7%*	*NC*	*NC*	*0%*	*6%*	*NC*	*2%*	*NC*	*0%*	*NC*	*0%*	*NC*	*0%*	*4%*	*4%*	*NC*	*NC*	*NC*	*NC*	*NC*	*3%*
	12-Jul-22		0.032	<0.00060	0.00033	<0.010	<0.0010	<0.020	0.000063	14	<0.0010	<0.00030	0.0073	0.67	<0.00020	<0.020	3.4	<0.0040	<0.00020	0.00052	<0.10	1.7	<0.00020	1.4	<0.00010	1.9	0.026	8.3	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.036
	26-Jul-22		0.048	<0.00060	0.00028	<0.010	<0.0010	<0.020	0.000094	13	<0.0010	<0.00030	0.0075	0.60	<0.00020	<0.020	3.1	0.011	<0.00020	<0.00050	<0.10	1.5	<0.00020	1.3	<0.00010	1.9	0.025	7.1	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.039
	9-Aug-22		0.039	<0.00060	0.00028	0.011	<0.0010	<0.020	0.00010	14	<0.0010	<0.00030	0.0075	0.63	<0.00020	<0.020	3.4	0.049	<0.00020	0.00055	<0.10	1.7	<0.00020	1.3	<0.00010	2.0	0.029	7.0	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.038
	23-Aug-22		0.028	<0.00060	0.00042	0.010	<0.0010	<0.020	0.000067	13	<0.0010	<0.00030	0.0062	0.43	<0.00020	<0.020	3.4	0.058	<0.00020	<0.00050	<0.10	1.6	<0.00020	1.1	<0.00010	2.0	0.027	6.0	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.026
	9-Sep-22		0.019	<0.00060	0.00046	<0.010	<0.0010	<0.020	0.000020	12	<0.0010	<0.00030	0.0054	0.16	<0.00020	<0.020	3.2	<0.0040	<0.00020	<0.00050	<0.10	1.5	<0.00020	0.79	<0.00010	2.0	0.028	5.2	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.011
	20-Sep-22		0.018	<0.00060	0.00028	<0.010	<0.0010	<0.020	<0.000020	12	<0.0010	<0.00030	0.0047	0.17	<0.00020	<0.020	3.2	<0.0040	<0.00020	<0.00050	<0.10	1.4	<0.00020	0.77	<0.00010	1.9	0.026	5.5	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.010
	4-Oct-22		0.029	<0.00060	0.00046	<0.010	<0.0010	<0.020	<0.000020	12	<0.0010	<0.00030	0.0044	0.18	<0.00020	<0.020	3.3	<0.0040	<0.00020	<0.00050	<0.10	1.7	<0.00020	0.74	<0.00010	2.0	0.026	5.0	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.0093
	18-Oct-22		0.025	<0.00060	0.00038	<0.010	<0.0010	<0.020	<0.000020	11	<0.0010	<0.00030	0.0045	0.18	<0.00020	<0.020	3.2	<0.0040	<0.00020	<0.00050	<0.10	1.5	<0.00020	0.73	<0.00010	2	0.027	4.9	<0.00020	<0.0010	0.001	<0.00010	<0.0010	0.0085
CL-6	31-May-22		0.045	<0.00060	0.00038	<0.010	<0.0010	<0.020	0.00013	12	<0.0010	<0.00030	0.0098	0.36	<0.00020	<0.020	3.2	0.022	<0.00020	<0.00050	<0.10	1.5	<0.00020	1.3	<0.00010	2.2	0.024	6.4	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.047
	14-Jun-22		0.019	<0.00060	0.00054	<0.010	<0.0010	<0.020	0.000023	11	<0.0010	<0.00030	0.0040	0.085	<0.00020	<0.020	3.1	<0.0040	<0.00020	<0.00050	<0.10	1.5	<0.00020	0.54	<0.00010	2.2	0.027	3.8	<0.00020	<0.0010	<0.0010	<0.00010	0.0015	0.013
	28-Jun-22		0.033	<0.00060	0.00045	<0.010	<0.0010	<0.020	0.000074	13	<0.0010	<0.00030	0.0066	0.22	<0.00020	0.022	3.4	<0.0040	<0.00020	<0.00050	<0.10	1.6	<0.00020	1.2	<0.00010	2.1	0.025	6.9	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.036
	12-Jul-22		0.035	<0.00060	0.00034	0.010	<0.0010	<0.020	0.000057	13	<0.0010	<0.00030	0.0068	0.48	<0.00020	<0.020	3.4	0.014	<0.00020	0.00056	<0.10	1.7	<0.00020	1.5	<0.00010	2.0	0.027	7.6	<0.00020	<0.0010	0.0015	<0.00010	<0.0010	0.035
	26-Jul-22		0.039	<0.00060	0.00030	<0.010	<0.0010	<0.020	0.00011	12	<0.0010	<0.00030	0.0061	0.39	<0.00020	<0.020	3.0	0.075	<0.00020	<0.00050	<0.10	1.5	<0.00020	1.2	<0.00010	1.8	0.025	6.1	<0.00020	<0.0010	0.0010	<0.00010	<0.0010	0.033
	9-Aug-22		0.019	<0.00060	0.00040	0.010	<0.0010	<0.020	0.000021	12	<0.0010	<0.00030	0.0042	0.11	<0.00020	<0.020	3.2	<0.0040	<0.00020	<0.00050	<0.10	1.5	<0.00020	0.67	<0.00010	2.0	0.028	4.7	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.015
		SW-115	0.018	<0.00060	0.00043	<0.010	<0.0010	<0.020	0.000028	11	<0.0010	<0.00030	0.0043	0.12	<0.00020	<0.020	3.2	<0.0040	<0.00020	<0.00050	<0.10	1.5	<0.00020	0.68	<0.00010	2.0	0.028	4.9	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.015
	RPD		*5%*	*NC*	*7%*	*NC*	*NC*	*NC*	*29%*	*9%*	*NC*	*NC*	*2%*	*9%*	*NC*	*NC*	*0%*	*NC*	*NC*	*NC*	*NC*	*0%*	*NC*	*1%*	*NC*	*0%*	*0%*	*4%*	*NC*	*NC*	*NC*	*NC*	*NC*	*0%*
	23-Aug-22		0.018	<0.00060	0.00040	<0.010	<0.0010	<0.020	0.000041	12	<0.0010	<0.00030	0.0044	0.22	<0.00020	<0.020	3.3	0.062	<0.00020	<0.00050	<0.10	1.6	<0.00020	0.92	<0.00010	2.0	0.027	4.7	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.017
	9-Sep-22		0.023	<0.00060	0.00049	<0.010	<0.0010	<0.020	<0.000020	11	<0.0010	<0.00030	0.0047	0.099	<0.00020	<0.020	3.1	<0.0040	<0.00020	<0.00050	<0.10	1.4	<0.00020	0.66	<0.00010	1.9	0.027	4.6	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.0093
	20-Sep-22		0.025	<0.00060	0.00039	<0.010	<0.0010	<0.020	<0.000020	11	<0.0010	<0.00030	0.0045	0.098	<0.00020	<0.020	3.1	<0.0040	0.00023	<0.00050	<0.10	1.4	<0.00020	0.66	<0.00010	1.9	0.026	5.1	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.0091
	4-Oct-22		0.027	<0.00060	0.00045	<0.010	<0.0010	<0.020	<0.000020	12	<0.0010	<0.00030	0.0040	0.14	<0.00020	<0.020	3.3	<0.0040	<0.00020	<0.00050	<0.10	1.6	<0.00020	0.68	<0.00010	2.1	0.026	5.0	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.0086
	18-Oct-22		0.018	<0.00060	0.00041	<0.010	<0.0010	<0.020	<0.000020	11	<0.0010	<0.00030	0.0035	<0.060	<0.00020	<0.020	3.2	<0.0040	<0.00020	<0.00050	<0.10	1.5	<0.00020	0.51	<0.00010	2	0.027	4.1	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.007
CL-7	31-May-22		0.055	<0.00060	0.00029	<0.010	<0.0010	<0.020	0.00017	14	<0.0010	<0.00030	0.011	0.52	<0.00020	<0.020	3.2	0.035	<0.00020	<0.00050	<0.10	1.5	<0.00020	1.3	<0.00010	1.8	0.027	11	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.066
		SW-101	0.048	<0.00060	0.00042	<0.010	<0.0010	<0.020	0.00017	17	<0.0010	<0.00030	0.0088	0.61	<0.00020	<0.020	4.0	0.039	<0.00020	<0.00050	<0.10	1.9	<0.00020	1.4	<0.00010	2.1	0.028	11	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.062
	RPD		*14%*	*NC*	*37%*	*NC*	*NC*	*NC*	*0%*	*19%*	*NC*	*NC*	*22%*	*16%*	*NC*	*NC*	*22%*	*11%*	*NC*	*NC*	*NC*	*24%*	*NC*	*7%*	*NC*	*15%*	*4%*	*0%*	*NC*	*NC*	*NC*	*NC*	*NC*	*6%*
	14-Jun-22		0.040	<0.00060	0.00047	<0.010	<0.0010	<0.020	0.00016	16	<0.0010	<0.00030	0.012	0.64	<0.00020	<0.020	3.6	0.0044	<0.00020	0.00086	<0.10	1.7	0.00022	1.2	<0.00010	1.9	0.028	9.5	<0.00020	<0.0010	<0.0010	<0.00010	0.0017	0.060
	28-Jun-22		0.039	<0.00060	0.00041	<0.010	<0.0010	<0.020	0.00015	16	<0.0010	<0.00030	0.010	0.59	<0.00020	0.052	3.7	0.0043	<0.00020	0.00075	<0.10	1.8	<0.00020	1.2	<0.00010	2.0	0.026	10	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.059
	12-Jul-22		0.053	<0.00060	0.00027	<0.010	<0.0010	<0.020	0.00011	14	<0.0010	<0.00030	0.0089	0.48	<0.00020	<0.020	3.5	<0.0040	<0.00020	0.00061	<0.10	1.6	<0.00020	1.1	<0.00010	1.9	0.026	9.5	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.046
	26-Jul-22		0.029	<0.00060	0.00039	<0.010	<0.0010	<0.020	0.000086	12	<0.0010	<0.00030	0.0066	0.24	<0.00020	<0.020	3.0	<0.0040	<0.00020	<0.00050	<0.10	1.4	<0.00020	0.81	<0.00010	1.8	0.024	6.5	<0.00020	<0.0010	0.001	<0.00010	<0.0010	0.028
	9-Aug-22		0.023	<0.00060	0.00031	0.010	<0.0010	<0.020	0.000044	13	<0.0010	<0.00030	0.0059	0.21	<0.00020	<0.020	3.3	<0.0040	<0.00020	0.00050	<0.10	1.6	<0.00020	0.87	<0.00010	2.0	0.028	5.8	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.022
	23-Aug-22		0.021	<0.00060	0.00042	<0.010	<0.0010	<0.020	0.000036	13	<0.0010	<0.00030	0.0057	0.18	<0.00020	<0.020	3.4	<0.0040	<0.00020	<0.00050	<0.10	1.6	<0.00020	0.81	<0.00010	2.0	0.027	6.2	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.018
	9-Sep-22		0.019	<0.00060	0.00037	<0.010	<0.0010	<0.020	0.000024	13	<0.0010	<0.00030	0.0054	0.23	<0.00020	<0.020	3.3	<0.0040	<0.00020	<0.00050	<0.10	1.5	<0.00020	0.87	<0.00010	1.9	0.028	5.8	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.012
		SW-101	0.024	<0.00060	0.00024	<0.010	<0.0010	<0.020	0.000041	13	<0.0010	<0.00030	0.0052	0.25	<0.00020	<0.020	3.2	<0.0040	<0.00020	<0.00050	<0.10	1.4	<0.00020	0.82	<0.00010	1.8	0.027	5.9	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.017
	RPD		*23%*	*NC*	*43%*	*NC*	*NC*	*NC*	*52%*	*0%*	*NC*	*NC*	*4%*	*8%*	*NC*	*NC*	*3%*	*NC*	*NC*	*NC*	*NC*	*7%*	*NC*	*6%*	*NC*	*5%*	*4%*	*2%*	*NC*	*NC*	*NC*	*NC*	*NC*	*34%*
	20-Sep-22		0.018	<0.00060	0.00036	<0.010	<0.0010	<0.020	0.000034	12	<0.0010	<0.00030	0.0052	0.27	<0.00020	<0.020	3.2	<0.0040	<0.00020	<0.00050	<0.10	1.5	<0.00020	0.87	<0.00010	1.9	0.027	6.4	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.014
		SW-104	0.018	<0.00060	0.00037	<0.010	<0.0010	<0.020	<0.000020	12	<0.0010	<0.00030	0.0057	0.25	<0.00020	<0.020	3.2	<0.0040	<0.00020	<0.00050	<0.10	1.5	<0.00020	0.86	<0.00010	1.9	0.026	6.4	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.013
	RPD		*0%*	*NC*	*3%*	*NC*	*NC*	*NC*	*NC*	*0%*	*NC*	*NC*	*9%*	*8%*	*NC*	*NC*	*0%*	*NC*	*NC*	*NC*	*NC*	*0%*	*NC*	*1%*	*NC*	*0%*	*4%*	*0%*	*NC*	*NC*	*NC*	*NC*	*NC*	*7%*
	4-Oct-22		0.032	<0.00060	0.00038	<0.010	<0.0010	<0.020	0.000022	13	<0.0010	<0.00030	0.0050	0.30	<0.00020	<0.020	3.4	<0.0040	<0.00020	<0.00050	<0.10	1.6	<0.00020	0.84	<0.00010	2.1	0.026	6.3	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.011
	18-Oct-22		0.028	<0.00060	0.0004	<0.010	<0.0010	<0.020	<0.000020	12	<0.0010	<0.00030	0.0054	0.28	<0.00020	<0.020	3.3	<0.0040	<0.00020	<0.00050	<0.10	1.5	<0.00020	0.81	<0.00010	2	0.027	5.5	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.011

TABLE 5
2022 DISSOLVED METALS IN SURFACE WATER
SHERRIDON MINE SITE, MANITOBA

Sample ID	Date	Field Duplicate Sample ID	Parameter [1]																																			
			Aluminum (Al) Dissolved	Antimony (Sb) Dissolved	Arsenic (As) Dissolved	Barium (Ba) Dissolved	Beryllium (Be) Dissolved	Boron (B) Dissolved	Cadmium (Cd) Dissolved	Calcium (Ca) Dissolved	Chromium (Cr) Dissolved	Cobalt (Co) Dissolved	Copper (Cu) Dissolved	Iron (Fe) Dissolved	Lead (Pb) Dissolved	Lithium (Li) Dissolved	Magnesium (Mg) Dissolved	Manganese (Mn) Dissolved	Molybdenum (Mo) Dissolved	Nickel (Ni) Dissolved	Phosphorus (P) Dissolved	Potassium (K) Dissolved	Selenium (Se) Dissolved	Silicon (Si) Dissolved	Silver (Ag) Dissolved	Sodium (Na) Dissolved	Strontium (Sr) Dissolved	Sulphur (S) Dissolved	Thallium (Tl) Dissolved	Tin (Sn) Dissolved	Titanium (Ti) Dissolved	Uranium (U) Dissolved	Vanadium (V) Dissolved	Zinc (Zn) Dissolved
CL-8	31-May-22		0.054	<0.00060	0.00041	<0.010	<0.0010	<0.020	0.00018	14	<0.0010	<0.00030	0.011	0.50	<0.00020	<0.020	3.2	0.034	<0.00020	<0.00050	<0.10	1.4	<0.00020	1.3	<0.00010	1.8	0.027	11	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.065
	14-Jun-22		0.045	<0.00060	0.00045	<0.010	<0.0010	<0.020	0.00012	14	<0.0010	<0.00030	0.0097	0.43	<0.00020	<0.020	3.4	<0.0040	<0.00020	0.00067	<0.10	1.6	<0.00020	1.1	<0.00010	2.0	0.028	7.5	<0.00020	<0.0010	<0.0010	<0.00010	0.0015	0.050
	28-Jun-22		0.041	<0.00060	0.00043	<0.010	<0.0010	<0.020	0.00012	15	<0.0010	<0.00030	0.0092	0.44	<0.00020	<0.020	3.6	<0.0040	<0.00020	0.00069	<0.10	1.7	<0.00020	1.2	<0.00010	2.0	0.026	9.2	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.046
	12-Jul-22		0.041	<0.00060	0.00033	<0.010	<0.0010	<0.020	0.000097	13	<0.0010	<0.00030	0.0080	0.34	<0.00020	<0.020	3.3	<0.0040	<0.00020	0.00052	<0.10	1.6	<0.00020	1.1	<0.00010	1.9	0.025	7.6	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.037
	26-Jul-22		0.029	<0.00060	0.00035	<0.010	<0.0010	<0.020	0.000060	12	<0.0010	<0.00030	0.0064	0.23	<0.00020	0.022	3.1	<0.0040	<0.00020	<0.00050	<0.10	1.5	<0.00020	0.82	<0.00010	1.9	0.025	6.1	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.027
	26-Jul-22	**SW-116**	0.027	<0.00060	0.00031	<0.010	<0.0010	<0.020	0.000075	12	<0.0010	<0.00030	0.0065	0.24	<0.00020	<0.020	3.1	<0.0040	<0.00020	<0.00050	<0.10	1.5	<0.00020	0.85	<0.00010	1.9	0.027	6.2	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.027
	9-Aug-22		0.022	<0.00060	0.00036	0.010	<0.0010	<0.020	0.000058	12	<0.0010	<0.00030	0.0061	0.21	<0.00020	<0.020	3.3	<0.0040	<0.00020	0.00056	<0.10	1.6	<0.00020	0.86	<0.00010	2.0	0.028	6.0	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.023
	23-Aug-22		0.019	<0.00060	0.00040	<0.010	<0.0010	<0.020	0.000040	13	<0.0010	<0.00030	0.0059	0.19	<0.00020	<0.020	3.5	<0.0040	<0.00020	<0.00050	<0.10	1.6	<0.00020	0.83	<0.00010	2.0	0.027	6.8	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.019
	9-Sep-22		0.028	<0.00060	0.00039	<0.010	<0.0010	<0.020	0.000028	13	<0.0010	<0.00030	0.0058	0.25	<0.00020	<0.020	3.3	<0.0040	<0.00020	0.00053	<0.10	1.6	<0.00020	0.93	<0.00010	2.2	0.028	5.9	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.014
	20-Sep-22		0.023	<0.00060	0.00039	<0.010	<0.0010	<0.020	<0.000020	12	<0.0010	<0.00030	0.0055	0.22	<0.00020	<0.020	3.2	<0.0040	<0.00020	0.00074	<0.10	1.5	<0.00020	0.84	<0.00010	1.9	0.026	6.1	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.013
	4-Oct-22		0.030	<0.00060	0.00038	<0.010	<0.0010	<0.020	0.000024	13	<0.0010	<0.00030	0.0050	0.29	<0.00020	<0.020	3.5	<0.0040	<0.00020	<0.00050	<0.10	1.7	<0.00020	0.85	<0.00010	2.0	0.027	6.1	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.011
	18-Oct-22		0.025	<0.00060	0.00039	<0.010	<0.0010	<0.020	<0.000020	12	<0.0010	<0.00030	0.0050	0.3	<0.00020	<0.020	3.3	<0.0040	<0.00020	<0.00050	<0.10	1.6	<0.00020	0.8	<0.00010	2	0.028	5.5	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.01
Laboratory Detection Limits			*0.0030*	*0.00060*	*0.00020*	*0.010*	*0.0010*	*0.020*	*0.000020*	*0.30*	*0.0010*	*0.00030*	*0.0010*	*0.060*	*0.00020*	*0.020*	*0.20*	*0.0040*	*0.00020*	*0.00050*	*0.10*	*0.30*	*0.00020*	*0.10*	*0.00010*	*0.50*	*0.020*	*0.20*	*0.00020*	*0.0010*	*0.0010*	*0.00010*	*0.0010*	*0.0030*
Manitoba Water Quality Standards, Objectives, and Guidelines [2]																																						
Protection of Aquatic Life and Wildlife																																						
Tier II Objective - Chronic					*0.150*				*0.00017* [2a]		*0.048* [2a]		*0.00574* [2a]		*0.00142* [2a]					*0.0335* [2a]															*0.076* [2a]
Tier II Objective - Acute					*0.340*				*0.00121* [2a]		*0.372* [2a]		*0.00823* [2a]		*0.0365* [2a]					*0.301* [2a]															*0.0754* [2a]

Notes:
"-" = No Data NC = Not Calculated RPD = Relative Percent Difference

1. All values are expressed in milligrams per litre (mg/L) unless otherwise specified.
2. Manitoba Water Quality Standards, Objectives, and Guidelines (MWQSOG). Manitoba Water Stewardship, 2011.
   a. Calculated as per Manitoba Conservation (2011) using mean total harness of 59.4 mg/L as $CaCO_3$ as measured in Cold Lake on May 11, 2016.

- Values above MWQSOG value.

Sample ID	Date	Field Duplicate Sample ID	Parameter [1]																																			
			Aluminum (Al) Dissolved	Antimony (Sb) Dissolved	Arsenic (As) Dissolved	Barium (Ba) Dissolved	Beryllium (Be) Dissolved	Boron (B) Dissolved	Cadmium (Cd) Dissolved	Calcium (Ca) Dissolved	Chromium (Cr) Dissolved	Cobalt (Co) Dissolved	Copper (Cu) Dissolved	Iron (Fe) Dissolved	Lead (Pb) Dissolved	Lithium (Li) Dissolved	Magnesium (Mg) Dissolved	Manganese (Mn) Dissolved	Molybdenum (Mo) Dissolved	Nickel (Ni) Dissolved	Phosphorus (P) Dissolved	Potassium (K) Dissolved	Selenium (Se) Dissolved	Silicon (Si) Dissolved	Silver (Ag) Dissolved	Sodium (Na) Dissolved	Strontium (Sr) Dissolved	Sulphur (S) Dissolved	Thallium (Tl) Dissolved	Tin (Sn) Dissolved	Titanium (Ti) Dissolved	Uranium (U) Dissolved	Vanadium (V) Dissolved	Zinc (Zn) Dissolved
TRIP BLANK	31-May-22		<0.0030	<0.00060	<0.00020	<0.010	<0.0010	<0.020	<0.000020	<0.30	<0.0010	<0.00030	<0.0010	<0.060	<0.00020	<0.020	<0.20	<0.0040	<0.00020	<0.00050	<0.10	<0.30	<0.00020	<0.10	<0.00010	<0.50	<0.020	<0.20	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	<0.0030
	14-Jun-22		<0.0030	<0.00060	<0.00020	<0.010	<0.0010	<0.020	<0.000020	<0.30	<0.0010	<0.00030	<0.0010	<0.060	<0.00020	<0.020	<0.20	<0.0040	<0.00020	<0.00050	<0.10	<0.30	<0.00020	<0.10	<0.00010	<0.50	<0.020	<0.20	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	<0.0030
	12-Jul-22		0.0032	<0.00060	<0.00020	<0.010	<0.0010	<0.020	<0.000020	<0.30	<0.0010	<0.00030	<0.0010	<0.060	<0.00020	<0.020	<0.20	<0.0040	<0.00020	<0.00050	<0.10	<0.30	<0.00020	<0.10	<0.00010	<0.50	<0.020	<0.20	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	<0.0030
	26-Jul-22		<0.0030	<0.00060	<0.00020	<0.010	0.0011	<0.020	<0.000020	<0.30	<0.0010	<0.00030	<0.0010	<0.060	<0.00020	<0.020	<0.20	<0.0040	<0.00020	<0.00050	<0.10	<0.30	<0.00020	<0.10	<0.00010	<0.50	<0.020	<0.20	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	<0.0030
	9-Aug-22		<0.0030	<0.00060	<0.00020	<0.010	<0.0010	<0.020	<0.000020	<0.30	<0.0010	<0.00030	<0.0010	<0.060	<0.00020	<0.020	<0.20	<0.0040	<0.00020	<0.00050	<0.10	<0.30	<0.00020	<0.10	<0.00010	<0.50	<0.020	<0.20	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	<0.0030
	23-Aug-22		<0.0030	<0.00060	<0.00020	<0.010	<0.0010	<0.020	<0.000020	<0.30	<0.0010	<0.00030	<0.0010	<0.060	<0.00020	<0.020	<0.20	<0.0040	<0.00020	<0.00050	<0.10	<0.30	<0.00020	<0.10	<0.00010	<0.50	<0.020	<0.20	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	<0.0030
	9-Sep-22		0.0055	<0.00060	<0.00020	<0.010	<0.0010	<0.020	<0.000020	<0.30	<0.0010	<0.00030	<0.0010	<0.060	<0.00020	<0.020	<0.20	<0.0040	<0.00020	<0.00050	<0.10	<0.30	<0.00020	<0.50	<0.00010	<0.50	<0.020	<0.20	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	<0.0030
	20-Sep-22		<0.0030	<0.00060	<0.00020	<0.010	<0.0010	<0.020	<0.000020	<0.30	<0.0010	<0.00030	<0.0010	<0.060	<0.00020	<0.020	<0.20	<0.0040	<0.00020	<0.00050	<0.10	<0.30	<0.00020	<0.50	<0.00010	<0.50	<0.020	<0.20	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	<0.0030
	4-Oct-22		<0.0030	<0.00060	<0.00020	<0.010	<0.0010	<0.020	<0.000020	<0.30	<0.0010	<0.00030	<0.0010	<0.060	<0.00020	<0.020	<0.20	<0.0040	<0.00020	<0.00050	<0.10	<0.30	<0.00020	<0.50	<0.00010	<0.50	<0.020	<0.20	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	<0.0030
	18-Oct-22		<0.0030	<0.00060	<0.00020	<0.010	<0.0010	<0.020	<0.000020	<0.30	<0.0010	<0.00030	<0.0010	<0.060	<0.00020	<0.020	<0.20	<0.0040	<0.00020	<0.00050	<0.10	<0.30	<0.00020	<0.50	<0.00010	<0.50	<0.020	<0.20	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	<0.0030
Laboratory Detection Limits			*0.0030*	*0.00060*	*0.00020*	*0.010*	*0.0010*	*0.020*	*0.000020*	*0.30*	*0.0010*	*0.00030*	*0.0010*	*0.060*	*0.00020*	*0.020*	*0.20*	*0.0040*	*0.00020*	*0.00050*	*0.10*	*0.30*	*0.00020*	*0.10*	*0.00010*	*0.50*	*0.020*	*0.20*	*0.00020*	*0.0010*	*0.0010*	*0.00010*	*0.0010*	*0.0030*

Notes:
"-" = No Data NC = Not Calculated RPD = Relative Percent Difference

1. All values are expressed in milligrams per litre (mg/L) unless otherwise specified.

TABLE 6
2022 TOTAL METALS IN SURFACE WATER
SHERRIDON MINE SITE, MANITOBA

Sample ID	Date	Field Duplicate Sample ID	Parameter[1]																														
			Total Aluminum (Al)	Total Antimony (Sb)	Total Arsenic (Ar)	Total Barium (Ba)	Total Beryllium (Be)	Total Boron (B)	Total Cadmium (Cd)	Total Calcium (Ca)	Total Chromium (Cr)	Total Cobalt (Co)	Total Copper (Cu)	Total Iron (Fe)	Total Lead (Pb)	Total Lithium (Li)	Total Magnesium (Mg)	Total Manganese (Mn)	Total Molybdenum (Mb)	Total Nickel (Ni)	Total Phosphorus (P)	Total Potassium (K)	Total Selenium (Se)	Total Silicon (Si)	Total Silver (Ag)	Total Sodium (Na)	Total Strontium (Sr)	Total Sulphur (S)	Total Thallium (Tl)	Total Tin (Sn)	Total Titanium (Ti)	Total Uranium (U)	Total Vanadium (V)	Total Zinc (Zn)
Camp Lake																																	
SB-1	31-May-22		**0.15**	<0.00060	0.00035	0.010	<0.0010	<0.020	**0.00080**	27	<0.0010	0.0014	**0.038**	**4.6**	<0.00020	<0.020	5.2	0.14	<0.00020	0.0014	<0.10	2.5	<0.00020	1.6	<0.00010	2.1	0.036	25	<0.00020	<0.0010	0.0027	<0.00010	<0.0010	**0.25**
	14-Jun-22		**0.18**	<0.00060	0.00036	0.01	<0.0010	<0.020	**0.00099**	28	<0.0010	0.0014	**0.046**	**5.1**	<0.00020	<0.020	5.5	0.13	<0.00020	0.002	<0.10	2.6	<0.00020	1.8	<0.00010	2.2	0.034	29	<0.00020	<0.0010	0.0044	<0.00010	<0.0010	**0.30**
	28-Jun-22		**0.39**	<0.012	<0.0040	<0.010	<0.020	<0.020	**0.0017**	25	<0.020	<0.0060	**0.028**	**2.7**	<0.0040 [4]	<0.020	5.0	0.074	0.0066	<0.010	<0.10	2.3	<0.0040 [4]	1.9	<0.0020 [4]	2.1	0.030	23	<0.0040 [4]	<0.020	<0.020	<0.0020	<0.020	**0.20**
	12-Jul-22		**0.090**	<0.00060	0.00036	0.011	<0.0010	<0.020	**0.00059**	29	<0.0010	0.00033	**0.025**	**2.6**	<0.00020	<0.020	5.5	0.061	<0.00020	0.0016	<0.10	2.6	<0.00020	1.6	<0.00010	2.2	0.035	28	<0.00020	<0.0010	0.0023	<0.00010	<0.0010	**0.18**
	26-Jul-22		**0.083**	<0.00060	0.00023	0.011	<0.0010	<0.020	**0.00056**	34	<0.0010	<0.00030	**0.022**	**2.7**	<0.00020	<0.020	5.8	0.055	<0.00020	0.0014	<0.10	2.9	<0.00020	1.6	<0.00010	2.4	0.038	32	<0.00020	<0.0010	0.0022	<0.00010	<0.0010	**0.17**
		SW-103	**0.082**	<0.00060	0.00031	0.011	<0.0010	<0.020	**0.00058**	34	<0.0010	<0.00030	**0.022**	**2.8**	<0.00020	<0.020	6.0	0.055	<0.00020	0.0016	<0.10	3.0	<0.00020	1.6	<0.00010	2.4	0.038	32	<0.00020	<0.0010	0.0020	<0.00010	<0.0010	**0.17**
	RPD		*1%*	*NC*	*30%*	*NC*	*NC*	*NC*	*4%*	*0%*	*NC*	*NC*	*0%*	*4%*	*NC*	*NC*	*3%*	*0%*	*NC*	*13%*	*NC*	*3%*	*NC*	*0%*	*NC*	*0%*	*0%*	*0%*	*NC*	*NC*	*10%*	*NC*	*NC*	*0%*
	9-Aug-22		**0.095**	<0.00060	0.00026	0.013	<0.0010	<0.020	0.00051	39	<0.0010	<0.00030	0.020	**3.5**	<0.00020	<0.020	6.9	0.057	<0.00020	0.0015	<0.10	3.3	<0.00020	1.6	<0.00010	2.5	0.047	39	<0.00020	<0.0010	0.0032	<0.00010	<0.0010	0.15
	23-Aug-22		0.057	<0.00060	0.00029	0.012	<0.0010	<0.020	**0.00045**	41	<0.0010	<0.00030	0.015	**2.3**	<0.00020	<0.020	7.0	0.055	<0.00020	0.0011	<0.10	3.5	0.00061	1.5	<0.00010	2.6	0.048	39	<0.00020	<0.0010	0.0017	<0.00010	<0.0010	0.14
	9-Sep-22		0.073	<0.00060	0.00027	0.012	<0.0010	0.021	0.00044	42	<0.0010	<0.00030	0.014	**3.6**	<0.00020	<0.020	6.8	0.058	<0.00020	0.0015	<0.10	3.3	<0.00020	1.4	<0.00010	2.7	0.049	40	<0.00020	<0.0010	0.0027	<0.00010	<0.0010	0.13
	20-Sep-22		0.048	<0.00060	0.00025	0.013	<0.0010	<0.020	0.00044	48	<0.0010	<0.00030	0.013	**3.4**	<0.00020	<0.020	8.0	0.060	<0.00020	0.0013	<0.10	4.2	<0.00020	1.5	<0.00010	3.4	0.051	48	<0.00020	<0.0010	0.002	<0.00010	<0.0010	0.12
	4-Oct-22		0.053	<0.00060	0.00026	0.014	<0.0010	<0.020	0.00047	49	<0.0010	<0.00030	0.012	**3.2**	<0.00020	<0.020	8.1	0.06	<0.00020	0.0013	<0.10	4.1	<0.00020	1.4	<0.00010	2.9	0.055	50	<0.00020	<0.0010	0.002	<0.00010	<0.0010	0.14
	18-Oct-22		0.19	<0.00060	0.00027	0.015	<0.0010	<0.020	**0.00055**	50	<0.0010	0.00039	**0.012**	**5.7**	0.00021	<0.020	8.5	0.088	<0.00020	0.0014	<0.10	4.2	<0.00020	1.5	<0.00010	2.8	0.052	55	<0.00020	<0.0010	0.0062	<0.00010	<0.0010	**0.14**
SB-2	31-May-22		**0.13**	<0.00060	0.00034	<0.010	<0.0010	<0.020	**0.00077**	27	<0.0010	0.0013	**0.036**	**4.6**	<0.00020	<0.020	5.1	0.14	<0.00020	0.0015	<0.10	2.5	<0.00020	1.6	<0.00010	2.1	0.035	24	<0.00020	<0.0010	0.0023	<0.00010	<0.0010	**0.24**
	14-Jun-22		**0.20**	<0.00060	0.00036	0.010	<0.0010	<0.020	**0.00088**	28	<0.0010	0.0014	**0.042**	**5.2**	<0.00020	<0.020	5.5	0.13	<0.00020	0.0020	<0.10	2.6	<0.00020	1.8	<0.00010	2.2	0.034	29	<0.00020	<0.0010	0.0044	<0.00010	<0.0010	**0.26**
	28-Jun-22		**0.087**	<0.00060	0.00040	<0.010	<0.0010	<0.020	**0.00065**	24	<0.0010	0.00042	**0.031**	**2.6**	<0.00020	<0.020	4.9	0.070	<0.00020	0.0014	<0.10	2.2	<0.00020	2.1	<0.00010	2.0	0.03	22	<0.00020	<0.0010	0.0017	<0.00010	<0.0010	**0.19**
	12-Jul-22		**0.086**	<0.00060	0.00031	0.011	<0.0010	<0.020	**0.00060**	30	<0.0010	0.00033	**0.024**	**2.7**	<0.00020	<0.020	5.6	0.062	<0.00020	0.0013	<0.10	2.6	<0.00020	1.7	<0.00010	2.3	0.035	28	<0.00020	<0.0010	0.0016	<0.00010	<0.0010	**0.17**
	26-Jul-22		**0.084**	<0.00060	0.00031	0.011	<0.0010	0.046	**0.00059**	34	<0.0010	<0.00030	**0.022**	**2.8**	<0.00020	<0.020	6.0	0.056	<0.00020	0.0018	<0.10	3.0	<0.00020	1.7	<0.00010	2.5	0.038	33	<0.00020	<0.0010	0.0019	<0.00010	<0.0010	**0.18**
	9-Aug-22		0.094	<0.00060	0.00025	0.012	<0.0010	<0.020	0.00047	38	<0.0010	<0.00030	0.020	**4.2**	<0.00020	<0.020	6.8	0.061	<0.00020	0.0013	<0.10	3.2	<0.00020	1.6	<0.00010	2.5	0.047	39	<0.00020	<0.0010	0.0034	<0.00010	<0.0010	0.15
	23-Aug-22		0.057	<0.00060	0.00025	0.012	<0.0010	<0.020	**0.00045**	41	<0.0010	<0.00030	0.015	**2.3**	<0.00020	<0.020	6.9	0.056	<0.00020	0.0012	<0.10	3.4	<0.00020	1.5	<0.00010	2.6	0.047	39	<0.00020	<0.0010	0.0024	<0.00010	<0.0010	0.13
	9-Sep-22		0.063	<0.00060	0.00020	0.012	<0.0010	<0.020	0.00049	42	<0.0010	<0.00030	0.015	**4.0**	<0.00020	<0.020	6.7	0.059	<0.00020	0.0015	<0.10	3.2	<0.00020	1.3	<0.00010	2.5	0.048	40	<0.00020	<0.0010	0.0025	<0.00010	<0.0010	0.14
	20-Sep-22		0.047	<0.00060	0.00022	0.012	<0.0010	<0.020	0.00037	48	<0.0010	<0.00030	0.013	**3.5**	<0.00020	<0.020	7.9	0.062	<0.00020	0.00099	<0.10	4.0	0.00024	1.5	<0.00010	3.0	0.046	50	<0.00020	<0.0010	0.0022	<0.00010	<0.0010	0.12
	4-Oct-22		0.062	<0.00060	0.00023	0.013	<0.0010	<0.020	0.00041	46	<0.0010	<0.00030	0.011	**3.2**	<0.00020	<0.020	7.7	0.06	<0.00020	0.0011	<0.10	3.7	<0.00020	1.4	<0.00010	2.8	0.052	49	<0.00020	<0.0010	0.0028	<0.00010	<0.0010	0.12
	18-Oct-22		0.13	<0.00060	0.00032	0.016	<0.0010	<0.020	**0.00056**	52	<0.0010	0.00042	**0.013**	**6.5**	0.00021	<0.020	8.8	0.095	<0.00020	0.0014	<0.10	4.4	<0.00020	1.5	<0.00010	2.9	0.054	58	<0.00020	<0.0010	0.006	<0.00010	<0.0010	**0.14**
		SW-104	0.16	<0.00060	0.00025	<0.010	<0.0010	<0.020	**0.00055**	51	<0.0010	0.00037	**0.012**	**5.9**	0.00026	<0.020	8.5	0.082	<0.00020	0.0013	<0.10	4.1	<0.00020	1.5	<0.00010	3	0.05	55	<0.00020	<0.0010	0.0085	<0.00010	<0.0010	**0.15**
	RPD		*21%*	*NC*	*25%*	*NC*	*NC*	*NC*	*2%*	*2%*	*NC*	*13%*	*8%*	*10%*	*21%*	*NC*	*3%*	*15%*	*NC*	*7%*	*NC*	*7%*	*NC*	*0%*	*NC*	*3%*	*8%*	*5%*	*NC*	*NC*	*34%*	*NC*	*NC*	*7%*
CB-1	31-May-22		**0.15**	<0.00060	0.00036	0.010	<0.0010	<0.020	**0.00087**	28	<0.0010	0.0014	**0.040**	**4.1**	<0.00020	<0.020	5.3	0.15	<0.00020	0.0016	<0.10	2.5	<0.00020	1.6	<0.00010	2.3	0.038	26	<0.00020	<0.0010	0.0028	<0.00010	<0.0010	**0.26**
		SW-100	**0.14**	<0.00060	0.00037	<0.010	<0.0010	<0.020	**0.00084**	27	<0.0010	0.0014	**0.040**	**3.8**	0.00024	<0.020	5.2	0.14	<0.00020	0.0016	<0.10	2.5	<0.00020	1.6	<0.00010	2.1	0.036	25	<0.00020	<0.0010	0.0025	<0.00010	<0.0010	**0.24**
	RPD		*7%*	*NC*	*3%*	*NC*	*NC*	*NC*	*4%*	*4%*	*NC*	*0%*	*0%*	*8%*	*NC*	*NC*	*2%*	*7%*	*NC*	*0%*	*NC*	*0%*	*NC*	*0%*	*NC*	*9%*	*5%*	*4%*	*NC*	*NC*	*11%*	*NC*	*NC*	*8%*
	14-Jun-22		**0.17**	<0.00060	0.00030	0.011	<0.0010	<0.020	**0.00088**	27	<0.0010	0.0013	**0.043**	**5.0**	<0.00020	<0.020	5.4	0.13	<0.00020	0.0017	<0.10	2.4	<0.00020	1.8	<0.00010	2.2	0.034	28	<0.00020	<0.0010	0.0040	<0.00010	<0.0010	**0.27**
	28-Jun-22		**0.084**	<0.00060	0.00035	<0.010	<0.0010	<0.020	**0.00070**	26	<0.0010	0.00064	**0.032**	**2.7**	<0.00020	<0.020	5.3	0.072	<0.00020	0.0014	<0.10	2.3	<0.00020	1.8	<0.00010	2.1	0.031	25	<0.00020	<0.0010	0.0016	<0.00010	<0.0010	**0.21**
	12-Jul-22		**0.093**	<0.00060	0.00041	0.010	<0.0010	<0.020	**0.00062**	29	<0.0010	0.00034	**0.024**	**2.6**	<0.00020	<0.020	5.5	0.061	<0.00020	0.0015	<0.10	2.5	<0.00020	1.6	<0.00010	2.2	0.035	29	<0.00020	<0.0010	0.0022	<0.00010	<0.0010	**0.18**
	26-Jul-22		**0.084**	<0.00060	0.00025	0.011	<0.0010	<0.020	**0.00058**	33	<0.0010	<0.00030	**0.023**	**2.6**	<0.00020	<0.020	5.8	0.054	<0.00020	0.0014	<0.10	2.9	<0.00020	1.7	<0.00010	2.4	0.037	32	<0.00020	<0.0010	0.0026	<0.00010	<0.0010	**0.18**
	9-Aug-22		0.086	<0.00060	0.00026	0.012	<0.0010	<0.020	**0.00048**	38	<0.0010	<0.00030	0.020	**3.5**	<0.00020	<0.020	6.7	0.055	<0.00020	0.0014	<0.10	3.2	<0.00020	1.6	<0.00010	2.5	0.046	38	<0.00020	<0.0010	0.0029	<0.00010	<0.0010	0.15
	23-Aug-22		0.056	<0.00060	0.00028	0.012	<0.0010	<0.020	**0.00045**	40	<0.0010	<0.00030	0.015	**2.1**	<0.00020	<0.020	6.7	0.052	<0.00020	0.0012	<0.10	3.4	<0.00020	1.4	<0.00010	2.5	0.046	38	<0.00020	<0.0010	0.0016	<0.00010	<0.0010	0.13
	9-Sep-22		0.072	<0.00060	0.00023	0.013	<0.0010	<0.020	0.00047	44	<0.0010	<0.00030	0.015	**3.4**	<0.00020	<0.020	7.0	0.056	<0.00020	0.0013	<0.10	3.4	<0.00020	1.4	<0.00010	2.7	0.050	42	<0.00020	<0.0010	0.0030	<0.00010	<0.0010	0.14
	20-Sep-22		0.049	<0.00060	0.00022	0.012	<0.0010	<0.020	0.00043	49	<0.0010	<0.00030	0.013	**3.6**	<0.00020	<0.020	8.0	0.062	<0.00020	0.0011	<0.10	4.0	0.00029	1.5	<0.00010	3.0	0.047	51	<0.00020	<0.0010	0.0020	<0.00010	<0.0010	0.12
		SW-117	0.039	<0.00060	0.00027	0.013	<0.0010	<0.020	0.00043	48	<0.0010	<0.00030	0.013	**3.5**	0.00034	<0.020	7.8	0.061	<0.00020	0.0013	<0.10	4.0	<0.00020	1.5	<0.00010	3.0	0.050	49	<0.00020	<0.0010	0.0021	<0.00010	<0.0010	0.13
	RPD		*6%*	*NC*	*8%*	*NC*	*NC*	*NC*	*0%*	*2%*	*NC*	*NC*	*0%*	*3%*	*NC*	*NC*	*3%*	*2%*	*NC*	*17%*	*NC*	*0%*	*NC*	*0%*	*NC*	*0%*	*6%*	*4%*	*NC*	*NC*	*5%*	*NC*	*NC*	*8%*
CB-2	4-Oct-22		0.063	<0.00060	0.00023	0.013	<0.0010	<0.020	0.00042	46	<0.0010	<0.00030	0.011	**3.0**	<0.00020	<0.020	7.7	0.058	<0.00020	0.0011	<0.10	3.7	<0.00020	1.4	<0.00010	2.8	0.052	49	<0.00020	<0.0010	0.0029	<0.00010	<0.0010	0.12
	18-Oct-22		0.17	<0.00060	0.00024	0.015	<0.0010	<0.020	**0.00058**	49	<0.0010	0.00043	**0.014**	**4.6**	<0.00020	<0.020	8.1	0.079	<0.00020	0.0015	<0.10	4	<0.00020	1.4	<0.00010	2.9	0.052	52	<0.00020	<0.0010	0.0082	<0.00010	<0.0010	**0.17**
	31-May-22		**0.17**	<0.00060	0.00037	0.010	<0.0010	<0.020	**0.00097**	29	<0.0010	0.0017	**0.043**	**4.2**	<0.00020	<0.020	5.4	0.15	<0.00020	0.0020	<0.10	2.7	<0.00020	1.6	<0.00010	2.1	0.038	28	<0.00020	<0.0010	0.0030	<0.00010	<0.0010	**0.29**
	14-Jun-22		**0.17**	<0.00060	0.00034	0.011	<0.0010	<0.020	**0.00092**	27	<0.0010	0.0014	**0.043**	**4.9**	<0.00020	<0.020	5.4	0.13	<0.00020	0.0019	<0.10	2.5	<0.00020	1.7	<0.00010	2.1	0.034	28	<0.00020	<0.0010	0.0037	<0.00010	<0.0010	**0.27**
	28-Jun-22		**0.098**	<0.00060	0.00029	0.010	<0.0010	<0.020	**0.00076**	28	<0.0010	0.00066	**0.033**	**2.9**	<0.00020	<0.020	5.7	0.079	<0.00020	0.0016	<0.10	2.5	<0.00020	1.8	<0.00010	2.2	0.033	28	<0.00020	<0.0010	0.0023	<0.00010	<0.0010	**0.22**
		SW-105	**0.092**	<0.00060	0.00033	0.010	<0.0010	<0.020	**0.00072**	27	<0.0010	0.00063	**0.032**	**2.7**	<0.00020	<0.020	5.4	0.075	<0.00020	0.0013	<0.10	2.4	<0.00020	1.7	<0.00010	2.1	0.032	27	<0.00020	<0.0010	0.0020	<0.00010	<0.0010	**0.21**
	RPD		*6%*	*NC*	*13%*	*NC*	*NC*	*NC*	*5%*	*4%*	*NC*	*5%*	*3%*	*7%*	*NC*	*NC*	*5%*	*5%*	*NC*	*21%*	*NC*	*4%*	*NC*	*6%*	*NC*	*5%*	*3%*	*4%*	*NC*	*NC*	*14%*	*NC*	*NC*	*5%*
NB-1	12-Jul-22		**0.11**	<0.00060	0.00041	0.013	<0.0010	<0.020	**0.00068**	31	<0.0010	0.00042	**0.027**	**2.7**	<0.00020	0.033	6.0	0.066	0.00021	0.0024	<0.10	2.8	0.00027	1.8	<0.00010	2.5	0.039	31	<0.00020	<0.0010	0.0027	<0.00010	<0.0010	**0.20**
	26-Jul-22		**0.093**	<0.00060	0.00022	0.012	<0.0010	<0.020	**0.00061**	35	<0.0010	<0.00030	**0.023**	**2.6**	<0.00020	<0.020	6.0	0.054	<0.00020	0.0015	<0.10	3.0	<0.00020	1.6	<0.00010	2.4	0.039	34	<0.00020	<0.0010	0.0021	<0.00010	<0.0010	**0.18**
	9-Aug-22		**0.097**	<0.00060	0.00031	0.012	<0.0010	<0.020	0.00050	38	<0.0010	<0.00030	0.020	**3.2**	<0.00020	<0.020	6.8	0.053	<0.00020	0.0014	<0.10	3.2	<0.00020	1.6	<0.00010	2.5	0.047	38	<0.00020	<0.0010	0.0035	<0.00010	<0.0010	0.15
	23-Aug-22		0.054	<0.00060	0.00024	0.012	<0.0010	<0.020	**0.00047**	40	<0.0010	<0.00030	0.015	**2.2**	<0.00020	<0.020	6.9	0.053	<0.00020	0.0013	<0.10	3.4	<0.00020	1.4	<0.00010	2.6	0.047	39	<0.00020	<0.0010	0.0019	<0.00010	<0.0010	0.13
	9-Sep-22		0.060	<0.00060	0.00027	0.013	<0.0010	<0.020	0.00045	44	<0.0010	<0.00030	0.014	**3.3**	<0.00020	<0.020	6.9	0.059	<0.00020	0.0013	<0.10	3.3	0.0017	1.4	<0.00010	2.8	0.050	42	<0.00020	<0.0010	0.0023	0.00010	<0.0010	0.13
	20-Sep-22		0.069	<0.00060	<0.00020	0.012	<0.0010	<0.020	0.00046	51	<0.0010	<0.00030	0.014	**3.3**	<0.00020	<0.020	8.3	0.059	<0.00020	0.0011	<0.10	4.2	0.00023	1.4	<0.00010	3.0	0.047	51	<0.00020	<0.0010	0.0028	<0.00010	<0.0010	0.13
	4-Oct-22		**0.079**	<0.00060	0.00024	0.014	<0.0010	<0.020	0.00043	48	<0.0010	<0.00030	0.013	**3.1**	0.00021	<0.020	8.0	0.059	<0.00020	0.0014	<0.10	3.9	<0.00020	1.5	<0.00010	2.9	0.054	51	<0.00020	<0.0010	0.0033	<0.00010	<0.0010	0.12
	18-Oct-22		0.13	<0.00060	0.00024	0.015	<0.0010	<0.020	**0.00056**	51	<0.0010	0.00035	**0.013**	**4.7**	<0.00020	<0.020	8.5	0.081	<0.00020	0.0014	<0.10	4.3	<0.00020	1.4	<0.00010	2.9	0.053	55	<0.00020	<0.0010	0.0057	<0.00010	<0.0010	**0.14**
	31-May-22		**0.15**	<0.00060	0.00036	0.011	<0.0010	<0.020	**0.00091**	35	<0.0010	0.0016	**0.042**	**4.8**	<0.00020	<0.020	6.1	0.17	<0.00020	0.0015	<0.10	2.7	<0.00020	1.6	<0.00010	2.3	0.039	35	<0.00020	<0.0010	0.0031	<0.00010	<0.0010	**0.28**
	14-Jun-22		**0.18**	<0.00060	0.00032	0.011	<0.0010	<0.020	**0.00096**	32	<0.0010	0.0015	**0.048**	**5.9**	<0.00020	<0.020	5.8	0.14	<0.00020	0.0023	<0.10	2.6	<0.00020	1.8	<0.00010	2.2	0.04	31	<0.00020	<0.0010	0.0045	<0.00010	<0.0010	**0.30**
	28-Jun-22		**0.12**	<0.00060	0.00029	0.011	<0.0010	<0.020	**0.00083**	32	<0.0010	0.00079	**0.037**	**3.2**	<0.00020	0.034	6.1	0.091	<0.00020	0.0017	<0.10	2.6	<0.00020	1.9	<0.00010	2.3	0.036	31	<0.00020	<0.0010	0.0014	<0.00010	<0.0010	**0.24**
	12-Jul-22		**0.10**	<0.00060	0.00040	0.010	<0.0010	<0.020	**0.00065**	33	0.0012	0.00033	**0.027**	**2.8**	<0.00020	<0.020	6.0	0.064	<0.00020	0.0018	<0.10	2.8	<0.00020	1.7	<0.00010	2.3	0.037	33	<0.00020	<0.0010	0.0016	<0.00010	<0.0010	**0.20**
	26-Jul-22		**0.083**	<0.00060	0.00027	0.010	<0.0010	<0.020	**0.00059**	36	<0.0010	<0.00030	**0.023**	**2.6**	<0.00020	<0.020	6.2	0.058	<0.00020	0.0014	<0.10	2.9	<0.00020	1.6	<0.00010	2.4	0.038	35	<0.00020	<0.0010	0.0013	<0.00010	<0.0010	**0.17**
	9-Aug-22		0.088	<0.00060	0.00027	0.012	<0.0010	<0.020	0.00050	42	<0.0010	0.00034	0.021	**3.0**	<0.00020	<0.020	7.1	0.063	<0.00020	0.0013	<0.10	3.2	<0.00020	1.6	<0.00010	2.4	0.048	41	<0.00020	<0.0010	0.0030	<0.00010	<0.0010	0.16
	23-Aug-22		0.051	<0.00060	0.00040	0.012	<0.0010	<0.020	**0.00044**	44	<0.0010	<0.00030	0.015	**2.3**	<0.00020	<0.020	7.5	0.060	<0.00020	0.0012	<0.10	3.3	<0.00020	1.5	<0.00010	2.6	0.044	45	<0.00020	<0.0010	0.0014	<0.00010	<0.0010	0.13
	9-Sep-22		0.055	<0.00060	0.00027	0.012	<0.0010	0.022	0.00047	50	<0.0010	0.00031	0.014	**3.2**	<0.00020	<0.020	7.5	0.066	<0.00020	0.0014	<0.10	3.5	<0.00020	1.4	<0.00010	2.7	0.053	48	<0.00020	<0.0010	0.0016	<0.00010	<0.0010	0.13
		SW-106	0.051	<0.00060	0.00022	0.012	<0.0010	<0.020	0.00043	50	<0.0010	0.00030	0.015	**3.1**	<0.00020	<0.020	7.6	0.066	<0.00020	0.0013	<0.10	3.5	<0.00020	1.3	<0.00010	2.7	0.054	47	<0.00020	<0.0010	0.0014	<0.00010	<0.0010	0.14
	RPD		*8%*	*NC*	*20%*	*0%*	*NC*	*NC*	*9%*	*0%*	*NC*	*3%*	*7%*	*3%*	*NC*	*NC*	*1%*	*0%*	*NC*	*7%*	*NC*	*0%*	*NC*	*7%*	*NC*	*0%*	*2%*	*2%*	*NC*	*NC*	*13%*	*NC*	*NC*	*7%*
NB-2	20-Sep-22		0.041	<0.00060	<0.00020	0.012	<0.0010	<0.020	0.00040	56	<0.0010	<0.00030	0.012	**3.3**	<0.00020	<0.020	8.8	0.066	<0.00020	0.001	<0.10	4.2	0.00021	1.5	<0.00010	3.1	0.05	58	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.12
	4-Oct-22		0.041	<0.00060	0.00025	0.013	<0.0010	<0.020	0.00050	52	<0.0010	<0.00030	0.013	**3.1**	<0.00020	<0.020	8.4	0.066	<0.00020	0.0015	<0.10	4.0	<0.00020	1.4	<0.00010	2.8	0.056	54	<0.00020	<0.0010	0.0015	<0.00010	<0.0010	0.14
	18-Oct-22		0.11	<0.00060	0.0002	0.015	<0.0010	<0.020	**0.00057**	52	<0.0010	0.00038	**0.012**	**4.2**	<0.00020	<0.020	8.6	0.093	<0.00020	0.0013	<0.10	4.1	<0.00020	1.5	<0.00010	2.9	0.055	56	<0.00020	<0.0010	0.0048	<0.00010	<0.0010	**0.15**
	31-May-22		**0.16**	<0.00060	0.00029	0.011	<0.0010	<0.020	**0.00090**	33	<0.0010	0.0015	**0.045**	**4.1**	<0.00020	0.029	5.7	0.15	<0.00020	0.0021	<0.10	2.6	<0.00020	1.7	<0.00010	2.3	0.037	32	<0.00020	<0.0010	0.0038	<0.00010	<0.0010	**0.28**
	14-Jun-22		**0.18**	<0.00060	0.00032	0.011	<0.0010	<0.020	**0.00095**	32	<0.0010	0.0015	0.048	**6.1**	<0.00020	<0.020	5.8	0.15	<0.00020	0.0020	<0.10	2.6	0.00020	1.9	<0.00010	2.3	0.041	31	<0.00020	<0.0010	0.0045	<0.00010	<0.0010	**0.30**
		SW-107	**0.17**	<0.00060	0.00031	0.011	<0.0010	<0.020	**0.00098**	31	<0.0010	0.0014	0.047	**5.7**	<0.00020	<0.020	5.9	0.14	<0.00020	0.0016	<0.10	2.6	<0.00020	1.8	<0.00010	2.2	0.036	33	<0.00020	<0.0010	0.0041	<0.00010	<0.0010	**0.30**
	RPD		*6%*	*NC*	*3%*	*0%*	*NC*	*NC*	*3%*	*3%*	*NC*	*7%*	*2%*	*7%*	*NC*	*NC*	*2%*	*7%*	*NC*	*22%*	*NC*	*0%*	*NC*	*5%*	*NC*	*4%*	*13%*	*6%*	*NC*	*NC*	*9%*	*NC*	*NC*	*0%*
	28-Jun-22		**0.097**	<0.00060	0.00035	0.010	<0.0010	<0.020	**0.00088**	31	<0.0010	0.00073	0.038	**3.0**	<0.00020	<0.020	5.8	0.087	<0.00020	0.0017	<0.10	2.5	<0.00020	2	<0.00010	2.2	0.035	30	<0.00020	<0.0010	0.0022	<0.00010	<0.0010	**0.25**
	12-Jul-22		**0.090**	<0.00060	0.00041	0.

TABLE 6
2022 TOTAL METALS IN SURFACE WATER
SHERRIDON MINE SITE, MANITOBA

Sample ID	Date	Field Duplicate Sample ID	Parameter[1]																														
			Total Aluminum (Al)	Total Antimony (Sb)	Total Arsenic (As)	Total Barium (Ba)	Total Beryllium (Be)	Total Boron (B)	Total Cadmium (Cd)	Total Calcium (Ca)	Total Chromium (Cr)	Total Cobalt (Co)	Total Copper (Cu)	Total Iron (Fe)	Total Lead (Pb)	Total Lithium (Li)	Total Magnesium (Mg)	Total Manganese (Mn)	Total Molybdenum (Mb)	Total Nickel (Ni)	Total Phosphorus (P)	Total Potassium (K)	Total Selenium (Se)	Total Silicon (Si)	Total Silver (Ag)	Total Sodium (Na)	Total Strontium (Sr)	Total Sulphur (S)	Total Thallium (Tl)	Total Tin (Sn)	Total Titanium (Ti)	Total Uranium (U)	Total Vanadium (V)	Total Zinc (Zn)
	9-Sep-22		0.058	<0.00060	0.00024	0.012	<0.0010	<0.020	0.00048	47	<0.0010	<0.00030	0.015	**2.5**	<0.00020	<0.020	7.2	0.055	<0.00020	0.0012	<0.10	3.3	<0.00020	1.3	<0.00010	2.6	0.051	44	<0.00020	<0.0010	0.0012	<0.00010	<0.0010	0.14
	20-Sep-22		0.041	<0.00060	<0.00020	0.012	<0.0010	<0.020	0.00041	55	<0.0010	<0.00030	0.012	**3.3**	<0.00020	<0.020	8.7	0.064	<0.00020	0.0011	<0.10	4.1	0.00023	1.5	<0.00010	3.0	0.048	57	<0.00020	<0.0010	0.0015	<0.00010	<0.0010	0.12
	4-Oct-22		0.052	<0.00060	0.00024	0.013	<0.0010	<0.020	0.00048	53	<0.0010	<0.00030	0.013	**2.9**	<0.00020	<0.020	8.5	0.062	<0.00020	0.0012	<0.10	4.0	<0.00020	1.4	<0.00010	2.8	0.056	54	<0.00020	<0.0010	0.0014	<0.00010	<0.0010	0.14
	18-Oct-22		0.11	<0.00060	0.00025	0.015	<0.0010	<0.020	**0.00055**	55	<0.0010	0.00041	**0.013**	**4.4**	<0.00020	<0.020	9	0.093	<0.00020	0.0013	<0.10	4.3	<0.00020	1.5	<0.00010	2.9	0.055	60	<0.00020	<0.0010	0.0047	<0.00010	<0.0010	**0.14**
EB-1	31-May-22		**0.25**	<0.00060	0.00035	0.013	<0.0010	<0.020	**0.0015**	39	<0.0010	0.0032	**0.057**	**4.4**	<0.00020	0.028	7.2	0.26	<0.00020	0.0030	<0.10	3.1	<0.00020	1.7	<0.00010	2.7	0.045	43	<0.00020	<0.0010	0.0043	<0.00010	<0.0010	**0.43**
	14-Jun-22		**0.25**	<0.00060	0.00031	0.012	<0.0010	<0.020	**0.0013**	34	<0.0010	0.0023	**0.053**	**4.8**	<0.00020	<0.020	6.4	0.18	<0.00020	0.0029	<0.10	2.8	<0.00020	1.8	<0.00010	2.4	0.039	36	<0.00020	<0.0010	0.0063	<0.00010	<0.0010	**0.38**
	28-Jun-22		**0.15**	<0.00060	0.00030	0.012	<0.0010	0.029	**0.0011**	37	<0.0010	0.0012	**0.034**	**2.8**	<0.00020	<0.020	7.0	0.12	<0.00020	0.0018	<0.10	2.9	0.00026	2.1	0.00014	2.5	0.04	39	<0.00020	<0.0010	0.0032	<0.00010	<0.0010	**0.26**
	12-Jul-22		**0.13**	<0.00060	0.00038	0.011	<0.0010	<0.020	**0.00091**	33	<0.0010	0.00068	**0.030**	**2.3**	<0.00020	0.031	6.2	0.077	<0.00020	0.0020	<0.10	2.8	<0.00020	1.5	<0.00010	2.4	0.038	35	<0.00020	<0.0010	0.0032	<0.00010	<0.0010	**0.24**
	26-Jul-22		**0.12**	<0.00060	0.00023	0.012	<0.0010	<0.020	**0.00067**	38	<0.0010	0.00033	**0.024**	**2.2**	<0.00020	<0.020	6.5	0.053	<0.00020	0.0017	<0.10	3.1	<0.00020	1.6	<0.00010	2.6	0.041	37	<0.00020	<0.0010	0.004	<0.00010	<0.0010	**0.20**
	9-Aug-22		**0.14**	<0.00060	0.00026	0.013	<0.0010	<0.020	**0.00068**	44	<0.0010	0.00048	0.025	**2.3**	<0.00020	<0.020	7.7	0.051	<0.00020	0.0020	<0.10	3.5	<0.00020	1.5	<0.00010	2.7	0.052	44	<0.00020	<0.0010	0.0044	<0.00010	<0.0010	0.20
	23-Aug-22		0.020	<0.00060	<0.00020	0.014	<0.0010	<0.020	0.000075	46	<0.0010	<0.00030	0.0029	**1.9**	<0.00020	<0.020	8.0	0.057	<0.00020	<0.00050	<0.10	3.7	<0.00020	1.3	<0.00010	2.8	0.048	47	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	0.027
		SW-108	0.076	<0.00060	0.00032	0.013	<0.0010	<0.020	**0.00059**	46	<0.0010	0.00045	**0.019**	**1.8**	<0.00020	<0.020	7.8	0.056	<0.00020	0.0015	<0.10	3.6	<0.00020	1.3	<0.00010	2.8	0.047	47	<0.00020	<0.0010	0.0016	<0.00010	<0.0010	**0.18**
	RPD		*117%*	*NC*	*NC*	*7%*	*NC*	*NC*	*155%*	*0%*	*NC*	*NC*	*147%*	*5%*	*NC*	*NC*	*3%*	*2%*	*NC*	*NC*	*NC*	*3%*	*NC*	*0%*	*NC*	*0%*	*2%*	*0%*	*NC*	*NC*	*NC*	*NC*	*NC*	*148%*
	9-Sep-22		**0.12**	<0.00060	0.00023	0.014	<0.0010	<0.020	0.00060	47	<0.0010	0.00033	0.016	**1.9**	<0.00020	<0.020	7.3	0.042	<0.00020	0.0017	<0.10	3.4	<0.00020	1.3	<0.00010	2.7	0.053	44	<0.00020	<0.0010	0.0048	<0.00010	<0.0010	0.16
	20-Sep-22		**0.26**	<0.00060	0.00028	0.015	<0.0010	<0.020	**0.00058**	53	<0.0010	<0.00030	0.016	**2.4**	<0.00020	<0.020	8.5	0.047	<0.00020	0.0017	<0.10	4.2	<0.00020	1.3	<0.00010	3.2	0.055	52	<0.00020	<0.0010	0.0053	<0.00010	<0.0010	0.16
	4-Oct-22		**0.11**	<0.00060	0.00025	0.014	<0.0010	<0.020	0.00060	50	<0.0010	0.00032	0.016	**2.4**	<0.00020	<0.020	8.2	0.048	<0.00020	0.0014	<0.10	3.9	<0.00020	1.3	<0.00010	2.9	0.055	53	<0.00020	<0.0010	0.0032	<0.00010	<0.0010	0.16
	18-Oct-22		0.2	<0.00060	0.00026	0.016	<0.0010	<0.020	**0.00065**	53	<0.0010	0.0004	**0.015**	**3.4**	<0.00020	<0.020	8.8	0.064	<0.00020	0.0016	<0.10	4.3	<0.00020	1.4	<0.00010	2.9	0.054	57	<0.00020	<0.0010	0.0088	<0.00010	<0.0010	**0.18**
EB-2	31-May-22		**0.31**	<0.00060	0.00033	0.014	<0.0010	<0.020	**0.0017**	42	<0.0010	0.0036	**0.057**	**4.6**	0.00020	<0.020	7.7	0.29	<0.00020	0.0037	<0.10	3.4	<0.00020	1.8	<0.00010	2.8	0.048	46	<0.00020	<0.0010	0.0086	<0.00010	<0.0010	**0.48**
	14-Jun-22		**0.27**	<0.00060	0.00028	0.013	<0.0010	<0.020	**0.0014**	34	<0.0010	0.0025	**0.054**	**4.8**	<0.00020	<0.020	6.5	0.19	<0.00020	0.0031	<0.10	2.9	<0.00020	1.9	<0.00010	2.4	0.040	37	<0.00020	<0.0010	0.0084	<0.00010	<0.0010	**0.38**
	28-Jun-22		**0.17**	<0.00060	0.00035	0.013	<0.0010	<0.020	**0.0011**	37	<0.0010	0.0012	**0.030**	**2.6**	<0.00020	<0.020	7.0	0.13	<0.00020	0.0019	<0.10	2.9	<0.00020	1.9	0.00020	2.5	0.040	39	<0.00020	<0.0010	0.0044	<0.00010	<0.0010	**0.25**
	12-Jul-22		**0.18**	<0.00060	0.00038	0.012	<0.0010	<0.020	**0.00087**	36	<0.0010	0.00072	**0.027**	**2.2**	<0.00020	<0.020	6.7	0.084	0.00022	0.0021	<0.10	3.0	0.00037	1.7	<0.00010	2.6	0.042	37	<0.00020	<0.0010	0.0057	<0.00010	<0.0010	**0.23**
		SW-109	**0.18**	<0.00060	0.00038	0.013	<0.0010	<0.020	**0.00083**	38	<0.0010	0.00074	**0.028**	**2.3**	<0.00020	0.031	6.9	0.086	<0.00020	0.0022	<0.10	3.1	<0.00020	1.7	<0.00010	2.6	0.043	39	<0.00020	<0.0010	0.0049	<0.00010	<0.0010	**0.24**
	RPD		*NC*	*NC*	*0%*	*8%*	*NC*	*NC*	*5%*	*5%*	*NC*	*3%*	*4%*	*4%*	*NC*	*NC*	*3%*	*2%*	*NC*	*5%*	*NC*	*3%*	*NC*	*0%*	*NC*	*0%*	*2%*	*5%*	*NC*	*NC*	*15%*	*NC*	*NC*	*4%*
	26-Jul-22		**0.18**	<0.00060	0.00032	0.012	<0.0010	<0.020	**0.00076**	38	<0.0010	0.00041	**0.024**	**2.1**	<0.00020	<0.020	6.5	0.053	<0.00020	0.0020	<0.10	3.1	<0.00020	1.6	<0.00010	2.6	0.041	38	<0.00020	<0.0010	0.0069	<0.00010	<0.0010	**0.22**
	9-Aug-22		**0.28**	<0.00060	0.00029	0.015	<0.0010	<0.020	**0.00066**	46	<0.0010	0.00057	0.021	**2.5**	<0.00020	<0.020	7.8	0.057	<0.00020	0.0021	<0.10	3.6	0.00023	1.7	<0.00010	2.8	0.053	44	<0.00020	<0.0010	0.013	<0.00010	<0.0010	0.19
	23-Aug-22		0.087	<0.00060	0.00025	0.014	<0.0010	<0.020	**0.00065**	47	<0.0010	0.00041	**0.019**	**1.8**	<0.00020	0.031	7.9	0.059	<0.00020	0.0017	<0.10	3.6	<0.00020	1.3	<0.00010	2.8	0.048	47	<0.00020	<0.0010	0.0025	<0.00010	<0.0010	**0.17**
	9-Sep-22		**0.18**	<0.00060	0.00030	0.016	<0.0010	0.036	0.00055	50	0.0013	0.00035	0.014	**1.7**	<0.00020	<0.020	7.5	0.046	<0.00020	0.0018	<0.10	3.6	0.00025	1.5	<0.00010	2.9	0.055	46	<0.00020	<0.0010	0.0084	<0.00010	<0.0010	0.15
	20-Sep-22		**0.10**	<0.00060	0.00021	0.013	<0.0010	<0.020	**0.00055**	55	<0.0010	0.0003	0.014	**2.3**	<0.00020	<0.020	8.7	0.048	<0.00020	0.0013	<0.10	4.3	0.00032	1.3	<0.00010	3.1	0.049	55	<0.00020	<0.0010	0.0080	<0.00010	<0.0010	0.16
	4-Oct-22		**0.13**	<0.00060	0.00027	0.015	<0.0010	<0.020	**0.00074**	54	<0.0010	<0.00030	0.018	**2.2**	<0.00020	<0.020	8.7	0.051	<0.00020	0.0017	<0.10	4.3	0.00022	1.3	<0.00010	3.0	0.059	55	<0.00020	<0.0010	0.0051	<0.00010	<0.0010	0.20
	18-Oct-22		0.29	<0.00060	0.00025	0.017	<0.0010	<0.020	**0.00073**	53	<0.0010	0.00045	**0.016**	**2.7**	0.00023	<0.020	8.6	0.057	<0.00020	0.0019	<0.10	4.2	<0.00020	1.5	<0.00010	3	0.056	55	<0.00020	<0.0010	0.014	<0.00010	<0.0010	**0.20**
CAMP LAKE DISCHARGE	31-May-22		**0.16**	<0.00060	0.00034	0.011	<0.0010	<0.020	**0.00089**	36	<0.0010	0.0016	**0.042**	**4.8**	<0.00020	0.027	6.2	0.18	<0.00020	0.0017	<0.10	2.7	<0.00020	1.7	<0.00010	2.3	0.039	36	<0.00020	<0.0010	0.0033	<0.00010	<0.0010	**0.28**
	14-Jun-22		**0.18**	<0.00060	0.00024	0.011	<0.0010	<0.020	**0.00098**	32	<0.0010	0.0013	**0.048**	**6.0**	<0.00020	<0.020	6.0	0.14	<0.00020	0.0019	<0.10	2.7	<0.00020	2.0	<0.00010	2.3	0.037	34	<0.00020	<0.0010	0.0042	<0.00010	<0.0010	**0.30**
	28-Jun-22		**0.094**	<0.00060	0.00028	0.011	<0.0010	<0.020	**0.00082**	34	<0.0010	0.00077	**0.037**	**3.4**	<0.00020	<0.020	6.4	0.094	<0.00020	0.0017	<0.10	2.7	0.00022	2.3	<0.00010	2.3	0.036	34	<0.00020	<0.0010	0.0024	<0.00010	<0.0010	**0.24**
	12-Jul-22		**0.14**	<0.00060	0.00038	0.010	<0.0010	<0.020	**0.00063**	31	<0.0010	0.00035	**0.026**	**2.7**	<0.00020	<0.020	5.7	0.059	<0.00020	0.0016	<0.10	2.6	<0.00020	1.7	<0.00010	2.2	0.036	31	<0.00020	<0.0010	0.013	<0.00010	<0.0010	**0.19**
	26-Jul-22		**0.32**	<0.00060	0.00035	0.012	<0.0010	<0.020	**0.00093**	37	<0.0010	0.0011	**0.044**	**5.5**	0.00033	<0.020	6.3	0.11	<0.00020	0.0023	<0.10	3.0	<0.00020	1.9	<0.00010	2.4	0.039	36	<0.00020	<0.0010	0.0013	<0.00010	0.0012	**0.30**
	9-Aug-22		**0.10**	<0.00060	0.00029	0.013	<0.0010	<0.020	0.00062	45	<0.0010	0.0004	0.024	**3.2**	<0.00020	<0.020	7.5	0.063	0.00034	0.0016	<0.10	3.3	<0.00020	1.7	<0.00010	2.6	0.050	43	<0.00020	<0.0010	0.0035	<0.00010	<0.0010	0.17
	23-Aug-22		0.058	<0.00060	0.00021	0.012	<0.0010	<0.020	**0.00043**	46	<0.0010	<0.00030	0.015	**2.1**	<0.00020	<0.020	7.6	0.049	<0.00020	0.0012	<0.10	3.5	<0.00020	1.5	<0.00010	2.7	0.045	45	<0.00020	<0.0010	0.0013	<0.00010	<0.0010	0.13
	9-Sep-22		0.062	<0.00060	0.00027	0.011	<0.0010	<0.020	0.00042	50	<0.0010	<0.00030	0.013	**2.7**	<0.00020	<0.020	7.8	0.057	<0.00020	0.0013	<0.10	3.6	0.00021	1.5	<0.00010	2.7	0.051	50	<0.00020	<0.0010	0.0027	<0.00010	<0.0010	0.13
	20-Sep-22		0.040	<0.00060	0.00021	0.011	<0.0010	<0.020	0.00037	55	<0.0010	<0.00030	0.011	**3.0**	<0.00020	<0.020	8.8	0.060	<0.00020	0.0010	<0.10	4.1	0.00022	1.4	<0.00010	3.0	0.048	55	<0.00020	<0.0010	0.0019	<0.00010	<0.0010	0.12
	4-Oct-22		0.049	<0.00060	0.00022	0.013	<0.0010	<0.020	0.00048	53	<0.0010	<0.00030	0.013	**2.9**	<0.00020	<0.020	8.5	0.061	<0.00020	0.0011	<0.10	4.0	<0.00020	1.4	<0.00010	2.8	0.056	54	<0.00020	<0.0010	0.0015	<0.00010	<0.0010	0.14
		SW-110	0.047	<0.00060	0.00026	0.014	<0.0010	<0.020	0.00049	53	<0.0010	<0.00030	0.013	**3.0**	<0.00020	<0.020	8.5	0.063	<0.00020	0.0011	<0.10	4.0	0.00024	1.4	<0.00010	2.9	0.057	55	<0.00020	<0.0010	0.0013	<0.00010	<0.0010	0.14
	RPD		*4%*	*NC*	*17%*	*7%*	*NC*	*NC*	*2%*	*0%*	*NC*	*NC*	*0%*	*3%*	*NC*	*NC*	*0%*	*3%*	*NC*	*0%*	*NC*	*0%*	*NC*	*0%*	*NC*	*4%*	*2%*	*2%*	*NC*	*NC*	*14%*	*NC*	*NC*	*0%*
	18-Oct-22		**0.13**	<0.00060	0.00023	0.015	<0.0010	<0.020	**0.00059**	55	<0.0010	0.00039	**0.013**	**4.3**	<0.00020	<0.020	8.9	0.099	<0.00020	0.002	<0.10	4.3	<0.00020	1.5	<0.00010	2.8	0.054	59	<0.00020	<0.0010	0.0069	<0.00010	<0.0010	**0.14**
Laboratory Detection Limits			*0.0030*	*0.00060*	*0.00020*	*0.010*	*0.0010*	*0.020*	*0.020*	*0.30*	*0.0010*	*0.00030*	*0.0010*	*0.060*	*0.00020*	*0.020*	*0.20*	*0.0040*	*0.00020*	*0.00050*	*0.10*	*0.30*	*0.00020*	*0.10*	*0.00010*	*0.50*	*0.020*	*0.20*	*0.00020*	*0.0010*	*0.0010*	*0.00010*	*0.0010*	*0.0030*
Manitoba Water Quality Standards, Objectives, and Guidelines [2]																																	
Protection of Aquatic Life and Wildlife																																	
Tier II Objective - Chronic									*0.00018 [2a]*		*0.056*		*0.00598 [2a]*		*0.00164 [2a]*					*0.0336 [2a]*													*0.0771 [2a]*
Tier II Objective - Acute									*0.00125 [2a]*		*1.176*		*0.00857 [2a]*		*0.0421 [2a]*					*0.302 [2a]*													*0.0771 [2a]*
Tier III Guideline			*0.1 (pH ≥ 6.5) 0.005 (pH <6.5)*											*0.3*					*0.073*				*0.001*		*0.0001*				*0.0008*			*0.015*		
Camp Lake Water Quality Performance Objectives [3]																																	
Sampling Event Dates	31-May-22		*0.109 [3a, 3c]*						*0.000363 [3a, 3c]*				*0.018 [3b, 3c]*	*0.36 [3a, 3c]*																				*0.12 [3a, 3c]*
	14-Jun-22		*0.093 [3a, 3c]*						*0.000250 [3a, 3c]*				*0.013 [3b, 3c]*	*0.31 [3a, 3c]*																				*0.07 [3a, 3c]*
	28-Jun-22		*0.070 [3a, 3c]*						*0.000213 [3a, 3c]*				*0.008 [3b, 3c]*	*0.30 [3a, 3c]*																				*0.05 [3a, 3c]*
	12-Jul-22		*0.076 [3a, 3c]*						*0.000213 [3a, 3c]*				*0.011 [3b, 3c]*	*0.29 [3a, 3c]*																				*0.07 [3a, 3c]*
	26-Jul-22		*0.069 [3a, 3c]*						*0.000200 [3a, 3c]*				*0.009 [3b, 3c]*	*0.24 [3a, 3c]*																				*0.06 [3a, 3c]*
	9-Aug-22		*0.094 [3a, 3c]*						*0.000650 [3a, 3c]*				*0.030 [3b, 3c]*	*0.35 [3a, 3c]*																				*0.21 [3a, 3c]*
	23-Aug-22		*0.098 [3a, 3c]*						*0.000363 [3a, 3c]*				*0.017 [3b, 3c]*	*0.39 [3a, 3c]*																				*0.14 [3a, 3c]*
	9-Sep-22		*0.089 [3a, 3c]*						*0.000838 [3a, 3c]*				*0.038 [3b, 3c]*	*0.50 [3a, 3c]*																				*0.24 [3a, 3c]*
	20-Sep-22		*0.080 [3a, 3c]*						*0.000488 [3a, 3c]*				*0.026 [3b, 3c]*	*0.53 [3a, 3c]*																				*0.16 [3a, 3c]*
	4-Oct-22		*0.065 [3a, 3c]*						*0.000663 [3a, 3c]*				*0.030 [3b, 3c]*	*0.65 [3a, 3c]*																				*0.25 [3a, 3c]*
	18-Oct-22		*0.076 [3a, 3c]*						*0.000275 [3a, 3c]*				*0.009 [3b, 3c]*	*0.30 [3a, 3c]*																				*0.10 [3a, 3c]*

Notes:
"-" = No Data NC = Not Calculated RPD = Relative Percent Difference

1. All values are expressed in milligrams per litre (mg/L) unless otherwise specified.
2. Manitoba Water Quality Standards, Objectives, and Guidelines (MWQSOG). Manitoba Water Stewardship, 2011.
   a. Calculated as per Manitoba Conservation (2011) using mean total hardness of 59.4 mg/L as $CaCO_3$ as measured in Cold Lake on May 11, 2016.
3. Camp Lake Water Quality Performance Objectives (CLWQPO). Final Adaptive Management Plan - Sherridon Orphaned Mine Site Reclamation Project, August 16, 2022.
   a. Aluminum, cadmium, iron, and zinc objectives calculated as ambient SC-1 + 25%. The 25% allowance is to account for sampling and analytical variation as per DJRC (2022).
   b. Copper objectives calculated as ambient SC-1 + 30%. Based on pre-construction prediction that total Cu will be 5 to 10% higher than in Sherlett Creek (from SENES 2008) plus 25% allowance for sampling and analytical variation as per DJRC (2022).
   c. Ambient SC-1 refers to the concentration measured at Sherlett Creek station SC-1 within the previous 7 days.

- Values above MWQSOG value.
BOLD - Values above CLWQPO value.

TABLE 6
2022 TOTAL METALS IN SURFACE WATER
SHERRIDON MINE SITE, MANITOBA

Sample ID	Date	Field Duplicate Sample ID	Parameter [1]																														
			Total Aluminum (Al)	Total Antimony (Sb)	Total Arsenic (Ar)	Total Barium (Ba)	Total Beryllium (Be)	Total Boron (B)	Total Cadmium (Cd)	Total Calcium (Ca)	Total Chromium (Cr)	Total Cobalt (Co)	Total Copper (Cu)	Total Iron (Fe)	Total Lead (Pb)	Total Lithium (Li)	Total Magnesium (Mg)	Total Manganese (Mn)	Total Molybdenum (Mb)	Total Nickel (Ni)	Total Phosphorus (P)	Total Potassium (K)	Total Selenium (Se)	Total Silicon (Si)	Total Silver (Ag)	Total Sodium (Na)	Total Strontium (Sr)	Total Sulphur (S)	Total Thallium (Tl)	Total Tin (Sn)	Total Titanium (Ti)	Total Uranium (U)	Total Vanadium (V)	Total Zinc (Zn)
Sherlett Creek																																	
SC-1	31-May-22		0.087	<0.00060	0.00033	<0.010	<0.0010	<0.020	0.00029	7.0	<0.0010	<0.00030	0.014	0.29	<0.00020	<0.020	2.3	0.022	<0.00020	0.00065	<0.10	1.2	<0.00020	1.8	<0.00010	1.5	<0.020	1.7	<0.00020	<0.0010	0.0028	<0.00010	<0.0010	0.093
	14-Jun-22		0.074	<0.00060	0.00040	<0.010	<0.0010	<0.020	0.00020	6.8	<0.0010	<0.00030	0.0098	0.25	<0.00020	<0.020	2.2	0.015	<0.00020	0.00057	<0.10	1.1	<0.00020	1.7	<0.00010	1.4	<0.020	1.2	<0.00020	<0.0010	0.0031	<0.00010	<0.0010	0.059
	28-Jun-22		0.056	<0.00060	0.00045	<0.010	<0.0010	<0.020	0.00017	7.1	0.0010	<0.00030	0.0060	0.24	<0.00020	<0.020	2.4	0.019	<0.00020	<0.00050	<0.10	1.1	0.00022	1.8	0.00019	1.5	<0.020	1.3	<0.00020	<0.0010	0.0022	<0.00010	<0.0010	0.043
	12-Jul-22		0.061	<0.00060	0.00057	<0.010	<0.0010	<0.020	0.00017	7.8	<0.0010	<0.00030	0.0083	0.23	<0.00020	<0.020	2.5	0.024	<0.00020	0.00055	<0.10	1.2	<0.00020	1.5	<0.00010	1.9	<0.020	1.4	<0.00020	<0.0010	0.0026	<0.00010	<0.0010	0.057
	26-Jul-22		0.055	<0.00060	0.00044	<0.010	<0.0010	<0.020	0.00016	7.4	<0.0010	<0.00030	0.0069	0.19	<0.00020	<0.020	2.3	0.021	<0.00020	0.00054	<0.10	1.2	<0.00020	1.4	<0.00010	1.5	<0.020	1.3	<0.00020	<0.0010	0.0031	<0.00010	<0.0010	0.046
	9-Aug-22		0.075	<0.00060	0.00042	<0.010	<0.0010	<0.020	0.00052	8.1	<0.0010	<0.00030	0.023	0.28	<0.00020	<0.020	2.6	0.037	<0.00020	0.00074	<0.10	1.1	<0.00020	1.5	<0.00010	1.5	0.022	2.0	<0.00020	<0.0010	0.0027	<0.00010	<0.0010	0.17
		SW-102	0.084	<0.00060	0.00049	<0.010	<0.0010	<0.020	0.00057	8.3	<0.0010	<0.00030	0.024	0.31	<0.00020	<0.020	2.6	0.038	<0.00020	0.00073	<0.10	1.2	<0.00020	1.5	<0.00010	1.5	0.022	2.0	<0.00020	<0.0010	0.0041	<0.00010	<0.0010	0.18
	RPD		*11%*	*NC*	*15%*	*NC*	*NC*	*NC*	*9%*	*2%*	*NC*	*NC*	*4%*	*10%*	*NC*	*NC*	*0%*	*3%*	*NC*	*1%*	*NC*	*9%*	*NC*	*0%*	*NC*	*0%*	*0%*	*0%*	*NC*	*NC*	*41%*	*NC*	*NC*	*6%*
	23-Aug-22		0.078	<0.00060	0.0005	<0.010	<0.0010	<0.020	0.00029	8.5	<0.0010	<0.00030	0.013	0.31	<0.00020	<0.020	2.6	0.038	<0.00020	0.00071	<0.10	1.3	<0.00020	1.4	<0.00010	1.7	0.022	1.8	<0.00020	<0.0010	0.0028	<0.00010	<0.0010	0.11
	9-Sep-22		0.071	<0.00060	0.00068	<0.010	<0.0010	<0.020	0.00067	8.6	<0.0010	0.00045	0.029	0.40	0.00023	<0.020	2.5	0.052	<0.00020	0.00094	<0.10	1.3	<0.00020	1.6	<0.00010	1.8	0.022	1.8	<0.00020	<0.0010	0.0017	0.00017	<0.0010	0.19
	20-Sep-22		0.064	<0.00060	0.00057	<0.010	<0.0010	<0.020	0.00039	9.4	<0.0010	<0.00030	0.020	0.42	<0.00020	<0.020	2.9	0.070	<0.00020	0.00086	<0.10	1.6	<0.00020	1.7	<0.00010	3.4	0.023	2.3	<0.00020	<0.0010	0.0022	<0.00010	<0.0010	0.13
	4-Oct-22		0.052	<0.00060	0.00052	<0.010	<0.0010	<0.020	0.00053	9.7	<0.0010	<0.00030	0.023	0.52	<0.00020	<0.020	3.1	0.084	<0.00020	0.00086	<0.10	1.5	0.0002	1.6	<0.00010	4.2	0.025	2.5	<0.00020	<0.0010	0.0018	<0.00010	<0.0010	0.20
	8-Nov-22		0.042	<0.00060	0.00037	<0.010	<0.0010	<0.020	0.00015	7.7	<0.0010	<0.00030	0.0064	0.16	<0.00020	<0.020	2.4	0.013	<0.00020	<0.00050	<0.10	1.2	<0.00020	1	<0.00010	1.8	0.021	1.4	<0.00020	<0.0010	0.0016	<0.00010	<0.0010	0.050
SC-2	20-Sep-22		0.034	<0.00060	0.00046	<0.010	<0.0010	<0.020	0.00017	8.1	<0.0010	<0.00030	0.0087	0.33	<0.00020	<0.020	2.5	0.067	<0.00020	<0.00050	<0.10	1.4	<0.00020	1.6	<0.00010	1.9	<0.020	1.4	<0.00020	<0.0010	0.0013	<0.00010	<0.0010	0.054
	4-Oct-22		0.065	<0.00060	0.00049	<0.010	<0.0010	<0.020	0.00066	9.1	0.0011	0.0004	0.023	0.54	<0.00020	<0.020	2.9	0.11	<0.00020	0.00064	<0.10	1.4	<0.00020	1.7	<0.00010	5.0	0.024	3.0	<0.00020	<0.0010	0.0021	<0.00010	<0.0010	0.21
	18-Oct-22		0.065	<0.00060	0.00041	<0.010	<0.0010	<0.020	0.00024	8.5	<0.0010	<0.00030	0.0079	0.24	<0.00020	<0.020	2.6	0.039	<0.00020	0.00055	<0.10	1.3	<0.00020	1.4	<0.00010	2	0.02	1.5	<0.00020	<0.0010	0.0021	<0.00010	<0.0010	0.078
SC-3	20-Sep-22		0.037	<0.00060	0.00049	<0.010	<0.0010	<0.020	0.00022	7.5	<0.0010	<0.00030	0.012	0.29	<0.00020	<0.020	2.3	0.057	<0.00020	<0.00050	<0.10	1.3	<0.00020	1.4	<0.00010	1.5	<0.020	1.2	<0.00020	<0.0010	0.0012	<0.00010	<0.0010	0.062
	4-Oct-22		0.052	<0.00060	0.00053	<0.010	<0.0010	<0.020	0.00041	8.5	<0.0010	<0.00030	0.013	0.36	<0.00020	<0.020	2.7	0.069	<0.00020	0.00082	<0.10	1.3	0.00021	1.6	<0.00010	3.3	0.022	1.8	<0.00020	<0.0010	0.0018	<0.00010	<0.0010	0.12
		SW-118	0.064	<0.00060	0.00048	<0.010	<0.0010	<0.020	0.00037	8.6	<0.0010	<0.00030	0.013	0.40	<0.00020	<0.020	2.7	0.072	<0.00020	0.00056	<0.10	1.3	<0.00020	1.6	<0.00010	3.3	0.023	1.9	<0.00020	<0.0010	0.0027	<0.00010	<0.0010	0.11
	RPD		*21%*	*NC*	*10%*	*NC*	*NC*	*NC*	*10%*	*1%*	*NC*	*NC*	*0%*	*11%*	*NC*	*NC*	*0%*	*4%*	*NC*	*38%*	*NC*	*0%*	*NC*	*0%*	*NC*	*0%*	*4%*	*5%*	*NC*	*NC*	*40%*	*NC*	*NC*	*9%*
SC-4	18-Oct-22		0.061	<0.00060	0.00036	<0.010	<0.0010	<0.020	0.000077	8.3	<0.0010	<0.00030	0.0043	0.22	<0.00020	0.029	2.5	0.025	<0.00020	<0.00050	<0.10	1.3	<0.00020	1.4	<0.00010	1.5	0.02	1.3	<0.00020	<0.0010	0.0042	<0.00010	<0.0010	0.023
	20-Sep-22		0.030	<0.00060	0.00043	<0.010	<0.0010	<0.020	<0.000020	8.4	<0.0010	<0.00030	0.0025	0.30	<0.00020	<0.020	2.6	0.058	<0.00020	<0.00050	<0.10	1.4	0.0002	1.6	<0.00010	1.5	<0.020	1.2	<0.00020	<0.0010	0.0017	<0.00010	<0.0010	<0.0030
	4-Oct-22		0.18	<0.00060	0.00049	<0.010	<0.0010	<0.020	0.00014	7.7	<0.0010	<0.00030	0.0065	0.48	0.00021	<0.020	2.6	0.058	<0.00020	0.00058	<0.10	1.2	<0.00020	1.7	<0.00010	1.8	0.021	1.4	<0.00020	<0.0010	0.0063	<0.00010	<0.0010	0.033
	18-Oct-22		0.065	<0.00060	0.00052	<0.010	<0.0010	<0.020	0.000029	8.4	<0.0010	<0.00030	0.0035	0.28	<0.00020	<0.020	2.6	0.021	<0.00020	0.00065	<0.10	1.3	<0.00020	1.4	<0.00010	1.6	0.021	1.2	<0.00020	<0.0010	0.0023	<0.00010	<0.0010	0.0057
			0.061	<0.00060	0.00036	<0.010	<0.0010	<0.020	0.000025	7.7	<0.0010	<0.00030	0.0033	0.24	<0.00020	<0.020	2.5	0.028	<0.00020	0.00061	<0.10	1.2	<0.00020	1.3	<0.00010	1.5	<0.020	1.2	<0.00020	<0.0010	0.0023	<0.00010	<0.0010	0.004
	RPD		*6%*	*NC*	*36%*	*NC*	*NC*	*NC*	*15%*	*9%*	*NC*	*NC*	*6%*	*15%*	*NC*	*NC*	*4%*	*29%*	*NC*	*6%*	*NC*	*8%*	*NC*	*7%*	*NC*	*6%*	*NC*	*0%*	*NC*	*NC*	*0%*	*NC*	*NC*	*35%*
SC-5	20-Sep-22		0.069	<0.00060	0.00051	<0.010	<0.0010	<0.020	<0.000020	7.9	<0.0010	<0.00030	0.0030	0.29	<0.00020	<0.020	2.5	0.043	<0.00020	<0.00050	<0.10	1.3	<0.00020	1.6	<0.00010	1.5	<0.020	1.1	<0.00020	<0.0010	0.0044	<0.00010	<0.0010	<0.0030
	4-Oct-22		0.047	<0.00060	0.00047	<0.010	<0.0010	<0.020	<0.000020	7.3	<0.0010	<0.00030	0.0020	0.29	<0.00020	<0.020	2.4	0.03	<0.00020	<0.00050	<0.10	1.1	<0.00020	1.5	<0.00010	1.4	<0.020	1.3	<0.00020	<0.0010	0.002	<0.00010	<0.0010	0.0034
	18-Oct-22		0.055	<0.00060	0.00037	<0.010	<0.0010	<0.020	0.000031	8.2	<0.0010	<0.00030	0.0034	0.19	<0.00020	0.03	2.5	0.018	<0.00020	<0.00050	<0.10	1.3	<0.00020	1.3	<0.00010	1.6	<0.020	1.1	<0.00020	<0.0010	0.0018	<0.00010	<0.0010	0.0035
SC-6	20-Sep-22		0.023	<0.00060	0.00047	<0.010	<0.0010	<0.020	<0.000020	7.9	<0.0010	<0.00030	0.0040	0.15	<0.00020	<0.020	2.5	0.015	<0.00020	<0.00050	<0.10	1.2	<0.00020	1.5	<0.00010	1.5	<0.020	1.2	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	<0.0030
	4-Oct-22		0.049	<0.00060	0.00054	<0.010	<0.0010	<0.020	<0.000020	7.8	<0.0010	<0.00030	0.0028	0.20	<0.00020	<0.020	2.5	0.018	<0.00020	0.00067	<0.10	1.3	<0.00020	1.4	<0.00010	1.8	0.021	2.1	<0.00020	<0.0010	0.002	<0.00010	<0.0010	0.0046
	18-Oct-22		0.058	<0.00060	0.00043	<0.010	<0.0010	<0.020	<0.000020	7.5	<0.0010	<0.00030	0.002	0.15	<0.00020	<0.020	2.4	0.0097	<0.00020	0.00052	<0.10	1.2	<0.00020	1.2	<0.00010	1.5	<0.020	1.1	<0.00020	<0.0010	0.0019	<0.00010	<0.0010	<0.0030
Laboratory Detection Limits			*0.0030*	*0.00060*	*0.00020*	*0.010*	*0.0010*	*0.020*	*0.020*	*0.30*	*0.0010*	*0.00030*	*0.0010*	*0.060*	*0.00020*	*0.020*	*0.20*	*0.0040*	*0.00020*	*0.00050*	*0.10*	*0.30*	*0.00020*	*0.10*	*0.00010*	*0.50*	*0.020*	*0.20*	*0.00020*	*0.0010*	*0.0010*	*0.00010*	*0.0010*	*0.0030*
Manitoba Water Quality Standards, Objectives, and Guidelines [2]																																	
Protection of Aquatic Life and Wildlife																																	
Tier II Objective - Chronic									*0.00011* [2a]		*0.03285* [2a]		*0.00341* [2a]		*0.00071* [2a]					*0.01926* [2a]													*0.04417* [2a]
Tier II Objective - Acute									*0.00064* [2a]		*0.68728* [2a]		*0.00462* [2a]		*0.01823* [2a]					*0.17324* [2a]													*0.04417* [2a]
Tier III Guideline			*0.1 (pH ≥ 6.5) 0.005 (pH <6.5)*											*0.3*					*0.073*				*0.001*		*0.0001*				*0.0008*			*0.015*		

Notes:
"-" = No Data NC = Not Calculated RPD = Relative Percent Difference

1. All values are expressed in milligrams per litre (mg/L) unless otherwise specified.
2. Manitoba Water Quality Standards, Objectives, and Guidelines (MWQSOG). Manitoba Water Stewardship, 2011.
   a. Calculated as per Manitoba Conservation (2011) using mean total harness of 30.8 mg/L as $CaCO_3$ as measured at station SC-1 in 2022.

Sample ID	Date	Duplicate Sample ID	Parameter [1]																														
			Total Aluminum (Al)	Total Antimony (Sb)	Total Arsenic (Ar)	Total Barium (Ba)	Total Beryllium (Be)	Total Boron (B)	Total Cadmium (Cd)	Total Calcium (Ca)	Total Chromium (Cr)	Total Cobalt (Co)	Total Copper (Cu)	Total Iron (Fe)	Total Lead (Pb)	Total Lithium (Li)	Total Magnesium (Mg)	Total Manganese (Mn)	Total Molybdenum (Mb)	Total Nickel (Ni)	Total Phosphorus (P)	Total Potassium (K)	Total Selenium (Se)	Total Silicon (Si)	Total Silver (Ag)	Total Sodium (Na)	Total Strontium (Sr)	Total Sulphur (S)	Total Thallium (Tl)	Total Tin (Sn)	Total Titanium (Ti)	Total Uranium (U)	Total Vanadium (V)	Total Zinc (Zn)
Cold Lake																																	
CL-2	31-May-22		0.090	<0.00060	0.00042	<0.010	<0.0010	<0.020	0.00021	16	<0.0010	<0.00030	0.017	1.0	<0.00020	<0.020	3.6	0.048	<0.00020	0.00080	<0.10	1.7	<0.00020	1.4	<0.00010	1.9	0.029	10	<0.00020	<0.0010	0.0020	<0.00010	<0.0010	0.076
	14-Jun-22		0.10	<0.00060	0.00040	0.010	<0.0010	0.023	0.00020	16	<0.0010	<0.00030	0.014	1.1	<0.00020	<0.020	3.6	0.045	<0.00020	0.0011	<0.10	1.7	<0.00020	1.6	<0.00010	2.2	0.032	10	<0.00020	<0.0010	0.0031	<0.00010	<0.0010	0.073
	28-Jun-22		0.081	<0.00060	0.00042	0.011	<0.0010	<0.020	0.00014	15	<0.0010	<0.00030	0.0087	0.88	<0.00020	<0.020	3.6	0.029	<0.00020	<0.00050	<0.10	1.6	0.00023	2.2	0.00020	2.0	0.026	9.3	<0.00020	<0.0010	0.0019	<0.00010	<0.0010	0.059
	12-Jul-22		0.12	<0.00060	0.00045	0.011	<0.0010	<0.020	0.00015	15	<0.0010	<0.00030	0.011	1.6	<0.00020	<0.020	3.6	0.094	<0.00020	0.00077	<0.10	1.7	<0.00020	1.9	<0.00010	2.1	0.028	9.9	<0.00020	<0.0010	0.0037	<0.00010	<0.0010	0.065
		SW-111	0.12	<0.00060	0.00055	0.012	<0.0010	<0.020	0.00018	16	<0.0010	<0.00030	0.012	1.6	<0.00020	<0.020	3.7	0.094	<0.00020	0.00079	<0.10	1.7	<0.00020	2.3	<0.00010	2.1	0.028	10	<0.00020	<0.0010	0.0025	<0.00010	<0.0010	0.066
	RPD		*0%*	*NC*	*20%*	*9%*	*NC*	*NC*	*18%*	*6%*	*NC*	*NC*	*9%*	*0%*	*NC*	*NC*	*3%*	*0%*	*NC*	*3%*	*NC*	*0%*	*NC*	*19%*	*NC*	*0%*	*0%*	*1%*	*NC*	*NC*	*39%*	*NC*	*NC*	*2%*
	26-Jul-22		0.094	<0.00060	0.00040	0.010	<0.0010	<0.020	0.00015	14	<0.0010	<0.00030	0.011	1.4	<0.00020	<0.020	3.3	0.090	<0.00020	0.00065	<0.10	1.7	<0.00020	1.8	<0.00010	2.0	0.025	8.6	<0.00020	<0.0010	0.0017	<0.00010	<0.0010	0.059
	9-Aug-22		0.088	<0.00060	0.00044	0.011	<0.0010	<0.020	0.00014	14	<0.0010	<0.00030	0.011	1.3	<0.00020	<0.020	3.5	0.081	<0.00020	0.00067	<0.10	1.6	<0.00020	1.7	<0.00010	1.9	0.029	8.8	<0.00020	<0.0010	0.0028	<0.00010	<0.0010	0.054
	23-Aug-22		0.094	<0.00060	0.00043	0.012	<0.0010	<0.020	0.00012	13	<0.0010	<0.00030	0.010	1.2	<0.00020	<0.020	3.2	0.11	<0.00020	0.00083	<0.10	1.4	<0.00020	1.6	<0.00010	1.9	0.028	7.8	<0.00020	<0.0010	0.0021	<0.00010	<0.0010	0.047
	9-Sep-22		0.075	<0.00060	0.00038	0.015	<0.0010	<0.020	0.00014	14	<0.0010	0.00070	0.0092	2.0	<0.00020	<0.020	3.1	0.33	<0.00020	0.00066	<0.10	1.5	<0.00020	1.7	<0.00010	1.8	0.028	7.3	<0.00020	<0.0010	0.0019	<0.00010	<0.0010	0.050
	20-Sep-22		0.076	<0.00060	0.00043	0.015	<0.0010	<0.020	0.00024	15	<0.0010	0.0011	0.0088	2.6	<0.00020	<0.020	3.6	0.61	0.00022	0.00074	<0.10	1.7	0.00035	2.0	<0.00010	2.1	0.028	8.3	<0.00020	<0.0010	0.0014	0.00010	<0.0010	0.047
	4-Oct-22		0.056	<0.00060	0.00051	<0.010	<0.0010	<0.020	0.000040	12	<0.0010	<0.00030	0.0069	0.60	<0.00020	<0.020	3.3	0.029	<0.00020	0.00079	<0.10	1.6	<0.00020	1.1	<0.00010	1.9	0.028	6.1	<0.00020	<0.0010	0.0021	<0.00010	<0.0010	0.018
	18-Oct-22 [3]		0.086	<0.00060	0.00039	<0.010	<0.0010	<0.020	0.000037	12	<0.0010	<0.00030	0.0052	0.53	<0.00020	0.029	3.2	0.0069	<0.00020	<0.00050	<0.10	1.5	<0.00020	1	<0.00010	2	0.025	5.8	<0.00020	<0.0010	0.0027	<0.00010	<0.0010	0.012

TABLE 6
2022 TOTAL METALS IN SURFACE WATER
SHERRIDON MINE SITE, MANITOBA

Sample ID	Date	Field Duplicate Sample ID	Parameter[1]																														
			Total Aluminum (Al)	Total Antimony (Sb)	Total Arsenic (Ar)	Total Barium (Ba)	Total Beryllium (Be)	Total Boron (B)	Total Cadmium (Cd)	Total Calcium (Ca)	Total Chromium (Cr)	Total Cobalt (Co)	Total Copper (Cu)	Total Iron (Fe)	Total Lead (Pb)	Total Lithium (Li)	Total Magnesium (Mg)	Total Manganese (Mn)	Total Molybdenum (Mb)	Total Nickel (Ni)	Total Phosphorus (P)	Total Potassium (K)	Total Selenium (Se)	Total Silicon (Si)	Total Silver (Ag)	Total Sodium (Na)	Total Strontium (Sr)	Total Sulphur (S)	Total Thallium (Tl)	Total Tin (Sn)	Total Titanium (Ti)	Total Uranium (U)	Total Vanadium (V)	Total Zinc (Zn)
CL-3	31-May-22		0.15	<0.00060	0.00034	0.011	<0.0010	<0.020	0.00065	29	<0.0010	0.0010	0.032	3.5	<0.00020	<0.020	5.4	0.13	<0.00020	0.0015	<0.10	2.4	<0.00020	1.6	<0.00010	2.2	0.035	27	<0.00020	<0.0010	0.0041	<0.00010	<0.0010	0.21
	14-Jun-22		0.091	<0.00060	0.00041	<0.010	<0.0010	<0.020	0.00027	15	<0.0010	<0.00030	0.017	1.3	<0.00020	<0.020	3.5	0.039	<0.00020	0.00097	<0.10	1.7	<0.00020	1.4	<0.00010	1.8	0.025	11	<0.00020	<0.0010	0.0026	<0.00010	<0.0010	0.091
	28-Jun-22		0.079	<0.00060	0.00040	<0.010	<0.0010	<0.020	0.00016	14	<0.0010	<0.00030	0.0099	0.69	<0.00020	<0.020	3.5	0.017	0.00023	<0.00050	<0.10	1.6	<0.00020	1.4	0.00017	2.4	0.025	9.3	<0.00020	<0.0010	0.0021	<0.00010	<0.0010	0.062
	12-Jul-22		0.10	<0.00060	0.00051	<0.010	<0.0010	<0.020	0.00017	14	<0.0010	<0.00030	0.010	0.78	<0.00020	<0.020	3.5	0.017	<0.00020	0.00068	<0.10	1.6	<0.00020	1.3	<0.00010	1.9	0.026	9.5	<0.00020	<0.0010	0.0038	<0.00010	<0.0010	0.055
	26-Jul-22		0.073	<0.00060	0.00042	<0.010	<0.0010	<0.020	0.00010	12	<0.0010	<0.00030	0.0088	0.42	<0.00020	<0.020	3.0	0.011	<0.00020	0.00066	<0.10	1.5	<0.00020	1.1	<0.00010	1.8	0.024	7.0	<0.00020	<0.0010	0.0028	<0.00010	<0.0010	0.039
	9-Aug-22		0.085	<0.00060	0.00047	0.010	<0.0010	<0.020	0.000085	12	0.0014	<0.00030	0.0075	0.42	<0.00020	<0.020	3.2	0.012	<0.00020	0.0010	<0.10	1.5	<0.00020	1.1	<0.00010	1.8	0.027	6.3	<0.00020	<0.0010	0.0036	<0.00010	<0.0010	0.028
	23-Aug-22		0.065	<0.00060	0.00043	<0.010	<0.0010	<0.020	0.000068	12	0.0037	<0.00030	0.0068	0.32	<0.00020	<0.020	3.1	0.0098	<0.00020	0.0020	<0.10	1.5	<0.00020	1.0	<0.00010	1.9	0.026	6.0	<0.00020	<0.0010	0.0017	<0.00010	<0.0010	0.022
		SW-112	0.071	<0.00060	0.00046	<0.010	<0.0010	<0.020	0.000064	12	<0.0010	<0.00030	0.0065	0.31	<0.00020	<0.020	3.1	0.0094	<0.00020	<0.00050	<0.10	1.5	<0.00020	1.0	<0.00010	1.8	0.026	5.8	<0.00020	<0.0010	0.0022	<0.00010	<0.0010	0.022
	RPD		*9%*	*NC*	*7%*	*NC*	*NC*	*NC*	*6%*	*0%*	*NC*	*NC*	*5%*	*3%*	*NC*	*NC*	*0%*	*4%*	*NC*	*NC*	*NC*	*0%*	*NC*	*0%*	*NC*	*5%*	*0%*	*3%*	*NC*	*NC*	*26%*	*NC*	*NC*	*0%*
	9-Sep-22		0.082	<0.00060	0.00049	0.010	<0.0010	<0.020	0.000053	12	<0.0010	<0.00030	0.0077	0.45	<0.00020	<0.020	3.0	0.020	<0.00020	0.00061	<0.10	1.4	<0.00020	1.0	<0.00010	1.8	0.027	5.6	<0.00020	<0.0010	0.0029	<0.00010	<0.0010	0.023
	20-Sep-22		0.055	<0.00060	0.00045	<0.010	<0.0010	<0.020	0.000063	14	<0.0010	<0.00030	0.0060	0.49	<0.00020	<0.020	3.5	0.017	<0.00020	<0.00050	<0.10	1.6	0.00028	1.1	<0.00010	2.2	0.025	6.7	<0.00020	<0.0010	0.0019	<0.00010	<0.0010	0.013
	4-Oct-22		0.077	<0.00060	0.00040	<0.010	<0.0010	<0.020	0.000042	12	<0.0010	<0.00030	0.0056	0.56	<0.00020	<0.020	3.2	0.019	<0.00020	<0.00050	<0.10	1.4	<0.00020	1.1	<0.00010	1.9	0.026	6.0	<0.00020	<0.0010	0.0027	<0.00010	<0.0010	0.014
	18-Oct-22 [3]		0.11	<0.00060	0.00044	0.011	<0.0010	<0.020	0.000047	12	<0.0010	<0.00030	0.0062	0.65	<0.00020	<0.020	3.4	0.016	<0.00020	0.00062	<0.10	1.6	<0.00020	1.1	<0.00010	1.9	0.026	6.5	<0.00020	<0.0010	0.0039	<0.00010	<0.0010	0.012
CL-4	31-May-22		0.079	<0.00060	0.00041	0.011	<0.0010	<0.020	0.00015	13	<0.0010	<0.00030	0.011	0.80	<0.00020	<0.020	3.3	0.040	<0.00020	0.00088	<0.10	1.6	<0.00020	1.4	<0.00010	2.0	0.027	8.0	<0.00020	<0.0010	0.0022	<0.00010	<0.0010	0.058
	14-Jun-22		0.11	<0.00060	0.00042	0.011	<0.0010	<0.020	0.00017	14	<0.0010	<0.00030	0.012	1.5	<0.00020	<0.020	3.4	0.075	<0.00020	0.00078	<0.10	1.7	<0.00020	1.6	<0.00010	1.9	0.025	9.3	<0.00020	<0.0010	0.0032	<0.00010	<0.0010	0.060
		SW-113	0.12	<0.00060	0.00050	0.01	<0.0010	<0.020	0.00015	14	<0.0010	<0.00030	0.011	1.6	<0.00020	<0.020	3.3	0.075	<0.00020	0.00074	<0.10	1.5	<0.00020	1.6	<0.00010	1.8	0.027	8.5	<0.00020	<0.0010	0.0035	<0.00010	0.0011	0.056
	RPD		*9%*	*NC*	*17%*	*10%*	*NC*	*NC*	*13%*	*0%*	*NC*	*NC*	*9%*	*6%*	*NC*	*NC*	*3%*	*0%*	*NC*	*5%*	*NC*	*13%*	*NC*	*0%*	*NC*	*5%*	*8%*	*9%*	*NC*	*NC*	*9%*	*NC*	*NC*	*7%*
	28-Jun-22		0.10	<0.00060	0.00041	0.011	<0.0010	<0.020	0.00013	13	<0.0010	<0.00030	0.0099	1.0	<0.00020	<0.020	3.6	0.034	<0.00020	0.00073	<0.10	1.6	<0.00020	1.5	<0.00010	2.4	0.027	8.0	<0.00020	<0.0010	0.0028	<0.00010	<0.0010	0.046
	12-Jul-22		0.16	<0.00060	0.00068	0.012	<0.0010	<0.020	0.00015	14	<0.0010	0.0004	0.010	3.2	0.00021	0.028	3.3	0.16	<0.00020	0.00072	<0.10	1.6	<0.00020	2.4	<0.00010	2.0	0.026	8.1	<0.00020	<0.0010	0.0037	<0.00010	<0.0010	0.053
	26-Jul-22		0.12	<0.00060	0.00053	0.011	<0.0010	<0.020	0.00016	13	<0.0010	0.00034	0.010	2.4	0.00020	<0.020	3.2	0.15	<0.00020	0.00072	<0.10	1.6	<0.00020	1.9	<0.00010	1.9	0.025	7.5	<0.00020	<0.0010	0.0033	<0.00010	<0.0010	0.051
	9-Aug-22		0.10	<0.00060	0.00052	0.013	<0.0010	<0.020	0.00013	13	<0.0010	0.00051	0.0094	2.9	<0.00020	<0.020	3.3	0.24	<0.00020	0.00077	<0.10	1.5	<0.00020	2.0	<0.00010	1.8	0.028	7.4	<0.00020	<0.0010	0.0024	<0.00010	<0.0010	0.048
	23-Aug-22		0.092	<0.00060	0.00054	0.016	<0.0010	<0.020	0.00014	14	<0.0010	0.0011	0.0084	5.5	<0.00020	0.030	3.5	0.56	<0.00020	0.00062	<0.10	1.6	<0.00020	2.3	<0.00010	1.9	0.028	7.2	<0.00020	<0.0010	0.0017	<0.00010	<0.0010	0.045
	9-Sep-22		0.072	<0.00060	0.00042	0.010	<0.0010	<0.020	0.000046	12	<0.0010	<0.00030	0.0071	0.68	<0.00020	<0.020	3.0	0.055	<0.00020	0.00051	<0.10	1.4	<0.00020	1.1	<0.00010	1.8	0.027	5.4	<0.00020	<0.0010	0.0024	<0.00010	<0.0010	0.021
	20-Sep-22		0.10	<0.00060	0.00068	0.010	<0.0010	<0.020	0.000071	13	<0.0010	<0.00030	0.0066	1.5	<0.00020	<0.020	3.5	0.075	<0.00020	0.00056	<0.10	1.6	<0.00020	1.3	<0.00010	2.1	0.025	5.9	<0.00020	<0.0010	0.0047	<0.00010	<0.0010	0.022
	4-Oct-22		0.086	<0.00060	0.00045	<0.010	<0.0010	<0.020	0.000034	11	<0.0010	<0.00030	0.0057	0.59	<0.00020	<0.020	3.2	0.020	<0.00020	0.00061	<0.10	1.4	<0.00020	1.1	<0.00010	1.9	0.027	5.8	<0.00020	<0.0010	0.0035	<0.00010	<0.0010	0.015
	18-Oct-22 [3]		0.18	<0.00060	0.0004	<0.010	<0.0010	<0.020	0.000039	12	<0.0010	<0.00030	0.0055	0.51	<0.00020	<0.020	3.2	0.0071	<0.00020	0.00065	<0.10	1.5	<0.00020	1.1	<0.00010	2.1	0.026	5.6	<0.00020	<0.0010	0.0042	<0.00010	<0.0010	0.013
CL-5	31-May-22		0.084	<0.00060	0.00047	<0.010	<0.0010	<0.020	0.00019	13	<0.0010	<0.00030	0.013	0.83	<0.00020	<0.020	3.3	0.040	<0.00020	0.00082	<0.10	1.6	<0.00020	1.6	<0.00010	1.9	0.026	8.7	<0.00020	<0.0010	0.0026	<0.00010	<0.0010	0.068
	14-Jun-22		0.085	<0.00060	0.00041	<0.010	<0.0010	<0.020	0.00014	12	<0.0010	<0.00030	0.011	0.73	<0.00020	<0.020	3.2	0.032	<0.00020	0.00076	<0.10	1.6	<0.00020	1.3	<0.00010	2.0	0.025	7.6	<0.00020	<0.0010	0.0034	<0.00010	<0.0010	0.055
	28-Jun-22		0.089	<0.00060	0.00049	0.01	<0.0010	<0.020	0.00011	13	<0.0010	<0.00030	0.0096	1.1	<0.00020	<0.020	3.5	0.047	<0.00020	0.00057	<0.10	1.6	<0.00020	1.6	0.00012	1.9	0.025	7.8	<0.00020	<0.0010	0.0028	<0.00010	<0.0010	0.048
		SW-114	0.085	<0.00060	0.00050	<0.010	<0.0010	<0.020	0.00010	13	<0.0010	<0.00030	0.0076	1.1	<0.00020	<0.020	3.3	0.045	<0.00020	<0.00050	<0.10	1.4	<0.00020	1.8	0.00016	1.9	0.024	7.5	<0.00020	<0.0010	0.0027	<0.00010	<0.0010	0.043
	RPD		*5%*	*NC*	*2%*	*NC*	*NC*	*NC*	*10%*	*0%*	*NC*	*NC*	*23%*	*0%*	*NC*	*NC*	*6%*	*4%*	*NC*	*NC*	*NC*	*13%*	*NC*	*12%*	*NC*	*0%*	*4%*	*4%*	*NC*	*NC*	*4%*	*NC*	*NC*	*11%*
	12-Jul-22		0.11	<0.00060	0.00048	0.01	<0.0010	<0.020	0.00011	13	<0.0010	<0.00030	0.0092	1.3	<0.00020	0.027	3.3	0.053	<0.00020	0.00075	<0.10	1.5	<0.00020	1.6	<0.00010	1.9	0.025	7.9	<0.00020	<0.0010	0.0039	<0.00010	<0.0010	0.051
	26-Jul-22		0.11	<0.00060	0.00040	<0.010	<0.0010	<0.020	0.00015	12	<0.0010	<0.00030	0.0098	1.3	<0.00020	<0.020	3.0	0.054	<0.00020	0.0012	<0.10	1.5	<0.00020	1.7	<0.00010	1.8	0.024	7.4	<0.00020	<0.0010	0.0035	<0.00010	<0.0010	0.057
	9-Aug-22		0.099	<0.00060	0.00046	0.011	<0.0010	<0.020	0.00013	13	<0.0010	<0.00030	0.011	1.2	<0.00020	<0.020	3.4	0.076	<0.00020	0.0010	<0.10	1.6	<0.00020	1.6	<0.00010	1.9	0.028	7.6	<0.00020	<0.0010	0.0027	<0.00010	<0.0010	0.045
	23-Aug-22		0.092	<0.00060	0.00048	0.011	<0.0010	<0.020	0.00013	12	<0.0010	<0.00030	0.0076	0.83	<0.00020	<0.020	3.2	0.087	<0.00020	0.00084	<0.10	1.5	<0.00020	1.3	<0.00010	1.9	0.027	5.7	<0.00020	<0.0010	0.0031	<0.00010	<0.0010	0.036
	9-Sep-22		0.088	<0.00060	0.00050	0.010	<0.0010	<0.020	0.000041	11	0.0011	<0.00030	0.0059	0.38	<0.00020	<0.020	2.9	0.023	<0.00020	0.00056	<0.10	1.4	<0.00020	1.0	<0.00010	1.9	0.026	5.0	<0.00020	<0.0010	0.0037	<0.00010	<0.0010	0.018
	20-Sep-22		0.078	<0.00060	0.00051	<0.010	<0.0010	<0.020	0.000035	12	<0.0010	<0.00030	0.0059	0.40	<0.00020	<0.020	3.4	0.018	<0.00020	0.00055	<0.10	1.6	<0.00020	1.0	<0.00010	2.1	0.027	5.6	<0.00020	<0.0010	0.0026	<0.00010	<0.0010	0.012
	4-Oct-22		0.079	<0.00060	0.00044	0.012	<0.0010	<0.020	0.000038	11	<0.0010	<0.00030	0.0054	0.41	<0.00020	<0.020	3.2	0.018	<0.00020	0.00055	<0.10	1.5	<0.00020	1.0	<0.00010	1.9	0.027	5.2	<0.00020	<0.0010	0.0032	<0.00010	<0.0010	0.015
	18-Oct-22 [3]		0.14	<0.00060	0.00046	0.01	<0.0010	<0.020	0.000038	11	<0.0010	<0.00030	0.0055	0.52	<0.00020	<0.020	3	0.015	<0.00020	0.00061	<0.10	1.4	<0.00020	0.98	<0.00010	1.7	0.024	5.3	<0.00020	<0.0010	0.0049	<0.00010	<0.0010	0.011
CL-6	31-May-22		0.091	<0.00060	0.00044	<0.010	<0.0010	<0.020	0.00015	12	<0.0010	<0.00030	0.011	0.63	<0.00020	<0.020	3.1	0.032	<0.00020	0.00067	<0.10	1.5	<0.00020	1.4	<0.00010	1.9	0.025	6.5	<0.00020	<0.0010	0.003	<0.00010	<0.0010	0.053
	14-Jun-22		0.064	<0.00060	0.00049	0.01	<0.0010	<0.020	0.000029	9.6	<0.0010	<0.00030	0.0058	0.20	<0.00020	<0.020	2.9	0.014	<0.00020	0.00052	<0.10	1.4	<0.00020	0.86	<0.00010	2.1	0.025	4.3	<0.00020	<0.0010	0.0028	<0.00010	<0.0010	0.017
	28-Jun-22		0.099	<0.00060	0.00040	<0.010	<0.0010	<0.020	0.00012	12	<0.0010	<0.00030	0.0085	0.62	<0.00020	<0.020	3.1	0.027	<0.00020	0.00067	<0.10	1.5	<0.00020	1.3	<0.00010	1.9	0.025	6.3	<0.00020	<0.0010	0.0028	<0.00010	<0.0010	0.042
	12-Jul-22		0.13	<0.00060	0.00052	0.011	<0.0010	<0.020	0.00010	13	<0.0010	<0.00030	0.0085	1.0	<0.00020	<0.020	3.2	0.09	<0.00020	0.00067	<0.10	1.5	<0.00020	1.8	<0.00010	1.9	0.025	7.2	<0.00020	<0.0010	0.0049	<0.00010	<0.0010	0.046
	26-Jul-22		0.11	<0.00060	0.00045	0.011	<0.0010	<0.020	0.00012	12	<0.0010	0.0003	0.0078	0.94	<0.00020	<0.020	3.0	0.14	<0.00020	0.0019	<0.10	1.5	<0.00020	2.0	<0.00010	1.8	0.025	6.4	<0.00020	<0.0010	0.0031	<0.00010	<0.0010	0.049
	9-Aug-22		0.11	<0.00060	0.00055	0.012	<0.0010	<0.020	0.000082	13	<0.0010	0.00034	0.0070	1.4	<0.00020	<0.020	3.4	0.19	<0.00020	0.00078	<0.10	1.5	<0.00020	1.6	<0.00010	1.9	0.030	6.2	<0.00020	<0.0010	0.0044	<0.00010	<0.0010	0.032
		SW-115	0.097	<0.00060	0.00058	0.011	<0.0010	<0.020	0.000075	12	<0.0010	0.00032	0.0067	1.4	<0.00020	<0.020	3.2	0.19	<0.00020	0.00070	<0.10	1.4	<0.00020	1.5	<0.00010	1.8	0.027	5.9	<0.00020	<0.0010	0.0037	<0.00010	<0.0010	0.033
	RPD		*13%*	*NC*	*5%*	*NC*	*NC*	*NC*	*9%*	*8%*	*NC*	*NC*	*4%*	*0%*	*NC*	*NC*	*6%*	*0%*	*NC*	*11%*	*NC*	*7%*	*NC*	*6%*	*NC*	*5%*	*11%*	*5%*	*NC*	*NC*	*17%*	*NC*	*NC*	*3%*
	23-Aug-22		0.078	<0.00060	0.00049	0.01	<0.0010	<0.020	0.000036	11	<0.0010	<0.00030	0.0049	0.55	<0.00020	<0.020	3.0	0.087	<0.00020	0.00075	<0.10	1.4	<0.00020	1.2	<0.00010	1.8	0.026	4.4	<0.00020	<0.0010	0.003	<0.00010	<0.0010	0.021
	9-Sep-22		0.10	<0.00060	0.00059	0.010	<0.0010	0.021	0.000036	11	<0.0010	<0.00030	0.0054	0.28	<0.00020	<0.020	2.9	0.017	<0.00020	0.00067	<0.10	1.4	<0.00020	0.97	<0.00010	1.9	0.026	4.5	<0.00020	<0.0010	0.0042	<0.00010	<0.0010	0.015
	20-Sep-22		0.088	<0.00060	0.00052	<0.010	<0.0010	<0.020	0.000034	11	<0.0010	<0.00030	0.0049	0.27	<0.00020	<0.020	3.0	0.015	<0.00020	0.00072	<0.10	1.4	<0.00020	0.96	<0.00010	1.8	0.025	4.6	<0.00020	<0.0010	0.0031	<0.00010	<0.0010	0.012
	4-Oct-22		0.076	<0.00060	0.00050	<0.010	<0.0010	0.024	0.000034	11	<0.0010	<0.00030	0.0050	0.29	<0.00020	<0.020	3.2	0.014	<0.00020	0.00070	<0.10	1.5	<0.00020	0.99	<0.00010	1.9	0.027	5.0	<0.00020	<0.0010	0.0036	<0.00010	<0.0010	0.014
	18-Oct-22 [3]		0.12	<0.00060	0.00045	0.011	<0.0010	<0.020	0.000029	11	0.0011	<0.00030	0.0042	0.31	<0.00020	<0.020	3.1	0.014	<0.00020	0.0006	<0.10	1.5	<0.00020	0.85	<0.00010	1.9	0.025	4.7	<0.00020	<0.0010	0.0056	<0.00010	<0.0010	0.0082
CL-7	31-May-22		0.090	<0.00060	0.00040	0.010	<0.0010	<0.020	0.00022	16	<0.0010	<0.00030	0.014	1.1	<0.00020	<0.020	3.7	0.046	<0.00020	0.00070	<0.10	1.7	<0.00020	1.4	<0.00010	2.0	0.028	11	<0.00020	<0.0010	0.0031	<0.00010	<0.0010	0.075
		SW-101	0.088	<0.00060	0.00046	<0.010	<0.0010	<0.020	0.00020	15	<0.0010	0.00032	0.014	1.0	<0.00020	<0.020	3.5	0.045	<0.00020	0.00078	<0.10	1.7	<0.00020	1.4	<0.00010	2.0	0.028	11	<0.00020	<0.0010	0.0025	<0.00010	<0.0010	0.074
	RPD		*2%*	*NC*	*14%*	*NC*	*NC*	*NC*	*10%*	*6%*	*NC*	*NC*	*0%*	*10%*	*NC*	*NC*	*6%*	*2%*	*NC*	*11%*	*NC*	*0%*	*NC*	*0%*	*NC*	*0%*	*0%*	*0%*	*NC*	*NC*	*21%*	*NC*	*NC*	*1%*
	14-Jun-22		0.097	<0.00060	0.00038	<0.010	<0.0010	<0.020	0.00024	15	<0.0010	<0.00030	0.014	1.1	<0.00020	<0.020	3.4	0.033	<0.00020	0.00081	<0.10	1.6	<0.00020	1.5	<0.00010	1.9	0.028	9.7	<0.00020	<0.0010	0.0031	<0.00010	<0.0010	0.083
	28-Jun-22		0.091	<0.00060	0.00038	0.012	<0.0010	<0.020	0.00021	15	<0.0010	<0.00030	0.012	0.80	<0.00020	0.036	3.7	0.021	<0.00020	0.00094	<0.10	1.7	<0.00020	1.7	<0.00010	2.3	0.027	9.8	<0.00020	<0.0010	0.0026	<0.00010	<0.0010	0.062
	12-Jul-22		0.084	<0.00060	0.00048	<0.010	<0.0010	<0.020	0.00015	15	<0.0010	<0.00030	0.010	0.65	<0.00020	<0.020	3.6	0.014	<0.00020	0.00075	<0.10	1.6	<0.00020	1.4	<0.00010	1.9	0.027	9.7	<0.00020	<0.0010	0.0028	<0.00010	<0.0010	0.056
	26-Jul-22		0.062	<0.00060	0.00044	<0.010	<0.0010	<0.020	0.000091	12	<0.0010	<0.00030	0.0077	0.38	<0.00020	<0.020	2.9	0.0093	<0.00020	0.00063	<0.10	1.5	<0.00020	1.1	<0.00010	1.8	0.024	6.4	<0.00020	<0.0010	0.0019	<0.00010	<0.0010	0.034
	9-Aug-22		0.094	<0.00060	0.00043	0.010	<0.0010	<0.020	0.000075	12	<0.0010	<0.00030	0.0072	0.38	<0.00020	<0.020	3.1	0.011	<0.00020	0.00067	<0.10	1.4	<0.00020	1.1	<0.00010	1.8	0.027	6.0	<0.00020	<0.0010	0.0035	<0.00010	<0.0010	0.027
	23-Aug-22		0.067	<0.00060	0.00041	<0.010	<0.0010	<0.020	0.000059	11	<0.0010	<0.00030	0.0063	0.29	<0.00020	<0.020	3.1	0.0086	<0.00020	<0.00050	<0.10	1.5	<0.00020	0.97	<0.00010	1.8	0.026	5.6	<0.00020	<0.0010	0.0022	<0.00010	<0.0010	0.020
	9-Sep-22		0.074	<0.00060	0.00039	<0.010	<0.0010	<0.020	0.000052	12	<0.0010	<0.00030	0.0067	0.46	<0.00020	<0.020	2.9	0.019	<0.00020	0.00059	<0.10	1.4	<0.00020	1.0	<0.00010	1.7	0.026	5.5	<0.00020	<0.0010	0.0023	<0.00010	<0.0010	0.021
		SW-101	0.070	<0.00060	0.00039	<0.010	<0.0010	<0.020	0.000041	12	<0.0010	<0.00030	0.0069	0.47	<0.00020	<0.020	3.0	0.020	<0.00020	0.00053	<0.10	1.4	<0.00020	1.0	<0.00010	1.8	0.027	5.7	<0.00020	<0.0010	0.0029	<0.00010	<0.0010	0.021
	RPD		*6%*	*NC*	*0%*	*NC*	*NC*	*NC*	*24%*	*0%*	*NC*	*NC*	*3%*	*2%*	*NC*	*NC*	*3%*	*5%*	*NC*	*11%*	*NC*	*0%*	*NC*	*0%*	*NC*	*6%*	*4%*	*4%*	*NC*	*NC*	*23%*	*NC*	*NC*	*0%*
	20-Sep-22		0.051	<0.00060	0.00045	<0.010	<0.0010	<0.020	0.000044	13	<0.0010	<0.00030	0.0065	0.48	<0.00020	<0.020	3.4	0.015	<0.00020	<0.00050	<0.10	1.6	<0.00020	1.1	<0.00010	2.1	0.026	6.5	<0.00020	<0.0010	0.0017	<0.00010	<0.0010	0.015
		SW-104	0.060	<0.00060	0.00047	<0.010	<0.0010	<0.020	0.000043	12	<0.0010	<0.00030	0.0066	0.45	<0.00020	<0.020	3.2	0.014	<0.00020	0.00057	<0.10	1.5	<0.00020	1.0	<0.00010	2.0	0.026	6.0	<0.00020	<0.0010	0.0018	<0.00010	<0.0010	0.015
	RPD		*16%*	*NC*	*4%*	*NC*	*NC*	*NC*	*2%*	*8%*	*NC*	*NC*	*2%*	*6%*	*NC*	*NC*	*6%*	*7%*	*NC*	*NC*	*NC*	*6%*	*NC*	*10%*	*NC*	*5%*	*0%*	*8%*	*NC*	*NC*	*6%*	*NC*	*NC*	*0%*
	4-Oct-22		0.077	<0.00060	0.00043	<0.010	<0.0010	<0.020	0.000041	12	<0.0010	<0.00030	0.0054	0.58	<0.00020	<0.020	3.2	0.019	<0.00020	<0.00050	<0.10	1.5	<0.00020	1.1	<0.00010	1.9	0.026	6.1	<0.00020	<0.0010	0.0031	<0.00010	<0.0010	0.014
	18-Oct-22 [3]		0.097	<0.00060	0.00045	0.01	<0.0010	<0.020	0.000038	12	<0.0010	<0.00030	0.0063	0.64	<0.00020	<0.020	3.3	0.016	<0.00020	0.00056	<0.10	1.6	<0.00020	1.1	<0.00010	1.8	0.026	6.4	<0.00020	<0.0010	0.0037	<0.00010	<0.0010	0.013

TABLE 6
2022 TOTAL METALS IN SURFACE WATER
SHERRIDON MINE SITE, MANITOBA

Sample ID	Date	Field Duplicate Sample ID	Parameter [1]																														
			Total Aluminum (Al)	Total Antimony (Sb)	Total Arsenic (Ar)	Total Barium (Ba)	Total Beryllium (Be)	Total Boron (B)	Total Cadmium (Cd)	Total Calcium (Ca)	Total Chromium (Cr)	Total Cobalt (Co)	Total Copper (Cu)	Total Iron (Fe)	Total Lead (Pb)	Total Lithium (Li)	Total Magnesium (Mg)	Total Manganese (Mn)	Total Molybdenum (Mb)	Total Nickel (Ni)	Total Phosphorus (P)	Total Potassium (K)	Total Selenium (Se)	Total Silicon (Si)	Total Silver (Ag)	Total Sodium (Na)	Total Strontium (Sr)	Total Sulphur (S)	Total Thallium (Tl)	Total Tin (Sn)	Total Titanium (Ti)	Total Uranium (U)	Total Vanadium (V)	Total Zinc (Zn)
CL-8	31-May-22		0.087	<0.00060	0.00044	<0.010	<0.0010	<0.020	0.00021	15	<0.0010	<0.00030	0.013	1.0	<0.00020	<0.020	3.5	0.044	<0.00020	0.00071	<0.10	1.7	<0.00020	1.4	<0.00010	1.9	0.027	11	<0.00020	<0.0010	0.0022	<0.00010	<0.0010	0.073
	14-Jun-22		0.082	<0.00060	0.00037	<0.010	<0.0010	<0.020	0.00016	13	<0.0010	<0.00030	0.012	0.84	<0.00020	<0.020	3.3	0.030	<0.00020	0.00054	<0.10	1.6	<0.00020	1.3	<0.00010	1.8	0.024	8.4	<0.00020	<0.0010	0.0032	<0.00010	<0.0010	0.061
	28-Jun-22		0.087	<0.00060	0.00042	<0.010	<0.0010	<0.020	0.00016	13	<0.0010	<0.00030	0.010	0.66	<0.00020	<0.020	3.4	0.017	<0.00020	0.00093	<0.10	1.6	<0.00020	1.9	<0.00010	1.9	0.024	8.3	<0.00020	<0.0010	0.0025	<0.00010	<0.0010	0.055
	12-Jul-22		0.079	<0.00060	0.00040	<0.010	<0.0010	<0.020	0.00012	13	<0.0010	<0.00030	0.0087	0.47	<0.00020	0.027	3.3	0.011	<0.00020	0.00089	<0.10	1.5	<0.00020	1.3	<0.00010	1.9	0.025	7.3	<0.00020	<0.0010	0.0026	<0.00010	<0.0010	0.040
	26-Jul-22		0.075	<0.00060	0.00049	<0.010	<0.0010	<0.020	0.000096	12	<0.0010	<0.00030	0.0086	0.36	<0.00020	<0.020	2.9	0.0094	<0.00020	0.00064	<0.10	1.5	<0.00020	1.1	<0.00010	1.8	0.024	6.5	<0.00020	<0.0010	0.0025	<0.00010	<0.0010	0.038
		SW-116	0.072	<0.00060	0.00040	<0.010	<0.0010	<0.020	0.00011	12	<0.0010	<0.00030	0.0081	0.37	<0.00020	<0.020	3.0	0.0094	<0.00020	0.00070	<0.10	1.5	<0.00020	1.1	<0.00010	1.8	0.024	6.5	<0.00020	<0.0010	0.0027	<0.00010	<0.0010	0.036
	RPD		*4%*	*NC*	*20%*	*NC*	*NC*	*NC*	*14%*	*0%*	*NC*	*NC*	*6%*	*3%*	*NC*	*NC*	*3%*	*0%*	*NC*	*9%*	*NC*	*0%*	*NC*	*0%*	*NC*	*0%*	*0%*	*0%*	*NC*	*NC*	*8%*	*NC*	*NC*	*5%*
	9-Aug-22		0.082	<0.00060	0.00042	0.010	<0.0010	<0.020	0.000071	12	<0.0010	<0.00030	0.0076	0.43	<0.00020	<0.020	3.2	0.012	<0.00020	0.00066	<0.10	1.5	<0.00020	1.1	<0.00010	1.8	0.027	6.4	<0.00020	<0.0010	0.0025	<0.00010	<0.0010	0.029
	23-Aug-22		0.058	<0.00060	0.00047	<0.010	<0.0010	<0.020	0.000042	13	<0.0010	<0.00030	0.0064	0.33	<0.00020	0.029	3.3	0.011	<0.00020	0.00072	<0.10	1.5	<0.00020	1.0	<0.00010	1.9	0.026	7.0	<0.00020	<0.0010	0.0023	<0.00010	<0.0010	0.022
	9-Sep-22		0.071	<0.00060	0.00040	<0.010	<0.0010	<0.020	0.000046	12	<0.0010	<0.00030	0.0068	0.44	<0.00020	<0.020	2.9	0.019	<0.00020	0.00057	<0.10	1.3	<0.00020	0.95	<0.00010	1.7	0.026	5.5	<0.00020	<0.0010	0.0030	<0.00010	<0.0010	0.021
	20-Sep-22		0.055	<0.00060	0.00035	<0.010	<0.0010	<0.020	0.000042	13	<0.0010	<0.00030	0.0056	0.46	<0.00020	<0.020	3.4	0.016	<0.00020	<0.00050	<0.10	1.6	0.00023	1.1	<0.00010	2.0	0.023	6.7	<0.00020	<0.0010	0.0025	<0.00010	<0.0010	0.012
	4-Oct-22		0.084	<0.00060	0.00043	<0.010	<0.0010	<0.020	0.000036	12	<0.0010	<0.00030	0.0058	0.59	<0.00020	<0.020	3.3	0.020	<0.00020	0.00050	<0.10	1.5	<0.00020	1.1	<0.00010	2.0	0.027	6.2	<0.00020	<0.0010	0.0027	<0.00010	<0.0010	0.015
	18-Oct-22 [3]		0.093	<0.00060	0.00035	<0.010	<0.0010	<0.020	0.00004	12	<0.0010	<0.00030	0.0053	0.57	<0.00020	<0.020	3.2	0.007	<0.00020	0.00053	<0.10	1.5	<0.00020	1.1	<0.00010	2.0	0.025	5.9	<0.00020	<0.0010	0.0033	<0.00010	<0.0010	0.012
Laboratory Detection Limits			*0.0030*	*0.00060*	*0.00020*	*0.010*	*0.0010*	*0.020*	*0.020*	*0.30*	*0.0010*	*0.00030*	*0.0010*	*0.060*	*0.00020*	*0.020*	*0.20*	*0.0040*	*0.00020*	*0.00050*	*0.10*	*0.30*	*0.00020*	*0.10*	*0.00010*	*0.50*	*0.020*	*0.20*	*0.00020*	*0.0010*	*0.0010*	*0.00010*	*0.0010*	*0.0030*
Manitoba Water Quality Standards, Objectives, and Guidelines [2]																																	
Protection of Aquatic Life and Wildlife																																	
Tier II Objective - Chronic									*0.00125 [2a]*		*1.176*		*0.00857 [2a]*		*0.0421 [2a]*					*0.302 [2a]*													*0.0771 [2a]*
Tier II Objective - Acute									*0.00018 [2a]*		*0.056*		*0.00598 [2a]*		*0.00164 [2a]*					*0.0336 [2a]*													*0.0771 [2a]*
Tier III Guideline			*0.1 (pH ≥ 6.5)* *0.005 (pH <6.5)*											*0.3*					*0.073*				*0.001*		*0.0001*				*0.0008*			*0.015*		

Notes:

"-" = No Data NC = Not Calculated RPD = Relative Percent Difference

1. All values are expressed in milligrams per litre (mg/L) unless otherwise specified.
2. Manitoba Water Quality Standards, Objectives, and Guidelines (MWQSOG). Manitoba Water Stewardship, 2011.
   a. Calculated as per Manitoba Conservation (2011) using mean total hardness of 59.4 mg/L as $CaCO_3$ as measured in Cold Lake on May 11, 2016.
3. Near surface samples taken instead of near bottom samples due to equipment issues onsite.

- Values above MWQSOG value.

Sample ID	Date	Duplicate Sample ID	Parameter [1]																														
			Total Aluminum (Al)	Total Antimony (Sb)	Total Arsenic (Ar)	Total Barium (Ba)	Total Beryllium (Be)	Total Boron (B)	Total Cadmium (Cd)	Total Calcium (Ca)	Total Chromium (Cr)	Total Cobalt (Co)	Total Copper (Cu)	Total Iron (Fe)	Total Lead (Pb)	Total Lithium (Li)	Total Magnesium (Mg)	Total Manganese (Mn)	Total Molybdenum (Mb)	Total Nickel (Ni)	Total Phosphorus (P)	Total Potassium (K)	Total Selenium (Se)	Total Silicon (Si)	Total Silver (Ag)	Total Sodium (Na)	Total Strontium (Sr)	Total Sulphur (S)	Total Thallium (Tl)	Total Tin (Sn)	Total Titanium (Ti)	Total Uranium (U)	Total Vanadium (V)	Total Zinc (Zn)
TRIP BLANK	31-May-22		<0.0030	<0.00060	<0.00020	<0.010	<0.0010	<0.020	<0.000020	<0.30	<0.0010	<0.00030	<0.0010	<0.060	<0.00020	<0.020	<0.20	<0.0040	<0.00020	<0.00050	<0.10	<0.30	<0.00020	0.15	<0.00010	<0.50	<0.020	<0.20	<0.00020	<0.0010	<0.0010	<0.00010	0.0012	<0.0030
	14-Jun-22		<0.0030	<0.00060	<0.00020	<0.010	<0.0010	<0.020	<0.000020	<0.30	<0.0010	<0.00030	<0.0010	<0.060	0.00021	<0.020	<0.20	<0.0040	<0.00020	<0.00050	<0.10	<0.30	<0.00020	<0.10	<0.00010	<0.50	<0.020	<0.20	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	<0.0030
	28-Jun-22		<0.0030	<0.00060	<0.00020	<0.010	<0.0010	<0.020	<0.000020	<0.30	<0.0010	<0.00030	<0.0010	<0.060	<0.00020	<0.020	<0.20	<0.0040	<0.00020	<0.00050	<0.10	<0.30	<0.00020	0.39	<0.00010	<0.50	<0.020	<0.20	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	<0.0030
	12-Jul-22		<0.0030	<0.00060	<0.00020	<0.010	<0.0010	<0.020	<0.000020	<0.30	<0.0010	<0.00030	<0.0010	<0.060	<0.00020	<0.020	<0.20	<0.0040	<0.00020	<0.00050	<0.10	<0.30	<0.00020	0.20	<0.00010	<0.50	<0.020	<0.20	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	<0.0030
	26-Jul-22		<0.0030	<0.00060	<0.00020	<0.010	<0.0010	0.038	<0.000020	<0.30	<0.0010	<0.00030	<0.0010	<0.060	<0.00020	<0.020	<0.20	<0.0040	<0.00020	<0.00050	<0.10	<0.30	<0.00020	0.23	<0.00010	<0.50	<0.020	<0.20	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	<0.0030
	9-Aug-22		0.0048	<0.00060	<0.00020	<0.010	<0.0010	<0.020	<0.000020	<0.30	0.0012	<0.00030	<0.0010	<0.060	<0.00020	<0.020	<0.20	<0.0040	<0.00020	0.00059	<0.10	<0.30	<0.00020	0.14	<0.00010	<0.50	<0.020	<0.20	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	<0.0030
	23-Aug-22		<0.0034	<0.00060	<0.00020	<0.010	<0.0010	<0.020	<0.000020	<0.30	<0.0010	<0.00030	<0.0010	<0.060	<0.00020	0.031	<0.20	<0.0040	<0.00020	<0.00050	<0.10	<0.30	<0.00020	0.12	<0.00010	<0.50	<0.020	<0.20	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	<0.0030
	9-Sep-22		0.0053	<0.00060	<0.00020	<0.010	<0.0010	<0.020	<0.000020	<0.30	<0.0010	<0.00030	<0.0010	<0.060	<0.00020	<0.020	<0.20	<0.0040	<0.00020	<0.00050	<0.10	<0.30	<0.00020	<0.50	<0.00010	<0.50	<0.020	<0.20	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	<0.0030
	20-Sep-22		<0.0030	<0.00060	<0.00020	<0.010	<0.0010	<0.020	<0.000020	<0.30	<0.0010	<0.00030	<0.0010	<0.060	<0.00020	<0.020	<0.20	<0.0040	<0.00020	<0.00050	<0.10	<0.30	<0.00020	<0.50	<0.00010	<0.50	<0.020	<0.20	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	<0.0030
	4-Oct-22		0.0035	<0.00060	<0.00020	<0.010	<0.0010	<0.020	<0.000020	<0.30	<0.0010	<0.00030	<0.0010	<0.060	<0.00020	<0.020	<0.20	<0.0040	<0.00020	<0.00050	<0.10	<0.30	<0.00020	<0.50	<0.00010	<0.50	<0.020	<0.20	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	<0.0030
	18-Oct-22		0.012	<0.00060	<0.00020	<0.010	<0.0010	<0.020	<0.000020	<0.30	<0.0010	<0.00030	<0.0010	<0.060	<0.00020	<0.020	<0.20	<0.0040	<0.00020	<0.00050	<0.10	<0.30	<0.00020	<0.50	<0.00010	<0.50	<0.020	<0.20	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	<0.0030
Laboratory Detection Limits			*0.0030*	*0.00060*	*0.00020*	*0.010*	*0.0010*	*0.020*	*0.020*	*0.30*	*0.0010*	*0.00030*	*0.0010*	*0.060*	*0.00020*	*0.020*	*0.20*	*0.0040*	*0.00020*	*0.00050*	*0.10*	*0.30*	*0.00020*	*0.10*	*0.00010*	*0.50*	*0.020*	*0.20*	*0.00020*	*0.0010*	*0.0010*	*0.00010*	*0.0010*	*0.0030*

Notes:

"-" = No Data NC = Not Calculated RPD = Relative Percent Difference

1. All values are expressed in milligrams per litre (mg/L) unless otherwise specified.

- Values above MWQSOG value.

TABLE 7
RAINBOW TROUT 96 HR LC_{50} TOXICITY RESULTS
SHERRIDON MINE SITE, MANITOBA

Sample ID	Date	Concentration (%vol/vol)	Start				24 hours				48 hours				72 hours				96 hours								Result
			Temperature (°C)	pH	Conductivity (µS/cm)	DO (mg/L)	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)	Temperature (°C)	pH	Conductivity (µS/cm)	DO (mg/L)	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)	96 hrs LC_{50} (% vol/vol)
CAMP LAKE DISCHARGE	31-May-22	0	14	8.1	346	8.7	0	0	0	0	0	0	0	0	0	0	0	0	15	8.0	359	8.6	0	0	0	0	
		6.25	15	8.1	339	8.7	0	0	0	0	0	0	0	0	0	0	0	0	16	7.9	367	8.3	0	0	0	0	
		12.5	15	8.0	333	8.7	0	0	0	0	0	0	0	0	0	0	0	0	16	7.8	357	8.4	0	0	0	0	>100
		25	15	8.0	323	8.8	0	0	0	0	0	0	0	0	0	0	0	0	16	7.8	345	8.2	0	0	0	0	
		50	15	7.7	289	8.7	0	0	0	0	0	0	0	0	0	0	0	0	16	7.7	312	8.5	0	0	0	0	
		100	15	7.1	232	8.8	0	0	0	0	0	0	0	0	0	0	0	0	16	7.1	258	8.6	0	0	0	0	
	14-Jun-22	0	15	8.4	344	9.3	0	0	0	0	0	0	0	0	0	0	0	0	16	7.9	348	8.9	0	0	0	0	
		6.25	15	8.1	335	9.1	0	0	0	0	0	0	0	0	0	0	0	0	16	8.0	340	9.1	0	0	0	0	
		12.5	15	8.1	326	9.2	0	0	0	0	0	0	0	0	0	0	0	0	16	7.6	330	8.0	0	0	0	0	>100
		25	15	8.0	316	9.2	0	0	0	0	0	0	0	0	0	0	0	0	16	7.8	319	8.8	0	0	0	0	
		50	15	7.9	286	9.5	0	0	0	0	0	0	0	0	0	0	0	0	16	7.6	287	8.9	0	0	0	0	
		100	15	7.4	227	9.6	0	0	0	0	0	0	0	0	0	0	0	0	16	7.1	227	9.0	0	0	0	0	
	12-Jul-22	0	15	8.0	338	9.0	0	0	0	0	0	0	0	0	0	0	0	0	15	7.6	371	7.7	0	0	0	0	
		6.25	15	8.0	329	9.0	0	0	0	0	0	0	0	0	0	0	0	0	15	7.7	362	8.1	0	0	0	0	
		12.5	15	8.0	321	9.0	0	0	0	0	0	0	0	0	0	0	0	0	16	7.5	356	7.4	0	0	0	0	>100
		25	15	8.0	298	9.0	0	0	0	0	0	0	0	0	0	0	0	0	15	7.8	320	8.7	0	0	0	0	
		50	15	7.7	265	9.1	0	0	0	0	0	0	0	0	0	0	0	0	15	7.7	287	8.8	0	0	0	0	
		100	15	7.3	199	9.1	0	0	0	0	0	0	0	0	0	0	0	0	15	7.2	215	8.8	0	0	0	0	
	09-Aug-22	0	14	8.0	287	9.0	0	0	0	0	0	0	0	0	0	0	0	0	14	7.7	297	8.8	0	0	0	0	
		6.25	14	7.9	285	9.0	0	0	0	0	0	0	0	0	0	0	0	0	14	7.5	297	8.2	0	0	0	0	
		12.5	14	7.8	282	9.0	0	0	0	0	0	0	0	0	0	0	0	0	14	75	295	8.3	0	0	0	0	>100
		25	14	7.7	278	9.1	0	0	0	0	0	0	0	0	0	0	0	0	14	7.5	291	8.4	0	0	0	0	
		50	14	7.6	270	9.1	0	0	0	0	0	0	0	0	0	0	0	0	15	7.5	281	8.9	0	0	0	0	
		100	14	7.1	252	9.4	0	0	0	0	0	0	0	0	0	0	0	0	15	7.1	267	8.8	0	0	0	0	
	09-Sep-22	0	15	7.7	274	8.8	0	0	0	0	0	0	0	0	0	0	0	0	15	7.9	270	9.0	0	0	0	0	
		6.25	15	7.7	275	9.1	0	0	0	0	0	0	0	0	0	0	0	0	15	7.7	273	9.0	0	0	0	0	
		12.5	15	7.6	276	9.1	0	0	0	0	0	0	0	0	0	0	0	0	14	7.7	274	9.0	0	0	0	0	>100
		25	15	7.6	279	9.2	0	0	0	0	0	0	0	0	0	0	0	0	14	7.6	275	9.3	0	0	0	0	
		50	14	7.4	286	9.1	0	0	0	0	0	0	0	0	0	0	0	0	15	7.4	284	9.1	0	0	0	0	
		100	14	6.9	301	9.2	0	0	0	0	0	0	0	0	0	0	0	0	15	6.7	299	9.0	0	0	0	0	
	04-Oct-22	0	14	8.0	259	9.1	0	0	0	0	0	0	0	0	0	0	0	0	15	7.8	292	8.6	0	0	0	0	
		6.25	14	8.0	261	9.1	0	0	0	0	0	0	0	0	0	0	0	0	15	7.8	292	8.8	0	0	0	0	
		12.5	14	8.0	263	9.1	0	0	0	0	0	0	0	0	0	0	0	0	15	7.8	294	8.8	0	0	0	0	>100
		25	14	8.0	266	9.2	0	0	0	0	0	0	0	0	0	0	0	0	15	7.6	298	8.8	0	0	0	0	
		50	14	7.8	273	9.3	0	0	0	0	0	0	0	0	0	0	0	0	15	7.5	305	8.8	0	0	0	0	
		100	14	6.7	288	9.4	0	0	0	0	0	0	0	0	0	0	0	0	15	7.1	322	8.9	0	0	0	0	
Metal and Diamond Mining Effluent Regulations [1]																											
Rainbow trout 96 hr LC_{50}			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100 [1a]

Notes:
"-" = No Data

1. Metal and Diamond Mining Effluent Regulations (MDMER) discharge quality limits, SOR/2002-222, Minister of Justice, amended June 9, 2023.
   a. An LC_{50} value >100% indicates discharge is not acutely toxic to fish.

BOLD - Exceedance of MDMER Criteria

TABLE 9
2022 GROUNDWATER MONITORING AND FIELD CHEMISTRY
SHERRIDON MINE SITE, MANITOBA

Sample ID	Date	Field Duplicate Sample ID	Depth to Water (m)	Depth to Bottom (m)	Stick up (m)	Temperature (^{o}C)	pH	EC (µS/cm)	DO (mg/L)	ORP (mV)	Notes
BEDROCK WELLS											
MW-01-BR	20-Sep-22		5.708	11.778	0.854	5.1	6.96	2,028	9.05	125.7	
MW-02-BR	20-Sep-22		1.510	10.403	0.919	11.8	7.98	740	3.23	95.5	
MW-04-BR	20-Sep-22		1.450	14.310	0.994	5.1	8.30	910	5.95	87.5	
MW-05-BR	20-Sep-22		6.400	16.379	0.900	7.7	5.55	112.4	4.01	119.2	
MW-06-BR	20-Sep-22		1.450	7.480	0.983	8.3	6.41	612.7	3.93	32.8	
MW-07-BR	20-Sep-22	MW-100	3.114	10.297	0.946	9.4	5.95	503.9	7.30	124.0	
MW-08-BR	20-Sep-22		11.193	16.261	0.899	-	-	-	-	-	No field chemistry collected due to bailer lost down well.
OVERBURDEN WELLS											
MW-03-OB	20-Sep-22		1.319	8.306	1.055	5.2	7.13	769.9	4.05	57.0	
MW-04-OB	20-Sep-22		0.805	8.621	0.661	11.1	7.57	1,129	3.32	80.4	
MW-09-OB	20-Sep-22		0.860	6.451	0.861	10.2	6.51	459.5	3.02	24.5	
MW-10-OB	20-Sep-22		1.402	6.276	1.202	9.0	6.57	902	4.04	22.7	
MW-11-OB	20-Sep-22		0.746	7.692	0.855	9.9	6.90	945	4.99	24.1	

Notes:
"-" = no value DO = Dissolved Oxygen EC = Electrical Conductivity ORP = Oxygen Reduction Potential

TABLE 10
2022 GROUNDWATER GENERAL WATER QUALITY
SHERRIDON MINE SITE, MANITOBA

Sample ID	Date	Field Duplicate Sample ID	Parameter [1]																		
			Anion Sum (meq/L)	Cation Sum (meq/L)	Ionic Balance (%)	pH (units)	E.C. (µS/cm)	Alkalinity (PP as $CaCO_3$)	Alkalinity (Total as $CaCO_3$)	Bicarbonate	Carbonate	Hydroxide	Chloride	Sulphate	Hardness as $CaCO_3$	Nitrate	Nitrate as N	Nitrite	Nitrite as N	Nitrate & Nitrite as N	T.D.S.
BEDROCK WELLS																					
MW-01-BR	20-Sep-22		28	30	2.2	7.62	2,200	<1.0	340	420	<1.0	<1.0	69	930	1,400	12	2.6	0.45	0.14	2.8	1,700
MW-02-BR	20-Sep-22		7.9	8.1	1.1	7.83	770	<1.0	200	240	<1.0	<1.0	29	150	150	<0.044	<0.010	<0.033	<0.010	<0.010	470
MW-04-BR	20-Sep-22		9.8	10	3.3	7.90	970	<1.0	210	260	<1.0	<1.0	27	230	190	0.053	0.012	<0.033	<0.010	0.012	600
MW-05-BR	20-Sep-22		1.1	1.1	NC	5.91	120	<1.0	15	18	<1.0	<1.0	<1.0	36	47	0.48	0.11	<0.033	<0.010	0.11	67
MW-06-BR	20-Sep-22		6.3	6.1	1.8	5.94	650	<1.0	27	33	<1.0	<1.0	<1.0	280	280	0.056	0.013	<0.033	<0.010	0.013	410
MW-07-BR	20-Sep-22		5.0	4.7	3.8	4.54	550	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	240	210	2.7	0.61	<0.033	<0.010	0.61	330
		MW-100	5.1	4.7	4.6	4.60	550	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	240	210	3.0	0.68	<0.033	<0.010	0.68	340
	RPD		*2%*	*0%*	*19%*	*1%*	*0%*	*NC*	*NC*	*NC*	*NC*	*NC*	*NC*	*0%*	*0%*	*11%*	*11%*	*NC*	*NC*	*11%*	*3%*
OVERBURDEN WELLS																					
MW-03-OB	20-Sep-22		9.1	9.7	3.2	7.15	840	<1.0	200	250	<1.0	<1.0	2.0	240	440	0.11	0.025	<0.033	<0.010	0.025	550
MW-04-OB	20-Sep-22		14	16	5.7	7.81	1,200	<1.0	360	440	<1.0	<1.0	14	300	700	0.097	0.022	<0.033	<0.010	0.022	810
MW-09-OB	20-Sep-22		9.7	10	1.4	6.20	920	<1.0	88	110	<1.0	<1.0	1.2	380	460	0.15	0.034	<0.033	<0.010	0.034	620
MW-10-OB	20-Sep-22		9.9	11	4.1	6.39	960	<1.0	110	130	<1.0	<1.0	<1.0	370	470	<0.044	<0.010	<0.033	<0.010	<0.010	640
MW-11-OB	20-Sep-22		11	12	4.5	7.02	1,000	<1.0	180	220	<1.0	<1.0	<1.0	380	590	0.070	0.016	<0.033	<0.010	0.016	710
QA/QC																					
FIELD BLANK	20-Sep-22		0.0000	0.0090	NC	5.06	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	<0.044	<0.010	<0.033	<0.010	<0.010	<10
TRIP BLANK	20-Sep-22		0.0000	0.012	NC	4.90	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	<0.044	<0.010	<0.033	<0.010	<0.010	<10
Laboratory Detection Limits			-	-	-	-	*2.0*	*1.0*	*1.0*	*1.0*	*1.0*	*1.0*	*1.0*	*1.0-25*	*0.50*	*0.044-0.22*	*0.010-0.050*	*0.033*	*0.010*	*0.010-0.050*	*10-25*
Manitoba Water Quality Standards, Objectives, and Guidelines [2]																					
Protection of Freshwater Aquatic Life																					
Tier III Guideline						*6.5 - 9.0*												*13*	*0.06*		

Notes:
"-" = No Data E.C. = Electrical Conductivity T.D.S. = Total Dissolved Solids RPD = Relative Percent Difference

1. All values are expressed in milligrams per litre (mg/L) unless otherwise specified.
2. Manitoba Water Quality Standards, Objectives, and Guidelines (MWQSOG). Manitoba Water Stewardship, 2011.

- Values above MWQSOG value.

TABLE 11
2022 DISSOLVED METALS IN GROUNDWATER
SHERRIDON MINE SITE, MANITOBA

Sample ID	Date	Field Duplicate Sample ID	Parameter [1]																																
			Aluminum (Al) Dissolved	Antimony (Sb) Dissolved	Arsenic (As) Dissolved	Barium (Ba) Dissolved	Beryllium (Be) Dissolved	Boron (B) Dissolved	Cadmium (Cd) Dissolved	Calcium (Ca) Dissolved	Chromium (Cr) Dissolved	Cobalt (Co) Dissolved	Copper (Cu) Dissolved	Iron (Fe) Dissolved	Lead (Pb) Dissolved	Lithium (Li) Dissolved	Magnesium (Mg) Dissolved	Manganese (Mn) Dissolved	Mercury (Hg) Dissolved	Molybdenum (Mo) Dissolved	Nickel (Ni) Dissolved	Phosphorus (P) Dissolved	Potassium (K) Dissolved	Selenium (Se) Dissolved	Silicon (Si) Dissolved	Silver (Ag) Dissolved	Sodium (Na) Dissolved	Strontium (Sr) Dissolved	Sulphur (S) Dissolved	Thallium (Tl) Dissolved	Tin (Sn) Dissolved	Titanium (Ti) Dissolved	Uranium (U) Dissolved	Vanadium (V) Dissolved	Zinc (Zn) Dissolved
BEDROCK WELLS																																			
MW-01-BR	20-Sep-22		<0.0030	<0.00060	0.00050	0.10	<0.0010	0.19	<0.000020	290	<0.0010	0.017	<0.0010	<0.060	<0.00020	0.033	160	1.6	<0.0000019	0.010	0.013	<0.10	21	0.0086	5.5	<0.00010	41	1.4	310	<0.00020	<0.0010	<0.0010	0.052	<0.0010	0.0032
MW-02-BR	20-Sep-22		0.0030	<0.00060	0.00051	0.052	<0.0010	0.54	<0.000020	32	<0.0010	0.0018	0.0015	<0.060	<0.00020	0.083	17	0.068	<0.0000019	0.00055	<0.00050	<0.10	6.9	<0.00020	6.4	<0.00010	110	0.42	48	<0.00020	<0.0010	<0.0010	0.0060	<0.0010	<0.0030
MW-04-BR	20-Sep-22		0.0074	<0.00060	0.0023	0.040	<0.0010	0.49	<0.000020	37	<0.0010	0.00055	<0.0010	<0.060	<0.00020	0.13	23	0.096	<0.0000019	0.0059	0.00079	<0.10	8.9	0.00020	6.0	<0.00010	150	0.62	79	<0.00020	<0.0010	<0.0010	0.0090	<0.0010	<0.0030
MW-05-BR	20-Sep-22		0.12	<0.00060	<0.00020	0.014	<0.0010	<0.020	0.000079	14	<0.0010	0.0091	0.014	<0.060	<0.00020	<0.020	3.2	0.13	<0.0000019	<0.00020	0.0038	<0.10	3.0	0.00030	5.8	<0.00010	1.6	<0.020	12	<0.00020	<0.0010	<0.0010	0.00064	<0.0010	0.029
MW-06-BR	20-Sep-22		<0.0030	<0.00060	<0.00020	0.024	<0.0010	0.038	0.100	83	<0.0010	0.044	0.22	0.17	<0.00020	<0.020	18	1.6	<0.0000019	<0.00020	0.017	<0.10	8.3	<0.00020	7.4	<0.00010	4.4	0.14	99	0.00021	<0.0010	<0.0010	0.00069	<0.0010	27
MW-07-BR	20-Sep-22		3.5	<0.00060	<0.00020	0.029	<0.0010	<0.020	0.066	63	<0.0010	0.032	5.8	0.064	0.00039	<0.020	13	0.57	<0.0000019	<0.00020	0.019	0.11	10	0.00069	12	<0.00010	2.6	0.077	88	<0.00020	<0.0010	<0.0010	0.0032	<0.0010	17
		MW-100	3.3	<0.00060	<0.00020	0.029	<0.0010	0.020	0.064	64	<0.0010	0.031	5.6	<0.060	0.00029	<0.020	13	0.57	<0.0000019	<0.00020	0.019	0.11	10	0.00092	12	<0.00010	2.7	0.078	87	<0.00020	<0.0010	<0.0010	0.0029	<0.0010	16
	RPD		*6%*	*NC*	*NC*	*0%*	*NC*	*NC*	*3%*	*2%*	*NC*	*3%*	*4%*	*NC*	*29%*	*NC*	*0%*	*0%*	*NC*	*NC*	*0%*	*0%*	*0%*	*29%*	*0%*	*NC*	*4%*	*1%*	*1%*	*NC*	*NC*	*NC*	*10%*	*NC*	*6%*
OVERBURDEN WELLS																																			
MW-03-OB	20-Sep-22		<0.0030	<0.00060	0.00080	0.14	<0.0010	0.071	<0.000020	130	<0.0010	0.0012	<0.0010	<0.060	<0.00020	0.033	25	0.92	<0.0000019	0.00093	0.0018	<0.10	9.1	<0.00020	7.9	<0.00010	15	0.38	83	<0.00020	<0.0010	<0.0010	0.0039	<0.0010	0.038
MW-04-OB	20-Sep-22		<0.0030	<0.00060	<0.00020	0.11	<0.0010	0.14	<0.000020	180	<0.0010	<0.00030	<0.0010	<0.060	<0.00020	0.074	60	0.58	<0.0000019	<0.00020	<0.00050	<0.10	5.6	<0.00020	9.1	<0.00010	31	0.84	110	<0.00020	<0.0010	<0.0010	0.0016	<0.0010	<0.0030
MW-09-OB	20-Sep-22		<0.0030	<0.00060	<0.00020	0.033	<0.0010	0.055	0.00021	130	<0.0010	0.039	<0.0010	7.4	<0.00020	0.058	31	2.2	<0.0000019	<0.00020	0.014	<0.10	7.1	<0.00020	8.6	<0.00010	6.5	0.24	140	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	24
MW-10-OB	20-Sep-22		<0.0030	<0.00060	<0.00020	0.023	<0.0010	0.11	0.0021	140	<0.0010	0.028	0.0012	3.7	<0.00020	0.046	28	2.3	<0.0000019	0.00070	0.014	<0.10	7.5	<0.00020	8.3	<0.00010	24	0.33	140	<0.00020	<0.0010	<0.0010	0.0015	<0.0010	9.1
MW-11-OB	20-Sep-22		<0.0030	<0.00060	0.0010	0.089	<0.0010	0.062	<0.000020	170	<0.0010	0.0032	<0.0010	<0.060	<0.00020	0.076	39	1.9	<0.0000019	0.00027	0.0018	<0.10	6.1	<0.00020	9.3	<0.00010	10	0.56	130	<0.00020	<0.0010	<0.0010	0.00024	<0.0010	0.47
QA/QC																																			
FIELD BLANK	20-Sep-22		<0.0030	<0.00060	<0.00020	<0.010	<0.0010	<0.020	<0.000020	<0.30	<0.0010	<0.00030	<0.0010	<0.060	<0.00020	<0.020	<0.20	<0.0040	<0.0000019	<0.00020	<0.00050	<0.10	<0.30	<0.00020	<0.50	<0.00010	<0.50	<0.020	<0.20	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	<0.0030
TRIP BLANK	20-Sep-22		<0.0030	<0.00060	<0.00020	<0.010	<0.0010	<0.020	<0.000020	<0.30	<0.0010	<0.00030	<0.0010	<0.060	<0.00020	<0.020	<0.20	<0.0040	-	<0.00020	<0.00050	<0.10	<0.30	<0.00020	<0.50	<0.00010	<0.50	<0.020	<0.20	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	<0.0030
Laboratory Detection Limits			*0.0030*	*0.00060*	*0.00020*	*0.010*	*0.0010*	*0.020*	*0.000020*	*0.30*	*0.0010*	*0.00030*	*0.0010*	*0.060*	*0.00020*	*0.020*	*0.20*	*0.0040*	*0.0000019*	*0.00020*	*0.00050*	*0.10*	*0.30*	*0.00020*	*0.50*	*0.00010*	*0.50*	*0.020*	*0.20*	*0.00020*	*0.0010*	*0.0010*	*0.00010*	*0.0010*	*0.0030*
Manitoba Water Quality Standards, Objectives, and Guidelines [2]																																			
Protection of Aquatic Life and Wildlife																																			
Tier II Objective - Chronic			-	-	-	-	-	-	*0.000145 - 0.00153* [2a]	-	*0.0399 - 0.644* [2a]	-	*0.00470 - 0.0854* [2a]	-	*0.0011 - 0.0372* [2a]	-	-	-	-	-	*0.0275 - 0.485* [2a]	-	-	-	-	-	-	-	-	-	-	-	-	-	*0.0623 - 1.105* [2a]
Tier II Objective - Acute			-	-	-	-	-	-	*0.000965 - 0.0230* [2a]	-	*0.311 - 5.010* [2a]	-	*0.00660 - 0.162* [2a]	-	*0.0.0281 - 0.959* [2a]	-	-	-	-	-	*0.247 - 4.366* [2a]	-	-	-	-	-	-	-	-	-	-	-	-	-	*0.0618 - 1.0964* [2a]

Notes:
"-" = No Data NC = Not Calculated RPD = Relative Percent Difference

1. All values are expressed in milligrams per litre (mg/L) unless otherwise specified.
2. Manitoba Water Quality Standards, Objectives, and Guidelines (MWQSOG). Manitoba Water Stewardship, 2011.
   a. MWQSOG Tier II Objectives for dissolved metals are dependent on the hardness of the sample (exception is Arsenic and Chromium IV). Equations used to calculate the hardness-dependent objectives for dissolved metals are provided in the MWQSOG.

- Values above MWQSOG value.

TABLE 12
2022 TOTAL METALS IN GROUNDWATER
SHERRIDON MINE SITE, MANITOBA

Sample ID	Date	Field Duplicate Sample ID	Parameter [1]																																				
			Total Aluminum (Al)	Total Antimony (Sb)	Total Arsenic (Ar)	Total Barium (Ba)	Total Beryllium (Be)	Total Boron (B)	Total Cadmium (Cd)	Total Calcium (Ca)	Total Chromium (Cr)	Total Cobalt (Co)	Total Copper (Cu)	Total Iron (Fe)	Total Lead (Pb)	Total Lithium (Li)	Total Magnesium (Mg)	Total Manganese (Mn)	Total Mercury (Hg)	Total Molybdenum (Mb)	Total Nickel (Ni)	Total Phosphorus (P)	Total Potassium (K)	Total Selenium (Se)	Total Silicon (Si)	Total Silver (Ag)	Total Sodium (Na)	Total Strontium (Sr)	Total Sulphur (S)	Total Thallium (Tl)	Total Tin (Sn)	Total Titanium (Ti)	Total Uranium (U)	Total Vanadium (V)	Total Zinc (Zn)
BEDROCK WELLS																																								
MW-01-BR	20-Sep-22		0.99	<0.00060	0.0015	0.12	<0.0010	0.18	0.000051	280	0.0028	0.019	0.0082	3.1	0.0017	0.040	160	1.9	0.0000056	0.012	0.017	<0.10	21	0.0067	7.3	<0.00010	41	1.4	290	<0.00020	<0.0010	0.066	0.053	0.0043	0.014
MW-02-BR	20-Sep-22		0.15	<0.00060	0.00073	0.052	<0.0010	0.53	<0.000020	32	<0.0010	0.0025	0.0019	0.25	<0.00020	0.085	17	0.073	<0.0000019	0.00075	<0.00050	<0.10	6.6	<0.00020	6.8	<0.00010	110	0.41	46	<0.00020	<0.0010	0.0056	0.0062	<0.0010	<0.0030
MW-04-BR	20-Sep-22		1.4	<0.00060	0.0027	0.049	<0.0010	0.49	0.000021	37	0.0037	0.0015	0.0066	1.5	0.0013	0.14	24	0.12	0.0000024	0.0059	0.0027	<0.10	9.2	0.00025	8.2	<0.00010	150	0.62	77	<0.00020	<0.0010	0.087	0.0089	0.0044	0.0058
MW-05-BR	20-Sep-22		0.34	<0.00060	<0.00020	0.014	<0.0010	<0.020	0.000074	14	<0.0010	0.0087	0.015	0.094	<0.00020	<0.020	3.1	0.13	<0.0000019	<0.00020	0.0031	<0.10	2.9	0.00032	5.9	<0.00010	1.5	<0.020	11	<0.00020	<0.0010	0.0030	0.00075	<0.0010	0.027
MW-06-BR	20-Sep-22		0.13	<0.00060	<0.00020	0.022	<0.0010	0.034	0.100	86	<0.0010	0.041	0.34	6.1	0.0068	0.044	19	1.7	<0.0000019	<0.00020	0.017	<0.10	8.4	0.00032	8.0	<0.00010	4.5	0.13	110	<0.00020	<0.0010	0.0030	0.0019	<0.0010	27
MW-07-BR	20-Sep-22		3.4	<0.00060	<0.00020	0.028	<0.0010	<0.020	0.064	66	<0.0010	0.031	5.6	0.094	0.00046	0.023	14	0.58	0.0000025	<0.00020	0.018	<0.10	10	0.0014	11	<0.00010	2.7	0.071	89	<0.00020	<0.0010	0.0018	0.0030	<0.0010	17
		MW-100	3.6	<0.00060	<0.00020	0.027	<0.0010	<0.020	0.065	63	<0.0010	0.030	5.5	0.093	0.00048	0.022	13	0.55	0.0000030	<0.00020	0.018	<0.10	10	0.0011	11	<0.00010	2.6	0.068	86	<0.00020	<0.0010	0.0033	0.0031	<0.0010	17
	RPD		*6%*	*NC*	*NC*	*4%*	*NC*	*NC*	*2%*	*5%*	*NC*	*3%*	*2%*	*1%*	*4%*	*NC*	*7%*	*5%*	*18%*	*NC*	*0%*	*NC*	*0%*	*24%*	*0%*	*NC*	*4%*	*4%*	*3%*	*NC*	*NC*	*59%*	*3%*	*NC*	*0%*
OVERBURDEN WELLS																																							
MW-03-OB	20-Sep-22		20	<0.00060	0.0048	0.28	0.0010	0.086	0.00017	140	0.044	0.012	0.033	25	0.0084	0.066	34	1.3	0.0000048	0.00073	0.031	0.39	15	0.00023	36	<0.00010	17	0.41	76	<0.00020	0.0023	1.2	0.0040	0.047	1.6
MW-04-OB	20-Sep-22		2.7	<0.00060	0.00047	0.13	<0.0010	0.14	0.000050	180	0.0055	0.0013	0.0044	3.6	0.0014	0.045	57	0.62	0.0000027	<0.00020	0.0039	0.41	5.9	<0.00020	13	<0.00010	31	0.82	99	<0.00020	0.0015	0.15	0.0021	0.0061	0.013
MW-09-OB	20-Sep-22		1.7	<0.00060	0.0015	0.040	<0.0010	0.046	0.00037	130	0.0036	0.041	0.0027	20	0.00065	0.065	32	2.3	<0.0000019	<0.00020	0.016	<0.10	7.7	<0.00020	12	<0.00010	6.8	0.22	150	<0.00020	<0.0010	0.11	0.00015	0.0030	26
MW-10-OB	20-Sep-22		1.8	<0.00060	0.00083	0.035	<0.0010	0.097	0.0038	140	0.0041	0.028	0.02	22	0.00095	0.056	30	2.5	<0.0000019	0.0012	0.016	<0.10	8.4	<0.00020	12	<0.00010	25	0.30	150	<0.00020	<0.0010	0.11	0.0020	0.0035	10
MW-11-OB	20-Sep-22		2.9	<0.00060	0.0037	0.10	<0.0010	0.056	0.000070	180	0.0059	0.0048	0.006	6.6	0.0012	0.054	42	1.9	<0.0000019	0.00029	0.0064	0.13	7.1	<0.00020	14	<0.00010	11	j	140	<0.00020	<0.0010	0.23	0.00047	0.0073	0.56
QA/QC																																								
FIELD BLANK	20-Sep-22		0.0060	<0.00060	<0.00020	<0.010	<0.0010	<0.020	<0.000020	<0.30	<0.0010	<0.00030	<0.0010	<0.060	<0.00020	<0.020	<0.20	<0.0040	<0.0000019	<0.00020	<0.00050	<0.10	<0.30	<0.00020	<0.50	<0.00010	<0.50	<0.020	0.29	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	<0.0030
TRIP BLANK	20-Sep-22		<0.0030	<0.00060	<0.00020	<0.010	<0.0010	<0.020	<0.000020	<0.30	<0.0010	<0.00030	<0.0010	<0.060	<0.00020	<0.020	<0.20	<0.0040	<0.0000019	<0.00020	<0.00050	<0.10	<0.30	<0.00020	<0.50	<0.00010	<0.50	<0.020	0.27	<0.00020	<0.0010	<0.0010	<0.00010	<0.0010	<0.0030
Laboratory Detection Limits			*0.0030*	*0.00060*	*0.00020*	*0.010*	*0.0010*	*0.020*	*0.000020*	*0.30*	*0.0010*	*0.00030*	*0.0010*	*0.060*	*0.00020*	*0.020*	*0.20*	*0.0040*	*0.0000019 - 0.0000038*	*0.00020*	*0.00050*	*0.10*	*0.30*	*0.00020*	*0.50*	*0.00010*	*0.50*	*0.020*	*0.20*	*0.00020*	*0.0010*	*0.0010*	*0.00010*	*0.0010*	*0.0030*
Manitoba Water Quality Standards, Objectives, and Guidelines [2]																																							
Protection of Aquatic Life and Wildlife																																							
Tier II Objective - Chronic			-	-	*0.150*	-	-	-	*0.000155 - 0.00191* [2a]	-	*0.0464 - 0.748* [2a]	-	*0.00489 - 0.0890* [2a]	-	*0.00122 - 0.0916* [2a]	-	-	-	-	-	*0.0275 - 0.486* [2a]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*0.0632 - 1.121* [2a]
Tier II Objective - Acute			-	-	*0.340*	-	-	-	*0.000989 - 0.0312* [2a]	-	*0.972 - 15.656* [2a]	-	*0.00687 - 0.168* [2a]	-	*0.0312 - 2.349* [2a]	-	-	-	-	-	*0.248 - 4.375* [2a]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*0.0632 - 1.121* [2a]
Protection of Freshwater Aquatic Life																																							
Tier III Guideline			*0.1 (pH ≥ 6.5) 0.005 (pH <6.5)*	-	-	-	-	-	-	-	-	-	-	*0.3*	-	-	-	-	*0.000026*	*0.073*	-	-	-	*0.001*	-	*0.0001*	-	-	-	*0.0008*	-	-	*0.015*	-	-

Notes:
"-" = No Data NC = Not Calculated RPD = Relative Percent Difference

1. All values are expressed in milligrams per litre (mg/L) unless otherwise specified.
2. Manitoba Water Quality Standards, Objectives, and Guidelines (MWQSOG). Manitoba Water Stewardship, 2011.
   a. MWQSOG Tier II Objectives for total metals are dependent on the hardness of the sample. Equations used to calculate the hardness-dependent objectives for total metals are provided in the MWQSOG.

- Values above MWQSOG value.

TABLE 13
COMPARISON OF KEY PARAMETER CONCENTRATIONS IN THE CAMP LAKE DISCHARGE
(2008 TO 2022)
SHERRIDON MINE SITE, MANITOBA

Parameter	Units	Fraction	2008	2022 (11 samples)			
				Mean	Max	Min	% Change
Aluminum	mg/L	Total	1.47	0.12	0.32	0.04	-92%
		Dissolved	1.43	0.032	0.069	0.0046	-98%
Cadmium	mg/L	Total	0.00178	0.00065	0.00098	0.00037	-63%
		Dissolved	0.00174	0.00051	0.00079	0.00032	-71%
Copper	mg/L	Total	0.149	0.026	0.048	0.011	-83%
		Dissolved	0.153	0.016	0.029	0.0065	-90%
Iron	mg/L	Total	21.0	3.69	6	2.10	-82%
		Dissolved	20.0	1.50	3.1	0.32	-93%
Zinc	mg/L	Total	0.71	0.19	0.30	0.120	-73%
		Dissolved	0.698	0.16	0.24	0.100	-77%
pH	pH units	N/A	3.4	6.77	7.1	5.93	99%

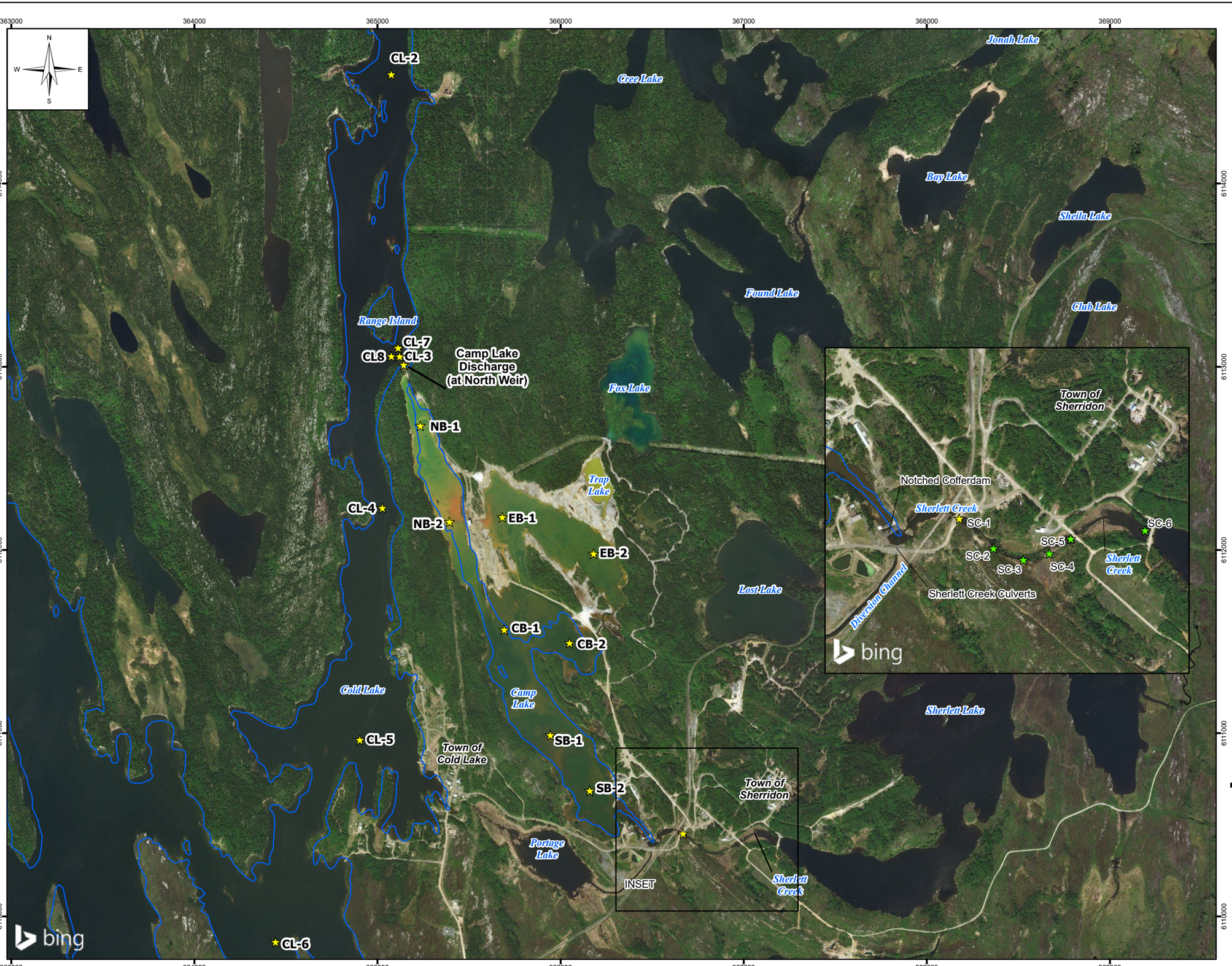
TABLE 14
COMPARISON OF KEY METALS PARAMETER CONCENTRATIONS IN COLD LAKE
(2008 TO 2022)
SHERRIDON MINE SITE, MANITOBA

Parameter	Year		Parameter Concentration [1]									
			CL2	CL3	CL4	CL5	CL6	CL2	CL3	CL4	CL5	CL6
			Total fraction					Dissolved fraction				
Aluminum	2022	Mean	0.087	0.088	0.11	0.096	0.097	0.039	0.036	0.038	0.032	0.027
		Max	0.12	0.15	0.18	0.14	0.13	0.049	0.073	0.057	0.050	0.045
		Min	0.06	0.055	0.072	0.078	0.064	0.025	0.017	0.021	0.018	0.018
	2008	September	0.38	0.36	0.27	0.23	0.074	0.35	0.37	0.27	0.20	0.042
		% Change	-77%	-76%	-60%	-59%	32%	-89%	-90%	-86%	-84%	-34%
Cadmium	2022	Mean	0.00014	0.00016	0.00011	0.00010	0.000070	0.00012	0.0001221	0.000085	0.000086	0.000065
		Max	0.00024	0.00065	0.00017	0.00019	0.00015	0.00017	0.00054	0.00013	0.00016	0.00013
		Min	0.000037	0.000042	0.000034	0.000035	0.000029	0.000023	0.000023	0.000028	0.000020	0.000021
	2008	September	0.00075	0.00072	0.00063	0.00056	0.00022	0.00069	0.00067	0.00059	0.00052	0.00018
		% Change	-81%	-78%	-82%	-82%	-68%	-83%	-82%	-86%	-84%	-63%
Copper	2022	Mean	0.010	0.011	0.0087	0.0085	0.0066	0.0080	0.0083	0.0068	0.0067	0.0053
		Max	0.017	0.032	0.012	0.013	0.011	0.011	0.022	0.0092	0.010	0.0098
		Min	0.0052	0.0056	0.0055	0.0054	0.0042	0.0050	0.0048	0.0048	0.0044	0.0035
	2008	September	0.045	0.044	0.037	0.032	0.013	0.039	0.038	0.032	0.027	0.011
		% Change	-77%	-76%	-77%	-73%	-47%	-79%	-78%	-79%	-75%	-50%
Iron	2022	Mean	1.3	0.87	1.9	0.82	0.59	0.65	0.44	0.73	0.40	0.22
		Max	2.6	3.5	5.5	1.3	1.4	1.0	1.5	1.7	0.67	0.48
		Min	0.53	0.32	0.51	0.38	0.20	0.27	0.18	0.20	0.16	0.085
	2008	September	1.8	1.6	1.2	1.0	0.52	1.2	0.78	0.22	0.12	0.21
		% Change	-27%	-46%	57%	-18%	13%	-47%	-44%	240%	226%	3%
Zinc	2022	Mean	0.051	0.052	0.039	0.038	0.028	0.041	0.04079091	0.030	0.029	0.021
		Max	0.076	0.21	0.060	0.068	0.053	0.064	0.17	0.048	0.060	0.047
		Min	0.012	0.012	0.013	0.011	0.0082	0.0098	0.0097	0.0093	0.0085	0.0070
	2008	September	0.29	0.28	0.25	0.22	0.094	0.27	0.27	0.24	0.21	0.085
		% Change	-82%	-82%	-84%	-83%	-70%	-85%	-85%	-88%	-86%	-75%

1. All values are expressed in milligrams per litre (mg/L) unless otherwise specified.

FIGURES

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LEGEND:

- Biweekly Water Sampling Location
- Additional Sherlett Creek Sampling Location
- Lake

NOTES:

1. Image Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.
2. All units are metric and in metres unless otherwise specified. Transverse Mercator Projection, NAD 1983, Zone 14. Elevations are in metres above sea level (MSL).

200 0 200 400 600 800
Metres

SCALE: 1:20,000 METRIC 11"x17"

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0	24/04/24	ISSUED WITH FINAL REPORT	MJN	EJC

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OAM SUBPROGRAM PROJECT
SHERRIDON MINE SITE
2022 WATER QUALITY SUMMARY REPORT

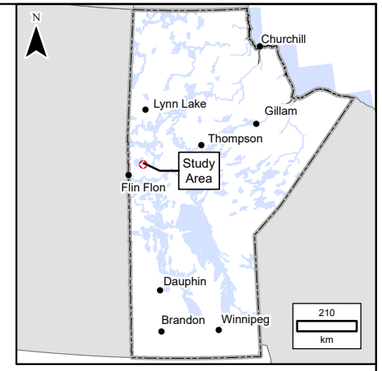
SITE PLAN AND SURFACE WATER SAMPLING LOCATIONS

APRIL 2024 | FIGURE 01 | REV: 0

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11"x17" PLOT SCALE 1:1

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LEGEND:

- Biweekly Water Sampling Location
- Additional Sherlett Creek Sampling Location
- Bedrock Monitoring Well
- Overburden Monitoring Well
- Wetland Area

NOTES:

1. Image Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community.
2. All units are metric and in metres unless otherwise specified. Transverse Mercator Projection, NAD 1983, Zone 14. Elevations are in metres above sea level (MSL).

