Marine Avenue Site, Powell River, BC
2024 Environmental Monitoring Program Annual Report



PRESENTED TO
qathet Regional District

MARCH 5, 2025
ISSUED FOR REVIEW
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EXECUTIVE SUMMARY

Tetra Tech Canada Inc. (Tetra Tech) was retained by the qathet Regional District (qRD) to support quarterly environmental monitoring and to prepare the 2024 annual monitoring report for the Marine Avenue Site (Site), located in Powell River, British Columbia (BC). This report summarizes the results of the 2024 quarterly groundwater and surface water monitoring events, which were conducted on the following dates: February 22, June 24, September 16, and December 9, 2024. The work was conducted in accordance with Permit PR-509 and the Updated Environmental Monitoring Plan for the Powell River Marine Avenue Site Closure Plan (Tetra Tech 2018).

There have been significant activities at the Site since 2020, including general site clean up, material processing, closure activities, and construction of the Resource Recovery Centre (RRC). Work on the RRC started in July 2023 and was completed in 2024.

Key findings of the 2024 annual groundwater and surface water sampling program include the following:

- On May 24, a new groundwater monitoring well (MW24-05) was installed to replace the decommissioned well (MW19-05), as per the recommendation made in the 2023 Environmental Monitoring Program Annual Report (Tetra Tech 2024).
- Groundwater flow was interpreted to be to the southwest for all monitoring events under an average hydraulic gradient of 0.10 m/m. This gradient has remained relatively consistent since the onset of monitoring.
- At MW-13-02 and MW19-04, concentrations of dissolved cobalt, iron, and manganese were found to be in exceedance of the BC Contaminated Sites Regulation Drinking Water (CSR-DW) Standards during one or more monitoring events. These wells are interpreted as being down-gradient of the landfill area. Groundwater quality at these wells should continue to be monitored for potential leachate impact.
- At MW24-05, exceedances of the CSR-DW Standard for dissolved cobalt and the CSR Freshwater Aquatic Life Standards for dissolved cadmium and dissolved copper were observed during the June monitoring event. However, concentrations of these dissolved metal parameters decreased to concentrations below the standards in December. As the June monitoring event occurred one month after well installation, these observations may be due to recovery from disturbance in the area and not interpreted to be related to site activities but should be confirmed in 2025.
- The laboratory pH levels of the surface water samples at multiple sampling locations were outside the BC Water Quality Guideline (WQG) range of pH 7.0 to 8.7 for Marine Aquatic Life during the February, June, and September monitoring events. Values of pH have exhibited an apparent decreasing trend since 2019, and decreased to below the acceptable range in 2023. However, as of September and December 2024, pH values have increased from the relatively low values observed in 2023 and early 2024 but were still below the guideline range at SW-1 and SW-2. The reason for the decreasing pH is not clear, as similar patterns are seen in the upstream and downstream locations and at both watercourses (and therefore they are interpreted to not be related to site activities).
- Exceedances of the BC WQG for Freshwater Aquatic Life for dissolved iron were noted at SW-1, SW-2, and SW-3 in December. As the exceedances are seen in the upstream and downstream locations and at both watercourses, these exceedances are not interpreted to be a result of leachate impact.

The following recommendations have been developed based on the data presented within this report:

- Continue the current quarterly groundwater monitoring and sampling schedule and analytical program in 2025. Tetra Tech trained qRD staff to assist with the environmental monitoring program during the 2020 and 2021 monitoring events and qRD staff will continue to be responsible for monitoring and sampling in 2025.

- Consider addition of a surface water sampling location to further assess water quality in the western ephemeral watercourse on the Site. Addition of the sampling location should occur after final site development. Additionally, surface water sampling locations on the Site should be reassessed and potentially adjusted based on final site development and surface water flows.
- Measure the pipe stickup and elevations for MW24-05 in 2025, so that the groundwater elevations for this well can be calculated.

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ACRONYMS & ABBREVIATIONS

Acronyms/Abbreviations	Definition
AW	Aquatic Life
AWQG	Approved Water Quality Guidelines
BC	British Columbia
BC ENV	British Columbia Ministry of Environment and Parks
BOD	Biological Oxygen Demand
CALA	Canadian Association for Laboratory Accreditation
CARO	CARO Analytical Services
Closure Plan	Powell River Marine Avenue Site Closure Plan (SHA 2014)
COC	Chain of Custody
COD	Chemical Oxygen Demand
Constraints Memo	Preliminary Riparian Areas Assessment Results and Environmental Regulatory Constraints Analysis for Powell River Regional District Transfer Station Site on Marine Avenue (Tetra Tech 2017)
CSM	Conceptual Site Model
CSR	Contaminated Sites Regulation
CSR-AW	Contaminated Sites Regulation – Aquatic Life
CSR-DW	Contaminated Sites Regulation – Drinking Water
DO	Dissolved Oxygen
DOC	Dissolved Organic Carbon
DW	Drinking Water
EMP	Environmental Monitoring Plan
EPH	Extractable Petroleum Hydrocarbon
Fresh AW	Freshwater Aquatic Life
HEPH	Heavy Extractable Petroleum Hydrocarbon
Hoskin	Hoskin Scientific
LEPH	Light Extractable Petroleum Hydrocarbon
Marine AW	Marine Aquatic Life
N/A	Not Applicable
ORP	Oxidation-Reduction Potential
PAH	Polycyclic Aromatic Hydrocarbon
QA/QC	Quality Assurance/Quality Control
qRD	qathet Regional District

Acronyms/Abbreviations	Definition
RDL	Reporting Detection Limit
RPD	Relative Percent Difference
RRC	Resource Recovery Centre
SHA	Sperling Hansen Associates Inc.
Site	Marine Avenue Site
TDS	Total Dissolved Solids
Tetra Tech	Tetra Tech Canada Inc.
Updated EMP	Updated Environmental Monitoring Plan for the Powell River Marine Avenue Site Closure Plan (Tetra Tech 2018)
VH	Volatile Hydrocarbon
WQG	Water Quality Guidelines
WWQG	Working Water Quality Guidelines

LIMITATIONS OF REPORT

This report and its contents are intended for the sole use of the qathet Regional District and their agents. Tetra Tech Canada Inc. (Tetra Tech) does not accept any responsibility for the accuracy of any of the data, the analysis, or the recommendations contained or referenced in the report when the report is used or relied upon by any Party other than qathet Regional District, or for any Project other than the proposed development at the subject site. Any such unauthorized use of this report is at the sole risk of the user. Use of this document is subject to the Limitations on the Use of this Document attached in the Appendix or Contractual Terms and Conditions executed by both parties.

1.0 INTRODUCTION

Tetra Tech Canada Inc. (Tetra Tech) was retained by the qathet Regional District (qRD) to support quarterly environmental monitoring and to prepare the 2024 Annual Environmental Monitoring Report for the Marine Avenue Site (Site), in Powell River, British Columbia (BC). This report summarizes the results of the 2024 quarterly groundwater and surface water monitoring events, which were conducted on the following dates: February 22, June 24, September 16, and December 9, 2024. The work was conducted in accordance with Permit PR-509 and the Updated Environmental Monitoring Plan (EMP) for the Powell River Marine Avenue Site Closure Plan (Tetra Tech 2018) ("Updated EMP"). Permit PR-509 is included as Appendix B.

1.1 Background

This section presents the Site's description and location with respect to nearby watercourses and current activities on the Site. The Site's history as an incinerator landfill, and historical site investigations have been previously discussed in detail in the 2021 Marine Avenue Site Environmental Monitoring Program Annual Report (Tetra Tech 2022).

1.1.1 Site Description

A site location plan and a site plan showing the locations of groundwater and surface water monitoring locations are presented on Figure 1 and Figure 2, respectively.

The Site currently has two entrance points; one situated on the south side of the Site directly off of Marine Avenue with an unmanned gate that is padlocked by the qRD and another on the northwest corner of the Site directly off Marine Avenue that is a manned gate. The Site is approximately 7 hectares in size and irregular in shape as shown on Figure 2.

Access roads are found throughout the Site as well as clearings that extend into the forested ravine area of McFall Creek, southeast of the Site. As described in Tetra Tech's memo, Preliminary Riparian Areas Assessment Results and Environmental Regulatory Constraints Analysis for Powell River Regional District Transfer Station Site on Marine Avenue (2017; "Constraints Memo"), McFall Creek (also known as Squatter Creek) is a fish-bearing stream flowing from Cranberry Lake to the Strait of Georgia. At its closest point, McFall Creek is within 65 m of the Site's cleared area flowing to the southwest.

A surface water source was uncovered as a seep located around SW-4 during site cleanup and landfill closure work in 2020 and 2021 (Figure 2). However, there are additional seeps that emerge from the banks in multiple locations. Some of these seeps are rich in dissolved iron as observed by the presence of orange microbial mats. The channel widens in some areas where the ground is fully saturated and multiple very small flow paths braid through aquatic or semi-aquatic vegetation. The channel with flow enters a culvert at the corner of Marine Avenue and the Site entrance and flows downslope towards McFall Creek. Following this analysis, the Updated EMP added a surface water sampling location near the headwaters of the unnamed watercourse running through the centre of the Site. This watercourse was known colloquially as the "central drainage" within tender and design documents.

A second drainage path was identified on the Site running parallel to, and east of, the westernmost road on the Site and joining the central drainage in a low-lying area before leaving the Site through a culvert under the current site entrance to meet McFall Creek.

Infrastructure from the former incinerator facility/landfill remains in place in some locations. This infrastructure includes short portions of the paved access road and the historical incinerator.

1.1.2 Site History

The Site was a gravel pit that was subsequently used as a landfill with a solid waste incinerator. The incinerator operated from the 1970s to approximately 1995. The Site has operated under Permit PR-509 (Appendix B) since 1971 with amendments in 1993 and 1994 reflecting changes in site operations. The permit was again amended to reflect a name change of the permit holder from The Corporation of the District of Powell River to qathet Regional District (application approved on March 12, 2024, effective date backdated to March 15, 2022).

Since closure of the incinerator in 1995, municipal solid waste has been transferred to the Roosevelt Regional Landfill (colloquially known as the Rabanco Landfill) in Washington, United States and construction and demolition waste has been transferred to the Ecowaste Landfill in Richmond, BC.

The Site has been altered from its original state, having been a former gravel pit and subsequently the site of a City-operated incinerator and bottom ash residual landfill. Ash generated in the incineration process was disposed on site in four distinct piles previously identified by Keystone Environmental Ltd. in 2003 and Sperling Hansen Associates Inc. (SHA) in 2014 as Pile D, Pile F, Pile M, and Pile Q. Previous site investigative work included classification and documentation of the stockpiled materials on site and installation of groundwater monitoring wells MW13-01, MW13-02, and MW13-03, as summarized in the Powell River Marine Avenue Site Closure Plan (SHA 2014; “Closure Plan”).

Following the time when the Site was an incinerator and a landfill, the Site operated as the commercial transfer station for the City of Powell River. The Site was used as a truck wash-out for the City of Powell River and private waste collection vehicles through early 2020 and until 2018 was used as a public works yard with minor material stockpiles and uncontrolled dumping of construction and roadworks maintenance materials. Since initiation of site works in 2020, the qRD has taken over care and control of the Site. Currently, the Site is used as a Resource Recovery Centre (RRC), accepting municipal solid waste dropped off by local residents and businesses prior to transfer offsite for disposal.

1.2 Regional Context

The Site’s geology and hydrogeology were discussed in the Closure Plan. The regional geology is described as an area covered by marine and glaciomarine sediments of the Capilano Group. Three boreholes were drilled during development of the Closure Plan to confirm local geology and hydrogeology. These boreholes and test pits found that sand was the “predominant material encountered beneath the waste piles and in test pits that did not encounter waste”.

The Closure Plan interpreted groundwater flow to follow regional topography toward the south-southwest. Inferred groundwater table contours were based on water level measurements in existing wells on-site and measurement of the water level in McFall Creek at three locations adjacent to the Site.

As identified on Figure 2, the primary surface water receptors include an unnamed watercourse flowing on the Site and McFall Creek adjacent to the Site. This creek discharges to the Strait of Georgia, which is approximately 150 m southwest of the Site (Figure 1).

The nearest dwelling or building structure is located approximately 100 m south of the Site. A check of the BC Water Resources Atlas on January 24, 2025, identified the nearest groundwater well to be located approximately 1 kilometre northeast of the Site. The well is unlicensed and is classed as a dewatering and drainage well.

1.3 Conceptual Site Model Update

A Conceptual Site Model (CSM) was created as a component of the initial environmental monitoring program completed in 2019 (Tetra Tech 2019). A CSM is a representation of an environmental system and the processes that determine the transport of contaminants from sources through the environmental media to environmental receptors within the system. This CSM was created prior to the site development activities and landfill closure decreased in the following subsections and may no longer be fully applicable to the Site. For a detailed summary of the CSM, see the 2023 Environmental Monitoring Program Annual Report (Tetra Tech 2024).

The potential release mechanisms for chemicals of potential concern at the Site include:

- Leachate migration through foundation soils beneath stockpiled or landfilled waste to the groundwater (or laterally through the covering soils and/or direct leaching from stockpiles to surface water runoff).
- Landfill gas emission laterally and vertically through cover soils by pressure differentials within the waste greater than atmospheric (Tetra Tech 2020).

Exposure pathways were identified as follows:

- P1 – Leachate mixed with groundwater migrating to potential water wells or to nearby surface water via discharge.
- P2 – Waste movement from stockpiles due to erosion or slope failure. Erosion is of heightened concern if waste or soil is exposed during high precipitation events common in autumn to spring months.
- P3 – Encapsulated waste generating landfill gas from the decomposition of organics, and subsequent exposure to site users via surface emissions or to adjacent receptors from lateral subsurface migration.

1.4 Recent Site Developments

Major changes to the Site have occurred from 2020 to the present in four phases, which are all now complete:

- Phase 1 – General Site Work and Material Processing (2020);
- Phase 2 – Landfill Closure (2020);
- Phase 3 – RRC Site Preparation (2021); and
- Phase 4 – RRC Construction (2022 to 2024).

Phase 1 to Phase 3 were discussed in 2021 Marine Avenue Site Environmental Monitoring Program Annual Report (Tetra Tech 2022). Phase 4 activities were discussed in 2023 Marine Avenue Site Environmental Monitoring Program Annual Report (Tetra Tech 2024). Drawings for the landfill closure and related works are included as Appendix C. Storm drainage design for around the encapsulated landfill are included as Appendix D.

1.4.1 Well Replacement

On May 24, 2024, a new groundwater monitoring well (MW24-05) was installed to replace the decommissioned well (MW19-05), as per the recommendation made in the 2023 Environmental Monitoring Program Annual Report (Tetra Tech 2024). The borehole log for MW24-05 has been included as Appendix E. Groundwater samples were collected from MW24-05 for the June, September, and November monitoring events.

2.0 METHODOLOGY

In 2020 and 2021, Tetra Tech partnered with qRD staff to complete monitoring events while training qRD staff in the appropriate methodology and techniques to conduct field sampling. qRD staff conducted all sampling events in 2024. Tetra Tech continued to provide office support and quality checks of field data collection, chain of custody (COC) forms, and analytical data for the 2024 monitoring events.

2.1 Groundwater Sampling

Monitoring well locations are shown on Figure 2. All water level measuring, well development, and sample collection including preservation and storage techniques were conducted using standard environmental industry protocols. Observations of each monitoring well, including well integrity and site activity, were conducted by qRD staff.

Groundwater samples were collected from the following monitoring wells:

- Monitoring well MW13-01 is hydraulically up-gradient of most site features, based on the interpreted southwesterly groundwater flow.
- Monitoring well MW13-02 is hydraulically down-gradient of most site features but is installed at the edge of the waste footprint and of questionable monitoring value in terms of evaluating groundwater characteristics off-site.
- Monitoring well MW13-03 is hydraulically down-gradient of the site features.
- Monitoring well MW19-04 is hydraulically down-gradient or cross-gradient from historical stockpile locations.
- Monitoring well MW24-05 was newly installed in 2024 and is hydraulically down-gradient of site features.

Monitoring wells were purged and sampled using a dedicated bailer at MW13-03 and a peristaltic pump at all other wells on Site. During purging, field parameters (i.e., pH, temperature, conductivity, total dissolved solids [TDS], dissolved oxygen [DO], and oxidation-reduction potential [ORP]) were measured with a YSI multi-probe device with a Quatro cable and flow-through cell rented from Hoskin Scientific (Hoskin) of Burnaby, BC. The YSI was calibrated by Hoskin prior to shipping to qRD. Prior to use, qRD staff verified the calibration in the field using pH 4.0, pH 7.0, and 1,413 µS/cm buffer solutions.

When using the peristaltic pump, the intake line was submerged to a depth within the approximate middle of the well screen. Measurements of field parameters were taken after every well volume was removed until well water had stabilized to variations of less than 10% between successive well volumes.

When using the bailer, qRD staff used the bailer to remove three well volumes of water from the well. The water was subsequently allowed to recover for a short period of time. Staff then used the bailer to collect several litres of water in a 20-litre bucket that had been previously cleaned and rinsed with distilled water. The YSI multi-probe device was used to take field measurements from the water in the bucket.

After sufficient time had passed allowing the wells to recover, samples were taken using a dedicated bailer or dedicated inertial pump (Waterra) system and placed in clean labelled bottles supplied by the laboratory, CARO Analytical Services (CARO). The samples were preserved as directed by CARO and stored in coolers with ice packs for transport to CARO's laboratory in Richmond, BC under the COC protocol.

When groundwater samples needed to be filtered (e.g., for dissolved metals analysis), the groundwater was field filtered. When using the peristaltic pump, a new, disposable 0.45 µm in-line filter was attached to the pump discharge tubing. When using a bailer, the water was collected using the bailer and then hand-pumped through a Nalgene filter into the laboratory-supplied sample bottles.

Groundwater sampling was conducted on the following dates: February 22, June 24, September 16, and December 9, 2024. The samples were submitted to CARO according to the suite of parameters identified in the Updated EMP (Tetra Tech 2018) and described in Table 2-1.

Table 2-1: Groundwater Analytical Suite

Parameters	February 2024	June 2024	September 2024	December 2024
General Chemistry (pH; conductivity; alkalinity; ammonia; sulphide; anions – chloride, sulphate, fluoride, nitrate, nitrite)	▪ MW13-01 ▪ MW13-02 ▪ MW13-03 ▪ MW19-04	▪ MW13-01 ▪ MW13-02 ▪ MW13-03 ▪ MW19-04 ▪ MW24-05	▪ MW13-01 ▪ MW13-02 ▪ MW13-03 ▪ MW19-04 ▪ MW24-05	▪ MW13-01 ▪ MW13-02 ▪ MW13-03 ▪ MW19-04 ▪ MW24-05
Dissolved Metals	▪ Not analyzed	▪ MW13-01 ▪ MW13-02 ▪ MW13-03 ▪ MW19-04 ▪ MW24-05	▪ Not analyzed	▪ MW13-01 ▪ MW13-02 ▪ MW13-03 ▪ MW19-04 ▪ MW24-05
Other Parameters (Hardness, TDS, DOC)				
BOD and COD				
Total Metals	▪ Not analyzed	▪ Not analyzed	▪ Not analyzed	▪ MW13-01 ▪ MW13-02 ▪ MW13-03 ▪ MW19-04 ▪ MW24-05
Total Phenols	▪ MW13-01 ▪ MW13-02 ▪ MW13-03 ▪ MW19-04	▪ Not analyzed	▪ Not analyzed	▪ Not analyzed
Resins and Fatty Acids				
Hydrocarbons (EPH_{10-32}, LEPH, HEPH, VH_{6-10})				
PAHs				

Abbreviations:
BOD – Biological Oxygen Demand.
COD – Chemical Oxygen Demand.
DOC – Dissolved Organic Carbon.
EPH – Extractable Petroleum Hydrocarbon.
HEPH – Heavy Extractable Petroleum Hydrocarbon.
LEPH – Light Extractable Petroleum Hydrocarbon.
PAH – Polycyclic Aromatic Hydrocarbon.
VH – Volatile Hydrocarbon.

2.2 Surface Water Sampling

Surface water samples were collected from the locations shown on Figure 2. Locations for surface water samples are as follows:

- SW-1 is on McFall Creek upstream of the Site.
- SW-2 is on McFall Creek upstream of the Site watercourse outlet.
- SW-3 is on McFall Creek downstream of the Site watercourse outlet.
- SW-4 is near the headwaters of the on-site watercourse.

Location SW-1 represents an upstream location on McFall Creek; Locations SW-2 and SW-3 represent locations on McFall Creek that are upstream and downstream, respectively, from the Site watercourse outlet. Location SW-4 represents an upstream location on the unnamed watercourse across the Site.

Samples were collected as grab samples near mid-stream (using an extension pole, if necessary) and halfway between the water surface and bottom of the creek with the mouth of the sample bottle facing upstream. Care was taken to avoid accidental sediment disruption during sampling. For each surface water sample, field parameters (i.e., pH, temperature, conductivity, TDS, DO, and ORP) were measured with a YSI multi-probe device.

Surface water sampling was conducted on the following dates: February 22, June 24, September 16, and December 9, 2024. The samples were stored in coolers with ice packs and submitted to CARO according to the suite of parameters identified in the Updated EMP (Tetra Tech 2018) and described in Table 2-2.

Table 2-2: Surface Water Analytical Suite

Parameters	February 2024	June 2024	September 2024	December 2024
General Chemistry (pH; conductivity; alkalinity; ammonia; sulphide; anions – chloride, sulphate, fluoride, nitrate, nitrite)	▪ SW-1 ▪ SW-2 ▪ SW-3 ▪ SW-4	▪ SW-1 ▪ SW-2 ▪ SW-3 ▪ SW-4	▪ SW-1 ▪ SW-2 ▪ SW-3 ▪ SW-4	▪ SW-1 ▪ SW-2 ▪ SW-3 ▪ SW-4
Total Metals, Dissolved Metals	▪ Not analyzed	▪ SW-1 ▪ SW-2 ▪ SW-3 ▪ SW-4	▪ Not analyzed	▪ SW-1 ▪ SW-2 ▪ SW-3 ▪ SW-4
Other Parameters (Hardness, TDS, DOC)				
COD and BOD				
Total Phenols	▪ SW-1 ▪ SW-2 ▪ SW-3 ▪ SW-4	▪ Not analyzed	▪ Not analyzed	▪ Not analyzed
Resins and Fatty Acids				
Hydrocarbons (EPH_{10-32}, LEPH, HEPH, VH_{6-10})				
PAHs				

2.3 Quality Assurance/Quality Control

The qRD implemented a quality assurance/quality control (QA/QC) program to assess the integrity of the sampling methodology and analytical testing. The QA/QC program adhered to the Tetra Tech In-house Quality Management System, which was designed to generate representative samples, mitigate potential cross-contamination between sampling locations and samples, and reduce the potential for systematic bias. Tetra Tech trained qRD staff on the sampling methodology portions of the QA/QC program during sampling events in 2020 and 2021. For the 2024 sampling events, qRD staff implemented the QA/QC program for sampling methodology while Tetra Tech staff remained responsible for QA/QC protocol during the analytical review stage of the program.

The QA/QC protocol included the following:

- Logging of site conditions during monitoring and sampling of environmental media.
- Recording the results of field activities in the field concurrently with the activities.
- Using clean, new sampling gloves at each sampling location.
- Placing samples into new and labelled laboratory-supplied containers, and when warranted, preserving the samples using laboratory-measured and supplied preservatives.

- Transporting temperature-sensitive samples to the analytical laboratory in chilled coolers using COC procedures either on the same day of sampling or within one day of sampling and analyzing the samples within the appropriate holding times.
- When appropriate, collecting duplicate samples using industry accepted splitting methods.
- Submitting duplicate samples to the laboratory as “blind” samples meaning that the source of the sample (e.g., groundwater monitoring well, surface water location) was not identified.
- Using Canadian Association for Laboratory Accreditation (CALA)-affiliated laboratories that are qualified to analyze the samples using Ministry-approved procedures.
- Decontaminating sampling equipment between sample locations.
- Reviewing the results of QA/QC analyses, assessing the significance of the analytical results, and identifying this information in this report.
- Comparing the laboratory certificates and the applicable standards to confirm the accuracy of the information presented with the analytical tables provided in the report.
- Reviewing this report by a qualified senior Tetra Tech professional to ensure that the report meets Tetra Tech technical and reporting requirements.

Part of the QA/QC program involved calculating the relative percent difference (RPD) between sample concentrations of paired blind duplicates. Results were calculated as follows:

$$RPD(\%) = 2 \times \frac{|X - Y|}{X + Y} \times 100\%$$

Where:

- X is the measured concentration in the original sample; and
- Y is the measured concentration in the duplicate sample.

RPD values were not calculated if one or both of the sample-duplicate concentrations were less than the reporting detection limit (RDL). In these cases, duplicate samples were still considered as having passed the QA/QC reproducibility procedure if the sample-duplicate concentration difference was less than five times the RDL value.

2.4 Data Analysis and Evaluation

Analytical results for groundwater were compared to the Aquatic Life (AW) and Drinking Water (DW) standards defined by the BC Contaminated Sites Regulation (CSR), B.C. Reg. 375/96 (including amendments up to BC Reg 133/2022, effective March 1, 2023). The AW standards are further divided into Freshwater Aquatic Life (Fresh AW) and Marine Aquatic Life (Marine AW). The groundwater quality at monitoring well MW13-01, located hydraulically up-gradient of most Site features, is assumed to be representative of background groundwater quality for the Site. The background average concentration for a particular parameter is calculated from the concentrations of that parameter from previous measurements in 2019 to 2024 at MW13-01.

Analytical results for surface water were compared to guidelines set out by the British Columbia Ministry of Environment and Parks (BC ENV) Water Quality Guidelines (WQG). Specifically, results were compared with the BC Approved Water Quality Guidelines (AWQG): Aquatic Life, Wildlife & Agriculture, February 2025 edition (BC ENV 2025), and BC Working Water Quality Guidelines (WWQG): Aquatic Life, Wildlife & Agriculture, August 2024 edition (BC ENV 2024). The guidelines for Fresh AW and Marine AW were referenced. The long-term chronic

guidelines are referenced when possible, and the short-term acute guidelines referenced when the long-term chronic guideline does not exist for a parameter. The surface water quality at surface water location SW-1, located up-stream of the Site, is assumed to be representative of background surface water quality for the Site. The background average concentration for a particular parameter is calculated from the concentrations of that parameter from previous measurements at SW-1, from 2019 to 2024.

3.0 RESULTS

3.1 Groundwater Conditions

The following sections summarize the groundwater elevations, interpreted flow, and the groundwater analytical results.

3.1.1 Water Levels

Table 3-1 summarizes the groundwater elevations measured in the groundwater monitoring wells at the Site in 2024. Additional well information is presented in attached Table 1. The groundwater elevations and interpreted contours for each 2024 monitoring event are shown on Figure 3 (February), Figure 4 (June), Figure 5 (September), and Figure 6 (December).

Table 3-1: Groundwater Levels at the Site

Well ID	Groundwater Elevations (Metres Above Mean Sea Level)			
	February 2024	June 2024	September 2024	December 2024
MW13-01	51.66	51.56	51.50	51.19
MW13-02	33.77	33.45	32.71	33.40
MW13-03	16.75	16.68	16.65	16.73
MW19-04	38.49	38.37	38.37	38.47

The greatest seasonal fluctuations in groundwater level are at MW13-02 in the southeast portion of the Site, which is consistent with historical readings. Tetra Tech interprets a southwesterly groundwater flow direction for all monitoring events under an average hydraulic gradient of 0.10 m/m. This gradient has remained relatively consistent since the onset of monitoring.

The pipe stickup and elevation for the new well, MW24-05, were not measured following well installation; therefore, the groundwater elevations in metres above sea level for this well have not been calculated for the 2024 monitoring events. However, based on measured water depths, typical well stickup, and the approximate ground surface elevation from topographic contours, the groundwater elevations are interpreted to generally align with the interpreted elevation contours.

3.1.2 Analytical Results

The available historical groundwater analytical data includes from well installations in 2013 and 2019, and data collection from 2019 to the present. Groundwater analytical results are presented in attached Table 2 and summarized in Table 3-2. The laboratory analytical certificates are in Appendix F. Trend plots for selected parameters are included as Figure 7 to Figure 12.

Table 3-2: Summary of Groundwater Analytical Results

Parameter	Most Stringent Standard*	Average Background Quality**	Measured Concentrations in 2024		Comments on Overall Trend
			Groundwater Concentration Range in 2024	Greater than the Standard	
pH	None	6.97	▪ Minimum: 6.40 at MW13-01 (Jun) ▪ Maximum: 7.12 at MW19-04 (Sep)	▪ N/A	The 2024 pH values at the wells were within the range of historical values.
Electrical Conductivity	None	123 µS/cm	▪ Minimum: 108 µS/cm at MW13-01 (Feb) ▪ Maximum: 1,220 µS/cm at MW13-02 (Feb)	▪ N/A	In general, electrical conductivity values at MW13-02 are higher than at other wells on Site. Since 2023, electrical conductivity values at MW13-02 have had a decreasing trend, although the 2024 values remain within the range of historical values. The electrical conductivity values at the other wells on Site remained relatively low and stable over time.
TDS	None	99,500 µg/L	▪ Minimum: 78,000 µg/L at MW24-05 (Dec) ▪ Maximum: 790,000 µg/L at MW13-02 (Jun)	▪ N/A	In general, TDS concentrations at MW13-02 are higher than at other wells on Site. TDS values at MW13-02 have had a decreasing trend since 2023, although the 2024 values remain within the range of historical concentrations. The electrical conductivity values at the other wells on Site remained relatively low and stable over time.
Sulphate (Figure 7)	500,000 µg/L (CSR-DW)	5,860 µg/L	▪ Minimum: 1,200 µg/L at MW19-04 (Jun) ▪ Maximum: 254,000 µg/L at MW13-02 (Feb)	▪ None	▪ Sulphate concentrations have not exceeded the CSR-DW Standard since monitoring started in 2019. ▪ Concentrations at MW13-02 are higher than at other wells on Site. Sulphate concentrations at MW13-02 were on an increasing trend in 2021 and 2022 but have been on a decreasing trend since reaching a historical high in October 2022. ▪ Sulphate concentrations at the other wells have been relatively low and stable over time.
Chloride (Figure 8)	250,000 µg/L (CSR-DW)	7,125 µg/L	▪ Minimum: 530 µg/L at MW24-05 (Dec) ▪ Maximum: 25,500 µg/L at MW13-03 (Feb)	▪ None	Chloride concentrations have remained relatively stable at all wells and remained well below the standards since monitoring started in 2019. Concentrations at MW13-03 have exhibited an overall decreasing trend at MW13-03.
Nitrate (as N)	10,000 µg/L (CSR-DW)	435 µg/L	▪ Minimum: less than the analytical detection limit (10 or 100 µg/L) at MW13-02 (all events), MW19-04 (all events), and MW24-05 (Jun) ▪ Maximum:2,170 µg/L at MW13-03 (Feb)	▪ None	Nitrate concentrations have remained relatively stable and well below the standards at all wells since monitoring started in 2019.
Ammonia (as N)	18,500 µg/L (CSR-Fresh AW)	Less than the analytical detection limit (50 µg/L)	▪ Minimum: less than the analytical detection limit (50 µg/L) at MW13-01 (Jun, Dec), MW13-03 (Jun), and MW24-05 (Sep, Dec) ▪ Maximum: 8,120 µg/L at MW13-02 (Jun)	▪ None	Ammonia concentrations have remained relatively stable and well below the standards at all wells since monitoring started in 2019. Ammonia concentrations are higher at MW13-02 than at other wells on site, although concentrations are still well below the standards at this well.
Dissolved Cobalt (Figure 9)	1 µg/L (CSR-DW)	Less than the analytical detection limit (0.10 µg/L)	▪ Minimum: Less than the analytical detection limit (0.10 µg/L) at MW13-01 (Jun, Dec) and MW13-03 (Jun, Dec) ▪ Maximum: 4.82 µg/L at MW24-05 (Jun)	▪ MW13-02 (Jun) ▪ MW19-04 (Jun, Dec) ▪ MW24-05 (Jun)	Dissolved cobalt concentrations have historically exceeded the CSR-DW standard at MW13-02, MW19-04, and MW19-05 (prior to decommissioning). ▪ Dissolved cobalt concentrations at MW13-02 were lower than concentrations previously observed in 2022 and 2023. ▪ Concentrations at MW19-04 remained within the range of historical concentrations. ▪ The concentration at MW24-05 exceeded the CSR-DW standard in June – one month after well installation. However, concentrations decreased by December 2024 to below the standard.
Dissolved Cadmium	1.5 µg/L (CSR-Fresh AW)	Less than the analytical detection limit (0.010 µg/L)	▪ Minimum: Less than the analytical detection limit (0.010 µg/L) at MW13-01 (Jun, Dec) and MW13-02 (Jun, Dec) ▪ Maximum: 2.71 µg/L at MW24-05 (Jun)	▪ MW24-05 (Jun)	Dissolved cadmium concentrations have historically remained at or below 0.1 µg/L at the Site's wells. The concentration at MW24-05 exceeded the CSR-DW standard in June – one month after well installation. However, concentrations had decreased by December 2024 to 0.062 µg/L, which is well below the standard.
Dissolved Copper	20 µg/L (CSR-Fresh AW, CSR-Marine AW)	7.2 µg/L	▪ Minimum: Less than the analytical detection limit (0.40 µg/L) at MW13-01 (Jun, Dec) and MW13-02 (Jun, Dec) ▪ Maximum: 100 µg/L at MW24-05 (Jun)	▪ MW24-05 (Jun)	Dissolved copper concentrations have generally remained below the CSR-AW standards at the Site's wells. The concentration at MW24-05 exceeded the standards in June – one month after well installation. However, concentrations decreased to 11.9 µg/L by December 2024, which is below the standard.

Parameter	Most Stringent Standard*	Average Background Quality**	Measured Concentrations in 2024		Comments on Overall Trend
			Groundwater Concentration Range in 2024	Greater than the Standard	
Dissolved Arsenic (Figure 10)	10 µg/L (CSR-DW)	Less than the analytical detection limit (0.50 µg/L)	▪ Minimum: Less than the analytical detection limit (0.50 µg/L) at MW13-01 (Jun, Dec) and MW13-03 (Jun, Dec) ▪ Maximum: 6.36 µg/L at MW13-02 (Jun)	▪ None	▪ Dissolved arsenic concentrations have previously exceeded the CSR-DW standard at MW13-02. However, the 2023 and 2024 concentrations at MW13-02 remained below the standard with a decreasing trend noted. ▪ At MW19-04, the 2024 concentrations were higher than the range of historical concentrations but remained well below the standard. ▪ Concentrations at the other wells on Site remain well below the standards and generally within the historical range.
Dissolved Iron (Figure 11)	6,500 µg/L (CSR-DW)	Less than the analytical detection limit (10 µg/L)	▪ Minimum: Less than the analytical detection limit (10 µg/L) at MW13-01 (Jun, Dec) and MW13-03 (Jun, Dec) Maximum: 68,600 µg/L at MW13-02 (Jun)	▪ MW13-02 (Jun, Dec) ▪ MW19-04 (Jun, Dec)	▪ Dissolved iron concentrations at MW13-02 have historically exceeded the CSR-DW standard. However, the 2024 concentrations have decreased compared to concentrations observed in 2022 and 2023. ▪ Dissolved iron concentrations at MW19-04 have historically been below the CSR-DW standard; however, concentrations have increased to concentrations above the standard in 2024. ▪ Concentrations at the other wells on Site remain well below the standards and generally within the range of historical concentrations.
Dissolved Manganese (Figure 12)	1,500 µg/L (CSR-DW)	0.36 µg/L	▪ Minimum: 0.21 µg/L at MW13-01 (Dec) ▪ Maximum: 2,180 µg/L at MW19-04 (Dec)	▪ MW13-02 (Jun, Dec) ▪ MW19-04 (Jun, Dec)	▪ Historical exceedances of the CSR-DW standard for dissolved manganese have been observed at MW13-02 and MW19-04. The 2024 concentrations at these two wells are in exceedance of the standards but remain within the range of historical concentrations. Concentrations at MW19-04 exhibit an overall increasing trend since 2019. ▪ Concentrations at the other wells on Site remain well below the standards and generally within the range of historical concentrations.
EPHs and VHs	Various	Less than the detection limits for all parameters	▪ Less than the detection limits at all monitoring wells tested (Feb)	▪ None	EPHs and VHs at all wells were below the detection limits in 2024.
PAHs	Various	Less than the detection limits for all parameters	▪ Less than the detection limits at all monitoring wells tested (Feb)	▪ None	PAHs at all wells were below the detection limits in 2024.
Resins and Fatty Acids	None	Less than the detection limits for all parameters (Except oleic acid, 14 µg/L)	▪ Less than the detection limits at all monitoring wells tested (Feb)	▪ N/A	Resins and fatty acids at all wells were below the detection limits in 2024.

Notes:
* Groundwater monitoring wells results are compared to CSR-Fresh AW, CSR-Marine AW, and CSR-DW standards.
**Background quality is the average of all available measurements, including non-detectable (value of half the detection limit) results at MW13-01, from 2019 to 2024.

Abbreviations:
Feb – February.
Jun – June.
Sep – September.
Dec – December.
N/A – Not Applicable.

3.2 Surface Water Conditions

3.2.1 Analytical Results

Surface water sampling has included data collection in March 2014 and from 2019 to the present. Surface water analytical results are presented in attached Table 3 and summarized in Table 3-3. The laboratory analytical certificates are in Appendix F. Trend plots for selected parameters are included as Figure 13 to Figure 15.

Table 3-3: Summary of Surface Water Analytical Results

Parameter	Most Stringent Guideline*	Average Background Quality**	Measured Concentrations in 2024		Comments on Overall Trends
			Surface water Concentration Range in 2024	Greater than the Guideline	
pH (Figure 13)	7.0 to 8.7 (BC WQG – Marine AW)	7.17	▪ Minimum: 6.50 at SW-2 (Feb) ▪ Maximum: 7.43 at SW-4 (Dec)	▪ SW-1 (Feb, Jun, Sep) ▪ SW-2 (Feb, Jun, Sep) ▪ SW-3 (Feb, Jun) ▪ SW-4 (Feb, Jun)	The pH values were outside (less than) the range specified by the BC WQG guidelines at multiple surface water locations in February, June, and September, including at the background location (SW-1). However, pH values were within the guideline range at all locations in December. Historically, pH values have had an apparent decreasing trend since 2019 and fell to below the acceptable range in 2023. However, as of September and December 2024, pH values at all locations have increased from the relatively low values observed in 2023 and early 2024.
Electrical Conductivity	None	100 µS/cm	▪ Minimum: 81.1 µS/cm at SW-1 (Feb) ▪ Maximum: 166 µS/cm at SW-4 (Dec)	▪ N/A	Electrical conductivity values at each location remained within the historical range in 2024.
TDS	None	71,056 µg/L	▪ Minimum: 50,000 µg/L at SW-2 (Dec) ▪ Maximum: 130,000 µg/L at SW-4 (Dec)	▪ N/A	TDS values at SW-2 and SW-3 were below the historical range at their respective locations (approximately 20,000 µg/L less than the previous historical lows). However, the TDS concentrations at SW-1 and SW-4 remained within the historical range.
Sulphate (Figure 14)	218,000 µg/L (BC WQG – Fresh AW, long-term chronic)	3,057 µg/L	▪ Minimum: 2,100 µg/L at SW-1 (Dec) ▪ Maximum: 11,200 at SW-4 (Feb)	▪ None	Sulphate concentrations have remained less than the guideline at the sampling locations and within historical ranges. Concentrations at SW-4 have shown an overall decreasing trend since 2020.
Chloride (Figure 15)	150,000 µg/L (BC WQG – Fresh AW, long-term chronic)	9,355 µg/L	▪ Minimum: 7,900 µg/L at SW-1 (Dec) ▪ Maximum: 10,800 µg/L at SW-2 (Sep) and at SW-3 (Sep)	▪ None	Chloride concentrations have remained well below the guidelines at the sampling locations. The 2024 concentrations remained within the historical range with no obvious trends noted.
Nitrate (as N)	3,000 µg/L (BC WQG – Fresh AW, long-term chronic)	115 µg/L	▪ Minimum: less than the analytical detection limit (10 µg/L) at SW-4 (Jun, Sep) ▪ Maximum: 177 µg/L at SW-3 (Feb)	▪ None	Nitrate concentrations have remained well below the BC WQG guideline at the sampling locations. The 2024 concentrations remained within the historical range.
Ammonia (as N)	1,850 µg/L (BC WQG – Fresh AW, long-term chronic)	Less than the analytical detection limit (50 µg/L)	▪ Minimum: less than the analytical detection limit (50 µg/L) at SW1 (Jun), at SW-2 (Jun, Dec), at SW-3 (Jun), and at SW-4 (Jun, Sep, Dec) ▪ Maximum: 252 µg/L at SW-1 (Sep)	▪ None	Ammonia concentrations have remained well below the BC WQG guideline at the sampling locations. The concentrations in September 2024 reached historic highs at SW-1 and SW-2, but remained below 300 µg/L.
Dissolved Iron	350 µg/L (BC WQG – Fresh AW, short-term acute)	344 µg/L	▪ Minimum: 28 µg/L at SW-4 (Dec) ▪ Maximum: 563 µg/L at SW-1 (Dec)	▪ SW-1 (Dec) ▪ SW-2 (Dec) ▪ SW-3 (Dec)	Dissolved iron concentrations have historically exceeded the guidelines during the fall event (i.e., October to December monitoring event) at SW-1, SW-2, and SW-3. 2024 concentrations were generally within the historical range at each location.
EPHs and VHs	Various	Less than the detection limits for all parameters	▪ Less than the detection limits at all locations (Feb)	▪ None	EPHs and VHs at all wells were below the detection limits in 2024.
PAHs	Various	Less than the detection limits for all parameters	▪ Less than the detection limits at all locations (Feb)	▪ None	PAHs at all wells were below the detection limits in 2024.
Resins and Fatty Acids	None	Less than the detection limits for all parameters (Except oleic acid, 1.7 µg/L)	▪ Less than the detection limits at all locations (Feb)	▪ N/A	Resins and fatty acids at all wells were below the detection limits in 2024.

Notes:
* Surface water results are compared to the BC WQG for Fresh AW and Marine AW.
**Background quality is the average of all available measurements, including non-detectable (value of half the detection limit) results at SW-1, from 2019 to 2024.
Abbreviations:
Feb – February.
Jun – June.
Sep – September.
Dec – December.

3.3 Quality Assurance/Quality Control Results

The field QA/QC program included the collection of one duplicate sample during each event and the use of COC forms to track sample handling between the field and the laboratory. In addition, sample hold times and temperatures were evaluated to determine if these parameters exceeded laboratory or method QA/QC limits. The duplicates were submitted to CARO and tested for routine parameters (e.g., pH, EC, major ions – for all events) and dissolved metals (in June and December). The samples in February, September, and December were received by the laboratory at temperatures below the alert limit of 10ºC, while the samples in June were received by the laboratory at 12.2ºC. Samples were analyzed within the method hold time, except for pH, which has a recommended hold time of 15 minutes and cannot practically be met.

Duplicate results were considered as having passed the QA/QC reproducibility procedure if the RPD was less than or equal to 30%, indicating a close correlation between the sample-duplicate pair. In poor precision situations (e.g., RPD >50%), the results cannot be distinguished as to whether it is due to the non-homogenous nature of the samples or poor sampling method or laboratory technique. Therefore, RPD is usually used for flagging data for further review, rather than for taking corrective action. The RPD calculations are summarized in Table 3-4 and detailed in attached Table 4. The majority of the calculated RPD values were within the RPD thresholds, with the exceptions noted in Table 3-4.

Table 3-4: Parameters with RPD greater than Screening Thresholds

Monitoring Event	February 2024	June 2024	September 2024	December 2024
Duplicate collected at:	SW-2	SW-2	MW24-05	MW19-04
Parameters with RPD >30%	None	Electrical conductivity = 39% Alkalinity = 56% Bicarbonate = 56%	None	Ammonia = 33% Dissolved copper = 76%

The reason for the elevated RPD values in June 2024 is unclear but may be related to the heterogeneity of the water sample and the amount of suspended material in the unfiltered water samples. This is supported by the lack of RPD values greater than the 20% threshold in the various dissolved metal parameters in June 2024.

The reason for elevated RPD values in December 2024 is unclear. However, the RPD for ammonia is marginally greater than the threshold, and dissolved metal parameters other than dissolved copper do not show RPD values higher than the threshold. In addition, other RPD values remained under 20% for all other parameters tested during all sampling events. Based on the results of the QA/QC program, Tetra Tech considers the analytical results reliable.

4.0 DISCUSSION

4.1 Groundwater Trends

Groundwater was assessed based on analysis of routine parameters, nutrients, phenols, dissolved metals, total metals, petroleum hydrocarbons, PAHs, and resins and fatty acids.

Groundwater at the Site appears to have a moderate concentration of minerals, with TDS values ranging from 78,000 µg/L to 790,000 µg/L in 2024. Sulphate did not exceed the CSR-AW and CSR-DW standards at any well in 2024. The sulphate concentrations at MW13-02 are higher than at other wells on Site but have been on a decreasing trend since reaching a historical high in October 2022. The sulphate levels at the other wells have been relatively

low and stable over time. The concentrations of other typical leachate indicator parameters such as chloride, ammonia, and dissolved boron remain less than standards with no obvious trends.

The concentrations of several compounds are indicative of anaerobic conditions in the groundwater hydraulically cross-gradient or down-gradient of the former site operations. This includes at MW13-02 (located at the edge of the historical waste footprint) and at MW19-04, situated along the west side of the Site. These findings are further discussed below.

Dissolved iron and manganese concentrations are relatively greater at MW13-02 and MW19-04 and exceeded the CSR-DW Standards as follows:

- Dissolved iron exceeded the CSR-DW standard of 6,500 µg/L at MW13-02 and MW19-04 in both June and December. The 2024 dissolved iron concentrations have decreased at MW13-02 compared to levels observed in 2022 and 2023. Dissolved iron concentrations at MW19-04 have historically been below the CSR-DW standard; however, concentrations have increased to levels above the standard in 2024.
- Dissolved manganese exceeded the CSR-DW standard of 1,500 µg/L at MW13-02 and MW19-04 in both June and December. The dissolved manganese concentration at all wells were generally within the range of historical concentrations.

Dissolved iron and dissolved manganese are often naturally occurring in groundwater under anaerobic conditions. In addition to the above noted exceedances, the concentrations of ammonia and dissolved arsenic at MW13-02 and to a lesser extent at MW19-04 are also relatively higher compared to levels found at other wells. These findings are also interpreted to be related to anaerobic conditions in the local groundwater which may be related to the historical waste operations at the Site. MW13-02 is located at the edge of the waste footprint and therefore, the measured concentrations may not be representative of the surrounding groundwater. The concentrations at MW19-04 are lower than those observed at MW13-02. However, concentrations of dissolved iron and dissolved arsenic at MW19-04 have increased in 2024 compared to previous levels. The groundwater at both of these wells should continue to be monitored for potential leachate impact.

Dissolved cobalt concentrations have historically exceeded the CSR-DW standard of 1 µg/L at MW13-02, MW19-04, and MW19-05 (prior to decommissioning). The 2024 and historical dissolved cobalt concentrations at all wells were below the CSR-AW freshwater and marine standards (40 µg/L). In 2024, dissolved cobalt concentrations exceeded the CSR-DW standard at MW13-02 (June, 1.67 µg/L), MW19-04 (June and December, maximum 3.01 µg/L), and MW24-05 (June, 4.82 µg/L). Dissolved cobalt concentrations at MW13-02 were lower than levels previously observed in 2022 and 2023, while concentrations at MW19-04 remained within the range of historical concentrations. The dissolved cobalt concentration at MW24-05 exceeded the CSR-DW standard in June – one month after well installation. However, concentrations decreased to levels below the standard in December 2024. Cobalt can be bound with iron and manganese oxides, and the relatively higher iron and manganese concentrations at MW13-02 and MW19-04, indicative of anaerobic conditions, are likely related to the dissolution of these oxides. Arsenic behaves in a similar manner, and similar trends in arsenic concentrations are noted at MW19-04 and MW13-02. The adjacent surface water chemistry, described in Section 4.2, does not show concentrations of total arsenic or total cobalt above the analytical detection limits.

Exceedances of the CSR-Fresh AW standards for dissolved cadmium (1.5 µg/L) and dissolved copper (20 µg/L), as well as the above-noted exceedance of the dissolved cobalt standard, were observed at MW24-05 in June. However, concentrations of these dissolved metal parameters had decreased to below the standards by December 2024. As the June monitoring event occurred one month after well installation, these observations may be due to recovery from disturbance in the area, since this well was newly installed. As such, the exceedances at MW24-05 are not interpreted to be related to site activities but should be confirmed in 2025.

The concentrations of petroleum hydrocarbons, PAHs, and resins and fatty acids continued to be less than analytical detection limits in 2024, consistent with historical results. Sampling for these parameters has not yet been undertaken at the new well, MW24-05.

4.2 Surface Water Trends

Surface water was assessed based on analysis of routine parameters, nutrients, phenols, dissolved metals, total metals, petroleum hydrocarbons, PAHs, and resins and fatty acids.

The laboratory pH levels of the surface water samples at multiple sampling locations were outside the range set by the BC AWQG for Marine AW (pH 7.0 to 8.7) during the February, June, and September monitoring events. Historically, pH values have had an apparent decreasing trend since 2019 and decreased to below the acceptable range in 2023. However, as of September and December 2024, pH values have increased from the relatively low values observed in 2023 and early 2024 but were still below the guideline range at SW-1 and SW-2. The reason for the decreasing pH is not clear, as similar patterns are seen in the upstream and downstream locations and at both watercourses (and therefore they are interpreted to not be related to site activities). pH is susceptible to shifts when the water being analyzed is of low hardness, and with the presence of dissolved iron and longer hold times, there is a potential for an acidifying effect due to the oxidation of the dissolved iron in the samples (Nilsson and Sandberg 2017). The pH of the surface water should continue to be closely monitored.

Exceedances of the BC AWQG for Fresh AW for dissolved iron of 350 µg/L were noted at SW-1, SW-2, and SW-3 in December 2024. Dissolved iron concentrations have historically exceeded the guideline during the fall event (i.e., October to December monitoring event) at SW-1, SW-2, and SW-3. In December 2024, the highest dissolved iron concentration was recorded at SW-1, which is considered to be the background surface water location. As the exceedances are seen in the upstream and downstream locations and at both watercourses, these exceedances are not interpreted to be a result of leachate impact.

Sulphate and chloride concentrations have remained within the range of historical concentrations and well below the BC AWQG for Fresh AW guidelines at the four surface water sampling locations in 2024. There were no detectable concentrations of PAHs, petroleum hydrocarbons, or resins and fatty acids in the surface water samples.

5.0 CONCLUSIONS AND RECOMMENDATIONS

In 2024, quarterly groundwater and surface water monitoring events were carried out by qRD staff on the following dates: February 22, June 24, September 16, and December 9, 2024. Tetra Tech provided office support and quality checks of field data collection, COC forms, and analytical data for the monitoring events.

Tetra Tech interprets a southwesterly groundwater flow direction for all monitoring events under an average hydraulic gradient of 0.10 m/m. This gradient has remained relatively consistent since the onset of monitoring.

The potential for migration of landfill and solid waste-related compounds from the Site can be assessed from evaluation of groundwater composition at the Site and Site boundary, and surface water composition from waters adjacent to the Site. The background Site conditions are monitored by groundwater well MW13-01 and surface water location SW-1.

Based on the results of the monitoring program, there are indications of anaerobic conditions in hydraulically down-gradient and cross-gradient groundwater monitoring wells which may be related to historical site operations, however, there are no significant trends noted or indications of site impact to the adjacent McFall Creek.

At MW13-02 and MW19-04, concentrations of dissolved cobalt, iron, and manganese were found to be in exceedance of the standards during one or more monitoring events in 2024. These wells are interpreted as being hydraulically down-gradient and cross-gradient, respectively, of the historical site operations and vulnerable to potential impacts from leachate. MW13-02 has been interpreted as being on the edge of the waste footprint. Groundwater quality at these wells should continue to be monitored for potential leachate impact and trends in indicator parameters. Total cobalt was not detected in the adjacent surface water chemistry above the analytical detection limits; total iron and total manganese concentrations did not show substantial differences or trends between upstream and downstream locations.

On May 24, 2024, a new groundwater monitoring well, MW24-05, was installed to replace the decommissioned well MW19-05, as per the recommendation made in the 2023 Environmental Monitoring Program Annual Report (Tetra Tech 2024). Groundwater samples were collected from MW24-05 for the June, September, and November monitoring events. At MW24-05, exceedances of dissolved cadmium, cobalt, and copper, were observed during the June monitoring event. However, the December 2024 concentrations of these dissolved metal parameters had decreased to concentrations below the standards. As the June monitoring event occurred one month after well installation, these observations may be due to recovery from disturbance in the area and are not interpreted to be related to site activities.

The laboratory pH levels of the surface water samples at multiple sampling locations were outside the range set by the BC AWQG for Marine AW (pH 7.0 to 8.7) during the February, June, and September monitoring events. Historically, pH values have had an apparent decreasing trend since 2019 and decreased to below the acceptable range in 2023. However, as of September and December 2024, pH values increased from the relatively low values observed in 2023 and early 2024 but were still below the guideline range in SW-1 and SW-2. Similar patterns are seen in the upstream and downstream locations and at both watercourses; therefore, the low pH values are not interpreted to be related to site activities.

At SW-1, SW-2, and SW-3, dissolved iron concentrations exceeded BC AWQG for Fresh AW guideline in December. Exceedances of the dissolved iron guideline have been noted for previous fall events (e.g., October to December events). As the exceedances are seen in the upstream and downstream locations and at both watercourses, these exceedances are not interpreted to be a result of historical site operations.

5.1 Recommendations

The following recommendations have been developed based on the data presented within this report:

- Continue the current quarterly groundwater monitoring and sampling schedule and analytical program in 2025. Tetra Tech trained qRD staff to assist with the environmental monitoring program during the 2020 and 2021 monitoring events and qRD staff will continue to be responsible for monitoring and sampling in 2025.
- Consider addition of a surface water sampling location to further assess water quality in the western ephemeral watercourse on the Site. Addition of the sampling location should occur after final site development. Additionally, surface water sampling locations on the Site should be reassessed and potentially adjusted based on final site development and surface water flows.
- Measure the pipe stickup and elevations for MW24-05 in 2025, so that the groundwater elevations for this well can be calculated.

6.0 LIMITATIONS OF REPORT

This report and its contents are intended for the sole use of qathet Regional District and their agents. Tetra Tech Canada Inc. (operating as Tetra Tech) does not accept any responsibility for the accuracy of any of the data, the analysis, or the recommendations contained or referenced in the report when the report is used or relied upon by any Party other than qathet Regional District, or for any Project other than the proposed development at the subject site. Any such unauthorized use of this report is at the sole risk of the user. Use of this document is subject to the Limitations on the Use of this Document attached in the Appendix or Contractual Terms and Conditions executed by both parties.

7.0 CLOSURE

We trust this document meets your present requirements. If you have any questions or comments, please contact the undersigned.

Respectfully submitted,
Tetra Tech Canada Inc.

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TABLES

Table 1 Groundwater Monitoring Summary
Table 2 Groundwater Analytical Results
Table 3 Surface Water Analytical Results
Table 4 Groundwater and Surface Water QA/QC Analytical Results

Table 1: Groundwater Monitoring Summary

Monitoring Well		MW13-01	MW13-02	MW13-03	MW19-04	MW19-05	MW24-05****
Year Installed		2013	2013	2013	2019	2019	2024
Year Decommissioned		--	--	--	--	2020	--
Year of Well Extension		--	2023	--	--	--	--
Pipe Length (m)		8.4	10.1	15.4	4.5	7.0	5.2
Pipe Stickup (m)		0.62	0.53	0.57	0.73	0.98	--
Pipe Stickup (m) - After Well Extension***		--	0.62	--	--	--	--
Screened Section length (m)		3.0	3.0	3.0	3.0	5.0	5.0
Screened Interval (m-TPC)		5.3 to 8.4	7.1 to 10.1	12.4 to 15.4	1.4 to 4.5	2.0 to 7.0	--
Ground Elevation (m)		55.97	40.15	29.08	39.64	44.73	--
Ground Elevation (m) - After Well Extension***		--	40.93	--	--	--	--
TPC Elevation (m)		56.59	40.68	29.65	40.37	45.71	--
TPC Elevation (m) - After Well Extension***		--	41.55	--	--	--	--
Depth to Groundwater (m-TPC)	Dec 1, 2013	5.25	8.04	13.46	*	*	*
	Apr 3, 2019	5.41	7.28	13.97	3.25	3.42	*
	Jul 1, 2019	5.61	8.06	13.07	2.81	4.00	*
	Oct 16, 2019	5.68	8.44	13.14	2.49	4.26	*
	Jan 27, 2020	5.49	6.62	12.83	2.00	2.64	*
	Apr 23, 2020	5.65	7.44	13.00	2.28	3.72	*
	Jul 22, 2020	6.01	8.14	13.08	2.26	4.10	*
	Oct 1, 2020	5.07	8.84	13.01	2.16	**	*
	Feb 24, 2021	4.57	7.02	12.97	2.15	**	*
	May 11, 2021	4.68	7.59	13.11	2.12	**	*
	Jul 19, 2021	4.76	8.00	12.97	2.19	**	*
	Dec 1, 2021	4.62	6.58	12.80	1.80	**	*
	Mar 2, 2022	4.85	7.90	12.94	1.97	**	*
	Jul 12, 2022	4.42	7.27	12.98	2.75	**	*
	Oct 11, 2022	4.51	8.17	13.70	2.16	**	*
	Dec 12, 2022	4.44	8.19	13.40	2.05	**	*
	Feb 28, 2023	4.47	7.83	13.98	2.00	**	*
	May 23, 2023	4.98	8.10	13.00	2.06	**	*
	Sep 27, 2023	5.07	9.09	13.02	2.05	**	*
	Dec 18, 2023	5.00	7.75	12.95	2.80	**	*
	Feb 22, 2024	4.93	7.78	12.90	1.88	**	*
	Jun 24, 2024	5.03	8.10	12.97	2.00	**	3.20
	Sep 16, 2024	5.09	8.84	13.00	2.00	**	4.87
	Dec 9, 2024	5.40	8.15	12.92	1.90	**	5.19
Groundwater Elevation (mamsl)	Dec 1, 2013	51.34	32.64	16.19	*	*	*
	Apr 1, 2019	51.18	33.40	15.69	37.12	42.29	*
	Jul 1, 2019	50.98	32.62	16.58	37.56	41.71	*
	Oct 1, 2019	50.91	32.24	16.51	37.88	41.45	*
	Jan 27, 2020	51.10	34.07	16.82	38.37	43.07	*
	Apr 23, 2020	50.94	33.25	16.66	38.09	41.99	*
	Jul 22, 2020	50.58	32.54	16.57	38.12	41.62	*
	Oct 1, 2020	51.52	31.84	16.64	38.22	**	*
	Feb 24, 2021	52.02	33.66	16.68	38.22	**	*
	May 11, 2021	51.91	33.09	16.54	38.25	**	*
	Jul 19, 2021	51.83	32.68	16.68	38.18	**	*
	Dec 1, 2021	51.97	34.10	16.85	38.57	**	*
	Mar 2, 2022	51.74	32.78	16.72	38.40	**	*
	Jul 12, 2022	52.17	33.41	16.67	37.62	**	*
	Oct 11, 2022	52.08	32.51	15.95	38.21	**	*
	Dec 12, 2022	52.15	32.49	16.25	38.32	**	*
	Feb 28, 2023	52.12	33.72	15.67	38.37	**	*
	May 23, 2023	51.61	33.45	16.65	38.31	**	*
	Sep 27, 2023	51.52	32.46	16.63	38.32	**	*
	Dec 18, 2023	51.59	33.80	16.70	37.57	**	*
	Feb 22, 2024	51.66	33.77	16.75	38.49	**	*
	Jun 24, 2024	51.56	33.45	16.68	38.37	**	****
	Sep 16, 2024	51.50	32.71	16.65	38.37	**	****
	Dec 9, 2024	51.19	33.40	16.73	38.47	**	****

Notes:
m-TPC - Metres below TPC.
mamsl - Metres above Mean Sea Level.
TPC - Top of plastic pipe casing.
* Monitoring well not installed at time of monitoring event.
** Monitoring well decommisioned prior to event.
*** New elevations for MW13-02 after well extension work completed on February 22, 2022.
**** The elevations for the well were not obtained in 2024 and need to be measured during the next monitoring event.

Table 2: Groundwater Analytical Results

Parameter	Unit	RDL	CSR - AW		CSR - DW	MW13-01																							
			Freshwater	Marine		14-Dec-2013	2-Apr-2019	DUP (2-Apr-2019)	25-Jul-2019	17-Oct-2019	27-Jan-2020	23-Apr-2020	22-Jul-2020	28-Oct-2020	21-Feb-2021	11-May-2021	19-Jul-2021	1-Dec-2021	2-Mar-2022	12-Jul-2022	11-Oct-2022	12-Dec-2022	28-Feb-2023	23-May-2023	27-Sep-2023	18-Dec-2023	DUP (18-Dec-2023)	22-Feb-2024	24-Jun-2024	16-Sep-2024	9-Dec-2024
						-	L2252890	L2252890	L2318207	L2367392	VA20A0908280120 20	VA20A536325420 20	VA20B113924072020	VA20B9565301020 20	21B2866	21E1432	21G2459	21L0641	22C0773	22G1537	22J1342	22L1310	23C0154	23E2913	23I3541	23L2282	23L2282	24B2509	24F3072	24I2276	24L1123
						-	L2252890-3	L2252890-1	L2318207-1	L2367392-1	VA20A0908-001	VA20A5363-001	VA20B1139-001	VA20B9565-001	21B2866-02	21E1432-01	21G2459-02	21L0641-02	22C0773-02	22G1537-02	22J1342-05	22L1310-02	23C0154-01	23E2913-01	23I3541-01	23L2282-01	23L2282-09	24B2509-01	24F3072-01	24I2276-01	24L1123-01
Field Measurements																															
Temperature	°C		-	-	-	-	9.34	-	11.60	11.3	10.1	10.42	10.7	10.8	9.3	10.1	11.9	11.4	9.8	11.4	12.3	10.7	9.7	11.7	11.5	10.6	10.6	10.2	11.2	11.4	11
Electrical Conductivity	µS/cm		-	-	-	-	124	-	96	143.9	95.9	94	132	127	83.5	125.4	94.9	84.8	78.4	84.4	126.2	85.8	76.2	89.2	99.2	9.8	9.8	11.4	82.8	3.1	84.9
Total Dissolved Solids (TDS)	mg/L		-	-	-	-	-	-	84	-	87.1	85	85	82.6	78	81.9	82.55	74.5	71.5	74.5	82.2	76.8	70.2	77.7	89.7	8.45	8.45	10.3	72.8	1.95	75.6
Salinity	-		15	10	-	-	-	-	0.06	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	%		-	-	-	-	11.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	mg/L		-	-	-	-	1.26	-	12.28	-	8.03	12.23	7.11	10.8	11.1	8.86	9.48	10.63	9.47	11.1	10.70	9.72	9.91	1.06	4.73	4.16	4.16	4.59	12.05	5.8	9.92
pH	pH Units		-	-	-	-	6.31	-	6.61	6.78	6.26	6.05	6.47	6.43	6.42	6.32	6.56	6.10	6.33	6.91	6.61	6.45	6.21	6.81	5.06	4.33	4.33	4.31	6.49	6.19	6.27
Oxidation Reduction Potential (ORP)	-		-	-	-	-	-	-	249.3	-	156	139.6	95.2	80.6	96.7	114	116.8	56.5	119.3	25.5	15.7	99.3	22.4	62.2	206.8	152	152	24	113.2	199.6	81.2
Physical Parameters																															
pH	pH Units	0.1	-	-	-	7.05	6.85	6.86	7.69	7.06	7.18	7.72	7.42	6.99	-	6.35	-	7.22	-	7.49	-	6.55	7.42	6.55	6.71	6.58	6.57	6.47	6.4	6.87	6.86
Electrical Conductivity (EC)	µS/cm	2	-	-	-	126	128	131	121	121	-	131	-	138	-	139	-	120	-	115	-	124	111	116	125	122	120	108	126	128	117
Total Suspended Solids (TSS)	µg/L	3000	-	-	-	709,000	<3,000	33,300	143,000	<3,000	-	<3000	-	<3000	-	<3300	-	<2500	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Dissolved Solids (TDS)	µg/L	10,000	-	-	-	100,000	-	-	-	-	107,000	116,000	-	103,000	-	-	-	-	-	71,000	-	-	-	102,000	-	100,000	-	-	85,000	-	112,000
Hardness as $CaCO_3$	µg/L	500	-	-	-	45,300	46,100	43,700	52,100	40,900	-	44,000	-	49,400	-	43,500	43,900	37,800	40,600	41,300	40,800	41,200	-	42,700	-	44,600	44,100	-	43,800	-	40,000
Alkalinity (total as $CaCO_3$)	µg/L	1000	-	-	-	-	-	-	-	-	-	-	-	-	-	47,800	-	-	-	-	-	-	40,400	46,400	53,200	49,000	48,600	46,600	46,200	45,200	40,100
Alkalinity (P)	µg/L	1000	-	-	-	-	-	-	-	-	-	-	-	-	-	<1000	-	-	-	-	-	-	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Bicarbonate	µg/L	1000	-	-	-	-	-	-	-	-	-	-	-	-	-	47,800	-	-	-	-	-	-	40,400	46,400	53,200	49,000	48,600	46,600	46,200	45,200	40,100
Carbonate	µg/L	1000	-	-	-	-	-	-	-	-	-	-	-	-	-	<1000	-	-	-	-	-	-	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Hydroxide	µg/L	1000	-	-	-	-	-	-	-	-	-	-	-	-	-	<1000	-	-	-	-	-	-	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Bromide	µg/L	50	-	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloride	µg/L	500	1,500,000	1,500,000	250,000	9,720	8,860	8,890	8,830	7,270	7,210	8,970	8,550	7,770	7180	6950	7490	4700	7,510	7,690	8,150	7,400	6,700	6,280	6,730	6,830	6,380	4,420	6,030	6,650	5,700
Fluoride	µg/L	20	2,000 #1	15,000	1,500	27	33	35	29	30	27	29	28	31	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Sulphate	µg/L	300	2,180,000 #3	2,180,000 #1	500,000	5,980	5,630	5790	6,750	6,340	6,020	5,490	6,390	6,370	5800	6000	6100	5300	5,800	5,600	6,500	6,800	5,800	6,000	6,000	5,300	5,300	4,600	5,100	6,100	5,000
Sulphide (as S)	µg/L	10	-	-	-	<20	<18	<18	<2.0	31	<2.0	2.3	<2.0	<2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulphide (as H2S)	µg/L	2	20	20	50	-	-	-	-	-	<2.0	2.4	<2.0	<2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulphide, total	µg/L	20	-	-	-	-	-	-	-	-	-	-	-	-	<20	-	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Turbidity	NTU	0.1	-	-	-	-	17.8	23.8	-	0.58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acidity	µg/L		-	-	-	-	-	-	-	-	-	4,000	-	3,700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nutrients																															
Ammonia as N	µg/L	5	18,500 #2	64,000 #2	-	<5.0	<5.0	<5.0	5.8	<5.0	<5.0	<5.0	8	<5.0	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	-	<50	54	<50
Nitrate (as N)	µg/L	5	400,000	400,000	10,000	171	407	347	139	87.3	492	497	205	208	889	628	368	876	1,150	554	218	135	395	470	223	441	418	977	264	175	202
Nitrite (as N)	µg/L	1	800 #3	800 #3	1,000	<1.0	<1.0	<1.0	1.8	<1.0	<1.0	<1.0	<1	<1.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Nitrate and Nitrite (as N)	µg/L	50	400,000	400,000	10,000	-	-	-	-	-	-	497	-	-	-	-	-	-	-	554	-	-	-	-	-	-	-	-	-	-	-
Demand Parameters																															
Biochemical Oxygen Demand (BOD)	µg/L	2000	-	-	-	-	<2,000	2900	-	<2,000	-	<2,000	-	<2,000	-	<1200	-	<1200	-	<6,200	-	<2,200	-	<4,800	-	<2,800	-	-	<3,200	-	4,000
Chemical Oxygen Demand (COD)	µg/L	20000	-	-	-	<20,000	<20,000	<20,000	-	<20,000	-	<20,000	-	<20,000	-	<20,000	-	<20,000	-	<20,000	-	<20,000	-	<20,000	-	<20,000	-	-	<20,000	-	<20,000
Carbon																															
Dissolved Organic Carbon (DOC) (Filtered)	µg/L	500	-	-	-	-	-	-	-	-	-	-	-	-	-	610	-	4850	-	-	-	-	-	-	-	-	-	-	1,250	-	1,460
Total Organic Carbon (TOC)	µg/L	500	-	-	-	-	1,810	3950	-	<500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenols																															
Phenols (4AAP)	µg/L	1	-	-	-	<1.0	<1.0	<1.0	-	-	-	-	<1	-	<2	-	-	-	<2.0	-	-	<2.0	<2.00	-	-	-	<0.50	-	-	-	-
Dissolved Metals																															
Aluminum	µg/L	1	-	-	9,500	<5.0	6.1	4.5	-	4.1	-	<1.0	-	<1.0	-	<5.0	-	<5.0	-	<5.0	-	<5.0	-	<5.0	-	<5	<5	-	<5.0	-	<5.0
Antimony	µg/L	0.1	90	2,500	6	<0.50	<0.10	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.20	-	<0.20	-	<0.20	-	<0.20	-	<0.20	-	<0.2	<0.2	-	<0.20	-	<0.20
Arsenic	µg/L	0.1	50	125	10	<0.50	<0.10	<0.10	-	0.1	-	<0.10	-	<0.10	-	<0.50	-	<0.50	-	<0.50	-	<0.50	-	<0.50	-	<0.5	<0.5	-	<0.50	-	<0.50
Barium	µg/L	0.1	10,000	5,000	1,000	<20	1.2	1.2	-	1.3	-	1.4	-	1.3	-	<5.0	-	<5.0	-	<5.0	-	<5.0	-	<5.0	-	<5	<5	-	<5.0	-	<5.0
Beryllium	µg/L	0.1	1.5	1,000	8	<1.0	<0.10	<0.10	-	<0.10	-	<0.020	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.1	<0.1	-	<0.10	-	<0.10
Bismuth	µg/L	0.05	-	-	-	-	<0.050	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	-	-	-	<0.10	-	<0.10
Boron	µg/L	10	12,000	12,000	5,000	<100	<10	<10	-	<10	-	<0.0050	-	<10	-	<50	-	<50	-	<50	-	<50	-	<50.0	-	<50	<50	-	<50.0	-	<50.0
Cadmium	µg/L	0.005	1.5 #1	15	5	<0.010	0.0	<0.0050	-	<0.0050	-	<0.0050	-	<0.0050	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.01	<0.01	-	<0.010	-	<0.010
Calcium	µg/L	50	-	-	-	13300.0	13900.0	13000.0	-	12100.0	-	13000.0	-	14100.0	-	12800.0	-	10700.0	-	121000.0	-	12000.0	-	12800.0	-	13200.0	13100.0	-	12,800	-	11,900
Cesium	µg/L	0.01	-	-	-	-	<0.010	<0.010	-	<0.010	-	<0.010	-	<0.010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	µg/L	0.1	10 #4	15 #4	50 #4	<1.0	<0.10	<0.10	-	<0.10	-	<0.50	-	<0.10	-	<0.50	-	<0.50	-	1.0	-	<0.50	-	1.1	-	<0.5	<0.5	-	<0.50	-	<0.50
Cobalt	µg/L	0.1	40	40	1	<0.30	<0.10	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.1	<0.1	-	<0.10	-	<0.10
Copper	µg/L	0.2	20 #1	20	1,500	<1.0	0.2	<0.20	-	0.3	-	<0.20	-	0.0	-	<0.40	-	<0.40	-	<0.40	-	84.0	-	<0.40	-	<0.4	1.9	-	<0.40	-	<0.40
Iron	µg/L	10	-	-	6,500	<30	<10	<10	-	<10	-	<10	-	<10	-	<10	-	<10	-	<10	-	<10	-	<10	-	<10	<10	-	<10	-	<10
Lead	µg/L	0.05	40 #1	20	10	<0.50	<0.050	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.20	-	<0.20	-	<0.2	-	<0.2	-	<0.20	-	<0.2	<0.2	-	<0.20	-	<0.20
Lithium	µg/L	1	-	-	8	<5.0	<1.0	<1.0	-	<1.0	-	<1	-	<1	-	0.8	-	0.7	-	0.8	-	0.8	-	0.8	-	0.8	0.8	-	0.88	-	0.81
Magnesium	µg/L	5	-	-	-	2940.0	2750.0	2720.0	-	2610.0	-	2880.0	-	3000.0	-	2780.0	-	2720.0	-	2680.0	-	2710.0	-	2600.0	-	2800.0	2780.0	-	2,890	-	2,500
Manganese	µg/L	0.1	-	-	1,500	10.2	0.5	0.2	-	0.2	-	<0.10	-	<0.10	-	0.3	-	0.4	-	<0.20	-	<0.20	-	<0.20	-	1.5	<0.2	-	0.78	-	0.21
Mercury	µg/L		0.25	0.25	1	<0.010	-	-	-	<0.0050	-	-	-	<0.0050	-	<0.010	-	<0.010	-	<0.010	-	-	-	<0.010	-	<0.01	<0.01	-	<0.010	-	<0.010
Molybdenum	µg/L	0.05	10,000	10,000	250	<1.0	0.1	0.1	-	0.1	-	0.1	-	0.1	-	0.2	-	0.1	-	<0.010	-	0.1	-	0.1	-	0.1	0.2	-	<0.10	-	0.13
Nickel	µg/L	0.5	250 #1	83	80	<1.0	<0.50	<0.50	-	<0.50	-	<0.50	-	<0.50	-	<0.40	-	<0.40	-	<0.40	-	<0.40	-	<0.40	-	15.7	<0.4	-	<0.40	-	<0.40
Phosphorus	µg/L	50	-	-	-	-	<50	<50	-	<50	-	<50	-	<50	-	<50	-	<50	-	<50	-	<50	-	<50	-	-	-	-	<50	-	<50
Potassium	µg/L	50	-	-	-	<2000	1410.0	1350.0	-	1290.0	-	1240.0	-	1280.0	-	1260.0	-	1290.0	-	1210.0	-	1420.0	-	1330.0	-	-	-	-	1,330	-	1,290
Rubidium	µg/L	0.2	-	-	-	-	<0.20	<0.20	-	<0.20	-	<0.20	-	<0.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	µg/L	0.05	20	20	10	0.1	0.1	0.1	-	0.2	-	0.1	-	0.1	-	<0.50	-	<0.50	-	<0.50	-	<0.50	-	<0.50	-	<0.5	<0.5	-	<0.50	-	<0.50
Silicon	µg/L	50	-	-	-	-	12000.0	12900.0	-	13300.0	-	13100.0	-	12000.0	-	14300.0	-	14300.0	-	12600.0	-	13900.0	-	13800.0	-	-	-	-	13,300	-	13,600
Silver	µg/L	0.01	0.5 #1	15	20	<0.020	<0.010	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.05	<0.05	-	<0.050	-	<0.050
Sodium	µg/L	50	-	-	200,000	7900.0	7650.0	7690.0	-	7590.0	-	7220.0	-	7820.0	-	7390.0	-	7120.0	-	6940.0	-	7520.0	-	7430.0	-	7770.0	7740.0	-	7,920	-	7,120
Strontium	µg/L	0.2	-	-	2,500	-	71.1	72.8	-	72.4	-	77.2	-	79.2	-	68.0	-	55.4	-	67.6	-	69.9	-	71.5	-	69.7	68.5	-	69.8	-	60.6
Sulphur	µg/L	500	-	-	-	-	2040.0	2030.0	-	2280.0	-	1690.0	-	1990.0	-	<3000	-	<3000	-	<3000	-	<3000	-	<3,000	-	-	-	-	<3,000	-	<3,000
Tellurium	µg/L	0.2	-	-	-	-	<0.20	<0.20	-	<0.20	-	<0.20	-	<0.20	-	<0.50	-	<0.50	-	<0.50	-	<0.50	-	<0.50	-	-	-	-	<0.50	-	<0.50
Thallium	µg/L	0.01	3	3	-	<0.20	<0.010	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.020	-	<0.020	-	<0.020	-	<0.020	-	<0.020	-	<0.02	<0.02	-	<0.020	-	<0.020
Thorium	µg/L	0.1	-	-	-	-	<0.10	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	-	-	-	<0.10	-	<0.10
Tin	µg/L	0.1	-	-	2,500	<0.50	0.5	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.20	-	<0.20	-	<0.20	-	<0.20	-	<0.20	-	<0.2	<0.2	-	<0.20	-	<0.20
Titanium	µg/L	0.3	1,000	1,000	-	<10	<0.30	<0.30	-	<0.30	-	<0.30	-	<0.30	-	<5.0	-	<5.0	-	<5.0	-	<5.0	-	<5.0	-	<5	<5	-	<5.0	-	<5.0
Tungsten	µg/L	0.1	-	-	3	-	<0.10	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1	<1	-	<1.0	-	<1.0
Uranium	µg/L	0.01	85	85	20	<0.20	0.1	0.1	-	0.0	-	0.1	-	0.1	-	0.1	-	0.1	-	0.1	-	0.1	-	0.1	-	0.1	0.1	-	0.055	-	0.056
Vanadium	µg/L	0.5	-	-	20	<1.0	0.9	0.8	-	0.9	-	0.8	-	0.9	-	1.1	-	<1.0	-	<5.0	-	<5.0	-	<5.0	-	<5	<5	-	<5.0	-	<5.0
Zinc	µg/L	1	75 #1	100	3,000	<5.0	2.6	<1.0	-	2.1	-	<1.0	-	<1.0	-	<4.0	-	<4.0	-	<4.0	-	8.2	-	<4.0	-	<4	<4	-	<4.0	-	<4.0
Zirconium	µg/L	0.06	-	-	-	-	<0.060	<0.060	-	<0.20	-	<0.3	-	<0.2	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	-	-	-	<0.10	-	<0.10

NOTES:

#1	Guideline varies with hardness. Values shown based on average hardness of 43 mg/L at background well MW13-01.
#2	Standard varies with pH. Value shown based on average laboratory pH of 7.0 at background well MW13-01.
#3	Standard varies with chloride concentration. Value shown based on average chloride concentration of 7 mg/L at background well MW13-01.
#4	Standard is for Chromium VI.
-	Not analyzed or no applicable CSR standard.
<	Concentration is less than the laboratory detection limit indicated.
CSR	BC Contaminated Sites Regulation (BC Reg. 375/96, including amendments up to BC Reg. 133/2022, March 2023) Schedule 3.2.
AW	Freshwater and marine aquatic life standards.
DW	Drinking water standards.
Shaded	Shaded indicates an exceedance of the CSR Freshwater AW standard.
BOLD	Bold and underlined indicates an exceedance of the CSR Marine AW standard.
Red Text	Red text indicates an exceedance of the CSR DW standard.
Italic	Detection limit greater than standard.