25 0 25 50 75 100

Metres

SCALE: 1:3,000 METRIC 11"x17"

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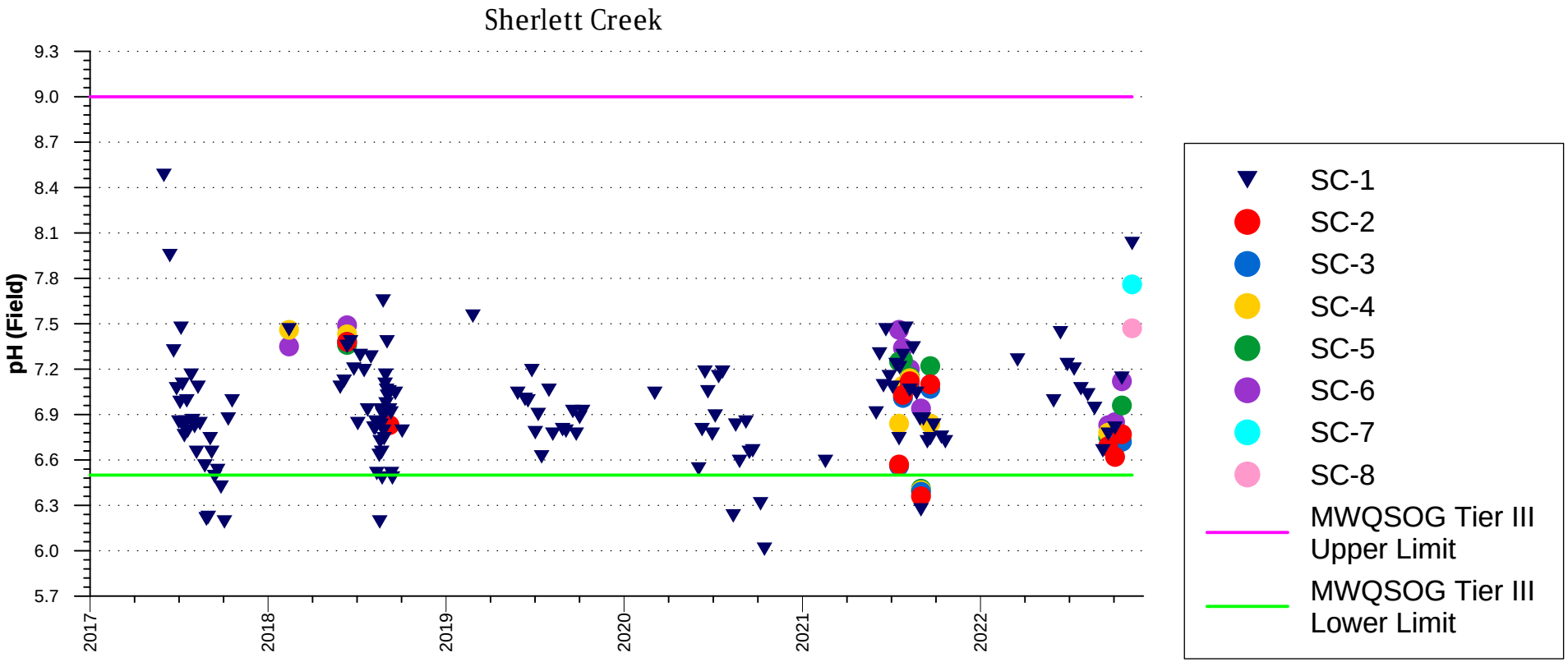
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OAM SUBPROGRAM PROJECT
SHERRIDON MINE SITE
2022 WATER QUALITY SUMMARY REPORT

GROUNDWATER MONITORING WELL LOCATIONS

APRIL 2024 | FIGURE 02 | REV: 0

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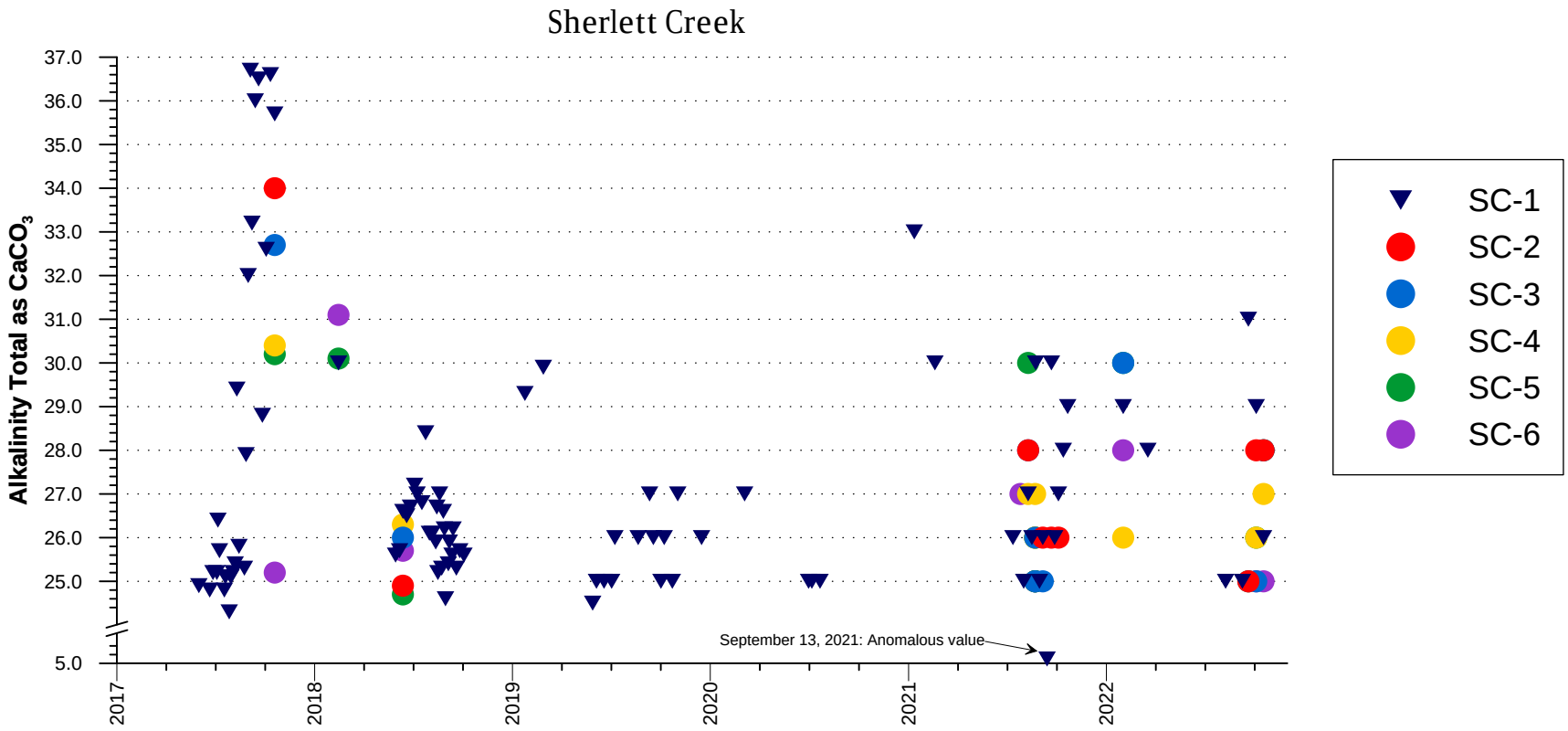
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2022 WATER QUALITY SUMMARY REPORT
SHERRIDON MINE SITE

SHERLETT CREEK — FIELD pH (2017 - 2022)

APRIL 2024 | FIGURE 03 | REV: 0



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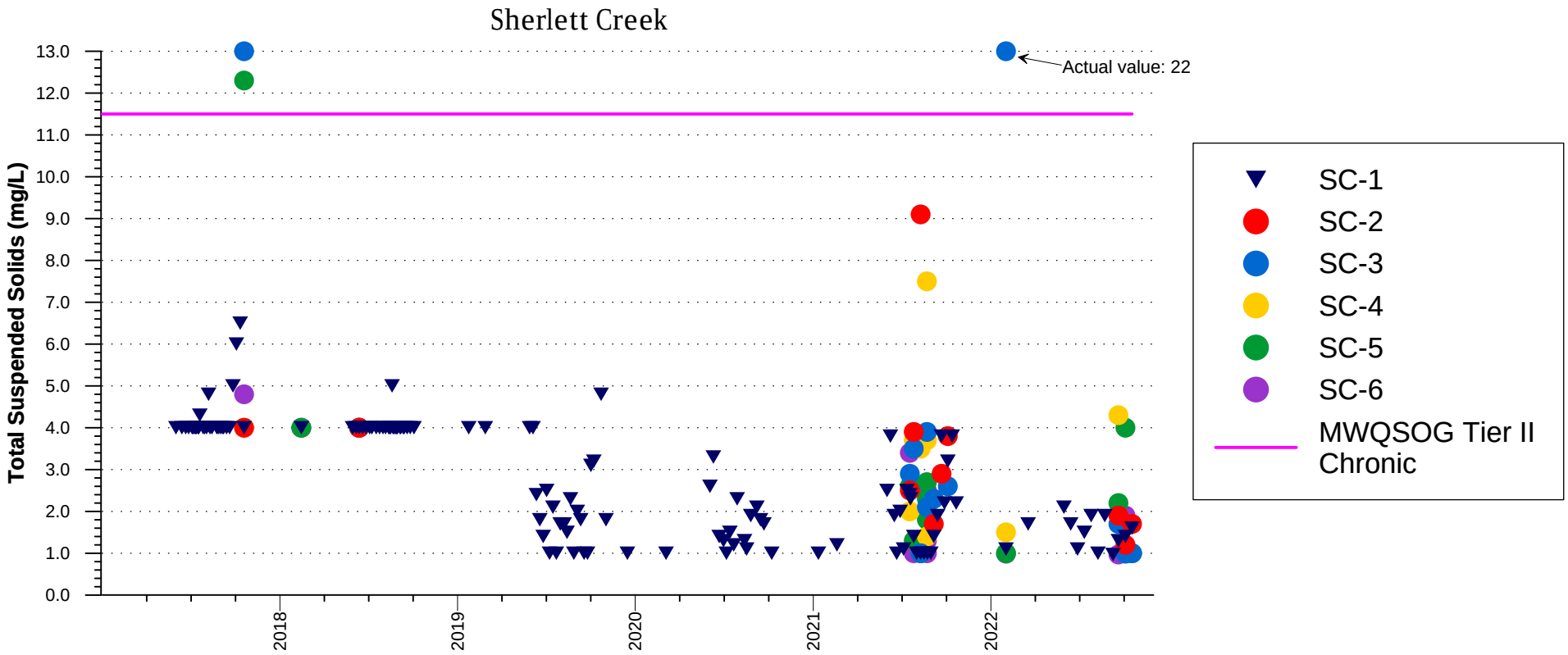
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2022 WATER QUALITY SUMMARY REPORT
SHERRIDON MINE SITE

SHERLETT CREEK — TOTAL ALKALINITY
(2017 - 2022)

APRIL 2024 | FIGURE 04 | REV: 0



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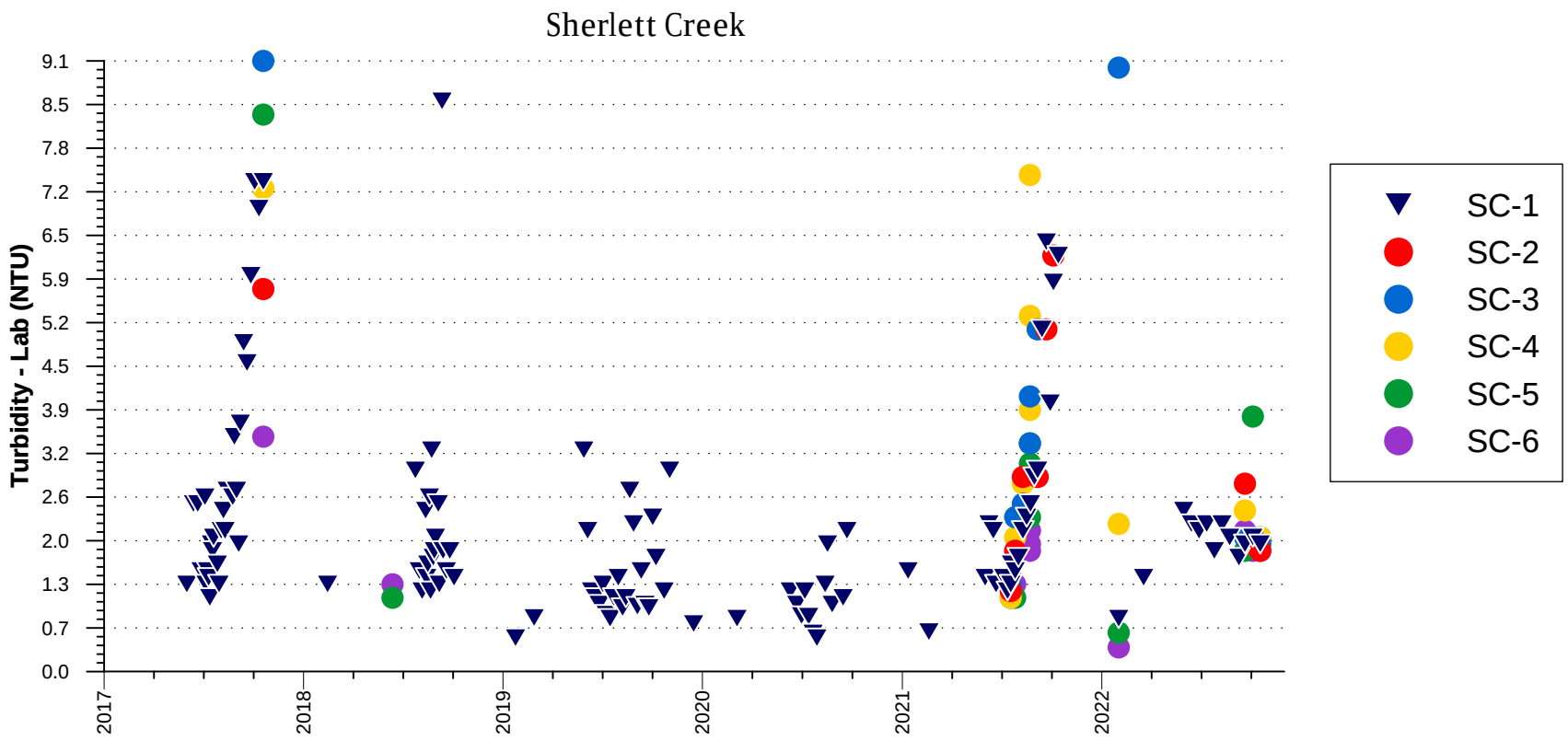
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2022 WATER QUALITY SUMMARY REPORT
SHERRIDON MINE SITE

SHERLETT CREEK
TOTAL SUSPENDED SOLIDS (2017 - 2022)

APRIL 2024	FIGURE 05	REV: 0



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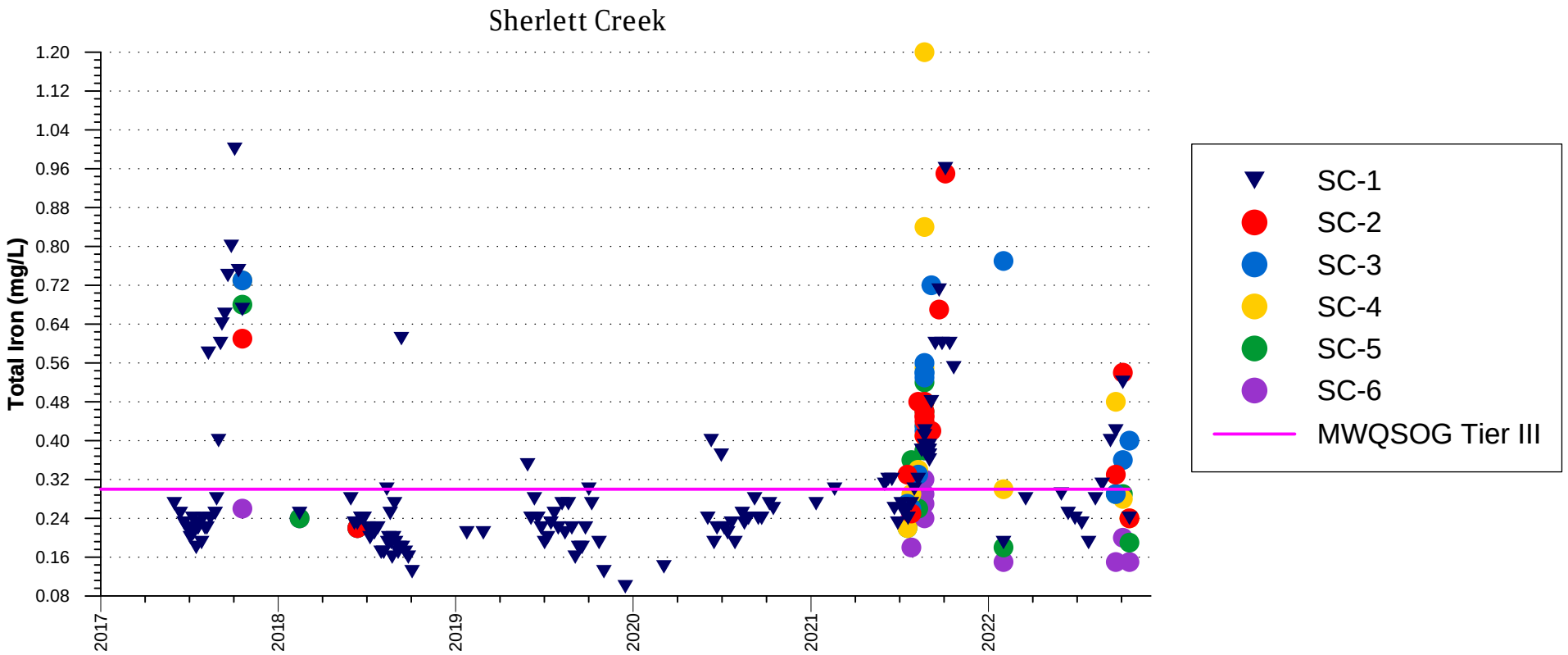
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2022 WATER QUALITY SUMMARY REPORT
SHERRIDON MINE SITE

SHERLETT CREEK — LAB TURBIDITY
(2017 - 2022)

APRIL 2024	FIGURE 06	REV: 0



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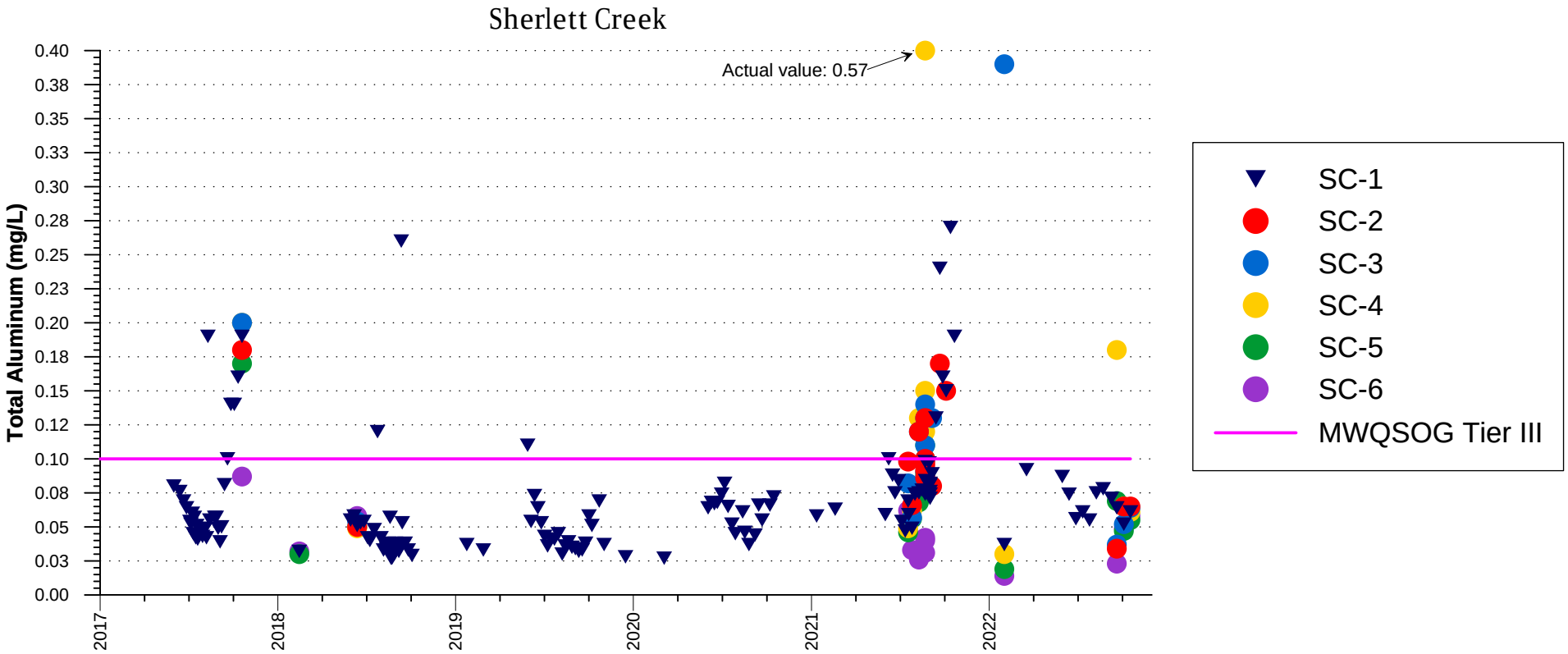
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2022 WATER QUALITY SUMMARY REPORT
SHERRIDON MINE SITE

SHERLETT CREEK — TOTAL IRON
(2017 - 2022)

APRIL 2024	FIGURE 07	REV: 0



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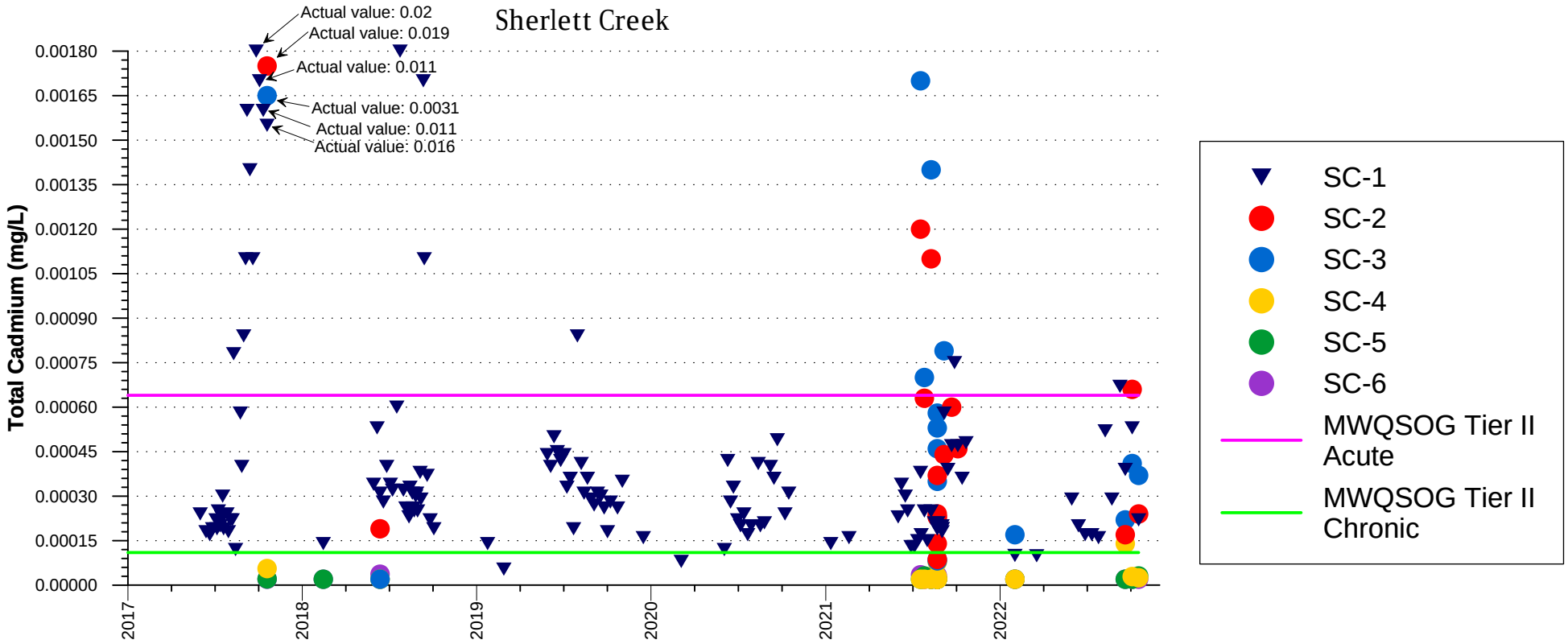
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2022 WATER QUALITY SUMMARY REPORT
SHERRIDON MINE SITE

SHERLETT CREEK — TOTAL ALUMINUM
(2017 - 2022)

APRIL 2024	FIGURE 08	REV: 0



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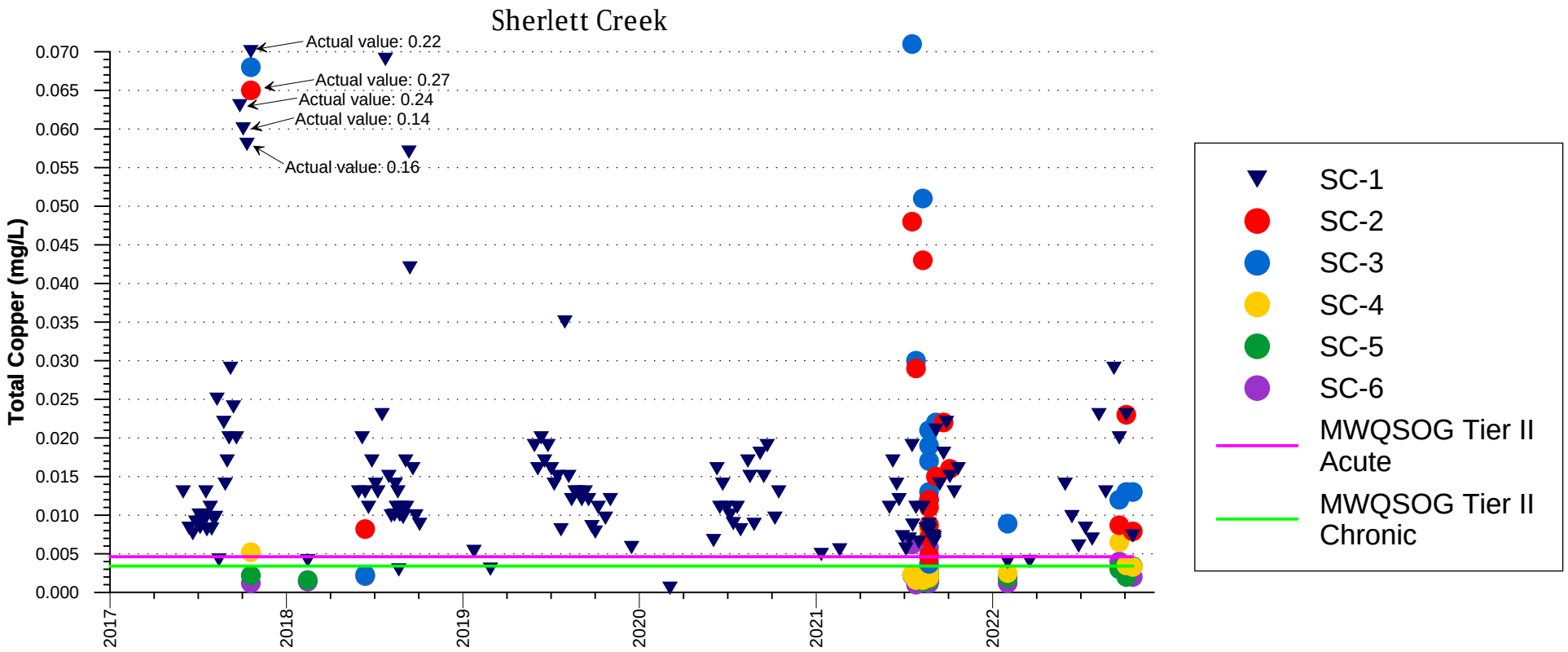
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2022 WATER QUALITY SUMMARY REPORT
SHERRIDON MINE SITE

SHERLETT CREEK — TOTAL CADMIUM
(2017 - 2022)

APRIL 2024	FIGURE 09	REV: 0



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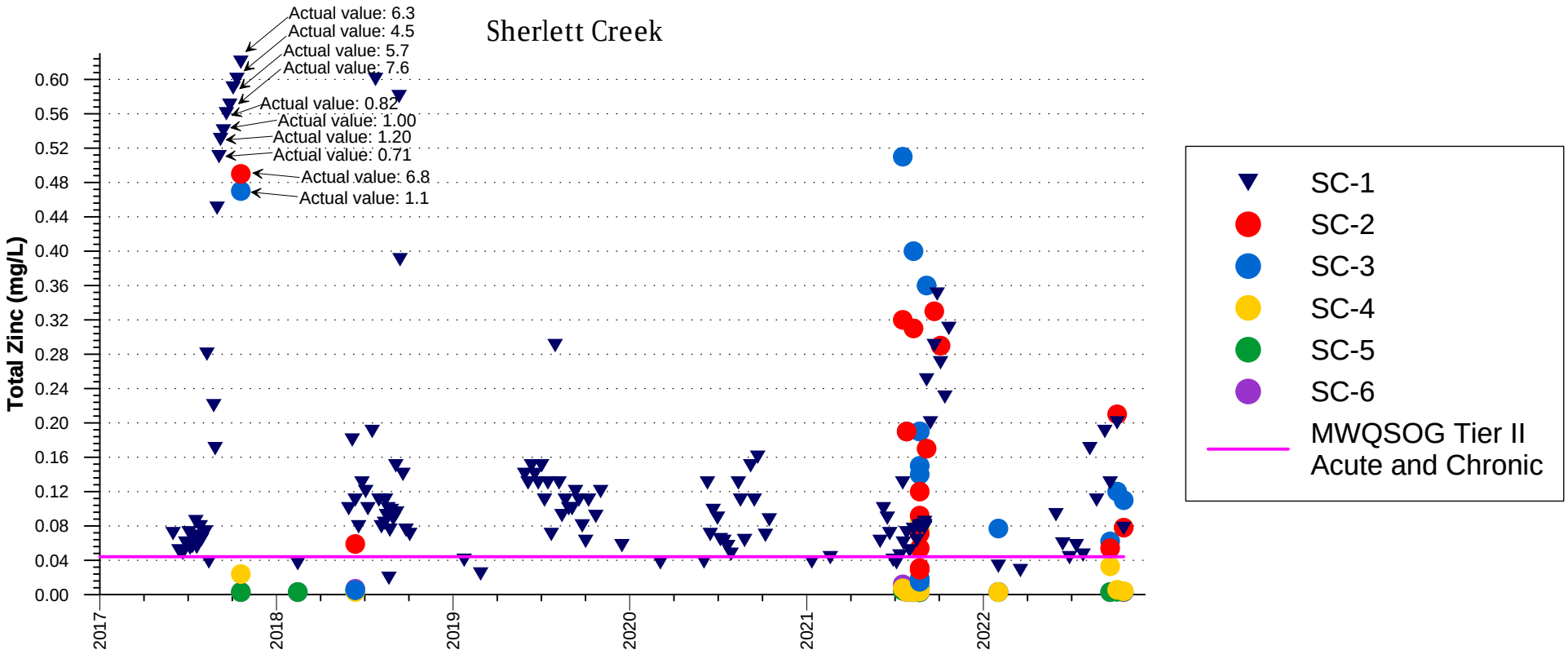
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2022 WATER QUALITY SUMMARY REPORT
SHERRIDON MINE SITE

SHERLETT CREEK — TOTAL COPPER
(2017 - 2022)

APRIL 2024	FIGURE 10	REV: 0



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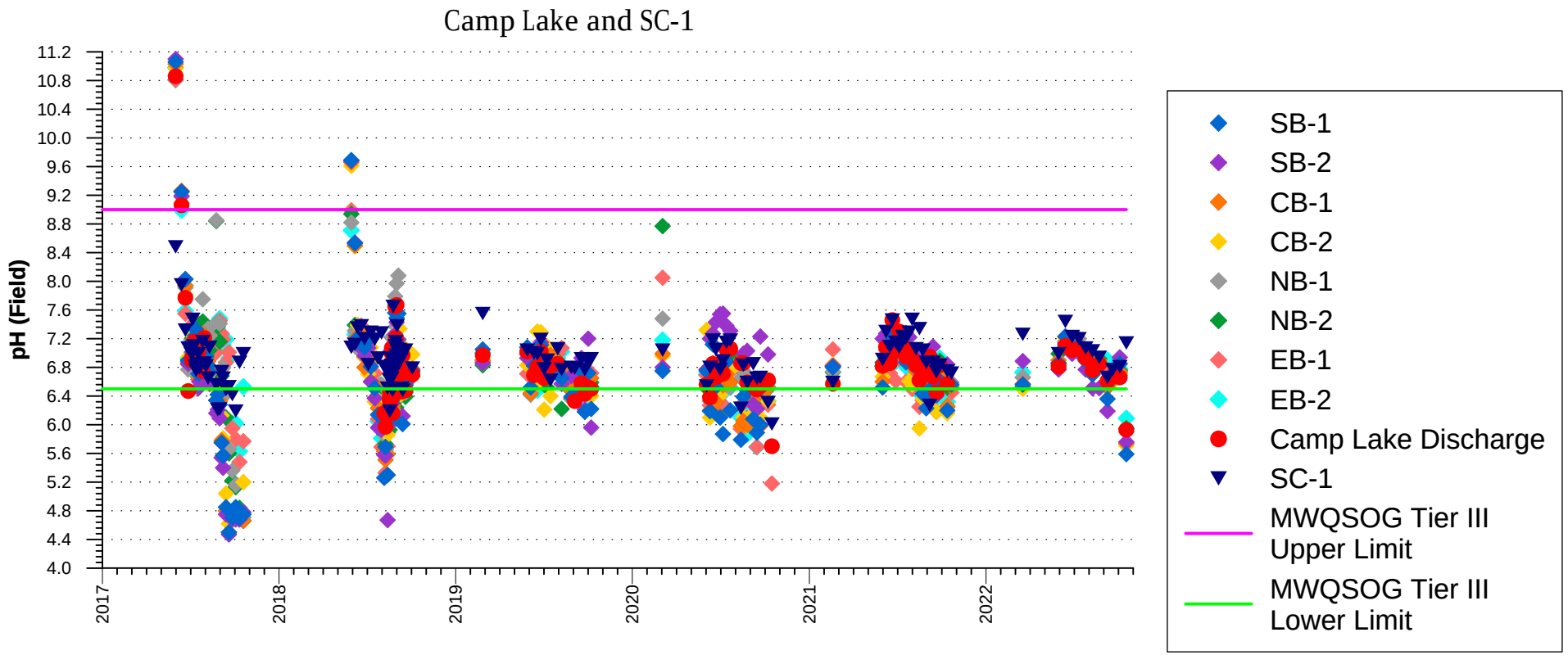
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2022 WATER QUALITY SUMMARY REPORT
SHERRIDON MINE SITE

SHERLETT CREEK — TOTAL ZINC
(2017 - 2022)

APRIL 2024	FIGURE 11	REV: 0



NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY
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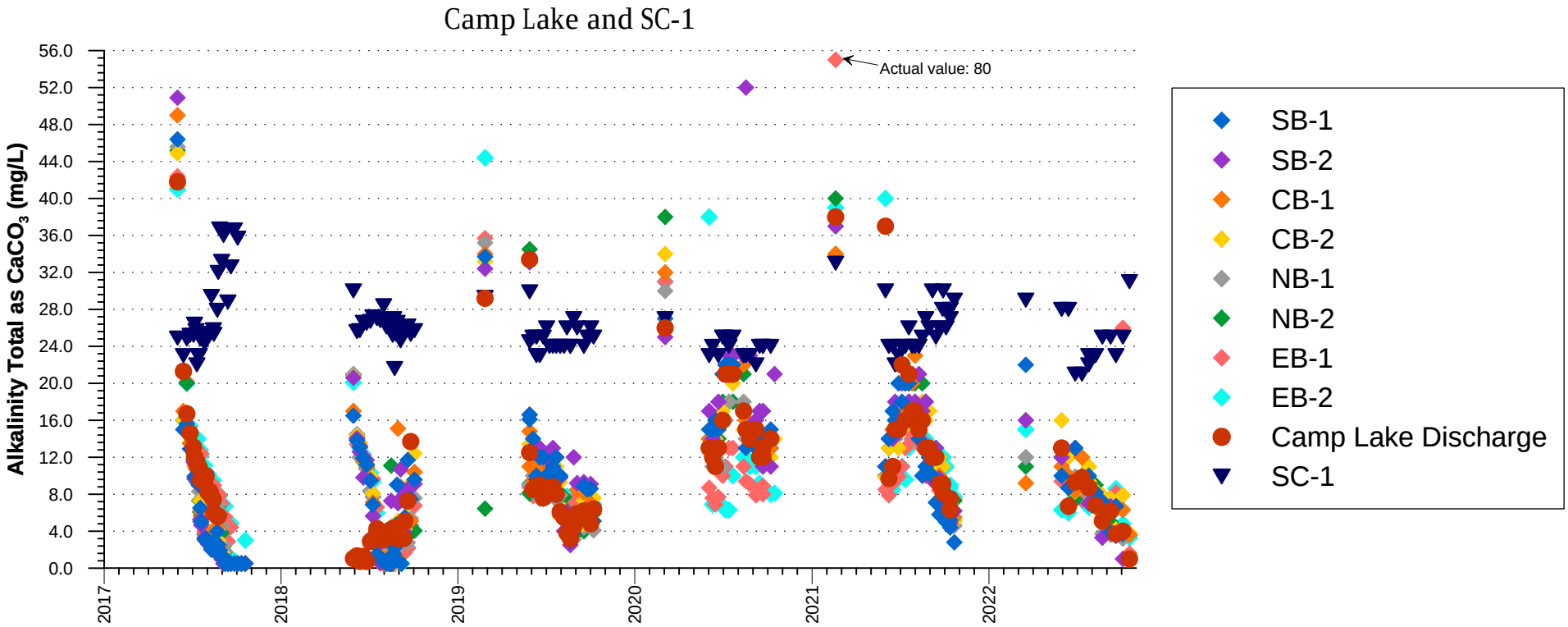
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2022 WATER QUALITY SUMMARY REPORT
SHERRIDON MINE SITE

CAMP LAKE AND SC-1 — FIELD pH
(2017 - 2022)

APRIL 2024 | FIGURE 12 | REV: 0



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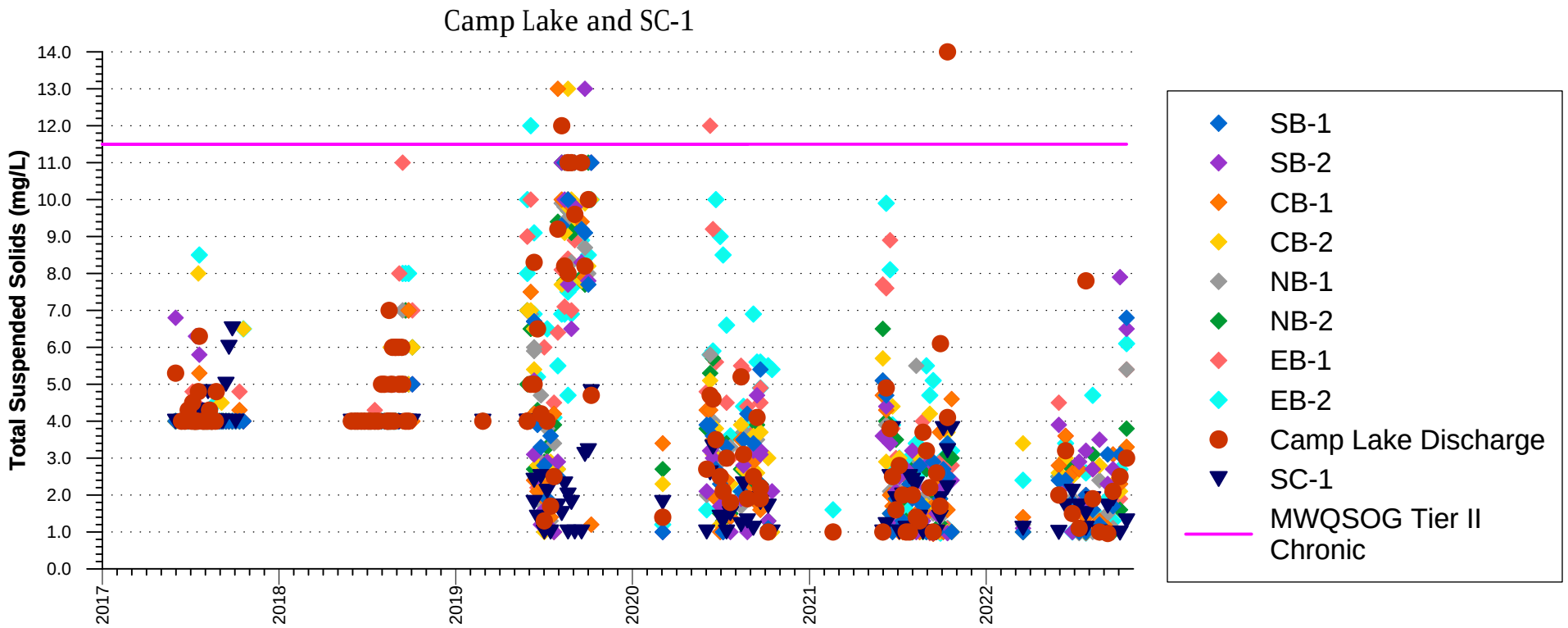
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2022 WATER QUALITY SUMMARY REPORT
SHERRIDON MINE SITE

CAMP LAKE AND SC-1 — TOTAL ALKALINITY (2017 - 2022)

APRIL 2024	FIGURE 13	REV: 0



NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY
0	24/04/24	ISSUED WITH FINAL REPORT	RED	MN

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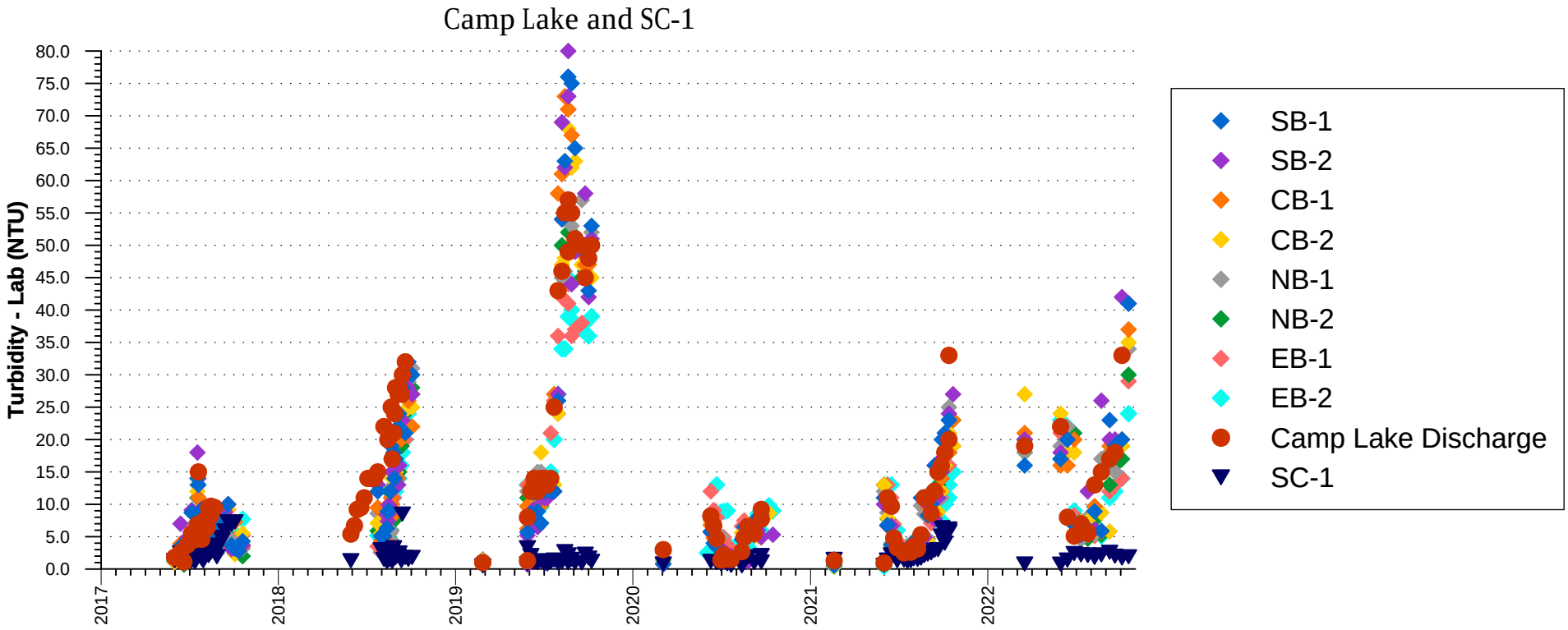
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2022 WATER QUALITY SUMMARY REPORT
SHERRIDON MINE SITE

CAMP LAKE AND SC-1 — TOTAL SUSPENDED SOLIDS (2017 - 2022)

APRIL 2024	FIGURE 14	REV: 0



NO.	YY/MM/DD	DESCRIPTION	ISSUED BY	CHECK BY
0	24/04/24	ISSUED WITH FINAL REPORT	RED	MJN

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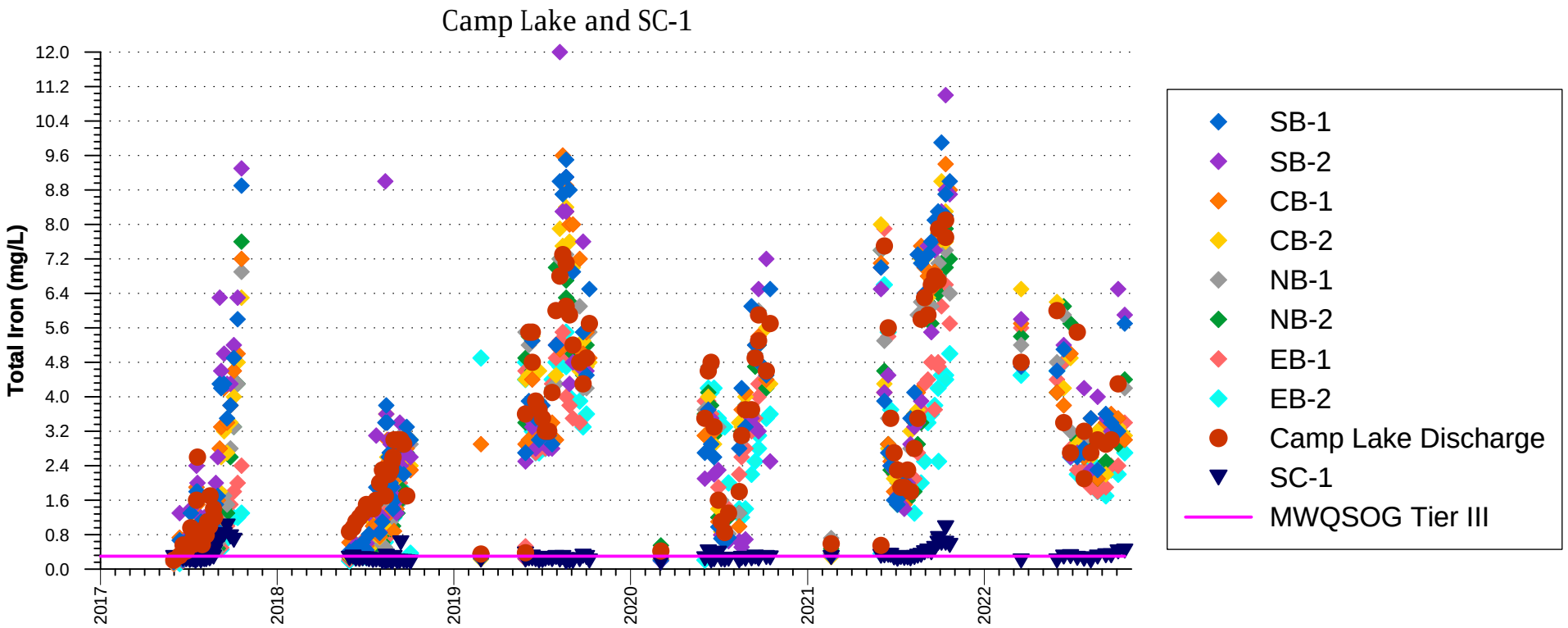
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2022 WATER QUALITY SUMMARY REPORT
SHERRIDON MINE SITE

CAMP LAKE AND SC-1 — LAB TURBIDITY
(2017 - 2022)

APRIL 2024	FIGURE 15	REV: 0



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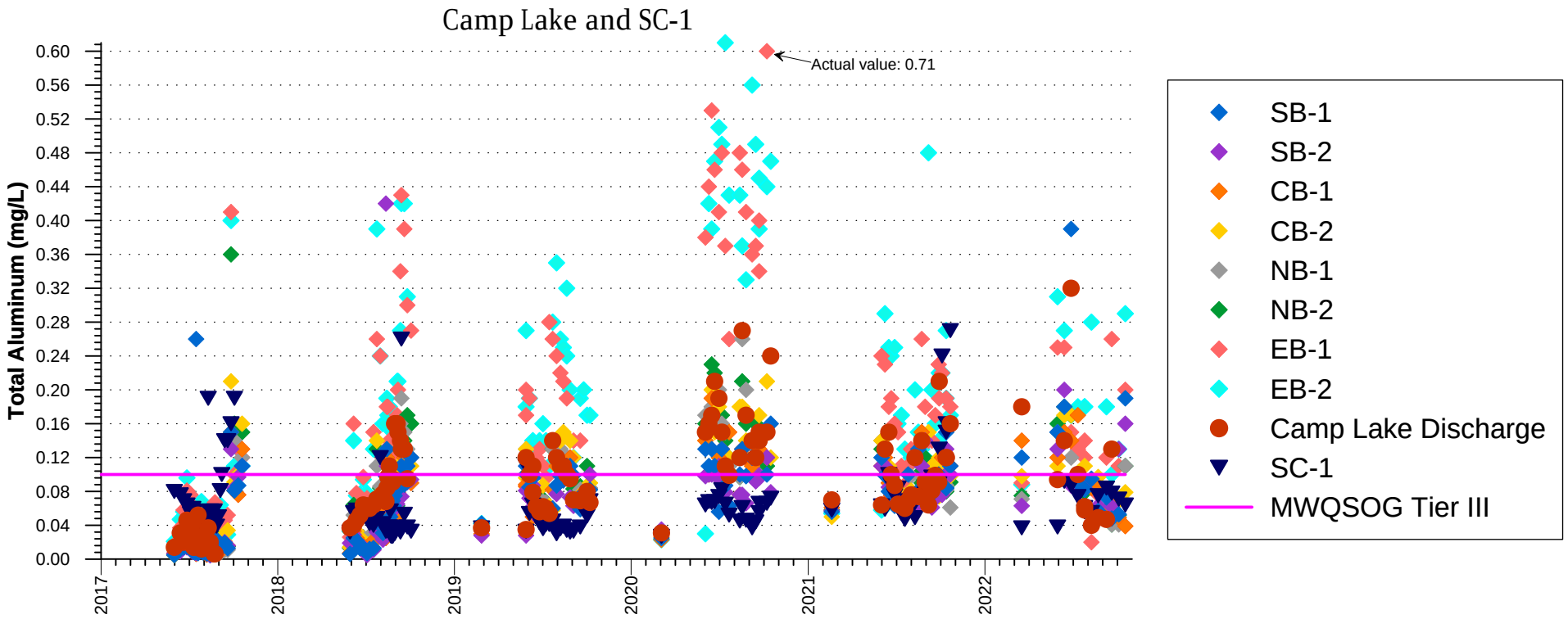
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2022 WATER QUALITY SUMMARY REPORT
SHERRIDON MINE SITE

CAMP LAKE AND SC-1 — TOTAL IRON
(2017 - 2022)

APRIL 2024	FIGURE 16	REV: 0



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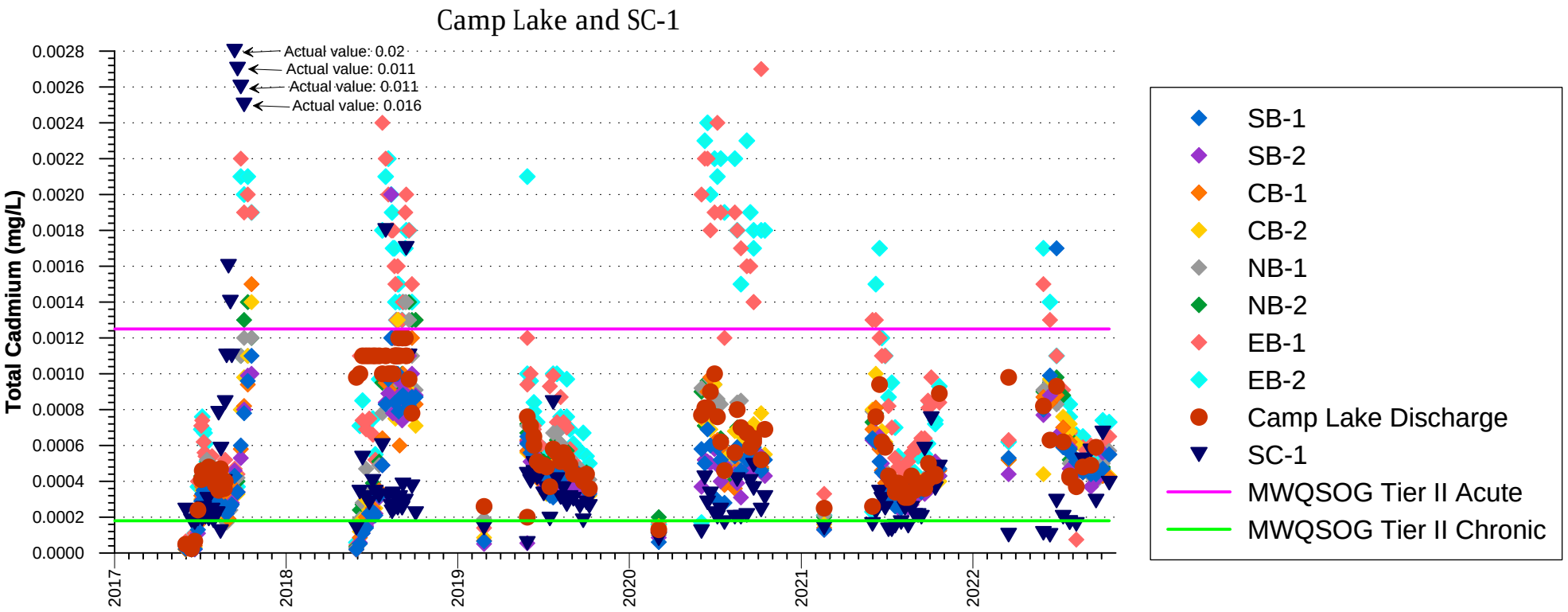
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CAMP LAKE AND SC-1 — TOTAL ALUMINUM (2017 - 2022)

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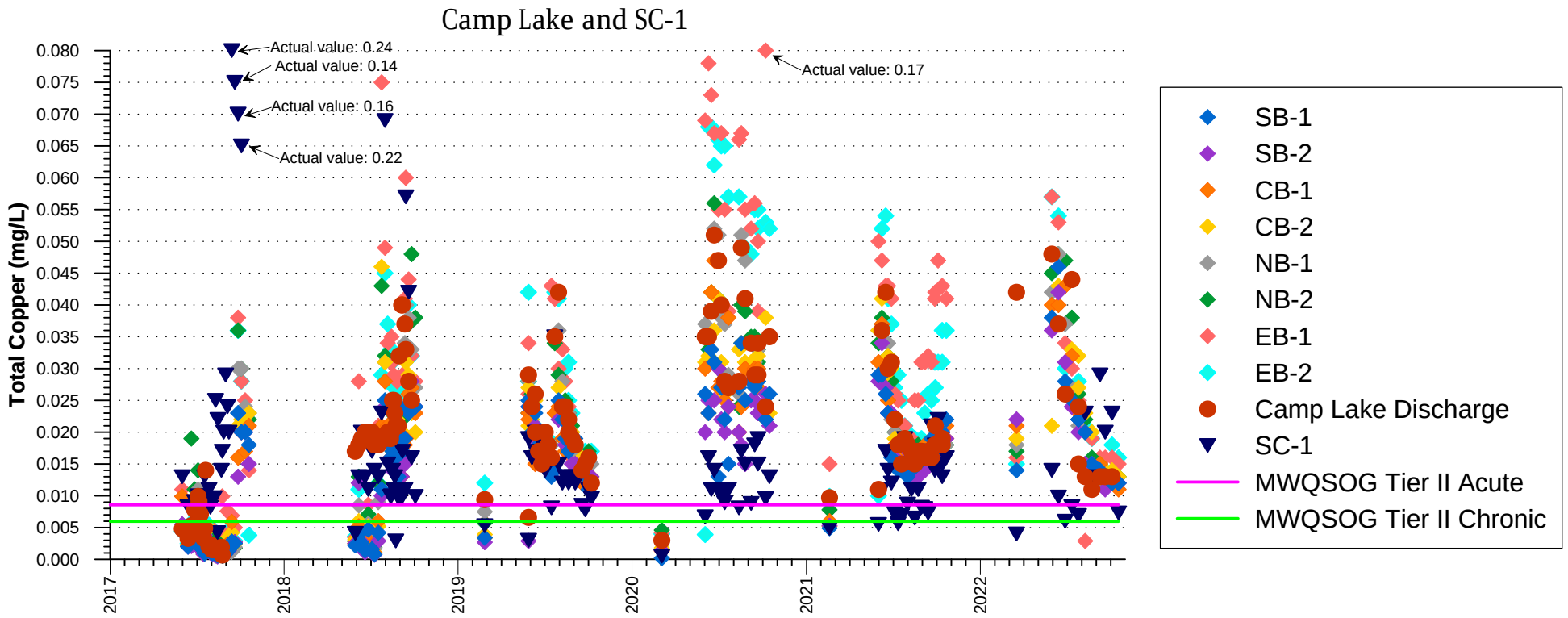
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CAMP LAKE AND SC-1 — TOTAL CADMIUM
(2017 - 2022)

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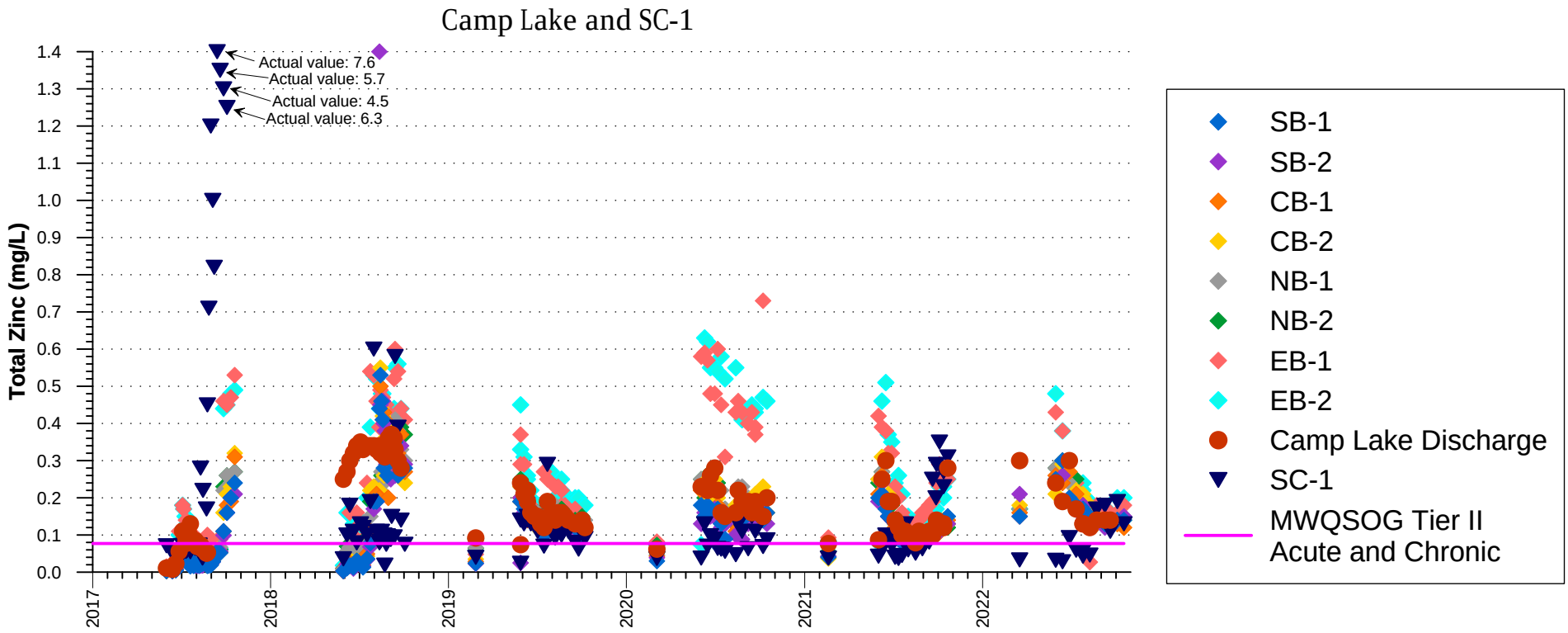
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CAMP LAKE AND SC-1 — TOTAL COPPER
(2017 - 2022)

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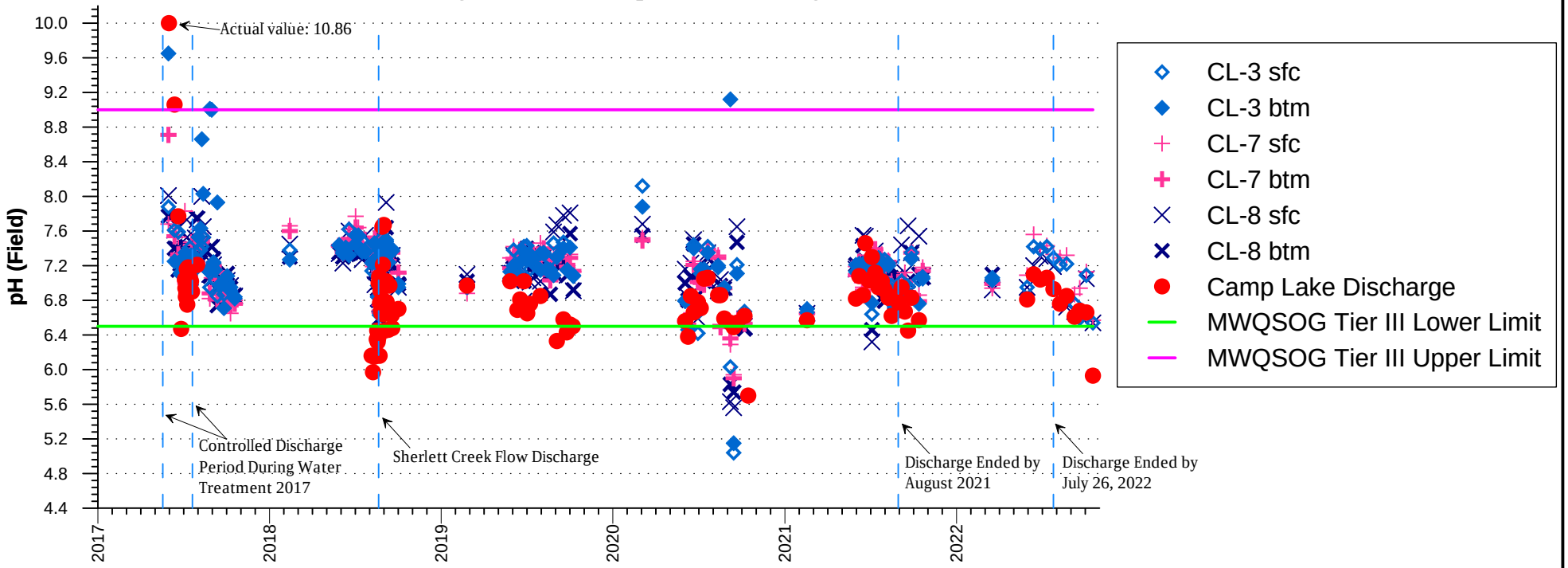
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CAMP LAKE AND SC-1 — TOTAL ZINC
(2017 - 2022)

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Cold Lake Mixing Zone vs. Camp Lake Discharge



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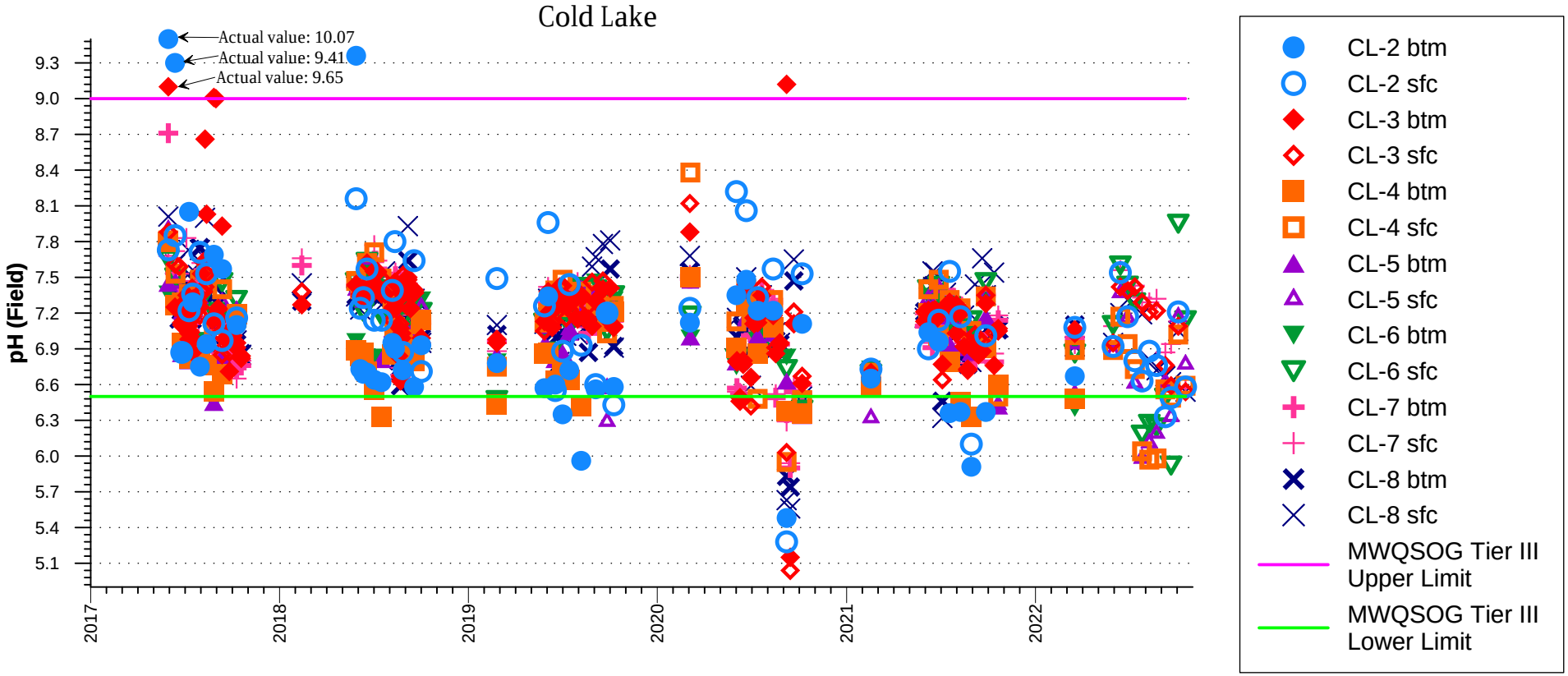
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SHERRIDON MINE SITE

COLD LAKE MIXING ZONE VS. CAMP LAKE DISCHARGE
FIELD pH (2017 - 2022)

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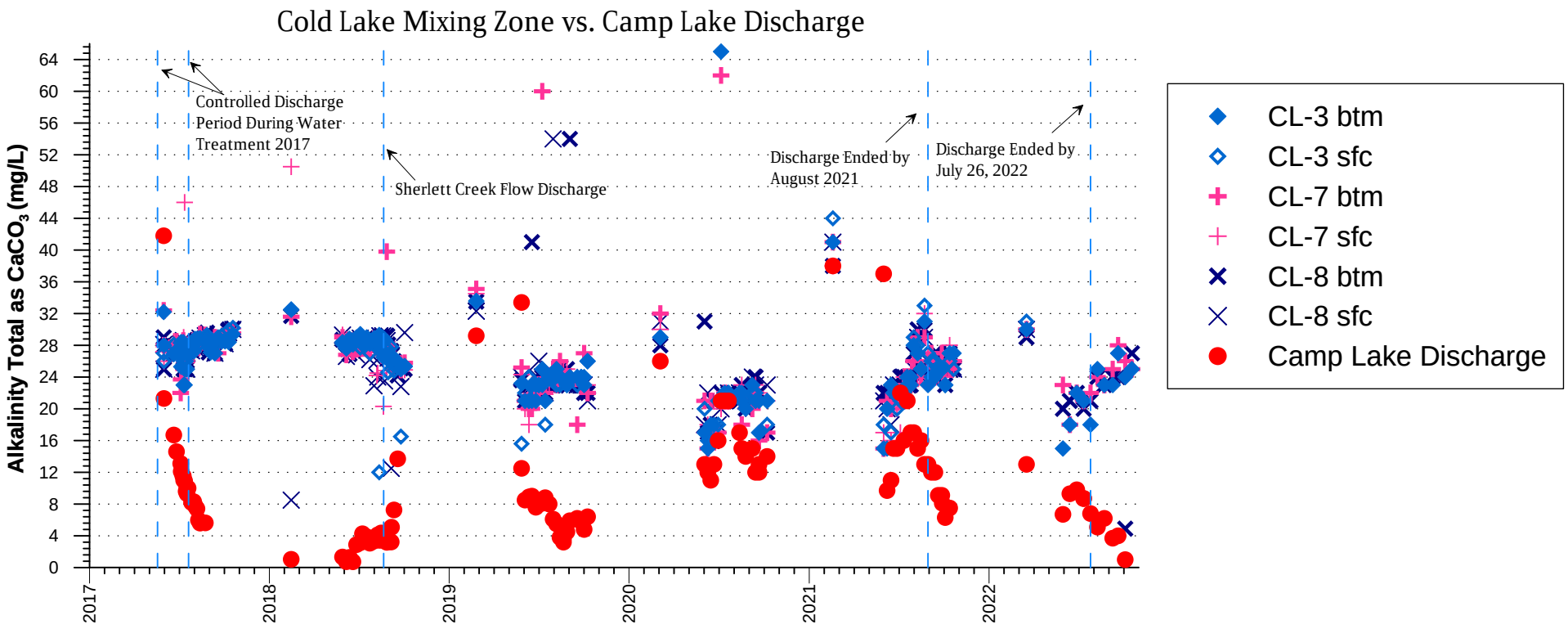
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SHERRIDON MINE SITE

COLD LAKE — FIELD pH (2017 - 2022)

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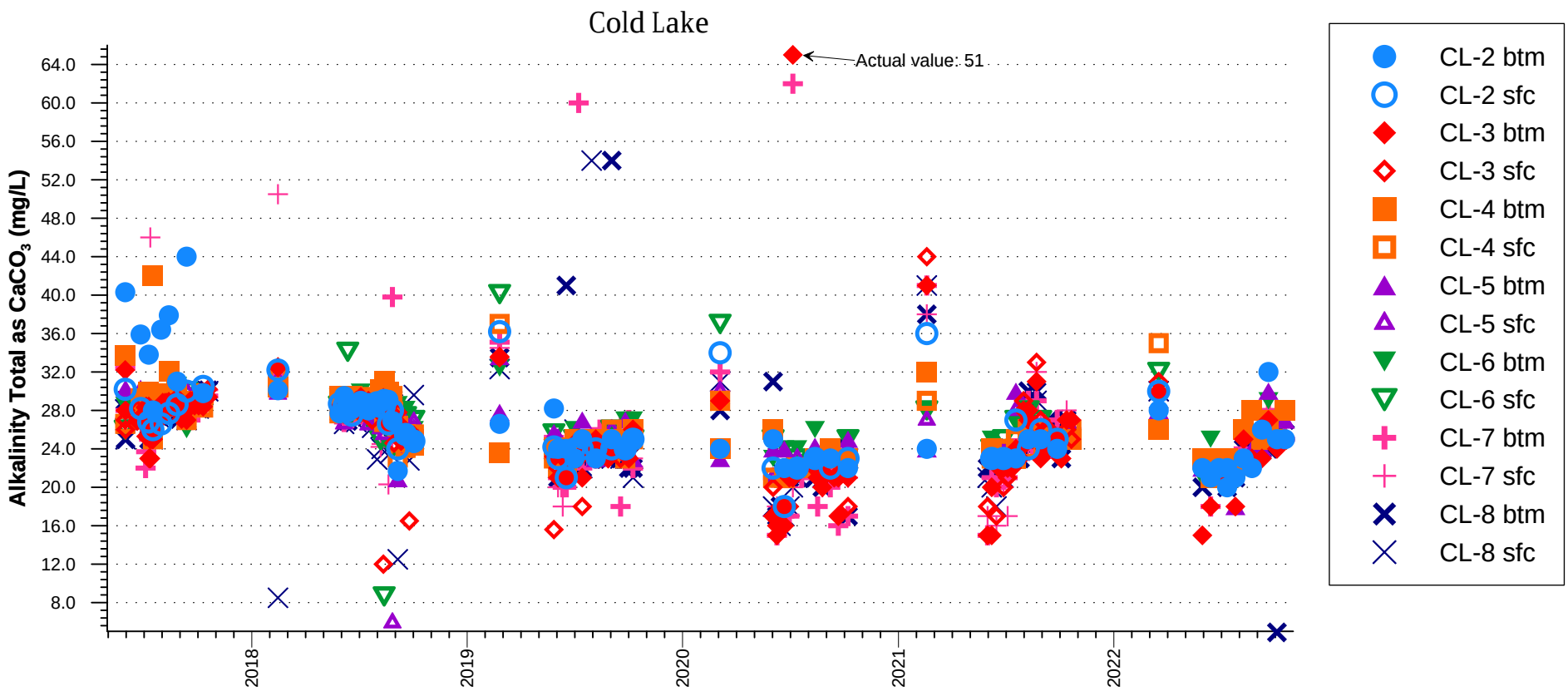
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2022 WATER QUALITY SUMMARY REPORT
SHERRIDON MINE SITE

COLD LAKE MIXING ZONE VS. CAMP LAKE DISCHARGE
TOTAL ALKALINITY (2017 - 2022)

APRIL 2024	FIGURE 23	REV. 0



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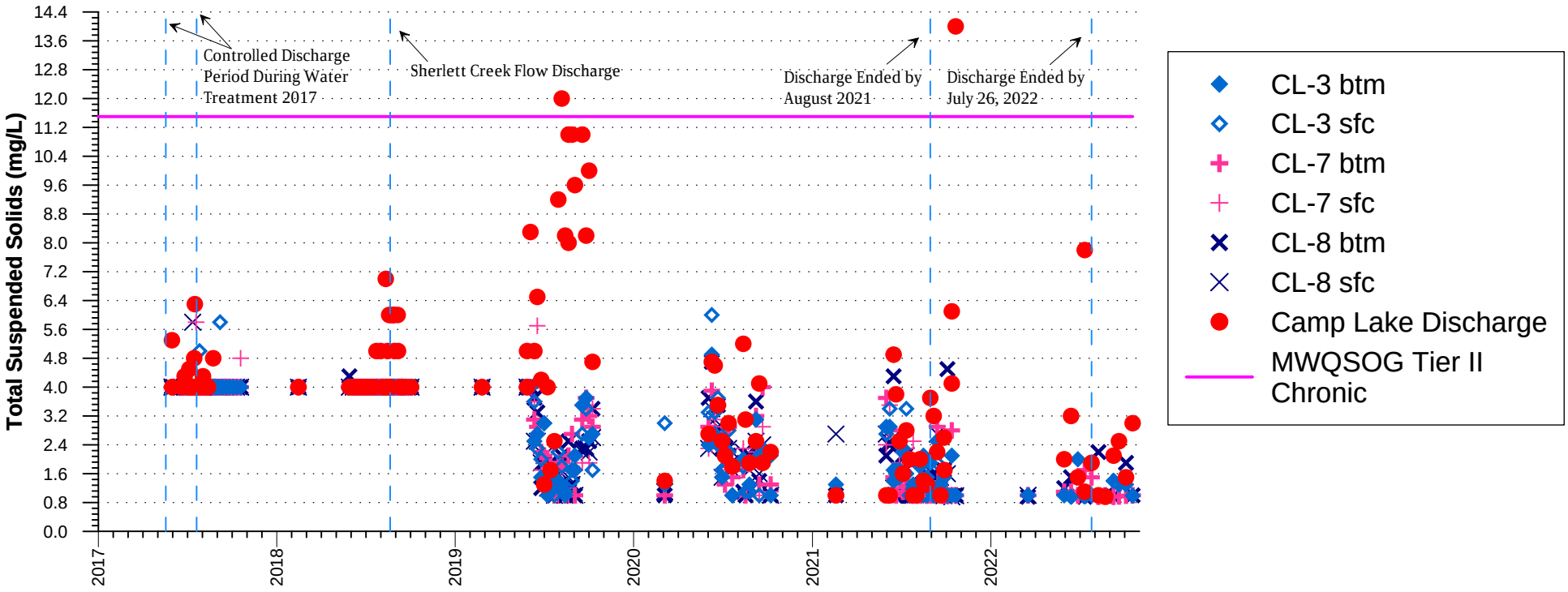
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2022 WATER QUALITY SUMMARY REPORT
SHERRIDON MINE SITE

COLD LAKE — TOTAL ALKALINITY
(2017 - 2022)

APRIL 2024	FIGURE 24	REV: 0

Cold Lake Mixing Zone vs. Camp Lake Discharge



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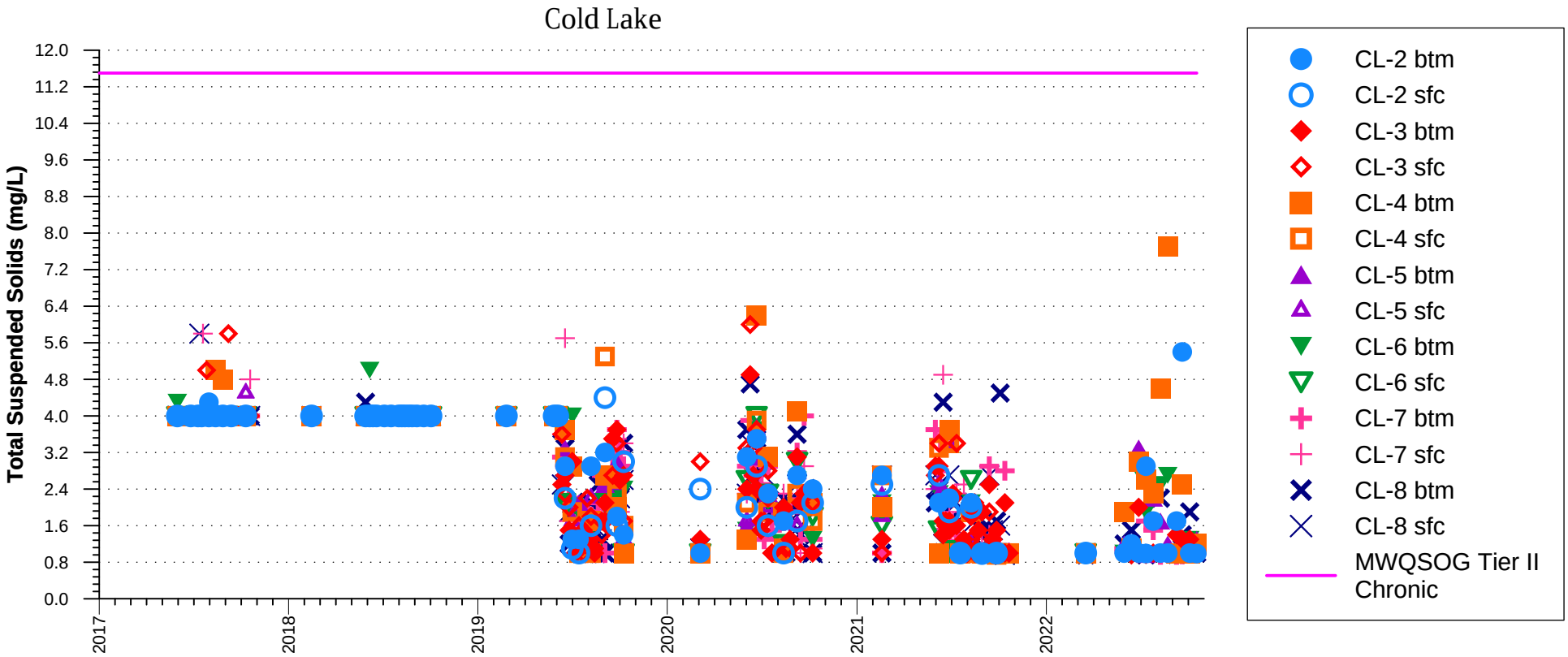
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2022 WATER QUALITY SUMMARY REPORT
SHERRIDON MINE SITE

COLD LAKE MIXING ZONE VS. CAMP LAKE DISCHARGE
TOTAL SUSPENDED SOLIDS (2017 - 2022)

APRIL 2024	FIGURE 25	REV: 0



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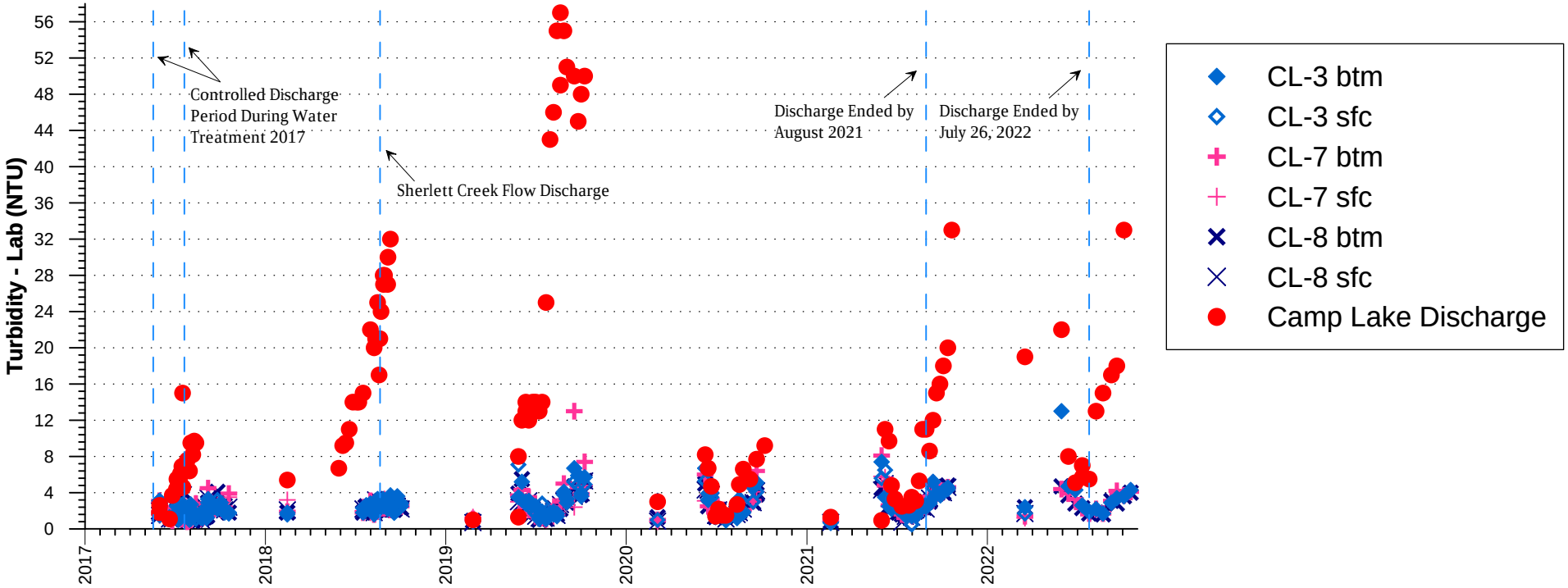
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2022 WATER QUALITY SUMMARY REPORT
SHERRIDON MINE SITE

COLD LAKE — TOTAL SUSPENDED SOLIDS (2017 - 2022)

APRIL 2024	FIGURE 26	REV: 0

Cold Lake Mixing Zone vs. Camp Lake Discharge



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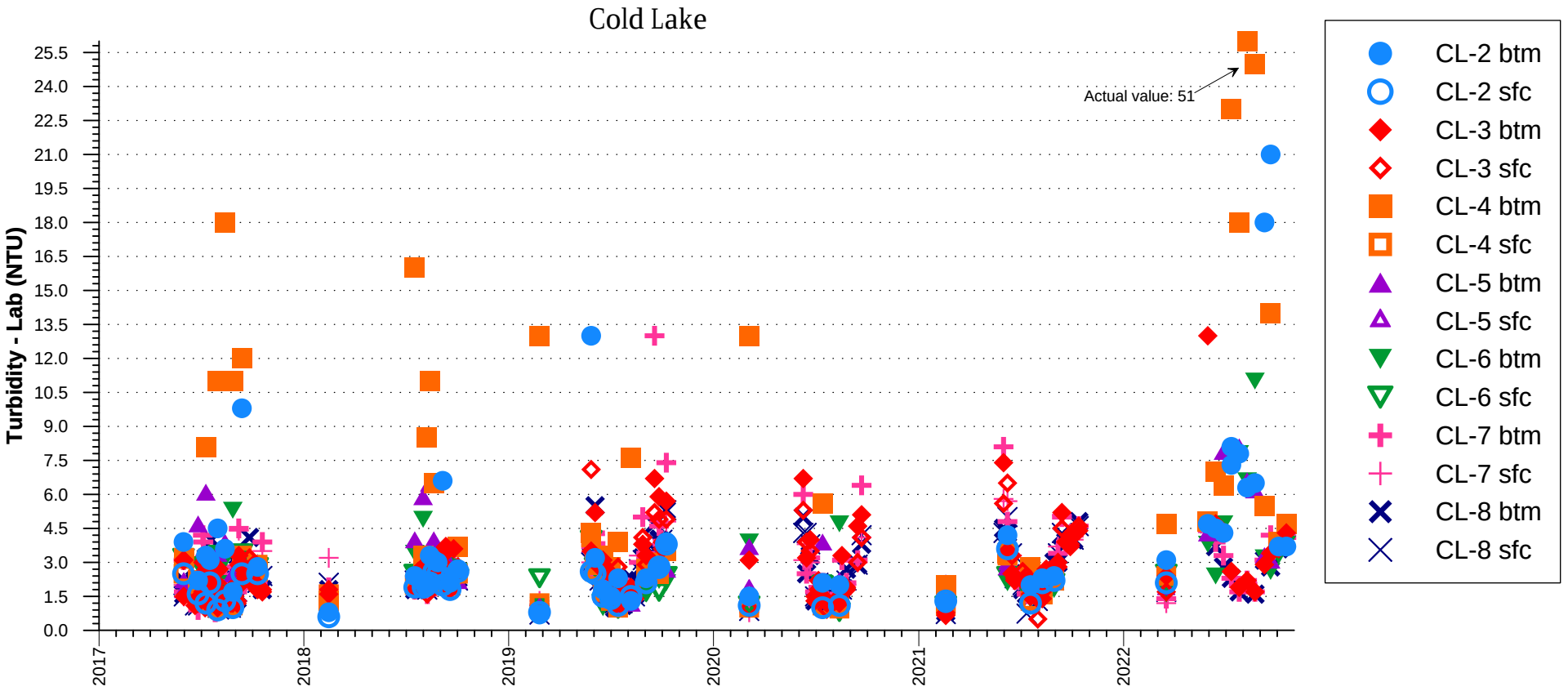
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2022 WATER QUALITY SUMMARY REPORT
SHERRIDON MINE SITE

COLD LAKE MIXING ZONE VS. CAMP LAKE DISCHARGE
LAB TURBIDITY (2017 - 2022)

APRIL 2024	FIGURE 27	REV: 0



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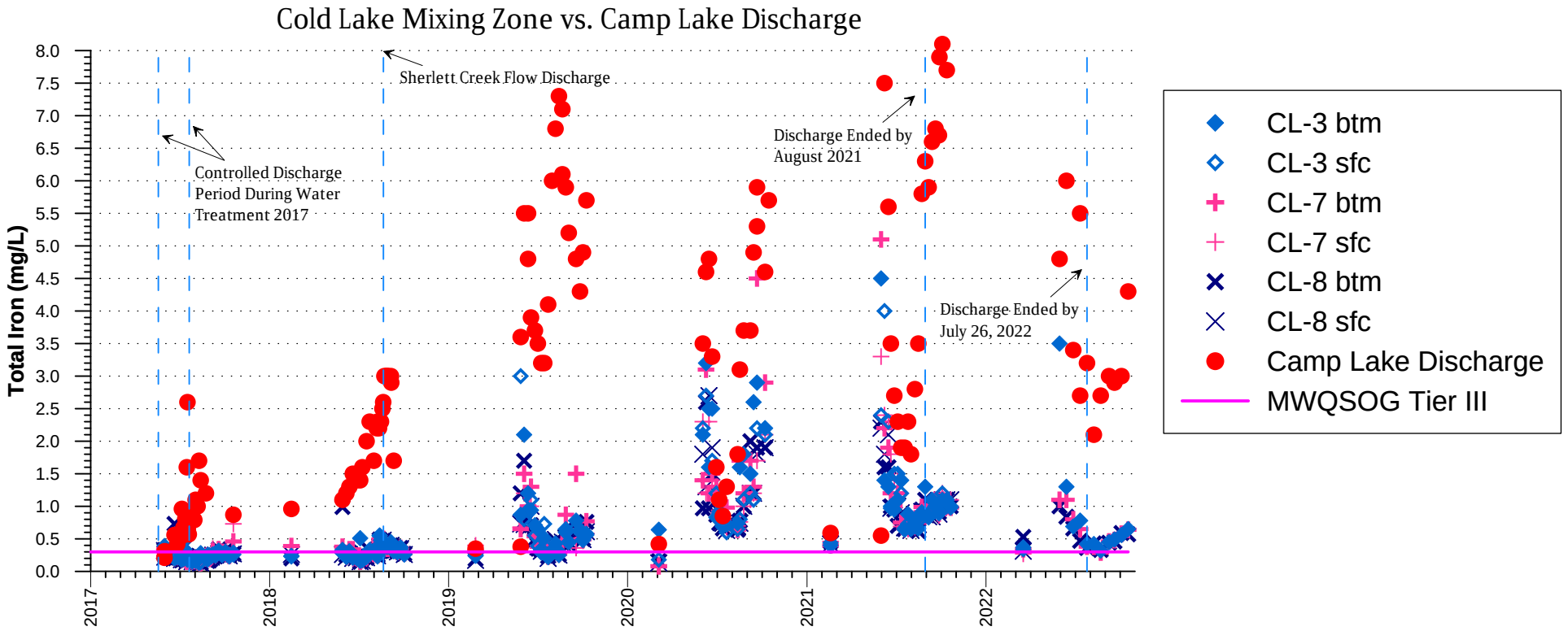
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2022 WATER QUALITY SUMMARY REPORT
SHERRIDON MINE SITE

COLD LAKE — LAB TURBIDITY (2017 - 2022)

APRIL 2024	FIGURE 28	REV: 0



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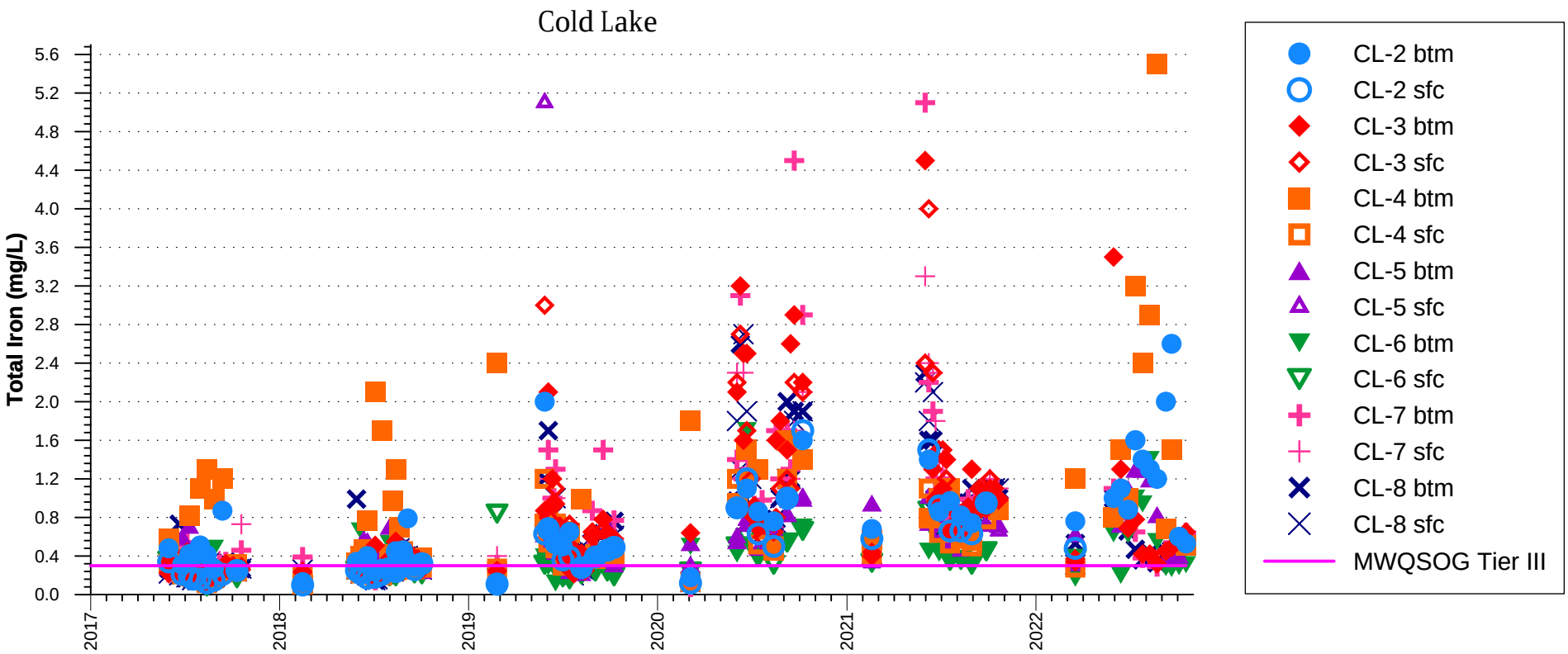
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2022 WATER QUALITY SUMMARY REPORT
SHERRIDON MINE SITE

COLD LAKE MIXING ZONE VS. CAMP LAKE DISCHARGE
TOTAL IRON (2017 - 2022)

APRIL 2024	FIGURE 29	REV: 0



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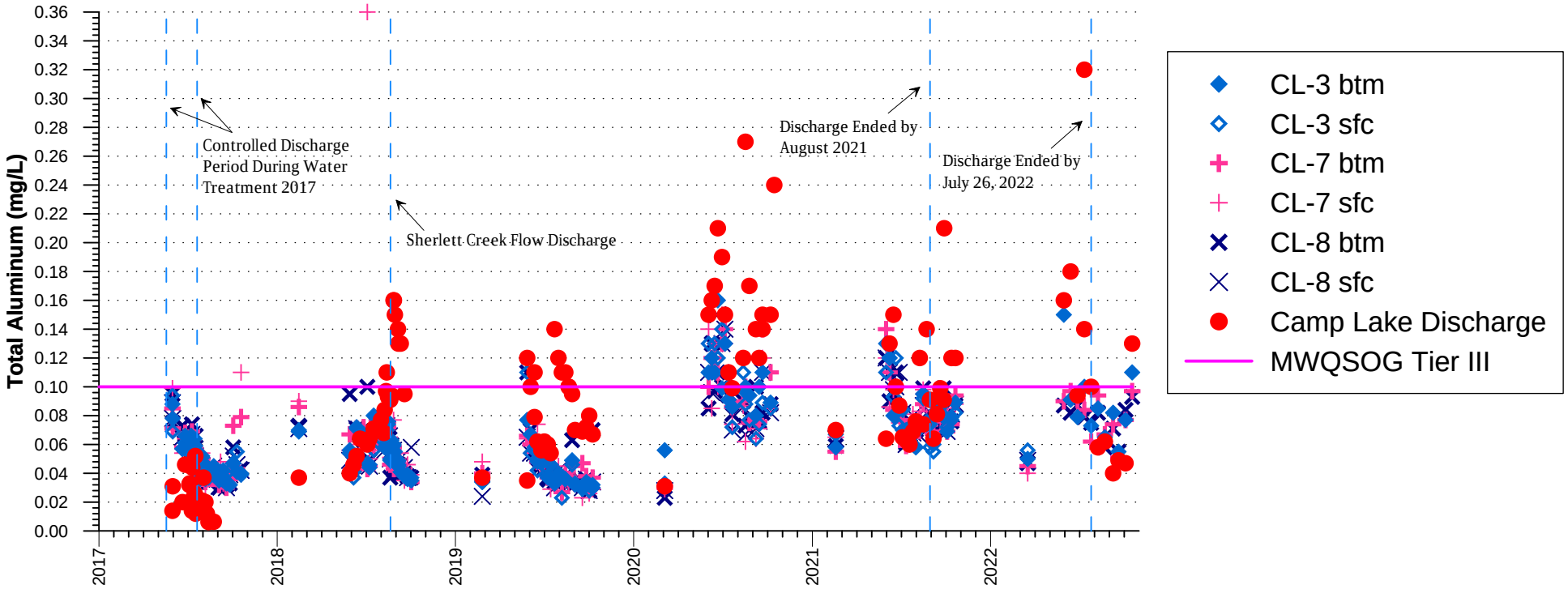
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2022 WATER QUALITY SUMMARY REPORT
SHERRIDON MINE SITE

COLD LAKE — TOTAL IRON (2017 - 2022)

APRIL 2024 | FIGURE 30 | REV: 0

Cold Lake Mixing Zone vs. Camp Lake Discharge



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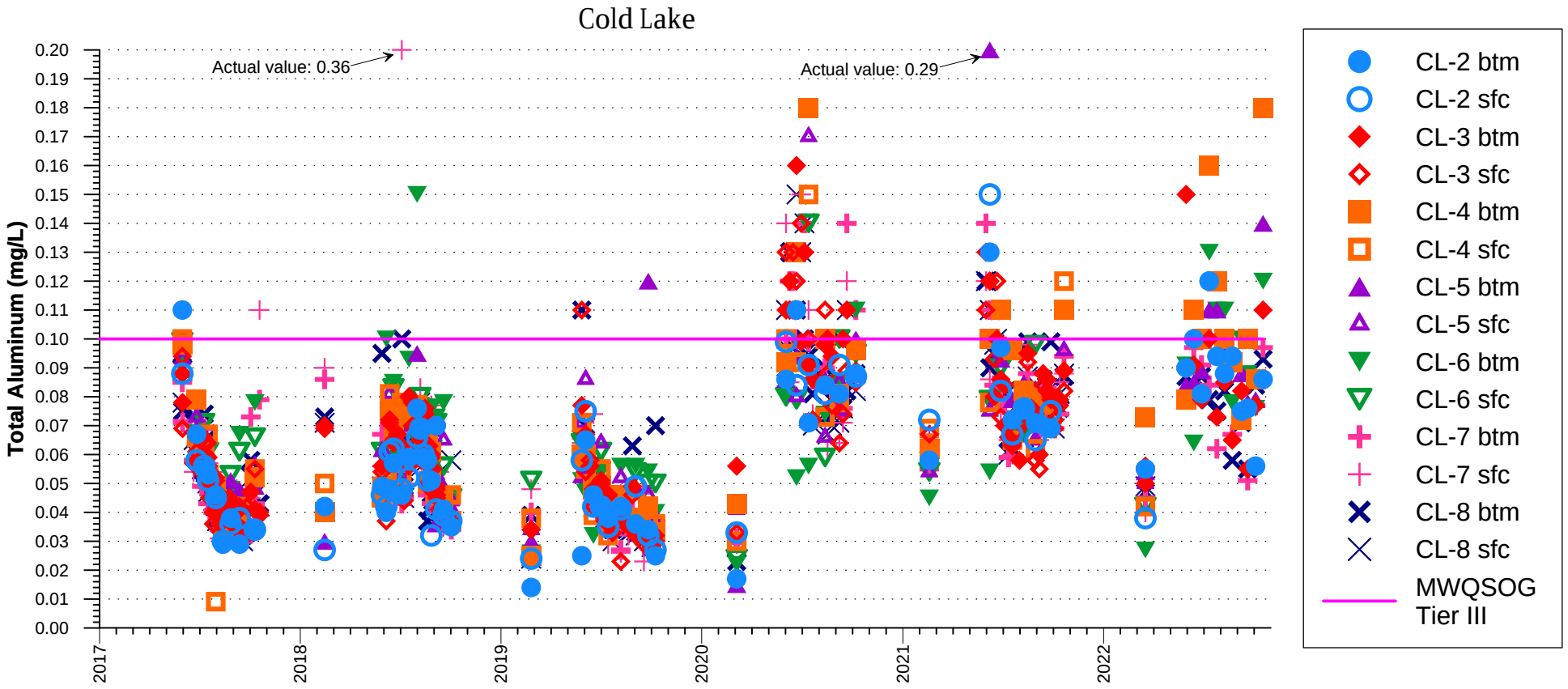
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2022 WATER QUALITY SUMMARY REPORT
SHERRIDON MINE SITE

COLD LAKE MIXING ZONE VS. CAMP LAKE DISCHARGE
TOTAL ALUMINUM (2017 - 2022)

APRIL 2024	FIGURE 31	REV: 0



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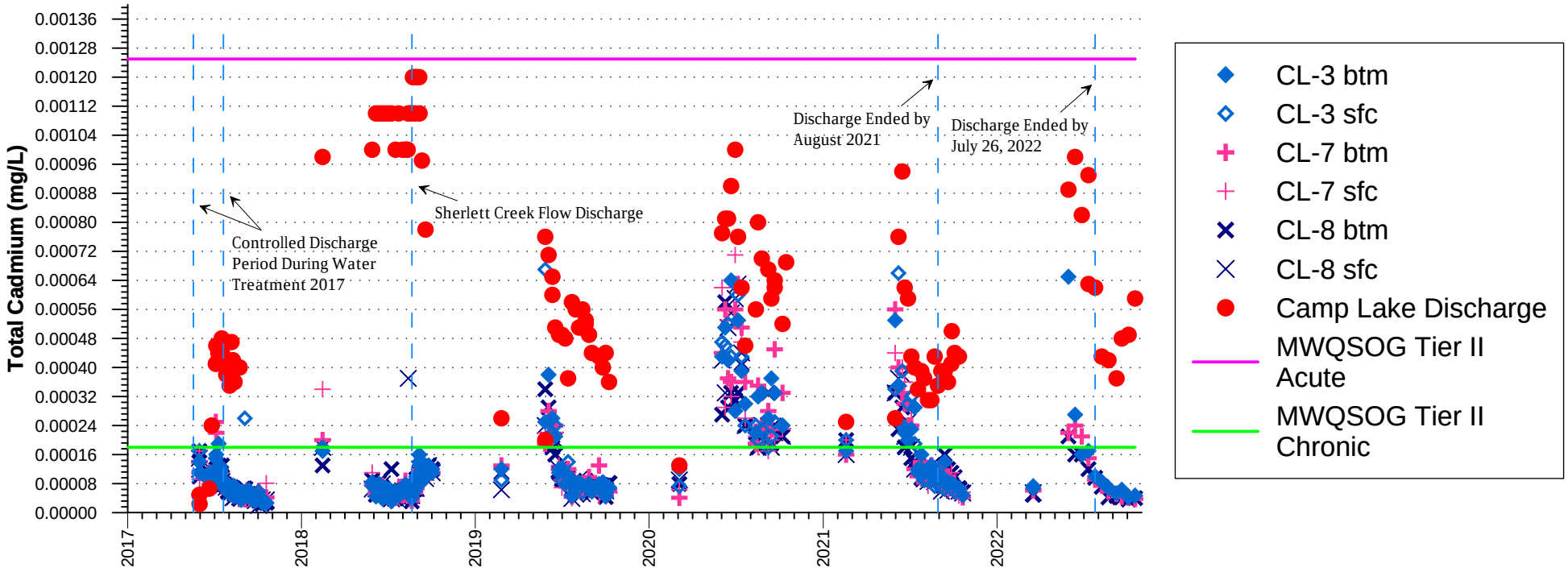
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2022 WATER QUALITY SUMMARY REPORT
SHERRIDON MINE SITE

COLD LAKE — TOTAL ALUMINUM (2017 - 2022)

APRIL 2024	FIGURE 32	REV: 0

Cold Lake Mixing Zone vs. Camp Lake Discharge



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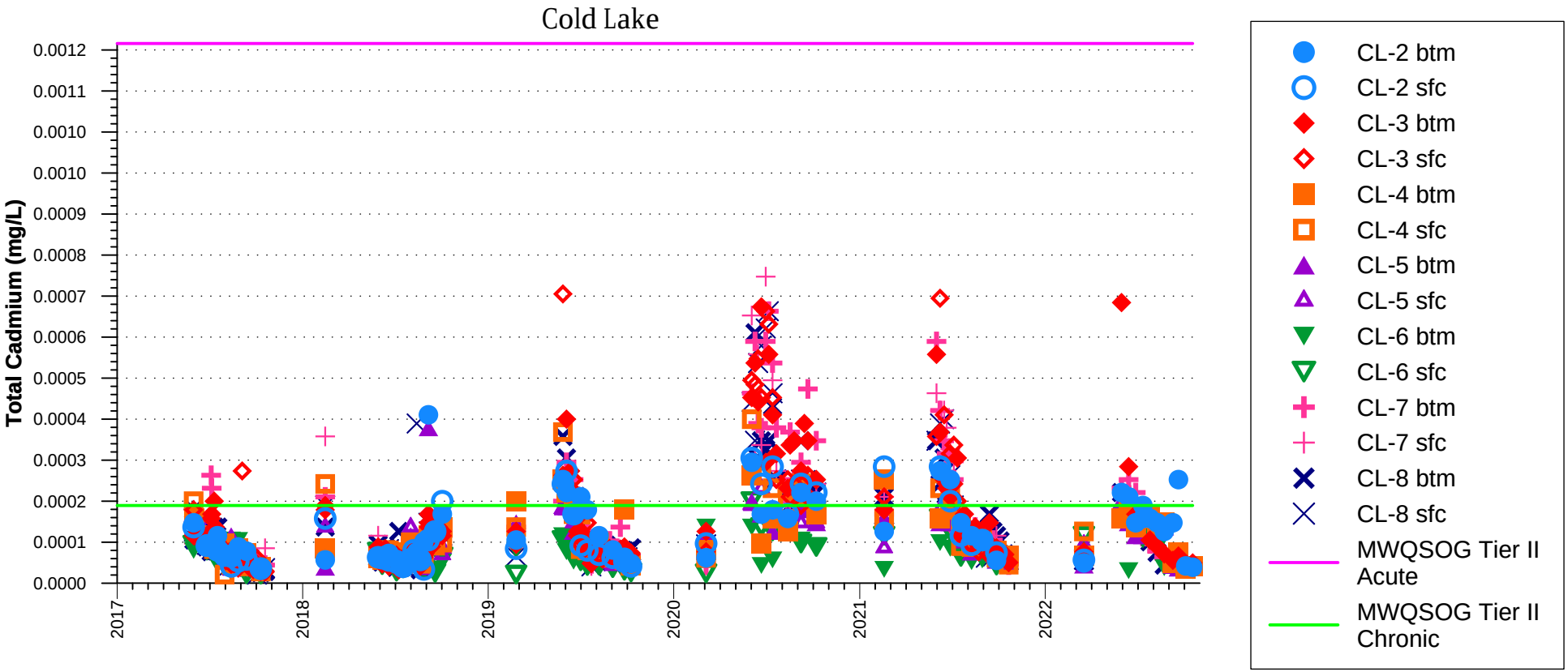
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2022 WATER QUALITY SUMMARY REPORT
SHERRIDON MINE SITE

COLD LAKE MIXING ZONE VS. CAMP LAKE DISCHARGE
TOTAL CADMIUM (2017 - 2022)

APRIL 2024	FIGURE 33	REV: 0



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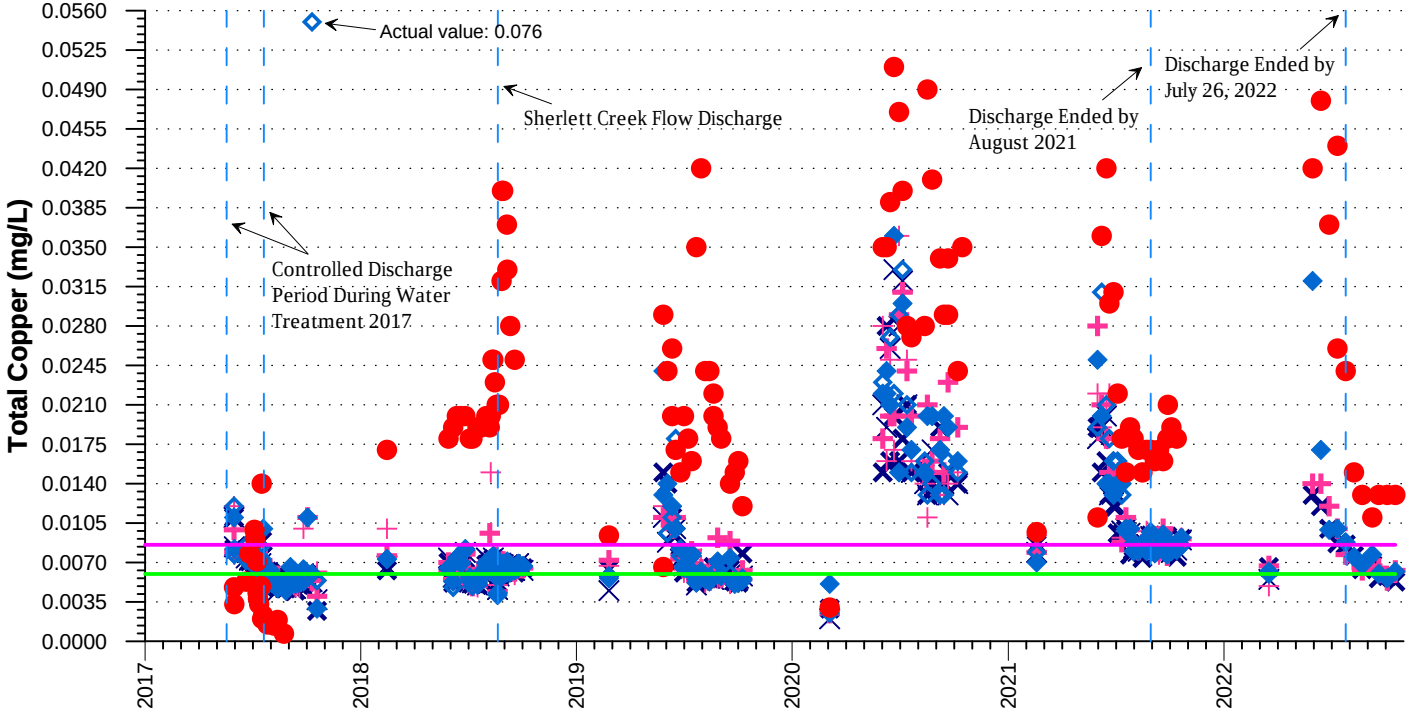
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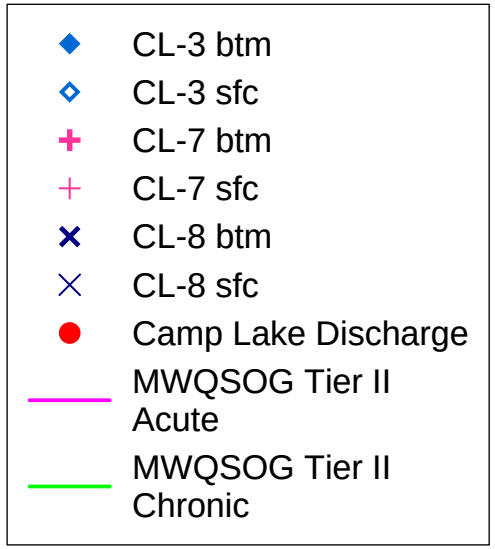
2022 WATER QUALITY SUMMARY REPORT
SHERRIDON MINE SITE

COLD LAKE — TOTAL CADMIUM (2017 - 2022)

APRIL 2024	FIGURE 34	REV: 0

Cold Lake Mixing Zone vs. Camp Lake Discharge





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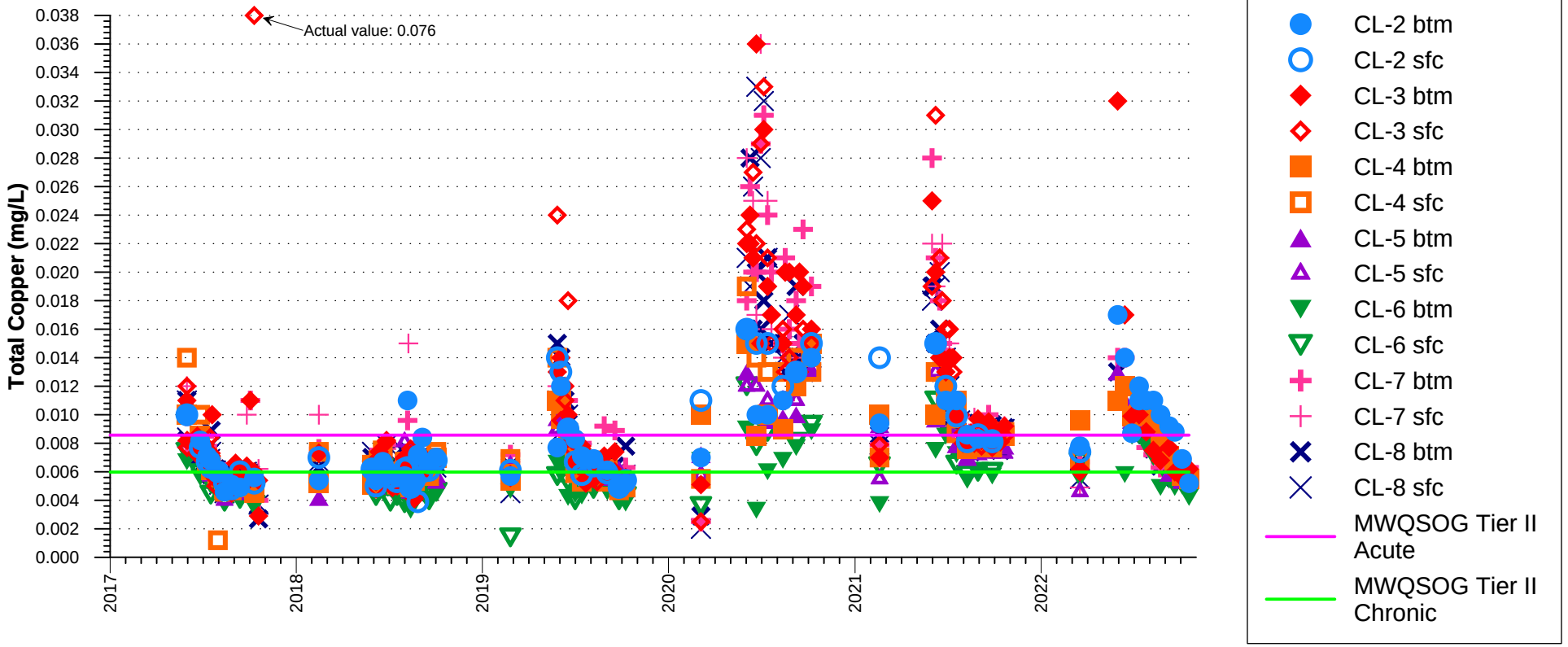
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SHERRIDON MINE SITE

COLD LAKE MIXING ZONE VS. CAMP LAKE DISCHARGE
TOTAL COPPER (2017 - 2022)

APRIL 2024	FIGURE 35	REV: 0

Cold Lake



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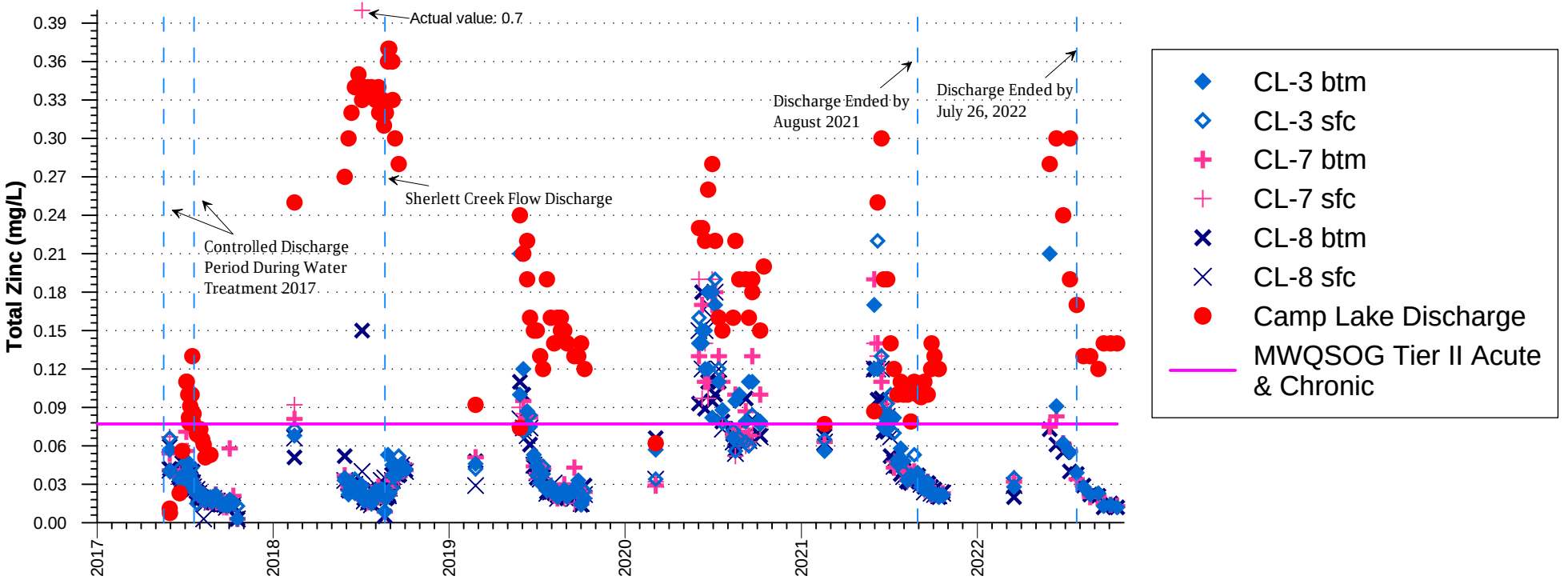
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COLD LAKE — TOTAL COPPER (2017 - 2022)

APRIL 2024	FIGURE 36	REV: 0

Cold Lake Mixing Zone vs. Camp Lake Discharge



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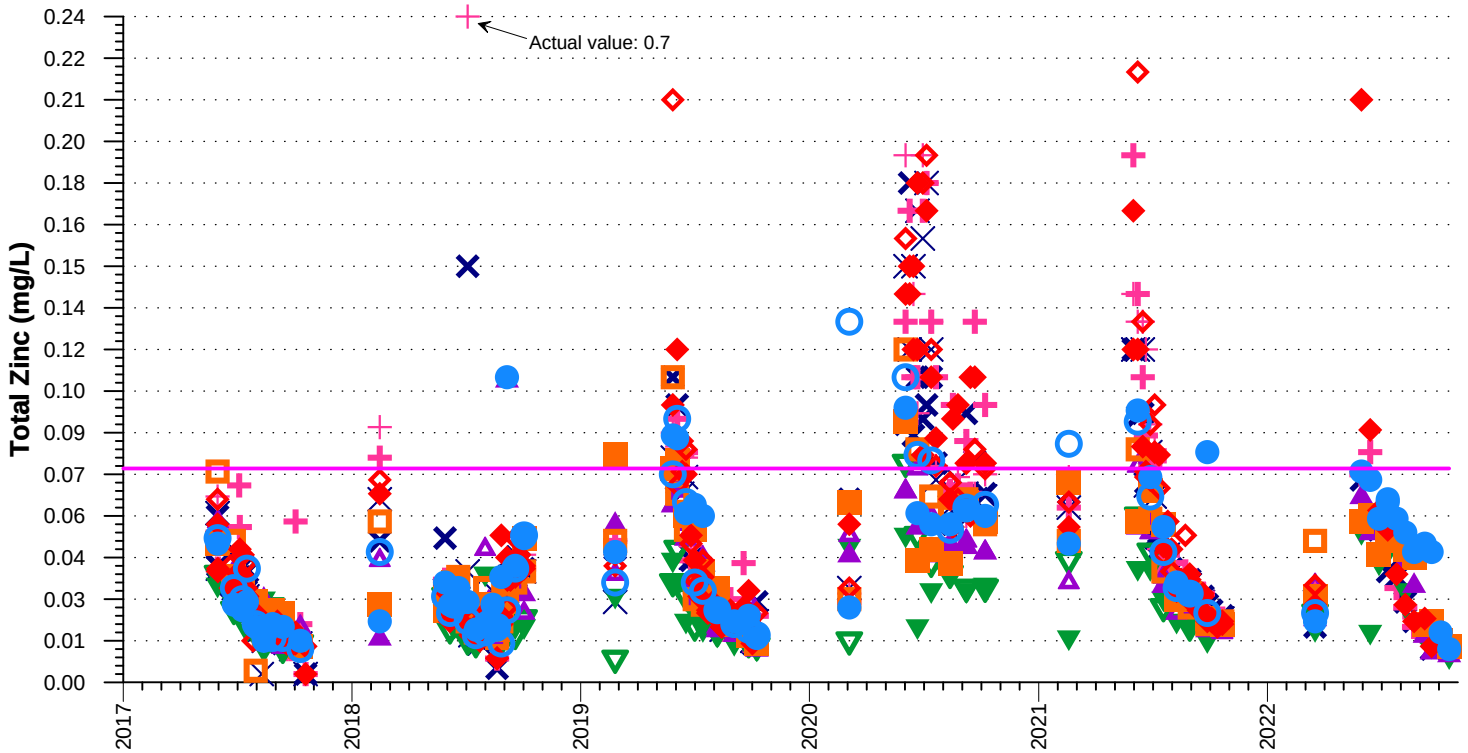
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2022 WATER QUALITY SUMMARY REPORT
SHERRIDON MINE SITE

COLD LAKE MIXING ZONE VS. CAMP LAKE DISCHARGE
TOTAL ZINC (2017 - 2022)

APRIL 2024	FIGURE 37	REV: 0

Cold Lake



- CL-2 btm
- CL-2 sfc
- CL-3 btm
- CL-3 sfc
- CL-4 btm
- CL-4 sfc
- CL-5 btm
- CL-5 sfc
- CL-6 btm
- CL-6 sfc
- CL-7 btm
- CL-7 sfc
- CL-8 btm
- CL-8 sfc
- MWQSOG Tier II Acute and Chronic

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2022 WATER QUALITY SUMMARY REPORT
SHERRIDON MINE SITE

COLD LAKE — TOTAL ZINC (2017 - 2022)

APRIL 2024 | FIGURE 38 | REV: 0

APPENDIX A

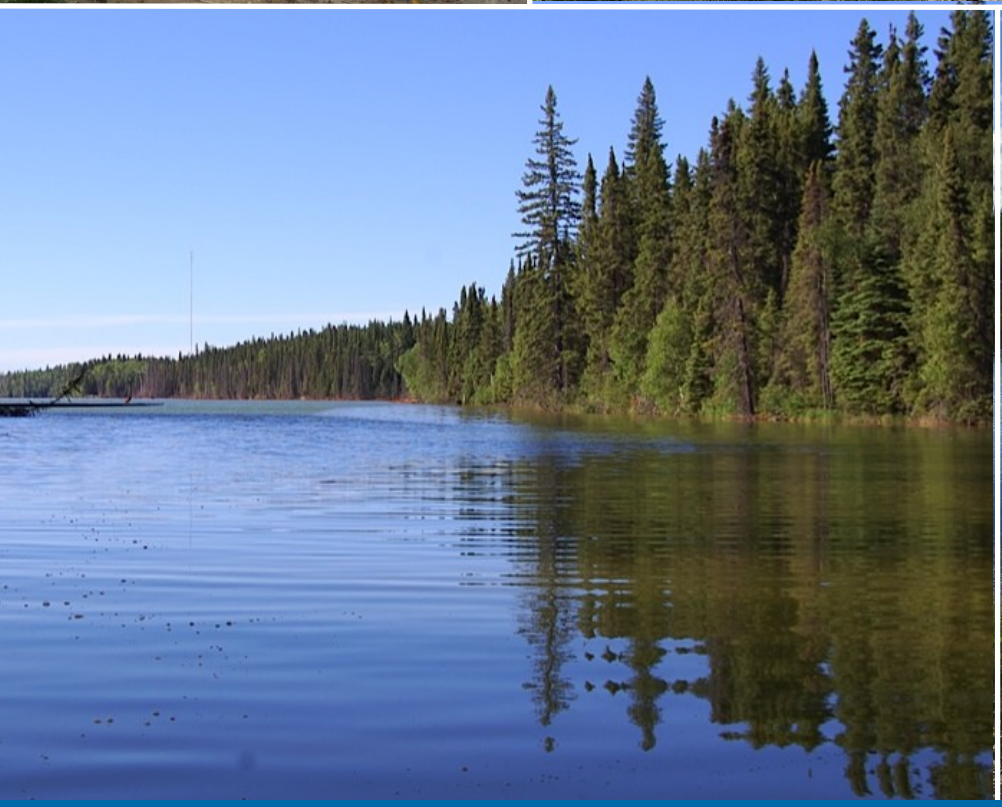
Sherridon Adaptive Management Plan

Sherridon Mine Orphan Mine Site Reclamation Project: Adaptive Mgmt. Plan











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Sherridon Orphan Mine Site Reclamation Project: Adaptive Management Plan

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Date

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EXECUTIVE SUMMARY

The Sherridon Orphaned Mine Site is located on the east shore of Camp Lake, approximately 65 km northeast of Flin Flon, Manitoba. The copper-zinc mine was operated by Sherritt Gordon Mines between 1928 and 1952. The communities of Cold Lake and Sherridon developed in the early 20th century in conjunction with development and operation of the Sherridon Mine. The mine site is since abandoned and is now the responsibility of the Province of Manitoba (the Province).

The Province commissioned a reclamation plan and associated design for the site in 2006. The design study recommended tailings relocation in combination with flooding as the preferred option for site reclamation. The reclamation plan included the relocation of 47 hectares of land-based tailings into Camp Lake. Construction associated with the Sherridon Orphan Mine Reclamation Project (the Project) began in 2009 and was completed in early September 2021.

Adaptive management is a means of assessing, managing, and planning for uncertainties associated with a particular project or program. This draft Adaptive Management Plan (AMP) has been developed to describe the framework used by the Province for identification of unanticipated adverse project effects as well as for monitoring and managing project uncertainties. The AMP identifies linkages between management plans and monitoring programs and defines how results from environmental monitoring programs will contribute to the adaptive management process. This process provides a means of identifying changes in the environment as a result of the project that fall outside of acceptable or expected thresholds to be addressed and mitigated. The AMP also provides a communications plan along with recommendations for communication frequency based on project performance.

The Sherridon Project AMP has been developed to cover the remaining two project phases: i.) post-construction transition; and ii.) final closure. The primary project components requiring monitoring during these two phases include:

- Water quality
- Camp Lake water level
- Adaptive Monitoring Requirements (Sampling Frequency)
- Inspection and Maintenance of Built Structures

Decision flowsheets have been developed to assist in guiding the Province in managing these project components and proactively mitigating any challenges that may arise over the long-term. The decision flowsheets provide a simple, graphical, representation of how adaptive management decisions are made in response to project conditions that may develop. Colour coding of the flowsheet cells indicates the risk of the indicated project condition to the aquatic environment and should also be used by the Province to communicate risk conditions and adaptive responses to project stakeholders.

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Appendix B Reclamation Plan Design Overview
Appendix C Reclamation Plan Modifications
Appendix D Sherridon Water Quality Key Parameters and Water Quality Objectives
Appendix E DJRC (2021b) – Post-construction Water Quality Performance Objectives
Appendix F Decision Flowsheets and Colour Coding Definition
Appendix G Sample Communications Log

ACRONYMS/ABBREVIATIONS

Acronyms/Abbreviations	Definition
AMP	Adaptive Management Plan
ARD	Acid Rock Drainage
CEAA	Canadian Environmental Assessment Agency
CL	Cold Lake
CB	Central Basin (Camp Lake)
DFO	Fisheries and Oceans Canada
EB	East Basin (Camp Lake)
ECCC	Environment and Climate Change Canada
EOR	Engineer of Record
ha	Hectare
HHERA	Human Health and Ecological Risk Assessment
IAA	Impact Assessment Agency of Canada
INAP	International Network for Acid Prevention
km^2	Square Kilometer
m	Meter
masl	Meters Above Sea Level
MECP	Manitoba Environment, Climate and Parks
MDMER	Metal and Diamond Mining Effluent Regulations
MEND	Mine Environment Neutral Drainage Program – a collaboration of the federal government and the Mining Association of Canada
MWQSOG	Manitoba Water Quality Standards, Objectives and Guidelines
NB	North Basin (Camp Lake)
NOAMI	National Orphaned/Abandoned Mines Initiative - a co-operative program guided by an advisory committee that brings together the mining industry, federal/provincial/territorial governments, environmental organizations and First Nations
OAM	Orphaned and Abandoned Mines
the Project	Sherridon Orphan Mine Reclamation Project
SC	Sherlett Creek
SCC	Sherridon Community Council
SB	South Basin (Camp Lake)
the Province	Province of Manitoba
TSS	Total Suspended Solids

1 INTRODUCTION

Adaptive Management is a means of assessing, managing, and planning for uncertainties associated with a particular project or program. The general process for adaptive management begins with a problem followed by an assessment of alternative means of managing that problem, and ultimately selecting the solution (Figure 1). The next step is solution design, followed by implementation. Monitoring is a key component of the adaptive process because the monitoring findings ultimately determine if any adjustment (or replacement) of the solution, or restatement of the problem are required.

The Sherridon Orphaned Mine Reclamation Project (the "Project") has employed adaptive management since project construction began. Going forward, this document formalizes and describes the framework for identification of unanticipated adverse project effects as well as for monitoring and managing project uncertainties. The AMP also provides the structure for communication between the Province and communities/stakeholders.

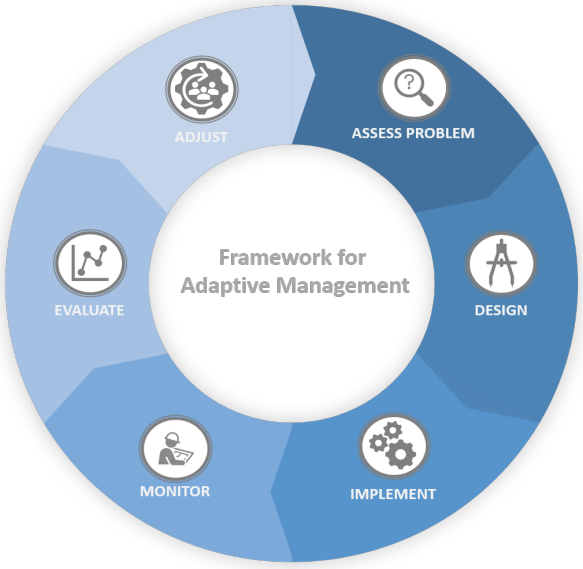


Figure 1 Framework for Adaptive Management.

The AMP includes a Monitoring Program Framework, project-specific water quality performance objectives, and an Adaptive Management Response Framework. The AMP identifies linkages between management plans and monitoring programs and defines how results from environmental monitoring programs will contribute to the adaptive management process. This process provides a means of identifying changes in the environment as a result of the project that fall outside of acceptable or expected thresholds to be addressed and mitigated.

Now that the construction phase of the project is complete, the Sherridon Project AMP has been developed to cover the two remaining project phases: the post-construction or transition phase (approx. 2022-2026) and final closure (2026+).

2 PROJECT BACKGROUND

The Sherridon Orphaned Mine Site is located on the east shore of Camp Lake, approximately 65 km northeast of Flin Flon, Manitoba (Figure 2). The copper-zinc mine was operated by Sherritt Gordon Mines between 1928 and 1952. The communities of Cold Lake and Sherridon developed in the early 20th century in conjunction with development and operation of the Sherridon Mine. The mine site is since abandoned and is now the responsibility of the Province of Manitoba.

The Province commissioned a reclamation plan and associated design for the site in 2006. The design study recommended tailings relocation in combination with flooding as the preferred option for site reclamation. The reclamation plan included the relocation of 47 hectares (ha) of land-based tailings into Camp Lake, which is known to effectively control acid rock drainage (ARD) from sulphide tailings and is a recognized best management practice (SRK 2005). This “sub-aqueous” tailings disposal method had already demonstrated specific effectiveness for the Sherridon sulphide tailings through the analysis of water from Fox Lake (adjacent to Camp Lake) in which tailings had been deposited during mining operations (Moncur et al. 2012). The objectives of the reclamation plan and additional detail are provided in Section 3.0.

Construction associated with the reclamation plan began in 2009 and was completed in early September 2021 (Appendix A). The bulk of the mine waste was relocated to Camp Lake between 2009 and 2012. Subsequent work focused on identifying and removing smaller quantities of residual mine waste from areas adjacent to Camp Lake and removal of the site access road, which was constructed from mine waste.

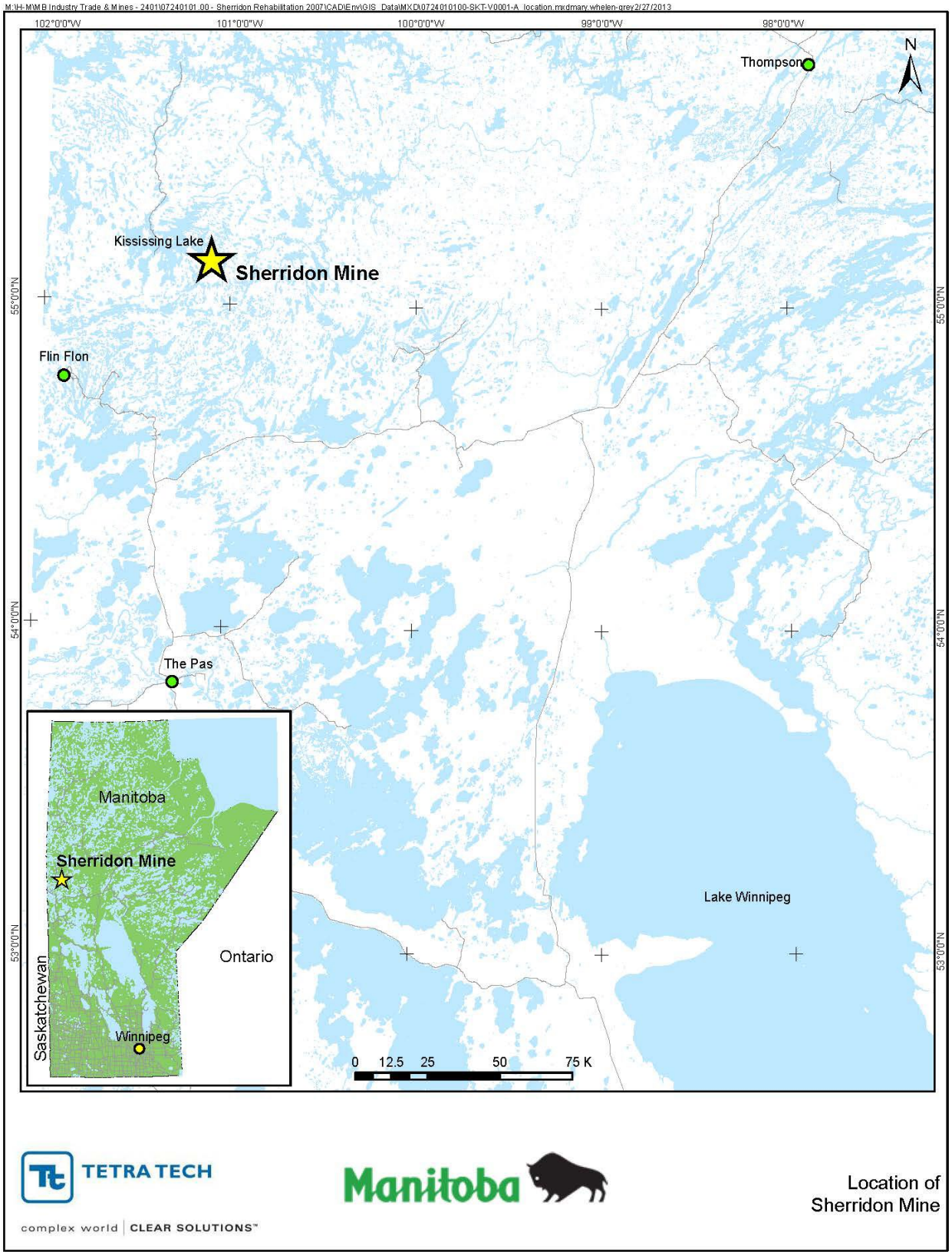


Figure 2 Location of the Sherridon Orphan Mine in Manitoba.

3 RECLAMATION PLAN

3.1 PLAN OBJECTIVES

The objectives for the Sherridon reclamation project were based on the findings of the Human Health and Ecological Risk Assessment (HHERA) completed in 2004 (UMA/SENES 2004). The HHERA determined that acid rock drainage originating from the tailings presented a significant ecological risk to aquatic life in Kississing Lake. Tailings dusting was identified as an important quality of life issue for the Community of Sherridon, requiring control, but was not found to be a risk to human health or the natural environment. No aspect of the project or its historical environmental effects was identified as a risk to human health (UMA/SENES 2004).

The reclamation objectives for the project were therefore threefold:

- Improve site safety
- Eliminate tailings dusting
- Control acid rock drainage from the Sherridon mine waste to prevent any further degradation of aquatic habitat in Kississing Lake

The Project was intended and designed to prevent further degradation of the environment related to historic mining operations. The Project was not intended or designed to return the site to pre-mining conditions. The scope of the reclamation Project did not extend to addressing historical effects on Kississing Lake, which, accordioning to UMA/SENES 2004, concluded that mine-related metals in soil, dust, drinking water, or diet (fish, berries, wildlife, etc.) were below levels where there would be a potential concern for human health.

3.2 PLAN DEVELOPMENT

The reclamation plan design for the Sherridon Orphan Mine Project was the product of a multi-step design and approval process in which six potentially applicable reclamation approaches were evaluated and compared, leading to recommendation of sub-aqueous disposal as the preferred approach. The plan, prepared by a team of three established and experienced engineering firms, was reviewed by Manitoba (Mines Branch), which also consulted with national and international agencies involved in managing acid rock drainage (e.g., MEND, NOAMI, INAP), and by the inter-departmental planning committee of the Manitoba government, which included representatives of all Provincial government departments and some federal departments and agencies (Fisheries and Oceans Canada (DFO), Environment Canada, and the Canadian Environmental Assessment Agency (now referred to as the Impact Assessment Agency)). Additional detail is provided in Appendix B.

All reclamation projects involve some changes to the initial plan as work proceeds. These changes often are a result of findings in the course of the work, since it is impossible to know in advance of the work everything that will be encountered during excavation and material relocation. The sub-aqueous disposal reclamation approach remains unchanged, but the execution approach has been modified several times to address requests from the community

(e.g., provision to maintain some flow down lower Sherlett Creek), decisions made by the contractor, and matters identified in the course of reclamation. These are further discussed in Appendix C.

3.3 ENVIRONMENTAL MONITORING

Environmental monitoring was a key element of the reclamation plan and will continue to be through the adaptive management phase. Water quality monitoring is the primary indicator of whether the project is continuing to function as designed or requires some form of further assessment or alteration.

3.3.1 Pre-Project

A baseline environmental study was conducted to document environmental conditions in Kississing Lake in the 2008 open water season immediately before the reclamation work started (Tetra Tech WEI 2016). The pre-construction study was designed to document conditions at that time, identifying ecologically appropriate reference areas in Kississing Lake that have not been affected by the historical discharge from Camp Lake to enable quantitative assessment of the effects to date and to assess the geographic extent of effects. The study design also maximized the use of studies conducted prior to 2008, to provide as full a picture of conditions in the lake as possible. Repeating the study over time will then allow determination of the rate of recovery of aquatic conditions in the lake.

3.3.2 Construction Phase

Monitoring has been instrumental in identifying issues associated with the remaining adjacent mine waste to target further reclamation work. The monitoring program for the construction phase of the Sherridon Project is complete. This was focused on water quality to support management of the construction activities to advance the project while preventing degradation of water quality in the Cold Lake arm of Kississing Lake which directly receives inflow from Camp Lake. In addition, the monitoring program has provided a preliminary measure of the performance of the subaqueous mine waste disposal, and an ongoing assessment of the significance of runoff from any mine waste remaining adjacent to Camp Lake.

The water quality monitoring program has evolved considerably to reflect environmental management requirements at different stages of project construction since it was first implemented in 2013. The initial focus was on the pH of Camp Lake, as pH was the primary indicator of project performance at that time. No discharge was planned in 2013 and more detailed water quality information beyond pH was not required. The sampling and analytical program expanded in 2015 in preparation for a controlled discharge of treated water from Camp Lake to include a wider range of water quality parameters (metals, TSS, alkalinity, toxicity) in Camp Lake and stations in Cold Lake. The focus of this program was on determining the suitability of water quality in Camp Lake for discharge following lime treatment and demonstrated that the lake could be treated successfully although no discharge was conducted.

The scope of water quality monitoring expanded further in 2016 to support the first discharge of treated water from Camp Lake. Discharge quality thresholds based on the Metal Mining Effluent Regulations (now the Metal and Diamond Mining Effluent Regulations (MDMER; Minister of Justice 2021)) were set to manage the first treated discharge and to

inform project management actions. Monitoring included frequent sampling during the discharge and a period of post-discharge sampling of downstream conditions.

Discharge quality thresholds were added to management of the 2017 discharge based on 2016 monitoring results (turbidity, iron) and the MWQSOGs (aluminum, cadmium) in addition to the MDMER thresholds (toxicity, pH, TSS, copper, zinc) that were applied in 2016. Sampling was initiated in both Camp Lake and Cold Lake shortly following ice-out and continued through the discharge and on to the end of the open water season. The mixing zone monitoring area was established and sampling frequency in Camp Lake, the discharge, and the mixing zone, was increased during the discharge period.

There was a further increase in sampling frequency in 2017 to include daily sampling of the discharge and frequent sampling of Camp Lake and the mixing zone and this approach continued during the spring 2018 discharge of treated water. Water quality sampling frequency was relaxed to weekly during the open water season once Sherlett Creek flow was returned to Camp Lake in August 2018 and has continued at this frequency though 2021.

A full list of the 2021 sampling parameters is included in Appendix D.

3.3.3 Sampling Locations

The monitoring program samples four distinct areas (Figure 3 and Table 1.0):

- Sherlett Creek above the inlet to Camp Lake (one station, SC-1) – documents background water quality in the dominant surface water inflow to the lake. Additional stations on Sherlett Creek upstream of SC-1 (identified as SC-2, SC-3, SC-4, SC-5, and SC-6) are periodically sampled as well, but SC-1 is the primary monitoring location.
- Camp Lake (8 stations, 2 in each of the South (SB-1 and SB-2), Central (CB-1 and CB-2), North (NB-1 and NB-2), and East (EB-1 and EB-2) basins of the lake); – documents water quality in the lake and allows for determination of how remaining adjacent mine waste and construction activities are affecting water quality
- Camp Lake discharge (one station) and Cold Lake mixing zone (3 stations, CL-3, CL-7, and CL-8) – to document discharge water quality and how the discharge attenuates within the mixing zone. Stations CL-7 and CL-8 are located at the margin of the mixing zone, 100 m from the point of discharge entry to the lake. Both stations were added as part of the reclamation project monitoring program. Station CL-3 is located within the mixing zone 75 m from the point of discharge entry to the lake and is an historical monitoring station employed by studies prior to the reclamation project. The mixing zone size is based on the Manitoba Water Quality Standards Objectives and Guidelines (MWQSOG; Manitoba Water Stewardship 2011) specification of a 100 m radius from the point of discharge entry to the lake.
- Cold Lake (4 stations (CL-2, CL-4, CL-5, and CL-6) – to document water quality within Cold Lake. Stations CL-2, CL-4, and CL-5 are historical monitoring stations. Station CL-6 was added as part of the pre-construction baseline study conducted as part of the reclamation project.

Sampling frequency varies with location and time of year. During the open water season of the construction phase, Sherlett Creek, Camp Lake, the Camp Lake discharge (water quality), and the Cold Lake mixing zone stations were typically sampled weekly, and the Cold Lake stations were sampled monthly. All locations are sampled once during the winter ice cover period, subject to safe ice conditions. Discharge toxicity is sampled monthly during the open water season.

3.3.4 Program Adaptation

Sampling locations can be added to address specific questions that may arise in the future and that may not be adequately considered with existing locations. These additional locations may be sampled only for a specific period to ask a particular question or, if long term data are needed, these may become part of the continuing program.

In general, sampling locations cannot be “moved” without a significant risk of losing comparability with historical data. Unless there is compelling data to the contrary, a sampling station relocation should be viewed as an abandonment of the historical station coupled with establishment of a new station. Considerable caution should be exercised before deciding to abandon a sampling station. At a minimum, a period of paired sampling of the historical and new location is necessary to establish comparability before the historical location is abandoned in favour of a new location. One year of paired sampling is a typical minimum paired sampling period, and longer may be advisable for locations that are not otherwise frequently sampled.

Similar caution should be exercised in the event that a change in analytical laboratories is contemplated. A program of paired analyses from both the historical and proposed new labs for all critical sampling locations is essential to establish comparability. Step changes in temporal trends almost always occur as a result of a lab change and need to be fully understood before completing a transition to a new laboratory service provider.

3.3.5 Reporting

Annual water quality reports for the Project are prepared every spring documenting the previous year’s sampling program, analytical results, and discussing the findings. Summary memos are typically provided throughout the open water season at varying frequencies to update interested parties on project activities and interim findings.

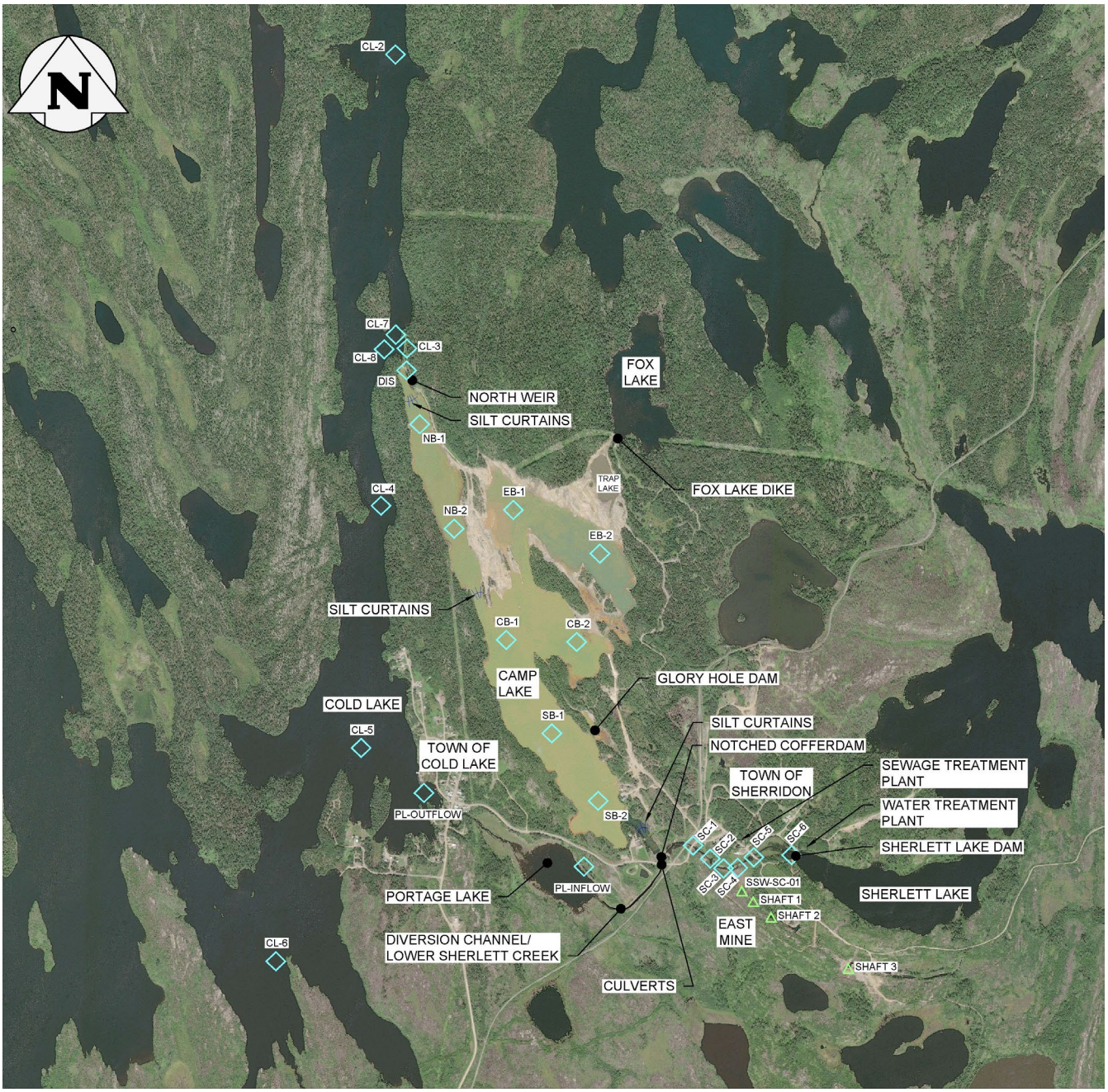


Figure 3 Sherridon Orphan Mine Project water quality monitoring stations.

Table 1 Sherridon Orphan Mine Reclamation Project water quality sampling station GPS locations (UTM Zone 14).

Camp Lake		
Sample ID	**Easting**	**Northing**
CB-1	365683	6111532
CB-2	366054	6111523
EB-1	365724	6112218
EB-2	366173	6111982
NB-1	365228	6112789
NB-2	365415	6112114
SB-1	365918	6111047
SB-2	366164	6110692
Cold Lake		
Sample ID	**Easting**	**Northing**
CL-2	365105	6114587
CL-3	365108	6113059
CL-4	365029	6112231
CL-5	364921	6110966
CL-6	364479	6109859
CL-7	365112	6113098
CL-8	365072	6113055
Sherlett Creek		
Sample ID	**Easting**	**Northing**
SC-1	386666	6110452
SC-2	366757	6110380
SC-3	366819	6110343
SC-4	366898	6110369
SC-5	366975	6110404
SC-6	367184	6110406

3.4 PLAN PERFORMANCE TO DATE

Indicative water quality trends are consistent with the pre-construction model predictions (DJRC 2021).

3.5 ANTICIPATED FUTURE OUTCOMES

The completed reclamation project is expected to:

- Eliminate surface-stockpiled tailings and waste rock, the associated tailings dusting, and the generation and runoff of ARD from the tailings/waste stockpiles into Camp Lake; and,
- Considerably improve water quality in Camp Lake such that it eliminates the Camp Lake discharge as a risk to the health of aquatic life in Kississing Lake.

Tailings dusting has already been eliminated as a result of the relocation of the bulk of the mine waste to the lake.

The expectation of considerable improvement in water quality is based on the water quality model predictions developed for the post-construction period during the project planning phase (Appendix E). These predictions were based on extensive information on Sherridon tailings and mine waste properties collected during project planning, along with site specific groundwater studies and sampling of Sherlett Creek upstream of Camp Lake. The modelling was completed for the key water quality parameters associated with protection of aquatic life - copper and zinc – and key indicators of acid rock drainage control – pH and sulphate. Cadmium originates from the same minerals as the zinc and is expected to behave in the same manner.

Key model predictions were that post-reclamation water quality in Camp Lake would primarily be determined by inflowing Sherlett Creek water quality and that water quality in Camp Lake would quickly approach that in Sherlett Creek on completion of construction. Overall, the submerged tailings were predicted to have a negligible to small effect on overlying water quality following the approximately 4-year transition period.

Subsequent water quality monitoring on Sherlett Creek has demonstrated the considerable variability of several key parameter concentrations. This variability needs to be kept in mind going forward when evaluating post-construction project performance and has been considered in development of the Post-construction Water Quality Performance Objectives (Appendix E).

4 ADAPTIVE MANAGEMENT

The Draft Sherridon Project AMP has been developed to cover the remaining two project phases: i.) post-construction transition; and ii.) final closure. The post-construction transition phase represents a period of improving water quality in Camp lake following removal of the adjacent mine waste/ARD runoff sources and elimination of construction disturbances in the watershed. The transition period represents the time expected to be necessary for the lake to fully respond to the relief from ARD loading. Predictive water quality modelling conducted during project planning indicated the transition period is expected to be relatively short, occurring over approximately four years, followed by the closure period characterized by minor water quality fluctuations related to the project works. The closure phase of the reclamation project represents the period of largely stable operation of the reclamation works. The start of this phase is tentatively set at four years post-construction, but the actual start time for this phase is when Camp Lake discharge water quality has stabilized as demonstrated by monitoring during the post-construction phase.

The primary project components requiring monitoring during these two phases include:

- Water quality
- Camp Lake water level
- Adaptive Monitoring Requirements (Sampling Frequency)
- Inspection and Maintenance of Built Structures

Decision flowsheets have been developed to assist in guiding the project owner in managing these project components and proactively mitigating any challenges that may arise over the long-term. The decision flowsheets provide a simple, graphical, representation of how adaptive management decisions are made in response to project conditions that may develop. Colour coding of the flowsheet cells indicates the risk of the indicated project condition to the aquatic environment (Appendix F) and may also be used by the project owner to communicate risk conditions and adaptive responses to project stakeholders (see Section 5).

4.1 WATER QUALITY

4.1.1 Management Concerns

Specific questions to be addressed include:

1. Has completion of the removal of remaining mine waste adjacent to Camp Lake –
    a. Reduced key metal concentrations (specifically copper and zinc) in the Camp Lake discharge to meet the post-construction water quality performance objectives developed for the project (Table 1).
    b. Caused iron concentrations (and specifically particulate iron) in Camp Lake to decrease such that the associated red turbidity in Camp Lake also has decreased to a level that is no longer an issue of aesthetic concern to local stakeholders.

2. Status of Kississing Lake Recovery

   Mining and mine waste affected water were discharged to the Cold Lake arm of Kississing Lake for about 80 years - from around 1928 until 2008. Kississing Lake is expected to slowly recover as a result of the reclamation project. That recovery will take considerable time, although signs of recovery are already evident. Local residents have observed the return of fish to the Cold Lake arm of Kississing Lake and use of Sherlett Creek by fish. Manitoba Fisheries Branch (now Manitoba Natural Resources and Northern Development) staff also have observed fish occurring within the discharge mixing zone. Water quality in Cold Lake has considerably improved and surficial sediment quality also is showing some initial signs of improvement since the uncontrolled discharge from Camp Lake was discontinued in late 2008. However, a quantitative assessment of recovery to date (e.g., repeat of the 2008 baseline study) remains to be done and the long-term recovery monitoring plan remains to be formalized. It should be noted that the recovery of Kississing Lake is a natural consequence of the project but was not an objective of the reclamation project. The end of the construction period is an appropriate milestone to re-visit the status of Kississing Lake recovery to date and establish a benchmark against which future recovery can be compared.

4.1.2 Management Thresholds

Post-construction water quality performance objectives (Table 1) have been developed to provide a means of evaluating performance of the reclamation project following completion of construction and informing the Adaptive Management Plan. The full basis for these objectives is detailed in DJRC (2022) attached in Appendix E.

The water quality performance objectives should not be considered as regulatory limits. Their purpose is to provide a means for evaluating the performance of the reclamation works in comparison to the expectations developed during project planning. Now that construction is completed, water quality in Camp Lake is expected to gradually approach the objectives over a four-year transition period. Monitoring to date indicates water quality is improving as fast or faster than predicted, although this trend may vary over the next few years.

The important diagnostic consideration is that the trend toward the objectives occurs, and at a rate of improvement such that there is a reasonable expectation that the objectives will be realized within four years of construction completion. Slow or absent improvement should trigger investigation of potential causes, which may or may not require the application of corrective or mitigative measures. Faster improvement than expected should move the monitoring program to confirmation monitoring, possibly followed by a reduced monitoring frequency.

Table 2. Proposed Post-construction Camp Lake Water Quality Performance Objectives to be achieved within 4 years following completion of construction.

Parameter (units)	Proposed Camp Lake Water Quality Performance Objectives
pH, field (pH units)	$6.5 \leq pH \leq 9.0$[1]
Sulphate (mg/L)	Ambient SC-1 +7+25%[2,3]
TSS (mg/L)	11.5 mg/L[4]
Turbidity (NTU)	Ambient SC-1 + 25%
Iron (total) (mg/L)	Ambient SC-1 + 25%
Aluminum (total) (mg/L)	Ambient SC-1 + 25%
Cadmium (total) (mg/L)	Ambient SC-1 + 25%
Copper (total) (mg/L)	Ambient SC-1 + 30%[5]
Zinc (total) (mg/L)	Ambient SC-1 + 25%

1. MWQSOG Tier II Objective – determined to be reasonable based on pre-construction predictions and monitoring record.
2. Ambient SC-1 refers to the current concentration measured at Sherlett Creek station SC-1 within the last 7 days.
3. Based on pre-construction prediction (from SENES 2008) plus 25% allowance for sampling and analytical variation as per DJRC (2022).
4. MSWQOG Tier II Objective for SC-1 determined as per Appendix A of DJRC (2022) and reasonable based on monitoring record.
5. Based on pre-construction prediction that total Cu will be 5 to 10% higher than in Sherlett Creek (from SENES 2008) plus 25% allowance for sampling and analytical variation as per DJRC (2022).

4.1.3 Management Actions

4.1.3.1 Water Quality Monitoring

The environmental monitoring program during the post-closure period will again primarily focus on water quality in Camp Lake since this determines the resulting discharge quality on which project objectives are evaluated. The initial scope of post-construction water quality monitoring is proposed as a continuation of the program conducted during the construction phase, with the same parameters (Table 1) and locations (Table 2) at a slightly decreased sampling frequency (bi-weekly during the open water season in place of the present weekly frequency). This scope should apply for at least the first two post-construction years. The “Water Quality” and “Adaptive Monitoring Requirements” decision flowsheets should be applied to water quality management during the post-construction phase and beyond. The “Water Cover” decision flow-sheet describes management decisions associated with low rainfall years that can erode water cover and affect water quality. There is a specific trigger for increased water quality monitoring frequency if water cover management is required.

4.1.3.2 Establish Post-Construction Benchmark for Kississing Lake

Mining and mine waste affected water were discharged to the Cold Lake arm of Kississing Lake for about 80 years - from around 1927 until 2008. Kississing Lake is expected to slowly recover as a result of the reclamation project, but that recovery will take considerable time, although signs of recovery are already evident. Local residents have observed the return of fish to the Cold Lake arm of Kississing Lake and use of Sherlett Creek by fish. Manitoba Environment, Climate and Parks also have observed fish occurring within the discharge mixing zone. Water quality in Cold Lake has considerably improved and surficial sediment quality also is showing some initial signs of improvement. However, a quantitative assessment of recovery to date remains to be completed.

The baseline environmental study conducted in 2008 provides a framework for long term recovery monitoring, representing the basic structure and sampling locations to be used for a similar post-construction study. Additions to the plan can always be made, but reductions should be avoided unless considered essential. It is recommended that this study be completed in 2022 or 2023.

4.1.4 Applicable Decision Flowsheets

- Water Quality
- Adaptive Management Requirements

4.2 WATER LEVEL/COVER

4.2.1 Management Concerns

Subaqueous storage of sulphide mine waste (tailings and waste rock) is an established best management practice for the long-term control of acid rock drainage. Effective control requires a minimum water cover of 1.0 m. The design of the Sherridon project established a target minimum water cover of 1.5 m to provide a factor of safety over the minimum requirement. The Sherlett Creek watershed covers over 100 km^2, and runoff is expected to maintain the 1 m minimum water cover under all but the most extreme drought conditions.

4.2.2 Management Thresholds

As described above, the target minimum water cover over tailings established for the Project is 1.5 m design cover level (316.0 masl) with a minimum water cover of 1.0 m (315.5 masl).

4.2.3 Management Actions

4.2.3.1 Lake Level Monitoring

Maintenance of the water cover over the mine waste is a critical success factor for the project. Loss of water cover can expose the waste to air, which would result in oxidation of the sulphides in the exposed waste and the resulting generation of acid rock drainage.

The water level on Camp Lake has been regularly monitored during project construction as part of weekly water quality sampling conducted during the open water season. As the project moves to less frequent sampling in the post-construction period, there will need to be a mechanism for the measurement and remote monitoring of the lake level to ensure the water cover is maintained (i.e., installation of continuous water level monitoring with remote access for data downloads).

4.2.3.2 Water Cover Management

Water cover management on Camp Lake would require pumping of water from an adjacent water body to restore water cover over the mine waste. Planning for water cover management would require selection of a water body to provide the water and plans for the installation of pumping capacity to deliver the necessary water. Examination of historical precipitation records indicates that water cover management is expected to rarely be necessary, such that the provision of temporary pumping capacity as needed is likely to be adequate. However, climate change is a reality and the effect of climate change on precipitation and local watershed runoff into the future remains somewhat uncertain. Should more extreme and longer drought conditions develop in the future than have been documented in the past, a permanent makeup water pumping capacity may become necessary.

4.2.4 Applicable Decision Flowsheets

- Water Cover
- Water Quality
- Adaptive Management Requirements

4.3 ADAPTIVE MONITORING REQUIREMENTS

4.3.1 Management Concerns

The primary objective of the Project is to manage the Sherridon mine waste such that discharges from Camp Lake do not present a risk to aquatic life. Project performance is assessed by monitoring water quality in Sherlett Creek, which flows into Camp Lake, in Camp Lake, and in the Cold Lake arm of Kississing Lake, which directly receives inflow from Camp Lake with subsequent comparison of the results to water quality performance objectives. Appropriate management of sampling frequency will ensure that water quality degradation does not go unnoticed.

4.3.2 Management Thresholds

The threshold for increasing/reducing sampling frequency is whether or not the measured water quality is meeting or trending toward the water quality objectives set for the project.

4.3.3 Management Actions

The frequency of water quality monitoring is determined by project phase and performance in comparison to the objectives; therefore, monitoring should continue as follows:

- Sherlett Creek – necessary for calculation of the objectives
- All four basins of Camp Lake to assess local performance of tailings management within the lake
- Camp Lake discharge, which is the location where the objectives are applied
- Cold Lake, within and outside the mixing zone

Monitoring frequency is highest during the initial post-construction period and is progressively reduced over time based on measured water quality.

4.3.4 Applicable Decision Flowsheets

- Adaptive Monitoring Requirements
- Water Quality

4.4 INSPECTION AND MAINTENANCE OF BUILT STRUCTURES

4.4.1 Management Concerns

The project is reliant upon the integrity of several built structures that need to remain in place for the project to function as planned, including: the Sherlett Lake level control dam; the coffer dam at the inflow to Camp Lake; the level control plates and diversion culverts at the inflow to the Sherlett Creek diversion channel; the Fox Lake outflow dyke; the Glory Hole dam; and the Camp Lake north weir. Management must include understanding and maintaining the structural integrity of this infrastructure over the long-term. Silt curtains have also been installed in Camp Lake and fencing has been installed along the diversion channel; both will require ongoing monitoring as long as they are in place (albeit not necessary for the project to function as planned).

4.4.2 Management Thresholds

Inspections must be conducted to determine if structures are functioning for intended purpose and/or if there is an apparent/impending risk of failure.

4.4.3 Management Actions

A program of periodic engineering inspections, informed by a Failure-Mode-Effects analysis to identify critical issues and appropriate management responses, should be developed, and implemented. A Dam Safety Review (including site inspection) was recently completed for the Project. The following management actions are summarized from Tetra Tech 2022.

- Establish Engineer of Record (EOR)
- Conduct Routine Surveillance in conjunction with water quality sampling (EOR to determine frequency; monthly frequency during open water season is recommended to initiate inspection program). Monitoring and reporting

should include but is not limited to beaver activity, vegetation growth, weathering, exposed rebar, cracking, ponding of water, fencing, signage, etc.

- Conduct formal annual inspections (should be conducted by the EOR)

4.4.4 Applicable Decision Flowsheets

Inspection and Maintenance of Built Structures

Silt Curtain Inspection and Maintenance

5 PROJECT COMMUNICATIONS

The community of Sherridon was established to house and service the mine workers; however, many of the original families have remained in the area long since mining ceased. Kississing Lake provides source of income and sustenance for many residents of Sherridon and Cold Lake. The residents have long expressed that Kississing Lake is of critical importance to their health and livelihood. Active communication between the communities of Sherridon and Cold Lake, Manitoba Environment, Climate and Parks (MECP), and other key stakeholders is of the utmost importance to successful AMP development, implementation, and long-term monitoring. To ensure that two-way communication occurs consistently moving forward, the following communication plan is proposed for implementation starting in Spring 2022.

1. **Project Website**. The project website will provide current information about project status and upcoming events, reports and memos of public interest, and photographs.

2. **Project Email Address**. A project specific email address and phone number will be established and provided to the public via the website. Questions or concerns related to the project may be submitted at any time. All incoming emails or phone calls will be received by Manitoba Environment, Climate and Parks with responses issued as quickly as possible. The email address may also be utilized for submitting photographs or observations from site to assist the Owner or its consultants in implementing the adaptive management plan, as needed.

3. **Communications Log**. A formal communications log will be developed and used to track all correspondence related to the project that is received from the public. The log will identify from whom the correspondence was received, when it was received, the form of the communication (email, phone call, meeting, etc.), a description of the query, a date by which follow up correspondence is required and submitted, and the person designated to provide the follow up. A sample communications log is included in Appendix G.

4. **Meetings**. Quarterly, semi-annual or annual meetings will be held via tele or video conference. Additional meetings may be proposed as necessary to address specific issues of concern that may require resolution before the next regular meeting (see item 5 below). It is anticipated that the need for meetings will decrease over time as the project moves past the post-construction transition state. At each regular meeting, a monitoring program update will be provided along with a summary of the communications received and responses provided since the last regular meeting. Time will be provided for a question-and-answer period, as appropriate to the matters under consideration. The meetings will provide a space for respectful open dialogue regarding topics of interest related to the long-term monitoring program and will provide an opportunity for two-way information sharing.

5. **Report Distribution.** Annual monitoring reports and other monitoring-related documents will be distributed to stakeholders following review and approval by Manitoba Environment, Climate and Parks. These reports have been shared with stakeholder groups over the years, including the Canadian federal government (Environment and Climate Change Canada, Fisheries and Oceans Canada), the provincial government (Manitoba Mines Branch, Conservation and Climate, Fisheries, Water Management, Indigenous and Northern Affairs) as well as the Sherridon Community Council, Manitoba Métis Federation, and Mathias Colomb Cree Nation.

6. **Additional Communication Triggers**. The AMP uses a colour coded system to manage project risks but also to trigger communication between the project owner and project stakeholders. Generally, the colour coding corresponds to maintenance of water quality (as per objectives presented in Appendix B). Colour coding in relation to communication triggers is as follows:

   a. Green = Project is performing as planned, water quality is meeting project objectives or trending toward, normal monitoring, maintain regular communication schedule with stakeholders

   b. Yellow = Project is performing as planned with no immediate risk to aquatic environment, but observations made of water quality trending away from project objectives, initiate investigation of cause, notify stakeholders of investigatory activities

   c. Orange = Project is not performing as planned with increased potential of risk to aquatic environment if the issue is not addressed. Investigate and apply corrective action. Communication with project stakeholders should continue until resolved (frequency dependent on nature and timing of issue).

   d. Red = Project is not performing as planned with potential for unacceptable risk to aquatic environment if the issue is not addressed. Response may include stopping the discharge, if appropriate to the issue, and immediate investigation of cause and application of corrective action as soon as possible. Frequent communication with stakeholders until resolved.

   Regular communications will be the responsibility of the project owner so that the community have a full understanding of any issues and what actions the owner or its consultant are taking to investigate and/or mitigate the problem and follow up communications will occur until the issue is resolved.

7. **Community monitor position.** The Province would like to establish a role for a community monitor who would assist the monitoring team with field work. This person would be appointed by Sherridon Community Council (SCC) and would provide liaison between OAM staff and SCC, as required.

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APPENDIX A – SHERRIDON ORPHAN MINE RECLAMATION PROJECT TIMELINE.

Sherridon Orphan Mine Reclamation:
Milestone Timeline

TETRA TECH

1928-1952
Mine Operated by Sherrit Gordon Mines



2000
Manitoba established the OAM Site Rehabilitation Program to address concerns associated with orphaned/abandoned mine sites.



2007-2008
Reclamation Plan Design



2008-2012
- Construct & commission Sherlett Creek diversion & WTP
- Discharge treated lake water, relocate 7 million tonnes of mine waste to Camp Lake



2013-2015
Refill Camp Lake, monitor & manage lake pH / water level



2016-2017
- Water quality monitoring & management
- Controlled discharge from Camp Lake
- Decommission & remove WTP & associated materials (waste rock, causeway materials, sludge)



2018
- Fox Lake & Glory Hole isolation
- Restore Sherlett Ck flow through Camp Lake
- Identify & initiate additional tailings removal
- Water quality monitoring & management.



2019
- Water Quality Monitoring
- No Construction Activity



2020
- Completion of tailings removal
- Removal of mine access road
- Water quality monitoring
- Preparation of draft adaptive management plan



2021-Ongoing
- Completion of tailings removal (2021)
- Adaptive Management Plan formalization & ongoing monitoring/communications



APPENDIX B – RECLAMATION PLAN DESIGN

The reclamation plan design for the Sherridon Project was designed to:

- Improve site safety
- Eliminate tailings dust
- Control acid rock drainage from the Sherridon mine waste

The final design was the product of a multi-step design and approval process. The first step was conceptual design, in which six potentially applicable reclamation approaches were evaluated and compared, leading to recommendation of sub-aqueous disposal as the preferred approach. The conceptual plan was reviewed by Manitoba (Mines Branch), which also consulted with national and international agencies involved in managing acid rock drainage (e.g., MEND, ICARD), and by the inter-departmental planning committee of the Manitoba government, which included representatives of all Provincial government departments and some federal departments and agencies (Fisheries and Oceans Canada (DFO), Environment Canada, and the Canadian Environmental Assessment Agency (now referred to as the Impact Assessment Agency)).

The subaqueous disposal approach was selected for a number of reasons:

- Subaqueous disposal is a recognized best management practice for the prevention of acid rock drainage from sulphide mine waste
- The effectiveness of subaqueous disposal in controlling acid generation from the Sherridon tailings was demonstrated by the placement of tailings in Fox Lake during historical operations
- Tailings dusting is eliminated, because all the tailings would be under water cover
- Long-term water treatment also is not expected to be required, because of the demonstrated effectiveness of the ARD control provided by sub-aqueous disposal resulting in lower cost.

The conceptual design was approved by the Mines Branch following review and the project moved to detailed design. Detailed design considered two approaches to sub-aqueous disposal – high level flooding, which minimized relocation of mine waste by using a system of dykes and dams for containment of the water cover over the mine waste, and a low-level design involving relocation of most of the mine waste (i.e., all that was not already under water or below the final design elevation for the tailings) to Camp Lake and using the natural topography to provide containment. The high-level design was ruled out part-way through the process due to unfavourable foundation conditions for the dam construction needed in Camp Lake. The low-level sub-aqueous disposal design was selected for construction.

The foundational element of the reclamation plan involved the sub-aqueous disposal of the mine waste (tailings and waste rock) that were stockpiled on land adjacent to Camp Lake. This involved temporary diversion of Sherlett Creek around Camp Lake, dewatering of Camp Lake by pumping water through a water treatment plant and discharging the treated water to the Cold Lake Arm of Kississing Lake, and relocation of the mine waste from the stockpile to Camp Lake using a truck and shovel method. The mine waste placed in Camp Lake was track packed in lifts, or layers. The

upper 3 m of mine waste placed in the lake were mixed with lime before placement and packing to assist with neutralization.

The South, Central, and North basins of Camp Lake largely contain placed tailings (i.e., tailings moved from the on-land tailings stockpile) and waste rock. The East basin is almost entirely underlain by cut-down tailings (i.e., tailings that were in place before the reclamation project but were “cut down” to the final design tailings elevation.

The final design elevation for the packed tailings surface was 316.5 m ASL. With the planned 1.5 m deep water cover, the final design water elevation for Camp Lake was 318.0 m ASL. The 1.5 m water cover was selected based on other studies that identified 1 m as the minimum water cover necessary for effective ARD control and then adding a 0.5 m, or 50% buffer to that requirement. Some settlement of the tailings was expected to occur over time, and since has, further increasing the depth of water cover in the basins with placed tailings (South, Central, and North).

Once all the mine waste located above elevation 316.5 m ASL had been relocated to Camp Lake, the lake was then to be refilled with water from Cold Lake, treated as necessary to pH 9.0 using the water treatment plant, and the flow of Sherlett Creek through Camp Lake would be restored.

Restoration of Sherlett Creek flow through Camp Lake is a critical design element for the project. The large Sherlett Creek watershed is sufficient to maintain some creek flow in extreme drought conditions and is therefore necessary to maintain the water cover on Camp Lake under those same conditions without requiring active management. Operation as a flow-through system also ensures that high-flow conditions are managed without requiring active management. Another important contribution of Sherlett Creek is the delivery of alkalinity – on an annual basis, Sherlett Creek delivers as much alkalinity as was typically added during the annual lime treatments.

For this reason, any decision to close the discharge needs to consider the risks associated with closure along with any benefits. Closure of the discharge should only be considered if the discharge quality is representing a risk to aquatic life. An obvious example of this risk is if the toxicity testing shows mortality – without question that should trigger an immediate discharge closure. However, there are other indicators to be monitored that should trigger a discharge closure in advance of an indication of acute toxicity. These include metals (copper, zinc), TSS concentrations, or pH in the discharge approaching the MDMER effluent quality limits.

The primary risk associated with closing of the discharge is that it also requires re-direction of all Sherlett Creek flow to lower Sherlett Creek because Camp Lake has limited storage capacity. This redirection also would eliminate the associated inflow of alkalinity to Camp Lake, which in most circumstances would result in the development of acidic conditions in the lake and would require lime treatment before a discharge could be resumed. Based on past experience, lime treatment is to be avoided if at all possible due to the difficulty associated with preventing fugitive emissions of lime dust during application and from the lake surface and the effect of these emissions on the adjacent community. In this regard, consideration of discharge closure should be limited to situations where it is absolutely necessary to prevent an acutely toxic discharge from occurring. Although issues related to the appearance of the water leaving Camp Lake also are important, discharge closure does not appear to be an acceptable management action given the likely requirement for a subsequent lime treatment before a discharge could be resumed.

APPENDIX C – PLAN MODIFICATIONS

All reclamation projects involve some changes to the initial plan as work proceeds. These changes often are a result of findings in the course of the work, since it is impossible to know in advance of the work everything that will be encountered in the course of excavation and material relocation. The sub-aqueous disposal reclamation approach remains unchanged, but the execution approach has been modified several times to address requests from the community, decisions made by the contractor, and matters identified in the course of reclamation.

Community Requests – The original project design involved routing of the entire flow of Sherlett Creek through Camp Lake via the natural inflow and outflow at the south end of Camp Lake. This would have meant that all water flow in lower Sherlett Creek would first pass through Camp Lake. The Community indicated they did not want water from Camp Lake flowing through the Community. The adaptive response to this request was to route all the Sherlett Creek flow out the north end of Camp Lake (which was the flow route of the creek at the time the reclamation project began) and plug the culverts in the south basin so no water could flow directly from Camp Lake to Portage Lake. Once the Sherlett Creek diversion was implemented, routing all the creek flow down through Portage Lake and lower Sherlett Creek to Kississing Lake, fish started using the creek in spring. The Community was most pleased with the return of the fish, which prompted them to request that flows be maintained in the creek on completion of the project. In response, the project team developed a flow-splitting plan to provide flows to both Camp Lake and lower Sherlett Creek.

Contractor Decisions – The reclamation construction contract was set up as a performance-based contract, which allows the contractor to make changes to the method of work provided that the change or changes have the same result as the original plan. Under this arrangement, any changes made by the contractor are made at their own risk, such that additional costs that result from the change are borne by the contractor.

The original plan called for batch lime treatment of the highly acidic water in what were called the “acid ponds” to remove the bulk of the acidity from the water in the ponds before transfer to the water treatment plant for final treatment before discharge. The contractor decided to skip the initial batch treatment of these waters and instead chose to transfer the untreated acidic water to Camp Lake for treatment through the water treatment plant. The contractor’s water treatment consultant assured them that the plant would handle the acid water from the ponds and the change was approved subject to the requirement that any discharge of water treatment plant sludge to Camp Lake did not exceed a specific depth. However, the treatment plant had difficulty treating the more acidic water, treatment took much longer than planned, and the volume of sludge deposited in Camp Lake considerably exceeded that allowed in the contract specification. The contractor was required to remove the sludge from the lake at their expense.

The contractor also chose to construct the water treatment plant and associated facilities on a pad built with acid-generating waste rock. This introduced the complexity that the waste rock could not be relocated to Camp Lake, or otherwise managed appropriately, until the water treatment plant was removed. This remaining waste rock on site contributed to the acid load to Camp Lake following refilling of the lake

Fox Lake Outlet Reinforcement – Removal of tailings from the area around the outlet of Fox Lake resulted in removal of the material that had been supporting the lake outlet and lowering the crest of the outlet, creating a risk of outlet berm failure during wet periods. A temporary clay berm was installed across the outlet, and a permanent structure was designed to restore outlet berm stability and to provide an overflow spillway to allow discharges from the lake during wet periods without compromising outlet integrity

Glory Hole Isolation – the mining company left several "glory holes" (openings to surface where ore in the crown pillar (the roof of the mine) was mined out at the end of mine life). One glory hole is located adjacent to the east side of the South basin of Camp Lake. The glory hole was not observed to be connected to Camp Lake prior to construction but a connection was clearly evident during construction. This connection likely developed during construction, when the water level in the South basin of Camp Lake was raised to facilitate dewatering of the North basin for waste placement. The connection persisted following establishment of the final operating level on Camp Lake, and a dyke was specified to isolate the Glory Hole from Camp Lake.

Remaining Mine Waste, Water Management, and Lime Treatment – Camp Lake was refilled in 2013, following relocation of much, but not all, of the mine waste. The large tailings stockpile had been removed and relocated to the lake, but waste rock remained on the former mine site, which also was the site of the water treatment plant. The site access road and causeway through the margin of Camp Lake, both constructed with waste rock, and ore/waste rock in the area of an ore loadout adjacent to a former mine shaft also remained between the access road and the South basin of Camp Lake.

In addition to these remaining adjacent mine waste sources, more recent site investigation has indicated the occurrence of mine waste (primarily tailings) adjacent to Camp Lake along the north shore of the East basin, around the peninsula that separates the East basin from the Central basin, and between the East basin and Fox Lake. Some of these materials were identified as mineral soils during the previous period of waste relocation and had been covered with erosion control matting, which was eventually eroded away by the acid drainage. Other waste material had become buried under overburden when placed during mine operations but was exposed by erosion of the overburden by rainfall and one or more overflow discharges from Fox Lake following removal of tailings on top of the overburden.

Acid drainage originating from the adjacent mine wastes and entering Camp Lake quickly acidified the lake after it was filled, and the aggregate acid load to the lake was greater than the ability of the water treatment plant to neutralize the acidity. Some residual mine waste was expected to remain adjacent to Camp Lake following the mine waste relocation, but the actual residual quantity that remained was much greater than planned, for all the reasons indicated above. Consequently, it was not possible to use the plant to treat the lake to an acceptable quality for discharge although the lake still required treatment before any discharge could be implemented.

Simply leaving the lake isolated also was not an option because natural accumulations of rainfall and local watershed runoff also necessitated controlled discharges to maintain containment, so it was necessary to find an approach that could address this treatment requirement.

Batch lime treatment was selected as the most rapid means to treat the entire lake. Lime was applied to the surface of lake ice in late winter 2014. Sampling in late May, following ice-out, indicated the treatment had increased lake pH from the range of pH 3.45 to 4.09, when sampled in 2013, to pH 6.03 to 7.55, demonstrating that batch lime treatment could effectively treat the lake but that higher lime loading would be necessary to achieve the pH of about 9.0 needed to effectively precipitate copper and zinc, the principal metals of concern. The increased pH was short lived, however, dropping to between pH 3.55 and 4.40 by June 10. The rapid post-treatment drop in pH indicated a significant uncontrolled source or sources of acidity to the lake basin remained to be addressed by the reclamation project.

Further investigation in summer 2014 determined that the subaqueous tailings were performing as expected, with black/dark grey unoxidised tailings found over the entire 12 cm length of a core taken in the Camp Bay area (Central basin) of Camp Lake. Subaqueous disposal functions to control acid generation from sulphide tailings by maintaining anoxic conditions in the tails and the core sample indicated the necessary anoxia was being maintained. Remaining adjacent mine waste materials were identified as the key contributors of acid drainage to Camp Lake requiring removal. The accumulated water treatment plant sludge in the North basin also was identified as a source of metals to the lake that required removal. The residual adjacent mine waste along the north shoreline of the East basin was not identified as an issue at this time. Acid generation from the waste had not yet started, and water quality in the East basin was generally much better than in the rest of Camp Lake.

A batch lime treatment was applied to the lake in late winter 2015, with a higher lime loading than in 2014, with the intention of conducting a controlled discharge to lower the lake level following verification that acceptable water quality had been achieved. Effective water treatment was achieved by the treatment, but a discharge was delayed by consultation with the Community and, by the time agreement to discharge had been reached with the Community, water quality had degraded due to the continuing inflow of acidity from the adjacent mine wastes and no discharge could occur.

Lime treatment and a controlled discharge were completed in 2016, enabling the construction works to resume. The water treatment plant sludge in the North basin of Camp Lake was dredged and transferred to Trap Lake. Waste rock was removed from the area of the water treatment plant, the causeway was removed, and removal of the access road was started, progressing from the edge of Camp Lake to the crest of the first hill.

The remainder of the planned construction works were planned for completion in 2017. A winter lime treatment was applied, followed by a controlled discharge in spring. Construction access to the site was restricted in 2017 such that it was not possible to complete the planned works (including reinstatement of Sherlett Creek flow through Camp Lake) which resulted in additional water treatment being needed to control pH. An alternative lake treatment was tested in late summer, using liquid sodium hydroxide instead of lime, but sodium hydroxide precipitates from solution below about 12 °C and the cooling ambient temperatures soon made it impossible to effectively apply the treatment.

The final batch lime treatment of Camp Lake was done in late winter 2018, followed by a controlled discharge to lower the lake level. Construction work resumed in July, with the Glory Hole dyke being completed, followed by removal of the ore and waste from around the ore loadout, and completion of the Fox Lake outlet dyke and spillway. The Sherlett Creek cofferdam was notched, and the tailings berm was removed to allow the creek to flow back into and through Camp Lake, beginning in mid-August. No lime treatments have been necessary to maintain water quality in Camp Lake since Sherlett Creek flow was restored, even though the construction works have not been completed.

The residual mine waste located adjacent to Camp Lake along the north shore of the East basin was identified in 2018. Oxidation had progressed to the stage where there was obvious yellow/orange colouration on the surface of the waste and water quality in the East basin was worse than in other lake basins – while water quality the South, Central and North basins had improved, East basin water quality was deteriorating. Removal of this material was added to the workplan, along with a thorough inspection of the adjacent areas to identify all remaining mine waste for removal.

APPENDIX D – WATER QUALITY PARAMETERS

Water quality monitoring sampled a wide range of water quality parameters (typically 75 lab-analysed parameters and 7 field-measured parameters; Table 1), but has primarily focused on what we have termed, since 2015, the "key parameters" for the project: pH, alkalinity, TSS, and the total fractions of the metals iron, aluminum, cadmium, copper, and zinc. The key parameters are those which have been found to be relevant to understanding the effects of water from Camp Lake on receiving water quality in Cold Lake. Some of the key parameters have historically occurred in Camp Lake in concentrations at or above the applicable MWQSOGs (pH, aluminum, cadmium, copper, iron, and zinc; Tetra Tech WEI (2016) and DJRC (2016)). Alkalinity was first introduced as a key parameter to track the performance of lime treatments and, through its consumption over the season, as a measure of continuing acid sources to the lake. With the lime treatment discontinued and Sherlett Creek inflow augmenting buffering capacity in Camp Lake, alkalinity is now monitored to assess the performance of the project in maintaining adequate alkalinity. TSS is a focus because of local concerns regarding the effect of any discharge from Camp Lake on the appearance of water in Cold Lake.

Turbidity, both field and lab measured, was added to the analyses in the 2017 program, and has been continued, to provide another means of detecting possible changes in appearance of the water and is considered here as a key parameter. Total and dissolved organic carbon were added to the 2021 program to provide a better understanding of factors affecting metal partitioning between the dissolved and particulate phases. Dissolved sulphate also was added to the 2021 program to allow comparison with pre-project model predictions.

Table 1.0 Sherridon Orphan Mine Reclamation Project measured water quality parameters (2021).

Parameter
Physical/Chemical (mg/L)
pH (pH units)
Alkalinity ($CaCO_3$)
Bicarbonate (HCO_3)
Carbonate (CO_3)
Hydroxide (OH)
Total Hardness ($CaCO_3$)
Hardness ($CaCO_3$)
Dissolved Hardness ($CaCO_3$)
Turbidity (NTU)
Total Suspended Solids (TSS)
Dissolved Organic Carbon (C)
Total Organic Carbon (C)
Dissolved Sulphate (SO_4)
Acute Toxicity (LC_{50})
Total and Dissolved Metals (mg/L)
Aluminum (Al)
Antimony (Sb)
Arsenic (As)
Barium (Ba)
Beryllium (Be)
Boron (B)
Cadmium (Cd)
Calcium (Ca)
Chromium (Cr)
Cobalt (Co)
Copper (Cu)
Iron (Fe)
Lead (Pb)
Lithium (Li)
Magnesium (Mg)
Manganese (Mn)
Molybdenum (Mo)
Nickel (Ni)
Phosphorus (P)
Potassium (K)
Selenium (Se)
Silicon (Si)
Silver (Ag)
Sodium (Na)

Strontium (Sr)
Sulphur (S)
Thallium (Tl)
Tin (Sn)
Titanium (Ti)
Uranium (U)
Vanadium (V)
Zinc (Zn)

APPENDIX E – WATER QUALITY PERFORMANCE OBJECTIVES

technical memorandum

DJRC | D.J. Ramsey Consulting Ltd.

To: Jennifer Wilson, Tetra Tech Canada Inc.

From: Doug Ramsey

Date: 29 May 2022

Re: Sherridon Reclamation Project – Development of Post-construction Water Quality Performance Objectives

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Jennifer

Post-construction water quality in Camp Lake was modelled during project planning to estimate the water quality improvement expected following completion of the construction works. The model predictions indicated that post-construction water quality in Camp Lake will be strongly influenced by Sherlett Creek water quality, with small to no incremental increases in parameter concentrations in passing through Camp Lake. Modelling was focused on total copper and zinc, as the key metal parameters targeted for control, and on pH and sulphate, as measures of the significance of any residual ARD generation from the submerged tailings.

The planning-level modelling provided sufficient insight to assess the effectiveness of the selected subaqueous disposal reclamation approach but stopped short of developing post-construction water quality performance objectives. This memo extends the pre-construction modelling results to performance objectives to be applied during the post-construction monitoring period. The modelling results are reviewed, predictions are benchmarked against recent monitoring results as a preliminary gauge of their validity, potential types of performance objectives are considered and their applicability evaluated, leading to identification of preferred performance objectives.

1.0 Predicted Post-Construction Water Quality

Post-construction water quality in the Camp Lake discharge was modelled as part of the detailed design phase of project planning (SENES 2008). Modelling was done using the Reactive Acid Tailings Program for Base Metal Tailings (RATAP.BMT) and focused on four parameters (pH, sulphate, total copper, and total zinc).

Input terms to the model included:

- tailings dimensions (size, depth, depth to water table),
- tailings particle size distribution,
- gaseous transport characteristics (diffusion coefficient, gas filled porosity),
- precipitation (hydraulic flows),

- mineralogy (bulk density, reactive sulfide minerals, other primary minerals, secondary minerals, buffering minerals),
- water quality (background water quality, both surface (Sherlett Creek) and groundwater, and tailings porewater quality),
- pond option (pond size, depth, pond water quality, inflow water quality),

Input data were subjected to statistical analysis to identify outliers and significant data clusters. All water quality data were checked for ion balance and solid/solution equilibrium with the US Geological Survey's PHREEQC water quality program.

The model predictions indicated that post-construction water quality in Camp Lake and the discharge to Cold Lake would largely be determined by the quality of the inflowing Sherlett Creek, with relatively steady water quality achieved within about 30 to 40 months following project completion (Figures 1 to 4).

pH was estimated to be the same as in Sherlett Creek within 10 months of the end of construction and to remain the same over the 600-month modelling period (Figure 1). Sulphate concentrations were estimated to be in the 11 to 12 mg/L range over the same period (Figure 2).

The tailings placed in Camp Lake were estimated to make a minor (range of 3 to 10%; Figure 3) additional contribution to the copper concentration compared to the creek inflow. It is unlikely that this small increase would be detectable in monitoring given that the precision of determinations by commercial analytical laboratories is typically in the range of 10 to 15%. Following project completion, the total zinc concentration in the Camp Lake discharge was expected to be 20 to 25% lower compared to the concentration in the Sherlett Creek inflow (Figure 4), indicating the submerged tailings appear to be a sink for zinc rather than a source.

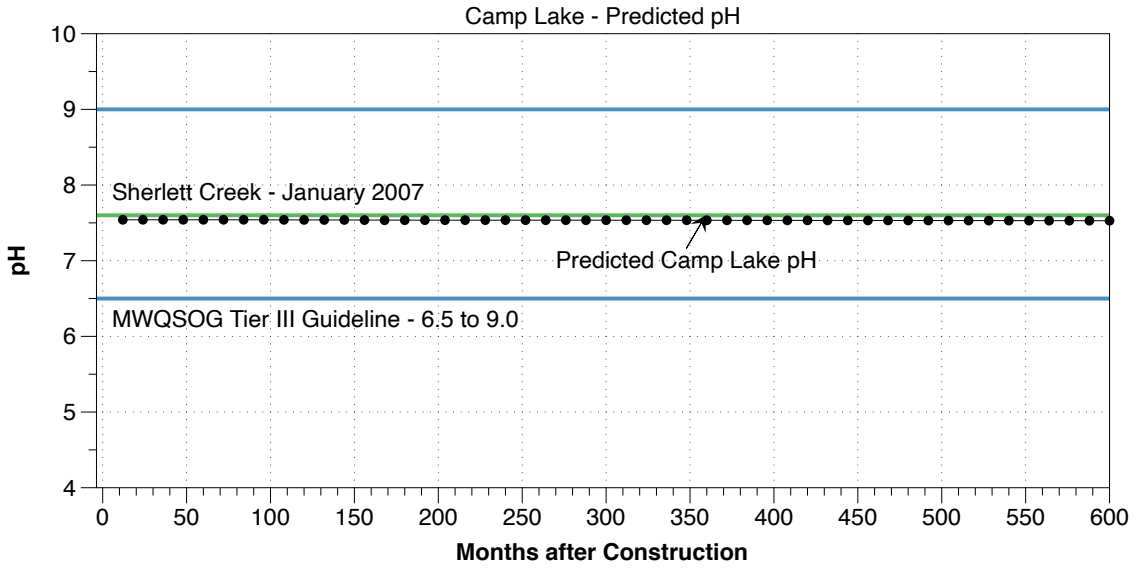


Figure 1. Predicted post-construction pH in the Camp Lake discharge.

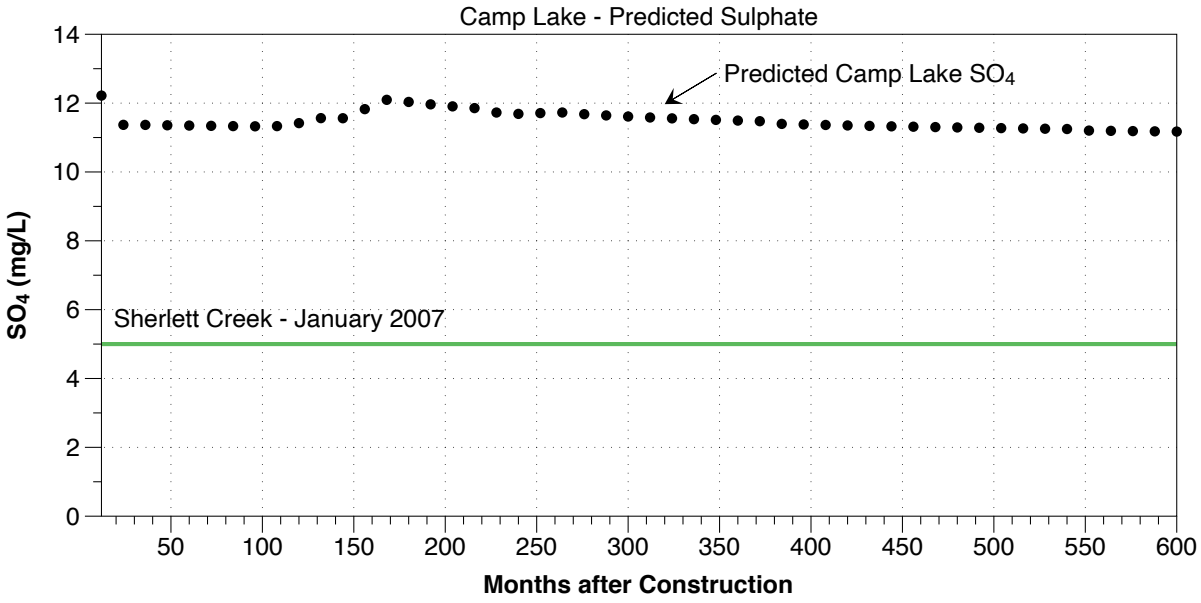


Figure 2. Predicted post-construction sulphate concentration in the Camp Lake discharge.

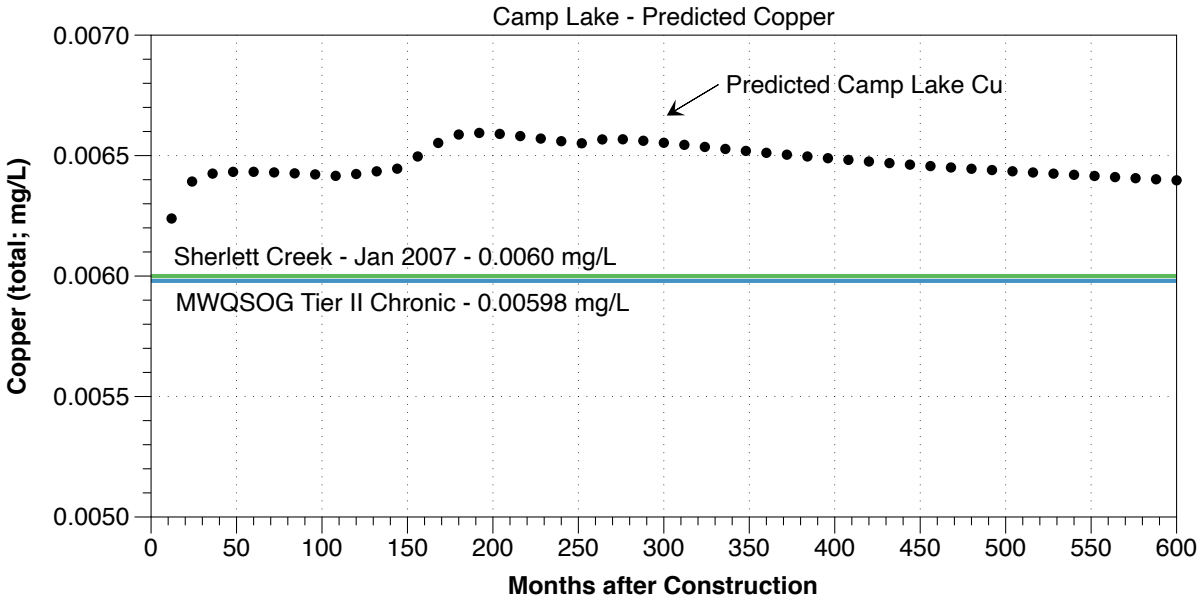


Figure 3. Predicted post-construction total copper concentration in the Camp Lake discharge.

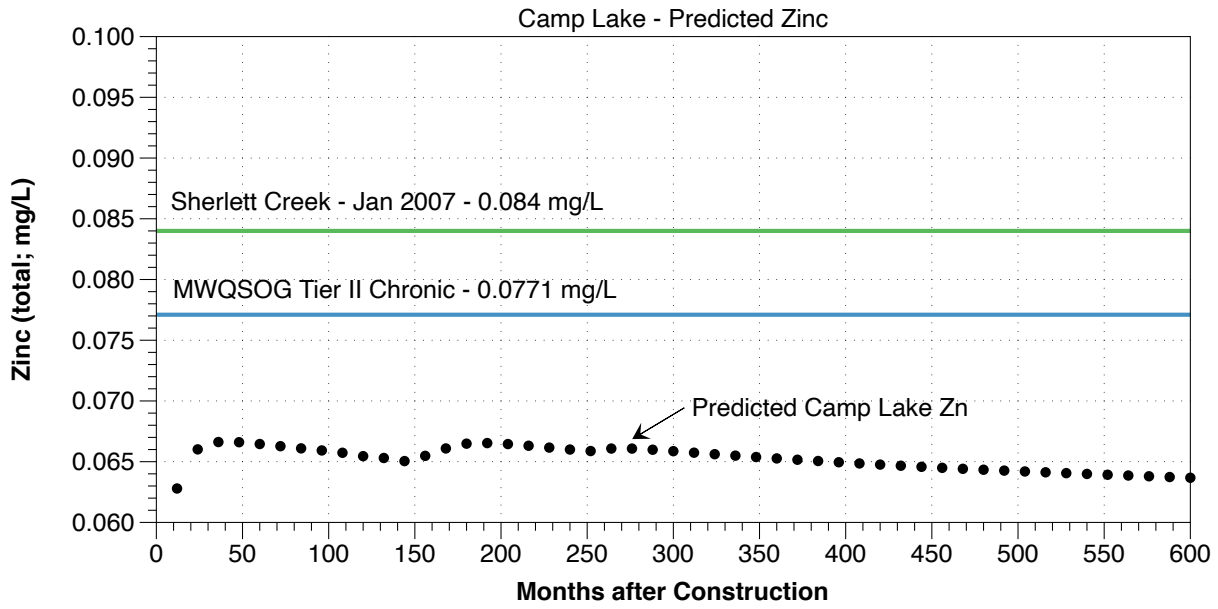


Figure 4. Predicted post-construction total zinc concentration in the Camp Lake discharge.

2.0 Benchmarking the Pre-construction Predictions

A conclusive benchmarking analysis of the Camp Lake water quality monitoring data has not yet been possible because construction was only completed in mid-September 2021. However, indicative water quality trends are consistent with the pre-construction model predictions.

Camp Lake pH quickly moved toward that in Sherlett Creek following the restoration of Sherlett Creek flow through Camp Lake in 2018 (Figure 5). By the 2020 and 2021 open water seasons, Camp Lake discharge pH matched that in Sherlett Creek on most sampling dates.

Sulphate wasn't routinely monitored through 2020 but was added to the analyses beginning in 2021.

An early indication of the validity of the predicted post-construction copper and zinc concentrations made during project planning is found in the measurements of under-ice water quality in Camp Lake during winter. Until construction is completed, mine waste remaining adjacent to the lake continues to influence water quality during the open water season (DJRC 2019, 2020, and 2021). Winter ice cover isolates the lake from runoff from the adjacent waste and provides an early means of testing the predictions.

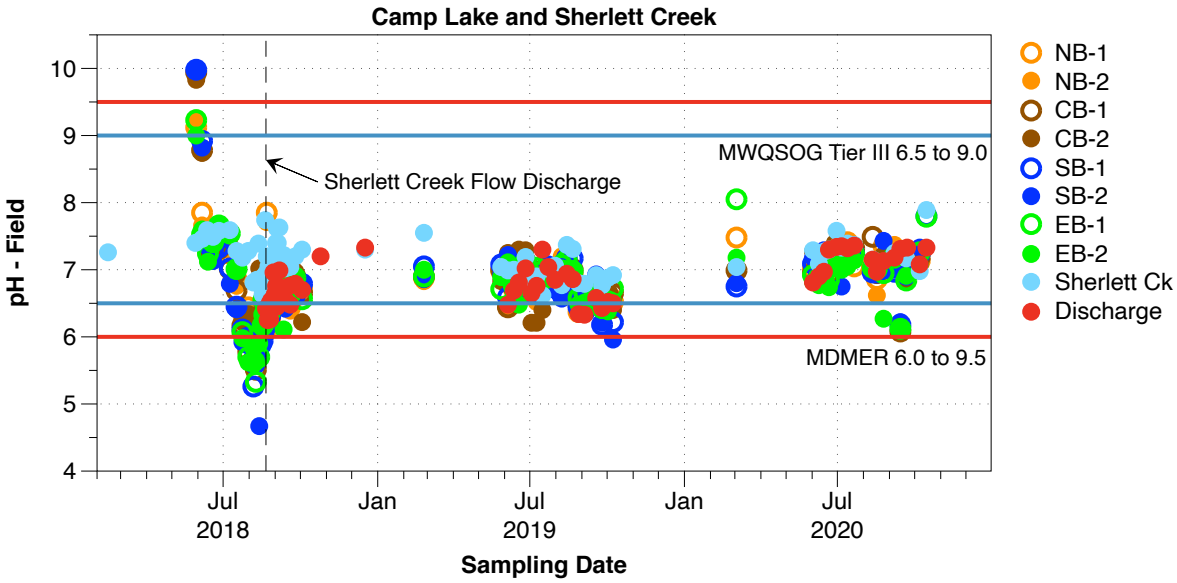


Figure 5. Field pH in Camp Lake and Sherlett Creek – 2018 to 2020.

In all three winter periods (2018/19, 2019/20, and 2020/21) since Sherlett Creek flow was restored to Camp Lake, copper and zinc concentrations in the lake have generally approached those in the inflowing Sherlett Creek (Figures 6 and 7). On this basis, the post-construction water quality predictions appear to be valid provided that the remaining mine waste adjacent to Camp Lake is removed.

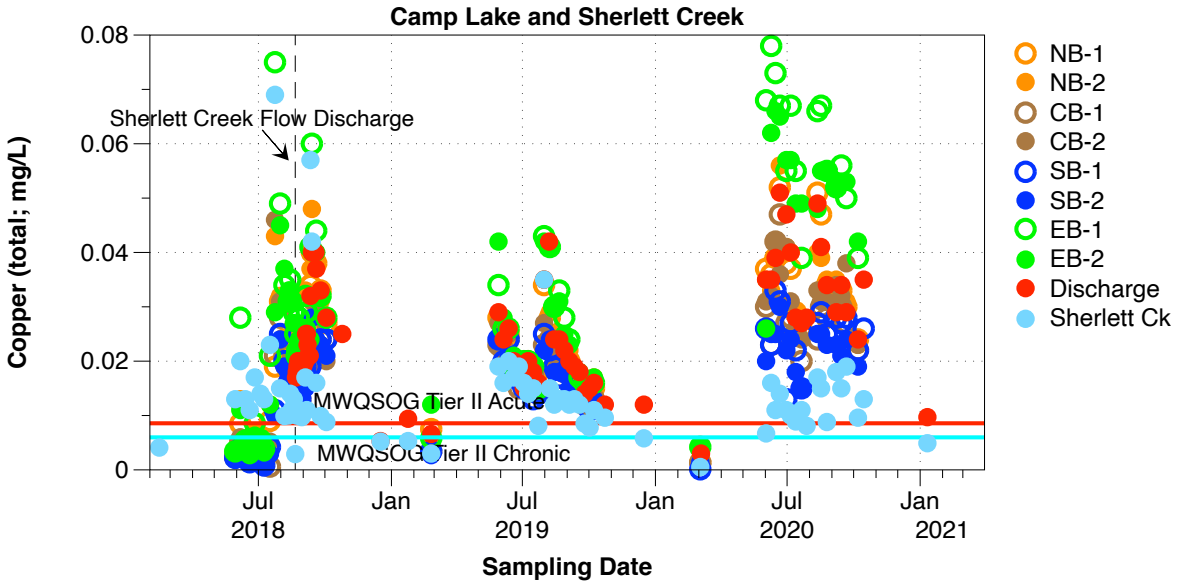


Figure 6. Total copper concentrations in Camp Lake and Sherlett Creek – 2018 to 2020.

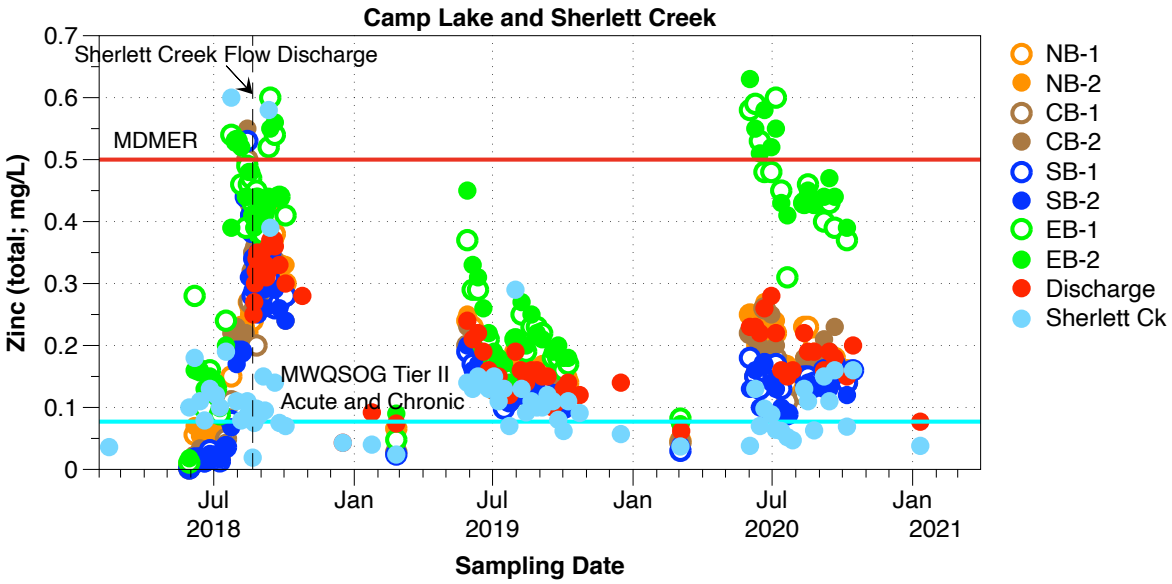


Figure 7. Total zinc concentrations in Camp Lake and Sherlett Creek – 2018 to 2020.

3.0 Potential Post-construction Performance Criteria

The preliminary model validations discussed above indicate that post-construction water quality in Camp Lake, and the lake discharge, will largely depend on Sherlett Creek water quality. Likewise, the post-construction performance metrics for the project will need to be based primarily on Sherlett Creek water quality. There are three possible approaches, used either individually or in combination, to set the metrics:

- apply existing regulatory criteria (e.g., MWQSOGs, MDMER effluent quality standards) as fixed objective concentrations;
- establish a fixed objective concentration for each parameter of interest based on model predictions; or
- establish a current background "plus" objective, represented by the current background condition plus an allowance to account for the predicted Camp Lake influence along with sampling and analytical uncertainty.

3.1 Regulatory Criteria Approach

Regulatory criteria to potentially consider include the Metal and Diamond Mining Effluent Regulations (MDMER; Minister of Justice 2020, current regulations at the time the analysis was conducted in early 2021) and the Manitoba Water Quality Standards Objectives and Guidelines (MWQSOGs; Manitoba Water Stewardship 2011).

The MDMER effluent quality standards represent the minimum acceptable effluent quality for an operating mine site, subject to the limitation that lower concentrations may be required at some sites to prevent adverse effects. The MDMER are not applicable to closed out mine sites – once a mine site attains "closed-out" status, the authorization to apply the MDMER standards is withdrawn by Environment Canada. The Sherridon site is approaching closed out status as a result of the reclamation project, consequently, the MDMER have not been considered further here.

The MWQSOGs are used by Manitoba to manage surface water quality and can be considered as reasonable potential performance metrics provided the background parameter concentration in Sherlett Creek does not already exceed the applicable criterion. However, concentrations of several key parameters (cadmium, copper, and zinc) almost always exceed the applicable MWQSOGs in Sherlett Creek (Table 1A in Appendix A), eliminating use of this approach for these parameters.

3.2 Fixed Objective Concentration

3.2.1 Model Prediction Approach

A fixed objective concentration for a parameter can also be assigned on the basis of water quality modelling predictions, provided that background concentrations are either:

- consistently much lower than the expected "project-affected" concentration, so that variations in background concentrations are relatively unimportant; or

- if background concentrations are similar to project-affected concentrations, that the background values are relatively constant so that variations in parameter concentrations can reasonably be attributed to the project and not to background variability.

Neither condition is fully met by water quality in Sherlett Creek. Predicted water quality in the Camp Lake discharge is very close to, or the same as, quality in Sherlett Creek, as noted in Section 2.0 above. Some key water quality parameters in Sherlett Creek also are particularly variable – coefficients of variation for cadmium, copper, and zinc have been in the range of 174% (Cu) to 310% (Zn) from 2017 through 2020 (Table 1A in Appendix A).

3.2.2 Site-Specific Objectives

Site-specific water quality objectives, developed on the basis of a statistical analysis of the site water quality data, also can be used to set performance objectives. However, the considerable variability of some key parameters means that unacceptably high site-specific objectives would be necessary for those parameters, as shown for cadmium, copper, and zinc (Table 1A in Appendix A).

The Sherlett Creek water characteristics discussed above in relation to the potential fixed concentration objectives mean this approach could only be applied for some of the key

parameters, and there is not a suitable fixed concentration objective that could be applied for any of cadmium, copper, and zinc – which are the primary parameters of concern with respect to the protection of aquatic life.

3.2.3 Background Plus Approach

The background plus approach to setting management thresholds accommodates variability in background parameter concentrations (in Sherlett Creek in this instance) by using current background water quality measurements to which a fixed increment is applied to account for sampling and analytical uncertainty and any predicted incremental contribution from the submerged mine waste.

Current background, or ambient, water quality in this specific case is a measurement made in Sherlett Creek within the last 7 days as the paired measurement in the Camp Lake discharge. In most cases, the measurements will be made the same day but some flexibility in timing is built into the approach to account for unforeseen circumstances (e.g., samples being lost or damaged in shipment, equipment breakdown, weather delay, etc.). This degree of "currency" in the paired measurements is necessary because water quality in Sherlett Creek can change quickly, particularly during lower flow periods when the highest concentrations of cadmium, copper, and zinc tend to occur in Sherlett Creek, as shown in DJRC (2018).

The "plus" component of the management threshold represents the magnitude of the difference from the current background value necessary for a difference in concentration between the Camp Lake discharge and Sherlett Creek to be considered a significant deviation from the prediction. The "plus" is determined in consideration of the sampling variability, analytical variability, and the predicted difference.

Analytical uncertainty needs to be included in the "plus" because all water quality analyses are subject to some small procedural variability. An allowance of +/- 10 to 15% is typically considered an acceptable level of variability, depending on the parameter (e.g., 10% for metals, 15% for TSS; Environment Canada 2012). The reader should keep in mind that this refers to analytical precision under ideal laboratory conditions and that +/- 10 to 15% variability can be expected in the analytical results for identical samples. Sampling variability also needs to be considered, since two samples taken from the same location at the same time will typically yield slightly different results. An allowance, expressed as the Relative Percent Difference (RPD), of +/- 25% is generally considered acceptable for paired replicate samples (e.g., CCME 2011) – with this allowance incorporating the analytical variability. On this basis, a difference of at least 25% is necessary to conclude that the measured concentrations in a pair of samples are different.

Finally, there is the need to consider the contribution of the submerged tailings, over and above that of the inflowing Sherlett Creek, to Camp Lake water quality. Based on the pre-construction modelling, three possible scenarios need to be considered: parameter concentrations that are unaffected by the submerged tailings (e.g., pH); concentrations that increase somewhat in passing through Camp Lake (e.g., copper and SO_4); and concentrations that decrease in passing over the tailings (e.g., zinc). Aluminum, cadmium, and iron were not modelled before

construction. Cadmium should perform similarly to zinc. Winter monitoring indicates aluminum and iron in Camp Lake follow concentrations in Sherlett Creek, inferring similar performance should be expected post-construction.

4.0 Proposed Water Quality Performance Objectives

The previous sections reviewed the potential water quality performance objectives. That analysis indicated that, for most parameters considered, it will be necessary to apply objectives developed using the Background "Plus" approach to accommodate the considerable variation in parameter concentration that occurs in Sherlett Creek. The only exceptions are pH and TSS, for which the applicable MWQSOG Tier II objectives are proposed (Table 1).

Table 1. Proposed Post-construction Camp Lake Water Quality Performance Objectives to be achieved within 4 years following completion of construction.

Parameter (units)	Proposed Camp Lake Water Quality Performance Objectives
pH, field (pH units)	$6.5 \leq pH \leq 9.0$[1]
Sulphate (mg/L)	Ambient SC-1 +7+25%[2,3]
TSS (mg/L)	11.5 mg/L[4]
Turbidity (NTU)	Ambient SC-1 + 25%
Fe (total) (mg/L)	Ambient SC-1 + 25%
Al (total) (mg/L)	Ambient SC-1 + 25%
Cd (total) (mg/L)	Ambient SC-1 + 25%
Cu (total) (mg/L)	Ambient SC-1 + 30%[5]
Zn (total) (mg/L)	Ambient SC-1 + 25%

1. MWQSOG Tier II Objective – determined to be reasonable n=based on pre-construction predictions and monitoring record.
2. Ambient SC-1 refers to the current concentration measured at Sherlett Creek station SC-1 within the last 7 days.
3. Based on pre-construction prediction (Figure 2) plus 25% allowance for analytical variation – Section 3.2.3.
4. MSWQOG Tier II Objective for SC-1 determined as per Appendix A and reasonable based on monitoring record.
5. Based on pre-construction prediction that total Cu concentrations in Camp Lake will be about 5% higher than in Sherlett Creek (Figure 3) plus 25% allowance for analytical variation as per section 3.2.3.

4.1 Application of the Performance Objectives

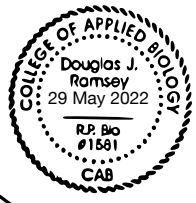
The water quality performance objectives should not be considered as regulatory limits. Their purpose is to provide a means for evaluating the performance of the reclamation works in comparison to the expectations developed during project planning. Once construction is completed, water quality in Camp Lake should be expected to gradually approach the objectives over a 3-to-4-year period. Water quality may improve to meet the objectives over a shorter period, but also may not.

The important diagnostic consideration is that the trend toward the objectives occurs, and at a rate of improvement such that there is a reasonable expectation that the objectives will be realized within 4 years of construction completion. Slow or absent improvement should trigger investigation of potential causes, which may or may not require the application of corrective or mitigative measures. Faster improvement than expected should move the monitoring program to confirmation monitoring followed by a reduced monitoring frequency.

5.0 Closure

We trust the water quality performance objectives developed herein address the needs for as specific a set of objectives as is possible in consideration of the site conditions and variations in upstream Sherlett Creek water quality. Should you have any questions regarding this memo, please contact the undersigned.

Sincerely,



Doug Ramsey, M.Sc. R.P.Bio
Principal Consultant

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Appendix A
Site-Specific Water Quality Objectives for Sherlett Creek

Site Specific Water Quality Objectives (SSWQOs) facilitate the detection of potential project-related effects on receiving water quality by accounting for site-specific physical, chemical, and biological factors that might make generic guidelines such as the MWQSOGs over-protective or under-protective.

The need for/suitability of site-specific water quality objectives as applied to Sherlett Creek was assessed for 8 of the key water quality parameters (pH, TSS, turbidity, and total iron, aluminum, cadmium, copper, and zinc) as follows based on the 2007-2020 data record.

- Data were first screened for evident outliers. All field duplicate values also were removed from the dataset.

- Values below the Reportable Detection Limit (RDL; i.e., the "less than" values) were replaced with a value equal to 0.50xRDL to calculate mean concentrations and other summary statistics. This is a convention in water quality data analysis.

- All data were then compared to the applicable generic guidelines (Table A1) and the following summary statistics were calculated for each parameter:

    - count (the total number of individual measurements);
    - count greater than the reportable detection limit (the total number of measurements that were above the "less than" value);
    - mean and median concentration;
    - count greater than the applicable generic guideline (total number of measurements, including less than RDL results, that were greater than the guideline); and,
    - count greater than both the RDL and the guideline (total number of measurements that were quantitatively detectable and were greater than the guideline).

These statistics facilitated the identification of parameters that were truly elevated relative to the guideline (i.e., those greater than both the RDL and the guideline) and the identification of problematic RDLs (i.e., RDLs that were higher than the applicable guideline) or RDLs that are higher than the ambient concentrations).

Naturally elevated parameters were identified as those that exceeded applicable guidelines at a frequency greater than 5%. Other factors considered in the identification of naturally elevated parameters included detectability (i.e., the proportion of samples with results greater than RDL) and the ratio of mean concentration to the guideline. Parameters found to exceed the applicable guidelines with a frequency of at least 5% and to exceed the applicable RDL in the majority (>50%) of samples were identified for SSWQO development.

Based on this screening analysis, the parameters fell into three categories: those never or rarely exceeding the generic guideline (pH, TSS, and turbidity); those periodically exceeding the generic guideline (Fe and Al); and those which typically exceeded the guideline (Cd, Cu, Zn). All of total iron, aluminum, cadmium, copper, and zinc were identified for SSWQO development.

The Background Concentration Procedure (BCP; CCME 2003) was employed to calculate preliminary SSWQOs. The BCP recognizes that it is not possible to meet generic water quality guidelines in surface waters where the natural concentrations of substances exceed the guidelines. Therefore, the BCP uses the site-specific monitoring data to determine the upper limit of background concentrations for the watercourse, water body, or watershed in question, which can be put forward as an SSWQO. Specific statistical procedures for defining the upper limit of background are not prescribed by CCME (2003), but typically involve a range of statistics that may define the upper 95% confidence limit of the mean concentration, including: the upper 95% confidence limit (mean + $t_{\alpha=0.05(1)}$*standard error of the mean), the mean + $t_{\alpha=0.05(1)}$*standard deviation of the mean, the mean + 2*standard deviation of the mean, the 90th or 95th percentile, or other alternatives as appropriate to the area under study (BCMELP 1997; CCME 1999).

The following summary statistics were calculated for each parameter identified as requiring the development of a SSWQO:

- sample size (count);
- sample size greater than the reportable detection limit;
- mean and median;
- standard deviation;
- standard error;
- mean + $t_{\alpha=0.05(1)}$* standard error;
- mean + $t_{\alpha=0.05(1)}$* standard deviation;
- mean + 2 * standard deviation; and,
- 95th percentile.

Water quality objectives can be used to achieve a number of water quality management goals, from maintaining average water quality to defining maximum parameter concentrations. Most typically, the objectives are used to set maximum allowable parameter concentrations in receiving waters. This type of objective is referred to as a Maximum BCP-SSWQO.

Three statistics (mean + $t_{\alpha=0.05(1)}$*standard deviation; mean + 2 standard deviations; and the 95th percentile) were examined for derivation of potential maximum BCP-SSWQOs for iron, aluminum, cadmium, copper, and zinc. Of these, the maximum BCP SSWQO based on the 95th percentile of the monitoring data provided the lowest frequency of exceedance for more of the

parameters (lowest for Fe and Al; tied for lowest for Cd and Cu; next to lowest for Zn) than either of the other measures.

Although the maximum BCP SSWQOs based on the 95th percentile have lower frequencies of exceedance than do the corresponding generic objectives, and by a very wide margin in some instances (e.g., cadmium, copper, and zinc) the occurrence of exceedances is not reduced to zero, with the natural frequency of exceedance remaining between 3% and 5% for all five parameters (Table A1).

Some of the 95th percentile BCPs derived above are particularly high in comparison to established water quality criteria. The BCPs for cadmium and copper are about 10X the applicable MWQSOGs and the BCP for zinc is about 153X the applicable MWQSOG. The zinc BCP also is about 2.4X the maximum acceptable monthly mean concentration specified under the MDMER and also exceeds the maximum acceptable concentration in a single grab sample by 18%.

Given the very high values of the BCPs for cadmium, copper, and zinc, these BCPs are not a useful tool for monitoring performance of the Sherridon project since they incorporate the very wide range of variation in Sherlett Creek water quality – variation that greatly exceeds the expected influence of Camp Lake flow-through on water quality. The values are so high they would never adequately detect poor Camp Lake performance. A more sensitive measure is needed, at least for Cd, Cu, and Zn.

Table A1. Sherlett Creek (SC-1) key parameter summary statistics, potential Maximum Background Concentration Procedure (BCP) Site Specific Water Quality Objectives (SSWQOs), and related Exceedance Reductions based on the 2017-2020 period of record.