TETRA TECH

Table 2: Groundwater Analytical Results

						MW13-01																							
						14-Dec-2013	2-Apr-2019	DUP (2-Apr-2019)	25-Jul-2019	17-Oct-2019	27-Jan-2020	23-Apr-2020	22-Jul-2020	28-Oct-2020	21-Feb-2021	11-May-2021	19-Jul-2021	1-Dec-2021	2-Mar-2022	12-Jul-2022	11-Oct-2022	12-Dec-2022	28-Feb-2023	23-May-2023	27-Sep-2023	18-Dec-2023	DUP (18-Dec-2023)	22-Feb-2024	24-Jun-2024	16-Sep-2024	9-Dec-2024
						-	L2252890	L2252890	L2318207	L2367392	VA20A0908280120 20	VA20A536325042020	VA20B113924072020	VA20B95653010202 0	21B2866	21E1432	21G2459	21L0641	22C0773	22G1537	22J1342	22L1310	23C0154	23E2913	23I3541	23L2282	23L2282	24B2509	24F3072	24I2276	24L1123
						-	L2252890-3	L2252890-1	L2318207-1	L2367392-1	VA20A0908-001	VA20A5363-001	VA20B1139-001	VA20B9565-001	21B2866-02	21E1432-01	21G2459-02	21L0641-02	22C0773-02	22G1537-02	22J1342-05	22L1310-02	23C0154-01	23E2913-01	23I3541-01	23L2282-01	23L2282-09	24B2509-01	24F3072-01	24I2276-01	24L1123-01
Parameter	**Unit**	**RDL**	**CSR - AW** Freshwater	**CSR - AW** Marine	**CSR - DW**																									
Total Metals																														
Aluminum	µg/L	3	-	-	-	-	-	-	7860.0	-	-	6.4	-	3.7	-	-	-	-	-	-	-	-	-	-	<5	-	-	-	-	<5.0
Antimony	µg/L	0.1	-	-	-	-	-	-	0.2	-	-	<0.10	-	<0.10	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-	-	<0.20
Arsenic	µg/L	0.1	-	-	-	-	-	-	1.8	-	-	<0.10	-	<0.10	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	<0.50
Barium	µg/L	0.1	-	-	-	-	-	-	41.0	-	-	1.2	-	1.3	-	-	-	-	-	-	-	-	-	-	<5	-	-	-	-	<5.0
Beryllium	µg/L	0.1	-	-	-	-	-	-	0.1	-	-	<0.20	-	<0.10	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	<0.10
Bismuth	µg/L	0.05	-	-	-	-	-	-	<0.050	-	-	<0.050	-	<0.050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.10
Boron	µg/L	10	-	-	-	-	-	-	<10	-	-	<10	-	<10	-	-	-	-	-	-	-	-	-	-	<50	-	-	-	-	<50.0
Cadmium	µg/L	0.005	-	-	-	-	-	-	0.0	-	-	<0.0050	-	<0.0050	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	<0.010
Calcium	µg/L	50	-	-	-	-	-	-	13800.0	-	-	13000.0	-	14600.0	-	-	12900.0	-	12400.0	-	12200.0	-	-	-	11800.0	-	-	-	-	12,000
Cesium	µg/L	0.01	-	-	-	-	-	-	0.4	-	-	<0.010	-	<0.010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	µg/L	0.1	-	-	-	-	-	-	5.3	-	-	<0.50	-	<0.10	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	<0.50
Cobalt	µg/L	0.1	-	-	-	-	-	-	3.2	-	-	<0.10	-	<0.10	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	<0.10
Copper	µg/L	0.5	-	-	-	-	-	-	18.9	-	-	<0.50	-	<0.50	-	-	-	-	-	-	-	-	-	-	<0.4	-	-	-	-	<0.40
Iron	µg/L	10	-	-	-	-	-	-	9940.0	-	-	<10	-	<10	-	-	-	-	-	-	-	-	-	-	<10	-	-	-	-	<10
Lead	µg/L	0.05	-	-	-	-	-	-	4.2	-	-	<0.050	-	<0.050	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-	-	<0.20
Lithium	µg/L	1	-	-	-	-	-	-	3.7	-	-	<1.0	-	<1.0	-	-	-	-	-	-	-	-	-	-	0.7	-	-	-	-	0.85
Magnesium	µg/L	5	-	-	-	-	-	-	4300.0	-	-	2760.0	-	3160.0	-	-	2860.0	-	2350.0	-	2490.0	-	-	-	2670.0	-	-	-	-	2,560
Manganese	µg/L	0.1	-	-	-	-	-	-	139.0	-	-	0.2	-	0.3	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-	-	<0.20
Mercury	µg/L	1	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	<0.010
Molybdenum	µg/L	0.05	-	-	-	-	-	-	0.7	-	-	0.1	-	0.1	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	0.13
Nickel	µg/L	0.5	-	-	-	-	-	-	3.6	-	-	<0.50	-	<0.50	-	-	-	-	-	-	-	-	-	-	<0.4	-	-	-	-	<0.40
Phosphorus	µg/L	50	-	-	-	-	-	-	178.0	-	-	<50	-	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<50
Potassium	µg/L	50	-	-	-	-	-	-	2310.0	-	-	1210.0	-	1420.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,320
Rubidium	µg/L	0.2	-	-	-	-	-	-	5.7	-	-	<0.2	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	µg/L	0.05	-	-	-	-	-	-	0.1	-	-	0.1	-	0.1	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	<0.50
Silicon	µg/L	100	-	-	-	-	-	-	25200.0	-	-	13000.0	-	13700.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13,800
Silver	µg/L	0.01	-	-	-	-	-	-	0.1	-	-	<0.010	-	<0.010	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	<0.050
Sodium	µg/L	50	-	-	-	-	-	-	8090.0	-	-	6840.0	-	8600.0	-	-	-	-	-	-	-	-	-	-	6890.0	-	-	-	-	7,150
Strontium	µg/L	0.2	-	-	-	-	-	-	94.6	-	-	79.4	-	77.2	-	-	-	-	-	-	-	-	-	-	66.3	-	-	-	-	61.8
Sulphur	µg/L	500	-	-	-	-	-	-	2500.0	-	-	1700.0	-	2360.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<3,000
Tellurium	µg/L	0.2	-	-	-	-	-	-	<0.20	-	-	<0.20	-	<0.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.50
Thallium	µg/L	0.01	-	-	-	-	-	-	0.0	-	-	<0.010	-	<0.010	-	-	-	-	-	-	-	-	-	-	<0.02	-	-	-	-	<0.020
Thorium	µg/L	0.1	-	-	-	-	-	-	2.5	-	-	<0.10	-	<0.10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.10
Tin	µg/L	0.1	-	-	-	-	-	-	1.0	-	-	<0.10	-	<0.10	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-	-	<0.20
Titanium	µg/L	0.3	-	-	-	-	-	-	377.0	-	-	<0.30	-	<0.30	-	-	-	-	-	-	-	-	-	-	<5	-	-	-	-	<5.0
Tungsten	µg/L	0.1	-	-	-	-	-	-	0.3	-	-	<0.10	-	<0.10	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	<1.0
Uranium	µg/L	0.01	-	-	-	-	-	-	0.7	-	-	0.1	-	0.1	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	0.058
Vanadium	µg/L	0.5	-	-	-	-	-	-	21.5	-	-	1.0	-	1.5	-	-	-	-	-	-	-	-	-	-	<5	-	-	-	-	<5.0
Zinc	µg/L	3	-	-	-	-	-	-	28.6	-	-	<3.0	-	<3.0	-	-	-	-	-	-	-	-	-	-	<4	-	-	-	-	<4.0
Zirconium	µg/L	0.2	-	-	-	-	-	-	0.4	-	-	<0.20	-	<0.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.10
Hydrocarbons																														
EPH_{19-19}	µg/L	250	5,000	5,000	5,000	-	<250	440.0	-	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	-	<250	-	-	-
EPH_{19-32}	µg/L	250	-	-	-	-	<250	460.0	-	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	-	<250	-	-	-
LEPH	µg/L	250	500	500	-	-	<250	440.0	-	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	-	<250	-	-	-
HEPH	µg/L	250	-	-	-	-	<250	460.0	-	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	-	<250	-	-	-
VH_{6-10}	µg/L	100	15,000	15,000	15,000	-	<100	<100	-	-	-	-	<100	-	-	-	-	-	<100	-	-	-	<100	-	-	-	-	<100	-	-	-
Polycyclic Aromatic Hydrocarbons (PAHs)																														
Acenaphthene	µg/L	0.01	60	60	250	-	<0.010	<0.010	-	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.050	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
Acenaphthylene	µg/L	0.01	-	-	-	-	<0.010	<0.010	-	<0.010	-	-	<0.010	-	<0.20	-	-	-	<0.20	-	-	-	<0.200	-	-	-	-	<0.200	-	-	-
Acridine	µg/L	0.01	0.5	0.5	-	-	<0.010	<0.08	-	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.050	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
Anthracene	µg/L	0.01	1	1	1,000	-	<0.010	<0.010	-	<0.010	-	-	<0.010	-	<0.010	-	-	-	<0.010	-	-	-	<0.010	-	-	-	-	<0.010	-	-	-
Benz(a)anthracene	µg/L	0.01	1	1	0.07	-	<0.010	<0.010	-	<0.010	-	-	<0.010	-	<0.010	-	-	-	<0.010	-	-	-	<0.010	-	-	-	-	<0.010	-	-	-
Benzo(a)pyrene	µg/L	0.005	0.1	0.1	0.01	-	<0.0050	<0.0050	-	<0.0050	-	-	<0.0050	-	<0.010	-	-	-	<0.010	-	-	-	<0.010	-	-	-	-	<0.010	-	-	-
Benzo(b,j,k)fluoranthene	µg/L	0.015	-	-	-	-	-	-	-	<0.015	-	-	<0.0150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b+j)fluoranthene	µg/L	0.01	-	-	0.07	-	<0.010	<0.010	-	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.050	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
Benzo(g,h,i)perylene	µg/L	0.01	-	-	-	-	<0.010	<0.010	-	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.050	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
Benzo(k)fluoranthene	µg/L	0.01	-	-	-	-	<0.010	<0.010	-	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.050	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
2-Chloronaphthalene	µg/L	0.1	-	-	300	-	-	-	-	-	-	-	-	-	<0.10	-	-	-	<0.10	-	-	-	<0.100	-	-	-	-	<0.100	-	-	-
Chrysene	µg/L	0.01	1	1	7	-	<0.010	<0.010	-	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.050	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
Dibenz(a,h)anthracene	µg/L	0.005	-	-	0.01	-	<0.0050	<0.0050	-	<0.0050	-	-	<0.0050	-	<0.010	-	-	-	<0.010	-	-	-	<0.010	-	-	-	-	<0.010	-	-	-
Fluoranthene	µg/L	0.01	2	2	150	-	<0.010	<0.010	-	<0.010	-	-	<0.010	-	<0.030	-	-	-	<0.030	-	-	-	<0.030	-	-	-	-	<0.030	-	-	-
Fluorene	µg/L	0.01	120	120	150	-	<0.010	0.0	-	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.050	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
Indeno(1,2,3-c,d)pyrene	µg/L	0.01	-	-	-	-	<0.010	<0.010	-	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.050	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
1-Methylnaphthalene	µg/L	0.05	-	-	5.5	-	<0.050	<0.050	-	<0.050	-	-	<0.010	-	<0.10	-	-	-	<0.10	-	-	-	<0.100	-	-	-	-	<0.100	-	-	-
2-Methylnaphthalene	µg/L	0.02	-	-	15	-	<0.020	<0.020	-	<0.050	-	-	<0.010	-	<0.10	-	-	-	<0.10	-	-	-	<0.100	-	-	-	-	<0.100	-	-	-
Naphthalene	µg/L	0.02	10	10	80	-	<0.020	<0.020	-	<0.050	-	-	<0.050	-	<0.20	-	-	-	<0.20	-	-	-	<0.200	-	-	-	-	<0.200	-	-	-
Phenanthrene	µg/L	0.02	3	3	-	-	<0.020	0.1	-	<0.020	-	-	<0.020	-	<0.10	-	-	-	<0.10	-	-	-	<0.100	-	-	-	-	<0.100	-	-	-
Pyrene	µg/L	0.01	0.2	0.2	100	-	<0.010	<0.010	-	<0.010	-	-	<0.010	-	<0.020	-	-	-	<0.020	-	-	-	<0.020	-	-	-	-	<0.020	-	-	-
Quinoline	µg/L	0.05	34	34	0.05	-	<0.050	<0.050	-	<0.050	-	-	<0.050	-	<0.050	-	-	-	<0.050	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-

NOTES:

#1	Guideline varies with hardness. Values shown based on average hardness of 43 mg/L at background well MW13-01.
#2	Standard varies with pH. Value shown based on average laboratory pH of 7.0 at background well MW13-01.
#3	Standard varies with chloride concentration. Value shown based on average chloride concentration of 7 mg/L at background well MW13-01.
#4	Standard is for Chromium VI.
-	Not analyzed or no applicable CSR standard.
<	Concentration is less than the laboratory detection limit indicated.
CSR	BC Contaminated Sites Regulation (BC Reg. 375/96, including amendments up to BC Reg. 133/2022, March 2023) Schedule 3.2.
AW	Freshwater and marine aquatic life standards.
DW	Drinking water standards.
EPHw	Extractable Petroleum Hydrocarbons.
LEPHw	Light Extractable Petroleum Hydrocarbons.
HEPHw	Heavy Extractable Petroleum Hydrocarbons.
Shaded	Shaded indicates an exceedance of the CSR Freshwater AW standard.
BOLD	Bold and underlined indicates an exceedance of the CSR Marine AW standard.
Red Text	Red text indicates an exceedance of the CSR DW standard.
Italic	Detection limit greater than standard.

TETRA TECH

Table 2: Groundwater Analytical Results

						MW13-01																							
						14-Dec-2013	2-Apr-2019	DUP (2-Apr-2019)	25-Jul-2019	17-Oct-2019	27-Jan-2020	23-Apr-2020	22-Jul-2020	28-Oct-2020	21-Feb-2021	11-May-2021	19-Jul-2021	1-Dec-2021	2-Mar-2022	12-Jul-2022	11-Oct-2022	12-Dec-2022	28-Feb-2023	23-May-2023	27-Sep-2023	18-Dec-2023	DUP (18-Dec-2023)	22-Feb-2024	24-Jun-2024	16-Sep-2024	9-Dec-2024
						-	L2252890	L2252890	L2318207	L2367392	VA20A0908280120	VA20A536325042020	VA20B113924072020	VA20B95653010202	21B2866	21E1432	21G2459	21L0641	22C0773	22G1537	22J1342	22L1310	23C0154	23E2913	23I3541	23L2282	23L2282	24B2509	24F3072	24I2276	24L1123
						-	L2252890-3	L2252890-1	L2318207-1	L2367392-1	VA20A0908-001	VA20A5363-001	VA20B1139-001	VA20B9565-001	21B2866-02	21E1432-01	21G2459-02	21L0641-02	22C0773-02	22G1537-02	22J1342-05	22L1310-02	23C0154-01	23E2913-01	23I3541-01	23L2282-01	23L2282-09	24B2509-01	24F3072-01	24I2276-01	24L1123-01
Parameter	**Unit**	**RDL**	**CSR - AW**		**CSR - DW**																									
			Freshwater	**Marine**																										
Resin/Fatty Acids																														
Abietic Acid	µg/L	0.001	-	-	-	-	<1.0	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
Arachidic Acid	µg/L	0.005	-	-	-	-	<5.0	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Behenic Acid	µg/L	0.005	-	-	-	-	<5.0	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12-Chlorodehydroabietic Acid	µg/L	0.001	-	-	-	-	<1.0	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
14-Chlorodehydroabietic Acid	µg/L	0.001	-	-	-	-	<1.0	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
Dehydroabietic Acid	µg/L	0.001	-	-	-	-	<1.0	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
Dichlorodehydroabietic Acid	µg/L	0.001	-	-	-	-	<1.0	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
9,10-Dichlorostearic Acid	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	<10	-	-	-	-	<10	-	-	-
Isopimaric & Palustric Acids	µg/L	0.001	-	-	-	-	<1.0	<1.0	-	-	-	-	<1.0	-	<6.0	-	-	-	-	<10	-	-	<10	-	-	-	-	-	-	-	-
Isopimaric Acid	µg/L	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	-
Palustric Acid	µg/L	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	-
Lauric Acid	µg/L	0.005	-	-	-	-	15.6	7.5	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Levopimaric Acid	µg/L	0.001	-	-	-	-	<1.0	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
Lignoceric Acid	µg/L	0.005	-	-	-	-	<5.0	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Linoleic Acid	µg/L	0.005	-	-	-	-	<5.0	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
Linolenic Acid	µg/L	0.005	-	-	-	-	<5.0	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
Myristic Acid	µg/L	0.005	-	-	-	-	<5.0	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Neoabietic Acid	µg/L	0.001	-	-	-	-	<1.0	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
Octadecanoic Acid	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-						-	-	-	-
Oleic Acid	µg/L	0.005	-	-	-	-	61.4	40.0	-	-	-	-	<5.0	-	0.0	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
Palmitic Acid	µg/L	100	-	-	-	-	<100	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-						-	-	-	-
Pimaric Acid	µg/L	0.001	-	-	-	-	<1.0	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
Sandaracopimaric Acid	µg/L	0.001	-	-	-	-	<1.0	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
Stearic Acid	µg/L	20	-	-	-	-	<20	<20	-	-	-	-	-	-	-	-	-	-	-	<10	-	-						-	-	-	-
Total Fatty Acids	µg/L	0.1	-	-	-	-	<100	<100	-	-	-	-	<110	-	-	-	-	-	-	<10	-	-	<10	-	-	-	-	<10	-	-	-
Total Resin Acids	µg/L	0.01	-	-	-	-	<10	<10	-	-	-	-	<3.5	-	-	-	-	-	-	<10	-	-	<10	-	-	-	-	<10	-	-	-
Total Resin and Fatty Acid	µg/L	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	<10	-	-	-	-	<10	-	-	-
BTEXS & MTBE																															
Benzene	µg/L	0.5	400	1,000	5	-	-	-	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-
Toluene	µg/L	1	5	2,000	60	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	1	2,000	2,500	140	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Xylenes Total	µg/L	2	300	300	90	-	-	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-	-
Styrene	µg/L	1	720	720	800	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Methyl t-butyl ether (MTBE)	µg/L	1	34,000	4,400	95	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Volatile Organic Compounds (VOCs)																															
Hexadecanoic Acid	µg/L	6	-	-	-	-	-	-	-	-	-	-	-	-	<6.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	µg/L	1	-	-	100	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Bromoform	µg/L	1	-	-	100	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Carbon tetrachloride	µg/L	0.5	130	130	2	-	-	-	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-
Chlorobenzene	µg/L	1	13	250	80	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Chloroethane	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-	-
Chloroform	µg/L	1	20	20	100	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Dibromochloromethane	µg/L	1	-	-	100	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,2-Dibromoethane	µg/L	0.3	-	-	0.5	-	-	-	-	-	-	-	-	-	<0.30	-	-	-	-	-	-	-	<0.3	-	-	-	-	-	-	-	-
Dibromomethane	µg/L	1	-	-	0.5	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	µg/L	0.5	7	420	200	-	-	-	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	µg/L	1	1,500	1,500	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	µg/L	1	260	260	5	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,1-Dichloroethane	µg/L	1	-	-	30	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,2-Dichloroethane	µg/L	1	1,000	1,000	5	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,1-Dichloroethene	µg/L	1	-	-	14	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,2-Dichloroethene (cis)	µg/L	1	-	-	8	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,2-Dichloroethene (trans)	µg/L	1	-	-	80	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,2-Dichloropropane	µg/L	1	-	-	4.5	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,3-Dichloropropene	µg/L	1	-	-	1.5	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Methylene Chloride	µg/L	3	980	980	50	-	-	-	-	-	-	-	-	-	<3.0	-	-	-	-	-	-	-	<3.0	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/L	0.5	-	-	0.8	-	-	-	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-
Tetrachloroethene	µg/L	1	1,100	1,100	30	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	µg/L	1	-	-	8000	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	µg/L	1	-	-	3	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Trichloroethene	µg/L	1	200	200	5	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Trichlorofluoromethane	µg/L	1	-	-	1000	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	1	-	-	2	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-

NOTES:

#1	Guideline varies with hardness. Values shown based on average hardness of 43 mg/L at background well MW13-01.
#2	Standard varies with pH. Value shown based on average laboratory pH of 7.0 at background well MW13-01.
#3	Standard varies with chloride concentration. Value shown based on average chloride concentration of 7 mg/L at background well MW13-01.
#4	Guideline is for Chromium VI.
-	Not analyzed or no applicable CSR standard.
<	Concentration is less than the laboratory detection limit indicated.
CSR	BC Contaminated Sites Regulation (BC Reg. 375/96, including amendments up to BC Reg. 133/2022, March 2023) Schedule 3.2.
AW	Freshwater and marine aquatic life standards.
DW	Drinking water standards.
Shaded	Shaded indicates an exceedance of the CSR Freshwater AW guidelines.
BOLD	Bold and underlined indicates an exceedance of the CSR Marine AW guidelines.
Red Text	Red text indicates an exceedance of the CSR DW standard.
Italic	Detection limit greater than guideline.

TETRA TECH

Table 2: Groundwater Analytical Results

						MW13-02																		
						14-Dec-2013	2-Apr-2019	25-Jul-2019	17-Oct-2019	27-Jan-2020	23-Apr-2020	22-Jul-2020	28-Oct-2020	21-Feb-2021	11-May-2021	19-Jul-2021	1-Dec-2021	2-Mar-2022	12-Jul-2022	11-Oct-2022	12-Dec-2022	28-Feb-2023	23-May-2023	27-Sep-2023	18-Dec-2023	22-Feb-2024	24-Jun-2024	16-Sep-2024	9-Dec-2024
						-	L2252890	L2318207	L2367392	VA20A0908280120 20	VA20A5363250 2020	VA20B1139240720 20	VA20B9565301020 20	21B2866	21E1432	21G2459	21L0641	22C0773	22G1537	22J1342	22L1310	23C0154	23E2913	23I3541	23L2282	24B2509	24F3072	24I2276	24L1123
						-	L2252890-2	L2318207-2	L2367392-2	VA20A0908-003	VA20A5363-002	VA20B1139-002	VA20B9565-002	21B2866-03	21E1432-02	21G2459-03	21L0641-03	22C0773-03	22G1537-03	22J1342-06	22L1310-03	23C0154-02	23E2913-02	23I3541-02	23L2282-02	24B2509-02	24F3072-02	24I2276-02	24L1123-02
Parameter	**Unit**	**RDL**	**CSR - AW**		**CSR - DW**																							
			Freshwater	Marine																								
Field Measurements																												
Temperature	°C		-	-	-	-	9.77	11.81	11.7	10.4	10.68	12.7	11.8	11.6	12	12.8	12.7	12.4	13.3	12.6	12.1	12.2	13.1	12.5	12.4	12.4	12.6	12.3	12.2
Electrical Conductivity	µS/cm		-	-	-	-	361	674	639	297.3	400	826	1,294	605	9.81	1,022	125	1179	1145	3260	1221	1,151	1,285	1,189	3	8.4	90.8	12.7	840
Total Dissolved Solids (TDS)	mg/L		-	-	-	-	-	438	-	267.2	358	539	845	526.5	637	864.5	106	1007.5	960	2127	1053	988	1,083	1,015	2.6	7.2	773.5	9.1	721
Salinity	-		15	10	-	-	-	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	%		-	-	-	-	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	mg/L		-	-	-	-	11.45	5.07	-	0.59	3.84	0.22	2.52	2.3	0.35	0.79	0.86	0.4	5.03	2.17	0.32	0.41	1.23	1.35	1.09	1.91	9.57	2.94	0.5
pH	pH Units		-	-	-	-	6.67	4.76	6.62	6.59	6.39	9.07	6.67	6.43	6.47	6.67	6.56	6.38	7.63	7.54	6.49	6.4	6.64	4.54	6.45	6.98	6.7	6.02	6.12
Oxidation Reduction Potential (ORP)	-		-	-	-	-	-	88.2	-	20.9	-34.4	-95.3	-58.1	-75.1	-10.1	-64.4	-86.2	8.7	-341.0	-200.1	-24.7	94.1	27	58.4	94.8	31.8	221	-26.4	-34
Physical Parameters																													
pH	pH Units	0.1	-	-	-	6.9	7.04	7.88	7.23	7.03	7.65	6.71	7.46	-	6.19	-	6.62	-	7.49	-	6.4	6.97	6.74	6.87	6.69	7	6.96	7.05	6.87
Electrical Conductivity (EC)	µS/cm	2	-	-	-	347	330	529	653	-	470	-	1,190	-	899	-	1520	-	1330	-	1560	1,440	1,470	1,410	1,330	1,220	1,190	1,040	1,080
Total Suspended Solids (TSS)	µg/L	3000	-	-	-	418,000	207,000	1,150,000	609,000	-	10,000	-	88,200	-	131,000	-	170,000	-	-	-	-	-	-	-	-	-	-	-	-
Total Dissolved Solids (TDS)	µg/L	10,000	-	-	-	192,000	-	-	-	260,000	344,000	-	793,000	-	-	-	-	-	948,000	-	-	-	-	1,180,000	-	1,060,000	-	790,000	-	622,000
Hardness as $CaCO_3$	µg/L	500	-	-	-	151,000	160,000	311,000	305,000	-	230,000	-	583,000	-	398,000	618,000	691,000	622,000	669,000	885,000	773,000	-	719,000	-	742,000	-	576,000	-	490,000
Alkalinity (total as $CaCO_3$)	µg/L	1000	-	-	-	-	-	-	-	-	-	-	-	-	467,000	-	-	-	-	-	-	416,000	488,000	501,000	520,000	437,000	452,000	347,000	479,000
Alkalinity (P)	µg/L	1000	-	-	-	-	-	-	-	-	-	-	-	-	<1000	-	-	-	-	-	-	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Bicarbonate	µg/L	1000	-	-	-	-	-	-	-	-	-	-	-	-	467,000	-	-	-	-	-	-	416,000	488,000	501,000	520,000	437,000	452,000	347,000	479,000
Carbonate	µg/L	1000	-	-	-	-	-	-	-	-	-	-	-	-	<1000	-	-	-	-	-	-	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Hydroxide	µg/L	1000	-	-	-	-	-	-	-	-	-	-	-	-	<1000	-	-	-	-	-	-	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Bromide	µg/L	50	-	-	-	<50	<50	<50	<50	<250	<50	<50	<250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloride	µg/L	500	1,500,000	1,500,000	250,000	7,060	2,190	5,540	5,200	1,380	1,960	3,880	23,000	3510	5650	9360	12,900	12,400	9,000	16,100	10,500	8,590	7,390	8,740	8,890	9,770	11,000	14,700	6,920
Fluoride	µg/L	20	2,000 #1	15,000	1,500	142	59	70	<100	39	51	<100	<100	<100	<100	120	230	180	<100	<100	<100	<100	<100	<100	<100	150	<1,000	<1,000	140
Sulphate	µg/L	300	2,180,000 #1	2,180,000 #1	500,000	3,060	920	11,900	3,200	480	<300	5,230	13,700	2500	39,800	181,000	226,000	326,000	381,000	491,000	380,000	334,000	352,000	344,000	328,000	254,000	140,000	156,000	62,600
Sulphide (as S)	µg/L	10	-	-	-	<20	19	<2.0	32	71.5	13.8	<2.0	4.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulphide (as H2S)	µg/L	2	20	20	50	-	-	-	-	78	14.7	<2.0	5.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulphide, total	µg/L	20	-	-	-	-	-	-	-	-	-	-	-	66	-	40	44	41	<20	<20	<20	30	41	<20	35	40	39	<20	36
Turbidity	NTU	0.1	-	-	-	-	181	-	1,050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acidity	µg/L		-	-	-	-	-	-	-	-	19,100	-	47,600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nutrients																													
Ammonia as N	µg/L	5	18,500 #2	64,000 #2	-	1,420	564	1500	1540	408	715	1,360	4,330	1000	1290	3120	6930	3410	6180	6700	8360	7,480	8,940	6,970	10,700	-	8,120	7,050	5,090
Nitrate (as N)	µg/L	5	400,000	400,000	10,000	64.2	6.0	36.2	<25	<5	<5	<25	<25	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<100	<100	<100	<100
Nitrite (as N)	µg/L	1	800 #3	800 #3	1,000	5.2	<1.0	2.2	<5	<1	<1	<5.0	<25	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Nitrate and Nitrite (as N)	µg/L	50	400,000	400,000	10,000	-	-	-	-	-	<50	-	-	-	-	-	-	-	<20	-	-	-	-	-	-	-	-	-	-
Demand Parameters																													
Biochemical Oxygen Demand (BOD)	µg/L	2000	-	-	-	-	<2,000	-	<2,000	-	2,000	-	4,600	-	<2200	-	10,600	-	<6,200	-	8,100	-	5,000	-	9,800	-	6,700	-	10,800
Chemical Oxygen Demand (COD)	µg/L	20000	-	-	-	74,000	47,000	-	63,000	-	<20,000	-	81,000	-	35,000	-	107,000	-	92,000	-	85,000	-	73,000	-	95,000	-	72,000	-	60,000
Carbon																													
Dissolved Organic Carbon (DOC) (Filtered)	µg/L	500	-	-	-	-	-	-	-	-	-	-	-	-	26,300	-	31,700	-	-	-	-	-	-	-	-	-	26,800	-	17,800
Total Organic Carbon (TOC)	µg/L	500	-	-	-	-	21,000	-	10,900	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenols																													
Phenols (4AAP)	µg/L	1	-	-	-	4.0	<1.0	-	-	-	-	<1.0	-	2	-	-	-	<2.0	-	-	-	<2.00	-	-	-	<0.50	-	-	-
Dissolved Metals																													
Aluminum	µg/L	1	-	-	9,500	26.9	19.9	-	1.6	-	13.1	-	8.9	-	18.9	-	12.7	-	18.4	-	9.2	-	16.7	-	18.2	-	14.2	-	19.1
Antimony	µg/L	0.1	90	2,500	6	<0.50	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.20	-	<0.20	-	<0.2	-	<0.2	-	<0.20	-	<0.2	-	<0.20	-	<0.20
Arsenic	µg/L	0.1	50	125	10	2.9	0.6	-	0.4	-	0.9	-	14.8	-	2.9	-	10.5	-	5.0	-	17.8	-	6.6	-	7.0	-	6.36	-	3.57
Barium	µg/L	0.1	10,000	5,000	1,000	32.0	15.0	-	24.7	-	20.7	-	112.0	-	50.3	-	158.0	-	141.0	-	143.0	-	151.0	-	154.0	-	109	-	71.7
Beryllium	µg/L	0.1	1.5	1,000	8	<1.0	<0.10	-	<0.10	-	<0.020	-	<0.10	-	<0.10	-	<0.10	-	<0.1	-	<0.1	-	<0.10	-	<0.1	-	<0.10	-	<0.10
Bismuth	µg/L	0.05	-	-	-	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.10	-	<0.10	-	<0.1	-	<0.1	-	<0.10	-	-	-	<0.10	-	<0.10
Boron	µg/L	10	12,000	12,000	5,000	<100	32.0	-	85.0	-	34.0	-	287.0	-	86.3	-	311.0	-	399.0	-	482.0	-	365.0	-	310.0	-	423	-	172
Cadmium	µg/L	0.005	1.5 #1	15	5	0.1	<0.0050	-	<0.0050	-	<0.050	-	<0.0050	-	<0.010	-	<0.010	-	<0.01	-	<0.01	-	<0.010	-	<0.01	-	<0.010	-	<0.010
Calcium	µg/L	50	-	-	-	52800.0	60700.0	-	112000.0	-	82900.0	-	192000.0	-	149000.0	-	220000.0	-	233000.0	-	267000.0	-	244000.0	-	255000.0	-	197,000	-	178,000
Cesium	µg/L	0.01	-	-	-	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	µg/L	0.1	10 #4	15 #4	50 #4	<1.0	0.8	-	0.2	-	0.8	-	1.1	-	1.5	-	2.1	-	2.9	-	3.1	-	2.8	-	3.1	-	1.43	-	1.63
Cobalt	µg/L	0.1	40	40	1	3.4	<0.10	-	2.4	-	0.2	-	5.8	-	1.0	-	5.7	-	2.4	-	6.7	-	2.9	-	2.5	-	1.67	-	0.94
Copper	µg/L	0.2	20 #1	20	1,500	<1.0	<0.20	-	<0.20	-	<0.20	-	<0.20	-	<0.40	-	1.2	-	<0.4	-	<0.4	-	<0.40	-	<0.4	-	<0.40	-	<0.40
Iron	µg/L	10	-	-	6,500	13700.0	14500.0	-	<10	-	24000.0	-	82500.0	-	64300.0	-	97200.0	-	96800.0	-	95700.0	-	99100.0	-	91700.0	-	68,600	-	66,500
Lead	µg/L	0.05	40 #1	20	10	<0.50	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.20	-	<0.20	-	<0.2	-	<0.2	-	<0.20	-	<0.2	-	<0.20	-	<0.20
Lithium	µg/L	1	-	-	8	<5.0	<1.0	-	<1.0	-	<1.0	-	2.1	-	0.5	-	1.5	-	0.7	-	1.9	-	0.8	-	1.0	-	0.71	-	0.53
Magnesium	µg/L	5	-	-	-	4710.0	2110.0	-	5990.0	-	2870.0	-	13300.0	-	6190.0	-	34100.0	-	21000.0	-	25500.0	-	26200.0	-	25200.0	-	19,900	-	10,600
Manganese	µg/L	0.1	-	-	1,500	627.0	656.0	-	1350.0	-	1040.0	-	1860.0	-	1560.0	-	1710.0	-	1920.0	-	1970.0	-	2170.0	-	2150.0	-	1,730	-	1,580
Mercury	µg/L		0.25	0.25	1	<0.010	-	-	<0.0050	-	-	-	<0.0050	-	<0.010	-	<0.010	-	<0.01	-	-	-	<0.010	-	<0.01	-	<0.010	-	<0.010
Molybdenum	µg/L	0.05	10,000	10,000	250	1.9	0.2	-	1.4	-	0.2	-	3.3	-	0.5	-	3.0	-	0.9	-	3.4	-	1.2	-	1.3	-	1.17	-	0.7
Nickel	µg/L	0.5	260 #1	83	80	1.5	<0.50	-	<0.50	-	<0.50	-	0.6	-	<0.40	-	0.9	-	0.4	-	0.8	-	<0.40	-	0.5	-	0.55	-	<0.40
Phosphorus	µg/L	50	-	-	-	-	<50	-	<50	-	<50	-	236.0	-	<50	-	171.0	-	76.0	-	264.0	-	104.0	-	-	-	96	-	<50
Potassium	µg/L	50	-	-	-	12000.0	6390.0	-	15800.0	-	6460.0	-	22200.0	-	11300.0	-	27500.0	-	24200.0	-	27400.0	-	28300.0	-	-	-	28,800	-	17,600
Rubidium	µg/L	0.2	-	-	-	-	3.6	-	6.0	-	3.8	-	8.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	µg/L	0.05	20	20	10	<0.10	0.1	-	<0.050	-	0.1	-	0.2	-	<0.50	-	<0.50	-	<0.5	-	<0.5	-	<0.50	-	<0.5	-	<0.50	-	0.63
Silicon	µg/L	50	-	-	-	-	8160.0	-	11700.0	-	10500.0	-	15300.0	-	11600.0	-	16300.0	-	11500.0	-	18300.0	-	11900.0	-	-	-	12,000	-	12,500
Silver	µg/L	0.01	0.5 #1	15	20	<0.020	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.050	-	<0.050	-	<0.05	-	<0.05	-	<0.050	-	<0.05	-	<0.050	-	<0.050
Sodium	µg/L	50	-	-	200,000	9600.0	4940.0	-	11800.0	-	4850.0	-	32300.0	-	11600.0	-	45200.0	-	36200.0	-	27300.0	-	30200.0	-	28300.0	-	29,800	-	13,100
Strontium	µg/L	0.2	-	-	2,500	-	157.0	-	307.0	-	235.0	-	698.0	-	407.0	-	950.0	-	1000.0	-	1170.0	-	1400.0	-	1420.0	-	1,010	-	615
Sulphur	µg/L	500	-	-	-	-	670.0	-	1960.0	-	<500	-	6210.0	-	8800.0	-	84600.0	-	129000.0	-	132000.0	-	123000.0	-	-	-	58,300	-	21,800
Tellurium	µg/L	0.2	-	-	-	-	<0.20	-	<0.20	-	<0.20	-	<0.20	-	<0.50	-	<0.50	-	<0.5	-	<0.5	-	<0.50	-	-	-	<0.50	-	<0.50
Thallium	µg/L	0.01	3	3	-	<0.20	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.02	-	<0.02	-	<0.02	-	<0.02	-	<0.020	-	<0.02	-	<0.020	-	<0.020
Thorium	µg/L	0.1	-	-	-	-	0.1	-	<0.10	-	<0.10	-	<0.10	-	0.1	-	<0.10	-	0.1	-	<0.1	-	0.1	-	-	-	<0.10	-	<0.10
Tin	µg/L	0.1	-	-	2,500	<0.50	0.2	-	<0.10	-	<0.10	-	<0.10	-	<0.20	-	<0.20	-	<0.2	-	<0.2	-	<0.20	-	<0.2	-	<0.20	-	<0.20
Titanium	µg/L	0.3	1,000	1,000	-	<10	2.7	-	<0.30	-	1.4	-	1.1	-	<5.0	-	<5.0	-	<5	-	<5	-	<5.0	-	<5	-	<5.0	-	<5.0
Tungsten	µg/L	0.1	-	-	3	-	<0.10	-	<0.10	-	<0.10	-	0.2	-	<1.0	-	<1.0	-	<1	-	<1	-	<1.0	-	<1	-	<1.0	-	<1.0
Uranium	µg/L	0.01	85	85	20	1.6	0.1	-	0.3	-	0.1	-	1.0	-	0.3	-	1.3	-	0.4	-	1.1	-	0.7	-	0.6	-	0.455	-	0.339
Vanadium	µg/L	0.5	-	-	20	<1.0	4.5	-	<0.50	-	2.9	-	4.9	-	3.7	-	7.3	-	7.6	-	8.2	-	7.5	-	6.4	-	5.4	-	5.5
Zinc	µg/L	1	75 #1	100	3,000	10.1	1.1	-	<1.0	-	1.6	-	1.1	-	<4.0	-	<4.0	-	<4	-	<4	-	<4.0	-	<4	-	8.5	-	<4.0
Zirconium	µg/L	0.06	-	-	-	-	0.2	-	<0.20	-	<0.30	-	0.4	-	0.3	-	0.6	-	0.5	-	0.6	-	0.6	-	-	-	0.42	-	0.44

NOTES:

#1	Guideline varies with hardness. Values shown based on average hardness of 43 mg/L at background well MW13-01.
#2	Standard varies with pH. Value shown based on average laboratory pH of 7.0 at background well MW13-01.
#3	Standard varies with chloride concentration. Value shown based on average chloride concentration of 7 mg/L at background well MW13-01.
#4	Standard is for Chromium VI.
-	Not analyzed or no applicable CSR standard.
<	Concentration is less than the laboratory detection limit indicated.
CSR	BC Contaminated Sites Regulation (BC Reg. 375/96, including amendments up to BC Reg. 133/2022, March 2023) Schedule 3.2.
AW	Freshwater and marine aquatic life standards.
DW	Drinking water standards.
Shaded	Shaded indicates an exceedance of the CSR Freshwater AW standard.
BOLD	Bold and underlined indicates an exceedance of the CSR Marine AW standard.
Red Text	Red text indicates an exceedance of the CSR DW standard.
Aaic	Detection limit greater than standard.

TETRA TECH

Table 2: Groundwater Analytical Results

Parameter	Unit	RDL	CSR - AW		CSR - DW	MW13-02																						
			Freshwater	Marine		14-Dec-2013	2-Apr-2019	25-Jul-2019	17-Oct-2019	27-Jan-2020	23-Apr-2020	22-Jul-2020	28-Oct-2020	21-Feb-2021	11-May-2021	19-Jul-2021	1-Dec-2021	2-Mar-2022	12-Jul-2022	11-Oct-2022	12-Dec-2022	28-Feb-2023	23-May-2023	27-Sep-2023	18-Dec-2023	22-Feb-2024	24-Jun-2024	16-Sep-2024	9-Dec-2024
						-	L2252890	L2318207	L2367392	VA20A0908280120020	VA20A5363250 2020	VA20B1139240720 20	VA20B9565301020 20	21B2866	21E1432	21G2459	21L0641	22C0773	22G1537	22J1342	22L1310	23C0154	23E2913	23I3541	23L2282	24B2509	24F3072	24I2276	24L1123
						-	L2252890-2	L2318207-2	L2367392-2	VA20A0908-003	VA20A5363-002	VA20B1139-002	VA20B9565-002	21B2866-03	21E1432-02	21G2459-03	21L0641-03	22C0773-03	22G1537-03	22J1342-06	22L1310-03	23C0154-02	23E2913-02	23I3541-02	23L2282-02	24B2509-02	24F3072-02	24I2276-02	24L1123-02
Total Metals																												
Aluminum	µg/L	3	-	-	-	-	-	65600.0	-	-	127.0	-	38.6	-	-	-	-	-	-	-	-	-	-	28.0	-	-	-	30.1
Antimony	µg/L	0.1	-	-	-	-	-	0.7	-	-	<0.10	-	<0.10	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-	<0.20
Arsenic	µg/L	0.1	-	-	-	-	-	11.1	-	-	0.9	-	14.2	-	-	-	-	-	-	-	-	-	-	7.1	-	-	-	3.71
Barium	µg/L	0.1	-	-	-	-	-	410.0	-	-	23.2	-	96.3	-	-	-	-	-	-	-	-	-	-	147.0	-	-	-	72.6
Beryllium	µg/L	0.1	-	-	-	-	-	0.7	-	-	<0.020	-	<0.10	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	<0.10
Bismuth	µg/L	0.05	-	-	-	-	-	0.3	-	-	<0.050	-	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.10
Boron	µg/L	10	-	-	-	-	-	92.0	-	-	33.0	-	259.0	-	-	-	-	-	-	-	-	-	-	348.0	-	-	-	187
Cadmium	µg/L	0.005	-	-	-	-	-	0.4	-	-	<0.0050	-	<0.0050	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	<0.010
Calcium	µg/L	50	-	-	-	-	-	98600.0	-	-	87700.0	-	209000.0	-	-	215000.0	-	224000.0	-	310000.0	-	-	-	254000.0	-	-	-	177,000
Cesium	µg/L	0.01	-	-	-	-	-	2.3	-	-	0.0	-	<0.010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	µg/L	0.1	-	-	-	-	-	54.8	-	-	1.1	-	1.2	-	-	-	-	-	-	-	-	-	-	1.7	-	-	-	1.65
Cobalt	µg/L	0.1	-	-	-	-	-	17.9	-	-	0.2	-	6.0	-	-	-	-	-	-	-	-	-	-	2.5	-	-	-	1.04
Copper	µg/L	0.5	-	-	-	-	-	107.0	-	-	<0.50	-	<0.50	-	-	-	-	-	-	-	-	-	-	<0.4	-	-	-	<0.40
Iron	µg/L	10	-	-	-	-	-	85400.0	-	-	28300.0	-	87200.0	-	-	-	-	-	-	-	-	-	-	88100.0	-	-	-	68,200
Lead	µg/L	0.05	-	-	-	-	-	34.4	-	-	0.2	-	<0.050	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-	<0.20
Lithium	µg/L	1	-	-	-	-	-	24.0	-	-	<1.0	-	2.1	-	-	-	-	-	-	-	-	-	-	1.1	-	-	-	0.55
Magnesium	µg/L	5	-	-	-	-	-	15700.0	-	-	2810.0	-	14600.0	-	-	19400.0	-	15100.0	-	26600.0	-	-	-	25900.0	-	-	-	11,200
Manganese	µg/L	0.1	-	-	-	-	-	1540.0	-	-	1040.0	-	1790.0	-	-	-	-	-	-	-	-	-	-	2040.0	-	-	-	1,600
Mercury	µg/L	1	-	-	-	-	-	-	-	-	-	-	<0.0050	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	<0.010
Molybdenum	µg/L	0.05	-	-	-	-	-	2.0	-	-	0.2	-	3.5	-	-	-	-	-	-	-	-	-	-	1.4	-	-	-	0.78
Nickel	µg/L	0.5	-	-	-	-	-	25.8	-	-	<0.50	-	<0.50	-	-	-	-	-	-	-	-	-	-	0.4	-	-	-	<0.40
Phosphorus	µg/L	50	-	-	-	-	-	760.0	-	-	<50	-	230.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<50
Potassium	µg/L	50	-	-	-	-	-	18600.0	-	-	6680.0	-	23700.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18,300
Rubidium	µg/L	0.2	-	-	-	-	-	43.7	-	-	3.9	-	9.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	µg/L	0.05	-	-	-	-	-	0.3	-	-	0.1	-	0.2	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	<0.50
Silicon	µg/L	100	-	-	-	-	-	76200.0	-	-	10600.0	-	16700.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13,000
Silver	µg/L	0.01	-	-	-	-	-	0.4	-	-	<0.01	-	<0.010	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	<0.050
Sodium	µg/L	50	-	-	-	-	-	12400.0	-	-	4750.0	-	34300.0	-	-	-	-	-	-	-	-	-	-	28000.0	-	-	-	14,100
Strontium	µg/L	0.2	-	-	-	-	-	364.0	-	-	248.0	-	710.0	-	-	-	-	-	-	-	-	-	-	1280.0	-	-	-	638
Sulphur	µg/L	500	-	-	-	-	-	5000.0	-	-	<500	-	6760.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24,300
Tellurium	µg/L	0.2	-	-	-	-	-	<1.0	-	-	<0.20	-	<0.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.50
Thallium	µg/L	0.01	-	-	-	-	-	0.4	-	-	<0.010	-	<0.010	-	-	-	-	-	-	-	-	-	-	<0.02	-	-	-	<0.020
Thorium	µg/L	0.1	-	-	-	-	-	22.9	-	-	0.2	-	<0.10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.12
Tin	µg/L	0.1	-	-	-	-	-	1.1	-	-	<0.10	-	<0.10	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-	<0.20
Titanium	µg/L	0.3	-	-	-	-	-	2720.0	-	-	7.2	-	2.9	-	-	-	-	-	-	-	-	-	-	<5	-	-	-	<5.0
Tungsten	µg/L	0.1	-	-	-	-	-	<0.50	-	-	<0.10	-	0.2	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	<1.0
Uranium	µg/L	0.01	-	-	-	-	-	3.6	-	-	0.1	-	1.1	-	-	-	-	-	-	-	-	-	-	0.6	-	-	-	0.369
Vanadium	µg/L	0.5	-	-	-	-	-	154.0	-	-	4.4	-	5.6	-	-	-	-	-	-	-	-	-	-	6.5	-	-	-	5.7
Zinc	µg/L	3	-	-	-	-	-	412.0	-	-	<3.0	-	24.8	-	-	-	-	-	-	-	-	-	-	<4	-	-	-	<4.0
Zirconium	µg/L	0.2	-	-	-	-	-	2.9	-	-	0.2	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.44
Hydrocarbons																												
EPH_{10-19}	µg/L	250	5,000	5,000	5,000	-	<250	-	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	<250	-	-
EPH_{19-32}	µg/L	250	-	-	-	-	<250	-	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	<250	-	-
LEPH	µg/L	250	500	500	-	-	<250	-	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	<250	-	-
HEPH	µg/L	250	-	-	-	-	<250	-	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	<250	-	-
VH_{6-10}	µg/L	100	15,000	15,000	15,000	-	<100	-	-	-	-	<100	-	-	-	-	-	<100	-	-	-	<100	-	-	-	<100	-	-
Polycyclic Aromatic Hydrocarbons (PAHs)																												
Acenaphthene	µg/L	0.01	60	60	250	-	<0.010	-	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-
Acenaphthylene	µg/L	0.01	-	-	-	-	<0.010	-	<0.010	-	-	<0.010	-	<0.20	-	-	-	<0.2	-	-	-	<0.200	-	-	-	<0.200	-	-
Acridine	µg/L	0.01	0.5	0.5	-	-	<0.010	-	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-
Anthracene	µg/L	0.01	1	1	1,000	-	<0.010	-	<0.010	-	-	<0.010	-	<0.010	-	-	-	<0.01	-	-	-	<0.010	-	-	-	<0.010	-	-
Benz(a)anthracene	µg/L	0.01	1	1	0.07	-	<0.010	-	<0.010	-	-	<0.010	-	0.0	-	-	-	<0.01	-	-	-	<0.010	-	-	-	<0.010	-	-
Benzo(a)pyrene	µg/L	0.005	0.1	0.1	0.01	-	<0.0050	-	<0.0050	-	-	<0.0050	-	0.0	-	-	-	<0.01	-	-	-	<0.010	-	-	-	<0.010	-	-
Benzo(b,j,k)fluoranthene	µg/L	0.015	-	-	-	-	-	-	<0.015	-	-	<0.0150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b+j)fluoranthene	µg/L	0.01	-	-	0.07	-	<0.010	-	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-
Benzo(g,h,i)perylene	µg/L	0.01	-	-	-	-	<0.010	-	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-
Benzo(k)fluoranthene	µg/L	0.01	-	-	-	-	<0.010	-	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-
2-Chloronaphthalene	µg/L	0.1	-	-	300	-	-	-	-	-	-	-	-	<0.10	-	-	-	<0.1	-	-	-	<0.100	-	-	-	<0.100	-	-
Chrysene	µg/L	0.01	1	1	7	-	<0.010	-	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-
Dibenz(a,h)anthracene	µg/L	0.005	-	-	0.01	-	<0.0050	-	<0.0050	-	-	<0.0050	-	<0.010	-	-	-	<0.01	-	-	-	<0.010	-	-	-	<0.010	-	-
Fluoranthene	µg/L	0.01	2	2	150	-	<0.010	-	<0.010	-	-	<0.010	-	<0.030	-	-	-	<0.03	-	-	-	<0.030	-	-	-	<0.030	-	-
Fluorene	µg/L	0.01	120	120	150	-	<0.010	-	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-
Indeno(1,2,3-c,d)pyrene	µg/L	0.01	-	-	-	-	<0.010	-	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-
1-Methylnaphthalene	µg/L	0.05	-	-	5.5	-	<0.050	-	<0.050	-	-	<0.010	-	<0.10	-	-	-	<0.1	-	-	-	<0.100	-	-	-	<0.100	-	-
2-Methylnaphthalene	µg/L	0.02	-	-	15	-	<0.020	-	<0.050	-	-	<0.010	-	<0.10	-	-	-	<0.1	-	-	-	<0.100	-	-	-	<0.100	-	-
Naphthalene	µg/L	0.02	10	10	80	-	<0.020	-	<0.050	-	-	<0.050	-	<0.20	-	-	-	<0.2	-	-	-	<0.200	-	-	-	<0.200	-	-
Phenanthrene	µg/L	0.02	3	3	-	-	<0.020	-	<0.020	-	-	<0.020	-	<0.10	-	-	-	<0.1	-	-	-	<0.100	-	-	-	<0.100	-	-
Pyrene	µg/L	0.01	0.2	0.2	100	-	<0.010	-	<0.010	-	-	<0.010	-	<0.02	-	-	-	<0.02	-	-	-	<0.020	-	-	-	<0.020	-	-
Quinoline	µg/L	0.05	34	34	0.05	-	<0.050	-	<0.050	-	-	<0.050	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-

NOTES:

#1	Guideline varies with hardness. Values shown based on average hardness of 43 mg/L at background well MW13-01.
#2	Standard varies with pH. Value shown based on average laboratory pH of 7.0 at background well MW13-01.
#3	Standard varies with chloride concentration. Value shown based on average chloride concentration of 7 mg/L at background well MW13-01.
#4	Standard is for Chromium VI.
-	Not analyzed or no applicable CSR standard.
<	Concentration is less than the laboratory detection limit indicated.
CSR	BC Contaminated Sites Regulation (BC Reg. 375/96, including amendments up to BC Reg. 133/2022, March 2023) Schedule 3.2.
AW	Freshwater and marine aquatic life standards.
DW	Drinking water standards.
EPHw	Extractable Petroleum Hydrocarbons.
LEPHw	Light Extractable Petroleum Hydrocarbons.
HEPHw	Heavy Extractable Petroleum Hydrocarbons.
Shaded	Shaded indicates an exceedance of the CSR Freshwater AW standard.
BOLD	Bold and underlined indicates an exceedance of the CSR Marine AW standard.
Red Text	Red text indicates an exceedance of the CSR DW standard.
Italic	Detection limit greater than standard.

TETRA TECH

Table 2: Groundwater Analytical Results

						MW13-02																				
						14-Dec-2013	2-Apr-2019	25-Jul-2019	17-Oct-2019	27-Jan-2020	23-Apr-2020	22-Jul-2020	28-Oct-2020	21-Feb-2021	11-May-2021	19-Jul-2021	1-Dec-2021	2-Mar-2022	12-Jul-2022	11-Oct-2022	12-Dec-2022	28-Feb-2023	23-May-2023	27-Sep-2023	18-Dec-2023	22-Feb-2024	24-Jun-2024	16-Sep-2024	9-Dec-2024
						-	L2252890	L2318207	L2367392	VA20A0908280120 20	VA20A536325042020	VA20B113924072020	VA20B95653010202 0	21B2866	21E1432	21G2459	21L0641	22C0773	22G1537	22J1342	22L1310	23C0154	23E2913	23I3541	23L2282	24B2509	24F3072	24I2276	24L1123
						-	L2252890-2	L2318207-2	L2367392-2	VA20A0908-003	VA20A5363-002	VA20B1139-002	VA20B9565-002	21B2866-03	21E1432-02	21G2459-03	21L0641-03	22C0773-03	22G1537-03	22J1342-06	22L1310-03	23C0154-02	23E2913-02	23I3541-02	23L2282-02	24B2509-02	24F3072-02	24I2276-02	24L1123-02
Parameter	**Unit**	**RDL**	**CSR - AW**		**CSR - DW**																							
			Freshwater	Marine																								
Resin/Fatty Acids																												
Abietic Acid	µg/L	0.001	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
Arachidic Acid	µg/L	0.005	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Behenic Acid	µg/L	0.005	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12-Chlorodehydroabietic Acid	µg/L	0.001	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
14-Chlorodehydroabietic Acid	µg/L	0.001	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
Dehydroabietic Acid	µg/L	0.001	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
Dichlorodehydroabietic Acid	µg/L	0.001	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
9,10-Dichlorostearic Acid	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	<10	-	-	-	<10	-	-	-
Isopimaric & Palustric Acids	µg/L	0.001	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<6.0	-	-	-	-	<10	-	-	<10	-	-	-	-	-	-	-
Isopimaric Acid	µg/L	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	-
Palustric Acid	µg/L	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	-
Lauric Acid	µg/L	0.005	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Levopimaric Acid	µg/L	0.001	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
Lignoceric Acid	µg/L	0.005	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Linoleic Acid	µg/L	0.005	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
Linolenic Acid	µg/L	0.005	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
Myristic Acid	µg/L	0.005	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Neoabietic Acid	µg/L	0.001	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
Octadecanoic Acid	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-
Oleic Acid	µg/L	0.005	-	-	-	-	6.0	-	-	-	-	<5.0	-	0.0	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
Palmitic Acid	µg/L	100	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pimaric Acid	µg/L	0.001	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
Sandaracopimaric Acid	µg/L	0.001	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
Stearic Acid	µg/L	20	-	-	-	-	<20	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-
Total Fatty Acids	µg/L	0.1	-	-	-	-	<100	-	-	-	-	<10	-	-	-	-	-	-	<10	-	-	<10	-	-	-	<10	-	-	-
Total Resin Acids	µg/L	0.01	-	-	-	-	<10	-	-	-	-	<3.5	-	-	-	-	-	-	<10	-	-	<10	-	-	-	<10	-	-	-
Total Resin and Fatty Acid	µg/L	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	<10	-	-	-	<10	-	-	-
BTEXS & MTBE																												
Benzene	µg/L	0.5	400	1,000	5	-	-	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-
Toluene	µg/L	1	5	2,000	60	-	-	-	-	-	-	-	-	*<1.0*	-	-	-	-	-	-	-	*<1.0*	-	-	-	-	-	-	-
Ethylbenzene	µg/L	1	2,000	2,500	140	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
Xylenes Total	µg/L	2	300	300	90	-	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-
Styrene	µg/L	1	720	720	800	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
Methyl t-butyl ether (MTBE)	µg/L	1	34,000	4,400	95	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
Volatile Organic Compounds (VOCs)																												
Hexadecanoic Acid	µg/L	6	-	-	-	-	-	-	-	-	-	-	-	<6.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	µg/L	1	-	-	100	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
Bromoform	µg/L	1	-	-	100	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
Carbon tetrachloride	µg/L	0.5	130	130	2	-	-	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-
Chlorobenzene	µg/L	1	13	250	80	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
Chloroethane	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-
Chloroform	µg/L	1	20	20	100	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
Dibromochloromethane	µg/L	1	-	-	100	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
1,2-Dibromoethane	µg/L	0.3	-	-	0.5	-	-	-	-	-	-	-	-	<0.30	-	-	-	-	-	-	-	<0.3	-	-	-	-	-	-	-
Dibromomethane	µg/L	1	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
1,2-Dichlorobenzene	µg/L	0.5	7	420	200	-	-	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-
1,3-Dichlorobenzene	µg/L	1	1,500	1,500	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
1,4-Dichlorobenzene	µg/L	1	260	260	5	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
1,1-Dichloroethane	µg/L	1	-	-	30	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
1,2-Dichloroethane	µg/L	1	1,000	1,000	5	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
1,1-Dichloroethene	µg/L	1	-	-	14	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
1,2-Dichloroethene (cis)	µg/L	1	-	-	8	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
1,2-Dichloroethene (trans)	µg/L	1	-	-	80	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
1,2-Dichloropropane	µg/L	1	-	-	4.5	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
1,3-Dichloropropene	µg/L	1	-	-	1.5	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
Methylene Chloride	µg/L	3	980	980	50	-	-	-	-	-	-	-	-	<3.0	-	-	-	-	-	-	-	<3.0	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/L	0.5	-	-	0.8	-	-	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-
Tetrachloroethene	µg/L	1	1,100	1,100	30	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
1,1,1-Trichloroethane	µg/L	1	-	-	8000	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
1,1,2-Trichloroethane	µg/L	1	-	-	3	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
Trichloroethene	µg/L	1	200	200	5	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
Trichlorofluoromethane	µg/L	1	-	-	1000	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
Vinyl chloride	µg/L	1	-	-	2	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-

NOTES:

#1	Guideline varies with hardness. Values shown based on average hardness of 43 mg/L at background well MW13-01.
#2	Standard varies with pH. Value shown based on average laboratory pH of 7.0 at background well MW13-01.
#3	Standard varies with chloride concentration. Value shown based on average chloride concentration of 7 mg/L at background well MW13-01.
#4	Guideline is for Chromium VI.
-	Not analyzed or no applicable CSR standard.
<	Concentration is less than the laboratory detection limit indicated.
CSR	BC Contaminated Sites Regulation (BC Reg. 375/96, including amendments up to BC Reg. 133/2022, March 2023) Schedule 3.2.
AW	Freshwater and marine aquatic life standards.
DW	Drinking water standards.
Shaded	Shaded indicates an exceedance of the CSR Freshwater AW guidelines.
BOLD	Bold and underlined indicates an exceedance of the CSR Marine AW guidelines.
Red Text	Red text indicates an exceedance of the CSR DW standard.
Italic	Detection limit greater than guideline.

TETRA TECH

Table 2: Groundwater Analytical Results

						MW13-03																					
						14-Dec-2013	3-Apr-2019	25-Jul-2019	17-Oct-2019	DUP (17-Oct-2019)	27-Jan-2020	23-Apr-2020	22-Jul-2020	28-Oct-2020	21-Feb-2021	11-May-2021	19-Jul-2021	1-Dec-2021	2-Mar-2022	12-Jul-2022	11-Oct-2022	12-Dec-2022	28-Feb-2023	23-May-2023	27-Sep-2023	DUP (27-Sep-2023)	18-Dec-2023	22-Feb-2024	24-Jun-2024	16-Sep-2024	9-Dec-2024
						-	L2254197	L2318207	L2367392	L2367392	VA20A0908280120	VA20A536325402	VA20B113924072020	VA20B9565301020	21B2866	21E1432	21G2459	21L0641	22C0773	22G1537	22J1342	22L1310	23C0154	23E2913	23I3541	23I3541	23L2282	24B2509	24F3072	24I2276	24L1123
						-	L2254197-4	L2318207-3	L2367392-3	L2367392-10	VA20A0908-004	VA20A5363-003	VA20B1139-003	VA20B9565-003	21B2866-04	21E1432-03	21G2459-04	21L0641-04	22C0773-04	22G1537-04	22J1342-07	22L1310-04	23C0154-03	23E2913-03	23I3541-03	23I3541-09	23L2282-03	24B2509-03	24F3072-03	24I2276-03	24L1123-03
Parameter	**Unit**	**RDL**	**CSR - AW** Freshwater	**CSR - AW** Marine	**CSR - DW**																										
Field Measurements																															
Temperature	°C		-	-	-	-	9.57	15.52	11.8	-	-	12.2	12.1	12	10.9	11.7	13.6	11.6	11.4	12.6	12.3	10.9	10.9	11.7	11.7	11.7	10.7	11.5	12.5	11.7	11.3
Electrical Conductivity	µS/cm		-	-	-	-	257	392	378.9	-	-	359	480	239	285	474.5	298.8	188.2	264.9	294.3	295.7	325.4	324.2	370.6	365.3	365.3	278	323.6	292.5	308.9	198.9
Total Dissolved Solids (TDS)	mg/L		-	-	-	-	-	310.000	-	-	-	308	312	155	254	305.5	247.65	164.5	232.7	250.6	192.5	289.7	289.25	323.6	319.2	319.2	249.6	283.3	48.96	268.8	175
Salinity	-		15	10	-	-	-	0.230	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	%		-	-	-	-	102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	mg/L		-	-	-	-	12.01	10.16	-	-	-	6.13	5	5.1	5.9	5.7	5.38	7.8	5.37	6.03	6.60	6.78	5.84	0.93	6.24	6.24	5.9	6.46	6.93	6.03	5.52
pH	pH Units		-	-	-	-	6.78	6.44	6.63	-	-	6.36	7.55	6.29	6.19	6.2	6.28	5.91	6.15	6.82	6.58	6.34	5.88	6.56	4.9	4.9	6.01	6.26	6.38	6.09	6.23
Oxidation Reduction Potential (ORP)	-		-	-	-	-	-	265.3	-	-	-	192.3	107	118.2	97.1	150.1	99.2	36	156.3	47.3	59.5	46.6	110.4	102.3	171	171	104.1	28.5	161.5	115.4	28.6
Physical Parameters																															
pH	pH Units	0.1	-	-	-	6.96	7.07	8.14	6.91	7.11	6.5	6.97	7.64	6.68	-	6.22	-	6.41	-	7.21	-	6.48	6.97	6.67	7.01	6.95	6.61	6.68	6.66	6.88	6.73
Electrical Conductivity (EC)	µS/cm	2	-	-	-	215	438	461	474	470	-	482	-	495	-	494	-	290	-	393	-	478	471	505	495	497	422	420	454	420	298
Total Suspended Solids (TSS)	µg/L	3000	-	-	-	869,000	2,530,000	1,640,000	1,260,000	2,350,000	-	52,600	-	29,500	-	283,000	-	83,000	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Dissolved Solids (TDS)	µg/L	10,000	-	-	-	144,000	-	-	-	-	276,000	306,000	-	306,000	-	-	-	-	-	253,000	-	-	-	322,000	-	-	310,000	-	258,000	-	222,000
Hardness as $CaCO_3$	µg/L	500	-	-	-	87,300	118,000	361,000	152,000	162,000	-	154,000	-	167,000	-	152,000	126,000	79,900	134,000	151,000	188,000	174,000	-	180,000	-	-	183,000	-	165,000	-	99,800
Alkalinity (total as $CaCO_3$)	µg/L	1000	-	-	-	-	-	-	-	-	-	-	-	-	-	186,000	-	-	-	-	-	-	144,000	175,000	194,000	197,000	151,000	147,000	142,000	137,000	95,600
Alkalinity (P)	µg/L	1000	-	-	-	-	-	-	-	-	-	-	-	-	-	<1000	-	-	-	-	-	-	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Bicarbonate	µg/L	1000	-	-	-	-	-	-	-	-	-	-	-	-	-	186,000	-	-	-	-	-	-	144,000	175,000	194,000	197,000	151,000	147,000	142,000	137,000	95,600
Carbonate	µg/L	1000	-	-	-	-	-	-	-	-	-	-	-	-	-	<1000	-	-	-	-	-	-	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Hydroxide	µg/L	1000	-	-	-	-	-	-	-	-	-	-	-	-	-	<1000	-	-	-	-	-	-	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Bromide	µg/L	50	-	-	-	<50	55	53	77	81	<50	77	90	68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloride	µg/L	500	1,500,000	1,500,000	250,000	9,630	44,700	34,800	30,400	30,000	37,700	34,000	28,300	30,900	23,500	20,600	18,100	12,400	16,100	15,400	17,900	22,000	27,300	22,600	22,700	23,400	22,300	25,500	19,200	16,600	12,600
Fluoride	µg/L	20	2,000 [#1]	15,000	1,500	60	41	42	35	35	36	35	34	34	<100	<100	<100	120	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Sulphate	µg/L	300	2,180,000 [#1]	2,180,000 [#1]	500,000	12,000	24,900	27,600	28,300	28,400	21,000	24,900	29,900	28,200	24,200	27,900	26,500	17,300	28,200	33,600	40,300	38,300	35,500	43,000	43,000	50,000	49,800	34,800	34,100	38,500	39,200	22,500
Sulphide (as S)	µg/L	10	-	-	-	<20	<90	<90	<18	<18	<2.0	<2.0	<2.0	<2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulphide (as H2S)	µg/L	2	20	20	50	-	-	-	-	-	<2.0	<2.0	<2.0	<2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulphide, total	µg/L	20	-	-	-	-	-	-	-	-	-	-	-	-	25	-	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Turbidity	NTU	0.1	-	-	-	-	>4000	-	1030	1350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acidity	µg/L		-	-	-	-	-	-	-	-	-	<2,000	-	8,300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nutrients																															
Ammonia as N	µg/L	5	18,500 [#2]	64,000 [#2]	-	106	9.5	9.5	<5.0	<5.0	5.7	<5.0	15.5	<5.0	90	<50	<50	<50	<50	<50	186	120	54	70	<50	<50	<50	-	<50	100	50
Nitrate (as N)	µg/L	5	400,000	400,000	10,000	526	1,210	910	674	670	1,440	1,860	1260	1350	2300	1680	1010	1440	1,980	1,680	1,130	1,130	2,280	2,130	1,800	1,740	1,640	2,170	1,190	746	628
Nitrite (as N)	µg/L	1	800 [#3]	800 [#3]	1,000	2.1	<1.0	1.9	<1.0	<1.0	<1.0	<1.0	2.2	<1.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Nitrate and Nitrite (as N)	µg/L	50	400,000	400,000	10,000		-	-	-	-	-	1,860	-	-	-	-	-	-	-	1,680	-	-	-	-	-	-	-	-	-	-	-	-
Demand Parameters																															
Biochemical Oxygen Demand (BOD)	µg/L	2000	-	-	-	-	<2000	-	<2,000	<2000	-	<2,000	-	<2,000	-	<2400	-	<3600	-	<17,500	-	14,500	-	<1,400	-	-	<2,800	-	<3,200	-	<2,700
Chemical Oxygen Demand (COD)	µg/L	20000	-	-	-	47,000	56,000	-	<20,000	<20,000	-	<20,000	-	<20,000	-	<20,000	-	<20,000	-	26,000	-	44,000	-	45,000	-	-	50,000	-	36,000	-	25,000
Carbon																															
Dissolved Organic Carbon (DOC) (Filtered)	µg/L	500	-	-	-	-	-	-	-	-	-	-	-	-	-	5680	-	2600	-	-	-	-	-	-	-	-	-	-	4,820	-	2,980
Total Organic Carbon (TOC)	µg/L	500	-	-	-	-	5310	-	3,200	3950	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenols																															
Phenols (4AAP)	µg/L	1	-	-	-	<1.0	<1.0	-	-	-	-	-	<1.0	<1.0	<2	-	-	-	<2	-	-	-	<2.00	-	-	-	-	<0.50	-	-	-
Dissolved Metals																															
Aluminum	µg/L	1	-	-	9,500	37.7	23.7	-	9.5	11.5	-	2.6	-	2.0	-	<5.0	-	6.2	-	18.1	-	12.9	-	11.2	-	-	8.2	-	<5.0	-	14.4
Antimony	µg/L	0.1	90	2,500	6	<0.50	<0.10	-	<0.10	<0.10	-	<0.10	-	<0.10	-	<0.20	-	<0.20	-	0.3	-	<0.2	-	<0.20	-	-	<0.2	-	<0.20	-	<0.20
Arsenic	µg/L	0.1	50	125	10	<0.50	0.1	-	0.2	0.1	-	0.1	-	0.1	-	<0.50	-	<0.50	-	<0.5	-	<0.5	-	<0.50	-	-	<0.5	-	<0.50	-	<0.50
Barium	µg/L	0.1	10,000	5,000	1,000	<20	14.3	-	16.2	16.2	-	16.7	-	16.6	-	14.1	-	9.4	-	16.2	-	16.3	-	17.0	-	-	16.0	-	15.7	-	9.4
Beryllium	µg/L	0.1	1.5	1,000	8	<1.0	<0.10	-	<0.10	<0.10	-	<0.020	-	<0.10	-	<0.10	-	<0.10	-	<0.1	-	<0.1	-	<0.10	-	-	<0.1	-	<0.10	-	<0.10
Bismuth	µg/L	0.05	-	-	-	-	<0.050	-	<0.050	<0.050	-	<0.050	-	<0.050	-	<0.10	-	<0.10	-	<0.1	-	<0.1	-	<0.10	-	-	-	-	<0.10	-	<0.10
Boron	µg/L	10	12,000	12,000	5,000	<100	84.0	-	117.0	130.0	-	92.0	-	115.0	-	100.0	-	87.0	-	88.0	-	116.0	-	104.0	-	-	92.9	-	92.2	-	60.3
Cadmium	µg/L	0.005	1.5 [#1]	15	5	0.0	0.0	-	0.0	0.0	-	0.0	-	0.0	-	0.1	-	0.0	-	0.1	-	0.0	-	0.0	-	-	0.0	-	0.022	-	0.013
Calcium	µg/L	50	-	-	-	25600.0	35600.0	-	45900.0	50900.0	-	44200.0	-	46500.0	-	48000.0	-	23700.0	-	47100.0	-	53800.0	-	54500.0	-	-	57700.0	-	50,500	-	31,200
Cesium	µg/L	0.01	-	-	-	-	<0.010	-	<0.010	<0.010	-	<0.010	-	<0.010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	µg/L	0.1	10 [#4]	15 [#4]	<1.0	<0.10	-	<0.10	<0.10	-	<0.50	-	<0.10	-	<0.50	-	<0.10	-	<0.50	-	1.4	-	1.1	-	1.0	-	-	1.3	-	<0.50	-	<0.50
Cobalt	µg/L	0.1	40	40	1	2.0	0.2	-	<0.10	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.1	-	<0.1	-	<0.10	-	-	<0.1	-	<0.10	-	<0.10
Copper	µg/L	0.2	20 [#1]	20	1,500	1.0	1.3	-	1.8	1.9	-	1.6	-	1.9	-	6.2	-	0.9	-	13.4	-	2.1	-	2.4	-	-	2.2	-	2.13	-	1.27
Iron	µg/L	10	-	-	6,500	83.0	17.0	-	<10	<10	-	<0.01	-	<10	-	<10	-	<10	-	22.0	-	<10	-	<10	-	-	<10	-	<10	-	<10
Lead	µg/L	0.05	40 [#1]	20	10	<0.50	<0.050	-	<0.050	<0.050	-	<0.050	-	<0.050	-	1.0	-	<0.20	-	0.7	-	<0.2	-	<0.20	-	-	<0.2	-	<0.20	-	<0.20
Lithium	µg/L	1	-	-	8	<5.0	1.9	-	1.9	1.8	-	2.0	-	2.1	-	2.1	-	1.7	-	2.1	-	2.1	-	2.2	-	-	2.2	-	2.14	-	1.79
Magnesium	µg/L	5	-	-	-	5690.0	7130.0	-	9020.0	8520.0	-	8660.0	-	8330.0	-	7750.0	-	5000.0	-	8010.0	-	9570.0	-	10700.0	-	-	9490.0	-	9,480	-	5,260
Manganese	µg/L	0.1	-	-	1,500	404.0	19.4	-	0.4	0.4	-	0.4	-	0.4	-	1.2	-	1.0	-	5.1	-	0.8	-	0.8	-	-	0.9	-	1.55	-	0.96
Mercury	µg/L		0.25	0.25	1	<0.010	-	-	<0.0050	<0.0050	-	-	-	<0.0050	-	<0.010	-	<0.010	-	<0.01	-	-	-	<0.010	-	-	<0.01	-	<0.010	-	<0.010
Molybdenum	µg/L	0.05	10,000	10,000	250	2.1	0.2	-	1.7	0.3	-	0.2	-	0.2	-	0.2	-	0.2	-	0.2	-	0.2	-	0.2	-	-	0.2	-	0.12	-	0.12
Nickel	µg/L	0.5	250 [#1]	83	80	1.8	<0.50	-	<0.50	<0.50	-	0.8	-	<0.50	-	<0.40	-	<0.40	-	1.6	-	<0.4	-	<0.40	-	-	<0.4	-	0.6	-	0.62
Phosphorus	µg/L	50	-	-	-	-	<50	-	<50	<50	-	<50	-	<50	-	<50	-	<50	-	<50	-	<50	-	<50	-	-	-	-	<50	-	<50
Potassium	µg/L	50	-	-	-	4100.0	4300.0	-	4630.0	4980.0	-	4480.0	-	4850.0	-	3860.0	-	3670.0	-	6650.0	-	4680.0	-	4590.0	-	-	-	-	4,290	-	3,480
Rubidium	µg/L	0.2	-	-	-	-	0.2	-	<0.20	<0.20	-	<0.2	-	<0.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	µg/L	0.05	20	20	10	<0.10	<0.050	-	0.1	<0.050	-	<0.050	-	<0.050	-	<0.50	-	<0.50	-	<0.5	-	<0.5	-	<0.50	-	-	<0.5	-	<0.50	-	<0.50
Silicon	µg/L	50	-	-	-	-	11500.0	-	13300.0	12400.0	-	12800.0	-	12700.0	-	12300.0	-	13800.0	-	12400.0	-	13900.0	-	13500.0	-	-	-	-	13,700	-	13,100
Silver	µg/L	0.01	0.5 [#1]	15	20	<0.020	<0.010	-	<0.010	<0.010	-	<0.010	-	<0.010	-	<0.050	-	<0.050	-	<0.05	-	<0.05	-	<0.050	-	-	<0.05	-	<0.050	-	<0.050
Sodium	µg/L	50	-	-	200,000	17400.0	43600.0	-	36600.0	39100.0	-	35800.0	-	35300.0	-	30400.0	-	26500.0	-	28700.0	-	29200.0	-	31300.0	-	-	29600.0	-	28,500	-	21,100
Strontium	µg/L	0.2	-	-	2,500	-	264.0	-	321.0	329.0	-	309.0	-	331.0	-	266.0	-	159.0	-	284.0	-	348.0	-	401.0	-	-	355.0	-	329	-	195
Sulphur	µg/L	500	-	-	-	-	8640.0	-	10900.0	9750.0	-	8020.0	-	9650.0	-	6500.0	-	5700.0	-	10900.0	-	12700.0	-	14600.0	-	-	-	-	15,100	-	7,200
Tellurium	µg/L	0.2	-	-	-	-	<0.20	-	<0.20	<0.20	-	<0.20	-	<0.20	-	<0.50	-	<0.50	-	<0.5	-	<0.5	-	<0.50	-	-	-	-	<0.50	-	<0.50
Thallium	µg/L	0.01	3	3	-	<0.20	<0.010	-	<0.010	<0.010	-	<0.010	-	<0.010	-	<0.02	-	<0.02	-	<0.02	-	<0.02	-	<0.020	-	-	<0.02	-	<0.020	-	<0.020
Thorium	µg/L	0.1	-	-	-	-	<0.10	-	<0.10	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.1	-	<0.1	-	<0.10	-	-	-	-	<0.10	-	<0.10
Tin	µg/L	0.1	-	-	2,500	<0.50	<0.10	-	<0.10	<0.10	-	<0.10	-	<0.10	-	<0.20	-	<0.20	-	0.4	-	<0.2	-	<0.20	-	-	<0.2	-	0.27	-	<0.20
Titanium	µg/L	0.3	1,000	1,000	-	<10	<0.90	-	<0.30	<0.30	-	<0.30	-	<0.30	-	<5.0	-	<5.0	-	<5	-	<5	-	<5.0	-	-	<5	-	<5.0	-	<5.0
Tungsten	µg/L	0.1	-	-	3	-	<0.10	-	<0.10	<0.10	-	<0.10	-	<0.10	-	<1.0	-	<1.0	-	<1	-	<1	-	<1.0	-	-	<1	-	<1.0	-	<1.0
Uranium	µg/L	0.01	85	85	20	0.4	0.9	-	2.4	2.5	-	2.0	-	1.9	-	2.0	-	0.4	-	1.6	-	2.9	-	3.3	-	-	1.9	-	1.96	-	0.705
Vanadium	µg/L	0.5	-	-	20	<1.0	<0.5	-	0.6	0.6	-	<0.50	-	0.5	-	<1.0	-	<1.0	-	<5	-	<5	-	<5.0	-	-	<5	-	<5.0	-	<5.0
Zinc	µg/L	1	75 [#1]	100	3,000	10.8	1.0	-	<1.0	<1.0	-	<1.0	-	21.7	-	19.4	-	15.1	-	**169.0**	-	<4	-	<4.0	-	-	6.6	-	5.5	-	<4.0
Zirconium	µg/L	0.06	-	-	-	-	<0.060	-	<0.20	<0.20	-	<0.30	-	<0.20	-	<0.10	-	<0.10	-	<0.1	-	<0.1	-	<0.10	-	-	-	-	<0.10	-	<0.10

NOTES:

#1	Guideline varies with hardness. Values shown based on average hardness of 43 mg/L at background well MW13-01.
#2	Standard varies with pH. Value shown based on average laboratory pH of 7.0 at background well MW13-01.
#3	Standard varies with chloride concentration. Value shown based on average chloride concentration of 7 mg/L at background well MW13-01.
#4	Standard is for Chromium VI.
-	Not analyzed or no applicable CSR standard.
<	Concentration is less than the laboratory detection limit indicated.
CSR	BC Contaminated Sites Regulation (BC Reg. 375/96, including amendments up to BC Reg. 133/2022, March 2023) Schedule 3.2.
AW	Freshwater and marine aquatic life standards.
DW	Drinking water standards.
Shaded	Shaded indicates an exceedance of the CSR Freshwater AW standard.
BOLD	Bold and underlined indicates an exceedance of the CSR Marine AW standard.
Red Text	Red text indicates an exceedance of the CSR DW standard.
Italic	Detection limit greater than standard.