Statistic	pH (field)	Turbidity	TSS	Fe[9]	Al[9]	Cd[9]	Cu[9]	Zn[9]
Summary Statistics								
Mean	7.15	2.1	2.0	0.27	0.060	0.00095	0.0209	0.383
Median	6.93	1.5	2.0	0.23	0.051	0.00031	0.0120	0.0980
Max	7.89	8.5	6.5	1.0	0.26	0.020	0.240	7.60
Min	6.59	0.5	0.5	0.099	0.027	0.00005	0.0005	0.0190
Count	80	87	91	101	101	101	101	101
Count >RDL	N/A	87	30	101	101	101	101	101
%>RDL	N/A	100%	33%	100%	100%	100%	100%	100%
MWQSOG[1]	6.5 to 9.0	8.1[3]	11.5[2]	0.30	0.10[4]	0.00018[5]	0.00598[6]	0.00771[7]
Count>MWQSOG[8]	0	1	0	14	9	89	93	100
%>MWQSOG[8]	0%	1%	0	14%	9%	92%	96%	99%
StDev.S				0.16	0.038	0.0029	0.0367	1.19
StDev.P				0.16	0.038	0.0029	0.0365	1.18
CV				57	63.6	304	176	310
SE				0.016	0.0038	0.00029	0.00365	0.118
2SD				0.31	0.076	0.0058	0.0734	2.38
Potential SSWQOs								
95% CI (SE)				0.304	0.0672	0.00152	0.0282	0.618
95% CI (SD)				0.584	0.136	0.00667	0.0938	2.74
Mean + 2 SD				0.586	0.137	0.00672	0.0943	2.76
95th Percentile				0.669	0.160	0.00179	0.0678	1.18
Exceedance Reductions for Each SSWQO								
Count>95% CI (SE)				14	21	7	9	8
Count>95% CI(SD)				9	7	4	4	4
Count>Mean + 2SD				9	7	4	4	4
Count>95th percentile				4	3	4	4	5
%>95% CI (SE)				14%	21%	7%	9%	8%
%>95% CI(SD)				9%	7%	4%	4%	4%
%>Mean + 2SD				9%	7%	4%	4%	4%
%>95th percentile				4%	3%	4%	4%	5%

1. MWQSOG – Manitoba Water Quality Standards Objectives and Guidelines (Manitoba Water Stewardship 2011)
2. TSS – MWQSOG Tier II Objective. Determined as highest value observed plus 5 mg/L
3. Turbidity – MWQSOG Tier II Objective. Calculated from the linear regression equation for turbidity on TSS (Turbidity = 0.69342 + 0.64783*TSS) using the TSS guideline of 11.5 mg/L
4. Al – MWQSOG Tier III Guideline for pH range ≥6.5
5. Cd – MWQSOG Tier II Chronic Exposure Objective – calculated as $[e^{\{0.7409[\ln(Hardness)]-4.719\}}]*[1.101672-\{\ln(Hardness)*(0.041838)\}]$ – values were calculated using hardness in Cold
6. Cu - MWQSOG Tier II Chronic Exposure Objective – calculated as $0.960*[e^{\{0.8545[\ln(Hardness)]-1.702\}}]$ – Cold L. hardness
7. Zn - MWQSOG Tier II Chronic Exposure Objective – calculated as $0.986*[e^{\{0.8473[\ln(Hardness)]+0.884\}}]$ – Cold L. hardness
8. For pH, refers to values both higher and lower than the MWQSOG guideline range
9. Total fraction

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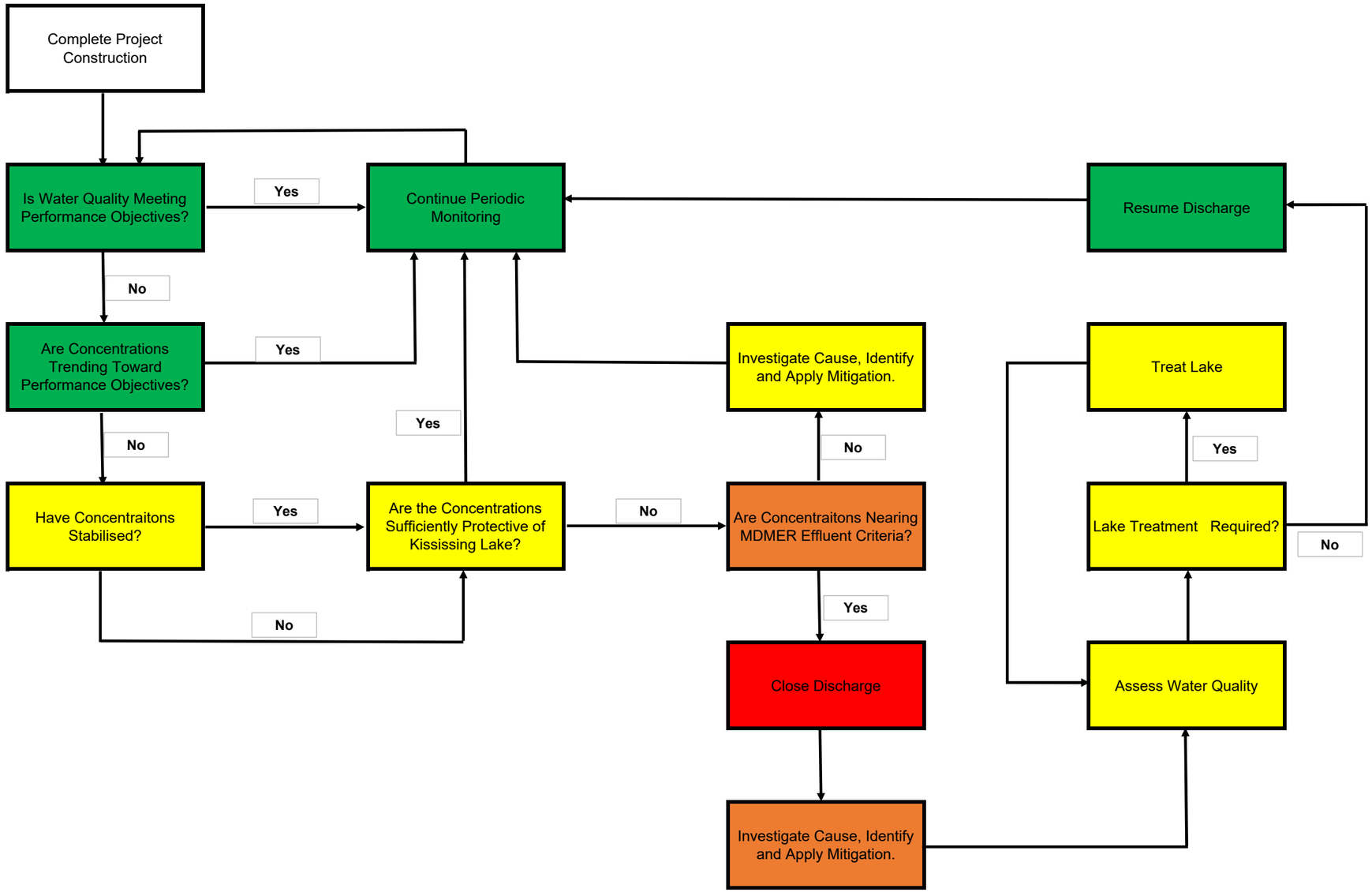
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APPENDIX F – DECISION FLOWSHEETS AND COLOUR CODING DEFINITION

Sherridon Reclamation Project - Post-Construction Water Quality Performance Evaluation Process



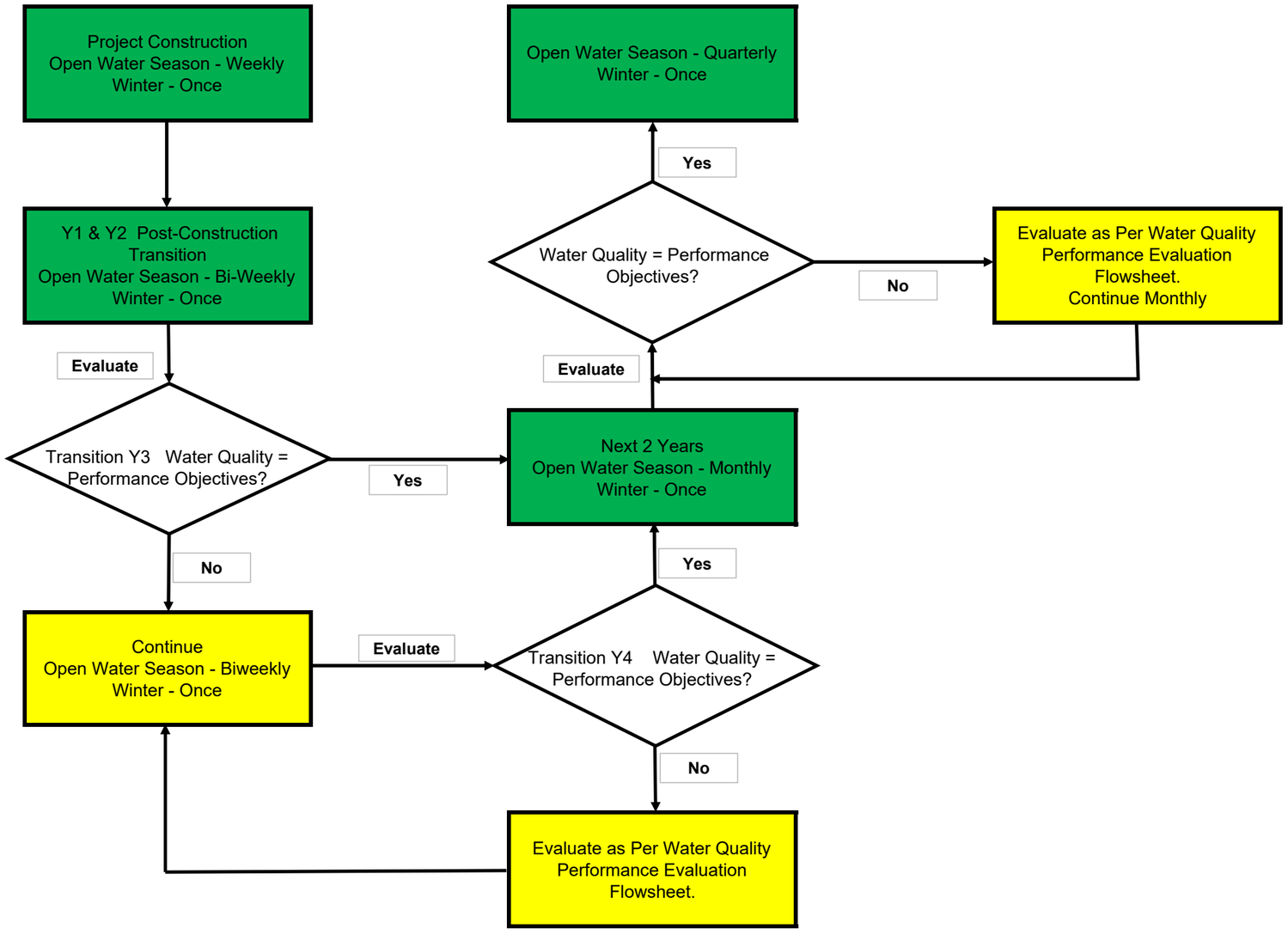
a. Green = Project is performing as planned, water quality is meeting project objectives or trending toward, normal monitoring, maintain regular communication schedule with stakeholders

b. Yellow = Project is performing as planned with no immediate risk to aquatic environment, but observations made of water quality trending away from project objectives, initiate investigation of cause, notify stakeholders of investigatory activities

c. Orange = Project is not performing as planned with increased potential of risk to aquatic environment if the issue is not addressed. Investigate and apply corrective action. Communication with project stakeholders should continue until resolved (frequency dependent on nature and timing of issue).

d. Red = Project is not performing as planned with potential for unacceptable risk to aquatic environment if the issue is not addressed. Response may include stopping the discharge, if appropriate to the issue, and immediate investigation of cause and application of corrective action as soon as possible. Frequent communication with stakeholders until resolved.

Sherridon Reclamation Project - Water Quality Monitoring Frequency



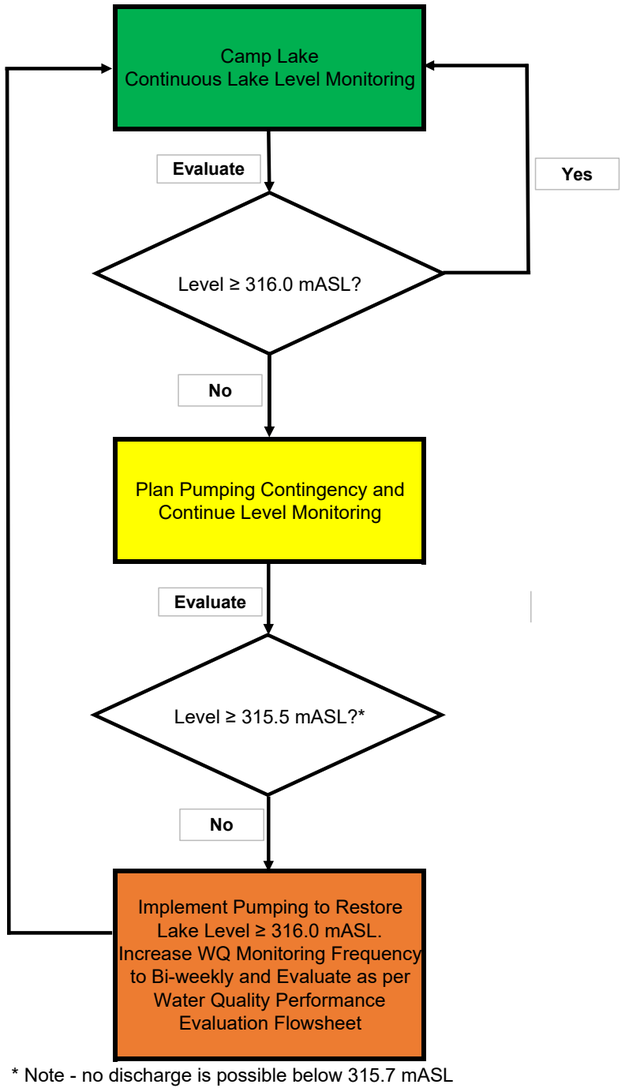
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Sherridon Reclamation Project - Camp Lake Level Monitoring



* Note - no discharge is possible below 315.7 mASL

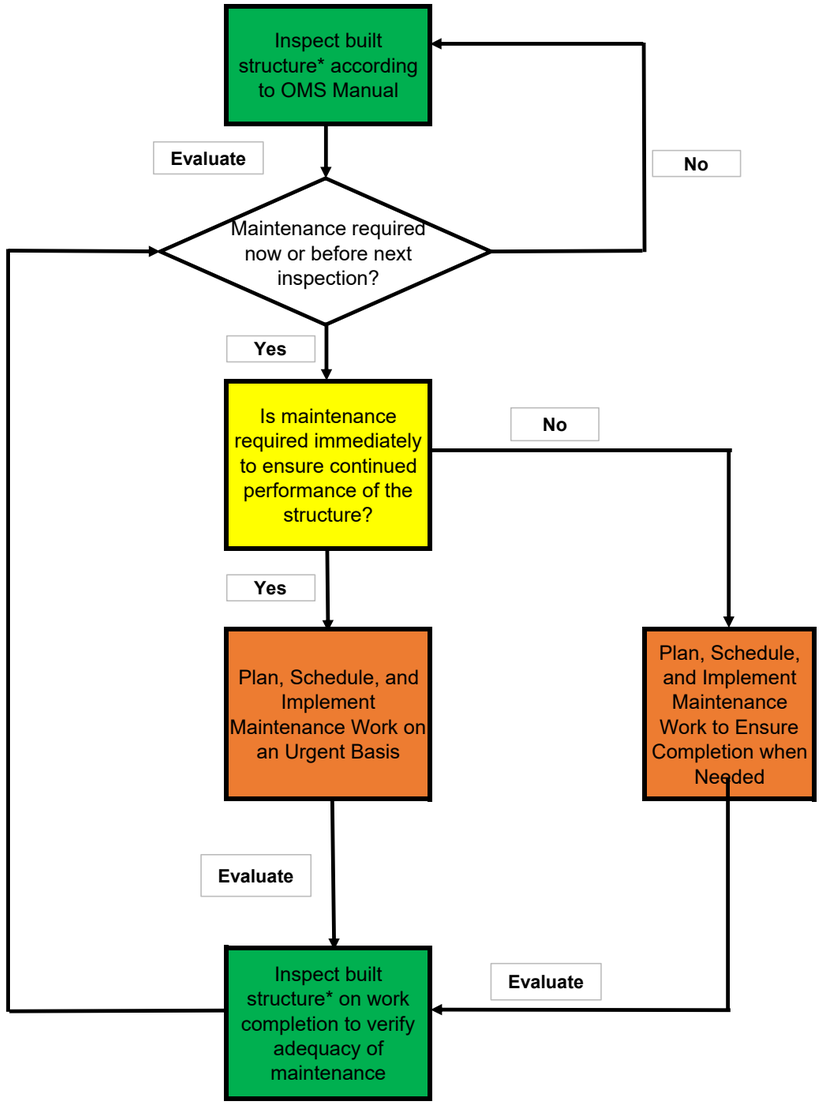
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Sherridon Reclamation Project - Inspection and Maintenance of Built Structures



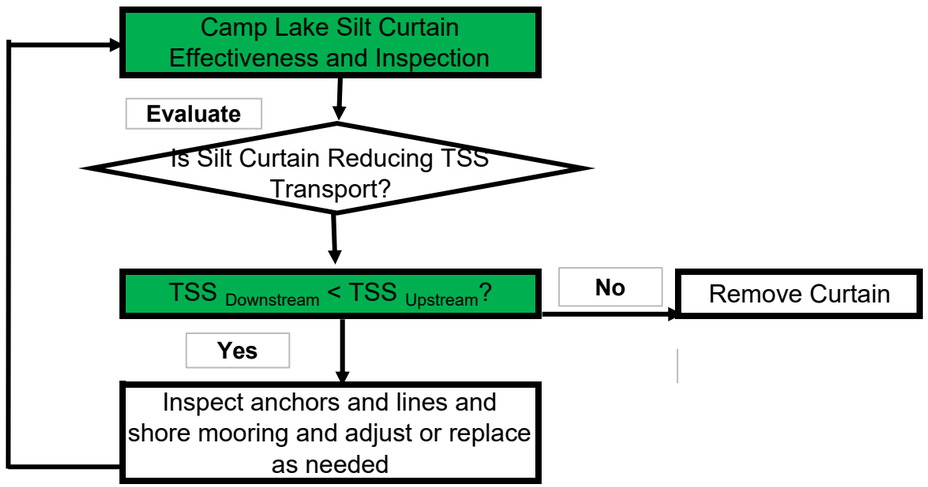
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Sherridon Reclamation Project
Silt Curtain Inspection and Management



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APPENDIX G – SAMPLE COMMUNICATIONS LOG

Communication Log: Sherridon Mine Site

Sherridon Community Council

Manitoba

Record of Communication

First Nation/Community: Sherridon Community Council
Representative:
Contact Information:

Band Office Phone:
Fax Number:

*Sherridon Community Council is a local community with Indigenous members, not a recognized First Nation Community

CURRENT TO:

Communication / Activity Log						
Date of Contact	**Manitoba Rep**	**FN / Community Rep**	**Method of Contact**	**Incoming / Outgoing**	**Summary/Action Items (include document ID if applicable)**	**Action Items / Follow-up**

APPENDIX B

Groundwater Well Logs

TETRA TECH

RECORD OF BOREHOLE

MW01-BR

Sheet 1 of 1

705-09240103-ALL

CLIENT: Manitoba Environment, Climate and Parks DATE DRILLED: January 26, 2022 DATUM: Geodetic

PROJECT TITLE: Sherridon Phased Groundwater Assessment PROJECT SITE: Sherridon, Manitoba NORTHING: 6110539

BOREHOLE LOCATION: 3.8 m northeast of intersection of Jowsey Street and Portage Road, north of community waste water treatment plant. EASTING: 366854

BORING METHOD	DEPTH SCALE m	DEPTH SCALE ft	ELEV DEPTH (m)	DESCRIPTION	SYMBOLS	SAMPLE NAME	SAMPLE TYPE	LAB TESTING (Primary)	LAB TESTING (Secondary)	GUIDELINE COMPARISON	No. of Fractures/ 0.3 m (2 4 6 8)	MONITORING WELL MW01-BR
Auger - Solid Stem	0.00		323.67	Ground Surface								Steel Protective Casing 324.54
			323.27	***Organics*** Some fine-grained sand.								323.67
			0.40	***Silt*** Some clay, little fine-grained sand, brown, loose, low plasticity, moist.								Bentonite
	1	5	322.17									Solid 50 mm PVC
			1.50	***Clay*** Little silt, brown-grey, soft, medium plasticity, moist.								
	2	10	320.67									319.47
			3.00	***Silt*** Little clay, little fine-grained sand, brown, soft, non-plastic, moist.			C				7 5 4 5 2 8 1 3 1 2 3 1 2 1 2	319.15
	3		320.32									318.50 January 29, 2022
			3.35	***Bedrock*** Gneiss, very strong, black, slightly decomposed in upper fracture zones, moderately fractured from 3.3 m to 6 m, slightly fractured below 6 m depth. - Quartz seam at 4.98 m depth. - Quartz seam at 5.41 m depth.			C					
	4	15										
	5	20					C					
	6		316.79									Sand
	7	25	6.88	- Water bearing fracture with indications of white precipitate at 6.78 m depth.			C					Slotted 50 mm PVC
	8											
		30	314.50									
	9		9.17	- Water bearing fracture with indications of white precipitate at 9.07 m depth.			C					
	10	35	312.98									312.98
	11		10.69	***End of Borehole at 10.69m***								
	12	40										
	13											
	14	45										
	15	50										
	16											
	17	55										
	18											

Maple Leaf Drilling Ltd., B-54 Mobile
Coring

SCALE 1: 100.0 LOGGED BY: MR CHECKED BY: BH

TETRA TECH CANADA LOG - ANALYTICAL 705-09240103-ALL-BOR-V0001-00 SHERRIDON -X-SECT.GPJ 22-5-26

TETRA TECH

RECORD OF BOREHOLE

MW02-BR

Sheet 1 of 1

705-09240103-ALL

CLIENT: Manitoba Environment, Climate and Parks DATE DRILLED: January 28, 2022 DATUM: Geodetic

PROJECT TITLE: Sherridon Phased Groundwater Assessment PROJECT SITE: Sherridon, Manitoba NORTHING: 6110440

BOREHOLE LOCATION: Southeast corner of Jowsey Street and Sherlett Drive Intersection. Approximately 20 m northwest of the Sherlett Creek bridge. EASTING: 366971

BORING METHOD	DEPTH SCALE m / ft	ELEV DEPTH (m)	DESCRIPTION	SYMBOLS	SAMPLE NAME	SAMPLE TYPE	LAB TESTING (Primary)	LAB TESTING (Secondary)	GUIDELINE COMPARISON	No. of Fractures/ 0.3 m (2 4 6 8)	MONITORING WELL MW02-BR
Auger - Solid Stem / Coring (Maple Leaf Drilling Ltd., B-54 Mobile)	0.00 / 0	316.82	Ground Surface								Steel Protective Casing 317.78
		316.57 / 0.25	***Organics*** Little silt, black-brown.								316.82
	1 / 5		***Silt*** Trace clay, brown, soft, non-plastic, moist. - From 0.6 m to 1.6 m; grey, very soft. - From 1.6 m to 4.4 m; wet.								316.26 January 29, 2022
	2 / 10										Bentonite / Solid 50 mm PVC
	3 / 10										
	4	312.42 / 4.40									
	15	312.17 / 4.65	***Sand*** Fine-grained, wet.							0 1	311.62
	5 / 20		***Bedrock*** Gneiss, very stong, black, moderately fractured from 4.65 m to 5.7 m, slightly fractured below 5.7 m depth.			C				3 2	311.32
	6 / 20					C				1 2 4	
	7 / 25	309.18 / 7.64	- Water bearing fracture zone at 7.5 m depth.			C				4 3 2 3	Sand / Slotted 50 mm PVC
	8 / 30	308.12 / 8.70	- Granite intrusion from 8.5 m to 8.7 m depth.			C				7 5 2 1	
	9 / 30	307.72 / 9.10	- Quartz seam from 8.9 m to 9.0 m depth. - Water bearing fracture at 9.0 m depth.			C					307.35
	10 / 35	307.35 / 9.47	***End of Borehole at 9.47m***								
	11 / 40										
	12 / 40										
	13 / 45										
	14 / 45										
	15 / 50										
	16 / 50										
	17 / 55										
	18										

SCALE 1: 100.0 LOGGED BY: MR CHECKED BY: BH

TETRA TECH CANADA LOG - ANALYTICAL 705-09240103-ALL-BOR-V0001-00 SHERRIDON -X-SECT.GPJ 22-5-26

TETRA TECH

RECORD OF BOREHOLE

MW03-OB

Sheet 1 of 1

705-09240103-ALL

CLIENT: Manitoba Environment, Climate and Parks DATE DRILLED: February 4, 2022 DATUM: Geodetic

PROJECT TITLE: Sherridon Phased Groundwater Assessment PROJECT SITE: Sherridon, Manitoba NORTHING: 6110369

BOREHOLE LOCATION: East edge of wetland area on south side of Sherlett Creek. Approximately 30 m southwest of the Sherlett Creek Bridge. EASTING: 366990

BORING METHOD	DEPTH SCALE m / ft	SUBSURFACE PROFILE: ELEV DEPTH (m)	DESCRIPTION	SYMBOLS	SAMPLES: SAMPLE NAME	SAMPLE TYPE	LAB TESTING (Primary)	LAB TESTING (Secondary)	GUIDELINE COMPARISON	No. of Fractures/ 0.3 m (2 4 6 8)	MONITORING WELL MW03-BR
Maple Leaf Drilling Ltd., B-54 Mobile Auger - Solid Stem	0 / 0.00	317.28	Ground Surface								Steel Protective Casing 318.22; Solid 50 mm PVC
			Peat Black, moist.								317.28
		316.47									Bentonite
	1 / 5	0.81 315.98	***Silt*** Black, soft, non-plastic, moist.								316.52 Feb. 7, 2022
		1.30	***Silt*** Little clay, grey, soft, medium plasticity, moist.								316.08
	2 / 10		- From 2.21 m to 8.61 m; wet.								315.78
	3 / 10										
	4 / 15										
	5 / 15										Sand
	6 / 20										Slotted 50 mm PVC
	7 / 25										
	8 / 25	308.67									
	9 / 30	8.61 308.62	***Sand*** Fine-grained, wet.								308.62
	10 / 35	8.66	***End of Borehole at 8.66m*** Terminated at refusal on suspected bedrock.								
	11 / 35										
	12 / 40										
	13 / 45										
	14 / 45										
	15 / 50										
	16 / 50										
	17 / 55										
	18 / 55										

SCALE 1: 100.0 LOGGED BY: MR CHECKED BY: BH

TETRA TECH CANADA LOG - ANALYTICAL 705-09240103-ALL-BOR-V0001-00 SHERRIDON -X-SECT.GPJ 22-5-26

TETRA TECH

RECORD OF BOREHOLE

MW04-BR

Sheet 1 of 1

705-09240103-ALL

CLIENT: Manitoba Environment, Climate and Parks DATE DRILLED: February 5, 2022 DATUM: Geodetic

PROJECT TITLE: Sherridon Phased Groundwater Assessment PROJECT SITE: Sherridon, Manitoba NORTHING: 6110396

BOREHOLE LOCATION: North side of Sherlett Creek, across from wetland area. Approximately 30 m southwest of the waste water treatment plant. EASTING: 366867

BORING METHOD	DEPTH SCALE m	DEPTH SCALE ft	ELEV DEPTH (m)	DESCRIPTION	SYMBOLS	SAMPLE NAME	SAMPLE TYPE	LAB TESTING (Primary)	LAB TESTING (Secondary)	GUIDELINE COMPARISON	No. of Fractures/ 0.3 m (2 4 6 8)	MONITORING WELL MW04-BR
Auger - Solid Stem / Coring (Maple Leaf Drilling Ltd., B-54 Mobile)	0.00		317.00	Ground Surface								Steel Protective Casing 317.97
			316.39 (0.61)	***Topsoil*** Some organics, brown-black.								317.00
	1	5	316.19 (0.81)	***Silt*** Some clay, grey, soft, medium plasticity, moist.								316.63 February 6, 2022
			315.81 (1.19)	***Silt*** Little clay, grey, soft, low plasticity, wet.								
	2	10	314.71 (2.29)	***Peat*** Brown, moist.								Solid 50 mm PVC
	3		313.60 (3.40)	***Silt*** Little organics, brown, soft, non-plastic, wet.								
	4	15		***Silt*** Trace clay, grey, soft, non-plastic, wet. - From 3.68 m to 3.76 m; little clay.								Bentonite
	5											
	6	20										
	7			- From 7.06 m to 7.62 m; little small gravel.								
		25	309.38 (7.62)	- From 7.42 m to 7.62 m; some fine-grained sand.								307.86
	8			***Bedrock*** Gneiss, very stong, black, slightly fractured.			C				3 4 2 3	
	9	30					C				0 2 1	
	10										0 1	306.87
		35					C				2 1 2	Slotted 50 mm PVC
	11											Sand
	12	40					C				0 1	
	13		303.69 (13.31)	***End of Borehole at 13.31m***								303.69
	14	45										
	15											
		50										
	16											
	17	55										
	18											

SCALE 1: 100.0 LOGGED BY: MR CHECKED BY: BH

TETRA TECH CANADA LOG - ANALYTICAL 705-09240103-ALL-BOR-V0001-00 SHERRIDON -X-SECT.GPJ 22-5-26

TETRA TECH

RECORD OF BOREHOLE

MW04-OB

Sheet 1 of 1

705-09240103-ALL

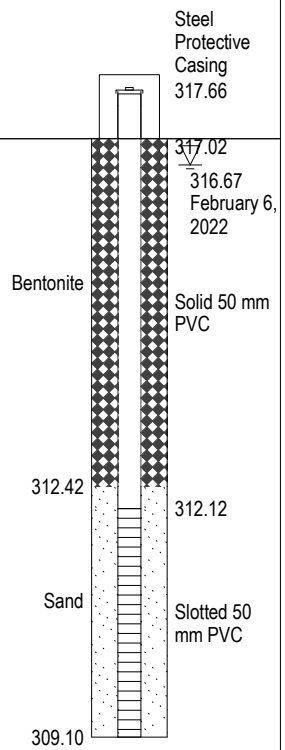
CLIENT: Manitoba Environment, Climate and Parks DATE DRILLED: February 5, 2022 DATUM: Geodetic

PROJECT TITLE: Sherridon Phased Groundwater Assessment PROJECT SITE: Sherridon, Manitoba NORTHING: 6110398

BOREHOLE LOCATION: North side of Sherlett Creek, across from wetland area. Approximately 30 m southwest of the waste water treatment plant. EASTING: 366866

Tetra Tech Canada Inc.
Auger - Solid Stem

BORING METHOD	DEPTH SCALE m	DEPTH SCALE ft	ELEV DEPTH (m)	DESCRIPTION	SYMBOLS	SAMPLE NAME	SAMPLE TYPE	LAB TESTING (Primary)	LAB TESTING (Secondary)	GUIDELINE COMPARISON	No. of Fractures/ 0.3 m (2 4 6 8)	MONITORING WELL MW04-OB
	0.00		317.02	Ground Surface								
			316.41	***Topsoil*** Some organics, brown-black.								
			0.61									
	1		316.21	***Silt*** Some clay, grey, soft, medium plasticity, moist.								
			0.81									
		5	315.83	***Silt*** Little clay, grey, soft, low plasticity, wet.								
	2		1.19									
			314.73	***Peat*** Brown, moist.								
			2.29									
	3	10		***Silt*** Little organics, brown, soft, non-plastic, wet.								
			313.62									
			3.40	***Silt*** Trace clay, grey, soft, non-plastic, wet. - From 3.68 m to 3.76 m; little clay.								
	4	15										
	5											
	6	20										
	7			- From 7.06 m to 7.72 m; little small gravel.								
		25										
			309.10	- From 7.72 m to 7.92 m; some fine-grained sand.								
	8		7.92	***End of Borehole at 7.92m*** Terminated at refusal on suspected bedrock.								
	9	30										
	10											
		35										
	11											
	12	40										
	13											
		45										
	14											
	15	50										
	16											
		55										
	17											
	18											



SCALE 1: 100.0 LOGGED BY: MR CHECKED BY: BH

TETRA TECH CANADA LOG - ANALYTICAL 705-09240103-ALL-BOR-V0001-00 SHERRIDON -X-SECT.GPJ 22-5-26

TETRA TECH

RECORD OF BOREHOLE

MW05-BR

Sheet 1 of 1

705-09240103-ALL

CLIENT: Manitoba Environment, Climate and Parks DATE DRILLED: February 5, 2022 DATUM: Geodetic

PROJECT TITLE: Sherridon Phased Groundwater Assessment PROJECT SITE: Sherridon, Manitoba NORTHING: 6110368

BOREHOLE LOCATION: South side of Sherlett creek and west of the wetland area. Approximately 75 m east of Portage Road. EASTING: 366711

BORING METHOD	DEPTH SCALE m	DEPTH SCALE ft	ELEV DEPTH (m)	DESCRIPTION	SYMBOLS	SAMPLE NAME	SAMPLE TYPE	LAB TESTING (Primary)	LAB TESTING (Secondary)	GUIDELINE COMPARISON	No. of Fractures/ 0.3 m (2 4 6 8)	MONITORING WELL MW05-BR
Coring	0	0	325.32	Ground Surface								Steel Protective Casing 326.22
			325.02	***Silt***								325.32
			0.30	Some coarse-grained sand, trace small gravel, brown, loose, non-plastic, dry.			C				1 3 4	
	1	5	324.32								0 1 1	Bentonite
			1.00	***Bedrock***Gneiss, highly weathered, red-brown colouration, pyrite crystals, iron staining on fracture surfaces.							3	Solid 50 mm PVC
	2	10		***Bedrock*** Gneiss, very stong, black, slightly fractured. - Fracture zone with iron staining at 1.93 m depth.			C				0 1 0	322.32
	3										4	
	4	15		- Fracture zone with iron staining at 3.06 m depth.			C				3	
				- Fracture zone with iron staining at 4.6 m depth.							2 1	
	5			- Fracture zone with iron staining at 5.05 m depth.			C				2	▽ 319.72 February 6, 2022
	6	20									4 2	
											5 1	
	7			- Fracture zone with iron staining at 6.93 m depth.			C				2 1	
	8	25	317.06								3 1	
			8.26	***Bedrock*** Granite, Quartz rich, hard, white to pink coloured.			C				2	
			316.30								3	Sand 316.18
	9	30	9.02	***Bedrock*** Gneiss, very stong, black, slightly fractured.							2	
	10						C				6 1	
		35									3 0	
	11						C				1	
	12	40										Slotted 50 mm PVC
				- Red-brown discolouration from 12.5 m to 13.5 m depth.							0 1	
	13						C				0 1	
		45									2	
	14										0 1	
	15	50	310.08				C				1	310.08
			15.24	***End of Borehole at 15.24m***								
	16											
		55										
	17											
	18											

SCALE 1: 100.0 LOGGED BY: MR CHECKED BY: BH

Maple Leaf Drilling Ltd., B-54 Mobile

TETRA TECH CANADA LOG - ANALYTICAL 705-09240103-ALL-BOR-V0001-00 SHERRIDON -X-SECT.GPJ 22-5-26

TETRA TECH

RECORD OF BOREHOLE

MW06-BR

Sheet 1 of 1

705-09240103-ALL

CLIENT: Manitoba Environment, Climate and Parks DATE DRILLED: February 3, 2022 DATUM: Geodetic

PROJECT TITLE: Sherridon Phased Groundwater Assessment PROJECT SITE: Sherridon, Manitoba NORTHING: 6110246

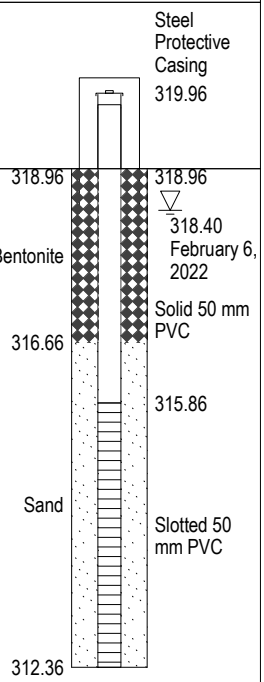
BOREHOLE LOCATION: Southern edge of the wetland to the south of Sherlett Creek, to the north of the apparent groundwater spring. EASTING: 366922

BORING METHOD: Maple Leaf Drilling Ltd., B-54 Mobile Auger - Solid Stem Coring

DEPTH SCALE m / ft

ELEV DEPTH (m)	DESCRIPTION	SYMBOLS	SAMPLE NAME	SAMPLE TYPE	LAB TESTING (Primary)	LAB TESTING (Secondary)	GUIDELINE COMPARISON	No. of Fractures/ 0.3 m (2 4 6 8)
0.00 318.96	Ground Surface							
318.22 0.74	***Organics*** Trace silt, trace clay, black, moist.							
317.21 1.75	***Bedrock*** Granite, strong, pink, coarse grained, moderate fracturing. - Fracture zone from 1.4 m to 1.75 m depth, possibly water bearing.			C				4 3 6 / 2 3 / 1 2 3 / 2 1 2 / 1 2 4 / 2 3 4 / 3
314.76 4.20	- Water bearing facture at 4.1 m depth.							
314.36 4.60	***Bedrock*** Gneiss, very stong, black, slightly fractured.							
312.36 6.60	***End of Borehole at 6.60m***							

MONITORING WELL MW06-BR



SCALE 1: 100.0 LOGGED BY: MR CHECKED BY: BH

TETRA TECH CANADA LOG - ANALYTICAL 705-09240103-ALL-BOR-V0001-00 SHERRIDON -X-SECT.GPJ 22-5-26

TETRA TECH

RECORD OF BOREHOLE

MW07-BR

Sheet 1 of 1

705-09240103-ALL

CLIENT: Manitoba Environment, Climate and Parks DATE DRILLED: January 31, 2022 DATUM: Geodetic

PROJECT TITLE: Sherridon Phased Groundwater Assessment PROJECT SITE: Sherridon, Manitoba NORTHING: 6110027

BOREHOLE LOCATION: South end of study area, Approximately 40 m east of the "Glory Hole". EASTING: 367243

BORING METHOD	DEPTH SCALE m	DEPTH SCALE ft	ELEV DEPTH (m)	DESCRIPTION	SYMBOLS	SAMPLE NAME	SAMPLE TYPE	LAB TESTING (Primary)	LAB TESTING (Secondary)	GUIDELINE COMPARISON	No. of Fractures/ 0.3 m (2 4 6 8)	MONITORING WELL MW07-BR
Auger - Solid Stem Maple Leaf Drilling Ltd., B-54 Mobile Coring	0	0.00	327.17	Ground Surface								Steel Protective Casing 328.11
			326.33	***Silt*** Few small and large gravel, trace clay, brown, soft, low plasticity, moist.								327.17
	1	5	0.84	***Bedrock*** Gneiss, very strong, black, slightly fractured.			C				5 2 1 2	Bentonite Solid 50 mm PVC
	2						C				0 2	
	3	10	323.17				C				7 5 4 4	324.53 324.72 Feb.. 5, 2022
	4	15	4.00	***Bedrock*** Granite, strong, pink, coarse grained, moderate fracturing.							2	
	5		322.27 4.90	- Water bearing fracture at 4.7 m depth.			C				1 2	
	6	20	321.77 5.40	***Bedrock*** Gneiss, very strong, black, slightly fractured.							1	Sand Slotted 50 mm PVC
				Bedrock Granite, quartz rich strong, white, coarse grained, moderate fracturing. - Gneiss seam from 5.7 m to 5.8 m depth.			C				3 1 2 3 2	
	7	25	319.76 7.41									
	8						C				4	
	9	30	317.97 9.20	- Water bearing fracture at 9.1 m depth.			C					317.77
			317.82 9.35	***End of Borehole at 9.40m***								
	10	35										
	11											
	12	40										
	13											
	14	45										
	15											
	16	50										
	17	55										
	18											

SCALE 1: 100.0 LOGGED BY: MR CHECKED BY: BH

TETRA TECH CANADA LOG - ANALYTICAL 705-09240103-ALL-BOR-V0001-00 SHERRIDON -X-SECT.GPJ 22-5-26

TETRA TECH

RECORD OF BOREHOLE

MW08-BR

Sheet 1 of 1

705-09240103-ALL

CLIENT: Manitoba Environment, Climate and Parks DATE DRILLED: January 30, 2022 DATUM: Geodetic

PROJECT TITLE: Sherridon Phased Groundwater Assessment PROJECT SITE: Sherridon, Manitoba NORTHING: 6109904

BOREHOLE LOCATION: South end of study area, on ridge area approximately 120 m south of the "Glory Hole" EASTING: 367205

BORING METHOD	DEPTH SCALE m	DEPTH SCALE ft	ELEV DEPTH (m)	DESCRIPTION	SYMBOLS	SAMPLE NAME	SAMPLE TYPE	LAB TESTING (Primary)	LAB TESTING (Secondary)	GUIDELINE COMPARISON	No. of Fractures/ 0.3 m (2 4 6 8)	MONITORING WELL MW08-BR
Auger - Solid Stem Coring	0.00		334.54	Ground Surface								Steel Protective Casing 335.46
			333.74 0.80	***Silt*** Some fine-grained sand, trace small gravel, light brown, loose, non-plastic, dry.			C				4 2	334.54
	1	5	333.09 1.45	***Bedrock*** Granite, quartz rich strong, white, coarse grained, weathered to 0.9 m depth.							4 5	
	2			***Bedrock*** Gneiss, very strong, black, slightly fractured.			C				2 0	
	3	10	331.19 3.35	- Water bearing fracture zone at 3.2 m depth. Iron staining of exposed fracture surfaces.			C				5 4 1	331.27 January 31, 2022
	4											Bentonite
	5	15					C				1 2 0	
	6	20					C				2 4 2	Solid 50 mm PVC
	7						C				1 2	
	8	25		- Multiple fracture zones between 7.7 m and 8.8 m depth with indications of water.			C				1 2	
	9	30	325.74 8.80 325.64 8.90	***Bedrock*** Granite, strong, pink, coarse grained, moderate fracturing.			C				1 2	325.88 325.55
	10		324.94 9.60	***Bedrock*** Granite, quartz rich strong, white, coarse grained, weathered to 0.9 m depth.			C				0 1 2	
	11	35					C				4 2	
	12	40					C				1 2	Slotted 50 mm PVC Sand
	13		321.34 13.20	***Bedrock*** Granite, strong, pink, coarse grained, moderate fracturing.			C				1 2	
	14	45	320.24 14.30	- Granite colour changes to dark red at 13.8 m depth.			C				4 1	
	15	50	319.44 15.10	***Bedrock*** Gneiss, very strong, black, slightly fractured.								319.45
	16			***End of Borehole at 15.09m***								
	17	55										
	18											

SCALE 1: 100.0 LOGGED BY: MR CHECKED BY: BH

TETRA TECH CANADA LOG - ANALYTICAL 705-09240103-ALL-BOR-V0001-00 SHERRIDON -X-SECT.GPJ 22-5-26

Maple Leaf Drilling Ltd., B-54 Mobile

TETRA TECH

RECORD OF BOREHOLE

MW09-OB

Sheet 1 of 1

705-09240103-ALL

CLIENT: Manitoba Environment, Climate and Parks DATE DRILLED: January 28, 2022 DATUM: Geodetic

PROJECT TITLE: Sherridon Phased Groundwater Assessment PROJECT SITE: Sherridon, Manitoba NORTHING: 6110304

BOREHOLE LOCATION: Central portion of the wetland area to the south of Sherlett Creek. EASTING: 366912

BORING METHOD	DEPTH SCALE m / ft	ELEV DEPTH (m)	DESCRIPTION	SYMBOLS	SAMPLE NAME	SAMPLE TYPE	LAB TESTING (Primary)	LAB TESTING (Secondary)	GUIDELINE COMPARISON	No. of Fractures/ 0.3 m (2 4 6 8)	MONITORING WELL MW09-OB
Maple Leaf Drilling Ltd., B-54 Mobile Auger - Solid Stem	0.00 / 0	317.50	Ground Surface								Steel Protective Casing 318.34
			Peat Little silt, black, moist.		MW-09-OB (0.25-0.35)	A					317.50
	1 / 5				MW-09-OB (1.50-1.75)	A					317.42 January 23, 2022
		315.50									Bentonite
	2 / 10	2.00	***Silt*** Trace clay, grey, very soft, high plasticity, moist.		MW-09-OB (2.75-3.00)	A					Solid 50 mm PVC
	3 / 15		- From 3 m to 5.5 m; wet.								314.50
	4 / 20				MW-09-OB (4.25-4.50)	A					314.20
	5 / 25	312.00	- From 5.25 m to 5.5 m; little fine-grained sand.		MW-09-OB (5.25-5.50)	A					Sand
		5.50	***End of Borehole at 5.50m*** Terminated at refusal on suspected bedrock.								Slotted 50 mm PVC
	6 / 30										311.90
	7 / 35										
	8 / 40										
	9 / 45										
	10 / 50										
	11 / 55										
	12 / 60										
	13 / 65										
	14 / 70										
	15 / 75										
	16 / 80										
	17 / 85										
	18 / 90										

SCALE 1: 100.0 LOGGED BY: MR CHECKED BY: BH

TETRA TECH CANADA LOG - ANALYTICAL 705-09240103-ALL-BOR-V0001-00 SHERRIDON -X-SECT.GPJ 22-5-26

TETRA TECH

RECORD OF BOREHOLE

MW10-OB

Sheet 1 of 1

705-09240103-ALL

CLIENT: Manitoba Environment, Climate and Parks DATE DRILLED: January 29, 2022 DATUM: Geodetic

PROJECT TITLE: Sherridon Phased Groundwater Assessment PROJECT SITE: Sherridon, Manitoba NORTHING: 6110273

BOREHOLE LOCATION: South-central portion of wetland area to the south of Sherlett Creek. EASTING: 366915

BORING METHOD	DEPTH SCALE m / ft	SUBSURFACE PROFILE: ELEV DEPTH (m)	DESCRIPTION	SYMBOLS	SAMPLES: SAMPLE NAME	SAMPLE TYPE	LAB TESTING (Primary)	LAB TESTING (Secondary)	GUIDELINE COMPARISON	No. of Fractures/ 0.3 m (2 4 6 8)	MONITORING WELL MW10-OB
Maple Leaf Drilling Ltd., B-54 Mobile Auger - Solid Stem	0.00 / 0	318.15	Ground Surface								Steel Protective Casing 319.05
		317.85 / 0.30	***Peat*** Trace small gravel, orange-red, moist.		MW-10-OB (0.10-0.35)	A				0 0 0 0	318.15
	1 / 5	317.45 / 0.70	***Peat*** Trace silt, black, moist.		MW-10-OB (0.70-0.95)	A					Bentonite
		316.95 / 1.20	***Clay*** Little peat, black.								316.15
	2 / 10		***Silt*** Trace clay, grey, very soft, high plasticity, moist.		MW-10-OB (2.3-2.55)	A					315.75
			- From 2.8 m to 5.2 m; wet.								
	3 / 10		- From 3.2 m to 5.2 m; little fine-grained sand, trace small gravel, trace coarse-grained sand.		MW-10-OB (3.20-3.45)	A	Metals		FAIL		Sand
	4 / 15										Slotted 50 mm PVC
	5	312.97 / 5.18	***End of Borehole at 5.18m*** Terminated at refusal on suspected bedrock.		MW-10-OB (4.8-5.05)	A					312.97
	6 / 20										
	7 / 25										
	8 / 25										
	9 / 30										
	10 / 35										
	11 / 35										
	12 / 40										
	13 / 45										
	14 / 45										
	15 / 50										
	16 / 50										
	17 / 55										
	18										

SCALE 1: 100.0 LOGGED BY: MR CHECKED BY: BH

TETRA TECH CANADA LOG - ANALYTICAL 705-09240103-ALL-BOR-V0001-00 SHERRIDON -X-SECT.GPJ 22-5-26

TETRA TECH

RECORD OF BOREHOLE

MW11-OB

Sheet 1 of 1

705-09240103-ALL

CLIENT: Manitoba Environment, Climate and Parks DATE DRILLED: January 29, 2022 DATUM: Geodetic

PROJECT TITLE: Sherridon Phased Groundwater Assessment PROJECT SITE: Sherridon, Manitoba NORTHING: 6110306

BOREHOLE LOCATION: North-central portion of wetland area to the south of Sherlett Creek. EASTING: 366893

BORING METHOD	DEPTH SCALE m / ft	ELEV DEPTH (m)	DESCRIPTION	SYMBOLS	SAMPLE NAME	SAMPLE TYPE	LAB TESTING (Primary)	LAB TESTING (Secondary)	GUIDELINE COMPARISON	No. of Fractures/ 0.3 m (2 4 6 8)	MONITORING WELL MW11-OB
Maple Leaf Drilling Ltd., B-54 Mobile Auger - Solid Stem	0.00 / 0	317.27	Ground Surface								Steel Protective Casing 318.04
		317.02 / 0.25	***Peat*** Trace small gravel, trace coarse-grained sand, orange-red, moist.		MW-11-OB (0.70-0.95)	A					317.27
	1 / 5	315.47 / 1.80	***Peat*** Little silt, trace small-grained and coarse-grained sand, black, wet.								317.19 February 1, 2022
	2 / 10	314.77 / 2.50	***Silt*** Some peat, trace clay, black, soft, low plasticity, wet.		MW-11-OB (2.20-2.45)	A					Bentonite / Solid 50 mm PVC
	3 / 10		***Silt*** Trace clay, grey, very soft, non-plastic, wet.		MW-11-OB (3.30-3.50)	A	Metals		FAIL		313.67
	4 / 15										313.47
	5 / 20				MW-11-OB (4.70-4.95)	A					Sand / Slotted 50 mm PVC
	6 / 20	310.47			MW-11-OB (6.20-6.45)	A					310.47
	7 / 25	6.80	***End of Borehole at 6.80m*** Terminated at refusal on suspected bedrock.								
	8 / 25										
	9 / 30										
	10 / 35										
	11 / 35										
	12 / 40										
	13 / 45										
	14 / 45										
	15 / 50										
	16 / 50										
	17 / 55										
	18										

SCALE 1: 100.0 LOGGED BY: MR CHECKED BY: BH

TETRA TECH CANADA LOG - ANALYTICAL 705-09240103-ALL-BOR-V0001-00 SHERRIDON -X-SECT.GPJ 22-5-26

APPENDIX C.1

Laboratory Certificates of Analysis – Biweekly

Surface Water Quality

Your Project #: 21-1357-005
Site#: OAM - Sherridon Mine Site
Your C.O.C. #: 663693-01-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/06/08
Report #: R3182678
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C237573
Received: 2022/06/01, 11:20

Sample Matrix: Water
Samples Received: 20

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH (1)	7	N/A	2022/06/04	AB SOP-00005	SM 23 2320 B m
Alkalinity @25C (pp, total), CO3,HCO3,OH (1)	5	N/A	2022/06/05	AB SOP-00005	SM 23 2320 B m
Alkalinity @25C (pp, total), CO3,HCO3,OH (1)	8	N/A	2022/06/06	AB SOP-00005	SM 23 2320 B m
Cadmium - low level CCME - Dissolved (1)	20	N/A	2022/06/06		Auto Calc
Cadmium - low level CCME (Total) (1)	6	N/A	2022/06/05		Auto Calc
Cadmium - low level CCME (Total) (1)	14	N/A	2022/06/08		Auto Calc
Hardness (1)	20	N/A	2022/06/06		Auto Calc
Hardness Total (calculated as CaCO3) (1, 2)	20	N/A	2022/06/08	BBY WI-00033	Auto Calc
Elements by ICP-Dissolved-Lab Filtered (1, 3)	2	N/A	2022/06/04	AB SOP-00042	EPA 6010d R5 m
Elements by ICP-Dissolved-Lab Filtered (1, 3)	18	N/A	2022/06/05	AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Total (1)	20	2022/06/03	2022/06/07	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Elements by ICPMS-Dissolved-Lab Filtered (1, 4)	20	N/A	2022/06/05	AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total (1)	6	2022/06/03	2022/06/04	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total (1)	14	2022/06/03	2022/06/08	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
pH @25°C (1, 5)	7	N/A	2022/06/04	AB SOP-00005	SM 23 4500-H+B m
pH @25°C (1, 5)	5	N/A	2022/06/05	AB SOP-00005	SM 23 4500-H+B m
pH @25°C (1, 5)	8	N/A	2022/06/06	AB SOP-00005	SM 23 4500-H+B m
Total Suspended Solids (NFR) (1)	18	2022/06/03	2022/06/03	AB SOP-00061	SM 23 2540 D m
Total Suspended Solids (NFR) (1)	2	2022/06/04	2022/06/04	AB SOP-00061	SM 23 2540 D m
Turbidity (1)	20	N/A	2022/06/03	CAL SOP-00081	SM 23 2130 B m

Remarks:

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

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

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

Your Project #: 21-1357-005
Site#: OAM - Sherridon Mine Site
Your C.O.C. #: 663693-01-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/06/08
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CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C237573
Received: 2022/06/01, 11:20

Uncertainty has not been accounted for when stating conformity to the referenced standard.

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8
(2) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(3) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(4) Samples were filtered and preserved at the lab. Values may not reflect concentrations at the time of sampling. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(5) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Janelle Kochan, B.Sc., Key Account Specialist
Email: Janelle.KOCHAN@bureauveritas.com
Phone# (204)259-0231
==========
This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AUD335		AUD336		AUD337	AUD338		
Sampling Date		2022/05/31 11:45		2022/05/31 10:10		2022/05/31 10:00	2022/05/31 10:15		
	UNITS	SC-1	QC Batch	SB-1	QC Batch	SB-2	CB-1	RDL	QC Batch
Elements									
Dissolved Cadmium (Cd)	ug/L	0.26	A595952	0.65	A595952	0.65	0.73	0.020	A595952
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	0.045	A597880	0.055	A597880	0.056	0.061	0.0030	A597880
Dissolved Antimony (Sb)	mg/L	<0.00060	A597880	<0.00060	A597880	<0.00060	<0.00060	0.00060	A597880
Dissolved Arsenic (As)	mg/L	0.00041	A597880	0.00029	A597880	0.00033	0.00022	0.00020	A597880
Dissolved Barium (Ba)	mg/L	<0.010	A598230	<0.010	A598235	<0.010	<0.010	0.010	A598230
Dissolved Beryllium (Be)	mg/L	<0.0010	A597880	<0.0010	A597880	<0.0010	<0.0010	0.0010	A597880
Dissolved Boron (B)	mg/L	<0.020	A598230	<0.020	A598235	<0.020	<0.020	0.020	A598230
Dissolved Calcium (Ca)	mg/L	6.9	A598230	28	A598235	26	27	0.30	A598230
Dissolved Chromium (Cr)	mg/L	<0.0010	A597880	<0.0010	A597880	<0.0010	<0.0010	0.0010	A597880
Dissolved Cobalt (Co)	mg/L	<0.00030	A597880	0.0012	A597880	0.0012	0.0013	0.00030	A597880
Dissolved Copper (Cu)	mg/L	0.0097	A597880	0.021	A597880	0.022	0.023	0.0010	A597880
Dissolved Iron (Fe)	mg/L	0.17	A598230	2.3	A598235	2.4	1.9	0.060	A598230
Dissolved Lead (Pb)	mg/L	<0.00020	A597880	<0.00020	A597880	<0.00020	<0.00020	0.00020	A597880
Dissolved Lithium (Li)	mg/L	<0.020	A598230	<0.020	A598235	<0.020	<0.020	0.020	A598230
Dissolved Magnesium (Mg)	mg/L	2.1	A598230	5.3	A598235	4.8	4.9	0.20	A598230
Dissolved Manganese (Mn)	mg/L	0.011	A598230	0.14	A598235	0.14	0.14	0.0040	A598230
Dissolved Molybdenum (Mo)	mg/L	<0.00020	A597880	<0.00020	A597880	<0.00020	<0.00020	0.00020	A597880
Dissolved Nickel (Ni)	mg/L	<0.00050	A597880	0.00075	A597880	0.00055	0.00082	0.00050	A597880
Dissolved Phosphorus (P)	mg/L	<0.10	A598230	<0.10	A598235	<0.10	<0.10	0.10	A598230
Dissolved Potassium (K)	mg/L	1.0	A598230	2.5	A598235	2.2	2.2	0.30	A598230
Dissolved Selenium (Se)	mg/L	<0.00020	A597880	<0.00020	A597880	<0.00020	<0.00020	0.00020	A597880
Dissolved Silicon (Si)	mg/L	1.6	A598230	1.4	A598235	1.4	1.4	0.10	A598230
Dissolved Silver (Ag)	mg/L	<0.00010	A597880	<0.00010	A597880	<0.00010	<0.00010	0.00010	A597880
Dissolved Sodium (Na)	mg/L	1.4	A598230	2.3	A598235	2.1	2.1	0.50	A598230
Dissolved Strontium (Sr)	mg/L	<0.020	A598230	0.037	A598235	0.035	0.036	0.020	A598230
Dissolved Sulphur (S)	mg/L	1.6	A598230	26	A598235	27	28	0.20	A598230
Dissolved Thallium (Tl)	mg/L	<0.00020	A597880	<0.00020	A597880	<0.00020	<0.00020	0.00020	A597880
Dissolved Tin (Sn)	mg/L	<0.0010	A597880	<0.0010	A597880	<0.0010	<0.0010	0.0010	A597880
Dissolved Titanium (Ti)	mg/L	<0.0010	A597880	<0.0010	A597880	<0.0010	<0.0010	0.0010	A597880
Dissolved Uranium (U)	mg/L	<0.00010	A597880	<0.00010	A597880	<0.00010	<0.00010	0.00010	A597880
Dissolved Vanadium (V)	mg/L	<0.0010	A597880	<0.0010	A597880	<0.0010	<0.0010	0.0010	A597880

RDL = Reportable Detection Limit

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AUD335		AUD336		AUD337	AUD338		
Sampling Date		2022/05/31 11:45		2022/05/31 10:10		2022/05/31 10:00	2022/05/31 10:15		
	UNITS	**SC-1**	**QC Batch**	**SB-1**	**QC Batch**	**SB-2**	**CB-1**	**RDL**	**QC Batch**
Dissolved Zinc (Zn)	mg/L	0.083	A597880	0.20	A597880	0.20	0.21	0.0030	A597880
RDL = Reportable Detection Limit									

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AUD339		AUD340		AUD341		AUD342		
Sampling Date		2022/05/31 10:25		2022/05/31 11:00		2022/05/31 10:55		2022/05/31 10:35		
	UNITS	CB-2	QC Batch	NB-1	QC Batch	NB-2	QC Batch	EB-1	RDL	QC Batch
Elements										
Dissolved Cadmium (Cd)	ug/L	0.84	A595952	0.76	A595952	0.77	A595952	1.4	0.020	A595952
Lab Filtered Elements										
Dissolved Aluminum (Al)	mg/L	0.070	A597878	0.067	A597880	0.075	A597878	0.062	0.0030	A597880
Dissolved Antimony (Sb)	mg/L	<0.00060	A597878	<0.00060	A597880	<0.00060	A597878	<0.00060	0.00060	A597880
Dissolved Arsenic (As)	mg/L	0.00032	A597878	0.00030	A597880	0.00028	A597878	0.00027	0.00020	A597880
Dissolved Barium (Ba)	mg/L	<0.010	A598230	0.010	A598230	<0.010	A598230	0.011	0.010	A598230
Dissolved Beryllium (Be)	mg/L	<0.0010	A597878	<0.0010	A597880	<0.0010	A597878	<0.0010	0.0010	A597880
Dissolved Boron (B)	mg/L	<0.020	A598230	<0.020	A598230	<0.020	A598230	<0.020	0.020	A598230
Dissolved Calcium (Ca)	mg/L	28	A598230	34	A598230	32	A598230	37	0.30	A598230
Dissolved Chromium (Cr)	mg/L	<0.0010	A597878	<0.0010	A597880	<0.0010	A597878	<0.0010	0.0010	A597880
Dissolved Cobalt (Co)	mg/L	0.0015	A597878	0.0013	A597880	0.0013	A597878	0.0028	0.00030	A597880
Dissolved Copper (Cu)	mg/L	0.027	A597878	0.024	A597880	0.028	A597878	0.024	0.0010	A597880
Dissolved Iron (Fe)	mg/L	1.9	A598230	2.1	A598230	1.8	A598230	1.0	0.060	A598230
Dissolved Lead (Pb)	mg/L	<0.00020	A597878	<0.00020	A597880	<0.00020	A597878	<0.00020	0.00020	A597880
Dissolved Lithium (Li)	mg/L	<0.020	A598230	<0.020	A598230	<0.020	A598230	<0.020	0.020	A598230
Dissolved Magnesium (Mg)	mg/L	5.1	A598230	5.5	A598230	5.3	A598230	6.5	0.20	A598230
Dissolved Manganese (Mn)	mg/L	0.15	A598230	0.17	A598230	0.15	A598230	0.25	0.0040	A598230
Dissolved Molybdenum (Mo)	mg/L	<0.00020	A597878	<0.00020	A597880	<0.00020	A597878	<0.00020	0.00020	A597880
Dissolved Nickel (Ni)	mg/L	0.0012	A597878	0.00081	A597880	0.00063	A597878	0.0018	0.00050	A597880
Dissolved Phosphorus (P)	mg/L	<0.10	A598230	<0.10	A598230	<0.10	A598230	<0.10	0.10	A598230
Dissolved Potassium (K)	mg/L	2.3	A598230	2.4	A598230	2.4	A598230	2.8	0.30	A598230
Dissolved Selenium (Se)	mg/L	<0.00020	A597878	<0.00020	A597880	<0.00020	A597878	<0.00020	0.00020	A597880
Dissolved Silicon (Si)	mg/L	1.4	A598230	1.4	A598230	1.4	A598230	1.5	0.10	A598230
Dissolved Silver (Ag)	mg/L	<0.00010	A597878	<0.00010	A597880	<0.00010	A597878	<0.00010	0.00010	A597880
Dissolved Sodium (Na)	mg/L	2.1	A598230	2.2	A598230	2.2	A598230	2.5	0.50	A598230
Dissolved Strontium (Sr)	mg/L	0.036	A598230	0.039	A598230	0.038	A598230	0.045	0.020	A598230
Dissolved Sulphur (S)	mg/L	31	A598230	34	A598230	32	A598230	41	0.20	A598230
Dissolved Thallium (Tl)	mg/L	<0.00020	A597878	<0.00020	A597880	<0.00020	A597878	<0.00020	0.00020	A597880
Dissolved Tin (Sn)	mg/L	<0.0010	A597878	<0.0010	A597880	<0.0010	A597878	<0.0010	0.0010	A597880
Dissolved Titanium (Ti)	mg/L	<0.0010	A597878	<0.0010	A597880	<0.0010	A597878	<0.0010	0.0010	A597880
Dissolved Uranium (U)	mg/L	<0.00010	A597878	<0.00010	A597880	<0.00010	A597878	<0.00010	0.00010	A597880
Dissolved Vanadium (V)	mg/L	<0.0010	A597878	<0.0010	A597880	<0.0010	A597878	<0.0010	0.0010	A597880

RDL = Reportable Detection Limit

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AUD339		AUD340		AUD341		AUD342		
Sampling Date		2022/05/31 10:25		2022/05/31 11:00		2022/05/31 10:55		2022/05/31 10:35		
	UNITS	**CB-2**	**QC Batch**	**NB-1**	**QC Batch**	**NB-2**	**QC Batch**	**EB-1**	**RDL**	**QC Batch**
Dissolved Zinc (Zn)	mg/L	0.25	A597878	0.23	A597880	0.23	A597878	0.35	0.0030	A597880
RDL = Reportable Detection Limit										

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AUD343	AUD344	AUD361	AUD362		
Sampling Date		2022/05/31 10:45	2022/05/31 10:10	2022/05/31 09:05	2022/05/31 09:15		
	UNITS	EB-2	CAMP LAKE DISCHARGE	CL-3	CL-7	RDL	QC Batch
Elements							
Dissolved Cadmium (Cd)	ug/L	1.5	0.79	0.54	0.17	0.020	A595952
Lab Filtered Elements							
Dissolved Aluminum (Al)	mg/L	0.064	0.063	0.065	0.055	0.0030	A597878
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	<0.00060	0.00060	A597878
Dissolved Arsenic (As)	mg/L	0.00029	0.00029	0.00031	0.00029	0.00020	A597878
Dissolved Barium (Ba)	mg/L	0.012	0.010	<0.010	<0.010	0.010	A598230
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A597878
Dissolved Boron (B)	mg/L	<0.020	<0.020	<0.020	<0.020	0.020	A598230
Dissolved Calcium (Ca)	mg/L	41	35	26	14	0.30	A598230
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A597878
Dissolved Cobalt (Co)	mg/L	0.0033	0.0013	0.00087	<0.00030	0.00030	A597878
Dissolved Copper (Cu)	mg/L	0.023	0.025	0.022	0.011	0.0010	A597878
Dissolved Iron (Fe)	mg/L	0.88	2.3	1.5	0.52	0.060	A598230
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A597878
Dissolved Lithium (Li)	mg/L	<0.020	<0.020	<0.020	<0.020	0.020	A598230
Dissolved Magnesium (Mg)	mg/L	6.9	5.6	4.6	3.2	0.20	A598230
Dissolved Manganese (Mn)	mg/L	0.29	0.17	0.11	0.035	0.0040	A598230
Dissolved Molybdenum (Mo)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A597878
Dissolved Nickel (Ni)	mg/L	0.0024	0.0014	<0.00050	<0.00050	0.00050	A597878
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	<0.10	0.10	A598230
Dissolved Potassium (K)	mg/L	2.9	2.5	2.1	1.5	0.30	A598230
Dissolved Selenium (Se)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A597878
Dissolved Silicon (Si)	mg/L	1.5	1.5	1.4	1.3	0.10	A598230
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A597878
Dissolved Sodium (Na)	mg/L	2.7	2.2	2.2	1.8	0.50	A598230
Dissolved Strontium (Sr)	mg/L	0.049	0.039	0.034	0.027	0.020	A598230
Dissolved Sulphur (S)	mg/L	46	36	25	11	0.20	A598230
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A597878
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A597878
Dissolved Titanium (Ti)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A597878
Dissolved Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A597878
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A597878

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AUD343	AUD344	AUD361	AUD362		
Sampling Date		2022/05/31 10:45	2022/05/31 10:10	2022/05/31 09:05	2022/05/31 09:15		
	UNITS	**EB-2**	**CAMP LAKE DISCHARGE**	**CL-3**	**CL-7**	**RDL**	**QC Batch**
Dissolved Zinc (Zn)	mg/L	0.39	0.24	0.17	0.066	0.0030	A597878
RDL = Reportable Detection Limit							

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AUD363		AUD364		AUD365	AUD366		
Sampling Date		2022/05/31 09:00		2022/05/31 09:30		2022/05/31 08:45	2022/05/31 08:30		
	UNITS	CL-8	QC Batch	CL-2	QC Batch	CL-4	CL-5	RDL	QC Batch
Elements									
Dissolved Cadmium (Cd)	ug/L	0.18	A595042	0.17	A595042	0.13	0.16	0.020	A595042
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	0.054	A597878	0.049	A597880	0.043	0.050	0.0030	A597878
Dissolved Antimony (Sb)	mg/L	<0.00060	A597878	<0.00060	A597880	<0.00060	<0.00060	0.00060	A597878
Dissolved Arsenic (As)	mg/L	0.00041	A597878	0.00040	A597880	0.00046	0.00040	0.00020	A597878
Dissolved Barium (Ba)	mg/L	<0.010	A598230	<0.010	A598230	<0.010	<0.010	0.010	A598230
Dissolved Beryllium (Be)	mg/L	<0.0010	A597878	<0.0010	A597880	<0.0010	<0.0010	0.0010	A597878
Dissolved Boron (B)	mg/L	<0.020	A598230	<0.020	A598230	<0.020	<0.020	0.020	A598230
Dissolved Calcium (Ca)	mg/L	14	A598230	15	A598230	12	13	0.30	A598230
Dissolved Chromium (Cr)	mg/L	<0.0010	A597878	<0.0010	A597880	<0.0010	<0.0010	0.0010	A597878
Dissolved Cobalt (Co)	mg/L	<0.00030	A597878	<0.00030	A597880	<0.00030	<0.00030	0.00030	A597878
Dissolved Copper (Cu)	mg/L	0.011	A597878	0.0087	A597880	0.0081	0.010	0.0010	A597878
Dissolved Iron (Fe)	mg/L	0.50	A598230	0.53	A598230	0.34	0.43	0.060	A598230
Dissolved Lead (Pb)	mg/L	<0.00020	A597878	<0.00020	A597880	<0.00020	<0.00020	0.00020	A597878
Dissolved Lithium (Li)	mg/L	<0.020	A598230	<0.020	A598230	<0.020	<0.020	0.020	A598230
Dissolved Magnesium (Mg)	mg/L	3.2	A598230	3.4	A598230	2.9	3.0	0.20	A598230
Dissolved Manganese (Mn)	mg/L	0.034	A598230	0.037	A598230	0.028	0.029	0.0040	A598230
Dissolved Molybdenum (Mo)	mg/L	<0.00020	A597878	<0.00020	A597880	<0.00020	0.00045	0.00020	A597878
Dissolved Nickel (Ni)	mg/L	<0.00050	A597878	<0.00050	A597880	<0.00050	<0.00050	0.00050	A597878
Dissolved Phosphorus (P)	mg/L	<0.10	A598230	<0.10	A598230	<0.10	<0.10	0.10	A598230
Dissolved Potassium (K)	mg/L	1.4	A598230	1.4	A598230	1.3	1.4	0.30	A598230
Dissolved Selenium (Se)	mg/L	<0.00020	A597878	<0.00020	A597880	<0.00020	<0.00020	0.00020	A597878
Dissolved Silicon (Si)	mg/L	1.3	A598230	1.2	A598230	1.1	1.2	0.10	A598230
Dissolved Silver (Ag)	mg/L	<0.00010	A597878	<0.00010	A597880	<0.00010	<0.00010	0.00010	A597878
Dissolved Sodium (Na)	mg/L	1.8	A598230	2.2	A598230	1.8	1.8	0.50	A598230
Dissolved Strontium (Sr)	mg/L	0.027	A598230	0.029	A598230	0.026	0.026	0.020	A598230
Dissolved Sulphur (S)	mg/L	11	A598230	11	A598230	7.5	8.7	0.20	A598230
Dissolved Thallium (Tl)	mg/L	<0.00020	A597878	<0.00020	A597880	<0.00020	<0.00020	0.00020	A597878
Dissolved Tin (Sn)	mg/L	<0.0010	A597878	<0.0010	A597880	<0.0010	<0.0010	0.0010	A597878
Dissolved Titanium (Ti)	mg/L	<0.0010	A597878	<0.0010	A597880	<0.0010	<0.0010	0.0010	A597878
Dissolved Uranium (U)	mg/L	<0.00010	A597878	<0.00010	A597880	<0.00010	<0.00010	0.00010	A597878
Dissolved Vanadium (V)	mg/L	<0.0010	A597878	<0.0010	A597880	<0.0010	<0.0010	0.0010	A597878

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AUD363		AUD364		AUD365	AUD366		
Sampling Date		2022/05/31 09:00		2022/05/31 09:30		2022/05/31 08:45	2022/05/31 08:30		
	UNITS	**CL-8**	**QC Batch**	**CL-2**	**QC Batch**	**CL-4**	**CL-5**	**RDL**	**QC Batch**
Dissolved Zinc (Zn)	mg/L	0.065	A597878	0.059	A597880	0.048	0.060	0.0030	A597878
RDL = Reportable Detection Limit									

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AUD367		AUD368		AUD369		AUD370		
Sampling Date		2022/05/31 08:15		2022/05/31 17:00		2022/05/31 16:00		2022/05/31		
	UNITS	CL-6	QC Batch	SW-100	QC Batch	SW-101	QC Batch	TRIP BLANK	RDL	QC Batch
Elements										
Dissolved Cadmium (Cd)	ug/L	0.13	A595042	0.75	A595042	0.17	A595042	<0.020	0.020	A595042
Lab Filtered Elements										
Dissolved Aluminum (Al)	mg/L	0.045	A597878	0.072	A597878	0.048	A597880	<0.0030	0.0030	A597878
Dissolved Antimony (Sb)	mg/L	<0.00060	A597878	<0.00060	A597878	<0.00060	A597880	<0.00060	0.00060	A597878
Dissolved Arsenic (As)	mg/L	0.00038	A597878	0.00027	A597878	0.00042	A597880	<0.00020	0.00020	A597878
Dissolved Barium (Ba)	mg/L	<0.010	A598228	0.010	A598235	<0.010	A598228	<0.010	0.010	A598230
Dissolved Beryllium (Be)	mg/L	<0.0010	A597878	<0.0010	A597878	<0.0010	A597880	<0.0010	0.0010	A597878
Dissolved Boron (B)	mg/L	<0.020	A598228	<0.020	A598235	<0.020	A598228	<0.020	0.020	A598230
Dissolved Calcium (Ca)	mg/L	12	A598228	29	A598235	17	A598228	<0.30	0.30	A598230
Dissolved Chromium (Cr)	mg/L	<0.0010	A597878	<0.0010	A597878	<0.0010	A597880	<0.0010	0.0010	A597878
Dissolved Cobalt (Co)	mg/L	<0.00030	A597878	0.0013	A597878	<0.00030	A597880	<0.00030	0.00030	A597878
Dissolved Copper (Cu)	mg/L	0.0098	A597878	0.030	A597878	0.0088	A597880	<0.0010	0.0010	A597878
Dissolved Iron (Fe)	mg/L	0.36	A598228	1.9	A598235	0.61	A598228	<0.060	0.060	A598230
Dissolved Lead (Pb)	mg/L	<0.00020	A597878	<0.00020	A597878	<0.00020	A597880	<0.00020	0.00020	A597878
Dissolved Lithium (Li)	mg/L	<0.020	A598228	<0.020	A598235	<0.020	A598228	<0.020	0.020	A598230
Dissolved Magnesium (Mg)	mg/L	3.2	A598228	5.2	A598235	4.0	A598228	<0.20	0.20	A598230
Dissolved Manganese (Mn)	mg/L	0.022	A598228	0.15	A598235	0.039	A598228	<0.0040	0.0040	A598230
Dissolved Molybdenum (Mo)	mg/L	<0.00020	A597878	<0.00020	A597878	<0.00020	A597880	<0.00020	0.00020	A597878
Dissolved Nickel (Ni)	mg/L	<0.00050	A597878	0.00085	A597878	<0.00050	A597880	<0.00050	0.00050	A597878
Dissolved Phosphorus (P)	mg/L	<0.10	A598228	<0.10	A598235	<0.10	A598228	<0.10	0.10	A598230
Dissolved Potassium (K)	mg/L	1.5	A598228	2.5	A598235	1.9	A598228	<0.30	0.30	A598230
Dissolved Selenium (Se)	mg/L	<0.00020	A597878	<0.00020	A597878	<0.00020	A597880	<0.00020	0.00020	A597878
Dissolved Silicon (Si)	mg/L	1.3	A598228	1.4	A598235	1.4	A598228	<0.10	0.10	A598230
Dissolved Silver (Ag)	mg/L	<0.00010	A597878	<0.00010	A597878	<0.00010	A597880	<0.00010	0.00010	A597878
Dissolved Sodium (Na)	mg/L	2.2	A598228	2.3	A598235	2.1	A598228	<0.50	0.50	A598230
Dissolved Strontium (Sr)	mg/L	0.024	A598228	0.036	A598235	0.028	A598228	<0.020	0.020	A598230
Dissolved Sulphur (S)	mg/L	6.4	A598228	27	A598235	11	A598228	<0.20	0.20	A598230
Dissolved Thallium (Tl)	mg/L	<0.00020	A597878	<0.00020	A597878	<0.00020	A597880	<0.00020	0.00020	A597878
Dissolved Tin (Sn)	mg/L	<0.0010	A597878	<0.0010	A597878	<0.0010	A597880	<0.0010	0.0010	A597878
Dissolved Titanium (Ti)	mg/L	<0.0010	A597878	<0.0010	A597878	<0.0010	A597880	<0.0010	0.0010	A597878
Dissolved Uranium (U)	mg/L	<0.00010	A597878	<0.00010	A597878	<0.00010	A597880	<0.00010	0.00010	A597878
Dissolved Vanadium (V)	mg/L	<0.0010	A597878	<0.0010	A597878	<0.0010	A597880	<0.0010	0.0010	A597878

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AUD367		AUD368		AUD369		AUD370		
Sampling Date		2022/05/31 08:15		2022/05/31 17:00		2022/05/31 16:00		2022/05/31		
	UNITS	**CL-6**	**QC Batch**	**SW-100**	**QC Batch**	**SW-101**	**QC Batch**	**TRIP BLANK**	**RDL**	**QC Batch**
Dissolved Zinc (Zn)	mg/L	0.047	A597878	0.22	A597878	0.062	A597880	<0.0030	0.0030	A597878
RDL = Reportable Detection Limit										

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AUD335			AUD335			AUD336		
Sampling Date		2022/05/31 11:45			2022/05/31 11:45			2022/05/31 10:10		
	UNITS	SC-1	RDL	QC Batch	SC-1 Lab-Dup	RDL	QC Batch	SB-1	RDL	QC Batch
Elements										
Total Cadmium (Cd)	ug/L	0.29	0.020	A595953				0.80	0.020	A595953
Total Aluminum (Al)	mg/L	0.087	0.0030	A596935	0.089	0.0030	A596935	0.15	0.0030	A596931
Total Antimony (Sb)	mg/L	<0.00060	0.00060	A596935	<0.00060	0.00060	A596935	<0.00060	0.00060	A596931
Total Arsenic (As)	mg/L	0.00033	0.00020	A596935	0.00033	0.00020	A596935	0.00035	0.00020	A596931
Total Barium (Ba)	mg/L	<0.010	0.010	A596947	<0.010	0.010	A596947	0.010	0.010	A596933
Total Beryllium (Be)	mg/L	<0.0010	0.0010	A596935	<0.0010	0.0010	A596935	<0.0010	0.0010	A596931
Total Boron (B)	mg/L	<0.020	0.020	A596947	<0.020	0.020	A596947	<0.020	0.020	A596933
Total Calcium (Ca)	mg/L	7.0	0.30	A596947	7.3	0.30	A596947	27	0.30	A596933
Total Chromium (Cr)	mg/L	<0.0010	0.0010	A596935	<0.0010	0.0010	A596935	<0.0010	0.0010	A596931
Total Cobalt (Co)	mg/L	<0.00030	0.00030	A596935	<0.00030	0.00030	A596935	0.0014	0.00030	A596931
Total Copper (Cu)	mg/L	0.014	0.0010	A596935	0.014	0.0010	A596935	0.038	0.0010	A596931
Total Iron (Fe)	mg/L	0.29	0.060	A596947	0.29	0.060	A596947	4.6	0.060	A596933
Total Lead (Pb)	mg/L	<0.00020	0.00020	A596935	<0.00020	0.00020	A596935	<0.00020	0.00020	A596931
Total Lithium (Li)	mg/L	<0.020	0.020	A596947	0.022	0.020	A596947	<0.020	0.020	A596933
Total Magnesium (Mg)	mg/L	2.3	0.20	A596947	2.4	0.20	A596947	5.2	0.20	A596933
Total Manganese (Mn)	mg/L	0.022	0.0040	A596947	0.022	0.0040	A596947	0.14	0.0040	A596933
Total Molybdenum (Mo)	mg/L	<0.00020	0.00020	A596935	<0.00020	0.00020	A596935	<0.00020	0.00020	A596931
Total Nickel (Ni)	mg/L	0.00065	0.00050	A596935	0.00072	0.00050	A596935	0.0014	0.00050	A596931
Total Phosphorus (P)	mg/L	<0.10	0.10	A596947	<0.10	0.10	A596947	<0.10	0.10	A596933
Total Potassium (K)	mg/L	1.2	0.30	A596947	1.3	0.30	A596947	2.5	0.30	A596933
Total Selenium (Se)	mg/L	<0.00020	0.00020	A596935	<0.00020	0.00020	A596935	<0.00020	0.00020	A596931
Total Silicon (Si)	mg/L	1.8	0.10	A596947	1.8	0.10	A596947	1.6	0.10	A596933
Total Silver (Ag)	mg/L	<0.00010	0.00010	A596935	<0.00010	0.00010	A596935	<0.00010	0.00010	A596931
Total Sodium (Na)	mg/L	1.5	0.50	A596947	1.5	0.50	A596947	2.1	0.50	A596933
Total Strontium (Sr)	mg/L	<0.020	0.020	A596947	<0.020	0.020	A596947	0.036	0.020	A596933
Total Sulphur (S)	mg/L	1.7	0.20	A596947	1.7	0.20	A596947	25	0.20	A596933
Total Thallium (Tl)	mg/L	<0.00020	0.00020	A596935	<0.00020	0.00020	A596935	<0.00020	0.00020	A596931
Total Tin (Sn)	mg/L	<0.0010	0.0010	A596935	<0.0010	0.0010	A596935	<0.0010	0.0010	A596931
Total Titanium (Ti)	mg/L	0.0028	0.0010	A596935	0.0042	0.0010	A596935	0.0027	0.0010	A596931
Total Uranium (U)	mg/L	<0.00010	0.00010	A596935	<0.00010	0.00010	A596935	<0.00010	0.00010	A596931
Total Vanadium (V)	mg/L	<0.0010	0.0010	A596935	<0.0010	0.0010	A596935	<0.0010	0.0010	A596931

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AUD335			AUD335			AUD336		
Sampling Date		2022/05/31 11:45			2022/05/31 11:45			2022/05/31 10:10		
	UNITS	**SC-1**	**RDL**	**QC Batch**	**SC-1 Lab-Dup**	**RDL**	**QC Batch**	**SB-1**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.093	0.0030	A596935	0.096	0.0030	A596935	0.25	0.0030	A596931

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AUD337		AUD338	AUD339		AUD340		
Sampling Date		2022/05/31 10:00		2022/05/31 10:15	2022/05/31 10:25		2022/05/31 11:00		
	UNITS	SB-2	QC Batch	CB-1	CB-2	QC Batch	NB-1	RDL	QC Batch
Elements									
Total Cadmium (Cd)	ug/L	0.77	A595953	0.87	0.97	A595043	0.91	0.020	A595043
Total Aluminum (Al)	mg/L	0.13	A596931	0.15	0.17	A596931	0.15	0.0030	A596935
Total Antimony (Sb)	mg/L	<0.00060	A596931	<0.00060	<0.00060	A596931	<0.00060	0.00060	A596935
Total Arsenic (As)	mg/L	0.00034	A596931	0.00036	0.00037	A596931	0.00036	0.00020	A596935
Total Barium (Ba)	mg/L	<0.010	A596933	0.010	0.010	A596933	0.011	0.010	A596947
Total Beryllium (Be)	mg/L	<0.0010	A596931	<0.0010	<0.0010	A596931	<0.0010	0.0010	A596935
Total Boron (B)	mg/L	<0.020	A596933	<0.020	<0.020	A596933	<0.020	0.020	A596947
Total Calcium (Ca)	mg/L	27	A596933	28	29	A596933	35	0.30	A596947
Total Chromium (Cr)	mg/L	<0.0010	A596931	<0.0010	<0.0010	A596931	<0.0010	0.0010	A596935
Total Cobalt (Co)	mg/L	0.0013	A596931	0.0014	0.0017	A596931	0.0016	0.00030	A596935
Total Copper (Cu)	mg/L	0.036	A596931	0.040	0.043	A596931	0.042	0.0010	A596935
Total Iron (Fe)	mg/L	4.6	A596933	4.1	4.2	A596933	4.8	0.060	A596947
Total Lead (Pb)	mg/L	<0.00020	A596931	<0.00020	<0.00020	A596931	<0.00020	0.00020	A596935
Total Lithium (Li)	mg/L	<0.020	A596933	<0.020	<0.020	A596933	<0.020	0.020	A596947
Total Magnesium (Mg)	mg/L	5.1	A596933	5.3	5.4	A596933	6.1	0.20	A596947
Total Manganese (Mn)	mg/L	0.14	A596933	0.15	0.15	A596933	0.17	0.0040	A596947
Total Molybdenum (Mo)	mg/L	<0.00020	A596931	<0.00020	<0.00020	A596931	<0.00020	0.00020	A596935
Total Nickel (Ni)	mg/L	0.0015	A596931	0.0016	0.0020	A596931	0.0015	0.00050	A596935
Total Phosphorus (P)	mg/L	<0.10	A596933	<0.10	<0.10	A596933	<0.10	0.10	A596947
Total Potassium (K)	mg/L	2.5	A596933	2.5	2.7	A596933	2.7	0.30	A596947
Total Selenium (Se)	mg/L	<0.00020	A596931	<0.00020	<0.00020	A596931	<0.00020	0.00020	A596935
Total Silicon (Si)	mg/L	1.6	A596933	1.6	1.6	A596933	1.6	0.10	A596947
Total Silver (Ag)	mg/L	<0.00010	A596931	<0.00010	<0.00010	A596931	<0.00010	0.00010	A596935
Total Sodium (Na)	mg/L	2.1	A596933	2.3	2.1	A596933	2.3	0.50	A596947
Total Strontium (Sr)	mg/L	0.035	A596933	0.038	0.038	A596933	0.039	0.020	A596947
Total Sulphur (S)	mg/L	24	A596933	26	28	A596933	35	0.20	A596947
Total Thallium (Tl)	mg/L	<0.00020	A596931	<0.00020	<0.00020	A596931	<0.00020	0.00020	A596935
Total Tin (Sn)	mg/L	<0.0010	A596931	<0.0010	<0.0010	A596931	<0.0010	0.0010	A596935
Total Titanium (Ti)	mg/L	0.0023	A596931	0.0028	0.0030	A596931	0.0031	0.0010	A596935
Total Uranium (U)	mg/L	<0.00010	A596931	<0.00010	<0.00010	A596931	<0.00010	0.00010	A596935
Total Vanadium (V)	mg/L	<0.0010	A596931	<0.0010	<0.0010	A596931	<0.0010	0.0010	A596935
Total Zinc (Zn)	mg/L	0.24	A596931	0.26	0.29	A596931	0.28	0.0030	A596935

RDL = Reportable Detection Limit

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AUD341	AUD342	AUD343	AUD344	AUD361		
Sampling Date		2022/05/31 10:55	2022/05/31 10:35	2022/05/31 10:45	2022/05/31 10:10	2022/05/31 09:05		
	UNITS	NB-2	EB-1	EB-2	CAMP LAKE DISCHARGE	CL-3	RDL	QC Batch
Elements								
Total Cadmium (Cd)	ug/L	0.90	1.5	1.7	0.89	0.65	0.020	A595043
Total Aluminum (Al)	mg/L	0.16	0.25	0.31	0.16	0.15	0.0030	A596935
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	0.00060	A596935
Total Arsenic (As)	mg/L	0.00029	0.00035	0.00033	0.00034	0.00034	0.00020	A596935
Total Barium (Ba)	mg/L	0.011	0.013	0.014	0.011	0.011	0.010	A596947
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A596935
Total Boron (B)	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	A596947
Total Calcium (Ca)	mg/L	33	39	42	36	29	0.30	A596947
Total Chromium (Cr)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A596935
Total Cobalt (Co)	mg/L	0.0015	0.0032	0.0036	0.0016	0.0010	0.00030	A596935
Total Copper (Cu)	mg/L	0.045	0.057	0.057	0.042	0.032	0.0010	A596935
Total Iron (Fe)	mg/L	4.1	4.4	4.6	4.8	3.5	0.060	A596947
Total Lead (Pb)	mg/L	<0.00020	<0.00020	0.00020	<0.00020	<0.00020	0.00020	A596935
Total Lithium (Li)	mg/L	0.029	0.028	<0.020	0.027	<0.020	0.020	A596947
Total Magnesium (Mg)	mg/L	5.7	7.2	7.7	6.2	5.4	0.20	A596947
Total Manganese (Mn)	mg/L	0.15	0.26	0.29	0.18	0.13	0.0040	A596947
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A596935
Total Nickel (Ni)	mg/L	0.0021	0.0030	0.0037	0.0017	0.0015	0.00050	A596935
Total Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	A596947
Total Potassium (K)	mg/L	2.6	3.1	3.4	2.7	2.4	0.30	A596947
Total Selenium (Se)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A596935
Total Silicon (Si)	mg/L	1.7	1.7	1.8	1.7	1.6	0.10	A596947
Total Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A596935
Total Sodium (Na)	mg/L	2.3	2.7	2.8	2.3	2.2	0.50	A596947
Total Strontium (Sr)	mg/L	0.037	0.045	0.048	0.039	0.035	0.020	A596947
Total Sulphur (S)	mg/L	32	43	46	36	27	0.20	A596947
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A596935
Total Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A596935
Total Titanium (Ti)	mg/L	0.0038	0.0043	0.0086	0.0033	0.0041	0.0010	A596935
Total Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A596935
Total Vanadium (V)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A596935
Total Zinc (Zn)	mg/L	0.28	0.43	0.48	0.28	0.21	0.0030	A596935

RDL = Reportable Detection Limit

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AUD362	AUD363		AUD364		AUD365		
Sampling Date		2022/05/31 09:15	2022/05/31 09:00		2022/05/31 09:30		2022/05/31 08:45		
	UNITS	CL-7	CL-8	QC Batch	CL-2	QC Batch	CL-4	RDL	QC Batch
Elements									
Total Cadmium (Cd)	ug/L	0.22	0.21	A595043	0.21	A595043	0.15	0.020	A595043
Total Aluminum (Al)	mg/L	0.090	0.087	A596935	0.090	A596931	0.079	0.0030	A596935
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	A596935	<0.00060	A596931	<0.00060	0.00060	A596935
Total Arsenic (As)	mg/L	0.00040	0.00044	A596935	0.00042	A596931	0.00041	0.00020	A596935
Total Barium (Ba)	mg/L	0.010	<0.010	A596947	<0.010	A596933	0.011	0.010	A596947
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	A596935	<0.0010	A596931	<0.0010	0.0010	A596935
Total Boron (B)	mg/L	<0.020	<0.020	A596947	<0.020	A596933	<0.020	0.020	A596947
Total Calcium (Ca)	mg/L	16	15	A596947	16	A596933	13	0.30	A596947
Total Chromium (Cr)	mg/L	<0.0010	<0.0010	A596935	<0.0010	A596931	<0.0010	0.0010	A596935
Total Cobalt (Co)	mg/L	<0.00030	<0.00030	A596935	<0.00030	A596931	<0.00030	0.00030	A596935
Total Copper (Cu)	mg/L	0.014	0.013	A596935	0.017	A596931	0.011	0.0010	A596935
Total Iron (Fe)	mg/L	1.1	1.0	A596947	1.0	A596933	0.80	0.060	A596947
Total Lead (Pb)	mg/L	<0.00020	<0.00020	A596935	<0.00020	A596931	<0.00020	0.00020	A596935
Total Lithium (Li)	mg/L	<0.020	<0.020	A596947	<0.020	A596933	<0.020	0.020	A596947
Total Magnesium (Mg)	mg/L	3.7	3.5	A596947	3.6	A596933	3.3	0.20	A596947
Total Manganese (Mn)	mg/L	0.046	0.044	A596947	0.048	A596933	0.040	0.0040	A596947
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	A596935	<0.00020	A596931	<0.00020	0.00020	A596935
Total Nickel (Ni)	mg/L	0.00070	0.00071	A596935	0.00080	A596931	0.00088	0.00050	A596935
Total Phosphorus (P)	mg/L	<0.10	<0.10	A596947	<0.10	A596933	<0.10	0.10	A596947
Total Potassium (K)	mg/L	1.7	1.7	A596947	1.7	A596933	1.6	0.30	A596947
Total Selenium (Se)	mg/L	<0.00020	<0.00020	A596935	<0.00020	A596931	<0.00020	0.00020	A596935
Total Silicon (Si)	mg/L	1.4	1.4	A596947	1.4	A596933	1.4	0.10	A596947
Total Silver (Ag)	mg/L	<0.00010	<0.00010	A596935	<0.00010	A596931	<0.00010	0.00010	A596935
Total Sodium (Na)	mg/L	2.0	1.9	A596947	1.9	A596933	2.0	0.50	A596947
Total Strontium (Sr)	mg/L	0.028	0.027	A596947	0.029	A596933	0.027	0.020	A596947
Total Sulphur (S)	mg/L	11	11	A596947	10	A596933	8.0	0.20	A596947
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	A596935	<0.00020	A596931	<0.00020	0.00020	A596935
Total Tin (Sn)	mg/L	<0.0010	<0.0010	A596935	<0.0010	A596931	<0.0010	0.0010	A596935
Total Titanium (Ti)	mg/L	0.0031	0.0022	A596935	0.0020	A596931	0.0022	0.0010	A596935
Total Uranium (U)	mg/L	<0.00010	<0.00010	A596935	<0.00010	A596931	<0.00010	0.00010	A596935
Total Vanadium (V)	mg/L	<0.0010	<0.0010	A596935	<0.0010	A596931	<0.0010	0.0010	A596935
Total Zinc (Zn)	mg/L	0.075	0.073	A596935	0.076	A596931	0.058	0.0030	A596935

RDL = Reportable Detection Limit

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AUD366	AUD367		AUD368		AUD369		
Sampling Date		2022/05/31 08:30	2022/05/31 08:15		2022/05/31 17:00		2022/05/31 16:00		
	UNITS	CL-5	CL-6	QC Batch	SW-100	QC Batch	SW-101	RDL	QC Batch
Elements									
Total Cadmium (Cd)	ug/L	0.19	0.15	A595043	0.84	A595043	0.20	0.020	A595043
Total Aluminum (Al)	mg/L	0.084	0.091	A596935	0.14	A596931	0.088	0.0030	A596935
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	A596935	<0.00060	A596931	<0.00060	0.00060	A596935
Total Arsenic (As)	mg/L	0.00047	0.00044	A596935	0.00037	A596931	0.00046	0.00020	A596935
Total Barium (Ba)	mg/L	<0.010	<0.010	A596947	<0.010	A596933	<0.010	0.010	A596947
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	A596935	<0.0010	A596931	<0.0010	0.0010	A596935
Total Boron (B)	mg/L	<0.020	<0.020	A596947	<0.020	A596933	<0.020	0.020	A596947
Total Calcium (Ca)	mg/L	13	12	A596947	27	A596933	15	0.30	A596947
Total Chromium (Cr)	mg/L	<0.0010	<0.0010	A596935	<0.0010	A596931	<0.0010	0.0010	A596935
Total Cobalt (Co)	mg/L	<0.00030	<0.00030	A596935	0.0014	A596931	0.00032	0.00030	A596935
Total Copper (Cu)	mg/L	0.013	0.011	A596935	0.040	A596931	0.014	0.0010	A596935
Total Iron (Fe)	mg/L	0.83	0.63	A596947	3.8	A596933	1.0	0.060	A596947
Total Lead (Pb)	mg/L	<0.00020	<0.00020	A596935	0.00024	A596931	<0.00020	0.00020	A596935
Total Lithium (Li)	mg/L	<0.020	<0.020	A596947	<0.020	A596933	<0.020	0.020	A596947
Total Magnesium (Mg)	mg/L	3.3	3.1	A596947	5.2	A596933	3.5	0.20	A596947
Total Manganese (Mn)	mg/L	0.040	0.032	A596947	0.14	A596933	0.045	0.0040	A596947
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	A596935	<0.00020	A596931	<0.00020	0.00020	A596935
Total Nickel (Ni)	mg/L	0.00082	0.00067	A596935	0.0016	A596931	0.00078	0.00050	A596935
Total Phosphorus (P)	mg/L	<0.10	<0.10	A596947	<0.10	A596933	<0.10	0.10	A596947
Total Potassium (K)	mg/L	1.6	1.5	A596947	2.5	A596933	1.7	0.30	A596947
Total Selenium (Se)	mg/L	<0.00020	<0.00020	A596935	<0.00020	A596931	<0.00020	0.00020	A596935
Total Silicon (Si)	mg/L	1.6	1.4	A596947	1.6	A596933	1.4	0.10	A596947
Total Silver (Ag)	mg/L	<0.00010	<0.00010	A596935	<0.00010	A596931	<0.00010	0.00010	A596935
Total Sodium (Na)	mg/L	1.9	1.9	A596947	2.1	A596933	2.0	0.50	A596947
Total Strontium (Sr)	mg/L	0.026	0.025	A596947	0.036	A596933	0.028	0.020	A596947
Total Sulphur (S)	mg/L	8.7	6.5	A596947	25	A596933	11	0.20	A596947
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	A596935	<0.00020	A596931	<0.00020	0.00020	A596935
Total Tin (Sn)	mg/L	<0.0010	<0.0010	A596935	<0.0010	A596931	<0.0010	0.0010	A596935
Total Titanium (Ti)	mg/L	0.0026	0.0030	A596935	0.0025	A596931	0.0025	0.0010	A596935
Total Uranium (U)	mg/L	<0.00010	<0.00010	A596935	<0.00010	A596931	<0.00010	0.00010	A596935
Total Vanadium (V)	mg/L	<0.0010	<0.0010	A596935	<0.0010	A596931	<0.0010	0.0010	A596935
Total Zinc (Zn)	mg/L	0.068	0.053	A596935	0.24	A596931	0.074	0.0030	A596935

RDL = Reportable Detection Limit

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AUD370		
Sampling Date		2022/05/31		
	UNITS	TRIP BLANK	RDL	QC Batch
Elements				
Total Cadmium (Cd)	ug/L	<0.020	0.020	A595043
Total Aluminum (Al)	mg/L	<0.0030	0.0030	A596935
Total Antimony (Sb)	mg/L	<0.00060	0.00060	A596935
Total Arsenic (As)	mg/L	<0.00020	0.00020	A596935
Total Barium (Ba)	mg/L	<0.010	0.010	A596947
Total Beryllium (Be)	mg/L	<0.0010	0.0010	A596935
Total Boron (B)	mg/L	<0.020	0.020	A596947
Total Calcium (Ca)	mg/L	<0.30	0.30	A596947
Total Chromium (Cr)	mg/L	<0.0010	0.0010	A596935
Total Cobalt (Co)	mg/L	<0.00030	0.00030	A596935
Total Copper (Cu)	mg/L	<0.0010	0.0010	A596935
Total Iron (Fe)	mg/L	<0.060	0.060	A596947
Total Lead (Pb)	mg/L	<0.00020	0.00020	A596935
Total Lithium (Li)	mg/L	<0.020	0.020	A596947
Total Magnesium (Mg)	mg/L	<0.20	0.20	A596947
Total Manganese (Mn)	mg/L	<0.0040	0.0040	A596947
Total Molybdenum (Mo)	mg/L	<0.00020	0.00020	A596935
Total Nickel (Ni)	mg/L	<0.00050	0.00050	A596935
Total Phosphorus (P)	mg/L	<0.10	0.10	A596947
Total Potassium (K)	mg/L	<0.30	0.30	A596947
Total Selenium (Se)	mg/L	<0.00020	0.00020	A596935
Total Silicon (Si)	mg/L	0.15	0.10	A596947
Total Silver (Ag)	mg/L	<0.00010	0.00010	A596935
Total Sodium (Na)	mg/L	<0.50	0.50	A596947
Total Strontium (Sr)	mg/L	<0.020	0.020	A596947
Total Sulphur (S)	mg/L	<0.20	0.20	A596947
Total Thallium (Tl)	mg/L	<0.00020	0.00020	A596935
Total Tin (Sn)	mg/L	<0.0010	0.0010	A596935
Total Titanium (Ti)	mg/L	<0.0010	0.0010	A596935
Total Uranium (U)	mg/L	<0.00010	0.00010	A596935
Total Vanadium (V)	mg/L	<0.0010	0.0010	A596935
Total Zinc (Zn)	mg/L	<0.0030	0.0030	A596935
RDL = Reportable Detection Limit				

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

Bureau Veritas Job #: C237573
Report Date: 2022/06/08

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AUD335			AUD335			AUD336	AUD337		
Sampling Date		2022/05/31 11:45			2022/05/31 11:45			2022/05/31 10:10	2022/05/31 10:00		
	UNITS	SC-1	RDL	QC Batch	SC-1 Lab-Dup	RDL	QC Batch	SB-1	SB-2	RDL	QC Batch
Calculated Parameters											
Hardness (CaCO3)	mg/L	26	0.50	A595955				91	86	0.50	A595955
Total Hardness (CaCO3)	mg/L	27.0	0.50	A595960				89.1	87.3	0.50	A595960
Misc. Inorganics											
pH	pH	7.08	N/A	A597575				6.73	6.86	N/A	A597575
Total Suspended Solids	mg/L	2.1	1.0	A596910				2.9	2.4	1.0	A596910
Anions											
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	A597571				<1.0	<1.0	1.0	A597571
Alkalinity (Total as CaCO3)	mg/L	21	1.0	A597571				10	12	1.0	A597571
Bicarbonate (HCO3)	mg/L	26	1.0	A597571				13	14	1.0	A597571
Carbonate (CO3)	mg/L	<1.0	1.0	A597571				<1.0	<1.0	1.0	A597571
Hydroxide (OH)	mg/L	<1.0	1.0	A597571				<1.0	<1.0	1.0	A597571
Physical Properties											
Turbidity	NTU	2.4	0.10	A596561	2.2	0.10	A596561	17 (1)	18 (1)	0.20	A596561

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AUD338			AUD339			AUD340		
Sampling Date		2022/05/31 10:15			2022/05/31 10:25			2022/05/31 11:00		
	UNITS	**CB-1**	**RDL**	**QC Batch**	**CB-2**	**RDL**	**QC Batch**	**NB-1**	**RDL**	**QC Batch**
Calculated Parameters										
Hardness (CaCO3)	mg/L	88	0.50	A595955	91	0.50	A595955	110	0.50	A595955
Total Hardness (CaCO3)	mg/L	91.9	0.50	A595960	95.7	0.50	A595957	112	0.50	A595960
Misc. Inorganics										
pH	pH	7.03	N/A	A597586	7.07	N/A	A597586	6.80	N/A	A597575
Total Suspended Solids	mg/L	3.9	1.0	A596910	3.6	0.97	A596910	3.0	1.0	A596910
Anions										
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	A597584	<1.0	1.0	A597584	<1.0	1.0	A597571
Alkalinity (Total as CaCO3)	mg/L	11	1.0	A597584	12	1.0	A597584	12	1.0	A597571
Bicarbonate (HCO3)	mg/L	13	1.0	A597584	14	1.0	A597584	14	1.0	A597571
Carbonate (CO3)	mg/L	<1.0	1.0	A597584	<1.0	1.0	A597584	<1.0	1.0	A597571
Hydroxide (OH)	mg/L	<1.0	1.0	A597584	<1.0	1.0	A597584	<1.0	1.0	A597571
Physical Properties										
Turbidity	NTU	16 (1)	0.20	A596561	18 (1)	0.20	A596561	19 (1)	0.20	A596561

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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Bureau Veritas Job #: C237573
Report Date: 2022/06/08

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AUD341			AUD341			AUD342		AUD343		
Sampling Date		2022/05/31 10:55			2022/05/31 10:55			2022/05/31 10:35		2022/05/31 10:45		
	UNITS	NB-2	RDL	QC Batch	NB-2 Lab-Dup	RDL	QC Batch	EB-1	RDL	EB-2	RDL	QC Batch
Calculated Parameters												
Hardness (CaCO3)	mg/L	100	0.50	A595955				120	0.50	130	0.50	A595758
Total Hardness (CaCO3)	mg/L	105	0.50	A595957				127	0.50	137	0.50	A595487
Misc. Inorganics												
pH	pH	7.11 (1)	N/A	A597586	7.85	N/A	A597586	6.88	N/A	6.82	N/A	A597586
Total Suspended Solids	mg/L	2.5	0.99	A596910				2.9	0.99	4.5	1.0	A596910
Anions												
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	A597584	<1.0	1.0	A597584	<1.0	1.0	<1.0	1.0	A597584
Alkalinity (Total as CaCO3)	mg/L	12	1.0	A597584	82 (2)	1.0	A597584	9.4	1.0	6.3	1.0	A597584
Bicarbonate (HCO3)	mg/L	15	1.0	A597584	100 (2)	1.0	A597584	12	1.0	7.7	1.0	A597584
Carbonate (CO3)	mg/L	<1.0	1.0	A597584	<1.0	1.0	A597584	<1.0	1.0	<1.0	1.0	A597584
Hydroxide (OH)	mg/L	<1.0	1.0	A597584	<1.0	1.0	A597584	<1.0	1.0	<1.0	1.0	A597584
Physical Properties												
Turbidity	NTU	17 (3)	0.20	A596561				21 (3)	0.20	23 (3)	0.20	A596561

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Duplicate exceeds acceptance criteria due to sample matrix. Reanalysis yields similar results.
(2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.
(3) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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Bureau Veritas Job #: C237573
Report Date: 2022/06/08

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AUD344	AUD361		AUD362	AUD363		AUD364		
Sampling Date		2022/05/31 10:10	2022/05/31 09:05		2022/05/31 09:15	2022/05/31 09:00		2022/05/31 09:30		
	UNITS	CAMP LAKE DISCHARGE	CL-3	RDL	CL-7	CL-8	QC Batch	CL-2	RDL	QC Batch
Calculated Parameters										
Hardness (CaCO3)	mg/L	110	85	0.50	49	48	A595758	52	0.50	A595758
Total Hardness (CaCO3)	mg/L	115	93.8	0.50	54.4	51.5	A595487	54.9	0.50	A595487
Misc. Inorganics										
pH	pH	7.01	7.16	N/A	7.27	7.35	A597586	7.05	N/A	A597575
Total Suspended Solids	mg/L	2.5	2.0	1.0	<1.0	<1.0	A596910	1.2	1.0	A596910
Anions										
Alkalinity (PP as CaCO3)	mg/L	<1.0	<1.0	1.0	<1.0	<1.0	A597584	<1.0	1.0	A597571
Alkalinity (Total as CaCO3)	mg/L	13	15	1.0	23	20	A597584	22	1.0	A597571
Bicarbonate (HCO3)	mg/L	15	19	1.0	28	25	A597584	26	1.0	A597571
Carbonate (CO3)	mg/L	<1.0	<1.0	1.0	<1.0	<1.0	A597584	<1.0	1.0	A597571
Hydroxide (OH)	mg/L	<1.0	<1.0	1.0	<1.0	<1.0	A597584	<1.0	1.0	A597571
Physical Properties										
Turbidity	NTU	19 (1)	13 (1)	0.20	4.4	4.7	A596561	4.7	0.10	A596561

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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Bureau Veritas Job #: C237573
Report Date: 2022/06/08

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AUD365	AUD366		AUD367		AUD368			AUD369		
Sampling Date		2022/05/31 08:45	2022/05/31 08:30		2022/05/31 08:15		2022/05/31 17:00			2022/05/31 16:00		
	UNITS	CL-4	CL-5	QC Batch	CL-6	RDL	SW-100	RDL	QC Batch	SW-101	RDL	QC Batch
Calculated Parameters												
Hardness (CaCO3)	mg/L	42	44	A595758	44	0.50	93	0.50	A595758	59	0.50	A595758
Total Hardness (CaCO3)	mg/L	46.3	47.0	A595487	41.5	0.50	89.1	0.50	A595487	52.2	0.50	A595487
Misc. Inorganics												
pH	pH	7.34	7.35	A597586	7.06	N/A	6.86	N/A	A597575	7.09	N/A	A597575
Total Suspended Solids	mg/L	<1.0	1.9	A596910	1.2	1.0	2.8	1.0	A596910	1.1	1.0	A597907
Anions												
Alkalinity (PP as CaCO3)	mg/L	<1.0	<1.0	A597584	<1.0	1.0	<1.0	1.0	A597571	<1.0	1.0	A597571
Alkalinity (Total as CaCO3)	mg/L	23	22	A597584	21	1.0	10	1.0	A597571	22	1.0	A597571
Bicarbonate (HCO3)	mg/L	28	27	A597584	25	1.0	13	1.0	A597571	27	1.0	A597571
Carbonate (CO3)	mg/L	<1.0	<1.0	A597584	<1.0	1.0	<1.0	1.0	A597571	<1.0	1.0	A597571
Hydroxide (OH)	mg/L	<1.0	<1.0	A597584	<1.0	1.0	<1.0	1.0	A597571	<1.0	1.0	A597571
Physical Properties												
Turbidity	NTU	4.8	4.3	A596561	3.8	0.10	16 (1)	0.20	A596561	4.5	0.10	A596561

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AUD370		
Sampling Date		2022/05/31		
	UNITS	TRIP BLANK	RDL	QC Batch
Calculated Parameters				
Hardness (CaCO3)	mg/L	<0.50	0.50	A595758
Total Hardness (CaCO3)	mg/L	<0.50	0.50	A595487
Misc. Inorganics				
pH	pH	5.46	N/A	A597586
Total Suspended Solids	mg/L	<1.0	1.0	A597907
Anions				
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	A597584
Alkalinity (Total as CaCO3)	mg/L	<1.0	1.0	A597584
Bicarbonate (HCO3)	mg/L	<1.0	1.0	A597584
Carbonate (CO3)	mg/L	<1.0	1.0	A597584
Hydroxide (OH)	mg/L	<1.0	1.0	A597584
Physical Properties				
Turbidity	NTU	<0.10	0.10	A596561

RDL = Reportable Detection Limit
N/A = Not Applicable

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	3.0°C
Package 2	2.1°C
Package 3	3.8°C

RESULTS OF CHEMICAL ANALYSES OF WATER Comments

Sample AUD341 [NB-2] Alkalinity @25C (pp, total), CO3,HCO3,OH: Duplicate exceeds acceptance criteria due to sample matrix. Reanalysis yields similar results.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A596561	Turbidity	2022/06/03			102	80 - 120	<0.10	NTU	7.0	20
A596910	Total Suspended Solids	2022/06/03	81	80 - 120	86	80 - 120	<1.0	mg/L	12	20
A596931	Total Aluminum (Al)	2022/06/04	161 (1)	80 - 120	100	80 - 120	<0.0030	mg/L	0.53	20
A596931	Total Antimony (Sb)	2022/06/04	107	80 - 120	105	80 - 120	<0.00060	mg/L	NC	20
A596931	Total Arsenic (As)	2022/06/04	98	80 - 120	96	80 - 120	<0.00020	mg/L	NC	20
A596931	Total Beryllium (Be)	2022/06/04	100	80 - 120	93	80 - 120	<0.0010	mg/L	NC	20
A596931	Total Chromium (Cr)	2022/06/04	100	80 - 120	99	80 - 120	<0.0010	mg/L	NC	20
A596931	Total Cobalt (Co)	2022/06/04	98	80 - 120	100	80 - 120	<0.00030	mg/L	NC	20
A596931	Total Copper (Cu)	2022/06/04	97	80 - 120	101	80 - 120	<0.0010	mg/L	NC	20
A596931	Total Lead (Pb)	2022/06/04	103	80 - 120	105	80 - 120	<0.00020	mg/L	3.9	20
A596931	Total Molybdenum (Mo)	2022/06/04	109	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
A596931	Total Nickel (Ni)	2022/06/04	97	80 - 120	99	80 - 120	<0.00050	mg/L	2.2	20
A596931	Total Selenium (Se)	2022/06/04	60 (1)	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
A596931	Total Silver (Ag)	2022/06/04	104	80 - 120	104	80 - 120	<0.00010	mg/L	NC	20
A596931	Total Thallium (Tl)	2022/06/04	101	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
A596931	Total Tin (Sn)	2022/06/04	110	80 - 120	105	80 - 120	<0.0010	mg/L	8.7	20
A596931	Total Titanium (Ti)	2022/06/04	102	80 - 120	100	80 - 120	<0.0010	mg/L	17	20
A596931	Total Uranium (U)	2022/06/04	106	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
A596931	Total Vanadium (V)	2022/06/04	103	80 - 120	100	80 - 120	<0.0010	mg/L	7.9	20
A596931	Total Zinc (Zn)	2022/06/04	99	80 - 120	100	80 - 120	<0.0030	mg/L	2.7	20
A596933	Total Barium (Ba)	2022/06/07	101	80 - 120	100	80 - 120	<0.010	mg/L	2.0	20
A596933	Total Boron (B)	2022/06/07	101	80 - 120	99	80 - 120	<0.020	mg/L	2.1	20
A596933	Total Calcium (Ca)	2022/06/07	NC	80 - 120	99	80 - 120	<0.30	mg/L	1.7	20
A596933	Total Iron (Fe)	2022/06/07	NC	80 - 120	103	80 - 120	<0.060	mg/L	6.0	20
A596933	Total Lithium (Li)	2022/06/07	102	80 - 120	100	80 - 120	<0.020	mg/L	0.77	20
A596933	Total Magnesium (Mg)	2022/06/07	NC	80 - 120	102	80 - 120	<0.20	mg/L	1.6	20
A596933	Total Manganese (Mn)	2022/06/07	103	80 - 120	101	80 - 120	<0.0040	mg/L	0.97	20
A596933	Total Phosphorus (P)	2022/06/07	97	80 - 120	95	80 - 120	<0.10	mg/L	1.6	20
A596933	Total Potassium (K)	2022/06/07	107	80 - 120	103	80 - 120	<0.30	mg/L	1.2	20
A596933	Total Silicon (Si)	2022/06/07	99	80 - 120	97	80 - 120	<0.10	mg/L	0.96	20
A596933	Total Sodium (Na)	2022/06/07	108	80 - 120	100	80 - 120	<0.50	mg/L	1.2	20
A596933	Total Strontium (Sr)	2022/06/07	100	80 - 120	98	80 - 120	<0.020	mg/L	1.6	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A596933	Total Sulphur (S)	2022/06/07	NC	80 - 120	98	80 - 120	<0.20	mg/L	1.9	20
A596935	Total Aluminum (Al)	2022/06/08	98	80 - 120	99	80 - 120	<0.0030	mg/L	1.9	20
A596935	Total Antimony (Sb)	2022/06/08	104	80 - 120	104	80 - 120	<0.00060	mg/L	NC	20
A596935	Total Arsenic (As)	2022/06/08	101	80 - 120	99	80 - 120	<0.00020	mg/L	1.4	20
A596935	Total Beryllium (Be)	2022/06/08	98	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
A596935	Total Chromium (Cr)	2022/06/08	101	80 - 120	99	80 - 120	<0.0010	mg/L	NC	20
A596935	Total Cobalt (Co)	2022/06/08	101	80 - 120	100	80 - 120	<0.00030	mg/L	NC	20
A596935	Total Copper (Cu)	2022/06/08	101	80 - 120	100	80 - 120	<0.0010	mg/L	3.4	20
A596935	Total Lead (Pb)	2022/06/08	99	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
A596935	Total Molybdenum (Mo)	2022/06/08	100	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20
A596935	Total Nickel (Ni)	2022/06/08	100	80 - 120	98	80 - 120	<0.00050	mg/L	11	20
A596935	Total Selenium (Se)	2022/06/08	104	80 - 120	105	80 - 120	<0.00020	mg/L	NC	20
A596935	Total Silver (Ag)	2022/06/08	102	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
A596935	Total Thallium (Tl)	2022/06/08	99	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
A596935	Total Tin (Sn)	2022/06/08	100	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20
A596935	Total Titanium (Ti)	2022/06/08	99	80 - 120	96	80 - 120	<0.0010	mg/L	NC	20
A596935	Total Uranium (U)	2022/06/08	95	80 - 120	96	80 - 120	<0.00010	mg/L	NC	20
A596935	Total Vanadium (V)	2022/06/08	101	80 - 120	99	80 - 120	<0.0010	mg/L	NC	20
A596935	Total Zinc (Zn)	2022/06/08	101	80 - 120	99	80 - 120	<0.0030	mg/L	2.8	20
A596947	Total Barium (Ba)	2022/06/07	104	80 - 120	102	80 - 120	<0.010	mg/L	NC	20
A596947	Total Boron (B)	2022/06/07	104	80 - 120	101	80 - 120	<0.020	mg/L	NC	20
A596947	Total Calcium (Ca)	2022/06/07	99	80 - 120	100	80 - 120	<0.30	mg/L	3.0	20
A596947	Total Iron (Fe)	2022/06/07	111	80 - 120	105	80 - 120	<0.060	mg/L	0.52	20
A596947	Total Lithium (Li)	2022/06/07	97	80 - 120	97	80 - 120	<0.020	mg/L	11	20
A596947	Total Magnesium (Mg)	2022/06/07	107	80 - 120	108	80 - 120	<0.20	mg/L	3.1	20
A596947	Total Manganese (Mn)	2022/06/07	105	80 - 120	102	80 - 120	<0.0040	mg/L	1.3	20
A596947	Total Phosphorus (P)	2022/06/07	110	80 - 120	107	80 - 120	<0.10	mg/L	NC	20
A596947	Total Potassium (K)	2022/06/07	101	80 - 120	101	80 - 120	<0.30	mg/L	4.1	20
A596947	Total Silicon (Si)	2022/06/07	99	80 - 120	97	80 - 120	<0.10	mg/L	0.38	20
A596947	Total Sodium (Na)	2022/06/07	99	80 - 120	100	80 - 120	<0.50	mg/L	0.88	20
A596947	Total Strontium (Sr)	2022/06/07	104	80 - 120	103	80 - 120	<0.020	mg/L	NC	20
A596947	Total Sulphur (S)	2022/06/07	111	80 - 120	107	80 - 120	<0.20	mg/L	0.94	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A597571	Alkalinity (PP as CaCO3)	2022/06/06					<1.0	mg/L	NC	20
A597571	Alkalinity (Total as CaCO3)	2022/06/06			93	80 - 120	<1.0	mg/L	NC	20
A597571	Bicarbonate (HCO3)	2022/06/06					<1.0	mg/L	NC	20
A597571	Carbonate (CO3)	2022/06/06					<1.0	mg/L	NC	20
A597571	Hydroxide (OH)	2022/06/06					<1.0	mg/L	NC	20
A597575	pH	2022/06/06			100	97 - 103			0.51	N/A
A597584	Alkalinity (PP as CaCO3)	2022/06/04					<1.0	mg/L	NC	20
A597584	Alkalinity (Total as CaCO3)	2022/06/04			94	80 - 120	<1.0	mg/L	149 (1)	20
A597584	Bicarbonate (HCO3)	2022/06/04					<1.0	mg/L	149 (1)	20
A597584	Carbonate (CO3)	2022/06/04					<1.0	mg/L	NC	20
A597584	Hydroxide (OH)	2022/06/04					<1.0	mg/L	NC	20
A597586	pH	2022/06/04			101	97 - 103			9.9	N/A
A597878	Dissolved Aluminum (Al)	2022/06/05	104	80 - 120	114	80 - 120	<0.0030	mg/L	NC	20
A597878	Dissolved Antimony (Sb)	2022/06/05	111	80 - 120	110	80 - 120	<0.00060	mg/L	NC	20
A597878	Dissolved Arsenic (As)	2022/06/05	92	80 - 120	89	80 - 120	<0.00020	mg/L	1.7	20
A597878	Dissolved Beryllium (Be)	2022/06/05	98	80 - 120	99	80 - 120	<0.0010	mg/L	NC	20
A597878	Dissolved Chromium (Cr)	2022/06/05	91	80 - 120	91	80 - 120	<0.0010	mg/L	NC	20
A597878	Dissolved Cobalt (Co)	2022/06/05	90	80 - 120	90	80 - 120	<0.00030	mg/L	NC	20
A597878	Dissolved Copper (Cu)	2022/06/05	87	80 - 120	88	80 - 120	<0.0010	mg/L	NC	20
A597878	Dissolved Lead (Pb)	2022/06/05	94	80 - 120	95	80 - 120	<0.00020	mg/L	NC	20
A597878	Dissolved Molybdenum (Mo)	2022/06/05	104	80 - 120	98	80 - 120	<0.00020	mg/L	5.4	20
A597878	Dissolved Nickel (Ni)	2022/06/05	87	80 - 120	87	80 - 120	<0.00050	mg/L	NC	20
A597878	Dissolved Selenium (Se)	2022/06/05	92	80 - 120	94	80 - 120	<0.00020	mg/L	NC	20
A597878	Dissolved Silver (Ag)	2022/06/05	94	80 - 120	95	80 - 120	<0.00010	mg/L	NC	20
A597878	Dissolved Thallium (Tl)	2022/06/05	94	80 - 120	95	80 - 120	<0.00020	mg/L	NC	20
A597878	Dissolved Tin (Sn)	2022/06/05	107	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20
A597878	Dissolved Titanium (Ti)	2022/06/05	94	80 - 120	92	80 - 120	<0.0010	mg/L	NC	20
A597878	Dissolved Uranium (U)	2022/06/05	97	80 - 120	95	80 - 120	<0.00010	mg/L	0.52	20
A597878	Dissolved Vanadium (V)	2022/06/05	95	80 - 120	95	80 - 120	<0.0010	mg/L	12	20
A597878	Dissolved Zinc (Zn)	2022/06/05	96	80 - 120	92	80 - 120	<0.0030	mg/L	NC	20
A597880	Dissolved Aluminum (Al)	2022/06/05	NC	80 - 120	106	80 - 120	<0.0030	mg/L	19	20
A597880	Dissolved Antimony (Sb)	2022/06/05	111	80 - 120	109	80 - 120	<0.00060	mg/L	NC	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A597880	Dissolved Arsenic (As)	2022/06/05	89	80 - 120	88	80 - 120	<0.00020	mg/L	3.7	20
A597880	Dissolved Beryllium (Be)	2022/06/05	89	80 - 120	93	80 - 120	<0.0010	mg/L	NC	20
A597880	Dissolved Chromium (Cr)	2022/06/05	89	80 - 120	87	80 - 120	<0.0010	mg/L	NC	20
A597880	Dissolved Cobalt (Co)	2022/06/05	89	80 - 120	88	80 - 120	<0.00030	mg/L	18	20
A597880	Dissolved Copper (Cu)	2022/06/05	83	80 - 120	82	80 - 120	<0.0010	mg/L	NC	20
A597880	Dissolved Lead (Pb)	2022/06/05	95	80 - 120	94	80 - 120	<0.00020	mg/L	NC	20
A597880	Dissolved Molybdenum (Mo)	2022/06/05	97	80 - 120	98	80 - 120	<0.00020	mg/L	0.42	20
A597880	Dissolved Nickel (Ni)	2022/06/05	85	80 - 120	84	80 - 120	<0.00050	mg/L	15	20
A597880	Dissolved Selenium (Se)	2022/06/05	90	80 - 120	90	80 - 120	<0.00020	mg/L	NC	20
A597880	Dissolved Silver (Ag)	2022/06/05	91	80 - 120	92	80 - 120	<0.00010	mg/L	NC	20
A597880	Dissolved Thallium (Tl)	2022/06/05	95	80 - 120	94	80 - 120	<0.00020	mg/L	NC	20
A597880	Dissolved Tin (Sn)	2022/06/05	103	80 - 120	103	80 - 120	<0.0010	mg/L	NC	20
A597880	Dissolved Titanium (Ti)	2022/06/05	92	80 - 120	90	80 - 120	<0.0010	mg/L	15	20
A597880	Dissolved Uranium (U)	2022/06/05	92	80 - 120	91	80 - 120	<0.00010	mg/L	1.1	20
A597880	Dissolved Vanadium (V)	2022/06/05	91	80 - 120	92	80 - 120	<0.0010	mg/L	2.1	20
A597880	Dissolved Zinc (Zn)	2022/06/05	93	80 - 120	91	80 - 120	<0.0030	mg/L	NC	20
A597907	Total Suspended Solids	2022/06/04	89	80 - 120	92	80 - 120	<1.0	mg/L	11	20
A598228	Dissolved Barium (Ba)	2022/06/04	99	80 - 120	96	80 - 120	<0.010	mg/L		
A598228	Dissolved Boron (B)	2022/06/04	97	80 - 120	95	80 - 120	<0.020	mg/L		
A598228	Dissolved Calcium (Ca)	2022/06/04	112	80 - 120	102	80 - 120	<0.30	mg/L	5.1	20
A598228	Dissolved Iron (Fe)	2022/06/04	113	80 - 120	106	80 - 120	<0.060	mg/L	NC	20
A598228	Dissolved Lithium (Li)	2022/06/04	105	80 - 120	100	80 - 120	<0.020	mg/L		
A598228	Dissolved Magnesium (Mg)	2022/06/04	117	80 - 120	108	80 - 120	<0.20	mg/L	12	20
A598228	Dissolved Manganese (Mn)	2022/06/04	112	80 - 120	107	80 - 120	<0.0040	mg/L	6.8	20
A598228	Dissolved Phosphorus (P)	2022/06/04	113	80 - 120	106	80 - 120	<0.10	mg/L		
A598228	Dissolved Potassium (K)	2022/06/04	108	80 - 120	101	80 - 120	<0.30	mg/L	2.9	20
A598228	Dissolved Silicon (Si)	2022/06/04	105	80 - 120	101	80 - 120	<0.10	mg/L		
A598228	Dissolved Sodium (Na)	2022/06/04	NC	80 - 120	96	80 - 120	<0.50	mg/L	3.1	20
A598228	Dissolved Strontium (Sr)	2022/06/04	96	80 - 120	93	80 - 120	<0.020	mg/L		
A598228	Dissolved Sulphur (S)	2022/06/04	113	80 - 120	105	80 - 120	<0.20	mg/L		
A598230	Dissolved Barium (Ba)	2022/06/05	100	80 - 120	103	80 - 120	<0.010	mg/L		
A598230	Dissolved Boron (B)	2022/06/05	99	80 - 120	101	80 - 120	<0.020	mg/L		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A598230	Dissolved Calcium (Ca)	2022/06/05	92	80 - 120	95	80 - 120	<0.30	mg/L	1.5	20
A598230	Dissolved Iron (Fe)	2022/06/05	96	80 - 120	95	80 - 120	<0.060	mg/L		
A598230	Dissolved Lithium (Li)	2022/06/05	92	80 - 120	94	80 - 120	<0.020	mg/L		
A598230	Dissolved Magnesium (Mg)	2022/06/05	91	80 - 120	93	80 - 120	<0.20	mg/L	1.6	20
A598230	Dissolved Manganese (Mn)	2022/06/05	95	80 - 120	95	80 - 120	<0.0040	mg/L		
A598230	Dissolved Phosphorus (P)	2022/06/05	90	80 - 120	95	80 - 120	<0.10	mg/L		
A598230	Dissolved Potassium (K)	2022/06/05	93	80 - 120	94	80 - 120	<0.30	mg/L		
A598230	Dissolved Silicon (Si)	2022/06/05	83	80 - 120	92	80 - 120	<0.10	mg/L		
A598230	Dissolved Sodium (Na)	2022/06/05	NC	80 - 120	93	80 - 120	<0.50	mg/L	1.4	20
A598230	Dissolved Strontium (Sr)	2022/06/05	99	80 - 120	101	80 - 120	<0.020	mg/L		
A598230	Dissolved Sulphur (S)	2022/06/05	95	80 - 120	93	80 - 120	<0.20	mg/L		
A598235	Dissolved Barium (Ba)	2022/06/05	102	80 - 120	102	80 - 120	<0.010	mg/L		
A598235	Dissolved Boron (B)	2022/06/05	103	80 - 120	102	80 - 120	<0.020	mg/L		
A598235	Dissolved Calcium (Ca)	2022/06/05	90	80 - 120	94	80 - 120	<0.30	mg/L		
A598235	Dissolved Iron (Fe)	2022/06/05	97	80 - 120	97	80 - 120	<0.060	mg/L		
A598235	Dissolved Lithium (Li)	2022/06/05	94	80 - 120	92	80 - 120	<0.020	mg/L		
A598235	Dissolved Magnesium (Mg)	2022/06/05	89	80 - 120	93	80 - 120	<0.20	mg/L		
A598235	Dissolved Manganese (Mn)	2022/06/05	96	80 - 120	96	80 - 120	<0.0040	mg/L		
A598235	Dissolved Phosphorus (P)	2022/06/05	97	80 - 120	96	80 - 120	<0.10	mg/L		
A598235	Dissolved Potassium (K)	2022/06/05	91	80 - 120	93	80 - 120	<0.30	mg/L		
A598235	Dissolved Silicon (Si)	2022/06/05	NC	80 - 120	92	80 - 120	<0.10	mg/L		
A598235	Dissolved Sodium (Na)	2022/06/05	94	80 - 120	92	80 - 120	<0.50	mg/L	0.13	20
A598235	Dissolved Strontium (Sr)	2022/06/05	99	80 - 120	100	80 - 120	<0.020	mg/L		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A598235	Dissolved Sulphur (S)	2022/06/05	99	80 - 120	94	80 - 120	<0.20	mg/L		

N/A = Not Applicable

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

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

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

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

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

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

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

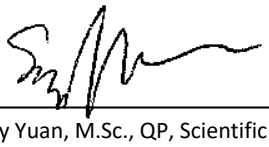
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VALIDATION SIGNATURE PAGE

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



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



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



Sze Yeung Fock, B.Sc., Scientific Specialist



Automated Statchk

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvna.com

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#7500 KGS Group	Company Name:	KGS GROUP.	Quotation #:	C20090	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Ganga Atmuri/Ed Collins	P.O. #:		C237573	663693
Address:	3rd Floor 865 Waverly St Winnipeg MB R3T 5T4	Address:	865 WAVERLEY ST – 3RD FLOOR WPG. MB R3T 5P4	Project:	21-1357-005	COC #:	Project Manager:
Tel:	(204) 896-1209 Fax:	Tel:	(204) 896-1209 Fax:	Project Name:		C#663693-03-01	Janelle Kochan
Email:	payables@kgsgroup.com	Email:	gatmuri@kgsgroup.com,ecollins@kgsgroup.com	Site #:	OAM - Sherridon Mine Site		
				Sampled By:	AL/SLD.		

Regulatory Criteria:
- [ ] ATI
- [ ] CCME
- [x] Other MWQSOG.

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: [x]
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission)
Date Required: _____ [ ]
Rush Confirmation Number: _____ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	pH @25°C	Alkalinity @25C (pp, total), CO3,HCO3,OH	Total Suspended Solids (NFR)	Turbidity	Regulated Metals (CCME/AT1) - Total	Reg. Metals (CCME/AT1) – Diss. Lab Filt.	Hardness	Hardness Total (calculated as CaCO3)			# of Bottles	Comments
1		SC-1	31-MAY-2022	11:45	SW	N	X	X	X	X	X	X	X	X			4	
2		SB-1		10:10		N	X	X	X	X	X	X	X	X			4	
3		SB-2		10:00		N	X	X	X	X	X	X	X	X			4	
4		CB-1		10:15		N	X	X	X	X	X	X	X	X			4	
5		CB-2		10:25		N	X	X	X	X	X	X	X	X			4	
6		NB-1		11:00		N	X	X	X	X	X	X	X	X			4	
7		NB-2		10:55		N	X	X	X	X	X	X	X	X			4	
8		EB-1		10:35		N	X	X	X	X	X	X	X	X			4	
9		EB-2		10:45		N	X	X	X	X	X	X	X	X			4	
10		CAMP LAKE DISCHARGE		11:10		N	X	X	X	X	X	X	X	X			4	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Ainsleigh Loria ALoria	22/06/01	11:10	Alana Amanda Bryar	2022/06/01	1120		[ ]	ACTR	[ ] Yes [ ] No
			MWQSOG Power	2022/06/02	8:50				

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.
** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

White: Bureau Veritas Yellow: Client

ILE - YES

see ACTR

Bureau Veritas Canada (2019) Inc.

Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvna.com

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#7500 KGS Group	Company Name:	KGS GROUP.	Quotation #:	C20090	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Ganga Atmuri/Ed Collins	P.O. #:		C237575	663693
Address:	3rd Floor 865 Waverly St Winnipeg MB R3T 5T4	Address:	3RD FLOOR - 865 WAVERLEY ST. WPG. MB R3T 5P4	Project:	21-1357-005	COC #:	Project Manager:
Tel:	(204) 896-1209 Fax:	Tel:	(204) 896-1209 Fax:	Project Name:		C#663693-02-01	Janelle Kochan
Email:	payables@kgsgroup.com	Email:	gatmuri@kgsgroup.com,ecollins@kgsgroup.com	Site #:	OAM - Sherridon Mine Site		
				Sampled By:	AL/SLD.		

Regulatory Criteria:
- [ ] ATI
- [ ] CCME
- [X] Other MWQSOG.

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: [X]
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission) [ ]
Date Required:
Rush Confirmation Number: *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	pH @25°C	Alkalinity @25C (pp, total), CO3,HCO3,OH	Total Suspended Solids (NFR)	Turbidity	Regulated Metals (CCME/AT1) - Total	Reg. Metals (CCME/AT1) – Diss. Lab Filt.	Hardness	Hardness Total (calculated as CaCO3)			# of Bottles	Comments
1		CL-3	31-MAY-2022	09:05	SW	N	X	X	X	X	X	X	X	X			4	
2		CL-7		09:15		N	X	X	X	X	X	X	X	X			4	
3		CL-8		09:00		N	X	X	X	X	X	X	X	X			4	
4		CL-2		09:30		N	X	X	X	X	X	X	X	X			4	
5		CL-4		08:45		N	X	X	X	X	X	X	X	X			4	
6		CL-5		08:30		N	X	X	X	X	X	X	X	X			4	
7		CL-6		08:15		N	X	X	X	X	X	X	X	X			4	
8		SW-100		17:00		N	X	X	X	X	X	X	X	X			4	
9		SW-101		16:00		N	X	X	X	X	X	X	X	X			4	
10		TRIP BLANK				N	X	X	X	X	X	X	X	X			4	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only		
							Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Kinsleigh Lorica	22/06/01	11:10	Amanda Brar	2022/06/01	11:20		[ ]	ACTR	[ ] Yes [ ] No
			Melissa Perez	2022/06/01	8:50				

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.
** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

White: Bureau Veritas Yellow: Client

ICE - YES
see ACTR

Bureau Veritas Canada (2019) Inc.

Your Project #: 21-1357-005
Site#: OAM - Sherridon Mine Site
Your C.O.C. #: 665919-03-01, 665919-02-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/06/24
Report #: R3191364
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C242124
Received: 2022/06/15, 11:55

Sample Matrix: Water
Samples Received: 20

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH (1)	20	N/A	2022/06/18	AB SOP-00005	SM 23 2320 B m
Cadmium - low level CCME - Dissolved (1)	11	N/A	2022/06/20		Auto Calc
Cadmium - low level CCME - Dissolved (1)	9	N/A	2022/06/21		Auto Calc
Cadmium - low level CCME (Total) (1)	1	N/A	2022/06/21		Auto Calc
Cadmium - low level CCME (Total) (1)	7	N/A	2022/06/22		Auto Calc
Cadmium - low level CCME (Total) (1)	12	N/A	2022/06/24		Auto Calc
Hardness (1)	16	N/A	2022/06/20		Auto Calc
Hardness (1)	4	N/A	2022/06/21		Auto Calc
Hardness Total (calculated as CaCO3) (1, 2)	7	N/A	2022/06/21	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3) (1, 2)	13	N/A	2022/06/22	BBY WI-00033	Auto Calc
Elements by ICP-Dissolved-Lab Filtered (1, 3)	1	N/A	2022/06/18	AB SOP-00042	EPA 6010d R5 m
Elements by ICP-Dissolved-Lab Filtered (1, 3)	15	N/A	2022/06/19	AB SOP-00042	EPA 6010d R5 m
Elements by ICP-Dissolved-Lab Filtered (1, 3)	4	N/A	2022/06/20	AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Total (1)	3	2022/06/20	2022/06/21	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Total (1)	12	2022/06/20	2022/06/22	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Total (1)	5	2022/06/21	2022/06/21	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Elements by ICPMS-Dissolved-Lab Filtered (1, 4)	11	N/A	2022/06/18	AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS-Dissolved-Lab Filtered (1, 4)	1	N/A	2022/06/20	AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS-Dissolved-Lab Filtered (1, 4)	8	N/A	2022/06/21	AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total (1)	2	2022/06/20	2022/06/21	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total (1)	1	2022/06/20	2022/06/22	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total (1)	8	2022/06/20	2022/06/23	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total (1)	4	2022/06/20	2022/06/24	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total (1)	1	2022/06/21	2022/06/21	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m

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Your Project #: 21-1357-005
Site#: OAM - Sherridon Mine Site
Your C.O.C. #: 665919-03-01, 665919-02-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/06/24
Report #: R3191364
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C242124
Received: 2022/06/15, 11:55

Sample Matrix: Water
Samples Received: 20

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Elements by ICPMS - Total (1)	4	2022/06/21	2022/06/22	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
pH @25°C (1, 5)	20	N/A	2022/06/18	AB SOP-00005	SM 23 4500-H+B m
Total Suspended Solids (NFR) (1)	20	2022/06/17	2022/06/17	AB SOP-00061	SM 23 2540 D m
Turbidity (1)	20	N/A	2022/06/17	CAL SOP-00081	SM 23 2130 B m

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8
(2) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(3) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(4) Samples were filtered and preserved at the lab. Values may not reflect concentrations at the time of sampling. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(5) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are

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Your Project #: 21-1357-005
Site#: OAM - Sherridon Mine Site
Your C.O.C. #: 665919-03-01, 665919-02-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/06/24
Report #: R3191364
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C242124

Received: 2022/06/15, 11:55

reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Janelle Kochan, B.Sc., Key Account Specialist
Email: Janelle.KOCHAN@bureauveritas.com
Phone# (204)259-0231

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For Service Group specific validation please refer to the Validation Signature Page.

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AVF059		AVF060		AVF061		AVF062		
Sampling Date		2022/06/14 11:05		2022/06/14 11:05		2022/06/14 09:45		2022/06/14 09:35		
COC Number		665919-03-01		665919-03-01		665919-03-01		665919-03-01		
	UNITS	SC-1	QC Batch	TRIP BLANK	QC Batch	SB-1	QC Batch	SB-2	RDL	QC Batch
Elements										
Dissolved Cadmium (Cd)	ug/L	0.14	A612833	<0.020	A612833	0.73	A612833	0.68	0.020	A612833
Lab Filtered Elements										
Dissolved Aluminum (Al)	mg/L	0.033	A614514	<0.0030	A614514	0.058	A614514	0.052	0.0030	A614514
Dissolved Antimony (Sb)	mg/L	<0.00060	A614514	<0.00060	A614514	<0.00060	A614514	<0.00060	0.00060	A614514
Dissolved Arsenic (As)	mg/L	0.00050	A614514	<0.00020	A614514	0.00021	A614514	0.00032	0.00020	A614514
Dissolved Barium (Ba)	mg/L	<0.010	A616578	<0.010	A615168	0.011	A616578	<0.010	0.010	A615168
Dissolved Beryllium (Be)	mg/L	<0.0010	A614514	<0.0010	A614514	<0.0010	A614514	<0.0010	0.0010	A614514
Dissolved Boron (B)	mg/L	<0.020	A616578	<0.020	A615168	<0.020	A616578	<0.020	0.020	A615168
Dissolved Calcium (Ca)	mg/L	7.6	A616578	<0.30	A615168	32	A616578	30	0.30	A615168
Dissolved Chromium (Cr)	mg/L	<0.0010	A614514	<0.0010	A614514	<0.0010	A614514	<0.0010	0.0010	A614514
Dissolved Cobalt (Co)	mg/L	<0.00030	A614514	<0.00030	A614514	0.00080	A614514	0.00078	0.00030	A614514
Dissolved Copper (Cu)	mg/L	0.0082	A614514	<0.0010	A614514	0.028	A614514	0.027	0.0010	A614514
Dissolved Iron (Fe)	mg/L	0.18	A616578	<0.060	A615168	3.0	A616578	3.0	0.060	A615168
Dissolved Lead (Pb)	mg/L	<0.00020	A614514	<0.00020	A614514	<0.00020	A614514	<0.00020	0.00020	A614514
Dissolved Lithium (Li)	mg/L	<0.020	A616578	<0.020	A615168	<0.020	A616578	<0.020	0.020	A615168
Dissolved Magnesium (Mg)	mg/L	2.5	A616578	<0.20	A615168	6.2	A616578	5.7	0.20	A615168
Dissolved Manganese (Mn)	mg/L	0.0087	A616578	<0.0040	A615168	0.12	A616578	0.12	0.0040	A615168
Dissolved Molybdenum (Mo)	mg/L	<0.00020	A614514	<0.00020	A614514	<0.00020	A614514	<0.00020	0.00020	A614514
Dissolved Nickel (Ni)	mg/L	<0.00050	A614514	<0.00050	A614514	0.0017	A614514	0.0016	0.00050	A614514
Dissolved Phosphorus (P)	mg/L	<0.10	A616578	<0.10	A615168	<0.10	A616578	<0.10	0.10	A615168
Dissolved Potassium (K)	mg/L	1.3	A616578	<0.30	A615168	2.7	A616578	2.7	0.30	A615168
Dissolved Selenium (Se)	mg/L	<0.00020	A614514	<0.00020	A614514	<0.00020	A614514	<0.00020	0.00020	A614514
Dissolved Silicon (Si)	mg/L	1.6	A616578	<0.10	A615168	1.6	A616578	1.4	0.10	A615168
Dissolved Silver (Ag)	mg/L	<0.00010	A614514	<0.00010	A614514	<0.00010	A614514	<0.00010	0.00010	A614514
Dissolved Sodium (Na)	mg/L	1.6	A616578	<0.50	A615168	2.8	A616578	2.3	0.50	A615168
Dissolved Strontium (Sr)	mg/L	<0.020	A616578	<0.020	A615168	0.040	A616578	0.044	0.020	A615168
Dissolved Sulphur (S)	mg/L	1.5	A616578	<0.20	A615168	29	A616578	24	0.20	A615168
Dissolved Thallium (Tl)	mg/L	<0.00020	A614514	<0.00020	A614514	<0.00020	A614514	<0.00020	0.00020	A614514
Dissolved Tin (Sn)	mg/L	<0.0010	A614514	<0.0010	A614514	<0.0010	A614514	<0.0010	0.0010	A614514
Dissolved Titanium (Ti)	mg/L	<0.0010	A614514	<0.0010	A614514	0.0010	A614514	<0.0010	0.0010	A614514
Dissolved Uranium (U)	mg/L	<0.00010	A614514	<0.00010	A614514	<0.00010	A614514	<0.00010	0.00010	A614514

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AVF059		AVF060		AVF061		AVF062		
Sampling Date		2022/06/14 11:05		2022/06/14 11:05		2022/06/14 09:45		2022/06/14 09:35		
COC Number		665919-03-01		665919-03-01		665919-03-01		665919-03-01		
	UNITS	**SC-1**	**QC Batch**	**TRIP BLANK**	**QC Batch**	**SB-1**	**QC Batch**	**SB-2**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	A614514	<0.0010	A614514	<0.0010	A614514	<0.0010	0.0010	A614514
Dissolved Zinc (Zn)	mg/L	0.051	A614514	<0.0030	A614514	0.22	A614514	0.22	0.0030	A614514
RDL = Reportable Detection Limit										

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AVF063	AVF064			AVF064		
Sampling Date		2022/06/14 09:50	2022/06/14 09:55			2022/06/14 09:55		
COC Number		665919-03-01	665919-03-01			665919-03-01		
	UNITS	CB-1	CB-2	RDL	QC Batch	CB-2 Lab-Dup	RDL	QC Batch
Elements								
Dissolved Cadmium (Cd)	ug/L	0.71	0.72	0.020	A612833			
Lab Filtered Elements								
Dissolved Aluminum (Al)	mg/L	0.051	0.054	0.0030	A614514	0.063	0.0030	A614514
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	0.00060	A614514	<0.00060	0.00060	A614514
Dissolved Arsenic (As)	mg/L	0.00023	0.00023	0.00020	A614514	<0.00020	0.00020	A614514
Dissolved Barium (Ba)	mg/L	<0.010	0.010	0.010	A615168			
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	0.0010	A614514	<0.0010	0.0010	A614514
Dissolved Boron (B)	mg/L	<0.020	<0.020	0.020	A615168			
Dissolved Calcium (Ca)	mg/L	30	30	0.30	A615168			
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010	0.0010	A614514	<0.0010	0.0010	A614514
Dissolved Cobalt (Co)	mg/L	0.00071	0.00085	0.00030	A614514	0.00079	0.00030	A614514
Dissolved Copper (Cu)	mg/L	0.025	0.027	0.0010	A614514	0.028	0.0010	A614514
Dissolved Iron (Fe)	mg/L	2.8	2.9	0.060	A615168			
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	0.00020	A614514	<0.00020	0.00020	A614514
Dissolved Lithium (Li)	mg/L	<0.020	<0.020	0.020	A615168			
Dissolved Magnesium (Mg)	mg/L	5.7	5.8	0.20	A615168			
Dissolved Manganese (Mn)	mg/L	0.12	0.12	0.0040	A615168			
Dissolved Molybdenum (Mo)	mg/L	<0.00020	<0.00020	0.00020	A614514	<0.00020	0.00020	A614514
Dissolved Nickel (Ni)	mg/L	0.0015	0.0017	0.00050	A614514	0.0016	0.00050	A614514
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	0.10	A615168			
Dissolved Potassium (K)	mg/L	2.6	2.7	0.30	A615168			
Dissolved Selenium (Se)	mg/L	<0.00020	0.00020	0.00020	A614514	0.00021	0.00020	A614514
Dissolved Silicon (Si)	mg/L	1.4	1.4	0.10	A615168			
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	0.00010	A614514	<0.00010	0.00010	A614514
Dissolved Sodium (Na)	mg/L	2.3	2.3	0.50	A615168			
Dissolved Strontium (Sr)	mg/L	0.039	0.040	0.020	A615168			
Dissolved Sulphur (S)	mg/L	26	26	0.20	A615168			
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	0.00020	A614514	<0.00020	0.00020	A614514
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	0.0010	A614514	<0.0010	0.0010	A614514
Dissolved Titanium (Ti)	mg/L	<0.0010	<0.0010	0.0010	A614514	<0.0010	0.0010	A614514
Dissolved Uranium (U)	mg/L	<0.00010	<0.00010	0.00010	A614514	<0.00010	0.00010	A614514

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AVF063	AVF064			AVF064		
Sampling Date		2022/06/14 09:50	2022/06/14 09:55			2022/06/14 09:55		
COC Number		665919-03-01	665919-03-01			665919-03-01		
	UNITS	**CB-1**	**CB-2**	**RDL**	**QC Batch**	**CB-2 Lab-Dup**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	0.0010	A614514	<0.0010	0.0010	A614514
Dissolved Zinc (Zn)	mg/L	0.21	0.23	0.0030	A614514	0.24	0.0030	A614514

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AVF065		AVF066		AVF067		AVF068		
Sampling Date		2022/06/14 10:35		2022/06/14 10:25		2022/06/14 10:00		2022/06/14 10:10		
COC Number		665919-03-01		665919-03-01		665919-03-01		665919-03-01		
	UNITS	NB-1	QC Batch	NB-2	QC Batch	EB-1	QC Batch	EB-2	RDL	QC Batch
Elements										
Dissolved Cadmium (Cd)	ug/L	0.71	A612833	0.75	A612833	1.1	A612833	1.1	0.020	A612833
Lab Filtered Elements										
Dissolved Aluminum (Al)	mg/L	0.055	A614514	0.057	A614514	0.050	A614514	0.055	0.0030	A616248
Dissolved Antimony (Sb)	mg/L	<0.00060	A614514	<0.00060	A614514	<0.00060	A614514	<0.00060	0.00060	A616248
Dissolved Arsenic (As)	mg/L	0.00027	A614514	0.00037	A614514	0.00024	A614514	0.00035	0.00020	A616248
Dissolved Barium (Ba)	mg/L	0.012	A616578	0.010	A615168	0.012	A616578	0.012	0.010	A615168
Dissolved Beryllium (Be)	mg/L	<0.0010	A614514	<0.0010	A614514	<0.0010	A614514	<0.0010	0.0010	A616248
Dissolved Boron (B)	mg/L	<0.020	A616578	<0.020	A615168	<0.020	A616578	<0.020	0.020	A615168
Dissolved Calcium (Ca)	mg/L	37	A616578	34	A615168	39	A616578	38	0.30	A615168
Dissolved Chromium (Cr)	mg/L	<0.0010	A614514	<0.0010	A614514	<0.0010	A614514	<0.0010	0.0010	A616248
Dissolved Cobalt (Co)	mg/L	0.00093	A614514	0.0010	A614514	0.0017	A614514	0.0018	0.00030	A616248
Dissolved Copper (Cu)	mg/L	0.027	A614514	0.029	A614514	0.026	A614514	0.025	0.0010	A616248
Dissolved Iron (Fe)	mg/L	3.5	A616578	3.2	A615168	2.3	A616578	1.9	0.060	A615168
Dissolved Lead (Pb)	mg/L	<0.00020	A614514	<0.00020	A614514	<0.00020	A614514	<0.00020	0.00020	A616248
Dissolved Lithium (Li)	mg/L	<0.020	A616578	<0.020	A615168	<0.020	A616578	<0.020	0.020	A615168
Dissolved Magnesium (Mg)	mg/L	6.6	A616578	6.2	A615168	7.2	A616578	6.8	0.20	A615168
Dissolved Manganese (Mn)	mg/L	0.14	A616578	0.14	A615168	0.19	A616578	0.18	0.0040	A615168
Dissolved Molybdenum (Mo)	mg/L	<0.00020	A614514	<0.00020	A614514	<0.00020	A614514	<0.00020	0.00020	A616248
Dissolved Nickel (Ni)	mg/L	0.0016	A614514	0.0017	A614514	0.0023	A614514	0.0025	0.00050	A616248
Dissolved Phosphorus (P)	mg/L	<0.10	A616578	<0.10	A615168	<0.10	A616578	<0.10	0.10	A615168
Dissolved Potassium (K)	mg/L	3.0	A616578	2.8	A615168	3.2	A616578	3.1	0.30	A615168
Dissolved Selenium (Se)	mg/L	<0.00020	A614514	<0.00020	A614514	<0.00020	A614514	<0.00020	0.00020	A616248
Dissolved Silicon (Si)	mg/L	1.6	A616578	1.4	A615168	1.6	A616578	1.4	0.10	A615168
Dissolved Silver (Ag)	mg/L	<0.00010	A614514	<0.00010	A614514	<0.00010	A614514	<0.00010	0.00010	A616248
Dissolved Sodium (Na)	mg/L	2.6	A616578	2.4	A615168	2.8	A616578	2.6	0.50	A615168
Dissolved Strontium (Sr)	mg/L	0.040	A616578	0.042	A615168	0.045	A616578	0.047	0.020	A615168
Dissolved Sulphur (S)	mg/L	34	A616578	29	A615168	38	A616578	34	0.20	A615168
Dissolved Thallium (Tl)	mg/L	<0.00020	A614514	<0.00020	A614514	<0.00020	A614514	<0.00020	0.00020	A616248
Dissolved Tin (Sn)	mg/L	<0.0010	A614514	<0.0010	A614514	<0.0010	A614514	<0.0010	0.0010	A616248
Dissolved Titanium (Ti)	mg/L	<0.0010	A614514	<0.0010	A614514	<0.0010	A614514	<0.0010	0.0010	A616248
Dissolved Uranium (U)	mg/L	<0.00010	A614514	<0.00010	A614514	<0.00010	A614514	<0.00010	0.00010	A616248

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AVF065		AVF066		AVF067		AVF068		
Sampling Date		2022/06/14 10:35		2022/06/14 10:25		2022/06/14 10:00		2022/06/14 10:10		
COC Number		665919-03-01		665919-03-01		665919-03-01		665919-03-01		
	UNITS	**NB-1**	**QC Batch**	**NB-2**	**QC Batch**	**EB-1**	**QC Batch**	**EB-2**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	A614514	<0.0010	A614514	<0.0010	A614514	<0.0010	0.0010	A616248
Dissolved Zinc (Zn)	mg/L	0.24	A614514	0.24	A614514	0.29	A614514	0.29	0.0030	A616248
RDL = Reportable Detection Limit										

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AVF109	AVF116		AVF117	AVF118		
Sampling Date		2022/06/14 10:40	2022/06/14 09:10		2022/06/14 08:55	2022/06/14 08:35		
COC Number		665919-02-01	665919-02-01		665919-02-01	665919-02-01		
	UNITS	CAMP LAKE DISCHARGE	CL-2	QC Batch	CL-3	CL-4	RDL	QC Batch
Elements								
Dissolved Cadmium (Cd)	ug/L	0.77	0.17	A612833	0.19	0.13	0.020	A612833
Lab Filtered Elements								
Dissolved Aluminum (Al)	mg/L	0.069	0.048	A614514	0.041	0.045	0.0030	A616317
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	A614514	<0.00060	<0.00060	0.00060	A616317
Dissolved Arsenic (As)	mg/L	0.00024	0.00040	A614514	0.00046	0.00059	0.00020	A616317
Dissolved Barium (Ba)	mg/L	<0.010	<0.010	A615168	<0.010	<0.010	0.010	A615168
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	A614514	<0.0010	<0.0010	0.0010	A616317
Dissolved Boron (B)	mg/L	<0.020	<0.020	A615168	<0.020	<0.020	0.020	A615168
Dissolved Calcium (Ca)	mg/L	35	17	A615168	17	14	0.30	A615168
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010	A614514	<0.0010	<0.0010	0.0010	A616317
Dissolved Cobalt (Co)	mg/L	0.00087	<0.00030	A614514	<0.00030	<0.00030	0.00030	A616317
Dissolved Copper (Cu)	mg/L	0.029	0.011	A614514	0.013	0.0092	0.0010	A616317
Dissolved Iron (Fe)	mg/L	3.1	0.68	A615168	0.77	0.55	0.060	A615168
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	A614514	<0.00020	<0.00020	0.00020	A616317
Dissolved Lithium (Li)	mg/L	<0.020	<0.020	A615168	<0.020	<0.020	0.020	A615168
Dissolved Magnesium (Mg)	mg/L	6.2	3.7	A615168	3.7	3.5	0.20	A615168
Dissolved Manganese (Mn)	mg/L	0.13	0.016	A615168	0.0092	0.024	0.0040	A615168
Dissolved Molybdenum (Mo)	mg/L	<0.00020	<0.00020	A614514	<0.00020	<0.00020	0.00020	A616317
Dissolved Nickel (Ni)	mg/L	0.0016	0.00052	A614514	0.00083	0.00063	0.00050	A616317
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	A615168	<0.10	<0.10	0.10	A615168
Dissolved Potassium (K)	mg/L	2.8	1.8	A615168	1.8	1.7	0.30	A615168
Dissolved Selenium (Se)	mg/L	0.00020	<0.00020	A614514	<0.00020	<0.00020	0.00020	A616317
Dissolved Silicon (Si)	mg/L	1.4	1.3	A615168	1.2	1.2	0.10	A615168
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	A614514	<0.00010	<0.00010	0.00010	A616317
Dissolved Sodium (Na)	mg/L	2.4	2.1	A615168	1.9	2.0	0.50	A615168
Dissolved Strontium (Sr)	mg/L	0.042	0.030	A615168	0.029	0.028	0.020	A615168
Dissolved Sulphur (S)	mg/L	31	9.9	A615168	10	8.0	0.20	A615168
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	A614514	<0.00020	<0.00020	0.00020	A616317
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	A614514	<0.0010	<0.0010	0.0010	A616317
Dissolved Titanium (Ti)	mg/L	0.0011	0.0010	A614514	<0.0010	<0.0010	0.0010	A616317
Dissolved Uranium (U)	mg/L	<0.00010	<0.00010	A614514	<0.00010	<0.00010	0.00010	A616317

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AVF109	AVF116		AVF117	AVF118		
Sampling Date		2022/06/14 10:40	2022/06/14 09:10		2022/06/14 08:55	2022/06/14 08:35		
COC Number		665919-02-01	665919-02-01		665919-02-01	665919-02-01		
	UNITS	**CAMP LAKE DISCHARGE**	**CL-2**	**QC Batch**	**CL-3**	**CL-4**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	A614514	0.0018	0.0016	0.0010	A616317
Dissolved Zinc (Zn)	mg/L	0.24	0.064	A614514	0.069	0.047	0.0030	A616317
RDL = Reportable Detection Limit								

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AVF119		AVF120		AVF121	AVF122		
Sampling Date		2022/06/14 08:20		2022/06/14 08:10		2022/06/14 09:00	2022/06/14 08:45		
COC Number		665919-02-01		665919-02-01		665919-02-01	665919-02-01		
	UNITS	CL-5	QC Batch	CL-6	QC Batch	CL-7	CL-8	RDL	QC Batch
Elements									
Dissolved Cadmium (Cd)	ug/L	0.099	A612833	0.023	A612833	0.16	0.12	0.020	A612867
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	0.035	A616317	0.019	A616317	0.040	0.045	0.0030	A616317
Dissolved Antimony (Sb)	mg/L	<0.00060	A616317	<0.00060	A616317	<0.00060	<0.00060	0.00060	A616317
Dissolved Arsenic (As)	mg/L	0.00062	A616317	0.00054	A616317	0.00047	0.00045	0.00020	A616317
Dissolved Barium (Ba)	mg/L	<0.010	A614723	<0.010	A615168	<0.010	<0.010	0.010	A615168
Dissolved Beryllium (Be)	mg/L	<0.0010	A616317	<0.0010	A616317	<0.0010	<0.0010	0.0010	A616317
Dissolved Boron (B)	mg/L	<0.020	A614723	<0.020	A615168	<0.020	<0.020	0.020	A615168
Dissolved Calcium (Ca)	mg/L	13	A614723	11	A615168	16	14	0.30	A615168
Dissolved Chromium (Cr)	mg/L	<0.0010	A616317	<0.0010	A616317	<0.0010	<0.0010	0.0010	A616317
Dissolved Cobalt (Co)	mg/L	<0.00030	A616317	<0.00030	A616317	<0.00030	<0.00030	0.00030	A616317
Dissolved Copper (Cu)	mg/L	0.0084	A616317	0.0040	A616317	0.012	0.0097	0.0010	A616317
Dissolved Iron (Fe)	mg/L	0.40	A614723	0.085	A615168	0.64	0.43	0.060	A615168
Dissolved Lead (Pb)	mg/L	<0.00020	A616317	<0.00020	A616317	<0.00020	<0.00020	0.00020	A616317
Dissolved Lithium (Li)	mg/L	<0.020	A614723	<0.020	A615168	<0.020	<0.020	0.020	A615168
Dissolved Magnesium (Mg)	mg/L	3.2	A614723	3.1	A615168	3.6	3.4	0.20	A615168
Dissolved Manganese (Mn)	mg/L	0.0045	A614723	<0.0040	A615168	0.0044	<0.0040	0.0040	A615168
Dissolved Molybdenum (Mo)	mg/L	<0.00020	A616317	<0.00020	A616317	<0.00020	<0.00020	0.00020	A616317
Dissolved Nickel (Ni)	mg/L	0.00060	A616317	<0.00050	A616317	0.00086	0.00067	0.00050	A616317
Dissolved Phosphorus (P)	mg/L	<0.10	A614723	<0.10	A615168	<0.10	<0.10	0.10	A615168
Dissolved Potassium (K)	mg/L	1.6	A614723	1.5	A615168	1.7	1.6	0.30	A615168
Dissolved Selenium (Se)	mg/L	<0.00020	A616317	<0.00020	A616317	0.00022	<0.00020	0.00020	A616317
Dissolved Silicon (Si)	mg/L	0.91	A614723	0.54	A615168	1.2	1.1	0.10	A615168
Dissolved Silver (Ag)	mg/L	<0.00010	A616317	<0.00010	A616317	<0.00010	<0.00010	0.00010	A616317
Dissolved Sodium (Na)	mg/L	1.9	A614723	2.2	A615168	1.9	2.0	0.50	A615168
Dissolved Strontium (Sr)	mg/L	0.027	A614723	0.027	A615168	0.028	0.028	0.020	A615168
Dissolved Sulphur (S)	mg/L	7.3	A614723	3.8	A615168	9.5	7.5	0.20	A615168
Dissolved Thallium (Tl)	mg/L	<0.00020	A616317	<0.00020	A616317	<0.00020	<0.00020	0.00020	A616317
Dissolved Tin (Sn)	mg/L	<0.0010	A616317	<0.0010	A616317	<0.0010	<0.0010	0.0010	A616317
Dissolved Titanium (Ti)	mg/L	<0.0010	A616317	<0.0010	A616317	<0.0010	<0.0010	0.0010	A616317
Dissolved Uranium (U)	mg/L	<0.00010	A616317	<0.00010	A616317	<0.00010	<0.00010	0.00010	A616317

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AVF119		AVF120		AVF121	AVF122		
Sampling Date		2022/06/14 08:20		2022/06/14 08:10		2022/06/14 09:00	2022/06/14 08:45		
COC Number		665919-02-01		665919-02-01		665919-02-01	665919-02-01		
	UNITS	**CL-5**	**QC Batch**	**CL-6**	**QC Batch**	**CL-7**	**CL-8**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	0.0016	A616317	0.0015	A616317	0.0017	0.0015	0.0010	A616317
Dissolved Zinc (Zn)	mg/L	0.041	A616317	0.013	A616317	0.060	0.050	0.0030	A616317
RDL = Reportable Detection Limit									

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AVF123			AVF123			AVF124		
Sampling Date		2022/06/14 15:00			2022/06/14 15:00			2022/06/14 14:00		
COC Number		665919-02-01			665919-02-01			665919-02-01		
	UNITS	SW-107	RDL	QC Batch	SW-107 Lab-Dup	RDL	QC Batch	SW-113	RDL	QC Batch
Elements										
Dissolved Cadmium (Cd)	ug/L	0.76	0.020	A612867				0.12	0.020	A612867
Lab Filtered Elements										
Dissolved Aluminum (Al)	mg/L	0.067	0.0030	A616317				0.039	0.0030	A616317
Dissolved Antimony (Sb)	mg/L	<0.00060	0.00060	A616317				<0.00060	0.00060	A616317
Dissolved Arsenic (As)	mg/L	0.00040	0.00020	A616317				0.00045	0.00020	A616317
Dissolved Barium (Ba)	mg/L	0.010	0.010	A615168	<0.010	0.010	A615168	<0.010	0.010	A615168
Dissolved Beryllium (Be)	mg/L	<0.0010	0.0010	A616317				<0.0010	0.0010	A616317
Dissolved Boron (B)	mg/L	<0.020	0.020	A615168	<0.020	0.020	A615168	<0.020	0.020	A615168
Dissolved Calcium (Ca)	mg/L	34	0.30	A615168	33	0.30	A615168	14	0.30	A615168
Dissolved Chromium (Cr)	mg/L	<0.0010	0.0010	A616317				<0.0010	0.0010	A616317
Dissolved Cobalt (Co)	mg/L	0.00090	0.00030	A616317				<0.00030	0.00030	A616317
Dissolved Copper (Cu)	mg/L	0.028	0.0010	A616317				0.0091	0.0010	A616317
Dissolved Iron (Fe)	mg/L	3.2	0.060	A615168	3.2	0.060	A615168	0.65	0.060	A615168
Dissolved Lead (Pb)	mg/L	<0.00020	0.00020	A616317				<0.00020	0.00020	A616317
Dissolved Lithium (Li)	mg/L	<0.020	0.020	A615168	<0.020	0.020	A615168	<0.020	0.020	A615168
Dissolved Magnesium (Mg)	mg/L	6.1	0.20	A615168	6.0	0.20	A615168	3.4	0.20	A615168
Dissolved Manganese (Mn)	mg/L	0.13	0.0040	A615168	0.13	0.0040	A615168	0.022	0.0040	A615168
Dissolved Molybdenum (Mo)	mg/L	<0.00020	0.00020	A616317				<0.00020	0.00020	A616317
Dissolved Nickel (Ni)	mg/L	0.0015	0.00050	A616317				0.00073	0.00050	A616317
Dissolved Phosphorus (P)	mg/L	<0.10	0.10	A615168	<0.10	0.10	A615168	<0.10	0.10	A615168
Dissolved Potassium (K)	mg/L	2.7	0.30	A615168	2.7	0.30	A615168	1.6	0.30	A615168
Dissolved Selenium (Se)	mg/L	<0.00020	0.00020	A616317				<0.00020	0.00020	A616317
Dissolved Silicon (Si)	mg/L	1.4	0.10	A615168	1.4	0.10	A615168	1.2	0.10	A615168
Dissolved Silver (Ag)	mg/L	<0.00010	0.00010	A616317				<0.00010	0.00010	A616317
Dissolved Sodium (Na)	mg/L	2.3	0.50	A615168	2.3	0.50	A615168	2.0	0.50	A615168
Dissolved Strontium (Sr)	mg/L	0.042	0.020	A615168	0.041	0.020	A615168	0.028	0.020	A615168
Dissolved Sulphur (S)	mg/L	31	0.20	A615168	31	0.20	A615168	8.1	0.20	A615168
Dissolved Thallium (Tl)	mg/L	<0.00020	0.00020	A616317				<0.00020	0.00020	A616317
Dissolved Tin (Sn)	mg/L	<0.0010	0.0010	A616317				<0.0010	0.0010	A616317
Dissolved Titanium (Ti)	mg/L	<0.0010	0.0010	A616317				<0.0010	0.0010	A616317
Dissolved Uranium (U)	mg/L	<0.00010	0.00010	A616317				<0.00010	0.00010	A616317

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AVF123			AVF123			AVF124		
Sampling Date		2022/06/14 15:00			2022/06/14 15:00			2022/06/14 14:00		
COC Number		665919-02-01			665919-02-01			665919-02-01		
	UNITS	**SW-107**	**RDL**	**QC Batch**	**SW-107 Lab-Dup**	**RDL**	**QC Batch**	**SW-113**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	0.0017	0.0010	A616317				0.0018	0.0010	A616317
Dissolved Zinc (Zn)	mg/L	0.22	0.0030	A616317				0.047	0.0030	A616317

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AVF059	AVF060		AVF061		AVF062		
Sampling Date		2022/06/14 11:05	2022/06/14 11:05		2022/06/14 09:45		2022/06/14 09:35		
COC Number		665919-03-01	665919-03-01		665919-03-01		665919-03-01		
	UNITS	SC-1	TRIP BLANK	QC Batch	SB-1	QC Batch	SB-2	RDL	QC Batch
Elements									
Total Cadmium (Cd)	ug/L	0.20	<0.020	A612834	0.99	A612834	0.88	0.020	A612834
Total Aluminum (Al)	mg/L	0.074	<0.0030	A617023	0.18	A615545	0.20	0.0030	A617023
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	A617023	<0.00060	A615545	<0.00060	0.00060	A617023
Total Arsenic (As)	mg/L	0.00040	<0.00020	A617023	0.00036	A615545	0.00039	0.00020	A617023
Total Barium (Ba)	mg/L	<0.010	<0.010	A617090	0.010	A615637	0.011	0.010	A617090
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	A617023	<0.0010	A615545	<0.0010	0.0010	A617023
Total Boron (B)	mg/L	<0.020	<0.020	A617090	<0.020	A615637	<0.020	0.020	A617090
Total Calcium (Ca)	mg/L	6.8	<0.30	A617090	28	A615637	28	0.30	A617090
Total Chromium (Cr)	mg/L	<0.0010	<0.0010	A617023	<0.0010	A615545	<0.0010	0.0010	A617023
Total Cobalt (Co)	mg/L	<0.00030	<0.00030	A617023	0.0014	A615545	0.0014	0.00030	A617023
Total Copper (Cu)	mg/L	0.0098	<0.0010	A617023	0.046	A615545	0.042	0.0010	A617023
Total Iron (Fe)	mg/L	0.25	<0.060	A617090	5.1	A615637	5.2	0.060	A617090
Total Lead (Pb)	mg/L	<0.00020	0.00021	A617023	<0.00020	A615545	<0.00020	0.00020	A617023
Total Lithium (Li)	mg/L	<0.020	<0.020	A617090	<0.020	A615637	<0.020	0.020	A617090
Total Magnesium (Mg)	mg/L	2.2	<0.20	A617090	5.5	A615637	5.4	0.20	A617090
Total Manganese (Mn)	mg/L	0.015	<0.0040	A617090	0.13	A615637	0.13	0.0040	A617090
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	A617023	<0.00020	A615545	<0.00020	0.00020	A617023
Total Nickel (Ni)	mg/L	0.00057	<0.00050	A617023	0.0020	A615545	0.0019	0.00050	A617023
Total Phosphorus (P)	mg/L	<0.10	<0.10	A617090	<0.10	A615637	<0.10	0.10	A617090
Total Potassium (K)	mg/L	1.1	<0.30	A617090	2.6	A615637	2.5	0.30	A617090
Total Selenium (Se)	mg/L	<0.00020	<0.00020	A617023	<0.00020	A615545	<0.00020	0.00020	A617023
Total Silicon (Si)	mg/L	1.7	<0.10	A617090	1.8	A615637	1.8	0.10	A617090
Total Silver (Ag)	mg/L	<0.00010	<0.00010	A617023	<0.00010	A615545	<0.00010	0.00010	A617023
Total Sodium (Na)	mg/L	1.4	<0.50	A617090	2.2	A615637	2.1	0.50	A617090
Total Strontium (Sr)	mg/L	<0.020	<0.020	A617090	0.034	A615637	0.038	0.020	A617090
Total Sulphur (S)	mg/L	1.2	<0.20	A617090	29	A615637	26	0.20	A617090
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	A617023	<0.00020	A615545	<0.00020	0.00020	A617023
Total Tin (Sn)	mg/L	<0.0010	<0.0010	A617023	<0.0010	A615545	<0.0010	0.0010	A617023
Total Titanium (Ti)	mg/L	0.0031	<0.0010	A617023	0.0044	A615545	0.0047	0.0010	A617023
Total Uranium (U)	mg/L	<0.00010	<0.00010	A617023	<0.00010	A615545	<0.00010	0.00010	A617023
Total Vanadium (V)	mg/L	<0.0010	0.0012	A617023	<0.0010	A615545	<0.0010	0.0010	A617023

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AVF059	AVF060		AVF061		AVF062		
Sampling Date		2022/06/14 11:05	2022/06/14 11:05		2022/06/14 09:45		2022/06/14 09:35		
COC Number		665919-03-01	665919-03-01		665919-03-01		665919-03-01		
	UNITS	**SC-1**	**TRIP BLANK**	**QC Batch**	**SB-1**	**QC Batch**	**SB-2**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.059	<0.0030	A617023	0.30	A615545	0.26	0.0030	A617023
RDL = Reportable Detection Limit									

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AVF063	AVF064		AVF065		AVF066		
Sampling Date		2022/06/14 09:50	2022/06/14 09:55		2022/06/14 10:35		2022/06/14 10:25		
COC Number		665919-03-01	665919-03-01		665919-03-01		665919-03-01		
	UNITS	CB-1	CB-2	QC Batch	NB-1	QC Batch	NB-2	RDL	QC Batch
Elements									
Total Cadmium (Cd)	ug/L	0.88	0.92	A612834	0.96	A612834	0.95	0.020	A612834
Total Aluminum (Al)	mg/L	0.17	0.17	A615545	0.18	A615527	0.18	0.0030	A617023
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	A615545	<0.00060	A615527	<0.00060	0.00060	A617023
Total Arsenic (As)	mg/L	0.00030	0.00034	A615545	0.00032	A615527	0.00032	0.00020	A617023
Total Barium (Ba)	mg/L	0.011	0.011	A615637	0.011	A615538	0.011	0.010	A617090
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	A615545	<0.0010	A615527	<0.0010	0.0010	A617023
Total Boron (B)	mg/L	<0.020	<0.020	A615637	<0.020	A615538	<0.020	0.020	A617090
Total Calcium (Ca)	mg/L	27	27	A615637	32	A615538	32	0.30	A617090
Total Chromium (Cr)	mg/L	<0.0010	<0.0010	A615545	<0.0010	A615527	<0.0010	0.0010	A617023
Total Cobalt (Co)	mg/L	0.0013	0.0014	A615545	0.0015	A615527	0.0015	0.00030	A617023
Total Copper (Cu)	mg/L	0.043	0.043	A615545	0.048	A615527	0.048	0.0010	A617023
Total Iron (Fe)	mg/L	5.0	4.9	A615637	5.9	A615538	6.1	0.060	A617090
Total Lead (Pb)	mg/L	<0.00020	<0.00020	A615545	<0.00020	A615527	<0.00020	0.00020	A617023
Total Lithium (Li)	mg/L	<0.020	<0.020	A615637	<0.020	A615538	<0.020	0.020	A617090
Total Magnesium (Mg)	mg/L	5.4	5.4	A615637	5.8	A615538	5.8	0.20	A617090
Total Manganese (Mn)	mg/L	0.13	0.13	A615637	0.14	A615538	0.15	0.0040	A617090
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	A615545	<0.00020	A615527	<0.00020	0.00020	A617023
Total Nickel (Ni)	mg/L	0.0017	0.0019	A615545	0.0023	A615527	0.0020	0.00050	A617023
Total Phosphorus (P)	mg/L	<0.10	<0.10	A615637	<0.10	A615538	<0.10	0.10	A617090
Total Potassium (K)	mg/L	2.4	2.5	A615637	2.6	A615538	2.6	0.30	A617090
Total Selenium (Se)	mg/L	<0.00020	<0.00020	A615545	<0.00020	A615527	0.00020	0.00020	A617023
Total Silicon (Si)	mg/L	1.8	1.7	A615637	1.8	A615538	1.9	0.10	A617090
Total Silver (Ag)	mg/L	<0.00010	<0.00010	A615545	<0.00010	A615527	<0.00010	0.00010	A617023
Total Sodium (Na)	mg/L	2.2	2.1	A615637	2.2	A615538	2.3	0.50	A617090
Total Strontium (Sr)	mg/L	0.034	0.034	A615637	0.040	A615538	0.041	0.020	A617090
Total Sulphur (S)	mg/L	28	28	A615637	31	A615538	31	0.20	A617090
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	A615545	<0.00020	A615527	<0.00020	0.00020	A617023
Total Tin (Sn)	mg/L	<0.0010	<0.0010	A615545	<0.0010	A615527	<0.0010	0.0010	A617023
Total Titanium (Ti)	mg/L	0.0040	0.0037	A615545	0.0045	A615527	0.0045	0.0010	A617023
Total Uranium (U)	mg/L	<0.00010	<0.00010	A615545	<0.00010	A615527	<0.00010	0.00010	A617023
Total Vanadium (V)	mg/L	<0.0010	<0.0010	A615545	<0.0010	A615527	<0.0010	0.0010	A617023

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AVF063	AVF064		AVF065		AVF066		
Sampling Date		2022/06/14 09:50	2022/06/14 09:55		2022/06/14 10:35		2022/06/14 10:25		
COC Number		665919-03-01	665919-03-01		665919-03-01		665919-03-01		
	UNITS	**CB-1**	**CB-2**	**QC Batch**	**NB-1**	**QC Batch**	**NB-2**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.27	0.27	A615545	0.30	A615527	0.30	0.0030	A617023
RDL = Reportable Detection Limit									

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AVF067	AVF068	AVF109		AVF116		
Sampling Date		2022/06/14 10:00	2022/06/14 10:10	2022/06/14 10:40		2022/06/14 09:10		
COC Number		665919-03-01	665919-03-01	665919-02-01		665919-02-01		
	UNITS	EB-1	EB-2	CAMP LAKE DISCHARGE	QC Batch	CL-2	RDL	QC Batch
Elements								
Total Cadmium (Cd)	ug/L	1.3	1.4	0.98	A612834	0.20	0.020	A612834
Total Aluminum (Al)	mg/L	0.25	0.27	0.18	A615545	0.10	0.0030	A617023
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	A615545	<0.00060	0.00060	A617023
Total Arsenic (As)	mg/L	0.00031	0.00028	0.00024	A615545	0.00040	0.00020	A617023
Total Barium (Ba)	mg/L	0.012	0.013	0.011	A615637	0.010	0.010	A617090
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	A615545	<0.0010	0.0010	A617023
Total Boron (B)	mg/L	<0.020	<0.020	<0.020	A615637	0.023	0.020	A617090
Total Calcium (Ca)	mg/L	34	34	32	A615637	16	0.30	A617090
Total Chromium (Cr)	mg/L	<0.0010	<0.0010	<0.0010	A615545	<0.0010	0.0010	A617023
Total Cobalt (Co)	mg/L	0.0023	0.0025	0.0013	A615545	<0.00030	0.00030	A617023
Total Copper (Cu)	mg/L	0.053	0.054	0.048	A615545	0.014	0.0010	A617023
Total Iron (Fe)	mg/L	4.8	4.8	6.0	A615637	1.1	0.060	A617090
Total Lead (Pb)	mg/L	<0.00020	<0.00020	<0.00020	A615545	<0.00020	0.00020	A617023
Total Lithium (Li)	mg/L	<0.020	<0.020	<0.020	A615637	<0.020	0.020	A617090
Total Magnesium (Mg)	mg/L	6.4	6.5	6.0	A615637	3.6	0.20	A617090
Total Manganese (Mn)	mg/L	0.18	0.19	0.14	A615637	0.045	0.0040	A617090
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	<0.00020	A615545	<0.00020	0.00020	A617023
Total Nickel (Ni)	mg/L	0.0029	0.0031	0.0019	A615545	0.0011	0.00050	A617023
Total Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	A615637	<0.10	0.10	A617090
Total Potassium (K)	mg/L	2.8	2.9	2.7	A615637	1.7	0.30	A617090
Total Selenium (Se)	mg/L	<0.00020	<0.00020	<0.00020	A615545	<0.00020	0.00020	A617023
Total Silicon (Si)	mg/L	1.8	1.9	2.0	A615637	1.6	0.10	A617090
Total Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	A615545	<0.00010	0.00010	A617023
Total Sodium (Na)	mg/L	2.4	2.4	2.3	A615637	2.2	0.50	A617090
Total Strontium (Sr)	mg/L	0.039	0.040	0.037	A615637	0.032	0.020	A617090
Total Sulphur (S)	mg/L	36	37	34	A615637	10	0.20	A617090
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	A615545	<0.00020	0.00020	A617023
Total Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	A615545	<0.0010	0.0010	A617023
Total Titanium (Ti)	mg/L	0.0063	0.0084	0.0042	A615545	0.0031	0.0010	A617023
Total Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	A615545	<0.00010	0.00010	A617023
Total Vanadium (V)	mg/L	<0.0010	<0.0010	<0.0010	A615545	<0.0010	0.0010	A617023

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AVF067	AVF068	AVF109		AVF116		
Sampling Date		2022/06/14 10:00	2022/06/14 10:10	2022/06/14 10:40		2022/06/14 09:10		
COC Number		665919-03-01	665919-03-01	665919-02-01		665919-02-01		
	UNITS	**EB-1**	**EB-2**	**CAMP LAKE DISCHARGE**	**QC Batch**	**CL-2**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.38	0.38	0.30	A615545	0.073	0.0030	A617023
RDL = Reportable Detection Limit								

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AVF117	AVF118	AVF119	AVF120		AVF121		
Sampling Date		2022/06/14 08:55	2022/06/14 08:35	2022/06/14 08:20	2022/06/14 08:10		2022/06/14 09:00		
COC Number		665919-02-01	665919-02-01	665919-02-01	665919-02-01		665919-02-01		
	UNITS	CL-3	CL-4	CL-5	CL-6	QC Batch	CL-7	RDL	QC Batch
Elements									
Total Cadmium (Cd)	ug/L	0.27	0.17	0.14	0.029	A612834	0.24	0.020	A612834
Total Aluminum (Al)	mg/L	0.091	0.11	0.085	0.064	A615545	0.097	0.0030	A617023
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	<0.00060	A615545	<0.00060	0.00060	A617023
Total Arsenic (As)	mg/L	0.00041	0.00042	0.00041	0.00049	A615545	0.00038	0.00020	A617023
Total Barium (Ba)	mg/L	<0.010	0.011	<0.010	0.010	A615637	<0.010	0.010	A617090
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	A615545	<0.0010	0.0010	A617023
Total Boron (B)	mg/L	<0.020	<0.020	<0.020	<0.020	A615637	<0.020	0.020	A617090
Total Calcium (Ca)	mg/L	15	14	12	9.6	A615637	15	0.30	A617090
Total Chromium (Cr)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	A615545	<0.0010	0.0010	A617023
Total Cobalt (Co)	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	A615545	<0.00030	0.00030	A617023
Total Copper (Cu)	mg/L	0.017	0.012	0.011	0.0058	A615545	0.014	0.0010	A617023
Total Iron (Fe)	mg/L	1.3	1.5	0.73	0.20	A615637	1.1	0.060	A617090
Total Lead (Pb)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	A615545	<0.00020	0.00020	A617023
Total Lithium (Li)	mg/L	<0.020	<0.020	<0.020	<0.020	A615637	<0.020	0.020	A617090
Total Magnesium (Mg)	mg/L	3.5	3.4	3.2	2.9	A615637	3.4	0.20	A617090
Total Manganese (Mn)	mg/L	0.039	0.075	0.032	0.014	A615637	0.033	0.0040	A617090
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	A615545	<0.00020	0.00020	A617023
Total Nickel (Ni)	mg/L	0.00097	0.00078	0.00076	0.00052	A615545	0.00081	0.00050	A617023
Total Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	<0.10	A615637	<0.10	0.10	A617090
Total Potassium (K)	mg/L	1.7	1.7	1.6	1.4	A615637	1.6	0.30	A617090
Total Selenium (Se)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	A615545	<0.00020	0.00020	A617023
Total Silicon (Si)	mg/L	1.4	1.6	1.3	0.86	A615637	1.5	0.10	A617090
Total Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	A615545	<0.00010	0.00010	A617023
Total Sodium (Na)	mg/L	1.8	1.9	2.0	2.1	A615637	1.9	0.50	A617090
Total Strontium (Sr)	mg/L	0.025	0.025	0.025	0.025	A615637	0.028	0.020	A617090
Total Sulphur (S)	mg/L	11	9.3	7.6	4.3	A615637	9.7	0.20	A617090
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	A615545	<0.00020	0.00020	A617023
Total Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	A615545	<0.0010	0.0010	A617023
Total Titanium (Ti)	mg/L	0.0026	0.0032	0.0034	0.0028	A615545	0.0031	0.0010	A617023
Total Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	A615545	<0.00010	0.00010	A617023
Total Vanadium (V)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	A615545	<0.0010	0.0010	A617023

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AVF117	AVF118	AVF119	AVF120		AVF121		
Sampling Date		2022/06/14 08:55	2022/06/14 08:35	2022/06/14 08:20	2022/06/14 08:10		2022/06/14 09:00		
COC Number		665919-02-01	665919-02-01	665919-02-01	665919-02-01		665919-02-01		
	UNITS	**CL-3**	**CL-4**	**CL-5**	**CL-6**	**QC Batch**	**CL-7**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.091	0.060	0.055	0.017	A615545	0.083	0.0030	A617023
RDL = Reportable Detection Limit									

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AVF121			AVF122	AVF123		AVF124		
Sampling Date		2022/06/14 09:00			2022/06/14 08:45	2022/06/14 15:00		2022/06/14 14:00		
COC Number		665919-02-01			665919-02-01	665919-02-01		665919-02-01		
	UNITS	CL-7 Lab-Dup	RDL	QC Batch	CL-8	SW-107	QC Batch	SW-113	RDL	QC Batch
Elements										
Total Cadmium (Cd)	ug/L				0.16	0.98	A612834	0.15	0.020	A612834
Total Aluminum (Al)	mg/L	0.099	0.0030	A617023	0.082	0.17	A615545	0.12	0.0030	A617023
Total Antimony (Sb)	mg/L	<0.00060	0.00060	A617023	<0.00060	<0.00060	A615545	<0.00060	0.00060	A617023
Total Arsenic (As)	mg/L	0.00044	0.00020	A617023	0.00037	0.00031	A615545	0.00050	0.00020	A617023
Total Barium (Ba)	mg/L	0.010	0.010	A617090	<0.010	0.011	A615637	0.010	0.010	A617090
Total Beryllium (Be)	mg/L	<0.0010	0.0010	A617023	<0.0010	<0.0010	A615545	<0.0010	0.0010	A617023
Total Boron (B)	mg/L	<0.020	0.020	A617090	<0.020	<0.020	A615637	<0.020	0.020	A617090
Total Calcium (Ca)	mg/L	15	0.30	A617090	13	31	A615637	14	0.30	A617090
Total Chromium (Cr)	mg/L	<0.0010	0.0010	A617023	<0.0010	<0.0010	A615545	<0.0010	0.0010	A617023
Total Cobalt (Co)	mg/L	<0.00030	0.00030	A617023	<0.00030	0.0014	A615545	<0.00030	0.00030	A617023
Total Copper (Cu)	mg/L	0.015	0.0010	A617023	0.012	0.047	A615545	0.011	0.0010	A617023
Total Iron (Fe)	mg/L	1.1	0.060	A617090	0.84	5.7	A615637	1.6	0.060	A617090
Total Lead (Pb)	mg/L	<0.00020	0.00020	A617023	<0.00020	<0.00020	A615545	<0.00020	0.00020	A617023
Total Lithium (Li)	mg/L	<0.020	0.020	A617090	<0.020	<0.020	A615637	<0.020	0.020	A617090
Total Magnesium (Mg)	mg/L	3.5	0.20	A617090	3.3	5.9	A615637	3.3	0.20	A617090
Total Manganese (Mn)	mg/L	0.034	0.0040	A617090	0.030	0.14	A615637	0.075	0.0040	A617090
Total Molybdenum (Mo)	mg/L	<0.00020	0.00020	A617023	<0.00020	<0.00020	A615545	<0.00020	0.00020	A617023
Total Nickel (Ni)	mg/L	0.00098	0.00050	A617023	0.00054	0.0016	A615545	0.00074	0.00050	A617023
Total Phosphorus (P)	mg/L	<0.10	0.10	A617090	<0.10	<0.10	A615637	<0.10	0.10	A617090
Total Potassium (K)	mg/L	1.6	0.30	A617090	1.6	2.6	A615637	1.5	0.30	A617090
Total Selenium (Se)	mg/L	<0.00020	0.00020	A617023	<0.00020	<0.00020	A615545	<0.00020	0.00020	A617023
Total Silicon (Si)	mg/L	1.5	0.10	A617090	1.3	1.8	A615637	1.6	0.10	A617090
Total Silver (Ag)	mg/L	<0.00010	0.00010	A617023	<0.00010	<0.00010	A615545	<0.00010	0.00010	A617023
Total Sodium (Na)	mg/L	1.9	0.50	A617090	1.8	2.2	A615637	1.8	0.50	A617090
Total Strontium (Sr)	mg/L	0.028	0.020	A617090	0.024	0.036	A615637	0.027	0.020	A617090
Total Sulphur (S)	mg/L	10	0.20	A617090	8.4	33	A615637	8.5	0.20	A617090
Total Thallium (Tl)	mg/L	<0.00020	0.00020	A617023	<0.00020	<0.00020	A615545	<0.00020	0.00020	A617023
Total Tin (Sn)	mg/L	<0.0010	0.0010	A617023	<0.0010	<0.0010	A615545	<0.0010	0.0010	A617023
Total Titanium (Ti)	mg/L	0.0040	0.0010	A617023	0.0032	0.0041	A615545	0.0035	0.0010	A617023
Total Uranium (U)	mg/L	<0.00010	0.00010	A617023	<0.00010	<0.00010	A615545	<0.00010	0.00010	A617023
Total Vanadium (V)	mg/L	<0.0010	0.0010	A617023	<0.0010	<0.0010	A615545	0.0011	0.0010	A617023

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AVF121			AVF122	AVF123		AVF124		
Sampling Date		2022/06/14 09:00			2022/06/14 08:45	2022/06/14 15:00		2022/06/14 14:00		
COC Number		665919-02-01			665919-02-01	665919-02-01		665919-02-01		
	UNITS	**CL-7 Lab-Dup**	**RDL**	**QC Batch**	**CL-8**	**SW-107**	**QC Batch**	**SW-113**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.086	0.0030	A617023	0.061	0.30	A615545	0.056	0.0030	A617023

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

Bureau Veritas Job #: C242124
Report Date: 2022/06/24

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AVF059			AVF059			AVF060		AVF061		
Sampling Date		2022/06/14 11:05			2022/06/14 11:05			2022/06/14 11:05		2022/06/14 09:45		
COC Number		665919-03-01			665919-03-01			665919-03-01		665919-03-01		
	UNITS	SC-1	RDL	QC Batch	SC-1 Lab-Dup	RDL	QC Batch	TRIP BLANK	RDL	SB-1	RDL	QC Batch
Calculated Parameters												
Hardness (CaCO3)	mg/L	29	0.50	A612842				<0.50	0.50	100	0.50	A612842
Total Hardness (CaCO3)	mg/L	25.9	0.50	A612852				<0.50	0.50	91.8	0.50	A612852
Misc. Inorganics												
pH	pH	6.99	N/A	A614485				4.82	N/A	6.67	N/A	A614485
Total Suspended Solids	mg/L	1.7	0.99	A613603				<0.98	0.98	2.4	0.99	A613603
Anions												
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	A614484				<1.0	1.0	<1.0	1.0	A614484
Alkalinity (Total as CaCO3)	mg/L	21	1.0	A614484				<1.0	1.0	8.7	1.0	A614484
Bicarbonate (HCO3)	mg/L	25	1.0	A614484				<1.0	1.0	11	1.0	A614484
Carbonate (CO3)	mg/L	<1.0	1.0	A614484				<1.0	1.0	<1.0	1.0	A614484
Hydroxide (OH)	mg/L	<1.0	1.0	A614484				<1.0	1.0	<1.0	1.0	A614484
Physical Properties												
Turbidity	NTU	2.2	0.10	A613037	1.9	0.10	A613037	<0.10	0.10	20 (1)	0.50	A613037

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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Bureau Veritas Job #: C242124
Report Date: 2022/06/24

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AVF061			AVF062		AVF063			AVF063		
Sampling Date		2022/06/14 09:45			2022/06/14 09:35		2022/06/14 09:50			2022/06/14 09:50		
COC Number		665919-03-01			665919-03-01		665919-03-01			665919-03-01		
	UNITS	SB-1 Lab-Dup	RDL	QC Batch	SB-2	RDL	CB-1	RDL	QC Batch	CB-1 Lab-Dup	RDL	QC Batch
Calculated Parameters												
Hardness (CaCO3)	mg/L				99	0.50	98	0.50	A612842			
Total Hardness (CaCO3)	mg/L				91.5	0.50	89.8	0.50	A612852			
Misc. Inorganics												
pH	pH				6.67	N/A	6.62	N/A	A614485	6.64	N/A	A614485
Total Suspended Solids	mg/L	2.1	0.95	A613603	2.3	0.99	2.6	0.95	A613603			
Anions												
Alkalinity (PP as CaCO3)	mg/L				<1.0	1.0	<1.0	1.0	A614484	<1.0	1.0	A614484
Alkalinity (Total as CaCO3)	mg/L				8.7	1.0	8.4	1.0	A614484	8.5	1.0	A614484
Bicarbonate (HCO3)	mg/L				11	1.0	10	1.0	A614484	10	1.0	A614484
Carbonate (CO3)	mg/L				<1.0	1.0	<1.0	1.0	A614484	<1.0	1.0	A614484
Hydroxide (OH)	mg/L				<1.0	1.0	<1.0	1.0	A614484	<1.0	1.0	A614484
Physical Properties												
Turbidity	NTU				20 (1)	0.50	20 (1)	0.50	A613037			

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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Bureau Veritas Job #: C242124
Report Date: 2022/06/24

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AVF064		AVF065	AVF066		AVF067		AVF068		
Sampling Date		2022/06/14 09:55		2022/06/14 10:35	2022/06/14 10:25		2022/06/14 10:00		2022/06/14 10:10		
COC Number		665919-03-01		665919-03-01	665919-03-01		665919-03-01		665919-03-01		
	UNITS	CB-2	RDL	NB-1	NB-2	RDL	EB-1	RDL	EB-2	RDL	QC Batch
Calculated Parameters											
Hardness (CaCO3)	mg/L	100	0.50	120	110	0.50	130	0.50	120	0.50	A612842
Total Hardness (CaCO3)	mg/L	90.6	0.50	103	104	0.50	110	0.50	112	0.50	A612852
Misc. Inorganics											
pH	pH	6.65	N/A	6.56	6.58	N/A	6.56	N/A	6.56	N/A	A614485
Total Suspended Solids	mg/L	2.5	0.98	3.2	2.9	0.97	3.6	0.95	3.4	0.97	A613603
Anions											
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	<1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	A614484
Alkalinity (Total as CaCO3)	mg/L	8.3	1.0	6.8	6.9	1.0	6.5	1.0	6.0	1.0	A614484
Bicarbonate (HCO3)	mg/L	10	1.0	8.3	8.4	1.0	7.9	1.0	7.3	1.0	A614484
Carbonate (CO3)	mg/L	<1.0	1.0	<1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	A614484
Hydroxide (OH)	mg/L	<1.0	1.0	<1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	A614484
Physical Properties											
Turbidity	NTU	18 (1)	0.50	22 (1)	21 (1)	0.50	21 (1)	0.50	22 (1)	0.50	A613037

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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Bureau Veritas Job #: C242124
Report Date: 2022/06/24

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Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AVF109		AVF116		AVF117		AVF118		
Sampling Date		2022/06/14 10:40		2022/06/14 09:10		2022/06/14 08:55		2022/06/14 08:35		
COC Number		665919-02-01		665919-02-01		665919-02-01		665919-02-01		
	UNITS	CAMP LAKE DISCHARGE	RDL	CL-2	RDL	CL-3	RDL	CL-4	RDL	QC Batch
Calculated Parameters										
Hardness (CaCO3)	mg/L	110	0.50	57	0.50	57	0.50	51	0.50	A612842
Total Hardness (CaCO3)	mg/L	105	0.50	54.2	0.50	51.5	0.50	48.3	0.50	A612852
Misc. Inorganics										
pH	pH	6.60	N/A	6.89	N/A	6.93	N/A	6.91	N/A	A614485
Total Suspended Solids	mg/L	3.2	1.0	1.2	0.97	<0.96	0.96	1.1	0.99	A613603
Anions										
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	A614484
Alkalinity (Total as CaCO3)	mg/L	6.7	1.0	21	1.0	18	1.0	21	1.0	A614484
Bicarbonate (HCO3)	mg/L	8.2	1.0	25	1.0	21	1.0	25	1.0	A614484
Carbonate (CO3)	mg/L	<1.0	1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	A614484
Hydroxide (OH)	mg/L	<1.0	1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	A614484
Physical Properties										
Turbidity	NTU	22 (1)	0.50	4.5	0.10	4.7	0.10	7.0	0.10	A613037

RDL = Reportable Detection Limit
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(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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Bureau Veritas Job #: C242124
Report Date: 2022/06/24

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AVF119		AVF120		AVF121		AVF122		AVF123		
Sampling Date		2022/06/14 08:20		2022/06/14 08:10		2022/06/14 09:00		2022/06/14 08:45		2022/06/14 15:00		
COC Number		665919-02-01		665919-02-01		665919-02-01		665919-02-01		665919-02-01		
	UNITS	**CL-5**	**RDL**	**CL-6**	**RDL**	**CL-7**	**RDL**	**CL-8**	**RDL**	**SW-107**	**RDL**	**QC Batch**
Calculated Parameters												
Hardness (CaCO3)	mg/L	46	0.50	39	0.50	54	0.50	49	0.50	110	0.50	A612842
Total Hardness (CaCO3)	mg/L	44.0	0.50	36.0	0.50	50.5	0.50	45.4	0.50	102	0.50	A612852
Misc. Inorganics												
pH	pH	6.97	N/A	7.05	N/A	6.99	N/A	6.99	N/A	6.58	N/A	A614485
Total Suspended Solids	mg/L	<1.0	1.0	1.0	0.95	1.1	0.99	1.5	0.96	2.7	0.97	A613603
Anions												
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	A614484
Alkalinity (Total as CaCO3)	mg/L	21	1.0	25	1.0	18	1.0	21	1.0	7.4	1.0	A614484
Bicarbonate (HCO3)	mg/L	25	1.0	30	1.0	22	1.0	25	1.0	9.0	1.0	A614484
Carbonate (CO3)	mg/L	<1.0	1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	A614484
Hydroxide (OH)	mg/L	<1.0	1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	A614484
Physical Properties												
Turbidity	NTU	4.5	0.10	2.4	0.10	3.9	0.10	3.7	0.10	21 (1)	0.50	A613037

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AVF124		
Sampling Date		2022/06/14 14:00		
COC Number		665919-02-01		
	UNITS	**SW-113**	**RDL**	**QC Batch**
Calculated Parameters				
Hardness (CaCO3)	mg/L	50	0.50	A612842
Total Hardness (CaCO3)	mg/L	47.5	0.50	A612852
Misc. Inorganics				
pH	pH	6.92	N/A	A614485
Total Suspended Solids	mg/L	1.5	0.99	A613603
Anions				
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	A614484
Alkalinity (Total as CaCO3)	mg/L	22	1.0	A614484
Bicarbonate (HCO3)	mg/L	26	1.0	A614484
Carbonate (CO3)	mg/L	<1.0	1.0	A614484
Hydroxide (OH)	mg/L	<1.0	1.0	A614484
Physical Properties				
Turbidity	NTU	7.4	0.10	A613037
RDL = Reportable Detection Limit N/A = Not Applicable				

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	-1.3°C
Package 2	0.0°C
Package 3	-2.7°C

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A613037	Turbidity	2022/06/17			102	80 - 120	<0.10	NTU	14	20
A613603	Total Suspended Solids	2022/06/17	116	80 - 120	103	80 - 120	<0.97	mg/L	15	20
A614484	Alkalinity (PP as CaCO3)	2022/06/18					<1.0	mg/L	NC	20
A614484	Alkalinity (Total as CaCO3)	2022/06/18			94	80 - 120	<1.0	mg/L	1.1	20
A614484	Bicarbonate (HCO3)	2022/06/18					<1.0	mg/L	1.1	20
A614484	Carbonate (CO3)	2022/06/18					<1.0	mg/L	NC	20
A614484	Hydroxide (OH)	2022/06/18					<1.0	mg/L	NC	20
A614485	pH	2022/06/18			100	97 - 103			0.35	N/A
A614514	Dissolved Aluminum (Al)	2022/06/18	NC	80 - 120	95	80 - 120	<0.0030	mg/L	16	20
A614514	Dissolved Antimony (Sb)	2022/06/18	104	80 - 120	116	80 - 120	<0.00060	mg/L	NC	20
A614514	Dissolved Arsenic (As)	2022/06/18	93	80 - 120	104	80 - 120	<0.00020	mg/L	15	20
A614514	Dissolved Beryllium (Be)	2022/06/18	87	80 - 120	94	80 - 120	<0.0010	mg/L	NC	20
A614514	Dissolved Chromium (Cr)	2022/06/18	92	80 - 120	103	80 - 120	<0.0010	mg/L	NC	20
A614514	Dissolved Cobalt (Co)	2022/06/18	91	80 - 120	104	80 - 120	<0.00030	mg/L	7.9	20
A614514	Dissolved Copper (Cu)	2022/06/18	90	80 - 120	105	80 - 120	<0.0010	mg/L	4.6	20
A614514	Dissolved Lead (Pb)	2022/06/18	93	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
A614514	Dissolved Molybdenum (Mo)	2022/06/18	96	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
A614514	Dissolved Nickel (Ni)	2022/06/18	91	80 - 120	103	80 - 120	<0.00050	mg/L	8.1	20
A614514	Dissolved Selenium (Se)	2022/06/18	92	80 - 120	113	80 - 120	<0.00020	mg/L	2.8	20
A614514	Dissolved Silver (Ag)	2022/06/18	92	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
A614514	Dissolved Thallium (Tl)	2022/06/18	91	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
A614514	Dissolved Tin (Sn)	2022/06/18	97	80 - 120	103	80 - 120	<0.0010	mg/L	NC	20
A614514	Dissolved Titanium (Ti)	2022/06/18	94	80 - 120	106	80 - 120	<0.0010	mg/L	NC	20
A614514	Dissolved Uranium (U)	2022/06/18	100	80 - 120	103	80 - 120	<0.00010	mg/L	NC	20
A614514	Dissolved Vanadium (V)	2022/06/18	95	80 - 120	107	80 - 120	<0.0010	mg/L	NC	20
A614514	Dissolved Zinc (Zn)	2022/06/18	NC	80 - 120	108	80 - 120	<0.0030	mg/L	3.4	20
A614723	Dissolved Barium (Ba)	2022/06/18	98	80 - 120	98	80 - 120	<0.010	mg/L	NC	20
A614723	Dissolved Boron (B)	2022/06/18	103	80 - 120	99	80 - 120	<0.020	mg/L	2.5	20
A614723	Dissolved Calcium (Ca)	2022/06/18	99	80 - 120	98	80 - 120	<0.30	mg/L	0.29	20
A614723	Dissolved Iron (Fe)	2022/06/18	105	80 - 120	105	80 - 120	<0.060	mg/L	11	20
A614723	Dissolved Lithium (Li)	2022/06/18	99	80 - 120	98	80 - 120	<0.020	mg/L	NC	20
A614723	Dissolved Magnesium (Mg)	2022/06/18	99	80 - 120	98	80 - 120	<0.20	mg/L	1.2	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A614723	Dissolved Manganese (Mn)	2022/06/18	104	80 - 120	102	80 - 120	<0.0040	mg/L	NC	20
A614723	Dissolved Phosphorus (P)	2022/06/18	103	80 - 120	99	80 - 120	<0.10	mg/L	NC	20
A614723	Dissolved Potassium (K)	2022/06/18	100	80 - 120	99	80 - 120	<0.30	mg/L	0.21	20
A614723	Dissolved Silicon (Si)	2022/06/18	97	80 - 120	95	80 - 120	<0.10	mg/L	0.56	20
A614723	Dissolved Sodium (Na)	2022/06/18	92	80 - 120	97	80 - 120	<0.50	mg/L	0.037	20
A614723	Dissolved Strontium (Sr)	2022/06/18	97	80 - 120	96	80 - 120	<0.020	mg/L	0.39	20
A614723	Dissolved Sulphur (S)	2022/06/18	99	80 - 120	96	80 - 120	<0.20	mg/L	0.63	20
A615168	Dissolved Barium (Ba)	2022/06/19	94	80 - 120	99	80 - 120	<0.010	mg/L	3.0	20
A615168	Dissolved Boron (B)	2022/06/19	96	80 - 120	98	80 - 120	<0.020	mg/L	NC	20
A615168	Dissolved Calcium (Ca)	2022/06/19	94	80 - 120	99	80 - 120	<0.30	mg/L	2.0	20
A615168	Dissolved Iron (Fe)	2022/06/19	102	80 - 120	106	80 - 120	<0.060	mg/L	2.0	20
A615168	Dissolved Lithium (Li)	2022/06/19	95	80 - 120	99	80 - 120	<0.020	mg/L	NC	20
A615168	Dissolved Magnesium (Mg)	2022/06/19	96	80 - 120	99	80 - 120	<0.20	mg/L	1.6	20
A615168	Dissolved Manganese (Mn)	2022/06/19	99	80 - 120	103	80 - 120	<0.0040	mg/L	1.6	20
A615168	Dissolved Phosphorus (P)	2022/06/19	100	80 - 120	102	80 - 120	<0.10	mg/L	NC	20
A615168	Dissolved Potassium (K)	2022/06/19	96	80 - 120	99	80 - 120	<0.30	mg/L	2.9	20
A615168	Dissolved Silicon (Si)	2022/06/19	90	80 - 120	94	80 - 120	<0.10	mg/L	0.17	20
A615168	Dissolved Sodium (Na)	2022/06/19	95	80 - 120	98	80 - 120	<0.50	mg/L	2.0	20
A615168	Dissolved Strontium (Sr)	2022/06/19	93	80 - 120	97	80 - 120	<0.020	mg/L	1.7	20
A615168	Dissolved Sulphur (S)	2022/06/19	101	80 - 120	96	80 - 120	<0.20	mg/L	2.9	20
A615527	Total Aluminum (Al)	2022/06/21	105	80 - 120	97	80 - 120	<0.0030	mg/L	0.081	20
A615527	Total Antimony (Sb)	2022/06/21	105	80 - 120	105	80 - 120	<0.00060	mg/L	NC	20
A615527	Total Arsenic (As)	2022/06/21	103	80 - 120	103	80 - 120	<0.00020	mg/L	6.9	20
A615527	Total Beryllium (Be)	2022/06/21	104	80 - 120	103	80 - 120	<0.0010	mg/L	NC	20
A615527	Total Chromium (Cr)	2022/06/21	104	80 - 120	107	80 - 120	<0.0010	mg/L	NC	20
A615527	Total Cobalt (Co)	2022/06/21	104	80 - 120	106	80 - 120	<0.00030	mg/L	NC	20
A615527	Total Copper (Cu)	2022/06/21	104	80 - 120	107	80 - 120	<0.0010	mg/L	NC	20
A615527	Total Lead (Pb)	2022/06/21	97	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
A615527	Total Molybdenum (Mo)	2022/06/21	106	80 - 120	103	80 - 120	<0.00020	mg/L	2.5	20
A615527	Total Nickel (Ni)	2022/06/21	103	80 - 120	105	80 - 120	<0.00050	mg/L	7.9	20
A615527	Total Selenium (Se)	2022/06/21	112	80 - 120	113	80 - 120	<0.00020	mg/L	7.4	20
A615527	Total Silver (Ag)	2022/06/21	103	80 - 120	103	80 - 120	<0.00010	mg/L	NC	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A615527	Total Thallium (Tl)	2022/06/21	98	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
A615527	Total Tin (Sn)	2022/06/21	104	80 - 120	101	80 - 120	<0.0010	mg/L	NC	20
A615527	Total Titanium (Ti)	2022/06/21	105	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20
A615527	Total Uranium (U)	2022/06/21	105	80 - 120	104	80 - 120	<0.00010	mg/L	NC	20
A615527	Total Vanadium (V)	2022/06/21	105	80 - 120	106	80 - 120	<0.0010	mg/L	2.9	20
A615527	Total Zinc (Zn)	2022/06/21	103	80 - 120	107	80 - 120	<0.0030	mg/L	NC	20
A615538	Total Barium (Ba)	2022/06/21	98	80 - 120	99	80 - 120	<0.010	mg/L	0.14	20
A615538	Total Boron (B)	2022/06/21	98	80 - 120	97	80 - 120	<0.020	mg/L	0.55	20
A615538	Total Calcium (Ca)	2022/06/21	95	80 - 120	96	80 - 120	<0.30	mg/L	0.29	20
A615538	Total Iron (Fe)	2022/06/21	106	80 - 120	105	80 - 120	<0.060	mg/L	NC	20
A615538	Total Lithium (Li)	2022/06/21	99	80 - 120	99	80 - 120	<0.020	mg/L	NC	20
A615538	Total Magnesium (Mg)	2022/06/21	98	80 - 120	98	80 - 120	<0.20	mg/L	0.34	20
A615538	Total Manganese (Mn)	2022/06/21	101	80 - 120	101	80 - 120	<0.0040	mg/L	3.5	20
A615538	Total Phosphorus (P)	2022/06/21	93	80 - 120	93	80 - 120	<0.10	mg/L	NC	20
A615538	Total Potassium (K)	2022/06/21	98	80 - 120	98	80 - 120	<0.30	mg/L	0.98	20
A615538	Total Silicon (Si)	2022/06/21	100	80 - 120	100	80 - 120	<0.10	mg/L	0.12	20
A615538	Total Sodium (Na)	2022/06/21	95	80 - 120	96	80 - 120	<0.50	mg/L	0.11	20
A615538	Total Strontium (Sr)	2022/06/21	96	80 - 120	97	80 - 120	<0.020	mg/L	0.77	20
A615538	Total Sulphur (S)	2022/06/21	92	80 - 120	93	80 - 120	<0.20	mg/L	0.35	20
A615545	Total Aluminum (Al)	2022/06/23	NC	80 - 120	102	80 - 120	<0.0030	mg/L	3.5	20
A615545	Total Antimony (Sb)	2022/06/23	100	80 - 120	106	80 - 120	<0.00060	mg/L	NC	20
A615545	Total Arsenic (As)	2022/06/23	99	80 - 120	101	80 - 120	<0.00020	mg/L	1.1	20
A615545	Total Beryllium (Be)	2022/06/23	98	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
A615545	Total Chromium (Cr)	2022/06/23	100	80 - 120	102	80 - 120	<0.0010	mg/L	NC	20
A615545	Total Cobalt (Co)	2022/06/23	101	80 - 120	103	80 - 120	<0.00030	mg/L	NC	20
A615545	Total Copper (Cu)	2022/06/23	101	80 - 120	105	80 - 120	<0.0010	mg/L	NC	20
A615545	Total Lead (Pb)	2022/06/23	101	80 - 120	105	80 - 120	<0.00020	mg/L	12	20
A615545	Total Molybdenum (Mo)	2022/06/23	100	80 - 120	102	80 - 120	<0.00020	mg/L	14	20
A615545	Total Nickel (Ni)	2022/06/23	99	80 - 120	102	80 - 120	<0.00050	mg/L	7.8	20
A615545	Total Selenium (Se)	2022/06/23	100	80 - 120	107	80 - 120	<0.00020	mg/L	NC	20
A615545	Total Silver (Ag)	2022/06/23	101	80 - 120	103	80 - 120	<0.00010	mg/L	NC	20
A615545	Total Thallium (Tl)	2022/06/23	101	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20

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			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A615545	Total Tin (Sn)	2022/06/23	99	80 - 120	103	80 - 120	<0.0010	mg/L	NC	20
A615545	Total Titanium (Ti)	2022/06/23	92	80 - 120	102	80 - 120	<0.0010	mg/L	NC	20
A615545	Total Uranium (U)	2022/06/23	102	80 - 120	104	80 - 120	<0.00010	mg/L	NC	20
A615545	Total Vanadium (V)	2022/06/23	101	80 - 120	103	80 - 120	<0.0010	mg/L	NC	20
A615545	Total Zinc (Zn)	2022/06/23	102	80 - 120	104	80 - 120	<0.0030	mg/L	NC	20
A615637	Total Barium (Ba)	2022/06/22	100	80 - 120	99	80 - 120	<0.010	mg/L	0.92	20
A615637	Total Boron (B)	2022/06/22	101	80 - 120	101	80 - 120	<0.020	mg/L	0.56	20
A615637	Total Calcium (Ca)	2022/06/22	99	80 - 120	97	80 - 120	<0.30	mg/L	0.44	20
A615637	Total Iron (Fe)	2022/06/22	NC	80 - 120	105	80 - 120	<0.060	mg/L	5.3	20
A615637	Total Lithium (Li)	2022/06/22	97	80 - 120	96	80 - 120	<0.020	mg/L	8.1	20
A615637	Total Magnesium (Mg)	2022/06/22	104	80 - 120	103	80 - 120	<0.20	mg/L	1.1	20
A615637	Total Manganese (Mn)	2022/06/22	102	80 - 120	102	80 - 120	<0.0040	mg/L	1.2	20
A615637	Total Phosphorus (P)	2022/06/22	104	80 - 120	104	80 - 120	<0.10	mg/L	NC	20
A615637	Total Potassium (K)	2022/06/22	99	80 - 120	97	80 - 120	<0.30	mg/L	0.47	20
A615637	Total Silicon (Si)	2022/06/22	101	80 - 120	102	80 - 120	<0.10	mg/L	0.71	20
A615637	Total Sodium (Na)	2022/06/22	96	80 - 120	95	80 - 120	<0.50	mg/L	1.1	20
A615637	Total Strontium (Sr)	2022/06/22	99	80 - 120	97	80 - 120	<0.020	mg/L	0.75	20
A615637	Total Sulphur (S)	2022/06/22	102	80 - 120	102	80 - 120	<0.20	mg/L	1.1	20
A616248	Dissolved Aluminum (Al)	2022/06/20	NC	80 - 120	101	80 - 120	<0.0030	mg/L	3.1	20
A616248	Dissolved Antimony (Sb)	2022/06/20	109	80 - 120	105	80 - 120	<0.00060	mg/L	7.3	20
A616248	Dissolved Arsenic (As)	2022/06/20	98	80 - 120	95	80 - 120	<0.00020	mg/L	4.0	20
A616248	Dissolved Beryllium (Be)	2022/06/20	105	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20
A616248	Dissolved Chromium (Cr)	2022/06/20	97	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20
A616248	Dissolved Cobalt (Co)	2022/06/20	97	80 - 120	98	80 - 120	<0.00030	mg/L	2.3	20
A616248	Dissolved Copper (Cu)	2022/06/20	95	80 - 120	97	80 - 120	<0.0010	mg/L	1.4	20
A616248	Dissolved Lead (Pb)	2022/06/20	95	80 - 120	94	80 - 120	<0.00020	mg/L	NC	20
A616248	Dissolved Molybdenum (Mo)	2022/06/20	105	80 - 120	101	80 - 120	<0.00020	mg/L	1.2	20
A616248	Dissolved Nickel (Ni)	2022/06/20	97	80 - 120	95	80 - 120	<0.00050	mg/L	2.5	20
A616248	Dissolved Selenium (Se)	2022/06/20	101	80 - 120	102	80 - 120	<0.00020	mg/L	9.3	20
A616248	Dissolved Silver (Ag)	2022/06/20	100	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
A616248	Dissolved Thallium (Tl)	2022/06/20	94	80 - 120	92	80 - 120	<0.00020	mg/L	NC	20
A616248	Dissolved Tin (Sn)	2022/06/20	107	80 - 120	101	80 - 120	<0.0010	mg/L	NC	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A616248	Dissolved Titanium (Ti)	2022/06/20	101	80 - 120	101	80 - 120	<0.0010	mg/L	3.0	20
A616248	Dissolved Uranium (U)	2022/06/20	98	80 - 120	95	80 - 120	<0.00010	mg/L	2.0	20
A616248	Dissolved Vanadium (V)	2022/06/20	101	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
A616248	Dissolved Zinc (Zn)	2022/06/20	101	80 - 120	98	80 - 120	<0.0030	mg/L	8.9	20
A616317	Dissolved Aluminum (Al)	2022/06/21	105	80 - 120	110	80 - 120	<0.0030	mg/L	NC	20
A616317	Dissolved Antimony (Sb)	2022/06/21	96	80 - 120	98	80 - 120	<0.00060	mg/L	NC	20
A616317	Dissolved Arsenic (As)	2022/06/21	86	80 - 120	91	80 - 120	<0.00020	mg/L	0.95	20
A616317	Dissolved Beryllium (Be)	2022/06/21	97	80 - 120	99	80 - 120	<0.0010	mg/L	NC	20
A616317	Dissolved Chromium (Cr)	2022/06/21	92	80 - 120	94	80 - 120	<0.0010	mg/L	NC	20
A616317	Dissolved Cobalt (Co)	2022/06/21	92	80 - 120	94	80 - 120	<0.00030	mg/L	NC	20
A616317	Dissolved Copper (Cu)	2022/06/21	93	80 - 120	95	80 - 120	<0.0010	mg/L	NC	20
A616317	Dissolved Lead (Pb)	2022/06/21	92	80 - 120	95	80 - 120	<0.00020	mg/L	NC	20
A616317	Dissolved Molybdenum (Mo)	2022/06/21	96	80 - 120	98	80 - 120	<0.00020	mg/L	1.8	20
A616317	Dissolved Nickel (Ni)	2022/06/21	91	80 - 120	93	80 - 120	<0.00050	mg/L	NC	20
A616317	Dissolved Selenium (Se)	2022/06/21	95	80 - 120	92	80 - 120	<0.00020	mg/L	12	20
A616317	Dissolved Silver (Ag)	2022/06/21	98	80 - 120	97	80 - 120	<0.00010	mg/L	NC	20
A616317	Dissolved Thallium (Tl)	2022/06/21	93	80 - 120	94	80 - 120	<0.00020	mg/L	NC	20
A616317	Dissolved Tin (Sn)	2022/06/21	96	80 - 120	96	80 - 120	<0.0010	mg/L	NC	20
A616317	Dissolved Titanium (Ti)	2022/06/21	96	80 - 120	96	80 - 120	<0.0010	mg/L	NC	20
A616317	Dissolved Uranium (U)	2022/06/21	89	80 - 120	93	80 - 120	<0.00010	mg/L	1.8	20
A616317	Dissolved Vanadium (V)	2022/06/21	94	80 - 120	96	80 - 120	<0.0010	mg/L	2.2	20
A616317	Dissolved Zinc (Zn)	2022/06/21	91	80 - 120	92	80 - 120	<0.0030	mg/L	NC	20
A616578	Dissolved Barium (Ba)	2022/06/20	97	80 - 120	97	80 - 120	<0.010	mg/L		
A616578	Dissolved Boron (B)	2022/06/20	102	80 - 120	101	80 - 120	<0.020	mg/L		
A616578	Dissolved Calcium (Ca)	2022/06/20	96	80 - 120	96	80 - 120	<0.30	mg/L	0.70	20
A616578	Dissolved Iron (Fe)	2022/06/20	106	80 - 120	103	80 - 120	<0.060	mg/L	NC	20
A616578	Dissolved Lithium (Li)	2022/06/20	95	80 - 120	93	80 - 120	<0.020	mg/L		
A616578	Dissolved Magnesium (Mg)	2022/06/20	101	80 - 120	99	80 - 120	<0.20	mg/L	1.2	20
A616578	Dissolved Manganese (Mn)	2022/06/20	103	80 - 120	100	80 - 120	<0.0040	mg/L	2.5	20
A616578	Dissolved Phosphorus (P)	2022/06/20	108	80 - 120	104	80 - 120	<0.10	mg/L		
A616578	Dissolved Potassium (K)	2022/06/20	97	80 - 120	94	80 - 120	<0.30	mg/L	0.35	20
A616578	Dissolved Silicon (Si)	2022/06/20	99	80 - 120	99	80 - 120	<0.10	mg/L		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A616578	Dissolved Sodium (Na)	2022/06/20	90	80 - 120	94	80 - 120	<0.50	mg/L	1.0	20
A616578	Dissolved Strontium (Sr)	2022/06/20	96	80 - 120	96	80 - 120	<0.020	mg/L		
A616578	Dissolved Sulphur (S)	2022/06/20	NC	80 - 120	102	80 - 120	<0.20	mg/L		
A617023	Total Aluminum (Al)	2022/06/21	99	80 - 120	97	80 - 120	<0.0030	mg/L	2.4	20
A617023	Total Antimony (Sb)	2022/06/21	113	80 - 120	106	80 - 120	<0.00060	mg/L	NC	20
A617023	Total Arsenic (As)	2022/06/21	106	80 - 120	101	80 - 120	<0.00020	mg/L	15	20
A617023	Total Beryllium (Be)	2022/06/21	107	80 - 120	99	80 - 120	<0.0010	mg/L	NC	20
A617023	Total Chromium (Cr)	2022/06/21	107	80 - 120	101	80 - 120	<0.0010	mg/L	NC	20
A617023	Total Cobalt (Co)	2022/06/21	105	80 - 120	102	80 - 120	<0.00030	mg/L	NC	20
A617023	Total Copper (Cu)	2022/06/21	101	80 - 120	104	80 - 120	<0.0010	mg/L	5.7	20
A617023	Total Lead (Pb)	2022/06/21	101	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
A617023	Total Molybdenum (Mo)	2022/06/21	120	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
A617023	Total Nickel (Ni)	2022/06/21	102	80 - 120	102	80 - 120	<0.00050	mg/L	20	20
A617023	Total Selenium (Se)	2022/06/21	104	80 - 120	107	80 - 120	<0.00020	mg/L	NC	20
A617023	Total Silver (Ag)	2022/06/21	107	80 - 120	105	80 - 120	<0.00010	mg/L	NC	20
A617023	Total Thallium (Tl)	2022/06/21	101	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
A617023	Total Tin (Sn)	2022/06/21	115	80 - 120	106	80 - 120	<0.0010	mg/L	NC	20
A617023	Total Titanium (Ti)	2022/06/21	113	80 - 120	102	80 - 120	<0.0010	mg/L	NC	20
A617023	Total Uranium (U)	2022/06/21	109	80 - 120	103	80 - 120	<0.00010	mg/L	NC	20
A617023	Total Vanadium (V)	2022/06/21	112	80 - 120	102	80 - 120	<0.0010	mg/L	NC	20
A617023	Total Zinc (Zn)	2022/06/21	102	80 - 120	102	80 - 120	<0.0030	mg/L	4.2	20
A617090	Total Barium (Ba)	2022/06/21	98	80 - 120	100	80 - 120	<0.010	mg/L	0	20
A617090	Total Boron (B)	2022/06/21	98	80 - 120	100	80 - 120	<0.020	mg/L	NC	20
A617090	Total Calcium (Ca)	2022/06/21	98	80 - 120	97	80 - 120	<0.30	mg/L	3.0	20
A617090	Total Iron (Fe)	2022/06/21	108	80 - 120	110	80 - 120	<0.060	mg/L	2.5	20
A617090	Total Lithium (Li)	2022/06/21	99	80 - 120	99	80 - 120	<0.020	mg/L	NC	20
A617090	Total Magnesium (Mg)	2022/06/21	100	80 - 120	100	80 - 120	<0.20	mg/L	3.8	20
A617090	Total Manganese (Mn)	2022/06/21	103	80 - 120	103	80 - 120	<0.0040	mg/L	2.4	20
A617090	Total Phosphorus (P)	2022/06/21	93	80 - 120	95	80 - 120	<0.10	mg/L	NC	20
A617090	Total Potassium (K)	2022/06/21	99	80 - 120	100	80 - 120	<0.30	mg/L	0.95	20
A617090	Total Silicon (Si)	2022/06/21	100	80 - 120	102	80 - 120	<0.10	mg/L	2.3	20
A617090	Total Sodium (Na)	2022/06/21	97	80 - 120	97	80 - 120	<0.50	mg/L	1.4	20

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			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A617090	Total Strontium (Sr)	2022/06/21	96	80 - 120	99	80 - 120	<0.020	mg/L	1.8	20
A617090	Total Sulphur (S)	2022/06/21	96	80 - 120	96	80 - 120	<0.20	mg/L	2.4	20

N/A = Not Applicable

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

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

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

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

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

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

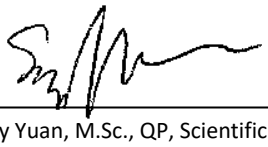
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VALIDATION SIGNATURE PAGE

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



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



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

Bureau Veritas Proprietary Software
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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvna.com

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#7500 KGS Group	Company Name:	KGS Group.	Quotation #:	C20090	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Ganga Atmuri/Ed Collins	P.O. #:			665919
Address:	3rd Floor 865 Waverly St Winnipeg MB R3T 5T4	Address:	865 Waverley St. - 3rd Floor Winnipeg, MB R3T 5P4	Project:	21-1357-005	COC #:	Project Manager:
Tel:	(204) 896-1209 Fax:	Tel:	(204) 896-1209 Fax:	Project Name:		C#665919-03-01	Janelle Kochan
Email:	payables@kgsgroup.com	Email:	gatmuri@kgsgroup.com,ecollins@kgsgroup.com	Site #:	OAM - Sherridon Mine Site		
				Sampled By:	AL/ZM		

Regulatory Criteria:
- [ ] ATI
- [ ] CCME
- [X] Other MWQSOG.

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: [X]
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission)
Date Required: _____ [ ]
Rush Confirmation Number: _____ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	pH @25°C	Alkalinity @25C (pp, total), CO3,HCO3,OH	Total Suspended Solids (NFR)	Turbidity	Regulated Metals (CCME/AT1) - Total	Reg. Metals (CCME/AT1) – Diss. Lab Filt.	Hardness	Hardness Total (calculated as CaCO3)			# of Bottles	Comments
1		SC-1	11:05	June 14,202	SW	N	X	X	X	X	X	X	X	X			4	
2		TRIP BLANK	—			N	X	X	X	X	X	X	X	X			4	
3		SB-1	9:45			N	X	X	X	X	X	X	X	X			4	
4		SB-2	9:35			N	X	X	X	X	X	X	X	X			4	
5		CB-1	9:50			N	X	X	X	X	X	X	X	X			4	
6		CB-2	9:55			N	X	X	X	X	X	X	X	X			4	
7		NB-1	10:35			N	X	X	X	X	X	X	X	X			4	
8		NB-2	10:25			N	X	X	X	X	X	X	X	X			4	
9		EB-1	10:00			N	X	X	X	X	X	X	X	X			4	
10		EB-2	10:10			N	X	X	X	X	X	X	X	X			4	

16-Jun-22 08:30
Janelle Kochan
C242124
CGE INS-0105

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Ainsleigh Loria Ainsleigh Loria	22/06/15	11:22	Ashton Raitt AR	2022/06/15	11:55		[ ]	7.5/6.9/7.4	[ ] Yes [ ] No
			Anjum Cwermail	2022/06/16	08:30				

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.
** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

White: Bureau Veritas Yellow: Client

ICE-YES
See Actr

Bureau Veritas Canada (2019) Inc.

Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvna.com

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#7500 KGS Group	Company Name:	KGS Group.	Quotation #:	C20090	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Ganga Atmuri/Ed Collins	P.O. #:			665919
Address:	3rd Floor 865 Waverly St Winnipeg MB R3T 5T4	Address:	865 Waverley St - 3rd Floor Winnipeg, MB R3T 5P4	Project:	21-1357-005	COC #:	Project Manager:
Tel:	(204) 896-1209 Fax:	Tel:	(204) 896-1209 Fax:	Project Name:		C#665919-02-01	Janelle Kochan
Email:	payables@kgsgroup.com	Email:	gatmuri@kgsgroup.com,ecollins@kgsgroup.com	Site #:	OAM - Sherridon Mine Site		
				Sampled By:	AL/EM		

Regulatory Criteria:
- [ ] ATI
- [ ] CCME
- [x] Other MWQSOG.

Special Instructions:

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: [x]
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission) [ ]
Date Required:
Rush Confirmation Number:
(call lab for #)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	pH @25°C	Alkalinity @25C (pp, total), CO3,HCO3,OH	Total Suspended Solids (NFR)	Turbidity	Regulated Metals (CCME/AT1) - Total	Reg. Metals (CCME/AT1) – Diss. Lab Filt.	Hardness	Hardness Total (calculated as CaCO3)			# of Bottles	Comments
1		CAMP LAKE DISCHARGE.	June 14, 2022	10:40	SW	N											4	
2		CL-2		9:10		N											4	
3		CL-3		8:55		N											4	
4		CL-4		8:35		N											4	
5		CL-5		9:20		N											4	
6		CL-6		8:10		N											4	
7		CL-7		9:00		N											4	
8		CL-8		8:45		N											4	
9		SW-107		15:00		N											4	
10		SW-113		14:00		N											4	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only		
							Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Ainsleigh Lorica Adonica	22/06/15	11:22	Ashton Raitt HK	2022/06/15	11:55		[ ]	9.3/4.0/6.8	[ ] Yes [ ] No
			Allyson Livermore	2022/06/16	08:30				

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.
** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

White: Bureau Veritas Yellow: Client

ICE-YES
See Attd

Bureau Veritas Canada (2019) Inc.

Your Project #: 21-1357-005
Site#: OAM - Sherridon Mine Site
Your C.O.C. #: 667282-02-01, 667282-01-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/07/12
Report #: R3198909
Version: 2 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C246493
Received: 2022/06/29, 12:30

Sample Matrix: Water
Samples Received: 20

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH (1)	18	N/A	2022/07/04	AB SOP-00005	SM 23 2320 B m
Alkalinity @25C (pp, total), CO3,HCO3,OH (1)	2	N/A	2022/07/05	AB SOP-00005	SM 23 2320 B m
Cadmium - low level CCME - Dissolved (1)	20	N/A	2022/07/06		Auto Calc
Cadmium - low level CCME (Total) (1)	4	N/A	2022/07/06		Auto Calc
Cadmium - low level CCME (Total) (1)	16	N/A	2022/07/07		Auto Calc
Hardness (1)	19	N/A	2022/07/05		Auto Calc
Hardness (1)	1	N/A	2022/07/06		Auto Calc
Hardness Total (calculated as CaCO3) (1, 2)	4	N/A	2022/07/07	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3) (1, 2)	12	N/A	2022/07/08	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3) (1, 2)	4	N/A	2022/07/12	BBY WI-00033	Auto Calc
Elements by ICP-Dissolved-Lab Filtered (1, 3)	9	N/A	2022/07/04	AB SOP-00042	EPA 6010d R5 m
Elements by ICP-Dissolved-Lab Filtered (1, 3)	1	N/A	2022/07/05	AB SOP-00042	EPA 6010d R5 m
Elements by ICP-Dissolved-Lab Filtered (1, 3)	10	N/A	2022/07/06	AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Total (1)	10	2022/07/05	2022/07/05	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Total (1)	3	2022/07/05	2022/07/06	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Total (1)	4	2022/07/05	2022/07/07	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Total (1)	2	2022/07/05	2022/07/08	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Total (1)	1	2022/07/06	2022/07/07	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Elements by ICPMS-Dissolved-Lab Filtered (1, 4)	4	N/A	2022/07/05	AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS-Dissolved-Lab Filtered (1, 4)	16	N/A	2022/07/06	AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total (1)	13	2022/07/05	2022/07/06	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total (1)	5	2022/07/05	2022/07/07	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total (1)	1	2022/07/06	2022/07/07	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m

Your Project #: 21-1357-005
Site#: OAM - Sherridon Mine Site
Your C.O.C. #: 667282-02-01, 667282-01-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/07/12
Report #: R3198909
Version: 2 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C246493
Received: 2022/06/29, 12:30

Sample Matrix: Water
Samples Received: 20

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Elements by ICPMS - Total (1)	1	2022/07/11	2022/07/11	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
pH @25°C (1, 5)	18	N/A	2022/07/04	AB SOP-00005	SM 23 4500-H+B m
pH @25°C (1, 5)	2	N/A	2022/07/05	AB SOP-00005	SM 23 4500-H+B m
Total Suspended Solids (NFR) (1)	20	2022/07/05	2022/07/05	AB SOP-00061	SM 23 2540 D m
Turbidity (1)	20	N/A	2022/06/30	CAL SOP-00081	SM 23 2130 B m

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8
(2) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(3) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(4) Samples were filtered and preserved at the lab. Values may not reflect concentrations at the time of sampling. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

Your Project #: 21-1357-005
Site#: OAM - Sherridon Mine Site
Your C.O.C. #: 667282-02-01, 667282-01-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/07/12
Report #: R3198909
Version: 2 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C246493

Received: 2022/06/29, 12:30

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

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Janelle Kochan, B.Sc., Key Account Specialist
Email: Janelle.KOCHAN@bureauveritas.com
Phone# (204)259-0231

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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Job #: C246493
Report Date: 2022/07/12

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AWF477	AWF478		AWF479		AWF480		
Sampling Date		2022/06/28 10:45	2022/06/28 09:15		2022/06/28 08:55		2022/06/28 08:35		
COC Number		667282-02-01	667282-02-01		667282-02-01		667282-02-01		
	UNITS	CAMP LAKE DISCHARGE	CL-2	QC Batch	CL-3	QC Batch	CL-4	RDL	QC Batch
Elements									
Dissolved Cadmium (Cd)	ug/L	0.73	0.096	A629055	0.13	A629055	0.083	0.020	A629055
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	0.058	0.039	A631277	0.035	A631277	0.035	0.0030	A631277
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	A631277	<0.00060	A631277	<0.00060	0.00060	A631277
Dissolved Arsenic (As)	mg/L	0.00033	0.00038	A631277	0.00036	A631277	0.00045	0.00020	A631277
Dissolved Barium (Ba)	mg/L	<0.010	<0.010	A631324	<0.010	A631326	<0.010	0.010	A631324
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	A631277	<0.0010	A631277	<0.0010	0.0010	A631277
Dissolved Boron (B)	mg/L	<0.020	<0.020	A631324	<0.020	A631326	0.025	0.020	A631324
Dissolved Calcium (Ca)	mg/L	34	15	A631324	15	A631326	14	0.30	A631324
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010	A631277	<0.0010	A631277	<0.0010	0.0010	A631277
Dissolved Cobalt (Co)	mg/L	0.00055	<0.00030	A631277	<0.00030	A631277	<0.00030	0.00030	A631277
Dissolved Copper (Cu)	mg/L	0.028	0.0090	A631277	0.0099	A631277	0.0079	0.0010	A631277
Dissolved Iron (Fe)	mg/L	2.7	0.47	A631324	0.38	A631326	0.49	0.060	A631324
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	A631277	<0.00020	A631277	<0.00020	0.00020	A631277
Dissolved Lithium (Li)	mg/L	<0.020	<0.020	A631324	<0.020	A631326	<0.020	0.020	A631324
Dissolved Magnesium (Mg)	mg/L	6.1	3.6	A631324	3.6	A631326	3.5	0.20	A631324
Dissolved Manganese (Mn)	mg/L	0.092	<0.0040	A631324	<0.0040	A631326	0.0054	0.0040	A631324
Dissolved Molybdenum (Mo)	mg/L	<0.00020	<0.00020	A631277	<0.00020	A631277	<0.00020	0.00020	A631277
Dissolved Nickel (Ni)	mg/L	0.0017	0.00079	A631277	0.00079	A631277	0.0011	0.00050	A631277
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	A631324	<0.10	A631326	<0.10	0.10	A631324
Dissolved Potassium (K)	mg/L	2.7	1.6	A631324	1.6	A631326	1.6	0.30	A631324
Dissolved Selenium (Se)	mg/L	<0.00020	<0.00020	A631277	<0.00020	A631277	<0.00020	0.00020	A631277
Dissolved Silicon (Si)	mg/L	1.7	1.3	A631324	1.2	A631326	1.2	0.10	A631324
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	A631277	<0.00010	A631277	<0.00010	0.00010	A631277
Dissolved Sodium (Na)	mg/L	2.3	2.0	A631324	1.9	A631326	2.0	0.50	A631324
Dissolved Strontium (Sr)	mg/L	0.036	0.026	A631324	0.025	A631326	0.026	0.020	A631324
Dissolved Sulphur (S)	mg/L	35	9.2	A631324	9.7	A631326	8.0	0.20	A631324
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	A631277	<0.00020	A631277	<0.00020	0.00020	A631277
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	A631277	<0.0010	A631277	<0.0010	0.0010	A631277
Dissolved Titanium (Ti)	mg/L	<0.0010	<0.0010	A631277	<0.0010	A631277	<0.0010	0.0010	A631277
Dissolved Uranium (U)	mg/L	<0.00010	<0.00010	A631277	<0.00010	A631277	<0.00010	0.00010	A631277

RDL = Reportable Detection Limit

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AWF477	AWF478		AWF479		AWF480		
Sampling Date		2022/06/28 10:45	2022/06/28 09:15		2022/06/28 08:55		2022/06/28 08:35		
COC Number		667282-02-01	667282-02-01		667282-02-01		667282-02-01		
	UNITS	**CAMP LAKE DISCHARGE**	**CL-2**	**QC Batch**	**CL-3**	**QC Batch**	**CL-4**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	A631277	<0.0010	A631277	<0.0010	0.0010	A631277
Dissolved Zinc (Zn)	mg/L	0.23	0.047	A631277	0.053	A631277	0.040	0.0030	A631277
RDL = Reportable Detection Limit									

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AWF481		AWF482		AWF483		AWF484		
Sampling Date		2022/06/28 08:25		2022/06/28 08:10		2022/06/28 09:00		2022/06/28 08:45		
COC Number		667282-02-01		667282-02-01		667282-02-01		667282-02-01		
	UNITS	CL-5	QC Batch	CL-6	QC Batch	CL-7	QC Batch	CL-8	RDL	QC Batch
Elements										
Dissolved Cadmium (Cd)	ug/L	0.082	A629055	0.074	A629055	0.15	A629055	0.12	0.020	A629055
Lab Filtered Elements										
Dissolved Aluminum (Al)	mg/L	0.032	A631277	0.033	A631277	0.039	A631277	0.041	0.0030	A637311
Dissolved Antimony (Sb)	mg/L	<0.00060	A631277	<0.00060	A631277	<0.00060	A631277	<0.00060	0.00060	A631277
Dissolved Arsenic (As)	mg/L	0.00046	A631277	0.00045	A631277	0.00041	A631277	0.00043	0.00020	A631277
Dissolved Barium (Ba)	mg/L	<0.010	A631324	<0.010	A631326	<0.010	A631324	<0.010	0.010	A631585
Dissolved Beryllium (Be)	mg/L	<0.0010	A631277	<0.0010	A631277	<0.0010	A631277	<0.0010	0.0010	A631277
Dissolved Boron (B)	mg/L	0.020	A631324	<0.020	A631326	<0.020	A631324	<0.020	0.020	A631585
Dissolved Calcium (Ca)	mg/L	14	A631324	13	A631326	16	A631324	15	0.30	A631585
Dissolved Chromium (Cr)	mg/L	<0.0010	A631277	<0.0010	A631277	<0.0010	A631277	<0.0010	0.0010	A631277
Dissolved Cobalt (Co)	mg/L	<0.00030	A631277	<0.00030	A631277	<0.00030	A631277	<0.00030	0.00030	A631277
Dissolved Copper (Cu)	mg/L	0.0075	A631277	0.0066	A631277	0.010	A631277	0.0092	0.0010	A637311
Dissolved Iron (Fe)	mg/L	0.53	A631324	0.22	A631326	0.59	A631324	0.44	0.060	A631585
Dissolved Lead (Pb)	mg/L	<0.00020	A631277	<0.00020	A631277	<0.00020	A631277	<0.00020	0.00020	A631277
Dissolved Lithium (Li)	mg/L	<0.020	A631324	0.022	A631326	0.052	A631324	<0.020	0.020	A631585
Dissolved Magnesium (Mg)	mg/L	3.5	A631324	3.4	A631326	3.7	A631324	3.6	0.20	A631585
Dissolved Manganese (Mn)	mg/L	0.017	A631324	<0.0040	A631326	0.0043	A631324	<0.0040	0.0040	A631585
Dissolved Molybdenum (Mo)	mg/L	<0.00020	A631277	<0.00020	A631277	<0.00020	A631277	<0.00020	0.00020	A631277
Dissolved Nickel (Ni)	mg/L	0.00059	A631277	<0.00050	A631277	0.00075	A631277	0.00069	0.00050	A631277
Dissolved Phosphorus (P)	mg/L	<0.10	A631324	<0.10	A631326	<0.10	A631324	<0.10	0.10	A631585
Dissolved Potassium (K)	mg/L	1.6	A631324	1.6	A631326	1.8	A631324	1.7	0.30	A631585
Dissolved Selenium (Se)	mg/L	<0.00020	A631277	<0.00020	A631277	<0.00020	A631277	<0.00020	0.00020	A631277
Dissolved Silicon (Si)	mg/L	1.3	A631324	1.2	A631326	1.2	A631324	1.2	0.10	A631585
Dissolved Silver (Ag)	mg/L	<0.00010	A631277	<0.00010	A631277	<0.00010	A631277	<0.00010	0.00010	A631277
Dissolved Sodium (Na)	mg/L	2.0	A631324	2.1	A631326	2.0	A631324	2.0	0.50	A631585
Dissolved Strontium (Sr)	mg/L	0.025	A631324	0.025	A631326	0.026	A631324	0.026	0.020	A631585
Dissolved Sulphur (S)	mg/L	8.0	A631324	6.9	A631326	10	A631324	9.2	0.20	A631585
Dissolved Thallium (Tl)	mg/L	<0.00020	A631277	<0.00020	A631277	<0.00020	A631277	<0.00020	0.00020	A631277
Dissolved Tin (Sn)	mg/L	<0.0010	A631277	<0.0010	A631277	<0.0010	A631277	<0.0010	0.0010	A631277
Dissolved Titanium (Ti)	mg/L	<0.0010	A631277	<0.0010	A631277	<0.0010	A631277	<0.0010	0.0010	A631277
Dissolved Uranium (U)	mg/L	<0.00010	A631277	<0.00010	A631277	<0.00010	A631277	<0.00010	0.00010	A631277

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AWF481		AWF482		AWF483		AWF484		
Sampling Date		2022/06/28 08:25		2022/06/28 08:10		2022/06/28 09:00		2022/06/28 08:45		
COC Number		667282-02-01		667282-02-01		667282-02-01		667282-02-01		
	UNITS	**CL-5**	**QC Batch**	**CL-6**	**QC Batch**	**CL-7**	**QC Batch**	**CL-8**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	A631277	<0.0010	A631277	<0.0010	A631277	<0.0010	0.0010	A631277
Dissolved Zinc (Zn)	mg/L	0.038	A631277	0.036	A631277	0.059	A631277	0.046	0.0030	A637311
RDL = Reportable Detection Limit										

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AWF485	AWF486	AWF496		AWF497		
Sampling Date		2022/06/28 14:00	2022/06/28 13:00	2022/06/28 11:00		2022/06/28 11:00		
COC Number		667282-02-01	667282-02-01	667282-01-01		667282-01-01		
	UNITS	SW-105	SW-114	SC-1	QC Batch	TRIP BLANK	RDL	QC Batch
Elements								
Dissolved Cadmium (Cd)	ug/L	0.66	0.077	0.12	A629055	<0.020	0.020	A629055
Lab Filtered Elements								
Dissolved Aluminum (Al)	mg/L	0.057	0.037	0.035	A631277	<0.0030	0.0030	A631277
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	A631277	<0.00060	0.00060	A631277
Dissolved Arsenic (As)	mg/L	0.00026	0.00035	0.00037	A631277	<0.00020	0.00020	A631277
Dissolved Barium (Ba)	mg/L	<0.010	<0.010	<0.010	A631324	<0.010	0.010	A631598
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	A631277	<0.0010	0.0010	A631277
Dissolved Boron (B)	mg/L	<0.020	<0.020	0.046	A631324	<0.020	0.020	A631598
Dissolved Calcium (Ca)	mg/L	31	14	7.8	A631324	<0.30	0.30	A631598
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010	<0.0010	A631277	<0.0010	0.0010	A631277
Dissolved Cobalt (Co)	mg/L	0.00049	<0.00030	<0.00030	A631277	<0.00030	0.00030	A631277
Dissolved Copper (Cu)	mg/L	0.026	0.0071	0.0066	A631277	<0.0010	0.0010	A631277
Dissolved Iron (Fe)	mg/L	2.4	0.57	0.18	A631324	<0.060	0.060	A631598
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	<0.00020	A631277	<0.00020	0.00020	A631277
Dissolved Lithium (Li)	mg/L	<0.020	<0.020	<0.020	A631324	<0.020	0.020	A631598
Dissolved Magnesium (Mg)	mg/L	5.8	3.5	2.5	A631324	<0.20	0.20	A631598
Dissolved Manganese (Mn)	mg/L	0.079	0.016	0.0090	A631324	<0.0040	0.0040	A631598
Dissolved Molybdenum (Mo)	mg/L	<0.00020	<0.00020	<0.00020	A631277	<0.00020	0.00020	A631277
Dissolved Nickel (Ni)	mg/L	0.0017	0.00060	0.00055	A631277	<0.00050	0.00050	A631277
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	A631324	<0.10	0.10	A631598
Dissolved Potassium (K)	mg/L	2.6	1.6	1.2	A631324	<0.30	0.30	A631598
Dissolved Selenium (Se)	mg/L	<0.00020	<0.00020	<0.00020	A631277	<0.00020	0.00020	A631277
Dissolved Silicon (Si)	mg/L	1.6	1.3	1.5	A631324	<0.10	0.10	A631598
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	A631277	<0.00010	0.00010	A631277
Dissolved Sodium (Na)	mg/L	2.3	2.0	2.1	A631324	<0.50	0.50	A631598
Dissolved Strontium (Sr)	mg/L	0.035	0.026	<0.020	A631324	<0.020	0.020	A631598
Dissolved Sulphur (S)	mg/L	29	7.7	1.5	A631324	<0.20	0.20	A631598
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	A631277	<0.00020	0.00020	A631277
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	A631277	<0.0010	0.0010	A631277
Dissolved Titanium (Ti)	mg/L	<0.0010	<0.0010	<0.0010	A631277	<0.0010	0.0010	A631277
Dissolved Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	A631277	<0.00010	0.00010	A631277

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AWF485	AWF486	AWF496		AWF497		
Sampling Date		2022/06/28 14:00	2022/06/28 13:00	2022/06/28 11:00		2022/06/28 11:00		
COC Number		667282-02-01	667282-02-01	667282-01-01		667282-01-01		
	UNITS	**SW-105**	**SW-114**	**SC-1**	**QC Batch**	**TRIP BLANK**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	<0.0010	A631277	<0.0010	0.0010	A631277
Dissolved Zinc (Zn)	mg/L	0.20	0.037	0.041	A631277	<0.0030	0.0030	A631277
RDL = Reportable Detection Limit								

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AWF497			AWF498			AWF498		
Sampling Date		2022/06/28 11:00			2022/06/28 09:55			2022/06/28 09:55		
COC Number		667282-01-01			667282-01-01			667282-01-01		
	UNITS	TRIP BLANK Lab-Dup	RDL	QC Batch	SB-1	RDL	QC Batch	SB-1 Lab-Dup	RDL	QC Batch
Elements										
Dissolved Cadmium (Cd)	ug/L				0.60	0.020	A629055			
Lab Filtered Elements										
Dissolved Aluminum (Al)	mg/L	<0.0030	0.0030	A631277	0.054	0.0030	A631277			
Dissolved Antimony (Sb)	mg/L	<0.00060	0.00060	A631277	<0.00060	0.00060	A631277			
Dissolved Arsenic (As)	mg/L	<0.00020	0.00020	A631277	0.00034	0.00020	A631277			
Dissolved Barium (Ba)	mg/L				0.014	0.010	A631326	<0.010	0.010	A631326
Dissolved Beryllium (Be)	mg/L	<0.0010	0.0010	A631277	<0.0010	0.0010	A631277			
Dissolved Boron (B)	mg/L				<0.020	0.020	A631326	<0.020	0.020	A631326
Dissolved Calcium (Ca)	mg/L				28	0.30	A631326	28	0.30	A631326
Dissolved Chromium (Cr)	mg/L	<0.0010	0.0010	A631277	<0.0010	0.0010	A631277			
Dissolved Cobalt (Co)	mg/L	<0.00030	0.00030	A631277	0.00034	0.00030	A631277			
Dissolved Copper (Cu)	mg/L	<0.0010	0.0010	A631277	0.024	0.0010	A631277			
Dissolved Iron (Fe)	mg/L				1.7	0.060	A631326	1.8	0.060	A631326
Dissolved Lead (Pb)	mg/L	<0.00020	0.00020	A631277	<0.00020	0.00020	A631277			
Dissolved Lithium (Li)	mg/L				0.025	0.020	A631326	<0.020	0.020	A631326
Dissolved Magnesium (Mg)	mg/L				5.5	0.20	A631326	5.4	0.20	A631326
Dissolved Manganese (Mn)	mg/L				0.073	0.0040	A631326	0.072	0.0040	A631326
Dissolved Molybdenum (Mo)	mg/L	<0.00020	0.00020	A631277	<0.00020	0.00020	A631277			
Dissolved Nickel (Ni)	mg/L	<0.00050	0.00050	A631277	0.0015	0.00050	A631277			
Dissolved Phosphorus (P)	mg/L				<0.10	0.10	A631326	<0.10	0.10	A631326
Dissolved Potassium (K)	mg/L				2.6	0.30	A631326	2.4	0.30	A631326
Dissolved Selenium (Se)	mg/L	<0.00020	0.00020	A631277	<0.00020	0.00020	A631277			
Dissolved Silicon (Si)	mg/L				1.7	0.10	A631326	1.7	0.10	A631326
Dissolved Silver (Ag)	mg/L	<0.00010	0.00010	A631277	<0.00010	0.00010	A631277			
Dissolved Sodium (Na)	mg/L				2.4	0.50	A631326	2.2	0.50	A631326
Dissolved Strontium (Sr)	mg/L				0.036	0.020	A631326	0.033	0.020	A631326
Dissolved Sulphur (S)	mg/L				26	0.20	A631326	26	0.20	A631326
Dissolved Thallium (Tl)	mg/L	<0.00020	0.00020	A631277	<0.00020	0.00020	A631277			
Dissolved Tin (Sn)	mg/L	<0.0010	0.0010	A631277	<0.0010	0.0010	A631277			
Dissolved Titanium (Ti)	mg/L	<0.0010	0.0010	A631277	<0.0010	0.0010	A631277			
Dissolved Uranium (U)	mg/L	<0.00010	0.00010	A631277	<0.00010	0.00010	A631277			

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AWF497			AWF498			AWF498		
Sampling Date		2022/06/28 11:00			2022/06/28 09:55			2022/06/28 09:55		
COC Number		667282-01-01			667282-01-01			667282-01-01		
	UNITS	**TRIP BLANK Lab-Dup**	**RDL**	**QC Batch**	**SB-1**	**RDL**	**QC Batch**	**SB-1 Lab-Dup**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	0.0010	A631277	<0.0010	0.0010	A631277			
Dissolved Zinc (Zn)	mg/L	<0.0030	0.0030	A631277	0.18	0.0030	A631277			

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AWF499	AWF500	AWF501	AWF502	AWF503		
Sampling Date		2022/06/28 09:45	2022/06/28 10:00	2022/06/28 10:05	2022/06/28 10:40	2022/06/28 10:30		
COC Number		667282-01-01	667282-01-01	667282-01-01	667282-01-01	667282-01-01		
	UNITS	SB-2	CB-1	CB-2	NB-1	NB-2	RDL	QC Batch
Elements								
Dissolved Cadmium (Cd)	ug/L	0.53	0.60	0.67	0.70	0.72	0.020	A629055
Lab Filtered Elements								
Dissolved Aluminum (Al)	mg/L	0.049	0.053	0.059	0.060	0.060	0.0030	A631277
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	0.00060	A631277
Dissolved Arsenic (As)	mg/L	0.00028	0.00025	0.00024	0.00030	0.00025	0.00020	A631277
Dissolved Barium (Ba)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	A631326
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A631277
Dissolved Boron (B)	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	A631326
Dissolved Calcium (Ca)	mg/L	26	29	31	35	34	0.30	A631326
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A631277
Dissolved Cobalt (Co)	mg/L	<0.00030	0.00035	0.00047	0.00057	0.00044	0.00030	A631277
Dissolved Copper (Cu)	mg/L	0.023	0.024	0.027	0.029	0.028	0.0010	A631277
Dissolved Iron (Fe)	mg/L	1.6	1.7	1.7	2.0	1.9	0.060	A631326
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A631277
Dissolved Lithium (Li)	mg/L	<0.020	<0.020	<0.020	0.020	<0.020	0.020	A631326
Dissolved Magnesium (Mg)	mg/L	5.1	5.5	5.9	6.1	6.1	0.20	A631326
Dissolved Manganese (Mn)	mg/L	0.064	0.074	0.079	0.093	0.087	0.0040	A631326
Dissolved Molybdenum (Mo)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A631277
Dissolved Nickel (Ni)	mg/L	0.0012	0.0014	0.0016	0.0019	0.0016	0.00050	A631277
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	A631326
Dissolved Potassium (K)	mg/L	2.3	2.6	2.6	2.7	2.6	0.30	A631326
Dissolved Selenium (Se)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A631277
Dissolved Silicon (Si)	mg/L	1.6	1.6	1.6	1.7	1.7	0.10	A631326
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A631277
Dissolved Sodium (Na)	mg/L	2.2	2.3	2.4	2.4	2.4	0.50	A631326
Dissolved Strontium (Sr)	mg/L	0.031	0.033	0.035	0.036	0.036	0.020	A631326
Dissolved Sulphur (S)	mg/L	24	27	29	35	34	0.20	A631326
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A631277
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A631277
Dissolved Titanium (Ti)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A631277
Dissolved Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A631277
RDL = Reportable Detection Limit								

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AWF499	AWF500	AWF501	AWF502	AWF503		
Sampling Date		2022/06/28 09:45	2022/06/28 10:00	2022/06/28 10:05	2022/06/28 10:40	2022/06/28 10:30		
COC Number		667282-01-01	667282-01-01	667282-01-01	667282-01-01	667282-01-01		
	UNITS	**SB-2**	**CB-1**	**CB-2**	**NB-1**	**NB-2**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A631277
Dissolved Zinc (Zn)	mg/L	0.17	0.18	0.20	0.23	0.22	0.0030	A631277
RDL = Reportable Detection Limit								

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AWF504		AWF505		
Sampling Date		2022/06/28 10:15		2022/06/28 10:20		
COC Number		667282-01-01		667282-01-01		
	UNITS	EB-1	QC Batch	EB-2	RDL	QC Batch
Elements						
Dissolved Cadmium (Cd)	ug/L	0.89	A629055	1.0	0.020	A629155
Lab Filtered Elements						
Dissolved Aluminum (Al)	mg/L	0.044	A632399	0.049	0.0030	A631277
Dissolved Antimony (Sb)	mg/L	<0.00060	A632399	<0.00060	0.00060	A631277
Dissolved Arsenic (As)	mg/L	0.00023	A632399	<0.00020	0.00020	A631277
Dissolved Barium (Ba)	mg/L	0.011	A631326	0.012	0.010	A631326
Dissolved Beryllium (Be)	mg/L	<0.0010	A632399	<0.0010	0.0010	A631277
Dissolved Boron (B)	mg/L	<0.020	A631326	<0.020	0.020	A631326
Dissolved Calcium (Ca)	mg/L	40	A631326	42	0.30	A631326
Dissolved Chromium (Cr)	mg/L	<0.0010	A632399	<0.0010	0.0010	A631277
Dissolved Cobalt (Co)	mg/L	0.0011	A632399	0.0012	0.00030	A631277
Dissolved Copper (Cu)	mg/L	0.023	A632399	0.023	0.0010	A631277
Dissolved Iron (Fe)	mg/L	1.1	A631326	0.90	0.060	A631326
Dissolved Lead (Pb)	mg/L	<0.00020	A632399	<0.00020	0.00020	A631277
Dissolved Lithium (Li)	mg/L	0.021	A631326	0.020	0.020	A631326
Dissolved Magnesium (Mg)	mg/L	7.2	A631326	7.5	0.20	A631326
Dissolved Manganese (Mn)	mg/L	0.13	A631326	0.14	0.0040	A631326
Dissolved Molybdenum (Mo)	mg/L	<0.00020	A632399	<0.00020	0.00020	A631277
Dissolved Nickel (Ni)	mg/L	0.0021	A632399	0.0023	0.00050	A631277
Dissolved Phosphorus (P)	mg/L	<0.10	A631326	<0.10	0.10	A631326
Dissolved Potassium (K)	mg/L	3.1	A631326	3.4	0.30	A631326
Dissolved Selenium (Se)	mg/L	<0.00020	A632399	<0.00020	0.00020	A631277
Dissolved Silicon (Si)	mg/L	1.6	A631326	1.6	0.10	A631326
Dissolved Silver (Ag)	mg/L	<0.00010	A632399	<0.00010	0.00010	A631277
Dissolved Sodium (Na)	mg/L	2.7	A631326	2.8	0.50	A631326
Dissolved Strontium (Sr)	mg/L	0.042	A631326	0.044	0.020	A631326
Dissolved Sulphur (S)	mg/L	39	A631326	37	0.20	A631326
Dissolved Thallium (Tl)	mg/L	<0.00020	A632399	<0.00020	0.00020	A631277
Dissolved Tin (Sn)	mg/L	<0.0010	A632399	<0.0010	0.0010	A631277
Dissolved Titanium (Ti)	mg/L	<0.0010	A632399	<0.0010	0.0010	A631277
Dissolved Uranium (U)	mg/L	<0.00010	A632399	<0.00010	0.00010	A631277
RDL = Reportable Detection Limit						

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AWF504		AWF505		
Sampling Date		2022/06/28 10:15		2022/06/28 10:20		
COC Number		667282-01-01		667282-01-01		
	UNITS	**EB-1**	**QC Batch**	**EB-2**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	A632399	<0.0010	0.0010	A631277
Dissolved Zinc (Zn)	mg/L	0.25	A632399	0.27	0.0030	A631277
RDL = Reportable Detection Limit						

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AWF477	AWF478	AWF479			AWF480		
Sampling Date		2022/06/28 10:45	2022/06/28 09:15	2022/06/28 08:55			2022/06/28 08:35		
COC Number		667282-02-01	667282-02-01	667282-02-01			667282-02-01		
	UNITS	CAMP LAKE DISCHARGE	CL-2	CL-3	RDL	QC Batch	CL-4	RDL	QC Batch
Elements									
Total Cadmium (Cd)	ug/L	0.82	0.14	0.16	0.020	A629056	0.13	0.020	A629056
Total Aluminum (Al)	mg/L	0.094	0.081	0.079	0.0030	A632851	0.10	0.0030	A632858
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	0.00060	A632851	<0.00060	0.00060	A632858
Total Arsenic (As)	mg/L	0.00028	0.00042	0.00040	0.00020	A632851	0.00041	0.00020	A632858
Total Barium (Ba)	mg/L	0.011	0.011	<0.010	0.010	A632854	0.011	0.010	A632864
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	A632851	<0.0010	0.0010	A632858
Total Boron (B)	mg/L	<0.020	<0.020	<0.020	0.020	A632854	<0.020	0.020	A632864
Total Calcium (Ca)	mg/L	34	15	14	0.30	A632854	13	0.30	A632864
Total Chromium (Cr)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	A632851	<0.0010	0.0010	A632858
Total Cobalt (Co)	mg/L	0.00077	<0.00030	<0.00030	0.00030	A632851	<0.00030	0.00030	A632858
Total Copper (Cu)	mg/L	0.037	0.0087	0.0099	0.0010	A632851	0.0099	0.0010	A632858
Total Iron (Fe)	mg/L	3.4	0.88	0.69	0.060	A632854	1.0	0.060	A632864
Total Lead (Pb)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	A632851	<0.00020	0.00020	A632858
Total Lithium (Li)	mg/L	<0.020	<0.020	<0.020	0.020	A632854	<0.020	0.020	A632864
Total Magnesium (Mg)	mg/L	6.4	3.6	3.5	0.20	A632854	3.6	0.20	A632864
Total Manganese (Mn)	mg/L	0.094	0.029	0.017	0.0040	A632854	0.034	0.0040	A632864
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	0.00023	0.00020	A632851	<0.00020	0.00020	A632858
Total Nickel (Ni)	mg/L	0.0017	<0.00050	<0.00050	0.00050	A632851	0.00073	0.00050	A632858
Total Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	0.10	A632854	<0.10	0.10	A632864
Total Potassium (K)	mg/L	2.7	1.6	1.6	0.30	A632854	1.6	0.30	A632864
Total Selenium (Se)	mg/L	0.00022	0.00023	<0.00020	0.00020	A632851	<0.00020	0.00020	A632858
Total Silicon (Si)	mg/L	2.3	2.2	1.4	0.34	A632854	1.5	0.35	A632864
Total Silver (Ag)	mg/L	<0.00010	0.00020	0.00017	0.00010	A632851	<0.00010	0.00010	A632858
Total Sodium (Na)	mg/L	2.3	2.0	2.4	0.50	A632854	2.4	0.50	A632864
Total Strontium (Sr)	mg/L	0.036	0.026	0.025	0.020	A632854	0.027	0.020	A632864
Total Sulphur (S)	mg/L	34	9.3	9.3	0.20	A632854	8.0	0.20	A632864
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	A632851	<0.00020	0.00020	A632858
Total Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	A632851	<0.0010	0.0010	A632858
Total Titanium (Ti)	mg/L	0.0024	0.0019	0.0021	0.0010	A632851	0.0028	0.0010	A632858
Total Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	A632851	<0.00010	0.00010	A632858
Total Vanadium (V)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	A632851	<0.0010	0.0010	A632858

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AWF477	AWF478	AWF479			AWF480		
Sampling Date		2022/06/28 10:45	2022/06/28 09:15	2022/06/28 08:55			2022/06/28 08:35		
COC Number		667282-02-01	667282-02-01	667282-02-01			667282-02-01		
	UNITS	**CAMP LAKE DISCHARGE**	**CL-2**	**CL-3**	**RDL**	**QC Batch**	**CL-4**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.24	0.059	0.062	0.0030	A632851	0.046	0.0030	A632858
RDL = Reportable Detection Limit									

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AWF480			AWF481			AWF482		
Sampling Date		2022/06/28 08:35			2022/06/28 08:25			2022/06/28 08:10		
COC Number		667282-02-01			667282-02-01			667282-02-01		
	UNITS	CL-4 Lab-Dup	RDL	QC Batch	CL-5	RDL	QC Batch	CL-6	RDL	QC Batch
Elements										
Total Cadmium (Cd)	ug/L				0.11	0.020	A629056	0.12	0.020	A629056
Total Aluminum (Al)	mg/L	0.098	0.0030	A632858	0.089	0.0030	A632851	0.099	0.0030	A634099
Total Antimony (Sb)	mg/L	<0.00060	0.00060	A632858	<0.00060	0.00060	A632851	<0.00060	0.00060	A634099
Total Arsenic (As)	mg/L	0.00039	0.00020	A632858	0.00049	0.00020	A632851	0.00040	0.00020	A634099
Total Barium (Ba)	mg/L	0.010	0.010	A632864	0.010	0.010	A632854	<0.010	0.010	A634105
Total Beryllium (Be)	mg/L	<0.0010	0.0010	A632858	<0.0010	0.0010	A632851	<0.0010	0.0010	A634099
Total Boron (B)	mg/L	<0.020	0.020	A632864	<0.020	0.020	A632854	<0.020	0.020	A634105
Total Calcium (Ca)	mg/L	13	0.30	A632864	13	0.30	A632854	12	0.30	A634105
Total Chromium (Cr)	mg/L	<0.0010	0.0010	A632858	<0.0010	0.0010	A632851	<0.0010	0.0010	A634099
Total Cobalt (Co)	mg/L	<0.00030	0.00030	A632858	<0.00030	0.00030	A632851	<0.00030	0.00030	A634099
Total Copper (Cu)	mg/L	0.0098	0.0010	A632858	0.0096	0.0010	A632851	0.0085	0.0010	A634099
Total Iron (Fe)	mg/L	0.96	0.060	A632864	1.1	0.060	A632854	0.62	0.060	A634105
Total Lead (Pb)	mg/L	<0.00020	0.00020	A632858	<0.00020	0.00020	A632851	<0.00020	0.00020	A634099
Total Lithium (Li)	mg/L	<0.020	0.020	A632864	<0.020	0.020	A632854	<0.020	0.020	A634105
Total Magnesium (Mg)	mg/L	3.3	0.20	A632864	3.5	0.20	A632854	3.1	0.20	A634105
Total Manganese (Mn)	mg/L	0.032	0.0040	A632864	0.047	0.0040	A632854	0.027	0.0040	A634105
Total Molybdenum (Mo)	mg/L	<0.00020	0.00020	A632858	<0.00020	0.00020	A632851	<0.00020	0.00020	A634099
Total Nickel (Ni)	mg/L	0.00069	0.00050	A632858	0.00057	0.00050	A632851	0.00067	0.00050	A634099
Total Phosphorus (P)	mg/L	<0.10	0.10	A632864	<0.10	0.10	A632854	<0.10	0.10	A634105
Total Potassium (K)	mg/L	1.6	0.30	A632864	1.6	0.30	A632854	1.5	0.30	A634105
Total Selenium (Se)	mg/L	<0.00020	0.00020	A632858	<0.00020	0.00020	A632851	<0.00020	0.00020	A634099
Total Silicon (Si)	mg/L	1.6	0.35	A632864	1.6	0.34	A632854	1.3	0.10	A634105
Total Silver (Ag)	mg/L	<0.00010	0.00010	A632858	0.00012	0.00010	A632851	<0.00010	0.00010	A634099
Total Sodium (Na)	mg/L	1.9	0.50	A632864	1.9	0.50	A632854	1.9	0.50	A634105
Total Strontium (Sr)	mg/L	0.025	0.020	A632864	0.025	0.020	A632854	0.025	0.020	A634105
Total Sulphur (S)	mg/L	7.5	0.20	A632864	7.8	0.20	A632854	6.3	0.20	A634105
Total Thallium (Tl)	mg/L	<0.00020	0.00020	A632858	<0.00020	0.00020	A632851	<0.00020	0.00020	A634099
Total Tin (Sn)	mg/L	<0.0010	0.0010	A632858	<0.0010	0.0010	A632851	<0.0010	0.0010	A634099
Total Titanium (Ti)	mg/L	0.0027	0.0010	A632858	0.0028	0.0010	A632851	0.0028	0.0010	A634099
Total Uranium (U)	mg/L	<0.00010	0.00010	A632858	<0.00010	0.00010	A632851	<0.00010	0.00010	A634099
Total Vanadium (V)	mg/L	<0.0010	0.0010	A632858	<0.0010	0.0010	A632851	<0.0010	0.0010	A634099

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AWF480			AWF481			AWF482		
Sampling Date		2022/06/28 08:35			2022/06/28 08:25			2022/06/28 08:10		
COC Number		667282-02-01			667282-02-01			667282-02-01		
	UNITS	**CL-4 Lab-Dup**	**RDL**	**QC Batch**	**CL-5**	**RDL**	**QC Batch**	**CL-6**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.046	0.0030	A632858	0.048	0.0030	A632851	0.042	0.0030	A634099

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AWF483		AWF484			AWF485	AWF486		
Sampling Date		2022/06/28 09:00		2022/06/28 08:45			2022/06/28 14:00	2022/06/28 13:00		
COC Number		667282-02-01		667282-02-01			667282-02-01	667282-02-01		
	UNITS	CL-7	QC Batch	CL-8	RDL	QC Batch	SW-105	SW-114	RDL	QC Batch
Elements										
Total Cadmium (Cd)	ug/L	0.21	A629056	0.16	0.020	A629056	0.72	0.10	0.020	A629056
Total Aluminum (Al)	mg/L	0.091	A632858	0.087	0.0030	A639342	0.092	0.085	0.0030	A632851
Total Antimony (Sb)	mg/L	<0.00060	A632858	<0.00060	0.00060	A639342	<0.00060	<0.00060	0.00060	A632851
Total Arsenic (As)	mg/L	0.00038	A632858	0.00042	0.00020	A639342	0.00033	0.00050	0.00020	A632851
Total Barium (Ba)	mg/L	0.012	A632864	<0.010	0.010	A635631	0.010	<0.010	0.010	A632854
Total Beryllium (Be)	mg/L	<0.0010	A632858	<0.0010	0.0010	A639342	<0.0010	<0.0010	0.0010	A632851
Total Boron (B)	mg/L	<0.020	A632864	<0.020	0.020	A635631	<0.020	<0.020	0.020	A632854
Total Calcium (Ca)	mg/L	15	A632864	13	0.30	A635631	27	13	0.30	A632854
Total Chromium (Cr)	mg/L	<0.0010	A632858	<0.0010	0.0010	A639342	<0.0010	<0.0010	0.0010	A632851
Total Cobalt (Co)	mg/L	<0.00030	A632858	<0.00030	0.00030	A639342	0.00063	<0.00030	0.00030	A632851
Total Copper (Cu)	mg/L	0.012	A632858	0.010	0.0010	A639342	0.032	0.0076	0.0010	A632851
Total Iron (Fe)	mg/L	0.80	A632864	0.66	0.060	A635631	2.7	1.1	0.060	A632854
Total Lead (Pb)	mg/L	<0.00020	A632858	<0.00020	0.00020	A639342	<0.00020	<0.00020	0.00020	A632851
Total Lithium (Li)	mg/L	0.036	A632864	<0.020	0.020	A635631	<0.020	<0.020	0.020	A632854
Total Magnesium (Mg)	mg/L	3.7	A632864	3.4	0.20	A635631	5.4	3.3	0.20	A632854
Total Manganese (Mn)	mg/L	0.021	A632864	0.017	0.0040	A635631	0.075	0.045	0.0040	A632854
Total Molybdenum (Mo)	mg/L	<0.00020	A632858	<0.00020	0.00020	A639342	<0.00020	<0.00020	0.00020	A632851
Total Nickel (Ni)	mg/L	0.00094	A632858	0.00093	0.00050	A639342	0.0013	<0.00050	0.00050	A632851
Total Phosphorus (P)	mg/L	<0.10	A632864	<0.10	0.10	A635631	<0.10	<0.10	0.10	A632854
Total Potassium (K)	mg/L	1.7	A632864	1.6	0.30	A635631	2.4	1.4	0.30	A632854
Total Selenium (Se)	mg/L	<0.00020	A632858	<0.00020	0.00020	A639342	<0.00020	<0.00020	0.00020	A632851
Total Silicon (Si)	mg/L	1.7	A632864	1.9	0.10	A635631	1.7	1.8	0.34	A632854
Total Silver (Ag)	mg/L	<0.00010	A632858	<0.00010	0.00010	A639342	<0.00010	0.00016	0.00010	A632851
Total Sodium (Na)	mg/L	2.3	A632864	1.9	0.50	A635631	2.1	1.9	0.50	A632854
Total Strontium (Sr)	mg/L	0.027	A632864	0.024	0.020	A635631	0.032	0.024	0.020	A632854
Total Sulphur (S)	mg/L	9.8	A632864	8.3	0.20	A635631	27	7.5	0.20	A632854
Total Thallium (Tl)	mg/L	<0.00020	A632858	<0.00020	0.00020	A639342	<0.00020	<0.00020	0.00020	A632851
Total Tin (Sn)	mg/L	<0.0010	A632858	<0.0010	0.0010	A639342	<0.0010	<0.0010	0.0010	A632851
Total Titanium (Ti)	mg/L	0.0026	A632858	0.0025	0.0010	A639342	0.0020	0.0027	0.0010	A632851
Total Uranium (U)	mg/L	<0.00010	A632858	<0.00010	0.00010	A639342	<0.00010	<0.00010	0.00010	A632851
Total Vanadium (V)	mg/L	<0.0010	A632858	<0.0010	0.0010	A639342	<0.0010	<0.0010	0.0010	A632851

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AWF483		AWF484			AWF485	AWF486		
Sampling Date		2022/06/28 09:00		2022/06/28 08:45			2022/06/28 14:00	2022/06/28 13:00		
COC Number		667282-02-01		667282-02-01			667282-02-01	667282-02-01		
	UNITS	**CL-7**	**QC Batch**	**CL-8**	**RDL**	**QC Batch**	**SW-105**	**SW-114**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.062	A632858	0.055	0.0030	A639342	0.21	0.043	0.0030	A632851
RDL = Reportable Detection Limit										

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AWF496	AWF497			AWF498		AWF499		
Sampling Date		2022/06/28 11:00	2022/06/28 11:00			2022/06/28 09:55		2022/06/28 09:45		
COC Number		667282-01-01	667282-01-01			667282-01-01		667282-01-01		
	UNITS	SC-1	TRIP BLANK	RDL	QC Batch	SB-1	RDL	SB-2	RDL	QC Batch
Elements										
Total Cadmium (Cd)	ug/L	0.17	<0.020	0.020	A629056	1.7	0.40	0.65	0.020	A629056
Total Aluminum (Al)	mg/L	0.056	<0.0030	0.0030	A632851	0.39	0.060	0.087	0.0030	A632412
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	0.00060	A632851	<0.012	0.012	<0.00060	0.00060	A632412
Total Arsenic (As)	mg/L	0.00045	<0.00020	0.00020	A632851	<0.0040	0.0040	0.00040	0.00020	A632412
Total Barium (Ba)	mg/L	<0.010	<0.010	0.010	A632854	<0.010	0.010	<0.010	0.010	A635631
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	0.0010	A632851	<0.020	0.020	<0.0010	0.0010	A632412
Total Boron (B)	mg/L	<0.020	<0.020	0.020	A632854	<0.020	0.020	<0.020	0.020	A635631
Total Calcium (Ca)	mg/L	7.1	<0.30	0.30	A632854	25	0.30	24	0.30	A635631
Total Chromium (Cr)	mg/L	0.0010	<0.0010	0.0010	A632851	<0.020	0.020	<0.0010	0.0010	A632412
Total Cobalt (Co)	mg/L	<0.00030	<0.00030	0.00030	A632851	<0.0060	0.0060	0.00042	0.00030	A632412
Total Copper (Cu)	mg/L	0.0060	<0.0010	0.0010	A632851	0.028	0.020	0.031	0.0010	A632412
Total Iron (Fe)	mg/L	0.24	<0.060	0.060	A632854	2.7	0.060	2.6	0.060	A635631
Total Lead (Pb)	mg/L	<0.00020	<0.00020	0.00020	A632851	<0.0040	0.0040	<0.00020	0.00020	A632412
Total Lithium (Li)	mg/L	<0.020	<0.020	0.020	A632854	<0.020	0.020	<0.020	0.020	A635631
Total Magnesium (Mg)	mg/L	2.4	<0.20	0.20	A632854	5.0	0.20	4.9	0.20	A635631
Total Manganese (Mn)	mg/L	0.019	<0.0040	0.0040	A632854	0.074	0.0040	0.070	0.0040	A635631
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	0.00020	A632851	0.0066	0.0040	<0.00020	0.00020	A632412
Total Nickel (Ni)	mg/L	<0.00050	<0.00050	0.00050	A632851	<0.010	0.010	0.0014	0.00050	A632412
Total Phosphorus (P)	mg/L	<0.10	<0.10	0.10	A632854	<0.10	0.10	<0.10	0.10	A635631
Total Potassium (K)	mg/L	1.1	<0.30	0.30	A632854	2.3	0.30	2.2	0.30	A635631
Total Selenium (Se)	mg/L	0.00022	<0.00020	0.00020	A632851	<0.0040	0.0040	<0.00020	0.00020	A632412
Total Silicon (Si)	mg/L	1.8	0.39	0.34	A632854	1.9	0.10	2.1	0.10	A635631
Total Silver (Ag)	mg/L	0.00019	<0.00010	0.00010	A632851	<0.0020	0.0020	<0.00010	0.00010	A632412
Total Sodium (Na)	mg/L	1.5	<0.50	0.50	A632854	2.1	0.50	2.0	0.50	A635631
Total Strontium (Sr)	mg/L	<0.020	<0.020	0.020	A632854	0.030	0.020	0.030	0.020	A635631
Total Sulphur (S)	mg/L	1.3	<0.20	0.20	A632854	23	0.20	22	0.20	A635631
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	0.00020	A632851	<0.0040	0.0040	<0.00020	0.00020	A632412
Total Tin (Sn)	mg/L	<0.0010	<0.0010	0.0010	A632851	<0.020	0.020	<0.0010	0.0010	A632412
Total Titanium (Ti)	mg/L	0.0022	<0.0010	0.0010	A632851	<0.020	0.020	0.0017	0.0010	A632412
Total Uranium (U)	mg/L	<0.00010	<0.00010	0.00010	A632851	<0.0020	0.0020	<0.00010	0.00010	A632412
Total Vanadium (V)	mg/L	<0.0010	<0.0010	0.0010	A632851	<0.020	0.020	<0.0010	0.0010	A632412

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AWF496	AWF497			AWF498		AWF499		
Sampling Date		2022/06/28 11:00	2022/06/28 11:00			2022/06/28 09:55		2022/06/28 09:45		
COC Number		667282-01-01	667282-01-01			667282-01-01		667282-01-01		
	UNITS	**SC-1**	**TRIP BLANK**	**RDL**	**QC Batch**	**SB-1**	**RDL**	**SB-2**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.043	<0.0030	0.0030	A632851	0.20	0.060	0.19	0.0030	A632412
RDL = Reportable Detection Limit										

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AWF500			AWF500			AWF501		
Sampling Date		2022/06/28 10:00			2022/06/28 10:00			2022/06/28 10:05		
COC Number		667282-01-01			667282-01-01			667282-01-01		
	UNITS	CB-1	RDL	QC Batch	CB-1 Lab-Dup	RDL	QC Batch	CB-2	RDL	QC Batch
Elements										
Total Cadmium (Cd)	ug/L	0.70	0.020	A629056				0.76	0.020	A629056
Total Aluminum (Al)	mg/L	0.084	0.0030	A632851	0.090	0.0030	A632851	0.098	0.0030	A632851
Total Antimony (Sb)	mg/L	<0.00060	0.00060	A632851	<0.00060	0.00060	A632851	<0.00060	0.00060	A632851
Total Arsenic (As)	mg/L	0.00035	0.00020	A632851	0.00030	0.00020	A632851	0.00029	0.00020	A632851
Total Barium (Ba)	mg/L	<0.010	0.010	A632854	0.010	0.010	A632854	0.010	0.010	A632854
Total Beryllium (Be)	mg/L	<0.0010	0.0010	A632851	<0.0010	0.0010	A632851	<0.0010	0.0010	A632851
Total Boron (B)	mg/L	<0.020	0.020	A632854	<0.020	0.020	A632854	<0.020	0.020	A632854
Total Calcium (Ca)	mg/L	26	0.30	A632854	26	0.30	A632854	28	0.30	A632854
Total Chromium (Cr)	mg/L	<0.0010	0.0010	A632851	<0.0010	0.0010	A632851	<0.0010	0.0010	A632851
Total Cobalt (Co)	mg/L	0.00064	0.00030	A632851	0.00065	0.00030	A632851	0.00066	0.00030	A632851
Total Copper (Cu)	mg/L	0.032	0.0010	A632851	0.033	0.0010	A632851	0.033	0.0010	A632851
Total Iron (Fe)	mg/L	2.7	0.060	A632854	2.8	0.060	A632854	2.9	0.060	A632854
Total Lead (Pb)	mg/L	<0.00020	0.00020	A632851	<0.00020	0.00020	A632851	<0.00020	0.00020	A632851
Total Lithium (Li)	mg/L	<0.020	0.020	A632854	<0.020	0.020	A632854	<0.020	0.020	A632854
Total Magnesium (Mg)	mg/L	5.3	0.20	A632854	5.4	0.20	A632854	5.7	0.20	A632854
Total Manganese (Mn)	mg/L	0.072	0.0040	A632854	0.075	0.0040	A632854	0.079	0.0040	A632854
Total Molybdenum (Mo)	mg/L	<0.00020	0.00020	A632851	<0.00020	0.00020	A632851	<0.00020	0.00020	A632851
Total Nickel (Ni)	mg/L	0.0014	0.00050	A632851	0.0015	0.00050	A632851	0.0016	0.00050	A632851
Total Phosphorus (P)	mg/L	<0.10	0.10	A632854	<0.10	0.10	A632854	<0.10	0.10	A632854
Total Potassium (K)	mg/L	2.3	0.30	A632854	2.3	0.30	A632854	2.5	0.30	A632854
Total Selenium (Se)	mg/L	<0.00020	0.00020	A632851	0.00027	0.00020	A632851	<0.00020	0.00020	A632851
Total Silicon (Si)	mg/L	1.8	0.34	A632854	1.8	0.34	A632854	1.8	0.34	A632854
Total Silver (Ag)	mg/L	<0.00010	0.00010	A632851	<0.00010	0.00010	A632851	<0.00010	0.00010	A632851
Total Sodium (Na)	mg/L	2.1	0.50	A632854	2.1	0.50	A632854	2.2	0.50	A632854
Total Strontium (Sr)	mg/L	0.031	0.020	A632854	0.032	0.020	A632854	0.033	0.020	A632854
Total Sulphur (S)	mg/L	25	0.20	A632854	26	0.20	A632854	28	0.20	A632854
Total Thallium (Tl)	mg/L	<0.00020	0.00020	A632851	<0.00020	0.00020	A632851	<0.00020	0.00020	A632851
Total Tin (Sn)	mg/L	<0.0010	0.0010	A632851	<0.0010	0.0010	A632851	<0.0010	0.0010	A632851
Total Titanium (Ti)	mg/L	0.0016	0.0010	A632851	0.0024	0.0010	A632851	0.0023	0.0010	A632851
Total Uranium (U)	mg/L	<0.00010	0.00010	A632851	<0.00010	0.00010	A632851	<0.00010	0.00010	A632851
Total Vanadium (V)	mg/L	<0.0010	0.0010	A632851	<0.0010	0.0010	A632851	<0.0010	0.0010	A632851

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AWF500			AWF500			AWF501		
Sampling Date		2022/06/28 10:00			2022/06/28 10:00			2022/06/28 10:05		
COC Number		667282-01-01			667282-01-01			667282-01-01		
	UNITS	**CB-1**	**RDL**	**QC Batch**	**CB-1 Lab-Dup**	**RDL**	**QC Batch**	**CB-2**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.21	0.0030	A632851	0.22	0.0030	A632851	0.22	0.0030	A632851

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AWF502			AWF503			AWF504		
Sampling Date		2022/06/28 10:40			2022/06/28 10:30			2022/06/28 10:15		
COC Number		667282-01-01			667282-01-01			667282-01-01		
	UNITS	NB-1	RDL	QC Batch	NB-2	RDL	QC Batch	EB-1	RDL	QC Batch
Elements										
Total Cadmium (Cd)	ug/L	0.83	0.020	A629056	0.88	0.020	A629056	1.1	0.020	A629056
Total Aluminum (Al)	mg/L	0.12	0.0030	A632858	0.097	0.0030	A632412	0.15	0.0030	A632851
Total Antimony (Sb)	mg/L	<0.00060	0.00060	A632858	<0.00060	0.00060	A632412	<0.00060	0.00060	A632851
Total Arsenic (As)	mg/L	0.00029	0.00020	A632858	0.00035	0.00020	A632412	0.00030	0.00020	A632851
Total Barium (Ba)	mg/L	0.011	0.010	A632864	0.010	0.010	A635631	0.012	0.010	A632854
Total Beryllium (Be)	mg/L	<0.0010	0.0010	A632858	<0.0010	0.0010	A632412	<0.0010	0.0010	A632851
Total Boron (B)	mg/L	<0.020	0.020	A632864	<0.020	0.020	A635631	0.029	0.020	A632854
Total Calcium (Ca)	mg/L	32	0.30	A632864	31	0.30	A635631	37	0.30	A632854
Total Chromium (Cr)	mg/L	<0.0010	0.0010	A632858	<0.0010	0.0010	A632412	<0.0010	0.0010	A632851
Total Cobalt (Co)	mg/L	0.00079	0.00030	A632858	0.00073	0.00030	A632412	0.0012	0.00030	A632851
Total Copper (Cu)	mg/L	0.037	0.0010	A632858	0.038	0.0010	A632412	0.034	0.0010	A632851
Total Iron (Fe)	mg/L	3.2	0.060	A632864	3.0	0.060	A635631	2.8	0.060	A632854
Total Lead (Pb)	mg/L	<0.00020	0.00020	A632858	<0.00020	0.00020	A632412	<0.00020	0.00020	A632851
Total Lithium (Li)	mg/L	0.034	0.020	A632864	<0.020	0.020	A635631	<0.020	0.020	A632854
Total Magnesium (Mg)	mg/L	6.1	0.20	A632864	5.8	0.20	A635631	7.0	0.20	A632854
Total Manganese (Mn)	mg/L	0.091	0.0040	A632864	0.087	0.0040	A635631	0.12	0.0040	A632854
Total Molybdenum (Mo)	mg/L	<0.00020	0.00020	A632858	<0.00020	0.00020	A632412	<0.00020	0.00020	A632851
Total Nickel (Ni)	mg/L	0.0017	0.00050	A632858	0.0017	0.00050	A632412	0.0018	0.00050	A632851
Total Phosphorus (P)	mg/L	<0.10	0.10	A632864	<0.10	0.10	A635631	<0.10	0.10	A632854
Total Potassium (K)	mg/L	2.6	0.30	A632864	2.5	0.30	A635631	2.9	0.30	A632854
Total Selenium (Se)	mg/L	<0.00020	0.00020	A632858	<0.00020	0.00020	A632412	0.00026	0.00020	A632851
Total Silicon (Si)	mg/L	1.9	0.35	A632864	2.0	0.10	A635631	2.1	0.34	A632854
Total Silver (Ag)	mg/L	<0.00010	0.00010	A632858	<0.00010	0.00010	A632412	0.00014	0.00010	A632851
Total Sodium (Na)	mg/L	2.3	0.50	A632864	2.2	0.50	A635631	2.5	0.50	A632854
Total Strontium (Sr)	mg/L	0.036	0.020	A632864	0.035	0.020	A635631	0.040	0.020	A632854
Total Sulphur (S)	mg/L	31	0.20	A632864	30	0.20	A635631	39	0.20	A632854
Total Thallium (Tl)	mg/L	<0.00020	0.00020	A632858	<0.00020	0.00020	A632412	<0.00020	0.00020	A632851
Total Tin (Sn)	mg/L	<0.0010	0.0010	A632858	<0.0010	0.0010	A632412	<0.0010	0.0010	A632851
Total Titanium (Ti)	mg/L	0.0014	0.0010	A632858	0.0022	0.0010	A632412	0.0032	0.0010	A632851
Total Uranium (U)	mg/L	<0.00010	0.00010	A632858	<0.00010	0.00010	A632412	<0.00010	0.00010	A632851
Total Vanadium (V)	mg/L	<0.0010	0.0010	A632858	<0.0010	0.0010	A632412	<0.0010	0.0010	A632851

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AWF502			AWF503			AWF504		
Sampling Date		2022/06/28 10:40			2022/06/28 10:30			2022/06/28 10:15		
COC Number		667282-01-01			667282-01-01			667282-01-01		
	UNITS	**NB-1**	**RDL**	**QC Batch**	**NB-2**	**RDL**	**QC Batch**	**EB-1**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.24	0.0030	A632858	0.25	0.0030	A632412	0.26	0.0030	A632851
RDL = Reportable Detection Limit										

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AWF505		
Sampling Date		2022/06/28 10:20		
COC Number		667282-01-01		
	UNITS	EB-2	RDL	QC Batch
Elements				
Total Cadmium (Cd)	ug/L	1.1	0.020	A629056
Total Aluminum (Al)	mg/L	0.17	0.0030	A632851
Total Antimony (Sb)	mg/L	<0.00060	0.00060	A632851
Total Arsenic (As)	mg/L	0.00035	0.00020	A632851
Total Barium (Ba)	mg/L	0.013	0.010	A632854
Total Beryllium (Be)	mg/L	<0.0010	0.0010	A632851
Total Boron (B)	mg/L	<0.020	0.020	A632854
Total Calcium (Ca)	mg/L	37	0.30	A632854
Total Chromium (Cr)	mg/L	<0.0010	0.0010	A632851
Total Cobalt (Co)	mg/L	0.0012	0.00030	A632851
Total Copper (Cu)	mg/L	0.030	0.0010	A632851
Total Iron (Fe)	mg/L	2.6	0.060	A632854
Total Lead (Pb)	mg/L	<0.00020	0.00020	A632851
Total Lithium (Li)	mg/L	<0.020	0.020	A632854
Total Magnesium (Mg)	mg/L	7.0	0.20	A632854
Total Manganese (Mn)	mg/L	0.13	0.0040	A632854
Total Molybdenum (Mo)	mg/L	<0.00020	0.00020	A632851
Total Nickel (Ni)	mg/L	0.0019	0.00050	A632851
Total Phosphorus (P)	mg/L	<0.10	0.10	A632854
Total Potassium (K)	mg/L	2.9	0.30	A632854
Total Selenium (Se)	mg/L	<0.00020	0.00020	A632851
Total Silicon (Si)	mg/L	1.9	0.34	A632854
Total Silver (Ag)	mg/L	0.00020	0.00010	A632851
Total Sodium (Na)	mg/L	2.5	0.50	A632854
Total Strontium (Sr)	mg/L	0.040	0.020	A632854
Total Sulphur (S)	mg/L	39	0.20	A632854
Total Thallium (Tl)	mg/L	<0.00020	0.00020	A632851
Total Tin (Sn)	mg/L	<0.0010	0.0010	A632851
Total Titanium (Ti)	mg/L	0.0044	0.0010	A632851
Total Uranium (U)	mg/L	<0.00010	0.00010	A632851
Total Vanadium (V)	mg/L	<0.0010	0.0010	A632851
RDL = Reportable Detection Limit				

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AWF505		
Sampling Date		2022/06/28 10:20		
COC Number		667282-01-01		
	UNITS	**EB-2**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.25	0.0030	A632851
RDL = Reportable Detection Limit				

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

Bureau Veritas Job #: C246493
Report Date: 2022/07/12

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AWF477			AWF477			AWF478		
Sampling Date		2022/06/28 10:45			2022/06/28 10:45			2022/06/28 09:15		
COC Number		667282-02-01			667282-02-01			667282-02-01		
	UNITS	CAMP LAKE DISCHARGE	RDL	QC Batch	CAMP LAKE DISCHARGE Lab-Dup	RDL	QC Batch	CL-2	RDL	QC Batch
Calculated Parameters										
Hardness (CaCO3)	mg/L	110	0.50	A629165				53	0.50	A629165
Total Hardness (CaCO3)	mg/L	111	0.50	A628423				51.4	0.50	A628423
Misc. Inorganics										
pH	pH	6.29	N/A	A630704				6.53	N/A	A630704
Total Suspended Solids	mg/L	1.5	0.99	A632270				<1.0	1.0	A632270
Anions										
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	A630703				<1.0	1.0	A630703
Alkalinity (Total as CaCO3)	mg/L	9.3	1.0	A630703				22	1.0	A630703
Bicarbonate (HCO3)	mg/L	11	1.0	A630703				26	1.0	A630703
Carbonate (CO3)	mg/L	<1.0	1.0	A630703				<1.0	1.0	A630703
Hydroxide (OH)	mg/L	<1.0	1.0	A630703				<1.0	1.0	A630703
Physical Properties										
Turbidity	NTU	8.0	0.10	A629511	8.0	0.10	A629511	4.3	0.10	A629511

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AWF479		AWF480			AWF481		
Sampling Date		2022/06/28 08:55		2022/06/28 08:35			2022/06/28 08:25		
COC Number		667282-02-01		667282-02-01			667282-02-01		
	UNITS	CL-3	QC Batch	CL-4	RDL	QC Batch	CL-5	RDL	QC Batch
Calculated Parameters									
Hardness (CaCO3)	mg/L	52	A629165	49	0.50	A629165	49	0.50	A629165
Total Hardness (CaCO3)	mg/L	49.4	A628423	48.2	0.50	A628423	46.7	0.50	A628423
Misc. Inorganics									
pH	pH	6.49	A632775	6.45	N/A	A630704	6.45	N/A	A632775
Total Suspended Solids	mg/L	2.0	A632270	3.0	1.0	A632270	3.3	1.0	A632270
Anions									
Alkalinity (PP as CaCO3)	mg/L	<1.0	A632770	<1.0	1.0	A630703	<1.0	1.0	A632770
Alkalinity (Total as CaCO3)	mg/L	22	A632770	23	1.0	A630703	23	1.0	A632770
Bicarbonate (HCO3)	mg/L	27	A632770	28	1.0	A630703	28	1.0	A632770
Carbonate (CO3)	mg/L	<1.0	A632770	<1.0	1.0	A630703	<1.0	1.0	A632770
Hydroxide (OH)	mg/L	<1.0	A632770	<1.0	1.0	A630703	<1.0	1.0	A632770
Physical Properties									
Turbidity	NTU	4.3	A629511	6.4	0.10	A629511	7.9 (1)	0.20	A629511

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

Bureau Veritas Job #: C246493
Report Date: 2022/07/12

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AWF482	AWF483		AWF484		AWF485	AWF486		
Sampling Date		2022/06/28 08:10	2022/06/28 09:00		2022/06/28 08:45		2022/06/28 14:00	2022/06/28 13:00		
COC Number		667282-02-01	667282-02-01		667282-02-01		667282-02-01	667282-02-01		
	UNITS	**CL-6**	**CL-7**	**RDL**	**CL-8**	**RDL**	**SW-105**	**SW-114**	**RDL**	**QC Batch**
Calculated Parameters										
Hardness (CaCO3)	mg/L	47	56	0.50	52	0.50	100	49	0.50	A629165
Total Hardness (CaCO3)	mg/L	41.6	51.8	0.50	46.9	0.50	90.2	45.2	0.50	A628423
Misc. Inorganics										
pH	pH	6.53	6.54	N/A	6.54	N/A	6.34	6.50	N/A	A630704
Total Suspended Solids	mg/L	2.8	<1.0	1.0	<0.99	0.99	1.0	1.2	1.0	A632270
Anions										
Alkalinity (PP as CaCO3)	mg/L	<1.0	<1.0	1.0	<1.0	1.0	<1.0	<1.0	1.0	A630703
Alkalinity (Total as CaCO3)	mg/L	23	22	1.0	22	1.0	11	24	1.0	A630703
Bicarbonate (HCO3)	mg/L	29	27	1.0	27	1.0	14	30	1.0	A630703
Carbonate (CO3)	mg/L	<1.0	<1.0	1.0	<1.0	1.0	<1.0	<1.0	1.0	A630703
Hydroxide (OH)	mg/L	<1.0	<1.0	1.0	<1.0	1.0	<1.0	<1.0	1.0	A630703
Physical Properties										
Turbidity	NTU	4.7	3.3	0.10	2.8	0.10	7.4	8.0	0.10	A629511

RDL = Reportable Detection Limit
N/A = Not Applicable

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

Bureau Veritas Job #: C246493
Report Date: 2022/07/12

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AWF496	AWF497			AWF497			AWF498		
Sampling Date		2022/06/28 11:00	2022/06/28 11:00			2022/06/28 11:00			2022/06/28 09:55		
COC Number		667282-01-01	667282-01-01			667282-01-01			667282-01-01		
	UNITS	SC-1	TRIP BLANK	RDL	QC Batch	TRIP BLANK Lab-Dup	RDL	QC Batch	SB-1	RDL	QC Batch
Calculated Parameters											
Hardness (CaCO3)	mg/L	30	<0.50	0.50	A629165				93	0.50	A629165
Total Hardness (CaCO3)	mg/L	27.3	<0.50	0.50	A628423				82.0	0.50	A628423
Misc. Inorganics											
pH	pH	6.60	4.54	N/A	A630704	4.50	N/A	A630704	6.36	N/A	A630704
Total Suspended Solids	mg/L	1.1	<1.0	1.0	A632270				1.8	0.97	A632270
Anions											
Alkalinity (PP as CaCO3)	mg/L	<1.0	<1.0	1.0	A630703	<1.0	1.0	A630703	<1.0	1.0	A630703
Alkalinity (Total as CaCO3)	mg/L	23	<1.0	1.0	A630703	<1.0	1.0	A630703	13	1.0	A630703
Bicarbonate (HCO3)	mg/L	28	<1.0	1.0	A630703	<1.0	1.0	A630703	15	1.0	A630703
Carbonate (CO3)	mg/L	<1.0	<1.0	1.0	A630703	<1.0	1.0	A630703	<1.0	1.0	A630703
Hydroxide (OH)	mg/L	<1.0	<1.0	1.0	A630703	<1.0	1.0	A630703	<1.0	1.0	A630703
Physical Properties											
Turbidity	NTU	2.1	<0.10	0.10	A629511				6.8	0.10	A629511

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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Bureau Veritas Job #: C246493
Report Date: 2022/07/12

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AWF499			AWF500		AWF501	AWF502	AWF503		
Sampling Date		2022/06/28 09:45			2022/06/28 10:00		2022/06/28 10:05	2022/06/28 10:40	2022/06/28 10:30		
COC Number		667282-01-01			667282-01-01		667282-01-01	667282-01-01	667282-01-01		
	UNITS	**SB-2**	**RDL**	**QC Batch**	**CB-1**	**RDL**	**CB-2**	**NB-1**	**NB-2**	**RDL**	**QC Batch**
Calculated Parameters											
Hardness (CaCO3)	mg/L	87	0.50	A629165	96	0.50	100	110	110	0.50	A629165
Total Hardness (CaCO3)	mg/L	79.0	0.50	A628423	85.8	0.50	94.2	105	101	0.50	A628423
Misc. Inorganics											
pH	pH	6.39	N/A	A630704	6.35	N/A	6.35	6.31	6.31	N/A	A630704
Total Suspended Solids	mg/L	<1.0	1.0	A632270	2.7	1.0	1.0	1.9	<1.0	1.0	A632271
Anions											
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	A630703	<1.0	1.0	<1.0	<1.0	<1.0	1.0	A630703
Alkalinity (Total as CaCO3)	mg/L	13	1.0	A630703	12	1.0	12	9.9	10	1.0	A630703
Bicarbonate (HCO3)	mg/L	16	1.0	A630703	15	1.0	14	12	12	1.0	A630703
Carbonate (CO3)	mg/L	<1.0	1.0	A630703	<1.0	1.0	<1.0	<1.0	<1.0	1.0	A630703
Hydroxide (OH)	mg/L	<1.0	1.0	A630703	<1.0	1.0	<1.0	<1.0	<1.0	1.0	A630703
Physical Properties											
Turbidity	NTU	6.8 (1)	0.20	A629511	6.4	0.10	7.3 (1)	7.6 (1)	7.4 (1)	0.20	A629511

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AWF504	AWF505		
Sampling Date		2022/06/28 10:15	2022/06/28 10:20		
COC Number		667282-01-01	667282-01-01		
	UNITS	**EB-1**	**EB-2**	**RDL**	**QC Batch**
Calculated Parameters					
Hardness (CaCO3)	mg/L	130	140	0.50	A629165
Total Hardness (CaCO3)	mg/L	120	121	0.50	A628423
Misc. Inorganics					
pH	pH	6.20	6.21	N/A	A630704
Total Suspended Solids	mg/L	1.9	<1.0	1.0	A632271
Anions					
Alkalinity (PP as CaCO3)	mg/L	<1.0	<1.0	1.0	A630703
Alkalinity (Total as CaCO3)	mg/L	8.2	7.9	1.0	A630703
Bicarbonate (HCO3)	mg/L	10	9.7	1.0	A630703
Carbonate (CO3)	mg/L	<1.0	<1.0	1.0	A630703
Hydroxide (OH)	mg/L	<1.0	<1.0	1.0	A630703
Physical Properties					
Turbidity	NTU	8.3 (1)	9.0 (1)	0.20	A629511

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	8.1°C

REGULATED METALS (CCME/AT1) - TOTAL Comments

Sample AWF498 [SB-1] Elements by ICPMS - Total: Detection limits raised due to sample matrix.

Sample AWF484, Elements by ICPMS-Dissolved-Lab Filtered: Test repeated.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A629511	Turbidity	2022/06/30			102	80 - 120	<0.10	NTU	0.12	20
A630703	Alkalinity (PP as CaCO3)	2022/07/04					<1.0	mg/L	NC	20
A630703	Alkalinity (Total as CaCO3)	2022/07/04			97	80 - 120	<1.0	mg/L	NC	20
A630703	Bicarbonate (HCO3)	2022/07/04					<1.0	mg/L	NC	20
A630703	Carbonate (CO3)	2022/07/04					<1.0	mg/L	NC	20
A630703	Hydroxide (OH)	2022/07/04					<1.0	mg/L	NC	20
A630704	pH	2022/07/04			100	97 - 103			0.98	N/A
A631277	Dissolved Aluminum (Al)	2022/07/05	97	80 - 120	96	80 - 120	<0.0030	mg/L	NC	20
A631277	Dissolved Antimony (Sb)	2022/07/05	96	80 - 120	97	80 - 120	<0.00060	mg/L	NC	20
A631277	Dissolved Arsenic (As)	2022/07/05	97	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20
A631277	Dissolved Beryllium (Be)	2022/07/05	94	80 - 120	92	80 - 120	<0.0010	mg/L	NC	20
A631277	Dissolved Chromium (Cr)	2022/07/05	98	80 - 120	98	80 - 120	<0.0010	mg/L	NC	20
A631277	Dissolved Cobalt (Co)	2022/07/05	98	80 - 120	98	80 - 120	<0.00030	mg/L	NC	20
A631277	Dissolved Copper (Cu)	2022/07/05	101	80 - 120	99	80 - 120	<0.0010	mg/L	NC	20
A631277	Dissolved Lead (Pb)	2022/07/05	96	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20
A631277	Dissolved Molybdenum (Mo)	2022/07/05	100	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
A631277	Dissolved Nickel (Ni)	2022/07/05	98	80 - 120	96	80 - 120	<0.00050	mg/L	NC	20
A631277	Dissolved Selenium (Se)	2022/07/05	102	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
A631277	Dissolved Silver (Ag)	2022/07/05	98	80 - 120	97	80 - 120	<0.00010	mg/L	NC	20
A631277	Dissolved Thallium (Tl)	2022/07/05	94	80 - 120	95	80 - 120	<0.00020	mg/L	NC	20
A631277	Dissolved Tin (Sn)	2022/07/05	99	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
A631277	Dissolved Titanium (Ti)	2022/07/05	100	80 - 120	99	80 - 120	<0.0010	mg/L	NC	20
A631277	Dissolved Uranium (U)	2022/07/05	95	80 - 120	96	80 - 120	<0.00010	mg/L	NC	20
A631277	Dissolved Vanadium (V)	2022/07/05	98	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20
A631277	Dissolved Zinc (Zn)	2022/07/05	100	80 - 120	99	80 - 120	<0.0030	mg/L	NC	20
A631324	Dissolved Barium (Ba)	2022/07/04	77 (1)	80 - 120	99	80 - 120	<0.010	mg/L		
A631324	Dissolved Boron (B)	2022/07/04			100	80 - 120	<0.020	mg/L		
A631324	Dissolved Calcium (Ca)	2022/07/05	NC	80 - 120	104	80 - 120	<0.30	mg/L	0.20	20
A631324	Dissolved Iron (Fe)	2022/07/05	104	80 - 120	105	80 - 120	<0.060	mg/L	2.6	20
A631324	Dissolved Lithium (Li)	2022/07/04	86	80 - 120	93	80 - 120	<0.020	mg/L		
A631324	Dissolved Magnesium (Mg)	2022/07/05	97	80 - 120	104	80 - 120	<0.20	mg/L	0.41	20
A631324	Dissolved Manganese (Mn)	2022/07/05	101	80 - 120	102	80 - 120	<0.0040	mg/L	7.5	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A631324	Dissolved Phosphorus (P)	2022/07/04	106	80 - 120	106	80 - 120	<0.10	mg/L		
A631324	Dissolved Potassium (K)	2022/07/05	94	80 - 120	96	80 - 120	<0.30	mg/L	0.038	20
A631324	Dissolved Silicon (Si)	2022/07/04	93	80 - 120	99	80 - 120	<0.10	mg/L		
A631324	Dissolved Sodium (Na)	2022/07/05	NC	80 - 120	96	80 - 120	<0.50	mg/L	1.0	20
A631324	Dissolved Strontium (Sr)	2022/07/04	86	80 - 120	95	80 - 120	<0.020	mg/L		
A631324	Dissolved Sulphur (S)	2022/07/04			102	80 - 120	<0.20	mg/L		
A631326	Dissolved Barium (Ba)	2022/07/06	99	80 - 120	98	80 - 120	<0.010	mg/L	NC	20
A631326	Dissolved Boron (B)	2022/07/06	104	80 - 120	100	80 - 120	<0.020	mg/L	NC	20
A631326	Dissolved Calcium (Ca)	2022/07/06	104	80 - 120	103	80 - 120	<0.30	mg/L	0.30	20
A631326	Dissolved Iron (Fe)	2022/07/06	108	80 - 120	104	80 - 120	<0.060	mg/L	5.2	20
A631326	Dissolved Lithium (Li)	2022/07/06	92	80 - 120	93	80 - 120	<0.020	mg/L	NC	20
A631326	Dissolved Magnesium (Mg)	2022/07/06	104	80 - 120	103	80 - 120	<0.20	mg/L	2.3	20
A631326	Dissolved Manganese (Mn)	2022/07/06	105	80 - 120	101	80 - 120	<0.0040	mg/L	0.84	20
A631326	Dissolved Phosphorus (P)	2022/07/06	110	80 - 120	105	80 - 120	<0.10	mg/L	NC	20
A631326	Dissolved Potassium (K)	2022/07/06	98	80 - 120	95	80 - 120	<0.30	mg/L	9.1	20
A631326	Dissolved Silicon (Si)	2022/07/06	99	80 - 120	98	80 - 120	<0.10	mg/L	2.7	20
A631326	Dissolved Sodium (Na)	2022/07/06	97	80 - 120	94	80 - 120	<0.50	mg/L	9.6	20
A631326	Dissolved Strontium (Sr)	2022/07/06	96	80 - 120	95	80 - 120	<0.020	mg/L	10	20
A631326	Dissolved Sulphur (S)	2022/07/06	105	80 - 120	101	80 - 120	<0.20	mg/L	1.4	20
A631585	Dissolved Barium (Ba)	2022/07/05	98	80 - 120	99	80 - 120	<0.010	mg/L	NC	20
A631585	Dissolved Boron (B)	2022/07/05	98	80 - 120	101	80 - 120	<0.020	mg/L	0.79	20
A631585	Dissolved Calcium (Ca)	2022/07/05	103	80 - 120	103	80 - 120	<0.30	mg/L	4.8	20
A631585	Dissolved Iron (Fe)	2022/07/05	105	80 - 120	105	80 - 120	<0.060	mg/L	NC	20
A631585	Dissolved Lithium (Li)	2022/07/05	89	80 - 120	93	80 - 120	<0.020	mg/L	6.6	20
A631585	Dissolved Magnesium (Mg)	2022/07/05	102	80 - 120	102	80 - 120	<0.20	mg/L	7.8	20
A631585	Dissolved Manganese (Mn)	2022/07/05	102	80 - 120	102	80 - 120	<0.0040	mg/L	15	20
A631585	Dissolved Phosphorus (P)	2022/07/05	109	80 - 120	105	80 - 120	<0.10	mg/L	NC	20
A631585	Dissolved Potassium (K)	2022/07/05	95	80 - 120	96	80 - 120	<0.30	mg/L	8.4	20
A631585	Dissolved Silicon (Si)	2022/07/05	94	80 - 120	99	80 - 120	<0.10	mg/L	0.32	20
A631585	Dissolved Sodium (Na)	2022/07/05	NC	80 - 120	94	80 - 120	<0.50	mg/L	2.2	20
A631585	Dissolved Strontium (Sr)	2022/07/05	94	80 - 120	95	80 - 120	<0.020	mg/L	3.1	20
A631585	Dissolved Sulphur (S)	2022/07/05	NC	80 - 120	102	80 - 120	<0.20	mg/L	9.8	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A631598	Dissolved Barium (Ba)	2022/07/05	96	80 - 120	97	80 - 120	<0.010	mg/L		
A631598	Dissolved Boron (B)	2022/07/05	98	80 - 120	97	80 - 120	<0.020	mg/L		
A631598	Dissolved Calcium (Ca)	2022/07/05	99	80 - 120	101	80 - 120	<0.30	mg/L	0.37	20
A631598	Dissolved Iron (Fe)	2022/07/05	104	80 - 120	102	80 - 120	<0.060	mg/L	NC	20
A631598	Dissolved Lithium (Li)	2022/07/05	96	80 - 120	100	80 - 120	<0.020	mg/L		
A631598	Dissolved Magnesium (Mg)	2022/07/05	100	80 - 120	107	80 - 120	<0.20	mg/L	1.4	20
A631598	Dissolved Manganese (Mn)	2022/07/05	102	80 - 120	99	80 - 120	<0.0040	mg/L	NC	20
A631598	Dissolved Phosphorus (P)	2022/07/05	110	80 - 120	107	80 - 120	<0.10	mg/L		
A631598	Dissolved Potassium (K)	2022/07/05	96	80 - 120	98	80 - 120	<0.30	mg/L	0.46	20
A631598	Dissolved Silicon (Si)	2022/07/05	96	80 - 120	99	80 - 120	<0.10	mg/L		
A631598	Dissolved Sodium (Na)	2022/07/05	90	80 - 120	97	80 - 120	<0.50	mg/L	0.48	20
A631598	Dissolved Strontium (Sr)	2022/07/05	93	80 - 120	94	80 - 120	<0.020	mg/L		
A631598	Dissolved Sulphur (S)	2022/07/05	106	80 - 120	103	80 - 120	<0.20	mg/L		
A632270	Total Suspended Solids	2022/07/05	99	80 - 120	93	80 - 120	<1.0	mg/L	NC	20
A632271	Total Suspended Solids	2022/07/05	93	80 - 120	94	80 - 120	<1.0	mg/L	13	20
A632399	Dissolved Aluminum (Al)	2022/07/05	NC	80 - 120	108	80 - 120	<0.0030	mg/L	2.0	20
A632399	Dissolved Antimony (Sb)	2022/07/05	97	80 - 120	97	80 - 120	<0.00060	mg/L		
A632399	Dissolved Arsenic (As)	2022/07/05	94	80 - 120	91	80 - 120	<0.00020	mg/L		
A632399	Dissolved Beryllium (Be)	2022/07/05	92	80 - 120	96	80 - 120	<0.0010	mg/L		
A632399	Dissolved Chromium (Cr)	2022/07/05	95	80 - 120	95	80 - 120	<0.0010	mg/L		
A632399	Dissolved Cobalt (Co)	2022/07/05	95	80 - 120	96	80 - 120	<0.00030	mg/L		
A632399	Dissolved Copper (Cu)	2022/07/05	94	80 - 120	96	80 - 120	<0.0010	mg/L		
A632399	Dissolved Lead (Pb)	2022/07/05	96	80 - 120	95	80 - 120	<0.00020	mg/L		
A632399	Dissolved Molybdenum (Mo)	2022/07/05	102	80 - 120	100	80 - 120	<0.00020	mg/L		
A632399	Dissolved Nickel (Ni)	2022/07/05	94	80 - 120	94	80 - 120	<0.00050	mg/L		
A632399	Dissolved Selenium (Se)	2022/07/05	97	80 - 120	99	80 - 120	<0.00020	mg/L		
A632399	Dissolved Silver (Ag)	2022/07/05	96	80 - 120	97	80 - 120	<0.00010	mg/L		
A632399	Dissolved Thallium (Tl)	2022/07/05	94	80 - 120	94	80 - 120	<0.00020	mg/L		
A632399	Dissolved Tin (Sn)	2022/07/05	103	80 - 120	104	80 - 120	<0.0010	mg/L		
A632399	Dissolved Titanium (Ti)	2022/07/05	96	80 - 120	99	80 - 120	<0.0010	mg/L		
A632399	Dissolved Uranium (U)	2022/07/05	95	80 - 120	96	80 - 120	<0.00010	mg/L		
A632399	Dissolved Vanadium (V)	2022/07/05	97	80 - 120	95	80 - 120	<0.0010	mg/L		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A632399	Dissolved Zinc (Zn)	2022/07/05	100	80 - 120	94	80 - 120	<0.0030	mg/L		
A632412	Total Aluminum (Al)	2022/07/06	96	80 - 120	99	80 - 120	<0.0030	mg/L	20	20
A632412	Total Antimony (Sb)	2022/07/06	109	80 - 120	103	80 - 120	<0.00060	mg/L	8.1	20
A632412	Total Arsenic (As)	2022/07/06	107	80 - 120	100	80 - 120	<0.00020	mg/L	15	20
A632412	Total Beryllium (Be)	2022/07/06	114	80 - 120	98	80 - 120	<0.0010	mg/L	NC	20
A632412	Total Chromium (Cr)	2022/07/06	106	80 - 120	105	80 - 120	<0.0010	mg/L	NC	20
A632412	Total Cobalt (Co)	2022/07/06	106	80 - 120	106	80 - 120	<0.00030	mg/L	12	20
A632412	Total Copper (Cu)	2022/07/06	107	80 - 120	106	80 - 120	<0.0010	mg/L	NC	20
A632412	Total Lead (Pb)	2022/07/06	103	80 - 120	108	80 - 120	<0.00020	mg/L	20	20
A632412	Total Molybdenum (Mo)	2022/07/06	111	80 - 120	108	80 - 120	<0.00020	mg/L	8.4	20
A632412	Total Nickel (Ni)	2022/07/06	102	80 - 120	107	80 - 120	<0.00050	mg/L	9.3	20
A632412	Total Selenium (Se)	2022/07/06	120	80 - 120	106	80 - 120	<0.00020	mg/L	NC	20
A632412	Total Silver (Ag)	2022/07/06	106	80 - 120	105	80 - 120	<0.00010	mg/L	NC	20
A632412	Total Thallium (Tl)	2022/07/06	106	80 - 120	108	80 - 120	<0.00020	mg/L	NC	20
A632412	Total Tin (Sn)	2022/07/06	107	80 - 120	107	80 - 120	<0.0010	mg/L	NC	20
A632412	Total Titanium (Ti)	2022/07/06	111	80 - 120	106	80 - 120	<0.0010	mg/L	3.7	20
A632412	Total Uranium (U)	2022/07/06	106	80 - 120	105	80 - 120	<0.00010	mg/L	8.5	20
A632412	Total Vanadium (V)	2022/07/06	108	80 - 120	106	80 - 120	<0.0010	mg/L	8.4	20
A632412	Total Zinc (Zn)	2022/07/06	99	80 - 120	103	80 - 120	<0.0030	mg/L	NC	20
A632770	Alkalinity (PP as CaCO3)	2022/07/05					<1.0	mg/L	NC	20
A632770	Alkalinity (Total as CaCO3)	2022/07/05			103	80 - 120	<1.0	mg/L	0.11	20
A632770	Bicarbonate (HCO3)	2022/07/05					<1.0	mg/L	0.11	20
A632770	Carbonate (CO3)	2022/07/05					<1.0	mg/L	NC	20
A632770	Hydroxide (OH)	2022/07/05					<1.0	mg/L	NC	20
A632775	pH	2022/07/05			100	97 - 103			0.67	N/A
A632851	Total Aluminum (Al)	2022/07/06	89	80 - 120	95	80 - 120	<0.0030	mg/L	6.1	20
A632851	Total Antimony (Sb)	2022/07/06	101	80 - 120	103	80 - 120	<0.00060	mg/L	NC	20
A632851	Total Arsenic (As)	2022/07/06	97	80 - 120	99	80 - 120	<0.00020	mg/L	16	20
A632851	Total Beryllium (Be)	2022/07/06	98	80 - 120	103	80 - 120	<0.0010	mg/L	NC	20
A632851	Total Chromium (Cr)	2022/07/06	99	80 - 120	101	80 - 120	<0.0010	mg/L	NC	20
A632851	Total Cobalt (Co)	2022/07/06	100	80 - 120	102	80 - 120	<0.00030	mg/L	1.2	20
A632851	Total Copper (Cu)	2022/07/06	102	80 - 120	103	80 - 120	<0.0010	mg/L	5.2	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A632851	Total Lead (Pb)	2022/07/06	100	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
A632851	Total Molybdenum (Mo)	2022/07/06	102	80 - 120	105	80 - 120	<0.00020	mg/L	NC	20
A632851	Total Nickel (Ni)	2022/07/06	99	80 - 120	100	80 - 120	<0.00050	mg/L	4.9	20
A632851	Total Selenium (Se)	2022/07/06	109	80 - 120	113	80 - 120	<0.00020	mg/L	NC	20
A632851	Total Silver (Ag)	2022/07/06	99	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20
A632851	Total Thallium (Tl)	2022/07/06	103	80 - 120	105	80 - 120	<0.00020	mg/L	NC	20
A632851	Total Tin (Sn)	2022/07/06	101	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20
A632851	Total Titanium (Ti)	2022/07/06	105	80 - 120	105	80 - 120	<0.0010	mg/L	NC	20
A632851	Total Uranium (U)	2022/07/06	99	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20
A632851	Total Vanadium (V)	2022/07/06	101	80 - 120	102	80 - 120	<0.0010	mg/L	NC	20
A632851	Total Zinc (Zn)	2022/07/06	101	80 - 120	101	80 - 120	<0.0030	mg/L	3.5	20
A632854	Total Barium (Ba)	2022/07/05	99	80 - 120	100	80 - 120	<0.010	mg/L	2.4	20
A632854	Total Boron (B)	2022/07/05	97	80 - 120	98	80 - 120	<0.020	mg/L	NC	20
A632854	Total Calcium (Ca)	2022/07/05	98	80 - 120	101	80 - 120	<0.30	mg/L	2.8	20
A632854	Total Iron (Fe)	2022/07/05	NC	80 - 120	103	80 - 120	<0.060	mg/L	4.4	20
A632854	Total Lithium (Li)	2022/07/05	99	80 - 120	101	80 - 120	<0.020	mg/L	NC	20
A632854	Total Magnesium (Mg)	2022/07/05	109	80 - 120	109	80 - 120	<0.20	mg/L	2.2	20
A632854	Total Manganese (Mn)	2022/07/05	99	80 - 120	101	80 - 120	<0.0040	mg/L	4.4	20
A632854	Total Phosphorus (P)	2022/07/05	105	80 - 120	107	80 - 120	<0.10	mg/L	NC	20
A632854	Total Potassium (K)	2022/07/05	96	80 - 120	98	80 - 120	<0.30	mg/L	1.2	20
A632854	Total Silicon (Si)	2022/07/05	98	80 - 120	102	80 - 120	<0.34	mg/L	2.3	20
A632854	Total Sodium (Na)	2022/07/05	97	80 - 120	99	80 - 120	<0.50	mg/L	2.7	20
A632854	Total Strontium (Sr)	2022/07/05	95	80 - 120	97	80 - 120	<0.020	mg/L	4.0	20
A632854	Total Sulphur (S)	2022/07/05	113	80 - 120	114	80 - 120	<0.20	mg/L	4.9	20
A632858	Total Aluminum (Al)	2022/07/06	115	80 - 120	109	80 - 120	<0.0030	mg/L	5.2	20
A632858	Total Antimony (Sb)	2022/07/06	100	80 - 120	101	80 - 120	<0.00060	mg/L	NC	20
A632858	Total Arsenic (As)	2022/07/06	96	80 - 120	98	80 - 120	<0.00020	mg/L	5.0	20
A632858	Total Beryllium (Be)	2022/07/06	104	80 - 120	103	80 - 120	<0.0010	mg/L	NC	20
A632858	Total Chromium (Cr)	2022/07/06	97	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
A632858	Total Cobalt (Co)	2022/07/06	98	80 - 120	101	80 - 120	<0.00030	mg/L	NC	20
A632858	Total Copper (Cu)	2022/07/06	97	80 - 120	101	80 - 120	<0.0010	mg/L	1.3	20
A632858	Total Lead (Pb)	2022/07/06	97	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A632858	Total Molybdenum (Mo)	2022/07/06	103	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
A632858	Total Nickel (Ni)	2022/07/06	96	80 - 120	100	80 - 120	<0.00050	mg/L	5.5	20
A632858	Total Selenium (Se)	2022/07/06	98	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
A632858	Total Silver (Ag)	2022/07/06	99	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20
A632858	Total Thallium (Tl)	2022/07/06	97	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
A632858	Total Tin (Sn)	2022/07/06	103	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20
A632858	Total Titanium (Ti)	2022/07/06	101	80 - 120	102	80 - 120	<0.0010	mg/L	4.4	20
A632858	Total Uranium (U)	2022/07/06	99	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
A632858	Total Vanadium (V)	2022/07/06	98	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
A632858	Total Zinc (Zn)	2022/07/06	93	80 - 120	95	80 - 120	<0.0030	mg/L	0.81	20
A632864	Total Barium (Ba)	2022/07/06	100	80 - 120	102	80 - 120	<0.010	mg/L	8.6	20
A632864	Total Boron (B)	2022/07/06	98	80 - 120	100	80 - 120	<0.020	mg/L	NC	20
A632864	Total Calcium (Ca)	2022/07/06	NC	80 - 120	101	80 - 120	<0.30	mg/L	5.4	20
A632864	Total Iron (Fe)	2022/07/06	NC	80 - 120	104	80 - 120	<0.060	mg/L	4.9	20
A632864	Total Lithium (Li)	2022/07/06	101	80 - 120	102	80 - 120	<0.020	mg/L	NC	20
A632864	Total Magnesium (Mg)	2022/07/06	NC	80 - 120	110	80 - 120	<0.20	mg/L	6.8	20
A632864	Total Manganese (Mn)	2022/07/06	101	80 - 120	102	80 - 120	<0.0040	mg/L	5.2	20
A632864	Total Phosphorus (P)	2022/07/06	100	80 - 120	100	80 - 120	<0.10	mg/L	NC	20
A632864	Total Potassium (K)	2022/07/06	100	80 - 120	101	80 - 120	<0.30	mg/L	2.0	20
A632864	Total Silicon (Si)	2022/07/06	NC	80 - 120	105	80 - 120	<0.35	mg/L	4.3	20
A632864	Total Sodium (Na)	2022/07/06	NC	80 - 120	101	80 - 120	<0.50	mg/L	NC	20
A632864	Total Strontium (Sr)	2022/07/06	96	80 - 120	99	80 - 120	<0.020	mg/L	7.8	20
A632864	Total Sulphur (S)	2022/07/06	NC	80 - 120	112	80 - 120	<0.20	mg/L	5.7	20
A634099	Total Aluminum (Al)	2022/07/07	109	80 - 120	109	80 - 120	<0.0030	mg/L	14	20
A634099	Total Antimony (Sb)	2022/07/07	98	80 - 120	98	80 - 120	<0.00060	mg/L	NC	20
A634099	Total Arsenic (As)	2022/07/07	97	80 - 120	97	80 - 120	<0.00020	mg/L	7.9	20
A634099	Total Beryllium (Be)	2022/07/07	104	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
A634099	Total Chromium (Cr)	2022/07/07	98	80 - 120	99	80 - 120	<0.0010	mg/L	NC	20
A634099	Total Cobalt (Co)	2022/07/07	99	80 - 120	100	80 - 120	<0.00030	mg/L	NC	20
A634099	Total Copper (Cu)	2022/07/07	98	80 - 120	100	80 - 120	<0.0010	mg/L	11	20
A634099	Total Lead (Pb)	2022/07/07	98	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
A634099	Total Molybdenum (Mo)	2022/07/07	103	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A634099	Total Nickel (Ni)	2022/07/07	97	80 - 120	99	80 - 120	<0.00050	mg/L	15	20
A634099	Total Selenium (Se)	2022/07/07	98	80 - 120	98	80 - 120	<0.00020	mg/L	8.7	20
A634099	Total Silver (Ag)	2022/07/07	100	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
A634099	Total Thallium (Tl)	2022/07/07	97	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20
A634099	Total Tin (Sn)	2022/07/07	102	80 - 120	102	80 - 120	<0.0010	mg/L	NC	20
A634099	Total Titanium (Ti)	2022/07/07	99	80 - 120	101	80 - 120	<0.0010	mg/L	NC	20
A634099	Total Uranium (U)	2022/07/07	98	80 - 120	98	80 - 120	<0.00010	mg/L	19	20
A634099	Total Vanadium (V)	2022/07/07	99	80 - 120	99	80 - 120	<0.0010	mg/L	0.39	20
A634099	Total Zinc (Zn)	2022/07/07	94	80 - 120	95	80 - 120	<0.0030	mg/L	9.4	20
A634105	Total Barium (Ba)	2022/07/07	99	80 - 120	102	80 - 120	<0.010	mg/L	2.3	20
A634105	Total Boron (B)	2022/07/07	94	80 - 120	100	80 - 120	<0.020	mg/L	7.8	20
A634105	Total Calcium (Ca)	2022/07/07	96	80 - 120	100	80 - 120	<0.30	mg/L	1.6	20
A634105	Total Iron (Fe)	2022/07/07	99	80 - 120	104	80 - 120	<0.060	mg/L	3.9	20
A634105	Total Lithium (Li)	2022/07/07	98	80 - 120	100	80 - 120	<0.020	mg/L	NC	20
A634105	Total Magnesium (Mg)	2022/07/07	102	80 - 120	105	80 - 120	<0.20	mg/L	2.5	20
A634105	Total Manganese (Mn)	2022/07/07	98	80 - 120	101	80 - 120	<0.0040	mg/L	0.74	20
A634105	Total Phosphorus (P)	2022/07/07	94	80 - 120	99	80 - 120	<0.10	mg/L	7.4	20
A634105	Total Potassium (K)	2022/07/07	96	80 - 120	99	80 - 120	<0.30	mg/L	2.2	20
A634105	Total Silicon (Si)	2022/07/07	97	80 - 120	102	80 - 120	<0.10	mg/L	0.075	20
A634105	Total Sodium (Na)	2022/07/07	96	80 - 120	98	80 - 120	<0.50	mg/L	1.7	20
A634105	Total Strontium (Sr)	2022/07/07	97	80 - 120	99	80 - 120	<0.020	mg/L	1.4	20
A634105	Total Sulphur (S)	2022/07/07	109	80 - 120	113	80 - 120	<0.20	mg/L	1.0	20
A635631	Total Barium (Ba)	2022/07/07	97	80 - 120	97	80 - 120	<0.010	mg/L		
A635631	Total Boron (B)	2022/07/07	96	80 - 120	95	80 - 120	<0.020	mg/L		
A635631	Total Calcium (Ca)	2022/07/07	NC	80 - 120	97	80 - 120	<0.30	mg/L		
A635631	Total Iron (Fe)	2022/07/07	104	80 - 120	103	80 - 120	<0.060	mg/L		
A635631	Total Lithium (Li)	2022/07/07	100	80 - 120	100	80 - 120	<0.020	mg/L		
A635631	Total Magnesium (Mg)	2022/07/07	109	80 - 120	107	80 - 120	<0.20	mg/L		
A635631	Total Manganese (Mn)	2022/07/07	101	80 - 120	101	80 - 120	<0.0040	mg/L		
A635631	Total Phosphorus (P)	2022/07/07	99	80 - 120	99	80 - 120	<0.10	mg/L		
A635631	Total Potassium (K)	2022/07/07	98	80 - 120	97	80 - 120	<0.30	mg/L		
A635631	Total Silicon (Si)	2022/07/07	101	80 - 120	103	80 - 120	<0.10	mg/L		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A635631	Total Sodium (Na)	2022/07/07	96	80 - 120	95	80 - 120	<0.50	mg/L	0.96	20
A635631	Total Strontium (Sr)	2022/07/07	96	80 - 120	95	80 - 120	<0.020	mg/L		
A635631	Total Sulphur (S)	2022/07/07	103	80 - 120	103	80 - 120	<0.20	mg/L		
A637311	Dissolved Aluminum (Al)	2022/07/08	NC	80 - 120	101	80 - 120	<0.0030	mg/L	3.9	20
A637311	Dissolved Copper (Cu)	2022/07/08	95	80 - 120	88	80 - 120	<0.0010	mg/L		
A637311	Dissolved Zinc (Zn)	2022/07/08	96	80 - 120	87	80 - 120	<0.0030	mg/L		
A639342	Total Aluminum (Al)	2022/07/11	100	80 - 120	100	80 - 120	<0.0030	mg/L	1.3	20
A639342	Total Antimony (Sb)	2022/07/11	113	80 - 120	111	80 - 120	<0.00060	mg/L	NC	20
A639342	Total Arsenic (As)	2022/07/11	102	80 - 120	101	80 - 120	<0.00020	mg/L	9.1	20
A639342	Total Beryllium (Be)	2022/07/11	108	80 - 120	105	80 - 120	<0.0010	mg/L	NC	20
A639342	Total Chromium (Cr)	2022/07/11	97	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20
A639342	Total Cobalt (Co)	2022/07/11	97	80 - 120	98	80 - 120	<0.00030	mg/L	NC	20
A639342	Total Copper (Cu)	2022/07/11	93	80 - 120	96	80 - 120	<0.0010	mg/L	0.097	20
A639342	Total Lead (Pb)	2022/07/11	99	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
A639342	Total Molybdenum (Mo)	2022/07/11	110	80 - 120	108	80 - 120	<0.00020	mg/L	4.8	20
A639342	Total Nickel (Ni)	2022/07/11	95	80 - 120	95	80 - 120	<0.00050	mg/L	4.5	20
A639342	Total Selenium (Se)	2022/07/11	130 (1)	80 - 120	127 (1)	80 - 120	<0.00020	mg/L	5.6	20
A639342	Total Silver (Ag)	2022/07/11	103	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
A639342	Total Thallium (Tl)	2022/07/11	100	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
A639342	Total Tin (Sn)	2022/07/11	108	80 - 120	111	80 - 120	<0.0010	mg/L	NC	20
A639342	Total Titanium (Ti)	2022/07/11	98	80 - 120	101	80 - 120	<0.0010	mg/L	NC	20
A639342	Total Uranium (U)	2022/07/11	99	80 - 120	97	80 - 120	<0.00010	mg/L	3.0	20
A639342	Total Vanadium (V)	2022/07/11	100	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A639342	Total Zinc (Zn)	2022/07/11	98	80 - 120	99	80 - 120	<0.0030	mg/L	NC	20

N/A = Not Applicable

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

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

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

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

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

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

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

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VALIDATION SIGNATURE PAGE

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

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

Sze Yeung Fock, B.Sc., Scientific Specialist

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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvna.com

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#7500 KGS Group	Company Name:	KGS Group	Quotation #:	C20090	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Ganga Atmuri/Ed Collins	P.O. #:		C246493	667282
Address:	3rd Floor 865 Waverly St Winnipeg MB R3T 5T4	Address:	865 Waverley St - 3rd floor Winnipeg, MB R3T 5P4	Project:	21-1357-005	COC #:	Project Manager:
Tel:	(204) 896-1209 Fax:	Tel:	(204) 896-1209 Fax:	Project Name:		C#667282-01-01	Janelle Kochan
Email:	payables@kgsgroup.com	Email:	gatmuri@kgsgroup.com,ecollins@kgsgroup.com	Site #:	OAM - Sherridon Mine Site		
				Sampled By:	AL/IH		

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☒ Other MWQSOG

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: ☒
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission) ☐
Date Required:
Rush Confirmation Number: *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	pH @25°C	Alkalinity @25C (pp, total), CO3,HCO3,OH	Total Suspended Solids (NFR)	Turbidity	Regulated Metals (CCME/AT1) - Total	Reg. Metals (CCME/AT1) – Diss. Lab Filt.	Hardness	Hardness Total (calculated as CaCO3)			# of Bottles	Comments
✓ 1		SC-1	22/06/29	11:00	SW	N	X	X	X	X	X	X	X	X			4	
✓ 2		TRIP BLANK		—		N	X	X	X	X	X	X	X	X			4	
✓ 3		SB-1		9:55		N	X	X	X	X	X	X	X	X			4	
✓ 4		SB-2		9:45		N	X	X	X	X	X	X	X	X			4	
✓ 5		CB-1		10:00		N	X	X	X	X	X	X	X	X			4	
✓ 6		CB-2		10:05		N	X	X	X	X	X	X	X	X			4	
✓ 7		NB-1		10:40		N	X	X	X	X	X	X	X	X			4	
✓ 8		NB-2		10:30		N	X	X	X	X	X	X	X	X			4	
✓ 9		EB-1		10:15		N	X	X	X	X	X	X	X	X			4	
✓ 10		EB-2		10:20		N	X	X	X	X	X	X	X	X			4	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Ainsleigh Loria	22/06/29	11:40	Ashton Raitt	2022/06/29	17:30		☐	7.0/7.5/8.1	☐ Yes ☐ No
			Rhyam Lawrence	2022/06/30	08:35				

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.

White: Bureau Veritas Yellow: Client

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

ICE-YES
See ACTR

Bureau Veritas Canada (2019) Inc.

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4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvna.com

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#7500 KGS Group	Company Name:	KGS Group	Quotation #:	C20090	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Ganga Atmuri/Ed Collins	P.O. #:		C246493	667282
Address:	3rd Floor 865 Waverly St Winnipeg MB R3T 5T4	Address:	865 Waverley St - 3rd floor Winnipeg, MB R3T 5P4	Project:	21-1357-005	COC #:	Project Manager:
Tel:	(204) 896-1209 Fax:	Tel:	(204) 896-1209 Fax:	Project Name:		C#667282-02-01	Janelle Kochan
Email:	payables@kgsgroup.com	Email:	gatmuri@kgsgroup.com,ecollins@kgsgroup.com	Site #:	OAM - Sherridon Mine Site		
				Sampled By:	AL/IH		

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☒ Other MWQSOG

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: ☒
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission) ☐
Date Required:
Rush Confirmation Number:
(call lab for #)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	pH @25°C	Alkalinity @25C (pp, total), CO3,HCO3,OH	Total Suspended Solids (NFR)	Turbidity	Regulated Metals (CCME/AT1) - Total	Reg. Metals (CCME/AT1) – Diss. Lab Filt.	Hardness	Hardness Total (calculated as CaCO3)	# of Bottles	Comments
1		CAMP LAKE DISCHARGE	22/06/28	10:45	SW	N	X	X	X	X	X	X	X	X	4	
2		CL-2		9:15		N	X	X	X	X	X	X	X	X	4	
3		CL-3		8:55		N	X	X	X	X	X	X	X	X	4	
4		CL-4		8:35		N	X	X	X	X	X	X	X	X	4	
5		CL-5		8:25		N	X	X	X	X	X	X	X	X	4	
6		CL-6		8:10		N	X	X	X	X	X	X	X	X	4	
7		CL-7		9:00		N	X	X	X	X	X	X	X	X	4	
8		CL-8		8:45		N	X	X	X	X	X	X	X	X	4	
9		SW-105		14:00		N	X	X	X	X	X	X	X	X	4	
10		SW-114	↓	13:00	↓	N	X	X	X	X	X	X	X	X	4	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only		
Ainsleigh Loria Aloria	22/06/29	11:40	Ashton Ratt AR	2022/06/29	12:30		Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
			[signature] Ayam Livermore	2022/06/30	08:35		☐	9.1/6.9/8.3	☐ Yes ☐ No

ICE-YES
See ACTE

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.
** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

Your Project #: 21-1357-005
Site#: OAM - Sherridon Mine Site
Your C.O.C. #: 668684-01-01, 668684-02-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/07/22
Report #: R3204065
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C250758
Received: 2022/07/13, 11:50

Sample Matrix: Water
Samples Received: 20

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH (1)	20	N/A	2022/07/18	AB SOP-00005	SM 23 2320 B m
Cadmium - low level CCME - Dissolved (1)	20	N/A	2022/07/20		Auto Calc
Cadmium - low level CCME (Total) (1)	2	N/A	2022/07/20		Auto Calc
Cadmium - low level CCME (Total) (1)	18	N/A	2022/07/21		Auto Calc
Hardness (1)	20	N/A	2022/07/21		Auto Calc
Hardness Total (calculated as CaCO3) (1, 2)	18	N/A	2022/07/20	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3) (1, 2)	2	N/A	2022/07/21	BBY WI-00033	Auto Calc
Elements by ICP-Dissolved-Lab Filtered (1, 3)	20	N/A	2022/07/20	AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Total (1)	18	2022/07/18	2022/07/20	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Total (1)	2	2022/07/18	2022/07/21	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Elements by ICPMS-Dissolved-Lab Filtered (1, 4)	20	N/A	2022/07/20	AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total (1)	16	2022/07/18	2022/07/19	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total (1)	4	2022/07/18	2022/07/20	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
pH @25°C (1, 5)	20	N/A	2022/07/18	AB SOP-00005	SM 23 4500-H+B m
Total Suspended Solids (NFR) (1)	20	2022/07/19	2022/07/19	AB SOP-00061	SM 23 2540 D m
Turbidity (1)	20	N/A	2022/07/15	CAL SOP-00081	SM 23 2130 B m

Remarks:

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

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

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

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

Your Project #: 21-1357-005
Site#: OAM - Sherridon Mine Site
Your C.O.C. #: 668684-01-01, 668684-02-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/07/22
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Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C250758

Received: 2022/07/13, 11:50

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8
(2) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(3) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(4) Samples were filtered and preserved at the lab. Values may not reflect concentrations at the time of sampling. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(5) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Janelle Kochan, B.Sc., Key Account Specialist
Email: Janelle.KOCHAN@bureauveritas.com
Phone# (204)259-0231
==========
This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AXG520	AXG521	AXG522		AXG523		
Sampling Date		2022/07/12 09:40	2022/07/12 09:45	2022/07/12 09:50		2022/07/12 10:05		
COC Number		668684-01-01	668684-01-01	668684-01-01		668684-01-01		
	UNITS	CB-2	EB-1	EB-2	QC Batch	NB-2	RDL	QC Batch
Elements								
Dissolved Cadmium (Cd)	ug/L	0.59	0.70	0.73	A644986	0.53	0.020	A644986
Lab Filtered Elements								
Dissolved Aluminum (Al)	mg/L	0.049	0.050	0.048	A650546	0.052	0.0030	A651949
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	A650546	<0.00060	0.00060	A650536
Dissolved Arsenic (As)	mg/L	0.00024	0.00023	<0.00020	A650546	0.00027	0.00020	A650536
Dissolved Barium (Ba)	mg/L	0.011	0.011	0.012	A650484	0.011	0.010	A650484
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	A650546	<0.0010	0.0010	A650536
Dissolved Boron (B)	mg/L	<0.020	<0.020	<0.020	A650484	<0.020	0.020	A650484
Dissolved Calcium (Ca)	mg/L	31	36	38	A650484	33	0.30	A650484
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010	<0.0010	A650546	<0.0010	0.0010	A650536
Dissolved Cobalt (Co)	mg/L	<0.00030	<0.00030	0.00037	A650546	<0.00030	0.00030	A650536
Dissolved Copper (Cu)	mg/L	0.020	0.021	0.019	A650546	0.026	0.0010	A650536
Dissolved Iron (Fe)	mg/L	2.1	1.5	1.2	A650484	2.0	0.060	A650484
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	<0.00020	A650546	<0.00020	0.00020	A650536
Dissolved Lithium (Li)	mg/L	<0.020	<0.020	<0.020	A650484	<0.020	0.020	A650484
Dissolved Magnesium (Mg)	mg/L	6.0	6.7	7.0	A650484	5.9	0.20	A650484
Dissolved Manganese (Mn)	mg/L	0.044	0.072	0.082	A650484	0.038	0.0040	A650484
Dissolved Molybdenum (Mo)	mg/L	<0.00020	<0.00020	<0.00020	A650546	<0.00020	0.00020	A650536
Dissolved Nickel (Ni)	mg/L	0.0014	0.0017	0.0018	A650546	0.0014	0.00050	A650536
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	A650484	<0.10	0.10	A650484
Dissolved Potassium (K)	mg/L	2.8	3.1	3.2	A650484	2.8	0.30	A650484
Dissolved Selenium (Se)	mg/L	<0.00020	<0.00020	<0.00020	A650546	<0.00020	0.00020	A650536
Dissolved Silicon (Si)	mg/L	1.5	1.4	1.4	A650484	1.4	0.10	A650484
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	A650546	<0.00010	0.00010	A650536
Dissolved Sodium (Na)	mg/L	2.3	2.6	2.6	A650484	2.3	0.50	A650484
Dissolved Strontium (Sr)	mg/L	0.038	0.042	0.042	A650484	0.037	0.020	A650484
Dissolved Sulphur (S)	mg/L	31	38	40	A650484	31	0.20	A650484
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	A650546	<0.00020	0.00020	A650536
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	A650546	<0.0010	0.0010	A650536
Dissolved Titanium (Ti)	mg/L	0.0012	<0.0010	<0.0010	A650546	<0.0010	0.0010	A650536
Dissolved Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	A650546	<0.00010	0.00010	A650536

RDL = Reportable Detection Limit

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AXG520	AXG521	AXG522		AXG523		
Sampling Date		2022/07/12 09:40	2022/07/12 09:45	2022/07/12 09:50		2022/07/12 10:05		
COC Number		668684-01-01	668684-01-01	668684-01-01		668684-01-01		
	UNITS	**CB-2**	**EB-1**	**EB-2**	**QC Batch**	**NB-2**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	<0.0010	A650546	<0.0010	0.0010	A650536
Dissolved Zinc (Zn)	mg/L	0.17	0.20	0.20	A650546	0.17	0.0030	A650536
RDL = Reportable Detection Limit								

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AXG524	AXG525	AXG526	AXG527		
Sampling Date		2022/07/12 10:10	2022/07/12 10:15	2022/07/12 10:35	2022/07/12 16:00		
COC Number		668684-01-01	668684-01-01	668684-01-01	668684-01-01		
	UNITS	NB-1	CAMP LAKE DISCHARGE	SC-1	SW-111	RDL	QC Batch
Elements							
Dissolved Cadmium (Cd)	ug/L	0.55	0.50	0.13	0.087	0.020	A644986
Lab Filtered Elements							
Dissolved Aluminum (Al)	mg/L	0.057	0.048	0.032	0.040 (1)	0.0030	A650546
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	<0.00060	0.00060	A650546
Dissolved Arsenic (As)	mg/L	0.00026	0.00023	0.00039	0.00026	0.00020	A650546
Dissolved Barium (Ba)	mg/L	<0.010	0.010	<0.010	0.011	0.010	A650484
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A650546
Dissolved Boron (B)	mg/L	<0.020	<0.020	<0.020	<0.020	0.020	A650484
Dissolved Calcium (Ca)	mg/L	31	32	7.7	15	0.30	A650484
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A650546
Dissolved Cobalt (Co)	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	0.00030	A650546
Dissolved Copper (Cu)	mg/L	0.022	0.021	0.0067	0.0087	0.0010	A650546
Dissolved Iron (Fe)	mg/L	2.1	2.1	0.16	0.71	0.060	A650484
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A650546
Dissolved Lithium (Li)	mg/L	<0.020	<0.020	<0.020	<0.020	0.020	A650484
Dissolved Magnesium (Mg)	mg/L	5.8	5.8	2.4	3.5	0.20	A650484
Dissolved Manganese (Mn)	mg/L	0.041	0.034	0.0078	<0.0040	0.0040	A650484
Dissolved Molybdenum (Mo)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A650546
Dissolved Nickel (Ni)	mg/L	0.0013	0.0012	<0.00050	0.00055	0.00050	A650546
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	<0.10	0.10	A650484
Dissolved Potassium (K)	mg/L	2.6	2.8	1.2	1.8	0.30	A650484
Dissolved Selenium (Se)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A650546
Dissolved Silicon (Si)	mg/L	1.4	1.5	1.3	1.5	0.10	A650484
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A650546
Dissolved Sodium (Na)	mg/L	2.2	2.3	1.9	2.1	0.50	A650484
Dissolved Strontium (Sr)	mg/L	0.037	0.037	<0.020	0.028	0.020	A650484
Dissolved Sulphur (S)	mg/L	31	31	1.4	9.2	0.20	A650484
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A650546
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A650546
Dissolved Titanium (Ti)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A650546
Dissolved Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A650546

RDL = Reportable Detection Limit
(1) Duplicate exceeds acceptance criteria due to sample non homogeneity. Reanalysis yields similar results.

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AXG524	AXG525	AXG526	AXG527		
Sampling Date		2022/07/12 10:10	2022/07/12 10:15	2022/07/12 10:35	2022/07/12 16:00		
COC Number		668684-01-01	668684-01-01	668684-01-01	668684-01-01		
	UNITS	**NB-1**	**CAMP LAKE DISCHARGE**	**SC-1**	**SW-111**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A650546
Dissolved Zinc (Zn)	mg/L	0.17	0.17	0.047	0.048	0.0030	A650546
RDL = Reportable Detection Limit							

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AXG527			AXG528	AXG529	AXG536		
Sampling Date		2022/07/12 16:00			2022/07/12 17:00	2022/07/12	2022/07/12 08:10		
COC Number		668684-01-01			668684-01-01	668684-01-01	668684-02-01		
	UNITS	SW-111 Lab-Dup	RDL	QC Batch	SW-109	TRIP BLANK	CL-6	RDL	QC Batch
Elements									
Dissolved Cadmium (Cd)	ug/L				0.66	<0.020	0.057	0.020	A644986
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	0.051 (1)	0.0030	A650546	0.052	0.0032	0.035	0.0030	A650546
Dissolved Antimony (Sb)	mg/L	<0.00060	0.00060	A650546	<0.00060	<0.00060	<0.00060	0.00060	A650546
Dissolved Arsenic (As)	mg/L	0.00034	0.00020	A650546	0.00024	<0.00020	0.00034	0.00020	A650546
Dissolved Barium (Ba)	mg/L	<0.010	0.010	A650484	0.011	<0.010	0.010	0.010	A650484
Dissolved Beryllium (Be)	mg/L	<0.0010	0.0010	A650546	<0.0010	<0.0010	<0.0010	0.0010	A650546
Dissolved Boron (B)	mg/L	<0.020	0.020	A650484	<0.020	<0.020	<0.020	0.020	A650484
Dissolved Calcium (Ca)	mg/L	16	0.30	A650484	37	<0.30	13	0.30	A650484
Dissolved Chromium (Cr)	mg/L	<0.0010	0.0010	A650546	<0.0010	<0.0010	<0.0010	0.0010	A650546
Dissolved Cobalt (Co)	mg/L	<0.00030	0.00030	A650546	0.00033	<0.00030	<0.00030	0.00030	A650546
Dissolved Copper (Cu)	mg/L	0.0095	0.0010	A650546	0.019	<0.0010	0.0068	0.0010	A650546
Dissolved Iron (Fe)	mg/L	0.73	0.060	A650484	1.1	<0.060	0.48	0.060	A650484
Dissolved Lead (Pb)	mg/L	<0.00020	0.00020	A650546	<0.00020	<0.00020	<0.00020	0.00020	A650546
Dissolved Lithium (Li)	mg/L	<0.020	0.020	A650484	0.031	<0.020	<0.020	0.020	A650484
Dissolved Magnesium (Mg)	mg/L	3.6	0.20	A650484	6.7	<0.20	3.4	0.20	A650484
Dissolved Manganese (Mn)	mg/L	<0.0040	0.0040	A650484	0.073	<0.0040	0.014	0.0040	A650484
Dissolved Molybdenum (Mo)	mg/L	<0.00020	0.00020	A650546	<0.00020	<0.00020	<0.00020	0.00020	A650546
Dissolved Nickel (Ni)	mg/L	0.00062	0.00050	A650546	0.0018	<0.00050	0.00056	0.00050	A650546
Dissolved Phosphorus (P)	mg/L	<0.10	0.10	A650484	<0.10	<0.10	<0.10	0.10	A650484
Dissolved Potassium (K)	mg/L	1.8	0.30	A650484	3.2	<0.30	1.7	0.30	A650484
Dissolved Selenium (Se)	mg/L	<0.00020	0.00020	A650546	<0.00020	<0.00020	<0.00020	0.00020	A650546
Dissolved Silicon (Si)	mg/L	1.5	0.10	A650484	1.3	<0.10	1.5	0.10	A650484
Dissolved Silver (Ag)	mg/L	<0.00010	0.00010	A650546	<0.00010	<0.00010	<0.00010	0.00010	A650546
Dissolved Sodium (Na)	mg/L	2.2	0.50	A650484	2.6	<0.50	2.0	0.50	A650484
Dissolved Strontium (Sr)	mg/L	0.028	0.020	A650484	0.041	<0.020	0.027	0.020	A650484
Dissolved Sulphur (S)	mg/L	8.8	0.20	A650484	38	<0.20	7.6	0.20	A650484
Dissolved Thallium (Tl)	mg/L	<0.00020	0.00020	A650546	<0.00020	<0.00020	<0.00020	0.00020	A650546
Dissolved Tin (Sn)	mg/L	<0.0010	0.0010	A650546	<0.0010	<0.0010	<0.0010	0.0010	A650546

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AXG527			AXG528	AXG529	AXG536		
Sampling Date		2022/07/12 16:00			2022/07/12 17:00	2022/07/12	2022/07/12 08:10		
COC Number		668684-01-01			668684-01-01	668684-01-01	668684-02-01		
	UNITS	**SW-111 Lab-Dup**	**RDL**	**QC Batch**	**SW-109**	**TRIP BLANK**	**CL-6**	**RDL**	**QC Batch**
Dissolved Titanium (Ti)	mg/L	<0.0010	0.0010	A650546	<0.0010	<0.0010	0.0015	0.0010	A650546
Dissolved Uranium (U)	mg/L	<0.00010	0.00010	A650546	<0.00010	<0.00010	<0.00010	0.00010	A650546
Dissolved Vanadium (V)	mg/L	<0.0010	0.0010	A650546	<0.0010	<0.0010	<0.0010	0.0010	A650546
Dissolved Zinc (Zn)	mg/L	0.050	0.0030	A650546	0.20	<0.0030	0.035	0.0030	A650546

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AXG537	AXG538	AXG539		AXG540		
Sampling Date		2022/07/12 08:20	2022/07/12 08:30	2022/07/12 08:40		2022/07/12 08:45		
COC Number		668684-02-01	668684-02-01	668684-02-01		668684-02-01		
	UNITS	CL-5	CL-4	CL-8	QC Batch	CL-3	RDL	QC Batch
Elements								
Dissolved Cadmium (Cd)	ug/L	0.063	0.10	0.097	A644986	0.10	0.020	A644986
Lab Filtered Elements								
Dissolved Aluminum (Al)	mg/L	0.032	0.057	0.041	A650546	0.037	0.0030	A650536
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	A650546	<0.00060	0.00060	A650536
Dissolved Arsenic (As)	mg/L	0.00033	0.00030	0.00033	A650546	0.00039	0.00020	A650536
Dissolved Barium (Ba)	mg/L	<0.010	0.010	<0.010	A650484	<0.010	0.010	A650484
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	A650546	<0.0010	0.0010	A650536
Dissolved Boron (B)	mg/L	<0.020	<0.020	<0.020	A650484	<0.020	0.020	A650484
Dissolved Calcium (Ca)	mg/L	14	14	13	A650484	14	0.30	A650484
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010	<0.0010	A650546	<0.0010	0.0010	A650536
Dissolved Cobalt (Co)	mg/L	<0.00030	<0.00030	<0.00030	A650546	<0.00030	0.00030	A650536
Dissolved Copper (Cu)	mg/L	0.0073	0.0073	0.0080	A650546	0.0084	0.0010	A650536
Dissolved Iron (Fe)	mg/L	0.67	1.5	0.34	A650484	0.50	0.060	A650484
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	<0.00020	A650546	<0.00020	0.00020	A650536
Dissolved Lithium (Li)	mg/L	<0.020	<0.020	<0.020	A650484	<0.020	0.020	A650484
Dissolved Magnesium (Mg)	mg/L	3.4	3.5	3.3	A650484	3.5	0.20	A650484
Dissolved Manganese (Mn)	mg/L	<0.0040	0.051	<0.0040	A650484	<0.0040	0.0040	A650484
Dissolved Molybdenum (Mo)	mg/L	<0.00020	<0.00020	<0.00020	A650546	<0.00020	0.00020	A650536
Dissolved Nickel (Ni)	mg/L	0.00052	<0.00050	0.00052	A650546	0.00060	0.00050	A650536
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	A650484	<0.10	0.10	A650484
Dissolved Potassium (K)	mg/L	1.7	1.7	1.6	A650484	1.6	0.30	A650484
Dissolved Selenium (Se)	mg/L	<0.00020	<0.00020	<0.00020	A650546	<0.00020	0.00020	A650536
Dissolved Silicon (Si)	mg/L	1.4	1.8	1.1	A650484	1.1	0.10	A650484
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	A650546	<0.00010	0.00010	A650536
Dissolved Sodium (Na)	mg/L	1.9	2.0	1.9	A650484	1.9	0.50	A650484
Dissolved Strontium (Sr)	mg/L	0.026	0.026	0.025	A650484	0.026	0.020	A650484
Dissolved Sulphur (S)	mg/L	8.3	8.2	7.6	A650484	9.1	0.20	A650484
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	A650546	<0.00020	0.00020	A650536
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	A650546	<0.0010	0.0010	A650536
Dissolved Titanium (Ti)	mg/L	<0.0010	<0.0010	<0.0010	A650546	<0.0010	0.0010	A650536
Dissolved Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	A650546	<0.00010	0.00010	A650536

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AXG537	AXG538	AXG539		AXG540		
Sampling Date		2022/07/12 08:20	2022/07/12 08:30	2022/07/12 08:40		2022/07/12 08:45		
COC Number		668684-02-01	668684-02-01	668684-02-01		668684-02-01		
	UNITS	**CL-5**	**CL-4**	**CL-8**	**QC Batch**	**CL-3**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	<0.0010	A650546	<0.0010	0.0010	A650536
Dissolved Zinc (Zn)	mg/L	0.036	0.036	0.037	A650546	0.042	0.0030	A650536
RDL = Reportable Detection Limit								

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AXG541	AXG542	AXG543		AXG544		
Sampling Date		2022/07/12 08:50	2022/07/12 09:00	2022/07/12 09:25		2022/07/12 09:30		
COC Number		668684-02-01	668684-02-01	668684-02-01		668684-02-01		
	UNITS	CL-7	CL-2	SB-2	QC Batch	SB-1	RDL	QC Batch
Elements								
Dissolved Cadmium (Cd)	ug/L	0.11	0.095	0.45	A644986	0.52	0.020	A644986
Lab Filtered Elements								
Dissolved Aluminum (Al)	mg/L	0.053	0.048	0.047	A650546	0.049	0.0030	A650224
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	A650546	<0.00060	0.00060	A650224
Dissolved Arsenic (As)	mg/L	0.00027	0.00029	0.00021	A650546	0.00026	0.00020	A650224
Dissolved Barium (Ba)	mg/L	<0.010	<0.010	0.010	A650484	0.011	0.010	A650484
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	A650546	<0.0010	0.0010	A650224
Dissolved Boron (B)	mg/L	<0.020	<0.020	<0.020	A650484	<0.020	0.020	A650484
Dissolved Calcium (Ca)	mg/L	14	15	31	A650484	32	0.30	A650484
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010	<0.0010	A650546	<0.0010	0.0010	A650224
Dissolved Cobalt (Co)	mg/L	<0.00030	<0.00030	<0.00030	A650546	<0.00030	0.00030	A650224
Dissolved Copper (Cu)	mg/L	0.0089	0.0094	0.019	A650546	0.021	0.0010	A650224
Dissolved Iron (Fe)	mg/L	0.48	0.60	2.0	A650484	2.2	0.060	A650484
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	<0.00020	A650546	<0.00020	0.00020	A650224
Dissolved Lithium (Li)	mg/L	<0.020	<0.020	<0.020	A650484	<0.020	0.020	A650484
Dissolved Magnesium (Mg)	mg/L	3.5	3.5	5.9	A650484	6.1	0.20	A650484
Dissolved Manganese (Mn)	mg/L	<0.0040	<0.0040	0.033	A650484	0.040	0.0040	A650484
Dissolved Molybdenum (Mo)	mg/L	<0.00020	<0.00020	<0.00020	A650546	<0.00020	0.00020	A650224
Dissolved Nickel (Ni)	mg/L	0.00061	0.00051	0.0012	A650546	0.0014	0.00050	A650224
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	A650484	<0.10	0.10	A650484
Dissolved Potassium (K)	mg/L	1.6	1.6	2.8	A650484	2.9	0.30	A650484
Dissolved Selenium (Se)	mg/L	<0.00020	<0.00020	<0.00020	A650546	<0.00020	0.00020	A650224
Dissolved Silicon (Si)	mg/L	1.1	1.5	1.4	A650484	1.5	0.10	A650484
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	A650546	<0.00010	0.00010	A650224
Dissolved Sodium (Na)	mg/L	1.9	2.0	2.4	A650484	2.4	0.50	A650484
Dissolved Strontium (Sr)	mg/L	0.026	0.027	0.037	A650484	0.038	0.020	A650484
Dissolved Sulphur (S)	mg/L	9.5	9.8	28	A650484	29	0.20	A650484
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	A650546	<0.00020	0.00020	A650224
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	A650546	<0.0010	0.0010	A650224
Dissolved Titanium (Ti)	mg/L	<0.0010	<0.0010	<0.0010	A650546	<0.0010	0.0010	A650224
Dissolved Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	A650546	<0.00010	0.00010	A650224

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AXG541	AXG542	AXG543		AXG544		
Sampling Date		2022/07/12 08:50	2022/07/12 09:00	2022/07/12 09:25		2022/07/12 09:30		
COC Number		668684-02-01	668684-02-01	668684-02-01		668684-02-01		
	UNITS	**CL-7**	**CL-2**	**SB-2**	**QC Batch**	**SB-1**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	<0.0010	A650546	<0.0010	0.0010	A650224
Dissolved Zinc (Zn)	mg/L	0.046	0.048	0.15	A650546	0.16	0.0030	A650224
RDL = Reportable Detection Limit								

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AXG545		
Sampling Date		2022/07/12 09:35		
COC Number		668684-02-01		
	UNITS	CB-1	RDL	QC Batch
Elements				
Dissolved Cadmium (Cd)	ug/L	0.50	0.020	A645252
Lab Filtered Elements				
Dissolved Aluminum (Al)	mg/L	0.055	0.0030	A650546
Dissolved Antimony (Sb)	mg/L	<0.00060	0.00060	A650546
Dissolved Arsenic (As)	mg/L	0.00023	0.00020	A650546
Dissolved Barium (Ba)	mg/L	0.010	0.010	A650484
Dissolved Beryllium (Be)	mg/L	<0.0010	0.0010	A650546
Dissolved Boron (B)	mg/L	<0.020	0.020	A650484
Dissolved Calcium (Ca)	mg/L	31	0.30	A650484
Dissolved Chromium (Cr)	mg/L	<0.0010	0.0010	A650546
Dissolved Cobalt (Co)	mg/L	<0.00030	0.00030	A650546
Dissolved Copper (Cu)	mg/L	0.020	0.0010	A650546
Dissolved Iron (Fe)	mg/L	2.2	0.060	A650484
Dissolved Lead (Pb)	mg/L	<0.00020	0.00020	A650546
Dissolved Lithium (Li)	mg/L	<0.020	0.020	A650484
Dissolved Magnesium (Mg)	mg/L	6.0	0.20	A650484
Dissolved Manganese (Mn)	mg/L	0.041	0.0040	A650484
Dissolved Molybdenum (Mo)	mg/L	<0.00020	0.00020	A650546
Dissolved Nickel (Ni)	mg/L	0.0014	0.00050	A650546
Dissolved Phosphorus (P)	mg/L	<0.10	0.10	A650484
Dissolved Potassium (K)	mg/L	2.8	0.30	A650484
Dissolved Selenium (Se)	mg/L	<0.00020	0.00020	A650546
Dissolved Silicon (Si)	mg/L	1.6	0.10	A650484
Dissolved Silver (Ag)	mg/L	<0.00010	0.00010	A650546
Dissolved Sodium (Na)	mg/L	2.4	0.50	A650484
Dissolved Strontium (Sr)	mg/L	0.037	0.020	A650484
Dissolved Sulphur (S)	mg/L	31	0.20	A650484
Dissolved Thallium (Tl)	mg/L	<0.00020	0.00020	A650546
Dissolved Tin (Sn)	mg/L	<0.0010	0.0010	A650546
Dissolved Titanium (Ti)	mg/L	<0.0010	0.0010	A650546
Dissolved Uranium (U)	mg/L	<0.00010	0.00010	A650546
RDL = Reportable Detection Limit				

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AXG545		
Sampling Date		2022/07/12 09:35		
COC Number		668684-02-01		
	UNITS	**CB-1**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	0.0010	A650546
Dissolved Zinc (Zn)	mg/L	0.16	0.0030	A650546
RDL = Reportable Detection Limit				

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AXG520	AXG521	AXG522			AXG522		
Sampling Date		2022/07/12 09:40	2022/07/12 09:45	2022/07/12 09:50			2022/07/12 09:50		
COC Number		668684-01-01	668684-01-01	668684-01-01			668684-01-01		
	UNITS	CB-2	EB-1	EB-2	RDL	QC Batch	EB-2 Lab-Dup	RDL	QC Batch
Elements									
Total Cadmium (Cd)	ug/L	0.68	0.91	0.87	0.020	A644882			
Total Aluminum (Al)	mg/L	0.11	0.13	0.18	0.0030	A647564	0.18	0.0030	A647564
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	0.00060	A647564	<0.00060	0.00060	A647564
Total Arsenic (As)	mg/L	0.00041	0.00038	0.00038	0.00020	A647564	0.00042	0.00020	A647564
Total Barium (Ba)	mg/L	0.013	0.011	0.012	0.010	A647566	0.013	0.010	A647566
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	A647564	<0.0010	0.0010	A647564
Total Boron (B)	mg/L	<0.020	<0.020	<0.020	0.020	A647566	<0.020	0.020	A647566
Total Calcium (Ca)	mg/L	31	33	36	0.30	A647566	37	0.30	A647566
Total Chromium (Cr)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	A647564	<0.0010	0.0010	A647564
Total Cobalt (Co)	mg/L	0.00042	0.00068	0.00072	0.00030	A647564	0.00075	0.00030	A647564
Total Copper (Cu)	mg/L	0.027	0.030	0.027	0.0010	A647564	0.027	0.0010	A647564
Total Iron (Fe)	mg/L	2.7	2.3	2.2	0.060	A647566	2.2	0.060	A647566
Total Lead (Pb)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	A647564	<0.00020	0.00020	A647564
Total Lithium (Li)	mg/L	0.033	0.031	<0.020	0.020	A647566	0.032	0.020	A647566
Total Magnesium (Mg)	mg/L	6.0	6.2	6.7	0.20	A647566	6.7	0.20	A647566
Total Manganese (Mn)	mg/L	0.066	0.077	0.084	0.0040	A647566	0.084	0.0040	A647566
Total Molybdenum (Mo)	mg/L	0.00021	<0.00020	0.00022	0.00020	A647564	<0.00020	0.00020	A647564
Total Nickel (Ni)	mg/L	0.0024	0.0020	0.0021	0.00050	A647564	0.0020	0.00050	A647564
Total Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	0.10	A647566	<0.10	0.10	A647566
Total Potassium (K)	mg/L	2.8	2.8	3.0	0.30	A647566	3.0	0.30	A647566
Total Selenium (Se)	mg/L	0.00027	<0.00020	0.00037	0.00020	A647564	<0.00020	0.00020	A647564
Total Silicon (Si)	mg/L	1.8	1.5	1.7	0.10	A647566	1.6	0.10	A647566
Total Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	A647564	<0.00010	0.00010	A647564
Total Sodium (Na)	mg/L	2.5	2.4	2.6	0.50	A647566	2.5	0.50	A647566
Total Strontium (Sr)	mg/L	0.039	0.038	0.042	0.020	A647566	0.042	0.020	A647566
Total Sulphur (S)	mg/L	31	35	37	0.20	A647566	38	0.20	A647566
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	A647564	<0.00020	0.00020	A647564
Total Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	A647564	<0.0010	0.0010	A647564
Total Titanium (Ti)	mg/L	0.0027	0.0032	0.0057	0.0010	A647564	0.0058	0.0010	A647564
Total Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	A647564	<0.00010	0.00010	A647564
Total Vanadium (V)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	A647564	<0.0010	0.0010	A647564

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AXG520	AXG521	AXG522			AXG522		
Sampling Date		2022/07/12 09:40	2022/07/12 09:45	2022/07/12 09:50			2022/07/12 09:50		
COC Number		668684-01-01	668684-01-01	668684-01-01			668684-01-01		
	UNITS	**CB-2**	**EB-1**	**EB-2**	**RDL**	**QC Batch**	**EB-2 Lab-Dup**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.20	0.24	0.23	0.0030	A647564	0.23	0.0030	A647564

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AXG523	AXG524	AXG525	AXG526	AXG527		
Sampling Date		2022/07/12 10:05	2022/07/12 10:10	2022/07/12 10:15	2022/07/12 10:35	2022/07/12 16:00		
COC Number		668684-01-01	668684-01-01	668684-01-01	668684-01-01	668684-01-01		
	UNITS	NB-2	NB-1	CAMP LAKE DISCHARGE	SC-1	SW-111	RDL	QC Batch
Elements								
Total Cadmium (Cd)	ug/L	0.64	0.65	0.63	0.17	0.18	0.020	A644882
Total Aluminum (Al)	mg/L	0.090	0.10	0.14	0.061	0.12	0.0030	A647564
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	0.00060	A647564
Total Arsenic (As)	mg/L	0.00041	0.00040	0.00038	0.00057	0.00055	0.00020	A647564
Total Barium (Ba)	mg/L	0.010	0.010	0.010	<0.010	0.012	0.010	A647566
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A647564
Total Boron (B)	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	A647566
Total Calcium (Ca)	mg/L	32	33	31	7.8	16	0.30	A647566
Total Chromium (Cr)	mg/L	<0.0010	0.0012	<0.0010	<0.0010	<0.0010	0.0010	A647564
Total Cobalt (Co)	mg/L	0.00033	0.00033	0.00035	<0.00030	<0.00030	0.00030	A647564
Total Copper (Cu)	mg/L	0.026	0.027	0.026	0.0083	0.012	0.0010	A647564
Total Iron (Fe)	mg/L	2.7	2.8	2.7	0.23	1.6	0.060	A647566
Total Lead (Pb)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A647564
Total Lithium (Li)	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	A647566
Total Magnesium (Mg)	mg/L	5.8	6.0	5.7	2.5	3.7	0.20	A647566
Total Manganese (Mn)	mg/L	0.060	0.064	0.059	0.024	0.094	0.0040	A647566
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A647564
Total Nickel (Ni)	mg/L	0.0013	0.0018	0.0016	0.00055	0.00079	0.00050	A647564
Total Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	A647566
Total Potassium (K)	mg/L	2.6	2.8	2.6	1.2	1.7	0.30	A647566
Total Selenium (Se)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A647564
Total Silicon (Si)	mg/L	1.6	1.7	1.7	1.5	2.3	0.10	A647566
Total Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A647564
Total Sodium (Na)	mg/L	2.3	2.3	2.2	1.9	2.1	0.50	A647566
Total Strontium (Sr)	mg/L	0.036	0.037	0.036	<0.020	0.028	0.020	A647566
Total Sulphur (S)	mg/L	31	33	31	1.4	10	0.20	A647566
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A647564
Total Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A647564
Total Titanium (Ti)	mg/L	0.0019	0.0016	0.013	0.0026	0.0025	0.0010	A647564
Total Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A647564
Total Vanadium (V)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A647564

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AXG523	AXG524	AXG525	AXG526	AXG527		
Sampling Date		2022/07/12 10:05	2022/07/12 10:10	2022/07/12 10:15	2022/07/12 10:35	2022/07/12 16:00		
COC Number		668684-01-01	668684-01-01	668684-01-01	668684-01-01	668684-01-01		
	UNITS	**NB-2**	**NB-1**	**CAMP LAKE DISCHARGE**	**SC-1**	**SW-111**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.19	0.20	0.19	0.057	0.066	0.0030	A647564
RDL = Reportable Detection Limit								

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AXG528	AXG529	AXG536	AXG537	AXG538		
Sampling Date		2022/07/12 17:00	2022/07/12	2022/07/12 08:10	2022/07/12 08:20	2022/07/12 08:30		
COC Number		668684-01-01	668684-01-01	668684-02-01	668684-02-01	668684-02-01		
	UNITS	**SW-109**	**TRIP BLANK**	**CL-6**	**CL-5**	**CL-4**	**RDL**	**QC Batch**
Elements								
Total Cadmium (Cd)	ug/L	0.83	<0.020	0.10	0.11	0.15	0.020	A644882
Total Aluminum (Al)	mg/L	0.18	<0.0030	0.13	0.11	0.16	0.0030	A647564
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	0.00060	A647564
Total Arsenic (As)	mg/L	0.00038	<0.00020	0.00052	0.00048	0.00068	0.00020	A647564
Total Barium (Ba)	mg/L	0.013	<0.010	0.011	0.010	0.012	0.010	A647566
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A647564
Total Boron (B)	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	A647566
Total Calcium (Ca)	mg/L	38	<0.30	13	13	14	0.30	A647566
Total Chromium (Cr)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A647564
Total Cobalt (Co)	mg/L	0.00074	<0.00030	<0.00030	<0.00030	0.00040	0.00030	A647564
Total Copper (Cu)	mg/L	0.028	<0.0010	0.0085	0.0092	0.010	0.0010	A647564
Total Iron (Fe)	mg/L	2.3	<0.060	1.0	1.3	3.2	0.060	A647566
Total Lead (Pb)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00021	0.00020	A647564
Total Lithium (Li)	mg/L	0.031	<0.020	<0.020	0.027	0.028	0.020	A647566
Total Magnesium (Mg)	mg/L	6.9	<0.20	3.2	3.3	3.3	0.20	A647566
Total Manganese (Mn)	mg/L	0.086	<0.0040	0.090	0.053	0.16	0.0040	A647566
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A647564
Total Nickel (Ni)	mg/L	0.0022	<0.00050	0.00067	0.00075	0.00072	0.00050	A647564
Total Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	A647566
Total Potassium (K)	mg/L	3.1	<0.30	1.5	1.5	1.6	0.30	A647566
Total Selenium (Se)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A647564
Total Silicon (Si)	mg/L	1.7	0.20	1.8	1.6	2.4	0.10	A647566
Total Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A647564
Total Sodium (Na)	mg/L	2.6	<0.50	1.9	1.9	2.0	0.50	A647566
Total Strontium (Sr)	mg/L	0.043	<0.020	0.025	0.025	0.026	0.020	A647566
Total Sulphur (S)	mg/L	39	<0.20	7.2	7.9	8.1	0.20	A647566
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A647564
Total Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A647564
Total Titanium (Ti)	mg/L	0.0049	<0.0010	0.0049	0.0039	0.0037	0.0010	A647564
Total Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A647564
Total Vanadium (V)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A647564

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AXG528	AXG529	AXG536	AXG537	AXG538		
Sampling Date		2022/07/12 17:00	2022/07/12	2022/07/12 08:10	2022/07/12 08:20	2022/07/12 08:30		
COC Number		668684-01-01	668684-01-01	668684-02-01	668684-02-01	668684-02-01		
	UNITS	**SW-109**	**TRIP BLANK**	**CL-6**	**CL-5**	**CL-4**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.24	<0.0030	0.046	0.051	0.053	0.0030	A647564
RDL = Reportable Detection Limit								

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AXG539			AXG539			AXG540		
Sampling Date		2022/07/12 08:40			2022/07/12 08:40			2022/07/12 08:45		
COC Number		668684-02-01			668684-02-01			668684-02-01		
	UNITS	CL-8	RDL	QC Batch	CL-8 Lab-Dup	RDL	QC Batch	CL-3	RDL	QC Batch
Elements										
Total Cadmium (Cd)	ug/L	0.12	0.020	A644882				0.17	0.020	A644882
Total Aluminum (Al)	mg/L	0.079	0.0030	A647720	0.081	0.0030	A647720	0.10	0.0030	A647564
Total Antimony (Sb)	mg/L	<0.00060	0.00060	A647720	<0.00060	0.00060	A647720	<0.00060	0.00060	A647564
Total Arsenic (As)	mg/L	0.00040	0.00020	A647720	0.00038	0.00020	A647720	0.00051	0.00020	A647564
Total Barium (Ba)	mg/L	<0.010	0.010	A647732	<0.010	0.010	A647732	<0.010	0.010	A647566
Total Beryllium (Be)	mg/L	<0.0010	0.0010	A647720	<0.0010	0.0010	A647720	<0.0010	0.0010	A647564
Total Boron (B)	mg/L	<0.020	0.020	A647732	<0.020	0.020	A647732	<0.020	0.020	A647566
Total Calcium (Ca)	mg/L	13	0.30	A647732	13	0.30	A647732	14	0.30	A647566
Total Chromium (Cr)	mg/L	<0.0010	0.0010	A647720	<0.0010	0.0010	A647720	<0.0010	0.0010	A647564
Total Cobalt (Co)	mg/L	<0.00030	0.00030	A647720	<0.00030	0.00030	A647720	<0.00030	0.00030	A647564
Total Copper (Cu)	mg/L	0.0087	0.0010	A647720	0.0088	0.0010	A647720	0.010	0.0010	A647564
Total Iron (Fe)	mg/L	0.47	0.060	A647732	0.48	0.060	A647732	0.78	0.060	A647566
Total Lead (Pb)	mg/L	<0.00020	0.00020	A647720	<0.00020	0.00020	A647720	<0.00020	0.00020	A647564
Total Lithium (Li)	mg/L	0.027	0.020	A647732	<0.020	0.020	A647732	<0.020	0.020	A647566
Total Magnesium (Mg)	mg/L	3.3	0.20	A647732	3.3	0.20	A647732	3.5	0.20	A647566
Total Manganese (Mn)	mg/L	0.011	0.0040	A647732	0.011	0.0040	A647732	0.017	0.0040	A647566
Total Molybdenum (Mo)	mg/L	<0.00020	0.00020	A647720	<0.00020	0.00020	A647720	<0.00020	0.00020	A647564
Total Nickel (Ni)	mg/L	0.00089	0.00050	A647720	0.00088	0.00050	A647720	0.00068	0.00050	A647564
Total Phosphorus (P)	mg/L	<0.10	0.10	A647732	<0.10	0.10	A647732	<0.10	0.10	A647566
Total Potassium (K)	mg/L	1.5	0.30	A647732	1.6	0.30	A647732	1.6	0.30	A647566
Total Selenium (Se)	mg/L	<0.00020	0.00020	A647720	<0.00020	0.00020	A647720	<0.00020	0.00020	A647564
Total Silicon (Si)	mg/L	1.3	0.10	A647732	1.3	0.10	A647732	1.3	0.10	A647566
Total Silver (Ag)	mg/L	<0.00010	0.00010	A647720	<0.00010	0.00010	A647720	<0.00010	0.00010	A647564
Total Sodium (Na)	mg/L	1.9	0.50	A647732	2.0	0.50	A647732	1.9	0.50	A647566
Total Strontium (Sr)	mg/L	0.025	0.020	A647732	0.025	0.020	A647732	0.026	0.020	A647566
Total Sulphur (S)	mg/L	7.3	0.20	A647732	7.4	0.20	A647732	9.5	0.20	A647566
Total Thallium (Tl)	mg/L	<0.00020	0.00020	A647720	<0.00020	0.00020	A647720	<0.00020	0.00020	A647564
Total Tin (Sn)	mg/L	<0.0010	0.0010	A647720	<0.0010	0.0010	A647720	<0.0010	0.0010	A647564
Total Titanium (Ti)	mg/L	0.0026	0.0010	A647720	0.0022	0.0010	A647720	0.0038	0.0010	A647564
Total Uranium (U)	mg/L	<0.00010	0.00010	A647720	<0.00010	0.00010	A647720	<0.00010	0.00010	A647564
Total Vanadium (V)	mg/L	<0.0010	0.0010	A647720	<0.0010	0.0010	A647720	<0.0010	0.0010	A647564

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AXG539			AXG539			AXG540		
Sampling Date		2022/07/12 08:40			2022/07/12 08:40			2022/07/12 08:45		
COC Number		668684-02-01			668684-02-01			668684-02-01		
	UNITS	**CL-8**	**RDL**	**QC Batch**	**CL-8 Lab-Dup**	**RDL**	**QC Batch**	**CL-3**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.040	0.0030	A647720	0.037	0.0030	A647720	0.055	0.0030	A647564

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AXG541	AXG542		AXG543		AXG544		
Sampling Date		2022/07/12 08:50	2022/07/12 09:00		2022/07/12 09:25		2022/07/12 09:30		
COC Number		668684-02-01	668684-02-01		668684-02-01		668684-02-01		
	UNITS	CL-7	CL-2	QC Batch	SB-2	QC Batch	SB-1	RDL	QC Batch
Elements									
Total Cadmium (Cd)	ug/L	0.15	0.15	A644882	0.60	A644882	0.59	0.020	A644882
Total Aluminum (Al)	mg/L	0.084	0.12	A647564	0.086	A647720	0.090	0.0030	A647564
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	A647564	<0.00060	A647720	<0.00060	0.00060	A647564
Total Arsenic (As)	mg/L	0.00048	0.00045	A647564	0.00031	A647720	0.00036	0.00020	A647564
Total Barium (Ba)	mg/L	<0.010	0.011	A647566	0.011	A647732	0.011	0.010	A647566
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	A647564	<0.0010	A647720	<0.0010	0.0010	A647564
Total Boron (B)	mg/L	<0.020	<0.020	A647566	<0.020	A647732	<0.020	0.020	A647566
Total Calcium (Ca)	mg/L	15	15	A647566	30	A647732	29	0.30	A647566
Total Chromium (Cr)	mg/L	<0.0010	<0.0010	A647564	<0.0010	A647720	<0.0010	0.0010	A647564
Total Cobalt (Co)	mg/L	<0.00030	<0.00030	A647564	0.00033	A647720	0.00033	0.00030	A647564
Total Copper (Cu)	mg/L	0.010	0.011	A647564	0.024	A647720	0.025	0.0010	A647564
Total Iron (Fe)	mg/L	0.65	1.6	A647566	2.7	A647732	2.6	0.060	A647566
Total Lead (Pb)	mg/L	<0.00020	<0.00020	A647564	<0.00020	A647720	<0.00020	0.00020	A647564
Total Lithium (Li)	mg/L	<0.020	<0.020	A647566	<0.020	A647732	<0.020	0.020	A647566
Total Magnesium (Mg)	mg/L	3.6	3.6	A647566	5.6	A647732	5.5	0.20	A647566
Total Manganese (Mn)	mg/L	0.014	0.094	A647566	0.062	A647732	0.061	0.0040	A647566
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	A647564	<0.00020	A647720	<0.00020	0.00020	A647564
Total Nickel (Ni)	mg/L	0.00075	0.00077	A647564	0.0013	A647720	0.0016	0.00050	A647564
Total Phosphorus (P)	mg/L	<0.10	<0.10	A647566	<0.10	A647732	<0.10	0.10	A647566
Total Potassium (K)	mg/L	1.6	1.7	A647566	2.6	A647732	2.6	0.30	A647566
Total Selenium (Se)	mg/L	<0.00020	<0.00020	A647564	<0.00020	A647720	<0.00020	0.00020	A647564
Total Silicon (Si)	mg/L	1.4	1.9	A647566	1.7	A647732	1.6	0.10	A647566
Total Silver (Ag)	mg/L	<0.00010	<0.00010	A647564	<0.00010	A647720	<0.00010	0.00010	A647564
Total Sodium (Na)	mg/L	1.9	2.1	A647566	2.3	A647732	2.2	0.50	A647566
Total Strontium (Sr)	mg/L	0.027	0.028	A647566	0.035	A647732	0.035	0.020	A647566
Total Sulphur (S)	mg/L	9.7	9.9	A647566	28	A647732	28	0.20	A647566
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	A647564	<0.00020	A647720	<0.00020	0.00020	A647564
Total Tin (Sn)	mg/L	<0.0010	<0.0010	A647564	<0.0010	A647720	<0.0010	0.0010	A647564
Total Titanium (Ti)	mg/L	0.0028	0.0037	A647564	0.0016	A647720	0.0023	0.0010	A647564
Total Uranium (U)	mg/L	<0.00010	<0.00010	A647564	<0.00010	A647720	<0.00010	0.00010	A647564
Total Vanadium (V)	mg/L	<0.0010	<0.0010	A647564	<0.0010	A647720	<0.0010	0.0010	A647564

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AXG541	AXG542		AXG543		AXG544		
Sampling Date		2022/07/12 08:50	2022/07/12 09:00		2022/07/12 09:25		2022/07/12 09:30		
COC Number		668684-02-01	668684-02-01		668684-02-01		668684-02-01		
	UNITS	**CL-7**	**CL-2**	**QC Batch**	**SB-2**	**QC Batch**	**SB-1**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.056	0.065	A647564	0.17	A647720	0.18	0.0030	A647564
RDL = Reportable Detection Limit									

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AXG545		
Sampling Date		2022/07/12 09:35		
COC Number		668684-02-01		
	UNITS	CB-1	RDL	QC Batch
Elements				
Total Cadmium (Cd)	ug/L	0.62	0.020	A644882
Total Aluminum (Al)	mg/L	0.093	0.0030	A647564
Total Antimony (Sb)	mg/L	<0.00060	0.00060	A647564
Total Arsenic (As)	mg/L	0.00041	0.00020	A647564
Total Barium (Ba)	mg/L	0.010	0.010	A647566
Total Beryllium (Be)	mg/L	<0.0010	0.0010	A647564
Total Boron (B)	mg/L	<0.020	0.020	A647566
Total Calcium (Ca)	mg/L	29	0.30	A647566
Total Chromium (Cr)	mg/L	<0.0010	0.0010	A647564
Total Cobalt (Co)	mg/L	0.00034	0.00030	A647564
Total Copper (Cu)	mg/L	0.024	0.0010	A647564
Total Iron (Fe)	mg/L	2.6	0.060	A647566
Total Lead (Pb)	mg/L	<0.00020	0.00020	A647564
Total Lithium (Li)	mg/L	<0.020	0.020	A647566
Total Magnesium (Mg)	mg/L	5.5	0.20	A647566
Total Manganese (Mn)	mg/L	0.061	0.0040	A647566
Total Molybdenum (Mo)	mg/L	<0.00020	0.00020	A647564
Total Nickel (Ni)	mg/L	0.0015	0.00050	A647564
Total Phosphorus (P)	mg/L	<0.10	0.10	A647566
Total Potassium (K)	mg/L	2.5	0.30	A647566
Total Selenium (Se)	mg/L	<0.00020	0.00020	A647564
Total Silicon (Si)	mg/L	1.6	0.10	A647566
Total Silver (Ag)	mg/L	<0.00010	0.00010	A647564
Total Sodium (Na)	mg/L	2.2	0.50	A647566
Total Strontium (Sr)	mg/L	0.035	0.020	A647566
Total Sulphur (S)	mg/L	29	0.20	A647566
Total Thallium (Tl)	mg/L	<0.00020	0.00020	A647564
Total Tin (Sn)	mg/L	<0.0010	0.0010	A647564
Total Titanium (Ti)	mg/L	0.0022	0.0010	A647564
Total Uranium (U)	mg/L	<0.00010	0.00010	A647564
Total Vanadium (V)	mg/L	<0.0010	0.0010	A647564
RDL = Reportable Detection Limit				

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AXG545		
Sampling Date		2022/07/12 09:35		
COC Number		668684-02-01		
	UNITS	**CB-1**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.18	0.0030	A647564
RDL = Reportable Detection Limit				

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Bureau Veritas Job #: C250758
Report Date: 2022/07/22

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AXG520	AXG521			AXG522		AXG523		
Sampling Date		2022/07/12 09:40	2022/07/12 09:45			2022/07/12 09:50		2022/07/12 10:05		
COC Number		668684-01-01	668684-01-01			668684-01-01		668684-01-01		
	UNITS	**CB-2**	**EB-1**	**RDL**	**QC Batch**	**EB-2**	**RDL**	**NB-2**	**RDL**	**QC Batch**
Calculated Parameters										
Hardness (CaCO3)	mg/L	100	120	0.50	A644987	120	0.50	110	0.50	A645253
Total Hardness (CaCO3)	mg/L	103	109	0.50	A644981	119	0.50	103	0.50	A644981
Misc. Inorganics										
pH	pH	6.46	6.39	N/A	A648158	6.37	N/A	6.44	N/A	A648158
Total Suspended Solids	mg/L	1.1	1.6	0.95	A648770	1.7	0.99	1.0	0.96	A648770
Anions										
Alkalinity (PP as CaCO3)	mg/L	<1.0	<1.0	1.0	A648156	<1.0	1.0	<1.0	1.0	A648156
Alkalinity (Total as CaCO3)	mg/L	9.4	7.4	1.0	A648156	7.4	1.0	8.7	1.0	A648156
Bicarbonate (HCO3)	mg/L	11	9.1	1.0	A648156	9.0	1.0	11	1.0	A648156
Carbonate (CO3)	mg/L	<1.0	<1.0	1.0	A648156	<1.0	1.0	<1.0	1.0	A648156
Hydroxide (OH)	mg/L	<1.0	<1.0	1.0	A648156	<1.0	1.0	<1.0	1.0	A648156
Physical Properties										
Turbidity	NTU	5.5	6.4	0.10	A645170	6.5	0.10	4.7	0.10	A645170

RDL = Reportable Detection Limit
N/A = Not Applicable

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Bureau Veritas Job #: C250758
Report Date: 2022/07/22

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AXG524		AXG525		AXG526		AXG527		
Sampling Date		2022/07/12 10:10		2022/07/12 10:15		2022/07/12 10:35		2022/07/12 16:00		
COC Number		668684-01-01		668684-01-01		668684-01-01		668684-01-01		
	UNITS	NB-1	RDL	CAMP LAKE DISCHARGE	RDL	SC-1	RDL	SW-111	RDL	QC Batch
Calculated Parameters										
Hardness (CaCO3)	mg/L	100	0.50	100	0.50	29	0.50	52	0.50	A645253
Total Hardness (CaCO3)	mg/L	107	0.50	101	0.50	29.8	0.50	54.2	0.50	A644981
Misc. Inorganics										
pH	pH	6.43	N/A	6.41	N/A	6.74	N/A	6.57	N/A	A648158
Total Suspended Solids	mg/L	<0.97	0.97	1.1	0.99	1.5	1.0	<0.99	0.99	A648770
Anions										
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	A648156
Alkalinity (Total as CaCO3)	mg/L	9.0	1.0	9.8	1.0	22	1.0	22	1.0	A648156
Bicarbonate (HCO3)	mg/L	11	1.0	12	1.0	27	1.0	26	1.0	A648156
Carbonate (CO3)	mg/L	<1.0	1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	A648156
Hydroxide (OH)	mg/L	<1.0	1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	A648156
Physical Properties										
Turbidity	NTU	4.6	0.10	5.1	0.10	2.2	0.10	7.3	0.10	A645170

RDL = Reportable Detection Limit
N/A = Not Applicable

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Bureau Veritas Job #: C250758
Report Date: 2022/07/22

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AXG528	AXG529		AXG536			AXG537		
Sampling Date		2022/07/12 17:00	2022/07/12		2022/07/12 08:10			2022/07/12 08:20		
COC Number		668684-01-01	668684-01-01		668684-02-01			668684-02-01		
	UNITS	SW-109	TRIP BLANK	RDL	CL-6	RDL	QC Batch	CL-5	RDL	QC Batch
Calculated Parameters										
Hardness (CaCO3)	mg/L	120	<0.50	0.50	48	0.50	A645253	48	0.50	A645253
Total Hardness (CaCO3)	mg/L	122	<0.50	0.50	44.6	0.50	A644981	45.8	0.50	A644981
Misc. Inorganics										
pH	pH	6.34	4.63	N/A	6.64	N/A	A648158	6.52	N/A	A648158
Total Suspended Solids	mg/L	0.97	<0.97	0.97	1.9	0.96	A648770	<0.97	0.97	A648770
Anions										
Alkalinity (PP as CaCO3)	mg/L	<1.0	<1.0	1.0	<1.0	1.0	A648156	<1.0	1.0	A648156
Alkalinity (Total as CaCO3)	mg/L	7.1	<1.0	1.0	22	1.0	A648156	21	1.0	A648156
Bicarbonate (HCO3)	mg/L	8.7	<1.0	1.0	27	1.0	A648156	26	1.0	A648156
Carbonate (CO3)	mg/L	<1.0	<1.0	1.0	<1.0	1.0	A648156	<1.0	1.0	A648156
Hydroxide (OH)	mg/L	<1.0	<1.0	1.0	<1.0	1.0	A648156	<1.0	1.0	A648156
Physical Properties										
Turbidity	NTU	6.0	<0.10	0.10	7.8	0.10	A645170	8.1 (1)	0.20	A645498

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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Bureau Veritas Job #: C250758
Report Date: 2022/07/22

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AXG537			AXG538	AXG539			AXG539		
Sampling Date		2022/07/12 08:20			2022/07/12 08:30	2022/07/12 08:40			2022/07/12 08:40		
COC Number		668684-02-01			668684-02-01	668684-02-01			668684-02-01		
	UNITS	CL-5 Lab-Dup	RDL	QC Batch	CL-4	CL-8	RDL	QC Batch	CL-8 Lab-Dup	RDL	QC Batch
Calculated Parameters											
Hardness (CaCO3)	mg/L				49	46	0.50	A645253			
Total Hardness (CaCO3)	mg/L				47.7	46.4	0.50	A644981			
Misc. Inorganics											
pH	pH				6.57	6.61	N/A	A648158	6.69	N/A	A648158
Total Suspended Solids	mg/L				2.6	<0.96	0.96	A648770			
Anions											
Alkalinity (PP as CaCO3)	mg/L				<1.0	<1.0	1.0	A648156	<1.0	1.0	A648156
Alkalinity (Total as CaCO3)	mg/L				23	20	1.0	A648156	21	1.0	A648156
Bicarbonate (HCO3)	mg/L				28	25	1.0	A648156	25	1.0	A648156
Carbonate (CO3)	mg/L				<1.0	<1.0	1.0	A648156	<1.0	1.0	A648156
Hydroxide (OH)	mg/L				<1.0	<1.0	1.0	A648156	<1.0	1.0	A648156
Physical Properties											
Turbidity	NTU	8.3	0.20	A645498	23 (1)	2.0 (1)	0.20	A645498			

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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Bureau Veritas Job #: C250758
Report Date: 2022/07/22

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AXG540			AXG541	AXG542		AXG543		
Sampling Date		2022/07/12 08:45			2022/07/12 08:50	2022/07/12 09:00		2022/07/12 09:25		
COC Number		668684-02-01			668684-02-01	668684-02-01		668684-02-01		
	UNITS	CL-3	RDL	QC Batch	CL-7	CL-2	RDL	SB-2	RDL	QC Batch
Calculated Parameters										
Hardness (CaCO3)	mg/L	50	0.50	A645253	50	52	0.50	100	0.50	A645253
Total Hardness (CaCO3)	mg/L	50.0	0.50	A644981	51.0	52.5	0.50	98.0	0.50	A644981
Misc. Inorganics										
pH	pH	6.71	N/A	A648158	6.67	6.60	N/A	6.43	N/A	A648158
Total Suspended Solids	mg/L	<0.97	0.97	A648770	1.7	2.9	1.0	2.9	0.99	A648772
Anions										
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	A648156	<1.0	<1.0	1.0	<1.0	1.0	A648156
Alkalinity (Total as CaCO3)	mg/L	21	1.0	A648156	21	20	1.0	9.7	1.0	A648156
Bicarbonate (HCO3)	mg/L	26	1.0	A648156	25	25	1.0	12	1.0	A648156
Carbonate (CO3)	mg/L	<1.0	1.0	A648156	<1.0	<1.0	1.0	<1.0	1.0	A648156
Hydroxide (OH)	mg/L	<1.0	1.0	A648156	<1.0	<1.0	1.0	<1.0	1.0	A648156
Physical Properties										
Turbidity	NTU	2.6 (1)	0.20	A645498	2.3 (1)	8.1 (1)	0.20	5.3 (1)	0.20	A645498

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AXG544		AXG545		
Sampling Date		2022/07/12 09:30		2022/07/12 09:35		
COC Number		668684-02-01		668684-02-01		
	UNITS	SB-1	RDL	CB-1	RDL	QC Batch
Calculated Parameters						
Hardness (CaCO3)	mg/L	100	0.50	100	0.50	A645253
Total Hardness (CaCO3)	mg/L	94.2	0.50	94.5	0.50	A644981
Misc. Inorganics						
pH	pH	6.46	N/A	6.44	N/A	A648158
Total Suspended Solids	mg/L	<1.0	1.0	1.4	0.99	A648772
Anions						
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	<1.0	1.0	A648156
Alkalinity (Total as CaCO3)	mg/L	9.5	1.0	9.1	1.0	A648156
Bicarbonate (HCO3)	mg/L	12	1.0	11	1.0	A648156
Carbonate (CO3)	mg/L	<1.0	1.0	<1.0	1.0	A648156
Hydroxide (OH)	mg/L	<1.0	1.0	<1.0	1.0	A648156
Physical Properties						
Turbidity	NTU	5.4 (1)	0.20	5.3 (1)	0.20	A645498

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	3.8°C
Package 2	5.5°C
Package 3	3.1°C

Sample AXG523, Elements by ICPMS-Dissolved-Lab Filtered: Test repeated.

Results relate only to the items tested.

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			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A645170	Turbidity	2022/07/15			102	80 - 120	<0.10	NTU	8.5	20
A645498	Turbidity	2022/07/15			102	80 - 120	<0.10	NTU	2.2	20
A647564	Total Aluminum (Al)	2022/07/20	113	80 - 120	112	80 - 120	0.0042, RDL=0.0030 (1)	mg/L	3.7	20
A647564	Total Antimony (Sb)	2022/07/20	101	80 - 120	97	80 - 120	<0.00060	mg/L	NC	20
A647564	Total Arsenic (As)	2022/07/20	96	80 - 120	96	80 - 120	<0.00020	mg/L	10	20
A647564	Total Beryllium (Be)	2022/07/20	116	80 - 120	113	80 - 120	<0.0010	mg/L	NC	20
A647564	Total Chromium (Cr)	2022/07/20	96	80 - 120	96	80 - 120	<0.0010	mg/L	NC	20
A647564	Total Cobalt (Co)	2022/07/20	97	80 - 120	96	80 - 120	<0.00030	mg/L	3.1	20
A647564	Total Copper (Cu)	2022/07/20	94	80 - 120	95	80 - 120	<0.0010	mg/L	0.037	20
A647564	Total Lead (Pb)	2022/07/20	103	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
A647564	Total Molybdenum (Mo)	2022/07/20	94	80 - 120	91	80 - 120	<0.00020	mg/L	11	20
A647564	Total Nickel (Ni)	2022/07/20	93	80 - 120	93	80 - 120	<0.00050	mg/L	5.0	20
A647564	Total Selenium (Se)	2022/07/20	89	80 - 120	88	80 - 120	<0.00020	mg/L	NC	20
A647564	Total Silver (Ag)	2022/07/20	99	80 - 120	94	80 - 120	<0.00010	mg/L	NC	20
A647564	Total Thallium (Tl)	2022/07/20	105	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
A647564	Total Tin (Sn)	2022/07/20	97	80 - 120	99	80 - 120	<0.0010	mg/L	NC	20
A647564	Total Titanium (Ti)	2022/07/20	101	80 - 120	104	80 - 120	<0.0010	mg/L	1.6	20
A647564	Total Uranium (U)	2022/07/20	105	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
A647564	Total Vanadium (V)	2022/07/20	102	80 - 120	102	80 - 120	<0.0010	mg/L	NC	20
A647564	Total Zinc (Zn)	2022/07/20	95	80 - 120	98	80 - 120	<0.0030	mg/L	0.21	20
A647566	Total Barium (Ba)	2022/07/20	101	80 - 120	102	80 - 120	<0.010	mg/L	2.6	20
A647566	Total Boron (B)	2022/07/20	104	80 - 120	104	80 - 120	<0.020	mg/L	NC	20
A647566	Total Calcium (Ca)	2022/07/20	NC	80 - 120	100	80 - 120	<0.30	mg/L	0.55	20
A647566	Total Iron (Fe)	2022/07/20	105	80 - 120	107	80 - 120	<0.060	mg/L	0.24	20
A647566	Total Lithium (Li)	2022/07/20	98	80 - 120	99	80 - 120	<0.020	mg/L	NC	20
A647566	Total Magnesium (Mg)	2022/07/20	NC	80 - 120	105	80 - 120	<0.20	mg/L	0.20	20
A647566	Total Manganese (Mn)	2022/07/20	102	80 - 120	103	80 - 120	<0.0040	mg/L	0.012	20
A647566	Total Phosphorus (P)	2022/07/20	107	80 - 120	106	80 - 120	<0.10	mg/L	NC	20
A647566	Total Potassium (K)	2022/07/20	102	80 - 120	101	80 - 120	<0.30	mg/L	0.95	20
A647566	Total Silicon (Si)	2022/07/20	101	80 - 120	102	80 - 120	<0.10	mg/L	1.8	20
A647566	Total Sodium (Na)	2022/07/20	NC	80 - 120	97	80 - 120	<0.50	mg/L	0.82	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A647566	Total Strontium (Sr)	2022/07/20	98	80 - 120	99	80 - 120	<0.020	mg/L	0.41	20
A647566	Total Sulphur (S)	2022/07/20	NC	80 - 120	108	80 - 120	<0.20	mg/L	0.32	20
A647720	Total Aluminum (Al)	2022/07/20	105	80 - 120	104	80 - 120	<0.0030	mg/L	1.3	20
A647720	Total Antimony (Sb)	2022/07/20	96	80 - 120	93	80 - 120	<0.00060	mg/L	NC	20
A647720	Total Arsenic (As)	2022/07/20	93	80 - 120	91	80 - 120	<0.00020	mg/L	6.2	20
A647720	Total Beryllium (Be)	2022/07/20	97	80 - 120	96	80 - 120	<0.0010	mg/L	NC	20
A647720	Total Chromium (Cr)	2022/07/20	95	80 - 120	93	80 - 120	<0.0010	mg/L	NC	20
A647720	Total Cobalt (Co)	2022/07/20	96	80 - 120	95	80 - 120	<0.00030	mg/L	NC	20
A647720	Total Copper (Cu)	2022/07/20	96	80 - 120	95	80 - 120	<0.0010	mg/L	2.1	20
A647720	Total Lead (Pb)	2022/07/20	97	80 - 120	94	80 - 120	<0.00020	mg/L	NC	20
A647720	Total Molybdenum (Mo)	2022/07/20	100	80 - 120	94	80 - 120	<0.00020	mg/L	NC	20
A647720	Total Nickel (Ni)	2022/07/20	95	80 - 120	93	80 - 120	<0.00050	mg/L	0.82	20
A647720	Total Selenium (Se)	2022/07/20	94	80 - 120	94	80 - 120	<0.00020	mg/L	NC	20
A647720	Total Silver (Ag)	2022/07/20	99	80 - 120	95	80 - 120	<0.00010	mg/L	NC	20
A647720	Total Thallium (Tl)	2022/07/20	97	80 - 120	95	80 - 120	<0.00020	mg/L	NC	20
A647720	Total Tin (Sn)	2022/07/20	100	80 - 120	96	80 - 120	<0.0010	mg/L	NC	20
A647720	Total Titanium (Ti)	2022/07/20	97	80 - 120	91	80 - 120	<0.0010	mg/L	14	20
A647720	Total Uranium (U)	2022/07/20	98	80 - 120	95	80 - 120	<0.00010	mg/L	NC	20
A647720	Total Vanadium (V)	2022/07/20	95	80 - 120	92	80 - 120	<0.0010	mg/L	NC	20
A647720	Total Zinc (Zn)	2022/07/20	94	80 - 120	92	80 - 120	<0.0030	mg/L	6.9	20
A647732	Total Barium (Ba)	2022/07/21	101	80 - 120	103	80 - 120	<0.010	mg/L	NC	20
A647732	Total Boron (B)	2022/07/21	102	80 - 120	102	80 - 120	<0.020	mg/L	NC	20
A647732	Total Calcium (Ca)	2022/07/21	NC	80 - 120	106	80 - 120	<0.30	mg/L	0.24	20
A647732	Total Iron (Fe)	2022/07/21	106	80 - 120	105	80 - 120	<0.060	mg/L	1.1	20
A647732	Total Lithium (Li)	2022/07/21	100	80 - 120	101	80 - 120	<0.020	mg/L	NC	20
A647732	Total Magnesium (Mg)	2022/07/21	NC	80 - 120	106	80 - 120	<0.20	mg/L	0.71	20
A647732	Total Manganese (Mn)	2022/07/21	104	80 - 120	103	80 - 120	<0.0040	mg/L	3.0	20
A647732	Total Phosphorus (P)	2022/07/21	106	80 - 120	105	80 - 120	<0.10	mg/L	NC	20
A647732	Total Potassium (K)	2022/07/21	101	80 - 120	101	80 - 120	<0.30	mg/L	3.4	20
A647732	Total Silicon (Si)	2022/07/21	NC	80 - 120	105	80 - 120	<0.10	mg/L	0.81	20
A647732	Total Sodium (Na)	2022/07/21	NC	80 - 120	101	80 - 120	<0.50	mg/L	3.3	20
A647732	Total Strontium (Sr)	2022/07/21	100	80 - 120	101	80 - 120	<0.020	mg/L	1.7	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A647732	Total Sulphur (S)	2022/07/21	111	80 - 120	108	80 - 120	<0.20	mg/L	1.8	20
A648156	Alkalinity (PP as CaCO3)	2022/07/18					<1.0	mg/L	NC	20
A648156	Alkalinity (Total as CaCO3)	2022/07/18			94	80 - 120	<1.0	mg/L	1.9	20
A648156	Bicarbonate (HCO3)	2022/07/18					<1.0	mg/L	1.9	20
A648156	Carbonate (CO3)	2022/07/18					<1.0	mg/L	NC	20
A648156	Hydroxide (OH)	2022/07/18					<1.0	mg/L	NC	20
A648158	pH	2022/07/18			100	97 - 103			1.1	N/A
A648770	Total Suspended Solids	2022/07/19	108	80 - 120	98	80 - 120	<1.0	mg/L	NC	20
A648772	Total Suspended Solids	2022/07/19	NC	80 - 120	99	80 - 120	<1.0	mg/L	4.1	20
A650224	Dissolved Aluminum (Al)	2022/07/20	121 (2)	80 - 120	103	80 - 120	<0.0030	mg/L	NC	20
A650224	Dissolved Antimony (Sb)	2022/07/20	102	80 - 120	89	80 - 120	<0.00060	mg/L	NC	20
A650224	Dissolved Arsenic (As)	2022/07/20	92	80 - 120	91	80 - 120	<0.00020	mg/L	0.87	20
A650224	Dissolved Beryllium (Be)	2022/07/20	104	80 - 120	95	80 - 120	<0.0010	mg/L	NC	20
A650224	Dissolved Chromium (Cr)	2022/07/20	97	80 - 120	95	80 - 120	<0.0010	mg/L	NC	20
A650224	Dissolved Cobalt (Co)	2022/07/20	104	80 - 120	96	80 - 120	<0.00030	mg/L	NC	20
A650224	Dissolved Copper (Cu)	2022/07/20	102	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20
A650224	Dissolved Lead (Pb)	2022/07/20	94	80 - 120	89	80 - 120	<0.00020	mg/L	NC	20
A650224	Dissolved Molybdenum (Mo)	2022/07/20	NC	80 - 120	94	80 - 120	<0.00020	mg/L	12	20
A650224	Dissolved Nickel (Ni)	2022/07/20	101	80 - 120	95	80 - 120	<0.00050	mg/L	NC	20
A650224	Dissolved Selenium (Se)	2022/07/20	99	80 - 120	94	80 - 120	<0.00020	mg/L	NC	20
A650224	Dissolved Silver (Ag)	2022/07/20	98	80 - 120	92	80 - 120	<0.00010	mg/L	NC	20
A650224	Dissolved Thallium (Tl)	2022/07/20	101	80 - 120	89	80 - 120	<0.00020	mg/L	NC	20
A650224	Dissolved Tin (Sn)	2022/07/20	109	80 - 120	92	80 - 120	<0.0010	mg/L	NC	20
A650224	Dissolved Titanium (Ti)	2022/07/20	114	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
A650224	Dissolved Uranium (U)	2022/07/20	101	80 - 120	93	80 - 120	<0.00010	mg/L	NC	20
A650224	Dissolved Vanadium (V)	2022/07/20	100	80 - 120	96	80 - 120	<0.0010	mg/L	NC	20
A650224	Dissolved Zinc (Zn)	2022/07/20	122 (2)	80 - 120	96	80 - 120	<0.0030	mg/L	NC	20
A650484	Dissolved Barium (Ba)	2022/07/20	96	80 - 120	99	80 - 120	<0.010	mg/L	8.6	20
A650484	Dissolved Boron (B)	2022/07/20	102	80 - 120	104	80 - 120	<0.020	mg/L	NC	20
A650484	Dissolved Calcium (Ca)	2022/07/20	96	80 - 120	99	80 - 120	<0.30	mg/L	3.3	20
A650484	Dissolved Iron (Fe)	2022/07/20	104	80 - 120	108	80 - 120	<0.060	mg/L	2.4	20
A650484	Dissolved Lithium (Li)	2022/07/20	93	80 - 120	96	80 - 120	<0.020	mg/L	NC	20

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			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A650484	Dissolved Magnesium (Mg)	2022/07/20	99	80 - 120	103	80 - 120	<0.20	mg/L	3.3	20
A650484	Dissolved Manganese (Mn)	2022/07/20	101	80 - 120	104	80 - 120	<0.0040	mg/L	NC	20
A650484	Dissolved Phosphorus (P)	2022/07/20	106	80 - 120	109	80 - 120	<0.10	mg/L	NC	20
A650484	Dissolved Potassium (K)	2022/07/20	98	80 - 120	100	80 - 120	<0.30	mg/L	0.60	20
A650484	Dissolved Silicon (Si)	2022/07/20	94	80 - 120	100	80 - 120	<0.10	mg/L	2.1	20
A650484	Dissolved Sodium (Na)	2022/07/20	95	80 - 120	95	80 - 120	<0.50	mg/L	4.1	20
A650484	Dissolved Strontium (Sr)	2022/07/20	93	80 - 120	95	80 - 120	<0.020	mg/L	0.18	20
A650484	Dissolved Sulphur (S)	2022/07/20	105	80 - 120	103	80 - 120	<0.20	mg/L	5.3	20
A650536	Dissolved Aluminum (Al)	2022/07/20	102	80 - 120	105	80 - 120	<0.0030	mg/L		
A650536	Dissolved Antimony (Sb)	2022/07/20	101	80 - 120	101	80 - 120	<0.00060	mg/L		
A650536	Dissolved Arsenic (As)	2022/07/20	97	80 - 120	96	80 - 120	<0.00020	mg/L		
A650536	Dissolved Beryllium (Be)	2022/07/20	100	80 - 120	100	80 - 120	<0.0010	mg/L		
A650536	Dissolved Chromium (Cr)	2022/07/20	98	80 - 120	98	80 - 120	<0.0010	mg/L		
A650536	Dissolved Cobalt (Co)	2022/07/20	94	80 - 120	97	80 - 120	<0.00030	mg/L		
A650536	Dissolved Copper (Cu)	2022/07/20	92	80 - 120	96	80 - 120	<0.0010	mg/L		
A650536	Dissolved Lead (Pb)	2022/07/20	96	80 - 120	97	80 - 120	<0.00020	mg/L		
A650536	Dissolved Molybdenum (Mo)	2022/07/20	100	80 - 120	98	80 - 120	<0.00020	mg/L		
A650536	Dissolved Nickel (Ni)	2022/07/20	92	80 - 120	95	80 - 120	<0.00050	mg/L		
A650536	Dissolved Selenium (Se)	2022/07/20	100	80 - 120	103	80 - 120	<0.00020	mg/L		
A650536	Dissolved Silver (Ag)	2022/07/20	91	80 - 120	95	80 - 120	<0.00010	mg/L		
A650536	Dissolved Thallium (Tl)	2022/07/20	99	80 - 120	100	80 - 120	<0.00020	mg/L		
A650536	Dissolved Tin (Sn)	2022/07/20	98	80 - 120	96	80 - 120	<0.0010	mg/L		
A650536	Dissolved Titanium (Ti)	2022/07/20	109	80 - 120	98	80 - 120	<0.0010	mg/L		
A650536	Dissolved Uranium (U)	2022/07/20	NC	80 - 120	97	80 - 120	<0.00010	mg/L		
A650536	Dissolved Vanadium (V)	2022/07/20	103	80 - 120	100	80 - 120	<0.0010	mg/L		
A650536	Dissolved Zinc (Zn)	2022/07/20	NC	80 - 120	99	80 - 120	<0.0030	mg/L	1.3	20
A650546	Dissolved Aluminum (Al)	2022/07/20	104	80 - 120	98	80 - 120	<0.0030	mg/L	23 (2)	20
A650546	Dissolved Antimony (Sb)	2022/07/20	97	80 - 120	99	80 - 120	<0.00060	mg/L	NC	20
A650546	Dissolved Arsenic (As)	2022/07/20	90	80 - 120	93	80 - 120	<0.00020	mg/L	NC	20
A650546	Dissolved Beryllium (Be)	2022/07/20	100	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
A650546	Dissolved Chromium (Cr)	2022/07/20	92	80 - 120	93	80 - 120	<0.0010	mg/L	NC	20
A650546	Dissolved Cobalt (Co)	2022/07/20	92	80 - 120	93	80 - 120	<0.00030	mg/L	NC	20

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			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A650546	Dissolved Copper (Cu)	2022/07/20	92	80 - 120	92	80 - 120	<0.0010	mg/L	8.3	20
A650546	Dissolved Lead (Pb)	2022/07/20	94	80 - 120	94	80 - 120	<0.00020	mg/L	NC	20
A650546	Dissolved Molybdenum (Mo)	2022/07/20	95	80 - 120	96	80 - 120	<0.00020	mg/L	NC	20
A650546	Dissolved Nickel (Ni)	2022/07/20	90	80 - 120	92	80 - 120	<0.00050	mg/L	13	20
A650546	Dissolved Selenium (Se)	2022/07/20	98	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20
A650546	Dissolved Silver (Ag)	2022/07/20	91	80 - 120	93	80 - 120	<0.00010	mg/L	NC	20
A650546	Dissolved Thallium (Tl)	2022/07/20	97	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20
A650546	Dissolved Tin (Sn)	2022/07/20	94	80 - 120	94	80 - 120	<0.0010	mg/L	NC	20
A650546	Dissolved Titanium (Ti)	2022/07/20	87	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20
A650546	Dissolved Uranium (U)	2022/07/20	93	80 - 120	93	80 - 120	<0.00010	mg/L	NC	20
A650546	Dissolved Vanadium (V)	2022/07/20	99	80 - 120	95	80 - 120	<0.0010	mg/L	NC	20
A650546	Dissolved Zinc (Zn)	2022/07/20	99	80 - 120	96	80 - 120	<0.0030	mg/L	4.0	20
A651949	Dissolved Aluminum (Al)	2022/07/22	110	80 - 120	118	80 - 120	<0.0030	mg/L	NC	20

N/A = Not Applicable

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

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

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

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

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

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Method blank above criteria. Data inspected. All data < RDL or greater than 10x Method Blank.

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

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VALIDATION SIGNATURE PAGE

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



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

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Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvna.com

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#7500 KGS Group	Company Name:	KGS Group	Quotation #:	C20090	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Ganga Atmuri/Ed Collins	P.O. #:		C250758	668684
Address:	3rd Floor 865 Waverly St Winnipeg MB R3T 5T4	Address:	865 Waverley St. 3rd Floor Winnipeg, MB R3T 5P4	Project:	21-1357-005	COC #:	Project Manager:
Tel:	(204) 896-1209 Fax:	Tel:	(204) 896-1209 Fax:	Project Name:		C#668684-02-01	Janelle Kochan
Email:	payables@kgsgroup.com	Email:	gatmuri@kgsgroup.com,ecollins@kgsgroup.com	Site #:	OAM - Sherridon Mine Site		
				Sampled By:	AL/IH		

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☒ Other MWQSOG

Special Instructions:

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: ☒
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission) ☐
Date Required:
Rush Confirmation Number:
(call lab for #)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	pH @25°C	Alkalinity @25C (pp, total), CO3,HCO3,OH	Total Suspended Solids (NFR)	Turbidity	Regulated Metals (CCME/AT1) - Total	Reg. Metals (CCME/AT1) – Diss. Lab Filt.	Hardness	Hardness Total (calculated as CaCO3)			# of Bottles	Comments
1		CL-6	22/07/12	8:10	SW	N	X	X	X	X	X	X	X	X			4	
2		CL-5		8:20		N	X	X	X	X	X	X	X	X			4	
3		CL-4		8:30		N	X	X	X	X	X	X	X	X			4	
4		CL-8		8:40		N	X	X	X	X	X	X	X	X			4	
5		CL-3		8:45		N	X	X	X	X	X	X	X	X			4	
6		CL-7		8:50		N	X	X	X	X	X	X	X	X			4	
7		CL-2		9:00		N	X	X	X	X	X	X	X	X			4	
8		SB-2		9:25		N	X	X	X	X	X	X	X	X			4	
9		SB-1		9:30		N	X	X	X	X	X	X	X	X			4	
10		CB-1		9:35		N	X	X	X	X	X	X	X	X			4	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Ainsleigh Loria Abena	22/07/13	11:45	Ashton Raitt AR	2022/07/13	11:50		☐	4.2/2.5/2.0 *AR	☐ Yes ☐ No
			Nabeel Abdul Rasm	22/07/14	08:45				

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.
** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

White: Bureau Veritas Yellow: Client

1.9/2.4/2.8
ICE-YES

see ACTR

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CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#7500 KGS Group	Company Name:	KGS Group	Quotation #:	C20090	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Ganga Atmuri/Ed Collins	P.O. #:			668684
Address:	3rd Floor 865 Waverly St Winnipeg MB R3T 5T4	Address:	865 Waverley St, 3rd Floor Winnipeg, MB R3T 5P4	Project:	21-1357-005		
Tel:	(204) 896-1209 Fax:	Tel:	(204) 896-1209 Fax:	Project Name:		COC #:	Project Manager:
Email:	payables@kgsgroup.com	Email:	gatmuri@kgsgroup.com,ecollins@kgsgroup.com	Site #:	OAM - Sherridon Mine Site	C#668684-01-01	Janelle Kochan
				Sampled By:	AL/IH		

Regulatory Criteria:
- [ ] ATI
- [ ] CCME
- [X] Other MWQSOG

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: [X]
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission)
Date Required: _____ [ ]
Rush Confirmation Number: _____
(call lab for #)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	pH @25°C	Alkalinity @25C (pp, total), CO3,HCO3,OH	Total Suspended Solids (NFR)	Turbidity	Regulated Metals (CCME/AT1) - Total	Reg. Metals (CCME/AT1) – Diss. Lab Filt.	Hardness	Hardness Total (calculated as CaCO3)			# of Bottles	Comments
1		CB-2	22/07/12	9:40	SW	N	X	X	X	X	X	X	X	X			4	
2		EB-1		9:45		N	X	X	X	X	X	X	X	X			4	
3		EB-2		9:50		N	X	X	X	X	X	X	X	X			4	
4		NB-2		10:05		N	X	X	X	X	X	X	X	X			4	
5		NB-1		10:10		N	X	X	X	X	X	X	X	X			4	
6		Camp Lake Discharge		10:15		N	X	X	X	X	X	X	X	X			4	
7		SC-1		10:35		N	X	X	X	X	X	X	X	X			4	
8		SW-111		16:00		N	X	X	X	X	X	X	X	X			4	
9		SW-109		17:00		N	X	X	X	X	X	X	X	X			4	
10		Trip blank				N	X	X	X	X	X	X	X	X			4	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Ainsleigh Loria	22/07/13	11:45	Ayaan Rajput AR	2022/07/13	11:50		[ ]	4.2/2.5/2.0	[ ] Yes [ ] No
			Nabeel Abdul Kadir	2022/07/14	09:45				

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.
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** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

White: Bureau Veritas Yellow: Client

See ACTR

ICE-YES

Bureau Veritas Canada (2019) Inc.