TETRA TECH

Table 2: Groundwater Analytical Results

						MW13-03																							
						14-Dec-2013	3-Apr-2019	25-Jul-2019	17-Oct-2019	DUP (17-Oct-2019)	27-Jan-2020	23-Apr-2020	22-Jul-2020	28-Oct-2020	21-Feb-2021	11-May-2021	19-Jul-2021	1-Dec-2021	2-Mar-2022	12-Jul-2022	11-Oct-2022	12-Dec-2022	28-Feb-2023	23-May-2023	27-Sep-2023	DUP (27-Sep-2023)	18-Dec-2023	22-Feb-2024	24-Jun-2024	16-Sep-2024	9-Dec-2024
						-	L2254197	L2318207	L2367392	L2367392	VA20A0908280120	VA20A536325042020	VA20B113924072020	VA20B95653010202	21B2866	21E1432	21G2459	21L0641	22C0773	22G1537	22J1342	22L1310	23C0154	23E2913	23I3541	23I3541	23L2282	24B2509	24F3072	24I2276	24L1123
						-	L2254197-4	L2318207-3	L2367392-3	L2367392-10	VA20A0908-004	VA20A5363-003	VA20B1139-003	VA20B9565-003	21B2866-04	21E1432-03	21G2459-04	21L0641-04	22C0773-04	22G1537-04	22J1342-07	22L1310-04	23C0154-03	23E2913-03	23I3541-03	23I3541-09	23L2282-03	24B2509-03	24F3072-03	24I2276-03	24L1123-03
Parameter	**Unit**	**RDL**	**CSR - AW**		**CSR - DW**																									
			Freshwater	**Marine**																										
Total Metals																														
Aluminum	µg/L	3	-	-	-	-	-	94300.0	-	-	-	2760.0	-	824.0	-	-	-	-	-	-	-	-	-	-	-	4210.0	-	-	-	8,330
Antimony	µg/L	0.1	-	-	-	-	-	<1.0	-	-	-	<0.10	-	0.1	-	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-	<0.20
Arsenic	µg/L	0.1	-	-	-	-	-	9.1	-	-	-	0.4	-	0.2	-	-	-	-	-	-	-	-	-	-	-	0.5	-	-	-	0.88
Barium	µg/L	0.1	-	-	-	-	-	597.0	-	-	-	44.9	-	20.8	-	-	-	-	-	-	-	-	-	-	-	47.1	-	-	-	64.9
Beryllium	µg/L	0.1	-	-	-	-	-	<1.0	-	-	-	0.0	-	<0.10	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	0.1
Bismuth	µg/L	0.05	-	-	-	-	-	<0.5	-	-	-	<0.050	-	<0.050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.10
Boron	µg/L	10	-	-	-	-	-	100.0	-	-	-	91.0	-	98.0	-	-	-	-	-	-	-	-	-	-	-	83.0	-	-	-	61
Cadmium	µg/L	0.005	-	-	-	-	-	0.4	-	-	-	0.0	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	0.035
Calcium	µg/L	50	-	-	-	-	-	72700.0	-	-	-	45800.0	-	51200.0	-	-	-	37600.0	-	40200.0	-	56600.0	-	-	-	49000.0	-	-	-	33,600
Cesium	µg/L	0.01	-	-	-	-	-	3.6	-	-	-	0.1	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	µg/L	0.1	-	-	-	-	-	59.0	-	-	-	2.0	-	0.6	-	-	-	-	-	-	-	-	-	-	-	2.7	-	-	-	4.99
Cobalt	µg/L	0.1	-	-	-	-	-	55.6	-	-	-	2.1	-	0.5	-	-	-	-	-	-	-	-	-	-	-	2.5	-	-	-	4.59
Copper	µg/L	0.5	-	-	-	-	-	182.0	-	-	-	8.5	-	3.0	-	-	-	-	-	-	-	-	-	-	-	10.8	-	-	-	17
Iron	µg/L	10	-	-	-	-	-	96300.0	-	-	-	2940.0	-	830.0	-	-	-	-	-	-	-	-	-	-	-	4180.0	-	-	-	8,070
Lead	µg/L	0.05	-	-	-	-	-	16.0	-	-	-	0.7	-	0.1	-	-	-	-	-	-	-	-	-	-	-	0.9	-	-	-	1.44
Lithium	µg/L	1	-	-	-	-	-	44.0	-	-	-	3.4	-	2.4	-	-	-	-	-	-	-	-	-	-	-	3.4	-	-	-	6.4
Magnesium	µg/L	5	-	-	-	-	-	43700.0	-	-	-	9710.0	-	9440.0	-	-	-	7770.0	-	8130.0	-	11300.0	-	-	-	100000.0	-	-	-	8,620
Manganese	µg/L	0.1	-	-	-	-	-	2340.0	-	-	-	93.9	-	20.6	-	-	-	-	-	-	-	-	-	-	-	96.6	-	-	-	171
Mercury	µg/L	1	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	0.015
Molybdenum	µg/L	0.05	-	-	-	-	-	3.1	-	-	-	0.3	-	0.2	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	0.4
Nickel	µg/L	0.5	-	-	-	-	-	43.4	-	-	-	1.5	-	<0.50	-	-	-	-	-	-	-	-	-	-	-	2.3	-	-	-	3.9
Phosphorus	µg/L	50	-	-	-	-	-	3150.0	-	-	-	203.0	-	51.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	382
Potassium	µg/L	50	-	-	-	-	-	16700.0	-	-	-	4990.0	-	4880.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,880
Rubidium	µg/L	0.2	-	-	-	-	-	78.8	-	-	-	2.4	-	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	µg/L	0.05	-	-	-	-	-	<0.50	-	-	-	<0.050	-	<0.050	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	<0.50
Silicon	µg/L	100	-	-	-	-	-	100000.0	-	-	-	16300.0	-	14700.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24,800
Silver	µg/L	0.01	-	-	-	-	-	0.8	-	-	-	0.0	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	0.086
Sodium	µg/L	50	-	-	-	-	-	45200.0	-	-	-	34800.0	-	38500.0	-	-	-	-	-	-	-	-	-	-	-	26800.0	-	-	-	22,100
Strontium	µg/L	0.2	-	-	-	-	-	581.0	-	-	-	331.0	-	342.0	-	-	-	-	-	-	-	-	-	-	-	360.0	-	-	-	225
Sulphur	µg/L	500	-	-	-	-	-	8800.0	-	-	-	8320.0	-	10400.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7,600
Tellurium	µg/L	0.2	-	-	-	-	-	<2.0	-	-	-	<0.20	-	<0.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.50
Thallium	µg/L	0.01	-	-	-	-	-	0.5	-	-	-	0.0	-	<0.010	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	0.046
Thorium	µg/L	0.1	-	-	-	-	-	13.3	-	-	-	0.5	-	<0.10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.04
Tin	µg/L	0.1	-	-	-	-	-	1.5	-	-	-	0.4	-	0.1	-	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-	0.32
Titanium	µg/L	0.3	-	-	-	-	-	5780.0	-	-	-	167.0	-	55.7	-	-	-	-	-	-	-	-	-	-	-	252.0	-	-	-	516
Tungsten	µg/L	0.1	-	-	-	-	-	1.0	-	-	-	<0.10	-	<0.10	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	<1.0
Uranium	µg/L	0.01	-	-	-	-	-	8.4	-	-	-	2.4	-	2.1	-	-	-	-	-	-	-	-	-	-	-	2.2	-	-	-	1.28
Vanadium	µg/L	0.5	-	-	-	-	-	201.0	-	-	-	7.1	-	2.5	-	-	-	-	-	-	-	-	-	-	-	9.1	-	-	-	16.9
Zinc	µg/L	3	-	-	-	-	-	1240.0	-	-	-	8.9	-	46.2	-	-	-	-	-	-	-	-	-	-	-	36.9	-	-	-	34.5
Zirconium	µg/L	0.2	-	-	-	-	-	<2.0	-	-	-	<0.20	-	<0.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.44
Hydrocarbons																														
EPH_{19-19}	µg/L	250	5,000	5,000	5,000	-	<250	-	-	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	-	<250	-	-	-
EPH_{19-32}	µg/L	250	-	-	-	-	<250	-	-	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	-	<250	-	-	-
LEPH	µg/L	250	500	500	-	-	<250	-	-	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	-	<250	-	-	-
HEPH	µg/L	250	-	-	-	-	<250	-	-	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	-	<250	-	-	-
VH_{6-10}	µg/L	100	15,000	15,000	15,000	-	<100	-	-	-	-	-	<100	-	-	-	-	-	<100	-	-	-	<100	-	-	-	-	<100	-	-	-
Polycyclic Aromatic Hydrocarbons (PAHs)																														
Acenaphthene	µg/L	0.01	60	60	250	-	<0.010	-	<0.010	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
Acenaphthylene	µg/L	0.01	-	-	-	-	<0.010	-	<0.010	<0.010	-	-	<0.010	-	<0.20	-	-	-	<0.2	-	-	-	<0.200	-	-	-	-	<0.200	-	-	-
Acridine	µg/L	0.01	0.5	0.5	-	-	<0.010	-	<0.010	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
Anthracene	µg/L	0.01	1	1	1,000	-	<0.010	-	<0.010	<0.010	-	-	<0.010	-	<0.010	-	-	-	<0.01	-	-	-	<0.010	-	-	-	-	<0.010	-	-	-
Benz(a)anthracene	µg/L	0.01	1	1	0.07	-	<0.010	-	<0.010	<0.010	-	-	<0.010	-	<0.010	-	-	-	<0.01	-	-	-	<0.010	-	-	-	-	<0.010	-	-	-
Benzo(a)pyrene	µg/L	0.005	0.1	0.1	0.01	-	<0.0050	-	<0.0050	<0.0050	-	-	<0.0050	-	<0.010	-	-	-	<0.01	-	-	-	<0.010	-	-	-	-	<0.010	-	-	-
Benzo(b,j,k)fluoranthene	µg/L	0.015	-	-	-	-	-	-	<0.015	<0.015	-	-	<0.0150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b+j)fluoranthene	µg/L	0.01	-	-	0.07	-	<0.010	-	<0.010	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
Benzo(g,h,i)perylene	µg/L	0.01	-	-	-	-	<0.010	-	<0.010	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
Benzo(k)fluoranthene	µg/L	0.01	-	-	-	-	<0.010	-	<0.010	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
2-Chloronaphthalene	µg/L	0.1	-	-	300	-	-	-	-	-	-	-	-	-	<0.10	-	-	-	<0.1	-	-	-	<0.100	-	-	-	-	<0.100	-	-	-
Chrysene	µg/L	0.01	1	1	7	-	<0.010	-	<0.010	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
Dibenz(a,h)anthracene	µg/L	0.005	-	-	0.01	-	<0.0050	-	<0.0050	<0.0050	-	-	<0.0050	-	<0.010	-	-	-	<0.01	-	-	-	<0.010	-	-	-	-	<0.010	-	-	-
Fluoranthene	µg/L	0.01	2	2	150	-	<0.010	-	<0.010	<0.010	-	-	<0.010	-	<0.030	-	-	-	<0.03	-	-	-	<0.030	-	-	-	-	<0.030	-	-	-
Fluorene	µg/L	0.01	120	120	150	-	<0.010	-	<0.010	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
Indeno(1,2,3-c,d)pyrene	µg/L	0.01	-	-	-	-	<0.010	-	<0.010	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
1-Methylnaphthalene	µg/L	0.05	-	-	5.5	-	<0.050	-	<0.050	<0.050	-	-	<0.010	-	<0.10	-	-	-	<0.1	-	-	-	<0.100	-	-	-	-	<0.100	-	-	-
2-Methylnaphthalene	µg/L	0.02	-	-	15	-	<0.020	-	<0.050	<0.050	-	-	<0.010	-	<0.10	-	-	-	<0.1	-	-	-	<0.100	-	-	-	-	<0.100	-	-	-
Naphthalene	µg/L	0.02	10	10	80	-	<0.020	-	<0.050	<0.050	-	-	<0.050	-	<0.20	-	-	-	<0.2	-	-	-	<0.200	-	-	-	-	<0.200	-	-	-
Phenanthrene	µg/L	0.02	3	3	-	-	<0.020	-	<0.020	<0.020	-	-	<0.020	-	<0.10	-	-	-	<0.1	-	-	-	<0.100	-	-	-	-	<0.100	-	-	-
Pyrene	µg/L	0.01	0.2	0.2	100	-	<0.010	-	<0.010	<0.010	-	-	<0.010	-	<0.02	-	-	-	<0.02	-	-	-	<0.020	-	-	-	-	<0.020	-	-	-
Quinoline	µg/L	0.05	34	34	0.05	-	<0.050	-	<0.050	<0.050	-	-	<0.050	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-

NOTES:

#1	Guideline varies with hardness. Values shown based on average hardness of 43 mg/L at background well MW13-01.
#2	Standard varies with pH. Value shown based on average laboratory pH of 7.0 at background well MW13-01.
#3	Standard varies with chloride concentration. Value shown based on average chloride concentration of 7 mg/L at background well MW13-01.
#4	Standard is for Chromium VI.
-	Not analyzed or no applicable CSR standard.
<	Concentration is less than the laboratory detection limit indicated.
CSR	BC Contaminated Sites Regulation (BC Reg. 375/96, including amendments up to BC Reg. 133/2022, March 2023) Schedule 3.2.
AW	Freshwater and marine aquatic life standards.
DW	Drinking water standards.
EPHw	Extractable Petroleum Hydrocarbons.
LEPHw	Light Extractable Petroleum Hydrocarbons.
HEPHw	Heavy Extractable Petroleum Hydrocarbons.
Shaded	Shaded indicates an exceedance of the CSR Freshwater AW standard.
BOLD	Bold and underlined indicates an exceedance of the CSR Marine AW standard.
Red Text	Red text indicates an exceedance of the CSR DW standard.
Italic	Detection limit greater than standard.

TETRA TECH

Table 2: Groundwater Analytical Results

						MW13-03																							
						14-Dec-2013	3-Apr-2019	25-Jul-2019	17-Oct-2019	DUP (17-Oct-2019)	27-Jan-2020	23-Apr-2020	22-Jul-2020	28-Oct-2020	21-Feb-2021	11-May-2021	19-Jul-2021	1-Dec-2021	2-Mar-2022	12-Jul-2022	11-Oct-2022	12-Dec-2022	28-Feb-2023	23-May-2023	27-Sep-2023	DUP (27-Sep-2023)	18-Dec-2023	22-Feb-2024	24-Jun-2024	16-Sep-2024	9-Dec-2024
						-	L2254197	L2318207	L2367392	L2367392	VA20A0908280120 20	VA20A536325042020	VA20B113924072020	VA20B95653010202 0	21B2866	21E1432	21G2459	21L0641	22C0773	22G1537	22J1342	22L1310	23C0154	23E2913	23I3541	23I3541	23L2282	24B2509	24F3072	24I2276	24L1123
						-	L2254197-4	L2318207-3	L2367392-3	L2367392-10	VA20A0908-004	VA20A5363-003	VA20B1139-003	VA20B9565-003	21B2866-04	21E1432-03	21G2459-04	21L0641-04	22C0773-04	22G1537-04	22J1342-07	22L1310-04	23C0154-03	23E2913-03	23I3541-03	23I3541-09	23L2282-03	24B2509-03	24F3072-03	24I2276-03	24L1123-03
Parameter	**Unit**	**RDL**	**CSR - AW**		**CSR - DW**																									
			Freshwater	**Marine**																										
Resin/Fatty Acids																														
Abietic Acid	µg/L	0.001	-	-	-	-	<1.0	-	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
Arachidic Acid	µg/L	0.005	-	-	-	-	<5.0	-	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Behenic Acid	µg/L	0.005	-	-	-	-	<5.0	-	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12-Chlorodehydroabietic Acid	µg/L	0.001	-	-	-	-	<1.0	-	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
14-Chlorodehydroabietic Acid	µg/L	0.001	-	-	-	-	<1.0	-	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
Dehydroabietic Acid	µg/L	0.001	-	-	-	-	<1.0	-	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
Dichlorodehydroabietic Acid	µg/L	0.001	-	-	-	-	<1.0	-	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
9,10-Dichlorostearic Acid	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	<10	-	-	-	-	<10	-	-	-
Isopimaric & Palustric Acids	µg/L	0.001	-	-	-	-	<1.0	-	-	-	-	-	<1.0	-	<6.0	-	-	-	-	<10	-	-	<10	-	-	-	-	-	-	-	-
Isopimaric Acid	µg/L	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	-
Palustric Acid	µg/L	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	-
Lauric Acid	µg/L	0.005	-	-	-	-	96.4	-	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Levopimaric Acid	µg/L	0.001	-	-	-	-	<1.0	-	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
Lignoceric Acid	µg/L	0.005	-	-	-	-	<5.0	-	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Linoleic Acid	µg/L	0.005	-	-	-	-	<5.0	-	-	-	-	-	<5.0	-	-	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
Linolenic Acid	µg/L	0.005	-	-	-	-	<5.0	-	-	-	-	-	<5.0	-	-	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
Myristic Acid	µg/L	0.005	-	-	-	-	<5.0	-	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Neoabietic Acid	µg/L	0.001	-	-	-	-	<1.0	-	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
Octadecanoic Acid	µg/L		-	-	-														-	<10	-	-	-	-	-	-	-	-	-	-	-
Oleic Acid	µg/L	0.005	-	-	-	-	<5.0	-	-	-	-	-	<5.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
Palmitic Acid	µg/L	100	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pimaric Acid	µg/L	0.001	-	-	-	-	<1.0	-	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
Sandaracopimaric Acid	µg/L	0.001	-	-	-	-	<1.0	-	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
Stearic Acid	µg/L	20	-	-	-	-	<20	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-
Total Fatty Acids	µg/L	0.1	-	-	-	-	<100	-	-	-	-	-	<10	-	-	-	-	-	-	<10	-	-	<10	-	-	-	-	<10	-	-	-
Total Resin Acids	µg/L	0.01	-	-	-	-	<10	-	-	-	-	-	<3.5	-	-	-	-	-	-	<10	-	-	<10	-	-	-	-	<10	-	-	-
Total Resin and Fatty Acid	µg/L	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	<10	-	-	-	-	<10	-	-	-
BTEXS & MTBE																															
Benzene	µg/L	0.5	400	1,000	5	-	-	-	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-
Toluene	µg/L	1	5	2,000	60	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	1	2,000	2,500	140	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Xylenes Total	µg/L	2	300	300	90	-	-	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-	-
Styrene	µg/L	1	720	720	800	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Methyl t-butyl ether (MTBE)	µg/L	1	34,000	4,400	95	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Volatile Organic Compounds (VOCs)																															
Hexadecanoic Acid	µg/L	6	-	-	-	-	-	-	-	-	-	-	-	-	<6.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	µg/L	1	-	-	100	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Bromoform	µg/L	1	-	-	100	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Carbon tetrachloride	µg/L	0.5	130	130	2	-	-	-	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-
Chlorobenzene	µg/L	1	13	250	80	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Chloroethane	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-	-
Chloroform	µg/L	1	20	20	100	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Dibromochloromethane	µg/L	1	-	-	100	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,2-Dibromoethane	µg/L	0.3	-	-	0.5	-	-	-	-	-	-	-	-	-	<0.30	-	-	-	-	-	-	-	<0.3	-	-	-	-	-	-	-	-
Dibromomethane	µg/L	1	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	µg/L	0.5	7	420	200	-	-	-	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	µg/L	1	1,500	1,500	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	µg/L	1	260	260	5	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,1-Dichloroethane	µg/L	1	-	-	30	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,2-Dichloroethane	µg/L	1	1,000	1,000	5	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,1-Dichloroethene	µg/L	1	-	-	14	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,2-Dichloroethene (cis)	µg/L	1	-	-	8	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,2-Dichloroethene (trans)	µg/L	1	-	-	80	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,2-Dichloropropane	µg/L	1	-	-	4.5	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,3-Dichloropropene	µg/L	1	-	-	1.5	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Methylene Chloride	µg/L	3	980	980	50	-	-	-	-	-	-	-	-	-	<3.0	-	-	-	-	-	-	-	<3.0	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/L	0.5	-	-	0.8	-	-	-	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-
Tetrachloroethene	µg/L	1	1,100	1,100	30	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	µg/L	1	-	-	8000	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	µg/L	1	-	-	3	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Trichloroethene	µg/L	1	200	200	5	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Trichlorofluoromethane	µg/L	1	-	-	1000	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	1	-	-	2	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-

NOTES:

#1	Guideline varies with hardness. Values shown based on average hardness of 43 mg/L at background well MW13-01.
#2	Standard varies with pH. Value shown based on average laboratory pH of 7.0 at background well MW13-01.
#3	Standard varies with chloride concentration. Value shown based on average chloride concentration of 7 mg/L at background well MW13-01.
#4	Guideline is for Chromium VI.
-	Not analyzed or no applicable CSR standard.
<	Concentration is less than the laboratory detection limit indicated.
CSR	BC Contaminated Sites Regulation (BC Reg. 375/96, including amendments up to BC Reg. 133/2022, March 2023) Schedule 3.2.
AW	Freshwater and marine aquatic life standards.
DW	Drinking water standards.
Shaded	Shaded indicates an exceedance of the CSR Freshwater AW guidelines.
BOLD	Bold and underlined indicates an exceedance of the CSR Marine AW guidelines.
Red Text	Red text indicates an exceedance of the CSR DW standard.
Italic	Detection limit greater than guideline.

TETRA TECH

Table 2: Groundwater Analytical Results

						MW19-04																			
						25-Jul-2019	17-Oct-2019	27-Jan-2020	23-Apr-2020	22-Jul-2020	28-Oct-2020	21-Feb-2021	11-May-2021	19-Jul-2021	1-Dec-2021	2-Mar-2022	12-Jul-2022	11-Oct-2022	12-Dec-2022	28-Feb-2023	23-May-2023	DUP(23-May-2023)	27-Sep-2023	18-Dec-2023	22-Feb-2024	24-Jun-2024	16-Sep-2024	9-Dec-2024	DUP (9-Dec-2024)
						L2318207	L2367392	VA20A0908280120 20	VA20A5363250420 20	VA20B1139240720 20	VA20B9565301020 20	21B2866	21E1432	21G2459	21L0641	22C0773	22G1537	22J1342	22L1310	23C0154	23E2913	23E2913	23I3541	23L2282	24B2509	24F3072	24I2276	24L1123	24L1123
Parameter	**Unit**	**RDL**	**CSR - AW**		**CSR - DW**	L2318207-4	L2367392-4	VA20A0908-005	VA20A5363-004	VA20B1139-004	VA20B9565-004	21B2866-05	21E1432-04	21G2459-05	21L0641-05	22C0773-05	22G1537-05	22J1342-08	22L1310-05	23C0154-04	23E2913-04	23E2913-09	23I3541-04	23L2282-04	24B2509-04	24F3072-04	24I2276-04	24L1123-04	24L1123-09
			Freshwater	Marine																							
Field Measurements																											
Temperature	°C		-	-	-	16.94	13.1	9.1	11.35	16	13.7	7.6	11.1	16.2	10.1	7.6	13.3	14.8	8.2	7.1	12.6	12.6	15.4	9.2	8.6	13.9	15.7	9.7	-
Electrical Conductivity	µS/cm		-	-	-	180	197.1	-	236	308	337	310	352.2	322.3	260.7	262	340.1	380.6	280.0	208.9	239.3	239.3	236.2	0.4	11.9	310.7	25	345.6	-
Total Dissolved Solids (TDS)	mg/L		-	-	-	195	-	4.6	208	200	218.4	302	229.45	257.55	237.9	276	286	247.4	268.2	207.35	204.6	204.6	187.7	0.65	11.2	258.7	22.1	316.5	-
Salinity	-		15	10	-	0.11	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	%		-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	mg/L		-	-	-	5.39	-	11.85	4.94	8.2	1.83	5.9	4.02	0.84	5.2	8.7	1.77	1.57	3.23	4.8	0.81	0.81	7.27	6.86	7.15	9.81	7.6	7.41	-
pH	pH Units		-	-	-	6.43	6.69	4.2	6.47	6.54	6.36	6.34	6.36	6.37	6.38	8.29	6.62	6.58	8.2	6.18	6.73	6.73	4.85	6.55	4.28	6.7	6.48	6.47	-
Oxidation Reduction Potential (ORP)	-		-	-	-	255.2	-	-	115.5	54.1	65.3	57.5	85.1	54.8	28.1	141.7	51.6	17.6	83.1	32.5	55.6	55.6	142.4	127.8	41.5	97.7	175.9	70.6	-
Physical Parameters																													
pH	pH Units	0.1	-	-	-	7.93	7.04	6.86	8.18	6.81	6.92	-	6.43	-	5.85	-	7.81	-	6.59	7.1	6.67	6.65	6.83	6.79	6.97	6.8	7.12	7.09	7.3
Electrical Conductivity (EC)	µS/cm	2	-	-	-	265	248	-	304	-	353	-	384	-	382	-	456	-	374	339	312	314	258	322	414	428	382	457	457
Total Suspended Solids (TSS)	µg/L	3000	-	-	-	1,930,000	959,000	-	264,000	-	6,900	-	3400	-	11,400	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Dissolved Solids (TDS)	µg/L	10,000	-	-	-	-	-	179,000	223,000	-	245,000	-	-	-	-	-	293,000	-	-	-	235,000	-	-	262,000	-	315,000	-	272,000	-
Hardness as $CaCO_3$	µg/L	500	-	-	-	99,700	105,000	-	201,000	-	171,000	-	153,000	161,000	163,000	198,000	218,000	182,000	195,000	-	140,000	144,000	-	174,000	-	192,000	-	210,000	204,000
Alkalinity (total as $CaCO_3$)	µg/L	1000	-	-	-	-	-	-	-	-	-	-	193,000	-	-	-	-	-	-	158,000	149,000	145,000	144,000	162,000	202,000	191,000	171,000	195,000	195,000
Alkalinity (P)	µg/L	1000	-	-	-	-	-	-	-	-	-	-	<1000	-	-	-	-	-	-	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Bicarbonate	µg/L	1000	-	-	-	-	-	-	-	-	-	-	193,000	-	-	-	-	-	-	158,000	149,000	145,000	144,000	162,000	202,000	191,000	171,000	195,000	195,000
Carbonate	µg/L	1000	-	-	-	-	-	-	-	-	-	-	<1000	-	-	-	-	-	-	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Hydroxide	µg/L	1000	-	-	-	-	-	-	-	-	-	-	<1000	-	-	-	-	-	-	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Bromide	µg/L	50	-	-	-	<50	<50	<50	<50	<50	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloride	µg/L	500	1,500,000	1,500,000	250,000	7,240	7,260	3,760	6,110	6,480	6,680	7220	7360	7400	4460	6,090	4,960	6,590	6,460	5,830	6,140	-	6,950	7,250	9,540	13,800	10,600	17,400	17,600
Fluoride	µg/L	20	2,000 #1	15,000	1,500	50	37	39	40	42	45	<100	<100	<100	120	<100	<100	<100	<100	<100	<100	-	<100	<100	<100	<100	<100	<100	<100
Sulphate	µg/L	300	2,180,000 #1	2,180,000 #1	500,000	4,290	3,770	2,800	5,050	3,340	2,630	4900	4000	1600	4500	4,000	1,500	2,400	6,300	2,900	1,700	-	1,600	2,600	2,700	1,200	2,000	2,600	2,600
Sulphide (as S)	µg/L	10	-	-	-	<2.0	29	<2.0	<2.0	<2.0	<2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulphide (as H2S)	µg/L	2	20	20	50	-	-	<2.0	<2.0	<2.0	<2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulphide, total	µg/L	20	-	-	-	-	-	-	-	-	-	<20	-	21	<20	<20	<20	<20	<20	<20	<20	-	<20	<20	<20	<20	<20	<20	-
Turbidity	NTU	0.1	-	-	-	-	668	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acidity	µg/L		-	-	-	-	-	-	<2,000	-	5,300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nutrients																													
Ammonia as N	µg/L	5	18,500 #2	64,000 #2	-	140	106	106	130	166	140	160	187	315	121	209	313	360	272	92	158	-	158	113	-	238	306	298	213
Nitrate (as N)	µg/L	5	400,000	400,000	10,000	182	204	160	121	25.6	49.3	<10	<10	<10	<10	312	<10	<10	19	<10	<10	-	<10	<10	<10	<10	<100	<100	<100
Nitrite (as N)	µg/L	1	800 #3	800 #3	1,000	<1.0	<1.0	<1.0	1.6	84.4	7.7	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	-	<10	<10	<10	<10	<10	<10	<10
Nitrate and Nitrite (as N)	µg/L	50	400,000	400,000	10,000	-	-	-	123.0	-	-	-	-	-	-	-	<20	-	-	-	-	-	-	-	-	-	-	-	-
Demand Parameters																													
Biochemical Oxygen Demand (BOD)	µg/L	2000	-	-	-	<2000	<2000	-	2,400	-	<2,000	-	<2400	-	<3600	-	<6,200	-	<7,400	-	<1,400	-	-	<2,800	-	<3,200	-	4,200	-
Chemical Oxygen Demand (COD)	µg/L	20000	-	-	-	78,000	50,000	-	<20,000	-	<20,000	-	21,000	-	23,000	-	60,000	-	54,000	-	36,000	-	-	41,000	-	56,000	-	50,000	-
Carbon																													
Dissolved Organic Carbon (DOC) (Filtered)	µg/L	500	-	-	-	-	-	-	-	-	-	-	14,500	-	13,300	-	-	-	-	-	-	-	-	-	-	14,800	-	13,300	-
Total Organic Carbon (TOC)	µg/L	500	-	-	-	-	10,800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenols																													
Phenols (4AAP)	µg/L	1	-	-	-	4.6	-	-	-	<1.0	-	4	-	-	-	<2	-	-	-	<2	-	-	-	-	<0.50	-	-	-	-
Dissolved Metals																													
Aluminum	µg/L	1	-	-	9,500	6.6	8.9	-	4.5	-	6.2	-	8.4	-	13.9	-	12.8	-	21.5	-	17.3	16.3	-	11.6	-	9.5	-	8.4	8.6
Antimony	µg/L	0.1	90	2,500	6	0.2	0.2	-	0.2	-	0.2	-	0.3	-	0.5	-	0.6	-	0.5	-	0.4	0.4	-	0.3	-	0.38	-	0.42	0.44
Arsenic	µg/L	0.1	50	125	10	0.5	0.4	-	0.4	-	0.3	-	<0.50	-	0.5	-	0.6	-	1.0	-	<0.50	<0.50	-	1.4	-	2.52	-	2.28	2.32
Barium	µg/L	0.1	10,000	5,000	1,000	20.1	21.0	-	24.8	-	36.2	-	32.3	-	28.9	-	46.7	-	33.4	-	24.3	24.5	-	26.5	-	36.7	-	35.3	34.6
Beryllium	µg/L	0.1	1.5	1,000	8	<0.10	<0.10	-	<0.020	-	<0.10	-	<0.10	-	<0.10	-	<0.1	-	<0.1	-	<0.10	<0.10	-	<0.1	-	<0.10	-	<0.10	<0.10
Bismuth	µg/L	0.05	-	-	-	<0.050	<0.050	-	<0.050	-	<0.050	-	<0.10	-	<0.10	-	<0.1	-	<0.1	-	<0.10	<0.10	-	-	-	<0.10	-	<0.10	<0.10
Boron	µg/L	10	12,000	12,000	5,000	50.0	40.0	-	61.0	-	51.0	-	63.9	-	<50	-	78.3	-	53.3	-	52.8	52.5	-	<50	-	64.2	-	<50.0	<50.0
Cadmium	µg/L	0.005	1.5 #1	15	5	0.0	0.1	-	0.0	-	0.1	-	0.1	-	0.1	-	0.1	-	0.1	-	0.1	0.1	-	0.0	-	0.041	-	0.044	0.037
Calcium	µg/L	50	-	-	-	31600.0	32500.0	-	38400.0	-	40300.0	-	46900.0	-	49100.0	-	68100.0	-	61400.0	-	43300.0	45100.0	-	55400.0	-	60,100	-	68,000	65,800
Cesium	µg/L	0.01	-	-	-	<0.010	<0.010	-	<0.010	-	<0.010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	µg/L	0.1	10 #4	15 #4	50 #4	0.3	0.3	-	<0.50	-	0.3	-	0.6	-	<0.50	-	1.1	-	2.6	-	1.0	1.2	-	0.9	-	0.65	-	0.65	0.62
Cobalt	µg/L	0.1	40	40	1	0.6	1.0	-	1.4	-	1.5	-	2.8	-	1.3	-	3.8	-	2.0	-	2.9	2.9	-	2.3	-	2.85	-	3.01	3.03
Copper	µg/L	0.2	20 #1	20	1,500	4.3	3.3	-	4.0	-	3.7	-	5.5	-	5.6	-	6.2	-	4.3	-	7.4	7.4	-	1.6	-	1.25	-	3.88	1.74
Iron	µg/L	10	-	-	6,500	57.0	78.0	-	852.0	-	698.0	-	1140.0	-	963.0	-	1540.0	-	3170.0	-	1500.0	1500.0	-	5960.0	-	12,600	-	14,400	14,400
Lead	µg/L	0.05	40 #1	20	10	<0.050	<0.050	-	<0.050	-	<0.050	-	<0.20	-	<0.20	-	<0.2	-	0.2	-	<0.20	<0.20	-	<0.2	-	<0.20	-	<0.20	<0.20
Lithium	µg/L	1	-	-	8	2.0	1.9	-	1.9	-	2.4	-	2.1	-	1.7	-	2.6	-	2.4	-	2.4	2.4	-	2.0	-	2.86	-	2.09	2
Magnesium	µg/L	5	-	-	-	5020.0	5780.0	-	7740.0	-	8420.0	-	8620.0	-	9820.0	-	11500.0	-	9990.0	-	7590.0	7640.0	-	8600.0	-	10,200	-	9,700	9,650
Manganese	µg/L	0.1	-	-	1,500	190.0	396.0	-	460.0	-	748.0	-	995.0	-	679.0	-	2360.0	-	1700.0	-	1580.0	1580.0	-	1420.0	-	2,010	-	2,180	2,180
Mercury	µg/L		0.25	0.25	1	<0.0050	<0.0050	-	-	-	<0.0050	-	<0.010	-	<0.010	-	<0.01	-	-	-	<0.010	<0.010	-	<0.01	-	<0.010	-	<0.010	<0.010
Molybdenum	µg/L	0.05	10,000	10,000	250	0.5	0.4	-	0.2	-	0.3	-	0.4	-	0.4	-	0.5	-	0.5	-	0.3	0.3	-	0.5	-	0.37	-	0.5	0.48
Nickel	µg/L	0.5	260 #1	83	80	0.5	<0.50	-	<0.50	-	<0.50	-	0.7	-	0.5	-	1.0	-	0.4	-	0.4	0.4	-	0.7	-	1.43	-	0.59	0.55
Phosphorus	µg/L	50	-	-	-	<50	<50	-	<50	-	<50	-	<50	-	<50	-	<50	-	<50	-	<50	<50	-	-	-	79	-	121	117
Potassium	µg/L	50	-	-	-	10200.0	10400.0	-	8570.0	-	9790.0	-	10300.0	-	7900.0	-	11800.0	-	10900.0	-	8870.0	9040.0	-	-	-	9,440	-	7,900	7,840
Rubidium	µg/L	0.2	-	-	-	2.5	2.0	-	1.7	-	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	µg/L	0.05	20	20	10	<0.050	<0.050	-	<0.050	-	<0.050	-	<0.50	-	<0.50	-	<0.5	-	<0.5	-	<0.50	<0.50	-	<0.5	-	<0.50	-	<0.50	<0.50
Silicon	µg/L	50	-	-	-	15600.0	14400.0	-	13600.0	-	15200.0	-	16900.0	-	12800.0	-	17300.0	-	16200.0	-	17400.0	17900.0	-	-	-	19,200	-	16,500	16,200
Silver	µg/L	0.01	0.5 #1	15	20	<0.010	<0.010	-	<0.010	-	<0.010	-	<0.050	-	<0.050	-	<0.05	-	<0.05	-	<0.050	<0.050	-	<0.05	-	<0.050	-	<0.050	<0.050
Sodium	µg/L	50	-	-	200,000	6940.0	7950.0	-	7130.0	-	7640.0	-	7740.0	-	7640.0	-	9130.0	-	7930.0	-	8640.0	8580.0	-	9250.0	-	11,200	-	10,300	10,100
Strontium	µg/L	0.2	-	-	2,500	149.0	169.0	-	211.0	-	254.0	-	255.0	-	242.0	-	355.0	-	341.0	-	284.0	286.0	-	257.0	-	360	-	340	336
Sulphur	µg/L	500	-	-	-	1610.0	1520.0	-	1720.0	-	980.0	-	<3000	-	<3000	-	<3000	-	<3000	-	<3,000	<3,000	-	-	-	<3,000	-	<3,000	<3,000
Tellurium	µg/L	0.2	-	-	-	<0.20	<0.20	-	<0.010	-	<0.20	-	<0.50	-	<0.50	-	<0.5	-	<0.5	-	<0.50	<0.50	-	-	-	<0.50	-	<0.50	<0.50
Thallium	µg/L	0.01	3	3	-	<0.010	<0.010	-	<0.010	-	<0.010	-	<0.02	-	<0.02	-	<0.02	-	<0.02	-	<0.020	<0.020	-	<0.02	-	<0.020	-	<0.020	<0.020
Thorium	µg/L	0.1	-	-	-	<0.10	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.1	-	<0.1	-	<0.10	<0.10	-	-	-	<0.10	-	<0.10	<0.10
Tin	µg/L	0.1	-	-	2,500	0.2	0.2	-	<0.10	-	<0.10	-	<0.20	-	<0.20	-	<0.2	-	<0.2	-	<0.20	<0.20	-	<0.2	-	<0.20	-	<0.20	<0.20
Titanium	µg/L	0.3	1,000	1,000	-	0.3	0.4	-	<0.30	-	<0.30	-	<5.0	-	<5.0	-	<5	-	<5	-	<5.0	<5.0	-	<5	-	<5.0	-	<5.0	<5.0
Tungsten	µg/L	0.1	-	-	3	<0.10	<0.10	-	<0.10	-	<0.10	-	<1.0	-	<1.0	-	<1	-	<1	-	<1.0	<1.0	-	<1	-	<1.0	-	<1.0	<1.0
Uranium	µg/L	0.01	85	85	20	0.1	0.1	-	0.3	-	0.4	-	0.5	-	0.7	-	1.1	-	0.9	-	0.4	0.4	-	0.5	-	0.608	-	0.826	0.818
Vanadium	µg/L	0.5	-	-	20	1.3	1.2	-	0.8	-	0.7	-	1.3	-	1.2	-	<5	-	<5	-	<5.0	<5.0	-	<5	-	<5.0	-	<5.0	<5.0
Zinc	µg/L	1	75 #1	100	3,000	2.7	1.5	-	2.2	-	1.1	-	<4.0	-	<4.0	-	45.9	-	<4	-	<4.0	<4.0	-	<4	-	4.2	-	<4.0	<4.0
Zirconium	µg/L	0.06	-	-	-	<0.20	<0.20	-	<0.30	-	<0.2	-	<0.10	-	<0.10	-	0.2	-	<0.1	-	<0.10	<0.10	-	-	-	0.15	-	0.14	0.13

NOTES:

#1	Guideline varies with hardness. Values shown based on average hardness of 43 mg/L at background well MW13-01.
#2	Standard varies with pH. Value shown based on average laboratory pH of 7.0 at background well MW13-01.
#3	Standard varies with chloride concentration. Value shown based on average chloride concentration of 7 mg/L at background well MW13-01.
#4	Standard is for Chromium VI.
-	Not analyzed or no applicable CSR standard.
<	Concentration is less than the laboratory detection limit indicated.
CSR	BC Contaminated Sites Regulation (BC Reg. 375/96, including amendments up to BC Reg. 133/2022, March 2023) Schedule 3.2.
AW	Freshwater and marine aquatic life standards.
DW	Drinking water standards.
Shaded	Shaded indicates an exceedance of the CSR Freshwater AW standard.
BOLD	Bold and underlined indicates an exceedance of the CSR Marine AW standard.
Red Text	Red text indicates an exceedance of the CSR DW standard.
Aalc	Detection limit greater than standard.

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Table 2: Groundwater Analytical Results

						MW19-04																				
						25-Jul-2019	17-Oct-2019	27-Jan-2020	23-Apr-2020	22-Jul-2020	28-Oct-2020	21-Feb-2021	11-May-2021	19-Jul-2021	1-Dec-2021	2-Mar-2022	12-Jul-2022	11-Oct-2022	12-Dec-2022	28-Feb-2023	23-May-2023	DUP(23-May-2023)	27-Sep-2023	18-Dec-2023	22-Feb-2024	24-Jun-2024	16-Sep-2024	9-Dec-2024	DUP (9-Dec-2024)
						L2318207	L2367392	VA20A0908280120 20	VA20A0363250420 20	VA20B1139240720 20	VA20B9565301020 20	21B2866	21E1432	21G2459	21L0641	22C0773	22G1537	22J1342	22L1310	23C0154	23E2913	23E2913	23I3541	23L2282	24B2509	24F3072	24I2276	24L1123	24L1123
						L2318207-4	L2367392-4	VA20A0908-005	VA20A5363-004	VA20B1139-004	VA20B9565-004	21B2866-05	21E1432-04	21G2459-05	21L0641-05	22C0773-05	22G1537-05	22J1342-08	22L1310-05	23C0154-04	23E2913-04	23E2913-09	23I3541-04	23L2282-04	24B2509-04	24F3072-04	24I2276-04	24L1123-04	24L1123-09
Parameter	**Unit**	**RDL**	**CSR - AW**		**CSR - DW**																							
			Freshwater	Marine																								
Total Metals																												
Aluminum	µg/L	3	-	-	-	-	-	-	4330.0	-	57.4	-	-	-	-	-	-	-	-	-	-	-	254.0	-	-	-	552	-
Antimony	µg/L	0.1	-	-	-	-	-	-	0.9	-	0.3	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	0.48	-
Arsenic	µg/L	0.1	-	-	-	-	-	-	3.7	-	0.7	-	-	-	-	-	-	-	-	-	-	-	1.7	-	-	-	3.67	-
Barium	µg/L	0.1	-	-	-	-	-	-	122.0	-	36.2	-	-	-	-	-	-	-	-	-	-	-	27.4	-	-	-	39.3	-
Beryllium	µg/L	0.1	-	-	-	-	-	-	0.1	-	<0.10	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	<0.10	-
Bismuth	µg/L	0.05	-	-	-	-	-	-	<0.050	-	<0.050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.10	-
Boron	µg/L	10	-	-	-	-	-	-	61.0	-	48.0	-	-	-	-	-	-	-	-	-	-	-	<50	-	-	-	<50.0	-
Cadmium	µg/L	0.005	-	-	-	-	-	-	0.2	-	0.1	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	0.053	-
Calcium	µg/L	50	-	-	-	-	-	-	58800.0	-	53700.0	-	-	50600.0	-	63600.0	-	58100.0	-	-	-	-	47600.0	-	-	-	68,100	-
Cesium	µg/L	0.01	-	-	-	-	-	-	0.2	-	<0.010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	µg/L	0.1	-	-	-	-	-	-	4.6	-	0.5	-	-	-	-	-	-	-	-	-	-	-	0.6	-	-	-	1.11	-
Cobalt	µg/L	0.1	-	-	-	-	-	-	9.2	-	1.9	-	-	-	-	-	-	-	-	-	-	-	2.0	-	-	-	3.15	-
Copper	µg/L	0.5	-	-	-	-	-	-	13.5	-	4.0	-	-	-	-	-	-	-	-	-	-	-	3.3	-	-	-	5.1	-
Iron	µg/L	10	-	-	-	-	-	-	11900.0	-	2300.0	-	-	-	-	-	-	-	-	-	-	-	6490.0	-	-	-	18,900	-
Lead	µg/L	0.05	-	-	-	-	-	-	2.4	-	<0.050	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	0.21	-
Lithium	µg/L	1	-	-	-	-	-	-	4.2	-	2.4	-	-	-	-	-	-	-	-	-	-	-	1.5	-	-	-	2.48	-
Magnesium	µg/L	5	-	-	-	-	-	-	13200.0	-	8910.0	-	-	8360.0	-	9430.0	-	8850.0	-	-	-	-	7540.0	-	-	-	10,200	-
Manganese	µg/L	0.1	-	-	-	-	-	-	1850.0	-	746.0	-	-	-	-	-	-	-	-	-	-	-	1240.0	-	-	-	2,140	-
Mercury	µg/L	1	-	-	-	-	-	-	-	-	<0.0050	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	<0.010	-
Molybdenum	µg/L	0.05	-	-	-	-	-	-	0.5	-	0.3	-	-	-	-	-	-	-	-	-	-	-	0.5	-	-	-	0.59	-
Nickel	µg/L	0.5	-	-	-	-	-	-	3.3	-	<0.50	-	-	-	-	-	-	-	-	-	-	-	0.6	-	-	-	0.83	-
Phosphorus	µg/L	50	-	-	-	-	-	-	3450.0	-	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	236	-
Potassium	µg/L	50	-	-	-	-	-	-	8960.0	-	9940.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7,920	-
Rubidium	µg/L	0.2	-	-	-	-	-	-	5.9	-	2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	µg/L	0.05	-	-	-	-	-	-	0.1	-	<0.050	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	<0.50	-
Silicon	µg/L	100	-	-	-	-	-	-	18600.0	-	16500.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17,900	-
Silver	µg/L	0.01	-	-	-	-	-	-	0.0	-	<0.010	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	<0.050	-
Sodium	µg/L	50	-	-	-	-	-	-	7170.0	-	8250.0	-	-	-	-	-	-	-	-	-	-	-	8010.0	-	-	-	10,500	-
Strontium	µg/L	0.2	-	-	-	-	-	-	252.0	-	264.0	-	-	-	-	-	-	-	-	-	-	-	247.0	-	-	-	342	-
Sulphur	µg/L	500	-	-	-	-	-	-	1930.0	-	1120.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<3,000	-
Tellurium	µg/L	0.2	-	-	-	-	-	-	<0.20	-	<0.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.50	-
Thallium	µg/L	0.01	-	-	-	-	-	-	0.0	-	<0.010	-	-	-	-	-	-	-	-	-	-	-	<0.02	-	-	-	<0.020	-
Thorium	µg/L	0.1	-	-	-	-	-	-	2.8	-	<0.10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-
Tin	µg/L	0.1	-	-	-	-	-	-	0.2	-	<0.10	-	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-	<0.20	-
Titanium	µg/L	0.3	-	-	-	-	-	-	122.0	-	2.9	-	-	-	-	-	-	-	-	-	-	-	13.2	-	-	-	28	-
Tungsten	µg/L	0.1	-	-	-	-	-	-	0.1	-	<0.10	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	<1.0	-
Uranium	µg/L	0.01	-	-	-	-	-	-	1.5	-	0.4	-	-	-	-	-	-	-	-	-	-	-	0.6	-	-	-	1.05	-
Vanadium	µg/L	0.5	-	-	-	-	-	-	12.0	-	1.7	-	-	-	-	-	-	-	-	-	-	-	<5	-	-	-	7.2	-
Zinc	µg/L	3	-	-	-	-	-	-	15.6	-	<3.0	-	-	-	-	-	-	-	-	-	-	-	338.0	-	-	-	38.6	-
Zirconium	µg/L	0.2	-	-	-	-	-	-	0.4	-	<0.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.25	-
Hydrocarbons																												
EPH_{10-19}	µg/L	250	5,000	5,000	5,000	<250	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	-	<250	-	-	-
EPH_{19-32}	µg/L	250	-	-	-	<250	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	-	<250	-	-	-
LEPH	µg/L	250	500	500	-	<250	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	-	<250	-	-	-
HEPH	µg/L	250	-	-	-	<250	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	-	<250	-	-	-
VH_{6-10}	µg/L	100	15,000	15,000	15,000	-	<100	-	-	<100	-	-	-	-	-	<100	-	-	-	<100	-	-	-	-	<100	-	-	-
Polycyclic Aromatic Hydrocarbons (PAHs)																												
Acenaphthene	µg/L	0.01	60	60	250	<0.010	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
Acenaphthylene	µg/L	0.01	-	-	-	<0.010	<0.010	-	-	<0.010	-	<0.20	-	-	-	<0.2	-	-	-	<0.200	-	-	-	-	<0.200	-	-	-
Acridine	µg/L	0.01	0.5	0.5	-	<0.010	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
Anthracene	µg/L	0.01	1	1	1,000	<0.010	<0.010	-	-	<0.010	-	<0.010	-	-	-	<0.01	-	-	-	<0.010	-	-	-	-	<0.010	-	-	-
Benz(a)anthracene	µg/L	0.01	1	1	0.07	<0.010	<0.010	-	-	<0.010	-	<0.010	-	-	-	<0.01	-	-	-	<0.010	-	-	-	-	<0.010	-	-	-
Benzo(a)pyrene	µg/L	0.005	0.1	0.1	0.01	<0.0050	<0.0050	-	-	<0.0050	-	<0.010	-	-	-	<0.01	-	-	-	<0.010	-	-	-	-	<0.010	-	-	-
Benzo(b,j,k)fluoranthene	µg/L	0.015	-	-	-	<0.015	<0.015	-	-	<0.0150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b+j)fluoranthene	µg/L	0.01	-	-	0.07	<0.010	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
Benzo(g,h,i)perylene	µg/L	0.01	-	-	-	<0.010	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
Benzo(k)fluoranthene	µg/L	0.01	-	-	-	<0.010	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
2-Chloronaphthalene	µg/L	0.1	-	-	300	-	-	-	-	-	-	<0.10	-	-	-	<0.1	-	-	-	<0.100	-	-	-	-	<0.100	-	-	-
Chrysene	µg/L	0.01	1	1	7	<0.010	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
Dibenz(a,h)anthracene	µg/L	0.005	-	-	0.01	<0.005	<0.0050	-	-	<0.0050	-	<0.010	-	-	-	<0.01	-	-	-	<0.010	-	-	-	-	<0.010	-	-	-
Fluoranthene	µg/L	0.01	2	2	150	0.0	<0.010	-	-	<0.010	-	<0.030	-	-	-	<0.03	-	-	-	<0.030	-	-	-	-	<0.030	-	-	-
Fluorene	µg/L	0.01	120	120	150	<0.010	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
Indeno(1,2,3-c,d)pyrene	µg/L	0.01	-	-	-	<0.010	<0.010	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
1-Methylnaphthalene	µg/L	0.05	-	-	5.5	<0.050	<0.050	-	-	<0.010	-	<0.10	-	-	-	<0.1	-	-	-	<0.100	-	-	-	-	<0.100	-	-	-
2-Methylnaphthalene	µg/L	0.02	-	-	15	<0.050	<0.050	-	-	<0.010	-	<0.10	-	-	-	<0.1	-	-	-	<0.100	-	-	-	-	<0.100	-	-	-
Naphthalene	µg/L	0.02	10	10	80	<0.050	<0.050	-	-	<0.050	-	<0.20	-	-	-	<0.2	-	-	-	<0.200	-	-	-	-	<0.200	-	-	-
Phenanthrene	µg/L	0.02	3	3	-	<0.020	<0.020	-	-	<0.020	-	<0.10	-	-	-	<0.1	-	-	-	<0.100	-	-	-	-	<0.100	-	-	-
Pyrene	µg/L	0.01	0.2	0.2	100	0.1	0.0	-	-	<0.010	-	<0.02	-	-	-	<0.02	-	-	-	<0.020	-	-	-	-	<0.020	-	-	-
Quinoline	µg/L	0.05	34	34	0.05	<0.050	<0.050	-	-	<0.050	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-

NOTES:

#1	Guideline varies with hardness. Values shown based on average hardness of 43 mg/L at background well MW13-01.
#2	Standard varies with pH. Value shown based on average laboratory pH of 7.0 at background well MW13-01.
#3	Standard varies with chloride concentration. Value shown based on average chloride concentration of 7 mg/L at background well MW13-01.
#4	Standard is for Chromium VI.
-	Not analyzed or no applicable CSR standard.
<	Concentration is less than the laboratory detection limit indicated.
CSR	BC Contaminated Sites Regulation (BC Reg. 375/96, including amendments up to BC Reg. 133/2022, March 2023) Schedule 3.2.
AW	Freshwater and marine aquatic life standards.
DW	Drinking water standards.
EPHw	Extractable Petroleum Hydrocarbons.
LEPHw	Light Extractable Petroleum Hydrocarbons.
HEPHw	Heavy Extractable Petroleum Hydrocarbons.
Shaded	Shaded indicates an exceedance of the CSR Freshwater AW standard.
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TETRA TECH

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						L2318207	L2367392	VA20A0908280120 20	VA20A0363250420 20	VA20B1139240720 20	VA20B9565301020 20	21B2866	21E1432	21G2459	21L0641	22C0773	22G1537	22J1342	22L1310	23C0154	23E2913	23E2913	23I3541	23L2282	24B2509	24F3072	24I2276	24L1123	24L1123
						L2318207-4	L2367392-4	VA20A0908-005	VA20A5363-004	VA20B1139-004	VA20B9565-004	21B2866-05	21E1432-04	21G2459-05	21L0641-05	22C0773-05	22G1537-05	22J1342-08	22L1310-05	23C0154-04	23E2913-04	23E2913-09	23I3541-04	23L2282-04	24B2509-04	24F3072-04	24I2276-04	24L1123-04	24L1123-09
Parameter	**Unit**	**RDL**	**CSR - AW**		**CSR - DW**																							
			Freshwater	Marine																								
Resin/Fatty Acids																												
Abietic Acid	µg/L	0.001	-	-	-	<0.0010	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-	-
Arachidic Acid	µg/L	0.005	-	-	-	<0.0050	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Behenic Acid	µg/L	0.005	-	-	-	<0.0050	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12-Chlorodehydroabietic Acid	µg/L	0.001	-	-	-	<0.0010	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-	-
14-Chlorodehydroabietic Acid	µg/L	0.001	-	-	-	<0.0010	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-	-
Dehydroabietic Acid	µg/L	0.001	-	-	-	<0.0010	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-	-
Dichlorodehydroabietic Acid	µg/L	0.001	-	-	-	<0.0010	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-	-
9,10-Dichlorostearic Acid	µg/L		-	-	-	-	-	-	-		-		-	-	-	-	<10	-	-	<10	-	-	-	-	<10	-	-	-	-
Isopimaric & Palustric Acids	µg/L	0.001	-	-	-	<0.0010	-	-	-	<1.0	-	<6.0	-	-	-	-	<10	-	-	<10	-	-	-	-	-	-	-	-	-
Isopimaric Acid	µg/L	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	-	-
Palustric Acid	µg/L	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	-	-
Lauric Acid	µg/L	0.005	-	-	-	<0.0050	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Levopimaric Acid	µg/L	0.001	-	-	-	<0.0010	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-	-
Lignoceric Acid	µg/L	0.005	-	-	-	<0.0050	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Linoleic Acid	µg/L	0.005	-	-	-	<0.0050	-	-	-	<5.0	-	-	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-	-
Linolenic Acid	µg/L	0.005	-	-	-	<0.0050	-	-	-	<5.0	-	-	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-	-
Myristic Acid	µg/L	0.005	-	-	-	<0.0050	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Neoabietic Acid	µg/L	0.001	-	-	-	<0.0010	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-	-
Octadecanoic Acid	µg/L		-	-	-		-	-	-		-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-
Oleic Acid	µg/L	0.005	-	-	-	<0.0050	-	-	-	<5.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-	-
Palmitic Acid	µg/L	100	-	-	-	<100	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pimaric Acid	µg/L	0.001	-	-	-	<0.0010	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-	-
Sandaracopimaric Acid	µg/L	0.001	-	-	-	<0.0010	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-	-
Stearic Acid	µg/L	20	-	-	-	<20	-	-	-		-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-
Total Fatty Acids	µg/L	0.1	-	-	-	<0.10	-	-	-	<110	-	-	-	-	-	-	<10	-	-	<10	-	-	-	-	<10	-	-	-	-
Total Resin Acids	µg/L	0.01	-	-	-	<0.010	-	-	-	<3.5	-	-	-	-	-	-	<10	-	-	<10	-	-	-	-	<10	-	-	-	-
Total Resin and Fatty Acid	µg/L	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	<10	-	-	-	-	<10	-	-	-	-
BTEXS & MTBE																													
Benzene	µg/L	0.5	400	1,000	5	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-
Toluene	µg/L	1	5	2,000	60	-	-	-	-	-	-	*<1.0*	-	-	-	-	-	-	-	*<1.0*	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	1	2,000	2,500	140	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-
Xylenes Total	µg/L	2	300	300	90	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-	-	-
Styrene	µg/L	1	720	720	800	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-
Methyl t-butyl ether (MTBE)	µg/L	1	34,000	4,400	95	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-
Volatile Organic Compounds (VOCs)																													
Hexadecanoic Acid	µg/L	6	-	-	-	-	-	-	-	-	-	<6.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	µg/L	1	-	-	100	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-
Bromoform	µg/L	1	-	-	100	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	µg/L	0.5	130	130	2	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-
Chlorobenzene	µg/L	1	13	250	80	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-
Chloroethane	µg/L	2	-	-	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-	-	-
Chloroform	µg/L	1	20	20	100	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-
Dibromochloromethane	µg/L	1	-	-	100	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	µg/L	0.3	-	-	0.5	-	-	-	-	-	-	<0.30	-	-	-	-	-	-	-	<0.3	-	-	-	-	-	-	-	-	-
Dibromomethane	µg/L	1	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	µg/L	0.5	7	420	200	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	µg/L	1	1,500	1,500	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	µg/L	1	260	260	5	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	µg/L	1	-	-	30	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	µg/L	1	1,000	1,000	5	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	µg/L	1	-	-	14	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-
1,2-Dichloroethene (cis)	µg/L	1	-	-	8	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-
1,2-Dichloroethene (trans)	µg/L	1	-	-	80	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	µg/L	1	-	-	4.5	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-
1,3-Dichloropropene	µg/L	1	-	-	1.5	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-
Methylene Chloride	µg/L	3	980	980	50	-	-	-	-	-	-	<3.0	-	-	-	-	-	-	-	<3.0	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/L	0.5	-	-	0.8	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-
Tetrachloroethene	µg/L	1	1,100	1,100	30	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	µg/L	1	-	-	8000	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	µg/L	1	-	-	3	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-
Trichloroethene	µg/L	1	200	200	5	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	µg/L	1	-	-	1000	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	1	-	-	2	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-

NOTES:

#1	Guideline varies with hardness. Values shown based on average hardness of 43 mg/L at background well MW13-01.
#2	Standard varies with pH. Value shown based on average laboratory pH of 7.0 at background well MW13-01.
#3	Standard varies with chloride concentration. Value shown based on average chloride concentration of 7 mg/L at background well MW13-01.
#4	Guideline is for Chromium VI.
-	Not analyzed or no applicable CSR standard.
<	Concentration is less than the laboratory detection limit indicated.
CSR	BC Contaminated Sites Regulation (BC Reg. 375/96, including amendments up to BC Reg. 133/2022, March 2023) Schedule 3.2.
AW	Freshwater and marine aquatic life standards.
DW	Drinking water standards.
Shaded	Shaded indicates an exceedance of the CSR Freshwater AW guidelines.
BOLD	Bold and underlined indicates an exceedance of the CSR Marine AW guidelines.
Red Text	Red text indicates an exceedance of the CSR DW standard.
Italic	Detection limit greater than guideline.

TETRA TECH

Table 2: Groundwater Analytical Results

						MW19-05					MW24-05			
						25-Jul-2019	17-Oct-2019	27-Jan-2020	23-Apr-2020	22-Jul-2020	24-Jun-2024	16-Sep-2024	DUP (16-Sep-2024)	9-Dec-2024
						L2318207	L2367392	VA20A0908280120 20	VA20A5363250420 20	VA20B1139240720 20	24F3072	24I2276	24I2276	24L1123
						L2318207-5	L2367392-5	VA20A0908-006	VA20A5363-005	VA20B1139-005	24F3072-10	24I2276-10	24I2276-09	24L1123-10
Parameter	**Unit**	**RDL**	**CSR - AW**		**CSR - DW**									
			Freshwater	**Marine**										
Field Measurements														
Temperature	°C		-	-	-	14.40	11.4	9	9.38	11.7	12.9	13.7	-	9.9
Electrical Conductivity	µS/cm		-	-	-	705	625	200	392	88.4	153.4	161.4	-	82.8
Total Dissolved Solids (TDS)	mg/L		-	-	-	458	-	187.2	369	572	130.1	133.9	-	75.4
Salinity	-		15	10	-	0.35	-	-	-		-	-	-	-
Dissolved Oxygen	%		-	-	-	-	-	-	-		-	-	-	-
Dissolved Oxygen	mg/L		-	-	-	5.68	-	8.63	5.64	4.91	3.49	1.47	-	0.96
pH	pH Units		-	-	-	5.92	6.94	6.34	6.26	6.53	6.34	6.18	-	6.1
Oxidation Reduction Potential (ORP)	-		-	-	-	249.7	-	156.2	101.9	111.8	113.9	70.9	-	-3.2
Physical Parameters														
pH	pH Units	0.1	-	-	-	8.02	7.25	7.15	8.13	6.81	6.51	6.86	6.85	6.93
Electrical Conductivity (EC)	µS/cm	2	-	`	-	746	853	-	695	-	236	214	214	119
Total Suspended Solids (TSS)	µg/L	3000	-	-	-	2,760,000	1,880,000	-	114,000	-	-	-	-	-
Total Dissolved Solids (TDS)	µg/L	10,000	-	-	-	-	-	178,000	506,000	-	252,000	-	-	78,000
Hardness as $CaCO_3$	µg/L	500	-	-	-	368,000	392,000	-	304,000	-	97,300	-	-	50,500
Alkalinity (total as $CaCO_3$)	µg/L	1000	-	-	-	-	-	-	-	-	103,000	87,400	87,200	50,700
Alkalinity (P)	µg/L	1000	-	-	-	-	-	-	-	-	<1,000	<1,000	<1,000	<1,000
Bicarbonate	µg/L	1000	-	-	-	-	-	-	-	-	103,000	87,400	87,200	50,700
Carbonate	µg/L	1000	-	-	-	-	-	-	-	-	<1,000	<1,000	<1,000	<1,000
Hydroxide	µg/L	1000	-	-	-	-	-	-	-	-	<1,000	<1,000	<1,000	<1,000
Bromide	µg/L	50	-	-	-	<50	<250	<50	<50	<250	-	-	-	-
Chloride	µg/L	500	1,500,000	1,500,000	250,000	8,480	9,200	17,300	9,380	11,500	5,180	2,750	2,760	530
Fluoride	µg/L	20	2,000 #1	15,000	1,500	29	<100	33	29	<100	<100	<100	<100	<100
Sulphate	µg/L	300	2,180,000 #1	2,180,000 #1	500,000	270,000	323,000	37,900	240,000	325,000	6,900	7,800	7,300	2,600
Sulphide (as S)	µg/L	10	-	-	-	<2.0	<18	<2.0	2	2.6	-	-	-	-
Sulphide (as H2S)	µg/L	2	20	20	50	-	-	<2.0	2.1	2.8	-	-	-	-
Sulphide, total	µg/L	20	-	-	-	-	-	-	-	-	<20	<20	-	<20
Turbidity	NTU	0.1	-	-	-	-	1340	-	-	-	-	-	-	-
Acidity	µg/L		-	-	-	-	-	-	<2,000	-	-	-	-	-
Nutrients														
Ammonia as N	µg/L	5	18,500 #2	64,000 #2	-	81.5	13.2	<5.0	<5.0	12.8	131	<50	<50	<50
Nitrate (as N)	µg/L	5	400,000	400,000	10,000	167	39	374	161	160	<10	1,260	1,260	111
Nitrite (as N)	µg/L	1	800 #3	800 #3	1,000	2.1	<5.0	<1.0	<1.0	<5.0	<10	<10	<10	<10
Nitrate and Nitrite (as N)	µg/L	50	400,000	400,000	10,000	-	-	-	-	-	-	-	-	-
Demand Parameters														
Biochemical Oxygen Demand (BOD)	µg/L	2000	-	-	-	<2000	<2000	-	<2,000	-	17,100	-	-	<2,700
Chemical Oxygen Demand (COD)	µg/L	20000	-	-	-	127,000	43,000	-	<20,000	-	288,000	-	-	38,000
Carbon														
Dissolved Organic Carbon (DOC) (Filtered)	µg/L	500	-	-	-	-	-	-	-	-	32,800	-	-	14,000
Total Organic Carbon (TOC)	µg/L	500	-	-	-	-	7520	-	-	-	-	-	-	-
Phenols														
Phenols (4AAP)	µg/L	1	-	-	-	5.9	-	-	-	<1.0	-	-	-	-
Dissolved Metals														
Aluminum	µg/L	1	-	-	9,500	3.9	4.6	-	4.8	-	83.1	-	-	170
Antimony	µg/L	0.1	90	2,500	6	0.2	0.2	-	0.2	-	0.73	-	-	0.84
Arsenic	µg/L	0.1	50	125	10	0.2	0.3	-	0.1	-	0.53	-	-	0.59
Barium	µg/L	0.1	10,000	5,000	1,000	18.7	21.5	-	17.6	-	18.1	-	-	<5.0
Beryllium	µg/L	0.1	1.5	1,000	8	<0.10	<0.10	-	<0.020	-	<0.10	-	-	<0.10
Bismuth	µg/L	0.05	-	-	-	<0.050	<0.050	-	<0.050	-	<0.10	-	-	<0.10
Boron	µg/L	10	12,000	12,000	5,000	821.0	770.0	-	637.0	-	<50.0	-	-	<50.0
Cadmium	µg/L	0.005	1.5 #1	15	5	0.1	0.1	-	0.1	-	2.71	-	-	0.062
Calcium	µg/L	50	-	-	-	129000.0	137000.0	-	103000.0	-	29,800	-	-	15,700
Cesium	µg/L	0.01	-	-	-	<0.010	<0.010	-	<0.010	-	-	-	-	-
Chromium	µg/L	0.1	10 #4	15 #4	50 #4	<0.10	<0.10	-	<0.50	-	<0.50	-	-	1.05
Cobalt	µg/L	0.1	40	40	1	1.0	1.1	-	2.1	-	4.82	-	-	0.12
Copper	µg/L	0.2	20 #1	20	1,500	2.5	1.8	-	1.4	-	**100**	-	-	11.9
Iron	µg/L	10	-	-	6,500	<10	<10	-	26.0	-	869	-	-	96
Lead	µg/L	0.05	40 #1	20	10	<0.050	<0.050	-	0.1	-	5.6	-	-	<0.20
Lithium	µg/L	1	-	-	8	1.3	1.1	-	<1.0	-	0.33	-	-	0.14
Magnesium	µg/L	5	-	-	-	11100.0	12000.0	-	9410.0	-	5,550	-	-	2,720
Manganese	µg/L	0.1	-	-	1,500	463.0	595.0	-	221.0	-	84.2	-	-	9.57
Mercury	µg/L		0.25	0.25	1	<0.0050	<0.0050	-	-	-	<0.010	-	-	<0.010
Molybdenum	µg/L	0.05	10,000	10,000	250	1.1	1.1	-	0.5	-	0.64	-	-	0.48
Nickel	µg/L	0.5	250 #1	83	80	1.1	1.4	-	0.7	-	1.68	-	-	0.79
Phosphorus	µg/L	50	-	-	-	<50	<50	-	<50	-	<50	-	-	<50
Potassium	µg/L	50	-	-	-	4540.0	4640.0	-	3420.0	-	4,100	-	-	1,940
Rubidium	µg/L	0.2	-	-	-	2.8	3.1	-	2.4	-	-	-	-	-
Selenium	µg/L	0.05	20	20	10	<0.050	0.1	-	0.1	-	<0.50	-	-	<0.50
Silicon	µg/L	50	-	-	-	7350.0	8360.0	-	6680.0	-	10,800	-	-	6,900
Silver	µg/L	0.01	0.5 #1	15	20	<0.010	<0.010	-	<0.010	-	<0.050	-	-	<0.050
Sodium	µg/L	50	-	-	200,000	24000.0	27700.0	-	21900.0	-	12,000	-	-	4,230
Strontium	µg/L	0.2	-	-	2,500	817.0	884.0	-	642.0	-	146	-	-	59.2
Sulphur	µg/L	500	-	-	-	102000.0	120000.0	-	83500.0	-	3,300	-	-	<3,000
Tellurium	µg/L	0.2	-	-	-	<0.20	<0.20	-	<0.20	-	<0.50	-	-	<0.50
Thallium	µg/L	0.01	3	3	-	<0.010	<0.010	-	<0.010	-	<0.020	-	-	<0.020
Thorium	µg/L	0.1	-	-	-	<0.10	<0.10	-	<0.10	-	<0.10	-	-	<0.10
Tin	µg/L	0.1	-	-	2,500	0.2	0.1	-	<0.10	-	<0.20	-	-	<0.20
Titanium	µg/L	0.3	1,000	1,000	-	<0.30	<0.30	-	<0.30	-	<5.0	-	-	<5.0
Tungsten	µg/L	0.1	-	-	3	<0.10	<0.10	-	<0.10	-	<1.0	-	-	<1.0
Uranium	µg/L	0.01	85	85	20	4.9	5.9	-	6.4	-	0.21	-	-	0.592
Vanadium	µg/L	0.5	-	-	20	0.8	0.6	-	<0.50	-	<5.0	-	-	<5.0
Zinc	µg/L	1	75 #1	100	3,000	6.2	8.4	-	1.6	-	10.7	-	-	<4.0
Zirconium	µg/L	0.06	-	-	-	<0.20	<0.20	-	<0.30	-	<0.10	-	-	0.16

NOTES:

#1	Guideline varies with hardness. Values shown based on average hardness of 43 mg/L at background well MW13-01.
#2	Standard varies with pH. Value shown based on average laboratory pH of 7.0 at background well MW13-01.
#3	Standard varies with chloride concentration. Value shown based on average chloride concentration of 7 mg/L at background well MW13-01.
#4	Standard is for Chromium VI.
-	Not analyzed or no applicable CSR standard.
<	Concentration is less than the laboratory detection limit indicated.
CSR	BC Contaminated Sites Regulation (BC Reg. 375/96, including amendments up to BC Reg. 133/2022, March 2023) Schedule 3.2.
AW	Freshwater and marine aquatic life standards.
DW	Drinking water standards.
Shaded	Shaded indicates an exceedance of the CSR Freshwater AW standard.
BOLD	Bold and underlined indicates an exceedance of the CSR Marine AW standard.
Red Text	Red text indicates an exceedance of the CSR DW standard.
RDL	Detection limit greater than standard.