Your Project #: 21-1357-005
Site#: OAM - Sherridon Mine Site
Your C.O.C. #: 669922-01-01, 669922-02-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/08/08
Report #: R3210414
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C254948
Received: 2022/07/27, 11:25

Sample Matrix: Water
Samples Received: 20

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH (1)	18	N/A	2022/07/30	AB SOP-00005	SM 23 2320 B m
Alkalinity @25C (pp, total), CO3,HCO3,OH (1)	2	N/A	2022/08/02	AB SOP-00005	SM 23 2320 B m
Cadmium - low level CCME - Dissolved (1)	20	N/A	2022/08/02		Auto Calc
Cadmium - low level CCME (Total) (1)	16	N/A	2022/08/04		Auto Calc
Cadmium - low level CCME (Total) (1)	4	N/A	2022/08/05		Auto Calc
Hardness (1)	20	N/A	2022/07/30		Auto Calc
Hardness Total (calculated as CaCO3) (1, 2)	20	N/A	2022/08/05	BBY WI-00033	Auto Calc
Elements by ICP-Dissolved-Lab Filtered (1, 3)	20	N/A	2022/07/30	AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Total (1)	20	2022/08/03	2022/08/04	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Elements by ICPMS-Dissolved-Lab Filtered (1, 4)	20	N/A	2022/08/01	AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total (1)	16	2022/08/03	2022/08/03	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total (1)	4	2022/08/03	2022/08/04	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
pH @25°C (1, 5)	20	N/A	2022/07/30	AB SOP-00005	SM 23 4500-H+B m
Total Suspended Solids (NFR) (1)	20	2022/08/02	2022/08/02	AB SOP-00061	SM 23 2540 D m
Turbidity (1)	20	N/A	2022/07/29	CAL SOP-00081	SM 23 2130 B m

Remarks:

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

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

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

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customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8
(2) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(3) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(4) Samples were filtered and preserved at the lab. Values may not reflect concentrations at the time of sampling. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(5) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Janelle Kochan, B.Sc., Key Account Specialist
Email: Janelle.KOCHAN@bureauveritas.com
Phone# (204)259-0231
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This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AYG558	AYG559		AYG560			AYG560		
Sampling Date		2022/07/26 08:15	2022/07/26 08:25		2022/07/26 08:35			2022/07/26 08:35		
COC Number		669922-01-01	669922-01-01		669922-01-01			669922-01-01		
	UNITS	CL-6	CL-5	QC Batch	CL-4	RDL	QC Batch	CL-4 Lab-Dup	RDL	QC Batch
Elements										
Dissolved Cadmium (Cd)	ug/L	0.11	0.094	A662050	0.12	0.020	A662050			
Lab Filtered Elements										
Dissolved Aluminum (Al)	mg/L	0.039	0.048	A663500	0.057	0.0030	A663500			
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	A663500	<0.00060	0.00060	A663500			
Dissolved Arsenic (As)	mg/L	0.00030	0.00028	A663500	0.00035	0.00020	A663500			
Dissolved Barium (Ba)	mg/L	<0.010	<0.010	A663824	0.011	0.010	A663826	<0.010	0.010	A663826
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	A663500	<0.0010	0.0010	A663500			
Dissolved Boron (B)	mg/L	<0.020	<0.020	A663824	<0.020	0.020	A663826	<0.020	0.020	A663826
Dissolved Calcium (Ca)	mg/L	12	13	A663824	14	0.30	A663826	13	0.30	A663826
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010	A663500	<0.0010	0.0010	A663500			
Dissolved Cobalt (Co)	mg/L	<0.00030	<0.00030	A663500	<0.00030	0.00030	A663500			
Dissolved Copper (Cu)	mg/L	0.0061	0.0075	A663500	0.0078	0.0010	A663500			
Dissolved Iron (Fe)	mg/L	0.39	0.60	A663824	1.2	0.060	A663826	1.0	0.060	A663826
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	A663500	<0.00020	0.00020	A663500			
Dissolved Lithium (Li)	mg/L	<0.020	<0.020	A663824	<0.020	0.020	A663826	<0.020	0.020	A663826
Dissolved Magnesium (Mg)	mg/L	3.0	3.1	A663824	3.3	0.20	A663826	3.1	0.20	A663826
Dissolved Manganese (Mn)	mg/L	0.075	0.011	A663824	0.096	0.0040	A663826	0.090	0.0040	A663826
Dissolved Molybdenum (Mo)	mg/L	<0.00020	<0.00020	A663500	<0.00020	0.00020	A663500			
Dissolved Nickel (Ni)	mg/L	<0.00050	<0.00050	A663500	<0.00050	0.00050	A663500			
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	A663824	<0.10	0.10	A663826	<0.10	0.10	A663826
Dissolved Potassium (K)	mg/L	1.5	1.5	A663824	1.5	0.30	A663826	1.4	0.30	A663826
Dissolved Selenium (Se)	mg/L	<0.00020	<0.00020	A663500	<0.00020	0.00020	A663500			
Dissolved Silicon (Si)	mg/L	1.2	1.3	A663824	1.6	0.10	A663826	1.5	0.10	A663826
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	A663500	<0.00010	0.00010	A663500			
Dissolved Sodium (Na)	mg/L	1.8	1.9	A663824	1.9	0.50	A663826	1.9	0.50	A663826
Dissolved Strontium (Sr)	mg/L	0.025	0.025	A663824	0.028	0.020	A663826	0.027	0.020	A663826
Dissolved Sulphur (S)	mg/L	6.1	7.1	A663824	7.1	0.20	A663826	7.5	0.20	A663826
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	A663500	<0.00020	0.00020	A663500			
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	A663500	<0.0010	0.0010	A663500			
Dissolved Titanium (Ti)	mg/L	0.0010	<0.0010	A663500	<0.0010	0.0010	A663500			
Dissolved Uranium (U)	mg/L	<0.00010	<0.00010	A663500	<0.00010	0.00010	A663500			

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AYG558	AYG559		AYG560			AYG560		
Sampling Date		2022/07/26 08:15	2022/07/26 08:25		2022/07/26 08:35			2022/07/26 08:35		
COC Number		669922-01-01	669922-01-01		669922-01-01			669922-01-01		
	UNITS	**CL-6**	**CL-5**	**QC Batch**	**CL-4**	**RDL**	**QC Batch**	**CL-4 Lab-Dup**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	A663500	<0.0010	0.0010	A663500			
Dissolved Zinc (Zn)	mg/L	0.033	0.039	A663500	0.040	0.0030	A663500			

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AYG561	AYG562			AYG562		
Sampling Date		2022/07/26 08:40	2022/07/26 08:45			2022/07/26 08:45		
COC Number		669922-01-01	669922-01-01			669922-01-01		
	UNITS	CL-8	CL-3	RDL	QC Batch	CL-3 Lab-Dup	RDL	QC Batch
Elements								
Dissolved Cadmium (Cd)	ug/L	0.060	0.083	0.020	A662050			
Lab Filtered Elements								
Dissolved Aluminum (Al)	mg/L	0.029	0.032	0.0030	A663500	0.029	0.0030	A663500
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	0.00060	A663500	<0.00060	0.00060	A663500
Dissolved Arsenic (As)	mg/L	0.00035	0.00031	0.00020	A663500	0.00026	0.00020	A663500
Dissolved Barium (Ba)	mg/L	<0.010	<0.010	0.010	A663824			
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	0.0010	A663500	<0.0010	0.0010	A663500
Dissolved Boron (B)	mg/L	<0.020	<0.020	0.020	A663824			
Dissolved Calcium (Ca)	mg/L	12	13	0.30	A663824			
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010	0.0010	A663500	<0.0010	0.0010	A663500
Dissolved Cobalt (Co)	mg/L	<0.00030	<0.00030	0.00030	A663500	<0.00030	0.00030	A663500
Dissolved Copper (Cu)	mg/L	0.0064	0.0068	0.0010	A663500	0.0068	0.0010	A663500
Dissolved Iron (Fe)	mg/L	0.23	0.26	0.060	A663824			
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	0.00020	A663500	<0.00020	0.00020	A663500
Dissolved Lithium (Li)	mg/L	0.022	0.022	0.020	A663824			
Dissolved Magnesium (Mg)	mg/L	3.1	3.1	0.20	A663824			
Dissolved Manganese (Mn)	mg/L	<0.0040	<0.0040	0.0040	A663824			
Dissolved Molybdenum (Mo)	mg/L	<0.00020	<0.00020	0.00020	A663500	<0.00020	0.00020	A663500
Dissolved Nickel (Ni)	mg/L	<0.00050	<0.00050	0.00050	A663500	<0.00050	0.00050	A663500
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	0.10	A663824			
Dissolved Potassium (K)	mg/L	1.5	1.5	0.30	A663824			
Dissolved Selenium (Se)	mg/L	<0.00020	<0.00020	0.00020	A663500	<0.00020	0.00020	A663500
Dissolved Silicon (Si)	mg/L	0.82	0.84	0.10	A663824			
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	0.00010	A663500	<0.00010	0.00010	A663500
Dissolved Sodium (Na)	mg/L	1.9	1.8	0.50	A663824			
Dissolved Strontium (Sr)	mg/L	0.025	0.025	0.020	A663824			
Dissolved Sulphur (S)	mg/L	6.1	6.9	0.20	A663824			
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	0.00020	A663500	<0.00020	0.00020	A663500
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	0.0010	A663500	<0.0010	0.0010	A663500
Dissolved Titanium (Ti)	mg/L	<0.0010	<0.0010	0.0010	A663500	<0.0010	0.0010	A663500
Dissolved Uranium (U)	mg/L	<0.00010	<0.00010	0.00010	A663500	<0.00010	0.00010	A663500

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AYG561	AYG562			AYG562		
Sampling Date		2022/07/26 08:40	2022/07/26 08:45			2022/07/26 08:45		
COC Number		669922-01-01	669922-01-01			669922-01-01		
	UNITS	**CL-8**	**CL-3**	**RDL**	**QC Batch**	**CL-3 Lab-Dup**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	0.0010	A663500	<0.0010	0.0010	A663500
Dissolved Zinc (Zn)	mg/L	0.027	0.030	0.0030	A663500	0.029	0.0030	A663500

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AYG563	AYG564		AYG565		AYG566		
Sampling Date		2022/07/26 08:50	2022/07/26 09:00		2022/07/26 09:20		2022/07/26 09:25		
COC Number		669922-01-01	669922-01-01		669922-01-01		669922-01-01		
	UNITS	**CL-7**	**CL-2**	**QC Batch**	**SB-2**	**QC Batch**	**SB-1**	**RDL**	**QC Batch**
Elements									
Dissolved Cadmium (Cd)	ug/L	0.086	0.12	A662050	0.49	A662050	0.52	0.020	A662050
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	0.029	0.042	A663500	0.029	A663500	0.032	0.0030	A663500
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	A663500	<0.00060	A663500	<0.00060	0.00060	A663500
Dissolved Arsenic (As)	mg/L	0.00039	0.00031	A663500	<0.00020	A663500	0.00020	0.00020	A663500
Dissolved Barium (Ba)	mg/L	<0.010	<0.010	A663824	0.011	A663826	0.011	0.010	A663824
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	A663500	<0.0010	A663500	<0.0010	0.0010	A663500
Dissolved Boron (B)	mg/L	<0.020	<0.020	A663824	<0.020	A663826	<0.020	0.020	A663824
Dissolved Calcium (Ca)	mg/L	12	14	A663824	35	A663826	34	0.30	A663824
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010	A663500	<0.0010	A663500	<0.0010	0.0010	A663500
Dissolved Cobalt (Co)	mg/L	<0.00030	<0.00030	A663500	<0.00030	A663500	<0.00030	0.00030	A663500
Dissolved Copper (Cu)	mg/L	0.0066	0.0083	A663500	0.015	A663500	0.016	0.0010	A663500
Dissolved Iron (Fe)	mg/L	0.24	0.72	A663824	1.8	A663826	1.7	0.060	A663824
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	A663500	<0.00020	A663500	<0.00020	0.00020	A663500
Dissolved Lithium (Li)	mg/L	<0.020	0.024	A663824	<0.020	A663826	0.026	0.020	A663824
Dissolved Magnesium (Mg)	mg/L	3.0	3.2	A663824	6.2	A663826	6.0	0.20	A663824
Dissolved Manganese (Mn)	mg/L	<0.0040	0.052	A663824	0.052	A663826	0.051	0.0040	A663824
Dissolved Molybdenum (Mo)	mg/L	<0.00020	<0.00020	A663500	<0.00020	A663500	<0.00020	0.00020	A663500
Dissolved Nickel (Ni)	mg/L	<0.00050	<0.00050	A663500	0.00073	A663500	0.00075	0.00050	A663500
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	A663824	<0.10	A663826	<0.10	0.10	A663824
Dissolved Potassium (K)	mg/L	1.4	1.5	A663824	3.0	A663826	2.9	0.30	A663824
Dissolved Selenium (Se)	mg/L	<0.00020	<0.00020	A663500	<0.00020	A663500	<0.00020	0.00020	A663500
Dissolved Silicon (Si)	mg/L	0.81	1.4	A663824	1.3	A663826	1.3	0.10	A663824
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	A663500	<0.00010	A663500	<0.00010	0.00010	A663500
Dissolved Sodium (Na)	mg/L	1.8	1.9	A663824	2.5	A663826	2.4	0.50	A663824
Dissolved Strontium (Sr)	mg/L	0.024	0.026	A663824	0.044	A663826	0.039	0.020	A663824
Dissolved Sulphur (S)	mg/L	6.5	8.2	A663824	32	A663826	32	0.20	A663824
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	A663500	<0.00020	A663500	<0.00020	0.00020	A663500
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	A663500	<0.0010	A663500	<0.0010	0.0010	A663500
Dissolved Titanium (Ti)	mg/L	0.0010	<0.0010	A663500	<0.0010	A663500	<0.0010	0.0010	A663500
Dissolved Uranium (U)	mg/L	<0.00010	<0.00010	A663500	<0.00010	A663500	<0.00010	0.00010	A663500

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AYG563	AYG564		AYG565		AYG566		
Sampling Date		2022/07/26 08:50	2022/07/26 09:00		2022/07/26 09:20		2022/07/26 09:25		
COC Number		669922-01-01	669922-01-01		669922-01-01		669922-01-01		
	UNITS	**CL-7**	**CL-2**	**QC Batch**	**SB-2**	**QC Batch**	**SB-1**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	A663500	<0.0010	A663500	<0.0010	0.0010	A663500
Dissolved Zinc (Zn)	mg/L	0.028	0.046	A663500	0.14	A663500	0.14	0.0030	A663500
RDL = Reportable Detection Limit									

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AYG567		AYG592		AYG593		AYG594		
Sampling Date		2022/07/26 09:35		2022/07/26 09:40		2022/07/26 09:45		2022/07/26 09:50		
COC Number		669922-01-01		669922-02-01		669922-02-01		669922-02-01		
	UNITS	CB-1	QC Batch	CB-2	QC Batch	EB-1	QC Batch	EB-2	RDL	QC Batch
Elements										
Dissolved Cadmium (Cd)	ug/L	0.50	A662050	0.47	A662050	0.51	A662050	0.62	0.020	A662050
Lab Filtered Elements										
Dissolved Aluminum (Al)	mg/L	0.036	A663500	0.035	A667290	0.031	A663500	0.033	0.0030	A663500
Dissolved Antimony (Sb)	mg/L	<0.00060	A663500	<0.00060	A663500	<0.00060	A663500	<0.00060	0.00060	A663500
Dissolved Arsenic (As)	mg/L	0.00020	A663500	<0.00020	A663500	0.00021	A663500	<0.00020	0.00020	A663500
Dissolved Barium (Ba)	mg/L	0.011	A663826	0.012	A663824	0.012	A663824	0.012	0.010	A663826
Dissolved Beryllium (Be)	mg/L	<0.0010	A663500	<0.0010	A663500	<0.0010	A663500	<0.0010	0.0010	A663500
Dissolved Boron (B)	mg/L	<0.020	A663826	<0.020	A663824	<0.020	A663824	<0.020	0.020	A663826
Dissolved Calcium (Ca)	mg/L	36	A663826	34	A663824	38	A663824	39	0.30	A663826
Dissolved Chromium (Cr)	mg/L	<0.0010	A663500	<0.0010	A663500	<0.0010	A663500	<0.0010	0.0010	A663500
Dissolved Cobalt (Co)	mg/L	<0.00030	A663500	<0.00030	A663500	<0.00030	A663500	<0.00030	0.00030	A663500
Dissolved Copper (Cu)	mg/L	0.016	A663500	0.016	A663500	0.015	A663500	0.014	0.0010	A663500
Dissolved Iron (Fe)	mg/L	1.6	A663826	1.7	A663824	1.2	A663824	1.1	0.060	A663826
Dissolved Lead (Pb)	mg/L	<0.00020	A663500	<0.00020	A663500	<0.00020	A663500	<0.00020	0.00020	A663500
Dissolved Lithium (Li)	mg/L	<0.020	A663826	0.024	A663824	<0.020	A663824	<0.020	0.020	A663826
Dissolved Magnesium (Mg)	mg/L	6.4	A663826	6.0	A663824	6.5	A663824	6.7	0.20	A663826
Dissolved Manganese (Mn)	mg/L	0.051	A663826	0.047	A663824	0.046	A663824	0.046	0.0040	A663826
Dissolved Molybdenum (Mo)	mg/L	<0.00020	A663500	<0.00020	A663500	<0.00020	A663500	<0.00020	0.00020	A663500
Dissolved Nickel (Ni)	mg/L	0.00077	A663500	0.0011	A663500	0.0011	A663500	0.0010	0.00050	A663500
Dissolved Phosphorus (P)	mg/L	<0.10	A663826	<0.10	A663824	<0.10	A663824	<0.10	0.10	A663826
Dissolved Potassium (K)	mg/L	3.1	A663826	3.0	A663824	3.1	A663824	3.2	0.30	A663826
Dissolved Selenium (Se)	mg/L	<0.00020	A663500	<0.00020	A663500	<0.00020	A663500	<0.00020	0.00020	A663500
Dissolved Silicon (Si)	mg/L	1.3	A663826	1.3	A663824	1.2	A663824	1.2	0.10	A663826
Dissolved Silver (Ag)	mg/L	<0.00010	A663500	<0.00010	A663500	<0.00010	A663500	<0.00010	0.00010	A663500
Dissolved Sodium (Na)	mg/L	2.6	A663826	2.4	A663824	2.5	A663824	2.6	0.50	A663826
Dissolved Strontium (Sr)	mg/L	0.045	A663826	0.040	A663824	0.042	A663824	0.048	0.020	A663826
Dissolved Sulphur (S)	mg/L	32	A663826	33	A663824	36	A663824	37	0.20	A663826
Dissolved Thallium (Tl)	mg/L	<0.00020	A663500	<0.00020	A663500	<0.00020	A663500	<0.00020	0.00020	A663500
Dissolved Tin (Sn)	mg/L	<0.0010	A663500	<0.0010	A663500	<0.0010	A663500	<0.0010	0.0010	A663500
Dissolved Titanium (Ti)	mg/L	<0.0010	A663500	<0.0010	A663500	<0.0010	A663500	<0.0010	0.0010	A663500
Dissolved Uranium (U)	mg/L	<0.00010	A663500	<0.00010	A663500	<0.00010	A663500	<0.00010	0.00010	A663500

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AYG567		AYG592		AYG593		AYG594		
Sampling Date		2022/07/26 09:35		2022/07/26 09:40		2022/07/26 09:45		2022/07/26 09:50		
COC Number		669922-01-01		669922-02-01		669922-02-01		669922-02-01		
	UNITS	**CB-1**	**QC Batch**	**CB-2**	**QC Batch**	**EB-1**	**QC Batch**	**EB-2**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	A663500	<0.0010	A663500	<0.0010	A663500	<0.0010	0.0010	A663500
Dissolved Zinc (Zn)	mg/L	0.14	A663500	0.14	A663500	0.16	A663500	0.15	0.0030	A663500
RDL = Reportable Detection Limit										

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AYG595	AYG596		AYG597		AYG598		
Sampling Date		2022/07/26 10:00	2022/07/26 10:05		2022/07/26 10:10		2022/07/26 10:30		
COC Number		669922-02-01	669922-02-01		669922-02-01		669922-02-01		
	UNITS	NB-2	NB-1	QC Batch	CAMP LAKE DISCHARGE	QC Batch	SC-1	RDL	QC Batch
Elements									
Dissolved Cadmium (Cd)	ug/L	0.50	0.47	A662050	0.50	A662050	0.12	0.020	A662050
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	0.034	0.038	A663500	0.039	A663500	0.019	0.0030	A663500
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	A663500	<0.00060	A663500	<0.00060	0.00060	A663500
Dissolved Arsenic (As)	mg/L	<0.00020	<0.00020	A663500	<0.00020	A663500	0.00031	0.00020	A663500
Dissolved Barium (Ba)	mg/L	0.011	0.010	A663824	0.011	A663826	<0.010	0.010	A663824
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	A663500	<0.0010	A663500	<0.0010	0.0010	A663500
Dissolved Boron (B)	mg/L	<0.020	<0.020	A663824	<0.020	A663826	<0.020	0.020	A663824
Dissolved Calcium (Ca)	mg/L	37	36	A663824	37	A663826	7.4	0.30	A663824
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010	A663500	<0.0010	A663500	<0.0010	0.0010	A663500
Dissolved Cobalt (Co)	mg/L	<0.00030	<0.00030	A663500	<0.00030	A663500	<0.00030	0.00030	A663500
Dissolved Copper (Cu)	mg/L	0.016	0.017	A663500	0.016	A663500	0.0051	0.0010	A663500
Dissolved Iron (Fe)	mg/L	1.6	1.5	A663824	1.6	A663826	0.10	0.060	A663824
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	A663500	<0.00020	A663500	<0.00020	0.00020	A663500
Dissolved Lithium (Li)	mg/L	0.024	<0.020	A663824	<0.020	A663826	<0.020	0.020	A663824
Dissolved Magnesium (Mg)	mg/L	6.4	6.2	A663824	6.3	A663826	2.3	0.20	A663824
Dissolved Manganese (Mn)	mg/L	0.051	0.054	A663824	0.043	A663826	<0.0040	0.0040	A663824
Dissolved Molybdenum (Mo)	mg/L	<0.00020	<0.00020	A663500	<0.00020	A663500	<0.00020	0.00020	A663500
Dissolved Nickel (Ni)	mg/L	0.00072	0.00077	A663500	0.00073	A663500	<0.00050	0.00050	A663500
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	A663824	<0.10	A663826	<0.10	0.10	A663824
Dissolved Potassium (K)	mg/L	2.9	2.9	A663824	2.9	A663826	1.1	0.30	A663824
Dissolved Selenium (Se)	mg/L	<0.00020	<0.00020	A663500	<0.00020	A663500	<0.00020	0.00020	A663500
Dissolved Silicon (Si)	mg/L	1.3	1.3	A663824	1.3	A663826	1.1	0.10	A663824
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	A663500	<0.00010	A663500	<0.00010	0.00010	A663500
Dissolved Sodium (Na)	mg/L	2.4	2.4	A663824	2.4	A663826	1.5	0.50	A663824
Dissolved Strontium (Sr)	mg/L	0.040	0.040	A663824	0.044	A663826	<0.020	0.020	A663824
Dissolved Sulphur (S)	mg/L	34	35	A663824	34	A663826	1.1	0.20	A663824
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	A663500	<0.00020	A663500	<0.00020	0.00020	A663500
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	A663500	<0.0010	A663500	<0.0010	0.0010	A663500
Dissolved Titanium (Ti)	mg/L	<0.0010	<0.0010	A663500	<0.0010	A663500	<0.0010	0.0010	A663500
Dissolved Uranium (U)	mg/L	<0.00010	<0.00010	A663500	<0.00010	A663500	<0.00010	0.00010	A663500

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AYG595	AYG596		AYG597		AYG598		
Sampling Date		2022/07/26 10:00	2022/07/26 10:05		2022/07/26 10:10		2022/07/26 10:30		
COC Number		669922-02-01	669922-02-01		669922-02-01		669922-02-01		
	UNITS	**NB-2**	**NB-1**	**QC Batch**	**CAMP LAKE DISCHARGE**	**QC Batch**	**SC-1**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	A663500	<0.0010	A663500	<0.0010	0.0010	A663500
Dissolved Zinc (Zn)	mg/L	0.14	0.15	A663500	0.14	A663500	0.037	0.0030	A663500
RDL = Reportable Detection Limit									

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AYG599		AYG600		AYG601		
Sampling Date		2022/07/26 16:00		2022/07/26 17:00		2022/07/26		
COC Number		669922-02-01		669922-02-01		669922-02-01		
	UNITS	SW-116	QC Batch	SW-103	QC Batch	TRIP BLANK	RDL	QC Batch
Elements								
Dissolved Cadmium (Cd)	ug/L	0.075	A662050	0.50	A662050	<0.020	0.020	A662104
Lab Filtered Elements								
Dissolved Aluminum (Al)	mg/L	0.027	A663500	0.032	A663500	<0.0030	0.0030	A663500
Dissolved Antimony (Sb)	mg/L	<0.00060	A663500	<0.00060	A663500	<0.00060	0.00060	A663500
Dissolved Arsenic (As)	mg/L	0.00031	A663500	0.00021	A663500	<0.00020	0.00020	A663500
Dissolved Barium (Ba)	mg/L	<0.010	A663826	0.011	A663824	<0.010	0.010	A663826
Dissolved Beryllium (Be)	mg/L	<0.0010	A663500	<0.0010	A663500	0.0011	0.0010	A663500
Dissolved Boron (B)	mg/L	<0.020	A663826	<0.020	A663824	<0.020	0.020	A663826
Dissolved Calcium (Ca)	mg/L	12	A663826	34	A663824	<0.30	0.30	A663826
Dissolved Chromium (Cr)	mg/L	<0.0010	A663500	<0.0010	A670693	<0.0010	0.0010	A663500
Dissolved Cobalt (Co)	mg/L	<0.00030	A663500	<0.00030	A663500	<0.00030	0.00030	A663500
Dissolved Copper (Cu)	mg/L	0.0065	A663500	0.016	A663500	<0.0010	0.0010	A663500
Dissolved Iron (Fe)	mg/L	0.24	A663826	1.7	A663824	<0.060	0.060	A663826
Dissolved Lead (Pb)	mg/L	<0.00020	A663500	<0.00020	A663500	<0.00020	0.00020	A663500
Dissolved Lithium (Li)	mg/L	<0.020	A663826	<0.020	A663824	<0.020	0.020	A663826
Dissolved Magnesium (Mg)	mg/L	3.1	A663826	5.9	A663824	<0.20	0.20	A663826
Dissolved Manganese (Mn)	mg/L	<0.0040	A663826	0.050	A663824	<0.0040	0.0040	A663826
Dissolved Molybdenum (Mo)	mg/L	<0.00020	A663500	<0.00020	A663500	<0.00020	0.00020	A663500
Dissolved Nickel (Ni)	mg/L	<0.00050	A663500	0.00087	A663500	<0.00050	0.00050	A663500
Dissolved Phosphorus (P)	mg/L	<0.10	A663826	<0.10	A663824	<0.10	0.10	A663826
Dissolved Potassium (K)	mg/L	1.5	A663826	2.9	A663824	<0.30	0.30	A663826
Dissolved Selenium (Se)	mg/L	<0.00020	A663500	<0.00020	A663500	<0.00020	0.00020	A663500
Dissolved Silicon (Si)	mg/L	0.85	A663826	1.3	A663824	<0.10	0.10	A663826
Dissolved Silver (Ag)	mg/L	<0.00010	A663500	<0.00010	A663500	<0.00010	0.00010	A663500
Dissolved Sodium (Na)	mg/L	1.9	A663826	2.4	A663824	<0.50	0.50	A663826
Dissolved Strontium (Sr)	mg/L	0.027	A663826	0.039	A663824	<0.020	0.020	A663826
Dissolved Sulphur (S)	mg/L	6.2	A663826	33	A663824	<0.20	0.20	A663826
Dissolved Thallium (Tl)	mg/L	<0.00020	A663500	<0.00020	A663500	<0.00020	0.00020	A663500
Dissolved Tin (Sn)	mg/L	<0.0010	A663500	<0.0010	A663500	<0.0010	0.0010	A663500
Dissolved Titanium (Ti)	mg/L	<0.0010	A663500	<0.0010	A663500	<0.0010	0.0010	A663500
Dissolved Uranium (U)	mg/L	<0.00010	A663500	<0.00010	A663500	<0.00010	0.00010	A663500

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AYG599		AYG600		AYG601		
Sampling Date		2022/07/26 16:00		2022/07/26 17:00		2022/07/26		
COC Number		669922-02-01		669922-02-01		669922-02-01		
	UNITS	**SW-116**	**QC Batch**	**SW-103**	**QC Batch**	**TRIP BLANK**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	A663500	<0.0010	A663500	<0.0010	0.0010	A663500
Dissolved Zinc (Zn)	mg/L	0.027	A663500	0.14	A663500	<0.0030	0.0030	A663500
RDL = Reportable Detection Limit								

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AYG558	AYG559			AYG560		
Sampling Date		2022/07/26 08:15	2022/07/26 08:25			2022/07/26 08:35		
COC Number		669922-01-01	669922-01-01			669922-01-01		
	UNITS	CL-6	CL-5	RDL	QC Batch	CL-4	RDL	QC Batch
Elements								
Total Cadmium (Cd)	ug/L	0.12	0.15	0.020	A660962	0.16	0.020	A660962
Total Aluminum (Al)	mg/L	0.11	0.11	0.0030	A666558	0.12	0.0030	A666563
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	0.00060	A666558	<0.00060	0.00060	A666563
Total Arsenic (As)	mg/L	0.00045	0.00040	0.00020	A666558	0.00053	0.00020	A666563
Total Barium (Ba)	mg/L	0.011	<0.010	0.010	A666561	0.011	0.010	A666566
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	0.0010	A666558	<0.0010	0.0010	A666563
Total Boron (B)	mg/L	<0.020	<0.020	0.020	A666561	<0.020	0.020	A666566
Total Calcium (Ca)	mg/L	12	12	0.30	A666561	13	0.30	A666566
Total Chromium (Cr)	mg/L	<0.0010	<0.0010	0.0010	A666558	<0.0010	0.0010	A666563
Total Cobalt (Co)	mg/L	0.00030	<0.00030	0.00030	A666558	0.00034	0.00030	A666563
Total Copper (Cu)	mg/L	0.0078	0.0098	0.0010	A666558	0.010	0.0010	A666563
Total Iron (Fe)	mg/L	0.94	1.3	0.060	A666561	2.4	0.060	A666566
Total Lead (Pb)	mg/L	<0.00020	<0.00020	0.00020	A666558	0.00020	0.00020	A666563
Total Lithium (Li)	mg/L	<0.020	<0.020	0.020	A666561	<0.020	0.020	A666566
Total Magnesium (Mg)	mg/L	3.0	3.0	0.20	A666561	3.2	0.20	A666566
Total Manganese (Mn)	mg/L	0.14	0.054	0.0040	A666561	0.15	0.0040	A666566
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	0.00020	A666558	<0.00020	0.00020	A666563
Total Nickel (Ni)	mg/L	0.0019	0.0012	0.00050	A666558	0.00072	0.00050	A666563
Total Phosphorus (P)	mg/L	<0.10	<0.10	0.10	A666561	<0.10	0.10	A666566
Total Potassium (K)	mg/L	1.5	1.5	0.30	A666561	1.6	0.30	A666566
Total Selenium (Se)	mg/L	<0.00020	<0.00020	0.00020	A666558	<0.00020	0.00020	A666563
Total Silicon (Si)	mg/L	2.0	1.7	0.16	A666561	1.9	0.10	A666566
Total Silver (Ag)	mg/L	<0.00010	<0.00010	0.00010	A666558	<0.00010	0.00010	A666563
Total Sodium (Na)	mg/L	1.8	1.8	0.50	A666561	1.9	0.50	A666566
Total Strontium (Sr)	mg/L	0.025	0.024	0.020	A666561	0.025	0.020	A666566
Total Sulphur (S)	mg/L	6.4	7.4	0.20	A666561	7.5	0.20	A666566
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	0.00020	A666558	<0.00020	0.00020	A666563
Total Tin (Sn)	mg/L	<0.0010	<0.0010	0.0010	A666558	<0.0010	0.0010	A666563
Total Titanium (Ti)	mg/L	0.0031	0.0035	0.0010	A666558	0.0033	0.0010	A666563
Total Uranium (U)	mg/L	<0.00010	<0.00010	0.00010	A666558	<0.00010	0.00010	A666563
Total Vanadium (V)	mg/L	<0.0010	<0.0010	0.0010	A666558	<0.0010	0.0010	A666563

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AYG558	AYG559			AYG560		
Sampling Date		2022/07/26 08:15	2022/07/26 08:25			2022/07/26 08:35		
COC Number		669922-01-01	669922-01-01			669922-01-01		
	UNITS	**CL-6**	**CL-5**	**RDL**	**QC Batch**	**CL-4**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.049	0.057	0.0030	A666558	0.051	0.0030	A666563
RDL = Reportable Detection Limit								

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AYG561	AYG562	AYG563	AYG564		
Sampling Date		2022/07/26 08:40	2022/07/26 08:45	2022/07/26 08:50	2022/07/26 09:00		
COC Number		669922-01-01	669922-01-01	669922-01-01	669922-01-01		
	UNITS	CL-8	CL-3	CL-7	CL-2	RDL	QC Batch
Elements							
Total Cadmium (Cd)	ug/L	0.096	0.10	0.091	0.15	0.020	A660962
Total Aluminum (Al)	mg/L	0.075	0.073	0.062	0.094	0.0030	A666558
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	<0.00060	0.00060	A666558
Total Arsenic (As)	mg/L	0.00049	0.00042	0.00044	0.00040	0.00020	A666558
Total Barium (Ba)	mg/L	<0.010	<0.010	<0.010	0.010	0.010	A666561
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A666558
Total Boron (B)	mg/L	<0.020	<0.020	<0.020	<0.020	0.020	A666561
Total Calcium (Ca)	mg/L	12	12	12	14	0.30	A666561
Total Chromium (Cr)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A666558
Total Cobalt (Co)	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	0.00030	A666558
Total Copper (Cu)	mg/L	0.0086	0.0088	0.0077	0.011	0.0010	A666558
Total Iron (Fe)	mg/L	0.36	0.42	0.38	1.4	0.060	A666561
Total Lead (Pb)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A666558
Total Lithium (Li)	mg/L	<0.020	<0.020	<0.020	<0.020	0.020	A666561
Total Magnesium (Mg)	mg/L	2.9	3.0	2.9	3.3	0.20	A666561
Total Manganese (Mn)	mg/L	0.0094	0.011	0.0093	0.090	0.0040	A666561
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A666558
Total Nickel (Ni)	mg/L	0.00064	0.00066	0.00063	0.00065	0.00050	A666558
Total Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	<0.10	0.10	A666561
Total Potassium (K)	mg/L	1.5	1.5	1.5	1.7	0.30	A666561
Total Selenium (Se)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A666558
Total Silicon (Si)	mg/L	1.1	1.1	1.1	1.8	0.16	A666561
Total Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A666558
Total Sodium (Na)	mg/L	1.8	1.8	1.8	2.0	0.50	A666561
Total Strontium (Sr)	mg/L	0.024	0.024	0.024	0.025	0.020	A666561
Total Sulphur (S)	mg/L	6.5	7.0	6.4	8.6	0.20	A666561
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A666558
Total Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A666558
Total Titanium (Ti)	mg/L	0.0025	0.0028	0.0019	0.0017	0.0010	A666558
Total Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A666558
Total Vanadium (V)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A666558

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AYG561	AYG562	AYG563	AYG564		
Sampling Date		2022/07/26 08:40	2022/07/26 08:45	2022/07/26 08:50	2022/07/26 09:00		
COC Number		669922-01-01	669922-01-01	669922-01-01	669922-01-01		
	UNITS	**CL-8**	**CL-3**	**CL-7**	**CL-2**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.038	0.039	0.034	0.059	0.0030	A666558
RDL = Reportable Detection Limit							

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AYG565			AYG566	AYG567	AYG592		
Sampling Date		2022/07/26 09:20			2022/07/26 09:25	2022/07/26 09:35	2022/07/26 09:40		
COC Number		669922-01-01			669922-01-01	669922-01-01	669922-02-01		
	UNITS	SB-2	RDL	QC Batch	SB-1	CB-1	CB-2	RDL	QC Batch
Elements									
Total Cadmium (Cd)	ug/L	0.59	0.020	A660962	0.56	0.58	0.61	0.020	A660962
Total Aluminum (Al)	mg/L	0.084	0.0030	A666563	0.083	0.084	0.093	0.0030	A666558
Total Antimony (Sb)	mg/L	<0.00060	0.00060	A666563	<0.00060	<0.00060	<0.00060	0.00060	A666558
Total Arsenic (As)	mg/L	0.00031	0.00020	A666563	0.00023	0.00025	0.00022	0.00020	A666558
Total Barium (Ba)	mg/L	0.011	0.010	A666566	0.011	0.011	0.012	0.010	A666561
Total Beryllium (Be)	mg/L	<0.0010	0.0010	A666563	<0.0010	<0.0010	<0.0010	0.0010	A666558
Total Boron (B)	mg/L	0.046	0.020	A666566	<0.020	<0.020	<0.020	0.020	A666561
Total Calcium (Ca)	mg/L	34	0.30	A666566	34	33	35	0.30	A666561
Total Chromium (Cr)	mg/L	<0.0010	0.0010	A666563	<0.0010	<0.0010	<0.0010	0.0010	A666558
Total Cobalt (Co)	mg/L	<0.00030	0.00030	A666563	<0.00030	<0.00030	<0.00030	0.00030	A666558
Total Copper (Cu)	mg/L	0.022	0.0010	A666563	0.022	0.023	0.023	0.0010	A666558
Total Iron (Fe)	mg/L	2.8	0.060	A666566	2.7	2.6	2.6	0.060	A666561
Total Lead (Pb)	mg/L	<0.00020	0.00020	A666563	<0.00020	<0.00020	<0.00020	0.00020	A666558
Total Lithium (Li)	mg/L	<0.020	0.020	A666566	<0.020	<0.020	<0.020	0.020	A666561
Total Magnesium (Mg)	mg/L	6.0	0.20	A666566	5.8	5.8	6.0	0.20	A666561
Total Manganese (Mn)	mg/L	0.056	0.0040	A666566	0.055	0.054	0.054	0.0040	A666561
Total Molybdenum (Mo)	mg/L	<0.00020	0.00020	A666563	<0.00020	<0.00020	<0.00020	0.00020	A666558
Total Nickel (Ni)	mg/L	0.0018	0.00050	A666563	0.0014	0.0014	0.0015	0.00050	A666558
Total Phosphorus (P)	mg/L	<0.10	0.10	A666566	<0.10	<0.10	<0.10	0.10	A666561
Total Potassium (K)	mg/L	3.0	0.30	A666566	2.9	2.9	3.0	0.30	A666561
Total Selenium (Se)	mg/L	<0.00020	0.00020	A666563	<0.00020	<0.00020	<0.00020	0.00020	A666558
Total Silicon (Si)	mg/L	1.7	0.10	A666566	1.6	1.7	1.6	0.16	A666561
Total Silver (Ag)	mg/L	<0.00010	0.00010	A666563	<0.00010	<0.00010	<0.00010	0.00010	A666558
Total Sodium (Na)	mg/L	2.5	0.50	A666566	2.4	2.4	2.4	0.50	A666561
Total Strontium (Sr)	mg/L	0.038	0.020	A666566	0.038	0.037	0.039	0.020	A666561
Total Sulphur (S)	mg/L	33	0.20	A666566	32	32	34	0.20	A666561
Total Thallium (Tl)	mg/L	<0.00020	0.00020	A666563	<0.00020	<0.00020	<0.00020	0.00020	A666558
Total Tin (Sn)	mg/L	<0.0010	0.0010	A666563	<0.0010	<0.0010	<0.0010	0.0010	A666558
Total Titanium (Ti)	mg/L	0.0019	0.0010	A666563	0.0022	0.0026	0.0021	0.0010	A666558
Total Uranium (U)	mg/L	<0.00010	0.00010	A666563	<0.00010	<0.00010	<0.00010	0.00010	A666558
Total Vanadium (V)	mg/L	<0.0010	0.0010	A666563	<0.0010	<0.0010	<0.0010	0.0010	A666558

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AYG565			AYG566	AYG567	AYG592		
Sampling Date		2022/07/26 09:20			2022/07/26 09:25	2022/07/26 09:35	2022/07/26 09:40		
COC Number		669922-01-01			669922-01-01	669922-01-01	669922-02-01		
	UNITS	**SB-2**	**RDL**	**QC Batch**	**SB-1**	**CB-1**	**CB-2**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.18	0.0030	A666563	0.17	0.18	0.18	0.0030	A666558
RDL = Reportable Detection Limit									

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AYG593			AYG593			AYG594		
Sampling Date		2022/07/26 09:45			2022/07/26 09:45			2022/07/26 09:50		
COC Number		669922-02-01			669922-02-01			669922-02-01		
	UNITS	EB-1	RDL	QC Batch	EB-1 Lab-Dup	RDL	QC Batch	EB-2	RDL	QC Batch
Elements										
Total Cadmium (Cd)	ug/L	0.67	0.020	A660962				0.76	0.020	A660962
Total Aluminum (Al)	mg/L	0.12	0.0030	A666558	0.13	0.0030	A666558	0.18	0.0030	A666558
Total Antimony (Sb)	mg/L	<0.00060	0.00060	A666558	<0.00060	0.00060	A666558	<0.00060	0.00060	A666558
Total Arsenic (As)	mg/L	0.00023	0.00020	A666558	0.00027	0.00020	A666558	0.00032	0.00020	A666558
Total Barium (Ba)	mg/L	0.012	0.010	A666561	0.015	0.010	A666561	0.012	0.010	A666561
Total Beryllium (Be)	mg/L	<0.0010	0.0010	A666558	<0.0010	0.0010	A666558	<0.0010	0.0010	A666558
Total Boron (B)	mg/L	<0.020	0.020	A666561	<0.020	0.020	A666561	<0.020	0.020	A666561
Total Calcium (Ca)	mg/L	38	0.30	A666561	35	0.30	A666561	38	0.30	A666561
Total Chromium (Cr)	mg/L	<0.0010	0.0010	A666558	<0.0010	0.0010	A666558	<0.0010	0.0010	A666558
Total Cobalt (Co)	mg/L	0.00033	0.00030	A666558	0.00035	0.00030	A666558	0.00041	0.00030	A666558
Total Copper (Cu)	mg/L	0.024	0.0010	A666558	0.024	0.0010	A666558	0.024	0.0010	A666558
Total Iron (Fe)	mg/L	2.2	0.060	A666561	2.0	0.060	A666561	2.1	0.060	A666561
Total Lead (Pb)	mg/L	<0.00020	0.00020	A666558	<0.00020	0.00020	A666558	<0.00020	0.00020	A666558
Total Lithium (Li)	mg/L	<0.020	0.020	A666561	<0.020	0.020	A666561	<0.020	0.020	A666561
Total Magnesium (Mg)	mg/L	6.5	0.20	A666561	6.1	0.20	A666561	6.5	0.20	A666561
Total Manganese (Mn)	mg/L	0.053	0.0040	A666561	0.050	0.0040	A666561	0.053	0.0040	A666561
Total Molybdenum (Mo)	mg/L	<0.00020	0.00020	A666558	<0.00020	0.00020	A666558	<0.00020	0.00020	A666558
Total Nickel (Ni)	mg/L	0.0017	0.00050	A666558	0.0018	0.00050	A666558	0.0020	0.00050	A666558
Total Phosphorus (P)	mg/L	<0.10	0.10	A666561	<0.10	0.10	A666561	<0.10	0.10	A666561
Total Potassium (K)	mg/L	3.1	0.30	A666561	3.0	0.30	A666561	3.1	0.30	A666561
Total Selenium (Se)	mg/L	<0.00020	0.00020	A666558	<0.00020	0.00020	A666558	<0.00020	0.00020	A666558
Total Silicon (Si)	mg/L	1.6	0.16	A666561	1.5	0.16	A666561	1.6	0.16	A666561
Total Silver (Ag)	mg/L	<0.00010	0.00010	A666558	<0.00010	0.00010	A666558	<0.00010	0.00010	A666558
Total Sodium (Na)	mg/L	2.6	0.50	A666561	2.4	0.50	A666561	2.6	0.50	A666561
Total Strontium (Sr)	mg/L	0.041	0.020	A666561	0.039	0.020	A666561	0.041	0.020	A666561
Total Sulphur (S)	mg/L	37	0.20	A666561	35	0.20	A666561	38	0.20	A666561
Total Thallium (Tl)	mg/L	<0.00020	0.00020	A666558	<0.00020	0.00020	A666558	<0.00020	0.00020	A666558
Total Tin (Sn)	mg/L	<0.0010	0.0010	A666558	<0.0010	0.0010	A666558	<0.0010	0.0010	A666558
Total Titanium (Ti)	mg/L	0.0040	0.0010	A666558	0.0033	0.0010	A666558	0.0069	0.0010	A666558
Total Uranium (U)	mg/L	<0.00010	0.00010	A666558	<0.00010	0.00010	A666558	<0.00010	0.00010	A666558
Total Vanadium (V)	mg/L	<0.0010	0.0010	A666558	<0.0010	0.0010	A666558	<0.0010	0.0010	A666558

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AYG593			AYG593			AYG594		
Sampling Date		2022/07/26 09:45			2022/07/26 09:45			2022/07/26 09:50		
COC Number		669922-02-01			669922-02-01			669922-02-01		
	UNITS	**EB-1**	**RDL**	**QC Batch**	**EB-1 Lab-Dup**	**RDL**	**QC Batch**	**EB-2**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.20	0.0030	A666558	0.20	0.0030	A666558	0.22	0.0030	A666558

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AYG595			AYG596			AYG596		
Sampling Date		2022/07/26 10:00			2022/07/26 10:05			2022/07/26 10:05		
COC Number		669922-02-01			669922-02-01			669922-02-01		
	UNITS	NB-2	RDL	QC Batch	NB-1	RDL	QC Batch	NB-1 Lab-Dup	RDL	QC Batch
Elements										
Total Cadmium (Cd)	ug/L	0.52	0.020	A660962	0.59	0.020	A662105			
Total Aluminum (Al)	mg/L	0.079	0.0030	A666558	0.083	0.0030	A666563	0.073	0.0030	A666563
Total Antimony (Sb)	mg/L	<0.00060	0.00060	A666558	<0.00060	0.00060	A666563	<0.00060	0.00060	A666563
Total Arsenic (As)	mg/L	0.00030	0.00020	A666558	0.00027	0.00020	A666563	0.00031	0.00020	A666563
Total Barium (Ba)	mg/L	0.011	0.010	A666561	0.010	0.010	A666566	0.010	0.010	A666566
Total Beryllium (Be)	mg/L	<0.0010	0.0010	A666558	<0.0010	0.0010	A666563	<0.0010	0.0010	A666563
Total Boron (B)	mg/L	<0.020	0.020	A666561	<0.020	0.020	A666566	<0.020	0.020	A666566
Total Calcium (Ca)	mg/L	37	0.30	A666561	36	0.30	A666566	36	0.30	A666566
Total Chromium (Cr)	mg/L	<0.0010	0.0010	A666558	<0.0010	0.0010	A666563	<0.0010	0.0010	A666563
Total Cobalt (Co)	mg/L	<0.00030	0.00030	A666558	<0.00030	0.00030	A666563	<0.00030	0.00030	A666563
Total Copper (Cu)	mg/L	0.024	0.0010	A666558	0.023	0.0010	A666563	0.024	0.0010	A666563
Total Iron (Fe)	mg/L	2.6	0.060	A666561	2.6	0.060	A666566	2.6	0.060	A666566
Total Lead (Pb)	mg/L	<0.00020	0.00020	A666558	<0.00020	0.00020	A666563	<0.00020	0.00020	A666563
Total Lithium (Li)	mg/L	<0.020	0.020	A666561	<0.020	0.020	A666566	<0.020	0.020	A666566
Total Magnesium (Mg)	mg/L	6.3	0.20	A666561	6.2	0.20	A666566	6.2	0.20	A666566
Total Manganese (Mn)	mg/L	0.058	0.0040	A666561	0.058	0.0040	A666566	0.058	0.0040	A666566
Total Molybdenum (Mo)	mg/L	<0.00020	0.00020	A666558	<0.00020	0.00020	A666563	<0.00020	0.00020	A666563
Total Nickel (Ni)	mg/L	0.0015	0.00050	A666558	0.0014	0.00050	A666563	0.0016	0.00050	A666563
Total Phosphorus (P)	mg/L	<0.10	0.10	A666561	<0.10	0.10	A666566	<0.10	0.10	A666566
Total Potassium (K)	mg/L	2.9	0.30	A666561	2.9	0.30	A666566	2.9	0.30	A666566
Total Selenium (Se)	mg/L	<0.00020	0.00020	A666558	<0.00020	0.00020	A666563	<0.00020	0.00020	A666563
Total Silicon (Si)	mg/L	1.7	0.16	A666561	1.6	0.10	A666566	1.6	0.10	A666566
Total Silver (Ag)	mg/L	<0.00010	0.00010	A666558	<0.00010	0.00010	A666563	<0.00010	0.00010	A666563
Total Sodium (Na)	mg/L	2.4	0.50	A666561	2.4	0.50	A666566	2.3	0.50	A666566
Total Strontium (Sr)	mg/L	0.040	0.020	A666561	0.038	0.020	A666566	0.038	0.020	A666566
Total Sulphur (S)	mg/L	36	0.20	A666561	35	0.20	A666566	35	0.20	A666566
Total Thallium (Tl)	mg/L	<0.00020	0.00020	A666558	<0.00020	0.00020	A666563	<0.00020	0.00020	A666563
Total Tin (Sn)	mg/L	<0.0010	0.0010	A666558	<0.0010	0.0010	A666563	<0.0010	0.0010	A666563
Total Titanium (Ti)	mg/L	0.0015	0.0010	A666558	0.0013	0.0010	A666563	0.0014	0.0010	A666563
Total Uranium (U)	mg/L	<0.00010	0.00010	A666558	<0.00010	0.00010	A666563	<0.00010	0.00010	A666563
Total Vanadium (V)	mg/L	<0.0010	0.0010	A666558	<0.0010	0.0010	A666563	<0.0010	0.0010	A666563

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AYG595			AYG596			AYG596		
Sampling Date		2022/07/26 10:00			2022/07/26 10:05			2022/07/26 10:05		
COC Number		669922-02-01			669922-02-01			669922-02-01		
	UNITS	**NB-2**	**RDL**	**QC Batch**	**NB-1**	**RDL**	**QC Batch**	**NB-1 Lab-Dup**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.18	0.0030	A666558	0.17	0.0030	A666563	0.18	0.0030	A666563

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AYG597	AYG598	AYG599			AYG600		
Sampling Date		2022/07/26 10:10	2022/07/26 10:30	2022/07/26 16:00			2022/07/26 17:00		
COC Number		669922-02-01	669922-02-01	669922-02-01			669922-02-01		
	UNITS	CAMP LAKE DISCHARGE	SC-1	SW-116	RDL	QC Batch	SW-103	RDL	QC Batch
Elements									
Total Cadmium (Cd)	ug/L	0.93	0.16	0.11	0.020	A662105	0.58	0.020	A662105
Total Aluminum (Al)	mg/L	0.32	0.055	0.072	0.0030	A666558	0.082	0.0030	A666563
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	0.00060	A666558	<0.00060	0.00060	A666563
Total Arsenic (As)	mg/L	0.00035	0.00044	0.00040	0.00020	A666558	0.00031	0.00020	A666563
Total Barium (Ba)	mg/L	0.012	<0.010	<0.010	0.010	A666561	0.011	0.010	A666566
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	A666558	<0.0010	0.0010	A666563
Total Boron (B)	mg/L	<0.020	<0.020	<0.020	0.020	A666561	<0.020	0.020	A666566
Total Calcium (Ca)	mg/L	37	7.4	12	0.30	A666561	34	0.30	A666566
Total Chromium (Cr)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	A666558	<0.0010	0.0010	A666563
Total Cobalt (Co)	mg/L	0.0011	<0.00030	<0.00030	0.00030	A666558	<0.00030	0.00030	A666563
Total Copper (Cu)	mg/L	0.044	0.0069	0.0081	0.0010	A666558	0.022	0.0010	A666563
Total Iron (Fe)	mg/L	5.5	0.19	0.37	0.060	A666561	2.8	0.060	A666566
Total Lead (Pb)	mg/L	0.00033	<0.00020	<0.00020	0.00020	A666558	<0.00020	0.00020	A666563
Total Lithium (Li)	mg/L	<0.020	<0.020	<0.020	0.020	A666561	<0.020	0.020	A666566
Total Magnesium (Mg)	mg/L	6.3	2.3	3.0	0.20	A666561	6.0	0.20	A666566
Total Manganese (Mn)	mg/L	0.11	0.021	0.0094	0.0040	A666561	0.055	0.0040	A666566
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	A666558	<0.00020	0.00020	A666563
Total Nickel (Ni)	mg/L	0.0023	0.00054	0.00070	0.00050	A666558	0.0016	0.00050	A666563
Total Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	0.10	A666561	<0.10	0.10	A666566
Total Potassium (K)	mg/L	3.0	1.2	1.5	0.30	A666561	3.0	0.30	A666566
Total Selenium (Se)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	A666558	<0.00020	0.00020	A666563
Total Silicon (Si)	mg/L	1.9	1.4	1.1	0.16	A666561	1.6	0.10	A666566
Total Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	A666558	<0.00010	0.00010	A666563
Total Sodium (Na)	mg/L	2.4	1.5	1.8	0.50	A666561	2.4	0.50	A666566
Total Strontium (Sr)	mg/L	0.039	<0.020	0.024	0.020	A666561	0.038	0.020	A666566
Total Sulphur (S)	mg/L	36	1.3	6.5	0.20	A666561	32	0.20	A666566
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	A666558	<0.00020	0.00020	A666563
Total Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	A666558	<0.0010	0.0010	A666563
Total Titanium (Ti)	mg/L	0.013	0.0031	0.0027	0.0010	A666558	0.0020	0.0010	A666563
Total Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	A666558	<0.00010	0.00010	A666563
Total Vanadium (V)	mg/L	0.0012	<0.0010	<0.0010	0.0010	A666558	<0.0010	0.0010	A666563

RDL = Reportable Detection Limit

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AYG597	AYG598	AYG599			AYG600		
Sampling Date		2022/07/26 10:10	2022/07/26 10:30	2022/07/26 16:00			2022/07/26 17:00		
COC Number		669922-02-01	669922-02-01	669922-02-01			669922-02-01		
	UNITS	**CAMP LAKE DISCHARGE**	**SC-1**	**SW-116**	**RDL**	**QC Batch**	**SW-103**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.30	0.046	0.036	0.0030	A666558	0.17	0.0030	A666563
RDL = Reportable Detection Limit									

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AYG601		
Sampling Date		2022/07/26		
COC Number		669922-02-01		
	UNITS	TRIP BLANK	RDL	QC Batch
Elements				
Total Cadmium (Cd)	ug/L	<0.020	0.020	A662105
Total Aluminum (Al)	mg/L	<0.0030	0.0030	A666558
Total Antimony (Sb)	mg/L	<0.00060	0.00060	A666558
Total Arsenic (As)	mg/L	<0.00020	0.00020	A666558
Total Barium (Ba)	mg/L	<0.010	0.010	A666561
Total Beryllium (Be)	mg/L	<0.0010	0.0010	A666558
Total Boron (B)	mg/L	0.038	0.020	A666561
Total Calcium (Ca)	mg/L	<0.30	0.30	A666561
Total Chromium (Cr)	mg/L	<0.0010	0.0010	A666558
Total Cobalt (Co)	mg/L	<0.00030	0.00030	A666558
Total Copper (Cu)	mg/L	<0.0010	0.0010	A666558
Total Iron (Fe)	mg/L	<0.060	0.060	A666561
Total Lead (Pb)	mg/L	<0.00020	0.00020	A666558
Total Lithium (Li)	mg/L	<0.020	0.020	A666561
Total Magnesium (Mg)	mg/L	<0.20	0.20	A666561
Total Manganese (Mn)	mg/L	<0.0040	0.0040	A666561
Total Molybdenum (Mo)	mg/L	<0.00020	0.00020	A666558
Total Nickel (Ni)	mg/L	<0.00050	0.00050	A668162
Total Phosphorus (P)	mg/L	<0.10	0.10	A666561
Total Potassium (K)	mg/L	<0.30	0.30	A666561
Total Selenium (Se)	mg/L	<0.00020	0.00020	A666558
Total Silicon (Si)	mg/L	0.23	0.16	A666561
Total Silver (Ag)	mg/L	<0.00010	0.00010	A666558
Total Sodium (Na)	mg/L	<0.50	0.50	A666561
Total Strontium (Sr)	mg/L	<0.020	0.020	A666561
Total Sulphur (S)	mg/L	<0.20	0.20	A666561
Total Thallium (Tl)	mg/L	<0.00020	0.00020	A666558
Total Tin (Sn)	mg/L	<0.0010	0.0010	A666558
Total Titanium (Ti)	mg/L	<0.0010	0.0010	A666558
Total Uranium (U)	mg/L	<0.00010	0.00010	A666558
Total Vanadium (V)	mg/L	<0.0010	0.0010	A666558
RDL = Reportable Detection Limit				

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AYG601		
Sampling Date		2022/07/26		
COC Number		669922-02-01		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	<0.0030	0.0030	A666558
RDL = Reportable Detection Limit				

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Bureau Veritas Job #: C254948
Report Date: 2022/08/08

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AYG558			AYG558			AYG559		
Sampling Date		2022/07/26 08:15			2022/07/26 08:15			2022/07/26 08:25		
COC Number		669922-01-01			669922-01-01			669922-01-01		
	UNITS	CL-6	RDL	QC Batch	CL-6 Lab-Dup	RDL	QC Batch	CL-5	RDL	QC Batch
Calculated Parameters										
Hardness (CaCO3)	mg/L	43	0.50	A662051				45	0.50	A662051
Total Hardness (CaCO3)	mg/L	42.7	0.50	A661915				43.3	0.50	A661915
Misc. Inorganics										
pH	pH	6.45	N/A	A663363				6.43	N/A	A663363
Total Suspended Solids	mg/L	2.2	1.0	A665116				2.2	0.99	A665116
Anions										
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	A663358				<1.0	1.0	A663358
Alkalinity (Total as CaCO3)	mg/L	22	1.0	A663358				18	1.0	A663358
Bicarbonate (HCO3)	mg/L	27	1.0	A663358				22	1.0	A663358
Carbonate (CO3)	mg/L	<1.0	1.0	A663358				<1.0	1.0	A663358
Hydroxide (OH)	mg/L	<1.0	1.0	A663358				<1.0	1.0	A663358
Physical Properties										
Turbidity	NTU	7.8	0.10	A663309	7.8	0.10	A663309	8.1	0.10	A663309

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

Bureau Veritas Job #: C254948
Report Date: 2022/08/08

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AYG559			AYG560	AYG561		AYG562		
Sampling Date		2022/07/26 08:25			2022/07/26 08:35	2022/07/26 08:40		2022/07/26 08:45		
COC Number		669922-01-01			669922-01-01	669922-01-01		669922-01-01		
	UNITS	CL-5 Lab-Dup	RDL	QC Batch	CL-4	CL-8	RDL	CL-3	RDL	QC Batch
Calculated Parameters										
Hardness (CaCO3)	mg/L				47	43	0.50	44	0.50	A662051
Total Hardness (CaCO3)	mg/L				46.3	41.6	0.50	43.2	0.50	A661915
Misc. Inorganics										
pH	pH				6.41	6.46	N/A	6.44	N/A	A663363
Total Suspended Solids	mg/L	2.0	0.99	A665116	2.3	<0.99	0.99	<1.0	1.0	A665116
Anions										
Alkalinity (PP as CaCO3)	mg/L				<1.0	<1.0	1.0	<1.0	1.0	A663358
Alkalinity (Total as CaCO3)	mg/L				22	21	1.0	18	1.0	A663358
Bicarbonate (HCO3)	mg/L				27	26	1.0	22	1.0	A663358
Carbonate (CO3)	mg/L				<1.0	<1.0	1.0	<1.0	1.0	A663358
Hydroxide (OH)	mg/L				<1.0	<1.0	1.0	<1.0	1.0	A663358
Physical Properties										
Turbidity	NTU				18	1.7	0.10	1.9	0.10	A663309

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

Bureau Veritas Job #: C254948
Report Date: 2022/08/08

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AYG563		AYG564	AYG565		AYG566		
Sampling Date		2022/07/26 08:50		2022/07/26 09:00	2022/07/26 09:20		2022/07/26 09:25		
COC Number		669922-01-01		669922-01-01	669922-01-01		669922-01-01		
	UNITS	CL-7	RDL	CL-2	SB-2	QC Batch	SB-1	RDL	QC Batch
Calculated Parameters									
Hardness (CaCO3)	mg/L	42	0.50	48	110	A662051	110	0.50	A662051
Total Hardness (CaCO3)	mg/L	41.5	0.50	49.0	110	A661915	108	0.50	A661915
Misc. Inorganics									
pH	pH	6.46	N/A	6.41	6.09	A663356	6.01	N/A	A663363
Total Suspended Solids	mg/L	1.5	0.99	1.7	1.9	A665116	2.0	1.0	A665116
Anions									
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	<1.0	<1.0	A663353	<1.0	1.0	A663358
Alkalinity (Total as CaCO3)	mg/L	22	1.0	21	8.7	A663353	10	1.0	A663358
Bicarbonate (HCO3)	mg/L	26	1.0	26	11	A663353	12	1.0	A663358
Carbonate (CO3)	mg/L	<1.0	1.0	<1.0	<1.0	A663353	<1.0	1.0	A663358
Hydroxide (OH)	mg/L	<1.0	1.0	<1.0	<1.0	A663353	<1.0	1.0	A663358
Physical Properties									
Turbidity	NTU	1.7	0.10	7.8	6.2	A663309	6.2	0.10	A663309

RDL = Reportable Detection Limit
N/A = Not Applicable

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

Bureau Veritas Job #: C254948
Report Date: 2022/08/08

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AYG566			AYG567			AYG592		AYG593		
Sampling Date		2022/07/26 09:25			2022/07/26 09:35			2022/07/26 09:40		2022/07/26 09:45		
COC Number		669922-01-01			669922-01-01			669922-02-01		669922-02-01		
	UNITS	SB-1 Lab-Dup	RDL	QC Batch	CB-1	RDL	QC Batch	CB-2	RDL	EB-1	RDL	QC Batch
Calculated Parameters												
Hardness (CaCO3)	mg/L				120	0.50	A662051	110	0.50	120	0.50	A662051
Total Hardness (CaCO3)	mg/L				107	0.50	A661915	111	0.50	121	0.50	A661915
Misc. Inorganics												
pH	pH	6.09	N/A	A663363	6.11	N/A	A663356	6.11	N/A	6.06	N/A	A663363
Total Suspended Solids	mg/L				1.1	0.97	A665116	1.9	0.99	<0.97	0.97	A665116
Anions												
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	A663358	<1.0	1.0	A663353	<1.0	1.0	<1.0	1.0	A663358
Alkalinity (Total as CaCO3)	mg/L	9.5	1.0	A663358	9.0	1.0	A663353	8.4	1.0	7.2	1.0	A663358
Bicarbonate (HCO3)	mg/L	12	1.0	A663358	11	1.0	A663353	10	1.0	8.8	1.0	A663358
Carbonate (CO3)	mg/L	<1.0	1.0	A663358	<1.0	1.0	A663353	<1.0	1.0	<1.0	1.0	A663358
Hydroxide (OH)	mg/L	<1.0	1.0	A663358	<1.0	1.0	A663353	<1.0	1.0	<1.0	1.0	A663358
Physical Properties												
Turbidity	NTU				6.0	0.10	A663309	5.9	0.10	5.9	0.10	A663309

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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Bureau Veritas Job #: C254948
Report Date: 2022/08/08

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AYG594		AYG595		AYG596			AYG597		
Sampling Date		2022/07/26 09:50		2022/07/26 10:00		2022/07/26 10:05			2022/07/26 10:10		
COC Number		669922-02-01		669922-02-01		669922-02-01			669922-02-01		
	UNITS	EB-2	RDL	NB-2	RDL	NB-1	RDL	QC Batch	CAMP LAKE DISCHARGE	RDL	QC Batch
Calculated Parameters											
Hardness (CaCO3)	mg/L	130	0.50	120	0.50	120	0.50	A662051	120	0.50	A662051
Total Hardness (CaCO3)	mg/L	123	0.50	119	0.50	116	0.50	A661915	119	0.50	A661915
Misc. Inorganics											
pH	pH	6.03	N/A	6.08	N/A	6.08	N/A	A663363	6.09	N/A	A663356
Total Suspended Solids	mg/L	2.6	1.0	0.99	0.99	1.5	0.96	A665116	7.8	0.99	A665116
Anions											
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	<1.0	1.0	<1.0	1.0	A663358	<1.0	1.0	A663353
Alkalinity (Total as CaCO3)	mg/L	6.6	1.0	8.3	1.0	8.0	1.0	A663358	8.7	1.0	A663353
Bicarbonate (HCO3)	mg/L	8.1	1.0	10	1.0	9.8	1.0	A663358	11	1.0	A663353
Carbonate (CO3)	mg/L	<1.0	1.0	<1.0	1.0	<1.0	1.0	A663358	<1.0	1.0	A663353
Hydroxide (OH)	mg/L	<1.0	1.0	<1.0	1.0	<1.0	1.0	A663358	<1.0	1.0	A663353
Physical Properties											
Turbidity	NTU	6.5	0.10	5.4	0.10	5.6	0.10	A663309	7.0	0.10	A663309

RDL = Reportable Detection Limit
N/A = Not Applicable

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Bureau Veritas Job #: C254948
Report Date: 2022/08/08

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AYG598		AYG599			AYG600			AYG601		
Sampling Date		2022/07/26 10:30		2022/07/26 16:00			2022/07/26 17:00			2022/07/26		
COC Number		669922-02-01		669922-02-01			669922-02-01			669922-02-01		
	UNITS	**SC-1**	**RDL**	**SW-116**	**RDL**	**QC Batch**	**SW-103**	**RDL**	**QC Batch**	**TRIP BLANK**	**RDL**	**QC Batch**
Calculated Parameters												
Hardness (CaCO3)	mg/L	28	0.50	44	0.50	A662051	110	0.50	A662051	<0.50	0.50	A662051
Total Hardness (CaCO3)	mg/L	27.7	0.50	42.5	0.50	A661915	110	0.50	A661915	<0.50	0.50	A661915
Misc. Inorganics												
pH	pH	6.47	N/A	6.45	N/A	A663356	6.10	N/A	A663363	4.74	N/A	A663356
Total Suspended Solids	mg/L	1.9	1.0	<0.98	0.98	A665116	<1.0	1.0	A665116	<0.99	0.99	A665116
Anions												
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	<1.0	1.0	A663353	<1.0	1.0	A663358	<1.0	1.0	A663353
Alkalinity (Total as CaCO3)	mg/L	23	1.0	22	1.0	A663353	8.7	1.0	A663358	<1.0	1.0	A663353
Bicarbonate (HCO3)	mg/L	28	1.0	26	1.0	A663353	11	1.0	A663358	<1.0	1.0	A663353
Carbonate (CO3)	mg/L	<1.0	1.0	<1.0	1.0	A663353	<1.0	1.0	A663358	<1.0	1.0	A663353
Hydroxide (OH)	mg/L	<1.0	1.0	<1.0	1.0	A663353	<1.0	1.0	A663358	<1.0	1.0	A663353
Physical Properties												
Turbidity	NTU	1.8	0.10	1.9	0.10	A663309	6.1	0.10	A663309	0.14	0.10	A663309

RDL = Reportable Detection Limit
N/A = Not Applicable

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	7.2°C
Package 2	9.5°C

Sample AYG592, Elements by ICPMS-Dissolved-Lab Filtered: Test repeated.
Sample AYG600, Elements by ICPMS-Dissolved-Lab Filtered: Test repeated.
Sample AYG601, Elements by ICPMS - Total: Test repeated.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A663309	Turbidity	2022/07/29			102	80 - 120	<0.10	NTU	0.64	20
A663353	Alkalinity (PP as CaCO3)	2022/07/30					<1.0	mg/L	NC	20
A663353	Alkalinity (Total as CaCO3)	2022/07/30			91	80 - 120	<1.0	mg/L	0.84	20
A663353	Bicarbonate (HCO3)	2022/07/30					<1.0	mg/L	0.84	20
A663353	Carbonate (CO3)	2022/07/30					<1.0	mg/L	NC	20
A663353	Hydroxide (OH)	2022/07/30					<1.0	mg/L	NC	20
A663356	pH	2022/07/30			100	97 - 103			1.1	N/A
A663358	Alkalinity (PP as CaCO3)	2022/08/02					<1.0	mg/L	NC	20
A663358	Alkalinity (Total as CaCO3)	2022/08/02			94	80 - 120	<1.0	mg/L	6.1	20
A663358	Bicarbonate (HCO3)	2022/08/02					<1.0	mg/L	6.1	20
A663358	Carbonate (CO3)	2022/08/02					<1.0	mg/L	NC	20
A663358	Hydroxide (OH)	2022/08/02					<1.0	mg/L	NC	20
A663363	pH	2022/07/30			100	97 - 103			1.2	N/A
A663500	Dissolved Aluminum (Al)	2022/08/01	98	80 - 120	85	80 - 120	<0.0030	mg/L	12	20
A663500	Dissolved Antimony (Sb)	2022/08/01	110	80 - 120	108	80 - 120	<0.00060	mg/L	NC	20
A663500	Dissolved Arsenic (As)	2022/08/01	92	80 - 120	93	80 - 120	<0.00020	mg/L	16	20
A663500	Dissolved Beryllium (Be)	2022/08/01	97	80 - 120	95	80 - 120	<0.0010	mg/L	NC	20
A663500	Dissolved Chromium (Cr)	2022/08/01	92	80 - 120	91	80 - 120	<0.0010	mg/L	NC	20
A663500	Dissolved Cobalt (Co)	2022/08/01	94	80 - 120	94	80 - 120	<0.00030	mg/L	NC	20
A663500	Dissolved Copper (Cu)	2022/08/01	91	80 - 120	90	80 - 120	<0.0010	mg/L	0.77	20
A663500	Dissolved Lead (Pb)	2022/08/01	96	80 - 120	95	80 - 120	<0.00020	mg/L	NC	20
A663500	Dissolved Molybdenum (Mo)	2022/08/01	103	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
A663500	Dissolved Nickel (Ni)	2022/08/01	91	80 - 120	91	80 - 120	<0.00050	mg/L	NC	20
A663500	Dissolved Selenium (Se)	2022/08/01	103	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
A663500	Dissolved Silver (Ag)	2022/08/01	100	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
A663500	Dissolved Thallium (Tl)	2022/08/01	100	80 - 120	94	80 - 120	<0.00020	mg/L	NC	20
A663500	Dissolved Tin (Sn)	2022/08/01	100	80 - 120	98	80 - 120	<0.0010	mg/L	NC	20
A663500	Dissolved Titanium (Ti)	2022/08/01	97	80 - 120	91	80 - 120	<0.0010	mg/L	NC	20
A663500	Dissolved Uranium (U)	2022/08/01	89	80 - 120	87	80 - 120	<0.00010	mg/L	NC	20
A663500	Dissolved Vanadium (V)	2022/08/01	97	80 - 120	95	80 - 120	<0.0010	mg/L	NC	20
A663500	Dissolved Zinc (Zn)	2022/08/01	94	80 - 120	92	80 - 120	<0.0030	mg/L	3.8	20
A663824	Dissolved Barium (Ba)	2022/07/30	100	80 - 120	101	80 - 120	<0.010	mg/L		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A663824	Dissolved Boron (B)	2022/07/30	101	80 - 120	100	80 - 120	<0.020	mg/L		
A663824	Dissolved Calcium (Ca)	2022/07/30	101	80 - 120	101	80 - 120	<0.30	mg/L		
A663824	Dissolved Iron (Fe)	2022/07/30	99	80 - 120	101	80 - 120	<0.060	mg/L	NC	20
A663824	Dissolved Lithium (Li)	2022/07/30	96	80 - 120	99	80 - 120	<0.020	mg/L		
A663824	Dissolved Magnesium (Mg)	2022/07/30	100	80 - 120	102	80 - 120	<0.20	mg/L		
A663824	Dissolved Manganese (Mn)	2022/07/30	101	80 - 120	103	80 - 120	<0.0040	mg/L		
A663824	Dissolved Phosphorus (P)	2022/07/30	100	80 - 120	100	80 - 120	<0.10	mg/L		
A663824	Dissolved Potassium (K)	2022/07/30	98	80 - 120	99	80 - 120	<0.30	mg/L		
A663824	Dissolved Silicon (Si)	2022/07/30	94	80 - 120	98	80 - 120	<0.10	mg/L		
A663824	Dissolved Sodium (Na)	2022/07/30	97	80 - 120	97	80 - 120	<0.50	mg/L		
A663824	Dissolved Strontium (Sr)	2022/07/30	98	80 - 120	98	80 - 120	<0.020	mg/L		
A663824	Dissolved Sulphur (S)	2022/07/30	100	80 - 120	97	80 - 120	<0.20	mg/L		
A663826	Dissolved Barium (Ba)	2022/07/30	97	80 - 120	99	80 - 120	<0.010	mg/L	6.8	20
A663826	Dissolved Boron (B)	2022/07/30	99	80 - 120	98	80 - 120	<0.020	mg/L	NC	20
A663826	Dissolved Calcium (Ca)	2022/07/30	98	80 - 120	99	80 - 120	<0.30	mg/L	5.7	20
A663826	Dissolved Iron (Fe)	2022/07/30	97	80 - 120	101	80 - 120	<0.060	mg/L	15	20
A663826	Dissolved Lithium (Li)	2022/07/30	97	80 - 120	99	80 - 120	<0.020	mg/L	NC	20
A663826	Dissolved Magnesium (Mg)	2022/07/30	97	80 - 120	98	80 - 120	<0.20	mg/L	6.2	20
A663826	Dissolved Manganese (Mn)	2022/07/30	100	80 - 120	101	80 - 120	<0.0040	mg/L	6.5	20
A663826	Dissolved Phosphorus (P)	2022/07/30	98	80 - 120	98	80 - 120	<0.10	mg/L	NC	20
A663826	Dissolved Potassium (K)	2022/07/30	98	80 - 120	99	80 - 120	<0.30	mg/L	6.8	20
A663826	Dissolved Silicon (Si)	2022/07/30	94	80 - 120	97	80 - 120	<0.10	mg/L	2.0	20
A663826	Dissolved Sodium (Na)	2022/07/30	98	80 - 120	101	80 - 120	<0.50	mg/L	3.7	20
A663826	Dissolved Strontium (Sr)	2022/07/30	93	80 - 120	98	80 - 120	<0.020	mg/L	4.4	20
A663826	Dissolved Sulphur (S)	2022/07/30	101	80 - 120	97	80 - 120	<0.20	mg/L	5.5	20
A665116	Total Suspended Solids	2022/08/02	104	80 - 120	96	80 - 120	<1.0	mg/L	6.3	20
A666558	Total Aluminum (Al)	2022/08/03	109	80 - 120	104	80 - 120	<0.0030	mg/L	4.5	20
A666558	Total Antimony (Sb)	2022/08/03	110	80 - 120	102	80 - 120	<0.00060	mg/L	NC	20
A666558	Total Arsenic (As)	2022/08/03	104	80 - 120	99	80 - 120	<0.00020	mg/L	15	20
A666558	Total Beryllium (Be)	2022/08/03	115	80 - 120	111	80 - 120	<0.0010	mg/L	NC	20
A666558	Total Chromium (Cr)	2022/08/03	107	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
A666558	Total Cobalt (Co)	2022/08/03	107	80 - 120	100	80 - 120	<0.00030	mg/L	5.5	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A666558	Total Copper (Cu)	2022/08/03	106	80 - 120	99	80 - 120	<0.0010	mg/L	0.13	20
A666558	Total Lead (Pb)	2022/08/03	109	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
A666558	Total Molybdenum (Mo)	2022/08/03	104	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20
A666558	Total Nickel (Ni)	2022/08/03	105	80 - 120	100	80 - 120	<0.00050	mg/L	5.5	20
A666558	Total Selenium (Se)	2022/08/03	105	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
A666558	Total Silver (Ag)	2022/08/03	103	80 - 120	96	80 - 120	<0.00010	mg/L	NC	20
A666558	Total Thallium (Tl)	2022/08/03	108	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
A666558	Total Tin (Sn)	2022/08/03	106	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
A666558	Total Titanium (Ti)	2022/08/03	110	80 - 120	102	80 - 120	<0.0010	mg/L	19	20
A666558	Total Uranium (U)	2022/08/03	108	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20
A666558	Total Vanadium (V)	2022/08/03	109	80 - 120	102	80 - 120	<0.0010	mg/L	NC	20
A666558	Total Zinc (Zn)	2022/08/03	109	80 - 120	102	80 - 120	<0.0030	mg/L	2.5	20
A666561	Total Barium (Ba)	2022/08/04	99	80 - 120	99	80 - 120	<0.010	mg/L	17	20
A666561	Total Boron (B)	2022/08/04	105	80 - 120	103	80 - 120	<0.020	mg/L	NC	20
A666561	Total Calcium (Ca)	2022/08/04	97	80 - 120	97	80 - 120	<0.30	mg/L	6.1	20
A666561	Total Iron (Fe)	2022/08/04	NC	80 - 120	100	80 - 120	<0.060	mg/L	6.2	20
A666561	Total Lithium (Li)	2022/08/04	99	80 - 120	98	80 - 120	<0.020	mg/L	NC	20
A666561	Total Magnesium (Mg)	2022/08/04	97	80 - 120	97	80 - 120	<0.20	mg/L	6.6	20
A666561	Total Manganese (Mn)	2022/08/04	98	80 - 120	96	80 - 120	<0.0040	mg/L	6.5	20
A666561	Total Phosphorus (P)	2022/08/04	98	80 - 120	97	80 - 120	<0.10	mg/L	NC	20
A666561	Total Potassium (K)	2022/08/04	99	80 - 120	98	80 - 120	<0.30	mg/L	3.6	20
A666561	Total Silicon (Si)	2022/08/04	100	80 - 120	100	80 - 120	<0.16	mg/L	6.7	20
A666561	Total Sodium (Na)	2022/08/04	96	80 - 120	95	80 - 120	<0.50	mg/L	6.2	20
A666561	Total Strontium (Sr)	2022/08/04	97	80 - 120	97	80 - 120	<0.020	mg/L	6.4	20
A666561	Total Sulphur (S)	2022/08/04	102	80 - 120	103	80 - 120	<0.20	mg/L	5.8	20
A666563	Total Aluminum (Al)	2022/08/04	102	80 - 120	102	80 - 120	<0.0030	mg/L	12	20
A666563	Total Antimony (Sb)	2022/08/04	108	80 - 120	109	80 - 120	<0.00060	mg/L	NC	20
A666563	Total Arsenic (As)	2022/08/04	94	80 - 120	97	80 - 120	<0.00020	mg/L	15	20
A666563	Total Beryllium (Be)	2022/08/04	85	80 - 120	85	80 - 120	<0.0010	mg/L	NC	20
A666563	Total Chromium (Cr)	2022/08/04	95	80 - 120	96	80 - 120	<0.0010	mg/L	NC	20
A666563	Total Cobalt (Co)	2022/08/04	96	80 - 120	97	80 - 120	<0.00030	mg/L	NC	20
A666563	Total Copper (Cu)	2022/08/04	94	80 - 120	96	80 - 120	<0.0010	mg/L	2.7	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A666563	Total Lead (Pb)	2022/08/04	100	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
A666563	Total Molybdenum (Mo)	2022/08/04	99	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
A666563	Total Nickel (Ni)	2022/08/04	94	80 - 120	95	80 - 120	<0.00050	mg/L	11	20
A666563	Total Selenium (Se)	2022/08/04	102	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
A666563	Total Silver (Ag)	2022/08/04	99	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
A666563	Total Thallium (Tl)	2022/08/04	100	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
A666563	Total Tin (Sn)	2022/08/04	104	80 - 120	102	80 - 120	<0.0010	mg/L	NC	20
A666563	Total Titanium (Ti)	2022/08/04	95	80 - 120	96	80 - 120	<0.0010	mg/L	5.3	20
A666563	Total Uranium (U)	2022/08/04	98	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
A666563	Total Vanadium (V)	2022/08/04	98	80 - 120	99	80 - 120	<0.0010	mg/L	NC	20
A666563	Total Zinc (Zn)	2022/08/04	91	80 - 120	99	80 - 120	<0.0030	mg/L	5.1	20
A666566	Total Barium (Ba)	2022/08/04	98	80 - 120	97	80 - 120	<0.010	mg/L	3.1	20
A666566	Total Boron (B)	2022/08/04	104	80 - 120	103	80 - 120	<0.020	mg/L	NC	20
A666566	Total Calcium (Ca)	2022/08/04	97	80 - 120	98	80 - 120	<0.30	mg/L	0.33	20
A666566	Total Iron (Fe)	2022/08/04	NC	80 - 120	103	80 - 120	<0.060	mg/L	0.19	20
A666566	Total Lithium (Li)	2022/08/04	99	80 - 120	99	80 - 120	<0.020	mg/L	NC	20
A666566	Total Magnesium (Mg)	2022/08/04	98	80 - 120	98	80 - 120	<0.20	mg/L	0.14	20
A666566	Total Manganese (Mn)	2022/08/04	98	80 - 120	96	80 - 120	<0.0040	mg/L	0.086	20
A666566	Total Phosphorus (P)	2022/08/04	98	80 - 120	97	80 - 120	<0.10	mg/L	NC	20
A666566	Total Potassium (K)	2022/08/04	99	80 - 120	99	80 - 120	<0.30	mg/L	0.50	20
A666566	Total Silicon (Si)	2022/08/04	100	80 - 120	100	80 - 120	<0.10	mg/L	0.19	20
A666566	Total Sodium (Na)	2022/08/04	96	80 - 120	96	80 - 120	<0.50	mg/L	0.54	20
A666566	Total Strontium (Sr)	2022/08/04	96	80 - 120	96	80 - 120	<0.020	mg/L	1.2	20
A666566	Total Sulphur (S)	2022/08/04	104	80 - 120	102	80 - 120	<0.20	mg/L	0.61	20
A667290	Dissolved Aluminum (Al)	2022/08/03	136 (1)	80 - 120	99	80 - 120	<0.0030	mg/L	NC	20
A668162	Total Nickel (Ni)	2022/08/07	99	80 - 120	106	80 - 120	<0.00050	mg/L	2.0	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A670693	Dissolved Chromium (Cr)	2022/08/06	100	80 - 120	107	80 - 120	<0.0010	mg/L	NC	20

N/A = Not Applicable

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

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

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

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

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

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

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

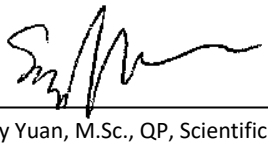
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VALIDATION SIGNATURE PAGE

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



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



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

Bureau Veritas Proprietary Software
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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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Bureau Veritas
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CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#7500 KGS Group	Company Name:	KGS Group	Quotation #:	C20090	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Ganga Atmuri/Ed Collins	P.O. #:		C254948	669922
Address:	3rd Floor 865 Waverly St Winnipeg MB R3T 5T4	Address:	865 Waverley St., 3rd Floor Winnipeg, MB R3T 5P4	Project:	21-1357-005	COC #:	Project Manager:
Tel:	(204) 896-1209 Fax:	Tel:	(204) 896-1209 Fax:	Project Name:		C#669922-01-01	Janelle Kochan
Email:	payables@kgsgroup.com	Email:	gatmuri@kgsgroup.com,ecollins@kgsgroup.com	Site #:	OAM - Sherridon Mine Site		
				Sampled By:	AL/ID		

Regulatory Criteria:
- [ ] ATI
- [ ] CCME
- [x] Other MWQSOG

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10ºC) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: [x]
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission)
Date Required: _____ [ ]
Rush Confirmation Number: _____ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	pH @25°C	Alkalinity @25C (pp, total), CO3,HCO3,OH	Total Suspended Solids (NFR)	Turbidity	Regulated Metals (CCME/AT1) - Total	Reg. Metals (CCME/AT1) – Diss. Lab Filt.	Hardness	Hardness Total (calculated as CaCO3)			# of Bottles	Comments
1		CL-6	22/07/26	8:15	SW	N	x	x	x	x	x	x	x	x			4	
2		CL-5		8:25		N	x	x	x	x	x	x	x	x			4	
3		CL-4		8:35		N	x	x	x	x	x	x	x	x			4	
4		CL-8		8:40		N	x	x	x	x	x	x	x	x			4	
5		CL-3		8:45		N	x	x	x	x	x	x	x	x			4	
6		CL-7		8:50		N	x	x	x	x	x	x	x	x			4	
7		CL-2		9:00		N	x	x	x	x	x	x	x	x			4	
8		SB-2		9:20		N	x	x	x	x	x	x	x	x			4	
9		SB-1		9:25		N	x	x	x	x	x	x	x	x			4	
10		CB-1		~~9:30~~ 9:35		N	x	x	x	x	x	x	x	x			4	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Ainsleigh Lord Ainsleigh Lord	22/07/27	11:20	Ashton Rault AR	2022/07/27	11:25	
			Nabeel Abdul Kasim NK	2022/07/28	08:45	

Laboratory Use Only

Time Sensitive	Temperature (ºC) on Receipt	Custody Seal Intact on Cooler?
[ ]	7.1 / 7.2 / 7.4	[ ] Yes [ ] No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.
** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

White: Bureau Veritas Yellow: Client

See ACTR

ICE-YES

Bureau Veritas Canada (2019) Inc.

Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvna.com

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#7500 KGS Group	Company Name:	KGS Group	Quotation #:	C20090	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Ganga Atmuri/Ed Collins	P.O. #:		C254948	669922
Address:	3rd Floor 865 Waverly St Winnipeg MB R3T 5T4	Address:	865 Waverley St., 3rd Floor Winnipeg, MB R3T 5P4	Project:	21-1357-005	COC #:	Project Manager:
Tel:	(204) 896-1209 Fax:	Tel:	(204) 896-1209 Fax:	Project Name:		C#669922-02-01	Janelle Kochan
Email:	payables@kgsgroup.com	Email:	gatmuri@kgsgroup.com,ecollins@kgsgroup.com	Site #:	OAM - Sherridon Mine Site		
				Sampled By:	AL/ID		

Regulatory Criteria:
- [ ] ATI
- [ ] CCME
- [X] Other MWQSOG

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: [X]
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission)
Date Required:
Rush Confirmation Number: *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	pH @25°C	Alkalinity @25C (pp, total), CO3,HCO3,OH	Total Suspended Solids (NFR)	Turbidity	Regulated Metals (CCME/AT1) - Total	Reg. Metals (CCME/AT1) – Diss. Lab Filt.	Hardness	Hardness Total (calculated as CaCO3)			# of Bottles	Comments
1		CB-2	22/07/26	9:40	SW	N	X	X	X	X	X	X	X	X			4	
2		EB-1		9:45		N	X	X	X	X	X	X	X	X			4	
3		EB-2		9:50		N	X	X	X	X	X	X	X	X			4	
4		NB-2		10:00		N	X	X	X	X	X	X	X	X			4	
5		NB-1		10.05		N	X	X	X	X	X	X	X	X			4	
6		Camp Lake Discharge		10:10		N	X	X	X	X	X	X	X	X			4	
7		SC-1		10:30		N	X	X	X	X	X	X	X	X			4	
8		SW-116		16:00		N	X	X	X	X	X	X	X	X			4	
9		SW-103		17:00		N	X	X	X	X	X	X	X	X			4	
10		Trip Blank		—		N	X	X	X	X	X	X	X	X			4	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Ainsleigh Loria Alkenia	22/07/27	11:20	Apuro, Amanjot Brar	2022/07/27	1125	
			We Holland Acadia Seamin	2022/07/28	02:45	

Laboratory Use Only

Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
[ ]	9.6 / 9.1 / 9.7	[ ] Yes [ ] No

ICE - YES

See ACTR

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.
** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

Your Project #: 21-1357-005
Site#: OAM - Sherridon Mine Site
Your C.O.C. #: 671379-02-01, 671379-01-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/08/17
Report #: R3217226
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C259375
Received: 2022/08/10, 10:47

Sample Matrix: Water
Samples Received: 20

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH	20	N/A	2022/08/15	AB SOP-00005	SM 23 2320 B m
Cadmium - low level CCME - Dissolved	20	N/A	2022/08/16		Auto Calc
Cadmium - low level CCME (Total)	1	N/A	2022/08/16		Auto Calc
Cadmium - low level CCME (Total)	19	N/A	2022/08/17		Auto Calc
Hardness	20	N/A	2022/08/15		Auto Calc
Hardness Total (calculated as CaCO3) (1)	20	N/A	2022/08/16	BBY WI-00033	Auto Calc
Elements by ICP-Dissolved-Lab Filtered (2)	20	N/A	2022/08/15	AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Total	13	2022/08/15	2022/08/16	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Total	7	2022/08/16	2022/08/16	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Elements by ICPMS-Dissolved-Lab Filtered (3)	19	N/A	2022/08/15	AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS-Dissolved-Lab Filtered (3)	1	N/A	2022/08/16	AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total	13	2022/08/15	2022/08/16	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total	7	2022/08/16	2022/08/16	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
pH @25°C (4)	20	N/A	2022/08/15	AB SOP-00005	SM 23 4500-H+B m
Total Suspended Solids (NFR)	14	2022/08/15	2022/08/15	AB SOP-00061	SM 23 2540 D m
Total Suspended Solids (NFR)	6	2022/08/16	2022/08/16	AB SOP-00061	SM 23 2540 D m
Turbidity	20	N/A	2022/08/12	CAL SOP-00081	SM 23 2130 B m

Remarks:

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

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

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or

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Your Project #: 21-1357-005
Site#: OAM - Sherridon Mine Site
Your C.O.C. #: 671379-02-01, 671379-01-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/08/17
Report #: R3217226
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C259375

Received: 2022/08/10, 10:47

implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(2) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(3) Samples were filtered and preserved at the lab. Values may not reflect concentrations at the time of sampling. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(4) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Janelle Kochan, B.Sc., Key Account Specialist
Email: Janelle.KOCHAN@bureauveritas.com
Phone# (204)259-0231
==========
This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AZH842	AZH843	AZH844	AZH845	AZH846		
Sampling Date		2022/08/09 10:35	2022/08/09 09:25	2022/08/09 09:20	2022/08/09 09:30	2022/08/09 09:35		
COC Number		671379-02-01	671379-02-01	671379-02-01	671379-02-01	671379-02-01		
	UNITS	SC-1	SB-1	SB-2	CB-1	CB-2	RDL	QC Batch
Elements								
Dissolved Cadmium (Cd)	ug/L	0.47	0.44	0.41	0.43	0.47	0.020	A677383
Lab Filtered Elements								
Dissolved Aluminum (Al)	mg/L	0.025	0.026	0.026	0.028	0.029	0.0030	A681195
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	0.00060	A681195
Dissolved Arsenic (As)	mg/L	0.00038	0.00025	0.00021	<0.00020	0.00021	0.00020	A681195
Dissolved Barium (Ba)	mg/L	<0.010	0.013	0.012	0.013	0.013	0.010	A680962
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A681195
Dissolved Boron (B)	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	A680962
Dissolved Calcium (Ca)	mg/L	8.5	41	40	41	41	0.30	A680962
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A681195
Dissolved Cobalt (Co)	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	0.00030	A681195
Dissolved Copper (Cu)	mg/L	0.020	0.013	0.014	0.013	0.014	0.0010	A681195
Dissolved Iron (Fe)	mg/L	0.15	2.2	2.5	2.3	2.1	0.060	A680962
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A681195
Dissolved Lithium (Li)	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	A680962
Dissolved Magnesium (Mg)	mg/L	2.7	7.1	7.0	7.1	7.1	0.20	A680962
Dissolved Manganese (Mn)	mg/L	0.010	0.054	0.061	0.056	0.051	0.0040	A680962
Dissolved Molybdenum (Mo)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A681195
Dissolved Nickel (Ni)	mg/L	0.00054	0.0012	0.0012	0.0011	0.0012	0.00050	A681195
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	A680962
Dissolved Potassium (K)	mg/L	1.2	3.6	3.5	3.5	3.5	0.30	A680962
Dissolved Selenium (Se)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A681195
Dissolved Silicon (Si)	mg/L	1.2	1.3	1.4	1.3	1.3	0.10	A680962
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A681195
Dissolved Sodium (Na)	mg/L	1.6	2.7	2.7	2.7	2.7	0.50	A680962
Dissolved Strontium (Sr)	mg/L	0.022	0.049	0.048	0.049	0.049	0.020	A680962
Dissolved Sulphur (S)	mg/L	1.7	37	37	37	38	0.20	A680962
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A681195
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A681195
Dissolved Titanium (Ti)	mg/L	<0.0010	0.0011	<0.0010	<0.0010	<0.0010	0.0010	A681195
Dissolved Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A681195
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A681195

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AZH842	AZH843	AZH844	AZH845	AZH846		
Sampling Date		2022/08/09 10:35	2022/08/09 09:25	2022/08/09 09:20	2022/08/09 09:30	2022/08/09 09:35		
COC Number		671379-02-01	671379-02-01	671379-02-01	671379-02-01	671379-02-01		
	UNITS	**SC-1**	**SB-1**	**SB-2**	**CB-1**	**CB-2**	**RDL**	**QC Batch**
Dissolved Zinc (Zn)	mg/L	0.16	0.13	0.13	0.13	0.13	0.0030	A681195
RDL = Reportable Detection Limit								

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AZH847		AZH848	AZH849	AZH850	AZH851		
Sampling Date		2022/08/09 10:05		2022/08/09 09:57	2022/08/09 09:45	2022/08/09 09:55	2022/08/09 10:10		
COC Number		671379-02-01		671379-02-01	671379-02-01	671379-02-01	671379-02-01		
	UNITS	**NB-1**	**QC Batch**	**NB-2**	**EB-1**	**EB-2**	**C.L.D.**	**RDL**	**QC Batch**
Elements									
Dissolved Cadmium (Cd)	ug/L	0.43	A677383	0.45	0.58	0.55	0.45	0.020	A677383
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	0.027	A681202	0.030	0.036	0.029	0.029	0.0030	A681195
Dissolved Antimony (Sb)	mg/L	<0.00060	A681202	<0.00060	<0.00060	<0.00060	<0.00060	0.00060	A681195
Dissolved Arsenic (As)	mg/L	0.00020	A681202	0.00021	0.00023	0.00023	0.00020	0.00020	A681195
Dissolved Barium (Ba)	mg/L	0.012	A680962	0.012	0.014	0.014	0.013	0.010	A680962
Dissolved Beryllium (Be)	mg/L	<0.0010	A681202	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A681195
Dissolved Boron (B)	mg/L	<0.020	A680962	<0.020	<0.020	<0.020	<0.020	0.020	A680962
Dissolved Calcium (Ca)	mg/L	45	A680962	44	45	46	45	0.30	A680962
Dissolved Chromium (Cr)	mg/L	<0.0010	A681202	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A681195
Dissolved Cobalt (Co)	mg/L	<0.00030	A681202	<0.00030	0.00033	0.00035	<0.00030	0.00030	A681195
Dissolved Copper (Cu)	mg/L	0.014	A681202	0.014	0.015	0.012	0.015	0.0010	A681195
Dissolved Iron (Fe)	mg/L	1.8	A680962	1.8	1.0	1.1	1.6	0.060	A680962
Dissolved Lead (Pb)	mg/L	<0.00020	A681202	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A681195
Dissolved Lithium (Li)	mg/L	<0.020	A680962	<0.020	<0.020	<0.020	<0.020	0.020	A680962
Dissolved Magnesium (Mg)	mg/L	7.4	A680962	7.5	7.6	7.6	7.3	0.20	A680962
Dissolved Manganese (Mn)	mg/L	0.062	A680962	0.058	0.043	0.049	0.042	0.0040	A680962
Dissolved Molybdenum (Mo)	mg/L	<0.00020	A681202	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A681195
Dissolved Nickel (Ni)	mg/L	0.0011	A681202	0.0011	0.0015	0.0014	0.0012	0.00050	A681195
Dissolved Phosphorus (P)	mg/L	<0.10	A680962	<0.10	<0.10	<0.10	<0.10	0.10	A680962
Dissolved Potassium (K)	mg/L	3.5	A680962	3.5	3.7	3.7	3.4	0.30	A680962
Dissolved Selenium (Se)	mg/L	<0.00020	A681202	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A681195
Dissolved Silicon (Si)	mg/L	1.4	A680962	1.4	1.2	1.1	1.4	0.10	A680962
Dissolved Silver (Ag)	mg/L	<0.00010	A681202	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A681195
Dissolved Sodium (Na)	mg/L	2.7	A680962	2.7	2.8	2.8	2.6	0.50	A680962
Dissolved Strontium (Sr)	mg/L	0.050	A680962	0.050	0.053	0.053	0.050	0.020	A680962
Dissolved Sulphur (S)	mg/L	40	A680962	40	41	42	40	0.20	A680962
Dissolved Thallium (Tl)	mg/L	<0.00020	A681202	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A681195
Dissolved Tin (Sn)	mg/L	<0.0010	A681202	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A681195
Dissolved Titanium (Ti)	mg/L	<0.0010	A681202	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A681195
Dissolved Uranium (U)	mg/L	<0.00010	A681202	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A681195
Dissolved Vanadium (V)	mg/L	<0.0010	A681202	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A681195

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AZH847		AZH848	AZH849	AZH850	AZH851		
Sampling Date		2022/08/09 10:05		2022/08/09 09:57	2022/08/09 09:45	2022/08/09 09:55	2022/08/09 10:10		
COC Number		671379-02-01		671379-02-01	671379-02-01	671379-02-01	671379-02-01		
	UNITS	**NB-1**	**QC Batch**	**NB-2**	**EB-1**	**EB-2**	**C.L.D.**	**RDL**	**QC Batch**
Dissolved Zinc (Zn)	mg/L	0.13	A681202	0.13	0.16	0.14	0.14	0.0030	A681195
RDL = Reportable Detection Limit									

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AZH851			AZH866	AZH867	AZH868		
Sampling Date		2022/08/09 10:10			2022/08/09 08:55	2022/08/09 08:40	2022/08/09 08:30		
COC Number		671379-02-01			671379-01-01	671379-01-01	671379-01-01		
	UNITS	C.L.D. Lab-Dup	RDL	QC Batch	CL-2	CL-3	CL-4	RDL	QC Batch
Elements									
Dissolved Cadmium (Cd)	ug/L				0.13	0.060	0.11	0.020	A677383
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L				0.044	0.024	0.036	0.0030	A681195
Dissolved Antimony (Sb)	mg/L				<0.00060	<0.00060	<0.00060	0.00060	A681195
Dissolved Arsenic (As)	mg/L				0.00033	0.00037	0.00034	0.00020	A681195
Dissolved Barium (Ba)	mg/L	0.012	0.010	A680962	0.011	0.010	0.012	0.010	A680962
Dissolved Beryllium (Be)	mg/L				<0.0010	<0.0010	<0.0010	0.0010	A681195
Dissolved Boron (B)	mg/L	<0.020	0.020	A680962	<0.020	<0.020	<0.020	0.020	A680962
Dissolved Calcium (Ca)	mg/L	45	0.30	A680962	15	13	15	0.30	A680962
Dissolved Chromium (Cr)	mg/L				<0.0010	<0.0010	<0.0010	0.0010	A681195
Dissolved Cobalt (Co)	mg/L				<0.00030	<0.00030	<0.00030	0.00030	A681195
Dissolved Copper (Cu)	mg/L				0.0083	0.0057	0.0071	0.0010	A681195
Dissolved Iron (Fe)	mg/L	1.4	0.060	A680962	0.80	0.22	1.1	0.060	A680962
Dissolved Lead (Pb)	mg/L				<0.00020	<0.00020	<0.00020	0.00020	A681195
Dissolved Lithium (Li)	mg/L	<0.020	0.020	A680962	<0.020	<0.020	<0.020	0.020	A680962
Dissolved Magnesium (Mg)	mg/L	7.3	0.20	A680962	3.6	3.3	3.5	0.20	A680962
Dissolved Manganese (Mn)	mg/L	0.043	0.0040	A680962	0.061	<0.0040	0.18	0.0040	A680962
Dissolved Molybdenum (Mo)	mg/L				<0.00020	<0.00020	<0.00020	0.00020	A681195
Dissolved Nickel (Ni)	mg/L				0.00052	<0.00050	0.00054	0.00050	A681195
Dissolved Phosphorus (P)	mg/L	<0.10	0.10	A680962	<0.10	<0.10	<0.10	0.10	A680962
Dissolved Potassium (K)	mg/L	3.4	0.30	A680962	1.8	1.6	1.7	0.30	A680962
Dissolved Selenium (Se)	mg/L				<0.00020	<0.00020	<0.00020	0.00020	A681195
Dissolved Silicon (Si)	mg/L	1.4	0.10	A680962	1.5	0.86	1.7	0.10	A680962
Dissolved Silver (Ag)	mg/L				<0.00010	<0.00010	<0.00010	0.00010	A681195
Dissolved Sodium (Na)	mg/L	2.6	0.50	A680962	2.1	2.0	2.0	0.50	A680962
Dissolved Strontium (Sr)	mg/L	0.050	0.020	A680962	0.030	0.028	0.030	0.020	A680962
Dissolved Sulphur (S)	mg/L	41	0.20	A680962	8.1	5.9	7.2	0.20	A680962
Dissolved Thallium (Tl)	mg/L				<0.00020	<0.00020	<0.00020	0.00020	A681195
Dissolved Tin (Sn)	mg/L				<0.0010	<0.0010	<0.0010	0.0010	A681195
Dissolved Titanium (Ti)	mg/L				<0.0010	<0.0010	<0.0010	0.0010	A681195
Dissolved Uranium (U)	mg/L				<0.00010	<0.00010	<0.00010	0.00010	A681195

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AZH851			AZH866	AZH867	AZH868		
Sampling Date		2022/08/09 10:10			2022/08/09 08:55	2022/08/09 08:40	2022/08/09 08:30		
COC Number		671379-02-01			671379-01-01	671379-01-01	671379-01-01		
	UNITS	**C.L.D. Lab-Dup**	**RDL**	**QC Batch**	**CL-2**	**CL-3**	**CL-4**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L				<0.0010	<0.0010	<0.0010	0.0010	A681195
Dissolved Zinc (Zn)	mg/L				0.045	0.022	0.038	0.0030	A681195

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AZH869	AZH870			AZH870		
Sampling Date		2022/08/09 08:25	2022/08/09 08:15			2022/08/09 08:15		
COC Number		671379-01-01	671379-01-01			671379-01-01		
	UNITS	CL-5	CL-6	RDL	QC Batch	CL-6 Lab-Dup	RDL	QC Batch
Elements								
Dissolved Cadmium (Cd)	ug/L	0.10	0.021	0.020	A677383			
Lab Filtered Elements								
Dissolved Aluminum (Al)	mg/L	0.039	0.019	0.0030	A681195	0.021	0.0030	A681195
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	0.00060	A681195	<0.00060	0.00060	A681195
Dissolved Arsenic (As)	mg/L	0.00028	0.00040	0.00020	A681195	0.00040	0.00020	A681195
Dissolved Barium (Ba)	mg/L	0.011	0.010	0.010	A680962			
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	0.0010	A681195	<0.0010	0.0010	A681195
Dissolved Boron (B)	mg/L	<0.020	<0.020	0.020	A680962			
Dissolved Calcium (Ca)	mg/L	14	12	0.30	A680962			
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010	0.0010	A681195	<0.0010	0.0010	A681195
Dissolved Cobalt (Co)	mg/L	<0.00030	<0.00030	0.00030	A681195	<0.00030	0.00030	A681195
Dissolved Copper (Cu)	mg/L	0.0075	0.0042	0.0010	A681195	0.0041	0.0010	A681195
Dissolved Iron (Fe)	mg/L	0.63	0.11	0.060	A680962			
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	0.00020	A681195	<0.00020	0.00020	A681195
Dissolved Lithium (Li)	mg/L	<0.020	<0.020	0.020	A680962			
Dissolved Magnesium (Mg)	mg/L	3.4	3.2	0.20	A680962			
Dissolved Manganese (Mn)	mg/L	0.049	<0.0040	0.0040	A680962			
Dissolved Molybdenum (Mo)	mg/L	<0.00020	<0.00020	0.00020	A681195	<0.00020	0.00020	A681195
Dissolved Nickel (Ni)	mg/L	0.00055	<0.00050	0.00050	A681195	0.00050	0.00050	A681195
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	0.10	A680962			
Dissolved Potassium (K)	mg/L	1.7	1.5	0.30	A680962			
Dissolved Selenium (Se)	mg/L	<0.00020	<0.00020	0.00020	A681195	<0.00020	0.00020	A681195
Dissolved Silicon (Si)	mg/L	1.3	0.67	0.10	A680962			
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	0.00010	A681195	<0.00010	0.00010	A681195
Dissolved Sodium (Na)	mg/L	2.0	2.0	0.50	A680962			
Dissolved Strontium (Sr)	mg/L	0.029	0.028	0.020	A680962			
Dissolved Sulphur (S)	mg/L	7.0	4.7	0.20	A680962			
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	0.00020	A681195	<0.00020	0.00020	A681195
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	0.0010	A681195	<0.0010	0.0010	A681195
Dissolved Titanium (Ti)	mg/L	<0.0010	<0.0010	0.0010	A681195	<0.0010	0.0010	A681195
Dissolved Uranium (U)	mg/L	<0.00010	<0.00010	0.00010	A681195	<0.00010	0.00010	A681195

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AZH869	AZH870			AZH870		
Sampling Date		2022/08/09 08:25	2022/08/09 08:15			2022/08/09 08:15		
COC Number		671379-01-01	671379-01-01			671379-01-01		
	UNITS	**CL-5**	**CL-6**	**RDL**	**QC Batch**	**CL-6 Lab-Dup**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	0.0010	A681195	<0.0010	0.0010	A681195
Dissolved Zinc (Zn)	mg/L	0.038	0.015	0.0030	A681195	0.014	0.0030	A681195

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AZH871	AZH872		AZH873		AZH874		
Sampling Date		2022/08/09 08:45	2022/08/09 08:35		2022/08/09 12:00		2022/08/09 12:05		
COC Number		671379-01-01	671379-01-01		671379-01-01		671379-01-01		
	UNITS	CL-7	CL-8	QC Batch	SW-102	QC Batch	SW-115	RDL	QC Batch
Elements									
Dissolved Cadmium (Cd)	ug/L	0.044	0.058	A677383	0.46	A677839	0.028	0.020	A677841
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	0.023	0.022	A681195	0.029	A681195	0.018	0.0030	A681195
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	A681195	<0.00060	A681195	<0.00060	0.00060	A681195
Dissolved Arsenic (As)	mg/L	0.00031	0.00036	A681195	0.00041	A681195	0.00043	0.00020	A681195
Dissolved Barium (Ba)	mg/L	0.010	0.010	A680962	<0.010	A680962	<0.010	0.010	A680962
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	A681195	<0.0010	A681195	<0.0010	0.0010	A681195
Dissolved Boron (B)	mg/L	<0.020	<0.020	A680962	<0.020	A680962	<0.020	0.020	A680962
Dissolved Calcium (Ca)	mg/L	13	12	A680962	8.5	A680962	11	0.30	A680962
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010	A681195	<0.0010	A681195	<0.0010	0.0010	A681195
Dissolved Cobalt (Co)	mg/L	<0.00030	<0.00030	A681195	<0.00030	A681195	<0.00030	0.00030	A681195
Dissolved Copper (Cu)	mg/L	0.0059	0.0061	A681195	0.020	A681195	0.0043	0.0010	A681195
Dissolved Iron (Fe)	mg/L	0.21	0.21	A680962	0.14	A680962	0.12	0.060	A680962
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	A681195	<0.00020	A681195	<0.00020	0.00020	A681195
Dissolved Lithium (Li)	mg/L	<0.020	<0.020	A680962	<0.020	A680962	<0.020	0.020	A680962
Dissolved Magnesium (Mg)	mg/L	3.3	3.3	A680962	2.6	A680962	3.2	0.20	A680962
Dissolved Manganese (Mn)	mg/L	<0.0040	<0.0040	A680962	0.0096	A680962	<0.0040	0.0040	A680962
Dissolved Molybdenum (Mo)	mg/L	<0.00020	<0.00020	A681195	<0.00020	A681195	<0.00020	0.00020	A681195
Dissolved Nickel (Ni)	mg/L	0.00050	0.00056	A681195	0.00054	A681195	<0.00050	0.00050	A681195
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	A680962	<0.10	A680962	<0.10	0.10	A680962
Dissolved Potassium (K)	mg/L	1.6	1.6	A680962	1.2	A680962	1.5	0.30	A680962
Dissolved Selenium (Se)	mg/L	<0.00020	<0.00020	A681195	<0.00020	A681195	<0.00020	0.00020	A681195
Dissolved Silicon (Si)	mg/L	0.87	0.86	A680962	1.2	A680962	0.68	0.10	A680962
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	A681195	<0.00010	A681195	<0.00010	0.00010	A681195
Dissolved Sodium (Na)	mg/L	2.0	2.0	A680962	1.6	A680962	2.0	0.50	A680962
Dissolved Strontium (Sr)	mg/L	0.028	0.028	A680962	0.022	A680962	0.028	0.020	A680962
Dissolved Sulphur (S)	mg/L	5.8	6.0	A680962	1.8	A680962	4.9	0.20	A680962
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	A681195	<0.00020	A681195	<0.00020	0.00020	A681195
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	A681195	<0.0010	A681195	<0.0010	0.0010	A681195
Dissolved Titanium (Ti)	mg/L	<0.0010	<0.0010	A681195	<0.0010	A681195	<0.0010	0.0010	A681195
Dissolved Uranium (U)	mg/L	<0.00010	<0.00010	A681195	<0.00010	A681195	<0.00010	0.00010	A681195
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	A681195	<0.0010	A681195	<0.0010	0.0010	A681195

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AZH871	AZH872		AZH873		AZH874		
Sampling Date		2022/08/09 08:45	2022/08/09 08:35		2022/08/09 12:00		2022/08/09 12:05		
COC Number		671379-01-01	671379-01-01		671379-01-01		671379-01-01		
	UNITS	**CL-7**	**CL-8**	**QC Batch**	**SW-102**	**QC Batch**	**SW-115**	**RDL**	**QC Batch**
Dissolved Zinc (Zn)	mg/L	0.022	0.023	A681195	0.17	A681195	0.015	0.0030	A681195
RDL = Reportable Detection Limit									

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AZH875		
Sampling Date		2022/08/09		
COC Number		671379-01-01		
	UNITS	TRIP BLANK	RDL	QC Batch
Elements				
Dissolved Cadmium (Cd)	ug/L	<0.020	0.020	A677841
Lab Filtered Elements				
Dissolved Aluminum (Al)	mg/L	<0.0030	0.0030	A681195
Dissolved Antimony (Sb)	mg/L	<0.00060	0.00060	A681195
Dissolved Arsenic (As)	mg/L	<0.00020	0.00020	A681195
Dissolved Barium (Ba)	mg/L	<0.010	0.010	A680962
Dissolved Beryllium (Be)	mg/L	<0.0010	0.0010	A681195
Dissolved Boron (B)	mg/L	<0.020	0.020	A680962
Dissolved Calcium (Ca)	mg/L	<0.30	0.30	A680962
Dissolved Chromium (Cr)	mg/L	<0.0010	0.0010	A681195
Dissolved Cobalt (Co)	mg/L	<0.00030	0.00030	A681195
Dissolved Copper (Cu)	mg/L	<0.0010	0.0010	A681195
Dissolved Iron (Fe)	mg/L	<0.060	0.060	A680962
Dissolved Lead (Pb)	mg/L	<0.00020	0.00020	A681195
Dissolved Lithium (Li)	mg/L	<0.020	0.020	A680962
Dissolved Magnesium (Mg)	mg/L	<0.20	0.20	A680962
Dissolved Manganese (Mn)	mg/L	<0.0040	0.0040	A680962
Dissolved Molybdenum (Mo)	mg/L	<0.00020	0.00020	A681195
Dissolved Nickel (Ni)	mg/L	<0.00050	0.00050	A681195
Dissolved Phosphorus (P)	mg/L	<0.10	0.10	A680962
Dissolved Potassium (K)	mg/L	<0.30	0.30	A680962
Dissolved Selenium (Se)	mg/L	<0.00020	0.00020	A681195
Dissolved Silicon (Si)	mg/L	<0.10	0.10	A680962
Dissolved Silver (Ag)	mg/L	<0.00010	0.00010	A681195
Dissolved Sodium (Na)	mg/L	<0.50	0.50	A680962
Dissolved Strontium (Sr)	mg/L	<0.020	0.020	A680962
Dissolved Sulphur (S)	mg/L	<0.20	0.20	A680962
Dissolved Thallium (Tl)	mg/L	<0.00020	0.00020	A681195
Dissolved Tin (Sn)	mg/L	<0.0010	0.0010	A681195
Dissolved Titanium (Ti)	mg/L	<0.0010	0.0010	A681195
Dissolved Uranium (U)	mg/L	<0.00010	0.00010	A681195
Dissolved Vanadium (V)	mg/L	<0.0010	0.0010	A681195
RDL = Reportable Detection Limit				

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		AZH875		
Sampling Date		2022/08/09		
COC Number		671379-01-01		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
Dissolved Zinc (Zn)	mg/L	<0.0030	0.0030	A681195
RDL = Reportable Detection Limit				

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AZH842	AZH843	AZH844	AZH845		
Sampling Date		2022/08/09 10:35	2022/08/09 09:25	2022/08/09 09:20	2022/08/09 09:30		
COC Number		671379-02-01	671379-02-01	671379-02-01	671379-02-01		
	UNITS	SC-1	SB-1	SB-2	CB-1	RDL	QC Batch
Elements							
Total Cadmium (Cd)	ug/L	0.52	0.51	0.47	0.48	0.020	A677191
Total Aluminum (Al)	mg/L	0.075	0.095	0.094	0.086	0.0030	A680429
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	<0.00060	0.00060	A680429
Total Arsenic (As)	mg/L	0.00042	0.00026	0.00025	0.00026	0.00020	A680429
Total Barium (Ba)	mg/L	<0.010	0.013	0.012	0.012	0.010	A680432
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A680429
Total Boron (B)	mg/L	<0.020	<0.020	<0.020	<0.020	0.020	A680432
Total Calcium (Ca)	mg/L	8.1	39	38	38	0.30	A680432
Total Chromium (Cr)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A680429
Total Cobalt (Co)	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	0.00030	A680429
Total Copper (Cu)	mg/L	0.023	0.020	0.020	0.020	0.0010	A680429
Total Iron (Fe)	mg/L	0.28	3.5	4.2	3.5	0.060	A680432
Total Lead (Pb)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A680429
Total Lithium (Li)	mg/L	<0.020	<0.020	<0.020	<0.020	0.020	A680432
Total Magnesium (Mg)	mg/L	2.6	6.9	6.8	6.7	0.20	A680432
Total Manganese (Mn)	mg/L	0.037	0.057	0.061	0.055	0.0040	A680432
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A680429
Total Nickel (Ni)	mg/L	0.00074	0.0015	0.0013	0.0014	0.00050	A680429
Total Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	<0.10	0.10	A680432
Total Potassium (K)	mg/L	1.1	3.3	3.2	3.2	0.30	A680432
Total Selenium (Se)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A680429
Total Silicon (Si)	mg/L	1.5	1.6	1.6	1.6	0.12	A680432
Total Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A680429
Total Sodium (Na)	mg/L	1.5	2.5	2.5	2.5	0.50	A680432
Total Strontium (Sr)	mg/L	0.022	0.047	0.047	0.046	0.020	A680432
Total Sulphur (S)	mg/L	2.0	39	39	38	0.20	A680432
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A680429
Total Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A680429
Total Titanium (Ti)	mg/L	0.0027	0.0032	0.0034	0.0029	0.0010	A680429
Total Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A680429
Total Vanadium (V)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A680429
Total Zinc (Zn)	mg/L	0.17	0.15	0.15	0.15	0.0030	A680429
RDL = Reportable Detection Limit							

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AZH846			AZH847	AZH848		
Sampling Date		2022/08/09 09:35			2022/08/09 10:05	2022/08/09 09:57		
COC Number		671379-02-01			671379-02-01	671379-02-01		
	UNITS	CB-2	RDL	QC Batch	NB-1	NB-2	RDL	QC Batch
Elements								
Total Cadmium (Cd)	ug/L	0.50	0.020	A677191	0.50	0.52	0.020	A677191
Total Aluminum (Al)	mg/L	0.097	0.0030	A681856	0.088	0.091	0.0030	A680429
Total Antimony (Sb)	mg/L	<0.00060	0.00060	A681856	<0.00060	<0.00060	0.00060	A680429
Total Arsenic (As)	mg/L	0.00031	0.00020	A681856	0.00027	0.00026	0.00020	A680429
Total Barium (Ba)	mg/L	0.012	0.010	A681857	0.012	0.012	0.010	A680432
Total Beryllium (Be)	mg/L	<0.0010	0.0010	A681856	<0.0010	<0.0010	0.0010	A680429
Total Boron (B)	mg/L	<0.020	0.020	A681857	<0.020	<0.020	0.020	A680432
Total Calcium (Ca)	mg/L	38	0.30	A681857	42	41	0.30	A680432
Total Chromium (Cr)	mg/L	<0.0010	0.0010	A681856	<0.0010	<0.0010	0.0010	A680429
Total Cobalt (Co)	mg/L	<0.00030	0.00030	A681856	0.00034	0.00032	0.00030	A680429
Total Copper (Cu)	mg/L	0.020	0.0010	A681856	0.021	0.022	0.0010	A680429
Total Iron (Fe)	mg/L	3.2	0.060	A681857	3.0	3.0	0.060	A680432
Total Lead (Pb)	mg/L	<0.00020	0.00020	A681856	<0.00020	<0.00020	0.00020	A680429
Total Lithium (Li)	mg/L	<0.020	0.020	A681857	<0.020	<0.020	0.020	A680432
Total Magnesium (Mg)	mg/L	6.8	0.20	A681857	7.1	7.1	0.20	A680432
Total Manganese (Mn)	mg/L	0.053	0.0040	A681857	0.063	0.062	0.0040	A680432
Total Molybdenum (Mo)	mg/L	<0.00020	0.00020	A681856	<0.00020	<0.00020	0.00020	A680429
Total Nickel (Ni)	mg/L	0.0014	0.00050	A681856	0.0013	0.0014	0.00050	A680429
Total Phosphorus (P)	mg/L	<0.10	0.10	A681857	<0.10	<0.10	0.10	A680432
Total Potassium (K)	mg/L	3.2	0.30	A681857	3.2	3.1	0.30	A680432
Total Selenium (Se)	mg/L	<0.00020	0.00020	A681856	<0.00020	<0.00020	0.00020	A680429
Total Silicon (Si)	mg/L	1.6	0.11	A681857	1.6	1.6	0.12	A680432
Total Silver (Ag)	mg/L	<0.00010	0.00010	A681856	<0.00010	<0.00010	0.00010	A680429
Total Sodium (Na)	mg/L	2.5	0.50	A681857	2.4	2.4	0.50	A680432
Total Strontium (Sr)	mg/L	0.047	0.020	A681857	0.048	0.047	0.020	A680432
Total Sulphur (S)	mg/L	38	0.20	A681857	41	41	0.20	A680432
Total Thallium (Tl)	mg/L	<0.00020	0.00020	A681856	<0.00020	<0.00020	0.00020	A680429
Total Tin (Sn)	mg/L	<0.0010	0.0010	A681856	<0.0010	<0.0010	0.0010	A680429
Total Titanium (Ti)	mg/L	0.0035	0.0010	A681856	0.0030	0.0018	0.0010	A680429
Total Uranium (U)	mg/L	<0.00010	0.00010	A681856	<0.00010	<0.00010	0.00010	A680429
Total Vanadium (V)	mg/L	<0.0010	0.0010	A681856	<0.0010	<0.0010	0.0010	A680429
Total Zinc (Zn)	mg/L	0.15	0.0030	A681856	0.16	0.16	0.0030	A680429

RDL = Reportable Detection Limit

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AZH849			AZH850			AZH851		
Sampling Date		2022/08/09 09:45			2022/08/09 09:55			2022/08/09 10:10		
COC Number		671379-02-01			671379-02-01			671379-02-01		
	UNITS	EB-1	RDL	QC Batch	EB-2	RDL	QC Batch	C.L.D.	RDL	QC Batch
Elements										
Total Cadmium (Cd)	ug/L	0.68	0.020	A677191	0.66	0.020	A677191	0.62	0.020	A677191
Total Aluminum (Al)	mg/L	0.14	0.0030	A681856	0.28	0.0030	A680429	0.10	0.0030	A681856
Total Antimony (Sb)	mg/L	<0.00060	0.00060	A681856	<0.00060	0.00060	A680429	<0.00060	0.00060	A681856
Total Arsenic (As)	mg/L	0.00026	0.00020	A681856	0.00029	0.00020	A680429	0.00029	0.00020	A681856
Total Barium (Ba)	mg/L	0.013	0.010	A681857	0.015	0.010	A680432	0.013	0.010	A681857
Total Beryllium (Be)	mg/L	<0.0010	0.0010	A681856	<0.0010	0.0010	A680429	<0.0010	0.0010	A681856
Total Boron (B)	mg/L	<0.020	0.020	A681857	<0.020	0.020	A680432	<0.020	0.020	A681857
Total Calcium (Ca)	mg/L	44	0.30	A681857	46	0.30	A680432	45	0.30	A681857
Total Chromium (Cr)	mg/L	<0.0010	0.0010	A681856	<0.0010	0.0010	A680429	<0.0010	0.0010	A681856
Total Cobalt (Co)	mg/L	0.00048	0.00030	A681856	0.00057	0.00030	A680429	0.00040	0.00030	A681856
Total Copper (Cu)	mg/L	0.025	0.0010	A681856	0.021	0.0010	A680429	0.024	0.0010	A681856
Total Iron (Fe)	mg/L	2.3	0.060	A681857	2.5	0.060	A680432	3.2	0.060	A681857
Total Lead (Pb)	mg/L	<0.00020	0.00020	A681856	<0.00020	0.00020	A680429	<0.00020	0.00020	A681856
Total Lithium (Li)	mg/L	<0.020	0.020	A681857	<0.020	0.020	A680432	<0.020	0.020	A681857
Total Magnesium (Mg)	mg/L	7.7	0.20	A681857	7.8	0.20	A680432	7.5	0.20	A681857
Total Manganese (Mn)	mg/L	0.051	0.0040	A681857	0.057	0.0040	A680432	0.063	0.0040	A681857
Total Molybdenum (Mo)	mg/L	<0.00020	0.00020	A681856	<0.00020	0.00020	A680429	0.00034	0.00020	A681856
Total Nickel (Ni)	mg/L	0.0020	0.00050	A681856	0.0021	0.00050	A680429	0.0016	0.00050	A681856
Total Phosphorus (P)	mg/L	<0.10	0.10	A681857	<0.10	0.10	A680432	<0.10	0.10	A681857
Total Potassium (K)	mg/L	3.5	0.30	A681857	3.6	0.30	A680432	3.3	0.30	A681857
Total Selenium (Se)	mg/L	<0.00020	0.00020	A681856	0.00023	0.00020	A680429	<0.00020	0.00020	A681856
Total Silicon (Si)	mg/L	1.5	0.11	A681857	1.7	0.12	A680432	1.7	0.11	A681857
Total Silver (Ag)	mg/L	<0.00010	0.00010	A681856	<0.00010	0.00010	A680429	<0.00010	0.00010	A681856
Total Sodium (Na)	mg/L	2.7	0.50	A681857	2.8	0.50	A680432	2.6	0.50	A681857
Total Strontium (Sr)	mg/L	0.052	0.020	A681857	0.053	0.020	A680432	0.050	0.020	A681857
Total Sulphur (S)	mg/L	44	0.20	A681857	44	0.20	A680432	43	0.20	A681857
Total Thallium (Tl)	mg/L	<0.00020	0.00020	A681856	<0.00020	0.00020	A680429	<0.00020	0.00020	A681856
Total Tin (Sn)	mg/L	<0.0010	0.0010	A681856	<0.0010	0.0010	A680429	<0.0010	0.0010	A681856
Total Titanium (Ti)	mg/L	0.0044	0.0010	A681856	0.013	0.0010	A680429	0.0035	0.0010	A681856
Total Uranium (U)	mg/L	<0.00010	0.00010	A681856	<0.00010	0.00010	A680429	<0.00010	0.00010	A681856
Total Vanadium (V)	mg/L	<0.0010	0.0010	A681856	<0.0010	0.0010	A680429	<0.0010	0.0010	A681856
Total Zinc (Zn)	mg/L	0.20	0.0030	A681856	0.19	0.0030	A680429	0.17	0.0030	A681856

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AZH866	AZH867	AZH868			AZH869		
Sampling Date		2022/08/09 08:55	2022/08/09 08:40	2022/08/09 08:30			2022/08/09 08:25		
COC Number		671379-01-01	671379-01-01	671379-01-01			671379-01-01		
	UNITS	CL-2	CL-3	CL-4	RDL	QC Batch	CL-5	RDL	QC Batch
Elements									
Total Cadmium (Cd)	ug/L	0.14	0.085	0.13	0.020	A677191	0.13	0.020	A677191
Total Aluminum (Al)	mg/L	0.088	0.085	0.10	0.0030	A680429	0.099	0.0030	A681856
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	0.00060	A680429	<0.00060	0.00060	A681856
Total Arsenic (As)	mg/L	0.00044	0.00047	0.00052	0.00020	A680429	0.00046	0.00020	A681856
Total Barium (Ba)	mg/L	0.011	0.010	0.013	0.010	A680432	0.011	0.010	A681857
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	A680429	<0.0010	0.0010	A681856
Total Boron (B)	mg/L	<0.020	<0.020	<0.020	0.020	A680432	<0.020	0.020	A681857
Total Calcium (Ca)	mg/L	14	12	13	0.30	A680432	13	0.30	A681857
Total Chromium (Cr)	mg/L	<0.0010	0.0014	<0.0010	0.0010	A680429	<0.0010	0.0010	A681856
Total Cobalt (Co)	mg/L	<0.00030	<0.00030	0.00051	0.00030	A680429	<0.00030	0.00030	A681856
Total Copper (Cu)	mg/L	0.011	0.0075	0.0094	0.0010	A680429	0.011	0.0010	A681856
Total Iron (Fe)	mg/L	1.3	0.42	2.9	0.060	A680432	1.2	0.060	A681857
Total Lead (Pb)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	A680429	<0.00020	0.00020	A681856
Total Lithium (Li)	mg/L	<0.020	<0.020	<0.020	0.020	A680432	<0.020	0.020	A681857
Total Magnesium (Mg)	mg/L	3.5	3.2	3.3	0.20	A680432	3.4	0.20	A681857
Total Manganese (Mn)	mg/L	0.081	0.012	0.24	0.0040	A680432	0.076	0.0040	A681857
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	A680429	<0.00020	0.00020	A681856
Total Nickel (Ni)	mg/L	0.00067	0.0010	0.00077	0.00050	A680429	0.0010	0.00050	A681856
Total Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	0.10	A680432	<0.10	0.10	A681857
Total Potassium (K)	mg/L	1.6	1.5	1.5	0.30	A680432	1.6	0.30	A681857
Total Selenium (Se)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	A680429	<0.00020	0.00020	A681856
Total Silicon (Si)	mg/L	1.7	1.1	2.0	0.12	A680432	1.6	0.11	A681857
Total Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	A680429	<0.00010	0.00010	A681856
Total Sodium (Na)	mg/L	1.9	1.8	1.8	0.50	A680432	1.9	0.50	A681857
Total Strontium (Sr)	mg/L	0.029	0.027	0.028	0.020	A680432	0.028	0.020	A681857
Total Sulphur (S)	mg/L	8.8	6.3	7.4	0.20	A680432	7.6	0.20	A681857
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	A680429	<0.00020	0.00020	A681856
Total Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	A680429	<0.0010	0.0010	A681856
Total Titanium (Ti)	mg/L	0.0028	0.0036	0.0024	0.0010	A680429	0.0027	0.0010	A681856
Total Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	A680429	<0.00010	0.00010	A681856
Total Vanadium (V)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	A680429	<0.0010	0.0010	A681856
Total Zinc (Zn)	mg/L	0.054	0.028	0.048	0.0030	A680429	0.045	0.0030	A681856

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AZH870	AZH871			AZH872		
Sampling Date		2022/08/09 08:15	2022/08/09 08:45			2022/08/09 08:35		
COC Number		671379-01-01	671379-01-01			671379-01-01		
	UNITS	CL-6	CL-7	RDL	QC Batch	CL-8	RDL	QC Batch
Elements								
Total Cadmium (Cd)	ug/L	0.082	0.075	0.020	A677191	0.071	0.020	A677842
Total Aluminum (Al)	mg/L	0.11	0.094	0.0030	A680429	0.082	0.0030	A681856
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	0.00060	A680429	<0.00060	0.00060	A681856
Total Arsenic (As)	mg/L	0.00055	0.00043	0.00020	A680429	0.00042	0.00020	A681856
Total Barium (Ba)	mg/L	0.012	0.010	0.010	A680432	0.010	0.010	A681857
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	0.0010	A680429	<0.0010	0.0010	A681856
Total Boron (B)	mg/L	<0.020	<0.020	0.020	A680432	<0.020	0.020	A681857
Total Calcium (Ca)	mg/L	13	12	0.30	A680432	12	0.30	A681857
Total Chromium (Cr)	mg/L	<0.0010	<0.0010	0.0010	A680429	<0.0010	0.0010	A681856
Total Cobalt (Co)	mg/L	0.00034	<0.00030	0.00030	A680429	<0.00030	0.00030	A681856
Total Copper (Cu)	mg/L	0.0070	0.0072	0.0010	A680429	0.0076	0.0010	A681856
Total Iron (Fe)	mg/L	1.4	0.38	0.060	A680432	0.43	0.060	A681857
Total Lead (Pb)	mg/L	<0.00020	<0.00020	0.00020	A680429	<0.00020	0.00020	A681856
Total Lithium (Li)	mg/L	<0.020	<0.020	0.020	A680432	<0.020	0.020	A681857
Total Magnesium (Mg)	mg/L	3.4	3.1	0.20	A680432	3.2	0.20	A681857
Total Manganese (Mn)	mg/L	0.19	0.011	0.0040	A680432	0.012	0.0040	A681857
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	0.00020	A680429	<0.00020	0.00020	A681856
Total Nickel (Ni)	mg/L	0.00078	0.00067	0.00050	A680429	0.00066	0.00050	A681856
Total Phosphorus (P)	mg/L	<0.10	<0.10	0.10	A680432	<0.10	0.10	A681857
Total Potassium (K)	mg/L	1.5	1.4	0.30	A680432	1.5	0.30	A681857
Total Selenium (Se)	mg/L	<0.00020	<0.00020	0.00020	A680429	<0.00020	0.00020	A681856
Total Silicon (Si)	mg/L	1.6	1.1	0.12	A680432	1.1	0.11	A681857
Total Silver (Ag)	mg/L	<0.00010	<0.00010	0.00010	A680429	<0.00010	0.00010	A681856
Total Sodium (Na)	mg/L	1.9	1.8	0.50	A680432	1.8	0.50	A681857
Total Strontium (Sr)	mg/L	0.030	0.027	0.020	A680432	0.027	0.020	A681857
Total Sulphur (S)	mg/L	6.2	6.0	0.20	A680432	6.4	0.20	A681857
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	0.00020	A680429	<0.00020	0.00020	A681856
Total Tin (Sn)	mg/L	<0.0010	<0.0010	0.0010	A680429	<0.0010	0.0010	A681856
Total Titanium (Ti)	mg/L	0.0044	0.0035	0.0010	A680429	0.0025	0.0010	A681856
Total Uranium (U)	mg/L	<0.00010	<0.00010	0.00010	A680429	<0.00010	0.00010	A681856
Total Vanadium (V)	mg/L	<0.0010	<0.0010	0.0010	A680429	<0.0010	0.0010	A681856
Total Zinc (Zn)	mg/L	0.032	0.027	0.0030	A680429	0.029	0.0030	A681856
RDL = Reportable Detection Limit								

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		AZH873			AZH874	AZH875		
Sampling Date		2022/08/09 12:00			2022/08/09 12:05	2022/08/09		
COC Number		671379-01-01			671379-01-01	671379-01-01		
	UNITS	SW-102	RDL	QC Batch	SW-115	TRIP BLANK	RDL	QC Batch
Elements								
Total Cadmium (Cd)	ug/L	0.57	0.020	A677842	0.075	<0.020	0.020	A677842
Total Aluminum (Al)	mg/L	0.084	0.0030	A680429	0.097	0.0048	0.0030	A681856
Total Antimony (Sb)	mg/L	<0.00060	0.00060	A680429	<0.00060	<0.00060	0.00060	A681856
Total Arsenic (As)	mg/L	0.00049	0.00020	A680429	0.00058	<0.00020	0.00020	A681856
Total Barium (Ba)	mg/L	<0.010	0.010	A680432	0.011	<0.010	0.010	A681857
Total Beryllium (Be)	mg/L	<0.0010	0.0010	A680429	<0.0010	<0.0010	0.0010	A681856
Total Boron (B)	mg/L	<0.020	0.020	A680432	<0.020	<0.020	0.020	A681857
Total Calcium (Ca)	mg/L	8.3	0.30	A680432	12	<0.30	0.30	A681857
Total Chromium (Cr)	mg/L	<0.0010	0.0010	A680429	<0.0010	0.0012	0.0010	A681856
Total Cobalt (Co)	mg/L	<0.00030	0.00030	A680429	0.00032	<0.00030	0.00030	A681856
Total Copper (Cu)	mg/L	0.024	0.0010	A680429	0.0067	<0.0010	0.0010	A681856
Total Iron (Fe)	mg/L	0.31	0.060	A680432	1.4	<0.060	0.060	A681857
Total Lead (Pb)	mg/L	<0.00020	0.00020	A680429	<0.00020	<0.00020	0.00020	A681856
Total Lithium (Li)	mg/L	<0.020	0.020	A680432	<0.020	<0.020	0.020	A681857
Total Magnesium (Mg)	mg/L	2.6	0.20	A680432	3.2	<0.20	0.20	A681857
Total Manganese (Mn)	mg/L	0.038	0.0040	A680432	0.19	<0.0040	0.0040	A681857
Total Molybdenum (Mo)	mg/L	<0.00020	0.00020	A680429	<0.00020	<0.00020	0.00020	A681856
Total Nickel (Ni)	mg/L	0.00073	0.00050	A680429	0.00070	0.00059	0.00050	A681856
Total Phosphorus (P)	mg/L	<0.10	0.10	A680432	<0.10	<0.10	0.10	A681857
Total Potassium (K)	mg/L	1.2	0.30	A680432	1.4	<0.30	0.30	A681857
Total Selenium (Se)	mg/L	<0.00020	0.00020	A680429	<0.00020	<0.00020	0.00020	A681856
Total Silicon (Si)	mg/L	1.5	0.12	A680432	1.5	0.14	0.11	A681857
Total Silver (Ag)	mg/L	<0.00010	0.00010	A680429	<0.00010	<0.00010	0.00010	A681856
Total Sodium (Na)	mg/L	1.5	0.50	A680432	1.8	<0.50	0.50	A681857
Total Strontium (Sr)	mg/L	0.022	0.020	A680432	0.027	<0.020	0.020	A681857
Total Sulphur (S)	mg/L	2.0	0.20	A680432	5.9	<0.20	0.20	A681857
Total Thallium (Tl)	mg/L	<0.00020	0.00020	A680429	<0.00020	<0.00020	0.00020	A681856
Total Tin (Sn)	mg/L	<0.0010	0.0010	A680429	<0.0010	<0.0010	0.0010	A681856
Total Titanium (Ti)	mg/L	0.0041	0.0010	A680429	0.0037	<0.0010	0.0010	A681856
Total Uranium (U)	mg/L	<0.00010	0.00010	A680429	<0.00010	<0.00010	0.00010	A681856
Total Vanadium (V)	mg/L	<0.0010	0.0010	A680429	<0.0010	<0.0010	0.0010	A681856
Total Zinc (Zn)	mg/L	0.18	0.0030	A680429	0.033	<0.0030	0.0030	A681856

RDL = Reportable Detection Limit

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C259375
Report Date: 2022/08/17

KGS Group
Client Project #: 21-1357-005
Sampler Initials: ID

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AZH842			AZH842			AZH843		AZH844		
Sampling Date		2022/08/09 10:35			2022/08/09 10:35			2022/08/09 09:25		2022/08/09 09:20		
COC Number		671379-02-01			671379-02-01			671379-02-01		671379-02-01		
	UNITS	**SC-1**	**RDL**	**QC Batch**	**SC-1 Lab-Dup**	**RDL**	**QC Batch**	**SB-1**	**RDL**	**SB-2**	**RDL**	**QC Batch**
Calculated Parameters												
Hardness (CaCO3)	mg/L	32	0.50	A677737				130	0.50	130	0.50	A677737
Total Hardness (CaCO3)	mg/L	31.1	0.50	A677479				125	0.50	123	0.50	A677479
Misc. Inorganics												
pH	pH	6.61	N/A	A680873	6.67	N/A	A680873	6.38	N/A	6.25	N/A	A680873
Total Suspended Solids	mg/L	<1.0	1.0	A681296				1.6	0.99	3.2	1.0	A681296
Anions												
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	A680869	<1.0	1.0	A680869	<1.0	1.0	<1.0	1.0	A680869
Alkalinity (Total as CaCO3)	mg/L	25	1.0	A680869	25	1.0	A680869	8.2	1.0	7.0	1.0	A680869
Bicarbonate (HCO3)	mg/L	31	1.0	A680869	30	1.0	A680869	10	1.0	8.6	1.0	A680869
Carbonate (CO3)	mg/L	<1.0	1.0	A680869	<1.0	1.0	A680869	<1.0	1.0	<1.0	1.0	A680869
Hydroxide (OH)	mg/L	<1.0	1.0	A680869	<1.0	1.0	A680869	<1.0	1.0	<1.0	1.0	A680869
Physical Properties												
Turbidity	NTU	2.2	0.10	A678080	2.3	0.10	A678080	8.9	0.10	12	0.10	A678080

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C259375
Report Date: 2022/08/17

KGS Group
Client Project #: 21-1357-005
Sampler Initials: ID

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AZH845	AZH846	AZH847	AZH848	AZH849	AZH850		
Sampling Date		2022/08/09 09:30	2022/08/09 09:35	2022/08/09 10:05	2022/08/09 09:57	2022/08/09 09:45	2022/08/09 09:55		
COC Number		671379-02-01	671379-02-01	671379-02-01	671379-02-01	671379-02-01	671379-02-01		
	UNITS	CB-1	CB-2	NB-1	NB-2	EB-1	EB-2	RDL	QC Batch
Calculated Parameters									
Hardness (CaCO3)	mg/L	130	130	140	140	140	150	0.50	A677737
Total Hardness (CaCO3)	mg/L	122	124	134	132	141	147	0.50	A677479
Misc. Inorganics									
pH	pH	6.23	6.37	6.36	6.35	6.33	6.37	N/A	A680873
Total Suspended Solids	mg/L	2.7	2.8	1.9	3.1	2.0	4.7	1.0	A681296
Anions									
Alkalinity (PP as CaCO3)	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	A680869
Alkalinity (Total as CaCO3)	mg/L	6.6	7.9	7.1	9.0	8.3	7.1	1.0	A680869
Bicarbonate (HCO3)	mg/L	8.0	9.7	8.7	11	10	8.7	1.0	A680869
Carbonate (CO3)	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	A680869
Hydroxide (OH)	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	A680869
Physical Properties									
Turbidity	NTU	9.7	8.7	8.0	7.6	6.0	9.6	0.10	A678080

RDL = Reportable Detection Limit
N/A = Not Applicable

Bureau Veritas ID		AZH851	AZH866	AZH867		AZH868		AZH869		
Sampling Date		2022/08/09 10:10	2022/08/09 08:55	2022/08/09 08:40		2022/08/09 08:30		2022/08/09 08:25		
COC Number		671379-02-01	671379-01-01	671379-01-01		671379-01-01		671379-01-01		
	UNITS	C.L.D.	CL-2	CL-3	RDL	CL-4	RDL	CL-5	RDL	QC Batch
Calculated Parameters										
Hardness (CaCO3)	mg/L	140	53	45	0.50	51	0.50	49	0.50	A677737
Total Hardness (CaCO3)	mg/L	144	50.7	43.0	0.50	47.3	0.50	47.2	0.50	A677479
Misc. Inorganics										
pH	pH	6.39	6.60	6.76	N/A	6.62	N/A	6.61	N/A	A680873
Total Suspended Solids	mg/L	1.9	<1.0	<1.0	1.0	4.6	0.99	1.7	1.0	A681296
Anions										
Alkalinity (PP as CaCO3)	mg/L	<1.0	<1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	A680869
Alkalinity (Total as CaCO3)	mg/L	8.7	23	25	1.0	26	1.0	23	1.0	A680869
Bicarbonate (HCO3)	mg/L	11	28	31	1.0	31	1.0	28	1.0	A680869
Carbonate (CO3)	mg/L	<1.0	<1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	A680869
Hydroxide (OH)	mg/L	<1.0	<1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	A680869
Physical Properties										
Turbidity	NTU	5.7	6.3	2.2	0.10	26	0.10	6.6	0.10	A678080

RDL = Reportable Detection Limit
N/A = Not Applicable

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		AZH870		AZH871		AZH872	AZH873		
Sampling Date		2022/08/09 08:15		2022/08/09 08:45		2022/08/09 08:35	2022/08/09 12:00		
COC Number		671379-01-01		671379-01-01		671379-01-01	671379-01-01		
	UNITS	CL-6	QC Batch	CL-7	QC Batch	CL-8	SW-102	RDL	QC Batch
Calculated Parameters									
Hardness (CaCO3)	mg/L	42	A677737	45	A677848	45	32	0.50	A677853
Total Hardness (CaCO3)	mg/L	45.5	A677479	41.9	A677479	43.5	31.5	0.50	A677479
Misc. Inorganics									
pH	pH	6.78	A680873	6.76	A680873	6.76	6.72	N/A	A680873
Total Suspended Solids	mg/L	2.5	A681820	<0.96	A681820	2.2	1.7	0.96	A681820
Anions									
Alkalinity (PP as CaCO3)	mg/L	<1.0	A680869	<1.0	A680869	<1.0	<1.0	1.0	A680869
Alkalinity (Total as CaCO3)	mg/L	26	A680869	24	A680869	24	25	1.0	A680869
Bicarbonate (HCO3)	mg/L	32	A680869	30	A680869	29	31	1.0	A680869
Carbonate (CO3)	mg/L	<1.0	A680869	<1.0	A680869	<1.0	<1.0	1.0	A680869
Hydroxide (OH)	mg/L	<1.0	A680869	<1.0	A680869	<1.0	<1.0	1.0	A680869
Physical Properties									
Turbidity	NTU	6.6	A678080	2.2	A678080	1.8	2.6	0.10	A678080

RDL = Reportable Detection Limit
N/A = Not Applicable

Bureau Veritas ID		AZH874	AZH875		
Sampling Date		2022/08/09 12:05	2022/08/09		
COC Number		671379-01-01	671379-01-01		
	UNITS	SW-115	TRIP BLANK	RDL	QC Batch
Calculated Parameters					
Hardness (CaCO3)	mg/L	42	<0.50	0.50	A677853
Total Hardness (CaCO3)	mg/L	43.4	<0.50	0.50	A677479
Misc. Inorganics					
pH	pH	6.72	4.45	N/A	A680873
Total Suspended Solids	mg/L	1.5	<0.97	0.97	A681820
Anions					
Alkalinity (PP as CaCO3)	mg/L	<1.0	<1.0	1.0	A680869
Alkalinity (Total as CaCO3)	mg/L	26	<1.0	1.0	A680869
Bicarbonate (HCO3)	mg/L	31	<1.0	1.0	A680869
Carbonate (CO3)	mg/L	<1.0	<1.0	1.0	A680869
Hydroxide (OH)	mg/L	<1.0	<1.0	1.0	A680869
Physical Properties					
Turbidity	NTU	5.1	<0.10	0.10	A678080

RDL = Reportable Detection Limit
N/A = Not Applicable

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	0.4°C

Results relate only to the items tested.

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A678080	Turbidity	2022/08/12			103	80 - 120	<0.10	NTU	6.7	20
A680429	Total Aluminum (Al)	2022/08/16	128 (1)	80 - 120	104	80 - 120	<0.0030	mg/L	9.7	20
A680429	Total Antimony (Sb)	2022/08/16	103	80 - 120	103	80 - 120	<0.00060	mg/L	NC	20
A680429	Total Arsenic (As)	2022/08/16	94	80 - 120	95	80 - 120	<0.00020	mg/L	7.6	20
A680429	Total Beryllium (Be)	2022/08/16	116	80 - 120	114	80 - 120	<0.0010	mg/L	NC	20
A680429	Total Chromium (Cr)	2022/08/16	97	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20
A680429	Total Cobalt (Co)	2022/08/16	96	80 - 120	97	80 - 120	<0.00030	mg/L	NC	20
A680429	Total Copper (Cu)	2022/08/16	94	80 - 120	96	80 - 120	<0.0010	mg/L	3.0	20
A680429	Total Lead (Pb)	2022/08/16	102	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
A680429	Total Molybdenum (Mo)	2022/08/16	97	80 - 120	96	80 - 120	<0.00020	mg/L	2.2	20
A680429	Total Nickel (Ni)	2022/08/16	94	80 - 120	96	80 - 120	<0.00050	mg/L	1.1	20
A680429	Total Selenium (Se)	2022/08/16	102	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
A680429	Total Silver (Ag)	2022/08/16	100	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
A680429	Total Thallium (Tl)	2022/08/16	104	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
A680429	Total Tin (Sn)	2022/08/16	97	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20
A680429	Total Titanium (Ti)	2022/08/16	104	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20
A680429	Total Uranium (U)	2022/08/16	108	80 - 120	106	80 - 120	<0.00010	mg/L	2.2	20
A680429	Total Vanadium (V)	2022/08/16	101	80 - 120	99	80 - 120	<0.0010	mg/L	NC	20
A680429	Total Zinc (Zn)	2022/08/16	96	80 - 120	97	80 - 120	<0.0030	mg/L	NC	20
A680432	Total Barium (Ba)	2022/08/16	106	80 - 120	105	80 - 120	<0.010	mg/L	5.8	20
A680432	Total Boron (B)	2022/08/16	102	80 - 120	104	80 - 120	<0.020	mg/L	NC	20
A680432	Total Calcium (Ca)	2022/08/16	104	80 - 120	103	80 - 120	<0.30	mg/L	0.90	20
A680432	Total Iron (Fe)	2022/08/16	104	80 - 120	109	80 - 120	<0.060	mg/L	2.8	20
A680432	Total Lithium (Li)	2022/08/16	105	80 - 120	103	80 - 120	<0.020	mg/L	NC	20
A680432	Total Magnesium (Mg)	2022/08/16	107	80 - 120	106	80 - 120	<0.20	mg/L	1.3	20
A680432	Total Manganese (Mn)	2022/08/16	102	80 - 120	106	80 - 120	<0.0040	mg/L	1.4	20
A680432	Total Phosphorus (P)	2022/08/16	98	80 - 120	102	80 - 120	<0.10	mg/L		
A680432	Total Potassium (K)	2022/08/16	107	80 - 120	105	80 - 120	<0.30	mg/L	0.059	20
A680432	Total Silicon (Si)	2022/08/16	99	80 - 120	103	80 - 120	<0.12	mg/L	10	20
A680432	Total Sodium (Na)	2022/08/16	103	80 - 120	102	80 - 120	<0.50	mg/L	1.2	20
A680432	Total Strontium (Sr)	2022/08/16	102	80 - 120	101	80 - 120	<0.020	mg/L	0.26	20
A680432	Total Sulphur (S)	2022/08/16	95	80 - 120	100	80 - 120	<0.20	mg/L	3.6	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A680869	Alkalinity (PP as CaCO3)	2022/08/15					<1.0	mg/L	NC	20
A680869	Alkalinity (Total as CaCO3)	2022/08/15			102	80 - 120	<1.0	mg/L	1.7	20
A680869	Bicarbonate (HCO3)	2022/08/15					<1.0	mg/L	1.7	20
A680869	Carbonate (CO3)	2022/08/15					<1.0	mg/L	NC	20
A680869	Hydroxide (OH)	2022/08/15					<1.0	mg/L	NC	20
A680873	pH	2022/08/15			100	97 - 103			0.89	N/A
A680962	Dissolved Barium (Ba)	2022/08/15	100	80 - 120	104	80 - 120	<0.010	mg/L	4.8	20
A680962	Dissolved Boron (B)	2022/08/15	99	80 - 120	99	80 - 120	<0.020	mg/L	NC	20
A680962	Dissolved Calcium (Ca)	2022/08/15	95	80 - 120	100	80 - 120	<0.30	mg/L	0.49	20
A680962	Dissolved Iron (Fe)	2022/08/15	94	80 - 120	100	80 - 120	<0.060	mg/L	7.9	20
A680962	Dissolved Lithium (Li)	2022/08/15	96	80 - 120	98	80 - 120	<0.020	mg/L	NC	20
A680962	Dissolved Magnesium (Mg)	2022/08/15	97	80 - 120	99	80 - 120	<0.20	mg/L	0.68	20
A680962	Dissolved Manganese (Mn)	2022/08/15	95	80 - 120	97	80 - 120	<0.0040	mg/L	2.3	20
A680962	Dissolved Phosphorus (P)	2022/08/15	96	80 - 120	95	80 - 120	<0.10	mg/L	NC	20
A680962	Dissolved Potassium (K)	2022/08/15	102	80 - 120	103	80 - 120	<0.30	mg/L	0.57	20
A680962	Dissolved Silicon (Si)	2022/08/15	90	80 - 120	94	80 - 120	<0.10	mg/L	0.40	20
A680962	Dissolved Sodium (Na)	2022/08/15	97	80 - 120	100	80 - 120	<0.50	mg/L	0.015	20
A680962	Dissolved Strontium (Sr)	2022/08/15	95	80 - 120	99	80 - 120	<0.020	mg/L	0.60	20
A680962	Dissolved Sulphur (S)	2022/08/15	95	80 - 120	94	80 - 120	<0.20	mg/L	1.8	20
A681195	Dissolved Aluminum (Al)	2022/08/15	89	80 - 120	102	80 - 120	<0.0030	mg/L	12	20
A681195	Dissolved Antimony (Sb)	2022/08/15	104	80 - 120	103	80 - 120	<0.00060	mg/L	NC	20
A681195	Dissolved Arsenic (As)	2022/08/15	93	80 - 120	93	80 - 120	<0.00020	mg/L	0.55	20
A681195	Dissolved Beryllium (Be)	2022/08/15	105	80 - 120	103	80 - 120	<0.0010	mg/L	NC	20
A681195	Dissolved Chromium (Cr)	2022/08/15	91	80 - 120	92	80 - 120	<0.0010	mg/L	NC	20
A681195	Dissolved Cobalt (Co)	2022/08/15	93	80 - 120	94	80 - 120	<0.00030	mg/L	NC	20
A681195	Dissolved Copper (Cu)	2022/08/15	90	80 - 120	91	80 - 120	<0.0010	mg/L	2.4	20
A681195	Dissolved Lead (Pb)	2022/08/15	99	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
A681195	Dissolved Molybdenum (Mo)	2022/08/15	96	80 - 120	95	80 - 120	<0.00020	mg/L	NC	20
A681195	Dissolved Nickel (Ni)	2022/08/15	92	80 - 120	92	80 - 120	<0.00050	mg/L	0.66	20
A681195	Dissolved Selenium (Se)	2022/08/15	98	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
A681195	Dissolved Silver (Ag)	2022/08/15	95	80 - 120	94	80 - 120	<0.00010	mg/L	NC	20
A681195	Dissolved Thallium (Tl)	2022/08/15	100	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A681195	Dissolved Tin (Sn)	2022/08/15	100	80 - 120	101	80 - 120	<0.0010	mg/L	NC	20
A681195	Dissolved Titanium (Ti)	2022/08/15	94	80 - 120	91	80 - 120	<0.0010	mg/L	NC	20
A681195	Dissolved Uranium (U)	2022/08/15	96	80 - 120	94	80 - 120	<0.00010	mg/L	NC	20
A681195	Dissolved Vanadium (V)	2022/08/15	96	80 - 120	94	80 - 120	<0.0010	mg/L	NC	20
A681195	Dissolved Zinc (Zn)	2022/08/15	96	80 - 120	97	80 - 120	<0.0030	mg/L	6.2	20
A681202	Dissolved Aluminum (Al)	2022/08/16	103	80 - 120	107	80 - 120	<0.0030	mg/L	NC	20
A681202	Dissolved Antimony (Sb)	2022/08/16	102	80 - 120	102	80 - 120	<0.00060	mg/L	NC	20
A681202	Dissolved Arsenic (As)	2022/08/16	93	80 - 120	94	80 - 120	<0.00020	mg/L	NC	20
A681202	Dissolved Beryllium (Be)	2022/08/16	101	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
A681202	Dissolved Chromium (Cr)	2022/08/16	92	80 - 120	93	80 - 120	<0.0010	mg/L	NC	20
A681202	Dissolved Cobalt (Co)	2022/08/16	93	80 - 120	94	80 - 120	<0.00030	mg/L	NC	20
A681202	Dissolved Copper (Cu)	2022/08/16	90	80 - 120	92	80 - 120	<0.0010	mg/L	NC	20
A681202	Dissolved Lead (Pb)	2022/08/16	100	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
A681202	Dissolved Molybdenum (Mo)	2022/08/16	97	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20
A681202	Dissolved Nickel (Ni)	2022/08/16	91	80 - 120	92	80 - 120	<0.00050	mg/L	NC	20
A681202	Dissolved Selenium (Se)	2022/08/16	98	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20
A681202	Dissolved Silver (Ag)	2022/08/16	94	80 - 120	95	80 - 120	<0.00010	mg/L	NC	20
A681202	Dissolved Thallium (Tl)	2022/08/16	98	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
A681202	Dissolved Tin (Sn)	2022/08/16	102	80 - 120	102	80 - 120	<0.0010	mg/L	NC	20
A681202	Dissolved Titanium (Ti)	2022/08/16	90	80 - 120	93	80 - 120	<0.0010	mg/L	NC	20
A681202	Dissolved Uranium (U)	2022/08/16	94	80 - 120	95	80 - 120	<0.00010	mg/L	NC	20
A681202	Dissolved Vanadium (V)	2022/08/16	95	80 - 120	95	80 - 120	<0.0010	mg/L	NC	20
A681202	Dissolved Zinc (Zn)	2022/08/16	97	80 - 120	97	80 - 120	<0.0030	mg/L	NC	20
A681296	Total Suspended Solids	2022/08/15	100	80 - 120	93	80 - 120	<1.0	mg/L	NC	20
A681820	Total Suspended Solids	2022/08/16	NC	80 - 120	96	80 - 120	<0.96	mg/L	4.7	20
A681856	Total Aluminum (Al)	2022/08/16	111	80 - 120	103	80 - 120	<0.0030	mg/L	NC	20
A681856	Total Antimony (Sb)	2022/08/16	104	80 - 120	103	80 - 120	<0.00060	mg/L		
A681856	Total Arsenic (As)	2022/08/16	98	80 - 120	96	80 - 120	<0.00020	mg/L		
A681856	Total Beryllium (Be)	2022/08/16	110	80 - 120	108	80 - 120	<0.0010	mg/L		
A681856	Total Chromium (Cr)	2022/08/16	101	80 - 120	100	80 - 120	<0.0010	mg/L		
A681856	Total Cobalt (Co)	2022/08/16	100	80 - 120	99	80 - 120	<0.00030	mg/L		
A681856	Total Copper (Cu)	2022/08/16	99	80 - 120	98	80 - 120	<0.0010	mg/L		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A681856	Total Lead (Pb)	2022/08/16	103	80 - 120	100	80 - 120	<0.00020	mg/L	1.7	20
A681856	Total Molybdenum (Mo)	2022/08/16	102	80 - 120	100	80 - 120	<0.00020	mg/L		
A681856	Total Nickel (Ni)	2022/08/16	99	80 - 120	99	80 - 120	<0.00050	mg/L		
A681856	Total Selenium (Se)	2022/08/16	106	80 - 120	104	80 - 120	<0.00020	mg/L		
A681856	Total Silver (Ag)	2022/08/16	103	80 - 120	100	80 - 120	<0.00010	mg/L		
A681856	Total Thallium (Tl)	2022/08/16	103	80 - 120	101	80 - 120	<0.00020	mg/L		
A681856	Total Tin (Sn)	2022/08/16	99	80 - 120	99	80 - 120	<0.0010	mg/L		
A681856	Total Titanium (Ti)	2022/08/16	102	80 - 120	102	80 - 120	<0.0010	mg/L		
A681856	Total Uranium (U)	2022/08/16	110	80 - 120	105	80 - 120	<0.00010	mg/L		
A681856	Total Vanadium (V)	2022/08/16	103	80 - 120	101	80 - 120	<0.0010	mg/L		
A681856	Total Zinc (Zn)	2022/08/16	100	80 - 120	98	80 - 120	<0.0030	mg/L		
A681857	Total Barium (Ba)	2022/08/16	106	80 - 120	103	80 - 120	<0.010	mg/L		
A681857	Total Boron (B)	2022/08/16	105	80 - 120	103	80 - 120	<0.020	mg/L		
A681857	Total Calcium (Ca)	2022/08/16	104	80 - 120	101	80 - 120	<0.30	mg/L		
A681857	Total Iron (Fe)	2022/08/16	110	80 - 120	107	80 - 120	<0.060	mg/L	NC	20
A681857	Total Lithium (Li)	2022/08/16	104	80 - 120	102	80 - 120	<0.020	mg/L		
A681857	Total Magnesium (Mg)	2022/08/16	107	80 - 120	105	80 - 120	<0.20	mg/L		
A681857	Total Manganese (Mn)	2022/08/16	106	80 - 120	104	80 - 120	<0.0040	mg/L		
A681857	Total Phosphorus (P)	2022/08/16	103	80 - 120	101	80 - 120	<0.10	mg/L		
A681857	Total Potassium (K)	2022/08/16	105	80 - 120	104	80 - 120	<0.30	mg/L		
A681857	Total Silicon (Si)	2022/08/16	104	80 - 120	102	80 - 120	<0.11	mg/L		
A681857	Total Sodium (Na)	2022/08/16	103	80 - 120	101	80 - 120	<0.50	mg/L		
A681857	Total Strontium (Sr)	2022/08/16	103	80 - 120	100	80 - 120	<0.020	mg/L		

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			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A681857	Total Sulphur (S)	2022/08/16	101	80 - 120	99	80 - 120	<0.20	mg/L		

N/A = Not Applicable

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

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

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

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

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

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

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

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VALIDATION SIGNATURE PAGE

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

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

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Automated Statchk

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Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvna.com

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#7500 KGS Group	Company Name:	KGS Group	Quotation #:	C20090	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Ganga Atmuri/Ed Collins	P.O. #:		C259375	671379
Address:	3rd Floor 865 Waverly St Winnipeg MB R3T 5T4	Address:	3rd FLOOR - 865 WAVERLEY ST. WPG. MB R3T 5P4	Project:	21-1357-005	COC #:	Project Manager:
Tel:	(204) 896-1209 Fax:	Tel:	(204) 896-1209 Fax:	Project Name:		C#671379-01-01	Janelle Kochan
Email:	payables@kgsgroup.com	Email:	gatmuri@kgsgroup.com,ecollins@kgsgroup.com	Site #:	OAM - Sherridon Mine Site		
				Sampled By:	ID/SD		

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☒ Other MWQSOG.

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: ☒
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission) ☐
Date Required:
Rush Confirmation Number: *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	pH @25°C	Alkalinity @25C (pp, total), CO3,HCO3,OH	Total Suspended Solids (NFR)	Turbidity	Regulated Metals (CCME/AT1) - Total	Reg. Metals (CCME/AT1) – Diss. Lab Filt.	Hardness	Hardness Total (calculated as CaCO3)			# of Bottles	Comments
1		CL-2	09-AUG-2022	08:55	SW	N	X	X	X	X	X	X	X	X			4	
2		CL-3		08:40		N	X	X	X	X	X	X	X	X			4	
3		CL-4		08:30		N	X	X	X	X	X	X	X	X			4	
4		CL-5		08:25		N	X	X	X	X	X	X	X	X			4	
5		CL-6		08:15		N	X	X	X	X	X	X	X	X			4	
6		CL-7		08:45		N	X	X	X	X	X	X	X	X			4	
7		CL-8		08:35		N	X	X	X	X	X	X	X	X			4	
8		SW-102		12:00		N	X	X	X	X	X	X	X	X			4	
9		SW-115		12:05		N	X	X	X	X	X	X	X	X			4	
10		TRIP BLANK.		—		N	X	X	X	X	X	X	X	X			4	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
S SHELLY	22/08/10	10:45	Ashton Roliff AR	2022/08/10	10:47	
			JOBAN RAJU	2022/08/11	08:30	

Laboratory Use Only

Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
☐	2.8/2.5/3.0	☐ Yes ☐ No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.

White: Bureau Veritas Yellow: Client

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

MCAL Temp: see ALTR

ICE-4ES

Bureau Veritas Canada (2019) Inc.

Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvna.com

0478

Page 1 of 2

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#7500 KGS Group	Company Name:	KGS GROUP	Quotation #:	C20090	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Ganga Atmuri/Ed Collins	P.O. #:		C259375	671379
Address:	3rd Floor 865 Waverly St	Address:	3rd FLOOR - 865 WAVERLEY ST.	Project:	21-1357-005	COC #:	Project Manager:
	Winnipeg MB R3T 5T4		WPG. MB R3T 5P4	Project Name:		C#671379-02-01	Janelle Kochan
Tel:	(204) 896-1209 Fax:	Tel:	(204) 896-1209 Fax:	Site #:	OAM - Sherridon Mine Site		
Email:	payables@kgsgroup.com	Email:	gatmuri@kgsgroup.com,ecollins@kgsgroup.com	Sampled By:	ID/SD.		

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☒ Other MWQSOG.

Special Instructions:

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: ☒
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission)
Date Required: _____ ☐
Rush Confirmation Number: _____ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	pH @25°C	Alkalinity @25C (pp, total), CO3,HCO3,OH	Total Suspended Solids (NFR)	Turbidity	Regulated Metals (CCME/AT1) - Total	Reg. Metals (CCME/AT1) – Diss. Lab Filt.	Hardness	Hardness Total (calculated as CaCO3)			# of Bottles	Comments
1		SC-1	09-AUG-22	10:35	SW	N	X	X	X	X	X	X	X	X			4	
2		SB-1		09:25		N	X	X	X	X	X	X	X	X			4	
3		SB-2		09:20		N	X	X	X	X	X	X	X	X			4	
4		CB-1		09:30		N	X	X	X	X	X	X	X	X			4	
5		CB-2		09:35		N	X	X	X	X	X	X	X	X			4	
6		NB-1		10:05		N	X	X	X	X	X	X	X	X			4	
7		NB-2		09:57		N	X	X	X	X	X	X	X	X			4	
8		EB-1		09:45		N	X	X	X	X	X	X	X	X			4	
9		EB-2		09:55		N	X	X	X	X	X	X	X	X			4	
10		C.L.D.		10:10		N	X	X	X	X	X	X	X	X			4	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
S.Shelly, S.SHEILLY	22/08/10	10:45	Ashton Raitt AR	2022/08/10	1014		☐	-0.3/0.3/-0.7	☐ Yes ☐ No
			JOBAN RAJU	2022/08/11	08:30				

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

MCAL Temp: ReACTR

ICE-YES

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

Your Project #: 21-1357-005
Site#: OAM - Sherridon Mine Site
Your C.O.C. #: 672616-01-01, 672616-02-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/09/03
Report #: R3226316
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C263842
Received: 2022/08/24, 11:45

Sample Matrix: Water
Samples Received: 20

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH	20	N/A	2022/08/27	AB SOP-00005	SM 23 2320 B m
Cadmium - low level CCME - Dissolved	20	N/A	2022/08/28		Auto Calc
Cadmium - low level CCME (Total)	12	N/A	2022/08/31		Auto Calc
Cadmium - low level CCME (Total)	8	N/A	2022/09/01		Auto Calc
Hardness	20	N/A	2022/08/27		Auto Calc
Hardness Total (calculated as CaCO3) (1)	1	N/A	2022/08/30	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3) (1)	19	N/A	2022/08/31	BBY WI-00033	Auto Calc
Elements by ICP-Dissolved-Lab Filtered (2)	20	N/A	2022/08/26	AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Total	1	2022/08/30	2022/08/30	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Total	19	2022/08/30	2022/08/31	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Elements by ICPMS-Dissolved-Lab Filtered (3)	20	N/A	2022/08/26	AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total	1	2022/08/30	2022/08/30	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total	19	2022/08/30	2022/08/31	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
pH @25°C (4)	20	N/A	2022/08/27	AB SOP-00005	SM 23 4500-H+B m
Total Suspended Solids (NFR)	12	2022/08/29	2022/08/29	AB SOP-00061	SM 23 2540 D m
Total Suspended Solids (NFR)	8	2022/08/30	2022/08/30	AB SOP-00061	SM 23 2540 D m
Turbidity	20	N/A	2022/08/26	CAL SOP-00081	SM 23 2130 B m

Remarks:

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

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

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or

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Your Project #: 21-1357-005
Site#: OAM - Sherridon Mine Site
Your C.O.C. #: 672616-01-01, 672616-02-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/09/03
Report #: R3226316
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C263842

Received: 2022/08/24, 11:45

implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(2) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(3) Samples were filtered and preserved at the lab. Values may not reflect concentrations at the time of sampling. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(4) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Janelle Kochan, B.Sc., Key Account Specialist
Email: Janelle.KOCHAN@bureauveritas.com
Phone# (204)259-0231
==========
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For Service Group specific validation please refer to the Validation Signature Page.

REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BAJ595		BAJ596		BAJ597	BAJ598		
Sampling Date		2022/08/23 08:05		2022/08/23 08:10		2022/08/23 08:20	2022/08/23 08:25		
COC Number		672616-01-01		672616-01-01		672616-01-01	672616-01-01		
	UNITS	CL-6	QC Batch	CL-5	QC Batch	CL-4	CL-8	RDL	QC Batch
Elements									
Dissolved Cadmium (Cd)	ug/L	0.041	A694148	0.067	A694148	0.082	0.040	0.020	A694148
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	0.018	A695193	0.028	A695193	0.033	0.019	0.0030	A695193
Dissolved Antimony (Sb)	mg/L	<0.00060	A695193	<0.00060	A695193	<0.00060	<0.00060	0.00060	A695193
Dissolved Arsenic (As)	mg/L	0.00040	A695193	0.00042	A695193	0.00041	0.00040	0.00020	A695193
Dissolved Barium (Ba)	mg/L	<0.010	A695111	0.010	A695110	0.012	<0.010	0.010	A695111
Dissolved Beryllium (Be)	mg/L	<0.0010	A695193	<0.0010	A695193	<0.0010	<0.0010	0.0010	A695193
Dissolved Boron (B)	mg/L	<0.020	A695111	<0.020	A695110	<0.020	<0.020	0.020	A695111
Dissolved Calcium (Ca)	mg/L	12	A695111	13	A695110	15	13	0.30	A695111
Dissolved Chromium (Cr)	mg/L	<0.0010	A695193	<0.0010	A695193	<0.0010	<0.0010	0.0010	A695193
Dissolved Cobalt (Co)	mg/L	<0.00030	A695193	<0.00030	A695193	0.00082	<0.00030	0.00030	A695193
Dissolved Copper (Cu)	mg/L	0.0044	A695193	0.0062	A695193	0.0067	0.0059	0.0010	A695193
Dissolved Iron (Fe)	mg/L	0.22	A695111	0.43	A695110	1.7	0.19	0.060	A695111
Dissolved Lead (Pb)	mg/L	<0.00020	A695193	<0.00020	A695193	<0.00020	<0.00020	0.00020	A695193
Dissolved Lithium (Li)	mg/L	<0.020	A695111	<0.020	A695110	<0.020	<0.020	0.020	A695111
Dissolved Magnesium (Mg)	mg/L	3.3	A695111	3.4	A695110	3.6	3.5	0.20	A695111
Dissolved Manganese (Mn)	mg/L	0.062	A695111	0.058	A695110	0.47	<0.0040	0.0040	A695111
Dissolved Molybdenum (Mo)	mg/L	<0.00020	A695193	<0.00020	A695193	<0.00020	<0.00020	0.00020	A695193
Dissolved Nickel (Ni)	mg/L	<0.00050	A695193	<0.00050	A695193	<0.00050	<0.00050	0.00050	A695193
Dissolved Phosphorus (P)	mg/L	<0.10	A695111	<0.10	A695110	<0.10	<0.10	0.10	A695111
Dissolved Potassium (K)	mg/L	1.6	A695111	1.6	A695110	1.7	1.6	0.30	A695111
Dissolved Selenium (Se)	mg/L	<0.00020	A695193	<0.00020	A695193	<0.00020	<0.00020	0.00020	A695193
Dissolved Silicon (Si)	mg/L	0.92	A695111	1.1	A695110	2.1	0.83	0.10	A695111
Dissolved Silver (Ag)	mg/L	<0.00010	A695193	<0.00010	A695193	<0.00010	<0.00010	0.00010	A695193
Dissolved Sodium (Na)	mg/L	2.0	A695111	2.0	A695110	2.0	2.0	0.50	A695111
Dissolved Strontium (Sr)	mg/L	0.027	A695111	0.027	A695110	0.029	0.027	0.020	A695111
Dissolved Sulphur (S)	mg/L	4.7	A695111	6.0	A695110	7.1	6.8	0.20	A695111
Dissolved Thallium (Tl)	mg/L	<0.00020	A695193	<0.00020	A695193	<0.00020	<0.00020	0.00020	A695193
Dissolved Tin (Sn)	mg/L	<0.0010	A695193	<0.0010	A695193	<0.0010	<0.0010	0.0010	A695193
Dissolved Titanium (Ti)	mg/L	<0.0010	A695193	<0.0010	A695193	<0.0010	<0.0010	0.0010	A695193
Dissolved Uranium (U)	mg/L	<0.00010	A695193	<0.00010	A695193	<0.00010	<0.00010	0.00010	A695193
RDL = Reportable Detection Limit									

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BAJ595		BAJ596		BAJ597	BAJ598		
Sampling Date		2022/08/23 08:05		2022/08/23 08:10		2022/08/23 08:20	2022/08/23 08:25		
COC Number		672616-01-01		672616-01-01		672616-01-01	672616-01-01		
	UNITS	**CL-6**	**QC Batch**	**CL-5**	**QC Batch**	**CL-4**	**CL-8**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	A695193	<0.0010	A695193	<0.0010	<0.0010	0.0010	A695193
Dissolved Zinc (Zn)	mg/L	0.017	A695193	0.026	A695193	0.034	0.019	0.0030	A695193
RDL = Reportable Detection Limit									

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BAJ599			BAJ599			BAJ600		
Sampling Date		2022/08/23 08:30			2022/08/23 08:30			2022/08/23 08:45		
COC Number		672616-01-01			672616-01-01			672616-01-01		
	UNITS	CL-3	RDL	QC Batch	CL-3 Lab-Dup	RDL	QC Batch	CL-7	RDL	QC Batch
Elements										
Dissolved Cadmium (Cd)	ug/L	0.040	0.020	A694148				0.036	0.020	A694148
Lab Filtered Elements										
Dissolved Aluminum (Al)	mg/L	0.017	0.0030	A695193	0.017	0.0030	A695193	0.021	0.0030	A695193
Dissolved Antimony (Sb)	mg/L	<0.00060	0.00060	A695193	<0.00060	0.00060	A695193	<0.00060	0.00060	A695193
Dissolved Arsenic (As)	mg/L	0.00037	0.00020	A695193	0.00037	0.00020	A695193	0.00042	0.00020	A695193
Dissolved Barium (Ba)	mg/L	<0.010	0.010	A695110				<0.010	0.010	A695110
Dissolved Beryllium (Be)	mg/L	<0.0010	0.0010	A695193	<0.0010	0.0010	A695193	<0.0010	0.0010	A695193
Dissolved Boron (B)	mg/L	<0.020	0.020	A695110				<0.020	0.020	A695110
Dissolved Calcium (Ca)	mg/L	13	0.30	A695110				13	0.30	A695110
Dissolved Chromium (Cr)	mg/L	<0.0010	0.0010	A695193	<0.0010	0.0010	A695193	<0.0010	0.0010	A695193
Dissolved Cobalt (Co)	mg/L	<0.00030	0.00030	A695193	<0.00030	0.00030	A695193	<0.00030	0.00030	A695193
Dissolved Copper (Cu)	mg/L	0.0055	0.0010	A695193	0.0057	0.0010	A695193	0.0057	0.0010	A695193
Dissolved Iron (Fe)	mg/L	0.18	0.060	A695110				0.18	0.060	A695110
Dissolved Lead (Pb)	mg/L	<0.00020	0.00020	A695193	<0.00020	0.00020	A695193	<0.00020	0.00020	A695193
Dissolved Lithium (Li)	mg/L	<0.020	0.020	A695110				<0.020	0.020	A695110
Dissolved Magnesium (Mg)	mg/L	3.4	0.20	A695110				3.4	0.20	A695110
Dissolved Manganese (Mn)	mg/L	<0.0040	0.0040	A695110				<0.0040	0.0040	A695110
Dissolved Molybdenum (Mo)	mg/L	<0.00020	0.00020	A695193	<0.00020	0.00020	A695193	<0.00020	0.00020	A695193
Dissolved Nickel (Ni)	mg/L	<0.00050	0.00050	A695193	<0.00050	0.00050	A695193	<0.00050	0.00050	A695193
Dissolved Phosphorus (P)	mg/L	<0.10	0.10	A695110				<0.10	0.10	A695110
Dissolved Potassium (K)	mg/L	1.6	0.30	A695110				1.6	0.30	A695110
Dissolved Selenium (Se)	mg/L	<0.00020	0.00020	A695193	<0.00020	0.00020	A695193	<0.00020	0.00020	A695193
Dissolved Silicon (Si)	mg/L	0.82	0.10	A695110				0.81	0.10	A695110
Dissolved Silver (Ag)	mg/L	<0.00010	0.00010	A695193	<0.00010	0.00010	A695193	<0.00010	0.00010	A695193
Dissolved Sodium (Na)	mg/L	2.0	0.50	A695110				2.0	0.50	A695110
Dissolved Strontium (Sr)	mg/L	0.027	0.020	A695110				0.027	0.020	A695110
Dissolved Sulphur (S)	mg/L	6.2	0.20	A695110				6.2	0.20	A695110
Dissolved Thallium (Tl)	mg/L	<0.00020	0.00020	A695193	<0.00020	0.00020	A695193	<0.00020	0.00020	A695193
Dissolved Tin (Sn)	mg/L	<0.0010	0.0010	A695193	<0.0010	0.0010	A695193	<0.0010	0.0010	A695193
Dissolved Titanium (Ti)	mg/L	<0.0010	0.0010	A695193	<0.0010	0.0010	A695193	<0.0010	0.0010	A695193
Dissolved Uranium (U)	mg/L	<0.00010	0.00010	A695193	<0.00010	0.00010	A695193	<0.00010	0.00010	A695193

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BAJ599			BAJ599			BAJ600		
Sampling Date		2022/08/23 08:30			2022/08/23 08:30			2022/08/23 08:45		
COC Number		672616-01-01			672616-01-01			672616-01-01		
	UNITS	**CL-3**	**RDL**	**QC Batch**	**CL-3 Lab-Dup**	**RDL**	**QC Batch**	**CL-7**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	0.0010	A695193	<0.0010	0.0010	A695193	<0.0010	0.0010	A695193
Dissolved Zinc (Zn)	mg/L	0.017	0.0030	A695193	0.018	0.0030	A695193	0.018	0.0030	A695193

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BAJ601		BAJ602		BAJ603	BAJ604		
Sampling Date		2022/08/23 09:55		2022/08/23 09:10		2022/08/23 09:15	2022/08/23 09:20		
COC Number		672616-01-01		672616-01-01		672616-01-01	672616-01-01		
	UNITS	CL-2	QC Batch	SB-2	QC Batch	SB-1	CB-1	RDL	QC Batch
Elements									
Dissolved Cadmium (Cd)	ug/L	0.096	A694148	0.39	A694148	0.35	0.35	0.020	A694148
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	0.041	A695193	0.016	A695193	0.017	0.015	0.0030	A695193
Dissolved Antimony (Sb)	mg/L	<0.00060	A695193	<0.00060	A695193	<0.00060	<0.00060	0.00060	A695193
Dissolved Arsenic (As)	mg/L	0.00034	A695193	0.00021	A695193	0.00023	<0.00020	0.00020	A695193
Dissolved Barium (Ba)	mg/L	0.011	A695110	0.012	A695111	0.012	0.012	0.010	A695110
Dissolved Beryllium (Be)	mg/L	<0.0010	A695193	<0.0010	A695193	<0.0010	<0.0010	0.0010	A695193
Dissolved Boron (B)	mg/L	<0.020	A695110	<0.020	A695111	<0.020	<0.020	0.020	A695110
Dissolved Calcium (Ca)	mg/L	15	A695110	43	A695111	43	44	0.30	A695110
Dissolved Chromium (Cr)	mg/L	<0.0010	A695193	<0.0010	A695193	<0.0010	<0.0010	0.0010	A695193
Dissolved Cobalt (Co)	mg/L	<0.00030	A695193	<0.00030	A695193	<0.00030	<0.00030	0.00030	A695193
Dissolved Copper (Cu)	mg/L	0.0084	A695193	0.011	A695193	0.011	0.010	0.0010	A695193
Dissolved Iron (Fe)	mg/L	0.76	A695110	1.2	A695111	0.98	0.93	0.060	A695110
Dissolved Lead (Pb)	mg/L	<0.00020	A695193	<0.00020	A695193	<0.00020	<0.00020	0.00020	A695193
Dissolved Lithium (Li)	mg/L	<0.020	A695110	<0.020	A695111	<0.020	<0.020	0.020	A695110
Dissolved Magnesium (Mg)	mg/L	3.6	A695110	7.4	A695111	7.5	7.5	0.20	A695110
Dissolved Manganese (Mn)	mg/L	0.10	A695110	0.043	A695111	0.045	0.046	0.0040	A695110
Dissolved Molybdenum (Mo)	mg/L	<0.00020	A695193	<0.00020	A695193	<0.00020	<0.00020	0.00020	A695193
Dissolved Nickel (Ni)	mg/L	<0.00050	A695193	0.0011	A695193	0.0011	0.0011	0.00050	A695193
Dissolved Phosphorus (P)	mg/L	<0.10	A695110	<0.10	A695111	<0.10	<0.10	0.10	A695110
Dissolved Potassium (K)	mg/L	1.7	A695110	3.7	A695111	3.7	3.7	0.30	A695110
Dissolved Selenium (Se)	mg/L	<0.00020	A695193	<0.00020	A695193	<0.00020	<0.00020	0.00020	A695193
Dissolved Silicon (Si)	mg/L	1.5	A695110	1.3	A695111	1.3	1.3	0.10	A695110
Dissolved Silver (Ag)	mg/L	<0.00010	A695193	<0.00010	A695193	<0.00010	<0.00010	0.00010	A695193
Dissolved Sodium (Na)	mg/L	2.0	A695110	2.8	A695111	2.8	2.8	0.50	A695110
Dissolved Strontium (Sr)	mg/L	0.028	A695110	0.048	A695111	0.048	0.049	0.020	A695110
Dissolved Sulphur (S)	mg/L	8.0	A695110	41	A695111	40	42	0.20	A695110
Dissolved Thallium (Tl)	mg/L	<0.00020	A695193	<0.00020	A695193	<0.00020	<0.00020	0.00020	A695193
Dissolved Tin (Sn)	mg/L	<0.0010	A695193	<0.0010	A695193	<0.0010	<0.0010	0.0010	A695193
Dissolved Titanium (Ti)	mg/L	<0.0010	A695193	<0.0010	A695193	<0.0010	<0.0010	0.0010	A695193
Dissolved Uranium (U)	mg/L	<0.00010	A695193	<0.00010	A695193	<0.00010	<0.00010	0.00010	A695193

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BAJ601		BAJ602		BAJ603	BAJ604		
Sampling Date		2022/08/23 09:55		2022/08/23 09:10		2022/08/23 09:15	2022/08/23 09:20		
COC Number		672616-01-01		672616-01-01		672616-01-01	672616-01-01		
	UNITS	**CL-2**	**QC Batch**	**SB-2**	**QC Batch**	**SB-1**	**CB-1**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	A695193	<0.0010	A695193	<0.0010	<0.0010	0.0010	A695193
Dissolved Zinc (Zn)	mg/L	0.043	A695193	0.11	A695193	0.11	0.11	0.0030	A695193
RDL = Reportable Detection Limit									

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BAJ608		BAJ609		BAJ610		BAJ611		
Sampling Date		2022/08/23 09:25		2022/08/23 09:40		2022/08/23 09:45		2022/08/23 09:50		
COC Number		672616-02-01		672616-02-01		672616-02-01		672616-02-01		
	UNITS	CB-2	QC Batch	EB-1	QC Batch	EB-2	QC Batch	NB-2	RDL	QC Batch
Elements										
Dissolved Cadmium (Cd)	ug/L	0.35	A694148	0.60	A694148	0.49	A694148	0.35	0.020	A694148
Lab Filtered Elements										
Dissolved Aluminum (Al)	mg/L	0.017	A695193	0.019	A695193	0.017	A695193	0.018	0.0030	A695193
Dissolved Antimony (Sb)	mg/L	<0.00060	A695193	<0.00060	A695193	<0.00060	A695193	<0.00060	0.00060	A695193
Dissolved Arsenic (As)	mg/L	0.00021	A695193	0.00021	A695193	0.00026	A695193	<0.00020	0.00020	A695193
Dissolved Barium (Ba)	mg/L	0.012	A695111	0.013	A695111	0.013	A695110	0.012	0.010	A695111
Dissolved Beryllium (Be)	mg/L	<0.0010	A695193	<0.0010	A695193	<0.0010	A695193	<0.0010	0.0010	A695193
Dissolved Boron (B)	mg/L	<0.020	A695111	<0.020	A695111	<0.020	A695110	<0.020	0.020	A695111
Dissolved Calcium (Ca)	mg/L	44	A695111	49	A695111	50	A695110	47	0.30	A695111
Dissolved Chromium (Cr)	mg/L	<0.0010	A695193	<0.0010	A695193	<0.0010	A695193	<0.0010	0.0010	A695193
Dissolved Cobalt (Co)	mg/L	<0.00030	A695193	<0.00030	A695193	<0.00030	A695193	<0.00030	0.00030	A695193
Dissolved Copper (Cu)	mg/L	0.010	A695193	0.013	A703421	0.013	A695193	0.011	0.0010	A695193
Dissolved Iron (Fe)	mg/L	1.1	A695111	0.81	A695111	0.66	A695110	1.2	0.060	A695111
Dissolved Lead (Pb)	mg/L	<0.00020	A695193	<0.00020	A695193	<0.00020	A695193	<0.00020	0.00020	A695193
Dissolved Lithium (Li)	mg/L	<0.020	A695111	<0.020	A695111	<0.020	A695110	<0.020	0.020	A695111
Dissolved Magnesium (Mg)	mg/L	7.4	A695111	8.2	A695111	8.1	A695110	7.8	0.20	A695111
Dissolved Manganese (Mn)	mg/L	0.043	A695111	0.051	A695111	0.053	A695110	0.051	0.0040	A695111
Dissolved Molybdenum (Mo)	mg/L	<0.00020	A695193	<0.00020	A695193	<0.00020	A695193	<0.00020	0.00020	A695193
Dissolved Nickel (Ni)	mg/L	0.00099	A695193	0.0015	A695193	0.0015	A695193	0.0011	0.00050	A695193
Dissolved Phosphorus (P)	mg/L	<0.10	A695111	<0.10	A695111	<0.10	A695110	<0.10	0.10	A695111
Dissolved Potassium (K)	mg/L	3.7	A695111	3.9	A695111	4.0	A695110	3.7	0.30	A695111
Dissolved Selenium (Se)	mg/L	<0.00020	A695193	<0.00020	A695193	<0.00020	A695193	<0.00020	0.00020	A695193
Dissolved Silicon (Si)	mg/L	1.3	A695111	1.2	A695111	1.2	A695110	1.4	0.10	A695111
Dissolved Silver (Ag)	mg/L	<0.00010	A695193	<0.00010	A695193	<0.00010	A695193	<0.00010	0.00010	A695193
Dissolved Sodium (Na)	mg/L	2.8	A695111	3.0	A695111	3.0	A695110	2.8	0.50	A695111
Dissolved Strontium (Sr)	mg/L	0.049	A695111	0.053	A695111	0.053	A695110	0.050	0.020	A695111
Dissolved Sulphur (S)	mg/L	39	A695111	47	A695111	47	A695110	43	0.20	A695111
Dissolved Thallium (Tl)	mg/L	<0.00020	A695193	<0.00020	A695193	<0.00020	A695193	<0.00020	0.00020	A695193
Dissolved Tin (Sn)	mg/L	<0.0010	A695193	<0.0010	A695193	<0.0010	A695193	<0.0010	0.0010	A695193
Dissolved Titanium (Ti)	mg/L	<0.0010	A695193	<0.0010	A695193	<0.0010	A695193	<0.0010	0.0010	A695193
Dissolved Uranium (U)	mg/L	<0.00010	A695193	<0.00010	A695193	<0.00010	A695193	<0.00010	0.00010	A695193

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BAJ608		BAJ609		BAJ610		BAJ611		
Sampling Date		2022/08/23 09:25		2022/08/23 09:40		2022/08/23 09:45		2022/08/23 09:50		
COC Number		672616-02-01		672616-02-01		672616-02-01		672616-02-01		
	UNITS	**CB-2**	**QC Batch**	**EB-1**	**QC Batch**	**EB-2**	**QC Batch**	**NB-2**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	A695193	<0.0010	A695193	<0.0010	A695193	<0.0010	0.0010	A695193
Dissolved Zinc (Zn)	mg/L	0.11	A695193	0.16	A703421	0.15	A695193	0.12	0.0030	A695193
RDL = Reportable Detection Limit										

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BAJ612		BAJ613		BAJ614		
Sampling Date		2022/08/23 09:55		2022/08/23 10:00		2022/08/23 10:15		
COC Number		672616-02-01		672616-02-01		672616-02-01		
	UNITS	NB-1	QC Batch	CAMP LAKE DISCHARGE	QC Batch	SC-1	RDL	QC Batch
Elements								
Dissolved Cadmium (Cd)	ug/L	0.41	A694148	0.32	A694148	0.23	0.020	A694148
Lab Filtered Elements								
Dissolved Aluminum (Al)	mg/L	0.019	A695193	0.016	A695193	0.021	0.0030	A695193
Dissolved Antimony (Sb)	mg/L	<0.00060	A695193	<0.00060	A695193	<0.00060	0.00060	A695193
Dissolved Arsenic (As)	mg/L	<0.00020	A695193	<0.00020	A695193	0.00045	0.00020	A695193
Dissolved Barium (Ba)	mg/L	0.011	A695111	0.012	A695110	<0.010	0.010	A695111
Dissolved Beryllium (Be)	mg/L	<0.0010	A695193	<0.0010	A695193	<0.0010	0.0010	A695193
Dissolved Boron (B)	mg/L	<0.020	A695111	<0.020	A695110	<0.020	0.020	A695111
Dissolved Calcium (Ca)	mg/L	45	A695111	47	A695110	8.2	0.30	A695111
Dissolved Chromium (Cr)	mg/L	<0.0010	A695193	<0.0010	A695193	<0.0010	0.0010	A695193
Dissolved Cobalt (Co)	mg/L	<0.00030	A695193	<0.00030	A695193	<0.00030	0.00030	A695193
Dissolved Copper (Cu)	mg/L	0.011	A695193	0.0098	A695193	0.012	0.0010	A695193
Dissolved Iron (Fe)	mg/L	0.98	A695111	0.81	A695110	0.13	0.060	A695111
Dissolved Lead (Pb)	mg/L	<0.00020	A695193	<0.00020	A695193	<0.00020	0.00020	A695193
Dissolved Lithium (Li)	mg/L	<0.020	A695111	<0.020	A695110	<0.020	0.020	A695111
Dissolved Magnesium (Mg)	mg/L	7.4	A695111	7.8	A695110	2.5	0.20	A695111
Dissolved Manganese (Mn)	mg/L	0.054	A695111	0.038	A695110	0.019	0.0040	A695111
Dissolved Molybdenum (Mo)	mg/L	<0.00020	A695193	<0.00020	A695193	<0.00020	0.00020	A695193
Dissolved Nickel (Ni)	mg/L	0.0010	A695193	0.0012	A695193	0.0015	0.00050	A695193
Dissolved Phosphorus (P)	mg/L	<0.10	A695111	<0.10	A695110	<0.10	0.10	A695111
Dissolved Potassium (K)	mg/L	3.6	A695111	3.7	A695110	1.2	0.30	A695111
Dissolved Selenium (Se)	mg/L	<0.00020	A695193	<0.00020	A695193	<0.00020	0.00020	A695193
Dissolved Silicon (Si)	mg/L	1.4	A695111	1.4	A695110	1.0	0.10	A695111
Dissolved Silver (Ag)	mg/L	<0.00010	A695193	<0.00010	A695193	<0.00010	0.00010	A695193
Dissolved Sodium (Na)	mg/L	2.7	A695111	2.8	A695110	1.7	0.50	A695111
Dissolved Strontium (Sr)	mg/L	0.049	A695111	0.050	A695110	0.021	0.020	A695111
Dissolved Sulphur (S)	mg/L	44	A695111	44	A695110	1.4	0.20	A695111
Dissolved Thallium (Tl)	mg/L	<0.00020	A695193	<0.00020	A695193	<0.00020	0.00020	A695193
Dissolved Tin (Sn)	mg/L	<0.0010	A695193	<0.0010	A695193	<0.0010	0.0010	A695193
Dissolved Titanium (Ti)	mg/L	<0.0010	A695193	<0.0010	A695193	<0.0010	0.0010	A695193
Dissolved Uranium (U)	mg/L	<0.00010	A695193	<0.00010	A695193	<0.00010	0.00010	A695193

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BAJ612		BAJ613		BAJ614		
Sampling Date		2022/08/23 09:55		2022/08/23 10:00		2022/08/23 10:15		
COC Number		672616-02-01		672616-02-01		672616-02-01		
	UNITS	**NB-1**	**QC Batch**	**CAMP LAKE DISCHARGE**	**QC Batch**	**SC-1**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	A695193	<0.0010	A695193	<0.0010	0.0010	A695193
Dissolved Zinc (Zn)	mg/L	0.12	A695193	0.11	A695193	0.10	0.0030	A695193
RDL = Reportable Detection Limit								

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BAJ614			BAJ615		BAJ616	BAJ617		
Sampling Date		2022/08/23 10:15			2022/08/23 12:00		2022/08/23 12:10	2022/08/23		
COC Number		672616-02-01			672616-02-01		672616-02-01	672616-02-01		
	UNITS	SC-1 Lab-Dup	RDL	QC Batch	SW-112	QC Batch	SW-108	TRIP BLANK	RDL	QC Batch
Elements										
Dissolved Cadmium (Cd)	ug/L				0.055	A694148	0.54	<0.020	0.020	A694148
Lab Filtered Elements										
Dissolved Aluminum (Al)	mg/L				0.020	A695193	0.021	<0.0030	0.0030	A695193
Dissolved Antimony (Sb)	mg/L				<0.00060	A695193	<0.00060	<0.00060	0.00060	A695193
Dissolved Arsenic (As)	mg/L				0.00040	A695193	0.00022	<0.00020	0.00020	A695193
Dissolved Barium (Ba)	mg/L	<0.010	0.010	A695111	<0.010	A695110	0.013	<0.010	0.010	A695111
Dissolved Beryllium (Be)	mg/L				<0.0010	A695193	<0.0010	<0.0010	0.0010	A695193
Dissolved Boron (B)	mg/L	<0.020	0.020	A695111	<0.020	A695110	<0.020	<0.020	0.020	A695111
Dissolved Calcium (Ca)	mg/L	8.6	0.30	A695111	13	A695110	49	<0.30	0.30	A695111
Dissolved Chromium (Cr)	mg/L				<0.0010	A695193	<0.0010	<0.0010	0.0010	A695193
Dissolved Cobalt (Co)	mg/L				<0.00030	A695193	<0.00030	<0.00030	0.00030	A695193
Dissolved Copper (Cu)	mg/L				0.0061	A695193	0.013	<0.0010	0.0010	A695193
Dissolved Iron (Fe)	mg/L	0.15	0.060	A695111	0.18	A695110	0.80	<0.060	0.060	A695111
Dissolved Lead (Pb)	mg/L				<0.00020	A695193	<0.00020	<0.00020	0.00020	A695193
Dissolved Lithium (Li)	mg/L	<0.020	0.020	A695111	<0.020	A695110	<0.020	<0.020	0.020	A695111
Dissolved Magnesium (Mg)	mg/L	2.7	0.20	A695111	3.4	A695110	8.2	<0.20	0.20	A695111
Dissolved Manganese (Mn)	mg/L	0.020	0.0040	A695111	<0.0040	A695110	0.050	<0.0040	0.0040	A695111
Dissolved Molybdenum (Mo)	mg/L				<0.00020	A695193	<0.00020	<0.00020	0.00020	A695193
Dissolved Nickel (Ni)	mg/L				<0.00050	A695193	0.0014	<0.00050	0.00050	A695193
Dissolved Phosphorus (P)	mg/L	<0.10	0.10	A695111	<0.10	A695110	<0.10	<0.10	0.10	A695111
Dissolved Potassium (K)	mg/L	1.3	0.30	A695111	1.6	A695110	4.0	<0.30	0.30	A695111
Dissolved Selenium (Se)	mg/L				<0.00020	A695193	<0.00020	<0.00020	0.00020	A695193
Dissolved Silicon (Si)	mg/L	1.2	0.10	A695111	0.82	A695110	1.2	<0.10	0.10	A695111
Dissolved Silver (Ag)	mg/L				<0.00010	A695193	<0.00010	<0.00010	0.00010	A695193
Dissolved Sodium (Na)	mg/L	1.7	0.50	A695111	2.0	A695110	2.9	<0.50	0.50	A695111
Dissolved Strontium (Sr)	mg/L	0.022	0.020	A695111	0.027	A695110	0.053	<0.020	0.020	A695111
Dissolved Sulphur (S)	mg/L	1.5	0.20	A695111	6.3	A695110	46	<0.20	0.20	A695111
Dissolved Thallium (Tl)	mg/L				<0.00020	A695193	<0.00020	<0.00020	0.00020	A695193
Dissolved Tin (Sn)	mg/L				<0.0010	A695193	<0.0010	<0.0010	0.0010	A695193
Dissolved Titanium (Ti)	mg/L				<0.0010	A695193	<0.0010	<0.0010	0.0010	A695193
Dissolved Uranium (U)	mg/L				<0.00010	A695193	<0.00010	<0.00010	0.00010	A695193

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BAJ614			BAJ615		BAJ616	BAJ617		
Sampling Date		2022/08/23 10:15			2022/08/23 12:00		2022/08/23 12:10	2022/08/23		
COC Number		672616-02-01			672616-02-01		672616-02-01	672616-02-01		
	UNITS	**SC-1 Lab-Dup**	**RDL**	**QC Batch**	**SW-112**	**QC Batch**	**SW-108**	**TRIP BLANK**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L				<0.0010	A695193	<0.0010	<0.0010	0.0010	A695193
Dissolved Zinc (Zn)	mg/L				0.019	A695193	0.15	<0.0030	0.0030	A695193

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BAJ595	BAJ596			BAJ597	BAJ598		
Sampling Date		2022/08/23 08:05	2022/08/23 08:10			2022/08/23 08:20	2022/08/23 08:25		
COC Number		672616-01-01	672616-01-01			672616-01-01	672616-01-01		
	UNITS	CL-6	CL-5	RDL	QC Batch	CL-4	CL-8	RDL	QC Batch
Elements									
Total Cadmium (Cd)	ug/L	0.036	0.13	0.020	A694080	0.14	0.042	0.020	A694080
Total Aluminum (Al)	mg/L	0.078	0.092	0.0030	A699035	0.092	0.058	0.0034	A699023
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	0.00060	A699035	<0.00060	<0.00060	0.00060	A699023
Total Arsenic (As)	mg/L	0.00049	0.00048	0.00020	A699035	0.00054	0.00047	0.00020	A699023
Total Barium (Ba)	mg/L	0.010	0.011	0.010	A699037	0.016	<0.010	0.010	A699031
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	0.0010	A699035	<0.0010	<0.0010	0.0010	A699023
Total Boron (B)	mg/L	<0.020	<0.020	0.020	A699037	<0.020	<0.020	0.020	A699031
Total Calcium (Ca)	mg/L	11	12	0.30	A699037	14	13	0.30	A699031
Total Chromium (Cr)	mg/L	<0.0010	<0.0010	0.0010	A699035	<0.0010	<0.0010	0.0010	A699023
Total Cobalt (Co)	mg/L	<0.00030	<0.00030	0.00030	A699035	0.0011	<0.00030	0.00030	A699023
Total Copper (Cu)	mg/L	0.0049	0.0076	0.0010	A699035	0.0084	0.0064	0.0010	A699023
Total Iron (Fe)	mg/L	0.55	0.83	0.060	A699037	5.5	0.33	0.060	A699031
Total Lead (Pb)	mg/L	<0.00020	<0.00020	0.00020	A699035	<0.00020	<0.00020	0.00020	A699023
Total Lithium (Li)	mg/L	<0.020	<0.020	0.020	A699037	0.030	0.029	0.020	A699031
Total Magnesium (Mg)	mg/L	3.0	3.2	0.20	A699037	3.5	3.3	0.20	A699031
Total Manganese (Mn)	mg/L	0.087	0.087	0.0040	A699037	0.56	0.011	0.0040	A699031
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	0.00020	A699035	<0.00020	<0.00020	0.00020	A699023
Total Nickel (Ni)	mg/L	0.00075	0.00084	0.00050	A699035	0.00062	0.00072	0.00050	A699023
Total Phosphorus (P)	mg/L	<0.10	<0.10	0.10	A699037	<0.10	<0.10	0.10	A699031
Total Potassium (K)	mg/L	1.4	1.5	0.30	A699037	1.6	1.5	0.30	A699031
Total Selenium (Se)	mg/L	<0.00020	<0.00020	0.00020	A699035	<0.00020	<0.00020	0.00020	A699023
Total Silicon (Si)	mg/L	1.2	1.3	0.14	A699037	2.3	1.0	0.10	A699031
Total Silver (Ag)	mg/L	<0.00010	<0.00010	0.00010	A699035	<0.00010	<0.00010	0.00010	A699023
Total Sodium (Na)	mg/L	1.8	1.9	0.50	A699037	1.9	1.9	0.50	A699031
Total Strontium (Sr)	mg/L	0.026	0.027	0.020	A699037	0.028	0.026	0.020	A699031
Total Sulphur (S)	mg/L	4.4	5.7	0.20	A699037	7.2	7.0	0.20	A699031
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	0.00020	A699035	<0.00020	<0.00020	0.00020	A699023
Total Tin (Sn)	mg/L	<0.0010	<0.0010	0.0010	A699035	<0.0010	<0.0010	0.0010	A699023
Total Titanium (Ti)	mg/L	0.0030	0.0031	0.0010	A699035	0.0017	0.0023	0.0010	A699023
Total Uranium (U)	mg/L	<0.00010	<0.00010	0.00010	A699035	<0.00010	<0.00010	0.00010	A699023
Total Vanadium (V)	mg/L	<0.0010	<0.0010	0.0010	A699035	<0.0010	<0.0010	0.0010	A699023
RDL = Reportable Detection Limit									

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BAJ595	BAJ596			BAJ597	BAJ598		
Sampling Date		2022/08/23 08:05	2022/08/23 08:10			2022/08/23 08:20	2022/08/23 08:25		
COC Number		672616-01-01	672616-01-01			672616-01-01	672616-01-01		
	UNITS	**CL-6**	**CL-5**	**RDL**	**QC Batch**	**CL-4**	**CL-8**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.021	0.036	0.0030	A699035	0.045	0.022	0.0030	A699023
RDL = Reportable Detection Limit									

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BAJ599	BAJ600			BAJ601		
Sampling Date		2022/08/23 08:30	2022/08/23 08:45			2022/08/23 09:55		
COC Number		672616-01-01	672616-01-01			672616-01-01		
	UNITS	CL-3	CL-7	RDL	QC Batch	CL-2	RDL	QC Batch
Elements								
Total Cadmium (Cd)	ug/L	0.068	0.059	0.020	A694080	0.12	0.020	A694080
Total Aluminum (Al)	mg/L	0.065	0.067	0.0030	A699035	0.094	0.0030	A698775
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	0.00060	A699035	<0.00060	0.00060	A698775
Total Arsenic (As)	mg/L	0.00043	0.00041	0.00020	A699035	0.00043	0.00020	A698775
Total Barium (Ba)	mg/L	<0.010	<0.010	0.010	A699037	0.012	0.010	A698791
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	0.0010	A699035	<0.0010	0.0010	A698775
Total Boron (B)	mg/L	<0.020	<0.020	0.020	A699037	<0.020	0.020	A698791
Total Calcium (Ca)	mg/L	12	11	0.30	A699037	13	0.30	A698791
Total Chromium (Cr)	mg/L	0.0037	<0.0010	0.0010	A699035	<0.0010	0.0010	A698775
Total Cobalt (Co)	mg/L	<0.00030	<0.00030	0.00030	A699035	<0.00030	0.00030	A698775
Total Copper (Cu)	mg/L	0.0068	0.0063	0.0010	A699035	0.010	0.0010	A698775
Total Iron (Fe)	mg/L	0.32	0.29	0.060	A699037	1.2	0.060	A698791
Total Lead (Pb)	mg/L	<0.00020	<0.00020	0.00020	A699035	<0.00020	0.00020	A698775
Total Lithium (Li)	mg/L	<0.020	<0.020	0.020	A699037	<0.020	0.020	A698791
Total Magnesium (Mg)	mg/L	3.1	3.1	0.20	A699037	3.2	0.20	A698791
Total Manganese (Mn)	mg/L	0.0098	0.0086	0.0040	A699037	0.11	0.0040	A698791
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	0.00020	A699035	<0.00020	0.00020	A698775
Total Nickel (Ni)	mg/L	0.0020	<0.00050	0.00050	A699035	0.00083	0.00050	A698775
Total Phosphorus (P)	mg/L	<0.10	<0.10	0.10	A699037	<0.10	0.10	A698791
Total Potassium (K)	mg/L	1.5	1.5	0.30	A699037	1.4	0.30	A698791
Total Selenium (Se)	mg/L	<0.00020	<0.00020	0.00020	A699035	<0.00020	0.00020	A698775
Total Silicon (Si)	mg/L	1.0	0.97	0.14	A699037	1.6	0.13	A698791
Total Silver (Ag)	mg/L	<0.00010	<0.00010	0.00010	A699035	<0.00010	0.00010	A698775
Total Sodium (Na)	mg/L	1.9	1.8	0.50	A699037	1.9	0.50	A698791
Total Strontium (Sr)	mg/L	0.026	0.026	0.020	A699037	0.028	0.020	A698791
Total Sulphur (S)	mg/L	6.0	5.6	0.20	A699037	7.8	0.20	A698791
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	0.00020	A699035	<0.00020	0.00020	A698775
Total Tin (Sn)	mg/L	<0.0010	<0.0010	0.0010	A699035	<0.0010	0.0010	A698775
Total Titanium (Ti)	mg/L	0.0017	0.0022	0.0010	A699035	0.0021	0.0010	A698775
Total Uranium (U)	mg/L	<0.00010	<0.00010	0.00010	A699035	<0.00010	0.00010	A698775
Total Vanadium (V)	mg/L	<0.0010	<0.0010	0.0010	A699035	<0.0010	0.0010	A698775

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BAJ599	BAJ600			BAJ601		
Sampling Date		2022/08/23 08:30	2022/08/23 08:45			2022/08/23 09:55		
COC Number		672616-01-01	672616-01-01			672616-01-01		
	UNITS	**CL-3**	**CL-7**	**RDL**	**QC Batch**	**CL-2**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.022	0.020	0.0030	A699035	0.047	0.0030	A698775
RDL = Reportable Detection Limit								

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BAJ602	BAJ603	BAJ604	BAJ608		
Sampling Date		2022/08/23 09:10	2022/08/23 09:15	2022/08/23 09:20	2022/08/23 09:25		
COC Number		672616-01-01	672616-01-01	672616-01-01	672616-02-01		
	UNITS	SB-2	SB-1	CB-1	CB-2	RDL	QC Batch
Elements							
Total Cadmium (Cd)	ug/L	0.45	0.45	0.45	0.47	0.020	A694080
Total Aluminum (Al)	mg/L	0.057	0.057	0.056	0.054	0.0030	A699035
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	<0.00060	0.00060	A699035
Total Arsenic (As)	mg/L	0.00025	0.00029	0.00028	0.00024	0.00020	A699035
Total Barium (Ba)	mg/L	0.012	0.012	0.012	0.012	0.010	A699037
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A699035
Total Boron (B)	mg/L	<0.020	<0.020	<0.020	<0.020	0.020	A699037
Total Calcium (Ca)	mg/L	41	41	40	40	0.30	A699037
Total Chromium (Cr)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A699035
Total Cobalt (Co)	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	0.00030	A699035
Total Copper (Cu)	mg/L	0.015	0.015	0.015	0.015	0.0010	A699035
Total Iron (Fe)	mg/L	2.3	2.3	2.1	2.2	0.060	A699037
Total Lead (Pb)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A699035
Total Lithium (Li)	mg/L	<0.020	<0.020	<0.020	<0.020	0.020	A699037
Total Magnesium (Mg)	mg/L	6.9	7.0	6.7	6.9	0.20	A699037
Total Manganese (Mn)	mg/L	0.056	0.055	0.052	0.053	0.0040	A699037
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A699035
Total Nickel (Ni)	mg/L	0.0012	0.0011	0.0012	0.0013	0.00050	A699035
Total Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	<0.10	0.10	A699037
Total Potassium (K)	mg/L	3.4	3.5	3.4	3.4	0.30	A699037
Total Selenium (Se)	mg/L	<0.00020	0.00061	<0.00020	<0.00020	0.00020	A699035
Total Silicon (Si)	mg/L	1.5	1.5	1.4	1.4	0.14	A699037
Total Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A699035
Total Sodium (Na)	mg/L	2.6	2.6	2.5	2.6	0.50	A699037
Total Strontium (Sr)	mg/L	0.047	0.048	0.046	0.047	0.020	A699037
Total Sulphur (S)	mg/L	39	39	38	39	0.20	A699037
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A699035
Total Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A699035
Total Titanium (Ti)	mg/L	0.0024	0.0017	0.0016	0.0019	0.0010	A699035
Total Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A699035
Total Vanadium (V)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A699035
RDL = Reportable Detection Limit							

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BAJ602	BAJ603	BAJ604	BAJ608		
Sampling Date		2022/08/23 09:10	2022/08/23 09:15	2022/08/23 09:20	2022/08/23 09:25		
COC Number		672616-01-01	672616-01-01	672616-01-01	672616-02-01		
	UNITS	**SB-2**	**SB-1**	**CB-1**	**CB-2**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.13	0.14	0.13	0.13	0.0030	A699035
RDL = Reportable Detection Limit							

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BAJ609	BAJ610			BAJ611		
Sampling Date		2022/08/23 09:40	2022/08/23 09:45			2022/08/23 09:50		
COC Number		672616-02-01	672616-02-01			672616-02-01		
	UNITS	EB-1	EB-2	RDL	QC Batch	NB-2	RDL	QC Batch
Elements								
Total Cadmium (Cd)	ug/L	0.075	0.65	0.020	A694080	0.47	0.020	A694080
Total Aluminum (Al)	mg/L	0.020	0.087	0.0034	A699023	0.052	0.0030	A699035
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	0.00060	A699023	<0.00060	0.00060	A699035
Total Arsenic (As)	mg/L	<0.00020	0.00025	0.00020	A699023	0.00029	0.00020	A699035
Total Barium (Ba)	mg/L	0.014	0.014	0.010	A699031	0.012	0.010	A699037
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	0.0010	A699023	<0.0010	0.0010	A699035
Total Boron (B)	mg/L	<0.020	<0.020	0.020	A699031	<0.020	0.020	A699037
Total Calcium (Ca)	mg/L	46	47	0.30	A699031	43	0.30	A699037
Total Chromium (Cr)	mg/L	<0.0010	<0.0010	0.0010	A699023	<0.0010	0.0010	A699035
Total Cobalt (Co)	mg/L	<0.00030	0.00041	0.00030	A699023	<0.00030	0.00030	A699035
Total Copper (Cu)	mg/L	0.0029	0.019	0.0010	A699023	0.016	0.0010	A699035
Total Iron (Fe)	mg/L	1.9	1.8	0.060	A699031	2.1	0.060	A699037
Total Lead (Pb)	mg/L	<0.00020	<0.00020	0.00020	A699023	<0.00020	0.00020	A699035
Total Lithium (Li)	mg/L	<0.020	0.031	0.020	A699031	<0.020	0.020	A699037
Total Magnesium (Mg)	mg/L	8.0	7.9	0.20	A699031	7.1	0.20	A699037
Total Manganese (Mn)	mg/L	0.057	0.059	0.0040	A699031	0.055	0.0040	A699037
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	0.00020	A699023	<0.00020	0.00020	A699035
Total Nickel (Ni)	mg/L	<0.00050	0.0017	0.00050	A699023	0.0020	0.00050	A699035
Total Phosphorus (P)	mg/L	<0.10	<0.10	0.10	A699031	<0.10	0.10	A699037
Total Potassium (K)	mg/L	3.7	3.6	0.30	A699031	3.4	0.30	A699037
Total Selenium (Se)	mg/L	<0.00020	<0.00020	0.00020	A699023	<0.00020	0.00020	A699035
Total Silicon (Si)	mg/L	1.3	1.3	0.10	A699031	1.4	0.14	A699037
Total Silver (Ag)	mg/L	<0.00010	<0.00010	0.00010	A699023	<0.00010	0.00010	A699035
Total Sodium (Na)	mg/L	2.8	2.8	0.50	A699031	2.5	0.50	A699037
Total Strontium (Sr)	mg/L	0.048	0.048	0.020	A699031	0.048	0.020	A699037
Total Sulphur (S)	mg/L	47	47	0.20	A699031	40	0.20	A699037
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	0.00020	A699023	<0.00020	0.00020	A699035
Total Tin (Sn)	mg/L	<0.0010	<0.0010	0.0010	A699023	<0.0010	0.0010	A699035
Total Titanium (Ti)	mg/L	<0.0010	0.0025	0.0010	A699023	0.0013	0.0010	A699035
Total Uranium (U)	mg/L	<0.00010	<0.00010	0.00010	A699023	<0.00010	0.00010	A699035
Total Vanadium (V)	mg/L	<0.0010	<0.0010	0.0010	A699023	<0.0010	0.0010	A699035

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BAJ609	BAJ610			BAJ611		
Sampling Date		2022/08/23 09:40	2022/08/23 09:45			2022/08/23 09:50		
COC Number		672616-02-01	672616-02-01			672616-02-01		
	UNITS	**EB-1**	**EB-2**	**RDL**	**QC Batch**	**NB-2**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.027	0.17	0.0030	A699023	0.13	0.0030	A699035
RDL = Reportable Detection Limit								

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BAJ612	BAJ613			BAJ614	BAJ615		
Sampling Date		2022/08/23 09:55	2022/08/23 10:00			2022/08/23 10:15	2022/08/23 12:00		
COC Number		672616-02-01	672616-02-01			672616-02-01	672616-02-01		
	UNITS	NB-1	CAMP LAKE DISCHARGE	RDL	QC Batch	SC-1	SW-112	RDL	QC Batch
Elements									
Total Cadmium (Cd)	ug/L	0.44	0.43	0.020	A694080	0.29	0.064	0.020	A694080
Total Aluminum (Al)	mg/L	0.051	0.058	0.0034	A699023	0.078	0.071	0.0030	A699035
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	0.00060	A699023	<0.00060	<0.00060	0.00060	A699035
Total Arsenic (As)	mg/L	0.00040	0.00021	0.00020	A699023	0.00050	0.00046	0.00020	A699035
Total Barium (Ba)	mg/L	0.012	0.012	0.010	A699031	<0.010	<0.010	0.010	A699037
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	0.0010	A699023	<0.0010	<0.0010	0.0010	A699035
Total Boron (B)	mg/L	<0.020	<0.020	0.020	A699031	<0.020	<0.020	0.020	A699037
Total Calcium (Ca)	mg/L	44	46	0.30	A699031	8.5	12	0.30	A699037
Total Chromium (Cr)	mg/L	<0.0010	<0.0010	0.0010	A699023	<0.0010	<0.0010	0.0010	A699035
Total Cobalt (Co)	mg/L	<0.00030	<0.00030	0.00030	A699023	<0.00030	<0.00030	0.00030	A699035
Total Copper (Cu)	mg/L	0.015	0.015	0.0010	A699023	0.013	0.0065	0.0010	A699035
Total Iron (Fe)	mg/L	2.3	2.1	0.060	A699031	0.31	0.31	0.060	A699037
Total Lead (Pb)	mg/L	<0.00020	<0.00020	0.00020	A699023	<0.00020	<0.00020	0.00020	A699035
Total Lithium (Li)	mg/L	<0.020	<0.020	0.020	A699031	<0.020	<0.020	0.020	A699037
Total Magnesium (Mg)	mg/L	7.5	7.6	0.20	A699031	2.6	3.1	0.20	A699037
Total Manganese (Mn)	mg/L	0.060	0.049	0.0040	A699031	0.038	0.0094	0.0040	A699037
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	0.00020	A699023	<0.00020	<0.00020	0.00020	A699035
Total Nickel (Ni)	mg/L	0.0012	0.0012	0.00050	A699023	0.00071	<0.00050	0.00050	A699035
Total Phosphorus (P)	mg/L	<0.10	<0.10	0.10	A699031	<0.10	<0.10	0.10	A699037
Total Potassium (K)	mg/L	3.3	3.5	0.30	A699031	1.3	1.5	0.30	A699037
Total Selenium (Se)	mg/L	<0.00020	<0.00020	0.00020	A699023	<0.00020	<0.00020	0.00020	A699035
Total Silicon (Si)	mg/L	1.5	1.5	0.10	A699031	1.4	1.0	0.14	A699037
Total Silver (Ag)	mg/L	<0.00010	<0.00010	0.00010	A699023	<0.00010	<0.00010	0.00010	A699035
Total Sodium (Na)	mg/L	2.6	2.7	0.50	A699031	1.7	1.8	0.50	A699037
Total Strontium (Sr)	mg/L	0.044	0.045	0.020	A699031	0.022	0.026	0.020	A699037
Total Sulphur (S)	mg/L	45	45	0.20	A699031	1.8	5.8	0.20	A699037
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	0.00020	A699023	<0.00020	<0.00020	0.00020	A699035
Total Tin (Sn)	mg/L	<0.0010	<0.0010	0.0010	A699023	<0.0010	<0.0010	0.0010	A699035
Total Titanium (Ti)	mg/L	0.0014	0.0013	0.0010	A699023	0.0028	0.0022	0.0010	A699035
Total Uranium (U)	mg/L	<0.00010	<0.00010	0.00010	A699023	<0.00010	<0.00010	0.00010	A699035
Total Vanadium (V)	mg/L	<0.0010	<0.0010	0.0010	A699023	<0.0010	<0.0010	0.0010	A699035

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BAJ612	BAJ613			BAJ614	BAJ615		
Sampling Date		2022/08/23 09:55	2022/08/23 10:00			2022/08/23 10:15	2022/08/23 12:00		
COC Number		672616-02-01	672616-02-01			672616-02-01	672616-02-01		
	UNITS	**NB-1**	**CAMP LAKE DISCHARGE**	**RDL**	**QC Batch**	**SC-1**	**SW-112**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.13	0.13	0.0030	A699023	0.11	0.022	0.0030	A699035
RDL = Reportable Detection Limit									

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BAJ615			BAJ616	BAJ617		
Sampling Date		2022/08/23 12:00			2022/08/23 12:10	2022/08/23		
COC Number		672616-02-01			672616-02-01	672616-02-01		
	UNITS	SW-112 Lab-Dup	RDL	QC Batch	SW-108	TRIP BLANK	RDL	QC Batch
Elements								
Total Cadmium (Cd)	ug/L				0.59	<0.020	0.020	A694080
Total Aluminum (Al)	mg/L	0.064	0.0030	A699035	0.076	<0.0034	0.0034	A699023
Total Antimony (Sb)	mg/L	<0.00060	0.00060	A699035	<0.00060	<0.00060	0.00060	A699023
Total Arsenic (As)	mg/L	0.00043	0.00020	A699035	0.00032	<0.00020	0.00020	A699023
Total Barium (Ba)	mg/L	<0.010	0.010	A699037	0.013	<0.010	0.010	A699031
Total Beryllium (Be)	mg/L	<0.0010	0.0010	A699035	<0.0010	<0.0010	0.0010	A699023
Total Boron (B)	mg/L	<0.020	0.020	A699037	<0.020	<0.020	0.020	A699031
Total Calcium (Ca)	mg/L	12	0.30	A699037	46	<0.30	0.30	A699031
Total Chromium (Cr)	mg/L	<0.0010	0.0010	A699035	<0.0010	<0.0010	0.0010	A699023
Total Cobalt (Co)	mg/L	<0.00030	0.00030	A699035	0.00045	<0.00030	0.00030	A699023
Total Copper (Cu)	mg/L	0.0065	0.0010	A699035	0.019	<0.0010	0.0010	A699023
Total Iron (Fe)	mg/L	0.31	0.060	A699037	1.8	<0.060	0.060	A699031
Total Lead (Pb)	mg/L	<0.00020	0.00020	A699035	<0.00020	<0.00020	0.00020	A699023
Total Lithium (Li)	mg/L	<0.020	0.020	A699037	<0.020	0.031	0.020	A699031
Total Magnesium (Mg)	mg/L	3.2	0.20	A699037	7.8	<0.20	0.20	A699031
Total Manganese (Mn)	mg/L	0.0096	0.0040	A699037	0.056	<0.0040	0.0040	A699031
Total Molybdenum (Mo)	mg/L	<0.00020	0.00020	A699035	<0.00020	<0.00020	0.00020	A699023
Total Nickel (Ni)	mg/L	0.0011	0.00050	A699035	0.0015	<0.00050	0.00050	A699023
Total Phosphorus (P)	mg/L	<0.10	0.10	A699037	<0.10	<0.10	0.10	A699031
Total Potassium (K)	mg/L	1.5	0.30	A699037	3.6	<0.30	0.30	A699031
Total Selenium (Se)	mg/L	<0.00020	0.00020	A699035	<0.00020	<0.00020	0.00020	A699023
Total Silicon (Si)	mg/L	1.1	0.14	A699037	1.3	0.12	0.10	A699031
Total Silver (Ag)	mg/L	<0.00010	0.00010	A699035	<0.00010	<0.00010	0.00010	A699023
Total Sodium (Na)	mg/L	1.9	0.50	A699037	2.8	<0.50	0.50	A699031
Total Strontium (Sr)	mg/L	0.027	0.020	A699037	0.047	<0.020	0.020	A699031
Total Sulphur (S)	mg/L	6.0	0.20	A699037	47	<0.20	0.20	A699031
Total Thallium (Tl)	mg/L	<0.00020	0.00020	A699035	<0.00020	<0.00020	0.00020	A699023
Total Tin (Sn)	mg/L	<0.0010	0.0010	A699035	<0.0010	<0.0010	0.0010	A699023
Total Titanium (Ti)	mg/L	0.0020	0.0010	A699035	0.0016	<0.0010	0.0010	A699023
Total Uranium (U)	mg/L	<0.00010	0.00010	A699035	<0.00010	<0.00010	0.00010	A699023
Total Vanadium (V)	mg/L	<0.0010	0.0010	A699035	<0.0010	<0.0010	0.0010	A699023

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BAJ615			BAJ616	BAJ617		
Sampling Date		2022/08/23 12:00			2022/08/23 12:10	2022/08/23		
COC Number		672616-02-01			672616-02-01	672616-02-01		
	UNITS	**SW-112 Lab-Dup**	**RDL**	**QC Batch**	**SW-108**	**TRIP BLANK**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.021	0.0030	A699035	0.18	<0.0030	0.0030	A699023

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C263842
Report Date: 2022/09/03

KGS Group
Client Project #: 21-1357-005
Sampler Initials: ID

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BAJ595			BAJ595			BAJ596	BAJ597		
Sampling Date		2022/08/23 08:05			2022/08/23 08:05			2022/08/23 08:10	2022/08/23 08:20		
COC Number		672616-01-01			672616-01-01			672616-01-01	672616-01-01		
	UNITS	CL-6	RDL	QC Batch	CL-6 Lab-Dup	RDL	QC Batch	CL-5	CL-4	RDL	QC Batch
Calculated Parameters											
Hardness (CaCO3)	mg/L	43	0.50	A694179				45	53	0.50	A694179
Total Hardness (CaCO3)	mg/L	38.7	0.50	A694183				43.2	50.1	0.50	A694183
Misc. Inorganics											
pH	pH	6.37	N/A	A696611				6.34	6.41	N/A	A696662
Total Suspended Solids	mg/L	2.7	1.0	A697333				1.2	7.7	1.0	A697333
Anions											
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	A696596				<1.0	<1.0	1.0	A696661
Alkalinity (Total as CaCO3)	mg/L	25	1.0	A696596				24	28	1.0	A696661
Bicarbonate (HCO3)	mg/L	31	1.0	A696596				29	34	1.0	A696661
Carbonate (CO3)	mg/L	<1.0	1.0	A696596				<1.0	<1.0	1.0	A696661
Hydroxide (OH)	mg/L	<1.0	1.0	A696596				<1.0	<1.0	1.0	A696661
Physical Properties											
Turbidity	NTU	11	0.10	A695337	11	0.10	A695337	6.2	51	0.10	A695337

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C263842
Report Date: 2022/09/03

KGS Group
Client Project #: 21-1357-005
Sampler Initials: ID

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BAJ598		BAJ599		BAJ600	BAJ601	BAJ602		
Sampling Date		2022/08/23 08:25		2022/08/23 08:30		2022/08/23 08:45	2022/08/23 09:55	2022/08/23 09:10		
COC Number		672616-01-01		672616-01-01		672616-01-01	672616-01-01	672616-01-01		
	UNITS	CL-8	QC Batch	CL-3	RDL	CL-7	CL-2	SB-2	RDL	QC Batch
Calculated Parameters										
Hardness (CaCO3)	mg/L	48	A694179	46	0.50	45	52	140	0.50	A694179
Total Hardness (CaCO3)	mg/L	45.3	A694183	43.1	0.50	41.1	45.9	130	0.50	A694183
Misc. Inorganics										
pH	pH	6.39	A696611	6.43	N/A	6.43	6.30	6.14	N/A	A696662
Total Suspended Solids	mg/L	<0.99	A697333	<0.99	0.99	<1.0	<1.0	2.7	1.0	A697333
Anions										
Alkalinity (PP as CaCO3)	mg/L	<1.0	A696596	<1.0	1.0	<1.0	<1.0	<1.0	1.0	A696661
Alkalinity (Total as CaCO3)	mg/L	23	A696596	23	1.0	23	22	7.4	1.0	A696661
Bicarbonate (HCO3)	mg/L	28	A696596	29	1.0	27	27	9.1	1.0	A696661
Carbonate (CO3)	mg/L	<1.0	A696596	<1.0	1.0	<1.0	<1.0	<1.0	1.0	A696661
Hydroxide (OH)	mg/L	<1.0	A696596	<1.0	1.0	<1.0	<1.0	<1.0	1.0	A696661
Physical Properties										
Turbidity	NTU	1.6	A695337	1.7	0.10	1.7	6.5	6.1	0.10	A695337

RDL = Reportable Detection Limit
N/A = Not Applicable

Bureau Veritas Calgary: 2021 - 41st Avenue N.E. T2E 6P2 Telephone (403) 291-3077 Fax (403) 291-9468

Bureau Veritas Job #: C263842
Report Date: 2022/09/03

KGS Group
Client Project #: 21-1357-005
Sampler Initials: ID

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BAJ603		BAJ604		BAJ608	BAJ609		
Sampling Date		2022/08/23 09:15		2022/08/23 09:20		2022/08/23 09:25	2022/08/23 09:40		
COC Number		672616-01-01		672616-01-01		672616-02-01	672616-02-01		
	UNITS	**SB-1**	**QC Batch**	**CB-1**	**QC Batch**	**CB-2**	**EB-1**	**RDL**	**QC Batch**
Calculated Parameters									
Hardness (CaCO3)	mg/L	140	A694179	140	A693564	140	160	0.50	A693564
Total Hardness (CaCO3)	mg/L	131	A694183	127	A694183	129	148	0.50	A694183
Misc. Inorganics									
pH	pH	6.12	A696662	6.13	A696611	6.13	6.11	N/A	A696662
Total Suspended Solids	mg/L	1.2	A697333	1.3	A697333	1.1	1.6	1.0	A697333
Anions									
Alkalinity (PP as CaCO3)	mg/L	<1.0	A696661	<1.0	A696596	<1.0	<1.0	1.0	A696661
Alkalinity (Total as CaCO3)	mg/L	7.2	A696661	6.9	A696596	7.5	7.4	1.0	A696661
Bicarbonate (HCO3)	mg/L	8.8	A696661	8.5	A696596	9.1	9.0	1.0	A696661
Carbonate (CO3)	mg/L	<1.0	A696661	<1.0	A696596	<1.0	<1.0	1.0	A696661
Hydroxide (OH)	mg/L	<1.0	A696661	<1.0	A696596	<1.0	<1.0	1.0	A696661
Physical Properties									
Turbidity	NTU	5.9	A695337	5.8	A695337	5.8	5.1	0.10	A695337

RDL = Reportable Detection Limit
N/A = Not Applicable

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Bureau Veritas Job #: C263842
Report Date: 2022/09/03

KGS Group
Client Project #: 21-1357-005
Sampler Initials: ID

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BAJ610			BAJ610			BAJ611		BAJ612		
Sampling Date		2022/08/23 09:45			2022/08/23 09:45			2022/08/23 09:50		2022/08/23 09:55		
COC Number		672616-02-01			672616-02-01			672616-02-01		672616-02-01		
	UNITS	EB-2	RDL	QC Batch	EB-2 Lab-Dup	RDL	QC Batch	NB-2	RDL	NB-1	RDL	QC Batch
Calculated Parameters												
Hardness (CaCO3)	mg/L	160	0.50	A693564				150	0.50	140	0.50	A693564
Total Hardness (CaCO3)	mg/L	150	0.50	A694183				136	0.50	141	0.50	A694183
Misc. Inorganics												
pH	pH	6.13	N/A	A696662				6.12	N/A	6.09	N/A	A696662
Total Suspended Solids	mg/L	1.4	0.99	A698673	<0.99	0.99	A698673	<0.99	0.99	<1.0	1.0	A698673
Anions												
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	A696661				<1.0	1.0	<1.0	1.0	A696661
Alkalinity (Total as CaCO3)	mg/L	6.9	1.0	A696661				6.4	1.0	6.7	1.0	A696661
Bicarbonate (HCO3)	mg/L	8.4	1.0	A696661				7.8	1.0	8.2	1.0	A696661
Carbonate (CO3)	mg/L	<1.0	1.0	A696661				<1.0	1.0	<1.0	1.0	A696661
Hydroxide (OH)	mg/L	<1.0	1.0	A696661				<1.0	1.0	<1.0	1.0	A696661
Physical Properties												
Turbidity	NTU	5.1	0.10	A695337				5.3	0.10	5.4	0.10	A695337

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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Bureau Veritas Job #: C263842
Report Date: 2022/09/03

KGS Group
Client Project #: 21-1357-005
Sampler Initials: ID

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BAJ613			BAJ613			BAJ614		
Sampling Date		2022/08/23 10:00			2022/08/23 10:00			2022/08/23 10:15		
COC Number		672616-02-01			672616-02-01			672616-02-01		
	UNITS	CAMP LAKE DISCHARGE	RDL	QC Batch	CAMP LAKE DISCHARGE Lab-Dup	RDL	QC Batch	SC-1	RDL	QC Batch
Calculated Parameters										
Hardness (CaCO3)	mg/L	150	0.50	A693564				31	0.50	A693564
Total Hardness (CaCO3)	mg/L	145	0.50	A694183				32.0	0.50	A694183
Misc. Inorganics										
pH	pH	6.02	N/A	A696662	6.08	N/A	A696662	6.34	N/A	A696662
Total Suspended Solids	mg/L	<1.0	1.0	A698673				1.9	0.96	A698673
Anions										
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	A696661	<1.0	1.0	A696661	<1.0	1.0	A696661
Alkalinity (Total as CaCO3)	mg/L	6.8	1.0	A696661	7.4	1.0	A696661	23	1.0	A696661
Bicarbonate (HCO3)	mg/L	8.3	1.0	A696661	9.0	1.0	A696661	28	1.0	A696661
Carbonate (CO3)	mg/L	<1.0	1.0	A696661	<1.0	1.0	A696661	<1.0	1.0	A696661
Hydroxide (OH)	mg/L	<1.0	1.0	A696661	<1.0	1.0	A696661	<1.0	1.0	A696661
Physical Properties										
Turbidity	NTU	5.5	0.10	A695337				2.0	0.10	A695337

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BAJ615	BAJ616		BAJ617		
Sampling Date		2022/08/23 12:00	2022/08/23 12:10		2022/08/23		
COC Number		672616-02-01	672616-02-01		672616-02-01		
	UNITS	**SW-112**	**SW-108**	**RDL**	**TRIP BLANK**	**RDL**	**QC Batch**
Calculated Parameters							
Hardness (CaCO3)	mg/L	46	160	0.50	<0.50	0.50	A693564
Total Hardness (CaCO3)	mg/L	42.0	146	0.50	<0.50	0.50	A694183
Misc. Inorganics							
pH	pH	6.43	6.10	N/A	4.49	N/A	A696662
Total Suspended Solids	mg/L	<0.99	<0.99	0.99	<1.0	1.0	A698673
Anions							
Alkalinity (PP as CaCO3)	mg/L	<1.0	<1.0	1.0	<1.0	1.0	A696661
Alkalinity (Total as CaCO3)	mg/L	22	7.1	1.0	<1.0	1.0	A696661
Bicarbonate (HCO3)	mg/L	27	8.6	1.0	<1.0	1.0	A696661
Carbonate (CO3)	mg/L	<1.0	<1.0	1.0	<1.0	1.0	A696661
Hydroxide (OH)	mg/L	<1.0	<1.0	1.0	<1.0	1.0	A696661
Physical Properties							
Turbidity	NTU	1.7	5.4	0.10	<0.10	0.10	A695337

RDL = Reportable Detection Limit
N/A = Not Applicable

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	2.1°C

Sample BAJ609, Elements by ICPMS-Dissolved-Lab Filtered: Test repeated.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A695110	Dissolved Barium (Ba)	2022/08/26	100	80 - 120	97	80 - 120	<0.010	mg/L	1.3	20
A695110	Dissolved Boron (B)	2022/08/26	104	80 - 120	98	80 - 120	<0.020	mg/L	NC	20
A695110	Dissolved Calcium (Ca)	2022/08/26	101	80 - 120	99	80 - 120	<0.30	mg/L	1.1	20
A695110	Dissolved Iron (Fe)	2022/08/26	107	80 - 120	101	80 - 120	<0.060	mg/L	NC	20
A695110	Dissolved Lithium (Li)	2022/08/26	100	80 - 120	96	80 - 120	<0.020	mg/L	NC	20
A695110	Dissolved Magnesium (Mg)	2022/08/26	104	80 - 120	100	80 - 120	<0.20	mg/L	1.0	20
A695110	Dissolved Manganese (Mn)	2022/08/26	107	80 - 120	102	80 - 120	<0.0040	mg/L	NC	20
A695110	Dissolved Phosphorus (P)	2022/08/26	104	80 - 120	97	80 - 120	<0.10	mg/L	NC	20
A695110	Dissolved Potassium (K)	2022/08/26	108	80 - 120	102	80 - 120	<0.30	mg/L	2.1	20
A695110	Dissolved Silicon (Si)	2022/08/26	99	80 - 120	96	80 - 120	<0.10	mg/L	2.2	20
A695110	Dissolved Sodium (Na)	2022/08/26	103	80 - 120	100	80 - 120	<0.50	mg/L	0.98	20
A695110	Dissolved Strontium (Sr)	2022/08/26	96	80 - 120	95	80 - 120	<0.020	mg/L	1.2	20
A695110	Dissolved Sulphur (S)	2022/08/26	106	80 - 120	96	80 - 120	<0.20	mg/L	1.7	20
A695111	Dissolved Barium (Ba)	2022/08/26	100	80 - 120	95	80 - 120	<0.010	mg/L	NC	20
A695111	Dissolved Boron (B)	2022/08/26	105	80 - 120	96	80 - 120	<0.020	mg/L	NC	20
A695111	Dissolved Calcium (Ca)	2022/08/26	106	80 - 120	98	80 - 120	<0.30	mg/L	4.5	20
A695111	Dissolved Iron (Fe)	2022/08/26	109	80 - 120	96	80 - 120	<0.060	mg/L	17	20
A695111	Dissolved Lithium (Li)	2022/08/26	102	80 - 120	95	80 - 120	<0.020	mg/L	NC	20
A695111	Dissolved Magnesium (Mg)	2022/08/26	107	80 - 120	98	80 - 120	<0.20	mg/L	5.2	20
A695111	Dissolved Manganese (Mn)	2022/08/26	109	80 - 120	96	80 - 120	<0.0040	mg/L	6.3	20
A695111	Dissolved Phosphorus (P)	2022/08/26	107	80 - 120	93	80 - 120	<0.10	mg/L	NC	20
A695111	Dissolved Potassium (K)	2022/08/26	108	80 - 120	101	80 - 120	<0.30	mg/L	7.6	20
A695111	Dissolved Silicon (Si)	2022/08/26	102	80 - 120	91	80 - 120	<0.10	mg/L	11	20
A695111	Dissolved Sodium (Na)	2022/08/26	105	80 - 120	99	80 - 120	<0.50	mg/L	5.2	20
A695111	Dissolved Strontium (Sr)	2022/08/26	97	80 - 120	93	80 - 120	<0.020	mg/L	1.4	20
A695111	Dissolved Sulphur (S)	2022/08/26	110	80 - 120	93	80 - 120	<0.20	mg/L	11	20
A695193	Dissolved Aluminum (Al)	2022/08/26	114	80 - 120	120	80 - 120	<0.0030	mg/L	0	20
A695193	Dissolved Antimony (Sb)	2022/08/26	103	80 - 120	96	80 - 120	<0.00060	mg/L	NC	20
A695193	Dissolved Arsenic (As)	2022/08/26	96	80 - 120	97	80 - 120	<0.00020	mg/L	0.16	20
A695193	Dissolved Beryllium (Be)	2022/08/26	107	80 - 120	103	80 - 120	<0.0010	mg/L	NC	20
A695193	Dissolved Chromium (Cr)	2022/08/26	100	80 - 120	101	80 - 120	<0.0010	mg/L	NC	20
A695193	Dissolved Cobalt (Co)	2022/08/26	99	80 - 120	99	80 - 120	<0.00030	mg/L	NC	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A695193	Dissolved Copper (Cu)	2022/08/26	99	80 - 120	98	80 - 120	<0.0010	mg/L	3.7	20
A695193	Dissolved Lead (Pb)	2022/08/26	103	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
A695193	Dissolved Molybdenum (Mo)	2022/08/26	100	80 - 120	92	80 - 120	<0.00020	mg/L	NC	20
A695193	Dissolved Nickel (Ni)	2022/08/26	98	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
A695193	Dissolved Selenium (Se)	2022/08/26	98	80 - 120	93	80 - 120	<0.00020	mg/L	NC	20
A695193	Dissolved Silver (Ag)	2022/08/26	99	80 - 120	91	80 - 120	<0.00010	mg/L	NC	20
A695193	Dissolved Thallium (Tl)	2022/08/26	105	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
A695193	Dissolved Tin (Sn)	2022/08/26	100	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
A695193	Dissolved Titanium (Ti)	2022/08/26	103	80 - 120	110	80 - 120	<0.0010	mg/L	NC	20
A695193	Dissolved Uranium (U)	2022/08/26	100	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
A695193	Dissolved Vanadium (V)	2022/08/26	102	80 - 120	103	80 - 120	<0.0010	mg/L	NC	20
A695193	Dissolved Zinc (Zn)	2022/08/26	102	80 - 120	99	80 - 120	<0.0030	mg/L	7.2	20
A695337	Turbidity	2022/08/26			103	80 - 120	<0.10	NTU	0.93	20
A696596	Alkalinity (PP as CaCO3)	2022/08/27					<1.0	mg/L	NC	20
A696596	Alkalinity (Total as CaCO3)	2022/08/27			96	80 - 120	<1.0	mg/L	1.0	20
A696596	Bicarbonate (HCO3)	2022/08/27					<1.0	mg/L	1.0	20
A696596	Carbonate (CO3)	2022/08/27					<1.0	mg/L	NC	20
A696596	Hydroxide (OH)	2022/08/27					<1.0	mg/L	NC	20
A696611	pH	2022/08/27			100	97 - 103			1.2	N/A
A696661	Alkalinity (PP as CaCO3)	2022/08/27					<1.0	mg/L	NC	20
A696661	Alkalinity (Total as CaCO3)	2022/08/27			96	80 - 120	<1.0	mg/L	8.2	20
A696661	Bicarbonate (HCO3)	2022/08/27					<1.0	mg/L	8.2	20
A696661	Carbonate (CO3)	2022/08/27					<1.0	mg/L	NC	20
A696661	Hydroxide (OH)	2022/08/27					<1.0	mg/L	NC	20
A696662	pH	2022/08/27			99	97 - 103			1.0	N/A
A697333	Total Suspended Solids	2022/08/29	98	80 - 120	95	80 - 120	<1.0	mg/L	3.2	20
A698673	Total Suspended Solids	2022/08/30	95	80 - 120	95	80 - 120	<1.0	mg/L	NC	20
A698775	Total Aluminum (Al)	2022/08/30	98	80 - 120	95	80 - 120	<0.0030	mg/L	3.5	20
A698775	Total Antimony (Sb)	2022/08/30	100	80 - 120	95	80 - 120	<0.00060	mg/L	8.7	20
A698775	Total Arsenic (As)	2022/08/30	93	80 - 120	90	80 - 120	<0.00020	mg/L	5.8	20
A698775	Total Beryllium (Be)	2022/08/30	100	80 - 120	95	80 - 120	<0.0010	mg/L	NC	20
A698775	Total Chromium (Cr)	2022/08/30	96	80 - 120	94	80 - 120	<0.0010	mg/L	10	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A698775	Total Cobalt (Co)	2022/08/30	96	80 - 120	94	80 - 120	<0.00030	mg/L	6.6	20
A698775	Total Copper (Cu)	2022/08/30	96	80 - 120	94	80 - 120	<0.0010	mg/L	8.3	20
A698775	Total Lead (Pb)	2022/08/30	97	80 - 120	94	80 - 120	<0.00020	mg/L	2.6	20
A698775	Total Molybdenum (Mo)	2022/08/30	99	80 - 120	94	80 - 120	<0.00020	mg/L	6.5	20
A698775	Total Nickel (Ni)	2022/08/30	96	80 - 120	94	80 - 120	<0.00050	mg/L	3.9	20
A698775	Total Selenium (Se)	2022/08/30	97	80 - 120	94	80 - 120	<0.00020	mg/L	18	20
A698775	Total Silver (Ag)	2022/08/30	97	80 - 120	93	80 - 120	<0.00010	mg/L	NC	20
A698775	Total Thallium (Tl)	2022/08/30	96	80 - 120	93	80 - 120	<0.00020	mg/L	NC	20
A698775	Total Tin (Sn)	2022/08/30	99	80 - 120	93	80 - 120	<0.0010	mg/L	NC	20
A698775	Total Titanium (Ti)	2022/08/30	98	80 - 120	95	80 - 120	<0.0010	mg/L	0.41	20
A698775	Total Uranium (U)	2022/08/30	98	80 - 120	93	80 - 120	<0.00010	mg/L	6.3	20
A698775	Total Vanadium (V)	2022/08/30	97	80 - 120	96	80 - 120	<0.0010	mg/L	1.1	20
A698775	Total Zinc (Zn)	2022/08/30	96	80 - 120	94	80 - 120	<0.0030	mg/L	28 (1)	20
A698791	Total Barium (Ba)	2022/08/30	109	80 - 120	111	80 - 120	<0.010	mg/L	1.3	20
A698791	Total Boron (B)	2022/08/30	106	80 - 120	108	80 - 120	<0.020	mg/L	0.22	20
A698791	Total Calcium (Ca)	2022/08/30	98	80 - 120	100	80 - 120	<0.30	mg/L	0.69	20
A698791	Total Iron (Fe)	2022/08/30	101	80 - 120	102	80 - 120	<0.060	mg/L	4.8	20
A698791	Total Lithium (Li)	2022/08/30	94	80 - 120	97	80 - 120	<0.020	mg/L	NC	20
A698791	Total Magnesium (Mg)	2022/08/30	104	80 - 120	105	80 - 120	<0.20	mg/L	0.50	20
A698791	Total Manganese (Mn)	2022/08/30	99	80 - 120	100	80 - 120	<0.0040	mg/L	0.71	20
A698791	Total Phosphorus (P)	2022/08/30	100	80 - 120	101	80 - 120	<0.10	mg/L	NC	20
A698791	Total Potassium (K)	2022/08/30	100	80 - 120	102	80 - 120	<0.30	mg/L	0.93	20
A698791	Total Silicon (Si)	2022/08/30	100	80 - 120	101	80 - 120	<0.13	mg/L	3.2	20
A698791	Total Sodium (Na)	2022/08/30	98	80 - 120	100	80 - 120	<0.50	mg/L	2.4	20
A698791	Total Strontium (Sr)	2022/08/30	105	80 - 120	107	80 - 120	<0.020	mg/L	1.4	20
A698791	Total Sulphur (S)	2022/08/30	97	80 - 120	99	80 - 120	<0.20	mg/L	0.68	20
A699023	Total Aluminum (Al)	2022/08/31	112	80 - 120	113	80 - 120	<0.0034	mg/L	4.5	20
A699023	Total Antimony (Sb)	2022/08/31	101	80 - 120	99	80 - 120	<0.00060	mg/L	NC	20
A699023	Total Arsenic (As)	2022/08/31	99	80 - 120	96	80 - 120	<0.00020	mg/L	1.0	20
A699023	Total Beryllium (Be)	2022/08/31	102	80 - 120	101	80 - 120	<0.0010	mg/L	NC	20
A699023	Total Chromium (Cr)	2022/08/31	104	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
A699023	Total Cobalt (Co)	2022/08/31	102	80 - 120	98	80 - 120	<0.00030	mg/L	2.6	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A699023	Total Copper (Cu)	2022/08/31	101	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20
A699023	Total Lead (Pb)	2022/08/31	106	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
A699023	Total Molybdenum (Mo)	2022/08/31	98	80 - 120	96	80 - 120	<0.00020	mg/L	4.9	20
A699023	Total Nickel (Ni)	2022/08/31	101	80 - 120	98	80 - 120	<0.00050	mg/L	6.1	20
A699023	Total Selenium (Se)	2022/08/31	102	80 - 120	100	80 - 120	<0.00020	mg/L	0.46	20
A699023	Total Silver (Ag)	2022/08/31	98	80 - 120	96	80 - 120	<0.00010	mg/L	NC	20
A699023	Total Thallium (Tl)	2022/08/31	104	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
A699023	Total Tin (Sn)	2022/08/31	101	80 - 120	93	80 - 120	<0.0010	mg/L	NC	20
A699023	Total Titanium (Ti)	2022/08/31	111	80 - 120	106	80 - 120	<0.0010	mg/L	NC	20
A699023	Total Uranium (U)	2022/08/31	112	80 - 120	108	80 - 120	<0.00010	mg/L	2.5	20
A699023	Total Vanadium (V)	2022/08/31	106	80 - 120	101	80 - 120	<0.0010	mg/L	NC	20
A699023	Total Zinc (Zn)	2022/08/31	102	80 - 120	99	80 - 120	<0.0030	mg/L	NC	20
A699031	Total Barium (Ba)	2022/08/31	104	80 - 120	104	80 - 120	<0.010	mg/L	1.2	20
A699031	Total Boron (B)	2022/08/31	103	80 - 120	101	80 - 120	<0.020	mg/L	4.0	20
A699031	Total Calcium (Ca)	2022/08/31	NC	80 - 120	102	80 - 120	<0.30	mg/L	1.9	20
A699031	Total Iron (Fe)	2022/08/31	108	80 - 120	105	80 - 120	<0.060	mg/L	1.1	20
A699031	Total Lithium (Li)	2022/08/31	102	80 - 120	98	80 - 120	<0.020	mg/L	0.69	20
A699031	Total Magnesium (Mg)	2022/08/31	NC	80 - 120	108	80 - 120	<0.20	mg/L	1.3	20
A699031	Total Manganese (Mn)	2022/08/31	103	80 - 120	101	80 - 120	<0.0040	mg/L	1.8	20
A699031	Total Phosphorus (P)	2022/08/31	103	80 - 120	101	80 - 120	<0.10	mg/L	9.2	20
A699031	Total Potassium (K)	2022/08/31	106	80 - 120	101	80 - 120	<0.30	mg/L	1.2	20
A699031	Total Silicon (Si)	2022/08/31	103	80 - 120	102	80 - 120	<0.10	mg/L	2.0	20
A699031	Total Sodium (Na)	2022/08/31	NC	80 - 120	98	80 - 120	<0.50	mg/L	0.57	20
A699031	Total Strontium (Sr)	2022/08/31	102	80 - 120	100	80 - 120	<0.020	mg/L	0.92	20
A699031	Total Sulphur (S)	2022/08/31	NC	80 - 120	96	80 - 120	<0.20	mg/L	1.7	20
A699035	Total Aluminum (Al)	2022/08/31	103	80 - 120	108	80 - 120	<0.0030	mg/L	10	20
A699035	Total Antimony (Sb)	2022/08/31	102	80 - 120	103	80 - 120	<0.00060	mg/L	NC	20
A699035	Total Arsenic (As)	2022/08/31	92	80 - 120	95	80 - 120	<0.00020	mg/L	6.0	20
A699035	Total Beryllium (Be)	2022/08/31	101	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
A699035	Total Chromium (Cr)	2022/08/31	94	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20
A699035	Total Cobalt (Co)	2022/08/31	94	80 - 120	96	80 - 120	<0.00030	mg/L	NC	20
A699035	Total Copper (Cu)	2022/08/31	93	80 - 120	95	80 - 120	<0.0010	mg/L	0.46	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A699035	Total Lead (Pb)	2022/08/31	100	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
A699035	Total Molybdenum (Mo)	2022/08/31	102	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
A699035	Total Nickel (Ni)	2022/08/31	92	80 - 120	95	80 - 120	<0.00050	mg/L	NC	20
A699035	Total Selenium (Se)	2022/08/31	97	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
A699035	Total Silver (Ag)	2022/08/31	96	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20
A699035	Total Thallium (Tl)	2022/08/31	99	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
A699035	Total Tin (Sn)	2022/08/31	102	80 - 120	102	80 - 120	<0.0010	mg/L	NC	20
A699035	Total Titanium (Ti)	2022/08/31	100	80 - 120	101	80 - 120	<0.0010	mg/L	8.8	20
A699035	Total Uranium (U)	2022/08/31	101	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20
A699035	Total Vanadium (V)	2022/08/31	96	80 - 120	98	80 - 120	<0.0010	mg/L	NC	20
A699035	Total Zinc (Zn)	2022/08/31	96	80 - 120	97	80 - 120	<0.0030	mg/L	2.0	20
A699037	Total Barium (Ba)	2022/08/31	101	80 - 120	100	80 - 120	<0.010	mg/L	NC	20
A699037	Total Boron (B)	2022/08/31	102	80 - 120	103	80 - 120	<0.020	mg/L	NC	20
A699037	Total Calcium (Ca)	2022/08/31	105	80 - 120	102	80 - 120	<0.30	mg/L	3.2	20
A699037	Total Iron (Fe)	2022/08/31	NC	80 - 120	104	80 - 120	<0.060	mg/L	1.2	20
A699037	Total Lithium (Li)	2022/08/31	102	80 - 120	103	80 - 120	<0.020	mg/L	NC	20
A699037	Total Magnesium (Mg)	2022/08/31	104	80 - 120	102	80 - 120	<0.20	mg/L	3.3	20
A699037	Total Manganese (Mn)	2022/08/31	103	80 - 120	104	80 - 120	<0.0040	mg/L	2.1	20
A699037	Total Phosphorus (P)	2022/08/31	98	80 - 120	98	80 - 120	<0.10	mg/L	NC	20
A699037	Total Potassium (K)	2022/08/31	106	80 - 120	107	80 - 120	<0.30	mg/L	4.2	20
A699037	Total Silicon (Si)	2022/08/31	100	80 - 120	100	80 - 120	<0.14	mg/L	3.1	20
A699037	Total Sodium (Na)	2022/08/31	101	80 - 120	102	80 - 120	<0.50	mg/L	3.1	20
A699037	Total Strontium (Sr)	2022/08/31	98	80 - 120	97	80 - 120	<0.020	mg/L	2.7	20
A699037	Total Sulphur (S)	2022/08/31	98	80 - 120	94	80 - 120	<0.20	mg/L	3.0	20
A703421	Dissolved Copper (Cu)	2022/09/02	91	80 - 120	108	80 - 120	<0.0010	mg/L	6.2	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A703421	Dissolved Zinc (Zn)	2022/09/02	98	80 - 120	105	80 - 120	<0.0030	mg/L	NC	20

N/A = Not Applicable

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

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

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

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

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

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

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

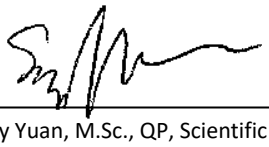
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VALIDATION SIGNATURE PAGE

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



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



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



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

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Automated Statchk

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvna.com

1247

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#7500 KGS Group	Company Name:	KGS Group	Quotation #:	C20090	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Ganga Atmuri/Ed Collins	P.O. #:		C263842	672616
Address:	3rd Floor 865 Waverly St Winnipeg MB R3T 5T4	Address:	3rd Floor 865 Waverly St WPG, MB R3T 5T4	Project:	21-1357-005	COC #:	Project Manager:
Tel:	(204) 896-1209 Fax:	Tel:	(204) 896-1209 Fax:	Project Name:		C#672616-01-01	Janelle Kochan
Email:	payables@kgsgroup.com	Email:	gatmuri@kgsgroup.com,ecollins@kgsgroup.com	Site #:	OAM - Sherridon Mine Site		
				Sampled By:	ED/TH		

Regulatory Criteria:
- [ ] ATI
- [ ] CCME
- [x] Other MWQSOG

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: [x]
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission)
Date Required:
Rush Confirmation Number: *(call lab for #)* [ ]

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	pH @25°C	Alkalinity @25C (pp, total), CO3,HCO3,OH	Total Suspended Solids (NFR)	Turbidity	Regulated Metals (CCME/AT1) - Total	Reg. Metals (CCME/AT1) – Diss. Lab Filt.	Hardness	Hardness Total (calculated as CaCO3)			# of Bottles	Comments
1		CL-6	23-Aug-2022	08:05	SW	N	x	x	x	x	x	x	x	x			4	
2		CL-5		08:10		N	x	x	x	x	x	x	x	x			4	
3		CL-4		08:20		N	x	x	x	x	x	x	x	x			4	
4		CL-8		08:25		N	x	x	x	x	x	x	x	x			4	
5		CL-3		08:30		N	x	x	x	x	x	x	x	x			4	
6		CL-7		08:45		N	x	x	x	x	x	x	x	x			4	
7		CL-2		08:55		N	x	x	x	x	x	x	x	x			4	
8		SB-2		09:10		N	x	x	x	x	x	x	x	x			4	
9		SB-1		09:15		N	x	x	x	x	x	x	x	x			4	
10		CB-1	↓	09:20	↓	N	x	x	x	x	x	x	x	x			4	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
I. Benson	22/08/24	11:40	Amanjit Brar	2022/08/24	1145	
			Jotika RAJ	2022/08/25	08:30	

Laboratory Use Only

Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
[ ]	1.3/1.9/3.0	[ ] Yes [ ] No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.
** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

White: Bureau Veritas Yellow: Client

Temp: 6, 6, 4
: 5, 4, 3
ICE-YES
ICE: YES
CS: YES

Bureau Veritas Canada (2019) Inc.

Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvna.com

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#7500 KGS Group	Company Name:	KGS Group	Quotation #:	C20090	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Ganga Atmuri/Ed Collins	P.O. #:		C263842	672616
Address:	3rd Floor 865 Waverly St Winnipeg MB R3T 5T4	Address:	865 Waverly St Wpg MB R3T 5T4	Project:	21-1357-005	COC #:	Project Manager:
Tel:	(204) 896-1209 Fax:	Tel:	(204) 896-1209 Fax:	Project Name:		C#672616-02-01	Janelle Kochan
Email:	payables@kgsgroup.com	Email:	gatmuri@kgsgroup.com,ecollins@kgsgroup.com	Site #:	OAM - Sherridon Mine Site		
				Sampled By:	ID/TH		

Regulatory Criteria:
- [ ] ATI
- [ ] CCME
- [x] Other MWQSOG

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10ºC) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: [X]
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission) [ ]
Date Required:
Rush Confirmation Number: *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	pH @25°C	Alkalinity @25C (pp, total), CO3,HCO3,OH	Total Suspended Solids (NFR)	Turbidity	Regulated Metals (CCME/AT1) - Total	Reg. Metals (CCME/AT1) – Diss. Lab Filt.	Hardness	Hardness Total (calculated as CaCO3)			# of Bottles	Comments
1		CB-2	23-Aug-2022	09:25	SW	N	X	X	X	X	X	X	X	X			4	
2		EB-1		09:40		N	X	X	X	X	X	X	X	X			4	
3		EB-2		09:45		N	X	X	X	X	X	X	X	X			4	
4		NB-2		09:50		N	X	X	X	X	X	X	X	X			4	
5		NB-1		09:55		N	X	X	X	X	X	X	X	X			4	
6		CLD		10:00		N	X	X	X	X	X	X	X	X			4	
7		SC-1		10:15		N	X	X	X	X	X	X	X	X			4	
8		SW-112		12:00		N	X	X	X	X	X	X	X	X			4	
9		SW-109		12:10		N	X	X	X	X	X	X	X	X			4	
10		TRIP BLANK	—	—	—	—	X	X	X	X	X	X	X	X			4	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
T. Bruni	22/08/24	11:40	Amanja Brar	2022/08/24	1145	
			John RAJU	2022/08/25	08:30	

Laboratory Use Only

Time Sensitive	Temperature (ºC) on Receipt	Custody Seal Intact on Cooler?
[ ]	0.9/1.0/0.7	[ ] Yes [ ] No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.
** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

White: Bureau Veritas Yellow: Client

Bpb : 6, 6, 4
5, 4, 3
TLE: YES
ICE-YES

Bureau Veritas Canada (2019) Inc.

Your Project #: 21-1357-005
Site#: OAM - Sherridon Mine Site
Your C.O.C. #: 673906-02-01, 673906-01-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/09/18
Report #: R3234181
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C269767
Received: 2022/09/12, 08:30

Sample Matrix: Water
Samples Received: 20

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH (1)	20	N/A	2022/09/14	AB SOP-00005	SM 23 2320 B m
Cadmium - low level CCME - Dissolved (1)	9	N/A	2022/09/15		Auto Calc
Cadmium - low level CCME - Dissolved (1)	11	N/A	2022/09/17		Auto Calc
Cadmium - low level CCME (Total) (1)	2	N/A	2022/09/14		Auto Calc
Cadmium - low level CCME (Total) (1)	17	N/A	2022/09/15		Auto Calc
Cadmium - low level CCME (Total) (1)	1	N/A	2022/09/16		Auto Calc
Hardness (1)	20	N/A	2022/09/15		Auto Calc
Hardness Total (calculated as CaCO3) (1, 2)	7	N/A	2022/09/14	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3) (1, 2)	12	N/A	2022/09/15	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3) (1, 2)	1	N/A	2022/09/16	BBY WI-00033	Auto Calc
Elements by ICP-Dissolved-Lab Filtered (1, 3)	19	N/A	2022/09/14	AB SOP-00042	EPA 6010d R5 m
Elements by ICP-Dissolved-Lab Filtered (1, 3)	1	N/A	2022/09/15	AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Total (1)	19	2022/09/14	2022/09/14	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Total (1)	1	2022/09/14	2022/09/15	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Elements by ICPMS-Dissolved-Lab Filtered (1, 4)	9	N/A	2022/09/14	AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS-Dissolved-Lab Filtered (1, 4)	11	N/A	2022/09/15	AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total (1)	14	2022/09/14	2022/09/14	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total (1)	6	2022/09/14	2022/09/15	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
pH @25°C (1, 5)	20	N/A	2022/09/14	AB SOP-00005	SM 23 4500-H+B m
Total Suspended Solids (NFR) (1)	20	2022/09/15	2022/09/15	AB SOP-00061	SM 23 2540 D m
Turbidity (1)	20	N/A	2022/09/14	CAL SOP-00081	SM 23 2130 B m

Remarks:

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

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in

Your Project #: 21-1357-005
Site#: OAM - Sherridon Mine Site
Your C.O.C. #: 673906-02-01, 673906-01-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/09/18
Report #: R3234181
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C269767

Received: 2022/09/12, 08:30

writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

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

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

(1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8
(2) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(3) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(4) Samples were filtered and preserved at the lab. Values may not reflect concentrations at the time of sampling. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(5) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Janelle Kochan, B.Sc., Key Account Specialist
Email: Janelle.KOCHAN@bureauveritas.com
Phone# (204)259-0231

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BBS009	BBS010	BBS011	BBS012	BBS013	BBS014		
Sampling Date		2022/09/09 08:20	2022/09/09 08:25	2022/09/09 08:35	2022/09/09 08:45	2022/09/09 08:50	2022/09/09 08:55		
COC Number		673906-02-01	673906-02-01	673906-02-01	673906-02-01	673906-02-01	673906-02-01		
	UNITS	**CL-6**	**CL-5**	**CL-4**	**CL-8**	**CL-3**	**CL-7**	**RDL**	**QC Batch**
Elements									
Dissolved Cadmium (Cd)	ug/L	<0.020	0.020	0.035	0.028	0.031	0.024	0.020	A713469
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	0.023	0.019	0.029	0.028	0.023	0.019	0.0030	A715279
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	0.00060	A715279
Dissolved Arsenic (As)	mg/L	0.00049	0.00046	0.00038	0.00039	0.00042	0.00037	0.00020	A715279
Dissolved Barium (Ba)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	A715015
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A715279
Dissolved Boron (B)	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	A715015
Dissolved Calcium (Ca)	mg/L	11	12	13	13	13	13	0.30	A715015
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A715279
Dissolved Cobalt (Co)	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	0.00030	A715279
Dissolved Copper (Cu)	mg/L	0.0047	0.0054	0.0053	0.0058	0.0048	0.0054	0.0010	A715279
Dissolved Iron (Fe)	mg/L	0.099	0.16	0.25	0.25	0.24	0.23	0.060	A715015
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A715279
Dissolved Lithium (Li)	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	A715015
Dissolved Magnesium (Mg)	mg/L	3.1	3.2	3.2	3.3	3.3	3.3	0.20	A715015
Dissolved Manganese (Mn)	mg/L	<0.0040	<0.0040	0.010	<0.0040	<0.0040	<0.0040	0.0040	A715015
Dissolved Molybdenum (Mo)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A715279
Dissolved Nickel (Ni)	mg/L	<0.00050	<0.00050	<0.00050	0.00053	<0.00050	<0.00050	0.00050	A715279
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	A715015
Dissolved Potassium (K)	mg/L	1.4	1.5	1.5	1.6	1.5	1.5	0.30	A715015
Dissolved Selenium (Se)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A715279
Dissolved Silicon (Si)	mg/L	0.66	0.79	0.96	0.93	0.88	0.87	0.50	A715015
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A715279
Dissolved Sodium (Na)	mg/L	1.9	2.0	2.0	2.2	1.9	1.9	0.50	A715015
Dissolved Strontium (Sr)	mg/L	0.027	0.028	0.028	0.028	0.028	0.028	0.020	A715015
Dissolved Sulphur (S)	mg/L	4.6	5.2	5.5	5.9	5.8	5.8	0.20	A715015
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A715279
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A715279
Dissolved Titanium (Ti)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A715279
Dissolved Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A715279

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BBS009	BBS010	BBS011	BBS012	BBS013	BBS014		
Sampling Date		2022/09/09 08:20	2022/09/09 08:25	2022/09/09 08:35	2022/09/09 08:45	2022/09/09 08:50	2022/09/09 08:55		
COC Number		673906-02-01	673906-02-01	673906-02-01	673906-02-01	673906-02-01	673906-02-01		
	UNITS	**CL-6**	**CL-5**	**CL-4**	**CL-8**	**CL-3**	**CL-7**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A715279
Dissolved Zinc (Zn)	mg/L	0.0093	0.011	0.014	0.014	0.012	0.012	0.0030	A715279
RDL = Reportable Detection Limit									

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BBS015	BBS016			BBS017	BBS018		
Sampling Date		2022/09/09 09:05	2022/09/09 09:30			2022/09/09 10:00	2022/09/09 10:05		
COC Number		673906-02-01	673906-02-01			673906-02-01	673906-02-01		
	UNITS	**CL-2**	**SB-2**	**RDL**	**QC Batch**	**SB-1**	**CB-1**	**RDL**	**QC Batch**
Elements									
Dissolved Cadmium (Cd)	ug/L	0.10	0.30	0.020	A713469	0.36	0.36	0.020	A713469
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	0.035	0.0058	0.0030	A715279	0.0086	0.0098	0.0044	A716056
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	0.00060	A715279	<0.00060	<0.00060	0.00060	A716056
Dissolved Arsenic (As)	mg/L	0.00036	0.00026	0.00020	A715279	0.00021	<0.00020	0.00020	A716056
Dissolved Barium (Ba)	mg/L	0.013	0.013	0.010	A715015	0.013	0.013	0.010	A715926
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	0.0010	A715279	<0.0010	<0.0010	0.0010	A716056
Dissolved Boron (B)	mg/L	<0.020	<0.020	0.020	A715015	<0.020	<0.020	0.020	A715926
Dissolved Calcium (Ca)	mg/L	15	47	0.30	A715015	45	47	0.30	A715926
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010	0.0010	A715279	<0.0010	<0.0010	0.0010	A716056
Dissolved Cobalt (Co)	mg/L	<0.00030	<0.00030	0.00030	A715279	<0.00030	<0.00030	0.00030	A716056
Dissolved Copper (Cu)	mg/L	0.0070	0.0074	0.0010	A715279	0.0070	0.0070	0.0010	A716056
Dissolved Iron (Fe)	mg/L	1.0	1.2	0.060	A715015	1.1	0.99	0.060	A715926
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	0.00020	A715279	<0.00020	<0.00020	0.00020	A716056
Dissolved Lithium (Li)	mg/L	<0.020	<0.020	0.020	A715015	<0.020	<0.020	0.020	A715926
Dissolved Magnesium (Mg)	mg/L	3.5	7.7	0.20	A715015	7.3	7.6	0.20	A715926
Dissolved Manganese (Mn)	mg/L	0.24	0.064	0.0040	A715015	0.058	0.057	0.0040	A715926
Dissolved Molybdenum (Mo)	mg/L	<0.00020	<0.00020	0.00020	A715279	<0.00020	<0.00020	0.00020	A716056
Dissolved Nickel (Ni)	mg/L	<0.00050	0.0011	0.00050	A715279	0.0011	0.0012	0.00050	A716056
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	0.10	A715015	<0.10	<0.10	0.10	A715926
Dissolved Potassium (K)	mg/L	1.6	3.6	0.30	A715015	3.4	3.6	0.30	A715926
Dissolved Selenium (Se)	mg/L	<0.00020	<0.00020	0.00020	A715279	<0.00020	<0.00020	0.00020	A716056
Dissolved Silicon (Si)	mg/L	1.7	1.3	0.50	A715015	1.2	1.2	0.50	A715926
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	0.00010	A715279	<0.00010	<0.00010	0.00010	A716056
Dissolved Sodium (Na)	mg/L	2.0	2.9	0.50	A715015	2.7	2.8	0.50	A715926
Dissolved Strontium (Sr)	mg/L	0.030	0.053	0.020	A715015	0.051	0.052	0.020	A715926
Dissolved Sulphur (S)	mg/L	7.8	44	0.20	A715015	43	45	0.20	A715926
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	0.00020	A715279	<0.00020	<0.00020	0.00020	A716056
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	0.0010	A715279	<0.0010	<0.0010	0.0010	A716056
Dissolved Titanium (Ti)	mg/L	<0.0010	<0.0010	0.0010	A715279	<0.0010	<0.0010	0.0010	A716056
Dissolved Uranium (U)	mg/L	<0.00010	<0.00010	0.00010	A715279	<0.00010	<0.00010	0.00010	A716056

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BBS015	BBS016			BBS017	BBS018		
Sampling Date		2022/09/09 09:05	2022/09/09 09:30			2022/09/09 10:00	2022/09/09 10:05		
COC Number		673906-02-01	673906-02-01			673906-02-01	673906-02-01		
	UNITS	**CL-2**	**SB-2**	**RDL**	**QC Batch**	**SB-1**	**CB-1**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	0.0010	A715279	<0.0010	<0.0010	0.0010	A716056
Dissolved Zinc (Zn)	mg/L	0.035	0.092	0.0030	A715279	0.11	0.11	0.0030	A716056
RDL = Reportable Detection Limit									

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BBS018			BBS028			BBS029		
Sampling Date		2022/09/09 10:05			2022/09/09 10:15			2022/09/09 10:20		
COC Number		673906-02-01			673906-01-01			673906-01-01		
	UNITS	CB-1 Lab-Dup	RDL	QC Batch	CB-2	RDL	QC Batch	EB-1	RDL	QC Batch
Elements										
Dissolved Cadmium (Cd)	ug/L				0.32	0.020	A713469	0.45	0.020	A713469
Lab Filtered Elements										
Dissolved Aluminum (Al)	mg/L				0.0071	0.0030	A715279	0.010	0.0044	A716056
Dissolved Antimony (Sb)	mg/L				<0.00060	0.00060	A715279	<0.00060	0.00060	A716056
Dissolved Arsenic (As)	mg/L				0.00028	0.00020	A715279	<0.00020	0.00020	A716056
Dissolved Barium (Ba)	mg/L	0.013	0.010	A715926	0.013	0.010	A715015	0.014	0.010	A715926
Dissolved Beryllium (Be)	mg/L				<0.0010	0.0010	A715279	<0.0010	0.0010	A716056
Dissolved Boron (B)	mg/L	<0.020	0.020	A715926	<0.020	0.020	A715015	<0.020	0.020	A715926
Dissolved Calcium (Ca)	mg/L	46	0.30	A715926	48	0.30	A715015	51	0.30	A715926
Dissolved Chromium (Cr)	mg/L				<0.0010	0.0010	A715279	<0.0010	0.0010	A716056
Dissolved Cobalt (Co)	mg/L				<0.00030	0.00030	A715279	<0.00030	0.00030	A716056
Dissolved Copper (Cu)	mg/L				0.0072	0.0010	A715279	0.0079	0.0010	A716056
Dissolved Iron (Fe)	mg/L	1.0	0.060	A715926	1.1	0.060	A715015	0.62	0.060	A715926
Dissolved Lead (Pb)	mg/L				<0.00020	0.00020	A715279	<0.00020	0.00020	A716056
Dissolved Lithium (Li)	mg/L	<0.020	0.020	A715926	<0.020	0.020	A715015	<0.020	0.020	A715926
Dissolved Magnesium (Mg)	mg/L	7.4	0.20	A715926	7.7	0.20	A715015	8.0	0.20	A715926
Dissolved Manganese (Mn)	mg/L	0.057	0.0040	A715926	0.058	0.0040	A715015	0.039	0.0040	A715926
Dissolved Molybdenum (Mo)	mg/L				<0.00020	0.00020	A715279	<0.00020	0.00020	A716056
Dissolved Nickel (Ni)	mg/L				0.0011	0.00050	A715279	0.0013	0.00050	A716056
Dissolved Phosphorus (P)	mg/L	<0.10	0.10	A715926	<0.10	0.10	A715015	<0.10	0.10	A715926
Dissolved Potassium (K)	mg/L	3.5	0.30	A715926	3.7	0.30	A715015	3.7	0.30	A715926
Dissolved Selenium (Se)	mg/L				<0.00020	0.00020	A715279	<0.00020	0.00020	A716056
Dissolved Silicon (Si)	mg/L	1.2	0.50	A715926	1.2	0.50	A715015	0.97	0.50	A715926
Dissolved Silver (Ag)	mg/L				<0.00010	0.00010	A715279	<0.00010	0.00010	A716056
Dissolved Sodium (Na)	mg/L	2.8	0.50	A715926	2.8	0.50	A715015	2.9	0.50	A715926
Dissolved Strontium (Sr)	mg/L	0.051	0.020	A715926	0.053	0.020	A715015	0.055	0.020	A715926
Dissolved Sulphur (S)	mg/L	44	0.20	A715926	44	0.20	A715015	48	0.20	A715926
Dissolved Thallium (Tl)	mg/L				<0.00020	0.00020	A715279	<0.00020	0.00020	A716056
Dissolved Tin (Sn)	mg/L				<0.0010	0.0010	A715279	<0.0010	0.0010	A716056
Dissolved Titanium (Ti)	mg/L				<0.0010	0.0010	A715279	<0.0010	0.0010	A716056
Dissolved Uranium (U)	mg/L				<0.00010	0.00010	A715279	<0.00010	0.00010	A716056

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BBS018			BBS028			BBS029		
Sampling Date		2022/09/09 10:05			2022/09/09 10:15			2022/09/09 10:20		
COC Number		673906-02-01			673906-01-01			673906-01-01		
	UNITS	CB-1 Lab-Dup	RDL	QC Batch	CB-2	RDL	QC Batch	EB-1	RDL	QC Batch
Dissolved Vanadium (V)	mg/L				<0.0010	0.0010	A715279	<0.0010	0.0010	A716056
Dissolved Zinc (Zn)	mg/L				0.094	0.0030	A715279	0.13	0.0030	A716056

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BBS030	BBS031	BBS032	BBS033	BBS034		
Sampling Date		2022/09/09 10:30	2022/09/09 11:30	2022/09/09 11:35	2022/09/09 11:45	2022/09/09 16:00		
COC Number		673906-01-01	673906-01-01	673906-01-01	673906-01-01	673906-01-01		
	UNITS	EB-2	NB-2	NB-1	CAMP LAKE DISCHARGE	SW-101	RDL	QC Batch
Elements								
Dissolved Cadmium (Cd)	ug/L	0.46	0.37	0.36	0.35	0.041	0.020	A713469
Lab Filtered Elements								
Dissolved Aluminum (Al)	mg/L	0.013	0.0077	0.0055	0.0069	0.024	0.0044	A716056
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	0.00060	A716056
Dissolved Arsenic (As)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00024	0.00020	A716056
Dissolved Barium (Ba)	mg/L	0.014	0.012	0.012	0.012	<0.010	0.010	A715926
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A716056
Dissolved Boron (B)	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	A715926
Dissolved Calcium (Ca)	mg/L	52	52	52	53	13	0.30	A715926
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A716056
Dissolved Cobalt (Co)	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	0.00030	A716056
Dissolved Copper (Cu)	mg/L	0.0078	0.0071	0.0068	0.0068	0.0052	0.0010	A716056
Dissolved Iron (Fe)	mg/L	0.41	0.86	0.99	1.0	0.25	0.060	A715926
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A716056
Dissolved Lithium (Li)	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	A715926
Dissolved Magnesium (Mg)	mg/L	8.0	8.0	8.0	8.0	3.2	0.20	A715926
Dissolved Manganese (Mn)	mg/L	0.041	0.057	0.066	0.057	<0.0040	0.0040	A715926
Dissolved Molybdenum (Mo)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A716056
Dissolved Nickel (Ni)	mg/L	0.0014	0.0010	0.0010	0.00099	<0.00050	0.00050	A716056
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	A715926
Dissolved Potassium (K)	mg/L	3.7	3.6	3.6	3.6	1.4	0.30	A715926
Dissolved Selenium (Se)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A716056
Dissolved Silicon (Si)	mg/L	0.97	1.2	1.2	1.2	0.82	0.50	A715926
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A716056
Dissolved Sodium (Na)	mg/L	2.9	2.7	2.7	2.7	1.8	0.50	A715926
Dissolved Strontium (Sr)	mg/L	0.056	0.054	0.055	0.054	0.027	0.020	A715926
Dissolved Sulphur (S)	mg/L	49	48	49	50	5.9	0.20	A715926
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A716056
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A716056
Dissolved Titanium (Ti)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A716056
Dissolved Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A716056

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BBS030	BBS031	BBS032	BBS033	BBS034		
Sampling Date		2022/09/09 10:30	2022/09/09 11:30	2022/09/09 11:35	2022/09/09 11:45	2022/09/09 16:00		
COC Number		673906-01-01	673906-01-01	673906-01-01	673906-01-01	673906-01-01		
	UNITS	**EB-2**	**NB-2**	**NB-1**	**CAMP LAKE DISCHARGE**	**SW-101**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A716056
Dissolved Zinc (Zn)	mg/L	0.12	0.11	0.11	0.11	0.017	0.0030	A716056
RDL = Reportable Detection Limit								

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BBS035	BBS036	BBS037			BBS037		
Sampling Date		2022/09/09 17:00	2022/09/09 12:20	2022/09/09			2022/09/09		
COC Number		673906-01-01	673906-01-01	673906-01-01			673906-01-01		
	UNITS	SW-106	SC-1	TRIP BLANK	RDL	QC Batch	TRIP BLANK Lab-Dup	RDL	QC Batch
Elements									
Dissolved Cadmium (Cd)	ug/L	0.36	0.47	<0.020	0.020	A713469			
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	0.0083	0.026	0.0055	0.0044	A716056	<0.0044	0.0044	A716056
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	0.00060	A716056	<0.00060	0.00060	A716056
Dissolved Arsenic (As)	mg/L	<0.00020	0.00032	<0.00020	0.00020	A716056	<0.00020	0.00020	A716056
Dissolved Barium (Ba)	mg/L	0.012	<0.010	<0.010	0.010	A715926			
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	A716056	<0.0010	0.0010	A716056
Dissolved Boron (B)	mg/L	<0.020	<0.020	<0.020	0.020	A715926			
Dissolved Calcium (Ca)	mg/L	53	8.9	<0.30	0.30	A715926			
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	A716056	<0.0010	0.0010	A716056
Dissolved Cobalt (Co)	mg/L	<0.00030	<0.00030	<0.00030	0.00030	A716056	<0.00030	0.00030	A716056
Dissolved Copper (Cu)	mg/L	0.0070	0.024	<0.0010	0.0010	A716056	<0.0010	0.0010	A716056
Dissolved Iron (Fe)	mg/L	0.86	0.26	<0.060	0.060	A715926			
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	A716056	<0.00020	0.00020	A716056
Dissolved Lithium (Li)	mg/L	<0.020	<0.020	<0.020	0.020	A715926			
Dissolved Magnesium (Mg)	mg/L	8.1	2.7	<0.20	0.20	A715926			
Dissolved Manganese (Mn)	mg/L	0.067	0.023	<0.0040	0.0040	A715926			
Dissolved Molybdenum (Mo)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	A716056	<0.00020	0.00020	A716056
Dissolved Nickel (Ni)	mg/L	0.0011	0.00055	<0.00050	0.00050	A716056	<0.00050	0.00050	A716056
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	0.10	A715926			
Dissolved Potassium (K)	mg/L	3.6	1.3	<0.30	0.30	A715926			
Dissolved Selenium (Se)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	A716056	<0.00020	0.00020	A716056
Dissolved Silicon (Si)	mg/L	1.2	1.5	<0.50	0.50	A715926			
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	A716056	<0.00010	0.00010	A716056
Dissolved Sodium (Na)	mg/L	2.7	1.8	<0.50	0.50	A715926			
Dissolved Strontium (Sr)	mg/L	0.055	0.023	<0.020	0.020	A715926			
Dissolved Sulphur (S)	mg/L	50	1.9	<0.20	0.20	A715926			
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	A716056	<0.00020	0.00020	A716056
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	A716056	<0.0010	0.0010	A716056
Dissolved Titanium (Ti)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	A716056	<0.0010	0.0010	A716056
Dissolved Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	A716056	<0.00010	0.00010	A716056

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BBS035	BBS036	BBS037			BBS037		
Sampling Date		2022/09/09 17:00	2022/09/09 12:20	2022/09/09			2022/09/09		
COC Number		673906-01-01	673906-01-01	673906-01-01			673906-01-01		
	UNITS	SW-106	SC-1	TRIP BLANK	RDL	QC Batch	TRIP BLANK Lab-Dup	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	A716056	<0.0010	0.0010	A716056
Dissolved Zinc (Zn)	mg/L	0.11	0.19	<0.0030	0.0030	A716056	<0.0030	0.0030	A716056

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BBS009	BBS010		BBS011	BBS012	BBS013		
Sampling Date		2022/09/09 08:20	2022/09/09 08:25		2022/09/09 08:35	2022/09/09 08:45	2022/09/09 08:50		
COC Number		673906-02-01	673906-02-01		673906-02-01	673906-02-01	673906-02-01		
	UNITS	CL-6	CL-5	QC Batch	CL-4	CL-8	CL-3	RDL	QC Batch
Elements									
Total Cadmium (Cd)	ug/L	0.036	0.041	A713641	0.046	0.046	0.053	0.020	A713641
Total Aluminum (Al)	mg/L	0.10	0.088	A714962	0.072	0.071	0.082	0.0030	A714940
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	A714962	<0.00060	<0.00060	<0.00060	0.00060	A714940
Total Arsenic (As)	mg/L	0.00059	0.00050	A714962	0.00042	0.00040	0.00049	0.00020	A714940
Total Barium (Ba)	mg/L	0.010	0.010	A714966	0.010	<0.010	0.010	0.010	A714955
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	A714962	<0.0010	<0.0010	<0.0010	0.0010	A714940
Total Boron (B)	mg/L	0.021	<0.020	A714966	<0.020	<0.020	<0.020	0.020	A714955
Total Calcium (Ca)	mg/L	11	11	A714966	12	12	12	0.30	A714955
Total Chromium (Cr)	mg/L	<0.0010	0.0011	A714962	<0.0010	<0.0010	<0.0010	0.0010	A714940
Total Cobalt (Co)	mg/L	<0.00030	<0.00030	A714962	<0.00030	<0.00030	<0.00030	0.00030	A714940
Total Copper (Cu)	mg/L	0.0054	0.0059	A714962	0.0071	0.0068	0.0077	0.0010	A714940
Total Iron (Fe)	mg/L	0.28	0.38	A714966	0.68	0.44	0.45	0.060	A714955
Total Lead (Pb)	mg/L	<0.00020	<0.00020	A714962	<0.00020	<0.00020	<0.00020	0.00020	A714940
Total Lithium (Li)	mg/L	<0.020	<0.020	A714966	<0.020	<0.020	<0.020	0.020	A714955
Total Magnesium (Mg)	mg/L	2.9	2.9	A714966	3.0	2.9	3.0	0.20	A714955
Total Manganese (Mn)	mg/L	0.017	0.023	A714966	0.055	0.019	0.020	0.0040	A714955
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	A714962	<0.00020	<0.00020	<0.00020	0.00020	A714940
Total Nickel (Ni)	mg/L	0.00067	0.00056	A714962	0.00051	0.00057	0.00061	0.00050	A714940
Total Phosphorus (P)	mg/L	<0.10	<0.10	A714966	<0.10	<0.10	<0.10	0.10	A714955
Total Potassium (K)	mg/L	1.4	1.4	A714966	1.4	1.3	1.4	0.30	A714955
Total Selenium (Se)	mg/L	<0.00020	<0.00020	A714962	<0.00020	<0.00020	<0.00020	0.00020	A714940
Total Silicon (Si)	mg/L	0.97	1.0	A714966	1.1	0.95	1.0	0.50	A714955
Total Silver (Ag)	mg/L	<0.00010	<0.00010	A714962	<0.00010	<0.00010	<0.00010	0.00010	A714940
Total Sodium (Na)	mg/L	1.9	1.9	A714966	1.8	1.7	1.8	0.50	A714955
Total Strontium (Sr)	mg/L	0.026	0.026	A714966	0.027	0.026	0.027	0.020	A714955
Total Sulphur (S)	mg/L	4.5	5.0	A714966	5.4	5.5	5.6	0.20	A714955
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	A714962	<0.00020	<0.00020	<0.00020	0.00020	A714940
Total Tin (Sn)	mg/L	<0.0010	<0.0010	A714962	<0.0010	<0.0010	<0.0010	0.0010	A714940
Total Titanium (Ti)	mg/L	0.0042	0.0037	A714962	0.0024	0.0030	0.0029	0.0010	A714940
Total Uranium (U)	mg/L	<0.00010	<0.00010	A714962	<0.00010	<0.00010	<0.00010	0.00010	A714940
Total Vanadium (V)	mg/L	<0.0010	<0.0010	A714962	<0.0010	<0.0010	<0.0010	0.0010	A714940

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BBS009	BBS010		BBS011	BBS012	BBS013		
Sampling Date		2022/09/09 08:20	2022/09/09 08:25		2022/09/09 08:35	2022/09/09 08:45	2022/09/09 08:50		
COC Number		673906-02-01	673906-02-01		673906-02-01	673906-02-01	673906-02-01		
	UNITS	**CL-6**	**CL-5**	**QC Batch**	**CL-4**	**CL-8**	**CL-3**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.015	0.018	A714962	0.021	0.021	0.023	0.0030	A714940
RDL = Reportable Detection Limit									

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BBS014	BBS015	BBS016		BBS017		
Sampling Date		2022/09/09 08:55	2022/09/09 09:05	2022/09/09 09:30		2022/09/09 10:00		
COC Number		673906-02-01	673906-02-01	673906-02-01		673906-02-01		
	UNITS	CL-7	CL-2	SB-2	QC Batch	SB-1	RDL	QC Batch
Elements								
Total Cadmium (Cd)	ug/L	0.052	0.14	0.49	A713641	0.44	0.020	A713641
Total Aluminum (Al)	mg/L	0.074	0.075	0.063	A714940	0.073	0.0030	A714962
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	A714940	<0.00060	0.00060	A714962
Total Arsenic (As)	mg/L	0.00039	0.00038	0.00020	A714940	0.00027	0.00020	A714962
Total Barium (Ba)	mg/L	<0.010	0.015	0.012	A714955	0.012	0.010	A714966
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	A714940	<0.0010	0.0010	A714962
Total Boron (B)	mg/L	<0.020	<0.020	<0.020	A714955	0.021	0.020	A714966
Total Calcium (Ca)	mg/L	12	14	42	A714955	42	0.30	A714966
Total Chromium (Cr)	mg/L	<0.0010	<0.0010	<0.0010	A714940	<0.0010	0.0010	A714962
Total Cobalt (Co)	mg/L	<0.00030	0.00070	<0.00030	A714940	<0.00030	0.00030	A714962
Total Copper (Cu)	mg/L	0.0067	0.0092	0.015	A714940	0.014	0.0010	A714962
Total Iron (Fe)	mg/L	0.46	2.0	4.0	A714955	3.6	0.060	A714966
Total Lead (Pb)	mg/L	<0.00020	<0.00020	<0.00020	A714940	<0.00020	0.00020	A714962
Total Lithium (Li)	mg/L	<0.020	<0.020	<0.020	A714955	<0.020	0.020	A714966
Total Magnesium (Mg)	mg/L	2.9	3.1	6.7	A714955	6.8	0.20	A714966
Total Manganese (Mn)	mg/L	0.019	0.33	0.059	A714955	0.058	0.0040	A714966
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	<0.00020	A714940	<0.00020	0.00020	A714962
Total Nickel (Ni)	mg/L	0.00059	0.00066	0.0015	A714940	0.0015	0.00050	A714962
Total Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	A714955	<0.10	0.10	A714966
Total Potassium (K)	mg/L	1.4	1.5	3.2	A714955	3.3	0.30	A714966
Total Selenium (Se)	mg/L	<0.00020	<0.00020	<0.00020	A714940	<0.00020	0.00020	A714962
Total Silicon (Si)	mg/L	1.0	1.7	1.3	A714955	1.4	0.50	A714966
Total Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	A714940	<0.00010	0.00010	A714962
Total Sodium (Na)	mg/L	1.7	1.8	2.5	A714955	2.7	0.50	A714966
Total Strontium (Sr)	mg/L	0.026	0.028	0.048	A714955	0.049	0.020	A714966
Total Sulphur (S)	mg/L	5.5	7.3	40	A714955	40	0.20	A714966
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	A714940	<0.00020	0.00020	A714962
Total Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	A714940	<0.0010	0.0010	A714962
Total Titanium (Ti)	mg/L	0.0023	0.0019	0.0025	A714940	0.0027	0.0010	A714962
Total Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	A714940	<0.00010	0.00010	A714962
Total Vanadium (V)	mg/L	<0.0010	<0.0010	<0.0010	A714940	<0.0010	0.0010	A714962

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BBS014	BBS015	BBS016		BBS017		
Sampling Date		2022/09/09 08:55	2022/09/09 09:05	2022/09/09 09:30		2022/09/09 10:00		
COC Number		673906-02-01	673906-02-01	673906-02-01		673906-02-01		
	UNITS	**CL-7**	**CL-2**	**SB-2**	**QC Batch**	**SB-1**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.021	0.050	0.14	A714940	0.13	0.0030	A714962
RDL = Reportable Detection Limit								

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BBS018		BBS028		BBS029		BBS030		
Sampling Date		2022/09/09 10:05		2022/09/09 10:15		2022/09/09 10:20		2022/09/09 10:30		
COC Number		673906-02-01		673906-01-01		673906-01-01		673906-01-01		
	UNITS	CB-1	QC Batch	CB-2	QC Batch	EB-1	QC Batch	EB-2	RDL	QC Batch
Elements										
Total Cadmium (Cd)	ug/L	0.47	A713641	0.45	A713641	0.60	A713641	0.55	0.020	A713641
Total Aluminum (Al)	mg/L	0.072	A714940	0.060	A714962	0.12	A714940	0.18	0.0030	A714962
Total Antimony (Sb)	mg/L	<0.00060	A714940	<0.00060	A714962	<0.00060	A714940	<0.00060	0.00060	A714962
Total Arsenic (As)	mg/L	0.00023	A714940	0.00027	A714962	0.00023	A714940	0.00030	0.00020	A714962
Total Barium (Ba)	mg/L	0.013	A714955	0.013	A714966	0.014	A714955	0.016	0.010	A714966
Total Beryllium (Be)	mg/L	<0.0010	A714940	<0.0010	A714962	<0.0010	A714940	<0.0010	0.0010	A714962
Total Boron (B)	mg/L	<0.020	A714955	<0.020	A714966	<0.020	A714955	0.036	0.020	A714966
Total Calcium (Ca)	mg/L	44	A714955	44	A714966	47	A714955	50	0.30	A714966
Total Chromium (Cr)	mg/L	<0.0010	A714940	<0.0010	A714962	<0.0010	A714940	0.0013	0.0010	A714962
Total Cobalt (Co)	mg/L	<0.00030	A714940	<0.00030	A714962	0.00033	A714940	0.00035	0.00030	A714962
Total Copper (Cu)	mg/L	0.015	A714940	0.014	A714962	0.016	A714940	0.014	0.0010	A714962
Total Iron (Fe)	mg/L	3.4	A714955	3.3	A714966	1.9	A714955	1.7	0.060	A714966
Total Lead (Pb)	mg/L	<0.00020	A714940	<0.00020	A714962	<0.00020	A714940	<0.00020	0.00020	A714962
Total Lithium (Li)	mg/L	<0.020	A714955	<0.020	A714966	<0.020	A714955	<0.020	0.020	A714966
Total Magnesium (Mg)	mg/L	7.0	A714955	6.9	A714966	7.3	A714955	7.5	0.20	A714966
Total Manganese (Mn)	mg/L	0.056	A714955	0.059	A714966	0.042	A714955	0.046	0.0040	A714966
Total Molybdenum (Mo)	mg/L	<0.00020	A714940	<0.00020	A714962	<0.00020	A714940	<0.00020	0.00020	A714962
Total Nickel (Ni)	mg/L	0.0013	A714940	0.0013	A714962	0.0017	A714940	0.0018	0.00050	A714962
Total Phosphorus (P)	mg/L	<0.10	A714955	<0.10	A714966	<0.10	A714955	<0.10	0.10	A714966
Total Potassium (K)	mg/L	3.4	A714955	3.3	A714966	3.4	A714955	3.6	0.30	A714966
Total Selenium (Se)	mg/L	<0.00020	A714940	0.0017	A714962	<0.00020	A714940	0.00025	0.00020	A714962
Total Silicon (Si)	mg/L	1.4	A714955	1.4	A714966	1.3	A714955	1.5	0.50	A714966
Total Silver (Ag)	mg/L	<0.00010	A714940	<0.00010	A714962	<0.00010	A714940	<0.00010	0.00010	A714962
Total Sodium (Na)	mg/L	2.7	A714955	2.8	A714966	2.7	A714955	2.9	0.50	A714966
Total Strontium (Sr)	mg/L	0.050	A714955	0.050	A714966	0.053	A714955	0.055	0.020	A714966
Total Sulphur (S)	mg/L	42	A714955	42	A714966	44	A714955	46	0.20	A714966
Total Thallium (Tl)	mg/L	<0.00020	A714940	<0.00020	A714962	<0.00020	A714940	<0.00020	0.00020	A714962
Total Tin (Sn)	mg/L	<0.0010	A714940	<0.0010	A714962	<0.0010	A714940	<0.0010	0.0010	A714962
Total Titanium (Ti)	mg/L	0.0030	A714940	0.0023	A714962	0.0048	A714940	0.0084	0.0010	A714962
Total Uranium (U)	mg/L	<0.00010	A714940	0.00010	A714962	<0.00010	A714940	<0.00010	0.00010	A714962
Total Vanadium (V)	mg/L	<0.0010	A714940	<0.0010	A714962	<0.0010	A714940	<0.0010	0.0010	A714962

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BBS018		BBS028		BBS029		BBS030		
Sampling Date		2022/09/09 10:05		2022/09/09 10:15		2022/09/09 10:20		2022/09/09 10:30		
COC Number		673906-02-01		673906-01-01		673906-01-01		673906-01-01		
	UNITS	**CB-1**	**QC Batch**	**CB-2**	**QC Batch**	**EB-1**	**QC Batch**	**EB-2**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.14	A714940	0.13	A714962	0.16	A714940	0.15	0.0030	A714962
RDL = Reportable Detection Limit										

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BBS031		BBS032			BBS032		
Sampling Date		2022/09/09 11:30		2022/09/09 11:35			2022/09/09 11:35		
COC Number		673906-01-01		673906-01-01			673906-01-01		
	UNITS	NB-2	QC Batch	NB-1	RDL	QC Batch	NB-1 Lab-Dup	RDL	QC Batch
Elements									
Total Cadmium (Cd)	ug/L	0.48	A713641	0.47	0.020	A713641			
Total Aluminum (Al)	mg/L	0.058	A714940	0.055	0.0030	A714962	0.055	0.0030	A714962
Total Antimony (Sb)	mg/L	<0.00060	A714940	<0.00060	0.00060	A714962	<0.00060	0.00060	A714962
Total Arsenic (As)	mg/L	0.00024	A714940	0.00027	0.00020	A714962	0.00031	0.00020	A714962
Total Barium (Ba)	mg/L	0.012	A714955	0.012	0.010	A714966	0.012	0.010	A714966
Total Beryllium (Be)	mg/L	<0.0010	A714940	<0.0010	0.0010	A714962	<0.0010	0.0010	A714962
Total Boron (B)	mg/L	<0.020	A714955	0.022	0.020	A714966	<0.020	0.020	A714966
Total Calcium (Ca)	mg/L	47	A714955	50	0.30	A714966	48	0.30	A714966
Total Chromium (Cr)	mg/L	<0.0010	A714940	<0.0010	0.0010	A714962	<0.0010	0.0010	A714962
Total Cobalt (Co)	mg/L	<0.00030	A714940	0.00031	0.00030	A714962	<0.00030	0.00030	A714962
Total Copper (Cu)	mg/L	0.015	A714940	0.014	0.0010	A714962	0.015	0.0010	A714962
Total Iron (Fe)	mg/L	2.5	A714955	3.2	0.060	A714966	3.0	0.060	A714966
Total Lead (Pb)	mg/L	<0.00020	A714940	<0.00020	0.00020	A714962	<0.00020	0.00020	A714962
Total Lithium (Li)	mg/L	<0.020	A714955	<0.020	0.020	A714966	<0.020	0.020	A714966
Total Magnesium (Mg)	mg/L	7.2	A714955	7.5	0.20	A714966	7.3	0.20	A714966
Total Manganese (Mn)	mg/L	0.055	A714955	0.066	0.0040	A714966	0.063	0.0040	A714966
Total Molybdenum (Mo)	mg/L	<0.00020	A714940	<0.00020	0.00020	A714962	<0.00020	0.00020	A714962
Total Nickel (Ni)	mg/L	0.0012	A714940	0.0014	0.00050	A714962	0.0012	0.00050	A714962
Total Phosphorus (P)	mg/L	<0.10	A714955	<0.10	0.10	A714966	<0.10	0.10	A714966
Total Potassium (K)	mg/L	3.3	A714955	3.5	0.30	A714966	3.4	0.30	A714966
Total Selenium (Se)	mg/L	<0.00020	A714940	<0.00020	0.00020	A714962	<0.00020	0.00020	A714962
Total Silicon (Si)	mg/L	1.3	A714955	1.4	0.50	A714966	1.4	0.50	A714966
Total Silver (Ag)	mg/L	<0.00010	A714940	<0.00010	0.00010	A714962	<0.00010	0.00010	A714962
Total Sodium (Na)	mg/L	2.6	A714955	2.7	0.50	A714966	2.7	0.50	A714966
Total Strontium (Sr)	mg/L	0.051	A714955	0.053	0.020	A714966	0.052	0.020	A714966
Total Sulphur (S)	mg/L	44	A714955	48	0.20	A714966	46	0.20	A714966
Total Thallium (Tl)	mg/L	<0.00020	A714940	<0.00020	0.00020	A714962	<0.00020	0.00020	A714962
Total Tin (Sn)	mg/L	<0.0010	A714940	<0.0010	0.0010	A714962	<0.0010	0.0010	A714962
Total Titanium (Ti)	mg/L	0.0012	A714940	0.0016	0.0010	A714962	0.0027	0.0010	A714962
Total Uranium (U)	mg/L	<0.00010	A714940	<0.00010	0.00010	A714962	<0.00010	0.00010	A714962
Total Vanadium (V)	mg/L	<0.0010	A714940	<0.0010	0.0010	A714962	<0.0010	0.0010	A714962

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BBS031		BBS032			BBS032		
Sampling Date		2022/09/09 11:30		2022/09/09 11:35			2022/09/09 11:35		
COC Number		673906-01-01		673906-01-01			673906-01-01		
	UNITS	**NB-2**	**QC Batch**	**NB-1**	**RDL**	**QC Batch**	**NB-1 Lab-Dup**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.14	A714940	0.13	0.0030	A714962	0.13	0.0030	A714962

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BBS033		BBS034	BBS035	BBS036		
Sampling Date		2022/09/09 11:45		2022/09/09 16:00	2022/09/09 17:00	2022/09/09 12:20		
COC Number		673906-01-01		673906-01-01	673906-01-01	673906-01-01		
	UNITS	CAMP LAKE DISCHARGE	QC Batch	SW-101	SW-106	SC-1	RDL	QC Batch
Elements								
Total Cadmium (Cd)	ug/L	0.42	A713641	0.041	0.43	0.67	0.020	A713641
Total Aluminum (Al)	mg/L	0.062	A716694	0.070	0.051	0.071	0.0030	A714940
Total Antimony (Sb)	mg/L	<0.00060	A716694	<0.00060	<0.00060	<0.00060	0.00060	A714940
Total Arsenic (As)	mg/L	0.00027	A716694	0.00039	0.00022	0.00068	0.00020	A714940
Total Barium (Ba)	mg/L	0.011	A716712	<0.010	0.012	<0.010	0.010	A714955
Total Beryllium (Be)	mg/L	<0.0010	A716694	<0.0010	<0.0010	<0.0010	0.0010	A714940
Total Boron (B)	mg/L	<0.020	A716712	<0.020	<0.020	<0.020	0.020	A714955
Total Calcium (Ca)	mg/L	50	A716712	12	50	8.6	0.30	A714955
Total Chromium (Cr)	mg/L	<0.0010	A716694	<0.0010	<0.0010	<0.0010	0.0010	A714940
Total Cobalt (Co)	mg/L	<0.00030	A716694	<0.00030	0.00030	0.00045	0.00030	A714940
Total Copper (Cu)	mg/L	0.013	A716694	0.0069	0.015	0.029	0.0010	A714940
Total Iron (Fe)	mg/L	2.7	A716712	0.47	3.1	0.40	0.060	A714955
Total Lead (Pb)	mg/L	<0.00020	A716694	<0.00020	<0.00020	0.00023	0.00020	A714940
Total Lithium (Li)	mg/L	<0.020	A716712	<0.020	<0.020	<0.020	0.020	A714955
Total Magnesium (Mg)	mg/L	7.8	A716712	3.0	7.6	2.5	0.20	A714955
Total Manganese (Mn)	mg/L	0.057	A716712	0.020	0.066	0.052	0.0040	A714955
Total Molybdenum (Mo)	mg/L	<0.00020	A716694	<0.00020	<0.00020	<0.00020	0.00020	A714940
Total Nickel (Ni)	mg/L	0.0013	A716694	0.00053	0.0013	0.00094	0.00050	A714940
Total Phosphorus (P)	mg/L	<0.10	A716712	<0.10	<0.10	<0.10	0.10	A714955
Total Potassium (K)	mg/L	3.6	A716712	1.4	3.5	1.3	0.30	A714955
Total Selenium (Se)	mg/L	0.00021	A716694	<0.00020	<0.00020	<0.00020	0.00020	A714940
Total Silicon (Si)	mg/L	1.5	A716712	1.0	1.3	1.6	0.50	A714955
Total Silver (Ag)	mg/L	<0.00010	A716694	<0.00010	<0.00010	<0.00010	0.00010	A714940
Total Sodium (Na)	mg/L	2.7	A716712	1.8	2.7	1.8	0.50	A714955
Total Strontium (Sr)	mg/L	0.051	A716712	0.027	0.054	0.022	0.020	A714955
Total Sulphur (S)	mg/L	50	A716712	5.7	47	1.8	0.20	A714955
Total Thallium (Tl)	mg/L	<0.00020	A716694	<0.00020	<0.00020	<0.00020	0.00020	A714940
Total Tin (Sn)	mg/L	<0.0010	A716694	<0.0010	<0.0010	<0.0010	0.0010	A714940
Total Titanium (Ti)	mg/L	0.0027	A716694	0.0029	0.0014	0.0017	0.0010	A714940
Total Uranium (U)	mg/L	<0.00010	A716694	<0.00010	<0.00010	0.00017	0.00010	A714940
Total Vanadium (V)	mg/L	<0.0010	A716694	<0.0010	<0.0010	<0.0010	0.0010	A714940

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BBS033		BBS034	BBS035	BBS036		
Sampling Date		2022/09/09 11:45		2022/09/09 16:00	2022/09/09 17:00	2022/09/09 12:20		
COC Number		673906-01-01		673906-01-01	673906-01-01	673906-01-01		
	UNITS	**CAMP LAKE DISCHARGE**	**QC Batch**	**SW-101**	**SW-106**	**SC-1**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.13	A716694	0.021	0.14	0.19	0.0030	A714940
RDL = Reportable Detection Limit								

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BBS037		
Sampling Date		2022/09/09		
COC Number		673906-01-01		
	UNITS	TRIP BLANK	RDL	QC Batch
Elements				
Total Cadmium (Cd)	ug/L	<0.020	0.020	A713641
Total Aluminum (Al)	mg/L	0.0053	0.0030	A714962
Total Antimony (Sb)	mg/L	<0.00060	0.00060	A714962
Total Arsenic (As)	mg/L	<0.00020	0.00020	A714962
Total Barium (Ba)	mg/L	<0.010	0.010	A714966
Total Beryllium (Be)	mg/L	<0.0010	0.0010	A714962
Total Boron (B)	mg/L	<0.020	0.020	A714966
Total Calcium (Ca)	mg/L	<0.30	0.30	A714966
Total Chromium (Cr)	mg/L	<0.0010	0.0010	A714962
Total Cobalt (Co)	mg/L	<0.00030	0.00030	A714962
Total Copper (Cu)	mg/L	<0.0010	0.0010	A714962
Total Iron (Fe)	mg/L	<0.060	0.060	A714966
Total Lead (Pb)	mg/L	<0.00020	0.00020	A714962
Total Lithium (Li)	mg/L	<0.020	0.020	A714966
Total Magnesium (Mg)	mg/L	<0.20	0.20	A714966
Total Manganese (Mn)	mg/L	<0.0040	0.0040	A714966
Total Molybdenum (Mo)	mg/L	<0.00020	0.00020	A714962
Total Nickel (Ni)	mg/L	<0.00050	0.00050	A714962
Total Phosphorus (P)	mg/L	<0.10	0.10	A714966
Total Potassium (K)	mg/L	<0.30	0.30	A714966
Total Selenium (Se)	mg/L	<0.00020	0.00020	A714962
Total Silicon (Si)	mg/L	<0.50	0.50	A714966
Total Silver (Ag)	mg/L	<0.00010	0.00010	A714962
Total Sodium (Na)	mg/L	<0.50	0.50	A714966
Total Strontium (Sr)	mg/L	<0.020	0.020	A714966
Total Sulphur (S)	mg/L	<0.20	0.20	A714966
Total Thallium (Tl)	mg/L	<0.00020	0.00020	A714962
Total Tin (Sn)	mg/L	<0.0010	0.0010	A714962
Total Titanium (Ti)	mg/L	<0.0010	0.0010	A714962
Total Uranium (U)	mg/L	<0.00010	0.00010	A714962
Total Vanadium (V)	mg/L	<0.0010	0.0010	A714962
RDL = Reportable Detection Limit				

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BBS037		
Sampling Date		2022/09/09		
COC Number		673906-01-01		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	<0.0030	0.0030	A714962
RDL = Reportable Detection Limit				

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Bureau Veritas Job #: C269767
Report Date: 2022/09/18

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BBS009			BBS009			BBS010		BBS011		
Sampling Date		2022/09/09 08:20			2022/09/09 08:20			2022/09/09 08:25		2022/09/09 08:35		
COC Number		673906-02-01			673906-02-01			673906-02-01		673906-02-01		
	UNITS	CL-6	RDL	QC Batch	CL-6 Lab-Dup	RDL	QC Batch	CL-5	RDL	CL-4	RDL	QC Batch
Calculated Parameters												
Hardness (CaCO3)	mg/L	41	0.50	A713321				44	0.50	45	0.50	A713321
Total Hardness (CaCO3)	mg/L	38.6	0.50	A714221				40.1	0.50	42.0	0.50	A714221
Misc. Inorganics												
pH	pH	6.43	N/A	A715573				6.47	N/A	6.44	N/A	A715573
Total Suspended Solids	mg/L	<0.99	0.99	A716584	<0.97	0.97	A716584	<0.97	0.97	<0.99	0.99	A716584
Anions												
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	A715566				<1.0	1.0	<1.0	1.0	A715566
Alkalinity (Total as CaCO3)	mg/L	24	1.0	A715566				24	1.0	25	1.0	A715566
Bicarbonate (HCO3)	mg/L	30	1.0	A715566				29	1.0	31	1.0	A715566
Carbonate (CO3)	mg/L	<1.0	1.0	A715566				<1.0	1.0	<1.0	1.0	A715566
Hydroxide (OH)	mg/L	<1.0	1.0	A715566				<1.0	1.0	<1.0	1.0	A715566
Physical Properties												
Turbidity	NTU	3.2	0.10	A715527	3.3	0.10	A715527	3.3	0.10	5.5	0.10	A715527

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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Bureau Veritas Job #: C269767
Report Date: 2022/09/18

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BBS012		BBS013			BBS013			BBS014		
Sampling Date		2022/09/09 08:45		2022/09/09 08:50			2022/09/09 08:50			2022/09/09 08:55		
COC Number		673906-02-01		673906-02-01			673906-02-01			673906-02-01		
	UNITS	CL-8	RDL	CL-3	RDL	QC Batch	CL-3 Lab-Dup	RDL	QC Batch	CL-7	RDL	QC Batch
Calculated Parameters												
Hardness (CaCO3)	mg/L	46	0.50	45	0.50	A713321				46	0.50	A713321
Total Hardness (CaCO3)	mg/L	41.1	0.50	42.7	0.50	A714221				41.4	0.50	A714221
Misc. Inorganics												
pH	pH	6.47	N/A	6.36	N/A	A715573	6.41	N/A	A715573	6.41	N/A	A715573
Total Suspended Solids	mg/L	<0.97	0.97	1.4	1.0	A716584				<0.96	0.96	A716584
Anions												
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	<1.0	1.0	A715566	<1.0	1.0	A715566	<1.0	1.0	A715566
Alkalinity (Total as CaCO3)	mg/L	24	1.0	23	1.0	A715566	24	1.0	A715566	25	1.0	A715566
Bicarbonate (HCO3)	mg/L	30	1.0	28	1.0	A715566	30	1.0	A715566	30	1.0	A715566
Carbonate (CO3)	mg/L	<1.0	1.0	<1.0	1.0	A715566	<1.0	1.0	A715566	<1.0	1.0	A715566
Hydroxide (OH)	mg/L	<1.0	1.0	<1.0	1.0	A715566	<1.0	1.0	A715566	<1.0	1.0	A715566
Physical Properties												
Turbidity	NTU	3.1	0.10	2.9	0.10	A715527				3.1	0.10	A715527

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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Bureau Veritas Job #: C269767
Report Date: 2022/09/18

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BBS015		BBS016		BBS017		BBS018	BBS028		
Sampling Date		2022/09/09 09:05		2022/09/09 09:30		2022/09/09 10:00		2022/09/09 10:05	2022/09/09 10:15		
COC Number		673906-02-01		673906-02-01		673906-02-01		673906-02-01	673906-01-01		
	UNITS	CL-2	RDL	SB-2	RDL	SB-1	RDL	CB-1	CB-2	RDL	QC Batch
Calculated Parameters											
Hardness (CaCO3)	mg/L	53	0.50	150	0.50	140	0.50	150	150	0.50	A713321
Total Hardness (CaCO3)	mg/L	48.1	0.50	132	0.50	133	0.50	139	137	0.50	A714221
Misc. Inorganics											
pH	pH	6.34	N/A	5.92	N/A	5.93	N/A	5.99	6.01	N/A	A715573
Total Suspended Solids	mg/L	1.7	0.97	3.5	0.95	3.1	0.97	1.1	2.3	1.0	A716584
Anions											
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	<1.0	1.0	<1.0	1.0	<1.0	<1.0	1.0	A715566
Alkalinity (Total as CaCO3)	mg/L	26	1.0	3.3	1.0	3.9	1.0	4.0	4.2	1.0	A715566
Bicarbonate (HCO3)	mg/L	31	1.0	4.0	1.0	4.8	1.0	4.9	5.1	1.0	A715566
Carbonate (CO3)	mg/L	<1.0	1.0	<1.0	1.0	<1.0	1.0	<1.0	<1.0	1.0	A715566
Hydroxide (OH)	mg/L	<1.0	1.0	<1.0	1.0	<1.0	1.0	<1.0	<1.0	1.0	A715566
Physical Properties											
Turbidity	NTU	18 (1)	0.20	26 (1)	0.20	23 (1)	0.20	19 (1)	19 (1)	0.20	A715527

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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Bureau Veritas Job #: C269767
Report Date: 2022/09/18

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BBS029		BBS030		BBS031		BBS032		
Sampling Date		2022/09/09 10:20		2022/09/09 10:30		2022/09/09 11:30		2022/09/09 11:35		
COC Number		673906-01-01		673906-01-01		673906-01-01		673906-01-01		
	UNITS	EB-1	RDL	EB-2	QC Batch	NB-2	RDL	NB-1	RDL	QC Batch
Calculated Parameters										
Hardness (CaCO3)	mg/L	160	0.50	160	A713321	160	0.50	160	0.50	A714219
Total Hardness (CaCO3)	mg/L	148	0.50	155	A714221	148	0.50	155	0.50	A714221
Misc. Inorganics										
pH	pH	6.08	N/A	6.10	A715573	6.03	N/A	5.98	N/A	A715573
Total Suspended Solids	mg/L	1.1	0.99	1.9	A716584	1.0	0.97	2.4	0.99	A716584
Anions										
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	<1.0	A715566	<1.0	1.0	<1.0	1.0	A715566
Alkalinity (Total as CaCO3)	mg/L	6.0	1.0	6.8	A715566	5.0	1.0	3.7	1.0	A715566
Bicarbonate (HCO3)	mg/L	7.3	1.0	8.3	A715566	6.1	1.0	4.5	1.0	A715566
Carbonate (CO3)	mg/L	<1.0	1.0	<1.0	A715566	<1.0	1.0	<1.0	1.0	A715566
Hydroxide (OH)	mg/L	<1.0	1.0	<1.0	A715566	<1.0	1.0	<1.0	1.0	A715566
Physical Properties										
Turbidity	NTU	12 (1)	0.20	11 (1)	A715527	13 (1)	0.20	17 (1)	0.20	A715527

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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Bureau Veritas Job #: C269767
Report Date: 2022/09/18

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BBS033		BBS034		BBS035		BBS036		
Sampling Date		2022/09/09 11:45		2022/09/09 16:00		2022/09/09 17:00		2022/09/09 12:20		
COC Number		673906-01-01		673906-01-01		673906-01-01		673906-01-01		
	UNITS	**CAMP LAKE DISCHARGE**	**RDL**	**SW-101**	**RDL**	**SW-106**	**RDL**	**SC-1**	**RDL**	**QC Batch**
Calculated Parameters										
Hardness (CaCO3)	mg/L	170	0.50	44	0.50	160	0.50	33	0.50	A714219
Total Hardness (CaCO3)	mg/L	157	0.50	42.2	0.50	156	0.50	31.9	0.50	A714221
Misc. Inorganics										
pH	pH	6.04	N/A	6.43	N/A	5.97	N/A	6.38	N/A	A715573
Total Suspended Solids	mg/L	<0.96	0.96	<0.99	0.99	1.5	0.96	<0.97	0.97	A716584
Anions										
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	A715566
Alkalinity (Total as CaCO3)	mg/L	5.1	1.0	25	1.0	3.6	1.0	25	1.0	A715566
Bicarbonate (HCO3)	mg/L	6.2	1.0	31	1.0	4.4	1.0	31	1.0	A715566
Carbonate (CO3)	mg/L	<1.0	1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	A715566
Hydroxide (OH)	mg/L	<1.0	1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	A715566
Physical Properties										
Turbidity	NTU	13 (1)	0.20	3.0 (1)	0.20	18 (1)	0.20	1.7	0.10	A715527

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BBS037		
Sampling Date		2022/09/09		
COC Number		673906-01-01		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
Calculated Parameters				
Hardness (CaCO3)	mg/L	<0.50	0.50	A714219
Total Hardness (CaCO3)	mg/L	<0.50	0.50	A714221
Misc. Inorganics				
pH	pH	4.60	N/A	A715573
Total Suspended Solids	mg/L	<0.99	0.99	A716584
Anions				
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	A715566
Alkalinity (Total as CaCO3)	mg/L	<1.0	1.0	A715566
Bicarbonate (HCO3)	mg/L	<1.0	1.0	A715566
Carbonate (CO3)	mg/L	<1.0	1.0	A715566
Hydroxide (OH)	mg/L	<1.0	1.0	A715566
Physical Properties				
Turbidity	NTU	<0.10	0.10	A715527
RDL = Reportable Detection Limit N/A = Not Applicable				

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	3.4°C
Package 2	4.1°C

Sample BBS009 [CL-6] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample BBS010 [CL-5] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample BBS011 [CL-4] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample BBS012 [CL-8] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample BBS013 [CL-3] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample BBS014 [CL-7] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample BBS015 [CL-2] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample BBS016 [SB-2] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample BBS017 [SB-1] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample BBS018 [CB-1] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample BBS028 [CB-2] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample BBS029 [EB-1] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample BBS030 [EB-2] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample BBS031 [NB-2] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample BBS032 [NB-1] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample BBS033 [CAMP LAKE DISCHARGE] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample BBS034 [SW-101] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

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Sample BBS035 [SW-106] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample BBS036 [SC-1] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample BBS037 [TRIP BLANK] : Sample was analyzed past method specified hold time for Turbidity. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A714940	Total Aluminum (Al)	2022/09/15	98	80 - 120	95	80 - 120	<0.0030	mg/L	7.2	20
A714940	Total Antimony (Sb)	2022/09/15	127 (1)	80 - 120	124 (1)	80 - 120	<0.00060	mg/L	9.3	20
A714940	Total Arsenic (As)	2022/09/15	98	80 - 120	96	80 - 120	<0.00020	mg/L	0.45	20
A714940	Total Beryllium (Be)	2022/09/15	101	80 - 120	95	80 - 120	<0.0010	mg/L	NC	20
A714940	Total Chromium (Cr)	2022/09/15	99	80 - 120	98	80 - 120	<0.0010	mg/L	NC	20
A714940	Total Cobalt (Co)	2022/09/15	102	80 - 120	100	80 - 120	<0.00030	mg/L	NC	20
A714940	Total Copper (Cu)	2022/09/15	102	80 - 120	100	80 - 120	<0.0010	mg/L	0.14	20
A714940	Total Lead (Pb)	2022/09/15	101	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
A714940	Total Molybdenum (Mo)	2022/09/15	111	80 - 120	107	80 - 120	<0.00020	mg/L	3.3	20
A714940	Total Nickel (Ni)	2022/09/15	102	80 - 120	100	80 - 120	<0.00050	mg/L	15	20
A714940	Total Selenium (Se)	2022/09/15	103	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
A714940	Total Silver (Ag)	2022/09/15	106	80 - 120	105	80 - 120	<0.00010	mg/L	109 (1)	20
A714940	Total Thallium (Tl)	2022/09/15	103	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
A714940	Total Tin (Sn)	2022/09/15	105	80 - 120	101	80 - 120	<0.0010	mg/L	3.7	20
A714940	Total Titanium (Ti)	2022/09/15	88	80 - 120	87	80 - 120	<0.0010	mg/L	12	20
A714940	Total Uranium (U)	2022/09/15	96	80 - 120	93	80 - 120	<0.00010	mg/L	0.16	20
A714940	Total Vanadium (V)	2022/09/15	101	80 - 120	98	80 - 120	<0.0010	mg/L	NC	20
A714940	Total Zinc (Zn)	2022/09/15	102	80 - 120	100	80 - 120	<0.0030	mg/L	0.35	20
A714955	Total Barium (Ba)	2022/09/14	100	80 - 120	97	80 - 120	<0.010	mg/L	4.3	20
A714955	Total Boron (B)	2022/09/14	99	80 - 120	96	80 - 120	<0.020	mg/L	2.6	20
A714955	Total Calcium (Ca)	2022/09/14	99	80 - 120	96	80 - 120	<0.30	mg/L	3.3	20
A714955	Total Iron (Fe)	2022/09/14	94	80 - 120	93	80 - 120	<0.060	mg/L	NC	20
A714955	Total Lithium (Li)	2022/09/14	97	80 - 120	94	80 - 120	<0.020	mg/L	NC	20
A714955	Total Magnesium (Mg)	2022/09/14	95	80 - 120	93	80 - 120	<0.20	mg/L	3.5	20
A714955	Total Manganese (Mn)	2022/09/14	96	80 - 120	94	80 - 120	<0.0040	mg/L	NC	20
A714955	Total Phosphorus (P)	2022/09/14	92	80 - 120	89	80 - 120	<0.10	mg/L	NC	20
A714955	Total Potassium (K)	2022/09/14	93	80 - 120	91	80 - 120	<0.30	mg/L	4.4	20
A714955	Total Silicon (Si)	2022/09/14	93	80 - 120	91	80 - 120	<0.50	mg/L	3.0	20
A714955	Total Sodium (Na)	2022/09/14	98	80 - 120	96	80 - 120	<0.50	mg/L	3.7	20
A714955	Total Strontium (Sr)	2022/09/14	96	80 - 120	94	80 - 120	<0.020	mg/L	2.8	20
A714955	Total Sulphur (S)	2022/09/14	91	80 - 120	89	80 - 120	<0.20	mg/L	5.7	20
A714962	Total Aluminum (Al)	2022/09/14	99	80 - 120	103	80 - 120	<0.0030	mg/L	1.6	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A714962	Total Antimony (Sb)	2022/09/14	112	80 - 120	114	80 - 120	<0.00060	mg/L	NC	20
A714962	Total Arsenic (As)	2022/09/14	98	80 - 120	100	80 - 120	<0.00020	mg/L	15	20
A714962	Total Beryllium (Be)	2022/09/14	98	80 - 120	99	80 - 120	<0.0010	mg/L	NC	20
A714962	Total Chromium (Cr)	2022/09/14	98	80 - 120	101	80 - 120	<0.0010	mg/L	NC	20
A714962	Total Cobalt (Co)	2022/09/14	100	80 - 120	102	80 - 120	<0.00030	mg/L	4.8	20
A714962	Total Copper (Cu)	2022/09/14	99	80 - 120	103	80 - 120	<0.0010	mg/L	4.4	20
A714962	Total Lead (Pb)	2022/09/14	102	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
A714962	Total Molybdenum (Mo)	2022/09/14	101	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
A714962	Total Nickel (Ni)	2022/09/14	98	80 - 120	101	80 - 120	<0.00050	mg/L	14	20
A714962	Total Selenium (Se)	2022/09/14	106	80 - 120	107	80 - 120	<0.00020	mg/L	NC	20
A714962	Total Silver (Ag)	2022/09/14	99	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20
A714962	Total Thallium (Tl)	2022/09/14	100	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
A714962	Total Tin (Sn)	2022/09/14	103	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20
A714962	Total Titanium (Ti)	2022/09/14	99	80 - 120	101	80 - 120	<0.0010	mg/L	NC	20
A714962	Total Uranium (U)	2022/09/14	101	80 - 120	103	80 - 120	<0.00010	mg/L	NC	20
A714962	Total Vanadium (V)	2022/09/14	100	80 - 120	102	80 - 120	<0.0010	mg/L	NC	20
A714962	Total Zinc (Zn)	2022/09/14	100	80 - 120	102	80 - 120	<0.0030	mg/L	0.75	20
A714966	Total Barium (Ba)	2022/09/14	101	80 - 120	101	80 - 120	<0.010	mg/L	3.3	20
A714966	Total Boron (B)	2022/09/14	101	80 - 120	101	80 - 120	<0.020	mg/L	9.5	20
A714966	Total Calcium (Ca)	2022/09/14	NC	80 - 120	101	80 - 120	<0.30	mg/L	2.9	20
A714966	Total Iron (Fe)	2022/09/14	NC	80 - 120	98	80 - 120	<0.060	mg/L	4.0	20
A714966	Total Lithium (Li)	2022/09/14	98	80 - 120	99	80 - 120	<0.020	mg/L	NC	20
A714966	Total Magnesium (Mg)	2022/09/14	97	80 - 120	97	80 - 120	<0.20	mg/L	2.6	20
A714966	Total Manganese (Mn)	2022/09/14	99	80 - 120	99	80 - 120	<0.0040	mg/L	3.7	20
A714966	Total Phosphorus (P)	2022/09/14	94	80 - 120	94	80 - 120	<0.10	mg/L	NC	20
A714966	Total Potassium (K)	2022/09/14	95	80 - 120	96	80 - 120	<0.30	mg/L	2.6	20
A714966	Total Silicon (Si)	2022/09/14	96	80 - 120	96	80 - 120	<0.50	mg/L	4.5	20
A714966	Total Sodium (Na)	2022/09/14	101	80 - 120	99	80 - 120	<0.50	mg/L	2.6	20
A714966	Total Strontium (Sr)	2022/09/14	97	80 - 120	98	80 - 120	<0.020	mg/L	2.9	20
A714966	Total Sulphur (S)	2022/09/14	95	80 - 120	91	80 - 120	<0.20	mg/L	4.1	20
A715015	Dissolved Barium (Ba)	2022/09/14	109	80 - 120	100	80 - 120	<0.010	mg/L		
A715015	Dissolved Boron (B)	2022/09/14	110	80 - 120	98	80 - 120	<0.020	mg/L		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A715015	Dissolved Calcium (Ca)	2022/09/14	109	80 - 120	100	80 - 120	<0.30	mg/L		
A715015	Dissolved Iron (Fe)	2022/09/14	112	80 - 120	96	80 - 120	<0.060	mg/L		
A715015	Dissolved Lithium (Li)	2022/09/14	108	80 - 120	96	80 - 120	<0.020	mg/L		
A715015	Dissolved Magnesium (Mg)	2022/09/14	109	80 - 120	96	80 - 120	<0.20	mg/L		
A715015	Dissolved Manganese (Mn)	2022/09/14	114	80 - 120	98	80 - 120	<0.0040	mg/L		
A715015	Dissolved Phosphorus (P)	2022/09/14	111	80 - 120	95	80 - 120	<0.10	mg/L		
A715015	Dissolved Potassium (K)	2022/09/14	104	80 - 120	93	80 - 120	<0.30	mg/L		
A715015	Dissolved Silicon (Si)	2022/09/14	101	80 - 120	94	80 - 120	<0.50	mg/L		
A715015	Dissolved Sodium (Na)	2022/09/14	110	80 - 120	99	80 - 120	<0.50	mg/L	1.8	20
A715015	Dissolved Strontium (Sr)	2022/09/14	106	80 - 120	98	80 - 120	<0.020	mg/L		
A715015	Dissolved Sulphur (S)	2022/09/14	106	80 - 120	93	80 - 120	<0.20	mg/L		
A715279	Dissolved Aluminum (Al)	2022/09/14	86	80 - 120	96	80 - 120	<0.0030	mg/L	NC	20
A715279	Dissolved Antimony (Sb)	2022/09/14	92	80 - 120	96	80 - 120	<0.00060	mg/L	NC	20
A715279	Dissolved Arsenic (As)	2022/09/14	82	80 - 120	86	80 - 120	<0.00020	mg/L	NC	20
A715279	Dissolved Beryllium (Be)	2022/09/14	85	80 - 120	88	80 - 120	<0.0010	mg/L	NC	20
A715279	Dissolved Chromium (Cr)	2022/09/14	82	80 - 120	87	80 - 120	<0.0010	mg/L	NC	20
A715279	Dissolved Cobalt (Co)	2022/09/14	82	80 - 120	88	80 - 120	<0.00030	mg/L	NC	20
A715279	Dissolved Copper (Cu)	2022/09/14	83	80 - 120	89	80 - 120	<0.0010	mg/L	NC	20
A715279	Dissolved Lead (Pb)	2022/09/14	83	80 - 120	88	80 - 120	<0.00020	mg/L	NC	20
A715279	Dissolved Molybdenum (Mo)	2022/09/14	88	80 - 120	90	80 - 120	<0.00020	mg/L	1.8	20
A715279	Dissolved Nickel (Ni)	2022/09/14	83	80 - 120	88	80 - 120	<0.00050	mg/L	NC	20
A715279	Dissolved Selenium (Se)	2022/09/14	86	80 - 120	88	80 - 120	<0.00020	mg/L	3.2	20
A715279	Dissolved Silver (Ag)	2022/09/14	83	80 - 120	87	80 - 120	<0.00010	mg/L	NC	20
A715279	Dissolved Thallium (Tl)	2022/09/14	84	80 - 120	87	80 - 120	<0.00020	mg/L	NC	20
A715279	Dissolved Tin (Sn)	2022/09/14	85	80 - 120	91	80 - 120	<0.0010	mg/L	NC	20
A715279	Dissolved Titanium (Ti)	2022/09/14	83	80 - 120	89	80 - 120	<0.0010	mg/L	NC	20
A715279	Dissolved Uranium (U)	2022/09/14	84	80 - 120	88	80 - 120	<0.00010	mg/L	3.2	20
A715279	Dissolved Vanadium (V)	2022/09/14	83	80 - 120	89	80 - 120	<0.0010	mg/L	NC	20
A715279	Dissolved Zinc (Zn)	2022/09/14	81	80 - 120	87	80 - 120	<0.0030	mg/L	NC	20
A715527	Turbidity	2022/09/14			104	80 - 120	<0.10	NTU	3.4	20
A715566	Alkalinity (PP as CaCO3)	2022/09/14					<1.0	mg/L	NC	20
A715566	Alkalinity (Total as CaCO3)	2022/09/14			98	80 - 120	<1.0	mg/L	4.8	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A715566	Bicarbonate (HCO3)	2022/09/14					<1.0	mg/L	4.8	20
A715566	Carbonate (CO3)	2022/09/14					<1.0	mg/L	NC	20
A715566	Hydroxide (OH)	2022/09/14					<1.0	mg/L	NC	20
A715573	pH	2022/09/14			100	97 - 103			0.74	N/A
A715926	Dissolved Barium (Ba)	2022/09/15	96	80 - 120	97	80 - 120	<0.010	mg/L	2.4	20
A715926	Dissolved Boron (B)	2022/09/15	96	80 - 120	95	80 - 120	<0.020	mg/L	NC	20
A715926	Dissolved Calcium (Ca)	2022/09/15	96	80 - 120	98	80 - 120	<0.30	mg/L	2.0	20
A715926	Dissolved Iron (Fe)	2022/09/15	82	80 - 120	93	80 - 120	<0.060	mg/L	4.0	20
A715926	Dissolved Lithium (Li)	2022/09/15	94	80 - 120	94	80 - 120	<0.020	mg/L	NC	20
A715926	Dissolved Magnesium (Mg)	2022/09/15	94	80 - 120	93	80 - 120	<0.20	mg/L	2.7	20
A715926	Dissolved Manganese (Mn)	2022/09/15	96	80 - 120	95	80 - 120	<0.0040	mg/L	1.4	20
A715926	Dissolved Phosphorus (P)	2022/09/15	94	80 - 120	92	80 - 120	<0.10	mg/L	NC	20
A715926	Dissolved Potassium (K)	2022/09/15	92	80 - 120	91	80 - 120	<0.30	mg/L	1.3	20
A715926	Dissolved Silicon (Si)	2022/09/15	89	80 - 120	90	80 - 120	<0.50	mg/L	2.3	20
A715926	Dissolved Sodium (Na)	2022/09/15	97	80 - 120	97	80 - 120	<0.50	mg/L	0.14	20
A715926	Dissolved Strontium (Sr)	2022/09/15	93	80 - 120	95	80 - 120	<0.020	mg/L	1.5	20
A715926	Dissolved Sulphur (S)	2022/09/15	88	80 - 120	90	80 - 120	<0.20	mg/L	0.10	20
A716056	Dissolved Aluminum (Al)	2022/09/15	89	80 - 120	97	80 - 120	<0.0044	mg/L	NC	20
A716056	Dissolved Antimony (Sb)	2022/09/15	108	80 - 120	107	80 - 120	<0.00060	mg/L	NC	20
A716056	Dissolved Arsenic (As)	2022/09/15	96	80 - 120	96	80 - 120	<0.00020	mg/L	NC	20
A716056	Dissolved Beryllium (Be)	2022/09/15	88	80 - 120	87	80 - 120	<0.0010	mg/L	NC	20
A716056	Dissolved Chromium (Cr)	2022/09/15	92	80 - 120	92	80 - 120	<0.0010	mg/L	NC	20
A716056	Dissolved Cobalt (Co)	2022/09/15	90	80 - 120	91	80 - 120	<0.00030	mg/L	NC	20
A716056	Dissolved Copper (Cu)	2022/09/15	87	80 - 120	88	80 - 120	<0.0010	mg/L	NC	20
A716056	Dissolved Lead (Pb)	2022/09/15	100	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
A716056	Dissolved Molybdenum (Mo)	2022/09/15	98	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
A716056	Dissolved Nickel (Ni)	2022/09/15	89	80 - 120	90	80 - 120	<0.00050	mg/L	NC	20
A716056	Dissolved Selenium (Se)	2022/09/15	102	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
A716056	Dissolved Silver (Ag)	2022/09/15	92	80 - 120	92	80 - 120	<0.00010	mg/L	NC	20
A716056	Dissolved Thallium (Tl)	2022/09/15	97	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20
A716056	Dissolved Tin (Sn)	2022/09/15	97	80 - 120	95	80 - 120	<0.0010	mg/L	NC	20
A716056	Dissolved Titanium (Ti)	2022/09/15	102	80 - 120	95	80 - 120	<0.0010	mg/L	NC	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A716056	Dissolved Uranium (U)	2022/09/15	93	80 - 120	94	80 - 120	<0.00010	mg/L	NC	20
A716056	Dissolved Vanadium (V)	2022/09/15	95	80 - 120	94	80 - 120	<0.0010	mg/L	NC	20
A716056	Dissolved Zinc (Zn)	2022/09/15	96	80 - 120	96	80 - 120	<0.0030	mg/L	NC	20
A716584	Total Suspended Solids	2022/09/15	97	80 - 120	99	80 - 120	<1.0	mg/L	NC	20
A716694	Total Aluminum (Al)	2022/09/15	NC	80 - 120	104	80 - 120	<0.0030	mg/L	13	20
A716694	Total Antimony (Sb)	2022/09/15	97	80 - 120	103	80 - 120	<0.00060	mg/L	NC	20
A716694	Total Arsenic (As)	2022/09/15	94	80 - 120	100	80 - 120	<0.00020	mg/L	4.6	20
A716694	Total Beryllium (Be)	2022/09/15	103	80 - 120	109	80 - 120	<0.0010	mg/L	NC	20
A716694	Total Chromium (Cr)	2022/09/15	96	80 - 120	103	80 - 120	<0.0010	mg/L	NC	20
A716694	Total Cobalt (Co)	2022/09/15	96	80 - 120	104	80 - 120	<0.00030	mg/L	NC	20
A716694	Total Copper (Cu)	2022/09/15	95	80 - 120	103	80 - 120	<0.0010	mg/L	NC	20
A716694	Total Lead (Pb)	2022/09/15	99	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
A716694	Total Molybdenum (Mo)	2022/09/15	97	80 - 120	103	80 - 120	<0.00020	mg/L	6.1	20
A716694	Total Nickel (Ni)	2022/09/15	95	80 - 120	103	80 - 120	<0.00050	mg/L	4.7	20
A716694	Total Selenium (Se)	2022/09/15	100	80 - 120	108	80 - 120	<0.00020	mg/L	18	20
A716694	Total Silver (Ag)	2022/09/15	97	80 - 120	103	80 - 120	<0.00010	mg/L	NC	20
A716694	Total Thallium (Tl)	2022/09/15	99	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
A716694	Total Tin (Sn)	2022/09/15	95	80 - 120	102	80 - 120	<0.0010	mg/L	NC	20
A716694	Total Titanium (Ti)	2022/09/15	97	80 - 120	109	80 - 120	<0.0010	mg/L	NC	20
A716694	Total Uranium (U)	2022/09/15	100	80 - 120	104	80 - 120	<0.00010	mg/L	1.5	20
A716694	Total Vanadium (V)	2022/09/15	99	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20
A716694	Total Zinc (Zn)	2022/09/15	96	80 - 120	102	80 - 120	<0.0030	mg/L	NC	20
A716712	Total Barium (Ba)	2022/09/15	100	80 - 120	98	80 - 120	<0.010	mg/L	0.14	20
A716712	Total Boron (B)	2022/09/15	98	80 - 120	97	80 - 120	<0.020	mg/L	NC	20
A716712	Total Calcium (Ca)	2022/09/15	NC	80 - 120	100	80 - 120	<0.30	mg/L	0.75	20
A716712	Total Iron (Fe)	2022/09/15	NC	80 - 120	102	80 - 120	<0.060	mg/L	5.8	20
A716712	Total Lithium (Li)	2022/09/15	101	80 - 120	102	80 - 120	<0.020	mg/L	NC	20
A716712	Total Magnesium (Mg)	2022/09/15	107	80 - 120	100	80 - 120	<0.20	mg/L	0.11	20
A716712	Total Manganese (Mn)	2022/09/15	99	80 - 120	100	80 - 120	<0.0040	mg/L	0	20
A716712	Total Phosphorus (P)	2022/09/15	96	80 - 120	96	80 - 120	<0.10	mg/L	NC	20
A716712	Total Potassium (K)	2022/09/15	106	80 - 120	102	80 - 120	<0.30	mg/L	0.61	20
A716712	Total Silicon (Si)	2022/09/15	86	80 - 120	100	80 - 120	<0.50	mg/L	5.1	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A716712	Total Sodium (Na)	2022/09/15	114	80 - 120	99	80 - 120	<0.50	mg/L	0.92	20
A716712	Total Strontium (Sr)	2022/09/15	94	80 - 120	93	80 - 120	<0.020	mg/L	0.18	20
A716712	Total Sulphur (S)	2022/09/15	84	80 - 120	98	80 - 120	<0.20	mg/L	0.14	20

N/A = Not Applicable

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

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

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

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

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

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

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

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VALIDATION SIGNATURE PAGE

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

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

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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

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Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvna.com

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#7500 KGS Group	Company Name:	KGS Group	Quotation #:	C20090	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Ganga Atmuri/Ed Collins	P.O. #:		C269767	673906
Address:	3rd Floor 865 Waverly St Winnipeg MB R3T 5T4	Address:	865 Waverley St. 3rd Floor Winnipeg, MB R3T 5T4	Project:	21-1357-005	COC #:	Project Manager:
Tel:	(204) 896-1209 Fax:	Tel:	(204) 896-1209 Fax:	Project Name:		C#673906-02-01	Janelle Kochan
Email:	payables@kgsgroup.com	Email:	gatmuri@kgsgroup.com,ecollins@kgsgroup.com	Site #:	OAM - Sherridon Mine Site		
				Sampled By:	AL/DL		

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☒ Other MWQSOG

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: ☑
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission) ☐
Date Required:
Rush Confirmation Number: *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	pH @25°C	Alkalinity @25C (pp, total), CO3,HCO3,OH	Total Suspended Solids (NFR)	Turbidity	Regulated Metals (CCME/AT1) - Total	Reg. Metals (CCME/AT1) – Diss. Lab Filt.	Hardness	Hardness Total (calculated as CaCO3)			# of Bottles	Comments
1		CL-6	22/09/09	8:20	S/W	N	X	X	X	X	X	X	X	X			4	
2		CL-5		8:25		N	X	X	X	X	X	X	X	X			4	
3		CL-4		8:35		N	X	X	X	X	X	X	X	X			4	
4		CL-8		8:45		N	X	X	X	X	X	X	X	X			4	
5		CL-3		8:50		N	X	X	X	X	X	X	X	X			4	
6		CL-7		8:55		N	X	X	X	X	X	X	X	X			4	
7		CL-2		9:05		N	X	X	X	X	X	X	X	X			4	
8		SB-2		9:30		N	X	X	X	X	X	X	X	X			4	
9		SB-1		10:00		N	X	X	X	X	X	X	X	X			4	
10		CB-1		10:05		N	X	X	X	X	X	X	X	X			4	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Rinsleigh Loria ALoria	22/09/10	15:15	~~Bat~~ Brooklyn Hlebert	22/09/12	0830	
			Joban RAJU	2022/09/13	08:00	

Laboratory Use Only: Time Sensitive ☐ | Temperature (°C) on Receipt: ACTR | Custody Seal Intact on Cooler? ☐ Yes ☐ No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.
** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

MCAL: SeeACTR

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

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Page 1 of 2

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#7500 KGS Group	Company Name:	KGS Group	Quotation #:	C20090	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Ganga Atmuri/Ed Collins	P.O. #:		C2697767	673906
Address:	3rd Floor 865 Waverly St Winnipeg MB R3T 5T4	Address:	865 Waverley St, 3rd Floor Winnipeg, MB R3T 5T4	Project:	21-1357-005	COC #:	Project Manager:
Tel:	(204) 896-1209 Fax:	Tel:	(204) 896-1209 Fax:	Project Name:		C#673906-01-01	Janelle Kochan
Email:	payables@kgsgroup.com	Email:	gatmuri@kgsgroup.com,ecollins@kgsgroup.com	Site #:	OAM - Sherridon Mine Site		
				Sampled By:	AL / DL		

Regulatory Criteria:
- [ ] ATI
- [ ] CCME
- [x] Other MWQSOG

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: ✓
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission)
Date Required:
Rush Confirmation Number: *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	pH @25°C	Alkalinity @25C (pp, total), CO3,HCO3,OH	Total Suspended Solids (NFR)	Turbidity	Regulated Metals (CCME/AT1) - Total	Reg. Metals (CCME/AT1) – Diss. Lab Filt.	Hardness	Hardness Total (calculated as CaCO3)			# of Bottles	Comments
1		CB-2	22/09/09	10:15	SW	N	x	x	x	x	x	x	x	x			4	
2		EB-1		10:20		N	x	x	x	x	x	x	x	x			4	
3		EB-2		10:30		N	x	x	x	x	x	x	x	x			4	
4		NB-2		11:30		N	x	x	x	x	x	x	x	x			4	
5		NB-1		11:35		N	x	x	x	x	x	x	x	x			4	
6		Camp Lake Discharge		11:45		N	x	x	x	x	x	x	x	x			4	
7		SW-101		16:00		N	x	x	x	x	x	x	x	x			4	
8		SW-106		17:00		N	x	x	x	x	x	x	x	x			4	
9		SC-1		12:20		N	x	x	x	x	x	x	x	x			4	
10		Trip Blank		—		N	x	x	x	x	x	x	x	x			4	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Ainsleigh Lovick	22/09/10	15:15	~~BM~~ Brooklyn Hiebert	22/09/12	0830			ACTR	Yes / No
			JORDAN RAJU	2022/09/13	0850				

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

White: Bureau Veritas Yellow: Client

MCAL: See ACTR

Bureau Veritas Canada (2019) Inc.

Your Project #: 21-1357-005
Site#: OAM - SHERRIDON MINE SITE
Your C.O.C. #: C#675143-01-01, C#675143-02-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/10/04
Report #: R3242908
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C273475
Received: 2022/09/22, 10:55

Sample Matrix: Surface Water
Samples Received: 20

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH (1)	20	N/A	2022/09/25	AB SOP-00005	SM 23 2320 B m
Cadmium - low level CCME - Dissolved (1)	20	N/A	2022/09/27		Auto Calc
Cadmium - low level CCME (Total) (1)	1	N/A	2022/09/27		Auto Calc
Cadmium - low level CCME (Total) (1)	6	N/A	2022/09/28		Auto Calc
Cadmium - low level CCME (Total) (1)	1	N/A	2022/09/29		Auto Calc
Cadmium - low level CCME (Total) (1)	3	N/A	2022/10/03		Auto Calc
Cadmium - low level CCME (Total) (1)	9	N/A	2022/10/04		Auto Calc
Hardness (1)	20	N/A	2022/09/25		Auto Calc
Hardness Total (calculated as CaCO3) (1, 2)	20	N/A	2022/09/28	BBY WI-00033	Auto Calc
Elements by ICP-Dissolved-Lab Filtered (1, 3)	20	N/A	2022/09/24	AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Total (1)	19	2022/09/27	2022/09/28	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Total (1)	1	2022/09/28	2022/09/28	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Elements by ICPMS-Dissolved-Lab Filtered (1, 4)	1	N/A	2022/09/26	AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS-Dissolved-Lab Filtered (1, 4)	19	N/A	2022/09/27	AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total (1)	8	2022/09/27	2022/09/27	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total (1)	11	2022/09/27	2022/10/03	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total (1)	1	2022/09/28	2022/09/29	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
pH @25°C (1, 5)	20	N/A	2022/09/25	AB SOP-00005	SM 23 4500-H+B m
Total Suspended Solids (NFR) (1)	19	2022/09/26	2022/09/26	AB SOP-00061	SM 23 2540 D m
Total Suspended Solids (NFR) (1)	1	2022/09/27	2022/09/27	AB SOP-00061	SM 23 2540 D m
Turbidity (1)	20	N/A	2022/09/23	CAL SOP-00081	SM 23 2130 B m

Remarks:

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

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession

Your Project #: 21-1357-005
Site#: OAM - SHERRIDON MINE SITE
Your C.O.C. #: C#675143-01-01, C#675143-02-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/10/04
Report #: R3242908
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C273475

Received: 2022/09/22, 10:55

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8
(2) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(3) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(4) Samples were filtered and preserved at the lab. Values may not reflect concentrations at the time of sampling. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(5) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Janelle Kochan, B.Sc., Key Account Specialist
Email: Janelle.KOCHAN@bureauveritas.com
Phone# (204)259-0231

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For Service Group specific validation please refer to the Validation Signature Page.

REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BCN755	BCN756		BCN757		BCN758		
Sampling Date		2022/09/20 15:00	2022/09/20 15:05		2022/09/20 15:10		2022/09/20 15:15		
COC Number		C#675143-01-01	C#675143-01-01		C#675143-01-01		C#675143-01-01		
	UNITS	**CB-2**	**EB-1**	**QC Batch**	**EB-2**	**QC Batch**	**NB-2**	**RDL**	**QC Batch**
Elements									
Dissolved Cadmium (Cd)	ug/L	0.38	0.56	A727696	0.46	A727696	0.29	0.020	A727696
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	0.011	0.0096	A729004	0.0088	A729004	0.0079	0.0030	A729004
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	A729004	<0.00060	A729004	<0.00060	0.00060	A729004
Dissolved Arsenic (As)	mg/L	<0.00020	<0.00020	A729004	<0.00020	A729004	0.00022	0.00020	A729004
Dissolved Barium (Ba)	mg/L	0.012	0.013	A729055	0.013	A729052	0.012	0.010	A729055
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	A729004	<0.0010	A729004	<0.0010	0.0010	A729004
Dissolved Boron (B)	mg/L	<0.020	<0.020	A729055	<0.020	A729052	<0.020	0.020	A729055
Dissolved Calcium (Ca)	mg/L	48	52	A729055	52	A729052	51	0.30	A729055
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010	A729004	<0.0010	A729004	<0.0010	0.0010	A729004
Dissolved Cobalt (Co)	mg/L	<0.00030	<0.00030	A729004	<0.00030	A729004	<0.00030	0.00030	A729004
Dissolved Copper (Cu)	mg/L	0.0091	0.0082	A729004	0.0075	A729004	0.0072	0.0010	A729004
Dissolved Iron (Fe)	mg/L	0.65	0.48	A729055	0.43	A729052	0.61	0.060	A729055
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	A729004	<0.00020	A729004	<0.00020	0.00020	A729004
Dissolved Lithium (Li)	mg/L	<0.020	<0.020	A729055	<0.020	A729052	<0.020	0.020	A729055
Dissolved Magnesium (Mg)	mg/L	7.9	8.3	A729055	8.2	A729052	8.1	0.20	A729055
Dissolved Manganese (Mn)	mg/L	0.056	0.042	A729055	0.041	A729052	0.054	0.0040	A729055
Dissolved Molybdenum (Mo)	mg/L	<0.00020	<0.00020	A729004	<0.00020	A729004	<0.00020	0.00020	A729004
Dissolved Nickel (Ni)	mg/L	0.00084	0.00095	A729004	0.00079	A729004	0.00074	0.00050	A729004
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	A729055	<0.10	A729052	<0.10	0.10	A729055
Dissolved Potassium (K)	mg/L	4.0	4.1	A729055	4.1	A729052	3.9	0.30	A729055
Dissolved Selenium (Se)	mg/L	<0.00020	<0.00020	A729004	<0.00020	A729004	<0.00020	0.00020	A729004
Dissolved Silicon (Si)	mg/L	1.2	0.98	A729055	1.0	A729052	1.2	0.50	A729055
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	A729004	<0.00010	A729004	<0.00010	0.00010	A729004
Dissolved Sodium (Na)	mg/L	2.9	3.0	A729055	2.9	A729052	2.9	0.50	A729055
Dissolved Strontium (Sr)	mg/L	0.052	0.054	A729055	0.054	A729052	0.053	0.020	A729055
Dissolved Sulphur (S)	mg/L	49	51	A729055	53	A729052	53	0.20	A729055
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	A729004	<0.00020	A729004	<0.00020	0.00020	A729004
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	A729004	<0.0010	A729004	<0.0010	0.0010	A729004
Dissolved Titanium (Ti)	mg/L	<0.0010	<0.0010	A729004	<0.0010	A729004	<0.0010	0.0010	A729004
Dissolved Uranium (U)	mg/L	<0.00010	<0.00010	A729004	<0.00010	A729004	<0.00010	0.00010	A729004

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BCN755	BCN756		BCN757		BCN758		
Sampling Date		2022/09/20 15:00	2022/09/20 15:05		2022/09/20 15:10		2022/09/20 15:15		
COC Number		C#675143-01-01	C#675143-01-01		C#675143-01-01		C#675143-01-01		
	UNITS	**CB-2**	**EB-1**	**QC Batch**	**EB-2**	**QC Batch**	**NB-2**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	A729004	<0.0010	A729004	<0.0010	0.0010	A729004
Dissolved Zinc (Zn)	mg/L	0.12	0.13	A729004	0.13	A729004	0.10	0.0030	A729004
RDL = Reportable Detection Limit									

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BCN759	BCN760	BCN761		BCN762		
Sampling Date		2022/09/20 15:25	2022/09/20 15:30	2022/09/20 16:25		2022/09/20 16:00		
COC Number		C#675143-01-01	C#675143-01-01	C#675143-01-01		C#675143-01-01		
	UNITS	NB-1	CAMP LAKE DISCHARGE	SC-1	QC Batch	SW-117	RDL	QC Batch
Elements								
Dissolved Cadmium (Cd)	ug/L	0.36	0.36	0.34	A727696	0.30	0.020	A727696
Lab Filtered Elements								
Dissolved Aluminum (Al)	mg/L	0.0077	0.011	0.020	A729004	0.0060	0.0030	A729004
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	A729004	<0.00060	0.00060	A729004
Dissolved Arsenic (As)	mg/L	<0.00020	<0.00020	0.00032	A729004	0.00025	0.00020	A729004
Dissolved Barium (Ba)	mg/L	0.012	0.012	<0.010	A729055	0.012	0.010	A729052
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	A729004	<0.0010	0.0010	A729004
Dissolved Boron (B)	mg/L	<0.020	<0.020	<0.020	A729055	<0.020	0.020	A729052
Dissolved Calcium (Ca)	mg/L	51	52	8.9	A729055	46	0.30	A729052
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010	<0.0010	A729004	<0.0010	0.0010	A729004
Dissolved Cobalt (Co)	mg/L	<0.00030	<0.00030	<0.00030	A729004	<0.00030	0.00030	A729004
Dissolved Copper (Cu)	mg/L	0.0071	0.0075	0.016	A729004	0.0067	0.0010	A729004
Dissolved Iron (Fe)	mg/L	0.63	0.32	0.22	A729055	0.78	0.060	A729052
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	<0.00020	A729004	<0.00020	0.00020	A729004
Dissolved Lithium (Li)	mg/L	<0.020	<0.020	<0.020	A729055	<0.020	0.020	A729052
Dissolved Magnesium (Mg)	mg/L	8.1	8.2	2.8	A729055	7.5	0.20	A729052
Dissolved Manganese (Mn)	mg/L	0.057	0.054	0.012	A729055	0.054	0.0040	A729052
Dissolved Molybdenum (Mo)	mg/L	<0.00020	<0.00020	<0.00020	A729004	<0.00020	0.00020	A729004
Dissolved Nickel (Ni)	mg/L	0.00072	0.0019	<0.00050	A729004	0.00089	0.00050	A729004
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	A729055	<0.10	0.10	A729052
Dissolved Potassium (K)	mg/L	3.9	3.9	1.5	A729055	3.8	0.30	A729052
Dissolved Selenium (Se)	mg/L	<0.00020	<0.00020	<0.00020	A729004	<0.00020	0.00020	A729004
Dissolved Silicon (Si)	mg/L	1.2	1.2	1.5	A729055	1.2	0.50	A729052
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	A729004	<0.00010	0.00010	A729004
Dissolved Sodium (Na)	mg/L	2.8	2.9	3.1	A729055	2.8	0.50	A729052
Dissolved Strontium (Sr)	mg/L	0.052	0.053	0.023	A729055	0.050	0.020	A729052
Dissolved Sulphur (S)	mg/L	52	52	2.2	A729055	46	0.20	A729052
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	A729004	<0.00020	0.00020	A729004
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	A729004	<0.0010	0.0010	A729004
Dissolved Titanium (Ti)	mg/L	<0.0010	<0.0010	<0.0010	A729004	<0.0010	0.0010	A729004
Dissolved Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	A729004	<0.00010	0.00010	A729004

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BCN759	BCN760	BCN761		BCN762		
Sampling Date		2022/09/20 15:25	2022/09/20 15:30	2022/09/20 16:25		2022/09/20 16:00		
COC Number		C#675143-01-01	C#675143-01-01	C#675143-01-01		C#675143-01-01		
	UNITS	**NB-1**	**CAMP LAKE DISCHARGE**	**SC-1**	**QC Batch**	**SW-117**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	<0.0010	A729004	<0.0010	0.0010	A729004
Dissolved Zinc (Zn)	mg/L	0.11	0.10	0.12	A729004	0.10	0.0030	A729004
RDL = Reportable Detection Limit								

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BCN763	BCN764		BCN788		
Sampling Date		2022/09/20 13:40	2022/09/20		2022/09/20 13:35		
COC Number		C#675143-01-01	C#675143-01-01		C#675143-02-01		
	UNITS	SW-104	TRIP BLANK	QC Batch	CL-6	RDL	QC Batch
Elements							
Dissolved Cadmium (Cd)	ug/L	<0.020	<0.020	A727696	<0.020	0.020	A727696
Lab Filtered Elements							
Dissolved Aluminum (Al)	mg/L	0.018	<0.0030	A729004	0.025	0.0030	A729007
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	A729004	<0.00060	0.00060	A729007
Dissolved Arsenic (As)	mg/L	0.00037	<0.00020	A729004	0.00039	0.00020	A729007
Dissolved Barium (Ba)	mg/L	<0.010	<0.010	A729055	<0.010	0.010	A729055
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	A729004	<0.0010	0.0010	A729007
Dissolved Boron (B)	mg/L	<0.020	<0.020	A729055	<0.020	0.020	A729055
Dissolved Calcium (Ca)	mg/L	12	<0.30	A729055	11	0.30	A729055
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010	A729004	<0.0010	0.0010	A729007
Dissolved Cobalt (Co)	mg/L	<0.00030	<0.00030	A729004	<0.00030	0.00030	A729007
Dissolved Copper (Cu)	mg/L	0.0057	<0.0010	A729004	0.0045	0.0010	A729007
Dissolved Iron (Fe)	mg/L	0.25	<0.060	A729055	0.098	0.060	A729055
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	A729004	<0.00020	0.00020	A729007
Dissolved Lithium (Li)	mg/L	<0.020	<0.020	A729055	<0.020	0.020	A729055
Dissolved Magnesium (Mg)	mg/L	3.2	<0.20	A729055	3.1	0.20	A729055
Dissolved Manganese (Mn)	mg/L	<0.0040	<0.0040	A729055	<0.0040	0.0040	A729055
Dissolved Molybdenum (Mo)	mg/L	<0.00020	<0.00020	A729004	0.00023	0.00020	A729007
Dissolved Nickel (Ni)	mg/L	<0.00050	<0.00050	A729004	<0.00050	0.00050	A729007
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	A729055	<0.10	0.10	A729055
Dissolved Potassium (K)	mg/L	1.5	<0.30	A729055	1.4	0.30	A729055
Dissolved Selenium (Se)	mg/L	<0.00020	<0.00020	A729004	<0.00020	0.00020	A729007
Dissolved Silicon (Si)	mg/L	0.86	<0.50	A729055	0.66	0.50	A729055
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	A729004	<0.00010	0.00010	A729007
Dissolved Sodium (Na)	mg/L	1.9	<0.50	A729055	1.9	0.50	A729055
Dissolved Strontium (Sr)	mg/L	0.026	<0.020	A729055	0.026	0.020	A729055
Dissolved Sulphur (S)	mg/L	6.4	<0.20	A729055	5.1	0.20	A729055
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	A729004	<0.00020	0.00020	A729007
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	A729004	<0.0010	0.0010	A729007
Dissolved Titanium (Ti)	mg/L	<0.0010	<0.0010	A729004	<0.0010	0.0010	A729007
Dissolved Uranium (U)	mg/L	<0.00010	<0.00010	A729004	<0.00010	0.00010	A729007

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BCN763	BCN764		BCN788		
Sampling Date		2022/09/20 13:40	2022/09/20		2022/09/20 13:35		
COC Number		C#675143-01-01	C#675143-01-01		C#675143-02-01		
	UNITS	**SW-104**	**TRIP BLANK**	**QC Batch**	**CL-6**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	A729004	<0.0010	0.0010	A729007
Dissolved Zinc (Zn)	mg/L	0.013	<0.0030	A729004	0.0091	0.0030	A729007
RDL = Reportable Detection Limit							

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BCN788			BCN789	BCN790	BCN791		
Sampling Date		2022/09/20 13:35			2022/09/20 13:45	2022/09/20 13:55	2022/09/20 14:00		
COC Number		C#675143-02-01			C#675143-02-01	C#675143-02-01	C#675143-02-01		
	UNITS	CL-6 Lab-Dup	RDL	QC Batch	CL-5	CL-4	CL-8	RDL	QC Batch
Elements									
Dissolved Cadmium (Cd)	ug/L				<0.020	0.034	<0.020	0.020	A727696
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	0.019	0.0030	A729007	0.018	0.021	0.023	0.0030	A729004
Dissolved Antimony (Sb)	mg/L	<0.00060	0.00060	A729007	<0.00060	<0.00060	<0.00060	0.00060	A729004
Dissolved Arsenic (As)	mg/L	0.00037	0.00020	A729007	0.00028	0.00031	0.00039	0.00020	A729004
Dissolved Barium (Ba)	mg/L				<0.010	<0.010	<0.010	0.010	A729055
Dissolved Beryllium (Be)	mg/L	<0.0010	0.0010	A729007	<0.0010	<0.0010	<0.0010	0.0010	A729004
Dissolved Boron (B)	mg/L				<0.020	<0.020	<0.020	0.020	A729055
Dissolved Calcium (Ca)	mg/L				12	12	12	0.30	A729055
Dissolved Chromium (Cr)	mg/L	<0.0010	0.0010	A729007	<0.0010	<0.0010	<0.0010	0.0010	A729004
Dissolved Cobalt (Co)	mg/L	<0.00030	0.00030	A729007	<0.00030	<0.00030	<0.00030	0.00030	A729004
Dissolved Copper (Cu)	mg/L	0.0040	0.0010	A729007	0.0047	0.0050	0.0055	0.0010	A729004
Dissolved Iron (Fe)	mg/L				0.17	0.49	0.22	0.060	A729055
Dissolved Lead (Pb)	mg/L	<0.00020	0.00020	A729007	<0.00020	<0.00020	<0.00020	0.00020	A729004
Dissolved Lithium (Li)	mg/L				<0.020	<0.020	<0.020	0.020	A729055
Dissolved Magnesium (Mg)	mg/L				3.2	3.2	3.2	0.20	A729055
Dissolved Manganese (Mn)	mg/L				<0.0040	0.0061	<0.0040	0.0040	A729055
Dissolved Molybdenum (Mo)	mg/L	<0.00020	0.00020	A729007	<0.00020	<0.00020	<0.00020	0.00020	A729004
Dissolved Nickel (Ni)	mg/L	<0.00050	0.00050	A729007	<0.00050	<0.00050	0.00074	0.00050	A729004
Dissolved Phosphorus (P)	mg/L				<0.10	<0.10	<0.10	0.10	A729055
Dissolved Potassium (K)	mg/L				1.4	1.5	1.5	0.30	A729055
Dissolved Selenium (Se)	mg/L	<0.00020	0.00020	A729007	<0.00020	<0.00020	<0.00020	0.00020	A729004
Dissolved Silicon (Si)	mg/L				0.77	0.93	0.84	0.50	A729055
Dissolved Silver (Ag)	mg/L	<0.00010	0.00010	A729007	<0.00010	<0.00010	<0.00010	0.00010	A729004
Dissolved Sodium (Na)	mg/L				1.9	2.0	1.9	0.50	A729055
Dissolved Strontium (Sr)	mg/L				0.026	0.027	0.026	0.020	A729055
Dissolved Sulphur (S)	mg/L				5.5	5.2	6.1	0.20	A729055
Dissolved Thallium (Tl)	mg/L	<0.00020	0.00020	A729007	<0.00020	<0.00020	<0.00020	0.00020	A729004
Dissolved Tin (Sn)	mg/L	<0.0010	0.0010	A729007	<0.0010	<0.0010	<0.0010	0.0010	A729004
Dissolved Titanium (Ti)	mg/L	<0.0010	0.0010	A729007	<0.0010	<0.0010	<0.0010	0.0010	A729004
Dissolved Uranium (U)	mg/L	<0.00010	0.00010	A729007	<0.00010	<0.00010	<0.00010	0.00010	A729004

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BCN788			BCN789	BCN790	BCN791		
Sampling Date		2022/09/20 13:35			2022/09/20 13:45	2022/09/20 13:55	2022/09/20 14:00		
COC Number		C#675143-02-01			C#675143-02-01	C#675143-02-01	C#675143-02-01		
	UNITS	**CL-6 Lab-Dup**	**RDL**	**QC Batch**	**CL-5**	**CL-4**	**CL-8**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	0.0010	A729007	<0.0010	<0.0010	<0.0010	0.0010	A729004
Dissolved Zinc (Zn)	mg/L	0.0089	0.0030	A729007	0.010	0.010	0.013	0.0030	A729004

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BCN792	BCN793	BCN794	BCN795	BCN796		
Sampling Date		2022/09/20 14:05	2022/09/20 14:10	2022/09/20 14:20	2022/09/20 14:40	2022/09/20 14:45		
COC Number		C#675143-02-01	C#675143-02-01	C#675143-02-01	C#675143-02-01	C#675143-02-01		
	UNITS	CL-3	CL-7	CL-2	SB-2	SB-1	RDL	QC Batch
Elements								
Dissolved Cadmium (Cd)	ug/L	0.023	0.034	0.15	0.36	0.35	0.020	A727696
Lab Filtered Elements								
Dissolved Aluminum (Al)	mg/L	0.022	0.018	0.030	0.0078	0.0053	0.0030	A729004
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	0.00060	A729004
Dissolved Arsenic (As)	mg/L	0.00041	0.00036	0.00028	0.00028	<0.00020	0.00020	A729004
Dissolved Barium (Ba)	mg/L	<0.010	<0.010	0.012	0.012	0.013	0.010	A729055
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A729004
Dissolved Boron (B)	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	A729055
Dissolved Calcium (Ca)	mg/L	12	12	15	46	46	0.30	A729055
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A729004
Dissolved Cobalt (Co)	mg/L	<0.00030	<0.00030	0.00049	<0.00030	<0.00030	0.00030	A729004
Dissolved Copper (Cu)	mg/L	0.0054	0.0052	0.0072	0.0073	0.0067	0.0010	A729004
Dissolved Iron (Fe)	mg/L	0.24	0.27	1.0	0.82	0.88	0.060	A729055
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A729004
Dissolved Lithium (Li)	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	A729055
Dissolved Magnesium (Mg)	mg/L	3.2	3.2	3.5	7.6	7.8	0.20	A729055
Dissolved Manganese (Mn)	mg/L	<0.0040	<0.0040	0.40	0.054	0.055	0.0040	A729055
Dissolved Molybdenum (Mo)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A729004
Dissolved Nickel (Ni)	mg/L	<0.00050	<0.00050	<0.00050	0.00064	0.00060	0.00050	A729004
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	A729055
Dissolved Potassium (K)	mg/L	1.5	1.5	1.6	3.8	3.9	0.30	A729055
Dissolved Selenium (Se)	mg/L	0.00022	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A729004
Dissolved Silicon (Si)	mg/L	0.85	0.87	1.7	1.2	1.2	0.50	A729055
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A729004
Dissolved Sodium (Na)	mg/L	1.9	1.9	2.0	2.9	3.2	0.50	A729055
Dissolved Strontium (Sr)	mg/L	0.026	0.027	0.029	0.050	0.051	0.020	A729055
Dissolved Sulphur (S)	mg/L	6.3	6.4	8.1	46	48	0.20	A729055
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A729004
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A729004
Dissolved Titanium (Ti)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A729004
Dissolved Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A729004

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BCN792	BCN793	BCN794	BCN795	BCN796		
Sampling Date		2022/09/20 14:05	2022/09/20 14:10	2022/09/20 14:20	2022/09/20 14:40	2022/09/20 14:45		
COC Number		C#675143-02-01	C#675143-02-01	C#675143-02-01	C#675143-02-01	C#675143-02-01		
	UNITS	**CL-3**	**CL-7**	**CL-2**	**SB-2**	**SB-1**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A729004
Dissolved Zinc (Zn)	mg/L	0.012	0.014	0.042	0.10	0.11	0.0030	A729004
RDL = Reportable Detection Limit								

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BCN797			BCN797		
Sampling Date		2022/09/20 14:50			2022/09/20 14:50		
COC Number		C#675143-02-01			C#675143-02-01		
	UNITS	CB-1	RDL	QC Batch	CB-1 Lab-Dup	RDL	QC Batch
Elements							
Dissolved Cadmium (Cd)	ug/L	0.40	0.020	A727696			
Lab Filtered Elements							
Dissolved Aluminum (Al)	mg/L	0.0099	0.0030	A729004	0.0071	0.0030	A729004
Dissolved Antimony (Sb)	mg/L	<0.00060	0.00060	A729004	<0.00060	0.00060	A729004
Dissolved Arsenic (As)	mg/L	0.00023	0.00020	A729004	<0.00020	0.00020	A729004
Dissolved Barium (Ba)	mg/L	0.012	0.010	A729052			
Dissolved Beryllium (Be)	mg/L	<0.0010	0.0010	A729004	<0.0010	0.0010	A729004
Dissolved Boron (B)	mg/L	<0.020	0.020	A729052			
Dissolved Calcium (Ca)	mg/L	46	0.30	A729052			
Dissolved Chromium (Cr)	mg/L	<0.0010	0.0010	A729004	<0.0010	0.0010	A729004
Dissolved Cobalt (Co)	mg/L	<0.00030	0.00030	A729004	<0.00030	0.00030	A729004
Dissolved Copper (Cu)	mg/L	0.0066	0.0010	A729004	0.0074	0.0010	A729004
Dissolved Iron (Fe)	mg/L	1.1	0.060	A729052			
Dissolved Lead (Pb)	mg/L	<0.00020	0.00020	A729004	<0.00020	0.00020	A729004
Dissolved Lithium (Li)	mg/L	<0.020	0.020	A729052			
Dissolved Magnesium (Mg)	mg/L	7.6	0.20	A729052			
Dissolved Manganese (Mn)	mg/L	0.055	0.0040	A729052			
Dissolved Molybdenum (Mo)	mg/L	<0.00020	0.00020	A729004	<0.00020	0.00020	A729004
Dissolved Nickel (Ni)	mg/L	0.00083	0.00050	A729004	0.00073	0.00050	A729004
Dissolved Phosphorus (P)	mg/L	<0.10	0.10	A729052			
Dissolved Potassium (K)	mg/L	3.8	0.30	A729052			
Dissolved Selenium (Se)	mg/L	<0.00020	0.00020	A729004	<0.00020	0.00020	A729004
Dissolved Silicon (Si)	mg/L	1.3	0.50	A729052			
Dissolved Silver (Ag)	mg/L	<0.00010	0.00010	A729004	<0.00010	0.00010	A729004
Dissolved Sodium (Na)	mg/L	2.8	0.50	A729052			
Dissolved Strontium (Sr)	mg/L	0.050	0.020	A729052			
Dissolved Sulphur (S)	mg/L	48	0.20	A729052			
Dissolved Thallium (Tl)	mg/L	<0.00020	0.00020	A729004	<0.00020	0.00020	A729004
Dissolved Tin (Sn)	mg/L	<0.0010	0.0010	A729004	<0.0010	0.0010	A729004
Dissolved Titanium (Ti)	mg/L	<0.0010	0.0010	A729004	<0.0010	0.0010	A729004
Dissolved Uranium (U)	mg/L	<0.00010	0.00010	A729004	<0.00010	0.00010	A729004

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BCN797			BCN797		
Sampling Date		2022/09/20 14:50			2022/09/20 14:50		
COC Number		C#675143-02-01			C#675143-02-01		
	UNITS	**CB-1**	**RDL**	**QC Batch**	**CB-1 Lab-Dup**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	0.0010	A729004	<0.0010	0.0010	A729004
Dissolved Zinc (Zn)	mg/L	0.10	0.0030	A729004	0.11	0.0030	A729004

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BCN755		BCN756		BCN757	BCN758		
Sampling Date		2022/09/20 15:00		2022/09/20 15:05		2022/09/20 15:10	2022/09/20 15:15		
COC Number		C#675143-01-01		C#675143-01-01		C#675143-01-01	C#675143-01-01		
	UNITS	CB-2	QC Batch	EB-1	QC Batch	EB-2	NB-2	RDL	QC Batch
Elements									
Total Cadmium (Cd)	ug/L	0.46	A727630	0.58	A727630	0.55	0.41	0.020	A727630
Total Aluminum (Al)	mg/L	0.069	A731505	0.26	A731421	0.10	0.041	0.0030	A731505
Total Antimony (Sb)	mg/L	<0.00060	A731505	<0.00060	A731421	<0.00060	<0.00060	0.00060	A731505
Total Arsenic (As)	mg/L	<0.00020	A731505	0.00028	A731421	0.00021	<0.00020	0.00020	A731505
Total Barium (Ba)	mg/L	0.012	A731494	0.015	A731407	0.013	0.012	0.010	A731494
Total Beryllium (Be)	mg/L	<0.0010	A731505	<0.0010	A731421	<0.0010	<0.0010	0.0010	A731505
Total Boron (B)	mg/L	<0.020	A731494	<0.020	A731407	<0.020	<0.020	0.020	A731494
Total Calcium (Ca)	mg/L	51	A731494	53	A731407	55	55	0.30	A731494
Total Chromium (Cr)	mg/L	<0.0010	A731505	<0.0010	A731421	<0.0010	<0.0010	0.0010	A731505
Total Cobalt (Co)	mg/L	<0.00030	A731505	<0.00030	A731421	0.00030	<0.00030	0.00030	A731505
Total Copper (Cu)	mg/L	0.014	A731505	0.016	A731421	0.014	0.012	0.0010	A731505
Total Iron (Fe)	mg/L	3.3	A731494	2.4	A731407	2.3	3.3	0.060	A731494
Total Lead (Pb)	mg/L	<0.00020	A731505	<0.00020	A731421	<0.00020	<0.00020	0.00020	A731505
Total Lithium (Li)	mg/L	<0.020	A731494	<0.020	A731407	<0.020	<0.020	0.020	A731494
Total Magnesium (Mg)	mg/L	8.3	A731494	8.5	A731407	8.7	8.7	0.20	A731494
Total Manganese (Mn)	mg/L	0.059	A731494	0.047	A731407	0.048	0.064	0.0040	A731494
Total Molybdenum (Mo)	mg/L	<0.00020	A731505	<0.00020	A731421	<0.00020	<0.00020	0.00020	A731505
Total Nickel (Ni)	mg/L	0.0011	A731505	0.0017	A731421	0.0013	0.0011	0.00050	A731505
Total Phosphorus (P)	mg/L	<0.10	A731494	<0.10	A731407	<0.10	<0.10	0.10	A731494
Total Potassium (K)	mg/L	4.2	A731494	4.2	A731407	4.3	4.1	0.30	A731494
Total Selenium (Se)	mg/L	0.00023	A731505	<0.00020	A731421	0.00032	0.00023	0.00020	A731505
Total Silicon (Si)	mg/L	1.4	A731494	1.3	A731407	1.3	1.5	0.50	A731494
Total Silver (Ag)	mg/L	<0.00010	A731505	<0.00010	A731421	<0.00010	<0.00010	0.00010	A731505
Total Sodium (Na)	mg/L	3.0	A731494	3.2	A731407	3.1	3.0	0.50	A731494
Total Strontium (Sr)	mg/L	0.047	A731494	0.055	A731407	0.049	0.048	0.020	A731494
Total Sulphur (S)	mg/L	51	A731494	52	A731407	55	57	0.20	A731494
Total Thallium (Tl)	mg/L	<0.00020	A731505	<0.00020	A731421	<0.00020	<0.00020	0.00020	A731505
Total Tin (Sn)	mg/L	<0.0010	A731505	<0.0010	A731421	<0.0010	<0.0010	0.0010	A731505
Total Titanium (Ti)	mg/L	0.0028	A731505	0.0053	A731421	0.0080	0.0015	0.0010	A731505
Total Uranium (U)	mg/L	<0.00010	A731505	<0.00010	A731421	<0.00010	<0.00010	0.00010	A731505
Total Vanadium (V)	mg/L	<0.0010	A731505	<0.0010	A731421	<0.0010	<0.0010	0.0010	A731505

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BCN755		BCN756		BCN757	BCN758		
Sampling Date		2022/09/20 15:00		2022/09/20 15:05		2022/09/20 15:10	2022/09/20 15:15		
COC Number		C#675143-01-01		C#675143-01-01		C#675143-01-01	C#675143-01-01		
	UNITS	**CB-2**	**QC Batch**	**EB-1**	**QC Batch**	**EB-2**	**NB-2**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.13	A731505	0.16	A731421	0.16	0.12	0.0030	A731505
RDL = Reportable Detection Limit									

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BCN759	BCN760		BCN761	BCN762		
Sampling Date		2022/09/20 15:25	2022/09/20 15:30		2022/09/20 16:25	2022/09/20 16:00		
COC Number		C#675143-01-01	C#675143-01-01		C#675143-01-01	C#675143-01-01		
	UNITS	NB-1	CAMP LAKE DISCHARGE	QC Batch	SC-1	SW-117	RDL	QC Batch
Elements								
Total Cadmium (Cd)	ug/L	0.40	0.37	A727630	0.39	0.43	0.020	A727630
Total Aluminum (Al)	mg/L	0.041	0.040	A731505	0.064	0.039	0.0030	A731421
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	A731505	<0.00060	<0.00060	0.00060	A731421
Total Arsenic (As)	mg/L	<0.00020	0.00021	A731505	0.00057	0.00027	0.00020	A731421
Total Barium (Ba)	mg/L	0.012	0.011	A731494	<0.010	0.013	0.010	A731407
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	A731505	<0.0010	<0.0010	0.0010	A731421
Total Boron (B)	mg/L	<0.020	<0.020	A731494	<0.020	<0.020	0.020	A731407
Total Calcium (Ca)	mg/L	56	55	A731494	9.4	48	0.30	A731407
Total Chromium (Cr)	mg/L	<0.0010	<0.0010	A731505	<0.0010	<0.0010	0.0010	A731421
Total Cobalt (Co)	mg/L	<0.00030	<0.00030	A731505	<0.00030	<0.00030	0.00030	A731421
Total Copper (Cu)	mg/L	0.012	0.011	A731505	0.020	0.013	0.0010	A731421
Total Iron (Fe)	mg/L	3.3	3.0	A731494	0.42	3.5	0.060	A731407
Total Lead (Pb)	mg/L	<0.00020	<0.00020	A731505	<0.00020	0.00034	0.00020	A731421
Total Lithium (Li)	mg/L	<0.020	<0.020	A731494	<0.020	<0.020	0.020	A731407
Total Magnesium (Mg)	mg/L	8.8	8.8	A731494	2.9	7.8	0.20	A731407
Total Manganese (Mn)	mg/L	0.066	0.060	A731494	0.070	0.061	0.0040	A731407
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	A731505	<0.00020	<0.00020	0.00020	A731421
Total Nickel (Ni)	mg/L	0.0010	0.0010	A731505	0.00086	0.0013	0.00050	A731421
Total Phosphorus (P)	mg/L	<0.10	<0.10	A731494	<0.10	<0.10	0.10	A731407
Total Potassium (K)	mg/L	4.2	4.1	A731494	1.6	4.0	0.30	A731407
Total Selenium (Se)	mg/L	0.00021	0.00022	A731505	<0.00020	<0.00020	0.00020	A731421
Total Silicon (Si)	mg/L	1.5	1.4	A731494	1.7	1.5	0.50	A731407
Total Silver (Ag)	mg/L	<0.00010	<0.00010	A731505	<0.00010	<0.00010	0.00010	A731421
Total Sodium (Na)	mg/L	3.1	3.0	A731494	3.4	3.0	0.50	A731407
Total Strontium (Sr)	mg/L	0.050	0.048	A731494	0.023	0.050	0.020	A731407
Total Sulphur (S)	mg/L	58	55	A731494	2.3	49	0.20	A731407
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	A731505	<0.00020	<0.00020	0.00020	A731421
Total Tin (Sn)	mg/L	<0.0010	<0.0010	A731505	<0.0010	<0.0010	0.0010	A731421
Total Titanium (Ti)	mg/L	<0.0010	0.0019	A731505	0.0022	0.0021	0.0010	A731421
Total Uranium (U)	mg/L	<0.00010	<0.00010	A731505	<0.00010	<0.00010	0.00010	A731421
Total Vanadium (V)	mg/L	<0.0010	<0.0010	A731505	<0.0010	<0.0010	0.0010	A731421

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BCN759	BCN760		BCN761	BCN762		
Sampling Date		2022/09/20 15:25	2022/09/20 15:30		2022/09/20 16:25	2022/09/20 16:00		
COC Number		C#675143-01-01	C#675143-01-01		C#675143-01-01	C#675143-01-01		
	UNITS	**NB-1**	**CAMP LAKE DISCHARGE**	**QC Batch**	**SC-1**	**SW-117**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.12	0.12	A731505	0.13	0.13	0.0030	A731421
RDL = Reportable Detection Limit								

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BCN763			BCN763			BCN764		
Sampling Date		2022/09/20 13:40			2022/09/20 13:40			2022/09/20		
COC Number		C#675143-01-01			C#675143-01-01			C#675143-01-01		
	UNITS	SW-104	RDL	QC Batch	SW-104 Lab-Dup	RDL	QC Batch	TRIP BLANK	RDL	QC Batch
Elements										
Total Cadmium (Cd)	ug/L	0.043	0.020	A727630				<0.020	0.020	A727630
Total Aluminum (Al)	mg/L	0.060	0.0030	A731421	0.054	0.0030	A731421	<0.0030	0.0030	A731505
Total Antimony (Sb)	mg/L	<0.00060	0.00060	A731421	<0.00060	0.00060	A731421	<0.00060	0.00060	A731505
Total Arsenic (As)	mg/L	0.00047	0.00020	A731421	0.00042	0.00020	A731421	<0.00020	0.00020	A731505
Total Barium (Ba)	mg/L	<0.010	0.010	A731407	<0.010	0.010	A731407	<0.010	0.010	A731494
Total Beryllium (Be)	mg/L	<0.0010	0.0010	A731421	<0.0010	0.0010	A731421	<0.0010	0.0010	A731505
Total Boron (B)	mg/L	<0.020	0.020	A731407	<0.020	0.020	A731407	<0.020	0.020	A731494
Total Calcium (Ca)	mg/L	12	0.30	A731407	12	0.30	A731407	<0.30	0.30	A731494
Total Chromium (Cr)	mg/L	<0.0010	0.0010	A731421	<0.0010	0.0010	A731421	<0.0010	0.0010	A731505
Total Cobalt (Co)	mg/L	<0.00030	0.00030	A731421	<0.00030	0.00030	A731421	<0.00030	0.00030	A731505
Total Copper (Cu)	mg/L	0.0066	0.0010	A731421	0.0064	0.0010	A731421	<0.0010	0.0010	A731505
Total Iron (Fe)	mg/L	0.45	0.060	A731407	0.45	0.060	A731407	<0.060	0.060	A731494
Total Lead (Pb)	mg/L	<0.00020	0.00020	A731421	<0.00020	0.00020	A731421	<0.00020	0.00020	A731505
Total Lithium (Li)	mg/L	<0.020	0.020	A731407	<0.020	0.020	A731407	<0.020	0.020	A731494
Total Magnesium (Mg)	mg/L	3.2	0.20	A731407	3.2	0.20	A731407	<0.20	0.20	A731494
Total Manganese (Mn)	mg/L	0.014	0.0040	A731407	0.015	0.0040	A731407	<0.0040	0.0040	A731494
Total Molybdenum (Mo)	mg/L	<0.00020	0.00020	A731421	<0.00020	0.00020	A731421	<0.00020	0.00020	A731505
Total Nickel (Ni)	mg/L	0.00057	0.00050	A731421	0.00050	0.00050	A731421	<0.00050	0.00050	A731505
Total Phosphorus (P)	mg/L	<0.10	0.10	A731407	<0.10	0.10	A731407	<0.10	0.10	A731494
Total Potassium (K)	mg/L	1.5	0.30	A731407	1.5	0.30	A731407	<0.30	0.30	A731494
Total Selenium (Se)	mg/L	<0.00020	0.00020	A731421	<0.00020	0.00020	A731421	<0.00020	0.00020	A731505
Total Silicon (Si)	mg/L	1.0	0.50	A731407	1.0	0.50	A731407	<0.50	0.50	A731494
Total Silver (Ag)	mg/L	<0.00010	0.00010	A731421	<0.00010	0.00010	A731421	<0.00010	0.00010	A731505
Total Sodium (Na)	mg/L	2.0	0.50	A731407	1.9	0.50	A731407	<0.50	0.50	A731494
Total Strontium (Sr)	mg/L	0.026	0.020	A731407	0.025	0.020	A731407	<0.020	0.020	A731494
Total Sulphur (S)	mg/L	6.0	0.20	A731407	6.3	0.20	A731407	<0.20	0.20	A731494
Total Thallium (Tl)	mg/L	<0.00020	0.00020	A731421	<0.00020	0.00020	A731421	<0.00020	0.00020	A731505
Total Tin (Sn)	mg/L	<0.0010	0.0010	A731421	<0.0010	0.0010	A731421	<0.0010	0.0010	A731505
Total Titanium (Ti)	mg/L	0.0018	0.0010	A731421	0.0018	0.0010	A731421	<0.0010	0.0010	A731505
Total Uranium (U)	mg/L	<0.00010	0.00010	A731421	<0.00010	0.00010	A731421	<0.00010	0.00010	A731505
Total Vanadium (V)	mg/L	<0.0010	0.0010	A731421	<0.0010	0.0010	A731421	<0.0010	0.0010	A731505

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BCN763			BCN763			BCN764		
Sampling Date		2022/09/20 13:40			2022/09/20 13:40			2022/09/20		
COC Number		C#675143-01-01			C#675143-01-01			C#675143-01-01		
	UNITS	**SW-104**	**RDL**	**QC Batch**	**SW-104 Lab-Dup**	**RDL**	**QC Batch**	**TRIP BLANK**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.015	0.0030	A731421	0.015	0.0030	A731421	<0.0030	0.0030	A731505

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BCN788		BCN789		BCN790	BCN791		
Sampling Date		2022/09/20 13:35		2022/09/20 13:45		2022/09/20 13:55	2022/09/20 14:00		
COC Number		C#675143-02-01		C#675143-02-01		C#675143-02-01	C#675143-02-01		
	UNITS	CL-6	QC Batch	CL-5	QC Batch	CL-4	CL-8	RDL	QC Batch
Elements									
Total Cadmium (Cd)	ug/L	0.034	A727630	0.035	A727630	0.071	0.042	0.020	A727630
Total Aluminum (Al)	mg/L	0.088	A732992	0.078	A731421	0.10	0.055	0.0030	A731505
Total Antimony (Sb)	mg/L	<0.00060	A732992	<0.00060	A731421	<0.00060	<0.00060	0.00060	A731505
Total Arsenic (As)	mg/L	0.00052	A732992	0.00051	A731421	0.00068	0.00035	0.00020	A731505
Total Barium (Ba)	mg/L	<0.010	A732970	<0.010	A731407	0.010	<0.010	0.010	A731494
Total Beryllium (Be)	mg/L	<0.0010	A732992	<0.0010	A731421	<0.0010	<0.0010	0.0010	A731505
Total Boron (B)	mg/L	<0.020	A732970	<0.020	A731407	<0.020	<0.020	0.020	A731494
Total Calcium (Ca)	mg/L	11	A732970	12	A731407	13	13	0.30	A731494
Total Chromium (Cr)	mg/L	<0.0010	A732992	<0.0010	A731421	<0.0010	<0.0010	0.0010	A731505
Total Cobalt (Co)	mg/L	<0.00030	A732992	<0.00030	A731421	<0.00030	<0.00030	0.00030	A731505
Total Copper (Cu)	mg/L	0.0049	A732992	0.0059	A731421	0.0066	0.0056	0.0010	A731505
Total Iron (Fe)	mg/L	0.27	A732970	0.40	A731407	1.5	0.46	0.060	A731494
Total Lead (Pb)	mg/L	<0.00020	A732992	<0.00020	A731421	<0.00020	<0.00020	0.00020	A731505
Total Lithium (Li)	mg/L	<0.020	A732970	<0.020	A731407	<0.020	<0.020	0.020	A731494
Total Magnesium (Mg)	mg/L	3.0	A732970	3.4	A731407	3.5	3.4	0.20	A731494
Total Manganese (Mn)	mg/L	0.015	A732970	0.018	A731407	0.075	0.016	0.0040	A731494
Total Molybdenum (Mo)	mg/L	<0.00020	A732992	<0.00020	A731421	<0.00020	<0.00020	0.00020	A731505
Total Nickel (Ni)	mg/L	0.00072	A732992	0.00055	A731421	0.00056	<0.00050	0.00050	A731505
Total Phosphorus (P)	mg/L	<0.10	A732970	<0.10	A731407	<0.10	<0.10	0.10	A731494
Total Potassium (K)	mg/L	1.4	A732970	1.6	A731407	1.6	1.6	0.30	A731494
Total Selenium (Se)	mg/L	<0.00020	A732992	<0.00020	A731421	<0.00020	0.00023	0.00020	A731505
Total Silicon (Si)	mg/L	0.96	A732970	1.0	A731407	1.3	1.1	0.50	A731494
Total Silver (Ag)	mg/L	<0.00010	A732992	<0.00010	A731421	<0.00010	<0.00010	0.00010	A731505
Total Sodium (Na)	mg/L	1.8	A732970	2.1	A731407	2.1	2.0	0.50	A731494
Total Strontium (Sr)	mg/L	0.025	A732970	0.027	A731407	0.025	0.023	0.020	A731494
Total Sulphur (S)	mg/L	4.6	A732970	5.6	A731407	5.9	6.7	0.20	A731494
Total Thallium (Tl)	mg/L	<0.00020	A732992	<0.00020	A731421	<0.00020	<0.00020	0.00020	A731505
Total Tin (Sn)	mg/L	<0.0010	A732992	<0.0010	A731421	<0.0010	<0.0010	0.0010	A731505
Total Titanium (Ti)	mg/L	0.0031	A732992	0.0026	A731421	0.0047	0.0025	0.0010	A731505
Total Uranium (U)	mg/L	<0.00010	A732992	<0.00010	A731421	<0.00010	<0.00010	0.00010	A731505
Total Vanadium (V)	mg/L	<0.0010	A732992	<0.0010	A731421	<0.0010	<0.0010	0.0010	A731505

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BCN788		BCN789		BCN790	BCN791		
Sampling Date		2022/09/20 13:35		2022/09/20 13:45		2022/09/20 13:55	2022/09/20 14:00		
COC Number		C#675143-02-01		C#675143-02-01		C#675143-02-01	C#675143-02-01		
	UNITS	**CL-6**	**QC Batch**	**CL-5**	**QC Batch**	**CL-4**	**CL-8**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.012	A732992	0.012	A731421	0.022	0.012	0.0030	A731505
RDL = Reportable Detection Limit									

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BCN792		BCN793		BCN794	BCN795		
Sampling Date		2022/09/20 14:05		2022/09/20 14:10		2022/09/20 14:20	2022/09/20 14:40		
COC Number		C#675143-02-01		C#675143-02-01		C#675143-02-01	C#675143-02-01		
	UNITS	CL-3	QC Batch	CL-7	QC Batch	CL-2	SB-2	RDL	QC Batch
Elements									
Total Cadmium (Cd)	ug/L	0.063	A727630	0.044	A727720	0.24	0.37	0.020	A727720
Total Aluminum (Al)	mg/L	0.055	A731505	0.051	A731421	0.076	0.047	0.0030	A731505
Total Antimony (Sb)	mg/L	<0.00060	A731505	<0.00060	A731421	<0.00060	<0.00060	0.00060	A731505
Total Arsenic (As)	mg/L	0.00045	A731505	0.00045	A731421	0.00043	0.00022	0.00020	A731505
Total Barium (Ba)	mg/L	<0.010	A731494	<0.010	A731407	0.015	0.012	0.010	A731494
Total Beryllium (Be)	mg/L	<0.0010	A731505	<0.0010	A731421	<0.0010	<0.0010	0.0010	A731505
Total Boron (B)	mg/L	<0.020	A731494	<0.020	A731407	<0.020	<0.020	0.020	A731494
Total Calcium (Ca)	mg/L	14	A731494	13	A731407	15	48	0.30	A731494
Total Chromium (Cr)	mg/L	<0.0010	A731505	<0.0010	A731421	<0.0010	<0.0010	0.0010	A731505
Total Cobalt (Co)	mg/L	<0.00030	A731505	<0.00030	A731421	0.0011	<0.00030	0.00030	A731505
Total Copper (Cu)	mg/L	0.0060	A731505	0.0065	A731421	0.0088	0.013	0.0010	A731505
Total Iron (Fe)	mg/L	0.49	A731494	0.48	A731407	2.6	3.5	0.060	A731494
Total Lead (Pb)	mg/L	<0.00020	A731505	<0.00020	A731421	<0.00020	<0.00020	0.00020	A731505
Total Lithium (Li)	mg/L	<0.020	A731494	<0.020	A731407	<0.020	<0.020	0.020	A731494
Total Magnesium (Mg)	mg/L	3.5	A731494	3.4	A731407	3.6	7.9	0.20	A731494
Total Manganese (Mn)	mg/L	0.017	A731494	0.015	A731407	0.61	0.062	0.0040	A731494
Total Molybdenum (Mo)	mg/L	<0.00020	A731505	<0.00020	A731421	0.00022	<0.00020	0.00020	A731505
Total Nickel (Ni)	mg/L	<0.00050	A731505	<0.00050	A731421	0.00074	0.00099	0.00050	A731505
Total Phosphorus (P)	mg/L	<0.10	A731494	<0.10	A731407	<0.10	<0.10	0.10	A731494
Total Potassium (K)	mg/L	1.6	A731494	1.6	A731407	1.7	4.0	0.30	A731494
Total Selenium (Se)	mg/L	0.00028	A731505	<0.00020	A731421	0.00035	0.00024	0.00020	A731505
Total Silicon (Si)	mg/L	1.1	A731494	1.1	A731407	2.0	1.5	0.50	A731494
Total Silver (Ag)	mg/L	<0.00010	A731505	<0.00010	A731421	<0.00010	<0.00010	0.00010	A731505
Total Sodium (Na)	mg/L	2.2	A731494	2.1	A731407	2.1	3.0	0.50	A731494
Total Strontium (Sr)	mg/L	0.025	A731494	0.026	A731407	0.028	0.046	0.020	A731494
Total Sulphur (S)	mg/L	6.7	A731494	6.5	A731407	8.3	50	0.20	A731494
Total Thallium (Tl)	mg/L	<0.00020	A731505	<0.00020	A731421	<0.00020	<0.00020	0.00020	A731505
Total Tin (Sn)	mg/L	<0.0010	A731505	<0.0010	A731421	<0.0010	<0.0010	0.0010	A731505
Total Titanium (Ti)	mg/L	0.0019	A731505	0.0017	A731421	0.0014	0.0022	0.0010	A731505
Total Uranium (U)	mg/L	<0.00010	A731505	<0.00010	A731421	0.00010	<0.00010	0.00010	A731505
Total Vanadium (V)	mg/L	<0.0010	A731505	<0.0010	A731421	<0.0010	<0.0010	0.0010	A731505

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BCN792		BCN793		BCN794	BCN795		
Sampling Date		2022/09/20 14:05		2022/09/20 14:10		2022/09/20 14:20	2022/09/20 14:40		
COC Number		C#675143-02-01		C#675143-02-01		C#675143-02-01	C#675143-02-01		
	UNITS	**CL-3**	**QC Batch**	**CL-7**	**QC Batch**	**CL-2**	**SB-2**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.013	A731505	0.015	A731421	0.047	0.12	0.0030	A731505
RDL = Reportable Detection Limit									

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BCN795			BCN796		BCN797		
Sampling Date		2022/09/20 14:40			2022/09/20 14:45		2022/09/20 14:50		
COC Number		C#675143-02-01			C#675143-02-01		C#675143-02-01		
	UNITS	SB-2 Lab-Dup	RDL	QC Batch	SB-1	QC Batch	CB-1	RDL	QC Batch
Elements									
Total Cadmium (Cd)	ug/L				0.44	A727720	0.43	0.020	A727720
Total Aluminum (Al)	mg/L	0.050	0.0030	A731505	0.048	A731421	0.049	0.0030	A731505
Total Antimony (Sb)	mg/L	<0.00060	0.00060	A731505	<0.00060	A731421	<0.00060	0.00060	A731505
Total Arsenic (As)	mg/L	<0.00020	0.00020	A731505	0.00025	A731421	0.00022	0.00020	A731505
Total Barium (Ba)	mg/L				0.013	A731407	0.012	0.010	A731494
Total Beryllium (Be)	mg/L	<0.0010	0.0010	A731505	<0.0010	A731421	<0.0010	0.0010	A731505
Total Boron (B)	mg/L				<0.020	A731407	<0.020	0.020	A731494
Total Calcium (Ca)	mg/L				48	A731407	49	0.30	A731494
Total Chromium (Cr)	mg/L	<0.0010	0.0010	A731505	<0.0010	A731421	<0.0010	0.0010	A731505
Total Cobalt (Co)	mg/L	<0.00030	0.00030	A731505	<0.00030	A731421	<0.00030	0.00030	A731505
Total Copper (Cu)	mg/L	0.014	0.0010	A731505	0.013	A731421	0.013	0.0010	A731505
Total Iron (Fe)	mg/L				3.4	A731407	3.6	0.060	A731494
Total Lead (Pb)	mg/L	<0.00020	0.00020	A731505	<0.00020	A731421	<0.00020	0.00020	A731505
Total Lithium (Li)	mg/L				<0.020	A731407	<0.020	0.020	A731494
Total Magnesium (Mg)	mg/L				8.0	A731407	8.0	0.20	A731494
Total Manganese (Mn)	mg/L				0.060	A731407	0.062	0.0040	A731494
Total Molybdenum (Mo)	mg/L	<0.00020	0.00020	A731505	<0.00020	A731421	<0.00020	0.00020	A731505
Total Nickel (Ni)	mg/L	0.0011	0.00050	A731505	0.0013	A731421	0.0011	0.00050	A731505
Total Phosphorus (P)	mg/L				<0.10	A731407	<0.10	0.10	A731494
Total Potassium (K)	mg/L				4.2	A731407	4.0	0.30	A731494
Total Selenium (Se)	mg/L	0.00022	0.00020	A731505	<0.00020	A731421	0.00029	0.00020	A731505
Total Silicon (Si)	mg/L				1.5	A731407	1.5	0.50	A731494
Total Silver (Ag)	mg/L	<0.00010	0.00010	A731505	<0.00010	A731421	<0.00010	0.00010	A731505
Total Sodium (Na)	mg/L				3.4	A731407	3.0	0.50	A731494
Total Strontium (Sr)	mg/L				0.051	A731407	0.047	0.020	A731494
Total Sulphur (S)	mg/L				48	A731407	51	0.20	A731494
Total Thallium (Tl)	mg/L	<0.00020	0.00020	A731505	<0.00020	A731421	<0.00020	0.00020	A731505
Total Tin (Sn)	mg/L	<0.0010	0.0010	A731505	<0.0010	A731421	<0.0010	0.0010	A731505
Total Titanium (Ti)	mg/L	0.0020	0.0010	A731505	0.0020	A731421	0.0020	0.0010	A731505
Total Uranium (U)	mg/L	<0.00010	0.00010	A731505	<0.00010	A731421	<0.00010	0.00010	A731505
Total Vanadium (V)	mg/L	<0.0010	0.0010	A731505	<0.0010	A731421	<0.0010	0.0010	A731505

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BCN795			BCN796		BCN797		
Sampling Date		2022/09/20 14:40			2022/09/20 14:45		2022/09/20 14:50		
COC Number		C#675143-02-01			C#675143-02-01		C#675143-02-01		
	UNITS	**SB-2 Lab-Dup**	**RDL**	**QC Batch**	**SB-1**	**QC Batch**	**CB-1**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.12	0.0030	A731505	0.12	A731421	0.12	0.0030	A731505

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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RESULTS OF CHEMICAL ANALYSES OF SURFACE WATER

Bureau Veritas ID		BCN755			BCN755			BCN756		
Sampling Date		2022/09/20 15:00			2022/09/20 15:00			2022/09/20 15:05		
COC Number		C#675143-01-01			C#675143-01-01			C#675143-01-01		
	UNITS	CB-2	RDL	QC Batch	CB-2 Lab-Dup	RDL	QC Batch	EB-1	RDL	QC Batch
Calculated Parameters										
Hardness (CaCO3)	mg/L	150	0.50	A727706				160	0.50	A727706
Total Hardness (CaCO3)	mg/L	161	0.50	A727723				168	0.50	A727726
Misc. Inorganics										
pH	pH	5.86	N/A	A729588				5.98	N/A	A729588
Total Suspended Solids	mg/L	2.1	1.0	A730850	2.7	0.99	A730850	1.1	1.0	A730850
Anions										
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	A729586				<1.0	1.0	A729586
Alkalinity (Total as CaCO3)	mg/L	7.9	1.0	A729586				8.2	1.0	A729586
Bicarbonate (HCO3)	mg/L	9.7	1.0	A729586				10	1.0	A729586
Carbonate (CO3)	mg/L	<1.0	1.0	A729586				<1.0	1.0	A729586
Hydroxide (OH)	mg/L	<1.0	1.0	A729586				<1.0	1.0	A729586
Physical Properties										
Turbidity	NTU	19 (1)	0.20	A727936				13	0.10	A727936

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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RESULTS OF CHEMICAL ANALYSES OF SURFACE WATER

Bureau Veritas ID		BCN757		BCN758		BCN759	BCN760		
Sampling Date		2022/09/20 15:10		2022/09/20 15:15		2022/09/20 15:25	2022/09/20 15:30		
COC Number		C#675143-01-01		C#675143-01-01		C#675143-01-01	C#675143-01-01		
	UNITS	EB-2	RDL	NB-2	RDL	NB-1	CAMP LAKE DISCHARGE	RDL	QC Batch
Calculated Parameters									
Hardness (CaCO3)	mg/L	160	0.50	160	0.50	160	160	0.50	A727706
Total Hardness (CaCO3)	mg/L	172	0.50	172	0.50	175	174	0.50	A727726
Misc. Inorganics									
pH	pH	5.91	N/A	5.94	N/A	5.92	5.93	N/A	A729588
Total Suspended Solids	mg/L	1.3	1.0	<1.0	1.0	1.1	2.1	0.99	A730850
Anions									
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	<1.0	1.0	<1.0	<1.0	1.0	A729586
Alkalinity (Total as CaCO3)	mg/L	8.6	1.0	6.4	1.0	7.0	6.2	1.0	A729586
Bicarbonate (HCO3)	mg/L	10	1.0	7.8	1.0	8.5	7.6	1.0	A729586
Carbonate (CO3)	mg/L	<1.0	1.0	<1.0	1.0	<1.0	<1.0	1.0	A729586
Hydroxide (OH)	mg/L	<1.0	1.0	<1.0	1.0	<1.0	<1.0	1.0	A729586
Physical Properties									
Turbidity	NTU	12	0.10	16 (1)	0.20	15 (1)	15 (1)	0.20	A727936

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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RESULTS OF CHEMICAL ANALYSES OF SURFACE WATER

Bureau Veritas ID		BCN761	BCN762		BCN763		BCN764		
Sampling Date		2022/09/20 16:25	2022/09/20 16:00		2022/09/20 13:40		2022/09/20		
COC Number		C#675143-01-01	C#675143-01-01		C#675143-01-01		C#675143-01-01		
	UNITS	SC-1	SW-117	RDL	SW-104	RDL	TRIP BLANK	RDL	QC Batch
Calculated Parameters									
Hardness (CaCO3)	mg/L	34	150	0.50	44	0.50	<0.50	0.50	A727706
Total Hardness (CaCO3)	mg/L	35.6	151	0.50	43.6	0.50	<0.50	0.50	A727726
Misc. Inorganics									
pH	pH	6.36	5.92	N/A	6.37	N/A	4.43	N/A	A729588
Total Suspended Solids	mg/L	1.3	2.3	1.0	<0.99	0.99	<0.96	0.96	A730850
Anions									
Alkalinity (PP as CaCO3)	mg/L	<1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	A729586
Alkalinity (Total as CaCO3)	mg/L	31	6.3	1.0	25	1.0	<1.0	1.0	A729586
Bicarbonate (HCO3)	mg/L	37	7.7	1.0	31	1.0	<1.0	1.0	A729586
Carbonate (CO3)	mg/L	<1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	A729586
Hydroxide (OH)	mg/L	<1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	A729586
Physical Properties									
Turbidity	NTU	1.9 (1)	20 (1)	0.20	2.6	0.10	<0.10	0.10	A727936

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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Bureau Veritas Job #: C273475
Report Date: 2022/10/04

KGS Group
Client Project #: 21-1357-005
Sampler Initials: IH

RESULTS OF CHEMICAL ANALYSES OF SURFACE WATER

Bureau Veritas ID		BCN764			BCN788		BCN789	BCN790		
Sampling Date		2022/09/20			2022/09/20 13:35		2022/09/20 13:45	2022/09/20 13:55		
COC Number		C#675143-01-01			C#675143-02-01		C#675143-02-01	C#675143-02-01		
	UNITS	TRIP BLANK Lab-Dup	RDL	QC Batch	CL-6	RDL	CL-5	CL-4	RDL	QC Batch
Calculated Parameters										
Hardness (CaCO3)	mg/L				41	0.50	42	42	0.50	A727706
Total Hardness (CaCO3)	mg/L				40.5	0.50	44.7	46.1	0.50	A727726
Misc. Inorganics										
pH	pH	4.44	N/A	A729588	6.37	N/A	6.39	6.35	N/A	A729588
Total Suspended Solids	mg/L				<1.0	1.0	<0.99	2.5	0.99	A730850
Anions										
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	A729586	<1.0	1.0	<1.0	<1.0	1.0	A729586
Alkalinity (Total as CaCO3)	mg/L	<1.0	1.0	A729586	29	1.0	30	27	1.0	A729586
Bicarbonate (HCO3)	mg/L	<1.0	1.0	A729586	35	1.0	37	33	1.0	A729586
Carbonate (CO3)	mg/L	<1.0	1.0	A729586	<1.0	1.0	<1.0	<1.0	1.0	A729586
Hydroxide (OH)	mg/L	<1.0	1.0	A729586	<1.0	1.0	<1.0	<1.0	1.0	A729586
Physical Properties										
Turbidity	NTU				2.6	0.10	3.1	14	0.10	A727936

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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Bureau Veritas Job #: C273475
Report Date: 2022/10/04

KGS Group
Client Project #: 21-1357-005
Sampler Initials: IH

RESULTS OF CHEMICAL ANALYSES OF SURFACE WATER

Bureau Veritas ID		BCN791		BCN792			BCN792		
Sampling Date		2022/09/20 14:00		2022/09/20 14:05			2022/09/20 14:05		
COC Number		C#675143-02-01		C#675143-02-01			C#675143-02-01		
	UNITS	CL-8	QC Batch	CL-3	RDL	QC Batch	CL-3 Lab-Dup	RDL	QC Batch
Calculated Parameters									
Hardness (CaCO3)	mg/L	44	A727706	44	0.50	A727706			
Total Hardness (CaCO3)	mg/L	45.5	A727726	48.6	0.50	A727726			
Misc. Inorganics									
pH	pH	6.36	A729588	6.38	N/A	A729588			
Total Suspended Solids	mg/L	1.4	A730850	1.3	1.0	A730850			
Anions									
Alkalinity (PP as CaCO3)	mg/L	<1.0	A729586	<1.0	1.0	A729586			
Alkalinity (Total as CaCO3)	mg/L	24	A729586	27	1.0	A729586			
Bicarbonate (HCO3)	mg/L	30	A729586	32	1.0	A729586			
Carbonate (CO3)	mg/L	<1.0	A729586	<1.0	1.0	A729586			
Hydroxide (OH)	mg/L	<1.0	A729586	<1.0	1.0	A729586			
Physical Properties									
Turbidity	NTU	2.8	A727936	3.4	0.10	A728462	3.4	0.10	A728462

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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Bureau Veritas Job #: C273475
Report Date: 2022/10/04

KGS Group
Client Project #: 21-1357-005
Sampler Initials: IH

RESULTS OF CHEMICAL ANALYSES OF SURFACE WATER

Bureau Veritas ID		BCN793		BCN794		BCN795		BCN796		
Sampling Date		2022/09/20 14:10		2022/09/20 14:20		2022/09/20 14:40		2022/09/20 14:45		
COC Number		C#675143-02-01		C#675143-02-01		C#675143-02-01		C#675143-02-01		
	UNITS	**CL-7**	**RDL**	**CL-2**	**RDL**	**SB-2**	**RDL**	**SB-1**	**RDL**	**QC Batch**
Calculated Parameters										
Hardness (CaCO3)	mg/L	45	0.50	52	0.50	150	0.50	150	0.50	A727706
Total Hardness (CaCO3)	mg/L	46.0	0.50	52.9	0.50	152	0.50	153	0.50	A727726
Misc. Inorganics										
pH	pH	6.37	N/A	6.30	N/A	5.95	N/A	5.94	N/A	A729588
Total Suspended Solids	mg/L	<0.97	0.97	5.4	1.0	2.3	0.97	1.7	1.0	A730850
Anions										
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	A729586
Alkalinity (Total as CaCO3)	mg/L	28	1.0	32	1.0	6.7	1.0	6.7	1.0	A729586
Bicarbonate (HCO3)	mg/L	35	1.0	39	1.0	8.2	1.0	8.2	1.0	A729586
Carbonate (CO3)	mg/L	<1.0	1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	A729586
Hydroxide (OH)	mg/L	<1.0	1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	A729586
Physical Properties										
Turbidity	NTU	4.2	0.10	21	0.10	20	0.10	19	0.10	A728462

RDL = Reportable Detection Limit
N/A = Not Applicable

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RESULTS OF CHEMICAL ANALYSES OF SURFACE WATER

Bureau Veritas ID		BCN797		
Sampling Date		2022/09/20 14:50		
COC Number		C#675143-02-01		
	UNITS	**CB-1**	**RDL**	**QC Batch**
Calculated Parameters				
Hardness (CaCO3)	mg/L	150	0.50	A727706
Total Hardness (CaCO3)	mg/L	155	0.50	A727726
Misc. Inorganics				
pH	pH	5.83	N/A	A729588
Total Suspended Solids	mg/L	3.1	0.99	A731456
Anions				
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	A729586
Alkalinity (Total as CaCO3)	mg/L	6.7	1.0	A729586
Bicarbonate (HCO3)	mg/L	8.2	1.0	A729586
Carbonate (CO3)	mg/L	<1.0	1.0	A729586
Hydroxide (OH)	mg/L	<1.0	1.0	A729586
Physical Properties				
Turbidity	NTU	19	0.10	A728462

RDL = Reportable Detection Limit
N/A = Not Applicable

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	3.3°C
Package 2	4.0°C

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A727936	Turbidity	2022/09/23			104	80 - 120	<0.10	NTU	3.4	20
A728462	Turbidity	2022/09/23			104	80 - 120	<0.10	NTU	0.88	20
A729004	Dissolved Aluminum (Al)	2022/09/27	94	80 - 120	105	80 - 120	<0.0030	mg/L	NC	20
A729004	Dissolved Antimony (Sb)	2022/09/27	101	80 - 120	101	80 - 120	<0.00060	mg/L	NC	20
A729004	Dissolved Arsenic (As)	2022/09/27	92	80 - 120	95	80 - 120	<0.00020	mg/L	13	20
A729004	Dissolved Beryllium (Be)	2022/09/27	104	80 - 120	111	80 - 120	<0.0010	mg/L	NC	20
A729004	Dissolved Chromium (Cr)	2022/09/27	93	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20
A729004	Dissolved Cobalt (Co)	2022/09/27	96	80 - 120	98	80 - 120	<0.00030	mg/L	NC	20
A729004	Dissolved Copper (Cu)	2022/09/27	96	80 - 120	95	80 - 120	<0.0010	mg/L	12	20
A729004	Dissolved Lead (Pb)	2022/09/27	97	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
A729004	Dissolved Molybdenum (Mo)	2022/09/27	104	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
A729004	Dissolved Nickel (Ni)	2022/09/27	94	80 - 120	95	80 - 120	<0.00050	mg/L	13	20
A729004	Dissolved Selenium (Se)	2022/09/27	103	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
A729004	Dissolved Silver (Ag)	2022/09/27	97	80 - 120	96	80 - 120	<0.00010	mg/L	NC	20
A729004	Dissolved Thallium (Tl)	2022/09/27	101	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
A729004	Dissolved Tin (Sn)	2022/09/27	110	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20
A729004	Dissolved Titanium (Ti)	2022/09/27	99	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
A729004	Dissolved Uranium (U)	2022/09/27	94	80 - 120	97	80 - 120	<0.00010	mg/L	NC	20
A729004	Dissolved Vanadium (V)	2022/09/27	97	80 - 120	99	80 - 120	<0.0010	mg/L	NC	20
A729004	Dissolved Zinc (Zn)	2022/09/27	NC	80 - 120	103	80 - 120	<0.0030	mg/L	6.9	20
A729007	Dissolved Aluminum (Al)	2022/09/26	93	80 - 120	101	80 - 120	<0.0030	mg/L	NC	20
A729007	Dissolved Antimony (Sb)	2022/09/26	100	80 - 120	100	80 - 120	<0.00060	mg/L	NC	20
A729007	Dissolved Arsenic (As)	2022/09/26	92	80 - 120	89	80 - 120	<0.00020	mg/L	6.5	20
A729007	Dissolved Beryllium (Be)	2022/09/26	104	80 - 120	105	80 - 120	<0.0010	mg/L	NC	20
A729007	Dissolved Chromium (Cr)	2022/09/26	92	80 - 120	95	80 - 120	<0.0010	mg/L	NC	20
A729007	Dissolved Cobalt (Co)	2022/09/26	95	80 - 120	96	80 - 120	<0.00030	mg/L	NC	20
A729007	Dissolved Copper (Cu)	2022/09/26	93	80 - 120	95	80 - 120	<0.0010	mg/L	11	20
A729007	Dissolved Lead (Pb)	2022/09/26	98	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
A729007	Dissolved Molybdenum (Mo)	2022/09/26	102	80 - 120	102	80 - 120	<0.00020	mg/L	12	20
A729007	Dissolved Nickel (Ni)	2022/09/26	92	80 - 120	93	80 - 120	<0.00050	mg/L	NC	20
A729007	Dissolved Selenium (Se)	2022/09/26	91	80 - 120	95	80 - 120	<0.00020	mg/L	NC	20
A729007	Dissolved Silver (Ag)	2022/09/26	97	80 - 120	97	80 - 120	<0.00010	mg/L	NC	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A729007	Dissolved Thallium (Tl)	2022/09/26	102	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
A729007	Dissolved Tin (Sn)	2022/09/26	110	80 - 120	109	80 - 120	<0.0010	mg/L	NC	20
A729007	Dissolved Titanium (Ti)	2022/09/26	98	80 - 120	106	80 - 120	<0.0010	mg/L	NC	20
A729007	Dissolved Uranium (U)	2022/09/26	93	80 - 120	95	80 - 120	<0.00010	mg/L	NC	20
A729007	Dissolved Vanadium (V)	2022/09/26	97	80 - 120	92	80 - 120	<0.0010	mg/L	NC	20
A729007	Dissolved Zinc (Zn)	2022/09/26	98	80 - 120	99	80 - 120	<0.0030	mg/L	2.3	20
A729052	Dissolved Barium (Ba)	2022/09/24	95	80 - 120	96	80 - 120	<0.010	mg/L		
A729052	Dissolved Boron (B)	2022/09/24	104	80 - 120	102	80 - 120	<0.020	mg/L		
A729052	Dissolved Calcium (Ca)	2022/09/24	NC	80 - 120	99	80 - 120	<0.30	mg/L	0.10	20
A729052	Dissolved Iron (Fe)	2022/09/24	96	80 - 120	95	80 - 120	<0.060	mg/L	NC	20
A729052	Dissolved Lithium (Li)	2022/09/24	100	80 - 120	99	80 - 120	<0.020	mg/L		
A729052	Dissolved Magnesium (Mg)	2022/09/24	96	80 - 120	98	80 - 120	<0.20	mg/L	0.15	20
A729052	Dissolved Manganese (Mn)	2022/09/24	95	80 - 120	94	80 - 120	<0.0040	mg/L	NC	20
A729052	Dissolved Phosphorus (P)	2022/09/24	101	80 - 120	97	80 - 120	<0.10	mg/L		
A729052	Dissolved Potassium (K)	2022/09/24	101	80 - 120	99	80 - 120	<0.30	mg/L	1.7	20
A729052	Dissolved Silicon (Si)	2022/09/24	91	80 - 120	95	80 - 120	<0.50	mg/L		
A729052	Dissolved Sodium (Na)	2022/09/24	97	80 - 120	98	80 - 120	<0.50	mg/L	0.77	20
A729052	Dissolved Strontium (Sr)	2022/09/24	89	80 - 120	92	80 - 120	<0.020	mg/L		
A729052	Dissolved Sulphur (S)	2022/09/24	102	80 - 120	97	80 - 120	<0.20	mg/L		
A729055	Dissolved Barium (Ba)	2022/09/24	95	80 - 120	96	80 - 120	<0.010	mg/L		
A729055	Dissolved Boron (B)	2022/09/24	104	80 - 120	102	80 - 120	<0.020	mg/L		
A729055	Dissolved Calcium (Ca)	2022/09/24	96	80 - 120	98	80 - 120	<0.30	mg/L	1.5	20
A729055	Dissolved Iron (Fe)	2022/09/24	96	80 - 120	99	80 - 120	<0.060	mg/L	NC	20
A729055	Dissolved Lithium (Li)	2022/09/24	98	80 - 120	98	80 - 120	<0.020	mg/L		
A729055	Dissolved Magnesium (Mg)	2022/09/24	96	80 - 120	97	80 - 120	<0.20	mg/L	1.8	20
A729055	Dissolved Manganese (Mn)	2022/09/24	95	80 - 120	99	80 - 120	<0.0040	mg/L	NC	20
A729055	Dissolved Phosphorus (P)	2022/09/24	100	80 - 120	98	80 - 120	<0.10	mg/L		
A729055	Dissolved Potassium (K)	2022/09/24	100	80 - 120	100	80 - 120	<0.30	mg/L	1.5	20
A729055	Dissolved Silicon (Si)	2022/09/24	95	80 - 120	96	80 - 120	<0.50	mg/L		
A729055	Dissolved Sodium (Na)	2022/09/24	96	80 - 120	98	80 - 120	<0.50	mg/L	1.2	20
A729055	Dissolved Strontium (Sr)	2022/09/24	91	80 - 120	93	80 - 120	<0.020	mg/L		
A729055	Dissolved Sulphur (S)	2022/09/24	102	80 - 120	97	80 - 120	<0.20	mg/L		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A729586	Alkalinity (PP as CaCO3)	2022/09/25					<1.0	mg/L	NC	20
A729586	Alkalinity (Total as CaCO3)	2022/09/25			100	80 - 120	<1.0	mg/L	NC	20
A729586	Bicarbonate (HCO3)	2022/09/25					<1.0	mg/L	NC	20
A729586	Carbonate (CO3)	2022/09/25					<1.0	mg/L	NC	20
A729586	Hydroxide (OH)	2022/09/25					<1.0	mg/L	NC	20
A729588	pH	2022/09/25			99	97 - 103			0.16	N/A
A730850	Total Suspended Solids	2022/09/26	92	80 - 120	99	80 - 120	<1.0	mg/L	NC	20
A731407	Total Barium (Ba)	2022/09/28	99	80 - 120	97	80 - 120	<0.010	mg/L	NC	20
A731407	Total Boron (B)	2022/09/28	103	80 - 120	102	80 - 120	<0.020	mg/L	NC	20
A731407	Total Calcium (Ca)	2022/09/28	105	80 - 120	100	80 - 120	<0.30	mg/L	0.51	20
A731407	Total Iron (Fe)	2022/09/28	114	80 - 120	105	80 - 120	<0.060	mg/L	0.82	20
A731407	Total Lithium (Li)	2022/09/28	105	80 - 120	102	80 - 120	<0.020	mg/L	NC	20
A731407	Total Magnesium (Mg)	2022/09/28	103	80 - 120	101	80 - 120	<0.20	mg/L	0.21	20
A731407	Total Manganese (Mn)	2022/09/28	104	80 - 120	101	80 - 120	<0.0040	mg/L	3.4	20
A731407	Total Phosphorus (P)	2022/09/28	99	80 - 120	98	80 - 120	<0.10	mg/L	NC	20
A731407	Total Potassium (K)	2022/09/28	108	80 - 120	105	80 - 120	<0.30	mg/L	1.7	20
A731407	Total Silicon (Si)	2022/09/28	104	80 - 120	101	80 - 120	<0.50	mg/L	1.6	20
A731407	Total Sodium (Na)	2022/09/28	108	80 - 120	105	80 - 120	<0.50	mg/L	1.5	20
A731407	Total Strontium (Sr)	2022/09/28	95	80 - 120	93	80 - 120	<0.020	mg/L	0.39	20
A731407	Total Sulphur (S)	2022/09/28	102	80 - 120	100	80 - 120	<0.20	mg/L	3.7	20
A731421	Total Aluminum (Al)	2022/09/27	NC	80 - 120	91	80 - 120	<0.0030	mg/L	9.4	20
A731421	Total Antimony (Sb)	2022/09/27	97	80 - 120	97	80 - 120	<0.00060	mg/L	NC	20
A731421	Total Arsenic (As)	2022/09/27	95	80 - 120	92	80 - 120	<0.00020	mg/L	12	20
A731421	Total Beryllium (Be)	2022/09/27	91	80 - 120	82	80 - 120	<0.0010	mg/L	NC	20
A731421	Total Chromium (Cr)	2022/09/27	98	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20
A731421	Total Cobalt (Co)	2022/09/27	95	80 - 120	95	80 - 120	<0.00030	mg/L	NC	20
A731421	Total Copper (Cu)	2022/09/27	98	80 - 120	97	80 - 120	<0.0010	mg/L	3.2	20
A731421	Total Lead (Pb)	2022/09/27	93	80 - 120	94	80 - 120	<0.00020	mg/L	NC	20
A731421	Total Molybdenum (Mo)	2022/09/27	102	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20
A731421	Total Nickel (Ni)	2022/09/27	96	80 - 120	96	80 - 120	<0.00050	mg/L	12	20
A731421	Total Selenium (Se)	2022/09/27	96	80 - 120	94	80 - 120	<0.00020	mg/L	NC	20
A731421	Total Silver (Ag)	2022/09/27	95	80 - 120	94	80 - 120	<0.00010	mg/L	NC	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A731421	Total Thallium (Tl)	2022/09/27	98	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
A731421	Total Tin (Sn)	2022/09/27	102	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20
A731421	Total Titanium (Ti)	2022/09/27	100	80 - 120	97	80 - 120	<0.0010	mg/L	3.6	20
A731421	Total Uranium (U)	2022/09/27	101	80 - 120	98	80 - 120	<0.00010	mg/L	NC	20
A731421	Total Vanadium (V)	2022/09/27	100	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20
A731421	Total Zinc (Zn)	2022/09/27	97	80 - 120	95	80 - 120	<0.0030	mg/L	4.9	20
A731456	Total Suspended Solids	2022/09/27	115	80 - 120	98	80 - 120	<1.0	mg/L	9.9	20
A731494	Total Barium (Ba)	2022/09/28	97	80 - 120	96	80 - 120	<0.010	mg/L	1.8	20
A731494	Total Boron (B)	2022/09/28	100	80 - 120	98	80 - 120	<0.020	mg/L	NC	20
A731494	Total Calcium (Ca)	2022/09/28	99	80 - 120	98	80 - 120	<0.30	mg/L	1.1	20
A731494	Total Iron (Fe)	2022/09/28	NC	80 - 120	98	80 - 120	<0.060	mg/L	1.2	20
A731494	Total Lithium (Li)	2022/09/28	103	80 - 120	101	80 - 120	<0.020	mg/L	3.1	20
A731494	Total Magnesium (Mg)	2022/09/28	101	80 - 120	99	80 - 120	<0.20	mg/L	1.6	20
A731494	Total Manganese (Mn)	2022/09/28	95	80 - 120	95	80 - 120	<0.0040	mg/L	4.6	20
A731494	Total Phosphorus (P)	2022/09/28	94	80 - 120	93	80 - 120	<0.10	mg/L	NC	20
A731494	Total Potassium (K)	2022/09/28	106	80 - 120	104	80 - 120	<0.30	mg/L	0.88	20
A731494	Total Silicon (Si)	2022/09/28	95	80 - 120	95	80 - 120	<0.50	mg/L	5.8	20
A731494	Total Sodium (Na)	2022/09/28	105	80 - 120	103	80 - 120	<0.50	mg/L	2.8	20
A731494	Total Strontium (Sr)	2022/09/28	93	80 - 120	92	80 - 120	<0.020	mg/L	0.71	20
A731494	Total Sulphur (S)	2022/09/28	96	80 - 120	95	80 - 120	<0.20	mg/L	5.4	20
A731505	Total Aluminum (Al)	2022/10/03	103	80 - 120	95	80 - 120	<0.0030	mg/L	5.8	20
A731505	Total Antimony (Sb)	2022/10/03	104	80 - 120	102	80 - 120	<0.00060	mg/L	NC	20
A731505	Total Arsenic (As)	2022/10/03	96	80 - 120	94	80 - 120	<0.00020	mg/L	7.5	20
A731505	Total Beryllium (Be)	2022/10/03	107	80 - 120	106	80 - 120	<0.0010	mg/L	NC	20
A731505	Total Chromium (Cr)	2022/10/03	98	80 - 120	95	80 - 120	<0.0010	mg/L	NC	20
A731505	Total Cobalt (Co)	2022/10/03	97	80 - 120	95	80 - 120	<0.00030	mg/L	NC	20
A731505	Total Copper (Cu)	2022/10/03	96	80 - 120	94	80 - 120	<0.0010	mg/L	6.9	20
A731505	Total Lead (Pb)	2022/10/03	99	80 - 120	95	80 - 120	<0.00020	mg/L	NC	20
A731505	Total Molybdenum (Mo)	2022/10/03	103	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
A731505	Total Nickel (Ni)	2022/10/03	97	80 - 120	94	80 - 120	<0.00050	mg/L	8.0	20
A731505	Total Selenium (Se)	2022/10/03	109	80 - 120	111	80 - 120	<0.00020	mg/L	7.9	20
A731505	Total Silver (Ag)	2022/10/03	102	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A731505	Total Thallium (Tl)	2022/10/03	100	80 - 120	95	80 - 120	<0.00020	mg/L	NC	20
A731505	Total Tin (Sn)	2022/10/03	98	80 - 120	98	80 - 120	<0.0010	mg/L	NC	20
A731505	Total Titanium (Ti)	2022/10/03	94	80 - 120	92	80 - 120	<0.0010	mg/L	8.3	20
A731505	Total Uranium (U)	2022/10/03	98	80 - 120	94	80 - 120	<0.00010	mg/L	NC	20
A731505	Total Vanadium (V)	2022/10/03	100	80 - 120	96	80 - 120	<0.0010	mg/L	NC	20
A731505	Total Zinc (Zn)	2022/10/03	101	80 - 120	96	80 - 120	<0.0030	mg/L	3.2	20
A732970	Total Barium (Ba)	2022/09/28	99	80 - 120	99	80 - 120	<0.010	mg/L	0.91	20
A732970	Total Boron (B)	2022/09/28	102	80 - 120	100	80 - 120	<0.020	mg/L	1.9	20
A732970	Total Calcium (Ca)	2022/09/28	NC	80 - 120	103	80 - 120	<0.30	mg/L	0.31	20
A732970	Total Iron (Fe)	2022/09/28	94	80 - 120	97	80 - 120	<0.060	mg/L	0.063	20
A732970	Total Lithium (Li)	2022/09/28	99	80 - 120	101	80 - 120	<0.020	mg/L	0.35	20
A732970	Total Magnesium (Mg)	2022/09/28	95	80 - 120	98	80 - 120	<0.20	mg/L	0.14	20
A732970	Total Manganese (Mn)	2022/09/28	92	80 - 120	96	80 - 120	<0.0040	mg/L	0.49	20
A732970	Total Phosphorus (P)	2022/09/28	89	80 - 120	89	80 - 120	<0.10	mg/L	NC	20
A732970	Total Potassium (K)	2022/09/28	103	80 - 120	103	80 - 120	<0.30	mg/L	0.18	20
A732970	Total Silicon (Si)	2022/09/28	90	80 - 120	94	80 - 120	<0.50	mg/L	0.74	20
A732970	Total Sodium (Na)	2022/09/28	NC	80 - 120	103	80 - 120	<0.50	mg/L	0.35	20
A732970	Total Strontium (Sr)	2022/09/28	95	80 - 120	96	80 - 120	<0.020	mg/L	0.51	20
A732970	Total Sulphur (S)	2022/09/28	90	80 - 120	92	80 - 120	<0.20	mg/L	0.25	20
A732992	Total Aluminum (Al)	2022/09/29	NC	80 - 120	117	80 - 120	<0.0030	mg/L	8.5	20
A732992	Total Antimony (Sb)	2022/09/29	98	80 - 120	96	80 - 120	<0.00060	mg/L	NC	20
A732992	Total Arsenic (As)	2022/09/29	88	80 - 120	90	80 - 120	<0.00020	mg/L	14	20
A732992	Total Beryllium (Be)	2022/09/29	117	80 - 120	116	80 - 120	<0.0010	mg/L	NC	20
A732992	Total Chromium (Cr)	2022/09/29	93	80 - 120	95	80 - 120	<0.0010	mg/L	NC	20
A732992	Total Cobalt (Co)	2022/09/29	92	80 - 120	93	80 - 120	<0.00030	mg/L	2.6	20
A732992	Total Copper (Cu)	2022/09/29	91	80 - 120	92	80 - 120	<0.0010	mg/L	NC	20
A732992	Total Lead (Pb)	2022/09/29	97	80 - 120	96	80 - 120	<0.00020	mg/L	NC	20
A732992	Total Molybdenum (Mo)	2022/09/29	98	80 - 120	97	80 - 120	<0.00020	mg/L	2.4	20
A732992	Total Nickel (Ni)	2022/09/29	91	80 - 120	93	80 - 120	<0.00050	mg/L	4.4	20
A732992	Total Selenium (Se)	2022/09/29	93	80 - 120	95	80 - 120	<0.00020	mg/L	2.2	20
A732992	Total Silver (Ag)	2022/09/29	95	80 - 120	94	80 - 120	<0.00010	mg/L	NC	20
A732992	Total Thallium (Tl)	2022/09/29	99	80 - 120	96	80 - 120	<0.00020	mg/L	NC	20

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			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A732992	Total Tin (Sn)	2022/09/29	100	80 - 120	98	80 - 120	<0.0010	mg/L	NC	20
A732992	Total Titanium (Ti)	2022/09/29	93	80 - 120	94	80 - 120	<0.0010	mg/L	20	20
A732992	Total Uranium (U)	2022/09/29	96	80 - 120	95	80 - 120	<0.00010	mg/L	2.6	20
A732992	Total Vanadium (V)	2022/09/29	95	80 - 120	95	80 - 120	<0.0010	mg/L	0.89	20
A732992	Total Zinc (Zn)	2022/09/29	89	80 - 120	91	80 - 120	<0.0030	mg/L	NC	20

N/A = Not Applicable

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

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

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

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

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

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

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Bureau Veritas Job #: C273475
Report Date: 2022/10/04

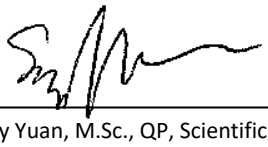
KGS Group
Client Project #: 21-1357-005
Sampler Initials: IH

VALIDATION SIGNATURE PAGE

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



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



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

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Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvna.com

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CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#7500 KGS Group	Company Name:	KGS Group	Quotation #:	C20090	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Ganga Atmuri/Ed Collins	P.O. #:		C23475	675143
Address:	3rd Floor 865 Waverly St Winnipeg MB R3T 5T4	Address:	865 Waverly St - 3rd Floor Winnipeg MB R3T 5T4	Project:	21-1357-005	COC #:	Project Manager:
Tel:	(204) 896-1209 Fax:	Tel:	(204) 896-1209 Fax:	Project Name:		C#675143-01-01	Janelle Kochan
Email:	payables@kgsgroup.com	Email:	gatmuri@kgsgroup.com,ecollins@kgsgroup.com	Site #:	OAM - Sherridon Mine Site		
				Sampled By:	IH/RD		

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☒ Other MWQSOG

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: ☒
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission)
Date Required: ☐
Rush Confirmation Number: *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	pH @25°C	Alkalinity @25C (pp, total), CO3,HCO3,OH	Total Suspended Solids (NFR)	Turbidity	Regulated Metals (CCME/AT1) - Total	Reg. Metals (CCME/AT1) – Diss. Lab Filt.	Hardness	Hardness Total (calculated as CaCO3)			# of Bottles	Comments
1		CB-2	22/09/20	15:00	SW	N	X	X	X	X	X	X	X	X			4	
2		EB-1		15:05		N	X	X	X	X	X	X	X	X			4	
3		EB-2		15:10		N	X	X	X	X	X	X	X	X			4	
4		NB-2		15:15		N	X	X	X	X	X	X	X	X			4	
5		NB-1		15:25		N	X	X	X	X	X	X	X	X			4	
6		Camp Lake Discharge		15:30		N	X	X	X	X	X	X	X	X			4	
7		SC-1		16:25		N	X	X	X	X	X	X	+	X			4	
8		SW-117		16:00		N	X	X	X	X	X	X	X	X			4	
9		SW-104		13:40		N	X	X	X	X	X	X	X	X			4	
10		Trip Blank	↓	—	↓	N	X	X	X	X	X	X	X	X			4	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only		
							Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
[illegible]	22/09/22	08:40	Amanda Brar	2022/09/22	1055		☐	6.2 / 7.6 / 6.3	☐ Yes ☐ No
			JOSHUA GIBSON RAJ	2022/09/23	08:44				

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

See ALTR

ICE-YES

White: Bureau Veritas Yellow: Client

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Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvna.com

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#7500 KGS Group	Company Name:	KGS Group	Quotation #:	C20090	Bureau Veritas Job #: C273475	Bottle Order #: 675143
Attention:	Accounts Payable	Attention:	Ganga Atmuri/Ed Collins	P.O. #:			
Address:	3rd Floor 865 Waverly St Winnipeg MB R3T 5T4	Address:	865 Waverly St - 3rd Floor Winnipeg MB R3T 5P4	Project:	21-1357-005	COC #: C#675143-02-01	Project Manager: Janelle Kochan
Tel:	(204) 896-1209 Fax:	Tel:	(204) 896-1209 Fax:	Project Name:			
Email:	payables@kgsgroup.com	Email:	gatmuri@kgsgroup.com,ecollins@kgsgroup.com	Site #:	OAM - Sherridon Mine Site		
				Sampled By:	IH/RD		

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☒ Other MWQSOG

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: ☒
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission) ☐
Date Required:
Rush Confirmation Number: *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	pH @25°C	Alkalinity @25C (pp, total), CO3,HCO3,OH	Total Suspended Solids (NFR)	Turbidity	Regulated Metals (CCME/AT1) - Total	Reg. Metals (CCME/AT1) – Diss. Lab Filt.	Hardness	Hardness Total (calculated as CaCO3)			# of Bottles	Comments
1		CL-6	22/09/20	13:35	SW	N	X	X	X	X	X	X	X	X			4	
2		CL-5		13:45		N	X	X	X	X	X	X	X	X			4	
3		CL-4		13:55		N	X	X	X	X	X	X	X	X			4	
4		CL-8		14:00		N	X	X	X	X	X	X	X	X			4	
5		CL-3		14:05		N	X	X	X	X	X	X	X	X			4	
6		CL-7		14:10		N	X	X	X	X	X	X	X	X			4	
7		CL-2		14:20		N	X	X	X	X	X	X	X	X			4	
8		SB-2		14:40		N	X	X	X	X	X	X	X	X			4	
9		SB-1		14:45		N	X	X	X	X	X	X	X	X			4	
10		CB-1		14:50		N	X	X	X	X	X	X	X	X			4	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Randall Gray	22/09/22	08:40	Anne Amarjit Brar	2022/09/23	10:55	
			Josh Pt JOPANRAU	2022/09/23	08:40	

Laboratory Use Only

Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
☐	8.2 / 8.1 / 8.3	☐ Yes ☐ No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.