TETRA TECH

Table 2: Groundwater Analytical Results

						MW19-05					MW24-05			
						25-Jul-2019	17-Oct-2019	27-Jan-2020	23-Apr-2020	22-Jul-2020	24-Jun-2024	16-Sep-2024	DUP (16-Sep-2024)	9-Dec-2024
						L2318207	L2367392	VA20A0908280120 20	VA20A5363250420 20	VA20B1139240720 20	24F3072	24I2276	24I2276	24L1123
						L2318207-5	L2367392-5	VA20A0908-006	VA20A5363-005	VA20B1139-005	24F3072-10	24I2276-10	24I2276-09	24L1123-10
Parameter	**Unit**	**RDL**	**CSR - AW**		**CSR - DW**									
			Freshwater	**Marine**										
Total Metals														
Aluminum	µg/L	3	-	-	-	-	-	-	976.0	-	-	-	-	336
Antimony	µg/L	0.1	-	-	-	-	-	-	0.2	-	-	-	-	0.8
Arsenic	µg/L	0.1	-	-	-	-	-	-	0.7	-	-	-	-	0.63
Barium	µg/L	0.1	-	-	-	-	-	-	29.3	-	-	-	-	<5.0
Beryllium	µg/L	0.1	-	-	-	-	-	-	0.0	-	-	-	-	<0.10
Bismuth	µg/L	0.05	-	-	-	-	-	-	<0.050	-	-	-	-	<0.10
Boron	µg/L	10	-	-	-	-	-	-	621.0	-	-	-	-	<50.0
Cadmium	µg/L	0.005	-	-	-	-	-	-	0.1	-	-	-	-	0.068
Calcium	µg/L	50	-	-	-	-	-	-	106000.0	-	-	-	-	16,200
Cesium	µg/L	0.01	-	-	-	-	-	-	0.1	-	-	-	-	-
Chromium	µg/L	0.1	-	-	-	-	-	-	1.0	-	-	-	-	1.16
Cobalt	µg/L	0.1	-	-	-	-	-	-	9.2	-	-	-	-	0.15
Copper	µg/L	0.5	-	-	-	-	-	-	4.3	-	-	-	-	12
Iron	µg/L	10	-	-	-	-	-	-	1490.0	-	-	-	-	195
Lead	µg/L	0.05	-	-	-	-	-	-	3.4	-	-	-	-	<0.20
Lithium	µg/L	1	-	-	-	-	-	-	1.3	-	-	-	-	0.2
Magnesium	µg/L	5	-	-	-	-	-	-	9370.0	-	-	-	-	2,740
Manganese	µg/L	0.1	-	-	-	-	-	-	396.0	-	-	-	-	11.1
Mercury	µg/L	1	-	-	-	-	-	-	-	-	-	-	-	<0.010
Molybdenum	µg/L	0.05	-	-	-	-	-	-	0.6	-	-	-	-	0.52
Nickel	µg/L	0.5	-	-	-	-	-	-	1.1	-	-	-	-	0.89
Phosphorus	µg/L	50	-	-	-	-	-	-	80.0	-	-	-	-	<50
Potassium	µg/L	50	-	-	-	-	-	-	3620.0	-	-	-	-	1,990
Rubidium	µg/L	0.2	-	-	-	-	-	-	3.4	-	-	-	-	-
Selenium	µg/L	0.05	-	-	-	-	-	-	0.1	-	-	-	-	<0.50
Silicon	µg/L	100	-	-	-	-	-	-	7820.0	-	-	-	-	7,300
Silver	µg/L	0.01	-	-	-	-	-	-	<0.010	-	-	-	-	<0.050
Sodium	µg/L	50	-	-	-	-	-	-	20800.0	-	-	-	-	4,320
Strontium	µg/L	0.2	-	-	-	-	-	-	672.0	-	-	-	-	62.5
Sulphur	µg/L	500	-	-	-	-	-	-	83300.0	-	-	-	-	<3,000
Tellurium	µg/L	0.2	-	-	-	-	-	-	<0.20	-	-	-	-	<0.50
Thallium	µg/L	0.01	-	-	-	-	-	-	0.0	-	-	-	-	<0.020
Thorium	µg/L	0.1	-	-	-	-	-	-	0.3	-	-	-	-	<0.10
Tin	µg/L	0.1	-	-	-	-	-	-	0.1	-	-	-	-	<0.20
Titanium	µg/L	0.3	-	-	-	-	-	-	51.8	-	-	-	-	6.6
Tungsten	µg/L	0.1	-	-	-	-	-	-	0.2	-	-	-	-	<1.0
Uranium	µg/L	0.01	-	-	-	-	-	-	7.2	-	-	-	-	0.616
Vanadium	µg/L	0.5	-	-	-	-	-	-	5.9	-	-	-	-	<5.0
Zinc	µg/L	3	-	-	-	-	-	-	5.5	-	-	-	-	<4.0
Zirconium	µg/L	0.2	-	-	-	-	-	-	<0.20	-	-	-	-	0.14
Hydrocarbons														
EPH_{10-19}	µg/L	250	5,000	5,000	5,000	<250	-	-	-	<250	-	-	-	-
EPH_{19-32}	µg/L	250	-	-	-	<250	-	-	-	<250	-	-	-	-
LEPH	µg/L	250	500	500	-	<250	-	-	-	<250	-	-	-	-
HEPH	µg/L	250	-	-	-	<250	-	-	-	<250	-	-	-	-
VH_{6-10}	µg/L	100	15,000	15,000	15,000	-	<100	-	-	<100	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAHs)														
Acenaphthene	µg/L	0.01	60	60	250	0.0	<0.010	-	-	<0.010	-	-	-	-
Acenaphthylene	µg/L	0.01	-	-	-	<0.010	<0.010	-	-	<0.010	-	-	-	-
Acridine	µg/L	0.01	0.5	0.5	-	<0.010	<0.010	-	-	<0.010	-	-	-	-
Anthracene	µg/L	0.01	1	1	1,000	0.0	<0.010	-	-	<0.010	-	-	-	-
Benz(a)anthracene	µg/L	0.01	1	1	0.07	0.1	0.0	-	-	<0.010	-	-	-	-
Benzo(a)pyrene	µg/L	0.005	0.1	0.1	0.01	0.1	0.0	-	-	<0.0050	-	-	-	-
Benzo(b,j,k)fluoranthene	µg/L	0.015	-	-	-	0.1	<0.015	-	-	<0.0150	-	-	-	-
Benzo(b+j)fluoranthene	µg/L	0.01	-	-	0.07	0.1	0.0	-	-	<0.010	-	-	-	-
Benzo(g,h,i)perylene	µg/L	0.01	-	-	-	0.1	0.0	-	-	<0.010	-	-	-	-
Benzo(k)fluoranthene	µg/L	0.01	-	-	-	0.0	<0.010	-	-	<0.010	-	-	-	-
2-Chloronaphthalene	µg/L	0.1	-	-	300	-	-	-	-	-	-	-	-	-
Chrysene	µg/L	0.01	1	1	7	0.1	0.0	-	-	<0.010	-	-	-	-
Dibenz(a,h)anthracene	µg/L	0.005	-	-	0.01	0.0	<0.0050	-	-	<0.0050	-	-	-	-
Fluoranthene	µg/L	0.01	2	2	150	0.2	0.0	-	-	<0.010	-	-	-	-
Fluorene	µg/L	0.01	120	120	150	0.0	<0.010	-	-	<0.010	-	-	-	-
Indeno(1,2,3-c,d)pyrene	µg/L	0.01	-	-	-	0.1	<0.010	-	-	<0.010	-	-	-	-
1-Methylnaphthalene	µg/L	0.05	-	-	5.5	<0.050	<0.050	-	-	<0.010	-	-	-	-
2-Methylnaphthalene	µg/L	0.02	-	-	15	<0.050	<0.050	-	-	<0.010	-	-	-	-
Naphthalene	µg/L	0.02	10	10	80	<0.050	<0.050	-	-	<0.050	-	-	-	-
Phenanthrene	µg/L	0.02	3	3	-	0.2	<0.020	-	-	<0.020	-	-	-	-
Pyrene	µg/L	0.01	0.2	0.2	100	0.2	0.0	-	-	<0.010	-	-	-	-
Quinoline	µg/L	0.05	34	34	0.05	<0.050	<0.050	-	-	<0.050	-	-	-	-

NOTES:	
#1	Guideline varies with hardness. Values shown based on average hardness of 43 mg/L at background well MW13-01.
#2	Standard varies with pH. Value shown based on average laboratory pH of 7.0 at background well MW13-01.
#3	Standard varies with chloride concentration. Value shown based on average chloride concentration of 7 mg/L at background well MW13-01.
#4	Standard is for Chromium VI.
-	Not analyzed or no applicable CSR standard.
<	Concentration is less than the laboratory detection limit indicated.
CSR	BC Contaminated Sites Regulation (BC Reg. 375/96, including amendments up to BC Reg. 133/2022, March 2023) Schedule 3.2.
AW	Freshwater and marine aquatic life standards.
DW	Drinking water standards.
EPHw	Extractable Petroleum Hydrocarbons.
LEPHw	Light Extractable Petroleum Hydrocarbons.
HEPHw	Heavy Extractable Petroleum Hydrocarbons.
Shaded	Shaded indicates an exceedance of the CSR Freshwater AW standard.
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RDL	Detection limit greater than standard.

TETRA TECH

Table 2: Groundwater Analytical Results

						MW19-05					MW24-05			
						25-Jul-2019	17-Oct-2019	27-Jan-2020	23-Apr-2020	22-Jul-2020	24-Jun-2024	16-Sep-2024	DUP (16-Sep-2024)	9-Dec-2024
						L2318207	L2367392	VA20A0908280120 20	VA20A5363250420 20	VA20B1139240720 20	24F3072	24I2276	24I2276	24L1123
						L2318207-5	L2367392-5	VA20A0908-006	VA20A5363-005	VA20B1139-005	24F3072-10	24I2276-10	24I2276-09	24L1123-10
Parameter	**Unit**	**RDL**	**CSR - AW**		**CSR - DW**									
			Freshwater	**Marine**										
Resin/Fatty Acids														
Abietic Acid	µg/L	0.001	-	-	-	0.0	-	-	-	<1.0	-	-	-	-
Arachidic Acid	µg/L	0.005	-	-	-	<0.0050	-	-	-	<5.0	-	-	-	-
Behenic Acid	µg/L	0.005	-	-	-	0.0	-	-	-	<5.0	-	-	-	-
12-Chlorodehydroabietic Acid	µg/L	0.001	-	-	-	<0.0010	-	-	-	<1.0	-	-	-	-
14-Chlorodehydroabietic Acid	µg/L	0.001	-	-	-	<0.0010	-	-	-	<1.0	-	-	-	-
Dehydroabietic Acid	µg/L	0.001	-	-	-	0.0	-	-	-	<1.0	-	-	-	-
Dichlorodehydroabietic Acid	µg/L	0.001	-	-	-	<0.0010	-	-	-	<1.0	-	-	-	-
9,10-Dichlorostearic Acid	µg/L		-	-	-	-	-	-	-	-	-	-	-	-
Isopimaric & Palustric Acids	µg/L	0.001	-	-	-	0.0	-	-	-	<1.0	-	-	-	-
Isopimaric Acid	ug/L	10	-	-	-	-	-	-	-	-	-	-	-	-
Palustric Acid	ug/L	10	-	-	-	-	-	-	-	-	-	-	-	-
Lauric Acid	µg/L	0.005	-	-	-	<0.0050	-	-	-	<5.0	-	-	-	-
Levopimaric Acid	µg/L	0.001	-	-	-	<0.0010	-	-	-	<1.0	-	-	-	-
Lignoceric Acid	µg/L	0.005	-	-	-	<0.0050	-	-	-	<5.0	-	-	-	-
Linoleic Acid	µg/L	0.005	-	-	-	<0.0050	-	-	-	<5.0	-	-	-	-
Linolenic Acid	µg/L	0.005	-	-	-	<0.0050	-	-	-	<5.0	-	-	-	-
Myristic Acid	µg/L	0.005	-	-	-	<0.0050	-	-	-	<5.0	-	-	-	-
Neoabietic Acid	µg/L	0.001	-	-	-	<0.0010	-	-	-	<1.0	-	-	-	-
Octadecanoic Acid	µg/L		-	-	-	-	-	-	-	-	-	-	-	-
Oleic Acid	µg/L	0.005	-	-	-	<0.0050	-	-	-	<5.0	-	-	-	-
Palmitic Acid	µg/L	100	-	-	-	<100	-	-	-	-	-	-	-	-
Pimaric Acid	µg/L	0.001	-	-	-	<0.0010	-	-	-	<1.0	-	-	-	-
Sandaracopimaric Acid	µg/L	0.001	-	-	-	<0.0010	-	-	-	<1.0	-	-	-	-
Stearic Acid	µg/L	20	-	-	-	<20	-	-	-	-	-	-	-	-
Total Fatty Acids	µg/L	0.1	-	-	-	<0.10	-	-	-	<110	-	-	-	-
Total Resin Acids	µg/L	0.01	-	-	-	<0.010	-	-	-	<3.5	-	-	-	-
Total Resin and Fatty Acid	µg/L	0.01	-	-	-	-	-	-	-	-	-	-	-	-
BTEXS & MTBE														
Benzene	µg/L	0.5	400	1,000	5	-	-	-	-	-	-	-	-	-
Toluene	µg/L	1	5	2,000	60	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	1	2,000	2,500	140	-	-	-	-	-	-	-	-	-
Xylenes Total	µg/L	2	300	300	90	-	-	-	-	-	-	-	-	-
Styrene	µg/L	1	720	720	800	-	-	-	-	-	-	-	-	-
Methyl t-butyl ether (MTBE)	µg/L	1	34,000	4,400	95	-	-	-	-	-	-	-	-	-
Volatile Organic Compounds (VOCs)														
Hexadecanoic Acid	µg/L	6	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	µg/L	1	-	-	100	-	-	-	-	-	-	-	-	-
Bromoform	µg/L	1	-	-	100	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	µg/L	0.5	130	130	2	-	-	-	-	-	-	-	-	-
Chlorobenzene	µg/L	1	13	250	80	-	-	-	-	-	-	-	-	-
Chloroethane	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	µg/L	1	20	20	100	-	-	-	-	-	-	-	-	-
Dibromochloromethane	µg/L	1	-	-	100	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	µg/L	0.3	-	-	0.5	-	-	-	-	-	-	-	-	-
Dibromomethane	µg/L	1	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	µg/L	0.5	7	420	200	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	µg/L	1	1,500	1,500	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	µg/L	1	260	260	5	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	µg/L	1	-	-	30	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	µg/L	1	1,000	1,000	5	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	µg/L	1	-	-	14	-	-	-	-	-	-	-	-	-
1,2-Dichloroethene (cis)	µg/L	1	-	-	8	-	-	-	-	-	-	-	-	-
1,2-Dichloroethene (trans)	µg/L	1	-	-	80	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	µg/L	1	-	-	4.5	-	-	-	-	-	-	-	-	-
1,3-Dichloropropene	µg/L	1	-	-	1.5	-	-	-	-	-	-	-	-	-
Methylene Chloride	µg/L	3	980	980	50	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/L	0.5	-	-	0.8	-	-	-	-	-	-	-	-	-
Tetrachloroethene	µg/L	1	1,100	1,100	30	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	µg/L	1	-	-	8000	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	µg/L	1	-	-	3	-	-	-	-	-	-	-	-	-
Trichloroethene	µg/L	1	200	200	5	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	µg/L	1	-	-	1000	-	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	1	-	-	2	-	-	-	-	-	-	-	-	-

NOTES:

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#2	Standard varies with pH. Value shown based on average laboratory pH of 7.0 at background well MW13-01.
#3	Standard varies with chloride concentration. Value shown based on average chloride concentration of 7 mg/L at background well MW13-01.
#4	Guideline is for Chromium VI.
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AW	Freshwater and marine aquatic life standards.
DW	Drinking water standards.
Shaded	Shaded indicates an exceedance of the CSR Freshwater AW guidelines.
BOLD	Bold and underlined indicates an exceedance of the CSR Marine AW guidelines.
Red Text	Red text indicates an exceedance of the CSR DW standard.
#a#c	Detection limit greater than guideline.

TETRA TECH

Table 3: Surface Water Analytical Results

Parameter	Unit	BC WQG - Fresh AW		BC WQG - Marine AW		Location	SW-1																									
						Sample Date	25-Mar-2014	1-Apr-2019	25-Jul-2019	17-Oct-2019	27-Jan-2020	23-Apr-2020	22-Jul-2020	28-Oct-2020	21-Feb-2021	11-May-2021	19-Jul-2021	1-Dec-2021	2-Mar-2022	12-Jul-2022	11-Oct-2022	12-Dec-2022	28-Feb-2023	23-May-2023	27-Sep-2023	18-Dec-2023	22-Feb-2024	24-Jun-2024	16-Sep-2024	9-Dec-2024
						Laboratory Report Number	-	L2254181	L2318207	L2367392	VA20A0908280120	VA20A3632504202	VA20B1139240720	VA20B9563010202	21B2866	21E1432	21G2459	21L0641	22C0773	22G1537	22J1342	22L1310	23C0154	23E2913	23I3541	23L2282	24B2509	24F3072	24I2276	24L1123
						Laboratory Sample ID	-	L2254181-1	L2318207-6	L2367392-6	VA20A0908-007	VA20A5363-007	VA20B1139-007	VA20B9565-006	21B2866-06	21E1432-06	21G2459-06	21L0641-06	22C0773-06	22G1537-06	22J1342-01	22L1310-06	23C0154-05	23E2913-05	23I3541-05	23L2282-05	24B2509-05	24F3072-05	24I2276-05	24L1123-05
		Approved	Working	Approved	Working																											
Field Measurements																																
Temperature	°C	19 [#1]	-	-	-	-	10.14	16.83	10.5	5.7	-	16.8	9.3	4	11.2	12.3	8	7.0	15.8	11.5	4.3	4	14.2	11.8	6.3	6.7	15.7	13.6	6.3
Electrical Conductivity	µS/cm	-	-	-	-	-	85	84	71.2	80.7	-	107.3	91.4	47.5	164.1	104.9	49	42.7	81.3	116.8	59.3	51.4	80.8	80.5	50	57.8	119.9	81.1	55.7
Total Dissolved Solids (TDS)	mg/L	-	-	-	-	-	55	65	-	-	-	69	59.2	51.4	106.6	89.7	47.2	42.25	64.4	75.9	63.8	55.9	66.1	70	50.7	57.7	94.9	67.6	56.3
Salinity	-	-	-	-	-	-	0.04	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	%	-	-	-	-	-	106.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	mg/L	Minimum 5 [#2]	-	Minimum 5 [#2]	-	-	12.68	8.79	-	13.31	-	7.56	11.5	14	10.34	10.9	13.2	12.28	9.66	16.42	12.97	12.29	8.74	10.16	12.3	12.7	10.48	9.67	11.58
pH	pH Units	6.5-9.0	-	7.0-8.7	-	-	7.33	6.16	7.53	-	-	7.43	7.6	7.48	7.74	7.29	6.68	7.01	7.72	7.83	7.36	7.29	7.68	5.41	6.27	7	7.06	7.26	7.75
Oxidation Reduction Potential (ORP)	-	-	-	-	-	-	81.8	300	-	-	-	108	60.5	79.4	133.5	106.6	-15.6	168.0	96.7	107.5	77.0	76.8	71.8	196.5	100.8	11.1	156.5	93.1	28.6
Physical Parameters																																
pH	pH Units	6.5-9.0	-	7.0-8.7	-	-	7.64	7.63	7.80	7.73	7.38	7.72	7.68	7.48	-	7.17	-	7.34	-	7.36	-	7.07	**6.72**	**6.59**	**6.77**	**6.59**	**6.55**	**6.56**	**6.93**	7.17
Electrical Conductivity (EC)	µS/cm	-	-	-	-	-	81.3	85.8	103	101	-	91.9	-	96.9	-	181	-	75.9	-	101	-	103	88	98	102	89.4	81.1	97.4	109	87.7
Total Suspended Solids (TSS)	µg/L	-	-	-	-	-	20,100	4,600	7,100	8,900	-	4,400	-	8,500	-	5,400	-	4,500	-	-	-	-	-	-	-	-	-	-	-	-
Total Dissolved Solids (TDS)	µg/L	-	-	-	-	-	55,000	-	-	-	66,000	66,000	-	73,000	-	92500	-	-	-	64,000	-	-	-	70,000	-	92,000	-	58,000	-	58,000
Hardness as $CaCO_3$	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51,200	46,700	23,400	23,000	33,400	36,300	29,700	-	33,300	-	27,700	-	29,500	-	27,200
Alkalinity (total as $CaCO_3$)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	61,400	-	-	-	-	-	-	25,200	33,300	37,500	31,400	23,600	31,400	34,800	26,200
Alkalinity (P)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1,000	-	-	-	-	-	-	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Bicarbonate	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	61,400	-	-	-	-	-	-	25,200	33,300	37,500	31,400	23,600	31,400	34,800	26,200
Carbonate	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1,000	-	-	-	-	-	-	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Hydroxide	µg/L	-	-	-	-	-	26,800	27,300	32,200	31,000	-	27,400	-	31,300	-	<1,000	-	-	-	-	-	-	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Bromide	µg/L	-	-	-	-	-	<50	<50	<50	<50	<50	<50	<50	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloride	µg/L	150,000 [#5]	-	-	-	-	7,850	9,040	10,300	9,360	8,420	9,560	9,980	9,610	8,720	11,600	12,000	6,390	9,870	8,620	10,100	9,680	9,730	9,440	9,550	9,020	7,960	8,680	9,630	7,900
Fluoride	µg/L	887 [#3,4]	-	1,500 [#3]	-	-	29	<20	26	21	<20	21	25	<20	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Sulphate	µg/L	218,000 [#4,5]	-	-	-	-	2,490	2,930	3,330	2,730	2,190	2,620	3,360	1,860	2,300	8,200	6,600	2,000	2,400	3,600	3,600	2,400	2,200	3,000	2,600	2,100	2,500	2,400	3,300	2,100
Sulphide (as S)	µg/L	-	-	-	-	-	-	18	<2.0	51	<2.0	<2.0	<2.0	<2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulphide (as H2S)	µg/L	-	2	-	-	-	-	-	-	-	<2.0	<2.0	<2.0	<2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulphide, total	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	-	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Turbidity	NTU	-	-	-	-	-	-	2.5	-	4.84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acidity	µg/L	-	-	-	-	-	-	-	-	-	-	11,400	-	2,300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nutrients																																
Ammonia as N	µg/L	1,850 [#5,6]	-	12,000 [#5,7]	-	-	5.7	17.3	14.6	5.1	27.1	9.7	20.6	10.4	<50	<50	<50	<50	<50	<50	<50	148	<50	<50	<50	<50	-	<50	252	62
Nitrate (as N)	µg/L	3,000 [#3]	-	3,700 [#5]	-	-	202	84.8	81.3	31.5	216	53.8	103	44.7	201	257	172	137	178	152	104	66	93	123	75	82	160	76	64	97
Nitrite (as N)	µg/L	100 [#1,8]	-	-	-	-	1.5	1.2	2.3	1.1	3.8	<1.0	1.6	<1.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Nitrate and Nitrite (as N)	µg/L	3,000 [#5]	-	3,700 [#5]	-	-	-	-	-	-	-	54.4	-	-	-	-	-	-	152	-	-	-	-	-	-	-	-	-	-	-
Demand Parameters																																
Biochemical Oxygen Demand (BOD)	µg/L	-	-	-	-	-	-	<2,000	-	<2,000	-	<2,000	-	<2,000	-	<2,400	-	<3,600	-	<3,800	-	<2,200	-	<1,400	-	<2,800	-	<3,200	-	5,100
Chemical Oxygen Demand (COD)	µg/L	-	-	-	-	-	<20,000	<20,000	-	<20,000	-	<20,000	-	<20,000	-	<20,000	-	<20,000	-	<20,000	-	<20,000	-	<20,000	-	28000	-	23,000	-	<20,000
Carbon																																
Dissolved Organic Carbon (DOC)	µg/L	-	-	-	-	-	-	-	-	-	-	3,590	-	3,950	-	-	-	6,950	-	-	-	-	-	-	-	-	-	4,890	-	4,970
Total Organic Carbon (TOC)	µg/L	-	-	-	-	-	-	3320	-	3810	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenols																																
Phenols (4AAP)	µg/L	-	-	-	-	-	1.5	<1.0	-	-	-	-	<2.0	-	2.1	-	-	-	<2	-	-	-	<2.00	-	-	-	<0.50	-	-	-
Dissolved Metals																																
Aluminum	µg/L	-	-	-	-	-	-	-	-	-	-	12.2	-	12.1	-	-	-	63.3	-	-	-	-	-	-	-	-	-	10.9	-	30.2
Antimony	µg/L	-	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10	-	-	-	<0.20	-	-	-	-	-	-	-	-	-	<0.20	-	<0.20
Arsenic	µg/L	-	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10	-	-	-	<0.50	-	-	-	-	-	-	-	-	-	<0.50	-	<0.50
Barium	µg/L	-	-	-	-	-	-	-	-	-	-	3.1	-	3.5	-	-	-	<5.00	-	-	-	-	-	-	-	-	-	<5.0	-	<5.0
Beryllium	µg/L	-	-	-	-	-	-	-	-	-	-	<0.020	-	<0.10	-	-	-	<0.10	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10
Bismuth	µg/L	-	-	-	-	-	-	-	-	-	-	<0.050	-	<0.050	-	-	-	<0.10	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10
Boron	µg/L	-	-	-	-	-	-	-	-	-	-	<10	-	<10	-	-	-	<50	-	-	-	-	-	-	-	-	-	<50.0	-	<50.0
Cadmium	µg/L	0.0932 [#4,5]	-	-	-	-	-	-	-	-	-	<0.0050	-	<0.0050	-	-	-	<0.010	-	-	-	-	-	-	-	-	-	<0.010	-	<0.010
Calcium	µg/L	-	-	-	-	-	-	-	-	-	-	8,110	-	9,060	-	-	-	6,970	-	-	-	-	-	-	-	-	-	8,780	-	8,290
Cesium	µg/L	-	-	-	-	-	-	-	-	-	-	<0.010	-	<0.010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	µg/L	-	-	-	-	-	-	-	-	-	-	<0.50	-	<0.10	-	-	-	<0.50	-	-	-	-	-	-	-	-	-	<0.50	-	<0.50
Cobalt	µg/L	-	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10	-	-	-	<0.10	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10
Copper	µg/L	0.862 [#5,10]	-	-	-	-	-	-	-	-	-	0.35	-	<0.20	-	-	-	0.61	-	-	-	-	-	-	-	-	-	<0.40	-	0.45
Iron	µg/L	350 [#2]	-	-	-	-	-	-	-	-	-	172	-	784	-	-	-	404	-	-	-	-	-	-	-	-	-	242	-	563
Lead	µg/L	3.67 [#5,11]	-	-	-	-	-	-	-	-	-	0.087	-	0.091	-	-	-	<0.20	-	-	-	-	-	-	-	-	-	<0.20	-	<0.20
Lithium	µg/L	-	-	-	-	-	-	-	-	-	-	<1.0	-	<1.0	-	-	-	0.17	-	-	-	-	-	-	-	-	-	0.34	-	0.24
Magnesium	µg/L	-	-	-	-	-	-	-	-	-	-	1,580	-	1,640	-	-	-	1,450	-	-	-	-	-	-	-	-	-	1,850	-	1,580
Manganese	µg/L	-	-	-	-	-	-	-	-	-	-	6.95	-	5.45	-	-	-	3.47	-	-	-	-	-	-	-	-	-	11.8	-	6.52
Mercury	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.0050	-	-	-	<0.010	-	-	-	-	-	-	-	-	-	<0.010	-	<0.010
Molybdenum	µg/L	-	-	-	-	-	-	-	-	-	-	0.185	-	0.134	-	-	-	0.14	-	-	-	-	-	-	-	-	-	0.11	-	0.15
Nickel	µg/L	1.3 [#5,10,13]	-	-	-	-	-	-	-	-	-	<0.50	-	<0.50	-	-	-	<0.40	-	-	-	-	-	-	-	-	-	<0.40	-	<0.40
Phosphorus	µg/L	-	-	-	-	-	-	-	-	-	-	<50	-	<50	-	-	-	<50	-	-	-	-	-	-	-	-	-	<50	-	<50
Potassium	µg/L	-	-	-	-	-	-	-	-	-	-	789	-	624	-	-	-	770	-	-	-	-	-	-	-	-	-	710	-	750
Rubidium	µg/L	-	-	-	-	-	-	-	-	-	-	0.6	-	0.57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	µg/L	-	-	-	-	-	-	-	-	-	-	<0.050	-	<0.050	-	-	-	<0.50	-	-	-	-	-	-	-	-	-	<0.50	-	<0.50
Silicon	µg/L	-	-	-	-	-	-	-	-	-	-	3,670	-	5,150	-	-	-	5,300	-	-	-	-	-	-	-	-	-	5,500	-	6,100
Silver	µg/L	-	-	-	-	-	-	-	-	-	-	<0.010	-	<0.010	-	-	-	<0.050	-	-	-	-	-	-	-	-	-	<0.050	-	<0.050
Sodium	µg/L	-	-	-	-	-	-	-	-	-	-	6,370	-	6,910	-	-	-	5,680	-	-	-	-	-	-	-	-	-	7,500	-	6,530
Strontium	µg/L	-	1,250 [#5,10]	-	-	-	-	-	-	-	-	53	-	58.3	-	-	-	38.7	-	-	-	-	-	-	-	-	-	57.3	-	49.4
Sulphur	µg/L	-	-	-	-	-	-	-	-	-	-	720	-	<0.5	-	-	-	<3,000	-	-	-	-	-	-	-	-	-	<3,000	-	<3,000
Tellurium	µg/L	-	-	-	-	-	-	-	-	-	-	<0.20	-	<0.20	-	-	-	<0.50	-	-	-	-	-	-	-	-	-	<0.50	-	<0.50
Thallium	µg/L	-	-	-	-	-	-	-	-	-	-	<0.010	-	<0.010	-	-	-	<0.020	-	-	-	-	-	-	-	-	-	<0.020	-	<0.020
Thorium	µg/L	-	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10	-	-	-	<0.10	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10
Tin	µg/L	-	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10	-	-	-	<0.20	-	-	-	-	-	-	-	-	-	<0.20	-	<0.20
Titanium	µg/L	-	-	-	-	-	-	-	-	-	-	<0.30	-	<0.30	-	-	-	<5.00	-	-	-	-	-	-	-	-	-	<5.0	-	<5.0
Tungsten	µg/L	-	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	<1.0	-	<1.0
Uranium	µg/L	-	-	-	-	-	-	-	-	-	-	0.014	-	<0.010	-	-	-	<0.020	-	-	-	-	-	-	-	-	-	<0.020	-	<0.020
Vanadium	µg/L	-	-	-	-	-	-	-	-	-	-	<0.50	-	<0.50	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	<5.0	-	<5.0
Zinc	µg/L	7.55 [#5,10]	-	-	-	-	-	-	-	-	-	1.6	-	1.4	-	-	-	4.7	-	-	-	-	-	-	-	-	-	<4.0	-	<4.0
Zirconium	µg/L	-	-	-	-	-	-	-	-	-	-	<0.30	-	<0.20	-	-	-	<0.10	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10

NOTES:

#1	Guideline is for short-term daily temperature in streams with unknown fish distribution.
#2	Guideline is the instantaneous minimum for all life stages other than buried embryo/alevin.
#3	Guideline is the short-term acute WQG.
#4	Guideline varies with hardness. Values shown based on average hardness of 32.855 mg/L at background location SW-1.
#5	Guideline is the long-term chronic WQG.
#6	Guideline varies with pH and temperature. Values shown based on an average laboratory pH of 7.17 and average field temperature of 10.09°C at background location SW-1.
#7	Guideline varies with pH, temperature, and salinity. Values shown based on an average laboratory pH of 7.17 and average field temperature of 10.1°C at background location SW-1. Salinity has not been measured since 2019, so the the guidelines for the lowest salinity is selected.
#8	Guideline varies with chloride. Values shown based on an average chloride concentration of 9.4 mg/L at background location SW-1.
#9	Guideline varies with pH, hardness, and DOC. Values shown is calculated based on an average laboratory pH of 7.17, average hardness of 32.855 mg/L , and DOC of 4.830 mg/L at background location SW-1.
#10	Guideline varies with temperature, hardness, and DOC. Values shown is calculated based on an average field temperature of 10.09°C, average hardness of 32.855 mg/L , and DOC of 4.830 mg/L at background location SW-1.
#11	Guideline varies with hardness and DOC. Values shown is calculated based on an average hardness of 32.855 mg/L, and DOC of 4.830 mg/L at background location SW-1.
#12	Guideline is for Chromium VI.
#13	Guideline varies with pH. Values shown is calculated based on an average laboratory pH of 7.17 at background location SW-1.
-	Not analyzed or no applicable BC WQG guideline.
<	Concentration is less than the laboratory detection limit indicated.
BC WQG - Approved	British Columbia Approved Water Quality Guidelines: Aquatic Life, Wildlife & Agriculture (February 2025).
BC WQG - Working AW	British Columbia Working Water Quality Guidelines: Aquatic Life, Wildlife & Agriculture (August Aquatic Wildlife.
Shaded	Shaded indicates an exceedance of the BCWQG Freshwater AW guidelines.
BOLD	Bold and underlined indicates an exceedance of the BCWQG Marine AW guidelines.
Italic	Detection limit greater than standard.

TETRA TECH

Table 3: Surface Water Analytical Results

						Location	SW-1																								
						Sample Date	25-Mar-2014	1-Apr-2019	25-Jul-2019	17-Oct-2019	27-Jan-2020	23-Apr-2020	22-Jul-2020	28-Oct-2020	21-Feb-2021	11-May-2021	19-Jul-2021	1-Dec-2021	2-Mar-2022	12-Jul-2022	11-Oct-2022	12-Dec-2022	28-Feb-2023	23-May-2023	27-Sep-2023	18-Dec-2023	22-Feb-2024	24-Jun-2024	16-Sep-2024	9-Dec-2024
						Laboratory Report Number	-	L2254181	L2318207	L2367392	VA20A0908280120	VA20A3632504020	VA20B1139240720	VA20B9563010202	21B2866	21E1432	21G2459	21L0641	22C0773	22G1537	22J1342	22L1310	23C0154	23E2913	23I3541	23L2282	24B2509	24F3072	24I2276	24L1123
						Laboratory Sample ID	-	L2254181-1	L2318207-6	L2367392-6	VA20A0908-007	VA20A5363-007	VA20B1139-007	VA20B9565-006	21B2866-06	21E1432-06	21G2459-06	21L0641-06	22C0773-06	22G1537-06	22J1342-01	22L1310-06	23C0154-05	23E2913-05	23I3541-05	23L2282-05	24B2509-05	24F3072-05	24I2276-05	24L1123-05
Parameter	Unit	BC WQG - Fresh AW		BC WQG - Marine AW																											
		Approved	Working	Approved	Working																										
Total Metals																															
Aluminum	µg/L	162 [#2,3]	-	-	-		521	95.3	147	202	-	97.1	-	110	-	106	-	106	-	106	-	45.1	-	137	-	106	-	134	-	75.6	
Antimony	µg/L	74 [#5]	-	-	270 [#5]		<0.50	<0.10	<0.10	<0.10	-	<0.10	-	<0.10	-	<0.20	-	<0.20	-	<0.2	-	<0.2	-	<0.20	-	<0.2	-	<0.20	-	<0.20	
Arsenic	µg/L	5 [#5]	-	12.5 [#5]	-		<0.50	<0.10	0.13	0.12	-	<0.10	-	0.13	-	<0.50	-	<0.50	-	<0.5	-	<0.5	-	<0.50	-	<0.5	-	<0.50	-	<0.50	
Barium	µg/L	-	1,000 [#5]	-	-		<20	3.51	4.21	4.94	-	3.87	-	4.25	-	6.2	-	<5.00	-	<5	-	<5	-	<5.0	-	<5	-	<5.0	-	<5.0	
Beryllium	µg/L	-	0.13 [#2]	-	100 [#5]		<1.0	<0.10	<0.10	<0.10	-	<0.020	-	<0.10	-	<0.10	-	<0.10	-	<0.1	-	<0.1	-	<0.10	-	<0.1	-	<0.10	-	<0.10	
Bismuth	µg/L	-	-	-	-		-	<0.050	<0.050	<0.050	-	<0.050	-	<0.050	-	<0.10	-	<0.10	-	<0.1	-	<0.1	-	<0.10	-	-	-	<0.10	-	<0.10	
Boron	µg/L	1,200 [#5]	-	1,200 [#5]	-		<100	<10	<10	<10	-	<10	-	<10	-	<50	-	<50	-	<50	-	<50	-	<50.0	-	<50	-	<50.0	-	<50.0	
Cadmium	µg/L	-	-	-	0.12 [#5]		<0.010	<0.0050	<0.0050	0.0075	-	<0.0050	-	<0.0050	-	<0.010	-	<0.010	-	0.018	-	<0.01	-	<0.010	-	<0.01	-	<0.010	-	<0.010	
Calcium	µg/L	-	-	-	-		7980	8250	9600	9230	-	8,300	-	9,680	-	17,100	13,700	6,650	7,220	10,100	11,000	8,980	-	10,100	-	8,450	-	9,030	-	8,430	
Cesium	µg/L	-	-	-	-		-	<0.010	0.011	0.012	-	<0.010	-	<0.010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Chromium	µg/L	-	2.5 [#5,12]	-	1.5 [#5,12]		<1.0	<0.10	0.13	0.18	-	<0.50	-	<0.10	-	<0.50	-	<0.50	-	0.87	-	<0.5	-	<0.50	-	<0.5	-	<0.50	-	<0.50	
Cobalt	µg/L	4 [#3]	-	-	-		<0.30	<0.10	<0.10	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.1	-	<0.1	-	<0.10	-	<0.1	-	<0.10	-	<0.10	
Copper	µg/L	-	-	2 [#5]	-		1.5	<0.50	<1.0	0.60	-	0.6	-	<0.50	-	0.64	-	0.87	-	<0.4	-	<0.4	-	0.58	-	0.52	-	0.48	-	0.50	
Iron	µg/L	1,000 [#3]	-	-	-		1,070	407	702	821	-	360	-	1,050	-	391	-	493	-	589	-	804	-	612	-	664	-	612	-	712	
Lead	µg/L	-	-	2 [#5]	-		<0.50	0.133	0.167	0.220	-	0.148	-	0.181	-	0.25	-	<0.20	-	<0.2	-	<0.2	-	<0.20	-	<0.2	-	<0.20	-	<0.20	
Lithium	µg/L	-	-	-	-		<5.0	<1.0	<1.0	<1.0	-	<1.0	-	<1.0	-	0.69	-	0.19	-	0.5	-	0.29	-	0.47	-	0.27	-	0.38	-	0.27	
Magnesium	µg/L	-	-	-	-		1,660	1,620	2,000	1930	-	1,620	-	1,740	-	3,740	3,050	1,370	1,210	2,000	2,160	1,770	-	1,970	-	1,600	-	1,970	-	1,530	
Manganese	µg/L	750 [#4,5]	-	-	100 [#5]		29.7	11.4	24.7	27.7	-	15.6	-	12.7	-	21.7	-	4.67	-	28.6	-	11.7	-	32.4	-	16	-	31.2	-	12.0	
Mercury	µg/L	-	-	-	-		<0.010	-	-	<0.0050	-	-	-	<0.0050	-	<0.04	-	<0.04	-	<0.04	-	-	-	<0.010	-	<0.01	-	<0.010	-	<0.010	
Molybdenum	µg/L	7,600 [#5]	-	-	-		<1.0	0.151	0.173	0.169	-	0.165	-	0.149	-	0.37	-	0.19	-	0.17	-	0.13	-	0.17	-	0.15	-	0.16	-	0.16	
Nickel	µg/L	-		-	8.3 [#5]		<1.0	<0.50	<0.50	<0.50	-	<0.50	-	<0.50	-	<0.40	-	<0.40	-	<0.4	-	<0.4	-	<0.40	-	<0.4	-	<0.40	-	<0.40	
Phosphorus	µg/L	-	-	-	-		-	<50	<50	<50	-	<50	-	<50	-	<50	-	50	-	<50	-	<50	-	<50	-	-	-	<50	-	<50	
Potassium	µg/L	-	-	-	-		<2000	857	780	927	-	808	-	660	-	1,750	-	790	-	770	-	920	-	1,010	-	-	-	810	-	750	
Rubidium	µg/L	-	-	-	-		-	0.66	0.54	0.79	-	0.62	-	0.62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Selenium	µg/L	2 [#5]	-	2 [#5]	-		<0.10	0.053	<0.050	<0.050	-	<0.050	-	0.052	-	<0.50	-	<0.50	-	<0.5	-	<0.5	-	<0.50	-	<0.5	-	<0.50	-	<0.50	
Silicon	µg/L	-	-	-	-		-	4620	6940	6400	-	3,920	-	5,730	-	13,000	-	5,300	-	8,000	-	6,200	-	5,900	-	-	-	5,800	-	6,000	
Silver	µg/L	0.05 [#4,5]	-	15 [#4,5]	-		<0.020	<0.010	<0.010	<0.010	-	<0.010	-	<0.010	-	<0.050	-	<0.050	-	<0.05	-	<0.05	-	<0.050	-	<0.05	-	<0.050	-	<0.050	
Sodium	µg/L	-	-	-	-		6200	6820	7220	7200	-	6,460	-	7,110	-	11,500	-	5,860	-	6,950	-	7,480	-	7,430	-	6,760	-	7,270	-	6,160	
Strontium	µg/L	-	-	-	-		-	50.9	61.8	60.5	-	54.8	-	59.2	-	102	-	43.2	-	61.6	-	54.7	-	61.5	-	51.7	-	59.0	-	50.3	
Sulphur	µg/L	-	-	-	-		-	1090	1110	1060	-	810	-	<0.5	-	3,600	-	<3,000	-	<3000	-	<3000	-	<3,000	-	-	-	<3,000	-	<3,000	
Tellurium	µg/L	-	-	-	-		-	<0.20	<0.20	<0.20	-	<0.20	-	<0.20	-	<0.50	-	<0.50	-	<0.5	-	<0.5	-	<0.50	-	-	-	<0.50	-	<0.50	
Thallium	µg/L	-	0.03 [#2]	-	-		<0.20	<0.010	<0.010	<0.010	-	<0.010	-	<0.010	-	<0.020	-	<0.020	-	<0.02	-	<0.02	-	<0.020	-	<0.02	-	<0.020	-	<0.020	
Thorium	µg/L	-	-	-	-		-	<0.10	<0.10	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.1	-	<0.1	-	<0.10	-	-	-	<0.10	-	<0.10	
Tin	µg/L	-	-	-	-		<0.50	<0.10	<0.10	0.49	-	<0.10	-	<0.10	-	<0.20	-	<0.20	-	<0.2	-	<0.2	-	<0.20	-	<0.2	-	<0.20	-	<0.20	
Titanium	µg/L	-	-	-	-		28	4.26	6.56	9.11	-	4.31	-	5.28	-	<5.00	-	<5.00	-	5.3	-	<5.0	-	7.1	-	<5	-	6.2	-	<5.0	
Tungsten	µg/L	-	-	-	-		-	<0.10	<0.10	<0.10	-	<0.10	-	<0.10	-	<1.0	-	<1.0	-	<0.2	-	<1.0	-	<1.0	-	<1	-	<1.0	-	<1.0	
Uranium	µg/L	-	7.5 [#5]	-	-		<0.20	0.022	0.023	0.027	-	0.02	-	0.021	-	0.097	-	<0.020	-	0.036	-	<0.02	-	0.024	-	<0.02	-	<0.020	-	<0.020	
Vanadium	µg/L	-	60 [#5]	-	5 [#5]		2	0.75	0.87	0.92	-	0.78	-	0.88	-	1.8	-	1.6	-	<5.0	-	<5.0	-	<5.0	-	<5	-	<5.0	-	<5.0	
Zinc	µg/L	-	-	10 [#5]	-		<5.0	<3.0	**72.3**	<3.0	-	<3	-	<3	-	<4	-	<4	-	<4.0	-	<4.0	-	4	-	<4	-	<4.0	-	<4.0	
Zirconium	µg/L	-	-	-	-		-	<0.060	<0.20	<0.20	-	<0.20	-	<0.20	-	<0.10	-	0.22	-	<0.1	-	<0.1	-	<0.10	-	-	-	<0.10	-	<0.10	
Hydrocarbons																															
EPH_{10-19}	µg/L	-	-	-	-		-	<250	-	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	
EPH_{19-32}	µg/L	-	-	-	-		-	<250	-	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	
LEPH	µg/L	-	-	-	-		-	<250	-	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	
HEPH	µg/L	-	-	-	-		-	<250	-	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	
VH_{6-10}	µg/L	-	-	-	-		-	<100	-	-	-	-	<100	-	-	-	-	-	<100	-	-	-	<100	-	-	-	<100	-	-	-	
Polycyclic Aromatic Hydrocarbons (PAHs)																															
Acenaphthene	µg/L	6 [#5]	-	6	-		-	<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
Acenaphthylene	µg/L	-	-	-	-		-	<0.010	-	-	-	-	<0.010	-	<0.20	-	-	-	<0.2	-	-	-	<0.200	-	-	-	<0.200	-	-	-	
Acridine	µg/L	3 [#3]	-	-	-		-	<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
Anthracene	µg/L	4 [#3]	-	-	-		-	<0.010	-	-	-	-	<0.010	-	<0.010	-	-	-	<0.01	-	-	-	<0.010	-	-	-	<0.010	-	-	-	
Benz(a)anthracene	µg/L	0.1 [#5]	-	-	-		-	<0.010	-	-	-	-	<0.010	-	<0.010	-	-	-	<0.01	-	-	-	<0.010	-	-	-	<0.010	-	-	-	
Benzo(a)pyrene	µg/L	0.01 [#5]	-	0.01	-		-	<0.0050	-	-	-	-	<0.0050	-	<0.010	-	-	-	<0.01	-	-	-	<0.010	-	-	-	<0.010	-	-	-	
Benzo(b,j,k)fluoranthene	µg/L	-	-	-	-		-	-	-	-	-	-	<0.0150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Benzo(b+)fluoranthene	µg/L	-	-	-	-		-	<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
Benzo(g,h,i)perylene	µg/L	-	-	-	-		-	<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
Benzo(k)fluoranthene	µg/L	-	-	-	-		-	<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
2-Chloronaphthalene	µg/L	-	-	-	-		-	-	-	-	-	-	-	-	<0.10	-	-	-	<0.1	-	-	-	<0.100	-	-	-	<0.100	-	-	-	
Chrysene	µg/L	-	-	0.1	-		-	<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
Dibenz(a,h)anthracene	µg/L	-	-	-	-		-	<0.0050	-	-	-	-	<0.0050	-	<0.010	-	-	-	<0.01	-	-	-	<0.010	-	-	-	<0.010	-	-	-	
Fluoranthene	µg/L	4 [#3]	-	-	-		-	<0.010	-	-	-	-	<0.010	-	<0.030	-	-	-	<0.03	-	-	-	<0.030	-	-	-	<0.030	-	-	-	
Fluorene	µg/L	12 [#3]	-	12	-		-	<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
Indeno(1,2,3-c,d)pyrene	µg/L	-	-	-	-		-	<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
1-Methylnaphthalene	µg/L	-	-	1	-		-	<0.050	-	-	-	-	<0.010	-	<0.10	-	-	-	<0.1	-	-	-	<0.100	-	-	-	<0.100	-	-	-	
2-Methylnaphthalene	µg/L	-	-	1	-		-	<0.020	-	-	-	-	<0.010	-	<0.10	-	-	-	<0.1	-	-	-	<0.100	-	-	-	<0.100	-	-	-	
Naphthalene	µg/L	1 [#5]	-	1	-		-	<0.020	-	-	-	-	<0.050	-	<0.20	-	-	-	<0.2	-	-	-	<0.200	-	-	-	<0.200	-	-	-	
Phenanthrene	µg/L	0.3 [#5]	-	-	-		-	<0.020	-	-	-	-	<0.020	-	<0.10	-	-	-	<0.1	-	-	-	<0.100	-	-	-	<0.100	-	-	-	
Pyrene	µg/L	-	-	-	-		-	<0.010	-	-	-	-	<0.010	-	<0.020	-	-	-	<0.02	-	-	-	<0.020	-	-	-	<0.020	-	-	-	
Quinoline	µg/L	-	50 [#5]	-	-		-	<0.050	-	-	-	-	<0.050	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-	-	

NOTES:

#1	Guideline is for short-term daily temperature in streams with unknown fish distribution.
#2	Guideline is the instantaneous minimum for all life stages other than buried embryo/alevin.
#3	Guideline is the short-term acute WQG.
#4	Guideline varies with hardness. Values shown based on average hardness of 32.855 mg/L at background location SW-1.
#5	Guideline is the long-term chronic WQG.
#6	Guideline varies with pH and temperature. Values shown based on an average laboratory pH of 7.17 and average field temperature of 10.09°C at background location SW-1.
#7	Guideline varies with pH, temperature, and salinity. Values shown based on an average laboratory pH of 7.17 and average field temperature of 10.1°C at background location SW-1. Salinity has not been measured since 2019, so the the guidelines for the lowest salinity is selected.
#8	Guideline varies with chloride. Values shown based on an average chloride concentration of 9.4 mg/L at background location SW-1.
#9	Guideline varies with pH, hardness, and DOC. Values shown is calculated based on an average laboratory pH of 7.17, average hardness of 32.855 mg/L , and DOC of 4.830 mg/L at background location SW-1.
#10	Guideline varies with temperature, hardness, and DOC. Values shown is calculated based on an average field temperature of 10.09°C, average hardness of 32.855 mg/L , and DOC of 4.830 mg/L at background location SW-1.
#11	Guideline varies with hardness and DOC. Values shown is calculated based on an average hardness of 32.855 mg/L, and DOC of 4.830 mg/L at background location SW-1.
#12	Guideline is for Chromium VI.
#13	Guideline varies with pH. Values shown is calculated based on an average laboratory pH of 7.17 at background location SW-1.
-	Not analyzed or no applicable BC WQG guideline.
<	Concentration is less than the laboratory detection limit indicated.
BC WQG - Approved	British Columbia Approved Water Quality Guidelines: Aquatic Life, Wildlife & Agriculture (February 2025).
BC WQG - Working	British Columbia Working Water Quality Guidelines: Aquatic Life, Wildlife & Agriculture (August
AW	Aquatic Wildlife.
Shaded	Shaded indicates an exceedance of the BCWQG Freshwater AW guidelines.
BOLD	Bold and underlined indicates an exceedance of the BCWQG Marine AW guidelines.
Italic	Detection limit greater than standard.

TETRA TECH

Table 3: Surface Water Analytical Results

						Location	SW-1																								
						Sample Date	25-Mar-2014	1-Apr-2019	25-Jul-2019	17-Oct-2019	27-Jan-2020	23-Apr-2020	22-Jul-2020	28-Oct-2020	21-Feb-2021	11-May-2021	19-Jul-2021	1-Dec-2021	2-Mar-2022	12-Jul-2022	11-Oct-2022	12-Dec-2022	28-Feb-2023	23-May-2023	27-Sep-2023	18-Dec-2023	22-Feb-2024	24-Jun-2024	16-Sep-2024	9-Dec-2024
						Laboratory Report Number	-	L2254181	L2318207	L2367392	VA20A09082801202	VA20A36325042020	VA20B11324072020	VA20B95630102020	21B2866	21E1432	21G2459	21L0641	22C0773	22G1537	22J1342	22L1310	23C0154	23E2913	23I3541	23L2282	24B2509	24F3072	24I2276	24L1123
						Laboratory Sample ID	-	L2254181-1	L2318207-6	L2367392-6	VA20A0908-007	VA20A5363-007	VA20B1139-007	VA20B9565-006	21B2866-06	21E1432-06	21G2459-06	21L0641-06	22C0773-06	22G1537-06	22J1342-01	22L1310-06	23C0154-05	23E2913-05	23I3541-05	23L2282-05	24B2509-05	24F3072-05	24I2276-05	24L1123-05
Parameter	Unit	BC WQG - Fresh AW		BC WQG - Marine AW																											
		Approved	Working	Approved	Working																										
Resin/Fatty Acids																															
Abietic Acid	µg/L	-	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
Arachidic Acid	µg/L	-	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Behenic Acid	µg/L	-	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12-Chlorodehydroabietic Acid	µg/L	-	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
14-Chlorodehydroabietic Acid	µg/L	-	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
Dehydroabietic Acid	µg/L	-	8 #3,13	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
Dichlorodehydroabietic Acid	µg/L	-	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
9,10-Dichlorostearic Acid	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	<10	-	-	-	<10	-	-	-
Isopimaric & Palustric Acids	µg/L	-	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<6.0	-	-	-	-	<10	-	-	<10	-	-	-	-	-	-	-
Isopimaric Acid	µg/L																									<10	-	-	-
Palustric Acid	µg/L																									<10	-	-	-
Lauric Acid	µg/L	-	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Levopimaric Acid	µg/L	-	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
Lignoceric Acid	µg/L	-	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Linoleic Acid	µg/L	-	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
Linolenic Acid	µg/L	-	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
Myristic Acid	µg/L	-	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Neoabietic Acid	µg/L	-	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
Octadecanoic Acid	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-
Oleic Acid	µg/L	-	-	-	-	-	<5.0	-	-	-	-	<5.0	-	0.017	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
Palmitic Acid	µg/L	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pimaric Acid	µg/L	-	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
Sandaracopimaric Acid	µg/L	-	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
Stearic Acid	µg/L	-	-	-	-	-	<20	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-
Total Fatty Acids	µg/L	-	-	-	-	-	<100	-	-	-	-	<110	-	-	-	-	-	-	<10	-	-	<10	-	-	-	<10	-	-	-
Total Resin Acids	µg/L	-	25 #3,13	-	-	-	<10	-	-	-	-	<3.5	-	-	-	-	-	-	<10	-	-	<10	-	-	-	<10	-	-	-
Total Resin and Fatty Acid	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	<10	-	-	-	<10	-	-	-
BTEXS & MTBE																															
Benzene	µg/L	40 #5	-	110 #5	-	-	-	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-
Toluene	µg/L	0.5 #5	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
Ethylbenzene	µg/L	200 #5	-	250 #5	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
Xylenes Total	µg/L	30 #5	-	-	-	-	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-
Styrene	µg/L	-	72 #5	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
Methyl t-butyl ether (MTBE)	µg/L	3,400 #3	-	440 #5	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-				
Volatile Organic Compounds (VOCs)																															
Hexadecanoic Acid	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<6.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
Bromoform	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
Carbon tetrachloride	µg/L	-	13.3 #5	-	-	-	-	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-
Chlorobenzene	µg/L	-	1.3 #5	-	25 #5	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
Chloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-
Chloroform	µg/L	-	1.8 #5	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
Dibromochloromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
1,2-Dibromoethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.30	-	-	-	-	-	-	-	<0.3	-	-	-	-	-	-	-
Dibromomethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
1,2-Dichlorobenzene	µg/L	-	0.7 #5	-	42 #5	-	-	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-
1,3-Dichlorobenzene	µg/L	-	150 #5	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
1,4-Dichlorobenzene	µg/L	-	26 #5	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
1,1-Dichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
1,2-Dichloroethane	µg/L	-	100 #5	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
1,1-Dichloroethene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
1,2-Dichloroethene (cis)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
1,2-Dichloroethene (trans)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
1,2-Dichloropropane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
1,3-Dichloropropene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
Methylene Chloride	µg/L	-	98.1 #5	-	-	-	-	-	-	-	-	-	-	<3.0	-	-	-	-	-	-	-	<3.0	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-
Tetrachloroethene	µg/L	-	110 #5	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
1,1,1-Trichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
1,1,2-Trichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
Trichloroethene	µg/L	-	21 #5	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
Trichlorofluoromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	625 #5	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-

NOTES:

#1	Guideline is for short-term daily temperature in streams with unknown fish distribution.
#2	Guideline is the instantaneous minimum for all life stages other than buried embryo/alevin.
#3	Guideline is the short-term acute WQG.
#4	Guideline varies with hardness. Values shown based on average hardness of 32.855 mg/L at background location SW-1.
#5	Guideline is the long-term chronic WQG.
#6	Guideline varies with pH and temperature. Values shown based on an average laboratory pH of 7.17 and average field temperature of 10.09°C at background location SW-1.
#7	Guideline varies with pH, temperature, and salinity. Values shown based on an average laboratory pH of 7.17 and average field temperature of 10.1°C at background location SW-1. Salinity has not been measured since 2019, so the the guidelines for the lowest salinity is selected.
#8	Guideline varies with chloride. Values shown based on an average chloride concentration of 9.4 mg/L at background location SW-1.
#9	Guideline varies with pH, hardness, and DOC. Values shown is calculated based on an average laboratory pH of 7.17, average hardness of 32.855 mg/L , and DOC of 4.830 mg/L at background location SW-1.
#10	Guideline varies with temperature, hardness, and DOC. Values shown is calculated based on an average field temperature of 10.09°C, average hardness of 32.855 mg/L , and DOC of 4.830 mg/L at background location SW-1.
#11	Guideline varies with hardness and DOC. Values shown is calculated based on an average hardness of 32.855 mg/L, and DOC of 4.830 mg/L at background location SW-1.
#12	Guideline is for Chromium VI.
#13	Guideline varies with pH. Values shown is calculated based on an average laboratory pH of 7.17 at background location SW-1.
-	Not analyzed or no applicable BC WQG guideline.
<	Concentration is less than the laboratory detection limit indicated.
BC WQG - Approved	British Columbia Approved Water Quality Guidelines: Aquatic Life, Wildlife & Agriculture (February 2025).
BC WQG - Working	British Columbia Working Water Quality Guidelines: Aquatic Life, Wildlife & Agriculture (August
AW	Aquatic Wildlife.
Shaded	Shaded indicates an exceedance of the BCWQG Freshwater AW guidelines.
BOLD	Bold and underlined indicates an exceedance of the BCWQG Marine AW guidelines.
Italic	Detection limit greater than standard.

TETRA TECH

Table 3: Surface Water Analytical Results

						Location	SW-2																								
						Sample Date	25-Mar-2014	1-Apr-2019	25-Jul-2019	17-Oct-2019	27-Jan-2020	23-Apr-2020	22-Jul-2020	28-Oct-2020	21-Feb-2021	11-May-2021	19-Jul-2021	1-Dec-2021	2-Mar-2022	12-Jul-2022	11-Oct-2022	12-Dec-2022	28-Feb-2023	23-May-2023	27-Sep-2023	18-Dec-2023	22-Feb-2024	DUP (22-Feb-2024)	24-Jun-2024	DUP (24-Jun-2024)	16-Sep-2024	9-Dec-2024
						Laboratory Report Number	-	L2254181	L2318207	L2367392	VA20A0908280120 20	VA20A5363502042 0 20	VA20B1139240720 20	VA20B9565301020 20	21B2866	21E1432	21G2459	21L0641	2C0773	22G1537	22J1342	22L1310	23C0154	23E2913	23I3541	23L2282	24B2509	24B2509	24F3072	24F3072	24I2276	24L1123
						Laboratory Sample ID	-	L2254181-2	L2318207-7	L2367392-7	VA20A0908-008	VA20A5363-008	VA20B1139-008	VA20B9565-007	21B2866-07	21E1432-07	21G2459-07	21L0641-07	2C0773-07	22G1537-07	22J1342-02	22L1310-07	23C0154-06	23E2913-06	23I3541-06	23L2282-06	24B2509-06	24B2509-09	24F3072-06	24F3072-09	24I2276-06	24L1123-06
Parameter	**Unit**	**BC WQG - Fresh AW**		**BC WQG - Marine AW**																											
		Approved	Working	Approved	Working																										
Field Measurements																															
Temperature	°C	19 #1	-	-	-	-	9.87	15.89	10.4	5.9	13.01	16.2	9.4	4.1	10.9	13.3	8.5	7.0	15.5	11.3	4.5	3.8	13.3	11.5	6.5	6.9	-	14.9	-	13.2	6.5
Electrical Conductivity	µS/cm	-	-	-	-	-	91	109	74.9	85	75	119	93.9	51.3	145.9	116.6	51.4	46.4	94.1	128	63.3	54.4	87.9	81	48.6	61.1	-	95.7	-	96.1	58
Total Dissolved Solids (TDS)	mg/L	-	-	-	-	-	59	71	-	-	63	78	61.1	55.3	94.9	97.5	49.1	46.1	74.6	83.2	67.5	59.15	73.6	71	48.1	60.7	-	77.6	-	80.6	58.4
Salinity	-	-	-	-	-	-	0.04	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	%	-	-	-	-	-	111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	mg/L	Minimum 5 #2	-	Minimum 5 #2	-	-	12.57	9.97	-	12.91	10.8	8.63	10.6	14.3	10.59	10.6	12.7	11.3	10.21	11.8	12.91	12.51	9.48	9.92	11.79	13.9	-	10.7	-	10	12.02
pH	pH Units	6.5-9.0	-	7.0-8.7	-	-	7.35	**6.86**	7.68	**6.29**	7.44	7.76	7.62	7.48	7.43	7.67	6.98	8.33	7.85	7.88	7.53	7.42	7.72	**5.62**	6.85	7.5	-	7.61	-	7.24	7.05
Oxidation Reduction Potential (ORP)	-	-	-	-	-	-	84.8	255	-	124.2	131	126	72.6	76.9	142.7	44.6	51.7	141.0	80.1	55.8	63.2	59.4	71.1	167.4	101.8	6.3	-	96	-	85	26.2
Physical Parameters																															
pH	pH Units	6.5-9.0	-	7.0-8.7	-	-	7.90	7.71	7.84	7.44	7.38	7.74	7.71	7.52	-	7.16	-	7.15	-	7.51	-	7.1	**6.67**	**6.59**	**6.75**	**6.58**	**6.5**	**6.52**	**6.51**	6.78	**6.99**	7.21
Electrical Conductivity (EC)	µS/cm	-	-	-	-	-	185	94.8	113	104	-	100	-	99.4	-	160	-	80.2	-	127	-	108	93.1	110	104	92.2	86.2	85.4	109	162	130	94.4
Total Suspended Solids (TSS)	µg/L	-	-	-	-	-	34,900	5,800	7,900	26,100	-	6,600	-	6,300	-	2,400	-	6,200	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Dissolved Solids (TDS)	µg/L	-	-	-	-	-	101,000	-	-	-	68,000	63,000	-	76,000	-	80400	-	-	-	80,000	-	-	-	65,000	-	92000	-	-	85,000	-	-	50,000
Hardness as $CaCO_3$	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51,300	51,500	25,700	25,600	43,400	39,700	32,000	-	38,100	-	28,800	-	-	34,700	33,800	-	29,600
Alkalinity (total as $CaCO_3$)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53,200	-	-	-	-	-	-	28400	37,200	39900	30800	27,400	27,000	33,100	59,000	42,700	28,500
Alkalinity (P)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1,000	-	-	-	-	-	-	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Bicarbonate	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53,200	-	-	-	-	-	-	28400	37,200	39900	30800	27,400	27,000	33,100	59,000	42,700	28,500
Carbonate	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1,000	-	-	-	-	-	-	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Hydroxide	µg/L	-	-	-	-	-	71,600	28,800	35,600	33,800	-	30,200	-	32,400	-	<1,000	-	-	-	-	-	-	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Bromide	µg/L	-	-	-	-	-	<50	<50	<50	<50	<50	<50	<50	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloride	µg/L	150,000 #5	-	-	-	-	7,590	9,370	10,600	9,400	8,630	10,000	10,700	9,820	8,970	11,400	12,600	6,420	9,930	9,460	10,900	10,400	10,300	10,200	10,800	9,200	8,260	8,180	9,320	9,350	10,800	8,310
Fluoride	µg/L	887 #3,4	-	1,500 #3	-	-	43	21	28	22	<20	23	28	<20	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Sulphate	µg/L	218,000 #4,5	-	-	-	-	16,400	3,250	3,740	3,020	2,280	2,940	3,860	2,070	2,500	5,900	6,500	2,100	2,600	5,200	4,100	2,700	2,500	3,600	3,000	2,300	3,300	3,200	2,800	2,800	3,700	2,200
Sulphide (as S)	µg/L	-	-	-	-	-	-	<18	<2.0	22	<2.0	<2.0	<2.0	2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulphide (as H2S)	µg/L	-	2	-	-	-	-	-	-	-	<2.0	<2.0	<2.0	2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulphide, total	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	-	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	-	<20	-	<20	<20	
Turbidity	NTU	-	-	-	-	-	-	2.94	-	11.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	-	<20	<20	
Acidity	µg/L	-	-	-	-	-	-	-	-	-	-	5,200	-	2,200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nutrients																																
Ammonia as N	µg/L	1,850 #6,8	-	12,000 #6,7	-	-	11.2	8.2	6.5	<5.0	24.6	10.5	9.4	9.2	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	-	<50	<50	<50	100	<50	
Nitrate (as N)	µg/L	3,000 #5	-	3,700 #5	-	-	196	122	99	72.5	221	86.6	62	82	224	260	229	152	203	187	162	96	111	156	131	95	174	175	106	104	141	122
Nitrite (as N)	µg/L	100 #5,8	-	-	-	-	1.9	1.1	3.0	<1.0	4.0	<1.0	<1.0	<1.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Nitrate and Nitrite (as N)	µg/L	3,000 #5	-	3,700 #5	-	-	-	-	-	-	-	87.1	-	-	-	-	-	-	-	187	-	-	-	-	-	-	-	-	-	-	-	-
Demand Parameters																																
Biochemical Oxygen Demand (BOD)	µg/L	-	-	-	-	-	-	<2,000	-	<2,000	-	<2,000	-	<2,000	-	<2,400	-	<3,600	-	<3,800	-	<2,200	-	<1,400	-	<2,800	-	-	<3,200	-	-	<2,700
Chemical Oxygen Demand (COD)	µg/L	-	-	-	-	-	40,000	<20,000	-	33,000	-	<20,000	-	<20,000	-	<20,000	-	<20,000	-	<20,000	-	48,000	-	<20,000	-	24,000	-	-	<20,000	-	-	<20,000
Carbon																																
Dissolved Organic Carbon (DOC)	µg/L	-	-	-	-	-	-	-	-	-	-	3,610	-	3,930	-	-	-	7,090	-	-	-	-	-	-	-	-	-	-	3,610	-	-	4,910
Total Organic Carbon (TOC)	µg/L	-	-	-	-	-	-	3020	-	3520	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenols																																
Phenols (4AAP)	µg/L	-	-	-	-	-	4.5	<1.0	-	-	-	-	<1.0	-	2.3	-	-	-	<2.0	-	-	-	<2.00	-	-	-	<0.50	-	-	-	-	-
Dissolved Metals																																
Aluminum	µg/L	-	-	-	-	-	-	-	-	-	-	13.3	-	13.1	-	-	-	65.9	-	-	-	-	-	-	-	-	-	-	13.6	11.8	-	29.6
Antimony	µg/L	-	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10	-	-	-	<0.20	-	-	-	-	-	-	-	-	-	-	<0.20	<0.20	-	<0.20
Arsenic	µg/L	-	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10	-	-	-	<0.50	-	-	-	-	-	-	-	-	-	-	<0.50	<0.50	-	<0.50
Barium	µg/L	-	-	-	-	-	-	-	-	-	-	3.31	-	3.29	-	-	-	<5.00	-	-	-	-	-	-	-	-	-	-	<5.0	<5.0	-	<5.0
Beryllium	µg/L	-	-	-	-	-	-	-	-	-	-	<0.020	-	<0.10	-	-	-	<0.10	-	-	-	-	-	-	-	-	-	-	<0.10	<0.10	-	<0.10
Bismuth	µg/L	-	-	-	-	-	-	-	-	-	-	<0.050	-	<0.050	-	-	-	<0.10	-	-	-	-	-	-	-	-	-	-	<0.10	<0.10	-	<0.10
Boron	µg/L	-	-	-	-	-	-	-	-	-	-	<10	-	<10	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	<50.0	<50.0	-	<50.0
Cadmium	µg/L	0.0932 #4,5	-	-	-	-	-	-	-	-	-	<0.0050	-	<0.0050	-	-	-	<0.010	-	-	-	-	-	-	-	-	-	-	<0.010	<0.010	-	<0.010
Calcium	µg/L	-	-	-	-	-	-	-	-	-	-	8,990	-	10,000	-	-	-	7,680	-	-	-	-	-	-	-	-	-	-	10,100	9,860	-	9,010
Cesium	µg/L	-	-	-	-	-	-	-	-	-	-	<0.010	-	<0.010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	µg/L	-	-	-	-	-	-	-	-	-	-	<0.50	-	<0.10	-	-	-	0.84	-	-	-	-	-	-	-	-	-	-	<0.50	<0.50	-	<0.50
Cobalt	µg/L	-	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10	-	-	-	<0.10	-	-	-	-	-	-	-	-	-	-	<0.10	<0.10	-	<0.10
Copper	µg/L	0.862 #5,10	-	-	-	-	-	-	-	-	-	0.4	-	0.2	-	-	-	0.6	-	-	-	-	-	-	-	-	-	-	<0.40	<0.40	-	<0.40
Iron	µg/L	350 #3	-	-	-	-	-	-	-	-	-	143	-	729	-	-	-	398	-	-	-	-	-	-	-	-	-	-	193	193	-	511
Lead	µg/L	3.67 #5,11	-	-	-	-	-	-	-	-	-	<0.050	-	0.09	-	-	-	<0.20	-	-	-	-	-	-	-	-	-	-	<0.20	<0.20	-	<0.20
Lithium	µg/L	-	-	-	-	-	-	-	-	-	-	<1.0	-	<1.0	-	-	-	0.21	-	-	-	-	-	-	-	-	-	-	0.45	0.47	-	0.27
Magnesium	µg/L	-	-	-	-	-	-	-	-	-	-	1,790	-	1,720	-	-	-	1,570	-	-	-	-	-	-	-	-	-	-	2,290	2,220	-	1,730
Manganese	µg/L	-	-	-	-	-	-	-	-	-	-	4.1	-	3.64	-	-	-	3.63	-	-	-	-	-	-	-	-	-	-	5.39	5.47	-	5.61
Mercury	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.0050	-	-	-	<0.010	-	-	-	-	-	-	-	-	-	-	<0.010	<0.010	-	<0.010
Molybdenum	µg/L	-	-	-	-	-	-	-	-	-	-	0.181	-	0.14	-	-	-	0.16	-	-	-	-	-	-	-	-	-	-	0.12	0.14	-	0.15
Nickel	µg/L	1.3 #5,10,13	-	-	-	-	-	-	-	-	-	<0.50	-	<0.50	-	-	-	<0.40	-	-	-	-	-	-	-	-	-	-	<0.40	<0.40	-	<0.40
Phosphorus	µg/L	-	-	-	-	-	-	-	-	-	-	<50	-	<50	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	<50	<50	-	<50
Potassium	µg/L	-	-	-	-	-	-	-	-	-	-	878	-	673	-	-	-	810	-	-	-	-	-	-	-	-	-	-	870	910	-	810
Rubidium	µg/L	-	-	-	-	-	-	-	-	-	-	0.61	-	0.55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	µg/L	-	-	-	-	-	-	-	-	-	-	<0.050	-	<0.050	-	-	-	<0.50	-	-	-	-	-	-	-	-	-	-	<0.50	<0.50	-	<0.50
Silicon	µg/L	-	-	-	-	-	-	-	-	-	-	4,360	-	5,450	-	-	-	6,000	-	-	-	-	-	-	-	-	-	-	6,800	6,400	-	6,300
Silver	µg/L	-	-	-	-	-	-	-	-	-	-	<0.010	-	<0.010	-	-	-	<0.050	-	-	-	-	-	-	-	-	-	-	<0.050	<0.050	-	<0.050
Sodium	µg/L	-	-	-	-	-	-	-	-	-	-	6,790	-	7,030	-	-	-	5,830	-	-	-	-	-	-	-	-	-	-	8,420	7,910	-	6,810
Strontium	µg/L	-	1,250 #5,12	-	-	-	-	-	-	-	-	58.1	-	60.9	-	-	-	42.9	-	-	-	-	-	-	-	-	-	-	65.1	69.2	-	53.3
Sulphur	µg/L	-	-	-	-	-	-	-	-	-	-	850	-	600	-	-	-	<3,000	-	-	-	-	-	-	-	-	-	-	<3,000	<3,000	-	<3,000
Tellurium	µg/L	-	-	-	-	-	-	-	-	-	-	<0.20	-	<0.20	-	-	-	<0.50	-	-	-	-	-	-	-	-	-	-	<0.50	<0.50	-	<0.50
Thallium	µg/L	-	-	-	-	-	-	-	-	-	-	<0.010	-	<0.010	-	-	-	<0.020	-	-	-	-	-	-	-	-	-	-	<0.020	<0.020	-	<0.020
Thorium	µg/L	-	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10	-	-	-	<0.10	-	-	-	-	-	-	-	-	-	-	<0.10	<0.10	-	<0.10
Tin	µg/L	-	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10	-	-	-	<0.20	-	-	-	-	-	-	-	-	-	-	<0.20	<0.20	-	<0.20
Titanium	µg/L	-	-	-	-	-	-	-	-	-	-	<0.30	-	<0.30	-	-	-	<5.00	-	-	-	-	-	-	-	-	-	-	<5.0	<5.0	-	<5.0
Tungsten	µg/L	-	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	<1.0	<1.0	-	<1.0
Uranium	µg/L	-	-	-	-	-	-	-	-	-	-	0.022	-	0.011	-	-	-	0.023	-	-	-	-	-	-	-	-	-	-	<0.020	<0.020	-	<0.020
Vanadium	µg/L	-	-	-	-	-	-	-	-	-	-	<0.50	-	0.5	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	<5.0	<5.0	-	<5.0
Zinc	µg/L	7.55 #5,10	-	-	-	-	-	-	-	-	-	1.2	-	4	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	<4.0	<4.0	-	<4.0
Zirconium	µg/L	-	-	-	-	-	-	-	-	-	-	<0.30	-	<0.20	-	-	-	<0.10	-	-	-	-	-	-	-	-	-	-	<0.10	<0.10	-	<0.10

NOTES:

#1	Guideline is for short-term daily temperature in streams with unknown fish distribution.
#2	Guideline is the instantaneous minimum for all life stages other than buried embryo/alevin.
#3	Guideline is the short-term acute WQG.
#4	Guideline varies with hardness. Values shown based on average hardness of 32.855 mg/L at background location SW-1.
#5	Guideline is the long-term chronic WQG.
#6	Guideline varies with pH and temperature. Values shown based on an average laboratory pH of 7.17 and average field temperature of 10.09°C at background location SW-1.
#7	Guideline varies with pH, temperature, and salinity. Values shown based on an average laboratory pH of 7.17 and average field temperature of 10.1°C at background location SW-1. Salinity has not been measured since 2019, so the the guidelines for the lowest salinity is selected.
#8	Guideline varies with chloride. Values shown based on an average chloride concentration of 9.4 mg/L at background location SW-1.
#9	Guideline varies with pH, hardness, and DOC. Values shown is calculated based on an average laboratory pH of 7.17, average hardness of 32.855 mg/L , and DOC of 4.830 mg/L at background location SW-1.
#10	Guideline varies with temperature, hardness, and DOC. Values shown is calculated based on an average field temperature of 10.09°C, average hardness of 32.855 mg/L , and DOC of 4.830 mg/L at background location SW-1.
#11	Guideline varies with hardness and DOC. Values shown is calculated based on an average hardness of 32.855 mg/L, and DOC of 4.830 mg/L at background location SW-1.
#12	Guideline is for Chromium VI.
#13	Guideline varies with pH. Values shown is calculated based on an average laboratory pH of 7.17 at background location SW-1.
-	Not analyzed or no applicable BC WQG guideline.
<	Concentration is less than the laboratory detection limit indicated.
BC WQG - Approved	British Columbia Approved Water Quality Guidelines: Aquatic Life, Wildlife & Agriculture (February 2025).
BC WQG - Working AW	British Columbia Working Water Quality Guidelines: Aquatic Life, Wildlife & Agriculture (August Aquatic Wildlife.
Shaded	Shaded indicates an exceedance of the BCWQG Freshwater AW guidelines.
BOLD	Bold and underlined indicates an exceedance of the BCWQG Marine AW guidelines.
Italic	Detection limit greater than standard.