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** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

See ACR

ICE - YES

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

Your Project #: 21-1357-005
Site#: OAM - SHERRIDON MINE SITE
Your C.O.C. #: 676081-01-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/10/06
Report #: R3244755
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C273561
Received: 2022/09/22, 10:55

Sample Matrix: Water
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH (1)	5	N/A	2022/09/27	AB SOP-00005	SM 23 2320 B m
Cadmium - low level CCME - Dissolved (1)	3	N/A	2022/09/27		Auto Calc
Cadmium - low level CCME - Dissolved (1)	2	N/A	2022/10/06		Auto Calc
Cadmium - low level CCME (Total) (1)	1	N/A	2022/09/27		Auto Calc
Cadmium - low level CCME (Total) (1)	3	N/A	2022/09/28		Auto Calc
Cadmium - low level CCME (Total) (1)	1	N/A	2022/10/04		Auto Calc
Hardness (1)	3	N/A	2022/09/25		Auto Calc
Hardness (1)	2	N/A	2022/09/26		Auto Calc
Hardness Total (calculated as CaCO3) (1, 2)	5	N/A	2022/09/28	BBY WI-00033	Auto Calc
Elements by ICP-Dissolved-Lab Filtered (1, 3)	3	N/A	2022/09/25	AB SOP-00042	EPA 6010d R5 m
Elements by ICP-Dissolved-Lab Filtered (1, 3)	2	N/A	2022/09/26	AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Total (1)	5	2022/09/27	2022/09/28	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Elements by ICPMS-Dissolved-Lab Filtered (1, 4)	3	N/A	2022/09/27	AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS-Dissolved-Lab Filtered (1, 4)	1	N/A	2022/10/05	AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS-Dissolved-Lab Filtered (1, 4)	1	N/A	2022/10/06	AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total (1)	4	2022/09/27	2022/09/27	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total (1)	1	2022/09/27	2022/10/03	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
pH @25°C (1, 5)	5	N/A	2022/09/27	AB SOP-00005	SM 23 4500-H+B m
Total Suspended Solids (NFR) (1)	5	2022/09/27	2022/09/27	AB SOP-00061	SM 23 2540 D m
Turbidity (1)	5	N/A	2022/09/23	CAL SOP-00081	SM 23 2130 B m

Remarks:

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

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

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

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Uncertainty has not been accounted for when stating conformity to the referenced standard.

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8
(2) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(3) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(4) Samples were filtered and preserved at the lab. Values may not reflect concentrations at the time of sampling. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(5) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Janelle Kochan, B.Sc., Key Account Specialist
Email: Janelle.KOCHAN@bureauveritas.com
Phone# (204)259-0231
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This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Job #: C273561
Report Date: 2022/10/06

KGS Group
Client Project #: 21-1357-005
Sampler Initials: IH

REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BCO230		BCO231		BCO232		BCO233		
Sampling Date		2022/09/20 16:05		2022/09/20 16:00		2022/09/20 15:55		2022/09/20 16:15		
COC Number		676081-01-01		676081-01-01		676081-01-01		676081-01-01		
	UNITS	SC-2	QC Batch	SC-3	QC Batch	SC-4	QC Batch	SC-5	RDL	QC Batch
Elements										
Dissolved Cadmium (Cd)	ug/L	0.12	A728141	0.10	A728141	<0.020	A728141	<0.020	0.020	A728141
Lab Filtered Elements										
Dissolved Aluminum (Al)	mg/L	0.017	A732462	0.017	A730514	0.014	A730514	0.019	0.0030	A732510
Dissolved Antimony (Sb)	mg/L	<0.00060	A732462	<0.00060	A730514	<0.00060	A730514	<0.00060	0.00060	A732510
Dissolved Arsenic (As)	mg/L	0.00045	A732462	0.00033	A730514	0.00046	A730514	0.00045	0.00020	A732510
Dissolved Barium (Ba)	mg/L	<0.010	A729356	<0.010	A729354	<0.010	A729356	<0.010	0.010	A729354
Dissolved Beryllium (Be)	mg/L	<0.0010	A732462	<0.0010	A730514	<0.0010	A730514	<0.0010	0.0010	A732510
Dissolved Boron (B)	mg/L	<0.020	A729356	<0.020	A729354	<0.020	A729356	<0.020	0.020	A729354
Dissolved Calcium (Ca)	mg/L	8.3	A729356	8.0	A729354	8.1	A729356	7.9	0.30	A729354
Dissolved Chromium (Cr)	mg/L	<0.0010	A732462	<0.0010	A730514	<0.0010	A730514	<0.0010	0.0010	A732510
Dissolved Cobalt (Co)	mg/L	<0.00030	A732462	<0.00030	A730514	<0.00030	A730514	<0.00030	0.00030	A732510
Dissolved Copper (Cu)	mg/L	0.0077	A732462	0.011	A730514	0.0023	A730514	0.0024	0.0010	A732510
Dissolved Iron (Fe)	mg/L	0.20	A729356	0.17	A729354	0.18	A729356	0.12	0.060	A729354
Dissolved Lead (Pb)	mg/L	<0.00020	A732462	<0.00020	A730514	<0.00020	A730514	<0.00020	0.00020	A732510
Dissolved Lithium (Li)	mg/L	<0.020	A729356	0.037	A729354	<0.020	A729356	0.035	0.020	A729354
Dissolved Magnesium (Mg)	mg/L	2.6	A729356	2.5	A729354	2.5	A729356	2.5	0.20	A729354
Dissolved Manganese (Mn)	mg/L	0.0065	A729356	0.0072	A729354	<0.0040	A729356	<0.0040	0.0040	A729354
Dissolved Molybdenum (Mo)	mg/L	<0.00020	A732462	<0.00020	A730514	<0.00020	A730514	<0.00020	0.00020	A732510
Dissolved Nickel (Ni)	mg/L	<0.00050	A732462	<0.00050	A730514	<0.00050	A730514	<0.00050	0.00050	A732510
Dissolved Phosphorus (P)	mg/L	<0.10	A729356	<0.10	A729354	<0.10	A729356	<0.10	0.10	A729354
Dissolved Potassium (K)	mg/L	1.4	A729356	1.4	A729354	1.4	A729356	1.3	0.30	A729354
Dissolved Selenium (Se)	mg/L	<0.00020	A732462	<0.00020	A730514	<0.00020	A730514	<0.00020	0.00020	A732510
Dissolved Silicon (Si)	mg/L	1.5	A729356	1.4	A729354	1.4	A729356	1.4	0.50	A729354
Dissolved Silver (Ag)	mg/L	<0.00010	A732462	<0.00010	A730514	<0.00010	A730514	<0.00010	0.00010	A732510
Dissolved Sodium (Na)	mg/L	2.0	A729356	1.5	A729354	1.5	A729356	1.5	0.50	A729354
Dissolved Strontium (Sr)	mg/L	0.021	A729356	<0.020	A729354	0.020	A729356	<0.020	0.020	A729354
Dissolved Sulphur (S)	mg/L	1.4	A729356	1.3	A729354	1.1	A729356	1.1	0.20	A729354
Dissolved Thallium (Tl)	mg/L	<0.00020	A732462	<0.00020	A730514	<0.00020	A730514	<0.00020	0.00020	A732510
Dissolved Tin (Sn)	mg/L	<0.0010	A732462	<0.0010	A730514	<0.0010	A730514	<0.0010	0.0010	A732510
Dissolved Titanium (Ti)	mg/L	<0.0010	A732462	<0.0010	A730514	<0.0010	A730514	<0.0010	0.0010	A732510
Dissolved Uranium (U)	mg/L	<0.00010	A732462	<0.00010	A730514	<0.00010	A730514	<0.00010	0.00010	A732510
Dissolved Vanadium (V)	mg/L	<0.0010	A732462	<0.0010	A730514	<0.0010	A730514	<0.0010	0.0010	A732510

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BCO230		BCO231		BCO232		BCO233		
Sampling Date		2022/09/20 16:05		2022/09/20 16:00		2022/09/20 15:55		2022/09/20 16:15		
COC Number		676081-01-01		676081-01-01		676081-01-01		676081-01-01		
	UNITS	**SC-2**	**QC Batch**	**SC-3**	**QC Batch**	**SC-4**	**QC Batch**	**SC-5**	**RDL**	**QC Batch**
Dissolved Zinc (Zn)	mg/L	0.055	A732462	0.060	A730514	0.0031	A730514	0.0039	0.0030	A732510
RDL = Reportable Detection Limit										

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BCO234		
Sampling Date		2022/09/20 16:20		
COC Number		676081-01-01		
	UNITS	SC-6	RDL	QC Batch
Elements				
Dissolved Cadmium (Cd)	ug/L	0.023	0.020	A728141
Lab Filtered Elements				
Dissolved Aluminum (Al)	mg/L	0.010	0.0030	A730514
Dissolved Antimony (Sb)	mg/L	<0.00060	0.00060	A730514
Dissolved Arsenic (As)	mg/L	0.00034	0.00020	A730514
Dissolved Barium (Ba)	mg/L	<0.010	0.010	A729356
Dissolved Beryllium (Be)	mg/L	<0.0010	0.0010	A730514
Dissolved Boron (B)	mg/L	<0.020	0.020	A729356
Dissolved Calcium (Ca)	mg/L	8.1	0.30	A729356
Dissolved Chromium (Cr)	mg/L	<0.0010	0.0010	A730514
Dissolved Cobalt (Co)	mg/L	<0.00030	0.00030	A730514
Dissolved Copper (Cu)	mg/L	0.0041	0.0010	A730514
Dissolved Iron (Fe)	mg/L	0.10	0.060	A729356
Dissolved Lead (Pb)	mg/L	<0.00020	0.00020	A730514
Dissolved Lithium (Li)	mg/L	<0.020	0.020	A729356
Dissolved Magnesium (Mg)	mg/L	2.5	0.20	A729356
Dissolved Manganese (Mn)	mg/L	<0.0040	0.0040	A729356
Dissolved Molybdenum (Mo)	mg/L	<0.00020	0.00020	A730514
Dissolved Nickel (Ni)	mg/L	<0.00050	0.00050	A730514
Dissolved Phosphorus (P)	mg/L	<0.10	0.10	A729356
Dissolved Potassium (K)	mg/L	1.2	0.30	A729356
Dissolved Selenium (Se)	mg/L	<0.00020	0.00020	A730514
Dissolved Silicon (Si)	mg/L	1.4	0.50	A729356
Dissolved Silver (Ag)	mg/L	<0.00010	0.00010	A730514
Dissolved Sodium (Na)	mg/L	1.5	0.50	A729356
Dissolved Strontium (Sr)	mg/L	0.021	0.020	A729356
Dissolved Sulphur (S)	mg/L	1.2	0.20	A729356
Dissolved Thallium (Tl)	mg/L	<0.00020	0.00020	A730514
Dissolved Tin (Sn)	mg/L	<0.0010	0.0010	A730514
Dissolved Titanium (Ti)	mg/L	<0.0010	0.0010	A730514
Dissolved Uranium (U)	mg/L	<0.00010	0.00010	A730514
Dissolved Vanadium (V)	mg/L	<0.0010	0.0010	A730514
RDL = Reportable Detection Limit				

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BCO234		
Sampling Date		2022/09/20 16:20		
COC Number		676081-01-01		
	UNITS	**SC-6**	**RDL**	**QC Batch**
Dissolved Zinc (Zn)	mg/L	0.0085	0.0030	A730514
RDL = Reportable Detection Limit				

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BCO230	BCO231		BCO232		BCO233		
Sampling Date		2022/09/20 16:05	2022/09/20 16:00		2022/09/20 15:55		2022/09/20 16:15		
COC Number		676081-01-01	676081-01-01		676081-01-01		676081-01-01		
	UNITS	SC-2	SC-3	QC Batch	SC-4	QC Batch	SC-5	RDL	QC Batch
Elements									
Total Cadmium (Cd)	ug/L	0.17	0.22	A727720	<0.020	A727720	<0.020	0.020	A727720
Total Aluminum (Al)	mg/L	0.034	0.037	A731421	0.030	A731505	0.069	0.0030	A731421
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	A731421	<0.00060	A731505	<0.00060	0.00060	A731421
Total Arsenic (As)	mg/L	0.00046	0.00049	A731421	0.00043	A731505	0.00051	0.00020	A731421
Total Barium (Ba)	mg/L	<0.010	<0.010	A731407	<0.010	A731494	<0.010	0.010	A731407
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	A731421	<0.0010	A731505	<0.0010	0.0010	A731421
Total Boron (B)	mg/L	<0.020	<0.020	A731407	<0.020	A731494	<0.020	0.020	A731407
Total Calcium (Ca)	mg/L	8.1	7.5	A731407	8.4	A731494	7.9	0.30	A731407
Total Chromium (Cr)	mg/L	<0.0010	<0.0010	A731421	<0.0010	A731505	<0.0010	0.0010	A731421
Total Cobalt (Co)	mg/L	<0.00030	<0.00030	A731421	<0.00030	A731505	<0.00030	0.00030	A731421
Total Copper (Cu)	mg/L	0.0087	0.012	A731421	0.0025	A731505	0.0030	0.0010	A731421
Total Iron (Fe)	mg/L	0.33	0.29	A731407	0.30	A731494	0.29	0.060	A731407
Total Lead (Pb)	mg/L	<0.00020	<0.00020	A731421	<0.00020	A731505	<0.00020	0.00020	A731421
Total Lithium (Li)	mg/L	<0.020	<0.020	A731407	<0.020	A731494	<0.020	0.020	A731407
Total Magnesium (Mg)	mg/L	2.5	2.3	A731407	2.6	A731494	2.5	0.20	A731407
Total Manganese (Mn)	mg/L	0.067	0.057	A731407	0.058	A731494	0.043	0.0040	A731407
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	A731421	<0.00020	A731505	<0.00020	0.00020	A731421
Total Nickel (Ni)	mg/L	<0.00050	<0.00050	A731421	<0.00050	A731505	<0.00050	0.00050	A731421
Total Phosphorus (P)	mg/L	<0.10	<0.10	A731407	<0.10	A731494	<0.10	0.10	A731407
Total Potassium (K)	mg/L	1.4	1.3	A731407	1.4	A731494	1.3	0.30	A731407
Total Selenium (Se)	mg/L	<0.00020	<0.00020	A731421	0.00020	A731505	<0.00020	0.00020	A731421
Total Silicon (Si)	mg/L	1.6	1.4	A731407	1.6	A731494	1.6	0.50	A731407
Total Silver (Ag)	mg/L	<0.00010	<0.00010	A731421	<0.00010	A731505	<0.00010	0.00010	A731421
Total Sodium (Na)	mg/L	1.9	1.5	A731407	1.5	A731494	1.5	0.50	A731407
Total Strontium (Sr)	mg/L	<0.020	<0.020	A731407	<0.020	A731494	<0.020	0.020	A731407
Total Sulphur (S)	mg/L	1.4	1.2	A731407	1.2	A731494	1.1	0.20	A731407
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	A731421	<0.00020	A731505	<0.00020	0.00020	A731421
Total Tin (Sn)	mg/L	<0.0010	<0.0010	A731421	<0.0010	A731505	<0.0010	0.0010	A731421
Total Titanium (Ti)	mg/L	0.0013	0.0012	A731421	0.0017	A731505	0.0044	0.0010	A731421
Total Uranium (U)	mg/L	<0.00010	<0.00010	A731421	<0.00010	A731505	<0.00010	0.00010	A731421
Total Vanadium (V)	mg/L	<0.0010	<0.0010	A731421	<0.0010	A731505	<0.0010	0.0010	A731421
Total Zinc (Zn)	mg/L	0.054	0.062	A731421	<0.0030	A731505	<0.0030	0.0030	A731421

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BCO234		
Sampling Date		2022/09/20 16:20		
COC Number		676081-01-01		
	UNITS	SC-6	RDL	QC Batch
Elements				
Total Cadmium (Cd)	ug/L	<0.020	0.020	A727720
Total Aluminum (Al)	mg/L	0.023	0.0030	A731421
Total Antimony (Sb)	mg/L	<0.00060	0.00060	A731421
Total Arsenic (As)	mg/L	0.00047	0.00020	A731421
Total Barium (Ba)	mg/L	<0.010	0.010	A731407
Total Beryllium (Be)	mg/L	<0.0010	0.0010	A731421
Total Boron (B)	mg/L	<0.020	0.020	A731407
Total Calcium (Ca)	mg/L	7.9	0.30	A731407
Total Chromium (Cr)	mg/L	<0.0010	0.0010	A731421
Total Cobalt (Co)	mg/L	<0.00030	0.00030	A731421
Total Copper (Cu)	mg/L	0.0040	0.0010	A731421
Total Iron (Fe)	mg/L	0.15	0.060	A731407
Total Lead (Pb)	mg/L	<0.00020	0.00020	A731421
Total Lithium (Li)	mg/L	<0.020	0.020	A731407
Total Magnesium (Mg)	mg/L	2.5	0.20	A731407
Total Manganese (Mn)	mg/L	0.015	0.0040	A731407
Total Molybdenum (Mo)	mg/L	<0.00020	0.00020	A731421
Total Nickel (Ni)	mg/L	<0.00050	0.00050	A731421
Total Phosphorus (P)	mg/L	<0.10	0.10	A731407
Total Potassium (K)	mg/L	1.2	0.30	A731407
Total Selenium (Se)	mg/L	<0.00020	0.00020	A731421
Total Silicon (Si)	mg/L	1.5	0.50	A731407
Total Silver (Ag)	mg/L	<0.00010	0.00010	A731421
Total Sodium (Na)	mg/L	1.5	0.50	A731407
Total Strontium (Sr)	mg/L	<0.020	0.020	A731407
Total Sulphur (S)	mg/L	1.2	0.20	A731407
Total Thallium (Tl)	mg/L	<0.00020	0.00020	A731421
Total Tin (Sn)	mg/L	<0.0010	0.0010	A731421
Total Titanium (Ti)	mg/L	<0.0010	0.0010	A731421
Total Uranium (U)	mg/L	<0.00010	0.00010	A731421
Total Vanadium (V)	mg/L	<0.0010	0.0010	A731421
Total Zinc (Zn)	mg/L	<0.0030	0.0030	A731421
RDL = Reportable Detection Limit				

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BCO230		BCO231		BCO232	BCO233		
Sampling Date		2022/09/20 16:05		2022/09/20 16:00		2022/09/20 15:55	2022/09/20 16:15		
COC Number		676081-01-01		676081-01-01		676081-01-01	676081-01-01		
	UNITS	SC-2	RDL	SC-3	RDL	SC-4	SC-5	RDL	QC Batch
Calculated Parameters									
Hardness (CaCO3)	mg/L	31	0.50	30	0.50	31	30	0.50	A728343
Total Hardness (CaCO3)	mg/L	30.5	0.50	28.4	0.50	31.6	29.9	0.50	A727726
Misc. Inorganics									
pH	pH	6.38	N/A	6.39	N/A	6.39	6.40	N/A	A731757
Total Suspended Solids	mg/L	1.9	0.99	1.7	0.97	1.5	2.2	1.0	A731456
Anions									
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	<1.0	1.0	<1.0	<1.0	1.0	A731751
Alkalinity (Total as CaCO3)	mg/L	25	1.0	25	1.0	26	24	1.0	A731751
Bicarbonate (HCO3)	mg/L	31	1.0	30	1.0	32	29	1.0	A731751
Carbonate (CO3)	mg/L	<1.0	1.0	<1.0	1.0	<1.0	<1.0	1.0	A731751
Hydroxide (OH)	mg/L	<1.0	1.0	<1.0	1.0	<1.0	<1.0	1.0	A731751
Physical Properties									
Turbidity	NTU	2.8	0.10	2.0	0.10	2.2	1.8	0.10	A728462

RDL = Reportable Detection Limit
N/A = Not Applicable

Bureau Veritas ID		BCO234		
Sampling Date		2022/09/20 16:20		
COC Number		676081-01-01		
	UNITS	SC-6	RDL	QC Batch
Calculated Parameters				
Hardness (CaCO3)	mg/L	31	0.50	A728343
Total Hardness (CaCO3)	mg/L	30.1	0.50	A728495
Misc. Inorganics				
pH	pH	6.47	N/A	A731757
Total Suspended Solids	mg/L	<0.97	0.97	A731456
Anions				
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	A731751
Alkalinity (Total as CaCO3)	mg/L	24	1.0	A731751
Bicarbonate (HCO3)	mg/L	29	1.0	A731751
Carbonate (CO3)	mg/L	<1.0	1.0	A731751
Hydroxide (OH)	mg/L	<1.0	1.0	A731751
Physical Properties				
Turbidity	NTU	2.1	0.10	A728462

RDL = Reportable Detection Limit
N/A = Not Applicable

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.6°C

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A728462	Turbidity	2022/09/23			104	80 - 120	<0.10	NTU	0.88	20
A729354	Dissolved Barium (Ba)	2022/09/25	96	80 - 120	100	80 - 120	<0.010	mg/L		
A729354	Dissolved Boron (B)	2022/09/25	97	80 - 120	98	80 - 120	<0.020	mg/L		
A729354	Dissolved Calcium (Ca)	2022/09/25	NC	80 - 120	102	80 - 120	<0.30	mg/L	1.8	20
A729354	Dissolved Iron (Fe)	2022/09/25	101	80 - 120	104	80 - 120	<0.060	mg/L	NC	20
A729354	Dissolved Lithium (Li)	2022/09/25	102	80 - 120	101	80 - 120	<0.020	mg/L		
A729354	Dissolved Magnesium (Mg)	2022/09/25	97	80 - 120	103	80 - 120	<0.20	mg/L	1.3	20
A729354	Dissolved Manganese (Mn)	2022/09/25	97	80 - 120	101	80 - 120	<0.0040	mg/L	2.7	20
A729354	Dissolved Phosphorus (P)	2022/09/25	100	80 - 120	100	80 - 120	<0.10	mg/L		
A729354	Dissolved Potassium (K)	2022/09/25	102	80 - 120	104	80 - 120	<0.30	mg/L	0.48	20
A729354	Dissolved Silicon (Si)	2022/09/25	91	80 - 120	98	80 - 120	<0.50	mg/L		
A729354	Dissolved Sodium (Na)	2022/09/25	97	80 - 120	98	80 - 120	<0.50	mg/L	1.1	20
A729354	Dissolved Strontium (Sr)	2022/09/25	90	80 - 120	96	80 - 120	<0.020	mg/L		
A729354	Dissolved Sulphur (S)	2022/09/25	102	80 - 120	98	80 - 120	<0.20	mg/L		
A729356	Dissolved Barium (Ba)	2022/09/25	96	80 - 120	96	80 - 120	<0.010	mg/L	NC	20
A729356	Dissolved Boron (B)	2022/09/25	99	80 - 120	98	80 - 120	<0.020	mg/L	NC	20
A729356	Dissolved Calcium (Ca)	2022/09/25	99	80 - 120	98	80 - 120	<0.30	mg/L	NC	20
A729356	Dissolved Iron (Fe)	2022/09/25	101	80 - 120	102	80 - 120	<0.060	mg/L	NC	20
A729356	Dissolved Lithium (Li)	2022/09/25	99	80 - 120	99	80 - 120	<0.020	mg/L	NC	20
A729356	Dissolved Magnesium (Mg)	2022/09/25	97	80 - 120	95	80 - 120	<0.20	mg/L	NC	20
A729356	Dissolved Manganese (Mn)	2022/09/25	98	80 - 120	99	80 - 120	<0.0040	mg/L	NC	20
A729356	Dissolved Phosphorus (P)	2022/09/25	102	80 - 120	100	80 - 120	<0.10	mg/L	NC	20
A729356	Dissolved Potassium (K)	2022/09/25	100	80 - 120	100	80 - 120	<0.30	mg/L	NC	20
A729356	Dissolved Silicon (Si)	2022/09/25	93	80 - 120	95	80 - 120	<0.50	mg/L	NC	20
A729356	Dissolved Sodium (Na)	2022/09/25	99	80 - 120	99	80 - 120	<0.50	mg/L	NC	20
A729356	Dissolved Strontium (Sr)	2022/09/25	92	80 - 120	94	80 - 120	<0.020	mg/L	NC	20
A729356	Dissolved Sulphur (S)	2022/09/25	104	80 - 120	98	80 - 120	<0.20	mg/L	NC	20
A730514	Dissolved Aluminum (Al)	2022/09/27	NC	80 - 120	101	80 - 120	<0.0030	mg/L	NC	20
A730514	Dissolved Antimony (Sb)	2022/09/27	101	80 - 120	101	80 - 120	<0.00060	mg/L	NC	20
A730514	Dissolved Arsenic (As)	2022/09/27	94	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
A730514	Dissolved Beryllium (Be)	2022/09/27	106	80 - 120	108	80 - 120	<0.0010	mg/L	NC	20
A730514	Dissolved Chromium (Cr)	2022/09/27	95	80 - 120	99	80 - 120	<0.0010	mg/L	NC	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A730514	Dissolved Cobalt (Co)	2022/09/27	96	80 - 120	98	80 - 120	<0.00030	mg/L	NC	20
A730514	Dissolved Copper (Cu)	2022/09/27	NC	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20
A730514	Dissolved Lead (Pb)	2022/09/27	98	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
A730514	Dissolved Molybdenum (Mo)	2022/09/27	105	80 - 120	105	80 - 120	<0.00020	mg/L	NC	20
A730514	Dissolved Nickel (Ni)	2022/09/27	95	80 - 120	94	80 - 120	<0.00050	mg/L	NC	20
A730514	Dissolved Selenium (Se)	2022/09/27	101	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
A730514	Dissolved Silver (Ag)	2022/09/27	96	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
A730514	Dissolved Thallium (Tl)	2022/09/27	99	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
A730514	Dissolved Tin (Sn)	2022/09/27	105	80 - 120	108	80 - 120	<0.0010	mg/L	NC	20
A730514	Dissolved Titanium (Ti)	2022/09/27	98	80 - 120	102	80 - 120	<0.0010	mg/L	NC	20
A730514	Dissolved Uranium (U)	2022/09/27	93	80 - 120	95	80 - 120	<0.00010	mg/L	NC	20
A730514	Dissolved Vanadium (V)	2022/09/27	99	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
A730514	Dissolved Zinc (Zn)	2022/09/27	NC	80 - 120	103	80 - 120	<0.0030	mg/L	NC	20
A731407	Total Barium (Ba)	2022/09/28	99	80 - 120	97	80 - 120	<0.010	mg/L	NC	20
A731407	Total Boron (B)	2022/09/28	103	80 - 120	102	80 - 120	<0.020	mg/L	NC	20
A731407	Total Calcium (Ca)	2022/09/28	105	80 - 120	100	80 - 120	<0.30	mg/L	0.51	20
A731407	Total Iron (Fe)	2022/09/28	114	80 - 120	105	80 - 120	<0.060	mg/L	0.82	20
A731407	Total Lithium (Li)	2022/09/28	105	80 - 120	102	80 - 120	<0.020	mg/L	NC	20
A731407	Total Magnesium (Mg)	2022/09/28	103	80 - 120	101	80 - 120	<0.20	mg/L	0.21	20
A731407	Total Manganese (Mn)	2022/09/28	104	80 - 120	101	80 - 120	<0.0040	mg/L	3.4	20
A731407	Total Phosphorus (P)	2022/09/28	99	80 - 120	98	80 - 120	<0.10	mg/L	NC	20
A731407	Total Potassium (K)	2022/09/28	108	80 - 120	105	80 - 120	<0.30	mg/L	1.7	20
A731407	Total Silicon (Si)	2022/09/28	104	80 - 120	101	80 - 120	<0.50	mg/L	1.6	20
A731407	Total Sodium (Na)	2022/09/28	108	80 - 120	105	80 - 120	<0.50	mg/L	1.5	20
A731407	Total Strontium (Sr)	2022/09/28	95	80 - 120	93	80 - 120	<0.020	mg/L	0.39	20
A731407	Total Sulphur (S)	2022/09/28	102	80 - 120	100	80 - 120	<0.20	mg/L	3.7	20
A731421	Total Aluminum (Al)	2022/09/27	NC	80 - 120	91	80 - 120	<0.0030	mg/L	9.4	20
A731421	Total Antimony (Sb)	2022/09/27	97	80 - 120	97	80 - 120	<0.00060	mg/L	NC	20
A731421	Total Arsenic (As)	2022/09/27	95	80 - 120	92	80 - 120	<0.00020	mg/L	12	20
A731421	Total Beryllium (Be)	2022/09/27	91	80 - 120	82	80 - 120	<0.0010	mg/L	NC	20
A731421	Total Chromium (Cr)	2022/09/27	98	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20
A731421	Total Cobalt (Co)	2022/09/27	95	80 - 120	95	80 - 120	<0.00030	mg/L	NC	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A731421	Total Copper (Cu)	2022/09/27	98	80 - 120	97	80 - 120	<0.0010	mg/L	3.2	20
A731421	Total Lead (Pb)	2022/09/27	93	80 - 120	94	80 - 120	<0.00020	mg/L	NC	20
A731421	Total Molybdenum (Mo)	2022/09/27	102	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20
A731421	Total Nickel (Ni)	2022/09/27	96	80 - 120	96	80 - 120	<0.00050	mg/L	12	20
A731421	Total Selenium (Se)	2022/09/27	96	80 - 120	94	80 - 120	<0.00020	mg/L	NC	20
A731421	Total Silver (Ag)	2022/09/27	95	80 - 120	94	80 - 120	<0.00010	mg/L	NC	20
A731421	Total Thallium (Tl)	2022/09/27	98	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
A731421	Total Tin (Sn)	2022/09/27	102	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20
A731421	Total Titanium (Ti)	2022/09/27	100	80 - 120	97	80 - 120	<0.0010	mg/L	3.6	20
A731421	Total Uranium (U)	2022/09/27	101	80 - 120	98	80 - 120	<0.00010	mg/L	NC	20
A731421	Total Vanadium (V)	2022/09/27	100	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20
A731421	Total Zinc (Zn)	2022/09/27	97	80 - 120	95	80 - 120	<0.0030	mg/L	4.9	20
A731456	Total Suspended Solids	2022/09/27	115	80 - 120	98	80 - 120	<1.0	mg/L	9.9	20
A731494	Total Barium (Ba)	2022/09/28	97	80 - 120	96	80 - 120	<0.010	mg/L	1.8	20
A731494	Total Boron (B)	2022/09/28	100	80 - 120	98	80 - 120	<0.020	mg/L	NC	20
A731494	Total Calcium (Ca)	2022/09/28	99	80 - 120	98	80 - 120	<0.30	mg/L	1.1	20
A731494	Total Iron (Fe)	2022/09/28	NC	80 - 120	98	80 - 120	<0.060	mg/L	1.2	20
A731494	Total Lithium (Li)	2022/09/28	103	80 - 120	101	80 - 120	<0.020	mg/L	3.1	20
A731494	Total Magnesium (Mg)	2022/09/28	101	80 - 120	99	80 - 120	<0.20	mg/L	1.6	20
A731494	Total Manganese (Mn)	2022/09/28	95	80 - 120	95	80 - 120	<0.0040	mg/L	4.6	20
A731494	Total Phosphorus (P)	2022/09/28	94	80 - 120	93	80 - 120	<0.10	mg/L	NC	20
A731494	Total Potassium (K)	2022/09/28	106	80 - 120	104	80 - 120	<0.30	mg/L	0.88	20
A731494	Total Silicon (Si)	2022/09/28	95	80 - 120	95	80 - 120	<0.50	mg/L	5.8	20
A731494	Total Sodium (Na)	2022/09/28	105	80 - 120	103	80 - 120	<0.50	mg/L	2.8	20
A731494	Total Strontium (Sr)	2022/09/28	93	80 - 120	92	80 - 120	<0.020	mg/L	0.71	20
A731494	Total Sulphur (S)	2022/09/28	96	80 - 120	95	80 - 120	<0.20	mg/L	5.4	20
A731505	Total Aluminum (Al)	2022/10/03	103	80 - 120	95	80 - 120	<0.0030	mg/L	5.8	20
A731505	Total Antimony (Sb)	2022/10/03	104	80 - 120	102	80 - 120	<0.00060	mg/L	NC	20
A731505	Total Arsenic (As)	2022/10/03	96	80 - 120	94	80 - 120	<0.00020	mg/L	7.5	20
A731505	Total Beryllium (Be)	2022/10/03	107	80 - 120	106	80 - 120	<0.0010	mg/L	NC	20
A731505	Total Chromium (Cr)	2022/10/03	98	80 - 120	95	80 - 120	<0.0010	mg/L	NC	20
A731505	Total Cobalt (Co)	2022/10/03	97	80 - 120	95	80 - 120	<0.00030	mg/L	NC	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A731505	Total Copper (Cu)	2022/10/03	96	80 - 120	94	80 - 120	<0.0010	mg/L	6.9	20
A731505	Total Lead (Pb)	2022/10/03	99	80 - 120	95	80 - 120	<0.00020	mg/L	NC	20
A731505	Total Molybdenum (Mo)	2022/10/03	103	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
A731505	Total Nickel (Ni)	2022/10/03	97	80 - 120	94	80 - 120	<0.00050	mg/L	8.0	20
A731505	Total Selenium (Se)	2022/10/03	109	80 - 120	111	80 - 120	<0.00020	mg/L	7.9	20
A731505	Total Silver (Ag)	2022/10/03	102	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
A731505	Total Thallium (Tl)	2022/10/03	100	80 - 120	95	80 - 120	<0.00020	mg/L	NC	20
A731505	Total Tin (Sn)	2022/10/03	98	80 - 120	98	80 - 120	<0.0010	mg/L	NC	20
A731505	Total Titanium (Ti)	2022/10/03	94	80 - 120	92	80 - 120	<0.0010	mg/L	8.3	20
A731505	Total Uranium (U)	2022/10/03	98	80 - 120	94	80 - 120	<0.00010	mg/L	NC	20
A731505	Total Vanadium (V)	2022/10/03	100	80 - 120	96	80 - 120	<0.0010	mg/L	NC	20
A731505	Total Zinc (Zn)	2022/10/03	101	80 - 120	96	80 - 120	<0.0030	mg/L	3.2	20
A731751	Alkalinity (PP as CaCO3)	2022/09/27					<1.0	mg/L	NC	20
A731751	Alkalinity (Total as CaCO3)	2022/09/27			91	80 - 120	<1.0	mg/L	0.43	20
A731751	Bicarbonate (HCO3)	2022/09/27					<1.0	mg/L	0.43	20
A731751	Carbonate (CO3)	2022/09/27					<1.0	mg/L	NC	20
A731751	Hydroxide (OH)	2022/09/27					<1.0	mg/L	NC	20
A731757	pH	2022/09/27			100	97 - 103			1.1	N/A
A732462	Dissolved Aluminum (Al)	2022/10/05	99	80 - 120	99	80 - 120	<0.0030	mg/L	NC	20
A732462	Dissolved Antimony (Sb)	2022/10/05	100	80 - 120	98	80 - 120	<0.00060	mg/L	NC	20
A732462	Dissolved Arsenic (As)	2022/10/05	95	80 - 120	93	80 - 120	<0.00020	mg/L	1.6	20
A732462	Dissolved Beryllium (Be)	2022/10/05	116	80 - 120	109	80 - 120	<0.0010	mg/L	NC	20
A732462	Dissolved Chromium (Cr)	2022/10/05	94	80 - 120	94	80 - 120	<0.0010	mg/L	NC	20
A732462	Dissolved Cobalt (Co)	2022/10/05	92	80 - 120	93	80 - 120	<0.00030	mg/L	2.4	20
A732462	Dissolved Copper (Cu)	2022/10/05	90	80 - 120	91	80 - 120	<0.0010	mg/L	NC	20
A732462	Dissolved Lead (Pb)	2022/10/05	99	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
A732462	Dissolved Molybdenum (Mo)	2022/10/05	98	80 - 120	96	80 - 120	<0.00020	mg/L	5.2	20
A732462	Dissolved Nickel (Ni)	2022/10/05	91	80 - 120	92	80 - 120	<0.00050	mg/L	5.0	20
A732462	Dissolved Selenium (Se)	2022/10/05	102	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
A732462	Dissolved Silver (Ag)	2022/10/05	90	80 - 120	93	80 - 120	<0.00010	mg/L	NC	20
A732462	Dissolved Thallium (Tl)	2022/10/05	101	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20
A732462	Dissolved Tin (Sn)	2022/10/05	104	80 - 120	101	80 - 120	<0.0010	mg/L	NC	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A732462	Dissolved Titanium (Ti)	2022/10/05	99	80 - 120	98	80 - 120	<0.0010	mg/L	NC	20
A732462	Dissolved Uranium (U)	2022/10/05	97	80 - 120	94	80 - 120	<0.00010	mg/L	2.1	20
A732462	Dissolved Vanadium (V)	2022/10/05	97	80 - 120	94	80 - 120	<0.0010	mg/L	NC	20
A732462	Dissolved Zinc (Zn)	2022/10/05	95	80 - 120	94	80 - 120	<0.0030	mg/L	NC	20
A732510	Dissolved Aluminum (Al)	2022/10/06	102	80 - 120	115	80 - 120	<0.0030	mg/L	9.5	20
A732510	Dissolved Antimony (Sb)	2022/10/06	99	80 - 120	109	80 - 120	<0.00060	mg/L	NC	20
A732510	Dissolved Arsenic (As)	2022/10/06	91	80 - 120	102	80 - 120	<0.00020	mg/L	0.11	20
A732510	Dissolved Beryllium (Be)	2022/10/06	103	80 - 120	114	80 - 120	<0.0010	mg/L	NC	20
A732510	Dissolved Chromium (Cr)	2022/10/06	92	80 - 120	101	80 - 120	<0.0010	mg/L	NC	20
A732510	Dissolved Cobalt (Co)	2022/10/06	89	80 - 120	99	80 - 120	<0.00030	mg/L	NC	20
A732510	Dissolved Copper (Cu)	2022/10/06	90	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20
A732510	Dissolved Lead (Pb)	2022/10/06	85	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
A732510	Dissolved Molybdenum (Mo)	2022/10/06	95	80 - 120	101	80 - 120	<0.00020	mg/L	3.9	20
A732510	Dissolved Nickel (Ni)	2022/10/06	88	80 - 120	98	80 - 120	<0.00050	mg/L	9.5	20
A732510	Dissolved Selenium (Se)	2022/10/06	98	80 - 120	110	80 - 120	<0.00020	mg/L	3.2	20
A732510	Dissolved Silver (Ag)	2022/10/06	89	80 - 120	98	80 - 120	<0.00010	mg/L	NC	20
A732510	Dissolved Thallium (Tl)	2022/10/06	87	80 - 120	105	80 - 120	<0.00020	mg/L	NC	20
A732510	Dissolved Tin (Sn)	2022/10/06	99	80 - 120	106	80 - 120	<0.0010	mg/L	NC	20
A732510	Dissolved Titanium (Ti)	2022/10/06	95	80 - 120	105	80 - 120	<0.0010	mg/L	NC	20
A732510	Dissolved Uranium (U)	2022/10/06	84	80 - 120	100	80 - 120	<0.00010	mg/L	1.4	20
A732510	Dissolved Vanadium (V)	2022/10/06	94	80 - 120	103	80 - 120	<0.0010	mg/L	NC	20
A732510	Dissolved Zinc (Zn)	2022/10/06	89	80 - 120	103	80 - 120	<0.0030	mg/L	NC	20

N/A = Not Applicable

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

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

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

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

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

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

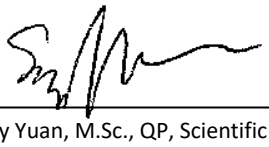
Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

VALIDATION SIGNATURE PAGE

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



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



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



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

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Automated Statchk

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Chain Of Custody Record

Bureau Veritas
D-675 Berry Street, Winnipeg, Manitoba Canada R3H 1A7 Tel:(204) 772-7276 Toll-free:800-563-6266 Fax:(204) 772-2386 www.bvna.com

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#7500 KGS Group	Company Name	KGS Group	Quotation #	C20090	Bureau Veritas Job #	Bottle Order #:
Contact Name	Accounts Payable	Contact Name	Ganga Atmuri/Ed Collins	P.O. #		C273561	676081
Address	3rd Floor 865 Waverly St Winnipeg MB R3T 5T4	Address	3rd Floor 865 Waverly St Winnipeg, MB R3T 5T4	Project #	21-1357-005	Chain Of Custody Record	Project Manager
Phone	(204) 896-1209 Fax:	Phone	(204) 896-1209 Fax:	Project Name		C#676081-01-01	Janelle Kochan
Email	payables@kgsgroup.com	Email	gatmuri@kgsgroup.com,ecollins@kgsgroup.com	Site #	OAM - Sherridon Mine Site		
				Sampled By	JH/RD		

Regulatory Criteria: ☒ Other MWQSOG

Special Instructions

Note: For regulated drinking water samples - please use the Drinking Water Chain of Custody Form

Samples must be kept cool (< 10ºC) from time of sampling until delivery to Bureau Veritas

Analysis Requested

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Regulated Drinking Water ? (Y / N)	Metals Field Filtered ? (Y / N)	pH @25°C	Alkalinity @25C (pp. total), CO3,HCO3,OH	Total Suspended Solids (NFR)	Turbidity	Regulated Metals (CCME/AT1) - Total	Reg. Metals (CCME/AT1) – Diss. Lab Filt.	Hardness	Hardness Total (calculated as CaCO3)			# of Bottles	Comments
1		SC-2	2022/09/20	16:05	SW	N	N	X	X	X	X	X	X	X	X			4	
2		SC-3	↓	16:00	↓	N	N	X	X	X	X	X	X	X	X			4	
3		SC-4		15:55		N	N	X	X	X	X	X	X	X	X			4	
4		SC-5		16:15		N	N	X	X	X	X	X	X	X	X			4	
5		SC-6		16:20		N	N	X	X	X	X	X	X	X	X			4	
6								X	X	X	X	X	X	X	X				
7								X	X	X	X	X	X	X	X				
8								X	X	X	X	X	X	X	X				
9								X	X	X	X	X	X	X	X				
10								X	X	X	X	X	X	X	X				

Turnaround Time (TAT) Required

Please provide advance notice for rush projects

Regular (Standard) TAT ☒
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: _____ Time Required: _____ ☐
Rush Confirmation Number _____ *(call lab for #)*

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Kait Ogle	22/09/22	09:40	Amanda Brar	2022/09/22	1055	
				2022/09/23	09:40	

Lab Use Only

Time Sensitive	Temperature (ºC) on Receipt	Custody Seal Intact on Cooler?
☐	6.3/4.1/3.5	☐ Yes ☐ No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Bureau Veritas Yellow: Client

Rush 5, 6, 5
ICE - YES
ICE - YES

Bureau Veritas Canada (2019) Inc.

Your Project #: 21-1357-005
Site#: OAM - Sherridon Mine Site

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Your C.O.C. #: 676556-03-01, 676556-02-01, 676556-01-01

Report Date: 2022/10/12
Report #: R3246766
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C277954
Received: 2022/10/05, 12:25

Sample Matrix: Water
Samples Received: 25

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH (1)	22	N/A	2022/10/08	AB SOP-00005	SM 23 2320 B m
Alkalinity @25C (pp, total), CO3,HCO3,OH (1)	3	N/A	2022/10/09	AB SOP-00005	SM 23 2320 B m
Cadmium - low level CCME - Dissolved (1)	25	N/A	2022/10/08		Auto Calc
Cadmium - low level CCME (Total) (1)	13	N/A	2022/10/10		Auto Calc
Cadmium - low level CCME (Total) (1)	3	N/A	2022/10/11		Auto Calc
Cadmium - low level CCME (Total) (1)	9	N/A	2022/10/12		Auto Calc
Hardness (1)	25	N/A	2022/10/09		Auto Calc
Hardness Total (calculated as CaCO3) (1, 2)	12	N/A	2022/10/08	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3) (1, 2)	1	N/A	2022/10/09	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3) (1, 2)	12	N/A	2022/10/11	BBY WI-00033	Auto Calc
Elements by ICP-Dissolved-Lab Filtered (1, 3)	25	N/A	2022/10/08	AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Total (1)	12	2022/10/07	2022/10/08	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Total (1)	1	2022/10/07	2022/10/09	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Total (1)	12	2022/10/10	2022/10/11	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Elements by ICPMS-Dissolved-Lab Filtered (1, 4)	7	N/A	2022/10/07	AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS-Dissolved-Lab Filtered (1, 4)	18	N/A	2022/10/08	AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total (1)	11	2022/10/07	2022/10/09	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total (1)	2	2022/10/07	2022/10/10	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total (1)	12	2022/10/10	2022/10/11	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
pH @25°C (1, 5)	22	N/A	2022/10/08	AB SOP-00005	SM 23 4500-H+B m
pH @25°C (1, 5)	3	N/A	2022/10/09	AB SOP-00005	SM 23 4500-H+B m
Total Suspended Solids (NFR) (1)	25	2022/10/11	2022/10/11	AB SOP-00061	SM 23 2540 D m
Turbidity (1)	25	N/A	2022/10/07	CAL SOP-00081	SM 23 2130 B m

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

Your Project #: 21-1357-005
Site#: OAM - Sherridon Mine Site

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Your C.O.C. #: 676556-03-01, 676556-02-01, 676556-01-01

Report Date: 2022/10/12
Report #: R3246766
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C277954
Received: 2022/10/05, 12:25

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8
(2) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(3) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(4) Samples were filtered and preserved at the lab. Values may not reflect concentrations at the time of sampling. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(5) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

Your Project #: 21-1357-005
Site#: OAM - Sherridon Mine Site

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Your C.O.C. #: 676556-03-01, 676556-02-01, 676556-01-01

Report Date: 2022/10/12
Report #: R3246766
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C277954
Received: 2022/10/05, 12:25

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Janelle Kochan, B.Sc., Key Account Specialist
Email: Janelle.KOCHAN@bureauveritas.com
Phone# (204)259-0231
==========
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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BDS074	BDS075		BDS076	BDS077	BDS078		
Sampling Date		2022/10/04 08:15	2022/10/04 08:25		2022/10/04 08:35	2022/10/04 08:45	2022/10/04 08:50		
COC Number		676556-03-01	676556-03-01		676556-03-01	676556-03-01	676556-03-01		
	UNITS	CL-6	CL-5	QC Batch	CL-4	CL-8	CL-3	RDL	QC Batch
Elements									
Dissolved Cadmium (Cd)	ug/L	<0.020	<0.020	A745380	0.028	0.024	0.024	0.020	A745380
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	0.027	0.029	A746923	0.028	0.030	0.073	0.0030	A746924
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	A746923	<0.00060	<0.00060	<0.00060	0.00060	A746924
Dissolved Arsenic (As)	mg/L	0.00045	0.00046	A746923	0.00038	0.00038	0.00039	0.00020	A746924
Dissolved Barium (Ba)	mg/L	<0.010	<0.010	A747265	<0.010	<0.010	<0.010	0.010	A747265
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	A746923	<0.0010	<0.0010	<0.0010	0.0010	A746924
Dissolved Boron (B)	mg/L	<0.020	<0.020	A747265	<0.020	<0.020	<0.020	0.020	A747265
Dissolved Calcium (Ca)	mg/L	12	12	A747265	12	13	13	0.30	A747265
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010	A746923	<0.0010	<0.0010	<0.0010	0.0010	A746924
Dissolved Cobalt (Co)	mg/L	<0.00030	<0.00030	A746923	<0.00030	<0.00030	<0.00030	0.00030	A746924
Dissolved Copper (Cu)	mg/L	0.0040	0.0044	A746923	0.0048	0.0050	0.0050	0.0010	A746924
Dissolved Iron (Fe)	mg/L	0.14	0.18	A747265	0.25	0.29	0.29	0.060	A747265
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	A746923	<0.00020	<0.00020	<0.00020	0.00020	A746924
Dissolved Lithium (Li)	mg/L	<0.020	<0.020	A747265	<0.020	<0.020	<0.020	0.020	A747265
Dissolved Magnesium (Mg)	mg/L	3.3	3.3	A747265	3.3	3.5	3.5	0.20	A747265
Dissolved Manganese (Mn)	mg/L	<0.0040	<0.0040	A747265	<0.0040	<0.0040	<0.0040	0.0040	A747265
Dissolved Molybdenum (Mo)	mg/L	<0.00020	<0.00020	A746923	<0.00020	<0.00020	<0.00020	0.00020	A746924
Dissolved Nickel (Ni)	mg/L	<0.00050	<0.00050	A746923	<0.00050	<0.00050	0.00052	0.00050	A746924
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	A747265	<0.10	<0.10	<0.10	0.10	A747265
Dissolved Potassium (K)	mg/L	1.6	1.7	A747265	1.6	1.7	1.7	0.30	A747265
Dissolved Selenium (Se)	mg/L	<0.00020	<0.00020	A746923	<0.00020	<0.00020	<0.00020	0.00020	A746924
Dissolved Silicon (Si)	mg/L	0.68	0.74	A747265	0.82	0.85	0.84	0.50	A747265
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	A746923	<0.00010	<0.00010	<0.00010	0.00010	A746924
Dissolved Sodium (Na)	mg/L	2.1	2.0	A747265	2.0	2.0	2.0	0.50	A747265
Dissolved Strontium (Sr)	mg/L	0.026	0.026	A747265	0.026	0.027	0.027	0.020	A747265
Dissolved Sulphur (S)	mg/L	5.0	5.0	A747265	5.8	6.1	6.0	0.20	A747265
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	A746923	<0.00020	<0.00020	<0.00020	0.00020	A746924
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	A746923	<0.0010	<0.0010	<0.0010	0.0010	A746924
Dissolved Titanium (Ti)	mg/L	<0.0010	<0.0010	A746923	<0.0010	<0.0010	<0.0010	0.0010	A746924
Dissolved Uranium (U)	mg/L	<0.00010	<0.00010	A746923	<0.00010	<0.00010	<0.00010	0.00010	A746924

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BDS074	BDS075		BDS076	BDS077	BDS078		
Sampling Date		2022/10/04 08:15	2022/10/04 08:25		2022/10/04 08:35	2022/10/04 08:45	2022/10/04 08:50		
COC Number		676556-03-01	676556-03-01		676556-03-01	676556-03-01	676556-03-01		
	UNITS	**CL-6**	**CL-5**	**QC Batch**	**CL-4**	**CL-8**	**CL-3**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	A746923	<0.0010	<0.0010	<0.0010	0.0010	A746924
Dissolved Zinc (Zn)	mg/L	0.0086	0.0093	A746923	0.011	0.011	0.012	0.0030	A746924
RDL = Reportable Detection Limit									

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BDS079			BDS079			BDS080		
Sampling Date		2022/10/04 08:55			2022/10/04 08:55			2022/10/04 09:40		
COC Number		676556-03-01			676556-03-01			676556-03-01		
	UNITS	CL-7	RDL	QC Batch	CL-7 Lab-Dup	RDL	QC Batch	SB-2	RDL	QC Batch
Elements										
Dissolved Cadmium (Cd)	ug/L	0.022	0.020	A745380				0.36	0.020	A745380
Lab Filtered Elements										
Dissolved Aluminum (Al)	mg/L	0.032	0.0030	A746923	0.034	0.0030	A746923	0.0046	0.0030	A746923
Dissolved Antimony (Sb)	mg/L	<0.00060	0.00060	A746923	<0.00060	0.00060	A746923	<0.00060	0.00060	A746923
Dissolved Arsenic (As)	mg/L	0.00038	0.00020	A746923	0.00042	0.00020	A746923	0.00021	0.00020	A746923
Dissolved Barium (Ba)	mg/L	<0.010	0.010	A747253				0.012	0.010	A747253
Dissolved Beryllium (Be)	mg/L	<0.0010	0.0010	A746923	<0.0010	0.0010	A746923	<0.0010	0.0010	A746923
Dissolved Boron (B)	mg/L	<0.020	0.020	A747253				<0.020	0.020	A747253
Dissolved Calcium (Ca)	mg/L	13	0.30	A747253				52	0.30	A747253
Dissolved Chromium (Cr)	mg/L	<0.0010	0.0010	A746923	<0.0010	0.0010	A746923	<0.0010	0.0010	A746923
Dissolved Cobalt (Co)	mg/L	<0.00030	0.00030	A746923	<0.00030	0.00030	A746923	<0.00030	0.00030	A746923
Dissolved Copper (Cu)	mg/L	0.0050	0.0010	A746923	0.0050	0.0010	A746923	0.0065	0.0010	A746923
Dissolved Iron (Fe)	mg/L	0.30	0.060	A747253				0.74	0.060	A747253
Dissolved Lead (Pb)	mg/L	<0.00020	0.00020	A746923	<0.00020	0.00020	A746923	<0.00020	0.00020	A746923
Dissolved Lithium (Li)	mg/L	<0.020	0.020	A747253				<0.020	0.020	A747253
Dissolved Magnesium (Mg)	mg/L	3.4	0.20	A747253				8.7	0.20	A747253
Dissolved Manganese (Mn)	mg/L	<0.0040	0.0040	A747253				0.062	0.0040	A747253
Dissolved Molybdenum (Mo)	mg/L	<0.00020	0.00020	A746923	<0.00020	0.00020	A746923	<0.00020	0.00020	A746923
Dissolved Nickel (Ni)	mg/L	<0.00050	0.00050	A746923	<0.00050	0.00050	A746923	0.0010	0.00050	A746923
Dissolved Phosphorus (P)	mg/L	<0.10	0.10	A747253				<0.10	0.10	A747253
Dissolved Potassium (K)	mg/L	1.6	0.30	A747253				4.3	0.30	A747253
Dissolved Selenium (Se)	mg/L	<0.00020	0.00020	A746923	<0.00020	0.00020	A746923	<0.00020	0.00020	A746923
Dissolved Silicon (Si)	mg/L	0.84	0.50	A747253				1.2	0.50	A747253
Dissolved Silver (Ag)	mg/L	<0.00010	0.00010	A746923	<0.00010	0.00010	A746923	<0.00010	0.00010	A746923
Dissolved Sodium (Na)	mg/L	2.1	0.50	A747253				3.0	0.50	A747253
Dissolved Strontium (Sr)	mg/L	0.026	0.020	A747253				0.050	0.020	A747253
Dissolved Sulphur (S)	mg/L	6.3	0.20	A747253				51	0.20	A747253
Dissolved Thallium (Tl)	mg/L	<0.00020	0.00020	A746923	<0.00020	0.00020	A746923	<0.00020	0.00020	A746923
Dissolved Tin (Sn)	mg/L	<0.0010	0.0010	A746923	<0.0010	0.0010	A746923	<0.0010	0.0010	A746923
Dissolved Titanium (Ti)	mg/L	<0.0010	0.0010	A746923	<0.0010	0.0010	A746923	<0.0010	0.0010	A746923
Dissolved Uranium (U)	mg/L	<0.00010	0.00010	A746923	<0.00010	0.00010	A746923	<0.00010	0.00010	A746923

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BDS079			BDS079			BDS080		
Sampling Date		2022/10/04 08:55			2022/10/04 08:55			2022/10/04 09:40		
COC Number		676556-03-01			676556-03-01			676556-03-01		
	UNITS	CL-7	RDL	QC Batch	CL-7 Lab-Dup	RDL	QC Batch	SB-2	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.0010	0.0010	A746923	<0.0010	0.0010	A746923	<0.0010	0.0010	A746923
Dissolved Zinc (Zn)	mg/L	0.011	0.0030	A746923	0.012	0.0030	A746923	0.11	0.0030	A746923

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BDS081		BDS082	BDS083		BDS096		
Sampling Date		2022/10/04 09:45		2022/10/04 09:05	2022/10/04 09:50		2022/10/04 09:55		
COC Number		676556-03-01		676556-03-01	676556-03-01		676556-02-01		
	UNITS	SB-1	QC Batch	CL-2	CB-1	QC Batch	CB-2	RDL	QC Batch
Elements									
Dissolved Cadmium (Cd)	ug/L	0.35	A745380	<0.020	0.38	A745380	0.36	0.020	A745380
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	0.0050	A746923	0.029	0.034	A746923	0.0052	0.0030	A746923
Dissolved Antimony (Sb)	mg/L	<0.00060	A746923	<0.00060	<0.00060	A746923	<0.00060	0.00060	A746923
Dissolved Arsenic (As)	mg/L	0.00021	A746923	0.00045	0.00023	A746923	<0.00020	0.00020	A746923
Dissolved Barium (Ba)	mg/L	0.011	A747253	<0.010	0.011	A747265	0.012	0.010	A747253
Dissolved Beryllium (Be)	mg/L	<0.0010	A746923	<0.0010	<0.0010	A746923	<0.0010	0.0010	A746923
Dissolved Boron (B)	mg/L	<0.020	A747253	<0.020	<0.020	A747265	<0.020	0.020	A747253
Dissolved Calcium (Ca)	mg/L	51	A747253	13	52	A747265	52	0.30	A747253
Dissolved Chromium (Cr)	mg/L	<0.0010	A746923	<0.0010	<0.0010	A746923	<0.0010	0.0010	A746923
Dissolved Cobalt (Co)	mg/L	<0.00030	A746923	<0.00030	<0.00030	A746923	<0.00030	0.00030	A746923
Dissolved Copper (Cu)	mg/L	0.0069	A746923	0.0055	0.0093	A746923	0.0068	0.0010	A746923
Dissolved Iron (Fe)	mg/L	0.64	A747253	0.32	1.8	A747265	0.60	0.060	A747253
Dissolved Lead (Pb)	mg/L	<0.00020	A746923	<0.00020	<0.00020	A746923	<0.00020	0.00020	A746923
Dissolved Lithium (Li)	mg/L	<0.020	A747253	<0.020	<0.020	A747265	<0.020	0.020	A747253
Dissolved Magnesium (Mg)	mg/L	8.7	A747253	3.4	8.8	A747265	8.8	0.20	A747253
Dissolved Manganese (Mn)	mg/L	0.061	A747253	<0.0040	0.060	A747265	0.059	0.0040	A747253
Dissolved Molybdenum (Mo)	mg/L	<0.00020	A746923	<0.00020	<0.00020	A746923	<0.00020	0.00020	A746923
Dissolved Nickel (Ni)	mg/L	0.0011	A746923	<0.00050	0.0011	A746923	0.0011	0.00050	A746923
Dissolved Phosphorus (P)	mg/L	<0.10	A747253	<0.10	<0.10	A747265	<0.10	0.10	A747253
Dissolved Potassium (K)	mg/L	4.3	A747253	1.7	4.3	A747265	4.4	0.30	A747253
Dissolved Selenium (Se)	mg/L	<0.00020	A746923	<0.00020	<0.00020	A746923	<0.00020	0.00020	A746923
Dissolved Silicon (Si)	mg/L	1.2	A747253	0.89	1.2	A747265	1.2	0.50	A747253
Dissolved Silver (Ag)	mg/L	<0.00010	A746923	<0.00010	<0.00010	A746923	<0.00010	0.00010	A746923
Dissolved Sodium (Na)	mg/L	3.0	A747253	2.0	3.0	A747265	3.0	0.50	A747253
Dissolved Strontium (Sr)	mg/L	0.050	A747253	0.026	0.051	A747265	0.051	0.020	A747253
Dissolved Sulphur (S)	mg/L	50	A747253	6.0	50	A747265	51	0.20	A747253
Dissolved Thallium (Tl)	mg/L	<0.00020	A746923	<0.00020	<0.00020	A746923	<0.00020	0.00020	A746923
Dissolved Tin (Sn)	mg/L	<0.0010	A746923	<0.0010	<0.0010	A746923	<0.0010	0.0010	A746923
Dissolved Titanium (Ti)	mg/L	<0.0010	A746923	<0.0010	<0.0010	A746923	<0.0010	0.0010	A746923
Dissolved Uranium (U)	mg/L	<0.00010	A746923	<0.00010	<0.00010	A746923	<0.00010	0.00010	A746923

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BDS081		BDS082	BDS083		BDS096		
Sampling Date		2022/10/04 09:45		2022/10/04 09:05	2022/10/04 09:50		2022/10/04 09:55		
COC Number		676556-03-01		676556-03-01	676556-03-01		676556-02-01		
	UNITS	**SB-1**	**QC Batch**	**CL-2**	**CB-1**	**QC Batch**	**CB-2**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	A746923	<0.0010	<0.0010	A746923	<0.0010	0.0010	A746923
Dissolved Zinc (Zn)	mg/L	0.11	A746923	0.011	0.13	A746923	0.12	0.0030	A746923
RDL = Reportable Detection Limit									

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BDS097	BDS098		BDS099	BDS100		
Sampling Date		2022/10/04 10:00	2022/10/04 10:05		2022/10/04 10:20	2022/10/04 10:15		
COC Number		676556-02-01	676556-02-01		676556-02-01	676556-02-01		
	UNITS	EB-1	EB-2	QC Batch	NB-1	NB-2	RDL	QC Batch
Elements								
Dissolved Cadmium (Cd)	ug/L	0.54	0.56	A745380	0.40	0.36	0.020	A745380
Lab Filtered Elements								
Dissolved Aluminum (Al)	mg/L	0.0087	0.0096	A746924	0.0044	0.0047	0.0030	A746923
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	A746924	<0.00060	<0.00060	0.00060	A746923
Dissolved Arsenic (As)	mg/L	<0.00020	<0.00020	A746924	0.00022	0.00020	0.00020	A746923
Dissolved Barium (Ba)	mg/L	0.012	0.013	A747265	0.011	0.010	0.010	A747253
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	A746924	<0.0010	<0.0010	0.0010	A746923
Dissolved Boron (B)	mg/L	<0.020	<0.020	A747265	<0.020	<0.020	0.020	A747253
Dissolved Calcium (Ca)	mg/L	56	58	A747265	58	56	0.30	A747253
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010	A746924	<0.0010	<0.0010	0.0010	A746923
Dissolved Cobalt (Co)	mg/L	0.00030	0.00035	A746924	<0.00030	<0.00030	0.00030	A746923
Dissolved Copper (Cu)	mg/L	0.0084	0.0082	A746924	0.0069	0.0069	0.0010	A746923
Dissolved Iron (Fe)	mg/L	0.46	0.44	A747265	0.48	0.47	0.060	A747253
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	A746924	<0.00020	<0.00020	0.00020	A746923
Dissolved Lithium (Li)	mg/L	<0.020	<0.020	A747265	<0.020	<0.020	0.020	A747253
Dissolved Magnesium (Mg)	mg/L	9.2	9.3	A747265	9.4	9.0	0.20	A747253
Dissolved Manganese (Mn)	mg/L	0.048	0.049	A747265	0.068	0.061	0.0040	A747253
Dissolved Molybdenum (Mo)	mg/L	<0.00020	<0.00020	A746924	<0.00020	<0.00020	0.00020	A746923
Dissolved Nickel (Ni)	mg/L	0.0013	0.0014	A746924	0.0011	0.0011	0.00050	A746923
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	A747265	<0.10	<0.10	0.10	A747253
Dissolved Potassium (K)	mg/L	4.4	4.5	A747265	4.4	4.2	0.30	A747253
Dissolved Selenium (Se)	mg/L	<0.00020	<0.00020	A746924	<0.00020	<0.00020	0.00020	A746923
Dissolved Silicon (Si)	mg/L	1.0	0.97	A747265	1.2	1.2	0.50	A747253
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	A746924	<0.00010	<0.00010	0.00010	A746923
Dissolved Sodium (Na)	mg/L	3.1	3.2	A747265	3.0	2.9	0.50	A747253
Dissolved Strontium (Sr)	mg/L	0.053	0.054	A747265	0.051	0.051	0.020	A747253
Dissolved Sulphur (S)	mg/L	55	53	A747265	55	54	0.20	A747253
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	A746924	<0.00020	<0.00020	0.00020	A746923
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	A746924	<0.0010	<0.0010	0.0010	A746923
Dissolved Titanium (Ti)	mg/L	<0.0010	<0.0010	A746924	<0.0010	<0.0010	0.0010	A746923
Dissolved Uranium (U)	mg/L	<0.00010	<0.00010	A746924	<0.00010	<0.00010	0.00010	A746923

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BDS097	BDS098		BDS099	BDS100		
Sampling Date		2022/10/04 10:00	2022/10/04 10:05		2022/10/04 10:20	2022/10/04 10:15		
COC Number		676556-02-01	676556-02-01		676556-02-01	676556-02-01		
	UNITS	**EB-1**	**EB-2**	**QC Batch**	**NB-1**	**NB-2**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	A746924	<0.0010	<0.0010	0.0010	A746923
Dissolved Zinc (Zn)	mg/L	0.15	0.16	A746924	0.12	0.12	0.0030	A746923
RDL = Reportable Detection Limit								

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BDS101		BDS102		BDS103		
Sampling Date		2022/10/04 10:30		2022/10/04 17:00		2022/10/04 18:00		
COC Number		676556-02-01		676556-02-01		676556-02-01		
	UNITS	CAMP LAKE DISCHARGE	QC Batch	SW-110	QC Batch	SW-118	RDL	QC Batch
Elements								
Dissolved Cadmium (Cd)	ug/L	0.36	A745380	0.38	A745939	0.34	0.020	A745939
Lab Filtered Elements								
Dissolved Aluminum (Al)	mg/L	0.0046	A746923	0.0045	A746923	0.028	0.0030	A746924
Dissolved Antimony (Sb)	mg/L	<0.00060	A746923	<0.00060	A746923	<0.00060	0.00060	A746924
Dissolved Arsenic (As)	mg/L	<0.00020	A746923	0.00022	A746923	0.00045	0.00020	A746924
Dissolved Barium (Ba)	mg/L	0.011	A747265	0.011	A747265	<0.010	0.010	A747265
Dissolved Beryllium (Be)	mg/L	<0.0010	A746923	<0.0010	A746923	<0.0010	0.0010	A746924
Dissolved Boron (B)	mg/L	<0.020	A747265	<0.020	A747265	<0.020	0.020	A747265
Dissolved Calcium (Ca)	mg/L	57	A747265	59	A747265	9.2	0.30	A747265
Dissolved Chromium (Cr)	mg/L	<0.0010	A746923	<0.0010	A746923	<0.0010	0.0010	A746924
Dissolved Cobalt (Co)	mg/L	<0.00030	A746923	<0.00030	A746923	<0.00030	0.00030	A746924
Dissolved Copper (Cu)	mg/L	0.0066	A746923	0.0065	A746923	0.012	0.0010	A746924
Dissolved Iron (Fe)	mg/L	0.46	A747265	0.55	A747265	0.24	0.060	A747265
Dissolved Lead (Pb)	mg/L	<0.00020	A746923	<0.00020	A746923	<0.00020	0.00020	A746924
Dissolved Lithium (Li)	mg/L	<0.020	A747265	<0.020	A747265	<0.020	0.020	A747265
Dissolved Magnesium (Mg)	mg/L	9.2	A747265	9.5	A747265	2.9	0.20	A747265
Dissolved Manganese (Mn)	mg/L	0.062	A747265	0.064	A747265	0.050	0.0040	A747265
Dissolved Molybdenum (Mo)	mg/L	<0.00020	A746923	<0.00020	A746923	<0.00020	0.00020	A746924
Dissolved Nickel (Ni)	mg/L	0.0011	A746923	0.0010	A746923	<0.00050	0.00050	A746924
Dissolved Phosphorus (P)	mg/L	<0.10	A747265	<0.10	A747265	<0.10	0.10	A747265
Dissolved Potassium (K)	mg/L	4.3	A747265	4.4	A747265	1.5	0.30	A747265
Dissolved Selenium (Se)	mg/L	<0.00020	A746923	<0.00020	A746923	<0.00020	0.00020	A746924
Dissolved Silicon (Si)	mg/L	1.2	A747265	1.2	A747265	1.4	0.50	A747265
Dissolved Silver (Ag)	mg/L	<0.00010	A746923	<0.00010	A746923	<0.00010	0.00010	A746924
Dissolved Sodium (Na)	mg/L	3.0	A747265	3.1	A747265	3.5	0.50	A747265
Dissolved Strontium (Sr)	mg/L	0.052	A747265	0.053	A747265	0.022	0.020	A747265
Dissolved Sulphur (S)	mg/L	56	A747265	54	A747265	1.8	0.20	A747265
Dissolved Thallium (Tl)	mg/L	<0.00020	A746923	<0.00020	A746923	<0.00020	0.00020	A746924
Dissolved Tin (Sn)	mg/L	<0.0010	A746923	<0.0010	A746923	<0.0010	0.0010	A746924
Dissolved Titanium (Ti)	mg/L	<0.0010	A746923	<0.0010	A746923	<0.0010	0.0010	A746924
Dissolved Uranium (U)	mg/L	<0.00010	A746923	<0.00010	A746923	<0.00010	0.00010	A746924

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BDS101		BDS102		BDS103		
Sampling Date		2022/10/04 10:30		2022/10/04 17:00		2022/10/04 18:00		
COC Number		676556-02-01		676556-02-01		676556-02-01		
	UNITS	**CAMP LAKE DISCHARGE**	**QC Batch**	**SW-110**	**QC Batch**	**SW-118**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	A746923	<0.0010	A746923	<0.0010	0.0010	A746924
Dissolved Zinc (Zn)	mg/L	0.12	A746923	0.12	A746923	0.11	0.0030	A746924
RDL = Reportable Detection Limit								

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BDS103			BDS104		BDS105		
Sampling Date		2022/10/04 18:00			2022/10/04 10:55		2022/10/04 11:25		
COC Number		676556-02-01			676556-02-01		676556-02-01		
	UNITS	SW-118 Lab-Dup	RDL	QC Batch	SC-1	QC Batch	SC-2	RDL	QC Batch
Elements									
Dissolved Cadmium (Cd)	ug/L				0.45	A745939	0.60	0.020	A745939
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L				0.031	A746923	0.031	0.0030	A746924
Dissolved Antimony (Sb)	mg/L				<0.00060	A746923	<0.00060	0.00060	A746924
Dissolved Arsenic (As)	mg/L				0.00042	A746923	0.00043	0.00020	A746924
Dissolved Barium (Ba)	mg/L	<0.010	0.010	A747265	<0.010	A747253	<0.010	0.010	A747265
Dissolved Beryllium (Be)	mg/L				<0.0010	A746923	<0.0010	0.0010	A746924
Dissolved Boron (B)	mg/L	<0.020	0.020	A747265	<0.020	A747253	<0.020	0.020	A747265
Dissolved Calcium (Ca)	mg/L	8.9	0.30	A747265	9.8	A747253	9.9	0.30	A747265
Dissolved Chromium (Cr)	mg/L				<0.0010	A746923	<0.0010	0.0010	A746924
Dissolved Cobalt (Co)	mg/L				<0.00030	A746923	<0.00030	0.00030	A746924
Dissolved Copper (Cu)	mg/L				0.019	A746923	0.021	0.0010	A746924
Dissolved Iron (Fe)	mg/L	0.23	0.060	A747265	0.30	A747253	0.30	0.060	A747265
Dissolved Lead (Pb)	mg/L				<0.00020	A746923	<0.00020	0.00020	A746924
Dissolved Lithium (Li)	mg/L	<0.020	0.020	A747265	<0.020	A747253	<0.020	0.020	A747265
Dissolved Magnesium (Mg)	mg/L	2.9	0.20	A747265	3.1	A747253	3.1	0.20	A747265
Dissolved Manganese (Mn)	mg/L	0.048	0.0040	A747265	0.056	A747253	0.081	0.0040	A747265
Dissolved Molybdenum (Mo)	mg/L				<0.00020	A746923	<0.00020	0.00020	A746924
Dissolved Nickel (Ni)	mg/L				0.00052	A746923	0.00055	0.00050	A746924
Dissolved Phosphorus (P)	mg/L	<0.10	0.10	A747265	<0.10	A747253	<0.10	0.10	A747265
Dissolved Potassium (K)	mg/L	1.5	0.30	A747265	1.7	A747253	1.6	0.30	A747265
Dissolved Selenium (Se)	mg/L				<0.00020	A746923	<0.00020	0.00020	A746924
Dissolved Silicon (Si)	mg/L	1.3	0.50	A747265	1.4	A747253	1.3	0.50	A747265
Dissolved Silver (Ag)	mg/L				<0.00010	A746923	<0.00010	0.00010	A746924
Dissolved Sodium (Na)	mg/L	3.4	0.50	A747265	4.3	A747253	5.4	0.50	A747265
Dissolved Strontium (Sr)	mg/L	0.021	0.020	A747265	0.024	A747253	0.023	0.020	A747265
Dissolved Sulphur (S)	mg/L	1.7	0.20	A747265	2.3	A747253	2.5	0.20	A747265
Dissolved Thallium (Tl)	mg/L				<0.00020	A746923	<0.00020	0.00020	A746924
Dissolved Tin (Sn)	mg/L				<0.0010	A746923	<0.0010	0.0010	A746924
Dissolved Titanium (Ti)	mg/L				<0.0010	A746923	<0.0010	0.0010	A746924
Dissolved Uranium (U)	mg/L				<0.00010	A746923	<0.00010	0.00010	A746924

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BDS103			BDS104		BDS105		
Sampling Date		2022/10/04 18:00			2022/10/04 10:55		2022/10/04 11:25		
COC Number		676556-02-01			676556-02-01		676556-02-01		
	UNITS	**SW-118 Lab-Dup**	**RDL**	**QC Batch**	**SC-1**	**QC Batch**	**SC-2**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L				<0.0010	A746923	<0.0010	0.0010	A746924
Dissolved Zinc (Zn)	mg/L				0.18	A746923	0.22	0.0030	A746924

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BDS108	BDS109	BDS110	BDS111	BDS112		
Sampling Date		2022/10/04 11:20	2022/10/04 11:15	2022/10/04 11:35	2022/10/04 11:45	2022/10/04		
COC Number		676556-01-01	676556-01-01	676556-01-01	676556-01-01	676556-01-01		
	UNITS	SC-3	SC-4	SC-5	SC-6	TRIP BLANK	RDL	QC Batch
Elements								
Dissolved Cadmium (Cd)	ug/L	0.35	0.029	<0.020	<0.020	<0.020	0.020	A745939
Lab Filtered Elements								
Dissolved Aluminum (Al)	mg/L	0.025	0.020	0.015	0.013	<0.0030	0.0030	A746923
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	0.00060	A746923
Dissolved Arsenic (As)	mg/L	0.00044	0.00049	0.00044	0.00039	<0.00020	0.00020	A746923
Dissolved Barium (Ba)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	A747253
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A746923
Dissolved Boron (B)	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	A747253
Dissolved Calcium (Ca)	mg/L	8.8	8.4	8.1	8.1	<0.30	0.30	A747253
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A746923
Dissolved Cobalt (Co)	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	0.00030	A746923
Dissolved Copper (Cu)	mg/L	0.012	0.0031	0.0019	0.0020	<0.0010	0.0010	A746923
Dissolved Iron (Fe)	mg/L	0.22	0.21	0.16	0.11	<0.060	0.060	A747253
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A746923
Dissolved Lithium (Li)	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	A747253
Dissolved Magnesium (Mg)	mg/L	2.8	2.7	2.6	2.6	<0.20	0.20	A747253
Dissolved Manganese (Mn)	mg/L	0.048	0.021	0.016	0.0043	<0.0040	0.0040	A747253
Dissolved Molybdenum (Mo)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A746923
Dissolved Nickel (Ni)	mg/L	0.00053	<0.00050	<0.00050	0.00056	<0.00050	0.00050	A746923
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	A747253
Dissolved Potassium (K)	mg/L	1.5	1.5	1.4	1.4	<0.30	0.30	A747253
Dissolved Selenium (Se)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A746923
Dissolved Silicon (Si)	mg/L	1.3	1.3	1.2	1.2	<0.50	0.50	A747253
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A746923
Dissolved Sodium (Na)	mg/L	3.4	1.8	1.5	1.6	<0.50	0.50	A747253
Dissolved Strontium (Sr)	mg/L	0.021	0.020	0.020	0.020	<0.020	0.020	A747253
Dissolved Sulphur (S)	mg/L	1.8	1.2	1.1	1.2	<0.20	0.20	A747253
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A746923
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A746923
Dissolved Titanium (Ti)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A746923
Dissolved Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A746923

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BDS108	BDS109	BDS110	BDS111	BDS112		
Sampling Date		2022/10/04 11:20	2022/10/04 11:15	2022/10/04 11:35	2022/10/04 11:45	2022/10/04		
COC Number		676556-01-01	676556-01-01	676556-01-01	676556-01-01	676556-01-01		
	UNITS	**SC-3**	**SC-4**	**SC-5**	**SC-6**	**TRIP BLANK**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A746923
Dissolved Zinc (Zn)	mg/L	0.11	0.018	<0.0030	0.0031	<0.0030	0.0030	A746923
RDL = Reportable Detection Limit								

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BDS074	BDS075		BDS076	BDS077	BDS078		
Sampling Date		2022/10/04 08:15	2022/10/04 08:25		2022/10/04 08:35	2022/10/04 08:45	2022/10/04 08:50		
COC Number		676556-03-01	676556-03-01		676556-03-01	676556-03-01	676556-03-01		
	UNITS	CL-6	CL-5	QC Batch	CL-4	CL-8	CL-3	RDL	QC Batch
Elements									
Total Cadmium (Cd)	ug/L	0.034	0.038	A745512	0.034	0.036	0.042	0.020	A745512
Total Aluminum (Al)	mg/L	0.076	0.079	A747857	0.086	0.084	0.077	0.0030	A750268
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	A747857	<0.00060	<0.00060	<0.00060	0.00060	A750268
Total Arsenic (As)	mg/L	0.00050	0.00044	A747857	0.00045	0.00043	0.00040	0.00020	A750268
Total Barium (Ba)	mg/L	<0.010	0.012	A747860	<0.010	<0.010	<0.010	0.010	A750269
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	A747857	<0.0010	<0.0010	<0.0010	0.0010	A750268
Total Boron (B)	mg/L	0.024	<0.020	A747860	<0.020	<0.020	<0.020	0.020	A750269
Total Calcium (Ca)	mg/L	11	11	A747860	11	12	12	0.30	A750269
Total Chromium (Cr)	mg/L	<0.0010	<0.0010	A747857	<0.0010	<0.0010	<0.0010	0.0010	A750268
Total Cobalt (Co)	mg/L	<0.00030	<0.00030	A747857	<0.00030	<0.00030	<0.00030	0.00030	A750268
Total Copper (Cu)	mg/L	0.0050	0.0054	A747857	0.0057	0.0058	0.0056	0.0010	A750268
Total Iron (Fe)	mg/L	0.29	0.41	A747860	0.59	0.59	0.56	0.060	A750269
Total Lead (Pb)	mg/L	<0.00020	<0.00020	A747857	<0.00020	<0.00020	<0.00020	0.00020	A750268
Total Lithium (Li)	mg/L	<0.020	<0.020	A747860	<0.020	<0.020	<0.020	0.020	A750269
Total Magnesium (Mg)	mg/L	3.2	3.2	A747860	3.2	3.3	3.2	0.20	A750269
Total Manganese (Mn)	mg/L	0.014	0.018	A747860	0.020	0.020	0.019	0.0040	A750269
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	A747857	<0.00020	<0.00020	<0.00020	0.00020	A750268
Total Nickel (Ni)	mg/L	0.00070	0.00055	A747857	0.00061	0.00050	<0.00050	0.00050	A750268
Total Phosphorus (P)	mg/L	<0.10	<0.10	A747860	<0.10	<0.10	<0.10	0.10	A750269
Total Potassium (K)	mg/L	1.5	1.5	A747860	1.4	1.5	1.4	0.30	A750269
Total Selenium (Se)	mg/L	<0.00020	<0.00020	A747857	<0.00020	<0.00020	<0.00020	0.00020	A750268
Total Silicon (Si)	mg/L	0.99	1.0	A747860	1.1	1.1	1.1	0.50	A750269
Total Silver (Ag)	mg/L	<0.00010	<0.00010	A747857	<0.00010	<0.00010	<0.00010	0.00010	A750268
Total Sodium (Na)	mg/L	1.9	1.9	A747860	1.9	2.0	1.9	0.50	A750269
Total Strontium (Sr)	mg/L	0.027	0.027	A747860	0.027	0.027	0.026	0.020	A750269
Total Sulphur (S)	mg/L	5.0	5.2	A747860	5.8	6.2	6.0	0.20	A750269
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	A747857	<0.00020	<0.00020	<0.00020	0.00020	A750268
Total Tin (Sn)	mg/L	<0.0010	<0.0010	A747857	<0.0010	<0.0010	<0.0010	0.0010	A750268
Total Titanium (Ti)	mg/L	0.0036	0.0032	A747857	0.0035	0.0027	0.0027	0.0010	A750268
Total Uranium (U)	mg/L	<0.00010	<0.00010	A747857	<0.00010	<0.00010	<0.00010	0.00010	A750268
Total Vanadium (V)	mg/L	<0.0010	<0.0010	A747857	<0.0010	<0.0010	<0.0010	0.0010	A750268

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BDS074	BDS075		BDS076	BDS077	BDS078		
Sampling Date		2022/10/04 08:15	2022/10/04 08:25		2022/10/04 08:35	2022/10/04 08:45	2022/10/04 08:50		
COC Number		676556-03-01	676556-03-01		676556-03-01	676556-03-01	676556-03-01		
	UNITS	**CL-6**	**CL-5**	**QC Batch**	**CL-4**	**CL-8**	**CL-3**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.014	0.015	A747857	0.015	0.015	0.014	0.0030	A750268
RDL = Reportable Detection Limit									

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BDS079	BDS080		BDS081	BDS082		
Sampling Date		2022/10/04 08:55	2022/10/04 09:40		2022/10/04 09:45	2022/10/04 09:05		
COC Number		676556-03-01	676556-03-01		676556-03-01	676556-03-01		
	UNITS	CL-7	SB-2	QC Batch	SB-1	CL-2	RDL	QC Batch
Elements								
Total Cadmium (Cd)	ug/L	0.041	0.41	A745512	0.47	0.040	0.020	A745512
Total Aluminum (Al)	mg/L	0.077	0.062	A750268	0.053	0.056	0.0030	A747857
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	A750268	<0.00060	<0.00060	0.00060	A747857
Total Arsenic (As)	mg/L	0.00043	0.00023	A750268	0.00026	0.00051	0.00020	A747857
Total Barium (Ba)	mg/L	<0.010	0.013	A750269	0.014	<0.010	0.010	A747860
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	A750268	<0.0010	<0.0010	0.0010	A747857
Total Boron (B)	mg/L	<0.020	<0.020	A750269	<0.020	<0.020	0.020	A747860
Total Calcium (Ca)	mg/L	12	46	A750269	49	12	0.30	A747860
Total Chromium (Cr)	mg/L	<0.0010	<0.0010	A750268	<0.0010	<0.0010	0.0010	A747857
Total Cobalt (Co)	mg/L	<0.00030	<0.00030	A750268	<0.00030	<0.00030	0.00030	A747857
Total Copper (Cu)	mg/L	0.0054	0.011	A750268	0.012	0.0069	0.0010	A747857
Total Iron (Fe)	mg/L	0.58	3.2	A750269	3.2	0.60	0.060	A747860
Total Lead (Pb)	mg/L	<0.00020	<0.00020	A750268	<0.00020	<0.00020	0.00020	A747857
Total Lithium (Li)	mg/L	<0.020	<0.020	A750269	<0.020	<0.020	0.020	A747860
Total Magnesium (Mg)	mg/L	3.2	7.7	A750269	8.1	3.3	0.20	A747860
Total Manganese (Mn)	mg/L	0.019	0.060	A750269	0.060	0.029	0.0040	A747860
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	A750268	<0.00020	<0.00020	0.00020	A747857
Total Nickel (Ni)	mg/L	<0.00050	0.0011	A750268	0.0013	0.00079	0.00050	A747857
Total Phosphorus (P)	mg/L	<0.10	<0.10	A750269	<0.10	<0.10	0.10	A747860
Total Potassium (K)	mg/L	1.5	3.7	A750269	4.1	1.6	0.30	A747860
Total Selenium (Se)	mg/L	<0.00020	<0.00020	A750268	<0.00020	<0.00020	0.00020	A747857
Total Silicon (Si)	mg/L	1.1	1.4	A750269	1.4	1.1	0.50	A747860
Total Silver (Ag)	mg/L	<0.00010	<0.00010	A750268	<0.00010	<0.00010	0.00010	A747857
Total Sodium (Na)	mg/L	1.9	2.8	A750269	2.9	1.9	0.50	A747860
Total Strontium (Sr)	mg/L	0.026	0.052	A750269	0.055	0.028	0.020	A747860
Total Sulphur (S)	mg/L	6.1	49	A750269	50	6.1	0.20	A747860
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	A750268	<0.00020	<0.00020	0.00020	A747857
Total Tin (Sn)	mg/L	<0.0010	<0.0010	A750268	<0.0010	<0.0010	0.0010	A747857
Total Titanium (Ti)	mg/L	0.0031	0.0028	A750268	0.0020	0.0021	0.0010	A747857
Total Uranium (U)	mg/L	<0.00010	<0.00010	A750268	<0.00010	<0.00010	0.00010	A747857
Total Vanadium (V)	mg/L	<0.0010	<0.0010	A750268	<0.0010	<0.0010	0.0010	A747857

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BDS079	BDS080		BDS081	BDS082		
Sampling Date		2022/10/04 08:55	2022/10/04 09:40		2022/10/04 09:45	2022/10/04 09:05		
COC Number		676556-03-01	676556-03-01		676556-03-01	676556-03-01		
	UNITS	**CL-7**	**SB-2**	**QC Batch**	**SB-1**	**CL-2**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.014	0.12	A750268	0.14	0.018	0.0030	A747857
RDL = Reportable Detection Limit								

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BDS083	BDS096	BDS097			BDS098		
Sampling Date		2022/10/04 09:50	2022/10/04 09:55	2022/10/04 10:00			2022/10/04 10:05		
COC Number		676556-03-01	676556-02-01	676556-02-01			676556-02-01		
	UNITS	CB-1	CB-2	EB-1	RDL	QC Batch	EB-2	RDL	QC Batch
Elements									
Total Cadmium (Cd)	ug/L	0.42	0.43	0.60	0.020	A745512	0.74	0.020	A745512
Total Aluminum (Al)	mg/L	0.063	0.079	0.11	0.0030	A750268	0.13	0.0060	A747857
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	0.00060	A750268	<0.00060	0.00060	A747857
Total Arsenic (As)	mg/L	0.00023	0.00024	0.00025	0.00020	A750268	0.00027	0.00020	A747857
Total Barium (Ba)	mg/L	0.013	0.014	0.014	0.010	A750269	0.015	0.010	A747860
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	A750268	<0.0010	0.0010	A747857
Total Boron (B)	mg/L	<0.020	<0.020	<0.020	0.020	A750269	<0.020	0.020	A747860
Total Calcium (Ca)	mg/L	46	48	50	0.30	A750269	54	0.30	A747860
Total Chromium (Cr)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	A750268	<0.0010	0.0010	A747857
Total Cobalt (Co)	mg/L	<0.00030	<0.00030	0.00032	0.00030	A750268	<0.00030	0.00030	A747857
Total Copper (Cu)	mg/L	0.011	0.013	0.016	0.0010	A750268	0.018	0.0010	A747857
Total Iron (Fe)	mg/L	3.0	3.1	2.4	0.060	A750269	2.2	0.060	A747860
Total Lead (Pb)	mg/L	<0.00020	0.00021	<0.00020	0.00020	A750268	<0.00020	0.00020	A747857
Total Lithium (Li)	mg/L	<0.020	<0.020	<0.020	0.020	A750269	<0.020	0.020	A747860
Total Magnesium (Mg)	mg/L	7.7	8.0	8.2	0.20	A750269	8.7	0.20	A747860
Total Manganese (Mn)	mg/L	0.058	0.059	0.048	0.0040	A750269	0.051	0.0040	A747860
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	A750268	<0.00020	0.00020	A747857
Total Nickel (Ni)	mg/L	0.0011	0.0014	0.0014	0.00050	A750268	0.0017	0.00050	A747857
Total Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	0.10	A750269	<0.10	0.10	A747860
Total Potassium (K)	mg/L	3.7	3.9	3.9	0.30	A750269	4.3	0.30	A747860
Total Selenium (Se)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	A750268	0.00022	0.00020	A747857
Total Silicon (Si)	mg/L	1.4	1.5	1.3	0.50	A750269	1.3	0.50	A747860
Total Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	A750268	<0.00010	0.00010	A747857
Total Sodium (Na)	mg/L	2.8	2.9	2.9	0.50	A750269	3.0	0.50	A747860
Total Strontium (Sr)	mg/L	0.052	0.054	0.055	0.020	A750269	0.059	0.020	A747860
Total Sulphur (S)	mg/L	49	51	53	0.20	A750269	55	0.20	A747860
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	A750268	<0.00020	0.00020	A747857
Total Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	A750268	<0.0010	0.0010	A747857
Total Titanium (Ti)	mg/L	0.0029	0.0033	0.0032	0.0010	A750268	0.0051	0.0010	A747857
Total Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	A750268	<0.00010	0.00010	A747857
Total Vanadium (V)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	A750268	<0.0010	0.0010	A747857

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BDS083	BDS096	BDS097			BDS098		
Sampling Date		2022/10/04 09:50	2022/10/04 09:55	2022/10/04 10:00			2022/10/04 10:05		
COC Number		676556-03-01	676556-02-01	676556-02-01			676556-02-01		
	UNITS	**CB-1**	**CB-2**	**EB-1**	**RDL**	**QC Batch**	**EB-2**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.12	0.12	0.16	0.0030	A750268	0.20	0.0030	A747857
RDL = Reportable Detection Limit									

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BDS099	BDS100	BDS101	BDS102		
Sampling Date		2022/10/04 10:20	2022/10/04 10:15	2022/10/04 10:30	2022/10/04 17:00		
COC Number		676556-02-01	676556-02-01	676556-02-01	676556-02-01		
	UNITS	NB-1	NB-2	CAMP LAKE DISCHARGE	SW-110	RDL	QC Batch
Elements							
Total Cadmium (Cd)	ug/L	0.50	0.48	0.48	0.49	0.020	A745512
Total Aluminum (Al)	mg/L	0.041	0.052	0.049	0.047	0.0030	A747857
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	<0.00060	0.00060	A747857
Total Arsenic (As)	mg/L	0.00025	0.00024	0.00022	0.00026	0.00020	A747857
Total Barium (Ba)	mg/L	0.013	0.013	0.013	0.014	0.010	A747860
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A747857
Total Boron (B)	mg/L	<0.020	<0.020	<0.020	<0.020	0.020	A747860
Total Calcium (Ca)	mg/L	52	53	53	53	0.30	A747860
Total Chromium (Cr)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A747857
Total Cobalt (Co)	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	0.00030	A747857
Total Copper (Cu)	mg/L	0.013	0.013	0.013	0.013	0.0010	A747857
Total Iron (Fe)	mg/L	3.1	2.9	2.9	3.0	0.060	A747860
Total Lead (Pb)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A747857
Total Lithium (Li)	mg/L	<0.020	<0.020	<0.020	<0.020	0.020	A747860
Total Magnesium (Mg)	mg/L	8.4	8.5	8.5	8.5	0.20	A747860
Total Manganese (Mn)	mg/L	0.066	0.062	0.061	0.063	0.0040	A747860
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A747857
Total Nickel (Ni)	mg/L	0.0015	0.0012	0.0011	0.0011	0.00050	A747857
Total Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	<0.10	0.10	A747860
Total Potassium (K)	mg/L	4.0	4.0	4.0	4.0	0.30	A747860
Total Selenium (Se)	mg/L	<0.00020	<0.00020	<0.00020	0.00024	0.00020	A747857
Total Silicon (Si)	mg/L	1.4	1.4	1.4	1.4	0.50	A747860
Total Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A747857
Total Sodium (Na)	mg/L	2.8	2.8	2.8	2.9	0.50	A747860
Total Strontium (Sr)	mg/L	0.056	0.056	0.056	0.057	0.020	A747860
Total Sulphur (S)	mg/L	54	54	54	55	0.20	A747860
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A747857
Total Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A747857
Total Titanium (Ti)	mg/L	0.0015	0.0014	0.0015	0.0013	0.0010	A747857
Total Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A747857
Total Vanadium (V)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A747857

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BDS099	BDS100	BDS101	BDS102		
Sampling Date		2022/10/04 10:20	2022/10/04 10:15	2022/10/04 10:30	2022/10/04 17:00		
COC Number		676556-02-01	676556-02-01	676556-02-01	676556-02-01		
	UNITS	NB-1	NB-2	CAMP LAKE DISCHARGE	SW-110	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.14	0.14	0.14	0.14	0.0030	A747857
RDL = Reportable Detection Limit							

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BDS103		BDS104		BDS105		BDS108		
Sampling Date		2022/10/04 18:00		2022/10/04 10:55		2022/10/04 11:25		2022/10/04 11:20		
COC Number		676556-02-01		676556-02-01		676556-02-01		676556-01-01		
	UNITS	SW-118	QC Batch	SC-1	QC Batch	SC-2	QC Batch	SC-3	RDL	QC Batch
Elements										
Total Cadmium (Cd)	ug/L	0.37	A745512	0.53	A745512	0.66	A745512	0.41	0.020	A745512
Total Aluminum (Al)	mg/L	0.064	A750268	0.052	A747857	0.065	A750268	0.052	0.0030	A747857
Total Antimony (Sb)	mg/L	<0.00060	A750268	<0.00060	A747857	<0.00060	A750268	<0.00060	0.00060	A747857
Total Arsenic (As)	mg/L	0.00048	A750268	0.00052	A747857	0.00049	A750268	0.00053	0.00020	A747857
Total Barium (Ba)	mg/L	<0.010	A750269	<0.010	A747860	<0.010	A750269	<0.010	0.010	A747860
Total Beryllium (Be)	mg/L	<0.0010	A750268	<0.0010	A747857	<0.0010	A750268	<0.0010	0.0010	A747857
Total Boron (B)	mg/L	<0.020	A750269	<0.020	A747860	<0.020	A750269	<0.020	0.020	A747860
Total Calcium (Ca)	mg/L	8.6	A750269	9.7	A747860	9.1	A750269	8.5	0.30	A747860
Total Chromium (Cr)	mg/L	<0.0010	A750268	<0.0010	A747857	0.0011	A750268	<0.0010	0.0010	A747857
Total Cobalt (Co)	mg/L	<0.00030	A750268	<0.00030	A747857	0.00040	A750268	<0.00030	0.00030	A747857
Total Copper (Cu)	mg/L	0.013	A750268	0.023	A747857	0.023	A750268	0.013	0.0010	A747857
Total Iron (Fe)	mg/L	0.40	A750269	0.52	A747860	0.54	A750269	0.36	0.060	A747860
Total Lead (Pb)	mg/L	<0.00020	A750268	<0.00020	A747857	<0.00020	A750268	<0.00020	0.00020	A747857
Total Lithium (Li)	mg/L	<0.020	A750269	<0.020	A747860	<0.020	A750269	<0.020	0.020	A747860
Total Magnesium (Mg)	mg/L	2.7	A750269	3.1	A747860	2.9	A750269	2.7	0.20	A747860
Total Manganese (Mn)	mg/L	0.072	A750269	0.084	A747860	0.11	A750269	0.069	0.0040	A747860
Total Molybdenum (Mo)	mg/L	<0.00020	A750268	<0.00020	A747857	<0.00020	A750268	<0.00020	0.00020	A747857
Total Nickel (Ni)	mg/L	0.00056	A750268	0.00086	A747857	0.00064	A750268	0.00082	0.00050	A747857
Total Phosphorus (P)	mg/L	<0.10	A750269	<0.10	A747860	<0.10	A750269	<0.10	0.10	A747860
Total Potassium (K)	mg/L	1.3	A750269	1.5	A747860	1.4	A750269	1.3	0.30	A747860
Total Selenium (Se)	mg/L	<0.00020	A750268	0.00020	A747857	<0.00020	A750268	0.00021	0.00020	A747857
Total Silicon (Si)	mg/L	1.6	A750269	1.6	A747860	1.7	A750269	1.6	0.50	A747860
Total Silver (Ag)	mg/L	<0.00010	A750268	<0.00010	A747857	<0.00010	A750268	<0.00010	0.00010	A747857
Total Sodium (Na)	mg/L	3.3	A750269	4.2	A747860	5.0	A750269	3.3	0.50	A747860
Total Strontium (Sr)	mg/L	0.023	A750269	0.025	A747860	0.024	A750269	0.022	0.020	A747860
Total Sulphur (S)	mg/L	1.9	A750269	2.5	A747860	3.0	A750269	1.8	0.20	A747860
Total Thallium (Tl)	mg/L	<0.00020	A750268	<0.00020	A747857	<0.00020	A750268	<0.00020	0.00020	A747857
Total Tin (Sn)	mg/L	<0.0010	A750268	<0.0010	A747857	<0.0010	A750268	<0.0010	0.0010	A747857
Total Titanium (Ti)	mg/L	0.0027	A750268	0.0018	A747857	0.0021	A750268	0.0018	0.0010	A747857
Total Uranium (U)	mg/L	<0.00010	A750268	<0.00010	A747857	<0.00010	A750268	<0.00010	0.00010	A747857
Total Vanadium (V)	mg/L	<0.0010	A750268	<0.0010	A747857	<0.0010	A750268	<0.0010	0.0010	A747857

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BDS103		BDS104		BDS105		BDS108		
Sampling Date		2022/10/04 18:00		2022/10/04 10:55		2022/10/04 11:25		2022/10/04 11:20		
COC Number		676556-02-01		676556-02-01		676556-02-01		676556-01-01		
	UNITS	**SW-118**	**QC Batch**	**SC-1**	**QC Batch**	**SC-2**	**QC Batch**	**SC-3**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.11	A750268	0.20	A747857	0.21	A750268	0.12	0.0030	A747857
RDL = Reportable Detection Limit										

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BDS108			BDS109	BDS110		BDS111		
Sampling Date		2022/10/04 11:20			2022/10/04 11:15	2022/10/04 11:35		2022/10/04 11:45		
COC Number		676556-01-01			676556-01-01	676556-01-01		676556-01-01		
	UNITS	SC-3 Lab-Dup	RDL	QC Batch	SC-4	SC-5	QC Batch	SC-6	RDL	QC Batch
Elements										
Total Cadmium (Cd)	ug/L				0.14	<0.020	A745512	<0.020	0.020	A745512
Total Aluminum (Al)	mg/L	0.053	0.0030	A747857	0.18	0.047	A750268	0.049	0.0030	A747857
Total Antimony (Sb)	mg/L	<0.00060	0.00060	A747857	<0.00060	<0.00060	A750268	<0.00060	0.00060	A747857
Total Arsenic (As)	mg/L	0.00054	0.00020	A747857	0.00049	0.00047	A750268	0.00054	0.00020	A747857
Total Barium (Ba)	mg/L	<0.010	0.010	A747860	<0.010	<0.010	A750269	<0.010	0.010	A747860
Total Beryllium (Be)	mg/L	<0.0010	0.0010	A747857	<0.0010	<0.0010	A750268	<0.0010	0.0010	A747857
Total Boron (B)	mg/L	<0.020	0.020	A747860	<0.020	<0.020	A750269	<0.020	0.020	A747860
Total Calcium (Ca)	mg/L	8.3	0.30	A747860	7.7	7.3	A750269	7.8	0.30	A747860
Total Chromium (Cr)	mg/L	<0.0010	0.0010	A747857	<0.0010	<0.0010	A750268	<0.0010	0.0010	A747857
Total Cobalt (Co)	mg/L	<0.00030	0.00030	A747857	<0.00030	<0.00030	A750268	<0.00030	0.00030	A747857
Total Copper (Cu)	mg/L	0.014	0.0010	A747857	0.0065	0.0020	A750268	0.0028	0.0010	A747857
Total Iron (Fe)	mg/L	0.35	0.060	A747860	0.48	0.29	A750269	0.20	0.060	A747860
Total Lead (Pb)	mg/L	<0.00020	0.00020	A747857	0.00021	<0.00020	A750268	<0.00020	0.00020	A747857
Total Lithium (Li)	mg/L	<0.020	0.020	A747860	<0.020	<0.020	A750269	<0.020	0.020	A747860
Total Magnesium (Mg)	mg/L	2.6	0.20	A747860	2.6	2.4	A750269	2.5	0.20	A747860
Total Manganese (Mn)	mg/L	0.067	0.0040	A747860	0.058	0.030	A750269	0.018	0.0040	A747860
Total Molybdenum (Mo)	mg/L	<0.00020	0.00020	A747857	<0.00020	<0.00020	A750268	<0.00020	0.00020	A747857
Total Nickel (Ni)	mg/L	0.00073	0.00050	A747857	0.00058	<0.00050	A750268	0.00067	0.00050	A747857
Total Phosphorus (P)	mg/L	<0.10	0.10	A747860	<0.10	<0.10	A750269	<0.10	0.10	A747860
Total Potassium (K)	mg/L	1.4	0.30	A747860	1.2	1.1	A750269	1.3	0.30	A747860
Total Selenium (Se)	mg/L	<0.00020	0.00020	A747857	<0.00020	<0.00020	A750268	<0.00020	0.00020	A747857
Total Silicon (Si)	mg/L	1.5	0.50	A747860	1.7	1.5	A750269	1.4	0.50	A747860
Total Silver (Ag)	mg/L	<0.00010	0.00010	A747857	<0.00010	<0.00010	A750268	<0.00010	0.00010	A747857
Total Sodium (Na)	mg/L	3.2	0.50	A747860	1.8	1.4	A750269	1.8	0.50	A747860
Total Strontium (Sr)	mg/L	0.022	0.020	A747860	0.021	<0.020	A750269	0.021	0.020	A747860
Total Sulphur (S)	mg/L	1.7	0.20	A747860	1.4	1.3	A750269	2.1	0.20	A747860
Total Thallium (Tl)	mg/L	<0.00020	0.00020	A747857	<0.00020	<0.00020	A750268	<0.00020	0.00020	A747857
Total Tin (Sn)	mg/L	<0.0010	0.0010	A747857	<0.0010	<0.0010	A750268	<0.0010	0.0010	A747857
Total Titanium (Ti)	mg/L	0.0019	0.0010	A747857	0.0063	0.0020	A750268	0.0020	0.0010	A747857
Total Uranium (U)	mg/L	<0.00010	0.00010	A747857	<0.00010	<0.00010	A750268	<0.00010	0.00010	A747857
Total Vanadium (V)	mg/L	<0.0010	0.0010	A747857	<0.0010	<0.0010	A750268	<0.0010	0.0010	A747857

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BDS108			BDS109	BDS110		BDS111		
Sampling Date		2022/10/04 11:20			2022/10/04 11:15	2022/10/04 11:35		2022/10/04 11:45		
COC Number		676556-01-01			676556-01-01	676556-01-01		676556-01-01		
	UNITS	**SC-3 Lab-Dup**	**RDL**	**QC Batch**	**SC-4**	**SC-5**	**QC Batch**	**SC-6**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.12	0.0030	A747857	0.033	0.0034	A750268	0.0046	0.0030	A747857

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BDS112		
Sampling Date		2022/10/04		
COC Number		676556-01-01		
	UNITS	TRIP BLANK	RDL	QC Batch
Elements				
Total Cadmium (Cd)	ug/L	<0.020	0.020	A745512
Total Aluminum (Al)	mg/L	0.0035	0.0030	A747857
Total Antimony (Sb)	mg/L	<0.00060	0.00060	A747857
Total Arsenic (As)	mg/L	<0.00020	0.00020	A747857
Total Barium (Ba)	mg/L	<0.010	0.010	A747860
Total Beryllium (Be)	mg/L	<0.0010	0.0010	A747857
Total Boron (B)	mg/L	<0.020	0.020	A747860
Total Calcium (Ca)	mg/L	<0.30	0.30	A747860
Total Chromium (Cr)	mg/L	<0.0010	0.0010	A747857
Total Cobalt (Co)	mg/L	<0.00030	0.00030	A747857
Total Copper (Cu)	mg/L	<0.0010	0.0010	A747857
Total Iron (Fe)	mg/L	<0.060	0.060	A747860
Total Lead (Pb)	mg/L	<0.00020	0.00020	A747857
Total Lithium (Li)	mg/L	<0.020	0.020	A747860
Total Magnesium (Mg)	mg/L	<0.20	0.20	A747860
Total Manganese (Mn)	mg/L	<0.0040	0.0040	A747860
Total Molybdenum (Mo)	mg/L	<0.00020	0.00020	A747857
Total Nickel (Ni)	mg/L	<0.00050	0.00050	A747857
Total Phosphorus (P)	mg/L	<0.10	0.10	A747860
Total Potassium (K)	mg/L	<0.30	0.30	A747860
Total Selenium (Se)	mg/L	<0.00020	0.00020	A747857
Total Silicon (Si)	mg/L	<0.50	0.50	A747860
Total Silver (Ag)	mg/L	<0.00010	0.00010	A747857
Total Sodium (Na)	mg/L	<0.50	0.50	A747860
Total Strontium (Sr)	mg/L	<0.020	0.020	A747860
Total Sulphur (S)	mg/L	<0.20	0.20	A747860
Total Thallium (Tl)	mg/L	<0.00020	0.00020	A747857
Total Tin (Sn)	mg/L	<0.0010	0.0010	A747857
Total Titanium (Ti)	mg/L	<0.0010	0.0010	A747857
Total Uranium (U)	mg/L	<0.00010	0.00010	A747857
Total Vanadium (V)	mg/L	<0.0010	0.0010	A747857
RDL = Reportable Detection Limit				

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BDS112		
Sampling Date		2022/10/04		
COC Number		676556-01-01		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	<0.0030	0.0030	A747857
RDL = Reportable Detection Limit				

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Bureau Veritas Job #: C277954
Report Date: 2022/10/12

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BDS074			BDS074			BDS075		BDS076		
Sampling Date		2022/10/04 08:15			2022/10/04 08:15			2022/10/04 08:25		2022/10/04 08:35		
COC Number		676556-03-01			676556-03-01			676556-03-01		676556-03-01		
	UNITS	CL-6	RDL	QC Batch	CL-6 Lab-Dup	RDL	QC Batch	CL-5	RDL	CL-4	RDL	QC Batch
Calculated Parameters												
Hardness (CaCO3)	mg/L	43	0.50	A745776				44	0.50	44	0.50	A745776
Total Hardness (CaCO3)	mg/L	40.5	0.50	A745956				41.6	0.50	41.8	0.50	A745956
Misc. Inorganics												
pH	pH	6.38	N/A	A746839				6.33	N/A	6.33	N/A	A748215
Total Suspended Solids	mg/L	1.3	0.99	A750519				<1.0	1.0	<0.99	0.99	A750519
Anions												
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	A746837				<1.0	1.0	<1.0	1.0	A746843
Alkalinity (Total as CaCO3)	mg/L	26	1.0	A746837				25	1.0	25	1.0	A746843
Bicarbonate (HCO3)	mg/L	31	1.0	A746837				31	1.0	30	1.0	A746843
Carbonate (CO3)	mg/L	<1.0	1.0	A746837				<1.0	1.0	<1.0	1.0	A746843
Hydroxide (OH)	mg/L	<1.0	1.0	A746837				<1.0	1.0	<1.0	1.0	A746843
Physical Properties												
Turbidity	NTU	3.3	0.10	A746945	3.4	0.10	A746945	3.9	0.10	3.9	0.10	A746945

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BDS077			BDS078	BDS079		BDS080		
Sampling Date		2022/10/04 08:45			2022/10/04 08:50	2022/10/04 08:55		2022/10/04 09:40		
COC Number		676556-03-01			676556-03-01	676556-03-01		676556-03-01		
	UNITS	CL-8	RDL	QC Batch	CL-3	CL-7	RDL	SB-2	RDL	QC Batch
Calculated Parameters										
Hardness (CaCO3)	mg/L	47	0.50	A745776	47	46	0.50	160	0.50	A745776
Total Hardness (CaCO3)	mg/L	43.6	0.50	A745956	41.9	42.1	0.50	146	0.50	A745956
Misc. Inorganics										
pH	pH	5.95	N/A	A748215	6.43	6.40	N/A	5.88	N/A	A746839
Total Suspended Solids	mg/L	1.9	1.0	A750519	1.3	<0.99	0.99	2.7	1.0	A750519
Anions										
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	A746843	<1.0	<1.0	1.0	<1.0	1.0	A746837
Alkalinity (Total as CaCO3)	mg/L	4.9	1.0	A746843	24	26	1.0	3.5	1.0	A746837
Bicarbonate (HCO3)	mg/L	6.0	1.0	A746843	30	32	1.0	4.2	1.0	A746837
Carbonate (CO3)	mg/L	<1.0	1.0	A746843	<1.0	<1.0	1.0	<1.0	1.0	A746837
Hydroxide (OH)	mg/L	<1.0	1.0	A746843	<1.0	<1.0	1.0	<1.0	1.0	A746837
Physical Properties										
Turbidity	NTU	3.6	0.10	A746945	3.6	3.7	0.10	20	0.10	A746945

RDL = Reportable Detection Limit
N/A = Not Applicable

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BDS081			BDS081			BDS082		
Sampling Date		2022/10/04 09:45			2022/10/04 09:45			2022/10/04 09:05		
COC Number		676556-03-01			676556-03-01			676556-03-01		
	UNITS	SB-1	RDL	QC Batch	SB-1 Lab-Dup	RDL	QC Batch	CL-2	RDL	QC Batch
Calculated Parameters										
Hardness (CaCO3)	mg/L	160	0.50	A745776				46	0.50	A745776
Total Hardness (CaCO3)	mg/L	155	0.50	A745956				44.5	0.50	A745956
Misc. Inorganics										
pH	pH	5.87	N/A	A746839				6.40	N/A	A746839
Total Suspended Solids	mg/L	3.1	1.0	A750521	4.2	1.0	A750521	<1.0	1.0	A750521
Anions										
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	A746837				<1.0	1.0	A746837
Alkalinity (Total as CaCO3)	mg/L	3.7	1.0	A746837				25	1.0	A746837
Bicarbonate (HCO3)	mg/L	4.6	1.0	A746837				30	1.0	A746837
Carbonate (CO3)	mg/L	<1.0	1.0	A746837				<1.0	1.0	A746837
Hydroxide (OH)	mg/L	<1.0	1.0	A746837				<1.0	1.0	A746837
Physical Properties										
Turbidity	NTU	20	0.10	A746945				3.7	0.10	A746945

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BDS083	BDS096		BDS097			BDS098		
Sampling Date		2022/10/04 09:50	2022/10/04 09:55		2022/10/04 10:00			2022/10/04 10:05		
COC Number		676556-03-01	676556-02-01		676556-02-01			676556-02-01		
	UNITS	**CB-1**	**CB-2**	**RDL**	**EB-1**	**RDL**	**QC Batch**	**EB-2**	**RDL**	**QC Batch**
Calculated Parameters										
Hardness (CaCO3)	mg/L	170	170	0.50	180	0.50	A745950	180	0.50	A745950
Total Hardness (CaCO3)	mg/L	146	152	0.50	158	0.50	A745956	171	0.50	A745956
Misc. Inorganics										
pH	pH	5.89	5.89	N/A	6.40	N/A	A746839	5.86	N/A	A748215
Total Suspended Solids	mg/L	3.3	3.3	1.0	1.9	0.96	A750521	2.7	0.99	A750521
Anions										
Alkalinity (PP as CaCO3)	mg/L	<1.0	<1.0	1.0	<1.0	1.0	A746837	<1.0	1.0	A746843
Alkalinity (Total as CaCO3)	mg/L	3.6	3.8	1.0	26	1.0	A746837	4.8	1.0	A746843
Bicarbonate (HCO3)	mg/L	4.4	4.6	1.0	32	1.0	A746837	5.8	1.0	A746843
Carbonate (CO3)	mg/L	<1.0	<1.0	1.0	<1.0	1.0	A746837	<1.0	1.0	A746843
Hydroxide (OH)	mg/L	<1.0	<1.0	1.0	<1.0	1.0	A746837	<1.0	1.0	A746843
Physical Properties										
Turbidity	NTU	19	19	0.10	14	0.10	A746945	14	0.10	A746945

RDL = Reportable Detection Limit
N/A = Not Applicable

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BDS098			BDS099	BDS100		
Sampling Date		2022/10/04 10:05			2022/10/04 10:20	2022/10/04 10:15		
COC Number		676556-02-01			676556-02-01	676556-02-01		
	UNITS	EB-2 Lab-Dup	RDL	QC Batch	NB-1	NB-2	RDL	QC Batch
Calculated Parameters								
Hardness (CaCO3)	mg/L				180	180	0.50	A745950
Total Hardness (CaCO3)	mg/L				165	168	0.50	A745956
Misc. Inorganics								
pH	pH	5.92	N/A	A748215	5.84	5.91	N/A	A746839
Total Suspended Solids	mg/L				2.3	1.6	0.98	A750521
Anions								
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	A746843	<1.0	<1.0	1.0	A746837
Alkalinity (Total as CaCO3)	mg/L	5.2	1.0	A746843	3.2	3.8	1.0	A746837
Bicarbonate (HCO3)	mg/L	6.4	1.0	A746843	3.9	4.6	1.0	A746837
Carbonate (CO3)	mg/L	<1.0	1.0	A746843	<1.0	<1.0	1.0	A746837
Hydroxide (OH)	mg/L	<1.0	1.0	A746843	<1.0	<1.0	1.0	A746837
Physical Properties								
Turbidity	NTU				19	17	0.10	A746945

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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Bureau Veritas Job #: C277954
Report Date: 2022/10/12

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BDS101			BDS101			BDS102		
Sampling Date		2022/10/04 10:30			2022/10/04 10:30			2022/10/04 17:00		
COC Number		676556-02-01			676556-02-01			676556-02-01		
	UNITS	CAMP LAKE DISCHARGE	RDL	QC Batch	CAMP LAKE DISCHARGE Lab-Dup	RDL	QC Batch	SW-110	RDL	QC Batch
Calculated Parameters										
Hardness (CaCO3)	mg/L	180	0.50	A745950				190	0.50	A745950
Total Hardness (CaCO3)	mg/L	167	0.50	A745956				168	0.50	A745956
Misc. Inorganics										
pH	pH	5.90	N/A	A746839				5.88	N/A	A746839
Total Suspended Solids	mg/L	2.5	0.99	A750521				1.5	0.99	A750521
Anions										
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	A746837				<1.0	1.0	A746837
Alkalinity (Total as CaCO3)	mg/L	3.7	1.0	A746837				4.0	1.0	A746837
Bicarbonate (HCO3)	mg/L	4.5	1.0	A746837				4.9	1.0	A746837
Carbonate (CO3)	mg/L	<1.0	1.0	A746837				<1.0	1.0	A746837
Hydroxide (OH)	mg/L	<1.0	1.0	A746837				<1.0	1.0	A746837
Physical Properties										
Turbidity	NTU	17	0.10	A746949	18	0.10	A746949	18	0.10	A746949

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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Bureau Veritas Job #: C277954
Report Date: 2022/10/12

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BDS103		BDS104			BDS105			BDS108		
Sampling Date		2022/10/04 18:00		2022/10/04 10:55			2022/10/04 11:25			2022/10/04 11:20		
COC Number		676556-02-01		676556-02-01			676556-02-01			676556-01-01		
	UNITS	**SW-118**	**RDL**	**SC-1**	**RDL**	**QC Batch**	**SC-2**	**RDL**	**QC Batch**	**SC-3**	**RDL**	**QC Batch**
Calculated Parameters												
Hardness (CaCO3)	mg/L	35	0.50	37	0.50	A745950	37	0.50	A745950	34	0.50	A745950
Total Hardness (CaCO3)	mg/L	32.6	0.50	37.0	0.50	A745956	34.9	0.50	A745956	32.3	0.50	A745956
Misc. Inorganics												
pH	pH	6.40	N/A	6.38	N/A	A746839	6.31	N/A	A748215	6.39	N/A	A746839
Total Suspended Solids	mg/L	1.0	1.0	1.4	0.98	A750521	1.2	1.0	A750521	<0.99	0.99	A750521
Anions												
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	<1.0	1.0	A746837	<1.0	1.0	A746843	<1.0	1.0	A746837
Alkalinity (Total as CaCO3)	mg/L	28	1.0	29	1.0	A746837	28	1.0	A746843	25	1.0	A746837
Bicarbonate (HCO3)	mg/L	35	1.0	36	1.0	A746837	34	1.0	A746843	30	1.0	A746837
Carbonate (CO3)	mg/L	<1.0	1.0	<1.0	1.0	A746837	<1.0	1.0	A746843	<1.0	1.0	A746837
Hydroxide (OH)	mg/L	<1.0	1.0	<1.0	1.0	A746837	<1.0	1.0	A746843	<1.0	1.0	A746837
Physical Properties												
Turbidity	NTU	2.1	0.10	2.0	0.10	A746949	1.9	0.10	A746949	2.0	0.10	A746949

RDL = Reportable Detection Limit
N/A = Not Applicable

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Bureau Veritas Job #: C277954
Report Date: 2022/10/12

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BDS109		BDS110	BDS111			BDS111		
Sampling Date		2022/10/04 11:15		2022/10/04 11:35	2022/10/04 11:45			2022/10/04 11:45		
COC Number		676556-01-01		676556-01-01	676556-01-01			676556-01-01		
	UNITS	SC-4	RDL	SC-5	SC-6	RDL	QC Batch	SC-6 Lab-Dup	RDL	QC Batch
Calculated Parameters										
Hardness (CaCO3)	mg/L	32	0.50	31	31	0.50	A745950			
Total Hardness (CaCO3)	mg/L	29.9	0.50	28.2	29.7	0.50	A745956			
Misc. Inorganics										
pH	pH	6.40	N/A	6.41	6.33	N/A	A746839	6.38	N/A	A746839
Total Suspended Solids	mg/L	4.3	0.99	4.0	1.9	0.97	A750521			
Anions										
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	<1.0	<1.0	1.0	A746837	<1.0	1.0	A746837
Alkalinity (Total as CaCO3)	mg/L	25	1.0	26	25	1.0	A746837	26	1.0	A746837
Bicarbonate (HCO3)	mg/L	31	1.0	32	31	1.0	A746837	31	1.0	A746837
Carbonate (CO3)	mg/L	<1.0	1.0	<1.0	<1.0	1.0	A746837	<1.0	1.0	A746837
Hydroxide (OH)	mg/L	<1.0	1.0	<1.0	<1.0	1.0	A746837	<1.0	1.0	A746837
Physical Properties										
Turbidity	NTU	2.4	0.10	3.8	1.8	0.10	A746949			

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BDS112		
Sampling Date		2022/10/04		
COC Number		676556-01-01		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
Calculated Parameters				
Hardness (CaCO3)	mg/L	<0.50	0.50	A745950
Total Hardness (CaCO3)	mg/L	<0.50	0.50	A745956
Misc. Inorganics				
pH	pH	4.77	N/A	A746839
Total Suspended Solids	mg/L	<0.98	0.98	A750521
Anions				
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	A746837
Alkalinity (Total as CaCO3)	mg/L	<1.0	1.0	A746837
Bicarbonate (HCO3)	mg/L	<1.0	1.0	A746837
Carbonate (CO3)	mg/L	<1.0	1.0	A746837
Hydroxide (OH)	mg/L	<1.0	1.0	A746837
Physical Properties				
Turbidity	NTU	<0.10	0.10	A746949

RDL = Reportable Detection Limit
N/A = Not Applicable

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.0°C
Package 2	0.3°C
Package 3	0.0°C

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A746837	Alkalinity (PP as CaCO3)	2022/10/08					<1.0	mg/L	NC	20
A746837	Alkalinity (Total as CaCO3)	2022/10/08			99	80 - 120	<1.0	mg/L	1.1	20
A746837	Bicarbonate (HCO3)	2022/10/08					<1.0	mg/L	1.1	20
A746837	Carbonate (CO3)	2022/10/08					<1.0	mg/L	NC	20
A746837	Hydroxide (OH)	2022/10/08					<1.0	mg/L	NC	20
A746839	pH	2022/10/08			100	97 - 103			0.91	N/A
A746843	Alkalinity (PP as CaCO3)	2022/10/08					<1.0	mg/L	NC	20
A746843	Alkalinity (Total as CaCO3)	2022/10/08			97	80 - 120	<1.0	mg/L	9.1	20
A746843	Bicarbonate (HCO3)	2022/10/08					<1.0	mg/L	9.1	20
A746843	Carbonate (CO3)	2022/10/08					<1.0	mg/L	NC	20
A746843	Hydroxide (OH)	2022/10/08					<1.0	mg/L	NC	20
A746923	Dissolved Aluminum (Al)	2022/10/08	111	80 - 120	117	80 - 120	<0.0030	mg/L	4.6	20
A746923	Dissolved Antimony (Sb)	2022/10/08	105	80 - 120	105	80 - 120	<0.00060	mg/L	NC	20
A746923	Dissolved Arsenic (As)	2022/10/08	99	80 - 120	100	80 - 120	<0.00020	mg/L	9.4	20
A746923	Dissolved Beryllium (Be)	2022/10/08	111	80 - 120	111	80 - 120	<0.0010	mg/L	NC	20
A746923	Dissolved Chromium (Cr)	2022/10/08	94	80 - 120	96	80 - 120	<0.0010	mg/L	NC	20
A746923	Dissolved Cobalt (Co)	2022/10/08	92	80 - 120	93	80 - 120	<0.00030	mg/L	NC	20
A746923	Dissolved Copper (Cu)	2022/10/08	89	80 - 120	92	80 - 120	<0.0010	mg/L	1.2	20
A746923	Dissolved Lead (Pb)	2022/10/08	100	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
A746923	Dissolved Molybdenum (Mo)	2022/10/08	92	80 - 120	93	80 - 120	<0.00020	mg/L	NC	20
A746923	Dissolved Nickel (Ni)	2022/10/08	90	80 - 120	92	80 - 120	<0.00050	mg/L	NC	20
A746923	Dissolved Selenium (Se)	2022/10/08	108	80 - 120	108	80 - 120	<0.00020	mg/L	NC	20
A746923	Dissolved Silver (Ag)	2022/10/08	89	80 - 120	90	80 - 120	<0.00010	mg/L	NC	20
A746923	Dissolved Thallium (Tl)	2022/10/08	101	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
A746923	Dissolved Tin (Sn)	2022/10/08	101	80 - 120	101	80 - 120	<0.0010	mg/L	NC	20
A746923	Dissolved Titanium (Ti)	2022/10/08	94	80 - 120	96	80 - 120	<0.0010	mg/L	NC	20
A746923	Dissolved Uranium (U)	2022/10/08	101	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20
A746923	Dissolved Vanadium (V)	2022/10/08	98	80 - 120	98	80 - 120	<0.0010	mg/L	NC	20
A746923	Dissolved Zinc (Zn)	2022/10/08	97	80 - 120	97	80 - 120	<0.0030	mg/L	6.2	20
A746924	Dissolved Aluminum (Al)	2022/10/07	105	80 - 120	115	80 - 120	<0.0030	mg/L	NC	20
A746924	Dissolved Antimony (Sb)	2022/10/07	106	80 - 120	106	80 - 120	<0.00060	mg/L	NC	20
A746924	Dissolved Arsenic (As)	2022/10/07	95	80 - 120	97	80 - 120	<0.00020	mg/L	2.9	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A746924	Dissolved Beryllium (Be)	2022/10/07	106	80 - 120	107	80 - 120	<0.0010	mg/L	NC	20
A746924	Dissolved Chromium (Cr)	2022/10/07	92	80 - 120	94	80 - 120	<0.0010	mg/L	NC	20
A746924	Dissolved Cobalt (Co)	2022/10/07	89	80 - 120	92	80 - 120	<0.00030	mg/L	NC	20
A746924	Dissolved Copper (Cu)	2022/10/07	86	80 - 120	90	80 - 120	<0.0010	mg/L	NC	20
A746924	Dissolved Lead (Pb)	2022/10/07	100	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
A746924	Dissolved Molybdenum (Mo)	2022/10/07	98	80 - 120	98	80 - 120	<0.00020	mg/L	2.1	20
A746924	Dissolved Nickel (Ni)	2022/10/07	86	80 - 120	91	80 - 120	<0.00050	mg/L	4.7	20
A746924	Dissolved Selenium (Se)	2022/10/07	103	80 - 120	105	80 - 120	<0.00020	mg/L	4.1	20
A746924	Dissolved Silver (Ag)	2022/10/07	87	80 - 120	93	80 - 120	<0.00010	mg/L	NC	20
A746924	Dissolved Thallium (Tl)	2022/10/07	99	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
A746924	Dissolved Tin (Sn)	2022/10/07	104	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20
A746924	Dissolved Titanium (Ti)	2022/10/07	97	80 - 120	96	80 - 120	<0.0010	mg/L	NC	20
A746924	Dissolved Uranium (U)	2022/10/07	101	80 - 120	100	80 - 120	<0.00010	mg/L	1.3	20
A746924	Dissolved Vanadium (V)	2022/10/07	97	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20
A746924	Dissolved Zinc (Zn)	2022/10/07	92	80 - 120	96	80 - 120	<0.0030	mg/L	NC	20
A746945	Turbidity	2022/10/07			104	80 - 120	<0.10	NTU	1.2	20
A746949	Turbidity	2022/10/07			104	80 - 120	<0.10	NTU	2.3	20
A747253	Dissolved Barium (Ba)	2022/10/08	99	80 - 120	100	80 - 120	<0.010	mg/L		
A747253	Dissolved Boron (B)	2022/10/08	101	80 - 120	100	80 - 120	<0.020	mg/L		
A747253	Dissolved Calcium (Ca)	2022/10/08	97	80 - 120	101	80 - 120	<0.30	mg/L	1.8	20
A747253	Dissolved Iron (Fe)	2022/10/08	107	80 - 120	104	80 - 120	<0.060	mg/L		
A747253	Dissolved Lithium (Li)	2022/10/08	100	80 - 120	100	80 - 120	<0.020	mg/L		
A747253	Dissolved Magnesium (Mg)	2022/10/08	105	80 - 120	106	80 - 120	<0.20	mg/L	0.50	20
A747253	Dissolved Manganese (Mn)	2022/10/08	107	80 - 120	105	80 - 120	<0.0040	mg/L		
A747253	Dissolved Phosphorus (P)	2022/10/08	107	80 - 120	104	80 - 120	<0.10	mg/L		
A747253	Dissolved Potassium (K)	2022/10/08	99	80 - 120	100	80 - 120	<0.30	mg/L		
A747253	Dissolved Silicon (Si)	2022/10/08	97	80 - 120	97	80 - 120	<0.50	mg/L		
A747253	Dissolved Sodium (Na)	2022/10/08	87	80 - 120	95	80 - 120	<0.50	mg/L		
A747253	Dissolved Strontium (Sr)	2022/10/08	94	80 - 120	96	80 - 120	<0.020	mg/L		
A747253	Dissolved Sulphur (S)	2022/10/08	NC	80 - 120	105	80 - 120	<0.20	mg/L		
A747265	Dissolved Barium (Ba)	2022/10/08	100	80 - 120	100	80 - 120	<0.010	mg/L	NC	20
A747265	Dissolved Boron (B)	2022/10/08	101	80 - 120	99	80 - 120	<0.020	mg/L	NC	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A747265	Dissolved Calcium (Ca)	2022/10/08	101	80 - 120	101	80 - 120	<0.30	mg/L	3.5	20
A747265	Dissolved Iron (Fe)	2022/10/08	106	80 - 120	104	80 - 120	<0.060	mg/L	5.8	20
A747265	Dissolved Lithium (Li)	2022/10/08	99	80 - 120	100	80 - 120	<0.020	mg/L	NC	20
A747265	Dissolved Magnesium (Mg)	2022/10/08	106	80 - 120	105	80 - 120	<0.20	mg/L	3.1	20
A747265	Dissolved Manganese (Mn)	2022/10/08	107	80 - 120	105	80 - 120	<0.0040	mg/L	4.1	20
A747265	Dissolved Phosphorus (P)	2022/10/08	106	80 - 120	104	80 - 120	<0.10	mg/L	NC	20
A747265	Dissolved Potassium (K)	2022/10/08	98	80 - 120	100	80 - 120	<0.30	mg/L	3.6	20
A747265	Dissolved Silicon (Si)	2022/10/08	96	80 - 120	97	80 - 120	<0.50	mg/L	3.1	20
A747265	Dissolved Sodium (Na)	2022/10/08	95	80 - 120	95	80 - 120	<0.50	mg/L	3.0	20
A747265	Dissolved Strontium (Sr)	2022/10/08	96	80 - 120	95	80 - 120	<0.020	mg/L	3.2	20
A747265	Dissolved Sulphur (S)	2022/10/08	106	80 - 120	104	80 - 120	<0.20	mg/L	2.1	20
A747857	Total Aluminum (Al)	2022/10/09	101	80 - 120	101	80 - 120	<0.0030	mg/L	1.7	20
A747857	Total Antimony (Sb)	2022/10/09	105	80 - 120	117	80 - 120	<0.00060	mg/L	NC	20
A747857	Total Arsenic (As)	2022/10/09	99	80 - 120	102	80 - 120	<0.00020	mg/L	0.58	20
A747857	Total Beryllium (Be)	2022/10/09	98	80 - 120	98	80 - 120	<0.0010	mg/L	NC	20
A747857	Total Chromium (Cr)	2022/10/09	90	80 - 120	91	80 - 120	<0.0010	mg/L	NC	20
A747857	Total Cobalt (Co)	2022/10/09	92	80 - 120	92	80 - 120	<0.00030	mg/L	NC	20
A747857	Total Copper (Cu)	2022/10/09	91	80 - 120	93	80 - 120	<0.0010	mg/L	0.82	20
A747857	Total Lead (Pb)	2022/10/09	94	80 - 120	95	80 - 120	<0.00020	mg/L	NC	20
A747857	Total Molybdenum (Mo)	2022/10/09	98	80 - 120	107	80 - 120	<0.00020	mg/L	NC	20
A747857	Total Nickel (Ni)	2022/10/09	90	80 - 120	92	80 - 120	<0.00050	mg/L	11	20
A747857	Total Selenium (Se)	2022/10/09	104	80 - 120	108	80 - 120	<0.00020	mg/L	2.7	20
A747857	Total Silver (Ag)	2022/10/09	97	80 - 120	98	80 - 120	<0.00010	mg/L	NC	20
A747857	Total Thallium (Tl)	2022/10/09	99	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
A747857	Total Tin (Sn)	2022/10/09	104	80 - 120	114	80 - 120	<0.0010	mg/L	NC	20
A747857	Total Titanium (Ti)	2022/10/09	93	80 - 120	103	80 - 120	<0.0010	mg/L	3.2	20
A747857	Total Uranium (U)	2022/10/09	99	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
A747857	Total Vanadium (V)	2022/10/09	93	80 - 120	94	80 - 120	<0.0010	mg/L	NC	20
A747857	Total Zinc (Zn)	2022/10/09	98	80 - 120	102	80 - 120	<0.0030	mg/L	1.0	20
A747860	Total Barium (Ba)	2022/10/08	100	80 - 120	101	80 - 120	<0.010	mg/L	NC	20
A747860	Total Boron (B)	2022/10/08	101	80 - 120	101	80 - 120	<0.020	mg/L	NC	20
A747860	Total Calcium (Ca)	2022/10/08	NC	80 - 120	98	80 - 120	<0.30	mg/L	2.1	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A747860	Total Iron (Fe)	2022/10/08	NC	80 - 120	110	80 - 120	<0.060	mg/L	3.4	20
A747860	Total Lithium (Li)	2022/10/08	97	80 - 120	98	80 - 120	<0.020	mg/L	NC	20
A747860	Total Magnesium (Mg)	2022/10/08	101	80 - 120	102	80 - 120	<0.20	mg/L	2.3	20
A747860	Total Manganese (Mn)	2022/10/08	104	80 - 120	104	80 - 120	<0.0040	mg/L	2.2	20
A747860	Total Phosphorus (P)	2022/10/08	100	80 - 120	101	80 - 120	<0.10	mg/L	NC	20
A747860	Total Potassium (K)	2022/10/08	101	80 - 120	104	80 - 120	<0.30	mg/L	2.7	20
A747860	Total Silicon (Si)	2022/10/08	99	80 - 120	100	80 - 120	<0.50	mg/L	2.9	20
A747860	Total Sodium (Na)	2022/10/08	97	80 - 120	98	80 - 120	<0.50	mg/L	2.3	20
A747860	Total Strontium (Sr)	2022/10/08	97	80 - 120	99	80 - 120	<0.020	mg/L	1.8	20
A747860	Total Sulphur (S)	2022/10/08	NC	80 - 120	95	80 - 120	<0.20	mg/L	3.5	20
A748215	pH	2022/10/08			100	97 - 103			1.0	N/A
A750268	Total Aluminum (Al)	2022/10/11	114	80 - 120	113	80 - 120	<0.0030	mg/L	4.4	20
A750268	Total Antimony (Sb)	2022/10/11	106	80 - 120	105	80 - 120	<0.00060	mg/L	NC	20
A750268	Total Arsenic (As)	2022/10/11	89	80 - 120	91	80 - 120	<0.00020	mg/L	1.7	20
A750268	Total Beryllium (Be)	2022/10/11	99	80 - 120	99	80 - 120	<0.0010	mg/L	NC	20
A750268	Total Chromium (Cr)	2022/10/11	94	80 - 120	95	80 - 120	<0.0010	mg/L	1.5	20
A750268	Total Cobalt (Co)	2022/10/11	91	80 - 120	94	80 - 120	<0.00030	mg/L	1.4	20
A750268	Total Copper (Cu)	2022/10/11	89	80 - 120	91	80 - 120	<0.0010	mg/L	0.64	20
A750268	Total Lead (Pb)	2022/10/11	99	80 - 120	99	80 - 120	<0.00020	mg/L	2.3	20
A750268	Total Molybdenum (Mo)	2022/10/11	101	80 - 120	101	80 - 120	<0.00020	mg/L	2.9	20
A750268	Total Nickel (Ni)	2022/10/11	90	80 - 120	92	80 - 120	<0.00050	mg/L	3.7	20
A750268	Total Selenium (Se)	2022/10/11	98	80 - 120	101	80 - 120	<0.00020	mg/L	3.5	20
A750268	Total Silver (Ag)	2022/10/11	97	80 - 120	98	80 - 120	<0.00010	mg/L	NC	20
A750268	Total Thallium (Tl)	2022/10/11	101	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
A750268	Total Tin (Sn)	2022/10/11	102	80 - 120	101	80 - 120	<0.0010	mg/L	NC	20
A750268	Total Titanium (Ti)	2022/10/11	92	80 - 120	94	80 - 120	<0.0010	mg/L	19	20
A750268	Total Uranium (U)	2022/10/11	98	80 - 120	97	80 - 120	<0.00010	mg/L	1.3	20
A750268	Total Vanadium (V)	2022/10/11	94	80 - 120	96	80 - 120	<0.0010	mg/L	0.088	20
A750268	Total Zinc (Zn)	2022/10/11	89	80 - 120	90	80 - 120	<0.0030	mg/L	4.4	20
A750269	Total Barium (Ba)	2022/10/11	98	80 - 120	99	80 - 120	<0.010	mg/L	3.0	20
A750269	Total Boron (B)	2022/10/11	99	80 - 120	100	80 - 120	<0.020	mg/L	2.9	20
A750269	Total Calcium (Ca)	2022/10/11	NC	80 - 120	100	80 - 120	<0.30	mg/L	3.6	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A750269	Total Iron (Fe)	2022/10/11	NC	80 - 120	108	80 - 120	<0.060	mg/L	2.9	20
A750269	Total Lithium (Li)	2022/10/11	100	80 - 120	101	80 - 120	<0.020	mg/L	0	20
A750269	Total Magnesium (Mg)	2022/10/11	105	80 - 120	102	80 - 120	<0.20	mg/L	3.2	20
A750269	Total Manganese (Mn)	2022/10/11	112	80 - 120	106	80 - 120	<0.0040	mg/L	2.4	20
A750269	Total Phosphorus (P)	2022/10/11	100	80 - 120	100	80 - 120	<0.10	mg/L	NC	20
A750269	Total Potassium (K)	2022/10/11	100	80 - 120	101	80 - 120	<0.30	mg/L	1.8	20
A750269	Total Silicon (Si)	2022/10/11	100	80 - 120	101	80 - 120	<0.50	mg/L	4.2	20
A750269	Total Sodium (Na)	2022/10/11	101	80 - 120	100	80 - 120	<0.50	mg/L	3.1	20
A750269	Total Strontium (Sr)	2022/10/11	97	80 - 120	98	80 - 120	<0.020	mg/L	2.9	20
A750269	Total Sulphur (S)	2022/10/11	102	80 - 120	98	80 - 120	<0.20	mg/L	2.8	20
A750519	Total Suspended Solids	2022/10/11	89	80 - 120	100	80 - 120	<1.0	mg/L	2.0	20
A750521	Total Suspended Solids	2022/10/11	91	80 - 120	101	80 - 120	<1.0	mg/L	NC	20

N/A = Not Applicable

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

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

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

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

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

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

VALIDATION SIGNATURE PAGE

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



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

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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvna.com

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CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#7500 KGS Group	Company Name:	KGS Group	Quotation #:	C20090	Bureau Veritas Job #: C277958	Bottle Order #: 676556
Attention:	Accounts Payable	Attention:	Ganga Atmuri/Ed Collins	P.O. #:			
Address:	3rd Floor 865 Waverly St	Address:	865 Waverley St. 3rd Floor	Project:	21-1357-005		
	Winnipeg MB R3T 5T4		Winnipeg, MB R3T 5T4	Project Name:		COC #: C#676556-03-01	Project Manager: Janelle Kochan
Tel:	(204) 896-1209 Fax:	Tel:	(204) 896-1209 Fax:	Site #:	OAM - Sherridon Mine Site		
Email:	payables@kgsgroup.com	Email:	gatmuri@kgsgroup.com,ecollins@kgsgroup.com	Sampled By:	~~AL~~ IRP		

Regulatory Criteria:
- [ ] ATI
- [ ] CCME
- [x] Other MWAQG

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: (will be applied if Rush TAT is not specified): [x]
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission)
Date Required:
Rush Confirmation Number: (call lab for #)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	pH @25°C	Alkalinity @25C (pp, total), CO3,HCO3,OH	Total Suspended Solids (NFR)	Turbidity	Regulated Metals (CCME/AT1) - Total	Reg. Metals (CCME/AT1) – Diss. Lab Filt.	Hardness	Hardness Total (calculated as CaCO3)			# of Bottles	Comments
1		CL-6	22/10/04	8:15	SW	N	x	x	x	x	x	x	x	x			4	
2		CL-5	~~22/10/04~~	8:25		N	x	x	x	x	x	x	x	x			4	
3		CL-4		8:35		N	x	x	x	x	x	x	x	x			4	
4		CL-8		8:45		N	x	x	x	x	x	x	x	x			4	
5		CL-3		8:50		N	x	x	x	x	x	x	x	x			4	
6		CL-7		8:55		N	x	x	x	x	x	x	x	x			4	
7		SB-2		9:40		N	x	x	x	x	x	x	x	x			4	
8		SB-1		9:45		N	x	x	x	x	x	x	x	x			4	
9		CL-2		9:05		N	x	x	x	x	x	x	x	x			4	
10		CB-1		9:50		N	x	x	x	x	x	x	x	x			4	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Ainsleigh Lorin AMorin	22/10/05	12:15	BH Brooklyn Hiebert	22/10/05	1225	
			Jason Bik	22/10/06	0845	

Laboratory Use Only: Time Sensitive [ ] | Temperature (°C) on Receipt: ACTR | Custody Seal Intact on Cooler? [ ] Yes [ ] No

CAL 1,1,1
1,0,0
0,0,0

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.
** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvna.com

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#7500 KGS Group	Company Name:	KGS Group	Quotation #:	C20090	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Ganga Atmuri/Ed Collins	P.O. #:		C2T954	676556
Address:	3rd Floor 865 Waverly St	Address:	865 Waverley St. 3rd Floor	Project:	21-1357-005	COC #:	Project Manager:
	Winnipeg MB R3T 5T4		Winnipeg, MB R3T 5T4	Project Name:		C#676556-02-01	Janelle Kochan
Tel:	(204) 896-1209 Fax:	Tel:	(204) 896-1209 Fax:	Site #:	OAM - Sherridon Mine Site		
Email:	payables@kgsgroup.com	Email:	gatmuri@kgsgroup.com,ecollins@kgsgroup.com	Sampled By:	AL/EH/RP		

Regulatory Criteria:
- [ ] ATI
- [ ] CCME
- [x] Other MWQSOG

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: [x]
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission)
Date Required: [ ]
Rush Confirmation Number: *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	pH @25°C	Alkalinity @25C (pp, total), CO3,HCO3,OH	Total Suspended Solids (NFR)	Turbidity	Regulated Metals (CCME/AT1) - Total	Reg. Metals (CCME/AT1) – Diss. Lab Filt.	Hardness	Hardness Total (calculated as CaCO3)			# of Bottles	Comments
1		CB-2	22/10/04	9:55	SW	N	x	x	x	x	x	x	x	x			4	
2		EB-1		10:00		N	x	x	x	x	x	x	x	x			4	
3		EB-2		10:05		N	x	x	x	x	x	x	x	x			4	
4		NB-1		10:20		N	x	x	x	x	x	x	x	x			4	
5		NB-2		10:15		N	x	x	x	x	x	x	x	x			4	
6		Camp Lake Discharge		10:30		N	x	x	x	x	x	x	x	x			4	
7		SW-110		17:00		N	x	x	x	x	x	x	x	x			4	
8		SW-110		15:00		N	x	x	x	x	x	x	x	x			4	
9		SC-1		10:55		N	x	x	x	x	x	x	x	x			4	
10		SC-2		11:25		N	x	x	x	x	x	x	x	x			4	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Ainsleigh Loria AMoria	22/10/05	12:15	BH Brooklyn Hiebert JASON BIL JB	22/10/05	1225		[ ]	ACTR	[ ] Yes [ ] No
				22/10/06	0845				

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.
** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvna.com

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#7500 KGS Group	Company Name:	KGS Group	Quotation #:	C20090	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Ganga Atmuri/Ed Collins	P.O. #:		C279950	676556
Address:	3rd Floor 865 Waverly St Winnipeg MB R3T 5T4	Address:	865 Waverley St, 3rd Floor Winnipeg, MB R3T 5T4	Project:	21-1357-005	COC #:	Project Manager:
Tel:	(204) 896-1209 Fax:	Tel:	(204) 896-1209 Fax:	Project Name:		C#676556-01-01	Janelle Kochan
Email:	payables@kgsgroup.com	Email:	gatmuri@kgsgroup.com,ecollins@kgsgroup.com	Site #:	OAM - Sherridon Mine Site		
				Sampled By:	~~AL~~ IH / RP		

Regulatory Criteria:
- [ ] ATI
- [ ] CCME
- [x] Other MWQSOG

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10ºC) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: [x]
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission)
Date Required: _____ [ ]
Rush Confirmation Number: _____ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	pH @25°C	Alkalinity @25C (pp, total), CO3,HCO3,OH	Total Suspended Solids (NFR)	Turbidity	Regulated Metals (CCME/AT1) - Total	Reg. Metals (CCME/AT1) – Diss. Lab Filt.	Hardness	Hardness Total (calculated as CaCO3)			# of Bottles	Comments
1		SC-3	22/10/04	11:20	SW	N	X	X	X	X	X	X	X	X			4	
2		SC-4		11:15		N	X	X	X	X	X	X	X	X			4	
3		SC-5		11:35		N	X	X	X	X	X	X	X	X			4	
4		SC-6		11:45		N	X	X	X	X	X	X	X	X			4	
5		Trip Blank		—	SW	N	X	X	X	X	X	X	X	X			4	
6																		
7																		
8																		
9																		
10																		

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only: Time Sensitive	Temperature (ºC) on Receipt	Custody Seal Intact on Cooler?
Ainsleigh Lavia Alavia	22/10/05	12:15	BH Brooklyn Hlebert	22/10/05	1225		[ ]	ACTR	[ ] Yes [ ] No
			JASON BLAIR	22/10/06	0845				

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.
** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

Your Project #: 21-1357-005
Site#: OAM - SHERRIDON MINE SITE

Attention: Ed Collins

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Your C.O.C. #: 1 of 3, 678043-03-01, 678043-02-01, 678043-01-01

Report Date: 2022/10/27
Report #: R3254851
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C282526
Received: 2022/10/19, 12:15

Sample Matrix: Water
Samples Received: 25

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH (1)	17	N/A	2022/10/24	AB SOP-00005	SM 23 2320 B m
Alkalinity @25C (pp, total), CO3,HCO3,OH (1)	8	N/A	2022/10/25	AB SOP-00005	SM 23 2320 B m
Cadmium - low level CCME - Dissolved (1)	25	N/A	2022/10/22		Auto Calc
Cadmium - low level CCME (Total) (1)	5	N/A	2022/10/21		Auto Calc
Cadmium - low level CCME (Total) (1)	11	N/A	2022/10/22		Auto Calc
Cadmium - low level CCME (Total) (1)	9	N/A	2022/10/24		Auto Calc
Hardness (1)	10	N/A	2022/10/22		Auto Calc
Hardness (1)	13	N/A	2022/10/23		Auto Calc
Hardness (1)	2	N/A	2022/10/24		Auto Calc
Hardness Total (calculated as CaCO3) (1, 2)	11	N/A	2022/10/22	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3) (1, 2)	5	N/A	2022/10/23	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3) (1, 2)	5	N/A	2022/10/24	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3) (1, 2)	4	N/A	2022/10/25	BBY WI-00033	Auto Calc
Elements by ICP-Dissolved-Lab Filtered (1, 3)	23	N/A	2022/10/22	AB SOP-00042	EPA 6010d R5 m
Elements by ICP-Dissolved-Lab Filtered (1, 3)	2	N/A	2022/10/24	AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Total (1)	11	2022/10/21	2022/10/21	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Total (1)	5	2022/10/21	2022/10/22	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Total (1)	9	2022/10/24	2022/10/24	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Elements by ICPMS-Dissolved-Lab Filtered (1, 4)	25	N/A	2022/10/21	AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total (1)	16	2022/10/21	2022/10/21	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total (1)	9	2022/10/24	2022/10/24	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
pH @25°C (1, 5)	17	N/A	2022/10/24	AB SOP-00005	SM 23 4500-H+B m
pH @25°C (1, 5)	8	N/A	2022/10/25	AB SOP-00005	SM 23 4500-H+B m
Total Suspended Solids (NFR) (1)	25	2022/10/25	2022/10/25	AB SOP-00061	SM 23 2540 D m

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

Your Project #: 21-1357-005
Site#: OAM - SHERRIDON MINE SITE

Attention: Ed Collins

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Your C.O.C. #: 1 of 3, 678043-03-01, 678043-02-01, 678043-01-01

Report Date: 2022/10/27
Report #: R3254851
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C282526
Received: 2022/10/19, 12:15

Sample Matrix: Water
Samples Received: 25

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Turbidity (1)	25	N/A	2022/10/21	CAL SOP-00081	SM 23 2130 B m

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8
(2) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(3) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(4) Samples were filtered and preserved at the lab. Values may not reflect concentrations at the time of sampling. Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(5) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

Your Project #: 21-1357-005
Site#: OAM - SHERRIDON MINE SITE

Attention: Ed Collins

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3rd Floor
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Your C.O.C. #: 1 of 3, 678043-03-01, 678043-02-01, 678043-01-01

Report Date: 2022/10/27
Report #: R3254851
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C282526
Received: 2022/10/19, 12:15

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Janelle Kochan, B.Sc., Key Account Specialist
Email: Janelle.KOCHAN@bureauveritas.com
Phone# (204)259-0231

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

REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BEY846		BEY847	BEY848		BEY849		
Sampling Date		2022/10/18 08:05		2022/10/18 08:15	2022/10/18 08:20		2022/10/18 08:25		
COC Number		678043-03-01		678043-03-01	678043-03-01		678043-03-01		
	UNITS	CL-6	QC Batch	CL-5	CL-4	QC Batch	CL-8	RDL	QC Batch
Elements									
Dissolved Cadmium (Cd)	ug/L	<0.020	A765024	<0.020	<0.020	A765024	<0.020	0.020	A765024
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	0.018	A766843	0.025	0.029	A766843	0.025	0.0030	A766848
Dissolved Antimony (Sb)	mg/L	<0.00060	A766843	<0.00060	<0.00060	A766843	<0.00060	0.00060	A766848
Dissolved Arsenic (As)	mg/L	0.00041	A766843	0.00038	0.00042	A766843	0.00039	0.00020	A766848
Dissolved Barium (Ba)	mg/L	<0.010	A766984	<0.010	<0.010	A766981	<0.010	0.010	A767001
Dissolved Beryllium (Be)	mg/L	<0.0010	A766843	<0.0010	<0.0010	A766843	<0.0010	0.0010	A766848
Dissolved Boron (B)	mg/L	<0.020	A766984	<0.020	<0.020	A766981	<0.020	0.020	A767001
Dissolved Calcium (Ca)	mg/L	11	A766984	11	12	A766981	12	0.30	A767001
Dissolved Chromium (Cr)	mg/L	<0.0010	A766843	<0.0010	<0.0010	A766843	<0.0010	0.0010	A766848
Dissolved Cobalt (Co)	mg/L	<0.00030	A766843	<0.00030	<0.00030	A766843	<0.00030	0.00030	A766848
Dissolved Copper (Cu)	mg/L	0.0035	A766843	0.0045	0.0051	A766843	0.0050	0.0010	A766848
Dissolved Iron (Fe)	mg/L	<0.060	A766984	0.18	0.20	A766981	0.30	0.060	A767001
Dissolved Lead (Pb)	mg/L	<0.00020	A766843	<0.00020	<0.00020	A766843	<0.00020	0.00020	A766848
Dissolved Lithium (Li)	mg/L	<0.020	A766984	<0.020	<0.020	A766981	<0.020	0.020	A767001
Dissolved Magnesium (Mg)	mg/L	3.2	A766984	3.2	3.2	A766981	3.3	0.20	A767001
Dissolved Manganese (Mn)	mg/L	<0.0040	A766984	<0.0040	<0.0040	A766981	<0.0040	0.0040	A767001
Dissolved Molybdenum (Mo)	mg/L	<0.00020	A766843	<0.00020	<0.00020	A766843	<0.00020	0.00020	A766848
Dissolved Nickel (Ni)	mg/L	<0.00050	A766843	<0.00050	0.00061	A766843	<0.00050	0.00050	A766848
Dissolved Phosphorus (P)	mg/L	<0.10	A766984	<0.10	<0.10	A766981	<0.10	0.10	A767001
Dissolved Potassium (K)	mg/L	1.5	A766984	1.5	1.6	A766981	1.6	0.30	A767001
Dissolved Selenium (Se)	mg/L	<0.00020	A766843	<0.00020	<0.00020	A766843	<0.00020	0.00020	A766848
Dissolved Silicon (Si)	mg/L	0.51	A766984	0.73	0.74	A766981	0.80	0.50	A767001
Dissolved Silver (Ag)	mg/L	<0.00010	A766843	<0.00010	<0.00010	A766843	<0.00010	0.00010	A766848
Dissolved Sodium (Na)	mg/L	2.0	A766984	2.0	2.0	A766981	2.0	0.50	A767001
Dissolved Strontium (Sr)	mg/L	0.027	A766984	0.027	0.027	A766981	0.028	0.020	A767001
Dissolved Sulphur (S)	mg/L	4.1	A766984	4.9	5.0	A766981	5.5	0.20	A767001
Dissolved Thallium (Tl)	mg/L	<0.00020	A766843	<0.00020	<0.00020	A766843	<0.00020	0.00020	A766848
Dissolved Tin (Sn)	mg/L	<0.0010	A766843	<0.0010	<0.0010	A766843	<0.0010	0.0010	A766848
Dissolved Titanium (Ti)	mg/L	<0.0010	A766843	0.0010	<0.0010	A766843	<0.0010	0.0010	A766848
Dissolved Uranium (U)	mg/L	<0.00010	A766843	<0.00010	<0.00010	A766843	<0.00010	0.00010	A766848

RDL = Reportable Detection Limit

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BEY846		BEY847	BEY848		BEY849		
Sampling Date		2022/10/18 08:05		2022/10/18 08:15	2022/10/18 08:20		2022/10/18 08:25		
COC Number		678043-03-01		678043-03-01	678043-03-01		678043-03-01		
	UNITS	**CL-6**	**QC Batch**	**CL-5**	**CL-4**	**QC Batch**	**CL-8**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	A766843	<0.0010	<0.0010	A766843	<0.0010	0.0010	A766848
Dissolved Zinc (Zn)	mg/L	0.0070	A766843	0.0085	0.0093	A766843	0.010	0.0030	A766848
RDL = Reportable Detection Limit									

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BEY850	BEY851	BEY852	BEY853	BEY854		
Sampling Date		2022/10/18 08:30	2022/10/18 08:35	2022/10/18 08:40	2022/10/18 09:10	2022/10/18 09:20		
COC Number		678043-03-01	678043-03-01	678043-03-01	678043-03-01	678043-03-01		
	UNITS	CL-3	CL-7	CL-2	SB-2	SB-1	RDL	QC Batch
Elements								
Dissolved Cadmium (Cd)	ug/L	<0.020	<0.020	0.023	0.46	0.46	0.020	A765024
Lab Filtered Elements								
Dissolved Aluminum (Al)	mg/L	0.025	0.028	0.025	0.0054	0.0057	0.0030	A766848
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	0.00060	A766848
Dissolved Arsenic (As)	mg/L	0.00035	0.00040	0.00038	0.00021	0.00022	0.00020	A766848
Dissolved Barium (Ba)	mg/L	<0.010	<0.010	<0.010	0.014	0.014	0.010	A767001
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A766848
Dissolved Boron (B)	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	A767001
Dissolved Calcium (Ca)	mg/L	12	12	12	51	51	0.30	A767001
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A766848
Dissolved Cobalt (Co)	mg/L	<0.00030	<0.00030	<0.00030	0.00038	0.00039	0.00030	A766848
Dissolved Copper (Cu)	mg/L	0.0049	0.0054	0.0050	0.0072	0.0070	0.0010	A766848
Dissolved Iron (Fe)	mg/L	0.26	0.28	0.27	2.1	1.4	0.060	A767001
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A766848
Dissolved Lithium (Li)	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020	0.020	A767001
Dissolved Magnesium (Mg)	mg/L	3.2	3.3	3.2	8.5	8.4	0.20	A767001
Dissolved Manganese (Mn)	mg/L	<0.0040	<0.0040	<0.0040	0.087	0.083	0.0040	A767001
Dissolved Molybdenum (Mo)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A766848
Dissolved Nickel (Ni)	mg/L	<0.00050	<0.00050	<0.00050	0.0013	0.0013	0.00050	A766848
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	A767001
Dissolved Potassium (K)	mg/L	1.5	1.5	1.5	4.4	4.2	0.30	A767001
Dissolved Selenium (Se)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A766848
Dissolved Silicon (Si)	mg/L	0.79	0.81	0.81	1.1	1.1	0.50	A767001
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A766848
Dissolved Sodium (Na)	mg/L	2.0	2.0	2.0	3.1	3.0	0.50	A767001
Dissolved Strontium (Sr)	mg/L	0.027	0.027	0.027	0.057	0.056	0.020	A767001
Dissolved Sulphur (S)	mg/L	5.7	5.5	5.6	50	50	0.20	A767001
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	A766848
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A766848
Dissolved Titanium (Ti)	mg/L	0.0011	<0.0010	0.0010	<0.0010	<0.0010	0.0010	A766848
Dissolved Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	A766848
RDL = Reportable Detection Limit								

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BEY850	BEY851	BEY852	BEY853	BEY854		
Sampling Date		2022/10/18 08:30	2022/10/18 08:35	2022/10/18 08:40	2022/10/18 09:10	2022/10/18 09:20		
COC Number		678043-03-01	678043-03-01	678043-03-01	678043-03-01	678043-03-01		
	UNITS	**CL-3**	**CL-7**	**CL-2**	**SB-2**	**SB-1**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	A766848
Dissolved Zinc (Zn)	mg/L	0.0097	0.011	0.0098	0.14	0.14	0.0030	A766848
RDL = Reportable Detection Limit								

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BEY855			BEY855			BEY877		
Sampling Date		2022/10/18 09:25			2022/10/18 09:25			2022/10/18 09:30		
COC Number		678043-03-01			678043-03-01			678043-02-01		
	UNITS	CB-1	RDL	QC Batch	CB-1 Lab-Dup	RDL	QC Batch	CB-2	RDL	QC Batch
Elements										
Dissolved Cadmium (Cd)	ug/L	0.45	0.020	A765024				0.47	0.020	A765024
Lab Filtered Elements										
Dissolved Aluminum (Al)	mg/L	0.0049	0.0030	A766848				0.0054	0.0030	A766848
Dissolved Antimony (Sb)	mg/L	<0.00060	0.00060	A766848				<0.00060	0.00060	A766848
Dissolved Arsenic (As)	mg/L	0.00021	0.00020	A766848				<0.00020	0.00020	A766848
Dissolved Barium (Ba)	mg/L	0.015	0.010	A767084	0.016	0.010	A767084	0.014	0.010	A767001
Dissolved Beryllium (Be)	mg/L	<0.0010	0.0010	A766848				<0.0010	0.0010	A766848
Dissolved Boron (B)	mg/L	<0.020	0.020	A767084	<0.020	0.020	A767084	<0.020	0.020	A767001
Dissolved Calcium (Ca)	mg/L	56	0.30	A767084	57	0.30	A767084	52	0.30	A767001
Dissolved Chromium (Cr)	mg/L	<0.0010	0.0010	A766848				<0.0010	0.0010	A766848
Dissolved Cobalt (Co)	mg/L	0.00035	0.00030	A766848				0.00038	0.00030	A766848
Dissolved Copper (Cu)	mg/L	0.0066	0.0010	A766848				0.0070	0.0010	A766848
Dissolved Iron (Fe)	mg/L	1.1	0.060	A767084	1.0	0.060	A767084	0.74	0.060	A767001
Dissolved Lead (Pb)	mg/L	<0.00020	0.00020	A766848				<0.00020	0.00020	A766848
Dissolved Lithium (Li)	mg/L	<0.020	0.020	A767084	<0.020	0.020	A767084	<0.020	0.020	A767001
Dissolved Magnesium (Mg)	mg/L	9.0	0.20	A767084	9.1	0.20	A767084	8.7	0.20	A767001
Dissolved Manganese (Mn)	mg/L	0.079	0.0040	A767084	0.080	0.0040	A767084	0.078	0.0040	A767001
Dissolved Molybdenum (Mo)	mg/L	<0.00020	0.00020	A766848				<0.00020	0.00020	A766848
Dissolved Nickel (Ni)	mg/L	0.0012	0.00050	A766848				0.0013	0.00050	A766848
Dissolved Phosphorus (P)	mg/L	<0.10	0.10	A767084	<0.10	0.10	A767084	<0.10	0.10	A767001
Dissolved Potassium (K)	mg/L	4.5	0.30	A767084	4.6	0.30	A767084	4.5	0.30	A767001
Dissolved Selenium (Se)	mg/L	<0.00020	0.00020	A766848				<0.00020	0.00020	A766848
Dissolved Silicon (Si)	mg/L	1.1	0.50	A767084	1.1	0.50	A767084	1.0	0.50	A767001
Dissolved Silver (Ag)	mg/L	<0.00010	0.00010	A766848				<0.00010	0.00010	A766848
Dissolved Sodium (Na)	mg/L	3.1	0.50	A767084	3.2	0.50	A767084	3.1	0.50	A767001
Dissolved Strontium (Sr)	mg/L	0.058	0.020	A767084	0.058	0.020	A767084	0.057	0.020	A767001
Dissolved Sulphur (S)	mg/L	52	0.20	A767084	51	0.20	A767084	50	0.20	A767001
Dissolved Thallium (Tl)	mg/L	<0.00020	0.00020	A766848				<0.00020	0.00020	A766848
Dissolved Tin (Sn)	mg/L	<0.0010	0.0010	A766848				<0.0010	0.0010	A766848
Dissolved Titanium (Ti)	mg/L	<0.0010	0.0010	A766848				<0.0010	0.0010	A766848
Dissolved Uranium (U)	mg/L	<0.00010	0.00010	A766848				<0.00010	0.00010	A766848

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BEY855			BEY855			BEY877		
Sampling Date		2022/10/18 09:25			2022/10/18 09:25			2022/10/18 09:30		
COC Number		678043-03-01			678043-03-01			678043-02-01		
	UNITS	**CB-1**	**RDL**	**QC Batch**	**CB-1 Lab-Dup**	**RDL**	**QC Batch**	**CB-2**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	0.0010	A766848				<0.0010	0.0010	A766848
Dissolved Zinc (Zn)	mg/L	0.14	0.0030	A766848				0.14	0.0030	A766848

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BEY878	BEY879	BEY880			BEY880		
Sampling Date		2022/10/18 09:35	2022/10/18 09:40	2022/10/18 09:50			2022/10/18 09:50		
COC Number		678043-02-01	678043-02-01	678043-02-01			678043-02-01		
	UNITS	EB-1	EB-2	NB-2	RDL	QC Batch	NB-2 Lab-Dup	RDL	QC Batch
Elements									
Dissolved Cadmium (Cd)	ug/L	0.56	0.57	0.47	0.020	A765024			
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	0.0039	0.0052	0.0036	0.0030	A766848	0.0043	0.0030	A766848
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	0.00060	A766848	<0.00060	0.00060	A766848
Dissolved Arsenic (As)	mg/L	<0.00020	0.00021	0.00022	0.00020	A766848	<0.00020	0.00020	A766848
Dissolved Barium (Ba)	mg/L	0.014	0.015	0.014	0.010	A767001			
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	A766848	<0.0010	0.0010	A766848
Dissolved Boron (B)	mg/L	<0.020	<0.020	<0.020	0.020	A767001			
Dissolved Calcium (Ca)	mg/L	51	55	55	0.30	A767001			
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	A766848	<0.0010	0.0010	A766848
Dissolved Cobalt (Co)	mg/L	0.00035	0.00040	0.00038	0.00030	A766848	0.00037	0.00030	A766848
Dissolved Copper (Cu)	mg/L	0.0075	0.0078	0.0066	0.0010	A766848	0.0065	0.0010	A766848
Dissolved Iron (Fe)	mg/L	0.33	0.24	0.62	0.060	A767001			
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	A766848	<0.00020	0.00020	A766848
Dissolved Lithium (Li)	mg/L	<0.020	<0.020	<0.020	0.020	A767001			
Dissolved Magnesium (Mg)	mg/L	8.1	9.0	8.9	0.20	A767001			
Dissolved Manganese (Mn)	mg/L	0.063	0.053	0.087	0.0040	A767001			
Dissolved Molybdenum (Mo)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	A766848	<0.00020	0.00020	A766848
Dissolved Nickel (Ni)	mg/L	0.0014	0.0016	0.0012	0.00050	A766848	0.0012	0.00050	A766848
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	0.10	A767001			
Dissolved Potassium (K)	mg/L	4.2	4.4	4.5	0.30	A767001			
Dissolved Selenium (Se)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	A766848	<0.00020	0.00020	A766848
Dissolved Silicon (Si)	mg/L	1.0	0.95	1.1	0.50	A767001			
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	A766848	<0.00010	0.00010	A766848
Dissolved Sodium (Na)	mg/L	3.0	3.1	3.1	0.50	A767001			
Dissolved Strontium (Sr)	mg/L	0.056	0.059	0.058	0.020	A767001			
Dissolved Sulphur (S)	mg/L	54	52	51	0.20	A767001			
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	A766848	<0.00020	0.00020	A766848
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	A766848	<0.0010	0.0010	A766848
Dissolved Titanium (Ti)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	A766848	<0.0010	0.0010	A766848
Dissolved Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	A766848	<0.00010	0.00010	A766848

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BEY878	BEY879	BEY880			BEY880		
Sampling Date		2022/10/18 09:35	2022/10/18 09:40	2022/10/18 09:50			2022/10/18 09:50		
COC Number		678043-02-01	678043-02-01	678043-02-01			678043-02-01		
	UNITS	**EB-1**	**EB-2**	**NB-2**	**RDL**	**QC Batch**	**NB-2 Lab-Dup**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	<0.0010	0.0010	A766848	<0.0010	0.0010	A766848
Dissolved Zinc (Zn)	mg/L	0.17	0.17	0.13	0.0030	A766848	0.13	0.0030	A766848

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BEY881	BEY882	BEY883		BEY884		
Sampling Date		2022/10/18 09:55	2022/10/18 10:00	2022/10/18 11:10		2022/10/18 10:50		
COC Number		678043-02-01	678043-02-01	678043-02-01		678043-02-01		
	UNITS	NB-1	CAMP LAKE DISCHAREGE	SC-1	QC Batch	SC-2	RDL	QC Batch
Elements								
Dissolved Cadmium (Cd)	ug/L	0.44	0.49	0.17	A765024	0.16	0.020	A765024
Lab Filtered Elements								
Dissolved Aluminum (Al)	mg/L	0.0052	0.0050	0.018	A766843	0.017	0.0030	A766843
Dissolved Antimony (Sb)	mg/L	<0.00060	<0.00060	<0.00060	A766843	<0.00060	0.00060	A766843
Dissolved Arsenic (As)	mg/L	<0.00020	0.00023	0.00039	A766843	0.00045	0.00020	A766843
Dissolved Barium (Ba)	mg/L	0.013	0.014	<0.010	A766984	<0.010	0.010	A766981
Dissolved Beryllium (Be)	mg/L	<0.0010	<0.0010	<0.0010	A766843	<0.0010	0.0010	A766843
Dissolved Boron (B)	mg/L	<0.020	<0.020	<0.020	A766984	<0.020	0.020	A766981
Dissolved Calcium (Ca)	mg/L	54	55	8.4	A766984	8.5	0.30	A766981
Dissolved Chromium (Cr)	mg/L	<0.0010	<0.0010	<0.0010	A766843	<0.0010	0.0010	A766843
Dissolved Cobalt (Co)	mg/L	0.00037	0.00043	<0.00030	A766843	<0.00030	0.00030	A766843
Dissolved Copper (Cu)	mg/L	0.0068	0.0065	0.0067	A766843	0.0058	0.0010	A766843
Dissolved Iron (Fe)	mg/L	0.54	0.51	0.14	A766984	0.14	0.060	A766981
Dissolved Lead (Pb)	mg/L	<0.00020	<0.00020	<0.00020	A766843	<0.00020	0.00020	A766843
Dissolved Lithium (Li)	mg/L	<0.020	<0.020	<0.020	A766984	<0.020	0.020	A766981
Dissolved Magnesium (Mg)	mg/L	8.9	9.0	2.7	A766984	2.7	0.20	A766981
Dissolved Manganese (Mn)	mg/L	0.089	0.094	0.027	A766984	0.029	0.0040	A766981
Dissolved Molybdenum (Mo)	mg/L	<0.00020	<0.00020	<0.00020	A766843	<0.00020	0.00020	A766843
Dissolved Nickel (Ni)	mg/L	0.0012	0.0013	0.00057	A766843	<0.00050	0.00050	A766843
Dissolved Phosphorus (P)	mg/L	<0.10	<0.10	<0.10	A766984	<0.10	0.10	A766981
Dissolved Potassium (K)	mg/L	4.3	4.4	1.4	A766984	1.4	0.30	A766981
Dissolved Selenium (Se)	mg/L	<0.00020	<0.00020	<0.00020	A766843	<0.00020	0.00020	A766843
Dissolved Silicon (Si)	mg/L	1.1	1.1	1.1	A766984	1.1	0.50	A766981
Dissolved Silver (Ag)	mg/L	<0.00010	<0.00010	<0.00010	A766843	<0.00010	0.00010	A766843
Dissolved Sodium (Na)	mg/L	3.0	3.0	2.1	A766984	2.0	0.50	A766981
Dissolved Strontium (Sr)	mg/L	0.058	0.058	0.022	A766984	0.022	0.020	A766981
Dissolved Sulphur (S)	mg/L	52	52	1.6	A766984	1.4	0.20	A766981
Dissolved Thallium (Tl)	mg/L	<0.00020	<0.00020	<0.00020	A766843	<0.00020	0.00020	A766843
Dissolved Tin (Sn)	mg/L	<0.0010	<0.0010	<0.0010	A766843	<0.0010	0.0010	A766843
Dissolved Titanium (Ti)	mg/L	<0.0010	<0.0010	<0.0010	A766843	<0.0010	0.0010	A766843
Dissolved Uranium (U)	mg/L	<0.00010	<0.00010	<0.00010	A766843	<0.00010	0.00010	A766843

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BEY881	BEY882	BEY883		BEY884		
Sampling Date		2022/10/18 09:55	2022/10/18 10:00	2022/10/18 11:10		2022/10/18 10:50		
COC Number		678043-02-01	678043-02-01	678043-02-01		678043-02-01		
	UNITS	**NB-1**	**CAMP LAKE DISCHAREGE**	**SC-1**	**QC Batch**	**SC-2**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	<0.0010	<0.0010	A766843	<0.0010	0.0010	A766843
Dissolved Zinc (Zn)	mg/L	0.13	0.13	0.071	A766843	0.058	0.0030	A766843
RDL = Reportable Detection Limit								

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BEY885		BEY886		BEY889	BEY890		
Sampling Date		2022/10/18 10:40		2022/10/18 10:30		2022/10/18 17:10	2022/10/18 17:00		
COC Number		678043-02-01		678043-02-01		678043-01-01	678043-01-01		
	UNITS	SC-3	QC Batch	SC-4	QC Batch	SW-104	SW-119	RDL	QC Batch
Elements									
Dissolved Cadmium (Cd)	ug/L	0.057	A765024	0.036	A765024	0.44	<0.020	0.020	A765024
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	0.016	A766843	0.017	A766848	0.0059	0.016	0.0030	A766843
Dissolved Antimony (Sb)	mg/L	<0.00060	A766843	<0.00060	A766848	<0.00060	<0.00060	0.00060	A766843
Dissolved Arsenic (As)	mg/L	0.00041	A766843	0.00041	A766848	0.00022	0.00042	0.00020	A766843
Dissolved Barium (Ba)	mg/L	<0.010	A766984	<0.010	A766984	0.015	<0.010	0.010	A766984
Dissolved Beryllium (Be)	mg/L	<0.0010	A766843	<0.0010	A766848	<0.0010	<0.0010	0.0010	A766843
Dissolved Boron (B)	mg/L	<0.020	A766984	<0.020	A766984	<0.020	<0.020	0.020	A766984
Dissolved Calcium (Ca)	mg/L	8.2	A766984	8.0	A766984	52	8.2	0.30	A766984
Dissolved Chromium (Cr)	mg/L	<0.0010	A766843	<0.0010	A766848	<0.0010	<0.0010	0.0010	A766843
Dissolved Cobalt (Co)	mg/L	<0.00030	A766843	<0.00030	A766848	0.00037	<0.00030	0.00030	A766843
Dissolved Copper (Cu)	mg/L	0.0036	A766843	0.0029	A766848	0.0072	0.0029	0.0010	A766843
Dissolved Iron (Fe)	mg/L	0.13	A766984	0.13	A766984	1.8	0.18	0.060	A766984
Dissolved Lead (Pb)	mg/L	<0.00020	A766843	<0.00020	A766848	<0.00020	<0.00020	0.00020	A766843
Dissolved Lithium (Li)	mg/L	<0.020	A766984	<0.020	A766984	<0.020	<0.020	0.020	A766984
Dissolved Magnesium (Mg)	mg/L	2.6	A766984	2.6	A766984	8.7	2.6	0.20	A766984
Dissolved Manganese (Mn)	mg/L	0.024	A766984	0.019	A766984	0.088	0.019	0.0040	A766984
Dissolved Molybdenum (Mo)	mg/L	<0.00020	A766843	<0.00020	A766848	<0.00020	<0.00020	0.00020	A766843
Dissolved Nickel (Ni)	mg/L	<0.00050	A766843	<0.00050	A766848	0.0013	<0.00050	0.00050	A766843
Dissolved Phosphorus (P)	mg/L	<0.10	A766984	<0.10	A766984	<0.10	<0.10	0.10	A766984
Dissolved Potassium (K)	mg/L	1.4	A766984	1.3	A766984	4.5	1.3	0.30	A766984
Dissolved Selenium (Se)	mg/L	<0.00020	A766843	<0.00020	A766848	<0.00020	<0.00020	0.00020	A766843
Dissolved Silicon (Si)	mg/L	1.0	A766984	1.0	A766984	1.1	1.0	0.50	A766984
Dissolved Silver (Ag)	mg/L	<0.00010	A766843	<0.00010	A766848	<0.00010	<0.00010	0.00010	A766843
Dissolved Sodium (Na)	mg/L	1.6	A766984	1.5	A766984	3.1	1.6	0.50	A766984
Dissolved Strontium (Sr)	mg/L	0.021	A766984	0.021	A766984	0.057	0.021	0.020	A766984
Dissolved Sulphur (S)	mg/L	1.2	A766984	1.1	A766984	49	1.1	0.20	A766984
Dissolved Thallium (Tl)	mg/L	<0.00020	A766843	<0.00020	A766848	<0.00020	<0.00020	0.00020	A766843
Dissolved Tin (Sn)	mg/L	<0.0010	A766843	<0.0010	A766848	<0.0010	<0.0010	0.0010	A766843
Dissolved Titanium (Ti)	mg/L	<0.0010	A766843	<0.0010	A766848	<0.0010	<0.0010	0.0010	A766843
Dissolved Uranium (U)	mg/L	<0.00010	A766843	<0.00010	A766848	<0.00010	<0.00010	0.00010	A766843

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BEY885		BEY886		BEY889	BEY890		
Sampling Date		2022/10/18 10:40		2022/10/18 10:30		2022/10/18 17:10	2022/10/18 17:00		
COC Number		678043-02-01		678043-02-01		678043-01-01	678043-01-01		
	UNITS	**SC-3**	**QC Batch**	**SC-4**	**QC Batch**	**SW-104**	**SW-119**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	A766843	<0.0010	A766848	<0.0010	<0.0010	0.0010	A766843
Dissolved Zinc (Zn)	mg/L	0.026	A766843	0.0050	A766848	0.13	0.0048	0.0030	A766843
RDL = Reportable Detection Limit									

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BEY891		BEY892		BEY893		
Sampling Date		2022/10/18 10:55		2022/10/18		2022/10/18 11:00		
COC Number		678043-01-01		678043-01-01		678043-01-01		
	UNITS	SC-5	QC Batch	TRIP BLANK	QC Batch	SC-6	RDL	QC Batch
Elements								
Dissolved Cadmium (Cd)	ug/L	<0.020	A765024	<0.020	A765024	<0.020	0.020	A765024
Lab Filtered Elements								
Dissolved Aluminum (Al)	mg/L	0.014	A766848	<0.0030	A766843	0.010	0.0030	A766848
Dissolved Antimony (Sb)	mg/L	<0.00060	A766848	<0.00060	A766843	<0.00060	0.00060	A766848
Dissolved Arsenic (As)	mg/L	0.00039	A766848	<0.00020	A766843	0.00037	0.00020	A766848
Dissolved Barium (Ba)	mg/L	<0.010	A766984	<0.010	A766984	<0.010	0.010	A767084
Dissolved Beryllium (Be)	mg/L	<0.0010	A766848	<0.0010	A766843	<0.0010	0.0010	A766848
Dissolved Boron (B)	mg/L	<0.020	A766984	<0.020	A766984	<0.020	0.020	A767084
Dissolved Calcium (Ca)	mg/L	8.1	A766984	<0.30	A766984	8.1	0.30	A767084
Dissolved Chromium (Cr)	mg/L	<0.0010	A766848	<0.0010	A766843	<0.0010	0.0010	A766848
Dissolved Cobalt (Co)	mg/L	<0.00030	A766848	<0.00030	A766843	<0.00030	0.00030	A766848
Dissolved Copper (Cu)	mg/L	0.0030	A766848	<0.0010	A766843	0.0016	0.0010	A766848
Dissolved Iron (Fe)	mg/L	0.11	A766984	<0.060	A766984	0.091	0.060	A767084
Dissolved Lead (Pb)	mg/L	<0.00020	A766848	<0.00020	A766843	<0.00020	0.00020	A766848
Dissolved Lithium (Li)	mg/L	<0.020	A766984	<0.020	A766984	<0.020	0.020	A767084
Dissolved Magnesium (Mg)	mg/L	2.6	A766984	<0.20	A766984	2.6	0.20	A767084
Dissolved Manganese (Mn)	mg/L	0.013	A766984	<0.0040	A766984	<0.0040	0.0040	A767084
Dissolved Molybdenum (Mo)	mg/L	<0.00020	A766848	<0.00020	A766843	<0.00020	0.00020	A766848
Dissolved Nickel (Ni)	mg/L	<0.00050	A766848	<0.00050	A766843	<0.00050	0.00050	A766848
Dissolved Phosphorus (P)	mg/L	<0.10	A766984	<0.10	A766984	<0.10	0.10	A767084
Dissolved Potassium (K)	mg/L	1.3	A766984	<0.30	A766984	1.2	0.30	A767084
Dissolved Selenium (Se)	mg/L	<0.00020	A766848	<0.00020	A766843	<0.00020	0.00020	A766848
Dissolved Silicon (Si)	mg/L	1.0	A766984	<0.50	A766984	0.97	0.50	A767084
Dissolved Silver (Ag)	mg/L	<0.00010	A766848	<0.00010	A766843	<0.00010	0.00010	A766848
Dissolved Sodium (Na)	mg/L	1.6	A766984	<0.50	A766984	1.5	0.50	A767084
Dissolved Strontium (Sr)	mg/L	0.022	A766984	<0.020	A766984	<0.020	0.020	A767084
Dissolved Sulphur (S)	mg/L	1.0	A766984	<0.20	A766984	1.1	0.20	A767084
Dissolved Thallium (Tl)	mg/L	<0.00020	A766848	<0.00020	A766843	<0.00020	0.00020	A766848
Dissolved Tin (Sn)	mg/L	<0.0010	A766848	<0.0010	A766843	<0.0010	0.0010	A766848
Dissolved Titanium (Ti)	mg/L	<0.0010	A766848	<0.0010	A766843	<0.0010	0.0010	A766848
Dissolved Uranium (U)	mg/L	<0.00010	A766848	<0.00010	A766843	<0.00010	0.00010	A766848

RDL = Reportable Detection Limit

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REG. METALS (CCME/AT1) – DISS. LAB FILT.