TETRA TECH

Table 3: Surface Water Analytical Results

						Location	SW-2																								
						Sample Date	25-Mar-2014	1-Apr-2019	25-Jul-2019	17-Oct-2019	27-Jan-2020	23-Apr-2020	22-Jul-2020	28-Oct-2020	21-Feb-2021	11-May-2021	19-Jul-2021	1-Dec-2021	2-Mar-2022	12-Jul-2022	11-Oct-2022	12-Dec-2022	28-Feb-2023	23-May-2023	27-Sep-2023	18-Dec-2023	22-Feb-2024	DUP (22-Feb-2024)	24-Jun-2024	DUP (24-Jun-2024)	16-Sep-2024	9-Dec-2024
						Laboratory Report Number	-	L2254181	L2318207	L2367392	VA20A090828012020	VA20A536325042020	VA20B113924072020	VA20B95530102020	21B2866	21E1432	21G2459	21L0641	2C0773	22G1537	22J1342	22L1310	23C0154	23E2913	23I3541	23L2282	24B2509	24B2509	24F3072	24F3072	24I2276	24L1123
						Laboratory Sample ID	-	L2254181-2	L2318207-7	L2367392-7	VA20A0908-008	VA20A5363-008	VA20B1139-008	VA20B9565-007	21B2866-07	21E1432-07	21G2459-07	21L0641-07	2C0773-07	22G1537-07	22J1342-02	22L1310-07	23C0154-06	23E2913-06	23I3541-06	23L2282-06	24B2509-06	24B2509-09	24F3072-06	24F3072-09	24I2276-06	24L1123-06
Parameter	**Unit**	**BC WQG - Fresh AW**		**BC WQG - Marine AW**																												
		Approved	Working	Approved	Working																											
Total Metals																																
Aluminum	µg/L	162 [#5,9]	-	-	-		774	133	170	439	-	132	-	134	-	47.9	-	118	-	147	-	67.1	-	176	-	152	-	-	177	-	-	183
Antimony	µg/L	74 [#5]	-	-	-		0.54	<0.10	<0.10	<0.10	-	<0.10	-	<0.10	-	0.22	-	<0.20	-	<0.2	-	<0.2	-	<0.20	-	<0.2	-	-	<0.20	-	-	<0.20
Arsenic	µg/L	5 [#5]	-	12.5 [#5]	-		0.7	<0.10	0.14	0.17	-	0.13	-	2.56	-	<0.50	-	<0.50	-	<0.5	-	<0.5	-	<0.50	-	<0.5	-	-	<0.50	-	-	<0.50
Barium	µg/L	-	1,000 [#5]	-	-		<20	4.09	4.45	6.89	-	4.26	-	4.75	-	5.7	-	<5.00	-	5	-	<5	-	<5.0	-	<5	-	-	<5.0	-	-	<5.0
Beryllium	µg/L	-	0.13 [#5]	-	100 [#5]		<1.0	<0.10	<0.10	<0.10	-	<0.020	-	<0.10	-	<0.10	-	<0.10	-	<0.1	-	<0.1	-	<0.10	-	<0.1	-	-	<0.10	-	-	<0.10
Bismuth	µg/L	-	-	-	-		-	<0.050	<0.050	<0.050	-	<0.050	-	<0.050	-	<0.10	-	<0.10	-	<0.1	-	<0.1	-	<0.10	-	-	-	-	<0.10	-	-	<0.10
Boron	µg/L	1,200 [#5]	-	1,200 [#5]	-		<100	<10	<10	<10	-	<10	-	<10	-	<50	-	<50	-	<50	-	<50	-	<50.0	-	<50	-	-	<50.0	-	-	<50.0
Cadmium	µg/L	-	-	-	0.12 [#5]		0.033	<0.0050	<0.0050	0.0104	-	<0.0050	-	<0.0050	-	<0.010	-	<0.010	-	<0.01	-	<0.01	-	<0.010	-	<0.01	-	-	<0.010	-	-	<0.010
Calcium	µg/L	-	-	-	-		21,400	8,530	10,500	9,950	-	9,070	-	9,890	-	15,100	15,100	7,010	7,970	13,200	11,800	9,660	-	11,400	-	8,690	-	-	10,100	-	-	9,090
Cesium	µg/L	-	-	-	-		-	<0.010	0.012	0.027	-	<0.010	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	µg/L	-	2.5 [#5,12]	-	1.5 [#5,12]		<1.0	0.11	0.23	0.40	-	<0.50	-	0.10	-	<0.50	-	<0.50	-	<0.5	-	<0.5	-	<0.50	-	<0.5	-	-	<0.50	-	-	<0.50
Cobalt	µg/L	4 [#5]	-	-	-		0.34	<0.10	<0.10	0.20	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.1	-	<0.1	-	<0.10	-	<0.1	-	-	<0.10	-	-	<0.10
Copper	µg/L	-	-	2 [#5]	-		**5.7**	0.51	<1.0	1.49	-	0.64	-	0.53	-	<0.40	-	1.07	-	0.49	-	0.42	-	0.61	-	0.61	-	-	0.61	-	-	0.63
Iron	µg/L	1,000 [#3]	-	-	-		3,010	427	594	1,120	-	366	-	1,060	-	142	-	508	-	572	-	721	-	568	-	681	-	-	584	-	-	805
Lead	µg/L	-	-	2 [#5]	-		**2.73**	0.142	0.152	0.380	-	0.145	-	0.195	-	<0.20	-	<0.20	-	0.23	-	<0.2	-	<0.20	-	<0.2	-	-	<0.20	-	-	<0.20
Lithium	µg/L	-	-	-	-		<5.0	<1.0	<1.0	<1.0	-	<1.0	-	<1.0	-	1.62	-	0.24	-	0.61	-	0.35	-	0.56	-	0.31	-	-	0.48	-	-	0.35
Magnesium	µg/L	-	-	-	-		4390	1810	2280	2170	-	1,820	-	1870	-	3,400	3,350	1,450	1,370	2,500	2,470	1,910	-	2,310	-	1,710	-	-	2,250	-	-	1,740
Manganese	µg/L	750 [#4,5]	-	-	100 [#5]		**139**	12.0	19.3	50.7	-	14.2	-	14.6	-	8.05	-	4.62	-	26	-	11	-	25.4	-	16.4	-	-	28.2	-	-	20.9
Mercury	µg/L	-	-	-	-		<0.010	-	-	<0.0050	-	-	-	<0.0050	-	<0.04	-	<0.04	-	<0.04	-	-	-	<0.010	-	<0.01	-	-	<0.010	-	-	<0.010
Molybdenum	µg/L	7,600 [#5]	-	-	-		<1.0	0.155	0.180	0.212	-	0.218	-	0.155	-	0.3	-	0.3	-	0.23	-	0.16	-	0.18	-	0.15	-	-	0.17	-	-	0.16
Nickel	µg/L	-		-	8.3 [#5]		<1.0	<0.50	<0.50	<0.50	-	<0.50	-	<0.50	-	<0.40	-	<0.40	-	<0.4	-	<0.4	-	<0.40	-	<0.4	-	-	<0.40	-	-	<0.40
Phosphorus	µg/L	-	-	-	-		-	<50	<50	<50	-	<50	-	<50	-	<50	-	92	-	<50	-	<50	-	<50	-	-	-	-	<50	-	-	<50
Potassium	µg/L	-	-	-	-		3100	922	887	1160	-	904	-	725	-	1,370	-	820	-	1,070	-	970	-	1,110	-	-	-	-	950	-	-	830
Rubidium	µg/L	-	-	-	-		-	0.68	0.54	0.98	-	0.74	-	0.61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	µg/L	2 [#5]	-	2 [#5]	-		<0.10	0.067	<0.050	<0.050	-	<0.050	-	<0.050	-	<0.50	-	<0.50	-	<0.5	-	<0.5	-	<0.50	-	<0.5	-	-	<0.50	-	-	<0.50
Silicon	µg/L	-	-	-	-		-	5170	7830	6890	-	4,530	-	6,130	-	13,200	-	5,500	-	9,000	-	6,600	-	7,000	-	-	-	-	6,700	-	-	6,600
Silver	µg/L	0.05 [#4,5]	-	15 [#4,5]	-		<0.020	<0.010	<0.010	<0.010	-	<0.010	-	<0.010	-	<0.050	-	<0.050	-	<0.05	-	<0.05	-	<0.050	-	<0.05	-	-	<0.050	-	-	<0.050
Sodium	µg/L	-	-	-	-		9600	7050	7510	7380	-	6,920	-	7,320	-	9,640	-	5,990	-	8,340	-	7,760	-	8,100	-	6,890	-	-	7,820	-	-	6,760
Strontium	µg/L	-	-	-	-		-	55.6	68.8	66.3	-	60.4	-	64.1	-	91.9	-	46.2	-	76.4	-	57.8	-	70.2	-	54.6	-	-	67.1	-	-	54.9
Sulphur	µg/L	-	-	-	-		-	1,110	1,300	1,010	-	1,000	-	700	-	3,900	-	3,100	-	<3000	-	<3000	-	<3,000	-	-	-	-	<3,000	-	-	<3,000
Tellurium	µg/L	-	-	-	-		-	<0.20	<0.20	<0.20	-	<0.20	-	<0.20	-	<0.50	-	<0.50	-	<0.5	-	<0.5	-	<0.50	-	-	-	-	<0.50	-	-	<0.50
Thallium	µg/L	-	0.03 [#5]	-	-		<0.20	<0.010	<0.010	<0.010	-	<0.010	-	<0.010	-	<0.020	-	<0.020	-	<0.02	-	<0.02	-	<0.020	-	<0.02	-	-	<0.020	-	-	<0.020
Thorium	µg/L	-	-	-	-		-	<0.10	<0.10	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.1	-	<0.1	-	<0.10	-	-	-	-	<0.10	-	-	<0.10
Tin	µg/L	-	-	-	-		<0.50	<0.10	<0.10	<0.10	-	<0.10	-	<0.10	-	<0.20	-	<0.20	-	<0.2	-	<0.2	-	<0.20	-	<0.2	-	-	<0.20	-	-	<0.20
Titanium	µg/L	-	-	-	-		36	6.51	7.45	21.7	-	7.1	-	6.72	-	<5.00	-	<5.00	-	7.2	-	<5	-	11.6	-	6.5	-	-	8.7	-	-	8.9
Tungsten	µg/L	-	-	-	-		-	<0.10	<0.10	<0.10	-	<0.10	-	<0.10	-	<1.0	-	<1.0	-	<0.2	-	<1	-	<1.0	-	<1	-	-	<1.0	-	-	<1.0
Uranium	µg/L	-	7.5 [#5]	-	-		0.46	0.033	0.036	0.074	-	0.034	-	0.025	-	0.059	-	0.023	-	0.059	-	0.026	-	0.042	-	0.027	-	-	0.034	-	-	0.034
Vanadium	µg/L	-	60 [#5]	-	5 [#5]		2.5	0.85	1.00	1.69	-	0.92	-	1.01	-	1.5	-	1.8	-	<5	-	<5	-	<5.0	-	<5	-	-	<5.0	-	-	<5.0
Zinc	µg/L	-	-	10 [#5]	-		**14.2**	<3.0	<3.0	3.2	-	<3.0	-	<3.0	-	<4	-	<4	-	<4	-	<4	-	<4.0	-	<4	-	-	<4.0	-	-	<4.0
Zirconium	µg/L	-	-	-	-		-	<0.060	<0.20	<0.20	-	<0.20	-	<0.20	-	<0.10	-	0.19	-	<0.1	-	<0.1	-	<0.10	-	-	-	-	<0.10	-	-	<0.10
Hydrocarbons																													-	-	-	-
EPH_{10-19}	µg/L	-	-	-	-		-	<250	-	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	-	-	-
EPH_{19-32}	µg/L	-	-	-	-		-	<250	-	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	-	-	-
LEPH	µg/L	-	-	-	-		-	<250	-	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	-	-	-
HEPH	µg/L	-	-	-	-		-	<250	-	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	-	-	-
VH_{6-10}	µg/L	-	-	-	-		-	<100	-	-	-	-	<100	-	-	-	-	-	<100	-	-	-	<100	-	-	-	<100						
Polycyclic Aromatic Hydrocarbons (PAHs)																																
Acenaphthene	µg/L	6 [#5]	-	6	-		-	<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-	-	-	-	-
Acenaphthylene	µg/L	-	-	-	-		-	<0.010	-	-	-	-	<0.010	-	<0.20	-	-	-	<0.2	-	-	-	<0.200	-	-	-	<0.200	-	-	-	-	-	-
Acridine	µg/L	3 [#5]	-	-	-		-	<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-	-	-	-	-
Anthracene	µg/L	4 [#5]	-	-	-		-	<0.010	-	-	-	-	<0.010	-	<0.010	-	-	-	<0.01	-	-	-	<0.010	-	-	-	<0.010	-	-	-	-	-	-
Benz(a)anthracene	µg/L	0.1 [#5]	-	-	-		-	<0.010	-	-	-	-	<0.010	-	<0.010	-	-	-	<0.01	-	-	-	<0.010	-	-	-	<0.010	-	-	-	-	-	-
Benzo(a)pyrene	µg/L	0.01 [#5]	-	0.01	-		-	<0.0050	-	-	-	-	<0.0050	-	<0.010	-	-	-	<0.01	-	-	-	<0.010	-	-	-	<0.010	-	-	-	-	-	-
Benzo(b,j,k)fluoranthene	µg/L	-	-	-	-		-	-	-	-	-	-	<0.0150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b+j)fluoranthene	µg/L	-	-	-	-		-	<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-	-	-	-	-
Benzo(c)phenanthrene	µg/L	-	-	-	-		-	<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-	-	-	-	-
Benzo(g,h,i)perylene	µg/L	-	-	-	-		-	<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-	-	-	-	-
Benzo(k)fluoranthene	µg/L	-	-	-	-		-	<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-	-	-	-	-
2-Chloronaphthalene	µg/L	-	-	-	-		-	-	-	-	-	-	-	-	<0.10	-	-	-	<0.1	-	-	-	<0.100	-	-	-	<0.100	-	-	-	-	-	-
Chrysene	µg/L	-	-	0.1	-		-	<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-	-	-	-	-
Dibenz(a,h)anthracene	µg/L	-	-	-	-		-	<0.0050	-	-	-	-	<0.0050	-	<0.010	-	-	-	<0.01	-	-	-	<0.010	-	-	-	<0.010	-	-	-	-	-	-
Fluoranthene	µg/L	4 [#5]	-	-	-		-	<0.010	-	-	-	-	<0.010	-	<0.030	-	-	-	<0.03	-	-	-	<0.030	-	-	-	<0.030	-	-	-	-	-	-
Fluorene	µg/L	12 [#3]	-	12	-		-	<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-	-	-	-	-
Indeno(1,2,3-c,d)pyrene	µg/L	-	-	-	-		-	<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-	-	-	-	-
1-Methylnaphthalene	µg/L	-	-	1	-		-	<0.050	-	-	-	-	<0.010	-	<0.10	-	-	-	<0.1	-	-	-	<0.100	-	-	-	<0.100	-	-	-	-	-	-
2-Methylnaphthalene	µg/L	-	-	1	-		-	<0.020	-	-	-	-	<0.010	-	<0.10	-	-	-	<0.1	-	-	-	<0.100	-	-	-	<0.100	-	-	-	-	-	-
Naphthalene	µg/L	1 [#5]	-	1	-		-	<0.020	-	-	-	-	<0.050	-	<0.20	-	-	-	<0.2	-	-	-	<0.200	-	-	-	<0.200	-	-	-	-	-	-
Phenanthrene	µg/L	0.3 [#5]	-	-	-		-	<0.020	-	-	-	-	<0.020	-	<0.10	-	-	-	<0.1	-	-	-	<0.100	-	-	-	<0.100	-	-	-	-	-	-
Pyrene	µg/L	-	-	-	-		-	<0.010	-	-	-	-	<0.010	-	<0.020	-	-	-	<0.02	-	-	-	<0.020	-	-	-	<0.020	-	-	-	-	-	-
Quinoline	µg/L	-	50 [#5]	-	-		-	<0.050	-	-	-	-	<0.050	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-	-	-	-	-

NOTES:

#1	Guideline is for short-term daily temperature in streams with unknown fish distribution.
#2	Guideline is the instantaneous minimum for all life stages other than buried embryo/alevin.
#3	Guideline is the short-term acute WQG.
#4	Guideline varies with hardness. Values shown based on average hardness of 32.855 mg/L at background location SW-1.
#5	Guideline is the long-term chronic WQG.
#6	Guideline varies with pH and temperature. Values shown based on an average laboratory pH of 7.17 and average field temperature of 10.09°C at background location SW-1.
#7	Guideline varies with pH, temperature, and salinity. Values shown based on an average laboratory pH of 7.17 and average field temperature of 10.1°C at background location SW-1. Salinity has not been measured since 2019, so the the guidelines for the lowest salinity is selected.
#8	Guideline varies with chloride. Values shown based on an average chloride concentration of 9.4 mg/L at background location SW-1.
#9	Guideline varies with pH, hardness, and DOC. Values shown is calculated based on an average laboratory pH of 7.17, average hardness of 32.855 mg/L , and DOC of 4.830 mg/L at background location SW-1.
#10	Guideline varies with temperature, hardness, and DOC. Values shown is calculated based on an average field temperature of 10.09°C, average hardness of 32.855 mg/L , and DOC of 4.830 mg/L at background location SW-1.
#11	Guideline varies with hardness and DOC. Values shown is calculated based on an average hardness of 32.855 mg/L, and DOC of 4.830 mg/L at background location SW-1.
#12	Guideline is for Chromium VI.
#13	Guideline varies with pH. Values shown is calculated based on an average laboratory pH of 7.17 at background location SW-1.
-	Not analyzed or no applicable BC WQG guideline.
<	Concentration is less than the laboratory detection limit indicated.
BC WQG - Approved	British Columbia Approved Water Quality Guidelines: Aquatic Life, Wildlife & Agriculture (February 2025).
BC WQG - Working	British Columbia Working Water Quality Guidelines: Aquatic Life, Wildlife & Agriculture (August
AW	Aquatic Wildlife.
Shaded	Shaded indicates an exceedance of the BCWQG Freshwater AW guidelines.
BOLD	Bold and underlined indicates an exceedance of the BCWQG Marine AW guidelines.
Italic	Detection limit greater than standard.

TETRA TECH

Table 3: Surface Water Analytical Results

						Location	SW-2																										
						Sample Date	25-Mar-2014	1-Apr-2019	25-Jul-2019	17-Oct-2019	27-Jan-2020	23-Apr-2020	22-Jul-2020	28-Oct-2020	21-Feb-2021	11-May-2021	19-Jul-2021	1-Dec-2021	2-Mar-2022	12-Jul-2022	11-Oct-2022	12-Dec-2022	28-Feb-2023	23-May-2023	27-Sep-2023	18-Dec-2023	22-Feb-2024	DUP (22-Feb-2024)	24-Jun-2024	DUP (24-Jun-2024)	16-Sep-2024	9-Dec-2024
						Laboratory Report Number	-	L2254181	L2318207	L2367392	VA20A090828012020	VA20A53632542020	VA20B11392407 2020	VA20B95653010 2020	21B2866	21E1432	21G2459	21L0641	22C0773	22G1537	22J1342	22L1310	23C0154	23E2913	23I3541	23L2282	24B2509	24B2509	24F3072	24F3072	24I2276	24L1123
						Laboratory Sample ID	-	L2254181-2	L2318207-7	L2367392-7	VA20A0908-008	VA20A5363-008	VA20B1139-008	VA20B9565-007	21B2866-07	21E1432-07	21G2459-07	21L0641-07	2C0773-07	22G1537-07	22J1342-02	22L1310-07	23C0154-06	23E2913-06	23I3541-06	23L2282-06	24B2509-06	24B2509-09	24F3072-06	24F3072-09	24I2276-06	24L1123-06
Parameter	**Unit**	**BC WQG - Fresh AW**		**BC WQG - Marine AW**																													
		Approved	Working	Approved	Working																												
Resin/Fatty Acids																																	
Abietic Acid	µg/L	-	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-	-	-	
Arachidic Acid	µg/L	-	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Behenic Acid	µg/L	-	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
12-Chlorodehydroabietic Acid	µg/L	-	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-	-	-	
14-Chlorodehydroabietic Acid	µg/L	-	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-	-	-	
Dehydroabietic Acid	µg/L	-	8 [#2,13]	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-	-	-	
Dichlorodehydroabietic Acid	µg/L	-	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-	-	-	
9,10-Dichlorostearic Acid	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	<10	-	-	-	<10	-	-	-	-	-	
Isopimaric & Palustric Acids	µg/L	-	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<6.0	-	-	-	-	<10	-	-	<10	-	-	-	-	-	-	-	-	-	
Isopimaric Acid	ug/L																									<10	-	-	-	-	-	
Palustric Acid	ug/L																									<10	-	-	-	-	-	
Lauric Acid	µg/L	-	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Levopimaric Acid	µg/L	-	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-	-	-	
Lignoceric Acid	µg/L	-	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Linoleic Acid	µg/L	-	-	-	-	-	<5.0	-	-	-	-	9.6	-	-	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-	-	-	
Linolenic Acid	µg/L	-	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-	-	-	
Myristic Acid	µg/L	-	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Neoabietic Acid	µg/L	-	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-	-	-	
Octadecanoic Acid	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	
Oleic Acid	µg/L	-	-	-	-	-	<5.0	-	-	-	-	<5.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-	-	-	
Palmitic Acid	µg/L	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Pimaric Acid	µg/L	-	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-	-	-	
Sandaracopimaric Acid	µg/L	-	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-	-	-	
Stearic Acid	µg/L	-	-	-	-	-	<20	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-	-	
Total Fatty Acids	µg/L	-	-	-	-	-	<100	-	-	-	-	<110	-	-	-	-	-	-	<10	-	-	<10	-	-	-	<10	-	-	-	-	-	
Total Resin Acids	µg/L	-	25 [#3,13]	-	-	-	<10	-	-	-	-	<3.5	-	-	-	-	-	-	<10	-	-	<10	-	-	-	<10	-	-	-	-	-	
Total Resin and Fatty Acid	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	<10	-	-	-	<10	-	-	-	-	-	
BTEXS & MTBE																																	
Benzene	µg/L	40 [#5]	-	110 [#5]	-	-	-	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	
Toluene	µg/L	0.5 [#5]	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	
Ethylbenzene	µg/L	200 [#5]	-	250 [#5]	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	
Xylenes Total	µg/L	30 [#5]	-	-	-	-	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-	-	-	
Styrene	µg/L	-	72 [#5]	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	
Methyl t-butyl ether (MTBE)	µg/L	3,400 [#3]	-	440 [#5]	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	1.7	-	-	-							
Volatile Organic Compounds (VOCs)																																	
Hexadecanoic Acid	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<6.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bromodichloromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	
Bromoform	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	
Carbon tetrachloride	µg/L	-	13.3 [#5]	-	-	-	-	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	
Chlorobenzene	µg/L	-	1.3 [#5]	-	25 [#5]	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	
Chloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-	-	-	
Chloroform	µg/L	-	1.8 [#5]	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	
Dibromochloromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	
1,2-Dibromoethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.30	-	-	-	-	-	-	-	<0.3	-	-	-	-	-	-	-	-	-	
Dibromomethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	
1,2-Dichlorobenzene	µg/L	-	0.7 [#5]	-	42 [#5]	-	-	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	
1,3-Dichlorobenzene	µg/L	-	150 [#5]	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	
1,4-Dichlorobenzene	µg/L	-	26 [#5]	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	
1,1-Dichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	
1,2-Dichloroethane	µg/L	-	100 [#5]	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	
1,1-Dichloroethene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	
1,2-Dichloroethene (cis)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	
1,2-Dichloroethene (trans)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	
1,2-Dichloropropane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	
1,3-Dichloropropene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	
Methylene Chloride	µg/L	-	98.1 [#5]	-	-	-	-	-	-	-	-	-	-	<3.0	-	-	-	-	-	-	-	<3.0	-	-	-	-	-	-	-	-	-	
1,1,2,2-Tetrachloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	
Tetrachloroethene	µg/L	-	110 [#5]	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	
1,1,1-Trichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	
1,1,2-Trichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	
Trichloroethene	µg/L	-	21 [#5]	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	
Trichlorofluoromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	
Vinyl chloride	µg/L	-	625 [#5]	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	

NOTES:

#1	Guideline is for short-term daily temperature in streams with unknown fish distribution.
#2	Guideline is the instantaneous minimum for all life stages other than buried embryo/alevin.
#3	Guideline is the short-term acute WQG.
#4	Guideline varies with hardness. Values shown based on average hardness of 32.855 mg/L at background location SW-1.
#5	Guideline is the long-term chronic WQG.
#6	Guideline varies with pH and temperature. Values shown based on an average laboratory pH of 7.17 and average field temperature of 10.09°C at background location SW-1.
#7	Guideline varies with pH, temperature, and salinity. Values shown based on an average laboratory pH of 7.17 and average field temperature of 10.1°C at background location SW-1. Salinity has not been measured since 2019, so the the guidelines for the lowest salinity is selected.
#8	Guideline varies with chloride. Values shown based on an average chloride concentration of 9.4 mg/L at background location SW-1.
#9	Guideline varies with pH, hardness, and DOC. Values shown is calculated based on an average laboratory pH of 7.17, average hardness of 32.855 mg/L , and DOC of 4.830 mg/L at background location SW-1.
#10	Guideline varies with temperature, hardness, and DOC. Values shown is calculated based on an average field temperature of 10.09°C, average hardness of 32.855 mg/L , and DOC of 4.830 mg/L at background location SW-1.
#11	Guideline varies with hardness and DOC. Values shown is calculated based on an average hardness of 32.855 mg/L, and DOC of 4.830 mg/L at background location SW-1.
#12	Guideline is for Chromium VI.
#13	Guideline varies with pH. Values shown is calculated based on an average laboratory pH of 7.17 at background location SW-1.
-	Not analyzed or no applicable BC WQG guideline.
<	Concentration is less than the laboratory detection limit indicated.
BC WQG - Approved	British Columbia Approved Water Quality Guidelines: Aquatic Life, Wildlife & Agriculture (February 2025).
BC WQG - Working	British Columbia Working Water Quality Guidelines: Aquatic Life, Wildlife & Agriculture (August
AW	Aquatic Wildlife.
Shaded	Shaded indicates an exceedance of the BCWQG Freshwater AW guidelines.
BOLD	Bold and underlined indicates an exceedance of the BCWQG Marine AW guidelines.
Italic	Detection limit greater than standard.

TETRA TECH

Table 3: Surface Water Analytical Results

						Location	SW-3																									
						Sample Date	25-Mar-2014	1-Apr-2019	25-Jul-2019	17-Oct-2019	27-Jan-2020	23-Apr-2020	22-Jul-2020	28-Oct-2020	21-Feb-2021	11-May-2021	19-Jul-2021	1-Dec-2021	2-Mar-2022	12-Jul-2022	11-Oct-2022	12-Dec-2022	28-Feb-2023	UP (28-Feb-2023)	23-May-2023	27-Sep-2023	18-Dec-2023	22-Feb-2024	24-Jun-2024	16-Sep-2024	9-Dec-2024
						Laboratory Report Number	-	L2254182	L2318207	L2367392	VA20A0908280120	VA20A536325042020	VA20B113924072020	VA20B95653010202	21B2866	21E1432	21G2459	21L0641	22C0773	22G1537	22J1342	22L1310	23C0154	23C0154	23E2913	23I3541	23L2282	24B2509	24F3072	24I2276	24L1123
						Laboratory Sample ID	-	L2254182-1	L2318207-8	L2367392-8	VA20A0908-009	VA20A5363-009	VA20B1139-009	VA20B9565-008	21B2866-08	21E1432-08	21G2459-08	21L0641-08	22C0773-08	22G1537-08	22J1342-03	22L1310-08	23C0154-07	23C0154-09	23E2913-07	23I3541-07	23L2282-07	24B2509-07	24F3072-07	24I2276-07	24L1123-07
Parameter	**Unit**	**BC WQG - Fresh AW**		**BC WQG - Marine AW**																												
		Approved	**Working**	**Approved**	**Working**																											
Field Measurements																																
Temperature	°C	19 [#1]	-	-	-	-	9.93	15.71	10.5	5.93	13.05	16.2	9.3	4.1	10.7	13.9	8.3	7.1	15.6	11.4	4.7	3.9	3.9	13.2	11.5	6.6	6.9	14.7	13.1	6.5
Electrical Conductivity	µS/cm	-	-	-	-	-	96	98	84.4	85.7	79	176.7	96.6	53.5	128.8	127.8	54.1	47.7	102.5	136.7	67.4	58.5	58.5	92.9	87.3	54.7	63.4	117.8	101.4	62.9
Total Dissolved Solids (TDS)	mg/L	-	-	-	-	-	62	770	-	-	67	82.5	63	57.9	83.85	105.3	51.6	47.45	81.2	88.9	71.5	63.7	63.7	78	76	54.6	63	94.9	85.15	63.2
Salinity	-	-	-	-	-	-	0.05	0.06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	%	-	-	-	-	-	107.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	mg/L	Minimum 5 [#2]	-	Minimum 5 [#2]	-	-	12.41	9.96	-	12.87	10.69	7.74	11.3	14.7	10.9	9.68	13.3	11.78	10.81	11.63	13.46	12.53	12.53	11.3	10.85	11.52	12.46	10.4	9.82	12
pH	pH Units	6.5-9.0	-	7.0-8.7	-	-	7.44	**6.84**	7.97	6.48	7.51	8.52	7.65	7.48	6.64	7.72	6.56	**6.3**	7.9	7.9	7.11	7.08	7.08	7.46	**5.64**	7.31	7.4	**6.8**	7.66	7.57
Oxidation Reduction Potential (ORP)	-	-	-	-	-	-	83.7	262	-	126.1	129.7		34.6	67.6	163.6	100.3	-27.2	171.8	72.1	83	28.9	76.6	76.6	67.4	188.6	107.2	10.9	171.4	94.7	33.2
Physical Parameters																																
pH	pH Units	6.5-9.0	-	7.0-8.7	-	7.71	7.76	7.83	7.52	7.40	7.74	7.72	7.55	-	7.64	-	7.1	-	7.47	-	7.09	**6.61**	**6.74**	**6.63**	**6.78**	**6.6**	**6.52**	**6.56**	7.05	7.23
Electrical Conductivity (EC)	µS/cm	-	-	-	-	88.6	99.1	123	120	-	106	-	102	-	140	-	83.3	-	174	-	115	103	101	117	113	97.1	89.2	120	138	98.1
Total Suspended Solids (TSS)	µg/L	-	-	-	-	23,500	6,600	9,900	22,700	-	5,400	-	6,100	-	<3,300	-	6,800	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Dissolved Solids (TDS)	µg/L	-	-	-	-	68,000	-	-	-	69,000	72,000	-	82,000	-	70800	-	-	-	101,000	-	-	-	-	75000	-	100000	-	72,000	-	58,000
Hardness as $CaCO_3$	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	39,900	55,900	26,000	27,400	37,800	42,500	34,800	-	-	39,900	-	30,100	-	37,800	-	31,000
Alkalinity (total as $CaCO_3$)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	45,900	-	-	-	-	-	-	24600	29600	38300	43700	33000	28,700	38,500	46,500	29,300
Alkalinity (P)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	<1,000	-	-	-	-	-	-	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Bicarbonate	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	45,900	-	-	-	-	-	-	24600	29600	38300	43700	33000	28,700	38,500	46,500	29,300
Carbonate	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	<1,000	-	-	-	-	-	-	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Hydroxide	µg/L	-	-	-	-	29,500	30,300	38,000	38,500	-	30,200	-	33,500	-	<1,000	-	-	-	-	-	-	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Bromide	µg/L	-	-	-	-	<50	<50	<50	<50	<50	<50	<50	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloride	µg/L	150,000 [#5]	-	-	-	7,870	9,440	10,700	9,830	8,620	10,000	10,700	9,830	9,160	10,600	12,300	6,580	9,900	9,490	10,700	10,400	10,200	10,200	10,100	10,600	9,150	8,230	9,240	10,800	8,340
Fluoride	µg/L	887 [#3,4]	-	1,500 [#3]	-	25	22	33	25	<20	24	30	20	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Sulphate	µg/L	218,000 [#1,5]	-	-	-	3,190	3,850	4,830	4,330	2,400	3,460	4,600	2,320	2,900	5,700	8,400	2,400	3,000	4,100	5,100	3,500	7,700	3,600	4,700	4,700	2,700	3,500	3,400	4,400	2,500
Sulphide (as S)	µg/L	-	-	-	-	-	<18	<2.0	<18	<2.0	<2.0	3.1	<2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulphide (as H2S)	µg/L	-	2	-	-	-	-	-	-	<2.0	<2.0	3.3	<2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulphide, total	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<20	-	<20	<20	<20	<20	<20	<20	<20	-	<20	<20	<20	<20	<20	<20	<20
Turbidity	NTU	-	-	-	-	-	2.58	-	7.59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acidity	µg/L	-	-	-	-	-	-	-	-	-	6,300	-	<2,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nutrients																																
Ammonia as N	µg/L	1,850 [#5,8]	-	12,000 [#6,7]	-	5.9	9.1	6.3	<5.0	23	6.9	12.3	6.2	<50	<50	<50	<50	64	<50	<50	152	<50	<50	<50	<50	<50	-	<50	140	73
Nitrate (as N)	µg/L	3,000 [#5]	-	3,700 [#6]	-	212	123	91.5	58.9	226	87.7	139	64.3	227	183	228	157	198	195	161	91	117	115	153	132	94	177	108	140	121
Nitrite (as N	µg/L	100 [#3,8]	-	-	-	1.4	<1.0	3.0	<1.0	3.9	<1.0	1.6	<1.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Nitrate and Nitrite (as N)	µg/L	3,000 [#5]	-	3,700 [#6]	-	-	-	-	-	-	88.2	-	-	-	-	-	-	-	195	-	-	-	-	-	-	-	-	-	-	-
Demand Parameters																																
Biochemical Oxygen Demand (BOD)	µg/L	-	-	-	-	-	<2,000	-	<2,000	-	<2,000	-	<2,000	-	<1,200	-	<3,600	-	<3,800	-	<2,200	-	-	<1,400	-	<2,800	-	<3,200	-	<2,700
Chemical Oxygen Demand (COD)	µg/L	-	-	-	-	<20,000	<20,000	-	25,000	-	<20,000	-	<20,000	-	<20,000	-	<20,000	-	<20,000	-	<20,000	-	-	<20,000	-	47000	-	25,000	-	<20,000
Carbon																																
Dissolved Organic Carbon (DOC)	µg/L	-	-	-	-	-	-	-	-	-	3,520	-	3,680	-	-	-	7,360	-	-	-	-	-	-	-	-	-	-	3,810	-	5,240
Total Organic Carbon (TOC)	µg/L	-	-	-	-	-	3,020	-	5,560	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenols																																
Phenols (4AAP)	µg/L	-	-	-	-	4.3	<1.0	-	-	-	-	<1.0	-	<2.0	-	-	-	<2.0	-	-	-	<2.00	-	-	-	-	<0.50	-	-	-
Dissolved Metals																																
Aluminum	µg/L	-	-	-	-	-	-	-	-	-	14	-	14.2	-	-	-	66.6	-	-	-	-	-	-	-	-	-	-	13.7	-	28.9
Antimony	µg/L	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10	-	-	-	<0.20	-	-	-	-	-	-	-	-	-	-	<0.20	-	<0.20
Arsenic	µg/L	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10	-	-	-	<0.50	-	-	-	-	-	-	-	-	-	-	<0.50	-	<0.50
Barium	µg/L	-	-	-	-	-	-	-	-	-	3.06	-	3.24	-	-	-	<5.00	-	-	-	-	-	-	-	-	-	-	<5.0	-	<5.0
Beryllium	µg/L	-	-	-	-	-	-	-	-	-	<0.020	-	<0.10	-	-	-	<0.10	-	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10
Bismuth	µg/L	-	-	-	-	-	-	-	-	-	<0.050	-	<0.050	-	-	-	<0.10	-	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10
Boron	µg/L	-	-	-	-	-	-	-	-	-	<10	-	<10	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	<50.0	-	<50.0
Cadmium	µg/L	0.0932 [#4,5]	-	-	-	-	-	-	-	-	<0.0050	-	<0.0050	-	-	-	<0.010	-	-	-	-	-	-	-	-	-	-	<0.010	-	<0.010
Calcium	µg/L	-	-	-	-	-	-	-	-	-	9,410	-	9,890	-	-	-	7,660	-	-	-	-	-	-	-	-	-	-	11,100	-	9,320
Cesium	µg/L	-	-	-	-	-	-	-	-	-	<0.010	-	<0.010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	µg/L	-	-	-	-	-	-	-	-	-	<0.50	-	<0.10	-	-	-	<0.50	-	-	-	-	-	-	-	-	-	-	<0.50	-	<0.50
Cobalt	µg/L	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10	-	-	-	<0.10	-	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10
Copper	µg/L	0.862 [#5,10]	-	-	-	-	-	-	-	-	0.37	-	0.21	-	-	-	1.14	-	-	-	-	-	-	-	-	-	-	<0.40	-	0.42
Iron	µg/L	350 [#3]	-	-	-	-	-	-	-	-	147	-	729	-	-	-	398	-	-	-	-	-	-	-	-	-	-	186	-	519
Lead	µg/L	3.67 [#5,11]	-	-	-	-	-	-	-	-	<0.050	-	0.089	-	-	-	<0.20	-	-	-	-	-	-	-	-	-	-	<0.20	-	<0.20
Lithium	µg/L	-	-	-	-	-	-	-	-	-	<1.0	-	<1.0	-	-	-	0.23	-	-	-	-	-	-	-	-	-	-	0.48	-	0.28
Magnesium	µg/L	-	-	-	-	-	-	-	-	-	1,840	-	1,770	-	-	-	1,670	-	-	-	-	-	-	-	-	-	-	2,470	-	1,870
Manganese	µg/L	-	-	-	-	-	-	-	-	-	3.8	-	3.48	-	-	-	3.67	-	-	-	-	-	-	-	-	-	-	6.79	-	5.81
Mercury	µg/L	-	-	-	-	-	-	-	-	-	-	-	<0.0050	-	-	-	<0.010	-	-	-	-	-	-	-	-	-	-	<0.010	-	<0.010
Molybdenum	µg/L	-	-	-	-	-	-	-	-	-	0.195	-	0.154	-	-	-	0.15	-	-	-	-	-	-	-	-	-	-	0.15	-	0.16
Nickel	µg/L	1.3 [#5,10,13]	-	-	-	-	-	-	-	-	<0.50	-	<0.50	-	-	-	<0.40	-	-	-	-	-	-	-	-	-	-	<0.40	-	<0.40
Phosphorus	µg/L	-	-	-	-	-	-	-	-	-	<50	-	<50	-	-	-	<50	-	-	-	-	-	-	-	-	-	-	<50	-	<50
Potassium	µg/L	-	-	-	-	-	-	-	-	-	958	-	714	-	-	-	880	-	-	-	-	-	-	-	-	-	-	980	-	910
Rubidium	µg/L	-	-	-	-	-	-	-	-	-	0.63	-	0.51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	µg/L	-	-	-	-	-	-	-	-	-	<0.050	-	<0.050	-	-	-	<0.50	-	-	-	-	-	-	-	-	-	-	<0.50	-	<0.50
Silicon	µg/L	-	-	-	-	-	-	-	-	-	4,460	-	5,490	-	-	-	5,400	-	-	-	-	-	-	-	-	-	-	6,600	-	8,300
Silver	µg/L	-	-	-	-	-	-	-	-	-	<0.010	-	<0.010	-	-	-	<0.050	-	-	-	-	-	-	-	-	-	-	<0.050	-	<0.050
Sodium	µg/L	-	-	-	-	-	-	-	-	-	7,790	-	7,210	-	-	-	6,130	-	-	-	-	-	-	-	-	-	-	9,100	-	7,340
Strontium	µg/L	-	1,250 [#5,10]	-	-	-	-	-	-	-	62.8	-	62.2	-	-	-	42.6	-	-	-	-	-	-	-	-	-	-	70.8	-	57.3
Sulphur	µg/L	-	-	-	-	-	-	-	-	-	1,030	-	520	-	-	-	<3,000	-	-	-	-	-	-	-	-	-	-	<3,000	-	<3,000
Tellurium	µg/L	-	-	-	-	-	-	-	-	-	<0.20	-	<0.20	-	-	-	<0.50	-	-	-	-	-	-	-	-	-	-	<0.50	-	<0.50
Thallium	µg/L	-	-	-	-	-	-	-	-	-	<0.010	-	<0.010	-	-	-	<0.020	-	-	-	-	-	-	-	-	-	-	<0.020	-	<0.020
Thorium	µg/L	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10	-	-	-	<0.10	-	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10
Tin	µg/L	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10	-	-	-	<0.20	-	-	-	-	-	-	-	-	-	-	<0.20	-	<0.20
Titanium	µg/L	-	-	-	-	-	-	-	-	-	<0.30	-	<0.30	-	-	-	<5.00	-	-	-	-	-	-	-	-	-	-	<5.0	-	<5.0
Tungsten	µg/L	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	<1.0	-	<1.0
Uranium	µg/L	-	-	-	-	-	-	-	-	-	0.027	-	0.013	-	-	-	0.028	-	-	-	-	-	-	-	-	-	-	0.021	-	0.021
Vanadium	µg/L	-	-	-	-	-	-	-	-	-	<0.50	-	0.50	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	<5.0	-	<5.0
Zinc	µg/L	7.55 [#5,10]	-	-	-	-	-	-	-	-	1.5	-	<1.0	-	-	-	<4	-	-	-	-	-	-	-	-	-	-	<4.0	-	<4.0
Zirconium	µg/L	-	-	-	-	-	-	-	-	-	<0.30	-	<0.20	-	-	-	<0.10	-	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10

NOTES:

#1	Guideline is for short-term daily temperature in streams with unknown fish distribution.
#2	Guideline is the instantaneous minimum for all life stages other than buried embryos/alevin.
#3	Guideline is the short-term acute WQG.
#4	Guideline varies with hardness. Values shown based on average hardness of 32.855 mg/L at background location SW-1.
#5	Guideline is the long-term chronic WQG.
#6	Guideline varies with pH and temperature. Values shown based on an average laboratory pH of 7.17 and average field temperature of 10.09°C at background location SW-1.
#7	Guideline varies with pH, temperature, and salinity. Values shown based on an average laboratory pH of 7.17 and average field temperature of 10.1°C at background location SW-1. Salinity has not been measured since 2019, so the the guidelines for the lowest salinity is selected.
#8	Guideline varies with chloride. Values shown based on an average chloride concentration of 9.4 mg/L at background location SW-1.
#9	Guideline varies with pH, hardness, and DOC. Values shown is calculated based on an average laboratory pH of 7.17, average hardness of 32.855 mg/L , and DOC of 4.830 mg/L at background location SW-1.
#10	Guideline varies with temperature, hardness, and DOC. Values shown is calculated based on an average field temperature of 10.09°C, average hardness of 32.855 mg/L , and DOC of 4.830 mg/L at background location SW-1.
#11	Guideline varies with hardness and DOC. Values shown is calculated based on an average hardness of 32.855 mg/L, and DOC of 4.830 mg/L at background location SW-1.
#12	Guideline is for Chromium VI.
#13	Guideline varies with pH. Values shown is calculated based on an average laboratory pH of 7.17 at background location SW-1.
-	Not analyzed or no applicable BC WQG guideline.
<	Concentration is less than the laboratory detection limit indicated.
BC WQG - Approved	British Columbia Approved Water Quality Guidelines: Aquatic Life, Wildlife & Agriculture (February 2025).
BC WQG - Working AW	British Columbia Working Water Quality Guidelines: Aquatic Life, Wildlife & Agriculture (August Aquatic Wildlife.
Shaded	Shaded indicates an exceedance of the BCWQG Freshwater AW guidelines.
BOLD	Bold and underlined indicates an exceedance of the BCWQG Marine AW guidelines.
Italic	Detection limit greater than standard.

TETRA TECH

Table 3: Surface Water Analytical Results

						Location	SW-3																									
						Sample Date	25-Mar-2014	1-Apr-2019	25-Jul-2019	17-Oct-2019	27-Jan-2020	23-Apr-2020	22-Jul-2020	28-Oct-2020	21-Feb-2021	11-May-2021	19-Jul-2021	1-Dec-2021	2-Mar-2022	12-Jul-2022	11-Oct-2022	12-Dec-2022	28-Feb-2023	UP (28-Feb-2023)	23-May-2023	27-Sep-2023	18-Dec-2023	22-Feb-2024	24-Jun-2024	16-Sep-2024	9-Dec-2024
						Laboratory Report Number	-	L2254182	L2318207	L2367392	VA20A0908028012020	VA20A536325042020	VA20B113924072020	VA20B095630102020	21B2866	21E1432	21G2459	21L0641	22C0773	22G1537	22J1342	22L1310	23C0154	23C0154	23E2913	23I3541	23L2282	24B2509	24F3072	24I2276	24L1123
						Laboratory Sample ID	-	L2254182-1	L2318207-8	L2367392-8	VA20A0908-009	VA20A5363-009	VA20B1139-009	VA20B9565-008	21B2866-08	21E1432-08	21G2459-08	21L0641-08	22C0773-08	22G1537-08	22J1342-03	22L1310-08	23C0154-07	23C0154-09	23E2913-07	23I3541-07	23L2282-07	24B2509-07	24F3072-07	24I2276-07	24L1123-07
Parameter	**Unit**	**BC WQG - Fresh AW**		**BC WQG - Marine AW**																												
		Approved	**Working**	**Approved**	**Working**																											
Total Metals																																
Aluminum	µg/L	162 [#5,9]	-	-	-		566	95.8	188	554	-	200	-	170	-	29	-	120	-	117	-	62.3	-	-	197	-	161	-	224	-	94.1
Antimony	µg/L	74 [#5]	-	-	270 [#5]		<0.50	<0.10	<0.10	<0.10	-	<0.10	-	<0.10	-	1.12	-	<0.20	-	<0.2	-	<0.2	-	-	<0.20	-	<0.2	-	<0.20	-	<0.20
Arsenic	µg/L	5 [#5]	-	12.5 [#5]	-		<0.50	0.10	0.15	0.30	-	0.12	-	0.12	-	<0.50	-	<0.50	-	<0.5	-	<0.5	-	-	<0.50	-	<0.5	-	<0.50	-	<0.50
Barium	µg/L	-	1,000 [#5]	-	-		<20	3.89	4.89	9.3	-	5	-	4.47	-	<5.00	-	<5.00	-	<5	-	<5	-	-	<5.0	-	<5	-	5.3	-	<5.0
Beryllium	µg/L	-	0.13 [#5]	-	100 [#5]		<1.0	<0.10	<0.10	<0.10	-	<0.020	-	<0.10	-	<0.10	-	<0.10	-	<0.1	-	<0.1	-	-	<0.10	-	<0.1	-	<0.10	-	<0.10
Bismuth	µg/L	-	-	-	-		-	<0.050	<0.050	<0.050	-	<0.050	-	<0.050	-	<0.10	-	<0.10	-	<0.1	-	<0.1	-	-	<0.10	-	-	-	<0.10	-	<0.10
Boron	µg/L	1,200 [#5]	-	1,200 [#5]	-		<100	<10	13	13	-	<10	-	<10	-	<50	-	<50	-	<50	-	<50	-	-	<50.0	-	<50	-	<50.0	-	<50.0
Cadmium	µg/L	-	-	-	0.12 [#5]		<0.010	<0.0050	<0.0050	0.0133	-	<0.0050	-	0.0077	-	<0.010	-	<0.010	-	<0.01	-	<0.01	-	-	<0.010	-	<0.01	-	<0.010	-	<0.010
Calcium	µg/L	-	-	-	-		8830	9080	11,300	11,300	-	8,830	-	10,200	-	13,300	16,400	7,430	8,610	11,300	12,800	10,500	-	-	12,000	-	9,160	-	11,200	-	9,380
Cesium	µg/L	-	-	-	-		-	<0.010	0.014	0.037	-	0.014	-	0.013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	µg/L	-	2.5 [#5,12]	-	1.5 [#5,12]		<1.0	0.11	0.16	0.69	-	<0.50	-	0.14	-	<0.50	-	<0.50	-	<0.5	-	<0.5	-	-	<0.50	-	<0.5	-	<0.50	-	<0.50
Cobalt	µg/L	4 [#5]	-	-	-		<0.30	<0.10	<0.10	0.27	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.1	-	<0.1	-	-	0.1	-	<0.1	-	0.12	-	<0.10
Copper	µg/L	-	-	2 [#5]	-		1.6	<0.50	<1.0	3.37	-	0.71	-	<0.50	-	<0.40	-	0.91	-	<0.4	-	0.41	-	-	0.72	-	0.59	-	0.64	-	0.62
Iron	µg/L	1,000 [#3]	-	-	-		1,130	384	661	1,660	-	490	-	1,100	-	201	-	501	-	459	-	698	-	-	590	-	668	-	667	-	665
Lead	µg/L	-	-	2 [#5]	-		0.56	0.132	0.233	1.06	-	0.202	-	0.216	-	<0.20	-	0.2	-	<0.2	-	<0.2	-	-	0.2	-	<0.2	-	<0.20	-	<0.20
Lithium	µg/L	-	-	-	-		<5.0	<1.0	<1.0	<1.0	-	<1.0	-	<1.0	-	0.66	-	0.23	-	0.53	-	0.37	-	-	0.57	-	0.32	-	0.54	-	0.32
Magnesium	µg/L	-	-	-	-		1810	1860	2390	2480	-	1,970	-	1,930	-	2,890	3,600	1,500	1,420	2,310	2,570	2,090	-	-	2,380	-	1,740	-	2,420	-	1,810
Manganese	µg/L	750 [#4,5]	-	-	100 [#5]		37.6	10.4	25.0	87.3	-	18.4	-	15.3	-	17.7	-	4.94	-	18	-	10.6	-	-	29.1	-	16.6	-	34.1	-	14.1
Mercury	µg/L	-	-	-	-		<0.010	-	-	0.0051	-	-	-	<0.0050	-	<0.04	-	<0.04	-	<0.04	-	-	-	-	<0.020	-	<0.01	-	<0.010	-	<0.010
Molybdenum	µg/L	7,600 [#5]	-	-	-		<1.0	0.184	0.245	0.241	-	0.224	-	0.176	-	0.17	-	0.17	-	0.17	-	0.17	-	-	0.24	-	0.16	-	0.22	-	0.17
Nickel	µg/L	-		-	8.3 [#5]		<1.0	<0.50	<0.50	0.52	-	<0.50	-	<0.50	-	<0.40	-	<0.40	-	<0.4	-	<0.4	-	-	<0.40	-	<0.4	-	<0.40	-	<0.40
Phosphorus	µg/L	-	-	-	-		-	<50	<50	74	-	<50	-	<50	-	<50	-	77	-	<50	-	<50	-	-	<50	-	-	-	<50	-	<50
Potassium	µg/L	-	-	-	-		<2000	977	1010	1470	-	974	-	778	-	1,170	-	890	-	900	-	1,090	-	-	1,240	-	-	-	1,130	-	890
Rubidium	µg/L	-	-	-	-		-	0.69	0.63	1.26	-	0.8	-	0.66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	µg/L	2 [#5]	-	2 [#5]	-		<0.10	<0.050	<0.050	0.083	-	<0.050	-	<0.050	-	<0.50	-	<0.50	-	<0.5	-	<0.5	-	-	<0.50	-	<0.5	-	<0.50	-	<0.50
Silicon	µg/L	-	-	-	-		-	5210	8200	7520	-	4,980	-	6,350	-	12,600	-	5,500	-	9,400	-	6,900	-	-	7,000	-	-	-	6,800	-	6,500
Silver	µg/L	0.05 [#4,5]	-	15 [#4,5]	-		<0.020	<0.010	<0.010	<0.010	-	<0.010	-	<0.010	-	<0.050	-	<0.050	-	<0.05	-	<0.05	-	-	<0.050	-	<0.05	-	<0.050	-	<0.050
Sodium	µg/L	-	-	-	-		6,600	7,350	8,120	8,660	-	7,670	-	7,540	-	8,300	-	6,190	-	7,480	-	8,250	-	-	8,800	-	7,180	-	8,510	-	7,100
Strontium	µg/L	-	-	-	-		-	58.7	74.6	73.9	-	65.6	-	66.6	-	75.2	-	48.4	-	71.2	-	63.3	-	-	73.6	-	58.2	-	73.5	-	56.4
Sulphur	µg/L	-	-	-	-		-	1130	1720	508,000	-	1,370	-	810	-	3,000	-	<3,000	-	<3000	-	<3000	-	-	<3,000	-	-	-	<3,000	-	<3,000
Tellurium	µg/L	-	-	-	-		-	<0.20	<0.20	<0.20	-	<0.20	-	<0.20	-	<0.50	-	<0.50	-	<0.5	-	<0.5	-	-	<0.50	-	-	-	<0.50	-	<0.50
Thallium	µg/L	-	0.03 [#5]	-	-		<0.20	<0.010	<0.010	<0.010	-	<0.010	-	<0.010	-	<0.020	-	<0.020	-	<0.02	-	<0.02	-	-	<0.020	-	<0.02	-	<0.020	-	<0.020
Thorium	µg/L	-	-	-	-		-	<0.10	<0.10	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.1	-	<0.1	-	-	<0.10	-	-	-	<0.10	-	<0.10
Tin	µg/L	-	-	-	-		<0.50	<0.10	<0.10	4.3	-	<0.10	-	<0.10	-	<0.20	-	<0.20	-	<0.2	-	<0.2	-	-	<0.20	-	<0.2	-	<0.20	-	<0.20
Titanium	µg/L	-	-	-	-		28	4.39	8.52	28.7	-	9.96	-	8.05	-	<5.00	-	<5.00	-	5.8	-	<5	-	-	10	-	7.4	-	10.3	-	<5.0
Tungsten	µg/L	-	-	-	-		-	<0.10	<0.10	<0.10	-	<0.10	-	<0.10	-	<1.0	-	<1.0	-	<0.2	-	<1	-	-	<1.0	-	<1	-	<1.0	-	<1.0
Uranium	µg/L	-	7.5 [#5]	-	-		<0.20	0.036	0.043	0.096	-	0.05	-	0.027	-	0.021	-	0.03	-	0.049	-	0.03	-	-	0.047	-	0.03	-	0.043	-	0.028
Vanadium	µg/L	-	60 [#5]	-	5 [#5]		2.1	0.78	1.12	2.03	-	1.02	-	1.16	-	1.1	-	1.5	-	<5	-	<5	-	-	<5.0	-	<5	-	<5.0	-	<5.0
Zinc	µg/L	-	-	10 [#5]	-		<5.0	<3.0	3.1	6.3	-	3.7	-	<3.0	-	<4	-	<4	-	<4	-	<4	-	-	<4.0	-	<4	-	<4.0	-	<4.0
Zirconium	µg/L	-	-	-	-		-	<0.060	<0.20	<0.20	-	<0.20	-	<0.20	-	<0.10	-	0.16	-	<0.1	-	<0.1	-	-	<0.10	-	-	-	<0.10	-	<0.10
Hydrocarbons																																
EPH_{C10-19}	µg/L	-	-	-	-		-	<250	-	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	-	<250	-	-	-
EPH_{C19-32}	µg/L	-	-	-	-		-	<250	-	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	-	<250	-	-	-
LEPH	µg/L	-	-	-	-		-	<250	-	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	-	<250	-	-	-
HEPH	µg/L	-	-	-	-		-	<250	-	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	-	<250	-	-	-
VH_{C6-10}	µg/L	-	-	-	-		-	<100	-	-	-	-	<100	-	-	-	-	-	<100	-	-	-	<100	-	-	-	-	<100	-	-	-
Polycyclic Aromatic Hydrocarbons (PAHs)																																
Acenaphthene	µg/L	6 [#5]	-	6	-		-	<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
Acenaphthylene	µg/L	-	-	-	-		-	<0.010	-	-	-	-	<0.010	-	<0.20	-	-	-	<0.2	-	-	-	<0.200	-	-	-	-	<0.200	-	-	-
Acridine	µg/L	3 [#5]	-	-	-		-	<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
Anthracene	µg/L	4 [#5]	-	-	-		-	<0.010	-	-	-	-	<0.010	-	<0.010	-	-	-	<0.01	-	-	-	<0.010	-	-	-	-	<0.010	-	-	-
Benz[a]anthracene	µg/L	0.1 [#5]	-	-	-		-	<0.010	-	-	-	-	<0.010	-	<0.010	-	-	-	<0.01	-	-	-	<0.010	-	-	-	-	<0.010	-	-	-
Benzo(a)pyrene	µg/L	0.01 [#5]	-	0.01	-		-	<0.0050	-	-	-	-	<0.0050	-	<0.010	-	-	-	<0.01	-	-	-	<0.010	-	-	-	-	<0.010	-	-	-
Benzo(b,j,k)fluoranthene	µg/L	-	-	-	-		-	-	-	-	-	-	<0.0150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b+j)fluoranthene	µg/L	-	-	-	-		-	<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
Benzo(g,h,i)perylene	µg/L	-	-	-	-		-	<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
Benzo(k)fluoranthene	µg/L	-	-	-	-		-	<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
2-Chloronaphthalene	µg/L	-	-	-	-		-	-	-	-	-	-	-	-	<0.10	-	-	-	<0.1	-	-	-	<0.100	-	-	-	-	<0.100	-	-	-
Chrysene	µg/L	-	-	0.1	-		-	<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
Dibenz(a,h)anthracene	µg/L	-	-	-	-		-	<0.0050	-	-	-	-	<0.0050	-	<0.010	-	-	-	<0.01	-	-	-	<0.010	-	-	-	-	<0.010	-	-	-
Fluoranthene	µg/L	4 [#5]	-	-	-		-	<0.010	-	-	-	-	<0.010	-	<0.030	-	-	-	<0.03	-	-	-	<0.030	-	-	-	-	<0.030	-	-	-
Fluorene	µg/L	12 [#5]	-	12	-		-	<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
Indeno(1,2,3-c,d)pyrene	µg/L	-	-	-	-		-	<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-
1-Methylnaphthalene	µg/L	-	-	1	-		-	<0.050	-	-	-	-	<0.050	-	<0.10	-	-	-	<0.1	-	-	-	<0.100	-	-	-	-	<0.100	-	-	-
2-Methylnaphthalene	µg/L	-	-	1	-		-	<0.020	-	-	-	-	<0.020	-	<0.10	-	-	-	<0.1	-	-	-	<0.100	-	-	-	-	<0.100	-	-	-
Naphthalene	µg/L	1 [#5]	-	1	-		-	<0.020	-	-	-	-	<0.020	-	<0.20	-	-	-	<0.2	-	-	-	<0.200	-	-	-	-	<0.200	-	-	-
Phenanthrene	µg/L	0.3 [#5]	-	-	-		-	<0.020	-	-	-	-	<0.020	-	<0.10	-	-	-	<0.1	-	-	-	<0.100	-	-	-	-	<0.100	-	-	-
Pyrene	µg/L	-	-	-	-		-	<0.010	-	-	-	-	<0.010	-	<0.020	-	-	-	<0.02	-	-	-	<0.020	-	-	-	-	<0.020	-	-	-
Quinoline	µg/L	-	50 [#5]	-	-		-	<0.050	-	-	-	-	<0.050	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	-	<0.050	-	-	-

NOTES:

#1	Guideline is for short-term daily temperature in streams with unknown fish distribution.
#2	Guideline is the instantaneous minimum for all life stages other than buried embryo/alevin.
#3	Guideline is the short-term acute WQG.
#4	Guideline varies with hardness. Values shown based on average hardness of 32.855 mg/L at background location SW-1.
#5	Guideline is the long-term chronic WQG.
#6	Guideline varies with pH and temperature. Values shown based on an average laboratory pH of 7.17 and average field temperature of 10.09°C at background location SW-1.
#7	Guideline varies with pH, temperature, and salinity. Values shown based on an average laboratory pH of 7.17 and average field temperature of 10.1°C at background location SW-1. Salinity has not been measured since 2019, so the the guidelines for the lowest salinity is selected.
#8	Guideline varies with chloride. Values shown based on an average chloride concentration of 9.4 mg/L at background location SW-1.
#9	Guideline varies with pH, hardness, and DOC. Values shown is calculated based on an average laboratory pH of 7.17, average hardness of 32.855 mg/L , and DOC of 4.830 mg/L at background location SW-1.
#10	Guideline varies with temperature, hardness, and DOC. Values shown is calculated based on an average field temperature of 10.09°C, average hardness of 32.855 mg/L , and DOC of 4.830 mg/L at background location SW-1.
#11	Guideline varies with hardness and DOC. Values shown is calculated based on an average hardness of 32.855 mg/L, and DOC of 4.830 mg/L at background location SW-1.
#12	Guideline is for Chromium VI.
#13	Guideline varies with pH. Values shown is calculated based on an average laboratory pH of 7.17 at background location SW-1.
-	Not analyzed or no applicable BC WQG guideline.
<	Concentration is less than the laboratory detection limit indicated.
BC WQG - Approved	British Columbia Approved Water Quality Guidelines: Aquatic Life, Wildlife & Agriculture (February 2025).
BC WQG - Working	British Columbia Working Water Quality Guidelines: Aquatic Life, Wildlife & Agriculture (August
AW	Aquatic Wildlife.
Shaded	Shaded indicates an exceedance of the BCWQG Freshwater AW guidelines.
BOLD	Bold and underlined indicates an exceedance of the BCWQG Marine AW guidelines.
Italic	Detection limit greater than standard.

TETRA TECH

Table 3: Surface Water Analytical Results

						Location																											
						Sample Date	25-Mar-2014	1-Apr-2019	25-Jul-2019	17-Oct-2019	27-Jan-2020	23-Apr-2020	22-Jul-2020	28-Oct-2020	21-Feb-2021	11-May-2021	19-Jul-2021	1-Dec-2021	2-Mar-2022	12-Jul-2022	11-Oct-2022	12-Dec-2022	28-Feb-2023	UP (28-Feb-2023)	23-May-2023	27-Sep-2023	18-Dec-2023	22-Feb-2024	24-Jun-2024	16-Sep-2024	9-Dec-2024
						Laboratory Report Number	-	L2254182	L2318207	L2367392	VA20A0908280120	VA20A5632504202	VA20B113924072020	VA20B9565301020	21B2866	21E1432	21G2459	21L0641	22C0773	22G1537	22J1342	22L1310	23C0154	23C0154	23E2913	23I3541	23L2282	24B2509	24F3072	24I2276	24L1123
						Laboratory Sample ID	-	L2254182-1	L2318207-8	L2367392-8	VA20A0908-009	VA20A5363-009	VA20B1139-009	VA20B9565-008	21B2866-08	21E1432-08	21G2459-08	21L0641-08	22C0773-08	22G1537-08	22J1342-03	22L1310-08	23C0154-07	23C0154-09	23E2913-07	23I3541-07	23L2282-07	24B2509-07	24F3072-07	24I2276-07	24L1123-07
Parameter	Unit	BC WQG - Fresh AW		BC WQG - Marine AW																													
		Approved	Working	Approved	Working																												
Resin/Fatty Acids																																	
Abietic Acid	µg/L	-	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
Arachidic Acid	µg/L	-	-	-	-	-	<5.0	-	-	-	-	<5.0	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Behenic Acid	µg/L	-	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12-Chlorodehydroabietic Acid	µg/L	-	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
14-Chlorodehydroabietic Acid	µg/L	-	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
Dehydroabietic Acid	µg/L	-	8 [#3,13]	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
Dichlorodehydroabietic Acid	µg/L	-	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
9,10-Dichlorostearic Acid	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	<10	-	-	-	-	<10	-	-	-
Isopimaric & Palustric Acids	µg/L	-	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<6.0	-	-	-	-	<10	-	-	<10	-	-	-	-	-	-	-	-
Isopimaric Acid	ug/L																										<10	-	-	-
Palustric Acid	ug/L																										<10	-	-	-
Lauric Acid	µg/L	-	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Levopimaric Acid	µg/L	-	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
Lignoceric Acid	µg/L	-	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Linoleic Acid	µg/L	-	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
Linolenic Acid	µg/L	-	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
Myristic Acid	µg/L	-	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Neoabietic Acid	µg/L	-	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
Octadecanoic Acid	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-
Oleic Acid	µg/L	-	-	-	-	-	<5.0	-	-	-	-	<5.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
Palmitic Acid	µg/L	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pimaric Acid	µg/L	-	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
Sandaracopimaric Acid	µg/L	-	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	-	<0.01	-	-	-
Stearic Acid	µg/L	-	-	-	-	-	<20	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-	-
Total Fatty Acids	µg/L	-	-	-	-	-	<100	-	-	-	-	<110	-	-	-	-	-	-	<10	-	-	<10	-	-	-	-	<10	-	-	-
Total Resin Acids	µg/L	-	25 [#3,13]	-	-	-	<10	-	-	-	-	<3.5	-	-	-	-	-	-	<10	-	-	<10	-	-	-	-	<10	-	-	-
Total Resin and Fatty Acid	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	<10	-	-	-	-	<10	-	-	-
BTEXS & MTBE																																	
Benzene	µg/L	40 [#5]	-	110 [#5]	-	-	-	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-
Toluene	µg/L	0.5 [#5]	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	200 [#5]	-	250 [#5]	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Xylenes Total	µg/L	30 [#3]	-	-	-	-	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-	-
Styrene	µg/L	-	72 [#5]	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Methyl t-butyl ether (MTBE)	µg/L	3,400 [#3]	-	440 [#5]	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-				
Volatile Organic Compounds (VOCs)																																	
Hexadecanoic Acid	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<6.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Bromoform	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Carbon tetrachloride	µg/L	-	13.3 [#3]	-	-	-	-	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-
Chlorobenzene	µg/L	-	1.3 [#5]	-	25 [#5]	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Chloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-	-
Chloroform	µg/L	-	1.8 [#5]	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Dibromochloromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,2-Dibromoethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.30	-	-	-	-	-	-	-	<0.3	-	-	-	-	-	-	-	-
Dibromomethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	µg/L	-	0.7 [#5]	-	42 [#5]	-	-	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	µg/L	-	150 [#3]	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	µg/L	-	26 [#5]	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,1-Dichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,2-Dichloroethane	µg/L	-	100 [#5]	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,1-Dichloroethene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,2-Dichloroethene (cis)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,2-Dichloroethene (trans)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,2-Dichloropropane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,3-Dichloropropene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Methylene Chloride	µg/L	-	98.1 [#5]	-	-	-	-	-	-	-	-	-	-	<3.0	-	-	-	-	-	-	-	<3.0	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-
Tetrachloroethene	µg/L	-	110 [#5]	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Trichloroethene	µg/L	-	21 [#5]	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Trichlorofluoromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	625 [#5]	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-

NOTES:

#1	Guideline is for short-term daily temperature in streams with unknown fish distribution.
#2	Guideline is the instantaneous minimum for all life stages other than buried embryo/alevin.
#3	Guideline is the short-term acute WQG.
#4	Guideline varies with hardness. Values shown based on average hardness of 32.855 mg/L at background location SW-1.
#5	Guideline is the long-term chronic WQG.
#6	Guideline varies with pH and temperature. Values shown based on an average laboratory pH of 7.17 and average field temperature of 10.09°C at background location SW-1.
#7	Guideline varies with pH, temperature, and salinity. Values shown based on an average laboratory pH of 7.17 and average field temperature of 10.1°C at background location SW-1. Salinity has not been measured since 2019, so the the guidelines for the lowest salinity is selected.
#8	Guideline varies with chloride. Values shown based on an average chloride concentration of 9.4 mg/L at background location SW-1.
#9	Guideline varies with pH, hardness, and DOC. Values shown is calculated based on an average laboratory pH of 7.17, average hardness of 32.855 mg/L , and DOC of 4.830 mg/L at background location SW-1.
#10	Guideline varies with temperature, hardness, and DOC. Values shown is calculated based on an average field temperature of 10.09°C, average hardness of 32.855 mg/L , and DOC of 4.830 mg/L at background location SW-1.
#11	Guideline varies with hardness and DOC. Values shown is calculated based on an average hardness of 32.855 mg/L, and DOC of 4.830 mg/L at background location SW-1.
#12	Guideline is for Chromium VI.
#13	Guideline varies with pH. Values shown is calculated based on an average laboratory pH of 7.17 at background location SW-1.
-	Not analyzed or no applicable BC WQG guideline.
<	Concentration is less than the laboratory detection limit indicated.
BC WQG - Approved	British Columbia Approved Water Quality Guidelines: Aquatic Life, Wildlife & Agriculture (February 2025).
BC WQG - Working	British Columbia Working Water Quality Guidelines: Aquatic Life, Wildlife & Agriculture (August
AW	Aquatic Wildlife.
Shaded	Shaded indicates an exceedance of the BCWQG Freshwater AW guidelines.
BOLD	Bold and underlined indicates an exceedance of the BCWQG Marine AW guidelines.
Italic	Detection limit greater than standard.

TETRA TECH

Table 3: Surface Water Analytical Results

						Location	SW-4																								
						Sample Date	1-Apr-2019	25-Jul-2019	17-Oct-2019	27-Jan-2020	23-Apr-2020	22-Jul-2020	28-Oct-2020	21-Feb-2021	11-May-2021	19-Jul-2021	1-Dec-2021	2-Mar-2022	12-Jul-2022	11-Oct-2022	12-Dec-2022	28-Feb-2023	23-May-2023	27-Sep-2023	18-Dec-2023	22-Feb-2024	24-Jun-2024	16-Sep-2024	9-Dec-2024
						Laboratory Report Number	L2254182	L2318207	L2367392	VA20A09082801202	VA20A53632504202	VA20B11392407202	VA20B95653010202	21B2866	21E1432	21G2459	21L0641	22C0773	22G1537	22J1342	22L1310	23C0154	23E2913	23I3541	23L2282	24B2509	24F3072	24I2276	24L1123
						Laboratory Sample ID	L2254182-2	L2318207-9	L2367392-9	VA20A0908-010	VA20A5363-010	VA20B1139-010	VA20B9565-009	21B2866-09	21E1432-09	21G2459-09	21L0641-09	22C0773-09	22G1537-09	22J1342-04	22L1310-09	23C0154-08	23E2913-08	23I3541-08	23L2282-08	24B2509-08	24F3072-08	24I2276-08	24L1123-08
Parameter	Unit	BC WQG - Fresh AW		BC WQG - Marine AW																											
		Approved	Working	Approved	Working																										
Field Measurements																															
Temperature	°C	19 [#1]	-	-	-		9.93	13.09	11	9.1	11.11	11.6	10.9	7.1	10.6	12.2	10.3	9.4	12.1	11.3	9.0	8.9	14.3	11.6	8.1	9.1	14.6	12.7	9
Electrical Conductivity	µS/cm	-	-	-	-		125	132	145.3	182.2	136	180	176.5	106	153.2	121.5	115.8	106.4	116.7	163.8	113.1	103.4	124.6	126.7	133.4	121	162.3	151.2	108
Total Dissolved Solids (TDS)	mg/L	-	-	-	-		114	111	-	-	120	117	114.4	105	100.75	104.65	104.6	98.8	99.9	106.5	106.0	97.5	101.8	110.7	128.1	113	130.65	128.7	101
Salinity	-	-	-	-	-		0.08	0.08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	%	-	-	-	-		102.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	mg/L	Minimum 5 [#2]	-	Minimum 5 [#2]	-		11.63	9.73	-	11.85	10.82	8.26	8.87	10	8.71	9.11	9.71	9.01	9.68	9.78	8.80	8.91	0.85	3.19	0.79	8.62	1.96	0.5	16.85
pH	pH Units	6.5-9.0	-	7.0-8.7	-		**6.91**	**4.54**	7.32	5.75	7.18	7.23	7.25	7.07	7.13	7.17	6.22	**6.92**	7.33	7.66	**6.96**	**6.72**	7.18	**5.58**	**5.5**	**6.83**	**6.79**	**6.58**	8.1
Oxidation Reduction Potential (ORP)	-	-	-	-	-		124.5	360	-	-	130.7	105.9	87.6	103	118	124.6	-5.2	153.2	26.7	32	9.8	39.8	60.7	197.4	91.7	16.1	151.1	80.1	47.3
Physical Parameters																															
pH	pH Units	6.5-9.0	-	7.0-8.7	-		7.87	8.06	7.44	7.64	8.06	7.72	7.61	-	**6.86**	-	7.13	-	7.12	-	**6.62**	**6.93**	**6.67**	**6.91**	**6.87**	6.61	6.57	7.11	7.43
Electrical Conductivity (EC)	µS/cm	-	-	-	-		180	182	160	-	187	-	184	-	169	-	170	-	157	-	165	153	152	156	165	163	162	165	166
Total Suspended Solids (TSS)	µg/L	-	-	-	-		7,200	3,900	7,700	-	10,600	-	4,700	-	8,600	-	3,500	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Dissolved Solids (TDS)	µg/L	-	-	-	-		-	-	-	127,000	123,000	-	135,000	-	94700	-	-	-	107,000	-	-	-	108,000	-	148000	-	55,000	-	130,000
Hardness as $CaCO_3$	µg/L	-	-	-	-		-	-	-	-	-	-	-	-	55,400	59,400	60,200	59,000	55,100	56,100	57,000	-	59,000	-	61,400	-	58,500	-	59,500
Alkalinity (total as $CaCO_3$)	µg/L	-	-	-	-		-	-	-	-	-	-	-	-	66,700	-	-	-	-	-	-	66700	55,300	59500	66100	56,700	59,600	57,000	56,000
Alkalinity (P)	µg/L	-	-	-	-		-	-	-	-	-	-	-	-	<1,000	-	-	-	-	-	-	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Bicarbonate	µg/L	-	-	-	-		-	-	-	-	-	-	-	-	66,700	-	-	-	-	-	-	66700	55,300	59500	66100	56,700	59,600	57,000	56,000
Carbonate	µg/L	-	-	-	-		-	-	-	-	-	-	-	-	<1,000	-	-	-	-	-	-	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Hydroxide	µg/L	-	-	-	-		69,100	63,200	53,800	-	65,500	-	68,400	-	<1,000	-	-	-	-	-	-	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Bromide	µg/L	-	-	-	-		<50	<50	<50	<50	<50	<50	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloride	µg/L	150,000 [#5]	-	-	-		9,430	10,100	7,990	9,220	9,760	10,000	10,200	9,330	9,520	10,200	8,670	9,840	9,880	10,500	10,000	9,890	9,470	9,890	9,710	9,690	9,820	10,600	10,300
Fluoride	µg/L	887 [#3,4]	-	1,500 [#3]	-		38	37	31	36	34	34	38	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Sulphate	µg/L	218,000 [#4,5]	-	-	-		14,700	15,000	13,700	13,300	14,700	17,300	15,200	11,800	10,700	9,200	8,900	9,000	7,500	7,700	8,500	7,100	6,400	8,200	8,200	11,200	5,200	6,700	6,500
Sulphide (as S)	µg/L	-	-	-	-		<18	<2.0	34	<2.0	2.5	<2.0	<2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulphide (as H2S)	µg/L	-	2	-	-		-	-	-	<2.0	2.6	<2.0	<2.0	<20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulphide, total	µg/L	-	-	-	-		-	-	-	-	-	-	-	-	-	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Turbidity	NTU	-	-	-	-		0.96	-	3.85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acidity	µg/L	-	-	-	-		-	-	-	-	12,200	-	2,100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nutrients																															
Ammonia as N	µg/L	1,850 [#3,6]	-	12,000 [#6,7]	-		<5.0	<5.0	7.1	<5.0	6	16.4	<5.0	<50	<50	<50	<50	<50	<50	<50	74	<50	<50	<50	<50	-	<50	<50	<50
Nitrate (as N)	µg/L	3,000 [#5]	-	3,700 [#5]	-		117	76	155	105	126	72.7	89.8	106	32	37	62	100	15	29	70	28	<10	<10	57	43	<10	<10	38
Nitrite (as N)	µg/L	100 [#3,8]	-	-	-		<1.0	1.2	<1.0	1.3	<1.0	<1.0	<1.0	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Nitrate and Nitrite (as N)	µg/L	3,000 [#5]	-	3,700 [#5]	-		-	-	-	-	126	-	-	-	-	-	-	-	<20	-	-	-	-	-	-	-	-	-	-	-
Demand Parameters																															
Biochemical Oxygen Demand (BOD)	µg/L	-	-	-	-		<2,000	-	<2,000	-	<2,000	-	<2,000	-	<2,400	-	<2,400	-	<3,800	-	<2,200	-	<1,400	-	<2,800	-	<3,200	-	<2,700
Chemical Oxygen Demand (COD)	µg/L	-	-	-	-		<20,000	-	28,000	-	<20,000	-	20,000	-	<20,000	-	<20,000	-	<20,000	-	<20,000	-	<20,000	-	<20,000	-	20,000	-	<20,000
Carbon																															
Dissolved Organic Carbon (DOC)	µg/L	-	-	-	-		-	-		-	1,240	-	1,630	-	-	-	2,610	-	-	-	-	-	-	-	-	-	2,380	-	1,620
Total Organic Carbon (TOC)	µg/L	-	-	-	-		870	-	7,430	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenols																															
Phenols (4AAP)	µg/L	-	-	-	-		<1.0	-	-	-	-	<1.0	-	<2.0	-	-	-	<2	-	-	-	<2.00	-	-	-	<0.50	-	-	-
Dissolved Metals																															
Aluminum	µg/L	-	-	-	-		-	-	-	-	2.6	-	32.6	-	-	-	23.2	-	-	-	-	-	-	-	-	-	10.5	-	6.2
Antimony	µg/L	-	-	-	-		-	-	-	-	<0.10	-	<0.10	-	-	-	<0.20	-	-	-	-	-	-	-	-	-	<0.20	-	<0.20
Arsenic	µg/L	-	-	-	-		-	-	-	-	<0.10	-	<0.10	-	-	-	<0.50	-	-	-	-	-	-	-	-	-	<0.50	-	<0.50
Barium	µg/L	-	-	-	-		-	-	-	-	3.8	-	4.96	-	-	-	<5.00	-	-	-	-	-	-	-	-	-	<5.0	-	<5.0
Beryllium	µg/L	-	-	-	-		-	-	-	-	<0.020	-	<0.10	-	-	-	<0.10	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10
Bismuth	µg/L	-	-	-	-		-	-	-	-	<0.050	-	<0.050	-	-	-	<0.10	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10
Boron	µg/L	-	-	-	-		-	-	-	-	36	-	32	-	-	-	<50	-	-	-	-	-	-	-	-	-	<50.0	-	<50.0
Cadmium	µg/L	0.0932 [#4,5]	-	-	-		-	-	-	-	<0.0050	-	<0.0050	-	-	-	<0.010	-	-	-	-	-	-	-	-	-	<0.010	-	<0.010
Calcium	µg/L	-	-	-	-		-	-	-	-	19,600	-	20,600	-	-	-	17,000	-	-	-	-	-	-	-	-	-	16,900	-	17,700
Cesium	µg/L	-	-	-	-		-	-	-	-	<0.010	-	<0.010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	µg/L	-	-	-	-		-	-	-	-	<0.50	-	<0.10	-	-	-	<0.50	-	-	-	-	-	-	-	-	-	<0.50	-	<0.50
Cobalt	µg/L	-	-	-	-		-	-	-	-	<0.10	-	<0.10	-	-	-	<0.10	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10
Copper	µg/L	0.862 [#5,10]	-	-	-		-	-	-	-	<0.20	-	0.31	-	-	-	0.89	-	-	-	-	-	-	-	-	-	<0.40	-	<0.40
Iron	µg/L	350 [#3]	-	-	-		-	-	-	-	<10	-	54	-	-	-	62	-	-	-	-	-	-	-	-	-	199	-	28
Lead	µg/L	3.67 [#5,11]	-	-	-		-	-	-	-	<0.050	-	<0.050	-	-	-	<0.20	-	-	-	-	-	-	-	-	-	<0.20	-	<0.20
Lithium	µg/L	-	-	-	-		-	-	-	-	1	-	1.2	-	-	-	1.13	-	-	-	-	-	-	-	-	-	1.26	-	1.20
Magnesium	µg/L	-	-	-	-		-	-	-	-	4,160	-	4,240	-	-	-	4,290	-	-	-	-	-	-	-	-	-	3,910	-	3,720
Manganese	µg/L	-	-	-	-		-	-	-	-	2.14	-	10.3	-	-	-	7.8	-	-	-	-	-	-	-	-	-	21.8	-	3.39
Mercury	µg/L	-	-	-	-		-	-	-	-	-	-	<0.0050	-	-	-	<0.010	-	-	-	-	-	-	-	-	-	<0.010	-	<0.010
Molybdenum	µg/L	-	-	-	-		-	-	-	-	0.162	-	0.171	-	-	-	0.19	-	-	-	-	-	-	-	-	-	0.14	-	0.15
Nickel	µg/L	1.3 [#5,10,13]	-	-	-		-	-	-	-	<0.50	-	<0.50	-	-	-	<0.40	-	-	-	-	-	-	-	-	-	<0.40	-	<0.40
Phosphorus	µg/L	-	-	-	-		-	-	-	-	<50	-	<50	-	-	-	<50	-	-	-	-	-	-	-	-	-	<50	-	<50
Potassium	µg/L	-	-	-	-		-	-	-	-	2,060	-	2,000	-	-	-	2,130	-	-	-	-	-	-	-	-	-	1,600	-	1,860
Rubidium	µg/L	-	-	-	-		-	-	-	-	<0.20	-	0.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	µg/L	-	-	-	-		-	-	-	-	0.064	-	0.087	-	-	-	<0.50	-	-	-	-	-	-	-	-	-	<0.50	-	<0.50
Silicon	µg/L	-	-	-	-		-	-	-	-	11,000	-	12,100	-	-	-	13,300	-	-	-	-	-	-	-	-	-	12,300	-	13,100
Silver	µg/L	-	-	-	-		-	-	-	-	<0.010	-	<0.010	-	-	-	<0.050	-	-	-	-	-	-	-	-	-	<0.050	-	<0.050
Sodium	µg/L	-	-	-	-		-	-	-	-	10,200	-	9,760	-	-	-	9,300	-	-	-	-	-	-	-	-	-	9,570	-	9,100
Strontium	µg/L	-	1,250 [#5,12]	-	-		-	-	-	-	118	-	116	-	-	-	90.9	-	-	-	-	-	-	-	-	-	96.4	-	94.3
Sulphur	µg/L	-	-	-	-		-	-	-	-	4,500	-	4,890	-	-	-	3,700	-	-	-	-	-	-	-	-	-	<3,000	-	<3,000
Tellurium	µg/L	-	-	-	-		-	-	-	-	<0.20	-	<0.20	-	-	-	<0.50	-	-	-	-	-	-	-	-	-	<0.50	-	<0.50
Thallium	µg/L	-	-	-	-		-	-	-	-	<0.010	-	<0.010	-	-	-	<0.020	-	-	-	-	-	-	-	-	-	<0.020	-	<0.020
Thorium	µg/L	-	-	-	-		-	-	-	-	<0.10	-	<0.10	-	-	-	<0.10	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10
Tin	µg/L	-	-	-	-		-	-	-	-	<0.10	-	<0.10	-	-	-	<0.20	-	-	-	-	-	-	-	-	-	<0.20	-	<0.20
Titanium	µg/L	-	-	-	-		-	-	-	-	<0.30	-	0.97	-	-	-	<5.00	-	-	-	-	-	-	-	-	-	<5.0	-	<5.0
Tungsten	µg/L	-	-	-	-		-	-	-	-	<0.10	-	<0.10	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	<1.0	-	<1.0
Uranium	µg/L	-	-	-	-		-	-	-	-	0.164	-	0.102	-	-	-	0.117	-	-	-	-	-	-	-	-	-	0.036	-	0.071
Vanadium	µg/L	-	-	-	-		-	-	-	-	0.58	-	0.64	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	<5.0	-	<5.0
Zinc	µg/L	7.55 [#5,10]	-	-	-		-	-	-	-	1.3	-	1.1	-	-	-	<4	-	-	-	-	-	-	-	-	-	<4.0	-	<4.0
Zirconium	µg/L	-	-	-	-		-	-	-	-	<0.30	-	<0.20	-	-	-	<0.10	-	-	-	-	-	-	-	-	-	<0.10	-	<0.10

NOTES:

#1	Guideline is for short-term daily temperature in streams with unknown fish distribution.
#2	Guideline is the instantaneous minimum for all life stages other than buried embryo/alevin.
#3	Guideline is the short-term acute WQG.
#4	Guideline varies with hardness. Values shown based on average hardness of 32.855 mg/L at background location SW-1.
#5	Guideline is the long-term chronic WQG.
#6	Guideline varies with pH and temperature. Values shown based on an average laboratory pH of 7.17 and average field temperature of 10.09°C at background location SW-1.
#7	Guideline varies with pH, temperature, and salinity. Values shown based on an average laboratory pH of 7.17 and average field temperature of 10.1°C at background location SW-1. Salinity has not been measured since 2019, so the the guidelines for the lowest salinity is selected.
#8	Guideline varies with chloride. Values shown based on an average chloride concentration of 9.4 mg/L at background location SW-1.
#9	Guideline varies with pH, hardness, and DOC. Values shown is calculated based on an average laboratory pH of 7.17, average hardness of 32.855 mg/L , and DOC of 4.830 mg/L at background location SW-1.
#10	Guideline varies with temperature, hardness, and DOC. Values shown is calculated based on an average field temperature of 10.09°C, average hardness of 32.855 mg/L , and DOC of 4.830 mg/L at background location SW-1.
#11	Guideline varies with hardness and DOC. Values shown is calculated based on an average hardness of 32.855 mg/L, and DOC of 4.830 mg/L at background location SW-1.
#12	Guideline is for Chromium VI.
#13	Guideline varies with pH. Values shown is calculated based on an average laboratory pH of 7.17 at background location SW-1.
-	Not analyzed or no applicable BC WQG guideline.
<	Concentration is less than the laboratory detection limit indicated.
BC WQG - Approved	British Columbia Approved Water Quality Guidelines: Aquatic Life, Wildlife & Agriculture (February 2025).
BC WQG - Working	British Columbia Working Water Quality Guidelines: Aquatic Life, Wildlife & Agriculture (August
AW	Aquatic Wildlife.
Shaded	Shaded indicates an exceedance of the BCWQG Freshwater AW guidelines.
BOLD	Bold and underlined indicates an exceedance of the BCWQG Marine AW guidelines.
Italic	Detection limit greater than standard.

TETRA TECH

Table 3: Surface Water Analytical Results

						Location	SW-4																									
						Sample Date	1-Apr-2019	25-Jul-2019	17-Oct-2019	27-Jan-2020	23-Apr-2020	22-Jul-2020	28-Oct-2020	21-Feb-2021	11-May-2021	19-Jul-2021	1-Dec-2021	2-Mar-2022	12-Jul-2022	11-Oct-2022	12-Dec-2022	28-Feb-2023	23-May-2023	27-Sep-2023	18-Dec-2023	22-Feb-2024	24-Jun-2024	16-Sep-2024	9-Dec-2024
						Laboratory Report Number	L2254182	L2318207	L2367392	VA20A09082801202	VA20A53632504202	VA20B11392407202	VA20B95653010202	21B2866	21E1432	21G2459	21L0641	22C0773	22G1537	22J1342	22L1310	23C0154	23E2913	23I3541	23L2282	24B2509	24F3072	24I2276	24L1123
						Laboratory Sample ID	L2254182-2	L2318207-9	L2367392-9	VA20A0908-010	VA20A5363-010	VA20B1139-010	VA20B9565-009	21B2866-09	21E1432-09	21G2459-09	21L0641-09	22C0773-09	22G1537-09	22J1342-04	22L1310-09	23C0154-08	23E2913-08	23I3541-08	23L2282-08	24B2509-08	24F3072-08	24I2276-08	24L1123-08
Parameter	**Unit**	**BC WQG - Fresh AW**		**BC WQG - Marine AW**																												
		Approved	Working	Approved	Working																											
Total Metals																																
Aluminum	µg/L	162 [#5,3]	-	-	-		21.8	22.9	158	-	46.3	-	338	-	169	-	54.2	-	44	-	144	-	84.3	-	278	-	40.2	-	36.6
Antimony	µg/L	74 [#5]	-	-	270 [#5]		<0.10	<0.10	<0.10	-	<0.10	-	<0.10	-	<0.20	-	<0.20	-	<0.2	-	<0.2	-	<0.20	-	<0.2	-	<0.20	-	<0.20
Arsenic	µg/L	5 [#5]	-	12.5 [#5]	-		<0.10	<0.10	0.2	-	<0.10	-	0.13	-	<0.50	-	<0.50	-	<0.5	-	<0.5	-	<0.50	-	<0.5	-	<0.50	-	<0.50
Barium	µg/L	-	1,000 [#5]	-	-		4.20	4.40	6.0	-	4.84	-	6.87	-	6.6	-	<5.00	-	<5	-	<5	-	<5.0	-	6.1	-	<5.0	-	<5.0
Beryllium	µg/L	-	0.13 [#5]	-	100 [#5]		<0.10	<0.10	<0.10	-	<0.020	-	<0.10	-	<0.10	-	<0.10	-	<0.1	-	<0.1	-	<0.10	-	<0.1	-	<0.10	-	<0.10
Bismuth	µg/L	-	-	-	-		<0.050	<0.050	<0.050	-	<0.050	-	<0.050	-	<0.10	-	<0.10	-	<0.1	-	<0.1	-	<0.10	-	-	-	<0.10	-	<0.10
Boron	µg/L	1,200 [#5]	-	1,200 [#5]	-		38	34	38	-	36	-	29	-	<50	-	<50	-	<50	-	<50	-	<50.0	-	<50	-	<50.0	-	<50.0
Cadmium	µg/L	-	-	-	0.12 [#5]		<0.0050	<0.0050	0.0135	-	<0.0050	-	0.0058	-	<0.010	-	<0.010	-	<0.01	-	<0.01	-	<0.010	-	<0.01	-	<0.010	-	<0.010
Calcium	µg/L	-	-	-	-		20,300	19,000	15,900	-	19,300	-	20,400	-	18,600	17,700	16,500	18,300	16,400	16,800	16,800	-	17,600	-	18,400	-	16,900	-	17,700
Cesium	µg/L	-	-	-	-		<0.010	<0.010	<0.010	-	<0.010	-	0.017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	µg/L	-	2.5 [#5,12]	-	1.5 [#5,12]		<0.10	<0.10	0.23	-	<0.50	-	0.22	-	<0.50	-	<0.50	-	<0.5	-	0.96	-	<0.50	-	<0.5	-	<0.50	-	<0.50
Cobalt	µg/L	4 [#5]	-	-	-		<0.10	<0.10	0.16	-	<0.10	-	0.13	-	0.16	-	<0.10	-	<0.1	-	0.1	-	<0.10	-	0.12	-	<0.10	-	<0.10
Copper	µg/L	-	-	2 [#5]	-		<0.50	<0.50	**2.83**	-	<0.50	-	0.94	-	**2.22**	-	1.14	-	<0.4	-	1.03	-	0.66	-	0.94	-	<0.40	-	<0.40
Iron	µg/L	1,000 [#3]	-	-	-		100	114	773	-	227	-	325	-	436	-	100	-	260	-	309	-	440	-	445	-	376	-	185
Lead	µg/L	-	-	2 [#5]	-		<0.050	<0.050	0.224	-	0.082	-	0.3	-	0.81	-	<0.20	-	<0.2	-	<0.2	-	0.27	-	0.21	-	<0.20	-	<0.20
Lithium	µg/L	-	-	-	-		1.1	1.0	<1.0	-	1	-	1.3	-	1.69	-	1.02	-	1.1	-	1.17	-	1.15	-	1.18	-	1.08	-	1.27
Magnesium	µg/L	-	-	-	-		4,470	3,830	3,390	-	4,200	-	4,210	-	4,030	3,690	3,630	3,240	3,450	3,420	3,630	-	3,630	-	3,750	-	3,850	-	3,830
Manganese	µg/L	750 [#4,3]	-	-	100 [#5]		9.97	10.2	49.1	-	15.4	-	16.5	-	42.8	-	7.4	-	18.4	-	21.4	-	28.4	-	29.2	-	24.0	-	16.3
Mercury	µg/L	-	-	-	-		-	-	<0.0050	-	-	-	<0.0050	-	<0.04	-	-	-	<0.04	-	-	-	<0.010	-	<0.01	-	<0.010	-	<0.010
Molybdenum	µg/L	7,600 [#5]	-	-	-		0.163	0.157	0.171	-	0.171	-	0.193	-	0.17	-	0.25	-	0.15	-	0.2	-	0.19	-	0.2	-	0.17	-	0.15
Nickel	µg/L	-		-	8.3 [#5]		<0.50	<0.50	<0.50	-	<0.50	-	<0.50	-	<0.40	-	<0.40	-	<0.4	-	0.41	-	<0.40	-	<0.4	-	<0.40	-	<0.40
Phosphorus	µg/L	-	-	-	-		<50	<50	<50	-	<50	-	<50	-	<50	-	59	-	<50	-	<50	-	<50	-	-	-	<50	-	<50
Potassium	µg/L	-	-	-	-		2,110	1,920	3,130	-	2,020	-	2,100	-	1,900	-	2,020	-	1,510	-	1,850	-	1,640	-	-	-	1,760	-	1,880
Rubidium	µg/L	-	-	-	-		<0.20	<0.20	0.99	-	<0.20	-	0.45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	µg/L	2 [#5]	-	2 [#5]	-		0.129	0.068	0.07	-	0.068	-	0.058	-	<0.50	-	<0.50	-	<0.5	-	<0.5	-	<0.50	-	<0.5	-	<0.50	-	<0.50
Silicon	µg/L	-	-	-	-		11,800	13,100	9560	-	11,800	-	13,500	-	13,800	-	12,200	-	12,500	-	12,200	-	12,100	-	-	-	12,000	-	13,400
Silver	µg/L	0.05 [#4,5]	-	15 [#4,5]	-		<0.010	<0.010	<0.010	-	<0.010	-	<0.010	-	<0.050	-	<0.050	-	<0.05	-	<0.05	-	<0.050	-	<0.05	-	<0.050	-	<0.050
Sodium	µg/L	-	-	-	-		10,000	9,230	8,360	-	9,500	-	10,300	-	9,120	-	8,830	-	8,300	-	8,670	-	8,830	-	9,200	-	9,030	-	9,220
Strontium	µg/L	-	-	-	-		118	108	97.5	-	120	-	118	-	98.6	-	98.4	-	87.4	-	93	-	96.9	-	107	-	99.1	-	96.4
Sulphur	µg/L	-	-	-	-		5160	5320	5040	-	5,000	-	5,440	-	3,800	-	3,900	-	<3000	-	3000	-	<3,000	-	-	-	<3,000	-	<3,000
Tellurium	µg/L	-	-	-	-		<0.20	<0.20	<0.20	-	<0.20	-	<0.20	-	<0.50	-	<0.50	-	<0.5	-	<0.5	-	<0.50	-	-	-	<0.50	-	<0.50
Thallium	µg/L	-	0.03 [#5]	-	-		<0.010	<0.010	<0.010	-	<0.010	-	<0.010	-	<0.020	-	<0.020	-	<0.02	-	<0.02	-	<0.020	-	<0.02	-	<0.020	-	<0.020
Thorium	µg/L	-	-	-	-		<0.10	<0.10	<0.10	-	0.10	-	0.10	-	<0.10	-	<0.10	-	<0.1	-	<0.1	-	<0.10	-	-	-	<0.10	-	<0.10
Tin	µg/L	-	-	-	-		<0.10	<0.10	0.10	-	0.10	-	0.10	-	<0.20	-	<0.20	-	<0.2	-	<0.2	-	<0.20	-	<0.2	-	<0.20	-	<0.20
Titanium	µg/L	-	-	-	-		0.96	<0.90	4.64	-	1.9	-	18	-	8.4	-	<5.00	-	<5.0	-	<5.0	-	<5.0	-	8.3	-	<5.0	-	<5.0
Tungsten	µg/L	-	-	-	-		<0.10	<0.10	<0.10	-	0.10	-	0.10	-	<1.0	-	<1.0	-	<0.2	-	<1	-	<1.0	-	<1	-	<1.0	-	<1.0
Uranium	µg/L	-	7.5 [#5]	-	-		0.22	0.147	0.235	-	0.232	-	0.125	-	0.128	-	0.113	-	0.102	-	0.115	-	0.06	-	0.109	-	0.039	-	0.090
Vanadium	µg/L	-	60 [#5]	-	5 [#5]		0.80	0.76	1.31	-	0.9	-	1.49	-	1.8	-	1.1	-	<5.0	-	<5.0	-	<5.0	-	<5	-	<5.0	-	<5.0
Zinc	µg/L	-	-	10 [#5]	-		<3.0	<3.0	<3.0	-	<3.0	-	<3.0	-	5	-	<4	-	<4.0	-	<4.0	-	<4.0	-	**21.6**	-	7.9	-	<4.0
Zirconium	µg/L	-	-	-	-		<0.060	<0.20	<0.20	-	<0.20	-	<0.20	-	<0.10	-	0.18	-	<0.1	-	<0.1	-	<0.10	-	-	-	<0.10	-	<0.10
Hydrocarbons																																
EPH_{10-19}	µg/L	-	-	-	-		<250	-	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	<250	-	-	-
EPH_{19-32}	µg/L	-	-	-	-		<250	-	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	<250	-	-	-
LEPH	µg/L	-	-	-	-		<250	-	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	<250	-	-	-
HEPH	µg/L	-	-	-	-		<250	-	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	<250	-	-	-
VH_{6-10}	µg/L	-	-	-	-		<100	-	-	-	-	<100	-	-	-	-	-	<100	-	-	-	<100	-	-	-	<100	-	-	-
Polycyclic Aromatic Hydrocarbons (PAHs)																																
Acenaphthene	µg/L	6 [#5]	-	6	-		<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-	-
Acenaphthylene	µg/L	-	-	-	-		<0.010	-	-	-	-	<0.010	-	<0.20	-	-	-	<0.2	-	-	-	<0.200	-	-	-	<0.200	-	-	-
Acridine	µg/L	3 [#5]	-	-	-		<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-	-
Anthracene	µg/L	4 [#5]	-	-	-		<0.010	-	-	-	-	<0.010	-	<0.010	-	-	-	<0.01	-	-	-	<0.010	-	-	-	<0.010	-	-	-
Benz[a]anthracene	µg/L	0.1 [#5]	-	-	-		<0.010	-	-	-	-	<0.010	-	<0.010	-	-	-	<0.01	-	-	-	<0.010	-	-	-	<0.010	-	-	-
Benzo(a)pyrene	µg/L	0.01 [#5]	-	0.01	-		<0.0050	-	-	-	-	<0.0050	-	<0.010	-	-	-	<0.01	-	-	-	<0.010	-	-	-	<0.010	-	-	-
Benzo(b,j,k)fluoranthene	µg/L	-	-	-	-		-	-	-	-	-	<0.0150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b+j)fluoranthene	µg/L	-	-	-	-		<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-	-
Benzo(g,h,i)perylene	µg/L	-	-	-	-		<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-	-
Benzo(k)fluoranthene	µg/L	-	-	-	-		<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-	-
2-Chloronaphthalene	µg/L	-	-	-	-		-	-	-	-	-	-	-	<0.10	-	-	-	<0.1	-	-	-	<0.100	-	-	-	<0.100	-	-	-
Chrysene	µg/L	-	-	0.1	-		<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-	-
Dibenz(a,h)anthracene	µg/L	-	-	-	-		<0.0050	-	-	-	-	<0.0050	-	<0.010	-	-	-	<0.01	-	-	-	<0.010	-	-	-	<0.010	-	-	-
Fluoranthene	µg/L	4 [#5]	-	-	-		<0.010	-	-	-	-	<0.010	-	<0.030	-	-	-	<0.03	-	-	-	<0.030	-	-	-	<0.030	-	-	-
Fluorene	µg/L	12 [#5]	-	12	-		<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-	-
Indeno(1,2,3-c,d)pyrene	µg/L	-	-	-	-		<0.010	-	-	-	-	<0.010	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-	-
1-Methylnaphthalene	µg/L	-	-	1	-		<0.050	-	-	-	-	<0.050	-	<0.10	-	-	-	<0.1	-	-	-	<0.100	-	-	-	<0.100	-	-	-
2-Methylnaphthalene	µg/L	-	-	1	-		<0.020	-	-	-	-	<0.020	-	<0.10	-	-	-	<0.1	-	-	-	<0.100	-	-	-	<0.100	-	-	-
Naphthalene	µg/L	1 [#5]	-	1	-		<0.020	-	-	-	-	<0.020	-	<0.20	-	-	-	<0.2	-	-	-	<0.200	-	-	-	<0.200	-	-	-
Phenanthrene	µg/L	0.3 [#5]	-	-	-		<0.020	-	-	-	-	<0.020	-	<0.10	-	-	-	<0.1	-	-	-	<0.100	-	-	-	<0.100	-	-	-
Pyrene	µg/L	-	-	-	-		<0.010	-	-	-	-	<0.010	-	<0.020	-	-	-	<0.02	-	-	-	<0.020	-	-	-	<0.020	-	-	-
Quinoline	µg/L	-	50 [#5]	-	-		<0.050	-	-	-	-	<0.050	-	<0.050	-	-	-	<0.05	-	-	-	<0.050	-	-	-	<0.050	-	-	-

NOTES:

#1	Guideline is for short-term daily temperature in streams with unknown fish distribution.
#2	Guideline is the instantaneous minimum for all life stages other than buried embryo/alevin.
#3	Guideline is the short-term acute WQG.
#4	Guideline varies with hardness. Values shown based on average hardness of 32.855 mg/L at background location SW-1.
#5	Guideline is the long-term chronic WQG.
#6	Guideline varies with pH and temperature. Values shown based on an average laboratory pH of 7.17 and average field temperature of 10.09°C at background location SW-1.
#7	Guideline varies with pH, temperature, and salinity. Values shown based on an average laboratory pH of 7.17 and average field temperature of 10.1°C at background location SW-1. Salinity has not been measured since 2019, so the the guidelines for the lowest salinity is selected.
#8	Guideline varies with chloride. Values shown based on an average chloride concentration of 9.4 mg/L at background location SW-1.
#9	Guideline varies with pH, hardness, and DOC. Values shown is calculated based on an average laboratory pH of 7.17, average hardness of 32.855 mg/L , and DOC of 4.830 mg/L at background location SW-1.
#10	Guideline varies with temperature, hardness, and DOC. Values shown is calculated based on an average field temperature of 10.09°C, average hardness of 32.855 mg/L , and DOC of 4.830 mg/L at background location SW-1.
#11	Guideline varies with hardness and DOC. Values shown is calculated based on an average hardness of 32.855 mg/L, and DOC of 4.830 mg/L at background location SW-1.
#12	Guideline is for Chromium VI.
#13	Guideline varies with pH. Values shown is calculated based on an average laboratory pH of 7.17 at background location SW-1.
-	Not analyzed or no applicable BC WQG guideline.
<	Concentration is less than the laboratory detection limit indicated.
BC WQG - Approved	British Columbia Approved Water Quality Guidelines: Aquatic Life, Wildlife & Agriculture (February 2025).
BC WQG - Working	British Columbia Working Water Quality Guidelines: Aquatic Life, Wildlife & Agriculture (August
AW	Aquatic Wildlife.
Shaded	Shaded indicates an exceedance of the BCWQG Freshwater AW guidelines.
BOLD	Bold and underlined indicates an exceedance of the BCWQG Marine AW guidelines.
Italic	Detection limit greater than standard.

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Table 3: Surface Water Analytical Results

Parameter	Unit	BC WQG - Fresh AW		BC WQG - Marine AW		Location	SW-4																							
						Sample Date	1-Apr-2019	25-Jul-2019	17-Oct-2019	27-Jan-2020	23-Apr-2020	22-Jul-2020	28-Oct-2020	21-Feb-2021	11-May-2021	19-Jul-2021	1-Dec-2021	2-Mar-2022	12-Jul-2022	11-Oct-2022	12-Dec-2022	28-Feb-2023	23-May-2023	27-Sep-2023	18-Dec-2023	22-Feb-2024	24-Jun-2024	16-Sep-2024	9-Dec-2024
						Laboratory Report Number	L2254182	L2318207	L2367392	VA20A090828012020	VA20A536325042020	VA20B113924072020	VA20B95653102020	21B2866	21E1432	21G2459	21L0641	22C0773	22G1537	22J1342	22L1310	23C0154	23E2913	23I3541	23L2282	24B2509	24F3072	24I2276	24L1123
						Laboratory Sample ID	L2254182-2	L2318207-9	L2367392-9	VA20A0908-010	VA20A5363-010	VA20B1139-010	VA20B9565-009	21B2866-09	21E1432-09	21G2459-09	21L0641-09	22C0773-09	22G1537-09	22J1342-04	22L1310-09	23C0154-08	23E2913-08	23I3541-08	23L2282-08	24B2509-08	24F3072-08	24I2276-08	24L1123-08
		Approved	Working	Approved	Working																									
Resin/Fatty Acids																														
Abietic Acid	µg/L	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
Arachidic Acid	µg/L	-	-	-	-	<5.0	-	-	-	-	<5.0	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Behenic Acid	µg/L	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12-Chlorodehydroabietic Acid	µg/L	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
14-Chlorodehydroabietic Acid	µg/L	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
Dehydroabietic Acid	µg/L	-	8 [#3,13]	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
Dichlorodehydroabietic Acid	µg/L	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
9,10-Dichlorostearic Acid	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	<10	-	-	-	<10	-	-	-
Isopimaric & Palustric Acids	µg/L	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<6.0	-	-	-	-	-	<10	-	-	<10	-	-	-	-	-	-	-
Isopimaric Acid	ug/L																									<10	-	-	-
Palustric Acid	ug/L																									<10	-	-	-
Lauric Acid	µg/L	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Levopimaric Acid	µg/L	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
Lignoceric Acid	µg/L	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Linoleic Acid	µg/L	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
Linolenic Acid	µg/L	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
Myristic Acid	µg/L	-	-	-	-	<5.0	-	-	-	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Neoabietic Acid	µg/L	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
Octadecanoic Acid	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-
Oleic Acid	µg/L	-	-	-	-	<5.0	-	-	-	-	<5.0	-	0.017	-	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
Palmitic Acid	µg/L	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pimaric Acid	µg/L	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
Sandaracopimaric Acid	µg/L	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<0.0060	-	-	-	-	-	<10	-	-	<0.01	-	-	-	<0.01	-	-	-
Stearic Acid	µg/L	-	-	-	-	<20	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	-	-
Total Fatty Acids	µg/L	-	-	-	-	<100	-	-	-	-	<110	-	-	-	-	-	-	-	<10	-	-	<10	-	-	-	<10	-	-	-
Total Resin Acids	µg/L	-	25 [#3,13]	-	-	<10	-	-	-	-	<3.5	-	-	-	-	-	-	-	<10	-	-	<10	-	-	-	<10	-	-	-
Total Resin and Fatty Acid	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	<10	-	-	-	<10	-	-	-
BTEXS & MTBE																														
Benzene	µg/L	40 [#5]	-	110 [#5]	-	-	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-
Toluene	µg/L	0.5 [#5]	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	200 [#5]	-	250 [#5]	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Xylenes Total	µg/L	30 [#5]	-	-	-	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-	-
Styrene	µg/L	-	72 [#5]	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Methyl t-butyl ether (MTBE)	µg/L	3,400 [#3]	-	440 [#5]	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-					
Volatile Organic Compounds (VOCs)																														
Hexadecanoic Acid	µg/L	-	-	-	-	-	-	-	-	-	-	-	<6.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Bromoform	µg/L	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Carbon tetrachloride	µg/L	-	13.3 [#5]	-	-	-	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-
Chlorobenzene	µg/L	-	1.3 [#5]	-	25 [#5]	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Chloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-	-
Chloroform	µg/L	-	1.8 [#5]	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Dibromochloromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,2-Dibromoethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	<0.30	-	-	-	-	-	-	-	<0.3	-	-	-	-	-	-	-	-
Dibromomethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	µg/L	-	0.7 [#5]	-	42 [#5]	-	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	µg/L	-	150 [#5]	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	µg/L	-	26 [#5]	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,1-Dichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,2-Dichloroethane	µg/L	-	100 [#5]	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,1-Dichloroethene	µg/L	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,2-Dichloroethene (cis)	µg/L	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,2-Dichloroethene (trans)	µg/L	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,2-Dichloropropane	µg/L	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,3-Dichloropropene	µg/L	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Methylene Chloride	µg/L	-	98.1 [#5]	-	-	-	-	-	-	-	-	-	<3.0	-	-	-	-	-	-	-	<3.0	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	<0.50	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-
Tetrachloroethene	µg/L	-	110 [#5]	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Trichloroethene	µg/L	-	21 [#5]	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Trichlorofluoromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	625 [#5]	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-

NOTES:

#1	Guideline is for short-term daily temperature in streams with unknown fish distribution.
#2	Guideline is the instantaneous minimum for all life stages other than buried embryo/alevin.
#3	Guideline is the short-term acute WQG.
#4	Guideline varies with hardness. Values shown based on average hardness of 32.855 mg/L at background location SW-1.
#5	Guideline is the long-term chronic WQG.
#6	Guideline varies with pH and temperature. Values shown based on an average laboratory pH of 7.17 and average field temperature of 10.09°C at background location SW-1.
#7	Guideline varies with pH, temperature, and salinity. Values shown based on an average laboratory pH of 7.17 and average field temperature of 10.1°C at background location SW-1. Salinity has not been measured since 2019, so the the guidelines for the lowest salinity is selected.
#8	Guideline varies with chloride. Values shown based on an average chloride concentration of 9.4 mg/L at background location SW-1.
#9	Guideline varies with pH, hardness, and DOC. Values shown is calculated based on an average laboratory pH of 7.17, average hardness of 32.855 mg/L , and DOC of 4.830 mg/L at background location SW-1.
#10	Guideline varies with temperature, hardness, and DOC. Values shown is calculated based on an average field temperature of 10.09°C, average hardness of 32.855 mg/L , and DOC of 4.830 mg/L at background location SW-1.
#11	Guideline varies with hardness and DOC. Values shown is calculated based on an average hardness of 32.855 mg/L, and DOC of 4.830 mg/L at background location SW-1.
#12	Guideline is for Chromium VI.
#13	Guideline varies with pH. Values shown is calculated based on an average laboratory pH of 7.17 at background location SW-1.
-	Not analyzed or no applicable BC WQG guideline.
<	Concentration is less than the laboratory detection limit indicated.
BC WQG - Approved	British Columbia Approved Water Quality Guidelines: Aquatic Life, Wildlife & Agriculture (February 2025).
BC WQG - Working	British Columbia Working Water Quality Guidelines: Aquatic Life, Wildlife & Agriculture (August
AW	Aquatic Wildlife.
Shaded	Shaded indicates an exceedance of the BCWQG Freshwater AW guidelines.
BOLD	Bold and underlined indicates an exceedance of the BCWQG Marine AW guidelines.
Italic	Detection limit greater than standard.

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Table 4: Groundwater and Surface Water QA/QC Analytical Results

	Location		SW2	Dup	RPD (%)	SW-2	Dup	RPD (%)	MW24-05	Dup	RPD (%)	MW19-04	Dup	RPD (%)
	Sample Date		22-Feb-2024	22-Feb-2024		24-Jun-2024	24-Jun-2024		16-Sep-2024	16-Sep-2024		9-Dec-2024	9-Dec-2024	
	Laboratory Report Number		24B2509	24B2509		24F3072	24F3072		24I2276	24I2276		24L1123	24L1123	
	Laboratory Sample ID		24B2509-06	24B2509-09		24F3072-06	24F3072-09		24I2276-10	24I2276-09		24L1123-04	24L1123-09	
Parameter	**Unit**	**RDL**												
Physical Parameters														
pH	pH Units	0.1	6.5	6.52	0	6.51	6.78	4	6.86	6.85	0	7.09	7.3	3
Electrical Conductivity (EC)	µS/cm	2	86.2	85.4	1	109	162	**39**	214	214	0	457	457	0
Total Suspended Solids (TSS)	µg/L	3,000	-	-	-	-	-	-	-	-	-	-	-	-
Hardness as $CaCO_3$	µg/L	500	-	-	-	34,700	33,800	3	-	-	-	210,000	204,000	3
Alkalinity (total as $CaCO_3$)	µg/L	1,000	27,400	27,000	1	33,100	59,000	**56**	87,400	87,200	0	195,000	195,000	0
Alkalinity (P)	µg/L	1,000	<1,000	<1,000	-	<1,000	<1,000	-	<1,000	<1,000	-	<1,000	<1,000	-
Bicarbonate	µg/L	1,000	27,400	27,000	1	33,100	59,000	**56**	87,400	87,200	0	195,000	195,000	0
Carbonate	µg/L	1,000	<1,000	<1,000	-	<1,000	<1,000	-	<1,000	<1,000	-	<1,000	<1,000	-
Hydroxide	µg/L	1,000	<1,000	<1,000	-	<1,000	<1,000	-	<1,000	<1,000	-	<1,000	<1,000	-
Bromide	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-
Chloride	µg/L	500	8,260	8,180	1	9,320	9,350	0	2,750	2,760	0	17,400	17,600	1
Fluoride	µg/L	20	<100	<100	-	<100	<100	-	<100	<100	-	<100	<100	-
Sulphate	µg/L	300	3,300	3,200	3	2,800	2,800	0	7,800	7,300	7	2,600	2,600	0
Sulphide (as S)	µg/L	10	-	-	-	-	-	-	-	-	-	-	-	-
Sulphide (as H2S)	µg/L	0.002	<20	-	-	<20	-	-	<20	-	-	<20	-	-
Turbidity	NTU	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Acidity	µg/L	2,000	-	-	-	-	-	-	-	-	-	-	-	-
Nutrients														
Ammonia as N	µg/L	5	-	<50	-	<50	<50	-	<50	<50	-	298	213	**33**
Nitrate (as N)	µg/L	5	174	175	1	106	104	2	1,260	1,260	0	<100	<100	-
Nitrite (as N)	µg/L	1	<10	<10	-	<10	<10	-	<10	<10	-	<10	<10	-
Nitrate and nitrate (as N)	µg/L	50	-	-	-	-	-	-	-	-	-	-	-	-
Demand Parameters														
Biochemical Oxygen Demand (BOD)	µg/L	2,000	-	-	-	<3,200	-	-	-	-	-	4,200	-	-
Chemical Oxygen Demand (COD)	µg/L	20,000	-	-	-	<20,000	-	-	-	-	-	50,000	-	-
Carbon														
Dissolved Organic Carbon (DOC)	µg/L	500	-	-	-	3,610	-	-	-	-	-	13,300	-	-
Total Organic Carbon (TOC)	µg/L	500	-	-	-	-	-	-	-	-	-	-	-	-
Phenols														
Phenols (4AAP)	µg/L	1	<0.50	-	-	-	-	-	-	-	-	-	-	-
Dissolved Metals														
Aluminum	µg/L	1	-	-	-	13.6	11.8	14	-	-	-	8.4	8.6	2
Antimony	µg/L	0.1	-	-	-	<0.20	<0.20	-	-	-	-	0.42	0.44	-
Arsenic	µg/L	0.1	-	-	-	<0.50	<0.50	-	-	-	-	2.28	2.32	2
Barium	µg/L	0.1	-	-	-	<5.0	<5.0	-	-	-	-	35.3	34.6	2
Beryllium	µg/L	0.1	-	-	-	<0.10	<0.10	-	-	-	-	<0.10	<0.10	-
Bismuth	µg/L	0.05	-	-	-	<0.10	<0.10	-	-	-	-	<0.10	<0.10	-
Boron	µg/L	10	-	-	-	<50.0	<50.0	-	-	-	-	<50.0	<50.0	-
Cadmium	µg/L	0.005	-	-	-	<0.010	<0.010	-	-	-	-	0.044	0.037	17
Calcium	µg/L	50	-	-	-	10,100	9,860	2	-	-	-	68,000	65,800	3
Cesium	µg/L	0.01	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	µg/L	0.1	-	-	-	<0.50	<0.50	-	-	-	-	0.65	0.62	5
Cobalt	µg/L	0.1	-	-	-	<0.10	<0.10	-	-	-	-	3.01	3.03	1
Copper	µg/L	0.2	-	-	-	<0.40	<0.40	-	-	-	-	3.88	1.74	**76**
Iron	µg/L	10	-	-	-	193	193	0	-	-	-	14,400	14,400	0
Lead	µg/L	0.05	-	-	-	<0.20	<0.20	-	-	-	-	<0.20	<0.20	-
Lithium	µg/L	1	-	-	-	0.45	0.47	-	-	-	-	2.09	2	-
Magnesium	µg/L	5	-	-	-	2,290	2,220	3	-	-	-	9,700	9,650	1
Manganese	µg/L	0.1	-	-	-	5.39	5.47	1	-	-	-	2,180	2,180	0
Mercury	µg/L	0.005	-	-	-	<0.010	<0.010	-	-	-	-	<0.010	<0.010	-
Molybdenum	µg/L	0.05	-	-	-	0.12	0.14	-	-	-	-	0.5	0.48	4
Nickel	µg/L	0.5	-	-	-	<0.40	<0.40	-	-	-	-	0.59	0.55	-
Phosphorus	µg/L	50	-	-	-	<50	<50	-	-	-	-	121	117	-
Potassium	µg/L	50	-	-	-	870	910	4	-	-	-	7,900	7,840	1
Rubidium	µg/L	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	µg/L	0.05	-	-	-	<0.50	<0.50	-	-	-	-	<0.50	<0.50	-
Silicon	µg/L	50	-	-	-	6,800	6,400	6	-	-	-	16,500	16,200	2
Silver	µg/L	0.01	-	-	-	<0.050	<0.050	-	-	-	-	<0.050	<0.050	-
Sodium	µg/L	50	-	-	-	8,420	7,910	6	-	-	-	10,300	10,100	2
Strontium	µg/L	0.2	-	-	-	65.1	69.2	6	-	-	-	340	336	1
Sulphur	µg/L	500	-	-	-	<3,000	<3,000	-	-	-	-	<3,000	<3,000	-
Tellurium	µg/L	0.2	-	-	-	<0.50	<0.50	-	-	-	-	<0.50	<0.50	-
Thallium	µg/L	0.01	-	-	-	<0.020	<0.020	-	-	-	-	<0.020	<0.020	-
Thorium	µg/L	0.1	-	-	-	<0.10	<0.10	-	-	-	-	<0.10	<0.10	-
Tin	µg/L	0.1	-	-	-	<0.20	<0.20	-	-	-	-	<0.20	<0.20	-
Titanium	µg/L	0.3	-	-	-	<5.0	<5.0	-	-	-	-	<5.0	<5.0	-
Tungsten	µg/L	0.1	-	-	-	<1.0	<1.0	-	-	-	-	<1.0	<1.0	-
Uranium	µg/L	0.01	-	-	-	<0.020	<0.020	-	-	-	-	0.826	0.818	1
Vanadium	µg/L	0.5	-	-	-	<5.0	<5.0	-	-	-	-	<5.0	<5.0	-
Zinc	µg/L	1	-	-	-	<4.0	<4.0	-	-	-	-	<4.0	<4.0	-
Zirconium	µg/L	0.06	-	-	-	<0.10	<0.10	-	-	-	-	0.14	0.13	-
Total Metals														
Aluminum	µg/L	3	-	-	-	177	-	-	-	-	-	552	-	-
Antimony	µg/L	0.1	-	-	-	<0.20	-	-	-	-	-	0.48	-	-
Arsenic	µg/L	0.1	-	-	-	<0.50	-	-	-	-	-	3.67	-	-
Barium	µg/L	0.1	-	-	-	<5.0	-	-	-	-	-	39.3	-	-
Beryllium	µg/L	0.1	-	-	-	<0.10	-	-	-	-	-	<0.10	-	-
Bismuth	µg/L	0.05	-	-	-	<0.10	-	-	-	-	-	<0.10	-	-
Boron	µg/L	10	-	-	-	<50.0	-	-	-	-	-	<50.0	-	-
Cadmium	µg/L	0.005	-	-	-	<0.010	-	-	-	-	-	0.053	-	-
Calcium	µg/L	50	-	-	-	10,100	-	-	-	-	-	68,100	-	-
Cesium	µg/L	0.01	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	µg/L	0.1	-	-	-	<0.50	-	-	-	-	-	1.11	-	-
Cobalt	µg/L	0.1	-	-	-	<0.10	-	-	-	-	-	3.15	-	-
Copper	µg/L	0.5	-	-	-	0.61	-	-	-	-	-	5.1	-	-
Iron	µg/L	10	-	-	-	584	-	-	-	-	-	18,900	-	-
Lead	µg/L	0.05	-	-	-	<0.20	-	-	-	-	-	0.21	-	-
Lithium	µg/L	1	-	-	-	0.48	-	-	-	-	-	2.48	-	-
Magnesium	µg/L	5	-	-	-	2,250	-	-	-	-	-	10,200	-	-
Manganese	µg/L	0.1	-	-	-	28.2	-	-	-	-	-	2,140	-	-
Mercury	µg/L	0.01	-	-	-	<0.010	-	-	-	-	-	<0.010	-	-
Molybdenum	µg/L	0.05	-	-	-	0.17	-	-	-	-	-	0.59	-	-
Nickel	µg/L	0.5	-	-	-	<0.40	-	-	-	-	-	0.83	-	-
Phosphorus	µg/L	50	-	-	-	<50	-	-	-	-	-	236	-	-
Potassium	µg/L	50	-	-	-	950	-	-	-	-	-	7,920	-	-
Rubidium	µg/L	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	µg/L	0.05	-	-	-	<0.50	-	-	-	-	-	<0.50	-	-
Silicon	µg/L	100	-	-	-	6,700	-	-	-	-	-	17,900	-	-
Silver	µg/L	0.01	-	-	-	<0.050	-	-	-	-	-	<0.050	-	-
Sodium	µg/L	50	-	-	-	7,820	-	-	-	-	-	10,500	-	-
Strontium	µg/L	0.2	-	-	-	67.1	-	-	-	-	-	342	-	-
Sulphur	µg/L	500	-	-	-	<3,000	-	-	-	-	-	<3,000	-	-
Tellurium	µg/L	0.2	-	-	-	<0.50	-	-	-	-	-	<0.50	-	-
Thallium	µg/L	0.01	-	-	-	<0.020	-	-	-	-	-	<0.020	-	-
Thorium	µg/L	0.1	-	-	-	<0.10	-	-	-	-	-	0.2	-	-
Tin	µg/L	0.1	-	-	-	<0.20	-	-	-	-	-	<0.20	-	-
Titanium	µg/L	0.3	-	-	-	8.7	-	-	-	-	-	28	-	-
Tungsten	µg/L	0.1	-	-	-	<1.0	-	-	-	-	-	<1.0	-	-
Uranium	µg/L	0.01	-	-	-	0.034	-	-	-	-	-	1.05	-	-
Vanadium	µg/L	0.5	-	-	-	<5.0	-	-	-	-	-	7.2	-	-
Zinc	µg/L	3	-	-	-	<4.0	-	-	-	-	-	38.6	-	-
Zirconium	µg/L	0.2	-	-	-	<0.10	-	-	-	-	-	0.25	-	-

NOTES:

- RPD not calculated.
< Concentration is less than the laboratory detection limit indicated.
RDL Laboratory Reportable Detection Limit.
RPD RPD is Relative Percentage Difference calculated as RPD(%)=(|V1-V2|/[(V1+V2)/2])*100 where V1,V2 = concentrations of parent and duplicate sample, respectively. RPDs have only been calculated where concentrations are greater than
BOLD High RPDs are in bold (groundwater metals were compared against a 30% screening threshold and groundwater Volitile Organic Compounds (VOCs) and other organics were compared to a 45% screening threshold as recommended by British Columbia (BC) Ministry of Environment Q&A, and BC Environmental Laboratory Manual).

Table 4: Groundwater and Surface Water QA/QC Analytical Results

	Location		SW2	Dup	RPD (%)	SW-2	Dup	RPD (%)	MW24-05	Dup	RPD (%)	MW19-04	Dup	RPD (%)
	Sample Date		22-Feb-2024	22-Feb-2024		24-Jun-2024	24-Jun-2024		16-Sep-2024	16-Sep-2024		9-Dec-2024	9-Dec-2024	
	Laboratory Report Number		24B2509	24B2509		24F3072	24F3072		24I2276	24I2276		24L1123	24L1123	
	Laboratory Sample ID		24B2509-06	24B2509-09		24F3072-06	24F3072-09		24I2276-10	24I2276-09		24L1123-04	24L1123-09	
Parameter	**Unit**	**RDL**												
Hydrocarbons														
EPH_{10-19}	µg/L	250	<250	-	-	-	-	-	-	-	-	-	-	-
EPH_{19-32}	µg/L	250	<250	-	-	-	-	-	-	-	-	-	-	-
LEPH	µg/L	250	<250	-	-	-	-	-	-	-	-	-	-	-
HEPH	µg/L	250	<250	-	-	-	-	-	-	-	-	-	-	-
VH^{6-10}	µg/L	100	<100	-	-	-	-	-	-	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons (PAHs)														
Acenaphthene	µg/L	0.01	<0.050	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	µg/L	0.01	<0.200	-	-	-	-	-	-	-	-	-	-	-
Acridine	µg/L	0.01	<0.050	-	-	-	-	-	-	-	-	-	-	-
Anthracene	µg/L	0.01	<0.010	-	-	-	-	-	-	-	-	-	-	-
Benz(a)anthracene	µg/L	0.01	<0.010	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	µg/L	0.005	<0.010	-	-	-	-	-	-	-	-	-	-	-
Benzo(b,j,k)fluoranthene	µg/L	0.015	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b+j)fluoranthene	µg/L	0.01	<0.050	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	µg/L	0.01	<0.050	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	µg/L	0.01	<0.050	-	-	-	-	-	-	-	-	-	-	-
2-chloronaphthalene	µg/L	0.01	<0.100	-	-	-	-	-	-	-	-	-	-	-
Chrysene	µg/L	0.01	<0.050	-	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	µg/L	0.005	<0.010	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	µg/L	0.01	<0.030	-	-	-	-	-	-	-	-	-	-	-
Fluorene	µg/L	0.01	<0.050	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-c,d)pyrene	µg/L	0.01	<0.050	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	µg/L	0.05	<0.100	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	µg/L	0.02	<0.100	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	µg/L	0.02	<0.200	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	µg/L	0.02	<0.100	-	-	-	-	-	-	-	-	-	-	-
Pyrene	µg/L	0.01	<0.020	-	-	-	-	-	-	-	-	-	-	-
Quinoline	µg/L	0.05	<0.050	-	-	-	-	-	-	-	-	-	-	-
Resin/Fatty Acids														
Abietic Acid	µg/L	0.001	<0.01	-	-	-	-	-	-	-	-	-	-	-
Arachidic Acid	µg/L	0.005	-	-	-	-	-	-	-	-	-	-	-	-
Behenic Acid	µg/L	0.005	-	-	-	-	-	-	-	-	-	-	-	-
12-Chlorodehydroabietic Acid	µg/L	0.001	<0.01	-	-	-	-	-	-	-	-	-	-	-
14-Chlorodehydroabietic Acid	µg/L	0.001	<0.01	-	-	-	-	-	-	-	-	-	-	-
Dehydroabietic Acid	µg/L	0.001	<0.01	-	-	-	-	-	-	-	-	-	-	-
Dichlorodehydroabietic Acid	µg/L	0.001	<0.01	-	-	-	-	-	-	-	-	-	-	-
9,10-Dichlorostearic Acid	µg/L		<10	-	-	-	-	-	-	-	-	-	-	-
Isopimaric & Palustric Acids	µg/L	0.001	-	-	-	-	-	-	-	-	-	-	-	-
Isopimaric Acid	ug/L	10	<10	-		-	-		-	-		-	-	
Palustric Acid	ug/L	10	<10	-		-	-		-	-		-	-	
Lauric Acid	µg/L	0.005	-	-	-	-	-	-	-	-	-	-	-	-
Levopimaric Acid	µg/L	0.001	<0.01	-	-	-	-	-	-	-	-	-	-	-
Lignoceric Acid	µg/L	0.005	-	-	-	-	-	-	-	-	-	-	-	-
Linoleic Acid	µg/L	0.005	<0.01	-	-	-	-	-	-	-	-	-	-	-
Linolenic Acid	µg/L	0.005	<0.01	-	-	-	-	-	-	-	-	-	-	-
Myristic Acid	µg/L	0.005	-	-	-	-	-	-	-	-	-	-	-	-
Neoabietic Acid	µg/L	0.001	<0.01	-	-	-	-	-	-	-	-	-	-	-
Octadecanoic Acid	µg/L		-	-	-	-	-	-	-	-	-	-	-	-
Oleic Acid	µg/L	0.005	<0.01	-	-	-	-	-	-	-	-	-	-	-
Palmitic Acid	µg/L	100	-	-	-	-	-	-	-	-	-	-	-	-
Pimaric Acid	µg/L	0.001	<0.01	-	-	-	-	-	-	-	-	-	-	-
Sandaracopimaric Acid	µg/L	0.001	<0.01	-	-	-	-	-	-	-	-	-	-	-
Stearic Acid	µg/L	20	-	-	-	-	-	-	-	-	-	-	-	-
Total Fatty Acids	µg/L	0.1	<10	-	-	-	-	-	-	-	-	-	-	-
Total Resin Acids	µg/L	0.01	<10	-	-	-	-	-	-	-	-	-	-	-
Total Resin and Fatty Acid	µg/L	0.01	<10	-	-	-	-	-	-	-	-	-	-	-
BTEXS & MTBE														
Benzene	µg/L	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	1	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	1	-	-	-	-	-	-	-	-	-	-	-	-
Xylenes Total	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	1	-	-	-	-	-	-	-	-	-	-	-	-
Methyl t-butyl ether (MTBE)	µg/L	1			-			-	-	-	-	-	-	-
Volatile Organic Compounds (VOCs)														
Hexadecanoic Acid	µg/L	6	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	µg/L	1	-	-	-	-	-	-	-	-	-	-	-	-
Bromoform	µg/L	1	-	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	µg/L	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	µg/L	1	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	µg/L	2	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	µg/L	1	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	µg/L	1	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	µg/L	0.3	-	-	-	-	-	-	-	-	-	-	-	-
Dibromomethane	µg/L	1	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	µg/L	0.5	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	µg/L	1	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	µg/L	1	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	µg/L	1	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	µg/L	1	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	µg/L	1	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethene (cis)	µg/L	1	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethene (trans)	µg/L	1	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	µg/L	1	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichloropropene	µg/L	1	-	-	-	-	-	-	-	-	-	-	-	-
Methylene Chloride	µg/L	3	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/L	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	µg/L	1	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	µg/L	1	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	µg/L	1	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	µg/L	1	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	µg/L	1	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	1	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:

-	RPD not calculated.
<	Concentration is less than the laboratory detection limit indicated.
RDL	Laboratory Reportable Detection Limit.
RPD	RPD is Relative Percentage Difference calculated as RPD(%)=(|V1-V2|/[(V1+V2)/2])*100 where V1,V2 = concentrations of parent and duplicate sample, respectively. RPDs have only been calculated where concentrations are greater than
BOLD	High RPDs are in bold (groundwater metals were compared against a 30% screening threshold and groundwater Volitile Organic Compounds (VOCs) and other organics were compared to a 45% screening threshold as recommended by British Columbia (BC) Ministry of Environment Q&A, and BC Environmental Laboratory Manual).

FIGURES

Figure 1 Site Location Plan
Figure 2 Site Plan
Figure 3 Interpreted Groundwater Flow February 2024
Figure 4 Interpreted Groundwater Flow June 2024
Figure 5 Interpreted Groundwater Flow September 2024
Figure 6 Interpreted Groundwater Flow December 2024
Figure 7 Sulphate Concentrations in Groundwater
Figure 8 Chloride Concentrations in Groundwater
Figure 9 Dissolved Cobalt Concentrations in Groundwater
Figure 10 Dissolved Arsenic Concentrations in Groundwater
Figure 11 Dissolved Iron Concentrations in Groundwater
Figure 12 Dissolved Manganese Concentrations in Groundwater
Figure 13 pH in Surface Water
Figure 14 Sulphate Concentrations in Surface Water
Figure 15 Chloride Concentrations in Surface Water



NOTE:

BASE IMAGE OBTAINED FROM GOOGLE EARTH
IMAGERY DATE: APRIL 2021

0 500m

Scale: 1:10,000 @ 11"x17"

CLIENT

qathet REGIONAL DISTRICT

TETRA TECH

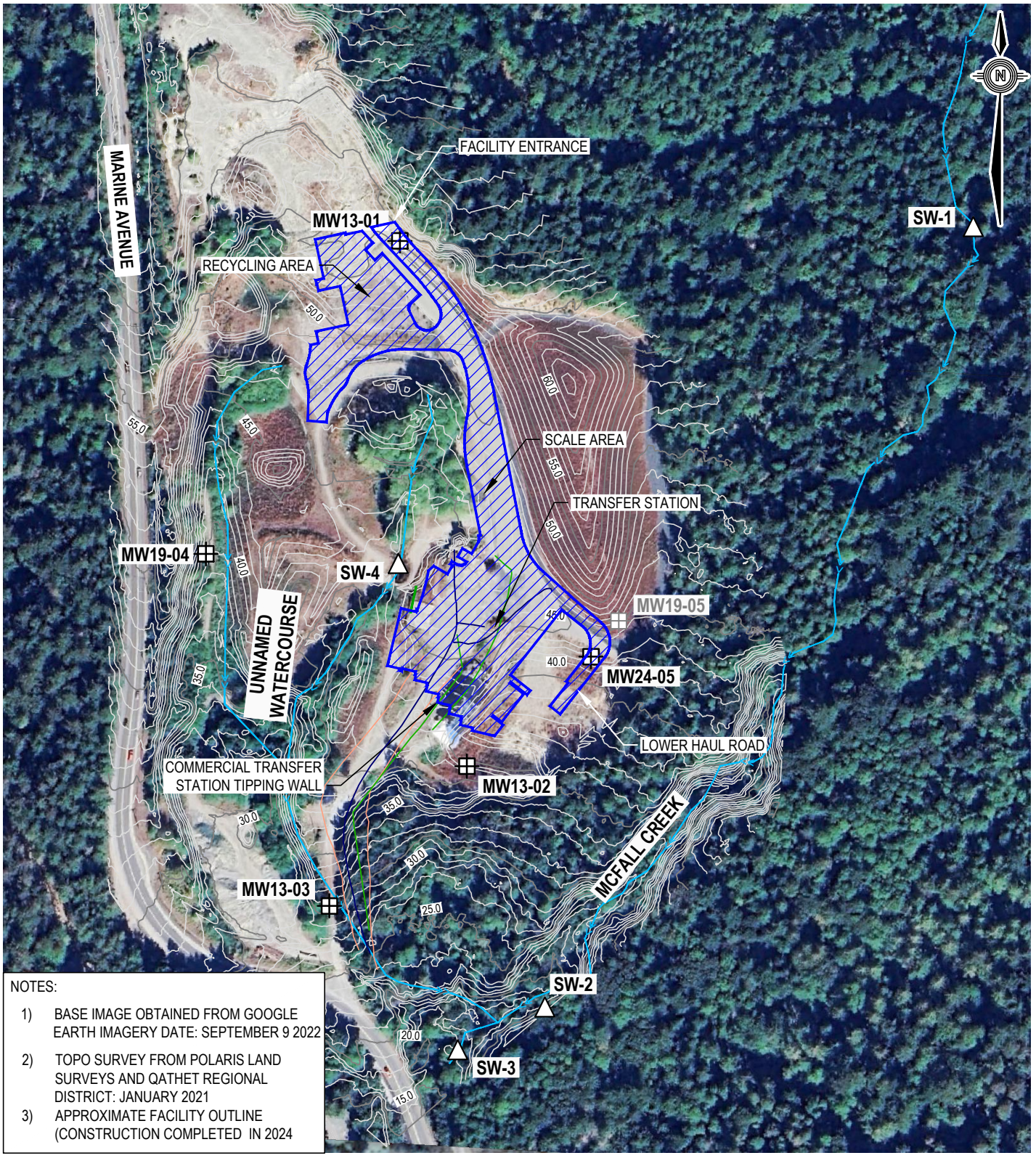
ENVIRONMENTAL MONITORING
MARINE AVENUE SITE, POWELL RIVER, BC

SITE LOCATION PLAN

PROJECT NO.	DWN	CKD	REV
SWM.SWOP03663-14	MC / DBD	PB	0
OFFICE: VAN	DATE: March 2025		

Figure 1

Q:\Edmonton\Drafting\00_MASTER PROJECT BASE PLANS\PRRD Transfer Station\SWM.SWOP03663 Env. Compliance Reporting\FIGURES\CAD\SWM.SWOP03663-14\SWM.SWOP03663-14 Figure 1_SS.dwg [FIGURE 1] March 05, 2025 - 3:48:11 pm (BY: FLEMING, ALEXA)



NOTES:

1) BASE IMAGE OBTAINED FROM GOOGLE EARTH IMAGERY DATE: SEPTEMBER 9 2022
2) TOPO SURVEY FROM POLARIS LAND SURVEYS AND QATHET REGIONAL DISTRICT: JANUARY 2021
3) APPROXIMATE FACILITY OUTLINE (CONSTRUCTION COMPLETED IN 2024

0 100 m

Scale: 1: 3 000

LEGEND:

- EXISTING MONITORING WELL LOCATION (APPROXIMATE)
- EXISTING SURFACE WATER MONITORING LOCATION (APPROXIMATE)
- MONITORING WELL DECOMMISSIONED SEPT. 14, 2020

CLIENT

qathet REGIONAL DISTRICT

TETRA TECH

ENVIRONMENTAL MONITORING
MARINE AVENUE SITE, POWELL RIVER, BC

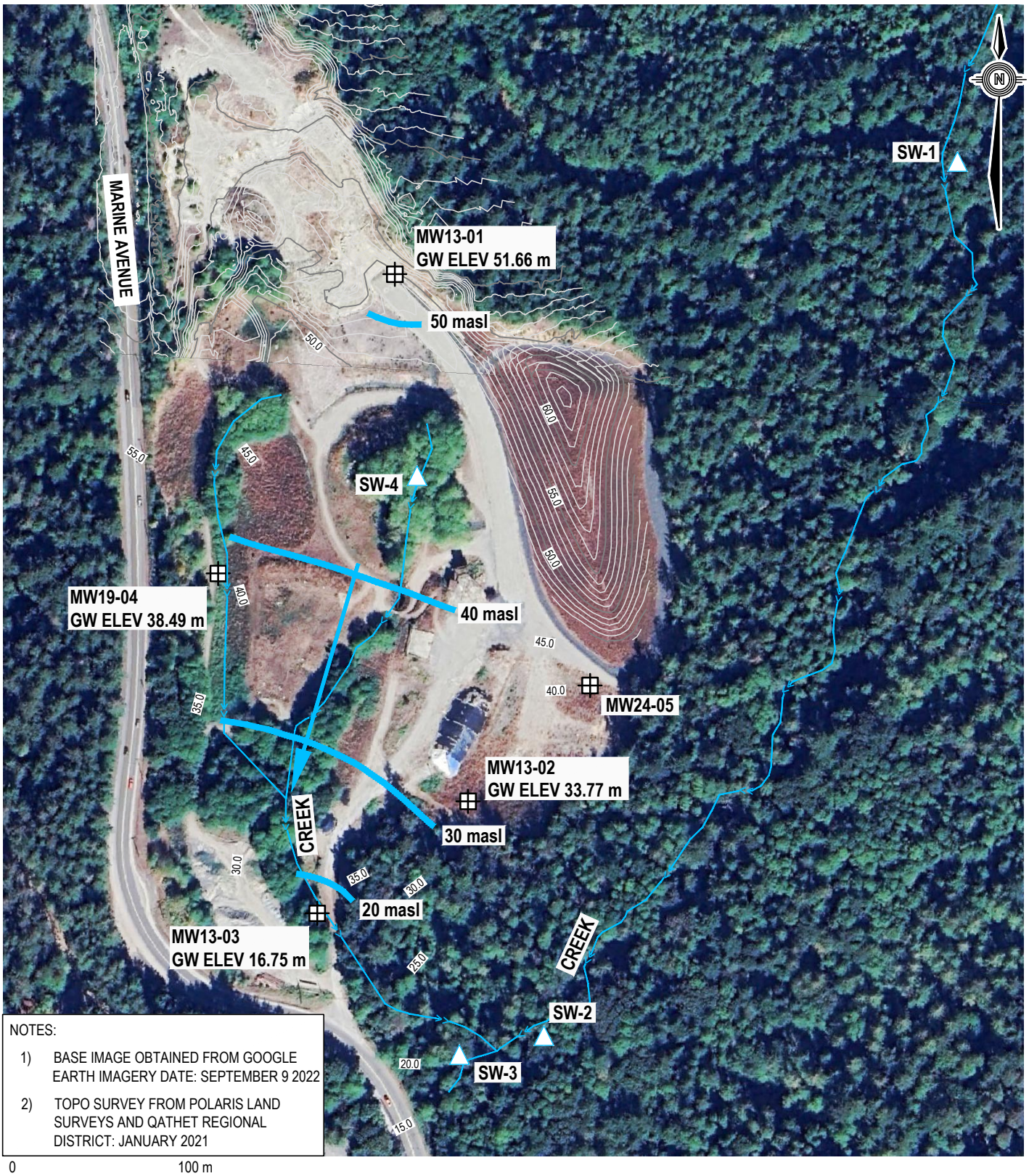
SITE PLAN

PROJECT NO.	DWN	CKD	REV
SWM.SWOP03663-14	MC / DBD	PB	0

OFFICE	DATE
VAN	March 2025

Figure 2

Q:\Edmonton\Drafting\00_MASTER PROJECT BASE PLANS\PRRD Transfer Station\SWM.SWOP03663 Env Compliance Reporting\FIGURES\CAD\SWM.SWOP03663-14\SWM.SWOP03663-14 Figure 2_SS.dwg [FIGURE 2] March 05, 2025 - 3:59:41 pm (BY: FLEMING, ALEXA)



NOTES:

1) BASE IMAGE OBTAINED FROM GOOGLE EARTH IMAGERY DATE: SEPTEMBER 9 2022

2) TOPO SURVEY FROM POLARIS LAND SURVEYS AND QATHET REGIONAL DISTRICT: JANUARY 2021

0 100 m

Scale: 1: 3 000

LEGEND:

- EXISTING MONITORING WELL LOCATION (APPROXIMATE)
- EXISTING SURFACE WATER MONITORING LOCATION (APPROXIMATE)
- INTERPRETED GROUNDWATER CONTOURS
- INFERRED GROUNDWATER FLOW DIRECTION
- CLOSURE AREA (2020)