Bureau Veritas ID		BEY891		BEY892		BEY893		
Sampling Date		2022/10/18 10:55		2022/10/18		2022/10/18 11:00		
COC Number		678043-01-01		678043-01-01		678043-01-01		
	UNITS	**SC-5**	**QC Batch**	**TRIP BLANK**	**QC Batch**	**SC-6**	**RDL**	**QC Batch**
Dissolved Vanadium (V)	mg/L	<0.0010	A766848	<0.0010	A766843	<0.0010	0.0010	A766848
Dissolved Zinc (Zn)	mg/L	0.0035	A766848	<0.0030	A766843	<0.0030	0.0030	A766848
RDL = Reportable Detection Limit								

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BEY846	BEY847		BEY848	BEY849		
Sampling Date		2022/10/18 08:05	2022/10/18 08:15		2022/10/18 08:20	2022/10/18 08:25		
COC Number		678043-03-01	678043-03-01		678043-03-01	678043-03-01		
	UNITS	CL-6	CL-5	QC Batch	CL-4	CL-8	RDL	QC Batch
Elements								
Total Cadmium (Cd)	ug/L	0.029	0.038	A764355	0.039	0.040	0.020	A764355
Total Aluminum (Al)	mg/L	0.12	0.14	A766792	0.18	0.093	0.0030	A769199
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	A766792	<0.00060	<0.00060	0.00060	A769199
Total Arsenic (As)	mg/L	0.00045	0.00046	A766792	0.00040	0.00035	0.00020	A769199
Total Barium (Ba)	mg/L	0.011	0.010	A766808	<0.010	<0.010	0.010	A769205
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	A766792	<0.0010	<0.0010	0.0010	A769199
Total Boron (B)	mg/L	<0.020	<0.020	A766808	<0.020	<0.020	0.020	A769205
Total Calcium (Ca)	mg/L	11	11	A766808	12	12	0.30	A769205
Total Chromium (Cr)	mg/L	0.0011	<0.0010	A766792	<0.0010	<0.0010	0.0010	A769199
Total Cobalt (Co)	mg/L	<0.00030	<0.00030	A766792	<0.00030	<0.00030	0.00030	A769199
Total Copper (Cu)	mg/L	0.0042	0.0055	A766792	0.0055	0.0053	0.0010	A769199
Total Iron (Fe)	mg/L	0.31	0.52	A766808	0.51	0.57	0.060	A769205
Total Lead (Pb)	mg/L	<0.00020	<0.00020	A766792	<0.00020	<0.00020	0.00020	A769199
Total Lithium (Li)	mg/L	<0.020	<0.020	A766808	<0.020	<0.020	0.020	A769205
Total Magnesium (Mg)	mg/L	3.1	3.0	A766808	3.2	3.2	0.20	A769205
Total Manganese (Mn)	mg/L	0.014	0.015	A766808	0.0071	0.0068	0.0040	A769205
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	A766792	<0.00020	<0.00020	0.00020	A769199
Total Nickel (Ni)	mg/L	0.00060	0.00061	A766792	0.00065	0.00053	0.00050	A769199
Total Phosphorus (P)	mg/L	<0.10	<0.10	A766808	<0.10	<0.10	0.10	A769205
Total Potassium (K)	mg/L	1.5	1.4	A766808	1.5	1.5	0.30	A769205
Total Selenium (Se)	mg/L	<0.00020	<0.00020	A766792	<0.00020	<0.00020	0.00020	A769199
Total Silicon (Si)	mg/L	0.85	0.98	A766808	1.1	1.1	0.50	A769205
Total Silver (Ag)	mg/L	<0.00010	<0.00010	A766792	<0.00010	<0.00010	0.00010	A769199
Total Sodium (Na)	mg/L	1.9	1.7	A766808	2.1	2.0	0.50	A769205
Total Strontium (Sr)	mg/L	0.025	0.024	A766808	0.026	0.025	0.020	A769205
Total Sulphur (S)	mg/L	4.7	5.3	A766808	5.6	5.9	0.20	A769205
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	A766792	<0.00020	<0.00020	0.00020	A769199
Total Tin (Sn)	mg/L	<0.0010	<0.0010	A766792	<0.0010	<0.0010	0.0010	A769199
Total Titanium (Ti)	mg/L	0.0056	0.0049	A766792	0.0042	0.0033	0.0010	A769199
Total Uranium (U)	mg/L	<0.00010	<0.00010	A766792	<0.00010	<0.00010	0.00010	A769199
Total Vanadium (V)	mg/L	<0.0010	<0.0010	A766792	<0.0010	<0.0010	0.0010	A769199

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BEY846	BEY847		BEY848	BEY849		
Sampling Date		2022/10/18 08:05	2022/10/18 08:15		2022/10/18 08:20	2022/10/18 08:25		
COC Number		678043-03-01	678043-03-01		678043-03-01	678043-03-01		
	UNITS	**CL-6**	**CL-5**	**QC Batch**	**CL-4**	**CL-8**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.0082	0.011	A766792	0.013	0.012	0.0030	A769199
RDL = Reportable Detection Limit								

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BEY850	BEY851		BEY852		BEY853		
Sampling Date		2022/10/18 08:30	2022/10/18 08:35		2022/10/18 08:40		2022/10/18 09:10		
COC Number		678043-03-01	678043-03-01		678043-03-01		678043-03-01		
	UNITS	CL-3	CL-7	QC Batch	CL-2	QC Batch	SB-2	RDL	QC Batch
Elements									
Total Cadmium (Cd)	ug/L	0.047	0.038	A764355	0.037	A764355	0.56	0.020	A764355
Total Aluminum (Al)	mg/L	0.11	0.097	A766792	0.086	A769199	0.13	0.0030	A766792
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	A766792	<0.00060	A769199	<0.00060	0.00060	A766792
Total Arsenic (As)	mg/L	0.00044	0.00045	A766792	0.00039	A769199	0.00032	0.00020	A766792
Total Barium (Ba)	mg/L	0.011	0.010	A766808	<0.010	A769205	0.016	0.010	A766808
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	A766792	<0.0010	A769199	<0.0010	0.0010	A766792
Total Boron (B)	mg/L	<0.020	<0.020	A766808	<0.020	A769205	<0.020	0.020	A766808
Total Calcium (Ca)	mg/L	12	12	A766808	12	A769205	52	0.30	A766808
Total Chromium (Cr)	mg/L	<0.0010	<0.0010	A766792	<0.0010	A769199	<0.0010	0.0010	A766792
Total Cobalt (Co)	mg/L	<0.00030	<0.00030	A766792	<0.00030	A769199	0.00042	0.00030	A766792
Total Copper (Cu)	mg/L	0.0062	0.0063	A766792	0.0052	A769199	0.013	0.0010	A766792
Total Iron (Fe)	mg/L	0.65	0.64	A766808	0.53	A769205	6.5	0.060	A766808
Total Lead (Pb)	mg/L	<0.00020	<0.00020	A766792	<0.00020	A769199	0.00021	0.00020	A766792
Total Lithium (Li)	mg/L	<0.020	<0.020	A766808	0.029	A769205	<0.020	0.020	A766808
Total Magnesium (Mg)	mg/L	3.4	3.3	A766808	3.2	A769205	8.8	0.20	A766808
Total Manganese (Mn)	mg/L	0.016	0.016	A766808	0.0069	A769205	0.095	0.0040	A766808
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	A766792	<0.00020	A769199	<0.00020	0.00020	A766792
Total Nickel (Ni)	mg/L	0.00062	0.00056	A766792	<0.00050	A769199	0.0014	0.00050	A766792
Total Phosphorus (P)	mg/L	<0.10	<0.10	A766808	<0.10	A769205	<0.10	0.10	A766808
Total Potassium (K)	mg/L	1.6	1.6	A766808	1.5	A769205	4.4	0.30	A766808
Total Selenium (Se)	mg/L	<0.00020	<0.00020	A766792	<0.00020	A769199	<0.00020	0.00020	A766792
Total Silicon (Si)	mg/L	1.1	1.1	A766808	1.0	A769205	1.5	0.50	A766808
Total Silver (Ag)	mg/L	<0.00010	<0.00010	A766792	<0.00010	A769199	<0.00010	0.00010	A766792
Total Sodium (Na)	mg/L	1.9	1.8	A766808	2.0	A769205	2.9	0.50	A766808
Total Strontium (Sr)	mg/L	0.026	0.026	A766808	0.025	A769205	0.054	0.020	A766808
Total Sulphur (S)	mg/L	6.5	6.4	A766808	5.8	A769205	58	0.20	A766808
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	A766792	<0.00020	A769199	<0.00020	0.00020	A766792
Total Tin (Sn)	mg/L	<0.0010	<0.0010	A766792	<0.0010	A769199	<0.0010	0.0010	A766792
Total Titanium (Ti)	mg/L	0.0039	0.0037	A766792	0.0027	A769199	0.0060	0.0010	A766792
Total Uranium (U)	mg/L	<0.00010	<0.00010	A766792	<0.00010	A769199	<0.00010	0.00010	A766792
Total Vanadium (V)	mg/L	<0.0010	<0.0010	A766792	<0.0010	A769199	<0.0010	0.0010	A766792

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BEY850	BEY851		BEY852		BEY853		
Sampling Date		2022/10/18 08:30	2022/10/18 08:35		2022/10/18 08:40		2022/10/18 09:10		
COC Number		678043-03-01	678043-03-01		678043-03-01		678043-03-01		
	UNITS	**CL-3**	**CL-7**	**QC Batch**	**CL-2**	**QC Batch**	**SB-2**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.012	0.013	A766792	0.012	A769199	0.14	0.0030	A766792
RDL = Reportable Detection Limit									

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BEY854		BEY855		BEY877	BEY878		
Sampling Date		2022/10/18 09:20		2022/10/18 09:25		2022/10/18 09:30	2022/10/18 09:35		
COC Number		678043-03-01		678043-03-01		678043-02-01	678043-02-01		
	UNITS	SB-1	QC Batch	CB-1	QC Batch	CB-2	EB-1	RDL	QC Batch
Elements									
Total Cadmium (Cd)	ug/L	0.55	A764355	0.58	A764355	0.56	0.65	0.020	A764355
Total Aluminum (Al)	mg/L	0.19	A766792	0.17	A766080	0.13	0.20	0.0030	A766792
Total Antimony (Sb)	mg/L	<0.00060	A766792	<0.00060	A766080	<0.00060	<0.00060	0.00060	A766792
Total Arsenic (As)	mg/L	0.00027	A766792	0.00024	A766080	0.00024	0.00026	0.00020	A766792
Total Barium (Ba)	mg/L	0.015	A766808	0.015	A766087	0.015	0.016	0.010	A766808
Total Beryllium (Be)	mg/L	<0.0010	A766792	<0.0010	A766080	<0.0010	<0.0010	0.0010	A766792
Total Boron (B)	mg/L	<0.020	A766808	<0.020	A766087	<0.020	<0.020	0.020	A766808
Total Calcium (Ca)	mg/L	50	A766808	49	A766087	51	53	0.30	A766808
Total Chromium (Cr)	mg/L	<0.0010	A766792	<0.0010	A766080	<0.0010	<0.0010	0.0010	A766792
Total Cobalt (Co)	mg/L	0.00039	A766792	0.00043	A766080	0.00035	0.00040	0.00030	A766792
Total Copper (Cu)	mg/L	0.012	A766792	0.014	A766080	0.013	0.015	0.0010	A766792
Total Iron (Fe)	mg/L	5.7	A766808	4.6	A766087	4.7	3.4	0.060	A766808
Total Lead (Pb)	mg/L	0.00021	A766792	<0.00020	A766080	<0.00020	<0.00020	0.00020	A766792
Total Lithium (Li)	mg/L	<0.020	A766808	<0.020	A766087	<0.020	<0.020	0.020	A766808
Total Magnesium (Mg)	mg/L	8.5	A766808	8.1	A766087	8.5	8.8	0.20	A766808
Total Manganese (Mn)	mg/L	0.088	A766808	0.079	A766087	0.081	0.064	0.0040	A766808
Total Molybdenum (Mo)	mg/L	<0.00020	A766792	<0.00020	A766080	<0.00020	<0.00020	0.00020	A766792
Total Nickel (Ni)	mg/L	0.0014	A766792	0.0015	A766080	0.0014	0.0016	0.00050	A766792
Total Phosphorus (P)	mg/L	<0.10	A766808	<0.10	A766087	<0.10	<0.10	0.10	A766808
Total Potassium (K)	mg/L	4.2	A766808	4.0	A766087	4.3	4.3	0.30	A766808
Total Selenium (Se)	mg/L	<0.00020	A766792	<0.00020	A766080	<0.00020	<0.00020	0.00020	A766792
Total Silicon (Si)	mg/L	1.5	A766808	1.4	A766087	1.4	1.4	0.50	A766808
Total Silver (Ag)	mg/L	<0.00010	A766792	<0.00010	A766080	<0.00010	<0.00010	0.00010	A766792
Total Sodium (Na)	mg/L	2.8	A766808	2.9	A766087	2.9	2.9	0.50	A766808
Total Strontium (Sr)	mg/L	0.052	A766808	0.052	A766087	0.053	0.054	0.020	A766808
Total Sulphur (S)	mg/L	55	A766808	52	A766087	55	57	0.20	A766808
Total Thallium (Tl)	mg/L	<0.00020	A766792	<0.00020	A766080	<0.00020	<0.00020	0.00020	A766792
Total Tin (Sn)	mg/L	<0.0010	A766792	<0.0010	A766080	<0.0010	<0.0010	0.0010	A766792
Total Titanium (Ti)	mg/L	0.0062	A766792	0.0082	A766080	0.0057	0.0088	0.0010	A766792
Total Uranium (U)	mg/L	<0.00010	A766792	<0.00010	A766080	<0.00010	<0.00010	0.00010	A766792
Total Vanadium (V)	mg/L	<0.0010	A766792	<0.0010	A766080	<0.0010	<0.0010	0.0010	A766792

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BEY854		BEY855		BEY877	BEY878		
Sampling Date		2022/10/18 09:20		2022/10/18 09:25		2022/10/18 09:30	2022/10/18 09:35		
COC Number		678043-03-01		678043-03-01		678043-02-01	678043-02-01		
	UNITS	**SB-1**	**QC Batch**	**CB-1**	**QC Batch**	**CB-2**	**EB-1**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.14	A766792	0.17	A766080	0.14	0.18	0.0030	A766792
RDL = Reportable Detection Limit									

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BEY879		BEY880		BEY881		
Sampling Date		2022/10/18 09:40		2022/10/18 09:50		2022/10/18 09:55		
COC Number		678043-02-01		678043-02-01		678043-02-01		
	UNITS	EB-2	QC Batch	NB-2	QC Batch	NB-1	RDL	QC Batch
Elements								
Total Cadmium (Cd)	ug/L	0.73	A764355	0.55	A764355	0.57	0.020	A765172
Total Aluminum (Al)	mg/L	0.29	A766080	0.11	A766792	0.11	0.0030	A766080
Total Antimony (Sb)	mg/L	<0.00060	A766080	<0.00060	A766792	<0.00060	0.00060	A766080
Total Arsenic (As)	mg/L	0.00025	A766080	0.00025	A766792	0.00020	0.00020	A766080
Total Barium (Ba)	mg/L	0.017	A766087	0.015	A766808	0.015	0.010	A766087
Total Beryllium (Be)	mg/L	<0.0010	A766080	<0.0010	A766792	<0.0010	0.0010	A766080
Total Boron (B)	mg/L	<0.020	A766087	<0.020	A766808	<0.020	0.020	A766087
Total Calcium (Ca)	mg/L	53	A766087	55	A766808	52	0.30	A766087
Total Chromium (Cr)	mg/L	<0.0010	A766080	<0.0010	A766792	<0.0010	0.0010	A766080
Total Cobalt (Co)	mg/L	0.00045	A766080	0.00041	A766792	0.00038	0.00030	A766080
Total Copper (Cu)	mg/L	0.016	A766080	0.013	A766792	0.012	0.0010	A766080
Total Iron (Fe)	mg/L	2.7	A766087	4.4	A766808	4.2	0.060	A766087
Total Lead (Pb)	mg/L	0.00023	A766080	<0.00020	A766792	<0.00020	0.00020	A766080
Total Lithium (Li)	mg/L	<0.020	A766087	<0.020	A766808	<0.020	0.020	A766087
Total Magnesium (Mg)	mg/L	8.6	A766087	9.0	A766808	8.6	0.20	A766087
Total Manganese (Mn)	mg/L	0.057	A766087	0.093	A766808	0.093	0.0040	A766087
Total Molybdenum (Mo)	mg/L	<0.00020	A766080	<0.00020	A766792	<0.00020	0.00020	A766080
Total Nickel (Ni)	mg/L	0.0019	A766080	0.0013	A766792	0.0013	0.00050	A766080
Total Phosphorus (P)	mg/L	<0.10	A766087	<0.10	A766808	<0.10	0.10	A766087
Total Potassium (K)	mg/L	4.2	A766087	4.3	A766808	4.1	0.30	A766087
Total Selenium (Se)	mg/L	<0.00020	A766080	<0.00020	A766792	<0.00020	0.00020	A766080
Total Silicon (Si)	mg/L	1.5	A766087	1.5	A766808	1.5	0.50	A766087
Total Silver (Ag)	mg/L	<0.00010	A766080	<0.00010	A766792	<0.00010	0.00010	A766080
Total Sodium (Na)	mg/L	3.0	A766087	2.9	A766808	2.9	0.50	A766087
Total Strontium (Sr)	mg/L	0.056	A766087	0.055	A766808	0.055	0.020	A766087
Total Sulphur (S)	mg/L	55	A766087	60	A766808	56	0.20	A766087
Total Thallium (Tl)	mg/L	<0.00020	A766080	<0.00020	A766792	<0.00020	0.00020	A766080
Total Tin (Sn)	mg/L	<0.0010	A766080	<0.0010	A766792	<0.0010	0.0010	A766080
Total Titanium (Ti)	mg/L	0.014	A766080	0.0047	A766792	0.0048	0.0010	A766080
Total Uranium (U)	mg/L	<0.00010	A766080	<0.00010	A766792	<0.00010	0.00010	A766080
Total Vanadium (V)	mg/L	<0.0010	A766080	<0.0010	A766792	<0.0010	0.0010	A766080

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BEY879		BEY880		BEY881		
Sampling Date		2022/10/18 09:40		2022/10/18 09:50		2022/10/18 09:55		
COC Number		678043-02-01		678043-02-01		678043-02-01		
	UNITS	**EB-2**	**QC Batch**	**NB-2**	**QC Batch**	**NB-1**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.20	A766080	0.14	A766792	0.15	0.0030	A766080
RDL = Reportable Detection Limit								

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BEY882		BEY883	BEY884		
Sampling Date		2022/10/18 10:00		2022/10/18 11:10	2022/10/18 10:50		
COC Number		678043-02-01		678043-02-01	678043-02-01		
	UNITS	CAMP LAKE DISCHAREGE	QC Batch	SC-1	SC-2	RDL	QC Batch
Elements							
Total Cadmium (Cd)	ug/L	0.59	A765172	0.22	0.24	0.020	A765172
Total Aluminum (Al)	mg/L	0.13	A766792	0.061	0.065	0.0030	A769199
Total Antimony (Sb)	mg/L	<0.00060	A766792	<0.00060	<0.00060	0.00060	A769199
Total Arsenic (As)	mg/L	0.00023	A766792	0.00041	0.00041	0.00020	A769199
Total Barium (Ba)	mg/L	0.015	A766808	<0.010	<0.010	0.010	A769205
Total Beryllium (Be)	mg/L	<0.0010	A766792	<0.0010	<0.0010	0.0010	A769199
Total Boron (B)	mg/L	<0.020	A766808	<0.020	<0.020	0.020	A769205
Total Calcium (Ca)	mg/L	55	A766808	9.0	8.5	0.30	A769205
Total Chromium (Cr)	mg/L	<0.0010	A766792	<0.0010	<0.0010	0.0010	A769199
Total Cobalt (Co)	mg/L	0.00039	A766792	<0.00030	<0.00030	0.00030	A769199
Total Copper (Cu)	mg/L	0.013	A766792	0.0073	0.0079	0.0010	A769199
Total Iron (Fe)	mg/L	4.3	A766808	0.24	0.24	0.060	A769205
Total Lead (Pb)	mg/L	<0.00020	A766792	<0.00020	<0.00020	0.00020	A769199
Total Lithium (Li)	mg/L	<0.020	A766808	0.027	<0.020	0.020	A769205
Total Magnesium (Mg)	mg/L	8.9	A766808	2.8	2.6	0.20	A769205
Total Manganese (Mn)	mg/L	0.099	A766808	0.036	0.039	0.0040	A769205
Total Molybdenum (Mo)	mg/L	<0.00020	A766792	<0.00020	<0.00020	0.00020	A769199
Total Nickel (Ni)	mg/L	0.0020	A766792	0.00051	0.00055	0.00050	A769199
Total Phosphorus (P)	mg/L	<0.10	A766808	<0.10	<0.10	0.10	A769205
Total Potassium (K)	mg/L	4.3	A766808	1.4	1.3	0.30	A769205
Total Selenium (Se)	mg/L	<0.00020	A766792	<0.00020	<0.00020	0.00020	A769199
Total Silicon (Si)	mg/L	1.5	A766808	1.4	1.4	0.50	A769205
Total Silver (Ag)	mg/L	<0.00010	A766792	<0.00010	<0.00010	0.00010	A769199
Total Sodium (Na)	mg/L	2.8	A766808	2.2	2.0	0.50	A769205
Total Strontium (Sr)	mg/L	0.054	A766808	0.022	0.020	0.020	A769205
Total Sulphur (S)	mg/L	59	A766808	1.7	1.5	0.20	A769205
Total Thallium (Tl)	mg/L	<0.00020	A766792	<0.00020	<0.00020	0.00020	A769199
Total Tin (Sn)	mg/L	<0.0010	A766792	<0.0010	<0.0010	0.0010	A769199
Total Titanium (Ti)	mg/L	0.0069	A766792	0.0015	0.0021	0.0010	A769199
Total Uranium (U)	mg/L	<0.00010	A766792	<0.00010	<0.00010	0.00010	A769199
Total Vanadium (V)	mg/L	<0.0010	A766792	<0.0010	<0.0010	0.0010	A769199
RDL = Reportable Detection Limit							

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BEY882		BEY883	BEY884		
Sampling Date		2022/10/18 10:00		2022/10/18 11:10	2022/10/18 10:50		
COC Number		678043-02-01		678043-02-01	678043-02-01		
	UNITS	**CAMP LAKE DISCHAREGE**	**QC Batch**	**SC-1**	**SC-2**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.14	A766792	0.077	0.078	0.0030	A769199
RDL = Reportable Detection Limit							

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BEY884			BEY885	BEY886	BEY889		
Sampling Date		2022/10/18 10:50			2022/10/18 10:40	2022/10/18 10:30	2022/10/18 17:10		
COC Number		678043-02-01			678043-02-01	678043-02-01	678043-01-01		
	UNITS	SC-2 Lab-Dup	RDL	QC Batch	SC-3	SC-4	SW-104	RDL	QC Batch
Elements									
Total Cadmium (Cd)	ug/L				0.077	0.029	0.55	0.020	A765172
Total Aluminum (Al)	mg/L	0.062	0.0030	A769199	0.061	0.065	0.16	0.0030	A769199
Total Antimony (Sb)	mg/L	<0.00060	0.00060	A769199	<0.00060	<0.00060	<0.00060	0.00060	A769199
Total Arsenic (As)	mg/L	0.00042	0.00020	A769199	0.00036	0.00052	0.00025	0.00020	A769199
Total Barium (Ba)	mg/L	<0.010	0.010	A769205	<0.010	<0.010	<0.010	0.010	A769205
Total Beryllium (Be)	mg/L	<0.0010	0.0010	A769199	<0.0010	<0.0010	<0.0010	0.0010	A769199
Total Boron (B)	mg/L	<0.020	0.020	A769205	<0.020	<0.020	<0.020	0.020	A769205
Total Calcium (Ca)	mg/L	8.6	0.30	A769205	8.3	8.4	51	0.30	A769205
Total Chromium (Cr)	mg/L	<0.0010	0.0010	A769199	<0.0010	<0.0010	<0.0010	0.0010	A769199
Total Cobalt (Co)	mg/L	0.00031	0.00030	A769199	<0.00030	<0.00030	0.00037	0.00030	A769199
Total Copper (Cu)	mg/L	0.0083	0.0010	A769199	0.0043	0.0035	0.012	0.0010	A769199
Total Iron (Fe)	mg/L	0.24	0.060	A769205	0.22	0.28	5.9	0.060	A769205
Total Lead (Pb)	mg/L	0.00022	0.00020	A769199	<0.00020	<0.00020	0.00026	0.00020	A769199
Total Lithium (Li)	mg/L	<0.020	0.020	A769205	0.029	<0.020	<0.020	0.020	A769205
Total Magnesium (Mg)	mg/L	2.7	0.20	A769205	2.5	2.6	8.5	0.20	A769205
Total Manganese (Mn)	mg/L	0.040	0.0040	A769205	0.025	0.021	0.082	0.0040	A769205
Total Molybdenum (Mo)	mg/L	<0.00020	0.00020	A769199	<0.00020	<0.00020	<0.00020	0.00020	A769199
Total Nickel (Ni)	mg/L	0.00057	0.00050	A769199	<0.00050	0.00065	0.0013	0.00050	A769199
Total Phosphorus (P)	mg/L	<0.10	0.10	A769205	<0.10	<0.10	<0.10	0.10	A769205
Total Potassium (K)	mg/L	1.3	0.30	A769205	1.3	1.3	4.1	0.30	A769205
Total Selenium (Se)	mg/L	<0.00020	0.00020	A769199	<0.00020	<0.00020	<0.00020	0.00020	A769199
Total Silicon (Si)	mg/L	1.4	0.50	A769205	1.4	1.4	1.5	0.50	A769205
Total Silver (Ag)	mg/L	<0.00010	0.00010	A769199	<0.00010	<0.00010	<0.00010	0.00010	A769199
Total Sodium (Na)	mg/L	2.0	0.50	A769205	1.5	1.6	3.0	0.50	A769205
Total Strontium (Sr)	mg/L	0.021	0.020	A769205	0.020	0.021	0.050	0.020	A769205
Total Sulphur (S)	mg/L	1.6	0.20	A769205	1.3	1.2	55	0.20	A769205
Total Thallium (Tl)	mg/L	<0.00020	0.00020	A769199	<0.00020	<0.00020	<0.00020	0.00020	A769199
Total Tin (Sn)	mg/L	<0.0010	0.0010	A769199	<0.0010	<0.0010	<0.0010	0.0010	A769199
Total Titanium (Ti)	mg/L	0.0018	0.0010	A769199	0.0042	0.0023	0.0085	0.0010	A769199
Total Uranium (U)	mg/L	<0.00010	0.00010	A769199	<0.00010	<0.00010	<0.00010	0.00010	A769199
Total Vanadium (V)	mg/L	<0.0010	0.0010	A769199	<0.0010	<0.0010	<0.0010	0.0010	A769199

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BEY884			BEY885	BEY886	BEY889		
Sampling Date		2022/10/18 10:50			2022/10/18 10:40	2022/10/18 10:30	2022/10/18 17:10		
COC Number		678043-02-01			678043-02-01	678043-02-01	678043-01-01		
	UNITS	**SC-2 Lab-Dup**	**RDL**	**QC Batch**	**SC-3**	**SC-4**	**SW-104**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.079	0.0030	A769199	0.023	0.0057	0.15	0.0030	A769199

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BEY890		BEY891		BEY892		BEY893		
Sampling Date		2022/10/18 17:00		2022/10/18 10:55		2022/10/18		2022/10/18 11:00		
COC Number		678043-01-01		678043-01-01		678043-01-01		678043-01-01		
	UNITS	SW-119	QC Batch	SC-5	QC Batch	TRIP BLANK	QC Batch	SC-6	RDL	QC Batch
Elements										
Total Cadmium (Cd)	ug/L	0.025	A765172	0.031	A765172	<0.020	A765172	<0.020	0.020	A765172
Total Aluminum (Al)	mg/L	0.061	A766080	0.055	A769199	0.012	A766792	0.058	0.0030	A766080
Total Antimony (Sb)	mg/L	<0.00060	A766080	<0.00060	A769199	<0.00060	A766792	<0.00060	0.00060	A766080
Total Arsenic (As)	mg/L	0.00036	A766080	0.00037	A769199	<0.00020	A766792	0.00043	0.00020	A766080
Total Barium (Ba)	mg/L	<0.010	A766087	<0.010	A769205	<0.010	A766808	<0.010	0.010	A766087
Total Beryllium (Be)	mg/L	<0.0010	A766080	<0.0010	A769199	<0.0010	A766792	<0.0010	0.0010	A766080
Total Boron (B)	mg/L	<0.020	A766087	<0.020	A769205	<0.020	A766808	<0.020	0.020	A766087
Total Calcium (Ca)	mg/L	7.7	A766087	8.2	A769205	<0.30	A766808	7.5	0.30	A766087
Total Chromium (Cr)	mg/L	<0.0010	A766080	<0.0010	A769199	<0.0010	A766792	<0.0010	0.0010	A766080
Total Cobalt (Co)	mg/L	<0.00030	A766080	<0.00030	A769199	<0.00030	A766792	<0.00030	0.00030	A766080
Total Copper (Cu)	mg/L	0.0033	A766080	0.0034	A769199	<0.0010	A766792	0.0020	0.0010	A766080
Total Iron (Fe)	mg/L	0.24	A766087	0.19	A769205	<0.060	A766808	0.15	0.060	A766087
Total Lead (Pb)	mg/L	<0.00020	A766080	<0.00020	A769199	<0.00020	A766792	<0.00020	0.00020	A766080
Total Lithium (Li)	mg/L	<0.020	A766087	0.030	A769205	<0.020	A766808	<0.020	0.020	A766087
Total Magnesium (Mg)	mg/L	2.5	A766087	2.5	A769205	<0.20	A766808	2.4	0.20	A766087
Total Manganese (Mn)	mg/L	0.028	A766087	0.018	A769205	<0.0040	A766808	0.0097	0.0040	A766087
Total Molybdenum (Mo)	mg/L	<0.00020	A766080	<0.00020	A769199	<0.00020	A766792	<0.00020	0.00020	A766080
Total Nickel (Ni)	mg/L	0.00061	A766080	<0.00050	A769199	<0.00050	A766792	0.00052	0.00050	A766080
Total Phosphorus (P)	mg/L	<0.10	A766087	<0.10	A769205	<0.10	A766808	<0.10	0.10	A766087
Total Potassium (K)	mg/L	1.2	A766087	1.3	A769205	<0.30	A766808	1.2	0.30	A766087
Total Selenium (Se)	mg/L	<0.00020	A766080	<0.00020	A769199	<0.00020	A766792	<0.00020	0.00020	A766080
Total Silicon (Si)	mg/L	1.3	A766087	1.3	A769205	<0.50	A766808	1.2	0.50	A766087
Total Silver (Ag)	mg/L	<0.00010	A766080	<0.00010	A769199	<0.00010	A766792	<0.00010	0.00010	A766080
Total Sodium (Na)	mg/L	1.5	A766087	1.6	A769205	<0.50	A766808	1.5	0.50	A766087
Total Strontium (Sr)	mg/L	<0.020	A766087	<0.020	A769205	<0.020	A766808	<0.020	0.020	A766087
Total Sulphur (S)	mg/L	1.2	A766087	1.1	A769205	<0.20	A766808	1.1	0.20	A766087
Total Thallium (Tl)	mg/L	<0.00020	A766080	<0.00020	A769199	<0.00020	A766792	<0.00020	0.00020	A766080
Total Tin (Sn)	mg/L	<0.0010	A766080	<0.0010	A769199	<0.0010	A766792	<0.0010	0.0010	A766080
Total Titanium (Ti)	mg/L	0.0023	A766080	0.0018	A769199	<0.0010	A766792	0.0019	0.0010	A766080
Total Uranium (U)	mg/L	<0.00010	A766080	<0.00010	A769199	<0.00010	A766792	<0.00010	0.00010	A766080
Total Vanadium (V)	mg/L	<0.0010	A766080	<0.0010	A769199	<0.0010	A766792	<0.0010	0.0010	A766080

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BEY890		BEY891		BEY892		BEY893		
Sampling Date		2022/10/18 17:00		2022/10/18 10:55		2022/10/18		2022/10/18 11:00		
COC Number		678043-01-01		678043-01-01		678043-01-01		678043-01-01		
	UNITS	SW-119	QC Batch	SC-5	QC Batch	TRIP BLANK	QC Batch	SC-6	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0040	A766080	0.0035	A769199	<0.0030	A766792	<0.0030	0.0030	A766080
RDL = Reportable Detection Limit										

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BEY893		
Sampling Date		2022/10/18 11:00		
COC Number		678043-01-01		
	UNITS	SC-6 Lab-Dup	RDL	QC Batch
Elements				
Total Aluminum (Al)	mg/L	0.054	0.0030	A766080
Total Antimony (Sb)	mg/L	<0.00060	0.00060	A766080
Total Arsenic (As)	mg/L	0.00040	0.00020	A766080
Total Barium (Ba)	mg/L	<0.010	0.010	A766087
Total Beryllium (Be)	mg/L	<0.0010	0.0010	A766080
Total Boron (B)	mg/L	<0.020	0.020	A766087
Total Calcium (Ca)	mg/L	7.2	0.30	A766087
Total Chromium (Cr)	mg/L	<0.0010	0.0010	A766080
Total Cobalt (Co)	mg/L	<0.00030	0.00030	A766080
Total Copper (Cu)	mg/L	0.0017	0.0010	A766080
Total Iron (Fe)	mg/L	0.15	0.060	A766087
Total Lead (Pb)	mg/L	<0.00020	0.00020	A766080
Total Lithium (Li)	mg/L	<0.020	0.020	A766087
Total Magnesium (Mg)	mg/L	2.3	0.20	A766087
Total Manganese (Mn)	mg/L	0.0092	0.0040	A766087
Total Molybdenum (Mo)	mg/L	<0.00020	0.00020	A766080
Total Nickel (Ni)	mg/L	0.00051	0.00050	A766080
Total Phosphorus (P)	mg/L	<0.10	0.10	A766087
Total Potassium (K)	mg/L	1.1	0.30	A766087
Total Selenium (Se)	mg/L	<0.00020	0.00020	A766080
Total Silicon (Si)	mg/L	1.2	0.50	A766087
Total Silver (Ag)	mg/L	<0.00010	0.00010	A766080
Total Sodium (Na)	mg/L	1.4	0.50	A766087
Total Strontium (Sr)	mg/L	<0.020	0.020	A766087
Total Sulphur (S)	mg/L	1.1	0.20	A766087
Total Thallium (Tl)	mg/L	<0.00020	0.00020	A766080
Total Tin (Sn)	mg/L	<0.0010	0.0010	A766080
Total Titanium (Ti)	mg/L	0.0020	0.0010	A766080
Total Uranium (U)	mg/L	<0.00010	0.00010	A766080
Total Vanadium (V)	mg/L	<0.0010	0.0010	A766080
Total Zinc (Zn)	mg/L	<0.0030	0.0030	A766080

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BEY846	BEY847		BEY848		BEY849		
Sampling Date		2022/10/18 08:05	2022/10/18 08:15		2022/10/18 08:20		2022/10/18 08:25		
COC Number		678043-03-01	678043-03-01		678043-03-01		678043-03-01		
	UNITS	CL-6	CL-5	RDL	CL-4	RDL	CL-8	RDL	QC Batch
Calculated Parameters									
Hardness (CaCO3)	mg/L	40	42	0.50	42	0.50	44	0.50	A764987
Total Hardness (CaCO3)	mg/L	39.2	39.3	0.50	43.7	0.50	44.2	0.50	A765175
Misc. Inorganics									
pH	pH	7.09	7.23	N/A	7.15	N/A	7.13	N/A	A768547
Total Suspended Solids	mg/L	<1.0	1.3	1.0	1.2	0.97	<1.0	1.0	A770932
Anions									
Alkalinity (PP as CaCO3)	mg/L	<1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	A768546
Alkalinity (Total as CaCO3)	mg/L	27	27	1.0	28	1.0	27	1.0	A768546
Bicarbonate (HCO3)	mg/L	33	33	1.0	35	1.0	33	1.0	A768546
Carbonate (CO3)	mg/L	<1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	A768546
Hydroxide (OH)	mg/L	<1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	A768546
Physical Properties									
Turbidity	NTU	3.8	4.6	0.10	4.7	0.10	4.0	0.10	A766075

RDL = Reportable Detection Limit
N/A = Not Applicable

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Bureau Veritas Job #: C282526
Report Date: 2022/10/27

KGS Group
Client Project #: 21-1357-005
Sampler Initials: IH

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BEY850		BEY851			BEY852			BEY853		
Sampling Date		2022/10/18 08:30		2022/10/18 08:35			2022/10/18 08:40			2022/10/18 09:10		
COC Number		678043-03-01		678043-03-01			678043-03-01			678043-03-01		
	UNITS	CL-3	RDL	CL-7	RDL	QC Batch	CL-2	RDL	QC Batch	SB-2	RDL	QC Batch
Calculated Parameters												
Hardness (CaCO3)	mg/L	43	0.50	44	0.50	A764987	43	0.50	A764987	160	0.50	A764987
Total Hardness (CaCO3)	mg/L	44.9	0.50	44.0	0.50	A765175	43.4	0.50	A765175	166	0.50	A765175
Misc. Inorganics												
pH	pH	7.20	N/A	7.19	N/A	A771255	7.27	N/A	A771255	4.87	N/A	A771255
Total Suspended Solids	mg/L	<0.99	0.99	<1.0	1.0	A770932	<0.99	0.99	A770959	7.9	1.0	A770942
Anions												
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	<1.0	1.0	A771258	<1.0	1.0	A771258	<1.0	1.0	A771258
Alkalinity (Total as CaCO3)	mg/L	25	1.0	25	1.0	A771258	25	1.0	A771258	<1.0	1.0	A771258
Bicarbonate (HCO3)	mg/L	30	1.0	31	1.0	A771258	31	1.0	A771258	<1.0	1.0	A771258
Carbonate (CO3)	mg/L	<1.0	1.0	<1.0	1.0	A771258	<1.0	1.0	A771258	<1.0	1.0	A771258
Hydroxide (OH)	mg/L	<1.0	1.0	<1.0	1.0	A771258	<1.0	1.0	A771258	<1.0	1.0	A771258
Physical Properties												
Turbidity	NTU	4.3	0.10	4.1	0.10	A766075	3.7	0.10	A766075	42 (1)	0.20	A766075

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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Bureau Veritas Job #: C282526
Report Date: 2022/10/27

KGS Group
Client Project #: 21-1357-005
Sampler Initials: IH

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BEY853			BEY854	BEY855		BEY877		
Sampling Date		2022/10/18 09:10			2022/10/18 09:20	2022/10/18 09:25		2022/10/18 09:30		
COC Number		678043-03-01			678043-03-01	678043-03-01		678043-02-01		
	UNITS	SB-2 Lab-Dup	RDL	QC Batch	SB-1	CB-1	QC Batch	CB-2	RDL	QC Batch
Calculated Parameters										
Hardness (CaCO3)	mg/L				160	180	A764987	170	0.50	A764987
Total Hardness (CaCO3)	mg/L				160	155	A765175	162	0.50	A765175
Misc. Inorganics										
pH	pH				5.05	5.08	A771255	5.54	N/A	A768547
Total Suspended Solids	mg/L	6.3	1.0	A770942	6.8	6.0	A770942	5.1	1.0	A770942
Anions										
Alkalinity (PP as CaCO3)	mg/L				<1.0	<1.0	A771258	<1.0	1.0	A768546
Alkalinity (Total as CaCO3)	mg/L				<1.0	<1.0	A771258	<1.0	1.0	A768546
Bicarbonate (HCO3)	mg/L				<1.0	<1.0	A771258	<1.0	1.0	A768546
Carbonate (CO3)	mg/L				<1.0	<1.0	A771258	<1.0	1.0	A768546
Hydroxide (OH)	mg/L				<1.0	<1.0	A771258	<1.0	1.0	A768546
Physical Properties										
Turbidity	NTU				41 (1)	37 (1)	A766075	35 (1)	0.20	A766075

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BEY878		BEY879			BEY879		
Sampling Date		2022/10/18 09:35		2022/10/18 09:40			2022/10/18 09:40		
COC Number		678043-02-01		678043-02-01			678043-02-01		
	UNITS	EB-1	QC Batch	EB-2	RDL	QC Batch	EB-2 Lab-Dup	RDL	QC Batch
Calculated Parameters									
Hardness (CaCO3)	mg/L	160	A764987	180	0.50	A764987			
Total Hardness (CaCO3)	mg/L	169	A765175	169	0.50	A765175			
Misc. Inorganics									
pH	pH	5.82	A771255	6.26	N/A	A768547	6.37	N/A	A768547
Total Suspended Solids	mg/L	5.4	A770942	6.1	1.0	A770942			
Anions									
Alkalinity (PP as CaCO3)	mg/L	<1.0	A771258	<1.0	1.0	A768546	<1.0	1.0	A768546
Alkalinity (Total as CaCO3)	mg/L	1.6	A771258	3.3	1.0	A768546	3.7	1.0	A768546
Bicarbonate (HCO3)	mg/L	1.9	A771258	4.0	1.0	A768546	4.5	1.0	A768546
Carbonate (CO3)	mg/L	<1.0	A771258	<1.0	1.0	A768546	<1.0	1.0	A768546
Hydroxide (OH)	mg/L	<1.0	A771258	<1.0	1.0	A768546	<1.0	1.0	A768546
Physical Properties									
Turbidity	NTU	29 (1)	A766075	24 (1)	0.20	A766075			

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BEY880			BEY881			BEY881		
Sampling Date		2022/10/18 09:50			2022/10/18 09:55			2022/10/18 09:55		
COC Number		678043-02-01			678043-02-01			678043-02-01		
	UNITS	NB-2	RDL	QC Batch	NB-1	RDL	QC Batch	NB-1 Lab-Dup	RDL	QC Batch
Calculated Parameters										
Hardness (CaCO3)	mg/L	170	0.50	A764987	170	0.50	A764987			
Total Hardness (CaCO3)	mg/L	175	0.50	A765175	166	0.50	A765175			
Misc. Inorganics										
pH	pH	5.67	N/A	A768547	5.56	N/A	A768547			
Total Suspended Solids	mg/L	3.8	1.0	A770942	5.4	1.0	A770942			
Anions										
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	A768546	<1.0	1.0	A768546			
Alkalinity (Total as CaCO3)	mg/L	<1.0	1.0	A768546	<1.0	1.0	A768546			
Bicarbonate (HCO3)	mg/L	<1.0	1.0	A768546	<1.0	1.0	A768546			
Carbonate (CO3)	mg/L	<1.0	1.0	A768546	<1.0	1.0	A768546			
Hydroxide (OH)	mg/L	<1.0	1.0	A768546	<1.0	1.0	A768546			
Physical Properties										
Turbidity	NTU	30	0.10	A767384	34 (1)	0.20	A766085	34 (1)	0.20	A766085

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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Bureau Veritas Job #: C282526
Report Date: 2022/10/27

KGS Group
Client Project #: 21-1357-005
Sampler Initials: IH

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BEY882		BEY883	BEY884		BEY885		
Sampling Date		2022/10/18 10:00		2022/10/18 11:10	2022/10/18 10:50		2022/10/18 10:40		
COC Number		678043-02-01		678043-02-01	678043-02-01		678043-02-01		
	UNITS	CAMP LAKE DISCHAREGE	RDL	SC-1	SC-2	QC Batch	SC-3	RDL	QC Batch
Calculated Parameters									
Hardness (CaCO3)	mg/L	180	0.50	32	33	A765174	31	0.50	A765174
Total Hardness (CaCO3)	mg/L	173	0.50	33.9	31.9	A765175	31.1	0.50	A765175
Misc. Inorganics									
pH	pH	5.68	N/A	7.05	7.06	A768547	7.12	N/A	A771255
Total Suspended Solids	mg/L	3.0	1.0	1.6	1.7	A770942	<1.0	1.0	A770942
Anions									
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	<1.0	<1.0	A768546	<1.0	1.0	A771258
Alkalinity (Total as CaCO3)	mg/L	<1.0	1.0	26	28	A768546	27	1.0	A771258
Bicarbonate (HCO3)	mg/L	<1.0	1.0	31	34	A768546	33	1.0	A771258
Carbonate (CO3)	mg/L	<1.0	1.0	<1.0	<1.0	A768546	<1.0	1.0	A771258
Hydroxide (OH)	mg/L	<1.0	1.0	<1.0	<1.0	A768546	<1.0	1.0	A771258
Physical Properties									
Turbidity	NTU	33 (1)	0.20	1.9	1.8	A766085	1.9	0.10	A766085

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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Bureau Veritas Job #: C282526
Report Date: 2022/10/27

KGS Group
Client Project #: 21-1357-005
Sampler Initials: IH

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BEY885			BEY886		BEY889		BEY890		
Sampling Date		2022/10/18 10:40			2022/10/18 10:30		2022/10/18 17:10		2022/10/18 17:00		
COC Number		678043-02-01			678043-02-01		678043-01-01		678043-01-01		
	UNITS	SC-3 Lab-Dup	RDL	QC Batch	SC-4	RDL	SW-104	RDL	SW-119	RDL	QC Batch
Calculated Parameters											
Hardness (CaCO3)	mg/L				30	0.50	160	0.50	31	0.50	A765174
Total Hardness (CaCO3)	mg/L				31.6	0.50	163	0.50	29.7	0.50	A765175
Misc. Inorganics											
pH	pH	7.08	N/A	A771255	7.14	N/A	5.10	N/A	7.09	N/A	A768547
Total Suspended Solids	mg/L				<1.0	1.0	6.5	1.0	<1.0	1.0	A770942
Anions											
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	A771258	<1.0	1.0	<1.0	1.0	<1.0	1.0	A768546
Alkalinity (Total as CaCO3)	mg/L	26	1.0	A771258	26	1.0	<1.0	1.0	27	1.0	A768546
Bicarbonate (HCO3)	mg/L	32	1.0	A771258	32	1.0	<1.0	1.0	33	1.0	A768546
Carbonate (CO3)	mg/L	<1.0	1.0	A771258	<1.0	1.0	<1.0	1.0	<1.0	1.0	A768546
Hydroxide (OH)	mg/L	<1.0	1.0	A771258	<1.0	1.0	<1.0	1.0	<1.0	1.0	A768546
Physical Properties											
Turbidity	NTU				1.9	0.10	41 (1)	0.20	2.0	0.10	A766085

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

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RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		BEY891	BEY892	BEY893		
Sampling Date		2022/10/18 10:55	2022/10/18	2022/10/18 11:00		
COC Number		678043-01-01	678043-01-01	678043-01-01		
	UNITS	**SC-5**	**TRIP BLANK**	**SC-6**	**RDL**	**QC Batch**
Calculated Parameters						
Hardness (CaCO3)	mg/L	31	<0.50	31	0.50	A765174
Total Hardness (CaCO3)	mg/L	30.8	<0.50	28.7	0.50	A765175
Misc. Inorganics						
pH	pH	7.11	5.39	7.15	N/A	A768547
Total Suspended Solids	mg/L	<1.0	<1.0	1.0	1.0	A770942
Anions						
Alkalinity (PP as CaCO3)	mg/L	<1.0	<1.0	<1.0	1.0	A768546
Alkalinity (Total as CaCO3)	mg/L	28	<1.0	25	1.0	A768546
Bicarbonate (HCO3)	mg/L	35	<1.0	30	1.0	A768546
Carbonate (CO3)	mg/L	<1.0	<1.0	<1.0	1.0	A768546
Hydroxide (OH)	mg/L	<1.0	<1.0	<1.0	1.0	A768546
Physical Properties						
Turbidity	NTU	2.0	<0.10	1.8	0.10	A766085

RDL = Reportable Detection Limit
N/A = Not Applicable

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	7.5°C
Package 2	4.7°C
Package 3	6.3°C

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A766075	Turbidity	2022/10/21			103	80 - 120	<0.10	NTU	2.3	20
A766080	Total Aluminum (Al)	2022/10/21	96	80 - 120	101	80 - 120	<0.0030	mg/L	7.2	20
A766080	Total Antimony (Sb)	2022/10/21	107	80 - 120	109	80 - 120	<0.00060	mg/L	NC	20
A766080	Total Arsenic (As)	2022/10/21	95	80 - 120	98	80 - 120	<0.00020	mg/L	7.0	20
A766080	Total Beryllium (Be)	2022/10/21	97	80 - 120	96	80 - 120	<0.0010	mg/L	NC	20
A766080	Total Chromium (Cr)	2022/10/21	93	80 - 120	96	80 - 120	<0.0010	mg/L	NC	20
A766080	Total Cobalt (Co)	2022/10/21	91	80 - 120	94	80 - 120	<0.00030	mg/L	NC	20
A766080	Total Copper (Cu)	2022/10/21	91	80 - 120	95	80 - 120	<0.0010	mg/L	16	20
A766080	Total Lead (Pb)	2022/10/21	94	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20
A766080	Total Molybdenum (Mo)	2022/10/21	102	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
A766080	Total Nickel (Ni)	2022/10/21	90	80 - 120	94	80 - 120	<0.00050	mg/L	2.2	20
A766080	Total Selenium (Se)	2022/10/21	100	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
A766080	Total Silver (Ag)	2022/10/21	96	80 - 120	98	80 - 120	<0.00010	mg/L	NC	20
A766080	Total Thallium (Tl)	2022/10/21	95	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
A766080	Total Tin (Sn)	2022/10/21	109	80 - 120	109	80 - 120	<0.0010	mg/L	NC	20
A766080	Total Titanium (Ti)	2022/10/21	97	80 - 120	98	80 - 120	<0.0010	mg/L	5.6	20
A766080	Total Uranium (U)	2022/10/21	97	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
A766080	Total Vanadium (V)	2022/10/21	95	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20
A766080	Total Zinc (Zn)	2022/10/21	93	80 - 120	97	80 - 120	<0.0030	mg/L	NC	20
A766085	Turbidity	2022/10/21			104	80 - 120	<0.10	NTU	0.58 (1)	20
A766087	Total Barium (Ba)	2022/10/22	92	80 - 120	91	80 - 120	<0.010	mg/L	NC	20
A766087	Total Boron (B)	2022/10/22	97	80 - 120	95	80 - 120	<0.020	mg/L	NC	20
A766087	Total Calcium (Ca)	2022/10/22	NC	80 - 120	92	80 - 120	<0.30	mg/L	4.4	20
A766087	Total Iron (Fe)	2022/10/22	NC	80 - 120	98	80 - 120	<0.060	mg/L	5.4	20
A766087	Total Lithium (Li)	2022/10/22	91	80 - 120	91	80 - 120	<0.020	mg/L	NC	20
A766087	Total Magnesium (Mg)	2022/10/22	96	80 - 120	95	80 - 120	<0.20	mg/L	3.4	20
A766087	Total Manganese (Mn)	2022/10/22	100	80 - 120	99	80 - 120	<0.0040	mg/L	5.3	20
A766087	Total Phosphorus (P)	2022/10/22	96	80 - 120	94	80 - 120	<0.10	mg/L	NC	20
A766087	Total Potassium (K)	2022/10/22	97	80 - 120	96	80 - 120	<0.30	mg/L	4.7	20
A766087	Total Silicon (Si)	2022/10/22	91	80 - 120	91	80 - 120	<0.50	mg/L	3.3	20
A766087	Total Sodium (Na)	2022/10/22	95	80 - 120	94	80 - 120	<0.50	mg/L	3.8	20
A766087	Total Strontium (Sr)	2022/10/22	90	80 - 120	89	80 - 120	<0.020	mg/L	NC	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A766087	Total Sulphur (S)	2022/10/22	95	80 - 120	92	80 - 120	<0.20	mg/L	3.0	20
A766792	Total Aluminum (Al)	2022/10/21	NC	80 - 120	103	80 - 120	<0.0030	mg/L	12	20
A766792	Total Antimony (Sb)	2022/10/21	105	80 - 120	104	80 - 120	<0.00060	mg/L	NC	20
A766792	Total Arsenic (As)	2022/10/21	90	80 - 120	90	80 - 120	<0.00020	mg/L	3.0	20
A766792	Total Beryllium (Be)	2022/10/21	91	80 - 120	95	80 - 120	<0.0010	mg/L	NC	20
A766792	Total Chromium (Cr)	2022/10/21	95	80 - 120	95	80 - 120	<0.0010	mg/L	NC	20
A766792	Total Cobalt (Co)	2022/10/21	93	80 - 120	94	80 - 120	<0.00030	mg/L	NC	20
A766792	Total Copper (Cu)	2022/10/21	91	80 - 120	94	80 - 120	<0.0010	mg/L	NC	20
A766792	Total Lead (Pb)	2022/10/21	96	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
A766792	Total Molybdenum (Mo)	2022/10/21	106	80 - 120	101	80 - 120	<0.00020	mg/L	8.5	20
A766792	Total Nickel (Ni)	2022/10/21	91	80 - 120	93	80 - 120	<0.00050	mg/L	NC	20
A766792	Total Selenium (Se)	2022/10/21	88	80 - 120	89	80 - 120	<0.00020	mg/L	4.9	20
A766792	Total Silver (Ag)	2022/10/21	98	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
A766792	Total Thallium (Tl)	2022/10/21	96	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20
A766792	Total Tin (Sn)	2022/10/21	111	80 - 120	107	80 - 120	<0.0010	mg/L	NC	20
A766792	Total Titanium (Ti)	2022/10/21	99	80 - 120	96	80 - 120	<0.0010	mg/L	NC	20
A766792	Total Uranium (U)	2022/10/21	103	80 - 120	101	80 - 120	<0.00010	mg/L	9.2	20
A766792	Total Vanadium (V)	2022/10/21	98	80 - 120	96	80 - 120	<0.0010	mg/L	NC	20
A766792	Total Zinc (Zn)	2022/10/21	85	80 - 120	86	80 - 120	<0.0030	mg/L	NC	20
A766808	Total Barium (Ba)	2022/10/21	98	80 - 120	97	80 - 120	<0.010	mg/L	1.8	20
A766808	Total Boron (B)	2022/10/21	99	80 - 120	96	80 - 120	<0.020	mg/L	NC	20
A766808	Total Calcium (Ca)	2022/10/21	NC	80 - 120	97	80 - 120	<0.30	mg/L	2.7	20
A766808	Total Iron (Fe)	2022/10/21	112	80 - 120	110	80 - 120	<0.060	mg/L	NC	20
A766808	Total Lithium (Li)	2022/10/21	98	80 - 120	96	80 - 120	<0.020	mg/L	NC	20
A766808	Total Magnesium (Mg)	2022/10/21	105	80 - 120	102	80 - 120	<0.20	mg/L	1.6	20
A766808	Total Manganese (Mn)	2022/10/21	105	80 - 120	102	80 - 120	<0.0040	mg/L	5.2	20
A766808	Total Phosphorus (P)	2022/10/21	103	80 - 120	101	80 - 120	<0.10	mg/L	NC	20
A766808	Total Potassium (K)	2022/10/21	103	80 - 120	101	80 - 120	<0.30	mg/L	7.7	20
A766808	Total Silicon (Si)	2022/10/21	100	80 - 120	98	80 - 120	<0.50	mg/L	2.2	20
A766808	Total Sodium (Na)	2022/10/21	96	80 - 120	94	80 - 120	<0.50	mg/L	2.4	20
A766808	Total Strontium (Sr)	2022/10/21	95	80 - 120	93	80 - 120	<0.020	mg/L	1.5	20
A766808	Total Sulphur (S)	2022/10/21	101	80 - 120	99	80 - 120	<0.20	mg/L	1.6	20

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			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A766843	Dissolved Aluminum (Al)	2022/10/21	100	80 - 120	108	80 - 120	<0.0030	mg/L	NC	20
A766843	Dissolved Antimony (Sb)	2022/10/21	99	80 - 120	100	80 - 120	<0.00060	mg/L	NC	20
A766843	Dissolved Arsenic (As)	2022/10/21	98	80 - 120	97	80 - 120	<0.00020	mg/L	0.12	20
A766843	Dissolved Beryllium (Be)	2022/10/21	109	80 - 120	109	80 - 120	<0.0010	mg/L	NC	20
A766843	Dissolved Chromium (Cr)	2022/10/21	97	80 - 120	99	80 - 120	<0.0010	mg/L	NC	20
A766843	Dissolved Cobalt (Co)	2022/10/21	96	80 - 120	99	80 - 120	<0.00030	mg/L	1.7	20
A766843	Dissolved Copper (Cu)	2022/10/21	93	80 - 120	98	80 - 120	<0.0010	mg/L	NC	20
A766843	Dissolved Lead (Pb)	2022/10/21	94	80 - 120	96	80 - 120	<0.00020	mg/L	NC	20
A766843	Dissolved Molybdenum (Mo)	2022/10/21	98	80 - 120	98	80 - 120	<0.00020	mg/L	4.5	20
A766843	Dissolved Nickel (Ni)	2022/10/21	94	80 - 120	98	80 - 120	<0.00050	mg/L	2.7	20
A766843	Dissolved Selenium (Se)	2022/10/21	102	80 - 120	102	80 - 120	<0.00020	mg/L	11	20
A766843	Dissolved Silver (Ag)	2022/10/21	92	80 - 120	97	80 - 120	<0.00010	mg/L	NC	20
A766843	Dissolved Thallium (Tl)	2022/10/21	98	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20
A766843	Dissolved Tin (Sn)	2022/10/21	100	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20
A766843	Dissolved Titanium (Ti)	2022/10/21	97	80 - 120	103	80 - 120	<0.0010	mg/L	NC	20
A766843	Dissolved Uranium (U)	2022/10/21	98	80 - 120	96	80 - 120	<0.00010	mg/L	3.3	20
A766843	Dissolved Vanadium (V)	2022/10/21	100	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
A766843	Dissolved Zinc (Zn)	2022/10/21	94	80 - 120	95	80 - 120	<0.0030	mg/L	NC	20
A766848	Dissolved Aluminum (Al)	2022/10/21	107	80 - 120	104	80 - 120	<0.0030	mg/L	18	20
A766848	Dissolved Antimony (Sb)	2022/10/21	102	80 - 120	101	80 - 120	<0.00060	mg/L	NC	20
A766848	Dissolved Arsenic (As)	2022/10/21	95	80 - 120	95	80 - 120	<0.00020	mg/L	8.5	20
A766848	Dissolved Beryllium (Be)	2022/10/21	113	80 - 120	109	80 - 120	<0.0010	mg/L	NC	20
A766848	Dissolved Chromium (Cr)	2022/10/21	96	80 - 120	98	80 - 120	<0.0010	mg/L	NC	20
A766848	Dissolved Cobalt (Co)	2022/10/21	96	80 - 120	98	80 - 120	<0.00030	mg/L	1.7	20
A766848	Dissolved Copper (Cu)	2022/10/21	95	80 - 120	97	80 - 120	<0.0010	mg/L	0.98	20
A766848	Dissolved Lead (Pb)	2022/10/21	99	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
A766848	Dissolved Molybdenum (Mo)	2022/10/21	98	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20
A766848	Dissolved Nickel (Ni)	2022/10/21	95	80 - 120	97	80 - 120	<0.00050	mg/L	4.3	20
A766848	Dissolved Selenium (Se)	2022/10/21	99	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
A766848	Dissolved Silver (Ag)	2022/10/21	95	80 - 120	96	80 - 120	<0.00010	mg/L	NC	20
A766848	Dissolved Thallium (Tl)	2022/10/21	101	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
A766848	Dissolved Tin (Sn)	2022/10/21	98	80 - 120	96	80 - 120	<0.0010	mg/L	NC	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A766848	Dissolved Titanium (Ti)	2022/10/21	101	80 - 120	99	80 - 120	<0.0010	mg/L	NC	20
A766848	Dissolved Uranium (U)	2022/10/21	99	80 - 120	97	80 - 120	<0.00010	mg/L	NC	20
A766848	Dissolved Vanadium (V)	2022/10/21	98	80 - 120	98	80 - 120	<0.0010	mg/L	NC	20
A766848	Dissolved Zinc (Zn)	2022/10/21	NC	80 - 120	95	80 - 120	<0.0030	mg/L	3.3	20
A766981	Dissolved Barium (Ba)	2022/10/22	96	80 - 120	96	80 - 120	<0.010	mg/L		
A766981	Dissolved Boron (B)	2022/10/22	98	80 - 120	95	80 - 120	<0.020	mg/L		
A766981	Dissolved Calcium (Ca)	2022/10/22	90	80 - 120	94	80 - 120	<0.30	mg/L	0.082	20
A766981	Dissolved Iron (Fe)	2022/10/22	95	80 - 120	95	80 - 120	<0.060	mg/L	NC	20
A766981	Dissolved Lithium (Li)	2022/10/22	92	80 - 120	92	80 - 120	<0.020	mg/L		
A766981	Dissolved Magnesium (Mg)	2022/10/22	94	80 - 120	96	80 - 120	<0.20	mg/L	0.88	20
A766981	Dissolved Manganese (Mn)	2022/10/22	94	80 - 120	95	80 - 120	<0.0040	mg/L	NC	20
A766981	Dissolved Phosphorus (P)	2022/10/22	96	80 - 120	95	80 - 120	<0.10	mg/L		
A766981	Dissolved Potassium (K)	2022/10/22	97	80 - 120	96	80 - 120	<0.30	mg/L	0.68	20
A766981	Dissolved Silicon (Si)	2022/10/22	86	80 - 120	90	80 - 120	<0.50	mg/L		
A766981	Dissolved Sodium (Na)	2022/10/22	95	80 - 120	94	80 - 120	<0.50	mg/L	0.67	20
A766981	Dissolved Strontium (Sr)	2022/10/22	93	80 - 120	94	80 - 120	<0.020	mg/L		
A766981	Dissolved Sulphur (S)	2022/10/22	98	80 - 120	93	80 - 120	<0.20	mg/L		
A766984	Dissolved Barium (Ba)	2022/10/22	95	80 - 120	97	80 - 120	<0.010	mg/L		
A766984	Dissolved Boron (B)	2022/10/22	100	80 - 120	97	80 - 120	<0.020	mg/L		
A766984	Dissolved Calcium (Ca)	2022/10/22	NC	80 - 120	95	80 - 120	<0.30	mg/L		
A766984	Dissolved Iron (Fe)	2022/10/22	104	80 - 120	99	80 - 120	<0.060	mg/L		
A766984	Dissolved Lithium (Li)	2022/10/22	93	80 - 120	93	80 - 120	<0.020	mg/L		
A766984	Dissolved Magnesium (Mg)	2022/10/22	98	80 - 120	98	80 - 120	<0.20	mg/L		
A766984	Dissolved Manganese (Mn)	2022/10/22	102	80 - 120	99	80 - 120	<0.0040	mg/L		
A766984	Dissolved Phosphorus (P)	2022/10/22	100	80 - 120	96	80 - 120	<0.10	mg/L		
A766984	Dissolved Potassium (K)	2022/10/22	100	80 - 120	98	80 - 120	<0.30	mg/L		
A766984	Dissolved Silicon (Si)	2022/10/22	90	80 - 120	90	80 - 120	<0.50	mg/L		
A766984	Dissolved Sodium (Na)	2022/10/22	NC	80 - 120	95	80 - 120	<0.50	mg/L	2.2	20
A766984	Dissolved Strontium (Sr)	2022/10/22	94	80 - 120	95	80 - 120	<0.020	mg/L		
A766984	Dissolved Sulphur (S)	2022/10/22	102	80 - 120	93	80 - 120	<0.20	mg/L		
A767001	Dissolved Barium (Ba)	2022/10/22	69 (2)	80 - 120	97	80 - 120	<0.010	mg/L		
A767001	Dissolved Boron (B)	2022/10/22	97	80 - 120	98	80 - 120	<0.020	mg/L		

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			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A767001	Dissolved Calcium (Ca)	2022/10/23	NC	80 - 120	94	80 - 120	<0.30	mg/L	18	20
A767001	Dissolved Iron (Fe)	2022/10/23	103	80 - 120	98	80 - 120	<0.060	mg/L	11	20
A767001	Dissolved Lithium (Li)	2022/10/22	93	80 - 120	92	80 - 120	<0.020	mg/L		
A767001	Dissolved Magnesium (Mg)	2022/10/23	NC	80 - 120	97	80 - 120	<0.20	mg/L	0.013	20
A767001	Dissolved Manganese (Mn)	2022/10/23	102	80 - 120	99	80 - 120	<0.0040	mg/L	1.6	20
A767001	Dissolved Phosphorus (P)	2022/10/22	103	80 - 120	96	80 - 120	<0.10	mg/L		
A767001	Dissolved Potassium (K)	2022/10/23	98	80 - 120	97	80 - 120	<0.30	mg/L	19	20
A767001	Dissolved Silicon (Si)	2022/10/22	90	80 - 120	89	80 - 120	<0.50	mg/L		
A767001	Dissolved Sodium (Na)	2022/10/23	NC	80 - 120	94	80 - 120	<0.50	mg/L	0.42	20
A767001	Dissolved Strontium (Sr)	2022/10/22	NC	80 - 120	95	80 - 120	<0.020	mg/L		
A767001	Dissolved Sulphur (S)	2022/10/22	NC	80 - 120	93	80 - 120	<0.20	mg/L		
A767084	Dissolved Barium (Ba)	2022/10/24	81	80 - 120	98	80 - 120	<0.010	mg/L	5.8	20
A767084	Dissolved Boron (B)	2022/10/24	104	80 - 120	93	80 - 120	<0.020	mg/L	NC	20
A767084	Dissolved Calcium (Ca)	2022/10/24	94	80 - 120	102	80 - 120	<0.30	mg/L	2.2	20
A767084	Dissolved Iron (Fe)	2022/10/24	139 (3)	80 - 120	101	80 - 120	<0.060	mg/L	8.6	20
A767084	Dissolved Lithium (Li)	2022/10/24	110	80 - 120	100	80 - 120	<0.020	mg/L	NC	20
A767084	Dissolved Magnesium (Mg)	2022/10/24	95	80 - 120	100	80 - 120	<0.20	mg/L	1.5	20
A767084	Dissolved Manganese (Mn)	2022/10/24	114	80 - 120	99	80 - 120	<0.0040	mg/L	0.75	20
A767084	Dissolved Phosphorus (P)	2022/10/24	116	80 - 120	104	80 - 120	<0.10	mg/L	NC	20
A767084	Dissolved Potassium (K)	2022/10/24	114	80 - 120	100	80 - 120	<0.30	mg/L	3.6	20
A767084	Dissolved Silicon (Si)	2022/10/24	84	80 - 120	95	80 - 120	<0.50	mg/L	0.94	20
A767084	Dissolved Sodium (Na)	2022/10/24	101	80 - 120	97	80 - 120	<0.50	mg/L	2.3	20
A767084	Dissolved Strontium (Sr)	2022/10/24	92	80 - 120	94	80 - 120	<0.020	mg/L	1.0	20
A767084	Dissolved Sulphur (S)	2022/10/24	107	80 - 120	99	80 - 120	<0.20	mg/L	2.0	20
A767384	Turbidity	2022/10/21			104	80 - 120	<0.10	NTU	0.52	20
A768546	Alkalinity (PP as CaCO3)	2022/10/24					<1.0	mg/L	NC	20
A768546	Alkalinity (Total as CaCO3)	2022/10/24			99	80 - 120	<1.0	mg/L	12	20
A768546	Bicarbonate (HCO3)	2022/10/24					<1.0	mg/L	12	20
A768546	Carbonate (CO3)	2022/10/24					<1.0	mg/L	NC	20
A768546	Hydroxide (OH)	2022/10/24					<1.0	mg/L	NC	20
A768547	pH	2022/10/24			100	97 - 103			1.8	N/A
A769199	Total Aluminum (Al)	2022/10/24	105	80 - 120	102	80 - 120	<0.0030	mg/L	4.5	20

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			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A769199	Total Antimony (Sb)	2022/10/24	105	80 - 120	103	80 - 120	<0.00060	mg/L	NC	20
A769199	Total Arsenic (As)	2022/10/24	95	80 - 120	94	80 - 120	<0.00020	mg/L	0.65	20
A769199	Total Beryllium (Be)	2022/10/24	89	80 - 120	86	80 - 120	<0.0010	mg/L	NC	20
A769199	Total Chromium (Cr)	2022/10/24	92	80 - 120	91	80 - 120	<0.0010	mg/L	NC	20
A769199	Total Cobalt (Co)	2022/10/24	95	80 - 120	93	80 - 120	<0.00030	mg/L	3.5	20
A769199	Total Copper (Cu)	2022/10/24	96	80 - 120	94	80 - 120	<0.0010	mg/L	5.1	20
A769199	Total Lead (Pb)	2022/10/24	100	80 - 120	99	80 - 120	<0.00020	mg/L	9.1	20
A769199	Total Molybdenum (Mo)	2022/10/24	101	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20
A769199	Total Nickel (Ni)	2022/10/24	94	80 - 120	93	80 - 120	<0.00050	mg/L	4.5	20
A769199	Total Selenium (Se)	2022/10/24	100	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
A769199	Total Silver (Ag)	2022/10/24	99	80 - 120	96	80 - 120	<0.00010	mg/L	NC	20
A769199	Total Thallium (Tl)	2022/10/24	105	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
A769199	Total Tin (Sn)	2022/10/24	107	80 - 120	103	80 - 120	<0.0010	mg/L	NC	20
A769199	Total Titanium (Ti)	2022/10/24	91	80 - 120	90	80 - 120	<0.0010	mg/L	12	20
A769199	Total Uranium (U)	2022/10/24	100	80 - 120	97	80 - 120	<0.00010	mg/L	NC	20
A769199	Total Vanadium (V)	2022/10/24	95	80 - 120	92	80 - 120	<0.0010	mg/L	NC	20
A769199	Total Zinc (Zn)	2022/10/24	95	80 - 120	95	80 - 120	<0.0030	mg/L	0.89	20
A769205	Total Barium (Ba)	2022/10/24	108	80 - 120	105	80 - 120	<0.010	mg/L	NC	20
A769205	Total Boron (B)	2022/10/24	99	80 - 120	96	80 - 120	<0.020	mg/L	NC	20
A769205	Total Calcium (Ca)	2022/10/24	103	80 - 120	100	80 - 120	<0.30	mg/L	1.4	20
A769205	Total Iron (Fe)	2022/10/24	105	80 - 120	98	80 - 120	<0.060	mg/L	0.33	20
A769205	Total Lithium (Li)	2022/10/24	104	80 - 120	101	80 - 120	<0.020	mg/L	NC	20
A769205	Total Magnesium (Mg)	2022/10/24	105	80 - 120	102	80 - 120	<0.20	mg/L	2.3	20
A769205	Total Manganese (Mn)	2022/10/24	103	80 - 120	99	80 - 120	<0.0040	mg/L	2.1	20
A769205	Total Phosphorus (P)	2022/10/24	100	80 - 120	98	80 - 120	<0.10	mg/L	NC	20
A769205	Total Potassium (K)	2022/10/24	102	80 - 120	99	80 - 120	<0.30	mg/L	1.2	20
A769205	Total Silicon (Si)	2022/10/24	100	80 - 120	99	80 - 120	<0.50	mg/L	0.24	20
A769205	Total Sodium (Na)	2022/10/24	101	80 - 120	98	80 - 120	<0.50	mg/L	1.6	20
A769205	Total Strontium (Sr)	2022/10/24	96	80 - 120	95	80 - 120	<0.020	mg/L	3.2	20
A769205	Total Sulphur (S)	2022/10/24	98	80 - 120	95	80 - 120	<0.20	mg/L	3.3	20
A770932	Total Suspended Solids	2022/10/25	102	80 - 120	95	80 - 120	<1.0	mg/L	0.26	20
A770942	Total Suspended Solids	2022/10/25	96	80 - 120	96	80 - 120	<1.0	mg/L	NC	20

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A770959	Total Suspended Solids	2022/10/25	96	80 - 120	95	80 - 120	<0.99	mg/L	NC	20
A771255	pH	2022/10/25			100	97 - 103			0.54	N/A
A771258	Alkalinity (PP as CaCO3)	2022/10/25					<1.0	mg/L	NC	20
A771258	Alkalinity (Total as CaCO3)	2022/10/25			98	80 - 120	<1.0	mg/L	3.7	20
A771258	Bicarbonate (HCO3)	2022/10/25					<1.0	mg/L	3.7	20
A771258	Carbonate (CO3)	2022/10/25					<1.0	mg/L	NC	20
A771258	Hydroxide (OH)	2022/10/25					<1.0	mg/L	NC	20

N/A = Not Applicable

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

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

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

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

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

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

(2) Matrix spike exceeds acceptance limits due to matrix interference.

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

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

VALIDATION SIGNATURE PAGE

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

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

Bureau Veritas Proprietary Software
Logiciel Propriétaire de Bureau Veritas

Automated Statchk

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Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvna.com

642

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#7500 KGS Group	Company Name:	KGS Group	Quotation #:	C20090	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Ganga Atmuri/Ed Collins	P.O. #:		C282526	678043
Address:	3rd Floor 865 Waverly St Winnipeg MB R3T 5T4	Address:	865 Waverley St., 3rd Floor Winnipeg, MB R3T 5T4	Project:	21-1357-005	COC #:	Project Manager:
Tel:	(204) 896-1209 Fax:	Tel:	(204) 896-1209 Fax:	Project Name:		C#678043-03-01	Janelle Kochan
Email:	payables@kgsgroup.com	Email:	gatmuri@kgsgroup.com,ecollins@kgsgroup.com	Site #:	OAM - Sherridon Mine Site		
				Sampled By:	IH/RP		

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☑ Other MWQSOG

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10ºC) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: ☑
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission) ☐
Date Required:
Rush Confirmation Number:
(call lab for #)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	pH @25°C	Alkalinity @25C (pp, total), CO3,HCO3,OH	Total Suspended Solids (NFR)	Turbidity	Regulated Metals (CCME/AT1) - Total	Reg. Metals (CCME/AT1) – Diss. Lab Filt.	Hardness	Hardness Total (calculated as CaCO3)			# of Bottles	Comments
1		CL-6	22/10/18	8:05	SW	N	✓	✓	✓	✓	✓	✓	✓	✓			4	
2		CL-5		8:15		N	✓	✓	✓	✓	✓	✓	✓	✓			4	
3		CL-4		8:20		N	✓	✓	✓	✓	✓	✓	✓	✓			4	
4		CL-8		8:25		N	✓	✓	✓	✓	✓	✓	✓	✓			4	
5		CL-3		8:30		N	✓	✓	✓	✓	✓	✓	✓	✓			4	
6		CL-7		8:35		N	✓	✓	✓	✓	✓	✓	✓	✓			4	
7		CL-2		8:40		N	✓	✓	✓	✓	✓	✓	✓	✓			4	
8		SB-2		9:10		N	✓	✓	✓	✓	✓	✓	✓	✓			4	
9		SB-1		9:20		N	✓	✓	✓	✓	✓	✓	✓	✓			4	
10		CB-1		9:25		N	✓	✓	✓	✓	✓	✓	✓	✓			4	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only: Time Sensitive	Temperature (ºC) on Receipt	Custody Seal Intact on Cooler?
Rachel Fowler	22/10/19	12:10	Ashton Routt AR	2022/10/19	12:15		☐	7.1/7.5/8.0	☐ Yes ☐ No
			BJR JOBAU RAJ	2022/10/20	08:47				

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* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.
** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

MCAL ACTR

LCE-YES

White: Bureau Veritas Yellow: Client

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Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvna.com

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#7500 KGS Group	Company Name:	KGS Group	Quotation #:	C20090	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Ganga Atmuri/Ed Collins	P.O. #:		C8252G	678043
Address:	3rd Floor 865 Waverly St Winnipeg MB R3T 5T4	Address:	865 Waverley St, 3rd Floor Winnipeg MB R3T 5T4	Project:	21-1357-005	COC #:	Project Manager:
Tel:	(204) 896-1209 Fax:	Tel:	(204) 896-1209 Fax:	Project Name:		C#678043-02-01	Janelle Kochan
Email:	payables@kgsgroup.com	Email:	gatmuri@kgsgroup.com,ecollins@kgsgroup.com	Site #:	OAM - Sherridon Mine Site		
				Sampled By:	IH/RP		

Regulatory Criteria:
- [ ] ATI
- [ ] CCME
- [x] Other MWQSOG

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	pH @25°C	Alkalinity @25C (pp, total), CO3,HCO3,OH	Total Suspended Solids (NFR)	Turbidity	Regulated Metals (CCME/AT1) - Total	Reg. Metals (CCME/AT1) – Diss. Lab Filt.	Hardness	Hardness Total (calculated as CaCO3)			# of Bottles	Comments
1		CB-2	22/10/18	9:30	SW	N	✓	✓	✓	✓	✓	✓	✓	✓			4	
2		EB-1		9:35		N	✓	✓	✓	✓	✓	✓	✓	✓			4	
3		EB-2		9:40		N	✓	✓	✓	✓	✓	✓	✓	✓			4	
4		NB-2		9:50		N	✓	✓	✓	✓	✓	✓	✓	✓			4	
5		NB-1		9:55		N	✓	✓	✓	✓	✓	✓	✓	✓			4	
6		Camp Lake Discharge		10:00		N	✓	✓	✓	✓	✓	✓	✓	✓			4	
7		SC-1		11:10		N	✓	✓	✓	✓	✓	✓	✓	✓			4	
8		SC-2		10:50		N	✓	✓	✓	✓	✓	✓	✓	✓			4	
9		SC-3		10:40		N	✓	✓	✓	✓	✓	✓	✓	✓			4	
10		SC-4		10:30		N	✓	✓	✓	✓	✓	✓	✓	✓			4	

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: ✓
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission)
Date Required:
Rush Confirmation Number: *(call lab for #)*

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Rachel Tomlin	22/10/19	12:10	Ashton Kautt AR	2022/10/19	12:15		☐	5.1/4.6/4.5	☐ Yes ☐ No
			Joel Isaac RAW	2022/10/20	08:45			LCE-YES	

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** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

MCDL: ACTR

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CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#7500 KGS Group	Company Name:	KGS Group	Quotation #:	C20090	Bureau Veritas Job #: C28 2526	Bottle Order #: 678043
Attention:	Accounts Payable	Attention:	Ganga Atmuri/Ed Collins	P.O. #:			
Address:	3rd Floor 865 Waverly St Winnipeg MB R3T 5T4	Address:	865 Waverley St., 3rd Floor Winnipeg, MB R3T 5T4	Project:	21-1357-005	COC #: C#678043-01-01	Project Manager: Janelle Kochan
Tel:	(204) 896-1209 Fax:	Tel:	(204) 896-1209 Fax:	Project Name:			
Email:	payables@kgsgroup.com	Email:	gatmuri@kgsgroup.com,ecollins@kgsgroup.com	Site #:	OAM - Sherridon Mine Site		
				Sampled By:	EH / RP		

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☑ Other MWQSOG

Special Instructions:

SAMPLES MUST BE KEPT COOL (< 10ºC) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	pH @25°C	Alkalinity @25C (pp, total), CO3,HCO3,OH	Total Suspended Solids (NFR)	Turbidity	Regulated Metals (CCME/AT1) - Total	Reg. Metals (CCME/AT1) – Diss. Lab Filt.	Hardness	Hardness Total (calculated as CaCO3)			# of Bottles	Comments
1		SW-104	22/10/18	17:10	SW	N	✓	✓	✓	✓	✓	✓	✓	✓			4	
2		SW-119	↓	17:00	↓	N	✓	✓	✓	✓	✓	✓	✓	✓			4	
3		SC-5		10:55		N	✓	✓	✓	✓	✓	✓	✓	✓			4	
4		Trip Blank		—		N	✓	✓	✓	✓	✓	✓	✓	✓			4	
5		SC-6		11:00		N	✓	✓	✓	✓	✓	✓	✓	✓			4	
6																		
7																		
8																		
9																		
10																		

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: ☑
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission) ☐
Date Required:
Rush Confirmation Number:
(call lab for #)

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Rachel Pyatt	22/10/19	12:10	BRYTON RUTT AR	2022/10/19	12:15	
			JBRAN RAJU	2022/10/20	08:45	

Laboratory Use Only

Time Sensitive	Temperature (ºC) on Receipt	Custody Seal Intact on Cooler?
☐	5.8/6.6/6.5	☐ Yes ☐ No

ICE-YES

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** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

Mapi: ARTR

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Bureau Veritas Canada (2019) Inc.

APPENDIX C.2

Laboratory Certificates of Analysis – Toxicity

Your Project #: 21-1357-005
Site#: OAM - Sherridon Mine Site
Your C.O.C. #: 663868-01-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/06/08
Report #: R3182378
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C237433
Received: 2022/06/01, 11:20

Sample Matrix: Surface Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Rainbow Trout LC50 Multi-Concentration (1)	1	N/A	2022/06/03	EENVSOP-00160	EPS 1 RM13 2nd ed m

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Edmonton Environmental, 9331 - 48 St. , Edmonton, AB, T6B 2R4

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

Your Project #: 21-1357-005
Site#: OAM - Sherridon Mine Site
Your C.O.C. #: 663868-01-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/06/08
Report #: R3182378
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C237433
Received: 2022/06/01, 11:20

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Janelle Kochan, B.Sc., Key Account Specialist
Email: Janelle.KOCHAN@bureauveritas.com
Phone# (204)259-0231

==========

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For Service Group specific validation please refer to the Validation Signature Page.

TOXICOLOGY (SURFACE WATER)

Bureau Veritas ID		AUC571	
Sampling Date		2022/05/31 11:10	
COC Number		663868-01-01	
	UNITS	CAMP LAKE DISCHARGE	QC Batch
Rainbow Trout Bioassay			
LC50	% vol/vol	ATTACHED	A596406

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	-0.4°C
Package 2	-0.5°C

Results relate only to the items tested.

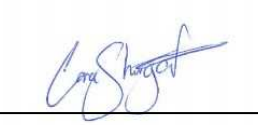
Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

Bureau Veritas Job #: C237433
Report Date: 2022/06/08

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

VALIDATION SIGNATURE PAGE

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



Cara Shurgot, Analyst 2

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Page 1 of 1

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#7500 KGS Group	Company Name:	KGS GROUP	Quotation #:	C20410	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Ganga Atmuri/Ed Collins	P.O. #:		C237433	663868
Address:	3rd Floor 865 Waverly St	Address:	3RD FLOOR - 865 WAVERLEY ST.	Project:	21-1357-005	COC #:	Project Manager:
	Winnipeg MB R3T 5T4		WPG. MB R3T 5P4.	Project Name:		C#663868-01-01	Janelle Kochan
Tel:	(204) 896-1209 Fax:	Tel:	(204) 896-1209 Fax:	Site #:	OAM - Sherridon Mine Site		
Email:	payables@kgsgroup.com	Email:	gatmuri@kgsgroup.com,ecollins@kgsgroup.com	Sampled By:	AL/SLD.		

Regulatory Criteria:
- [ ] ATI
- [ ] CCME
- [X] Other MWAS06.

Special Instructions:

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: [X]
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission)
Date Required: _____ [ ]
Rush Confirmation Number: _____ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	Rainbow Trout LC50 Multi-Concentration	# of Bottles	Comments
1		CAMP LAKE DISCHARGE	31-MAY-2022	11:10	SW	N	X	2	
2									
3									
4									
5									
6									
7									
8									
9									
10									

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Kinsleigh Loria Kloria	22/06/01	11:10	Alaine Amanzi Brace	2022/06/01	11:20		[ ]	-1.0/-0.2/-0.1	[ ] Yes [ ] No
			Erin Alejandra Escobar-Lopez	2022/06/02	10:17			-0.4/-0.2/-0.9	

ICE-YES

Temp: 1/1/1 Both Yes Ice
0/0/0 No Seal
Yes

ALQ 2022/06/02

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.
** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

RESULTS OF RAINBOW TROUT LC50 MULTI-CONCENTRATION

Client : 7500 KGS Group Job Number: C237433

Client Project Name & Number: 21-1357-005

Test Result:

96 hrs LC50 % vol/vol (95% CL): >100% (N/A) Statistical Method: Visual

Sample Name : CAMP LAKE DISCHARGE Sample Matrix : Surface Water

Description: Orange, hazy Sample Number: AUC571-01

Sample Collected: May 31, 2022 11:10 AM Sampling Method : N/A Site Collection: N/A

Sample Collected By: AL Volume Received: 37 L Avg Temp Arrival: 0 °C Storage: 2-6°C

Sample Received: Jun 01, 2022 11:20 AM pH: 6.6 Dissolved Oxygen: 11.1 mg/L

Analysis Start : Jun 03, 2022 09:10 AM Temperature : 14 °C Sample Conductance: 233 µS/cm

Concentration	Temperature (°C)	pH (pH)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)
% vol/vol	Start	Start	Start	Start	24 hrs	24 hrs	24 hrs	24 hrs	48 hrs	48 hrs	48 hrs	48 hrs
0	14	8.1	346	8.7	0	0	0	0	0	0	0	0
6.25	15	8.1	339	8.7	0	0	0	0	0	0	0	0
12.5	15	8.0	333	8.7	0	0	0	0	0	0	0	0
25	15	8.0	323	8.8	0	0	0	0	0	0	0	0
50	15	7.7	289	8.7	0	0	0	0	0	0	0	0
100	15	7.1	232	8.8	0	0	0	0	0	0	0	0

Concentration	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)	Temperature (°C)	pH (pH)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)
% vol/vol	72 hrs	72 hrs	72 hrs	72 hrs	96 hrs	96 hr	96 hrs	96 hrs	96 hrs	96 hrs	96 hrs	96 hrs
0	0	0	0	0	15	8.0	359	8.6	0	0	0	0
6.25	0	0	0	0	16	7.9	367	8.3	0	0	0	0
12.5	0	0	0	0	16	7.8	357	8.4	0	0	0	0
25	0	0	0	0	16	7.8	345	8.2	0	0	0	0
50	0	0	0	0	16	7.7	312	8.5	0	0	0	0
100	0	0	0	0	16	7.1	258	8.6	0	0	0	0

Comments : None

Culture/Control/Dilution Water City of Edmonton dechlorinated tap water

Hardness: 190 mg/L $CaCO_3$ Other parameters available on request.

Test Conditions Test concentration : 0,6.25,12.5,25,50,100 (% vol/vol)

Organisms per Vessel :	10	Test Temperature :	15 ± 1 °C	Solution Depth :	>15 cm
Total # of Organisms Used :	60	Pre-aeration Time :	120 min.	Rate of Aeration	6.5±1 mL/min/L
Test Volume :	17 L	Vessel Volume :	38L	Test pH Adjusted:	No
Loading Density :	0.3 g/L	Photoperiod :	16:8 (light: dark)		

Test Organism : Rainbow Trout *(Oncorhynchus mykiss)* Source : Spring Valley Trout Hatchery

Culture Temperature :	15 ± 2 °C	Weight (Mean) +- SD :	0.4 ± 0.1 g	Length (Mean) +- SD :	3.78 ± 0.37 cm
Culture Water Renewal :	≥ 1.0 L/min/kg fish	Weight (Range) :	0.2 – 0.6 g	Length (Range) :	3.10 – 4.20 cm
Culture Photoperiod :	16:8 (light: dark)			% Mortality within 7 days :	0.2%
Feeding rate and frequency :	daily: 1-5% biomass of trout.			Acclimation Time:	>14 days

Reference chemical: Phenol Test Date: May 26, 2022

Test Endpoint 96 hrs LC50 (95% confidence interval) : 9.80 (8.83, 10.7)mg/L Statistical Method : Probit

Historical Mean LC50 (warning limits) : 9.97 (8.73, 11.4) mg/L Concentration : 0,8,10,12,15,20 mg/L

RESULTS OF RAINBOW TROUT LC50 MULTI-CONCENTRATION

Client : 7500 KGS Group

Job Number: C237433

Client Project Name & Number: 21-1357-005

Sample Number: AUC571-01

Test Method EPS 1/RM/13

Method Deviations : None

Note: The results contained in this report refer only to the testing of the sample submitted. Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation, including the toxicity parameters reported herein. The conductivity, dissolved oxygen and pH data contained within the toxicity report are provided for information purposes and are not individually accredited parameters. This report may not be reproduced, except in its entirety, without the written approval of the laboratory.

Analyst : Cara Shurgot, Kyle Monaghan, Natasha Lloyd, Tami Horvath



Verified By : Cara Shurgot, Analyst 2

Date: Jun 08, 2022 11:17 AM

Your Project #: 21-1357-005
Site#: OAM - Sherridon Mine Site
Your C.O.C. #: 666387-01-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/06/23
Report #: R3190750
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C241920
Received: 2022/06/15, 11:35

Sample Matrix: Surface Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Rainbow Trout LC50 Multi-Concentration (1)	1	N/A	2022/06/18	EENVSOP-00160	EPS 1 RM13 2nd ed m

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Edmonton Environmental, 9331 - 48 St. , Edmonton, AB, T6B 2R4

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

Your Project #: 21-1357-005
Site#: OAM - Sherridon Mine Site
Your C.O.C. #: 666387-01-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/06/23
Report #: R3190750
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C241920
Received: 2022/06/15, 11:35

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Janelle Kochan, B.Sc., Key Account Specialist
Email: Janelle.KOCHAN@bureauveritas.com
Phone# (204)259-0231

==========

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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

TOXICOLOGY (SURFACE WATER)

Bureau Veritas ID		AVD876	
Sampling Date		2022/06/14 10:40	
COC Number		666387-01-01	
	UNITS	CAMP LAKE DISCHARGE	QC Batch
Rainbow Trout Bioassay			
LC50	% vol/vol	ATTACHED	A614495

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

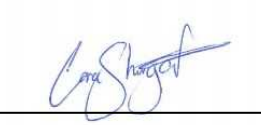
Package 1	-0.3°C
Package 2	-0.4°C

Results relate only to the items tested.

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

VALIDATION SIGNATURE PAGE

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



Cara Shurgot, Analyst 2

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Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvna.com

4602

Page 1 of 1

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#7500 KGS Group	Company Name:	KGS GROUP	Quotation #:	C20410	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Ganga Atmuri/Ed Collins	P.O. #:		C241920	666387
Address:	3rd Floor 865 Waverly St Winnipeg MB R3T 5T4	Address:	3rd FLOOR - 865 WAVERLEY ST. WPG. MB R3T 5P4	Project:	21-1357-005	COC #:	Project Manager:
Tel:	(204) 896-1209 Fax:	Tel:	(204) 896-1209 Fax:	Project Name:		C#666387-01-01	Janelle Kochan
Email:	payables@kgsgroup.com	Email:	gatmuri@kgsgroup.com,ecollins@kgsgroup.com	Site #:	OAM - Sherridon Mine Site		
				Sampled By:	AL/BM		

Regulatory Criteria:
- [ ] ATI
- [ ] CCME
- [X] Other MWQSOG.

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: [X]
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission)
Date Required: _____ [ ]
Rush Confirmation Number: _____ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	Rainbow Trout LC50 Multi-Concentration	# of Bottles	Comments
1		CAMP LAKE DISCHARGE	June 14, 2022	10:40	SW	N	X	2	
2									
3									
4									
5									
6									
7									
8									
9									
10									

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Ainsleigh Lorin Ainsa	22/06/15	11:22	Jaime Amaral Brear	2022/06/15	11:35		[ ]	-0.4/-0.5/-0.1	[ ] Yes [ ] No
			Alexander Mona Harrison	2022/06/16	10:44			-0.2/-0.5/-0.4 ICE-YES	

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.
** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

White: Bureau Veritas Yellow: Client

MED$_2$ 6/3/3 Ice Yes
~~2/10~~ AMY 2022/06/16
2/1/0 Ice Yes

Bureau Veritas Canada (2019) Inc.

RESULTS OF RAINBOW TROUT LC50 MULTI-CONCENTRATION

Client : 7500 KGS Group Job Number: C241920

Client Project Name & Number: 21-1357-005

Test Result:

96 hrs LC50 % vol/vol (95% CL): >100% (N/A) Statistical Method: Visual

Sample Name : CAMP LAKE DISCHARGE Sample Matrix : Surface Water

Description: Orange, hazy Sample Number: AVD876-01

Sample Collected: Jun 14, 2022 10:40 AM Sampling Method : N/A Site Collection: N/A

Sample Collected By: N/A Volume Received: 40 L Avg Temp Arrival: 0 °C Storage: 2-6°C

Sample Received: Jun 15, 2022 11:35 AM pH: 7.5 Dissolved Oxygen: 10.6 mg/L

Analysis Start : Jun 18, 2022 10:10 AM Temperature : 14 °C Sample Conductance: 222 µS/cm

Concentration	Temperature (°C)	pH (pH)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)
% vol/vol	Start	Start	Start	Start	24 hrs	24 hrs	24 hrs	24 hrs	48 hrs	48 hrs	48 hrs	48 hrs
0	15	8.4	344	9.3	0	0	0	0	0	0	0	0
6.25	15	8.1	335	9.1	0	0	0	0	0	0	0	0
12.5	15	8.1	326	9.2	0	0	0	0	0	0	0	0
25	15	8.0	316	9.2	0	0	0	0	0	0	0	0
50	15	7.9	286	9.5	0	0	0	0	0	0	0	0
100	15	7.4	227	9.6	0	0	0	0	0	0	0	0

Concentration	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)	Temperature (°C)	pH (pH)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)
% vol/vol	72 hrs	72 hrs	72 hrs	72 hrs	96 hrs	96 hr	96 hrs	96 hrs	96 hrs	96 hrs	96 hrs	96 hrs
0	0	0	0	0	16	7.9	348	8.9	0	0	0	0
6.25	0	0	0	0	16	8.0	340	9.1	0	0	0	0
12.5	0	0	0	0	16	7.6	330	8.0	0	0	0	0
25	0	0	0	0	16	7.8	319	8.8	0	0	0	0
50	0	0	0	0	16	7.6	287	8.9	0	0	0	0
100	0	0	0	0	16	7.1	227	9.0	0	0	0	0

Comments : None

Culture/Control/Dilution Water City of Edmonton dechlorinated tap water

Hardness: 190 mg/L $CaCO_3$ Other parameters available on request.

Test Conditions Test concentration : 0,6.25,12.5,25,50,100 (% vol/vol)

Organisms per Vessel :	10	Test Temperature :	15 ± 1 °C	Solution Depth :	>15 cm
Total # of Organisms Used :	60	Pre-aeration Time :	120 min.	Rate of Aeration	6.5±1 mL/min/L
Test Volume :	20 L	Vessel Volume :	38L	Test pH Adjusted:	No
Loading Density :	0.3 g/L	Photoperiod :	16:8 (light: dark)		

Test Organism : Rainbow Trout *(Oncorhynchus mykiss)* Source : Spring Valley Trout Hatchery

Culture Temperature :	15 ± 2 °C	Weight (Mean) +- SD :	0.6 ± 0.2 g	Length (Mean) +- SD :	4.11 ± 0.32 cm
Culture Water Renewal :	≥ 1.0 L/min/kg fish	Weight (Range) :	0.4 – 0.9 g	Length (Range) :	3.60 – 4.60 cm
Culture Photoperiod :	16:8 (light: dark)			% Mortality within 7 days :	0%
Feeding rate and frequency :	daily: 1-5% biomass of trout.			Acclimation Time:	>14 days

Reference chemical: Phenol Test Date: May 26, 2022

Test Endpoint 96 hrs LC50 (95% confidence interval) : 9.80 (8.83, 10.7)mg/L Statistical Method : Probit

Historical Mean LC50 (warning limits) : 9.97 (8.73, 11.4) mg/L Concentration : 0,8,10,12,15,20 mg/L

RESULTS OF RAINBOW TROUT LC50 MULTI-CONCENTRATION

Client : 7500 KGS Group | Job Number: C241920

Client Project Name & Number: 21-1357-005 | Sample Number: AVD876-01

Test Method EPS 1/RM/13

Method Deviations : None

Note: The results contained in this report refer only to the testing of the sample submitted. Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation, including the toxicity parameters reported herein. The conductivity, dissolved oxygen and pH data contained within the toxicity report are provided for information purposes and are not individually accredited parameters. This report may not be reproduced, except in its entirety, without the written approval of the laboratory.

Analyst : Cara Shurgot, Chelsea Tessier, Kyle Monaghan, Tami Horvath



Verified By : Cara Shurgot, Analyst 2 Date: Jun 23, 2022 02:22 PM

Your Project #: 21-1357-005
Site#: OAM - Sherridon Mine Site
Your C.O.C. #: 667133-01-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/07/19
Report #: R3201931
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C250578
Received: 2022/07/13, 11:50

Sample Matrix: Surface Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Rainbow Trout LC50 Multi-Concentration (1)	1	N/A	2022/07/15	EENVSOP-00160	EPS 1 RM13 2nd ed m

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Edmonton Environmental, 9331 - 48 St. , Edmonton, AB, T6B 2R4

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

Your Project #: 21-1357-005
Site#: OAM - Sherridon Mine Site
Your C.O.C. #: 667133-01-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/07/19
Report #: R3201931
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C250578
Received: 2022/07/13, 11:50

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Janelle Kochan, B.Sc., Key Account Specialist
Email: Janelle.KOCHAN@bureauveritas.com
Phone# (204)259-0231
==========
This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

TOXICOLOGY (SURFACE WATER)

Bureau Veritas ID		AXF315	
Sampling Date		2022/07/12 10:15	
COC Number		667133-01-01	
	UNITS	**CAMP LAKE DISCHARGE**	**QC Batch**
Rainbow Trout Bioassay			
LC50	% vol/vol	ATTACHED	A645171

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	6.0°C
Package 2	5.7°C

Results relate only to the items tested.

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

Bureau Veritas Job #: C250578
Report Date: 2022/07/19

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

VALIDATION SIGNATURE PAGE

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

Chelsea Tessier

Chelsea Tessier, Ecotoxicology Supervisor

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

Bureau Veritas
9331 - 48th Street, Edmonton, Alberta Canada T6B 2R4 Tel:(780) 577-7100 Toll-free:800-563-6266 Fax:(780) 450-4187 www.bvna.com

303 (2)

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#7500 KGS Group	Company Name:	KGS Group	Quotation #:	C20410	Bureau Veritas Job #: C250578	Bottle Order #: 667133
Attention:	Accounts Payable	Attention:	Ganga Atmuri/Ed Collins	P.O. #:			
Address:	3rd Floor 865 Waverly St Winnipeg MB R3T 5T4	Address:	865 Waverley St, 3rd floor Winnipeg, MB R3T 5P4	Project:	21-1357-005	COC #: C#667133-01-01	Project Manager: Janelle Kochan
Tel:	(204) 896-1209 Fax:	Tel:	(204) 896-1209 Fax:	Project Name:			
Email:	payables@kgsgroup.com	Email:	gatmuri@kgsgroup.com,ecollins@kgsgroup.com	Site #:	OAM - Sherridon Mine Site		
				Sampled By:	AL/IH		

Regulatory Criteria:
- [ ] ATI
- [ ] CCME
- [X] Other MWQSOG

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	Rainbow Trout LC50 Multi-Concentration	# of Bottles	Comments
1		Camp Lake Discharge	22/07/12	10:15	SW	N	X	2	
2									
3									
4									
5									
6									
7									
8									
9									
10									

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: [X]
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission)
Date Required: _____ [ ]
Rush Confirmation Number: _____ *(call lab for #)*

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Ainsleigh Loria Ainsleigh	22/07/13	11:45	Ajanu Amanjit Brar Peji WU	2022/07/13 2022/07/14	1150 08:45		[ ]	6.5/4.8/5.1 6.6.6. 6.5.6	[ ] Yes [ ] No ILE - YES ice & seal: yes both

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.
** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

RESULTS OF RAINBOW TROUT LC50 MULTI-CONCENTRATION

Client : 7500 KGS Group Job Number: C250578

Client Project Name & Number: 21-1357-005

Test Result:

96 hrs LC50 % vol/vol (95% CL): >100% (N/A) Statistical Method: Visual

Sample Name : CAMP LAKE DISCHARGE Sample Matrix : Surface Water

Description: Orange, clear Sample Number: AXF315-01

Sample Collected: Jul 12, 2022 10:15 AM Sampling Method : N/A Site Collection: N/A

Sample Collected By: AL Volume Received: 40 L Avg Temp Arrival: 6 °C Storage: 2-6°C

Sample Received: Jul 13, 2022 11:50 AM pH: 7.1 Dissolved Oxygen: 9.6 mg/L

Analysis Start : Jul 15, 2022 08:30 AM Temperature : 15 °C Sample Conductance: 232 µS/cm

Concentration	Temperature (°C)	pH (pH)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)
% vol/vol	Start	Start	Start	Start	24 hrs	24 hrs	24 hrs	24 hrs	48 hrs	48 hrs	48 hrs	48 hrs
0	15	8.0	338	9.0	0	0	0	0	0	0	0	0
6.25	15	8.0	329	9.0	0	0	0	0	0	0	0	0
12.5	15	8.0	321	9.0	0	0	0	0	0	0	0	0
25	15	8.0	298	9.0	0	0	0	0	0	0	0	0
50	15	7.7	265	9.1	0	0	0	0	0	0	0	0
100	15	7.3	199	9.1	0	0	0	0	0	0	0	0

Concentration	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)	Temperature (°C)	pH (pH)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)
% vol/vol	72 hrs	72 hrs	72 hrs	72 hrs	96 hrs	96 hr	96 hrs	96 hrs	96 hrs	96 hrs	96 hrs	96 hrs
0	0	0	0	0	15	7.6	371	7.7	0	0	0	0
6.25	0	0	0	0	15	7.7	362	8.1	0	0	0	0
12.5	0	0	0	0	16	7.5	356	7.4	0	0	0	0
25	0	0	0	0	15	7.8	320	8.7	0	0	0	0
50	0	0	0	0	15	7.7	287	8.8	0	0	0	0
100	0	0	0	0	15	7.2	215	8.8	0	0	0	0

Comments : None

Culture/Control/Dilution Water City of Edmonton dechlorinated tap water

Hardness: 190 mg/L $CaCO_3$ Other parameters available on request.

Test Conditions Test concentration : 0,6.25,12.5,25,50,100 (% vol/vol)

Organisms per Vessel :	10	Test Temperature :	15 ± 1 °C	Solution Depth :	>15 cm
Total # of Organisms Used :	60	Pre-aeration Time :	30 min.	Rate of Aeration	6.5±1 mL/min/L
Test Volume :	20 L	Vessel Volume :	38L	Test pH Adjusted:	No
Loading Density :	0.3 g/L	Photoperiod :	16:8 (light: dark)		

Test Organism : Rainbow Trout *(Oncorhynchus mykiss)* Source : Spring Valley Trout Hatchery

Culture Temperature :	15 ± 2 °C	Weight (Mean) +- SD :	0.5 ± 0.1 g	Length (Mean) +- SD :	4.14 ± 0.26 cm
Culture Water Renewal :	≥ 1.0 L/min/kg fish	Weight (Range) :	0.4 – 0.7 g	Length (Range) :	3.70 – 4.50 cm
Culture Photoperiod :	16:8 (light: dark)			% Mortality within 7 days :	0%
Feeding rate and frequency :	daily: 1-5% biomass of trout.			Acclimation Time:	>14 days

Reference chemical: Phenol Test Date: Jun 28, 2022

Test Endpoint 96 hrs LC50 (95% confidence interval) : 10.4 (9.35, 11.4)mg/L Statistical Method : Probit

Historical Mean LC50 (warning limits) : 9.94 (8.72, 11.3) mg/L Concentration : 0,8,10,12,15,20 mg/L

RESULTS OF RAINBOW TROUT LC50 MULTI-CONCENTRATION

Client : 7500 KGS Group

Job Number: C250578

Client Project Name & Number: 21-1357-005

Sample Number: AXF315-01

Test Method EPS 1/RM/13

Method Deviations : None

Note: The results contained in this report refer only to the testing of the sample submitted. Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation, including the toxicity parameters reported herein. The conductivity, dissolved oxygen and pH data contained within the toxicity report are provided for information purposes and are not individually accredited parameters. This report may not be reproduced, except in its entirety, without the written approval of the laboratory.

Analyst : Cara Shurgot, Chelsea Tessier, Kaylie Lyons, Kyle Monaghan, Tami Horvath

Chelsea Tessier

Verified By : Chelsea Tessier, Ecotoxicology Supervisor

Date: Jul 19, 2022 02:14 PM

Your Project #: 21-1357-005
Your C.O.C. #: 670068-01-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/08/23
Report #: R3220174
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C259201
Received: 2022/08/11, 10:09

Sample Matrix: Surface Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Rainbow Trout LC50 Multi-Concentration	1	N/A	2022/08/13	EENVSOP-00160	EPS 1 RM13 2nd ed m

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Bureau Veritas Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

Your Project #: 21-1357-005
Your C.O.C. #: 670068-01-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/08/23
Report #: R3220174
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C259201
Received: 2022/08/11, 10:09

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Janelle Kochan, B.Sc., Key Account Specialist
Email: Janelle.KOCHAN@bureauveritas.com
Phone# (204)259-0231

==========

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For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Job #: C259201
Report Date: 2022/08/23

KGS Group
Client Project #: 21-1357-005
Sampler Initials: ID

TOXICOLOGY (SURFACE WATER)

Bureau Veritas ID		AZG577	
Sampling Date		2022/08/09 10:10	
COC Number		670068-01-01	
	UNITS	CAMP LAKE DISCHARGE	QC Batch
Rainbow Trout Bioassay			
LC50	% vol/vol	ATTACHED	A679427

Bureau Veritas Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.0°C
Package 2	4.3°C

Results relate only to the items tested.

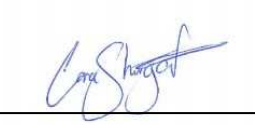
Bureau Veritas Edmonton: 9331 - 48th Street T6B 2R4 Telephone (780)577-7100 Fax (780)450-4187

Bureau Veritas Job #: C259201
Report Date: 2022/08/23

KGS Group
Client Project #: 21-1357-005
Sampler Initials: ID

VALIDATION SIGNATURE PAGE

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



Cara Shurgot, Analyst 2

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Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvna.com

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Page of

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#7500 KGS Group	Company Name:	KGS GROUP	Quotation #:	C20410	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Ganga Atmuri/Ed Collins	P.O. #:		C259201	670068
Address:	3rd Floor 865 Waverly St Winnipeg MB R3T 5T4	Address:	3RD FLOOR - 865 WAVERLEY ST. WPG MB R3T 5P4	Project:	21-1357-005	COC #:	Project Manager:
Tel:	(204) 896-1209 Fax:	Tel:	(204) 896-1209 Fax:	Project Name:		C#670068-01-01	Janelle Kochan
Email:	payables@kgsgroup.com	Email:	gatmuri@kgsgroup.com,ecollins@kgsgroup.com	Site #:	OAM - Sherridon Mine Site		
				Sampled By:	ID/SD.		

Regulatory Criteria:
- [ ] ATI
- [ ] CCME
- [X] Other MWQSOG.

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	Rainbow Trout LC50 Multi-Concentration									# of Bottles	Comments
1		CAMP LAKE DISCHARGE.	09-AUG-2022	10:10	SW	N	X									2.	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: [X]
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission) [ ]
Date Required:
Rush Confirmation Number:
(call lab for #)

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only		
							Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
S.DAEILLY	22/08/10	10:45	Ashton Raitt AR	2022/08/10	10:47		[ ]	ACTR	[ ] Yes [ ] No
			Delivered	2022/08/11	10:09				

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

White: Bureau Veritas Yellow: Client

ICE-YES

Bureau Veritas Canada (2019) Inc.

RESULTS OF RAINBOW TROUT LC50 MULTI-CONCENTRATION

Client : 7500 KGS Group Job Number: C259201

Client Project Name & Number: 21-1357-005

Test Result:

96 hrs LC50 % vol/vol (95% CL): >100% (N/A) Statistical Method: Visual

Sample Name : CAMP LAKE DISCHARGE Sample Matrix : Surface Water

Description: Orange, clear Sample Number: AZG577-01

Sample Collected: Aug 09, 2022 10:10 AM Sampling Method : N/A Site Collection: N/A

Sample Collected By: ID Volume Received: 40 L Avg Temp Arrival: 4 °C Storage: 2-6°C

Sample Received: Aug 11, 2022 10:09 AM pH: 6.5 Dissolved Oxygen: 9.6 mg/L

Analysis Start : Aug 13, 2022 08:20 AM Temperature : 14 °C Sample Conductance: 252 µS/cm

Concentration	Temperature (°C)	pH (pH)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)
% vol/vol	Start	Start	Start	Start	24 hrs	24 hrs	24 hrs	24 hrs	48 hrs	48 hrs	48 hrs	48 hrs
0	14	8.0	287	9.0	0	0	0	0	0	0	0	0
6.25	14	7.9	285	9.0	0	0	0	0	0	0	0	0
12.5	14	7.8	282	9.0	0	0	0	0	0	0	0	0
25	14	7.7	278	9.1	0	0	0	0	0	0	0	0
50	14	7.6	270	9.1	0	0	0	0	0	0	0	0
100	14	7.1	252	9.4	0	0	0	0	0	0	0	0

Concentration	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)	Temperature (°C)	pH (pH)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)
% vol/vol	72 hrs	72 hrs	72 hrs	72 hrs	96 hrs	96 hr	96 hrs	96 hrs	96 hrs	96 hrs	96 hrs	96 hrs
0	0	0	0	0	14	7.7	297	8.8	0	0	0	0
6.25	0	0	0	0	14	7.5	297	8.2	0	0	0	0
12.5	0	0	0	0	14	7.5	295	8.3	0	0	0	0
25	0	0	0	0	14	7.5	291	8.4	0	0	0	0
50	0	0	0	0	15	7.5	281	8.9	0	0	0	0
100	0	0	0	0	15	7.1	267	8.8	0	0	0	0

Comments : None

Culture/Control/Dilution Water City of Edmonton dechlorinated tap water

Hardness: 160 mg/L $CaCO_3$ Other parameters available on request.

Test Conditions Test concentration : 0,6.25,12.5,25,50,100 (% vol/vol)

Organisms per Vessel :	10	Test Temperature :	15 ± 1 °C	Solution Depth :	>15 cm
Total # of Organisms Used :	60	Pre-aeration Time :	30 min.	Rate of Aeration	6.5±1 mL/min/L
Test Volume :	20 L	Vessel Volume :	38L	Test pH Adjusted:	No
Loading Density :	0.3 g/L	Photoperiod :	16:8 (light: dark)		

Test Organism : Rainbow Trout *(Oncorhynchus mykiss)* Source : Spring Valley Trout Hatchery

Culture Temperature :	15 ± 2 °C	Weight (Mean) +- SD :	0.6 ± 0.2 g	Length (Mean) +- SD :	4.10 ± 0.45 cm
Culture Water Renewal :	≥ 1.0 L/min/kg fish	Weight (Range) :	0.3 – 0.9 g	Length (Range) :	3.20 – 4.60 cm
Culture Photoperiod :	16:8 (light: dark)			% Mortality within 7 days :	0.2%
Feeding rate and frequency :	daily: 1-5% biomass of trout.			Acclimation Time:	>14 days

Reference chemical: Phenol Test Date: Jul 21, 2022

Test Endpoint 96 hrs LC50 (95% confidence interval) : 8.94 (8.00, 10.0)mg/L Statistical Method : Binomial

Historical Mean LC50 (warning limits) : 9.93 (8.72, 11.3) mg/L Concentration : 0,8,10,12,15,20 mg/L

RESULTS OF RAINBOW TROUT LC50 MULTI-CONCENTRATION

Client : 7500 KGS Group

Client Project Name & Number: 21-1357-005

Job Number: C259201

Sample Number: AZG577-01

Test Method EPS 1/RM/13

Method Deviations : None

Note: The results contained in this report refer only to the testing of the sample submitted. Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation, including the toxicity parameters reported herein. The conductivity, dissolved oxygen and pH data contained within the toxicity report are provided for information purposes and are not individually accredited parameters. This report may not be reproduced, except in its entirety, without the written approval of the laboratory.

Analyst : Cara Shurgot, Chelsea Tessier, Kaylie Lyons, Kyle Monaghan



Verified By : Cara Shurgot, Analyst 2

Date: Aug 23, 2022 10:22 AM

Your Project #: 21-1357-005
Site#: OAM - Sherridon Mine Site
Your C.O.C. #: 673016-01-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/09/23
Report #: R3236931
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C269698
Received: 2022/09/12, 08:30

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Rainbow Trout LC50 Multi-Concentration (1)	1	N/A	2022/09/15	EENVSOP-00160	EPS 1 RM13 2nd ed m

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
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Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Edmonton Environmental, 9331 - 48 St. , Edmonton, AB, T6B 2R4

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

Your Project #: 21-1357-005
Site#: OAM - Sherridon Mine Site
Your C.O.C. #: 673016-01-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/09/23
Report #: R3236931
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C269698
Received: 2022/09/12, 08:30

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Janelle Kochan, B.Sc., Key Account Specialist
Email: Janelle.KOCHAN@bureauveritas.com
Phone# (204)259-0231

==========

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For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Job #: C269698
Report Date: 2022/09/23

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AD

TOXICOLOGY (WATER)

Bureau Veritas ID		BBR775	
Sampling Date		2022/09/09 11:45	
COC Number		673016-01-01	
	UNITS	**CAMP LAKE DISCHARGE**	**QC Batch**
Rainbow Trout Bioassay			
LC50	% vol/vol	ATTACHED	A716552

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	6.0°C
Package 2	6.7°C

Results relate only to the items tested.

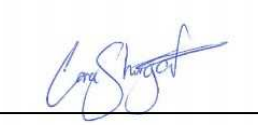
Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

Bureau Veritas Job #: C269698
Report Date: 2022/09/23

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AD

VALIDATION SIGNATURE PAGE

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



Cara Shurgot, Analyst 2

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Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvna.com

319(2).

Page 1 of 1

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#7500 KGS Group	Company Name:	KGS Group	Quotation #:	C20410	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Ganga Atmuri/Ed Collins	P.O. #:		C269698	673016
Address:	3rd Floor 865 Waverly St Winnipeg MB R3T 5T4	Address:	865 Waverley St., 3rd Floor Winnipeg, MB R3T 5T4	Project:	21-1357-005	COC #:	Project Manager:
Tel:	(204) 896-1209 Fax:	Tel:	(204) 896-1209 Fax:	Project Name:		C#673016-01-01	Janelle Kochan
Email:	payables@kgsgroup.com	Email:	gatmuri@kgsgroup.com,ecollins@kgsgroup.com	Site #:	OAM - Sherridon Mine Site		
				Sampled By:	AL/DL		

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☒ Other MMER S06

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: ☑
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission)
Date Required:
Rush Confirmation Number: *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	Rainbow Trout LC50 Multi-Concentration									# of Bottles	Comments
1		Camp Lake Discharge	22/09/09	11:45	SW	N	X									2	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Ainsleigh Lovia	22/09/10	15:15	Brit Brooklyn Hiebert	22/09/12	0830		☐	ACTR	☐ Yes ☐ No
			Deji WM	2022/09/13	11:14				

6.6.6
7.6.7

Ice & seal: yes both.

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.
** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

RESULTS OF RAINBOW TROUT LC50 MULTI-CONCENTRATION

Client : 7500 KGS Group Job Number: C269698

Client Project Name & Number: 21-1357-005

Test Result:

96 hrs LC50 % vol/vol (95% CL): >100% (N/A) Statistical Method: Visual

Sample Name : CAMP LAKE DISCHARGE Sample Matrix : Water

Description: Gold, slightly hazy Sample Number: BBR775-01

Sample Collected: Sep 09, 2022 11:45 AM Sampling Method : N/A Site Collection: N/A

Sample Collected By: AD Volume Received: 40 L Avg Temp Arrival: 6 °C Storage: 2-6°C

Sample Received: Sep 12, 2022 08:30 AM pH: 6.4 Dissolved Oxygen: 9.9 mg/L

Analysis Start : Sep 15, 2022 09:35 AM Temperature : 14 °C Sample Conductance: 299 µS/cm

Concentration	Temperature (°C)	pH (pH)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)
% vol/vol	Start	Start	Start	Start	24 hrs	24 hrs	24 hrs	24 hrs	48 hrs	48 hrs	48 hrs	48 hrs
0	15	7.7	274	8.8	0	0	0	0	0	0	0	0
6.25	15	7.7	275	9.1	0	0	0	0	0	0	0	0
12.5	15	7.6	276	9.1	0	0	0	0	0	0	0	0
25	15	7.6	279	9.2	0	0	0	0	0	0	0	0
50	14	7.4	286	9.1	0	0	0	0	0	0	0	0
100	14	6.9	301	9.2	0	0	0	0	0	0	0	0

Concentration	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)	Temperature (°C)	pH (pH)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)
% vol/vol	72 hrs	72 hrs	72 hrs	72 hrs	96 hrs	96 hr	96 hrs	96 hrs	96 hrs	96 hrs	96 hrs	96 hrs
0	0	0	0	0	15	7.9	270	9.0	0	0	0	0
6.25	0	0	0	0	15	7.7	273	9.0	0	0	0	0
12.5	0	0	0	0	14	7.7	274	9.0	0	0	0	0
25	0	0	0	0	14	7.6	275	9.3	0	0	0	0
50	0	0	0	0	15	7.4	284	9.1	0	0	0	0
100	0	0	0	0	15	6.7	299	9.0	0	0	0	0

Comments : None

Culture/Control/Dilution Water City of Edmonton dechlorinated tap water

Hardness: 160 mg/L $CaCO_3$ Other parameters available on request.

Test Conditions Test concentration : 0,6.25,12.5,25,50,100 (% vol/vol)

Organisms per Vessel :	10	Test Temperature :	15 ± 1 °C	Solution Depth :	>15 cm
Total # of Organisms Used :	60	Pre-aeration Time :	120 min.	Rate of Aeration	6.5±1 mL/min/L
Test Volume :	20 L	Vessel Volume :	38L	Test pH Adjusted:	No
Loading Density :	0.2 g/L	Photoperiod :	16:8 (light: dark)		

Test Organism : Rainbow Trout *(Oncorhynchus mykiss)* Source : LSL Trout Hatchery

Culture Temperature :	15 ± 2 °C	Weight (Mean) +- SD :	0.5 ± 0.1 g	Length (Mean) +- SD :	4.02 ± 0.32 cm
Culture Water Renewal :	≥ 1.0 L/min/kg fish	Weight (Range) :	0.3 – 0.7 g	Length (Range) :	3.70 – 4.60 cm
Culture Photoperiod :	16:8 (light: dark)			% Mortality within 7 days :	0%
Feeding rate and frequency :	daily: 1-5% biomass of trout.			Acclimation Time:	>14 days

Reference chemical: Phenol Test Date: Aug 23, 2022

Test Endpoint 96 hrs LC50 (95% confidence interval) : 9.45 (8.60, 10.3)mg/L Statistical Method : Probit

Historical Mean LC50 (warning limits) : 9.83 (8.64, 11.2) mg/L Concentration : 0,8,10,12,15,20 mg/L

RESULTS OF RAINBOW TROUT LC50 MULTI-CONCENTRATION

Client : 7500 KGS Group

Client Project Name & Number: 21-1357-005

Job Number: C269698

Sample Number: BBR775-01

Test Method EPS 1/RM/13

Method Deviations : None

Note: The results contained in this report refer only to the testing of the sample submitted. Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation, including the toxicity parameters reported herein. The conductivity, dissolved oxygen and pH data contained within the toxicity report are provided for information purposes and are not individually accredited parameters. This report may not be reproduced, except in its entirety, without the written approval of the laboratory.

Analyst : Cara Shurgot, Chelsea Tessier, Kaylie Lyons



Verified By : Cara Shurgot, Analyst 2

Date: Sep 23, 2022 09:12 AM

Your Project #: 21-1357-005
Site#: OAM - Sherridon Mine Site
Your C.O.C. #: 675875-01-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/10/14
Report #: R3247861
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C277933
Received: 2022/10/05, 12:25

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Rainbow Trout LC50 Multi-Concentration (1)	1	N/A	2022/10/09	EENVSOP-00160	EPS 1 RM13 2nd ed m

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Edmonton Environmental, 9331 - 48 St. , Edmonton, AB, T6B 2R4

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

Your Project #: 21-1357-005
Site#: OAM - Sherridon Mine Site
Your C.O.C. #: 675875-01-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/10/14
Report #: R3247861
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C277933
Received: 2022/10/05, 12:25

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Janelle Kochan, B.Sc., Key Account Specialist
Email: Janelle.KOCHAN@bureauveritas.com
Phone# (204)259-0231
==========
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For Service Group specific validation please refer to the Validation Signature Page.

TOXICOLOGY (WATER)

Bureau Veritas ID		BDS015	
Sampling Date		2022/10/04 10:30	
COC Number		675875-01-01	
	UNITS	CAMP LAKE DISCHARGE	QC Batch
Rainbow Trout Bioassay			
LC50	% vol/vol	ATTACHED	A750000

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.7°C
Package 2	2.0°C

Results relate only to the items tested.

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

Bureau Veritas Job #: C277933
Report Date: 2022/10/14

KGS Group
Client Project #: 21-1357-005
Sampler Initials: AL

VALIDATION SIGNATURE PAGE

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

Chelsea Tessier

Chelsea Tessier, Ecotoxicology Supervisor

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Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

Bureau Veritas
4000 19st N.E, Calgary, Alberta Canada T2E 6P8 Tel:(403) 291-3077 Toll-free:800-563-6266 Fax:(403) 291-9468 www.bvna.com

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CHAIN OF CUSTODY RECORD

Page 1 of 1

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#7500 KGS Group	Company Name:	KGS Group	Quotation #:	C20410	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Ganga Atmuri/Ed Collins	P.O. #:		C277933	675875
Address:	3rd Floor 865 Waverly St Winnipeg MB R3T 5T4	Address:	865 Waverley St, 3rd Floor Winnipeg, MB R3T 5T4	Project:	21-1357-005	COC #:	Project Manager:
Tel:	(204) 896-1209 Fax:	Tel:	(204) 896-1209 Fax:	Project Name:		C#675875-01-01	Janelle Kochan
Email:	payables@kgsgroup.com	Email:	gatmuri@kgsgroup.com,ecollins@kgsgroup.com	Site #:	OAM - Sherridon Mine Site		
				Sampled By:	AL / RP		

Regulatory Criteria:
- ☐ ATI
- ☐ CCME
- ☑ Other MWQSOG

Special Instructions

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: ☒
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests are > 5 days - contact your Project Manager for details

Job Specific Rush TAT (if applies to entire submission) ☐
Date Required:
Rush Confirmation Number: *(call lab for #)*

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	Rainbow Trout LC50 Multi-Concentration	# of Bottles	Comments
1		Camp Lake Discharge	22/10/04	10:30	SW	N	✓	2	
2									
3									
4									
5									
6									
7									
8									
9									
10									

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Ainsleigh Loria	22/10/05	12:15	Brooklyn Hiebert	22/10/05	1225		☐	ACTR	☐ Yes (x2) ☐ No
			Alana Morrison	22/10/06	1440				

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* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.
** ALL SAMPLES ARE HELD FOR 60 DAYS AFTER SAMPLE RECEIPT, FOR SPECIAL REQUESTS CONTACT YOUR PROJECT MANAGER

MEO_2 - 2/2/1
2/2/2

White: Bureau Veritas Yellow: Client

Ice Yes (x2)

Bureau Veritas Canada (2019) Inc.

RESULTS OF RAINBOW TROUT LC50 MULTI-CONCENTRATION

Client : 7500 KGS Group Job Number: C277933

Client Project Name & Number: 21-1357-005

Test Result:

96 hrs LC50 % vol/vol (95% CL): >100% (N/A) Statistical Method: Visual

Sample Name : CAMP LAKE DISCHARGE Sample Matrix : Water

Description: Brown, slightly hazy Sample Number: BDS015-01

Sample Collected: Oct 04, 2022 10:30 AM Sampling Method : N/A Site Collection: N/A

Sample Collected By: AL Volume Received: 40 L Avg Temp Arrival: 2 °C Storage: 2-6°C

Sample Received: Oct 05, 2022 12:25 PM pH: 6.5 Dissolved Oxygen: 9.8 mg/L

Analysis Start : Oct 09, 2022 12:30 PM Temperature : 14 °C Sample Conductance: 286 µS/cm

Concentration	Temperature (°C)	pH (pH)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)
% vol/vol	Start	Start	Start	Start	24 hrs	24 hrs	24 hrs	24 hrs	48 hrs	48 hrs	48 hrs	48 hrs
0	14	8.0	259	9.1	0	0	0	0	0	0	0	0
6.25	14	8.0	261	9.1	0	0	0	0	0	0	0	0
12.5	14	8.0	263	9.1	0	0	0	0	0	0	0	0
25	14	8.0	266	9.2	0	0	0	0	0	0	0	0
50	14	7.8	273	9.3	0	0	0	0	0	0	0	0
100	14	6.7	288	9.4	0	0	0	0	0	0	0	0

Concentration	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)	Temperature (°C)	pH (pH)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	Mortality (#)	Mortality (%)	Atypical Behaviour (#)	Atypical Behaviour (%)
% vol/vol	72 hrs	72 hrs	72 hrs	72 hrs	96 hrs	96 hr	96 hrs	96 hrs	96 hrs	96 hrs	96 hrs	96 hrs
0	0	0	0	0	15	7.8	292	8.6	0	0	0	0
6.25	0	0	0	0	15	7.8	292	8.8	0	0	0	0
12.5	0	0	0	0	15	7.8	294	8.8	0	0	0	0
25	0	0	0	0	15	7.6	298	8.8	0	0	0	0
50	0	0	0	0	15	7.5	305	8.8	0	0	0	0
100	0	0	0	0	15	7.1	322	8.9	0	0	0	0

Comments : None

Culture/Control/Dilution Water City of Edmonton dechlorinated tap water

Hardness: 160 mg/L $CaCO_3$ Other parameters available on request.

Test Conditions Test concentration : 0,6.25,12.5,25,50,100 (% vol/vol)

Organisms per Vessel :	10	Test Temperature :	15 ± 1 °C	Solution Depth :	>15 cm
Total # of Organisms Used :	60	Pre-aeration Time :	120 min.	Rate of Aeration	6.5±1 mL/min/L
Test Volume :	20 L	Vessel Volume :	38L	Test pH Adjusted:	No
Loading Density :	0.4 g/L	Photoperiod :	16:8 (light: dark)		

Test Organism : Rainbow Trout *(Oncorhynchus mykiss)* Source : LSL Trout Hatchery

Culture Temperature :	15 ± 2 °C	Weight (Mean) +- SD :	0.8 ± 0.2 g	Length (Mean) +- SD :	4.27 ± 0.36 cm
Culture Water Renewal :	≥ 1.0 L/min/kg fish	Weight (Range) :	0.4 – 1.1 g	Length (Range) :	3.70 – 4.70 cm
Culture Photoperiod :	16:8 (light: dark)			% Mortality within 7 days :	0%
Feeding rate and frequency :	daily: 1-5% biomass of trout.			Acclimation Time:	>14 days

Reference chemical: Phenol Test Date: Sep 27, 2022

Test Endpoint 96 hrs LC50 (95% confidence interval) : 10.2 (9.01, 11.4)mg/L Statistical Method : Probit

Historical Mean LC50 (warning limits) : 9.77 (8.63, 11.1) mg/L Concentration : 0,8,10,12,15,20 mg/L

RESULTS OF RAINBOW TROUT LC50 MULTI-CONCENTRATION

Client : 7500 KGS Group

Client Project Name & Number: 21-1357-005

Job Number: C277933

Sample Number: BDS015-01

Test Method EPS 1/RM/13

Method Deviations : None

Note: The results contained in this report refer only to the testing of the sample submitted. Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation, including the toxicity parameters reported herein. The conductivity, dissolved oxygen and pH data contained within the toxicity report are provided for information purposes and are not individually accredited parameters. This report may not be reproduced, except in its entirety, without the written approval of the laboratory.

Analyst : Cara Shurgot, Kaylie Lyons, Kyle Monaghan, Tami Horvath

Chelsea Tessier

Verified By : Chelsea Tessier, Ecotoxicology Supervisor

Date: Oct 14, 2022 11:08 AM

APPENDIX D

Laboratory Certificates of Analysis – Groundwater

Your Project #: 21-1357-005
Site#: SHERRIDON GROUNDWATER
Your C.O.C. #: 676079-01-01, 676079-02-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/10/05
Report #: R3243529
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C273575
Received: 2022/09/22, 10:55

Sample Matrix: Ground Water
Samples Received: 14

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity @25C (pp, total), CO3,HCO3,OH (1)	14	N/A	2022/09/25	AB SOP-00005	SM 23 2320 B m
Cadmium - low level CCME - Dissolved (1)	14	N/A	2022/09/27		Auto Calc
Cadmium - low level CCME (Total) (1)	4	N/A	2022/09/28		Auto Calc
Cadmium - low level CCME (Total) (1)	4	N/A	2022/09/29		Auto Calc
Cadmium - low level CCME (Total) (1)	2	N/A	2022/10/03		Auto Calc
Cadmium - low level CCME (Total) (1)	4	N/A	2022/10/04		Auto Calc
Chloride/Sulphate by Auto Colourimetry (1)	14	N/A	2022/09/25	AB SOP-00020	SM23-4500-Cl/SO4-E m
Conductivity @25C (1)	14	N/A	2022/09/25	AB SOP-00005	SM 23 2510 B m
Hardness (1)	12	N/A	2022/09/25		Auto Calc
Hardness (1)	2	N/A	2022/09/26		Auto Calc
Mercury (Dissolved) by CV-Lab Filtered (1)	13	2022/09/26	2022/09/26	AB SOP-00084	BCMOE BCLM Oct2013 m
Mercury (Total) by CV (1)	14	2022/09/24	2022/09/26	AB SOP-00084	BCMOE BCLM Oct2013 m
Elements by ICP-Dissolved-Lab Filtered (1, 2)	12	N/A	2022/09/25	AB SOP-00042	EPA 6010d R5 m
Elements by ICP-Dissolved-Lab Filtered (1, 2)	2	N/A	2022/09/26	AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Total (1)	10	2022/09/27	2022/09/28	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Elements by ICP - Total (1)	4	2022/09/28	2022/09/28	AB SOP-00014 / AB SOP-00042	EPA 6010d R5 m
Elements by ICPMS-Dissolved-Lab Filtered (1, 3)	14	N/A	2022/09/27	AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total (1)	5	2022/09/27	2022/09/27	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total (1)	5	2022/09/27	2022/10/03	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total (1)	1	2022/09/28	2022/09/28	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
Elements by ICPMS - Total (1)	3	2022/09/28	2022/09/29	AB SOP-00014 / AB SOP-00043	EPA 6020b R2 m
Ion Balance (1)	14	N/A	2022/09/28		Auto Calc
Sum of cations, anions (1)	12	N/A	2022/09/25		Auto Calc
Sum of cations, anions (1)	2	N/A	2022/09/26		Auto Calc
Nitrate and Nitrite (1)	10	N/A	2022/09/27		Auto Calc
Nitrate and Nitrite (1)	2	N/A	2022/09/28		Auto Calc

Your Project #: 21-1357-005
Site#: SHERRIDON GROUNDWATER
Your C.O.C. #: 676079-01-01, 676079-02-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/10/05
Report #: R3243529
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C273575
Received: 2022/09/22, 10:55

Sample Matrix: Ground Water
Samples Received: 14

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Nitrate and Nitrite (1)	2	N/A	2022/09/29		Auto Calc
NO2 (N); NO2 (N) + NO3 (N) in Water (1)	10	N/A	2022/09/24	AB SOP-00091	SM 23 4500 NO3m
NO2 (N); NO2 (N) + NO3 (N) in Water (1)	4	N/A	2022/09/25	AB SOP-00091	SM 23 4500 NO3m
Nitrate (as N) (1)	10	2022/09/23	2022/09/27		Auto Calc
Nitrate (as N) (1)	2	2022/09/23	2022/09/28		Auto Calc
Nitrate (as N) (1)	2	2022/09/23	2022/09/29		Auto Calc
pH @25°C (1, 4)	14	N/A	2022/09/25	AB SOP-00005	SM 23 4500-H+B m
Total Dissolved Solids (Calculated) (1)	14	N/A	2022/09/28		Auto Calc

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Calgary, 4000 - 19 St. , Calgary, AB, T2E 6P8
(2) Dissolved > Total Imbalance: When applicable, Dissolved and Total results were reviewed and data quality meets acceptable levels unless otherwise noted.
(3) Samples were filtered and preserved at the lab. Values may not reflect concentrations at the time of sampling. Dissolved > Total Imbalance: When applicable, Dissolved and Total

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

Your Project #: 21-1357-005
Site#: SHERRIDON GROUNDWATER
Your C.O.C. #: 676079-01-01, 676079-02-01

Attention: Ganga Atmuri

KGS Group
3rd Floor
865 Waverly St
Winnipeg, MB
Canada R3T 5T4

Report Date: 2022/10/05
Report #: R3243529
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C273575

Received: 2022/09/22, 10:55

results were reviewed and data quality meets acceptable levels unless otherwise noted.
(4) The CCME method requires pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME holding time. Bureau Veritas endeavours to analyze samples as soon as possible after receipt.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Janelle Kochan, B.Sc., Key Account Specialist
Email: Janelle.KOCHAN@bureauveritas.com
Phone# (204)259-0231
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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

ROUTINE + DISS. REG. METALS – LAB FILT (GROUND WATER)

Bureau Veritas ID		BCO318			BCO319		BCO320		
Sampling Date		2022/09/20 17:00			2022/09/20 17:10		2022/09/20 17:30		
COC Number		676079-01-01			676079-01-01		676079-01-01		
	UNITS	MW-01-BR	RDL	QC Batch	MW-02-BR	QC Batch	MW-03-OB	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	28	N/A	A728382	7.9	A728382	9.1	N/A	A728382
Cation Sum	meq/L	30	N/A	A728382	8.1	A728382	9.7	N/A	A728382
Hardness (CaCO3)	mg/L	1400	0.50	A728343	150	A728343	440	0.50	A728343
Ion Balance (% Difference)	%	2.2	N/A	A728345	1.1	A728345	3.2	N/A	A728345
Nitrate (N)	mg/L	2.6	0.050	A728344	<0.010	A728344	0.025	0.010	A728344
Nitrate (NO3)	mg/L	12	0.22	A728295	<0.044	A728295	0.11	0.044	A728295
Nitrite (NO2)	mg/L	0.45	0.033	A728295	<0.033	A728295	<0.033	0.033	A728295
Calculated Total Dissolved Solids	mg/L	1700	25	A728342	470	A728342	550	10	A728342
Elements									
Dissolved Cadmium (Cd)	ug/L	<0.020	0.020	A728141	<0.020	A728141	<0.020	0.020	A728141
Misc. Inorganics									
Conductivity	uS/cm	2200	2.0	A729557	770	A729557	840	2.0	A729557
pH	pH	7.62	N/A	A729555	7.83	A729555	7.15	N/A	A729555
Anions									
Alkalinity (PP as CaCO3)	mg/L	<1.0	1.0	A729556	<1.0	A729556	<1.0	1.0	A729556
Alkalinity (Total as CaCO3)	mg/L	340	1.0	A729556	200	A729556	200	1.0	A729556
Bicarbonate (HCO3)	mg/L	420	1.0	A729556	240	A729556	250	1.0	A729556
Carbonate (CO3)	mg/L	<1.0	1.0	A729556	<1.0	A729556	<1.0	1.0	A729556
Hydroxide (OH)	mg/L	<1.0	1.0	A729556	<1.0	A729556	<1.0	1.0	A729556
Chloride (Cl)	mg/L	69	1.0	A729350	29	A729350	2.0	1.0	A729350
Sulphate (SO4)	mg/L	930	25	A729350	150	A729350	240	5.0	A729350
Nutrients									
Nitrite (N)	mg/L	0.14	0.010	A729143	<0.010	A729349	<0.010	0.010	A729348
Nitrate plus Nitrite (N)	mg/L	2.8	0.050	A729143	<0.010	A729349	0.025	0.010	A729348
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	<0.0030	0.0030	A730514	0.0030	A730514	<0.0030	0.0030	A730514
Dissolved Antimony (Sb)	mg/L	<0.00060	0.00060	A730514	<0.00060	A730514	<0.00060	0.00060	A730514
Dissolved Arsenic (As)	mg/L	0.00050	0.00020	A730514	0.00051	A730514	0.00080	0.00020	A730514
Dissolved Barium (Ba)	mg/L	0.10	0.010	A729356	0.052	A729356	0.14	0.010	A729356
Dissolved Beryllium (Be)	mg/L	<0.0010	0.0010	A730514	<0.0010	A730514	<0.0010	0.0010	A730514
Dissolved Boron (B)	mg/L	0.19	0.020	A729356	0.54	A729356	0.071	0.020	A729356

RDL = Reportable Detection Limit
N/A = Not Applicable

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

ROUTINE + DISS. REG. METALS – LAB FILT (GROUND WATER)

Bureau Veritas ID		BCO318			BCO319		BCO320		
Sampling Date		2022/09/20 17:00			2022/09/20 17:10		2022/09/20 17:30		
COC Number		676079-01-01			676079-01-01		676079-01-01		
	UNITS	MW-01-BR	RDL	QC Batch	MW-02-BR	QC Batch	MW-03-OB	RDL	QC Batch
Dissolved Calcium (Ca)	mg/L	290	0.30	A729356	32	A729356	130	0.30	A729356
Dissolved Chromium (Cr)	mg/L	<0.0010	0.0010	A730514	<0.0010	A730514	<0.0010	0.0010	A730514
Dissolved Cobalt (Co)	mg/L	0.017	0.00030	A730514	0.0018	A730514	0.0012	0.00030	A730514
Dissolved Copper (Cu)	mg/L	<0.0010	0.0010	A730514	0.0015	A730514	<0.0010	0.0010	A730514
Dissolved Iron (Fe)	mg/L	<0.060	0.060	A729356	<0.060	A729356	<0.060	0.060	A729356
Dissolved Lead (Pb)	mg/L	<0.00020	0.00020	A730514	<0.00020	A730514	<0.00020	0.00020	A730514
Dissolved Lithium (Li)	mg/L	0.033	0.020	A729356	0.083	A729356	0.033	0.020	A729356
Dissolved Magnesium (Mg)	mg/L	160	0.20	A729356	17	A729356	25	0.20	A729356
Dissolved Manganese (Mn)	mg/L	1.6	0.0040	A729356	0.068	A729356	0.92	0.0040	A729356
Dissolved Molybdenum (Mo)	mg/L	0.010	0.00020	A730514	0.00055	A730514	0.00093	0.00020	A730514
Dissolved Nickel (Ni)	mg/L	0.013	0.00050	A730514	<0.00050	A730514	0.0018	0.00050	A730514
Dissolved Phosphorus (P)	mg/L	<0.10	0.10	A729356	<0.10	A729356	<0.10	0.10	A729356
Dissolved Potassium (K)	mg/L	21	0.30	A729356	6.9	A729356	9.1	0.30	A729356
Dissolved Selenium (Se)	mg/L	0.0086	0.00020	A730514	<0.00020	A730514	<0.00020	0.00020	A730514
Dissolved Silicon (Si)	mg/L	5.5	0.50	A729356	6.4	A729356	7.9	0.50	A729356
Dissolved Silver (Ag)	mg/L	<0.00010	0.00010	A730514	<0.00010	A730514	<0.00010	0.00010	A730514
Dissolved Sodium (Na)	mg/L	41	0.50	A729356	110	A729356	15	0.50	A729356
Dissolved Strontium (Sr)	mg/L	1.4	0.020	A729356	0.42	A729356	0.38	0.020	A729356
Dissolved Sulphur (S)	mg/L	310	0.20	A729356	48	A729356	83	0.20	A729356
Dissolved Thallium (Tl)	mg/L	<0.00020	0.00020	A730514	<0.00020	A730514	<0.00020	0.00020	A730514
Dissolved Tin (Sn)	mg/L	<0.0010	0.0010	A730514	<0.0010	A730514	<0.0010	0.0010	A730514
Dissolved Titanium (Ti)	mg/L	<0.0010	0.0010	A730514	<0.0010	A730514	<0.0010	0.0010	A730514
Dissolved Uranium (U)	mg/L	0.052	0.00010	A730514	0.0060	A730514	0.0039	0.00010	A730514
Dissolved Vanadium (V)	mg/L	<0.0010	0.0010	A730514	<0.0010	A730514	<0.0010	0.0010	A730514
Dissolved Zinc (Zn)	mg/L	0.0032	0.0030	A730514	<0.0030	A730514	0.038	0.0030	A730514

RDL = Reportable Detection Limit

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

ROUTINE + DISS. REG. METALS – LAB FILT (GROUND WATER)

Bureau Veritas ID		BCO321		BCO322			BCO323		
Sampling Date		2022/09/20 17:20		2022/09/20 17:15			2022/09/20 16:45		
COC Number		676079-01-01		676079-01-01			676079-01-01		
	UNITS	MW-04-BR	QC Batch	MW-04-OB	RDL	QC Batch	MW-05-BR	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	9.8	A728382	14	N/A	A728382	1.1	N/A	A728382
Cation Sum	meq/L	10	A728382	16	N/A	A728382	1.1	N/A	A728382
Hardness (CaCO3)	mg/L	190	A728343	700	0.50	A728343	47	0.50	A728343
Ion Balance (% Difference)	%	3.3	A728345	5.7	N/A	A728345	NC	N/A	A728345
Nitrate (N)	mg/L	0.012	A728344	0.022	0.010	A728344	0.11	0.010	A728344
Nitrate (NO3)	mg/L	0.053	A728295	0.097	0.044	A728566	0.48	0.044	A728566
Nitrite (NO2)	mg/L	<0.033	A728295	<0.033	0.033	A728566	<0.033	0.033	A728566
Calculated Total Dissolved Solids	mg/L	600	A728342	810	10	A728342	67	10	A728342
Elements									
Dissolved Cadmium (Cd)	ug/L	<0.020	A728141	<0.020	0.020	A728141	0.079	0.020	A728141
Misc. Inorganics									
Conductivity	uS/cm	970	A729557	1200	2.0	A729557	120	2.0	A729557
pH	pH	7.90	A729555	7.81	N/A	A729555	5.91	N/A	A729555
Anions									
Alkalinity (PP as CaCO3)	mg/L	<1.0	A729556	<1.0	1.0	A729556	<1.0	1.0	A729556
Alkalinity (Total as CaCO3)	mg/L	210	A729556	360	1.0	A729556	15	1.0	A729556
Bicarbonate (HCO3)	mg/L	260	A729556	440	1.0	A729556	18	1.0	A729556
Carbonate (CO3)	mg/L	<1.0	A729556	<1.0	1.0	A729556	<1.0	1.0	A729556
Hydroxide (OH)	mg/L	<1.0	A729556	<1.0	1.0	A729556	<1.0	1.0	A729556
Chloride (Cl)	mg/L	27	A729350	14	1.0	A729350	<1.0	1.0	A729350
Sulphate (SO4)	mg/L	230	A729350	300	5.0	A729350	36	1.0	A729350
Nutrients									
Nitrite (N)	mg/L	<0.010	A729348	<0.010	0.010	A729143	<0.010	0.010	A729143
Nitrate plus Nitrite (N)	mg/L	0.012	A729348	0.022	0.010	A729143	0.11	0.010	A729143
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	0.0074	A730514	<0.0030	0.0030	A730514	0.12	0.0030	A730514
Dissolved Antimony (Sb)	mg/L	<0.00060	A730514	<0.00060	0.00060	A730514	<0.00060	0.00060	A730514
Dissolved Arsenic (As)	mg/L	0.0023	A730514	<0.00020	0.00020	A730514	<0.00020	0.00020	A730514
Dissolved Barium (Ba)	mg/L	0.040	A729356	0.11	0.010	A729354	0.014	0.010	A729356
Dissolved Beryllium (Be)	mg/L	<0.0010	A730514	<0.0010	0.0010	A730514	<0.0010	0.0010	A730514
Dissolved Boron (B)	mg/L	0.49	A729356	0.14	0.020	A729354	<0.020	0.020	A729356

RDL = Reportable Detection Limit
N/A = Not Applicable

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

ROUTINE + DISS. REG. METALS – LAB FILT (GROUND WATER)

Bureau Veritas ID		BCO321		BCO322			BCO323		
Sampling Date		2022/09/20 17:20		2022/09/20 17:15			2022/09/20 16:45		
COC Number		676079-01-01		676079-01-01			676079-01-01		
	UNITS	MW-04-BR	QC Batch	MW-04-OB	RDL	QC Batch	MW-05-BR	RDL	QC Batch
Dissolved Calcium (Ca)	mg/L	37	A729356	180	0.30	A729354	14	0.30	A729356
Dissolved Chromium (Cr)	mg/L	<0.0010	A730514	<0.0010	0.0010	A730514	<0.0010	0.0010	A730514
Dissolved Cobalt (Co)	mg/L	0.00055	A730514	<0.00030	0.00030	A730514	0.0091	0.00030	A730514
Dissolved Copper (Cu)	mg/L	<0.0010	A730514	<0.0010	0.0010	A730514	0.014	0.0010	A730514
Dissolved Iron (Fe)	mg/L	<0.060	A729356	<0.060	0.060	A729354	<0.060	0.060	A729356
Dissolved Lead (Pb)	mg/L	<0.00020	A730514	<0.00020	0.00020	A730514	<0.00020	0.00020	A730514
Dissolved Lithium (Li)	mg/L	0.13	A729356	0.074	0.020	A729354	<0.020	0.020	A729356
Dissolved Magnesium (Mg)	mg/L	23	A729356	60	0.20	A729354	3.2	0.20	A729356
Dissolved Manganese (Mn)	mg/L	0.096	A729356	0.58	0.0040	A729354	0.13	0.0040	A729356
Dissolved Molybdenum (Mo)	mg/L	0.0059	A730514	<0.00020	0.00020	A730514	<0.00020	0.00020	A730514
Dissolved Nickel (Ni)	mg/L	0.00079	A730514	<0.00050	0.00050	A730514	0.0038	0.00050	A730514
Dissolved Phosphorus (P)	mg/L	<0.10	A729356	<0.10	0.10	A729354	<0.10	0.10	A729356
Dissolved Potassium (K)	mg/L	8.9	A729356	5.6	0.30	A729354	3.0	0.30	A729356
Dissolved Selenium (Se)	mg/L	0.00020	A730514	<0.00020	0.00020	A730514	0.00030	0.00020	A730514
Dissolved Silicon (Si)	mg/L	6.0	A729356	9.1	0.50	A729354	5.8	0.50	A729356
Dissolved Silver (Ag)	mg/L	<0.00010	A730514	<0.00010	0.00010	A730514	<0.00010	0.00010	A730514
Dissolved Sodium (Na)	mg/L	150	A729356	31	0.50	A729354	1.6	0.50	A729356
Dissolved Strontium (Sr)	mg/L	0.62	A729356	0.84	0.020	A729354	<0.020	0.020	A729356
Dissolved Sulphur (S)	mg/L	79	A729356	110	0.20	A729354	12	0.20	A729356
Dissolved Thallium (Tl)	mg/L	<0.00020	A730514	<0.00020	0.00020	A730514	<0.00020	0.00020	A730514
Dissolved Tin (Sn)	mg/L	<0.0010	A730514	<0.0010	0.0010	A730514	<0.0010	0.0010	A730514
Dissolved Titanium (Ti)	mg/L	<0.0010	A730514	<0.0010	0.0010	A730514	<0.0010	0.0010	A730514
Dissolved Uranium (U)	mg/L	0.0090	A730514	0.0016	0.00010	A730514	0.00064	0.00010	A730514
Dissolved Vanadium (V)	mg/L	<0.0010	A730514	<0.0010	0.0010	A730514	<0.0010	0.0010	A730514
Dissolved Zinc (Zn)	mg/L	<0.0030	A730514	<0.0030	0.0030	A730514	0.029	0.0030	A730514

RDL = Reportable Detection Limit

Bureau Veritas Winnipeg: Unit D, 675 Berry Street R3H 1A7 Telephone (204) 772-7276 Fax (204) 772-2386

ROUTINE + DISS. REG. METALS – LAB FILT (GROUND WATER)

Bureau Veritas ID		BCO324		BCO325		BCO326	BCO335		
Sampling Date		2022/09/20 17:50		2022/09/20 18:05		2022/09/20 17:35	2022/09/20 17:45		
COC Number		676079-01-01		676079-01-01		676079-01-01	676079-02-01		
	UNITS	MW-06-BR	QC Batch	MW-07-BR	QC Batch	MW-09-OB	MW-10-OB	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	6.3	A728382	5.0	A728382	9.7	9.9	N/A	A728382
Cation Sum	meq/L	6.1	A728382	4.7	A728382	10	11	N/A	A728382
Hardness (CaCO3)	mg/L	280	A728343	210	A728343	460	470	0.50	A728568
Ion Balance (% Difference)	%	1.8	A728345	3.8	A728345	1.4	4.1	N/A	A728345
Nitrate (N)	mg/L	0.013	A728344	0.61	A728344	0.034	<0.010	0.010	A728344
Nitrate (NO3)	mg/L	0.056	A728566	2.7	A728566	0.15	<0.044	0.044	A728566
Nitrite (NO2)	mg/L	<0.033	A728566	<0.033	A728566	<0.033	<0.033	0.033	A728566
Calculated Total Dissolved Solids	mg/L	410	A728342	330	A728342	620	640	10	A728342
Elements									
Dissolved Cadmium (Cd)	ug/L	100	A728141	66	A728141	0.21	2.1	0.020	A728141
Misc. Inorganics									
Conductivity	uS/cm	650	A729557	550	A729557	920	960	2.0	A729557
pH	pH	5.94	A729555	4.54	A729555	6.20	6.39	N/A	A729555
Anions									
Alkalinity (PP as CaCO3)	mg/L	<1.0	A729556	<1.0	A729556	<1.0	<1.0	1.0	A729556
Alkalinity (Total as CaCO3)	mg/L	27	A729556	<1.0	A729556	88	110	1.0	A729556
Bicarbonate (HCO3)	mg/L	33	A729556	<1.0	A729556	110	130	1.0	A729556
Carbonate (CO3)	mg/L	<1.0	A729556	<1.0	A729556	<1.0	<1.0	1.0	A729556
Hydroxide (OH)	mg/L	<1.0	A729556	<1.0	A729556	<1.0	<1.0	1.0	A729556
Chloride (Cl)	mg/L	<1.0	A729350	<1.0	A729350	1.2	<1.0	1.0	A729350
Sulphate (SO4)	mg/L	280	A729350	240	A729350	380	370	5.0	A729350
Nutrients									
Nitrite (N)	mg/L	<0.010	A729143	<0.010	A729349	<0.010	<0.010	0.010	A729143
Nitrate plus Nitrite (N)	mg/L	0.013	A729143	0.61	A729349	0.034	<0.010	0.010	A729143
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	<0.0030	A730514	3.5	A730514	<0.0030	<0.0030	0.0030	A730514
Dissolved Antimony (Sb)	mg/L	<0.00060	A730514	<0.00060	A730514	<0.00060	<0.00060	0.00060	A730514
Dissolved Arsenic (As)	mg/L	<0.00020	A730514	<0.00020	A730514	<0.00020	<0.00020	0.00020	A730514
Dissolved Barium (Ba)	mg/L	0.024	A729354	0.029	A729356	0.033	0.023	0.010	A729356
Dissolved Beryllium (Be)	mg/L	<0.0010	A730514	<0.0010	A730514	<0.0010	<0.0010	0.0010	A730514
Dissolved Boron (B)	mg/L	0.038	A729354	<0.020	A729356	0.055	0.11	0.020	A729356

RDL = Reportable Detection Limit
N/A = Not Applicable

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ROUTINE + DISS. REG. METALS – LAB FILT (GROUND WATER)

Bureau Veritas ID		BCO324		BCO325		BCO326	BCO335		
Sampling Date		2022/09/20 17:50		2022/09/20 18:05		2022/09/20 17:35	2022/09/20 17:45		
COC Number		676079-01-01		676079-01-01		676079-01-01	676079-02-01		
	UNITS	MW-06-BR	QC Batch	MW-07-BR	QC Batch	MW-09-OB	MW-10-OB	RDL	QC Batch
Dissolved Calcium (Ca)	mg/L	83	A729354	63	A729356	130	140	0.30	A729356
Dissolved Chromium (Cr)	mg/L	<0.0010	A730514	<0.0010	A730514	<0.0010	<0.0010	0.0010	A730514
Dissolved Cobalt (Co)	mg/L	0.044	A730514	0.032	A730514	0.039	0.028	0.00030	A730514
Dissolved Copper (Cu)	mg/L	0.22	A730514	5.8	A730514	<0.0010	0.0012	0.0010	A730514
Dissolved Iron (Fe)	mg/L	0.17	A729354	0.064	A729356	7.4	3.7	0.060	A729356
Dissolved Lead (Pb)	mg/L	<0.00020	A730514	0.00039	A730514	<0.00020	<0.00020	0.00020	A730514
Dissolved Lithium (Li)	mg/L	<0.020	A729354	<0.020	A729356	0.058	0.046	0.020	A729356
Dissolved Magnesium (Mg)	mg/L	18	A729354	13	A729356	31	28	0.20	A729356
Dissolved Manganese (Mn)	mg/L	1.6	A729354	0.57	A729356	2.2	2.3	0.0040	A729356
Dissolved Molybdenum (Mo)	mg/L	<0.00020	A730514	<0.00020	A730514	<0.00020	0.00070	0.00020	A730514
Dissolved Nickel (Ni)	mg/L	0.017	A730514	0.019	A730514	0.014	0.014	0.00050	A730514
Dissolved Phosphorus (P)	mg/L	<0.10	A729354	0.11	A729356	<0.10	<0.10	0.10	A729356
Dissolved Potassium (K)	mg/L	8.3	A729354	10	A729356	7.1	7.5	0.30	A729356
Dissolved Selenium (Se)	mg/L	<0.00020	A730514	0.00069	A730514	<0.00020	<0.00020	0.00020	A730514
Dissolved Silicon (Si)	mg/L	7.4	A729354	12	A729356	8.6	8.3	0.50	A729356
Dissolved Silver (Ag)	mg/L	<0.00010	A730514	<0.00010	A730514	<0.00010	<0.00010	0.00010	A730514
Dissolved Sodium (Na)	mg/L	4.4	A729354	2.6	A729356	6.5	24	0.50	A729356
Dissolved Strontium (Sr)	mg/L	0.14	A729354	0.077	A729356	0.24	0.33	0.020	A729356
Dissolved Sulphur (S)	mg/L	99	A729354	88	A729356	140	140	0.20	A729356
Dissolved Thallium (Tl)	mg/L	0.00021	A730514	<0.00020	A730514	<0.00020	<0.00020	0.00020	A730514
Dissolved Tin (Sn)	mg/L	<0.0010	A730514	<0.0010	A730514	<0.0010	<0.0010	0.0010	A730514
Dissolved Titanium (Ti)	mg/L	<0.0010	A730514	<0.0010	A730514	<0.0010	<0.0010	0.0010	A730514
Dissolved Uranium (U)	mg/L	0.00069	A730514	0.0032	A730514	<0.00010	0.0015	0.00010	A730514
Dissolved Vanadium (V)	mg/L	<0.0010	A730514	<0.0010	A730514	<0.0010	<0.0010	0.0010	A730514
Dissolved Zinc (Zn)	mg/L	27	A730514	17	A730514	24	9.1	0.0030	A730514

RDL = Reportable Detection Limit

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ROUTINE + DISS. REG. METALS – LAB FILT (GROUND WATER)

Bureau Veritas ID		BCO336		BCO337		BCO338	BCO339		
Sampling Date		2022/09/20 17:40		2022/09/20 18:30		2022/09/20	2022/09/20		
COC Number		676079-02-01		676079-02-01		676079-02-01	676079-02-01		
	UNITS	MW-11-OB	QC Batch	MW-100	RDL	FIELD BLANK	TRIP BLANK	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	11	A728382	5.1	N/A	0.0000	0.0000	N/A	A728382
Cation Sum	meq/L	12	A728382	4.7	N/A	0.0090	0.012	N/A	A728382
Hardness (CaCO3)	mg/L	590	A728568	210	0.50	<0.50	<0.50	0.50	A728568
Ion Balance (% Difference)	%	4.5	A728345	4.6	N/A	NC	NC	N/A	A728345
Nitrate (N)	mg/L	0.016	A728344	0.68	0.010	<0.010	<0.010	0.010	A728344
Nitrate (NO3)	mg/L	0.070	A728566	3.0	0.044	<0.044	<0.044	0.044	A728566
Nitrite (NO2)	mg/L	<0.033	A728566	<0.033	0.033	<0.033	<0.033	0.033	A728566
Calculated Total Dissolved Solids	mg/L	710	A728342	340	10	<10	<10	10	A728342
Elements									
Dissolved Cadmium (Cd)	ug/L	<0.020	A728141	64	0.020	<0.020	<0.020	0.020	A728141
Misc. Inorganics									
Conductivity	uS/cm	1000	A729557	550	2.0	<2.0	<2.0	2.0	A729557
pH	pH	7.02	A729555	4.60	N/A	5.06	4.90	N/A	A729555
Anions									
Alkalinity (PP as CaCO3)	mg/L	<1.0	A729556	<1.0	1.0	<1.0	<1.0	1.0	A729556
Alkalinity (Total as CaCO3)	mg/L	180	A729556	<1.0	1.0	<1.0	<1.0	1.0	A729556
Bicarbonate (HCO3)	mg/L	220	A729556	<1.0	1.0	<1.0	<1.0	1.0	A729556
Carbonate (CO3)	mg/L	<1.0	A729556	<1.0	1.0	<1.0	<1.0	1.0	A729556
Hydroxide (OH)	mg/L	<1.0	A729556	<1.0	1.0	<1.0	<1.0	1.0	A729556
Chloride (Cl)	mg/L	<1.0	A729350	<1.0	1.0	<1.0	<1.0	1.0	A729350
Sulphate (SO4)	mg/L	380	A729350	240	5.0	<1.0	<1.0	1.0	A729350
Nutrients									
Nitrite (N)	mg/L	<0.010	A729143	<0.010	0.010	<0.010	<0.010	0.010	A729143
Nitrate plus Nitrite (N)	mg/L	0.016	A729143	0.68	0.010	<0.010	<0.010	0.010	A729143
Lab Filtered Elements									
Dissolved Aluminum (Al)	mg/L	<0.0030	A730514	3.3	0.0030	<0.0030	<0.0030	0.0030	A730514
Dissolved Antimony (Sb)	mg/L	<0.00060	A730514	<0.00060	0.00060	<0.00060	<0.00060	0.00060	A730514
Dissolved Arsenic (As)	mg/L	0.0010	A730514	<0.00020	0.00020	<0.00020	<0.00020	0.00020	A730514
Dissolved Barium (Ba)	mg/L	0.089	A729354	0.029	0.010	<0.010	<0.010	0.010	A729356
Dissolved Beryllium (Be)	mg/L	<0.0010	A730514	<0.0010	0.0010	<0.0010	<0.0010	0.0010	A730514
Dissolved Boron (B)	mg/L	0.062	A729354	0.020	0.020	<0.020	<0.020	0.020	A729356

RDL = Reportable Detection Limit
N/A = Not Applicable

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ROUTINE + DISS. REG. METALS – LAB FILT (GROUND WATER)

Bureau Veritas ID		BCO336		BCO337		BCO338	BCO339		
Sampling Date		2022/09/20 17:40		2022/09/20 18:30		2022/09/20	2022/09/20		
COC Number		676079-02-01		676079-02-01		676079-02-01	676079-02-01		
	UNITS	MW-11-OB	QC Batch	MW-100	RDL	FIELD BLANK	TRIP BLANK	RDL	QC Batch
Dissolved Calcium (Ca)	mg/L	170	A729354	64	0.30	<0.30	<0.30	0.30	A729356
Dissolved Chromium (Cr)	mg/L	<0.0010	A730514	<0.0010	0.0010	<0.0010	<0.0010	0.0010	A730514
Dissolved Cobalt (Co)	mg/L	0.0032	A730514	0.031	0.00030	<0.00030	<0.00030	0.00030	A730514
Dissolved Copper (Cu)	mg/L	<0.0010	A730514	5.6	0.0010	<0.0010	<0.0010	0.0010	A730514
Dissolved Iron (Fe)	mg/L	<0.060	A729354	<0.060	0.060	<0.060	<0.060	0.060	A729356
Dissolved Lead (Pb)	mg/L	<0.00020	A730514	0.00029	0.00020	<0.00020	<0.00020	0.00020	A730514
Dissolved Lithium (Li)	mg/L	0.076	A729354	<0.020	0.020	<0.020	<0.020	0.020	A729356
Dissolved Magnesium (Mg)	mg/L	39	A729354	13	0.20	<0.20	<0.20	0.20	A729356
Dissolved Manganese (Mn)	mg/L	1.9	A729354	0.57	0.0040	<0.0040	<0.0040	0.0040	A729356
Dissolved Molybdenum (Mo)	mg/L	0.00027	A730514	<0.00020	0.00020	<0.00020	<0.00020	0.00020	A730514
Dissolved Nickel (Ni)	mg/L	0.0018	A730514	0.019	0.00050	<0.00050	<0.00050	0.00050	A730514
Dissolved Phosphorus (P)	mg/L	<0.10	A729354	0.11	0.10	<0.10	<0.10	0.10	A729356
Dissolved Potassium (K)	mg/L	6.1	A729354	10	0.30	<0.30	<0.30	0.30	A729356
Dissolved Selenium (Se)	mg/L	<0.00020	A730514	0.00092	0.00020	<0.00020	<0.00020	0.00020	A730514
Dissolved Silicon (Si)	mg/L	9.3	A729354	12	0.50	<0.50	<0.50	0.50	A729356
Dissolved Silver (Ag)	mg/L	<0.00010	A730514	<0.00010	0.00010	<0.00010	<0.00010	0.00010	A730514
Dissolved Sodium (Na)	mg/L	10	A729354	2.7	0.50	<0.50	<0.50	0.50	A729356
Dissolved Strontium (Sr)	mg/L	0.56	A729354	0.078	0.020	<0.020	<0.020	0.020	A729356
Dissolved Sulphur (S)	mg/L	130	A729354	87	0.20	<0.20	<0.20	0.20	A729356
Dissolved Thallium (Tl)	mg/L	<0.00020	A730514	<0.00020	0.00020	<0.00020	<0.00020	0.00020	A730514
Dissolved Tin (Sn)	mg/L	<0.0010	A730514	<0.0010	0.0010	<0.0010	<0.0010	0.0010	A730514
Dissolved Titanium (Ti)	mg/L	<0.0010	A730514	<0.0010	0.0010	<0.0010	<0.0010	0.0010	A730514
Dissolved Uranium (U)	mg/L	0.00024	A730514	0.0029	0.00010	<0.00010	<0.00010	0.00010	A730514
Dissolved Vanadium (V)	mg/L	<0.0010	A730514	<0.0010	0.0010	<0.0010	<0.0010	0.0010	A730514
Dissolved Zinc (Zn)	mg/L	0.47	A730514	16	0.0030	<0.0030	<0.0030	0.0030	A730514

RDL = Reportable Detection Limit

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ROUTINE + DISS. REG. METALS – LAB FILT (GROUND WATER)

Bureau Veritas ID		BCO339		
Sampling Date		2022/09/20		
COC Number		676079-02-01		
	UNITS	TRIP BLANK Lab-Dup	RDL	QC Batch
Lab Filtered Elements				
Dissolved Aluminum (Al)	mg/L	<0.0030	0.0030	A730514
Dissolved Antimony (Sb)	mg/L	<0.00060	0.00060	A730514
Dissolved Arsenic (As)	mg/L	<0.00020	0.00020	A730514
Dissolved Barium (Ba)	mg/L	<0.010	0.010	A729356
Dissolved Beryllium (Be)	mg/L	<0.0010	0.0010	A730514
Dissolved Boron (B)	mg/L	<0.020	0.020	A729356
Dissolved Calcium (Ca)	mg/L	<0.30	0.30	A729356
Dissolved Chromium (Cr)	mg/L	<0.0010	0.0010	A730514
Dissolved Cobalt (Co)	mg/L	<0.00030	0.00030	A730514
Dissolved Copper (Cu)	mg/L	<0.0010	0.0010	A730514
Dissolved Iron (Fe)	mg/L	<0.060	0.060	A729356
Dissolved Lead (Pb)	mg/L	<0.00020	0.00020	A730514
Dissolved Lithium (Li)	mg/L	<0.020	0.020	A729356
Dissolved Magnesium (Mg)	mg/L	<0.20	0.20	A729356
Dissolved Manganese (Mn)	mg/L	<0.0040	0.0040	A729356
Dissolved Molybdenum (Mo)	mg/L	<0.00020	0.00020	A730514
Dissolved Nickel (Ni)	mg/L	<0.00050	0.00050	A730514
Dissolved Phosphorus (P)	mg/L	<0.10	0.10	A729356
Dissolved Potassium (K)	mg/L	<0.30	0.30	A729356
Dissolved Selenium (Se)	mg/L	<0.00020	0.00020	A730514
Dissolved Silicon (Si)	mg/L	<0.50	0.50	A729356
Dissolved Silver (Ag)	mg/L	<0.00010	0.00010	A730514
Dissolved Sodium (Na)	mg/L	<0.50	0.50	A729356
Dissolved Strontium (Sr)	mg/L	<0.020	0.020	A729356
Dissolved Sulphur (S)	mg/L	<0.20	0.20	A729356
Dissolved Thallium (Tl)	mg/L	<0.00020	0.00020	A730514

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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ROUTINE + DISS. REG. METALS – LAB FILT (GROUND WATER)

Bureau Veritas ID		BCO339		
Sampling Date		2022/09/20		
COC Number		676079-02-01		
	UNITS	**TRIP BLANK Lab-Dup**	**RDL**	**QC Batch**
Dissolved Tin (Sn)	mg/L	<0.0010	0.0010	A730514
Dissolved Titanium (Ti)	mg/L	<0.0010	0.0010	A730514
Dissolved Uranium (U)	mg/L	<0.00010	0.00010	A730514
Dissolved Vanadium (V)	mg/L	<0.0010	0.0010	A730514
Dissolved Zinc (Zn)	mg/L	<0.0030	0.0030	A730514

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BCO318		BCO319	BCO320		BCO321		
Sampling Date		2022/09/20 17:00		2022/09/20 17:10	2022/09/20 17:30		2022/09/20 17:20		
COC Number		676079-01-01		676079-01-01	676079-01-01		676079-01-01		
	UNITS	MW-01-BR	QC Batch	MW-02-BR	MW-03-OB	QC Batch	MW-04-BR	RDL	QC Batch
Elements									
Total Cadmium (Cd)	ug/L	0.051	A727720	<0.020	0.17	A727720	0.021	0.020	A727720
Total Aluminum (Al)	mg/L	0.99	A731421	0.15	20	A732992	1.4	0.0030	A731421
Total Antimony (Sb)	mg/L	<0.00060	A731421	<0.00060	<0.00060	A732992	<0.00060	0.00060	A731421
Total Arsenic (As)	mg/L	0.0015	A731421	0.00073	0.0048	A732992	0.0027	0.00020	A731421
Total Barium (Ba)	mg/L	0.12	A731407	0.052	0.28	A732970	0.049	0.010	A731407
Total Beryllium (Be)	mg/L	<0.0010	A731421	<0.0010	0.0010	A732992	<0.0010	0.0010	A731421
Total Boron (B)	mg/L	0.18	A731407	0.53	0.086	A732970	0.49	0.020	A731407
Total Calcium (Ca)	mg/L	280	A731407	32	140	A732970	37	0.30	A731407
Total Chromium (Cr)	mg/L	0.0028	A731421	<0.0010	0.044	A732992	0.0037	0.0010	A731421
Total Cobalt (Co)	mg/L	0.019	A731421	0.0025	0.012	A732992	0.0015	0.00030	A731421
Total Copper (Cu)	mg/L	0.0082	A731421	0.0019	0.033	A732992	0.0066	0.0010	A731421
Total Iron (Fe)	mg/L	3.1	A731407	0.25	25	A732970	1.5	0.060	A731407
Total Lead (Pb)	mg/L	0.0017	A731421	<0.00020	0.0084	A732992	0.0013	0.00020	A731421
Total Lithium (Li)	mg/L	0.040	A731407	0.085	0.066	A732970	0.14	0.020	A731407
Total Magnesium (Mg)	mg/L	160	A731407	17	34	A732970	24	0.20	A731407
Total Manganese (Mn)	mg/L	1.9	A731407	0.073	1.3	A732970	0.12	0.0040	A731407
Total Molybdenum (Mo)	mg/L	0.012	A731421	0.00075	0.00073	A732992	0.0059	0.00020	A731421
Total Nickel (Ni)	mg/L	0.017	A731421	<0.00050	0.031	A732992	0.0027	0.00050	A731421
Total Phosphorus (P)	mg/L	<0.10	A731407	<0.10	0.39	A732970	<0.10	0.10	A731407
Total Potassium (K)	mg/L	21	A731407	6.6	15	A732970	9.2	0.30	A731407
Total Selenium (Se)	mg/L	0.0067	A731421	<0.00020	0.00023	A732992	0.00025	0.00020	A731421
Total Silicon (Si)	mg/L	7.3	A731407	6.8	36	A732970	8.2	0.50	A731407
Total Silver (Ag)	mg/L	<0.00010	A731421	<0.00010	<0.00010	A732992	<0.00010	0.00010	A731421
Total Sodium (Na)	mg/L	41	A731407	110	17	A732970	150	0.50	A731407
Total Strontium (Sr)	mg/L	1.4	A731407	0.41	0.41	A732970	0.62	0.020	A731407
Total Sulphur (S)	mg/L	290	A731407	46	76	A732970	77	0.20	A731407
Total Thallium (Tl)	mg/L	<0.00020	A731421	<0.00020	<0.00020	A732992	<0.00020	0.00020	A731421
Total Tin (Sn)	mg/L	<0.0010	A731421	<0.0010	0.0023	A732992	<0.0010	0.0010	A731421
Total Titanium (Ti)	mg/L	0.066	A731421	0.0056	1.2	A732992	0.087	0.0010	A731421
Total Uranium (U)	mg/L	0.053	A731421	0.0062	0.0040	A732992	0.0089	0.00010	A731421
Total Vanadium (V)	mg/L	0.0043	A731421	<0.0010	0.047	A732992	0.0044	0.0010	A731421
Total Zinc (Zn)	mg/L	0.014	A731421	<0.0030	1.6	A732992	0.0058	0.0030	A731421

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BCO322	BCO323		BCO324	BCO325		
Sampling Date		2022/09/20 17:15	2022/09/20 16:45		2022/09/20 17:50	2022/09/20 18:05		
COC Number		676079-01-01	676079-01-01		676079-01-01	676079-01-01		
	UNITS	MW-04-OB	MW-05-BR	QC Batch	MW-06-BR	MW-07-BR	RDL	QC Batch
Elements								
Total Cadmium (Cd)	ug/L	0.050	0.074	A727720	100	64	0.020	A727720
Total Aluminum (Al)	mg/L	2.7	0.34	A732992	0.13	3.4	0.0030	A731505
Total Antimony (Sb)	mg/L	<0.00060	<0.00060	A732992	<0.00060	<0.00060	0.00060	A731505
Total Arsenic (As)	mg/L	0.00047	<0.00020	A732992	<0.00020	<0.00020	0.00020	A731505
Total Barium (Ba)	mg/L	0.13	0.014	A732970	0.022	0.028	0.010	A731494
Total Beryllium (Be)	mg/L	<0.0010	<0.0010	A732992	<0.0010	<0.0010	0.0010	A731505
Total Boron (B)	mg/L	0.14	<0.020	A732970	0.034	<0.020	0.020	A731494
Total Calcium (Ca)	mg/L	180	14	A732970	86	66	0.30	A731494
Total Chromium (Cr)	mg/L	0.0055	<0.0010	A732992	<0.0010	<0.0010	0.0010	A731505
Total Cobalt (Co)	mg/L	0.0013	0.0087	A732992	0.041	0.031	0.00030	A731505
Total Copper (Cu)	mg/L	0.0044	0.015	A732992	0.34	5.6	0.0010	A731505
Total Iron (Fe)	mg/L	3.6	0.094	A732970	6.1	0.094	0.060	A731494
Total Lead (Pb)	mg/L	0.0014	<0.00020	A732992	0.0068	0.00046	0.00020	A731505
Total Lithium (Li)	mg/L	0.045	<0.020	A732970	0.044	0.023	0.020	A731494
Total Magnesium (Mg)	mg/L	57	3.1	A732970	19	14	0.20	A731494
Total Manganese (Mn)	mg/L	0.62	0.13	A732970	1.7	0.58	0.0040	A731494
Total Molybdenum (Mo)	mg/L	<0.00020	<0.00020	A732992	<0.00020	<0.00020	0.00020	A731505
Total Nickel (Ni)	mg/L	0.0039	0.0031	A732992	0.017	0.018	0.00050	A731505
Total Phosphorus (P)	mg/L	0.41	<0.10	A732970	<0.10	<0.10	0.10	A731494
Total Potassium (K)	mg/L	5.9	2.9	A732970	8.4	10	0.30	A731494
Total Selenium (Se)	mg/L	<0.00020	0.00032	A732992	0.00032	0.0014	0.00020	A731505
Total Silicon (Si)	mg/L	13	5.9	A732970	8.0	11	0.50	A731494
Total Silver (Ag)	mg/L	<0.00010	<0.00010	A732992	<0.00010	<0.00010	0.00010	A731505
Total Sodium (Na)	mg/L	31	1.5	A732970	4.5	2.7	0.50	A731494
Total Strontium (Sr)	mg/L	0.82	<0.020	A732970	0.13	0.071	0.020	A731494
Total Sulphur (S)	mg/L	99	11	A732970	110	89	0.20	A731494
Total Thallium (Tl)	mg/L	<0.00020	<0.00020	A732992	<0.00020	<0.00020	0.00020	A731505
Total Tin (Sn)	mg/L	0.0015	<0.0010	A732992	<0.0010	<0.0010	0.0010	A731505
Total Titanium (Ti)	mg/L	0.15	0.0030	A732992	0.0030	0.0018	0.0010	A731505
Total Uranium (U)	mg/L	0.0021	0.00075	A732992	0.0019	0.0030	0.00010	A731505
Total Vanadium (V)	mg/L	0.0061	<0.0010	A732992	<0.0010	<0.0010	0.0010	A731505
Total Zinc (Zn)	mg/L	0.013	0.027	A732992	27	17	0.0030	A731505

RDL = Reportable Detection Limit

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BCO325			BCO326		BCO335	BCO336		
Sampling Date		2022/09/20 18:05			2022/09/20 17:35		2022/09/20 17:45	2022/09/20 17:40		
COC Number		676079-01-01			676079-01-01		676079-02-01	676079-02-01		
	UNITS	MW-07-BR Lab-Dup	RDL	QC Batch	MW-09-OB	QC Batch	MW-10-OB	MW-11-OB	RDL	QC Batch
Elements										
Total Cadmium (Cd)	ug/L				0.37	A727720	3.8	0.070	0.020	A728567
Total Aluminum (Al)	mg/L				1.7	A731505	1.8	2.9	0.0030	A731505
Total Antimony (Sb)	mg/L				<0.00060	A731505	<0.00060	<0.00060	0.00060	A731505
Total Arsenic (As)	mg/L				0.0015	A731505	0.00083	0.0037	0.00020	A731505
Total Barium (Ba)	mg/L	0.027	0.010	A731494	0.040	A731494	0.035	0.10	0.010	A731494
Total Beryllium (Be)	mg/L				<0.0010	A731505	<0.0010	<0.0010	0.0010	A731505
Total Boron (B)	mg/L	<0.020	0.020	A731494	0.046	A731494	0.097	0.056	0.020	A731494
Total Calcium (Ca)	mg/L	65	0.30	A731494	130	A731494	140	180	0.30	A731494
Total Chromium (Cr)	mg/L				0.0036	A731505	0.0041	0.0059	0.0010	A731505
Total Cobalt (Co)	mg/L				0.041	A731505	0.028	0.0048	0.00030	A731505
Total Copper (Cu)	mg/L				0.0027	A731505	0.020	0.0060	0.0010	A731505
Total Iron (Fe)	mg/L	0.093	0.060	A731494	20	A731494	22	6.6	0.060	A731494
Total Lead (Pb)	mg/L				0.00065	A731505	0.00095	0.0012	0.00020	A731505
Total Lithium (Li)	mg/L	0.023	0.020	A731494	0.065	A731494	0.056	0.054	0.020	A731494
Total Magnesium (Mg)	mg/L	13	0.20	A731494	32	A731494	30	42	0.20	A731494
Total Manganese (Mn)	mg/L	0.60	0.0040	A731494	2.3	A731494	2.5	1.9	0.0040	A731494
Total Molybdenum (Mo)	mg/L				<0.00020	A731505	0.0012	0.00029	0.00020	A731505
Total Nickel (Ni)	mg/L				0.016	A731505	0.016	0.0064	0.00050	A731505
Total Phosphorus (P)	mg/L	<0.10	0.10	A731494	<0.10	A731494	<0.10	0.13	0.10	A731494
Total Potassium (K)	mg/L	10	0.30	A731494	7.7	A731494	8.4	7.1	0.30	A731494
Total Selenium (Se)	mg/L				<0.00020	A731505	<0.00020	<0.00020	0.00020	A731505
Total Silicon (Si)	mg/L	12	0.50	A731494	12	A731494	12	14	0.50	A731494
Total Silver (Ag)	mg/L				<0.00010	A731505	<0.00010	<0.00010	0.00010	A731505
Total Sodium (Na)	mg/L	2.7	0.50	A731494	6.8	A731494	25	11	0.50	A731494
Total Strontium (Sr)	mg/L	0.070	0.020	A731494	0.22	A731494	0.30	0.53	0.020	A731494
Total Sulphur (S)	mg/L	94	0.20	A731494	150	A731494	150	140	0.20	A731494
Total Thallium (Tl)	mg/L				<0.00020	A731505	<0.00020	<0.00020	0.00020	A731505
Total Tin (Sn)	mg/L				<0.0010	A731505	<0.0010	<0.0010	0.0010	A731505
Total Titanium (Ti)	mg/L				0.11	A731505	0.11	0.23	0.0010	A731505
Total Uranium (U)	mg/L				0.00015	A731505	0.0020	0.00047	0.00010	A731505
Total Vanadium (V)	mg/L				0.0030	A731505	0.0035	0.0073	0.0010	A731505

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BCO325			BCO326		BCO335	BCO336		
Sampling Date		2022/09/20 18:05			2022/09/20 17:35		2022/09/20 17:45	2022/09/20 17:40		
COC Number		676079-01-01			676079-01-01		676079-02-01	676079-02-01		
	UNITS	**MW-07-BR Lab-Dup**	**RDL**	**QC Batch**	**MW-09-OB**	**QC Batch**	**MW-10-OB**	**MW-11-OB**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L				26	A731505	10	0.56	0.0030	A731505

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

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REGULATED METALS (CCME/AT1) - TOTAL

Bureau Veritas ID		BCO337		BCO338	BCO339		
Sampling Date		2022/09/20 18:30		2022/09/20	2022/09/20		
COC Number		676079-02-01		676079-02-01	676079-02-01		
	UNITS	MW-100	QC Batch	FIELD BLANK	TRIP BLANK	RDL	QC Batch
Elements							
Total Cadmium (Cd)	ug/L	65	A728567	<0.020	<0.020	0.020	A728567
Total Aluminum (Al)	mg/L	3.6	A731505	0.0060	<0.0030	0.0030	A731421
Total Antimony (Sb)	mg/L	<0.00060	A731505	<0.00060	<0.00060	0.00060	A731421
Total Arsenic (As)	mg/L	<0.00020	A731505	<0.00020	<0.00020	0.00020	A731421
Total Barium (Ba)	mg/L	0.027	A731494	<0.010	<0.010	0.010	A731407
Total Beryllium (Be)	mg/L	<0.0010	A731505	<0.0010	<0.0010	0.0010	A731421
Total Boron (B)	mg/L	<0.020	A731494	<0.020	<0.020	0.020	A731407
Total Calcium (Ca)	mg/L	63	A731494	<0.30	<0.30	0.30	A731407
Total Chromium (Cr)	mg/L	<0.0010	A731505	<0.0010	<0.0010	0.0010	A731421
Total Cobalt (Co)	mg/L	0.030	A731505	<0.00030	<0.00030	0.00030	A731421
Total Copper (Cu)	mg/L	5.5	A731505	<0.0010	<0.0010	0.0010	A731421
Total Iron (Fe)	mg/L	0.16	A731494	<0.060	<0.060	0.060	A731407
Total Lead (Pb)	mg/L	0.00048	A731505	<0.00020	<0.00020	0.00020	A731421
Total Lithium (Li)	mg/L	0.022	A731494	<0.020	<0.020	0.020	A731407
Total Magnesium (Mg)	mg/L	13	A731494	<0.20	<0.20	0.20	A731407
Total Manganese (Mn)	mg/L	0.55	A731494	<0.0040	<0.0040	0.0040	A731407
Total Molybdenum (Mo)	mg/L	<0.00020	A731505	<0.00020	<0.00020	0.00020	A731421
Total Nickel (Ni)	mg/L	0.018	A731505	<0.00050	<0.00050	0.00050	A731421
Total Phosphorus (P)	mg/L	<0.10	A731494	<0.10	<0.10	0.10	A731407
Total Potassium (K)	mg/L	10	A731494	<0.30	<0.30	0.30	A731407
Total Selenium (Se)	mg/L	0.0011	A731505	<0.00020	<0.00020	0.00020	A731421
Total Silicon (Si)	mg/L	11	A731494	<0.50	<0.50	0.50	A731407
Total Silver (Ag)	mg/L	<0.00010	A731505	<0.00010	<0.00010	0.00010	A731421
Total Sodium (Na)	mg/L	2.6	A731494	<0.50	<0.50	0.50	A731407
Total Strontium (Sr)	mg/L	0.068	A731494	<0.020	<0.020	0.020	A731407
Total Sulphur (S)	mg/L	86	A731494	0.29	0.27	0.20	A731407
Total Thallium (Tl)	mg/L	<0.00020	A731505	<0.00020	<0.00020	0.00020	A731421
Total Tin (Sn)	mg/L	<0.0010	A731505	<0.0010	<0.0010	0.0010	A731421
Total Titanium (Ti)	mg/L	0.0033	A731505	<0.0010	<0.0010	0.0010	A731421
Total Uranium (U)	mg/L	0.0031	A731505	<0.00010	<0.00010	0.00010	A731421
Total Vanadium (V)	mg/L	<0.0010	A731505	<0.0010	<0.0010	0.0010	A731421
Total Zinc (Zn)	mg/L	17	A731505	<0.0030	<0.0030	0.0030	A731421

RDL = Reportable Detection Limit

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Bureau Veritas Job #: C273575
Report Date: 2022/10/05

KGS Group
Client Project #: 21-1357-005
Sampler Initials: IH

MERCURY BY COLD VAPOR (GROUND WATER)

Bureau Veritas ID		BCO318	BCO319		BCO320		BCO321		
Sampling Date		2022/09/20 17:00	2022/09/20 17:10		2022/09/20 17:30		2022/09/20 17:20		
COC Number		676079-01-01	676079-01-01		676079-01-01		676079-01-01		
	UNITS	MW-01-BR	MW-02-BR	RDL	MW-03-OB	RDL	MW-04-BR	RDL	QC Batch
Elements									
Total Mercury (Hg)	mg/L	0.0000056	<0.0000019	0.0000019	0.0000048	0.0000038	0.0000024	0.0000019	A729124
Lab Filtered Elements									
Dissolved Mercury (Hg)	ug/L	<0.0019	<0.0019	0.0019	<0.0019	0.0019	<0.0019	0.0019	A730880
RDL = Reportable Detection Limit									

Bureau Veritas ID		BCO322	BCO323	BCO324		
Sampling Date		2022/09/20 17:15	2022/09/20 16:45	2022/09/20 17:50		
COC Number		676079-01-01	676079-01-01	676079-01-01		
	UNITS	MW-04-OB	MW-05-BR	MW-06-BR	RDL	QC Batch
Elements						
Total Mercury (Hg)	mg/L	0.0000027	<0.0000019	<0.0000019	0.0000019	A729124
Lab Filtered Elements						
Dissolved Mercury (Hg)	ug/L	<0.0019	<0.0019	<0.0019	0.0019	A730880
RDL = Reportable Detection Limit						

Bureau Veritas ID		BCO324			BCO325	BCO326		
Sampling Date		2022/09/20 17:50			2022/09/20 18:05	2022/09/20 17:35		
COC Number		676079-01-01			676079-01-01	676079-01-01		
	UNITS	MW-06-BR Lab-Dup	RDL	QC Batch	MW-07-BR	MW-09-OB	RDL	QC Batch
Elements								
Total Mercury (Hg)	mg/L	<0.0000019	0.0000019	A729124	0.0000025	<0.0000019	0.0000019	A729124
Lab Filtered Elements								
Dissolved Mercury (Hg)	ug/L				<0.0019	<0.0019	0.0019	A730880
RDL = Reportable Detection Limit Lab-Dup = Laboratory Initiated Duplicate								

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MERCURY BY COLD VAPOR (GROUND WATER)

Bureau Veritas ID		BCO335			BCO335			BCO336		
Sampling Date		2022/09/20 17:45			2022/09/20 17:45			2022/09/20 17:40		
COC Number		676079-02-01			676079-02-01			676079-02-01		
	UNITS	MW-10-OB	RDL	QC Batch	MW-10-OB Lab-Dup	RDL	QC Batch	MW-11-OB	RDL	QC Batch
Elements										
Total Mercury (Hg)	mg/L	<0.0000019	0.0000019	A729124				<0.0000019	0.0000019	A729124
Lab Filtered Elements										
Dissolved Mercury (Hg)	ug/L	<0.0019	0.0019	A730880	0.0057	0.0019	A730880	<0.0019	0.0019	A730880

RDL = Reportable Detection Limit
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas ID		BCO337	BCO338			BCO339		
Sampling Date		2022/09/20 18:30	2022/09/20			2022/09/20		
COC Number		676079-02-01	676079-02-01			676079-02-01		
	UNITS	MW-100	FIELD BLANK	RDL	QC Batch	TRIP BLANK	RDL	QC Batch
Elements								
Total Mercury (Hg)	mg/L	0.0000030	<0.0000019	0.0000019	A729124	<0.0000019	0.0000019	A729124
Lab Filtered Elements								
Dissolved Mercury (Hg)	ug/L	<0.0019	<0.0019	0.0019	A730880			

RDL = Reportable Detection Limit

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	5.8°C

Version #2:Report reissued to amend project from 21-1357-001, 1000.05 to 21-1357-005 as per client request received 2022/10/05.

Sample BCO318 [MW-01-BR] : Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample BCO319 [MW-02-BR] : Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample BCO320 [MW-03-OB] : Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample BCO321 [MW-04-BR] : Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample BCO322 [MW-04-OB] : Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample BCO323 [MW-05-BR] : Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample BCO324 [MW-06-BR] : Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample BCO325 [MW-07-BR] : Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample BCO326 [MW-09-OB] : Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample BCO335 [MW-10-OB] : Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample BCO336 [MW-11-OB] : Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample BCO337 [MW-100] : Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample BCO338 [FIELD BLANK] : Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

Sample BCO339 [TRIP BLANK] : Sample was analyzed past method specified hold time for NO2 (N); NO2 (N) + NO3 (N) in Water. Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.

MERCURY BY COLD VAPOR (GROUND WATER) Comments

Sample BCO320 [MW-03-OB] Mercury (Total) by CV: Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A729124	Total Mercury (Hg)	2022/09/26	108	80 - 120	105	80 - 120	<0.0000019	mg/L	NC	20
A729143	Nitrate plus Nitrite (N)	2022/09/24	NC	80 - 120	96	80 - 120	<0.010	mg/L	0.21	20
A729143	Nitrite (N)	2022/09/24	100	80 - 120	101	80 - 120	<0.010	mg/L	0.39	20
A729348	Nitrate plus Nitrite (N)	2022/09/25	105	80 - 120	109	80 - 120	<0.010	mg/L	2.0	20
A729348	Nitrite (N)	2022/09/25	97	80 - 120	107	80 - 120	<0.010	mg/L	NC	20
A729349	Nitrate plus Nitrite (N)	2022/09/25	120	80 - 120	99	80 - 120	<0.010	mg/L	20	20
A729349	Nitrite (N)	2022/09/25	104	80 - 120	107	80 - 120	<0.010	mg/L	NC	20
A729350	Chloride (Cl)	2022/09/25	NC	80 - 120	104	80 - 120	<1.0	mg/L	4.5	20
A729350	Sulphate (SO4)	2022/09/25	NC	80 - 120	103	80 - 120	<1.0	mg/L	2.8	20
A729354	Dissolved Barium (Ba)	2022/09/25	96	80 - 120	100	80 - 120	<0.010	mg/L		
A729354	Dissolved Boron (B)	2022/09/25	97	80 - 120	98	80 - 120	<0.020	mg/L		
A729354	Dissolved Calcium (Ca)	2022/09/25	NC	80 - 120	102	80 - 120	<0.30	mg/L	1.8	20
A729354	Dissolved Iron (Fe)	2022/09/25	101	80 - 120	104	80 - 120	<0.060	mg/L	NC	20
A729354	Dissolved Lithium (Li)	2022/09/25	102	80 - 120	101	80 - 120	<0.020	mg/L		
A729354	Dissolved Magnesium (Mg)	2022/09/25	97	80 - 120	103	80 - 120	<0.20	mg/L	1.3	20
A729354	Dissolved Manganese (Mn)	2022/09/25	97	80 - 120	101	80 - 120	<0.0040	mg/L	2.7	20
A729354	Dissolved Phosphorus (P)	2022/09/25	100	80 - 120	100	80 - 120	<0.10	mg/L		
A729354	Dissolved Potassium (K)	2022/09/25	102	80 - 120	104	80 - 120	<0.30	mg/L	0.48	20
A729354	Dissolved Silicon (Si)	2022/09/25	91	80 - 120	98	80 - 120	<0.50	mg/L		
A729354	Dissolved Sodium (Na)	2022/09/25	97	80 - 120	98	80 - 120	<0.50	mg/L	1.1	20
A729354	Dissolved Strontium (Sr)	2022/09/25	90	80 - 120	96	80 - 120	<0.020	mg/L		
A729354	Dissolved Sulphur (S)	2022/09/25	102	80 - 120	98	80 - 120	<0.20	mg/L		
A729356	Dissolved Barium (Ba)	2022/09/25	96	80 - 120	96	80 - 120	<0.010	mg/L	NC	20
A729356	Dissolved Boron (B)	2022/09/25	99	80 - 120	98	80 - 120	<0.020	mg/L	NC	20
A729356	Dissolved Calcium (Ca)	2022/09/25	99	80 - 120	98	80 - 120	<0.30	mg/L	NC	20
A729356	Dissolved Iron (Fe)	2022/09/25	101	80 - 120	102	80 - 120	<0.060	mg/L	NC	20
A729356	Dissolved Lithium (Li)	2022/09/25	99	80 - 120	99	80 - 120	<0.020	mg/L	NC	20
A729356	Dissolved Magnesium (Mg)	2022/09/25	97	80 - 120	95	80 - 120	<0.20	mg/L	NC	20
A729356	Dissolved Manganese (Mn)	2022/09/25	98	80 - 120	99	80 - 120	<0.0040	mg/L	NC	20
A729356	Dissolved Phosphorus (P)	2022/09/25	102	80 - 120	100	80 - 120	<0.10	mg/L	NC	20
A729356	Dissolved Potassium (K)	2022/09/25	100	80 - 120	100	80 - 120	<0.30	mg/L	NC	20
A729356	Dissolved Silicon (Si)	2022/09/25	93	80 - 120	95	80 - 120	<0.50	mg/L	NC	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A729356	Dissolved Sodium (Na)	2022/09/25	99	80 - 120	99	80 - 120	<0.50	mg/L	NC	20
A729356	Dissolved Strontium (Sr)	2022/09/25	92	80 - 120	94	80 - 120	<0.020	mg/L	NC	20
A729356	Dissolved Sulphur (S)	2022/09/25	104	80 - 120	98	80 - 120	<0.20	mg/L	NC	20
A729555	pH	2022/09/25			100	97 - 103			0.23	N/A
A729556	Alkalinity (PP as CaCO3)	2022/09/25					<1.0	mg/L	NC	20
A729556	Alkalinity (Total as CaCO3)	2022/09/25			98	80 - 120	<1.0	mg/L	0.63	20
A729556	Bicarbonate (HCO3)	2022/09/25					<1.0	mg/L	0.63	20
A729556	Carbonate (CO3)	2022/09/25					<1.0	mg/L	NC	20
A729556	Hydroxide (OH)	2022/09/25					<1.0	mg/L	NC	20
A729557	Conductivity	2022/09/25			100	90 - 110	<2.0	uS/cm	0.17	10
A730514	Dissolved Aluminum (Al)	2022/09/27	NC	80 - 120	101	80 - 120	<0.0030	mg/L	NC	20
A730514	Dissolved Antimony (Sb)	2022/09/27	101	80 - 120	101	80 - 120	<0.00060	mg/L	NC	20
A730514	Dissolved Arsenic (As)	2022/09/27	94	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
A730514	Dissolved Beryllium (Be)	2022/09/27	106	80 - 120	108	80 - 120	<0.0010	mg/L	NC	20
A730514	Dissolved Chromium (Cr)	2022/09/27	95	80 - 120	99	80 - 120	<0.0010	mg/L	NC	20
A730514	Dissolved Cobalt (Co)	2022/09/27	96	80 - 120	98	80 - 120	<0.00030	mg/L	NC	20
A730514	Dissolved Copper (Cu)	2022/09/27	NC	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20
A730514	Dissolved Lead (Pb)	2022/09/27	98	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
A730514	Dissolved Molybdenum (Mo)	2022/09/27	105	80 - 120	105	80 - 120	<0.00020	mg/L	NC	20
A730514	Dissolved Nickel (Ni)	2022/09/27	95	80 - 120	94	80 - 120	<0.00050	mg/L	NC	20
A730514	Dissolved Selenium (Se)	2022/09/27	101	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
A730514	Dissolved Silver (Ag)	2022/09/27	96	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
A730514	Dissolved Thallium (Tl)	2022/09/27	99	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
A730514	Dissolved Tin (Sn)	2022/09/27	105	80 - 120	108	80 - 120	<0.0010	mg/L	NC	20
A730514	Dissolved Titanium (Ti)	2022/09/27	98	80 - 120	102	80 - 120	<0.0010	mg/L	NC	20
A730514	Dissolved Uranium (U)	2022/09/27	93	80 - 120	95	80 - 120	<0.00010	mg/L	NC	20
A730514	Dissolved Vanadium (V)	2022/09/27	99	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
A730514	Dissolved Zinc (Zn)	2022/09/27	NC	80 - 120	103	80 - 120	<0.0030	mg/L	NC	20
A730880	Dissolved Mercury (Hg)	2022/09/26	97	80 - 120	108	80 - 120	<0.0019	ug/L	NC	20
A731407	Total Barium (Ba)	2022/09/28	99	80 - 120	97	80 - 120	<0.010	mg/L	NC	20
A731407	Total Boron (B)	2022/09/28	103	80 - 120	102	80 - 120	<0.020	mg/L	NC	20
A731407	Total Calcium (Ca)	2022/09/28	105	80 - 120	100	80 - 120	<0.30	mg/L	0.51	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A731407	Total Iron (Fe)	2022/09/28	114	80 - 120	105	80 - 120	<0.060	mg/L	0.82	20
A731407	Total Lithium (Li)	2022/09/28	105	80 - 120	102	80 - 120	<0.020	mg/L	NC	20
A731407	Total Magnesium (Mg)	2022/09/28	103	80 - 120	101	80 - 120	<0.20	mg/L	0.21	20
A731407	Total Manganese (Mn)	2022/09/28	104	80 - 120	101	80 - 120	<0.0040	mg/L	3.4	20
A731407	Total Phosphorus (P)	2022/09/28	99	80 - 120	98	80 - 120	<0.10	mg/L	NC	20
A731407	Total Potassium (K)	2022/09/28	108	80 - 120	105	80 - 120	<0.30	mg/L	1.7	20
A731407	Total Silicon (Si)	2022/09/28	104	80 - 120	101	80 - 120	<0.50	mg/L	1.6	20
A731407	Total Sodium (Na)	2022/09/28	108	80 - 120	105	80 - 120	<0.50	mg/L	1.5	20
A731407	Total Strontium (Sr)	2022/09/28	95	80 - 120	93	80 - 120	<0.020	mg/L	0.39	20
A731407	Total Sulphur (S)	2022/09/28	102	80 - 120	100	80 - 120	<0.20	mg/L	3.7	20
A731421	Total Aluminum (Al)	2022/09/27	NC	80 - 120	91	80 - 120	<0.0030	mg/L	9.4	20
A731421	Total Antimony (Sb)	2022/09/27	97	80 - 120	97	80 - 120	<0.00060	mg/L	NC	20
A731421	Total Arsenic (As)	2022/09/27	95	80 - 120	92	80 - 120	<0.00020	mg/L	12	20
A731421	Total Beryllium (Be)	2022/09/27	91	80 - 120	82	80 - 120	<0.0010	mg/L	NC	20
A731421	Total Chromium (Cr)	2022/09/27	98	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20
A731421	Total Cobalt (Co)	2022/09/27	95	80 - 120	95	80 - 120	<0.00030	mg/L	NC	20
A731421	Total Copper (Cu)	2022/09/27	98	80 - 120	97	80 - 120	<0.0010	mg/L	3.2	20
A731421	Total Lead (Pb)	2022/09/27	93	80 - 120	94	80 - 120	<0.00020	mg/L	NC	20
A731421	Total Molybdenum (Mo)	2022/09/27	102	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20
A731421	Total Nickel (Ni)	2022/09/27	96	80 - 120	96	80 - 120	<0.00050	mg/L	12	20
A731421	Total Selenium (Se)	2022/09/27	96	80 - 120	94	80 - 120	<0.00020	mg/L	NC	20
A731421	Total Silver (Ag)	2022/09/27	95	80 - 120	94	80 - 120	<0.00010	mg/L	NC	20
A731421	Total Thallium (Tl)	2022/09/27	98	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
A731421	Total Tin (Sn)	2022/09/27	102	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20
A731421	Total Titanium (Ti)	2022/09/27	100	80 - 120	97	80 - 120	<0.0010	mg/L	3.6	20
A731421	Total Uranium (U)	2022/09/27	101	80 - 120	98	80 - 120	<0.00010	mg/L	NC	20
A731421	Total Vanadium (V)	2022/09/27	100	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20
A731421	Total Zinc (Zn)	2022/09/27	97	80 - 120	95	80 - 120	<0.0030	mg/L	4.9	20
A731494	Total Barium (Ba)	2022/09/28	97	80 - 120	96	80 - 120	<0.010	mg/L	1.8	20
A731494	Total Boron (B)	2022/09/28	100	80 - 120	98	80 - 120	<0.020	mg/L	NC	20
A731494	Total Calcium (Ca)	2022/09/28	99	80 - 120	98	80 - 120	<0.30	mg/L	1.1	20
A731494	Total Iron (Fe)	2022/09/28	NC	80 - 120	98	80 - 120	<0.060	mg/L	1.2	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A731494	Total Lithium (Li)	2022/09/28	103	80 - 120	101	80 - 120	<0.020	mg/L	3.1	20
A731494	Total Magnesium (Mg)	2022/09/28	101	80 - 120	99	80 - 120	<0.20	mg/L	1.6	20
A731494	Total Manganese (Mn)	2022/09/28	95	80 - 120	95	80 - 120	<0.0040	mg/L	4.6	20
A731494	Total Phosphorus (P)	2022/09/28	94	80 - 120	93	80 - 120	<0.10	mg/L	NC	20
A731494	Total Potassium (K)	2022/09/28	106	80 - 120	104	80 - 120	<0.30	mg/L	0.88	20
A731494	Total Silicon (Si)	2022/09/28	95	80 - 120	95	80 - 120	<0.50	mg/L	5.8	20
A731494	Total Sodium (Na)	2022/09/28	105	80 - 120	103	80 - 120	<0.50	mg/L	2.8	20
A731494	Total Strontium (Sr)	2022/09/28	93	80 - 120	92	80 - 120	<0.020	mg/L	0.71	20
A731494	Total Sulphur (S)	2022/09/28	96	80 - 120	95	80 - 120	<0.20	mg/L	5.4	20
A731505	Total Aluminum (Al)	2022/10/03	103	80 - 120	95	80 - 120	<0.0030	mg/L	5.8	20
A731505	Total Antimony (Sb)	2022/10/03	104	80 - 120	102	80 - 120	<0.00060	mg/L	NC	20
A731505	Total Arsenic (As)	2022/10/03	96	80 - 120	94	80 - 120	<0.00020	mg/L	7.5	20
A731505	Total Beryllium (Be)	2022/10/03	107	80 - 120	106	80 - 120	<0.0010	mg/L	NC	20
A731505	Total Chromium (Cr)	2022/10/03	98	80 - 120	95	80 - 120	<0.0010	mg/L	NC	20
A731505	Total Cobalt (Co)	2022/10/03	97	80 - 120	95	80 - 120	<0.00030	mg/L	NC	20
A731505	Total Copper (Cu)	2022/10/03	96	80 - 120	94	80 - 120	<0.0010	mg/L	6.9	20
A731505	Total Lead (Pb)	2022/10/03	99	80 - 120	95	80 - 120	<0.00020	mg/L	NC	20
A731505	Total Molybdenum (Mo)	2022/10/03	103	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
A731505	Total Nickel (Ni)	2022/10/03	97	80 - 120	94	80 - 120	<0.00050	mg/L	8.0	20
A731505	Total Selenium (Se)	2022/10/03	109	80 - 120	111	80 - 120	<0.00020	mg/L	7.9	20
A731505	Total Silver (Ag)	2022/10/03	102	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
A731505	Total Thallium (Tl)	2022/10/03	100	80 - 120	95	80 - 120	<0.00020	mg/L	NC	20
A731505	Total Tin (Sn)	2022/10/03	98	80 - 120	98	80 - 120	<0.0010	mg/L	NC	20
A731505	Total Titanium (Ti)	2022/10/03	94	80 - 120	92	80 - 120	<0.0010	mg/L	8.3	20
A731505	Total Uranium (U)	2022/10/03	98	80 - 120	94	80 - 120	<0.00010	mg/L	NC	20
A731505	Total Vanadium (V)	2022/10/03	100	80 - 120	96	80 - 120	<0.0010	mg/L	NC	20
A731505	Total Zinc (Zn)	2022/10/03	101	80 - 120	96	80 - 120	<0.0030	mg/L	3.2	20
A732970	Total Barium (Ba)	2022/09/28	99	80 - 120	99	80 - 120	<0.010	mg/L	0.91	20
A732970	Total Boron (B)	2022/09/28	102	80 - 120	100	80 - 120	<0.020	mg/L	1.9	20
A732970	Total Calcium (Ca)	2022/09/28	NC	80 - 120	103	80 - 120	<0.30	mg/L	0.31	20
A732970	Total Iron (Fe)	2022/09/28	94	80 - 120	97	80 - 120	<0.060	mg/L	0.063	20
A732970	Total Lithium (Li)	2022/09/28	99	80 - 120	101	80 - 120	<0.020	mg/L	0.35	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A732970	Total Magnesium (Mg)	2022/09/28	95	80 - 120	98	80 - 120	<0.20	mg/L	0.14	20
A732970	Total Manganese (Mn)	2022/09/28	92	80 - 120	96	80 - 120	<0.0040	mg/L	0.49	20
A732970	Total Phosphorus (P)	2022/09/28	89	80 - 120	89	80 - 120	<0.10	mg/L	NC	20
A732970	Total Potassium (K)	2022/09/28	103	80 - 120	103	80 - 120	<0.30	mg/L	0.18	20
A732970	Total Silicon (Si)	2022/09/28	90	80 - 120	94	80 - 120	<0.50	mg/L	0.74	20
A732970	Total Sodium (Na)	2022/09/28	NC	80 - 120	103	80 - 120	<0.50	mg/L	0.35	20
A732970	Total Strontium (Sr)	2022/09/28	95	80 - 120	96	80 - 120	<0.020	mg/L	0.51	20
A732970	Total Sulphur (S)	2022/09/28	90	80 - 120	92	80 - 120	<0.20	mg/L	0.25	20
A732992	Total Aluminum (Al)	2022/09/29	NC	80 - 120	117	80 - 120	<0.0030	mg/L	8.5	20
A732992	Total Antimony (Sb)	2022/09/29	98	80 - 120	96	80 - 120	<0.00060	mg/L	NC	20
A732992	Total Arsenic (As)	2022/09/29	88	80 - 120	90	80 - 120	<0.00020	mg/L	14	20
A732992	Total Beryllium (Be)	2022/09/29	117	80 - 120	116	80 - 120	<0.0010	mg/L	NC	20
A732992	Total Chromium (Cr)	2022/09/29	93	80 - 120	95	80 - 120	<0.0010	mg/L	NC	20
A732992	Total Cobalt (Co)	2022/09/29	92	80 - 120	93	80 - 120	<0.00030	mg/L	2.6	20
A732992	Total Copper (Cu)	2022/09/29	91	80 - 120	92	80 - 120	<0.0010	mg/L	NC	20
A732992	Total Lead (Pb)	2022/09/29	97	80 - 120	96	80 - 120	<0.00020	mg/L	NC	20
A732992	Total Molybdenum (Mo)	2022/09/29	98	80 - 120	97	80 - 120	<0.00020	mg/L	2.4	20
A732992	Total Nickel (Ni)	2022/09/29	91	80 - 120	93	80 - 120	<0.00050	mg/L	4.4	20
A732992	Total Selenium (Se)	2022/09/29	93	80 - 120	95	80 - 120	<0.00020	mg/L	2.2	20
A732992	Total Silver (Ag)	2022/09/29	95	80 - 120	94	80 - 120	<0.00010	mg/L	NC	20
A732992	Total Thallium (Tl)	2022/09/29	99	80 - 120	96	80 - 120	<0.00020	mg/L	NC	20
A732992	Total Tin (Sn)	2022/09/29	100	80 - 120	98	80 - 120	<0.0010	mg/L	NC	20
A732992	Total Titanium (Ti)	2022/09/29	93	80 - 120	94	80 - 120	<0.0010	mg/L	20	20
A732992	Total Uranium (U)	2022/09/29	96	80 - 120	95	80 - 120	<0.00010	mg/L	2.6	20
A732992	Total Vanadium (V)	2022/09/29	95	80 - 120	95	80 - 120	<0.0010	mg/L	0.89	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
A732992	Total Zinc (Zn)	2022/09/29	89	80 - 120	91	80 - 120	<0.0030	mg/L	NC	20

N/A = Not Applicable

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

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

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

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

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

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

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VALIDATION SIGNATURE PAGE

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



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



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

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#7500 KGS Group	Company Name	KGS Group	Quotation #	C20090	Bureau Veritas Job #	Bottle Order #:
Contact Name	Accounts Payable	Contact Name	Ganga Atmuri	P.O. #		C273575	676079
Address	3rd Floor 865 Waverly St Winnipeg MB R3T 5T4	Address	3rd Floor 865 Waverly St Winnipeg MB R3T 5T4	Project #	21-1357-001, 1000.05	Chain Of Custody Record	Project Manager
Phone	(204) 896-1209 Fax:	Phone	(204) 896-1209 Fax:	Project Name		C#676079-01-01	
Email	payables@kgsgroup.com	Email	gatmuri@kgsgroup.com	Site #	Sherridon Groundwater		
				Sampled By	JH/RD		

Regulatory Criteria: Manitoba Water Stewardship – MB Water Quality Guidelines

Special Instructions

Note: For regulated drinking water samples - please use the Drinking Water Chain of Custody Form

Samples must be kept cool (< 10°C) from time of sampling until delivery to Bureau Veritas

Turnaround Time (TAT) Required
Please provide advance notice for rush projects

Regular (Standard) TAT X
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: _____ Time Required: _____
Rush Confirmation Number _____ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Regulated Drinking Water ? (Y / N)	Metals Field Filtered ? (Y / N)	Regulated Metals (CCME/AT1) - Total	Mercury (Total) by CV	Routine + Diss. Reg. Metals – Lab Filt	Mercury (Dissolved) by CV-Lab Filtered	# of Bottles	Comments
1		MW-01-BR	2022/09/20	17:00	GW	N	N	X	X	X	X	4	
2		MW-02-BR		17:10	GW	N	N	X	X	X	X	4	
3		MW-03-OB		17:30	GW	N	N	X	X	X	X	4	
4		MW-04-BR		17:20	GW	N	N	X	X	X	X	4	
5		MW-04-OB		17:15	GW	N	N	X	X	X	X	4	
6		MW-05-BR		16:45	GW	N	N	X	X	X	X	4	
7		MW-06-BR		17:50	GW	N	N	X	X	X	X	4	
8		MW-07-BR		18:05	GW	N	N	X	X	X	X	4	
9		MW-08-BR			GW	N	N	X	X	X	X	4	Not submitted. No recovery.
10		MW-09-OB		17:35	GW	N	N	X	X	X	X	4	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
	22/09/22	08:40	Aparna Amarja Brar	2022/09/23	1055			6.1/6.3/4.9	Yes / No
			[illegible] RAJ	2022/09/23	08:40				

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

Ref. 5, 6, 5
ICE-YES

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

Bureau Veritas
D-675 Berry Street, Winnipeg, Manitoba Canada R3H 1A7 Tel:(204) 772-7276 Toll-free:800-563-6266 Fax:(204) 772-2386 www.bvna.com

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Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#7500 KGS Group	Company Name	KGS Group	Quotation #	C20090	Bureau Veritas Job #	Bottle Order #:
Contact Name	Accounts Payable	Contact Name	Ganga Atmuri	P.O. #		C273575	676079
Address	3rd Floor 865 Waverly St Winnipeg MB R3T 5T4	Address	3rd Floor 865 Waverly St Winnipeg MB R3T 5T4	Project #	21-1357-001, 1000.05	Chain Of Custody Record	Project Manager
Phone	(204) 896-1209 Fax:	Phone	(204) 896-1209 Fax:	Project Name		C#676079-02-01	
Email	payables@kgsgroup.com	Email	gatmuri@kgsgroup.com	Site #	Sherridon Groundwater		
				Sampled By	IH/RD		

Regulatory Criteria: Manitoba Water Stewardship - MB Water Quality Guidelines.

Special Instructions

Note: For regulated drinking water samples - please use the Drinking Water Chain of Custody Form

Samples must be kept cool (< 10°C) from time of sampling until delivery to Bureau Veritas

Analysis Requested

Turnaround Time (TAT) Required

Please provide advance notice for rush projects

Regular (Standard) TAT X

(will be applied if Rush TAT is not specified)

Standard TAT = 5-7 Working days for most tests.

Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)

Date Required: Time Required:

Rush Confirmation Number *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Regulated Drinking Water ? (Y / N)	Metals Field Filtered ? (Y / N)	Regulated Metals (CCME/AT1) - Total	Mercury (Total) by CV	Routine + Diss. Reg. Metals – Lab Filt	Mercury (Dissolved) by CV-Lab Filtered	# of Bottles	Comments
1		MW-10-OB	2022/09/20	17:45	GW	N	N	X	X	X	X	4	
2		MW-11-OB		17:40	GW	N	N	X	X	X	X	4	
3		MW-100		18:30	GW	N	N	X	X	X	X	4	
4		Field Blank		—	GW	N	N	X	X	X	X	4	
5		TRIP BLANK		—	GW	N	N	X	X	X	X	4	
6													
7													
8													
9													
10													

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Rachel Dyck / Rachel Dyck	22/09/22	08:40	Amanjot Brar / Amanjot Brar	2022/09/22	10:55	
				2022/09/23	08:40	

Lab Use Only: Time Sensitive ☐ | Temperature (°C) on Receipt 6.1/6.3/4.9 | Custody Seal Intact on Cooler? ☐ Yes ☐ No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.

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White: Bureau Veritas Yellow: Client

RJ 5.6.5 ICE-YES DUE: YES

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