CLIENT

qathet REGIONAL DISTRICT

TETRA TECH

ENVIRONMENTAL MONITORING
MARINE AVENUE SITE, POWELL RIVER, BC

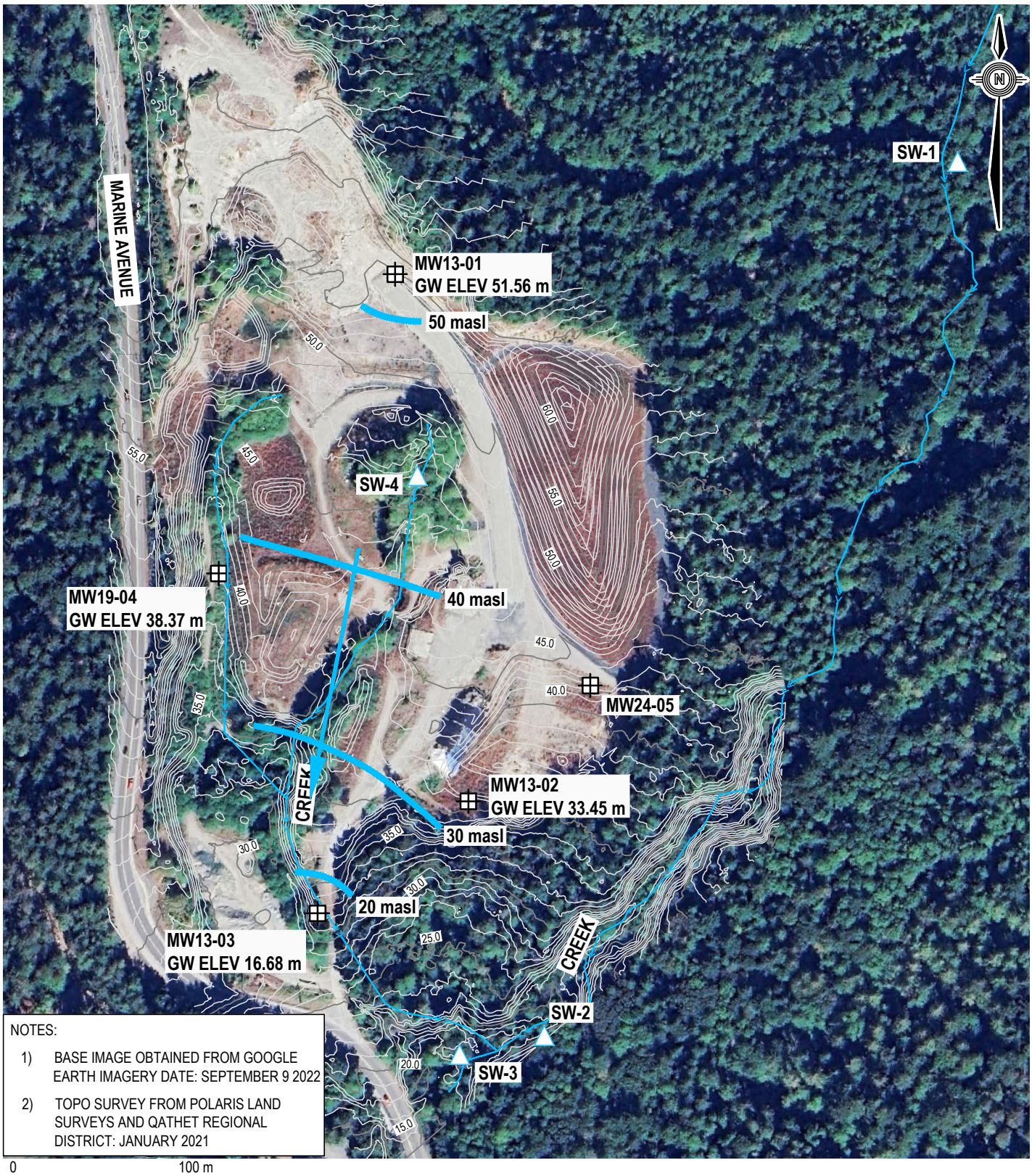
INTERPRETED GROUNDWATER FLOW
FEBRUARY 2024

PROJECT NO.	DWN	CKD	REV
SWM.SWOP03663-14	MC / DBD	PB	0

OFFICE	DATE
VAN	March 2025

Figure 3

Q:\Edmonton\Drafting\00_MASTER PROJECT BASE PLANS\PRRD Transfer Station\SWM.SWOP03663 Env Compliance Reporting\FIGURES\CAD\SWM.SWOP03663-14\SWM.SWOP03663-14 Figure 3_SS.dwg [FIGURE 3] March 05, 2025 - 4:06:09 pm (BY: FLEMING, ALEXA)



NOTES:

1) BASE IMAGE OBTAINED FROM GOOGLE EARTH IMAGERY DATE: SEPTEMBER 9 2022

2) TOPO SURVEY FROM POLARIS LAND SURVEYS AND QATHET REGIONAL DISTRICT: JANUARY 2021

0 100 m

Scale: 1: 3 000

LEGEND:

- EXISTING MONITORING WELL LOCATION (APPROXIMATE)
- EXISTING SURFACE WATER MONITORING LOCATION (APPROXIMATE)
- INTERPRETED GROUNDWATER CONTOURS
- INFERRED GROUNDWATER FLOW DIRECTION
- CLOSURE AREA (2020)

CLIENT

qathet REGIONAL DISTRICT

TETRA TECH

ENVIRONMENTAL MONITORING
MARINE AVENUE SITE, POWELL RIVER, BC

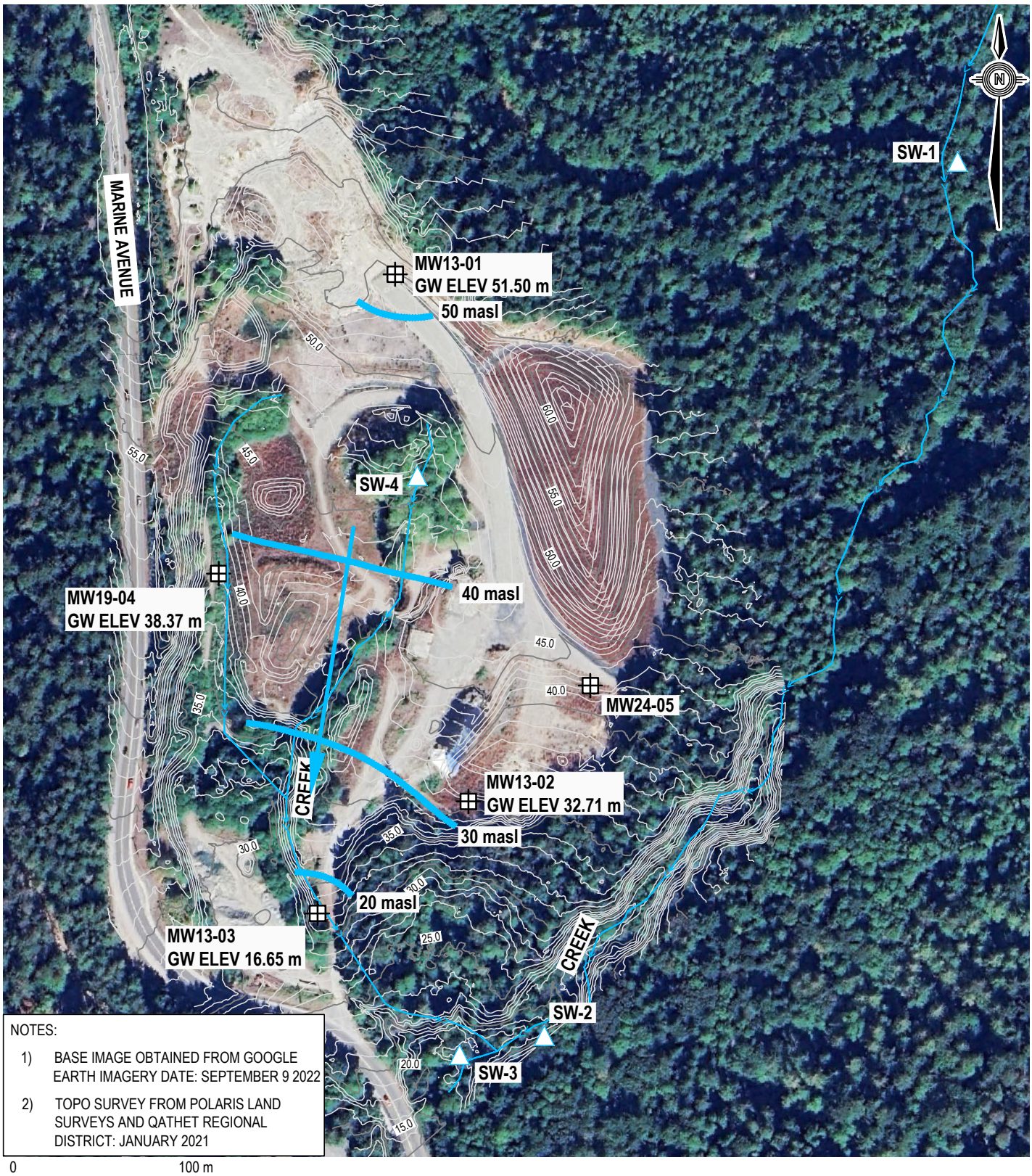
INTERPRETED GROUNDWATER FLOW
JUNE 2024

PROJECT NO.	DWN	CKD	REV
SWM.SWOP03663-14	MC / DBD	PB	0

OFFICE	DATE
VAN	March 2025

Figure 4

Q:\Edmonton\Drafting\00_MASTER PROJECT BASE PLANS\PRRD Transfer Station\SWM.SWOP03663 Env Compliance Reporting\FIGURES\CAD\SWM.SWOP03663-14\SWM.SWOP03663-14 Figure 4_SS.dwg [FIGURE 4] March 05, 2025 - 4:09:18 pm (BY: FLEMING, ALEXA)



NOTES:

1) BASE IMAGE OBTAINED FROM GOOGLE EARTH IMAGERY DATE: SEPTEMBER 9 2022

2) TOPO SURVEY FROM POLARIS LAND SURVEYS AND QATHET REGIONAL DISTRICT: JANUARY 2021

0 100 m

Scale: 1: 3 000

LEGEND:

- EXISTING MONITORING WELL LOCATION (APPROXIMATE)
- EXISTING SURFACE WATER MONITORING LOCATION (APPROXIMATE)
- INTERPRETED GROUNDWATER CONTOURS
- INFERRED GROUNDWATER FLOW DIRECTION
- CLOSURE AREA (2020)

CLIENT

qathet REGIONAL DISTRICT

TETRA TECH

ENVIRONMENTAL MONITORING
MARINE AVENUE SITE, POWELL RIVER, BC

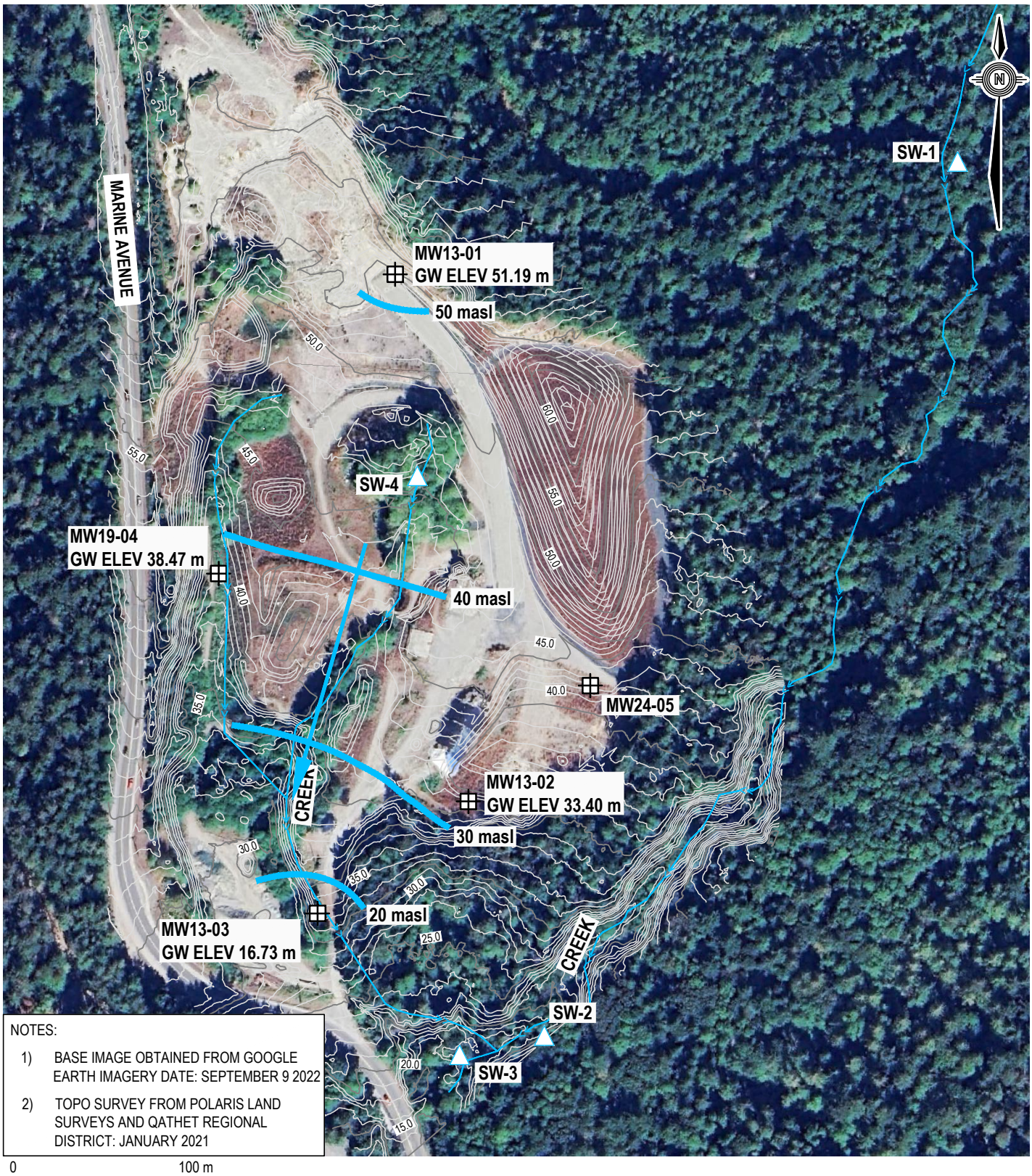
INTERPRETED GROUNDWATER FLOW
SEPTEMBER 2024

PROJECT NO.	DWN	CKD	REV
SWM.SWOP03663-14	MC / DBD	PB	0

OFFICE	DATE
VAN	March 2025

Figure 5

Q:\Edmonton\Drafting\00_MASTER PROJECT BASE PLANS\PRRD Transfer Station\SWM.SWOP03663 Env Compliance Reporting\FIGURES\CAD\SWM.SWOP03663-14SWM.SWOP03663-14 Figure 5_SS.dwg [FIGURE 5] March 05, 2025 - 4:13:23 pm (BY: FLEMING, ALEXA)



NOTES:

1) BASE IMAGE OBTAINED FROM GOOGLE EARTH IMAGERY DATE: SEPTEMBER 9 2022

2) TOPO SURVEY FROM POLARIS LAND SURVEYS AND QATHET REGIONAL DISTRICT: JANUARY 2021

0 100 m

Scale: 1: 3 000

LEGEND:

- EXISTING MONITORING WELL LOCATION (APPROXIMATE)
- EXISTING SURFACE WATER MONITORING LOCATION (APPROXIMATE)
- INTERPRETED GROUNDWATER CONTOURS
- INFERRED GROUNDWATER FLOW DIRECTION
- CLOSURE AREA (2020)

CLIENT

qathet REGIONAL DISTRICT

TETRA TECH

ENVIRONMENTAL MONITORING
MARINE AVENUE SITE, POWELL RIVER, BC

INTERPRETED GROUNDWATER FLOW
DECEMBER 2024

PROJECT NO.	DWN	CKD	REV
SWM.SWOP03663-14	MC / DBD	PB	0

OFFICE	DATE
VAN	March 2025

Figure 6

Q:\Edmonton\Drafting\00_MASTER PROJECT BASE PLANS\PRRD Transfer Station\SWM.SWOP03663 Env Compliance Reporting\FIGURES\CAD\SWM.SWOP03663-14\SWM.SWOP03663-14 Figure 6_SS.dwg [FIGURE 6] March 05, 2025 - 4:18:12 pm (BY: FLEMING, ALEXA)

Figure 7
Sulphate Concentrations in Groundwater

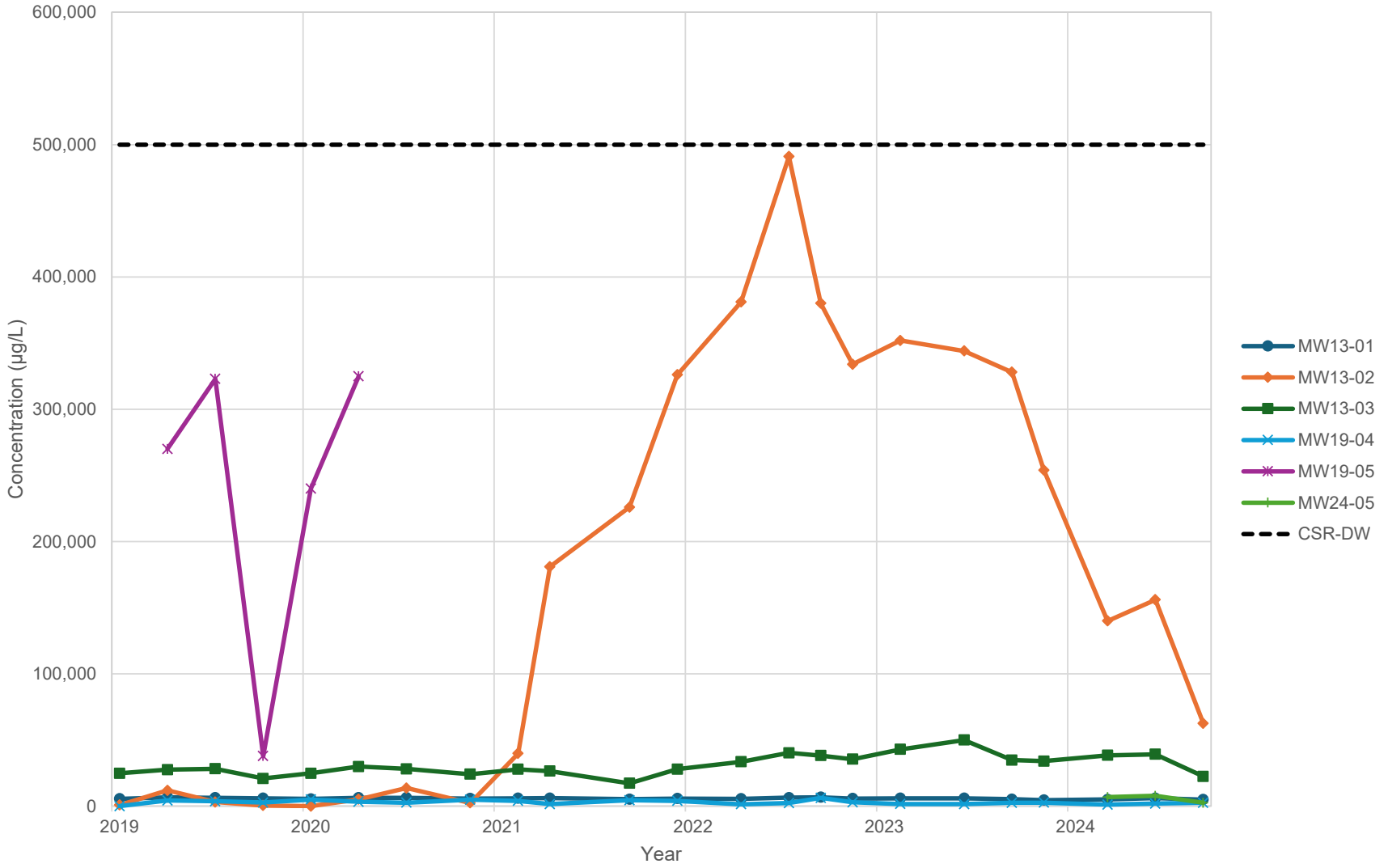


Figure 8
Chloride Concentrations in Groundwater

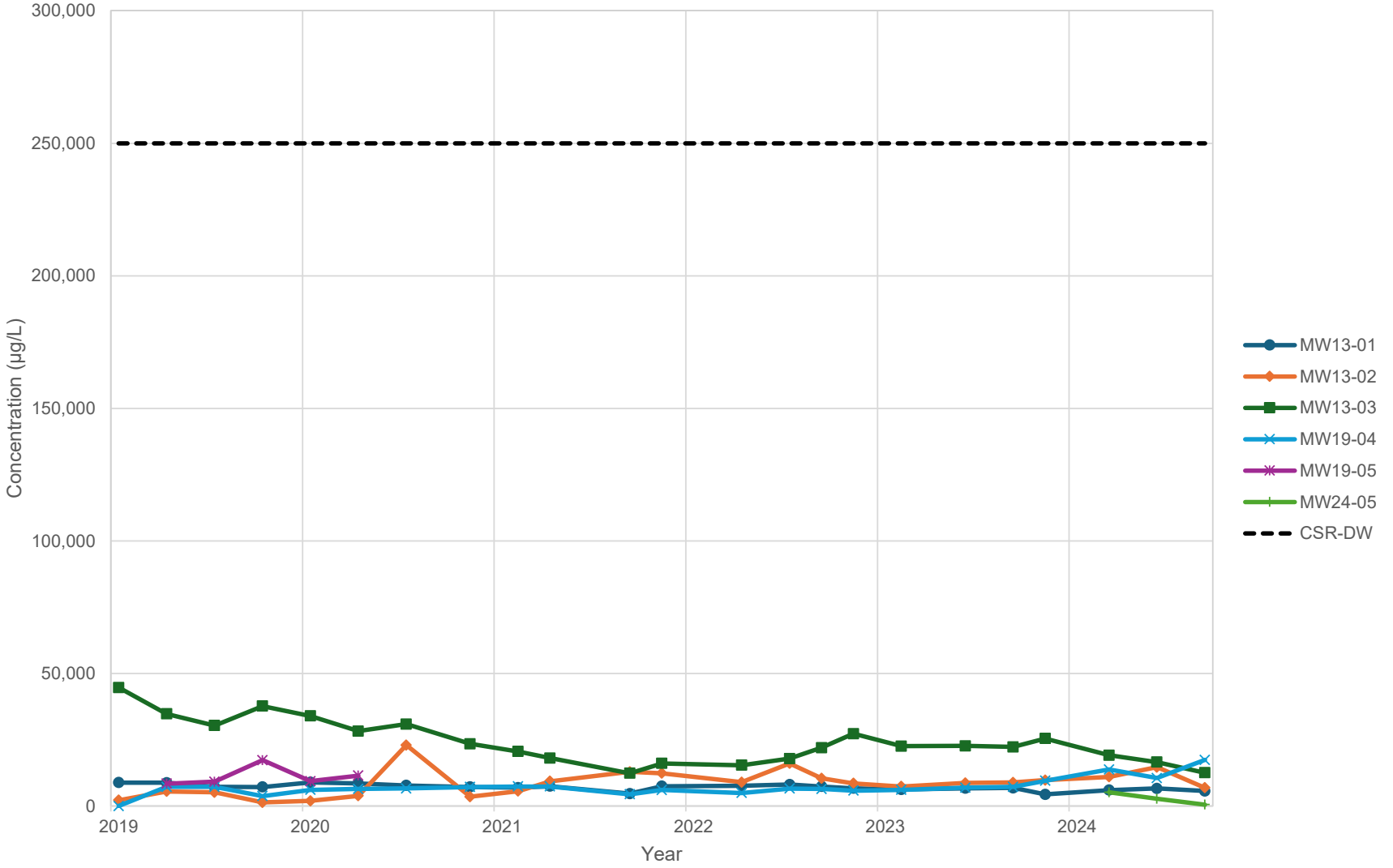


Figure 9
Dissolved Cobalt Concentrations in Groundwater

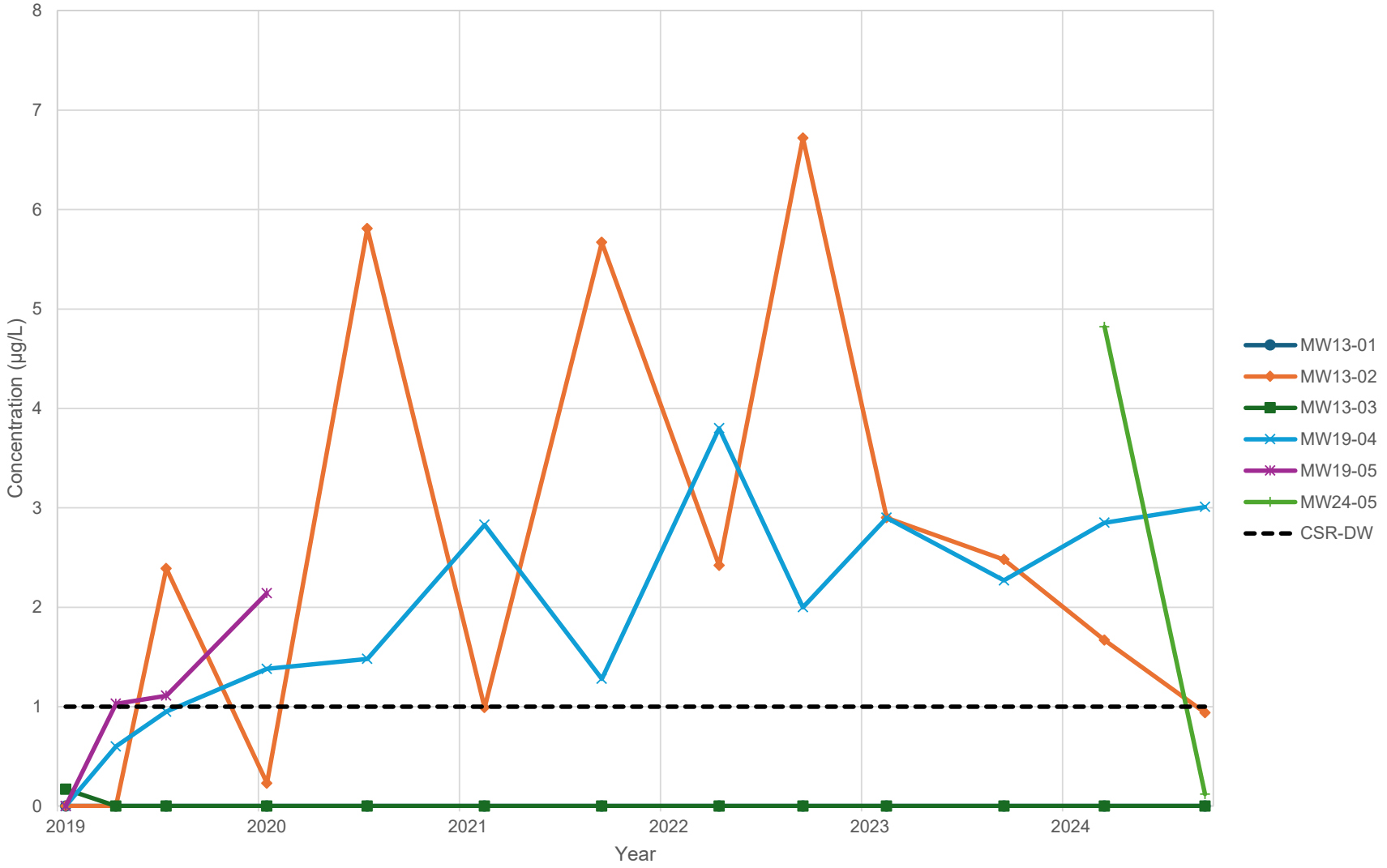


Figure 10
Dissolved Arsenic Concentrations in Groundwater

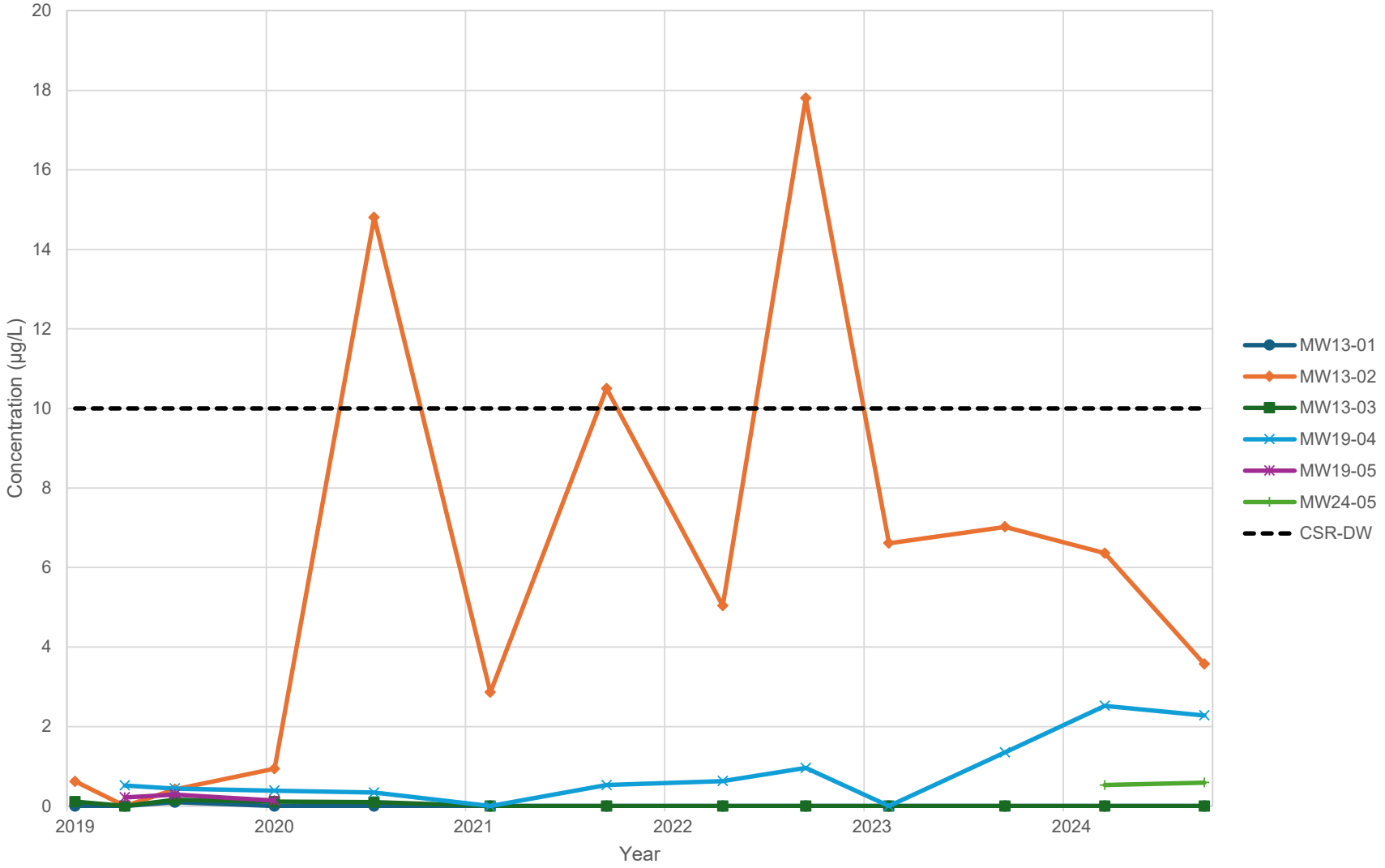


Figure 11
Dissolved Iron Concentrations in Groundwater

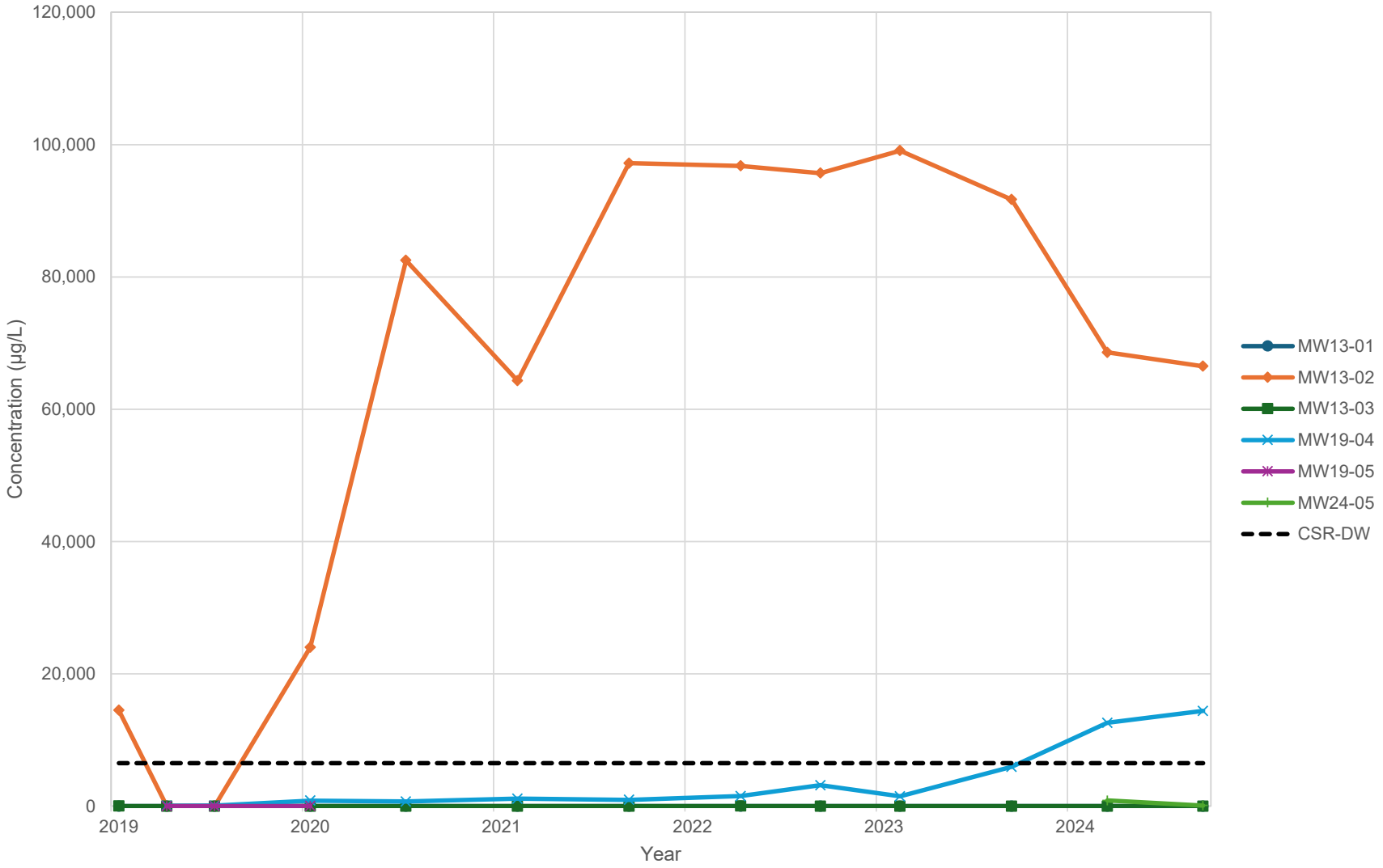


Figure 12
Dissolved Manganese Concentrations in Groundwater

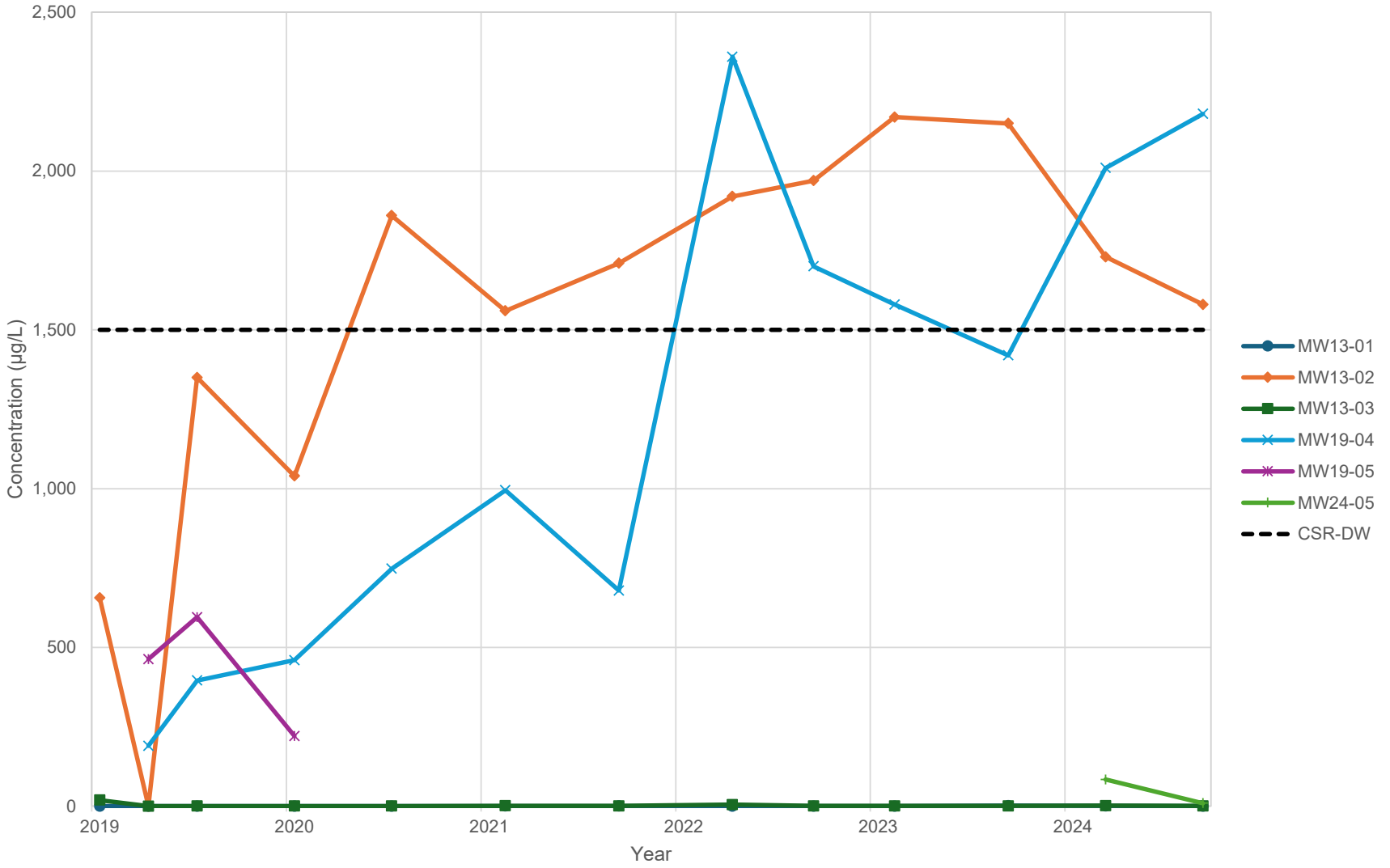


Figure 13
pH in Surface Water

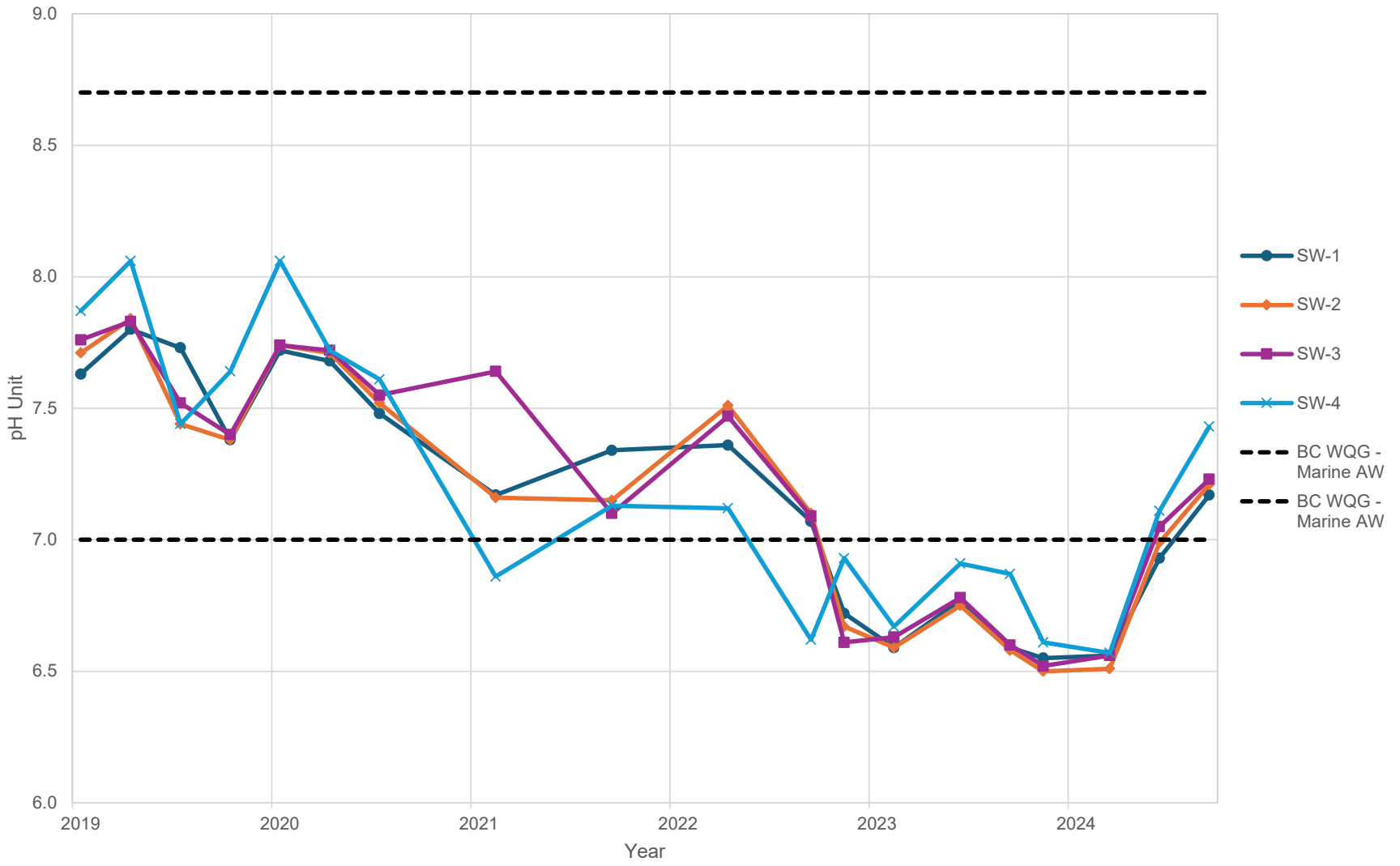


Figure 14
Sulphate Concentrations in Surface Water

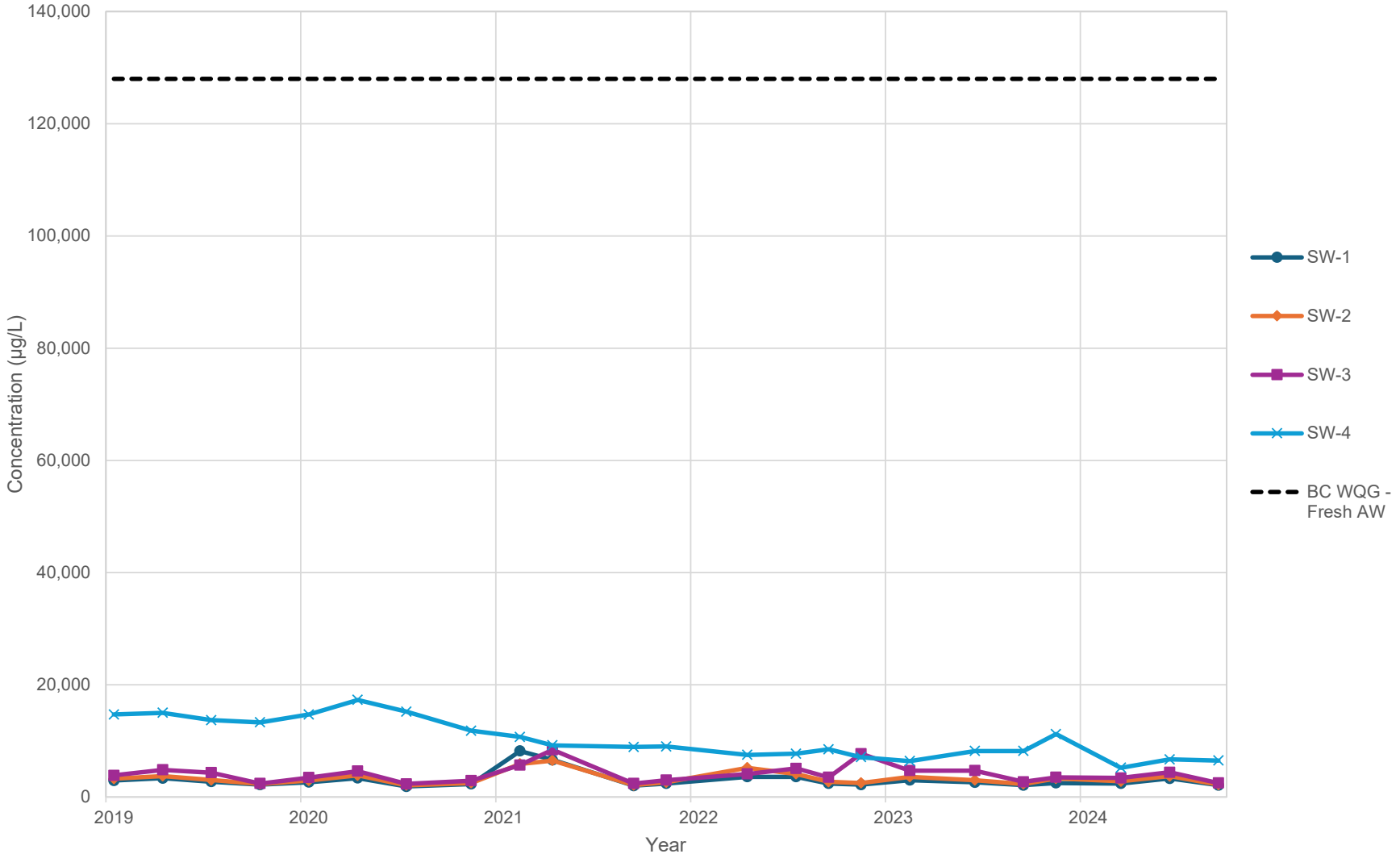
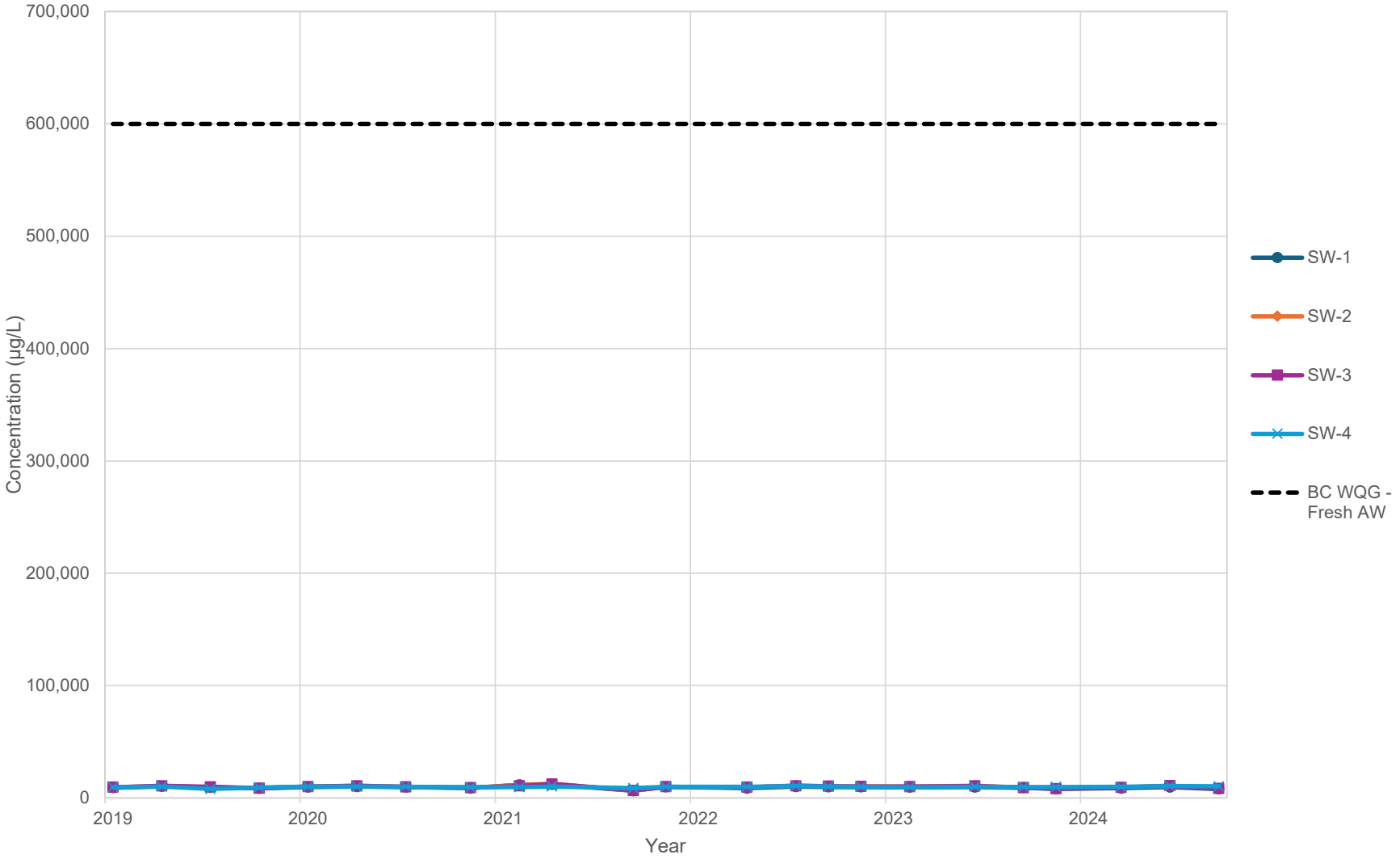


Figure 15
Chloride Concentrations in Surface Water



APPENDIX A

LIMITATIONS ON THE USE OF THIS DOCUMENT

LIMITATIONS ON USE OF THIS DOCUMENT

GEOENVIRONMENTAL

1.1 USE OF DOCUMENT AND OWNERSHIP

This document pertains to a specific site, a specific development, and a specific scope of work. The document may include plans, drawings, profiles and other supporting documents that collectively constitute the document (the "Professional Document").

The Professional Document is intended for the sole use of TETRA TECH's Client (the "Client") as specifically identified in the TETRA TECH Services Agreement or other Contractual Agreement entered into with the Client (either of which is termed the "Contract" herein). TETRA TECH does not accept any responsibility for the accuracy of any of the data, analyses, recommendations or other contents of the Professional Document when it is used or relied upon by any party other than the Client, unless authorized in writing by TETRA TECH.

Any unauthorized use of the Professional Document is at the sole risk of the user. TETRA TECH accepts no responsibility whatsoever for any loss or damage where such loss or damage is alleged to be or, is in fact, caused by the unauthorized use of the Professional Document.

Where TETRA TECH has expressly authorized the use of the Professional Document by a third party (an "Authorized Party"), consideration for such authorization is the Authorized Party's acceptance of these Limitations on Use of this Document as well as any limitations on liability contained in the Contract with the Client (all of which is collectively termed the "Limitations on Liability"). The Authorized Party should carefully review both these Limitations on Use of this Document and the Contract prior to making any use of the Professional Document. Any use made of the Professional Document by an Authorized Party constitutes the Authorized Party's express acceptance of, and agreement to, the Limitations on Liability.

The Professional Document and any other form or type of data or documents generated by TETRA TECH during the performance of the work are TETRA TECH's professional work product and shall remain the copyright property of TETRA TECH.

The Professional Document is subject to copyright and shall not be reproduced either wholly or in part without the prior, written permission of TETRA TECH. Additional copies of the Document, if required, may be obtained upon request.

1.2 ALTERNATIVE DOCUMENT FORMAT

Where TETRA TECH submits electronic file and/or hard copy versions of the Professional Document or any drawings or other project-related documents and deliverables (collectively termed TETRA TECH's "Instruments of Professional Service"), only the signed and/or sealed versions shall be considered final. The original signed and/or sealed electronic file and/or hard copy version archived by TETRA TECH shall be deemed to be the original. TETRA TECH will archive a protected digital copy of the original signed and/or sealed version for a period of 10 years.

Both electronic file and/or hard copy versions of TETRA TECH's Instruments of Professional Service shall not, under any circumstances, be altered by any party except TETRA TECH. TETRA TECH's Instruments of Professional Service will be used only and exactly as submitted by TETRA TECH.

Electronic files submitted by TETRA TECH have been prepared and submitted using specific software and hardware systems. TETRA TECH makes no representation about the compatibility of these files with the Client's current or future software and hardware systems.

1.3 STANDARD OF CARE

Services performed by TETRA TECH for the Professional Document have been conducted in accordance with the Contract, in a manner consistent with the level of skill ordinarily exercised by members of the profession currently practicing under similar conditions in the jurisdiction in which the services are provided. Professional judgment has been applied in developing the conclusions and/or recommendations provided in this Professional Document. No warranty or guarantee, express or implied, is made concerning the test results, comments, recommendations, or any other portion of the Professional Document.

If any error or omission is detected by the Client or an Authorized Party, the error or omission must be immediately brought to the attention of TETRA TECH.

1.4 DISCLOSURE OF INFORMATION BY CLIENT

The Client acknowledges that it has fully cooperated with TETRA TECH with respect to the provision of all available information on the past, present, and proposed conditions on the site, including historical information respecting the use of the site. The Client further acknowledges that in order for TETRA TECH to properly provide the services contracted for in the Contract, TETRA TECH has relied upon the Client with respect to both the full disclosure and accuracy of any such information.

1.5 INFORMATION PROVIDED TO TETRA TECH BY OTHERS

During the performance of the work and the preparation of this Professional Document, TETRA TECH may have relied on information provided by third parties other than the Client.

While TETRA TECH endeavours to verify the accuracy of such information, TETRA TECH accepts no responsibility for the accuracy or the reliability of such information even where inaccurate or unreliable information impacts any recommendations, design or other deliverables and causes the Client or an Authorized Party loss or damage.

1.6 GENERAL LIMITATIONS OF DOCUMENT

This Professional Document is based solely on the conditions presented and the data available to TETRA TECH at the time the data were collected in the field or gathered from available databases.

The Client, and any Authorized Party, acknowledges that the Professional Document is based on limited data and that the conclusions, opinions, and recommendations contained in the Professional Document are the result of the application of professional judgment to such limited data.

The Professional Document is not applicable to any other sites, nor should it be relied upon for types of development other than those to which it refers. Any variation from the site conditions present, or variation in assumed conditions which might form the basis of design or recommendations as outlined in this report, at or on the development proposed as of the date of the Professional Document requires a supplementary exploration, investigation, and assessment.

TETRA TECH is neither qualified to, nor is it making, any recommendations with respect to the purchase, sale, investment or development of the property, the decisions on which are the sole responsibility of the Client.

1.7 NOTIFICATION OF AUTHORITIES

In certain instances, the discovery of hazardous substances or conditions and materials may require that regulatory agencies and other persons be informed and the client agrees that notification to such bodies or persons as required may be done by TETRA TECH in its reasonably exercised discretion.

APPENDIX B

PERMIT PR-509

BRITISH COLUMBIA

July 5, 2024

Tracking Number: 412352
Authorization Number: 509

qathet Regional District
202 - 4675 Marine Avenue
Powell River BC V8A 2L2

RECEIVED
JUL 18 2024
qathet REGIONAL DISTRICT

Dear qathet Regional District,

Re: Abandonment of a Permit under Section 20 of the Environmental Management Act.

Your notice of abandonment of March 15, 2022, advising that you have elected to abandon Permit 509 on the date of your letter pursuant to Section 20(3) of the Environmental Management Act, has been received. It is recognized that you have exercised the right under the subject authorization to discharge waste.

In accordance with Section 20 (5)(b) of the Environmental Management Act, the Director hereby imposes the following requirements:

1. Continue implementation of the previously approved closure plan as detailed in the September 23, 2019, letter "Approval of Powell River Marine Avenue Site Closure Plan" (attached), and the subsequent amendment approved on October 19, 2020 (attached).

2. Carry out the landfill closure plan including any additional requirements and/or amendments specified by the Director, to the satisfaction of the Director.

3. Carry out any additional requirements that the director imposes respecting restoration of the environment, or the control and monitoring of the waste discharged or the waste that continues to be discharged after abandonment.

BRITISH COLUMBIA

This decision may be appealed to the Environmental Appeal Board in accordance with Part 8 of the Environmental Management Act. An appeal must be delivered within 30 days from the date that notice of this decision is given. For further information, please contact the Environmental Appeal Board at (250) 387-3464.

The property is located at 2021 Marine Avenue, Powell River, (49.85099N, 124.53136W). In accordance with Section 3.2 (1) of the Contaminated Sites Regulation a Site Disclosure Statement must be submitted within 6 months after the owner or operator:

(a) decommissions a site on the land, or
(b) ceases operation on the land,

which was used for an industrial or commercial purpose or activity listed in Schedule 2. If you are about to undertake or have undertaken decommissioning of the site and have not submitted a Site Disclosure Statement, a Site Disclosure Statement must be submitted. The Site Disclosure Statement can be accessed at https://www2.gov.bc.ca/gov/content/environment/air-land-water/site-remediation/guidance-resources/forms or:

Land Remediation
PO Box 9342
Stn Prov Govt
Victoria BC V8W 9M1
Phone: (250) 387-4441 Fax: (250)387-9935

BRITISH COLUMBIA

Administration of this authorization will be carried out by staff from the Environmental Protection Division's Authorizations and Remediation Branch. Plans, data and reports pertinent to the authorization are to be submitted by email or electronic transfer to the director, or designate officer, at EnvAuthorizationsReporting@gov.bc.ca.

If you have any questions or concerns, please contact the regional office indicated on this letter.

Yours truly,



Jason Lasuik, P.Ag.
for Director, Environmental Management Act
Communities, IPM & Agri Food

CC: Land Remediation Branch, Victoria

ENCL: September 23, 2019 letter "approval of Powell River Marine Avenue Site Closure Plan
October 19, 2020 Amendment to Approval of Powell River Marine Avenue Site Closure Plan

BRITISH COLUMBIA



September 23, 2019 File Number: PR-509

qathet Regional District
#202 – 4675 Marine Avenue
Powell River, BC V8A 2L2

Dear: Mike Wall,

Re: Approval of Powell River Marine Avenue Site Closure Plan

Site:
This approval pertains to the former municipal solid waste incinerator site located on a parcel of land on portion of Block 36, District Lot 450, Group 1, New Westminster District, Plan 8096 (Marine Avenue Site) for which the Ministry of Environment and Climate Change Strategy (ENV) received a closure plan and amendments.

Permittee:
As stated in the approved solid waste management plan for the qathet Regional District (qRD) entitled "Powell River Regional District, Solid Waste Management and Resource Recovery Plan" dated November 22, 2017 (2017 SWMP), the qRD has assumed full responsibility for the waste export system in the region. Therefore, in accordance with the approved plan, this approval considers the permittee to be the qathet Regional District while agreements between the Corporation of the City of Powell River and the qathet Regional District apportion liability for environmental emissions from past and future site activities.

Closure Plan Documents Reviewed (Marine Site Avenue Closure Plan):
The landfill closure plan, "Powell River Marine Avenue Site Closure Plan Final Report" prepared by Sperling Hansen Associates and dated October 2014 (Closure Plan) is approved by the Director with the following amendments:

- Section 6.2 is replaced with "Updated End-use Plan for the Marine Avenue Site" prepared by Tetra Tech and dated September 19, 2018 (Updated End-Use Plan); and
- Section 12 is replaced with "Updated Environmental Monitoring Plan for the Powell River Marine Avenue Site Closure Plan" prepared by Tetra Tech and dated September 19, 2018 (Updated Monitoring Plan).

Ministry of Environment and Climate Change Strategy
Authorizations - South
Regional Operations Branch
Environmental Protection Division
Mailing Address:
2080-A Labieux Road
Nanaimo BC V9T 6J9
Telephone: 250 751-3100
Facsimile: 250 751-3103
Website: www.gov.bc.ca/en

Requirements to Implement Marine Site Avenue Closure Plan

It is noted that, as per an amendment to PR-509 on February 2, 1994, all discharges at the Marine Avenue Site were to cease on October 15, 1994. It is further noted that on September 12, 2018, the 2017 SWMP received the approval of the Minister of Environment and Climate Change Strategy. The closure of the Marine Avenue Site and transformation of a portion of the site into a Resource Recovery Centre is a prominent segment of the 2017 SWMP. Therefore, in agreement with the approved 2017 SWMP and pursuant to Section 16(4)(j) of the *Environmental Management Act*, the Director requires the qathet Regional District to implement the Marine Avenue Closure Plan, along with the following requirements:

1. An application must be made to transfer PR-509 from the Corporation of the District of Powell River to the qathet Regional District.
2. The landfill closure must be carried out in accordance with the approved plans with the following requirements:
    a. As much recyclable material as practical must be recovered from the solid waste on the Marine Avenue Site prior to landfilling.
    b. The waste eligible for landfilling is limited to that which was present on the Marine Avenue Site detailed at the time of the Closure Plan on October 2014.
    c. Landfilling of waste is limited to the Marine Avenue Site.
    d. A 50 metre buffer zone, as defined in the "Landfill Criteria for Municipal Solid Waste", second edition, June 2016 (Criteria), must be maintained between the landfill footprint and the landfill site boundary unless those wastes are already documented as in place at closer than 50 metres from the site boundary.
3. Only bottom ash which has been determined to not meet the definition of hazardous waste as defined in the "Hazardous Waste Regulation" is eligible for reuse as a construction material substitute such as road base material. The bottom ash must be sampled and characterized by a qualified professional (QP).
4. For one year starting the day construction is complete, the final cover must be inspected by the qRD at least once every three (3) months. Any damage to the final cover must be repaired within 30 days of discovery. Causes of damage include, but are not limited to, settlement, cracks, erosion and sloughing.
5. The groundwater and surface water sampling must be carried out or supervised by a QP in accordance with the Updated Monitoring Plan.
6. An annual report for the preceding calendar year must be submitted by March 31 of each year. The annual report must be certified by a QP and meet the conditions set out in Section 10.6 of the Criteria. The first annual report is due on March 31, 2020.
7. In addition to the requirements set out in Section 10.6 of the Criteria, the first annual report is to include the following (to be updated at each subsequent report until works are completed):
    a. The date landfilling ceased at the Marine Avenue Site.
    b. A section detailing the sampling and characterizing of any bottom ash used as a construction material substitute as outlined in requirement #3 above.

c. A section detailing the constructed modifications to the Marine Avenue Site. This section is to include all inspection and quality assurance/quality control testing results of applicable closure elements including the final cover system, and as-built record drawings showing the lines, grades, and elevations of the landfill.

8. The qRD must carry out any future additional requirements that the Director imposes respecting restoration of the environment or the control and monitoring of the waste discharged.

This decision may be appealed to the Environmental Appeal Board in accordance with Part 8 of the *Environmental Management Act*. An appeal must be delivered within 30 days from the date that notice of this decision is given. For further information, please contact the Environmental Appeal Board at (250) 387-3464.

If you have any questions or concerns, please contact Luc Lachance at Luc.Lachance@gov.bc.ca.

Yours truly,

Luc Lachance, P.Eng
for Director, *Environmental Management Act*
South Authorizations

October 19, 2020 File: PR-509

VIA EMAIL: MWall@qathet.ca

Attn: Mike Wall
qathet Regional District
#202 – 4675 Marine Avenue
Powell River, BC V8A 2L2

Dear: Mike Wall

Re: **Amendment to Approval of Powell River Marine Avenue Site Closure Plan**

Thank you for submitting the October 2, 2020 letter report prepared by TetraTech and issued to you regarding proposed changes to the Powell River Marine Avenue Site Closure Plan previously approved by myself on September 23, 2019.

Pursuant to Section 16(4)(j) of the *Environmental Management Act,* I hereby amend the September 23, 2019 approval to include recommendations listed in Section 4.0 of the letter report by TetraTech referred to above.

This letter shall not be construed as a waiver of any lawful requirement pertaining to any unauthorized discharge of waste to the environment and is without prejudice to any further legal action that the Ministry may take under the *Environmental Management Act*. All other conditions of the September 23, 2019 approval letter are unchanged and remain in full force.

This letter should be appended to the permit PR-509 as it is now part of the authorization.

Yours truly,

Luc Lachance, P.Eng.
for Director
Environmental Management Act
cc: Lauren Quan, TetraTech (Lauren.Quan@tetratech.com)

March 12, 2024

Tracking Number: 419019
Authorization Number: 509

qathet Regional District
202 - 4675 Marine Avenue
Powell River BC V8A 2L2

Dear qathet Regional District,

Re: Your application for a Permit Transfer under the Environmental Management Act

In response to your application package dated January 24, 2024, and pursuant to Section 17 of the *Environmental Management Act*, the Director hereby consents to the transfer of Permit 509 from THE CORPORATION OF THE DISTRICT OF POWELL RIVER to qathet Regional District. The effective date of this amendment is March 15, 2022.

Furthermore, pursuant to Section 16 of the *Environmental Management Act*, Permit 509 is hereby amended to reflect the name change from THE CORPORATION OF THE DISTRICT OF POWELL RIVER to qathet Regional District. Please note that although a revised permit has not been produced at this time, a copy of this letter is being placed on the permit file, as an addendum to the permit, to reflect the change in the name of the permit holder. The qathet Regional District is now the permittee with all inherent rights and responsibilities. An annual fee for the permit will be determined in accordance with the Permit and Approval Fees and Charges Regulation.

This permit does not authorize entry upon, crossing over, or use for any purpose of private or Crown lands or works, unless and except as authorized by the owner of such lands or works. The responsibility for obtaining such authority rests with the permittee. This permit is issued pursuant to the provisions of the *Environmental Management Act* to ensure compliance with Section 120(3) of that statute, which makes it an offence to discharge waste, from a prescribed industry or activity, without proper authorization. It is also the responsibility of the permittee to ensure that all activities conducted under this authorization are carried out with regard to the rights of third parties and comply with other applicable legislation that may be in force.

When a spill occurs, or there is an imminent risk of one occurring, the responsible person must ensure that it is reported in accordance with the Spill Reporting Regulation. Additional information on spill reporting requirements is available at gov.bc.ca/reportaspill.

This decision may be appealed to the Environmental Appeal Board in accordance with Part 8 of the *Environmental Management Act*. An appeal must be delivered within 30 days from the date that notice of this decision is given. For further information, please contact the Environmental Appeal Board at (250) 387-3464.

Administration of this permit will be carried out by staff from the Environmental Protection Division's Regional Operations Branch. Plans, data and reports pertinent to the permit are to be submitted by email or electronic transfer to the Director. To meet the reporting requirements in a form and manner acceptable to the Director, reports and notifications related to the administration of this approval must be submitted electronically to the following ministry email address:

- EnvAuthorizationsReporting@gov.bc.ca for monitoring and annual reports.
- EnvironmentalCompliance@gov.bc.ca for non-compliance reports and emergency notifications.

For further information about how to submit data and reports, please refer to https://www2.gov.bc.ca/gov/content/environment/waste-management/waste-discharge-authorization/comply.

Please be reminded that the Director may require the permittee to do one or more of the following at any time:
- repair, alter, remove, improve or add to existing works, or to construct new works, and to submit plans and specifications for works specified in this authorization.
- conduct monitoring, and may specify procedures for monitoring and analysis, and procedures or requirements respecting the handling, treatment, transportation, discharge or storage of waste.
- provide security in the amount and form, and subject to the conditions, specified by the director.
- conduct studies and to report information in accordance with the specifications of the director.
- recycle certain wastes and recover certain reusable resources, including energy potential from wastes, in accordance with the specifications of the director.
- submit copies of reports and notifications to specified Indigenous Groups, within specified timelines, in accordance with the specifications of the director.

For more information about how the Ministry will assess compliance with your permit please refer to gov.bc.ca/environmentalcompliance.

For more information about how to make changes to your permit and to access waste discharge amendment forms and guidance, please refer to gov.bc.ca/wastedischarge-authorizations.

Yours truly,



Jason Lasuik, P.Ag.
for Director, Environmental Management Act
Communities, IPM & Agri Food

CC: Arnold Schwabe, ASchwabe@qathet.ca,
Russell Brewer, rbrewer@powellriver.ca

ENCL: Permit 509

THE GOVERNMENT OF
THE PROVINCE OF BRITISH COLUMBIA

DEPARTMENT OF LANDS, FORESTS, AND WATER RESOURCES
WATER RESOURCES SERVICE

POLLUTION CONTROL BRANCH

PROVISIONAL PERMIT

Under the Provisions of Section 5 (1) of the Pollution Control Act, 1967

The Corporation of the District of Powell River
(Name.)

of 6910 Duncan Street, Powell River, British Columbia
(Address.)

is hereby authorized to discharge ~~effluent~~ refuse from an incinerator
(Plant, factory, municipality, etc.)

located at Powell River, B.C., subject to the conditions set out below and to the conditions set forth in any appendix attached hereto.

(*a*) The approximate point of discharge to a parcel of land on portion of Block 36, District Lot 450, Group 1, New Westminster District, Plan 8096 is located as shown on the attached plan.

(*b*) The quantity of ~~effluent~~ refuse which may be discharged is a maximum of 5 cubic yards per day

(*c*) The characteristics of the ~~effluent~~ refuse shall be ~~equivalent to or better than~~ those of substantially inert incinerator residue

(*d*) The works authorized to be constructed are an incinerator and residue storage facilities approximately located as shown on the attached plan.

(*e*) The land from which the ~~effluent~~ refuse originates and to which this permit is appurtenant is the area of the Powell River Regional District

(x) ~~The appendix attached hereto contains items dealing with~~

~~, which are an integral part of this permit.~~

(x)

(f) The incinerator shall be operated in such a manner that the emission of air contaminants does not create a health hazard or a nuisance condition, or contravene any provision of the Pollution Control Act, 1967, or Regulations.

(g) The authority to discharge under this Permit is contingent upon the works authorized having been constructed as per final construction plans approved in accordance with the Pollution Control Act, 1967.

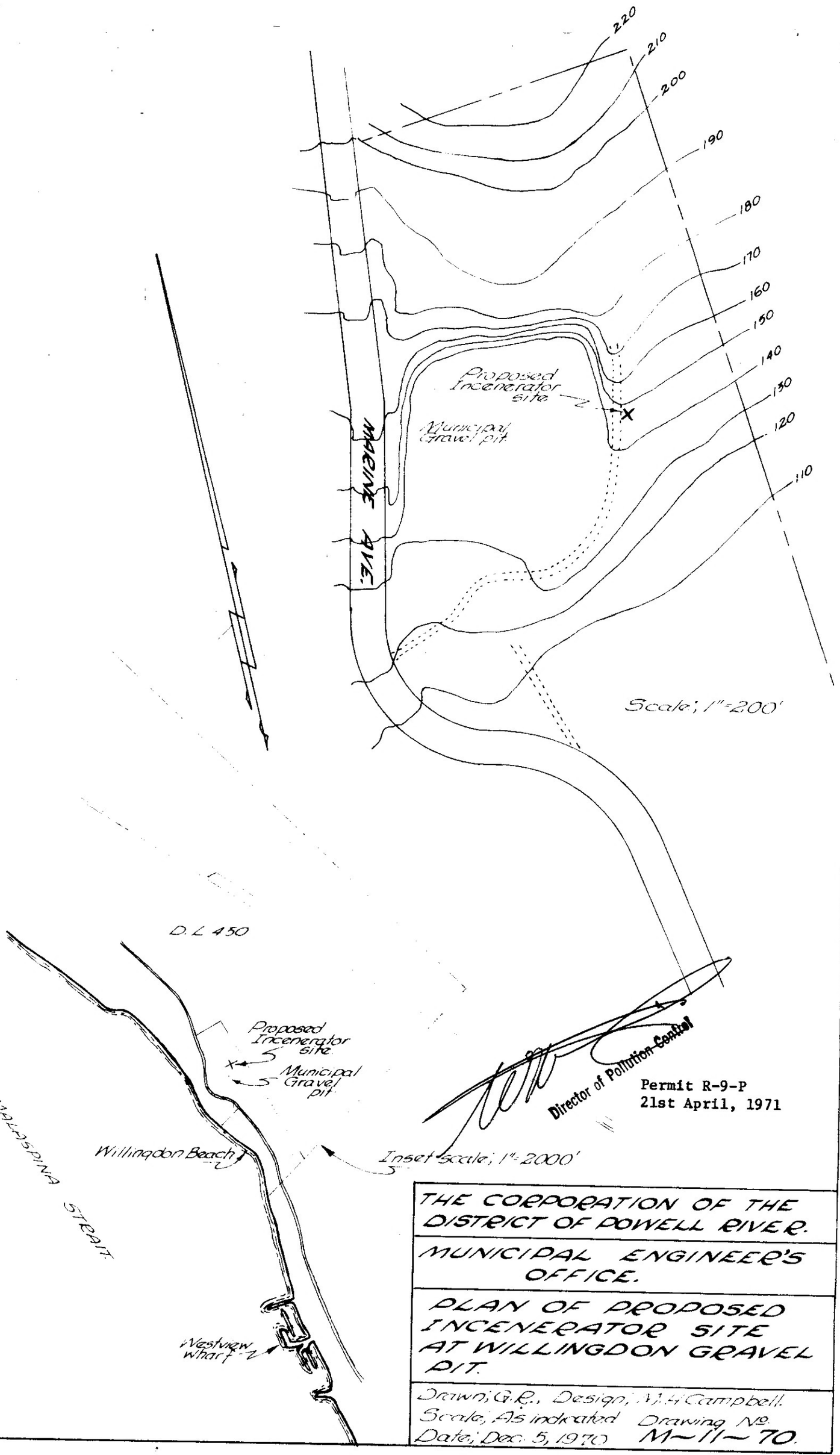
(h) The works are to be constructed on or before June 30, 1972.

This permit, or any of the conditions contained herein, may be amended, varied, or rescinded by order, at any time.

Director of Pollution Control.

Date issued 21st April, 1971

Permit No. R-9-P


220
210
200
190
180
170
160
150
140
130
120
110
Proposed Incinerator site
Municipal Gravel pit
MARINE AVE.
Scale; 1"=200'
D.L 450
Proposed Incinerator site
Municipal Gravel pit
Willingdon Beach
Inset Scale; 1"=2000'
MALASPINA STRAIT
Westview wharf
Director of Pollution Control
Permit R-9-P
21st April, 1971
THE CORPORATION OF THE DISTRICT OF POWELL RIVER.
MUNICIPAL ENGINEER'S OFFICE.
PLAN OF PROPOSED INCENERATOR SITE AT WILLINGDON GRAVEL PIT.
Drawn; G.R., Design; W.H. Campbell.
Scale; As indicated Drawing No.
Date; Dec. 5, 1970 M-11-70.

Province of
British Columbia

MINISTRY OF
ENVIRONMENT,
LANDS AND PARKS

BC Environment
LOWER MAINLAND REGION

Environmental Protection
15326 — 103A Avenue
Surrey, British Columbia
V3R 7A2
Telephone: (604) 582-5200
Facsimile: (604) 584-9751

APR 0 1 1993

File: PR-509

DOUBLE REGISTERED

THE CORPORATION OF THE
DISTRICT OF POWELL RIVER
6910 Duncan Street
Powell River, B. C.
V8A 1V2

Dear Permittee:

AMENDED PERMIT NO. PR-509

Pursuant to Section 11 of the Waste Management Act, Permit PR-509, issued to the Corporation of the District of Powell River on April 21, 1971 and amended December 17, 1992 authorizing the discharge of refuse to land and contaminants to air,is hereby amended as follows:

1. Add the following line to clause (b) of the permit

   Effective February 28, 1994, the quantity of refuse that may be discharged is zero (0) cubic metres per day.

2. Add the following line to clause (f) of the permit

   Effective February 28, 1994, the incinerator shall comply with BACT (Best Available Control Technology) which is as outlined in the document "Emission Criteria for Municipal Solid Waste Incinerators" published by B.C. Environment, June 1991.

All other terms of the Permit shall remain in full force and effect.

Yours very truly,

E. M. Lawson

E.M. Lawson
Assistant Regional Waste Manager

EML/fo

c.c. Environment Canada
Powell River Regional District

Printed on Recycled Paper

British Columbia
Handle with care

Province of
British Columbia

MINISTRY OF
ENVIRONMENT,
LANDS AND PARKS

BC Environment
LOWER MAINLAND REGION

Environmental Protection
15326 — 103A Avenue
Surrey, British Columbia
V3R 7A2
Telephone: (604) 582-5200
Facsimile: (604) 584-9751

DOUBLE REGISTERED

Our File: PR-509

Date: FEB 02 1994

THE CORPORATION OF THE
DISTRICT OF POWELL RIVER
6910 Duncan Street
Powell River, British Columbia
V8A 1V2

Attention: V. H. Petersen
Administrator

Dear Permittee:

AMENDMENT TO PERMIT

Pursuant to Section 11 of the Waste Management Act, Permit PR-509 issued to **THE CORPORATION OF THE DISTRICT OF POWELL RIVER** on April 21, 1971 and last amended April 1, 1993 authorizing the discharge of refuse to land and contaminants to air, is hereby amended as follows:

1. Effective October 15, 1994, all discharge shall cease and the existing refuse burner shall be closed.

2. Progress reports outlining your activities and action in a form suitable for public release shall be submitted on:

   i April 15, 1994;
   ii May 31, 1994;
   iii July 15, 1994;
   iv August 31, 1994;
   v October 14, 1994.

We look forward to your cooperation and strict compliance.

Yours very truly,

E. M. Lawson

E. M. Lawson
Assistant Regional Waste Manager

Enc.

cc: Environment Canada
Powell River Regional District

Printed on Recycled Paper

British Columbia
Handle with care

September 23, 2019 File Number: PR-509

qathet Regional District
#202 – 4675 Marine Avenue
Powell River, BC V8A 2L2

Dear: Mike Wall,

Re: Approval of Powell River Marine Avenue Site Closure Plan

Site:
This approval pertains to the former municipal solid waste incinerator site located on a parcel of land on portion of Block 36, District Lot 450, Group 1, New Westminster District, Plan 8096 (Marine Avenue Site) for which the Ministry of Environment and Climate Change Strategy (ENV) received a closure plan and amendments.

Permittee:
As stated in the approved solid waste management plan for the qathet Regional District (qRD) entitled "Powell River Regional District, Solid Waste Management and Resource Recovery Plan" dated November 22, 2017 (2017 SWMP), the qRD has assumed full responsibility for the waste export system in the region. Therefore, in accordance with the approved plan, this approval considers the permittee to be the qathet Regional District while agreements between the Corporation of the City of Powell River and the qathet Regional District apportion liability for environmental emissions from past and future site activities.

Closure Plan Documents Reviewed (Marine Site Avenue Closure Plan):
The landfill closure plan, "Powell River Marine Avenue Site Closure Plan Final Report" prepared by Sperling Hansen Associates and dated October 2014 (Closure Plan) is approved by the Director with the following amendments:

- Section 6.2 is replaced with "Updated End-use Plan for the Marine Avenue Site" prepared by Tetra Tech and dated September 19, 2018 (Updated End-Use Plan); and
- Section 12 is replaced with "Updated Environmental Monitoring Plan for the Powell River Marine Avenue Site Closure Plan" prepared by Tetra Tech and dated September 19, 2018 (Updated Monitoring Plan).

Ministry of Environment and Climate Change Strategy
Authorizations - South
Regional Operations Branch
Environmental Protection Division
Mailing Address:
2080-A Labieux Road
Nanaimo BC V9T 6J9
Telephone: 250 751-3100
Facsimile: 250 751-3103
Website: www.gov.bc.ca/en

Requirements to Implement Marine Site Avenue Closure Plan

It is noted that, as per an amendment to PR-509 on February 2, 1994, all discharges at the Marine Avenue Site were to cease on October 15, 1994. It is further noted that on September 12, 2018, the 2017 SWMP received the approval of the Minister of Environment and Climate Change Strategy. The closure of the Marine Avenue Site and transformation of a portion of the site into a Resource Recovery Centre is a prominent segment of the 2017 SWMP. Therefore, in agreement with the approved 2017 SWMP and pursuant to Section 16(4)(j) of the *Environmental Management Act*, the Director requires the qathet Regional District to implement the Marine Avenue Closure Plan, along with the following requirements:

1. An application must be made to transfer PR-509 from the Corporation of the District of Powell River to the qathet Regional District.
2. The landfill closure must be carried out in accordance with the approved plans with the following requirements:
    a. As much recyclable material as practical must be recovered from the solid waste on the Marine Avenue Site prior to landfilling.
    b. The waste eligible for landfilling is limited to that which was present on the Marine Avenue Site detailed at the time of the Closure Plan on October 2014.
    c. Landfilling of waste is limited to the Marine Avenue Site.
    d. A 50 metre buffer zone, as defined in the "Landfill Criteria for Municipal Solid Waste", second edition, June 2016 (Criteria), must be maintained between the landfill footprint and the landfill site boundary unless those wastes are already documented as in place at closer than 50 metres from the site boundary.
3. Only bottom ash which has been determined to not meet the definition of hazardous waste as defined in the "Hazardous Waste Regulation" is eligible for reuse as a construction material substitute such as road base material. The bottom ash must be sampled and characterized by a qualified professional (QP).
4. For one year starting the day construction is complete, the final cover must be inspected by the qRD at least once every three (3) months. Any damage to the final cover must be repaired within 30 days of discovery. Causes of damage include, but are not limited to, settlement, cracks, erosion and sloughing.
5. The groundwater and surface water sampling must be carried out or supervised by a QP in accordance with the Updated Monitoring Plan.
6. An annual report for the preceding calendar year must be submitted by March 31 of each year. The annual report must be certified by a QP and meet the conditions set out in Section 10.6 of the Criteria. The first annual report is due on March 31, 2020.
7. In addition to the requirements set out in Section 10.6 of the Criteria, the first annual report is to include the following (to be updated at each subsequent report until works are completed):
    a. The date landfilling ceased at the Marine Avenue Site.
    b. A section detailing the sampling and characterizing of any bottom ash used as a construction material substitute as outlined in requirement #3 above.

c. A section detailing the constructed modifications to the Marine Avenue Site. This section is to include all inspection and quality assurance/quality control testing results of applicable closure elements including the final cover system, and as-built record drawings showing the lines, grades, and elevations of the landfill.

8. The qRD must carry out any future additional requirements that the Director imposes respecting restoration of the environment or the control and monitoring of the waste discharged.

This decision may be appealed to the Environmental Appeal Board in accordance with Part 8 of the *Environmental Management Act*. An appeal must be delivered within 30 days from the date that notice of this decision is given. For further information, please contact the Environmental Appeal Board at (250) 387-3464.

If you have any questions or concerns, please contact Luc Lachance at Luc.Lachance@gov.bc.ca.

Yours truly,

Luc Lachance, P.Eng
for Director, *Environmental Management Act*
South Authorizations

October 19, 2020 File: PR-509

VIA EMAIL: MWall@qathet.ca

Attn: Mike Wall
qathet Regional District
#202 – 4675 Marine Avenue
Powell River, BC V8A 2L2

Dear: Mike Wall

Re: **Amendment to Approval of Powell River Marine Avenue Site Closure Plan**

Thank you for submitting the October 2, 2020 letter report prepared by TetraTech and issued to you regarding proposed changes to the Powell River Marine Avenue Site Closure Plan previously approved by myself on September 23, 2020.

Pursuant to Section 16(4)(j) of the *Environmental Management Act*, I hereby amend the September 23, 2020 approval to include recommendations listed in Section 4.0 of the letter report by TetraTech referred to above.

This letter shall not be construed as a waiver of any lawful requirement pertaining to any unauthorized discharge of waste to the environment and is without prejudice to any further legal action that the Ministry may take under the *Environmental Management Act*. All other conditions of the September 23, 2020 approval letter are unchanged and remain in full force.

This letter should be appended to the permit PR-509 as it is now part of the authorization.

Yours truly,

Luc Lachance, P.Eng.
for Director
Environmental Management Act
cc: Lauren Quan, TetraTech (Lauren.Quan@tetratech.com)

APPENDIX C

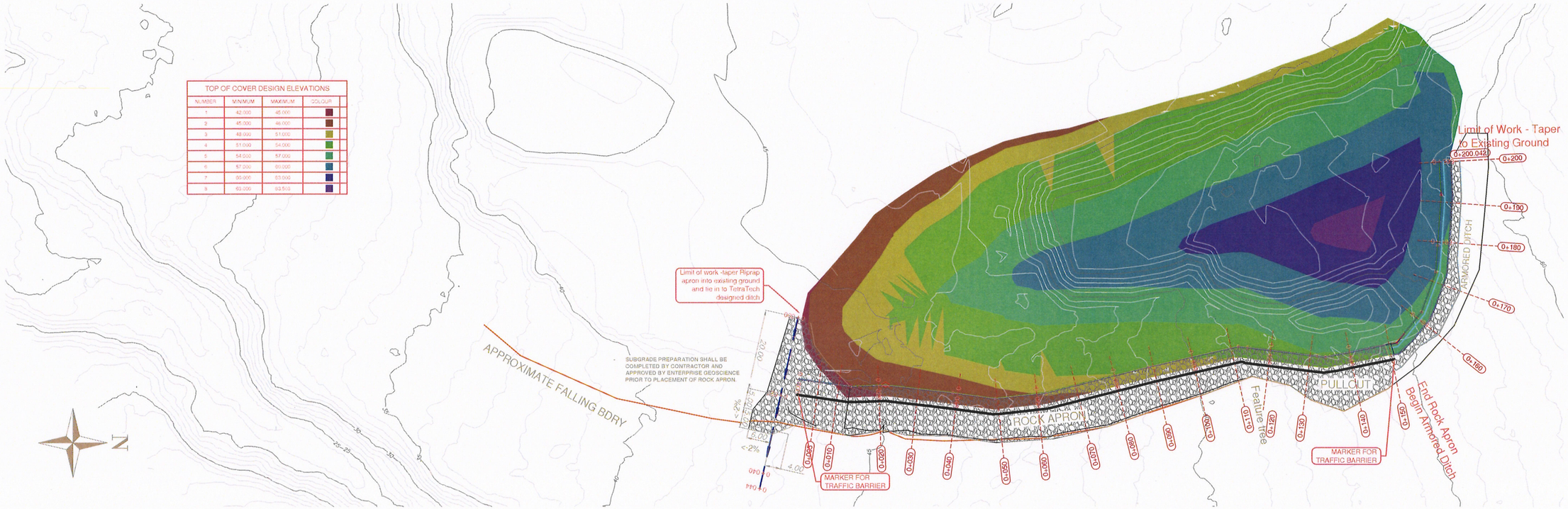
LANDFILL CLOSURE AND RELATED WORKS DRAWINGS

Appendices that have been authenticated through Notarius are encrypted; therefore, the secure files have been included as attachments within the PDF. To access the authenticated appendices, open the document in Adobe and locate the paperclip icon in the tool bar.

APPENDIX D

SURFACE WATER DESIGNS (ENTERPRISE GEOSCIENCE SERVICES)

TOP OF COVER DESIGN ELEVATIONS			
NUMBER	MINIMUM	MAXIMUM	COLOUR
1	42.000	45.000	
2	45.000	48.000	
3	48.000	51.000	
4	51.000	54.000	
5	54.000	57.000	
6	57.000	60.000	
7	60.000	63.000	
8	63.000	63.503	



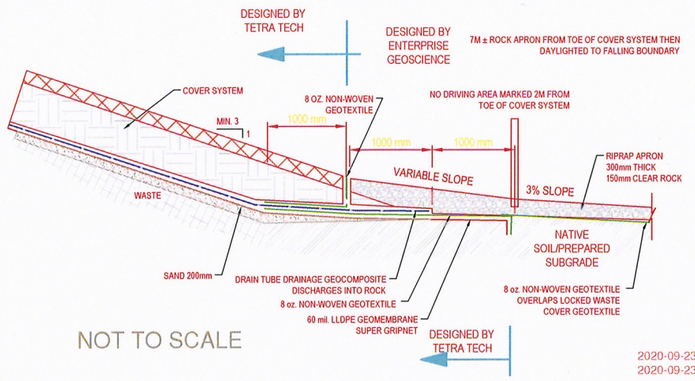
Riprap 150mm Minus Volume Table			
Station	Area	Volume	Cumulative Volume
0+000.000	2.59	0.00	0.00
0+011.000	1.36	22.72	22.72
0+020.000	2.68	18.15	40.76
0+030.000	2.95	28.06	68.82
0+040.000	2.77	28.52	118.16
0+050.000	2.79	27.82	145.98
0+060.000	2.90	28.41	174.10
0+070.000	2.95	29.43	203.53
0+080.000	2.93	29.43	232.96
0+090.000	2.64	27.79	260.66
0+100.000	2.44	25.40	286.06
0+110.000	2.09	22.60	308.66
0+120.000	1.78	19.52	327.86
0+130.000	2.89	21.52	349.50
0+140.000	3.29	28.09	373.59

Riprap 150mm Minus Volume Table			
Station	Area	Volume	Cumulative Volume
0+150.000	1.69	21.41	+93.06
0+160.000	1.85	16.89	+118.99
0+170.000	1.73	17.17	+136.06
0+180.000	1.11	14.34	+151.26
0+190.000	1.11	11.13	+162.39
0+200.000	1.11	11.13	+173.45
0+200.042	1.11	0.05	+173.50

Contractor to provide 10kg sample of 150mm Riprap for approval prior to use.

Add 120 cubic m to Riprap volume to create apron tie in: Total 593 cubic m.

ROCK APRON DETAIL

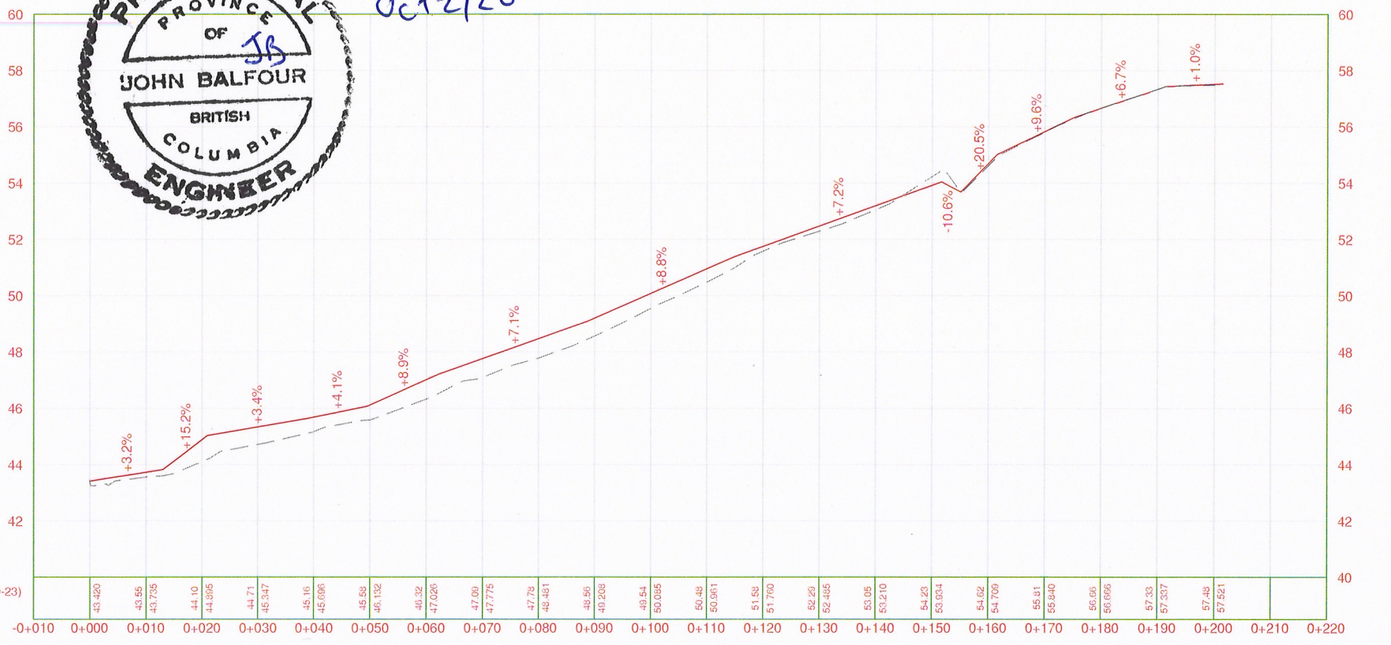


NOT TO SCALE

2020-09-23 (Original Ground 2020-09-23)
2020-09-23 Staked Toe of Waste

PROFESSIONAL ENGINEER — PROVINCE OF JB — JOHN BALFOUR — BRITISH COLUMBIA

Oct 2/20



►IFC

DESIGN NO. C002701

REV NO	REVISIONS	DATE	DRAWN	APPRD
1	Preliminary East Side Cross Sections	8/27/2020	CDA	
2	Remove Southern Ditch Add typical Section for tie in Add Swale Plan View	9/11/2020	CDA	
3	Remove Swale Plan View/ Add Northern Armored Ditch/Adjust Typical Section Add No Drive Marking System	9/15/2020	CDA	
4	Revised Toe Location and Grading of Subgrade Added Notes IFC	9/30/2020	CDA	JB

STORM DRAINAGE

Resource Recovery Centre

Landfill East Side Apron Plan/ Profile

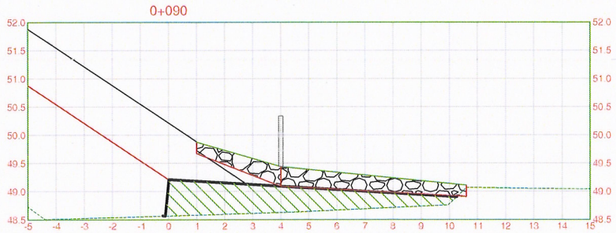
Enterprise Geoscience Services Ltd.

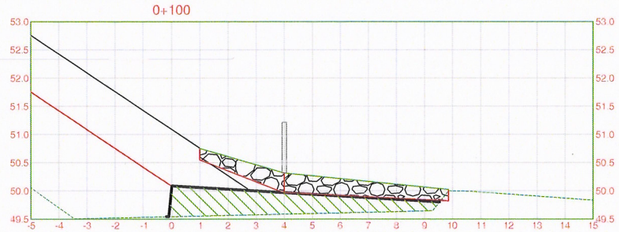
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DRAWN BY	CDA	DESIGN BY	JB
CHECKED BY	JB	APPROVED BY	JB

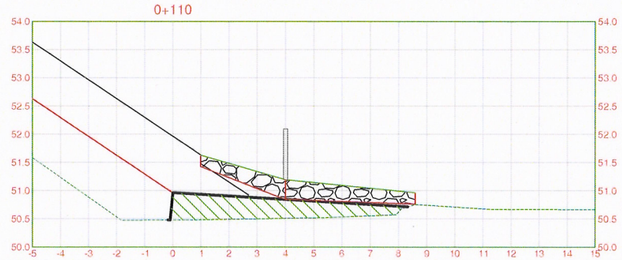
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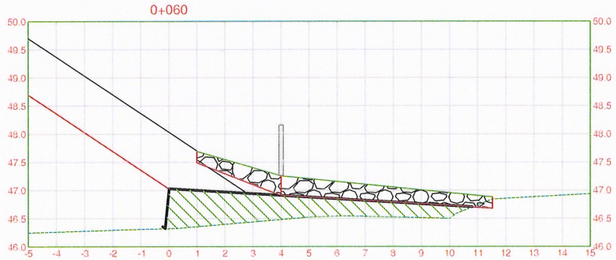
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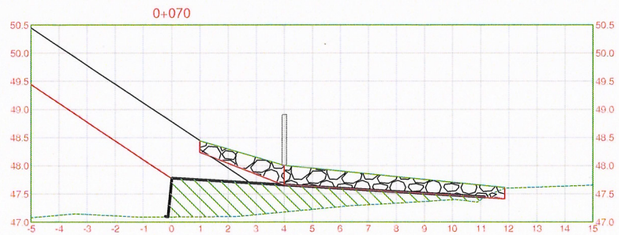
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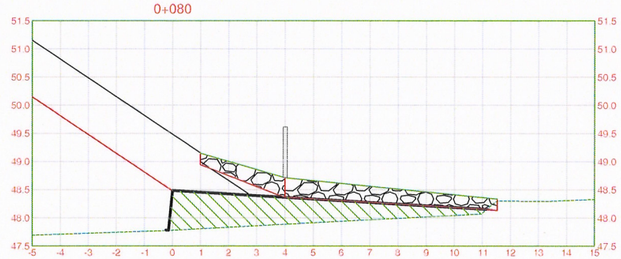


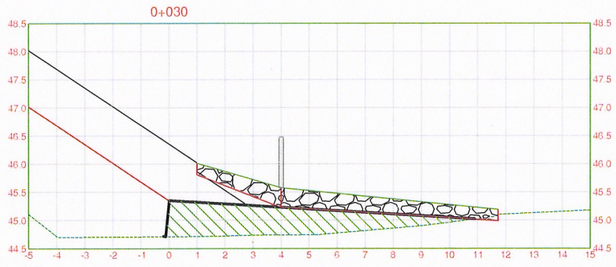


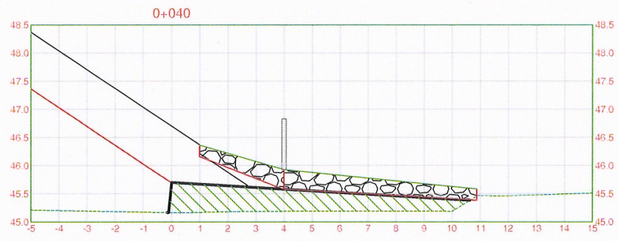


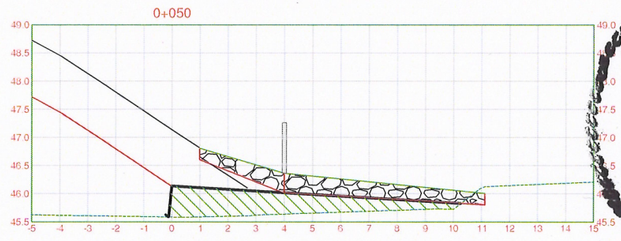


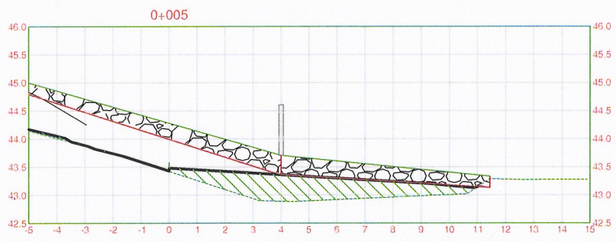


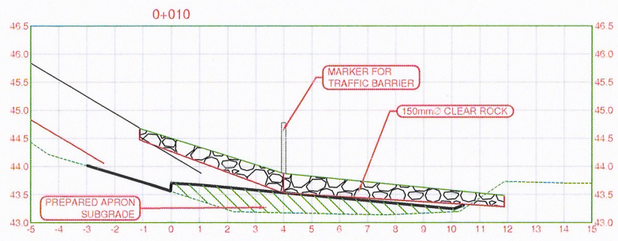


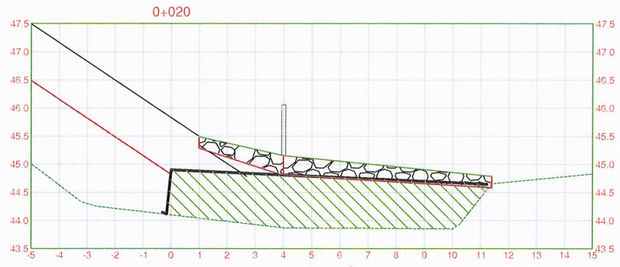












PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
JOHN BALFOUR
JB
Oct 2/20

►IFC

DESIGN NO. C002702

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2	Remove Southern Ditch Add typical Section for tie in Add Swale Plan View	9/11/2020	CDA	
3	Remove Swale Plan View/ Add Northern Armored Ditch/Adjust Typical Section Add No Drive Marking System	9/15/2020	CDA	
4	Revised Toe Location and Grading of Subgrade Added Notes IFC	9/30/2020	CDA	JB

STORM DRAINAGE

Resource Recovery Centre

Landfill East Side Drainage Apron Sections

Enterprise Geoscience Services Ltd.

SCALE	1:100H 1:50V	DATE	2020-09-30
DRAWN BY	CDA	DESIGN BY	JB
CHECKED BY	JB	APPROVED BY	JB
		REV.	4

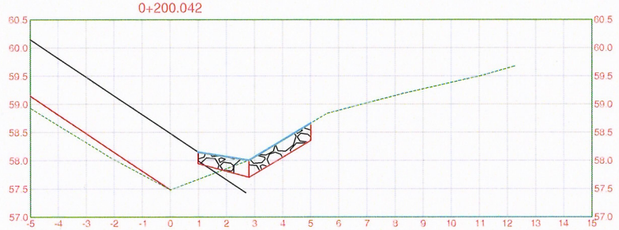
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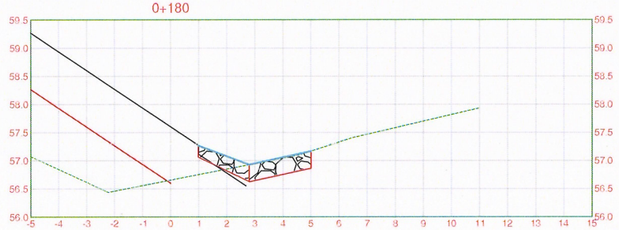
PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
JOHN BALFOUR

Oct 2/20

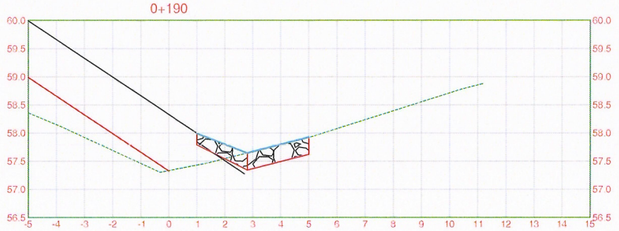
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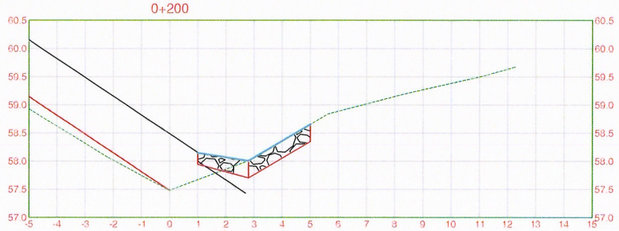
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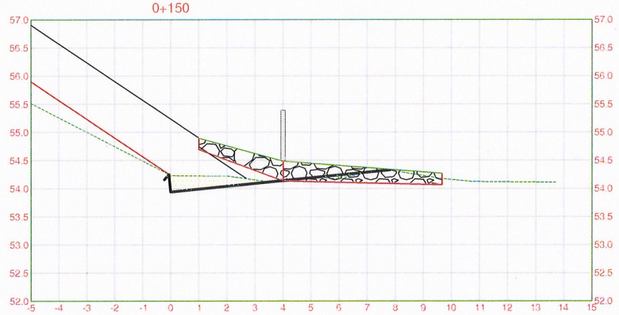
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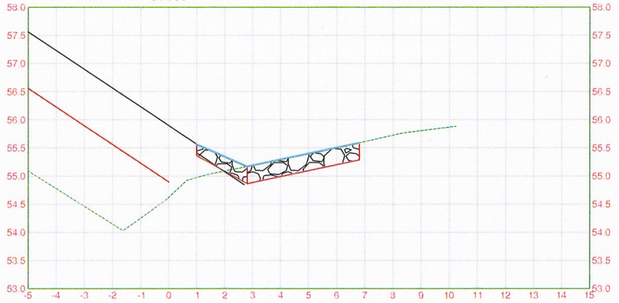
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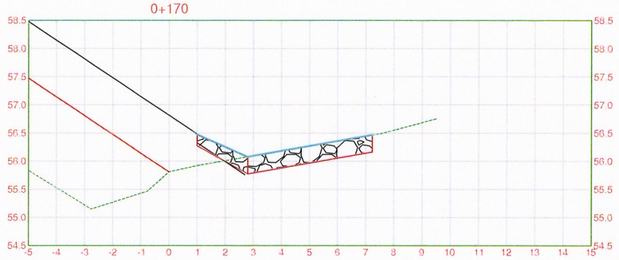
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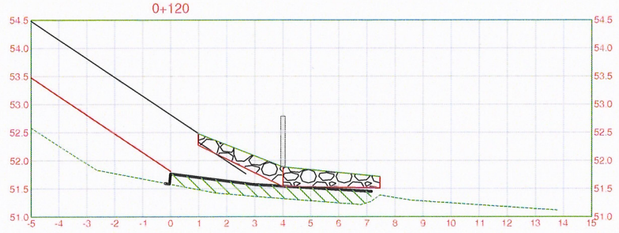
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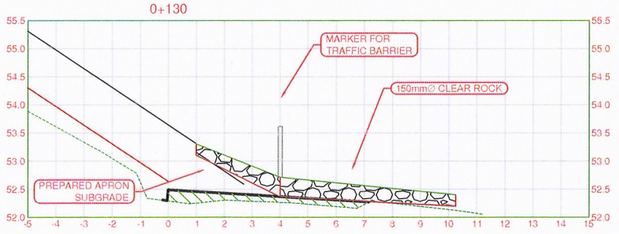
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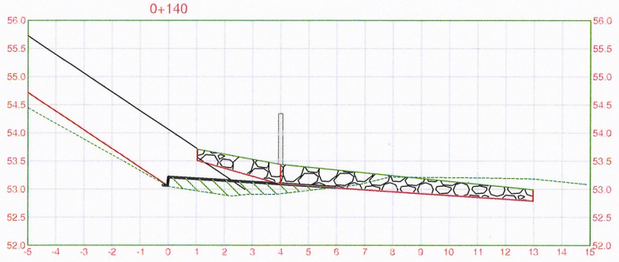
0+120



0+130



0+140



►IFC

DESIGN NO. C002703

REV NO	REVISIONS	DATE	DRAWN	APPR'D
1	Preliminary East Side Cross Sections	8/27/2020	CDA	
2	Remove Southern Ditch Add typical Section for tie in Add Swale Plan View	9/11/2020	CDA	
3	Remove Swale Plan View/ Add Northern Armored Ditch/Adjust Typical Section Add No Drive Marking System	9/15/2020	CDA	
4	Revised Toe Location and Grading of Subgrade Added Notes IFC	9/30/2020	CDA	JB

STORM DRAINAGE

Resource Recovery Centre

Landfill East Side Drainage Apron Sections

Enterprise Geoscience Services Ltd.

SCALE	1:100H 1:50V	DATE	2020-09-30
DRAWN BY	CDA	DESIGN BY	JB
CHECKED BY	JB	APPROVED BY	JB
		REV.	4

DWG. NO. 3 OF 3

PLOT DATE: October 1, 2020 - D:_qHD\C0027\Enterprise GeoScience\Apron Base 2020-09-25-Rev-4.dwg

APPENDIX E

BOREHOLE LOG FOR MW24-05

BOREHOLE KEYSHEET

WATER LEVEL MEASUREMENT

- Measured in standpipe, piezometer or well
- Inferred

SAMPLE TYPES

- A-Casing
- Core
- Disturbed, Bag, Grab
- HQ Core
- Jar
- Jar and Bag
- NQ Core
- No Recovery
- Split Spoon/SPT
- Tube
- CRREL Core

BACKFILL MATERIALS

- Asphalt
- Bentonite
- Cement/ Grout
- Drill Cuttings
- Grout
- Gravel
- Sand
- Slough
- Topsoil Backfill

LITHOLOGY - GRAPHYICAL LEGEND[1]

- Asphalt
- Bedrock
- Cobbles/Boulders
- Clay
- Coal
- Concrete
- Fill
- Gravel
- Limestone
- Mudstone
- Organics
- Peat
- Sand
- Sandstone
- Shale
- Silt
- Siltstone
- Till
- Topsoil

1. The graphical legend is an approximation and for visual representation only. Soil strata may comprise a combination of the basic symbols shown above. Particle sizes are not drawn to scale

qathet Regional District

Borehole No: **MW24-05**

Project: Marine Avenue Former Landfill Monitoring	Project No: SWM.SWOP03663-13
Location: 4924 Marine Avenue	
Powell River, British Columbia	UTM: 390017 E; 5523198 N; Z 10

Depth (m)	Method	Soil Description	Notes and Comments	MW24-01	Depth (ft)
0					0
	Cable tool	SAND (FILL) - road base crush, some gravel, trace silt, grey			
		- concrete			
1		SILT - trace to some organics, trace sand, soft, dark brown			
		SAND - some gravel, trace organics, well graded, dark brown			
2		- no visible organics			
3		SILT - some sand, fine to medium grained sand, stiff, light brown			
		SAND - some silt, trace to some gravel, fine to coarse grained gravel, poorly graded, wet			
4		SILT - sandy, moist, light brown			
5		END OF BOREHOLE (4.57 metres) slough - ?.?? metres at 0 hrs. water - ?.?? metres at 0 hrs. Monitoring well installed to 4.57 metres			

Not Reviewed

TETRA TECH

Contractor: Can West Drilling	Completion Depth: 4.57 m
Equipment Type: Cable Tool	Start Date: 2024 May 24
Logged By: MG	Completion Date: 2024 May 24
Reviewed By:	Page 1 of 1

APPENDIX F

LABORATORY ANALYTICAL RESULTS

CERTIFICATE OF ANALYSIS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver) 1000 - 885 Dunsmuir Street Vancouver, BC V6C 1N5		
ATTENTION	Lauren Quan	**WORK ORDER**	24B2509
PO NUMBER	704-SWM.SWOP03663-12	**RECEIVED / TEMP**	2024-02-23 10:30 / 6.1°C
PROJECT	704-SWM.SWOP03663-12	**REPORTED**	2024-04-26 12:28
PROJECT INFO	Marine Avenue Site		

Introduction:

CARO Analytical Services is a testing laboratory full of smart, engaged scientists driven to make the world a safer and healthier place. Through our clients' projects we become an essential element for a better world. We employ methods conducted in accordance with recognized professional standards using accepted testing methodologies and quality control efforts. CARO is accredited by the Canadian Association for Laboratories Accreditation (CALA) to ISO/IEC 17025:2017 for specific tests listed in the scope of accreditation approved by CALA.

Big Picture Sidekicks

You know that the sample you collected after snowshoeing to site, digging 5 meters, and racing to get it on a plane so you can submit it to the lab for time sensitive results needed to make important and expensive decisions (whew) is VERY important. We know that too.

We've Got Chemistry

It's simple. We figure the more you enjoy working with our fun and engaged team members; the more likely you are to give us continued opportunities to support you.

Ahead of the Curve

Through research, regulation knowledge, and instrumentation, we are your analytical centre for the technical knowledge you need, BEFORE you need it, so you can stay up to date and in the know.

By engaging our services, you are agreeing to CARO Analytical Service's Standard Terms and Conditions outlined here: https://www.caro.ca/terms-conditions

If you have any questions or concerns, please contact me at aquesada@caro.ca

Authorized By:

Adrian Quesada
Junior Account Manager

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
PROJECT	704-SWM.SWOP03663-12	**REPORTED**	2024-04-26 12:28

Analyte	Result	RL	Units	Analyzed	Qualifier
MW13-01 (24B2509-01) | Matrix: Water | Sampled: 2024-02-22 12:20					
Anions					
Chloride	**4.42**	0.10	mg/L	2024-02-24	
Fluoride	< 0.10	0.10	mg/L	2024-02-24	
Nitrate (as N)	**0.977**	0.010	mg/L	2024-02-24	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-02-24	
Sulfate	**4.6**	1.0	mg/L	2024-02-24	
BCMOE Aggregate Hydrocarbons					
VHw (6-10)	< 100	100	µg/L	2024-02-28	
EPHw10-19	< 250	250	µg/L	2024-02-27	
EPHw19-32	< 250	250	µg/L	2024-02-27	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	*94*	*60-140*	%	*2024-02-27*	
Calculated Parameters					
Total Non-Chlorinated Phenols	< 0.500	0.500	µg/L	N/A	
Total Phenolics	< 0.500	0.500	µg/L	N/A	
Total Chlorinated Phenols	< 0.500	0.500	µg/L	N/A	
Chlorinated Phenols					
2-Chlorophenol	< 0.10	0.10	µg/L	2024-03-02	
3 & 4-Chlorophenol	< 0.10	0.10	µg/L	2024-03-02	
4-Chloro-3-Methylphenol	< 0.50	0.50	µg/L	2024-03-02	
2,3-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
2,4 & 2,5-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
2,6-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
3,4-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
3,5-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
2,3,4-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,3,5-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,3,6-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,4,5-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,4,6-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
3,4,5-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,3,4,5 & 2,3,5,6-Tetrachlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,3,4,6-Tetrachlorophenol	< 0.50	0.50	µg/L	2024-03-02	
Pentachlorophenol	< 0.50	0.50	µg/L	2024-03-02	
Surrogate: 2,4-Dibromophenol	*76*	*60-130*	%	*2024-03-02*	
Surrogate: 2,4,6-Tribromophenol	*101*	*60-130*	%	*2024-03-02*	
Surrogate: Phenol-d6	*99*	*70-130*	%	*2024-03-02*	
General Parameters					
Alkalinity, Total (as CaCO3)	**46.6**	1.0	mg/L	2024-02-27	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-02-27	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
PROJECT	704-SWM.SWOP03663-12	**REPORTED**	2024-04-26 12:28

Analyte	Result	RL	Units	Analyzed	Qualifier
MW13-01 (24B2509-01) | Matrix: Water | Sampled: 2024-02-22 12:20, Continued					
General Parameters, Continued					
Alkalinity, Bicarbonate (as CaCO3)	**46.6**	1.0	mg/L	2024-02-27	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-02-27	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-02-27	
Conductivity (EC)	**108**	2.0	µS/cm	2024-02-27	
pH	**6.47**	0.10	pH units	2024-02-27	HT2
Sulfide, Total	< 0.020	0.020	mg/L	2024-02-27	
Non-Chlorinated Phenols					
Phenol	< 0.50	0.50	µg/L	2024-03-02	
2-Methylphenol	< 0.50	0.50	µg/L	2024-03-02	
3 & 4-Methylphenol	< 0.50	0.50	µg/L	2024-03-02	
2,4-Dimethylphenol	< 0.50	0.50	µg/L	2024-03-02	
2-Nitrophenol	< 0.50	0.50	µg/L	2024-03-02	
4-Nitrophenol	< 0.50	0.50	µg/L	2024-03-02	
2,4-Dinitrophenol	< 0.50	0.50	µg/L	2024-03-02	
2-Methyl-4,6-dinitrophenol	< 0.50	0.50	µg/L	2024-03-02	
Surrogate: 2,4-Dibromophenol	*76*	*60-130*	%	*2024-03-02*	
Surrogate: 2,4,6-Tribromophenol	*101*	*60-130*	%	*2024-03-02*	
Surrogate: Phenol-d6	*99*	*70-130*	%	*2024-03-02*	
Polycyclic Aromatic Hydrocarbons (PAH)					
Acenaphthene	< 0.050	0.050	µg/L	2024-02-27	
Acenaphthylene	< 0.200	0.200	µg/L	2024-02-27	
Acridine	< 0.050	0.050	µg/L	2024-02-27	
Anthracene	< 0.010	0.010	µg/L	2024-02-27	
Benz(a)anthracene	< 0.010	0.010	µg/L	2024-02-27	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2024-02-27	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2024-02-27	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2024-02-27	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2024-02-27	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2024-02-27	
Chrysene	< 0.050	0.050	µg/L	2024-02-27	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2024-02-27	
Fluoranthene	< 0.030	0.030	µg/L	2024-02-27	
Fluorene	< 0.050	0.050	µg/L	2024-02-27	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2024-02-27	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2024-02-27	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2024-02-27	
Naphthalene	< 0.200	0.200	µg/L	2024-02-27	
Phenanthrene	< 0.100	0.100	µg/L	2024-02-27	
Pyrene	< 0.020	0.020	µg/L	2024-02-27	
Quinoline	< 0.050	0.050	µg/L	2024-02-27	
Surrogate: Acridine-d9	*102*	*50-140*	%	*2024-02-27*	
Surrogate: Naphthalene-d8	*112*	*50-140*	%	*2024-02-27*	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
PROJECT	704-SWM.SWOP03663-12	**REPORTED**	2024-04-26 12:28

Analyte	Result	RL	Units	Analyzed	Qualifier
MW13-01 (24B2509-01) | Matrix: Water | Sampled: 2024-02-22 12:20, Continued					
Polycyclic Aromatic Hydrocarbons (PAH), Continued					
Surrogate: Perylene-d12	*106*	*50-140*	%	*2024-02-27*	
Resin and Fatty Acids					
Linoleic Acid	< 10	10	µg/L	2024-03-04	
Linolenic Acid	< 10	10	µg/L	2024-03-04	
Oleic Acid	< 10	10	µg/L	2024-03-04	
9,10-Dichlorostearic Acid	< 10	10	µg/L	2024-03-04	
Stearic Acid	< 10	10	µg/L	2024-03-04	
Fatty Acids, Total	< 10	10	µg/L	2024-03-04	
Pimaric Acid	< 10	10	µg/L	2024-03-04	
Sandaracopimaric Acid	< 10	10	µg/L	2024-03-04	
Isopimaric Acid	< 10	10	µg/L	2024-03-04	
Palustric Acid	< 10	10	µg/L	2024-03-04	
Levopimaric Acid	< 10	10	µg/L	2024-03-04	
Dehydroabietic Acid	< 10	10	µg/L	2024-03-04	
Abietic Acid	< 10	10	µg/L	2024-03-04	
Neoabietic Acid	< 10	10	µg/L	2024-03-04	
14-Chlorodehydroabietic Acid	< 10	10	µg/L	2024-03-04	
12-Chlorodehydroabietic Acid	< 10	10	µg/L	2024-03-04	
12,14-Dichlorodehydroabietic Acid	< 10	10	µg/L	2024-03-04	
Resin Acids, total	< 10	10	µg/L	2024-03-04	
Resin and Fatty Acids, total	< 10	10	µg/L	2024-03-04	
MW13-02 (24B2509-02) | Matrix: Water | Sampled: 2024-02-22 14:15					
Anions					
Chloride	**9.77**	0.10	mg/L	2024-02-24	
Fluoride	**0.15**	0.10	mg/L	2024-02-24	
Nitrate (as N)	< 0.100	0.010	mg/L	2024-02-24	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-02-24	
Sulfate	**254**	1.0	mg/L	2024-02-24	
BCMOE Aggregate Hydrocarbons					
VHw (6-10)	< 100	100	µg/L	2024-02-29	
EPHw10-19	< 250	250	µg/L	2024-02-27	
EPHw19-32	< 250	250	µg/L	2024-02-27	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	*104*	*60-140*	%	*2024-02-27*	
Calculated Parameters					
Total Non-Chlorinated Phenols	< 0.500	0.500	µg/L	N/A	
Total Phenolics	< 0.500	0.500	µg/L	N/A	
Total Chlorinated Phenols	< 0.500	0.500	µg/L	N/A	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
PROJECT	704-SWM.SWOP03663-12	**REPORTED**	2024-04-26 12:28

Analyte	Result	RL	Units	Analyzed	Qualifier
MW13-02 (24B2509-02) | Matrix: Water | Sampled: 2024-02-22 14:15, Continued					
Chlorinated Phenols					
2-Chlorophenol	< 0.10	0.10	µg/L	2024-03-02	
3 & 4-Chlorophenol	< 0.10	0.10	µg/L	2024-03-02	
4-Chloro-3-Methylphenol	< 0.50	0.50	µg/L	2024-03-02	
2,3-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
2,4 & 2,5-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
2,6-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
3,4-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
3,5-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
2,3,4-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,3,5-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,3,6-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,4,5-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,4,6-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
3,4,5-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,3,4,5 & 2,3,5,6-Tetrachlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,3,4,6-Tetrachlorophenol	< 0.50	0.50	µg/L	2024-03-02	
Pentachlorophenol	< 0.50	0.50	µg/L	2024-03-02	
Surrogate: 2,4-Dibromophenol	*84*	*60-130*	%	*2024-03-02*	
Surrogate: 2,4,6-Tribromophenol	*120*	*60-130*	%	*2024-03-02*	
Surrogate: Phenol-d6	*108*	*70-130*	%	*2024-03-02*	
General Parameters					
Alkalinity, Total (as CaCO3)	**437**	1.0	mg/L	2024-02-27	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-02-27	
Alkalinity, Bicarbonate (as CaCO3)	**437**	1.0	mg/L	2024-02-27	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-02-27	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-02-27	
Conductivity (EC)	**1220**	2.0	µS/cm	2024-02-27	
pH	**7.00**	0.10	pH units	2024-02-27	HT2
Sulfide, Total	**0.040**	0.020	mg/L	2024-02-27	
Non-Chlorinated Phenols					
Phenol	< 0.50	0.50	µg/L	2024-03-02	
2-Methylphenol	< 0.50	0.50	µg/L	2024-03-02	
3 & 4-Methylphenol	< 0.50	0.50	µg/L	2024-03-02	
2,4-Dimethylphenol	< 0.50	0.50	µg/L	2024-03-02	
2-Nitrophenol	< 0.50	0.50	µg/L	2024-03-02	
4-Nitrophenol	< 0.50	0.50	µg/L	2024-03-02	
2,4-Dinitrophenol	< 0.50	0.50	µg/L	2024-03-02	
2-Methyl-4,6-dinitrophenol	< 0.50	0.50	µg/L	2024-03-02	
Surrogate: 2,4-Dibromophenol	*84*	*60-130*	%	*2024-03-02*	
Surrogate: 2,4,6-Tribromophenol	*120*	*60-130*	%	*2024-03-02*	
Surrogate: Phenol-d6	*108*	*70-130*	%	*2024-03-02*	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
PROJECT	704-SWM.SWOP03663-12	**REPORTED**	2024-04-26 12:28

Analyte	Result	RL	Units	Analyzed	Qualifier
MW13-02 (24B2509-02) | Matrix: Water | Sampled: 2024-02-22 14:15, Continued					
Polycyclic Aromatic Hydrocarbons (PAH)					
Acenaphthene	< 0.050	0.050	µg/L	2024-02-27	
Acenaphthylene	< 0.200	0.200	µg/L	2024-02-27	
Acridine	< 0.050	0.050	µg/L	2024-02-27	
Anthracene	< 0.010	0.010	µg/L	2024-02-27	
Benz(a)anthracene	< 0.010	0.010	µg/L	2024-02-27	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2024-02-27	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2024-02-27	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2024-02-27	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2024-02-27	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2024-02-27	
Chrysene	< 0.050	0.050	µg/L	2024-02-27	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2024-02-27	
Fluoranthene	< 0.030	0.030	µg/L	2024-02-27	
Fluorene	< 0.050	0.050	µg/L	2024-02-27	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2024-02-27	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2024-02-27	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2024-02-27	
Naphthalene	< 0.200	0.200	µg/L	2024-02-27	
Phenanthrene	< 0.100	0.100	µg/L	2024-02-27	
Pyrene	< 0.020	0.020	µg/L	2024-02-27	
Quinoline	< 0.050	0.050	µg/L	2024-02-27	
Surrogate: Acridine-d9	*99*	*50-140*	%	*2024-02-27*	
Surrogate: Naphthalene-d8	*109*	*50-140*	%	*2024-02-27*	
Surrogate: Perylene-d12	*113*	*50-140*	%	*2024-02-27*	
Resin and Fatty Acids					
Linoleic Acid	< 10	10	µg/L	2024-03-04	
Linolenic Acid	< 10	10	µg/L	2024-03-04	
Oleic Acid	< 10	10	µg/L	2024-03-04	
9,10-Dichlorostearic Acid	< 10	10	µg/L	2024-03-04	
Stearic Acid	< 10	10	µg/L	2024-03-04	
Fatty Acids, Total	< 10	10	µg/L	2024-03-04	
Pimaric Acid	< 10	10	µg/L	2024-03-04	
Sandaracopimaric Acid	< 10	10	µg/L	2024-03-04	
Isopimaric Acid	< 10	10	µg/L	2024-03-04	
Palustric Acid	< 10	10	µg/L	2024-03-04	
Levopimaric Acid	< 10	10	µg/L	2024-03-04	
Dehydroabietic Acid	< 10	10	µg/L	2024-03-04	
Abietic Acid	< 10	10	µg/L	2024-03-04	
Neoabietic Acid	< 10	10	µg/L	2024-03-04	
14-Chlorodehydroabietic Acid	< 10	10	µg/L	2024-03-04	
12-Chlorodehydroabietic Acid	< 10	10	µg/L	2024-03-04	
12,14-Dichlorodehydroabietic Acid	< 10	10	µg/L	2024-03-04	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
PROJECT	704-SWM.SWOP03663-12	**REPORTED**	2024-04-26 12:28

Analyte	Result	RL	Units	Analyzed	Qualifier
MW13-02 (24B2509-02) | Matrix: Water | Sampled: 2024-02-22 14:15, Continued					
Resin and Fatty Acids, Continued					
Resin Acids, total	< 10	10	µg/L	2024-03-04	
Resin and Fatty Acids, total	< 10	10	µg/L	2024-03-04	
MW13-03 (24B2509-03) | Matrix: Water | Sampled: 2024-02-22 14:20					
Anions					
Chloride	**25.5**	0.10	mg/L	2024-02-24	
Fluoride	< 0.10	0.10	mg/L	2024-02-24	
Nitrate (as N)	**2.17**	0.010	mg/L	2024-02-24	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-02-24	
Sulfate	**34.1**	1.0	mg/L	2024-02-24	
BCMOE Aggregate Hydrocarbons					
VHw (6-10)	< 100	100	µg/L	2024-02-28	
EPHw10-19	< 250	250	µg/L	2024-02-26	
EPHw19-32	< 250	250	µg/L	2024-02-26	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	*97*	*60-140*	%	*2024-02-26*	
Calculated Parameters					
Total Non-Chlorinated Phenols	< 0.500	0.500	µg/L	N/A	
Total Phenolics	< 0.500	0.500	µg/L	N/A	
Total Chlorinated Phenols	< 0.500	0.500	µg/L	N/A	
Chlorinated Phenols					
2-Chlorophenol	< 0.10	0.10	µg/L	2024-03-02	
3 & 4-Chlorophenol	< 0.10	0.10	µg/L	2024-03-02	
4-Chloro-3-Methylphenol	< 0.50	0.50	µg/L	2024-03-02	
2,3-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
2,4 & 2,5-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
2,6-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
3,4-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
3,5-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
2,3,4-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,3,5-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,3,6-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,4,5-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,4,6-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
3,4,5-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,3,4,5 & 2,3,5,6-Tetrachlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,3,4,6-Tetrachlorophenol	< 0.50	0.50	µg/L	2024-03-02	
Pentachlorophenol	< 0.50	0.50	µg/L	2024-03-02	
Surrogate: 2,4-Dibromophenol	*66*	*60-130*	%	*2024-03-02*	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
PROJECT	704-SWM.SWOP03663-12	**REPORTED**	2024-04-26 12:28

Analyte	Result	RL	Units	Analyzed	Qualifier
MW13-03 (24B2509-03) | Matrix: Water | Sampled: 2024-02-22 14:20, Continued					
Chlorinated Phenols, Continued					
Surrogate: 2,4,6-Tribromophenol	*94*	*60-130*	%	*2024-03-02*	
Surrogate: Phenol-d6	*90*	*70-130*	%	*2024-03-02*	
General Parameters					
Alkalinity, Total (as CaCO3)	**147**	1.0	mg/L	2024-02-27	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-02-27	
Alkalinity, Bicarbonate (as CaCO3)	**147**	1.0	mg/L	2024-02-27	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-02-27	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-02-27	
Conductivity (EC)	**420**	2.0	µS/cm	2024-02-27	
pH	**6.68**	0.10	pH units	2024-02-27	HT2
Sulfide, Total	< 0.020	0.020	mg/L	2024-02-27	
Non-Chlorinated Phenols					
Phenol	< 0.50	0.50	µg/L	2024-03-02	
2-Methylphenol	< 0.50	0.50	µg/L	2024-03-02	
3 & 4-Methylphenol	< 0.50	0.50	µg/L	2024-03-02	
2,4-Dimethylphenol	< 0.50	0.50	µg/L	2024-03-02	
2-Nitrophenol	< 0.50	0.50	µg/L	2024-03-02	
4-Nitrophenol	< 0.50	0.50	µg/L	2024-03-02	
2,4-Dinitrophenol	< 0.50	0.50	µg/L	2024-03-02	
2-Methyl-4,6-dinitrophenol	< 0.50	0.50	µg/L	2024-03-02	
Surrogate: 2,4-Dibromophenol	*66*	*60-130*	%	*2024-03-02*	
Surrogate: 2,4,6-Tribromophenol	*94*	*60-130*	%	*2024-03-02*	
Surrogate: Phenol-d6	*90*	*70-130*	%	*2024-03-02*	
Polycyclic Aromatic Hydrocarbons (PAH)					
Acenaphthene	< 0.050	0.050	µg/L	2024-02-27	
Acenaphthylene	< 0.200	0.200	µg/L	2024-02-27	
Acridine	< 0.050	0.050	µg/L	2024-02-27	
Anthracene	< 0.010	0.010	µg/L	2024-02-27	
Benz(a)anthracene	< 0.010	0.010	µg/L	2024-02-27	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2024-02-27	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2024-02-27	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2024-02-27	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2024-02-27	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2024-02-27	
Chrysene	< 0.050	0.050	µg/L	2024-02-27	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2024-02-27	
Fluoranthene	< 0.030	0.030	µg/L	2024-02-27	
Fluorene	< 0.050	0.050	µg/L	2024-02-27	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2024-02-27	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2024-02-27	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2024-02-27	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
PROJECT	704-SWM.SWOP03663-12	**REPORTED**	2024-04-26 12:28

Analyte	Result	RL	Units	Analyzed	Qualifier
MW13-03 (24B2509-03) | Matrix: Water | Sampled: 2024-02-22 14:20, Continued					
Polycyclic Aromatic Hydrocarbons (PAH), Continued					
Naphthalene	< 0.200	0.200	µg/L	2024-02-27	
Phenanthrene	< 0.100	0.100	µg/L	2024-02-27	
Pyrene	< 0.020	0.020	µg/L	2024-02-27	
Quinoline	< 0.050	0.050	µg/L	2024-02-27	
Surrogate: Acridine-d9	*104*	*50-140*	%	*2024-02-27*	
Surrogate: Naphthalene-d8	*114*	*50-140*	%	*2024-02-27*	
Surrogate: Perylene-d12	*126*	*50-140*	%	*2024-02-27*	
Resin and Fatty Acids					
Linoleic Acid	< 10	10	µg/L	2024-03-04	
Linolenic Acid	< 10	10	µg/L	2024-03-04	
Oleic Acid	< 10	10	µg/L	2024-03-04	
9,10-Dichlorostearic Acid	< 10	10	µg/L	2024-03-04	
Stearic Acid	< 10	10	µg/L	2024-03-04	
Fatty Acids, Total	< 10	10	µg/L	2024-03-04	
Pimaric Acid	< 10	10	µg/L	2024-03-04	
Sandaracopimaric Acid	< 10	10	µg/L	2024-03-04	
Isopimaric Acid	< 10	10	µg/L	2024-03-04	
Palustric Acid	< 10	10	µg/L	2024-03-04	
Levopimaric Acid	< 10	10	µg/L	2024-03-04	
Dehydroabietic Acid	< 10	10	µg/L	2024-03-04	
Abietic Acid	< 10	10	µg/L	2024-03-04	
Neoabietic Acid	< 10	10	µg/L	2024-03-04	
14-Chlorodehydroabietic Acid	< 10	10	µg/L	2024-03-04	
12-Chlorodehydroabietic Acid	< 10	10	µg/L	2024-03-04	
12,14-Dichlorodehydroabietic Acid	< 10	10	µg/L	2024-03-04	
Resin Acids, total	< 10	10	µg/L	2024-03-04	
Resin and Fatty Acids, total	< 10	10	µg/L	2024-03-04	
MW19-04 (24B2509-04) | Matrix: Water | Sampled: 2024-02-22 11:10					
Anions					
Chloride	**9.54**	0.10	mg/L	2024-02-24	
Fluoride	< 0.10	0.10	mg/L	2024-02-24	
Nitrate (as N)	< 0.010	0.010	mg/L	2024-02-24	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-02-24	
Sulfate	**2.7**	1.0	mg/L	2024-02-24	
BCMOE Aggregate Hydrocarbons					
VHw (6-10)	< 100	100	µg/L	2024-02-28	
EPHw10-19	< 250	250	µg/L	2024-02-26	
EPHw19-32	< 250	250	µg/L	2024-02-26	
LEPHw	< 250	250	µg/L	N/A	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
PROJECT	704-SWM.SWOP03663-12	**REPORTED**	2024-04-26 12:28

Analyte	Result	RL	Units	Analyzed	Qualifier
MW19-04 (24B2509-04) | Matrix: Water | Sampled: 2024-02-22 11:10, Continued					
BCMOE Aggregate Hydrocarbons, Continued					
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	*99*	*60-140*	%	*2024-02-26*	
Calculated Parameters					
Total Non-Chlorinated Phenols	< 0.500	0.500	µg/L	N/A	
Total Phenolics	< 0.500	0.500	µg/L	N/A	
Total Chlorinated Phenols	< 0.500	0.500	µg/L	N/A	
Chlorinated Phenols					
2-Chlorophenol	< 0.10	0.10	µg/L	2024-03-02	
3 & 4-Chlorophenol	< 0.10	0.10	µg/L	2024-03-02	
4-Chloro-3-Methylphenol	< 0.50	0.50	µg/L	2024-03-02	
2,3-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
2,4 & 2,5-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
2,6-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
3,4-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
3,5-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
2,3,4-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,3,5-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,3,6-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,4,5-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,4,6-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
3,4,5-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,3,4,5 & 2,3,5,6-Tetrachlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,3,4,6-Tetrachlorophenol	< 0.50	0.50	µg/L	2024-03-02	
Pentachlorophenol	< 0.50	0.50	µg/L	2024-03-02	
Surrogate: 2,4-Dibromophenol	*80*	*60-130*	%	*2024-03-02*	
Surrogate: 2,4,6-Tribromophenol	*105*	*60-130*	%	*2024-03-02*	
Surrogate: Phenol-d6	*97*	*70-130*	%	*2024-03-02*	
General Parameters					
Alkalinity, Total (as CaCO3)	**202**	1.0	mg/L	2024-02-27	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-02-27	
Alkalinity, Bicarbonate (as CaCO3)	**202**	1.0	mg/L	2024-02-27	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-02-27	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-02-27	
Conductivity (EC)	**414**	2.0	µS/cm	2024-02-27	
pH	**6.97**	0.10	pH units	2024-02-27	HT2
Sulfide, Total	< 0.020	0.020	mg/L	2024-02-27	
Non-Chlorinated Phenols					
Phenol	< 0.50	0.50	µg/L	2024-03-02	
2-Methylphenol	< 0.50	0.50	µg/L	2024-03-02	
3 & 4-Methylphenol	< 0.50	0.50	µg/L	2024-03-02	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
PROJECT	704-SWM.SWOP03663-12	**REPORTED**	2024-04-26 12:28

Analyte	Result	RL	Units	Analyzed	Qualifier
MW19-04 (24B2509-04) | Matrix: Water | Sampled: 2024-02-22 11:10, Continued					
Non-Chlorinated Phenols, Continued					
2,4-Dimethylphenol	< 0.50	0.50	µg/L	2024-03-02	
2-Nitrophenol	< 0.50	0.50	µg/L	2024-03-02	
4-Nitrophenol	< 0.50	0.50	µg/L	2024-03-02	
2,4-Dinitrophenol	< 0.50	0.50	µg/L	2024-03-02	
2-Methyl-4,6-dinitrophenol	< 0.50	0.50	µg/L	2024-03-02	
Surrogate: 2,4-Dibromophenol	*80*	*60-130*	%	*2024-03-02*	
Surrogate: 2,4,6-Tribromophenol	*105*	*60-130*	%	*2024-03-02*	
Surrogate: Phenol-d6	*97*	*70-130*	%	*2024-03-02*	
Polycyclic Aromatic Hydrocarbons (PAH)					
Acenaphthene	< 0.050	0.050	µg/L	2024-02-27	
Acenaphthylene	< 0.200	0.200	µg/L	2024-02-27	
Acridine	< 0.050	0.050	µg/L	2024-02-27	
Anthracene	< 0.010	0.010	µg/L	2024-02-27	
Benz(a)anthracene	< 0.010	0.010	µg/L	2024-02-27	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2024-02-27	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2024-02-27	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2024-02-27	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2024-02-27	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2024-02-27	
Chrysene	< 0.050	0.050	µg/L	2024-02-27	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2024-02-27	
Fluoranthene	< 0.030	0.030	µg/L	2024-02-27	
Fluorene	< 0.050	0.050	µg/L	2024-02-27	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2024-02-27	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2024-02-27	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2024-02-27	
Naphthalene	< 0.200	0.200	µg/L	2024-02-27	
Phenanthrene	< 0.100	0.100	µg/L	2024-02-27	
Pyrene	< 0.020	0.020	µg/L	2024-02-27	
Quinoline	< 0.050	0.050	µg/L	2024-02-27	
Surrogate: Acridine-d9	*101*	*50-140*	%	*2024-02-27*	
Surrogate: Naphthalene-d8	*114*	*50-140*	%	*2024-02-27*	
Surrogate: Perylene-d12	*123*	*50-140*	%	*2024-02-27*	
Resin and Fatty Acids					
Linoleic Acid	< 10	10	µg/L	2024-03-04	
Linolenic Acid	< 10	10	µg/L	2024-03-04	
Oleic Acid	< 10	10	µg/L	2024-03-04	
9,10-Dichlorostearic Acid	< 10	10	µg/L	2024-03-04	
Stearic Acid	< 10	10	µg/L	2024-03-04	
Fatty Acids, Total	< 10	10	µg/L	2024-03-04	
Pimaric Acid	< 10	10	µg/L	2024-03-04	
Sandaracopimaric Acid	< 10	10	µg/L	2024-03-04	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
PROJECT	704-SWM.SWOP03663-12	**REPORTED**	2024-04-26 12:28

Analyte	Result	RL	Units	Analyzed	Qualifier
MW19-04 (24B2509-04) | Matrix: Water | Sampled: 2024-02-22 11:10, Continued					
Resin and Fatty Acids, Continued					
Isopimaric Acid	< 10	10	µg/L	2024-03-04	
Palustric Acid	< 10	10	µg/L	2024-03-04	
Levopimaric Acid	< 10	10	µg/L	2024-03-04	
Dehydroabietic Acid	< 10	10	µg/L	2024-03-04	
Abietic Acid	< 10	10	µg/L	2024-03-04	
Neoabietic Acid	< 10	10	µg/L	2024-03-04	
14-Chlorodehydroabietic Acid	< 10	10	µg/L	2024-03-04	
12-Chlorodehydroabietic Acid	< 10	10	µg/L	2024-03-04	
12,14-Dichlorodehydroabietic Acid	< 10	10	µg/L	2024-03-04	
Resin Acids, total	< 10	10	µg/L	2024-03-04	
Resin and Fatty Acids, total	< 10	10	µg/L	2024-03-04	
SW1 (24B2509-05) | Matrix: Water | Sampled: 2024-02-22 08:45					
Anions					
Chloride	**7.96**	0.10	mg/L	2024-02-24	
Fluoride	< 0.10	0.10	mg/L	2024-02-24	
Nitrate (as N)	**0.160**	0.010	mg/L	2024-02-24	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-02-24	
Sulfate	**2.5**	1.0	mg/L	2024-02-24	
BCMOE Aggregate Hydrocarbons					
VHw (6-10)	< 100	100	µg/L	2024-02-28	
EPHw10-19	< 250	250	µg/L	2024-02-26	
EPHw19-32	< 250	250	µg/L	2024-02-26	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	*93*	*60-140*	%	*2024-02-26*	
Calculated Parameters					
Total Non-Chlorinated Phenols	< 0.500	0.500	µg/L	N/A	
Total Phenolics	< 0.500	0.500	µg/L	N/A	
Total Chlorinated Phenols	< 0.500	0.500	µg/L	N/A	
Chlorinated Phenols					
2-Chlorophenol	< 0.10	0.10	µg/L	2024-03-02	
3 & 4-Chlorophenol	< 0.10	0.10	µg/L	2024-03-02	
4-Chloro-3-Methylphenol	< 0.50	0.50	µg/L	2024-03-02	
2,3-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
2,4 & 2,5-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
2,6-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
3,4-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
3,5-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
2,3,4-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
PROJECT	704-SWM.SWOP03663-12	**REPORTED**	2024-04-26 12:28

Analyte	Result	RL	Units	Analyzed	Qualifier
SW1 (24B2509-05) | Matrix: Water | Sampled: 2024-02-22 08:45, Continued					
Chlorinated Phenols, Continued					
2,3,5-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,3,6-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,4,5-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,4,6-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
3,4,5-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,3,4,5 & 2,3,5,6-Tetrachlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,3,4,6-Tetrachlorophenol	< 0.50	0.50	µg/L	2024-03-02	
Pentachlorophenol	< 0.50	0.50	µg/L	2024-03-02	
Surrogate: 2,4-Dibromophenol	*72*	*60-130*	%	*2024-03-02*	
Surrogate: 2,4,6-Tribromophenol	*98*	*60-130*	%	*2024-03-02*	
Surrogate: Phenol-d6	*97*	*70-130*	%	*2024-03-02*	
General Parameters					
Alkalinity, Total (as CaCO3)	**23.6**	1.0	mg/L	2024-02-27	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-02-27	
Alkalinity, Bicarbonate (as CaCO3)	**23.6**	1.0	mg/L	2024-02-27	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-02-27	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-02-27	
Conductivity (EC)	**81.1**	2.0	µS/cm	2024-02-27	
pH	**6.55**	0.10	pH units	2024-02-27	HT2
Sulfide, Total	< 0.020	0.020	mg/L	2024-02-27	
Non-Chlorinated Phenols					
Phenol	< 0.50	0.50	µg/L	2024-03-02	
2-Methylphenol	< 0.50	0.50	µg/L	2024-03-02	
3 & 4-Methylphenol	< 0.50	0.50	µg/L	2024-03-02	
2,4-Dimethylphenol	< 0.50	0.50	µg/L	2024-03-02	
2-Nitrophenol	< 0.50	0.50	µg/L	2024-03-02	
4-Nitrophenol	< 0.50	0.50	µg/L	2024-03-02	
2,4-Dinitrophenol	< 0.50	0.50	µg/L	2024-03-02	
2-Methyl-4,6-dinitrophenol	< 0.50	0.50	µg/L	2024-03-02	
Surrogate: 2,4-Dibromophenol	*72*	*60-130*	%	*2024-03-02*	
Surrogate: 2,4,6-Tribromophenol	*98*	*60-130*	%	*2024-03-02*	
Surrogate: Phenol-d6	*97*	*70-130*	%	*2024-03-02*	
Polycyclic Aromatic Hydrocarbons (PAH)					
Acenaphthene	< 0.050	0.050	µg/L	2024-02-27	
Acenaphthylene	< 0.200	0.200	µg/L	2024-02-27	
Acridine	< 0.050	0.050	µg/L	2024-02-27	
Anthracene	< 0.010	0.010	µg/L	2024-02-27	
Benz(a)anthracene	< 0.010	0.010	µg/L	2024-02-27	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2024-02-27	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2024-02-27	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2024-02-27	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
PROJECT	704-SWM.SWOP03663-12	**REPORTED**	2024-04-26 12:28

Analyte	Result	RL	Units	Analyzed	Qualifier
SW1 (24B2509-05) | Matrix: Water | Sampled: 2024-02-22 08:45, Continued					
Polycyclic Aromatic Hydrocarbons (PAH), Continued					
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2024-02-27	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2024-02-27	
Chrysene	< 0.050	0.050	µg/L	2024-02-27	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2024-02-27	
Fluoranthene	< 0.030	0.030	µg/L	2024-02-27	
Fluorene	< 0.050	0.050	µg/L	2024-02-27	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2024-02-27	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2024-02-27	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2024-02-27	
Naphthalene	< 0.200	0.200	µg/L	2024-02-27	
Phenanthrene	< 0.100	0.100	µg/L	2024-02-27	
Pyrene	< 0.020	0.020	µg/L	2024-02-27	
Quinoline	< 0.050	0.050	µg/L	2024-02-27	
Surrogate: Acridine-d9	*104*	*50-140*	%	*2024-02-27*	
Surrogate: Naphthalene-d8	*123*	*50-140*	%	*2024-02-27*	
Surrogate: Perylene-d12	*131*	*50-140*	%	*2024-02-27*	
Resin and Fatty Acids					
Linoleic Acid	< 10	10	µg/L	2024-03-04	
Linolenic Acid	< 10	10	µg/L	2024-03-04	
Oleic Acid	< 10	10	µg/L	2024-03-04	
9,10-Dichlorostearic Acid	< 10	10	µg/L	2024-03-04	
Stearic Acid	< 10	10	µg/L	2024-03-04	
Fatty Acids, Total	< 10	10	µg/L	2024-03-04	
Pimaric Acid	< 10	10	µg/L	2024-03-04	
Sandaracopimaric Acid	< 10	10	µg/L	2024-03-04	
Isopimaric Acid	< 10	10	µg/L	2024-03-04	
Palustric Acid	< 10	10	µg/L	2024-03-04	
Levopimaric Acid	< 10	10	µg/L	2024-03-04	
Dehydroabietic Acid	< 10	10	µg/L	2024-03-04	
Abietic Acid	< 10	10	µg/L	2024-03-04	
Neoabietic Acid	< 10	10	µg/L	2024-03-04	
14-Chlorodehydroabietic Acid	< 10	10	µg/L	2024-03-04	
12-Chlorodehydroabietic Acid	< 10	10	µg/L	2024-03-04	
12,14-Dichlorodehydroabietic Acid	< 10	10	µg/L	2024-03-04	
Resin Acids, total	< 10	10	µg/L	2024-03-04	
Resin and Fatty Acids, total	< 10	10	µg/L	2024-03-04	
SW2 (24B2509-06) | Matrix: Water | Sampled: 2024-02-22 09:15					
Anions					
Chloride	**8.26**	0.10	mg/L	2024-02-24	
Fluoride	< 0.10	0.10	mg/L	2024-02-24	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
PROJECT	704-SWM.SWOP03663-12	**REPORTED**	2024-04-26 12:28

Analyte	Result	RL	Units	Analyzed	Qualifier
SW2 (24B2509-06) | Matrix: Water | Sampled: 2024-02-22 09:15, Continued					
Anions, Continued					
Nitrate (as N)	**0.174**	0.010	mg/L	2024-02-24	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-02-24	
Sulfate	**3.3**	1.0	mg/L	2024-02-24	
BCMOE Aggregate Hydrocarbons					
VHw (6-10)	< 100	100	µg/L	2024-02-28	
EPHw10-19	< 250	250	µg/L	2024-02-26	
EPHw19-32	< 250	250	µg/L	2024-02-26	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	*87*	*60-140*	%	*2024-02-26*	
Calculated Parameters					
Total Non-Chlorinated Phenols	< 0.500	0.500	µg/L	N/A	
Total Phenolics	< 0.500	0.500	µg/L	N/A	
Total Chlorinated Phenols	< 0.500	0.500	µg/L	N/A	
Chlorinated Phenols					
2-Chlorophenol	< 0.10	0.10	µg/L	2024-03-02	
3 & 4-Chlorophenol	< 0.10	0.10	µg/L	2024-03-02	
4-Chloro-3-Methylphenol	< 0.50	0.50	µg/L	2024-03-02	
2,3-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
2,4 & 2,5-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
2,6-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
3,4-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
3,5-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
2,3,4-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,3,5-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,3,6-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,4,5-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,4,6-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
3,4,5-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,3,4,5 & 2,3,5,6-Tetrachlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,3,4,6-Tetrachlorophenol	< 0.50	0.50	µg/L	2024-03-02	
Pentachlorophenol	< 0.50	0.50	µg/L	2024-03-02	
Surrogate: 2,4-Dibromophenol	*72*	*60-130*	%	*2024-03-02*	
Surrogate: 2,4,6-Tribromophenol	*97*	*60-130*	%	*2024-03-02*	
Surrogate: Phenol-d6	*98*	*70-130*	%	*2024-03-02*	
General Parameters					
Alkalinity, Total (as CaCO3)	**27.4**	1.0	mg/L	2024-02-27	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-02-27	
Alkalinity, Bicarbonate (as CaCO3)	**27.4**	1.0	mg/L	2024-02-27	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-02-27	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
PROJECT	704-SWM.SWOP03663-12	**REPORTED**	2024-04-26 12:28

Analyte	Result	RL	Units	Analyzed	Qualifier
SW2 (24B2509-06) | Matrix: Water | Sampled: 2024-02-22 09:15, Continued					
General Parameters, Continued					
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-02-27	
Conductivity (EC)	**86.2**	2.0	µS/cm	2024-02-27	
pH	**6.50**	0.10	pH units	2024-02-27	HT2
Sulfide, Total	< 0.020	0.020	mg/L	2024-02-27	
Non-Chlorinated Phenols					
Phenol	< 0.50	0.50	µg/L	2024-03-02	
2-Methylphenol	< 0.50	0.50	µg/L	2024-03-02	
3 & 4-Methylphenol	< 0.50	0.50	µg/L	2024-03-02	
2,4-Dimethylphenol	< 0.50	0.50	µg/L	2024-03-02	
2-Nitrophenol	< 0.50	0.50	µg/L	2024-03-02	
4-Nitrophenol	< 0.50	0.50	µg/L	2024-03-02	
2,4-Dinitrophenol	< 0.50	0.50	µg/L	2024-03-02	
2-Methyl-4,6-dinitrophenol	< 0.50	0.50	µg/L	2024-03-02	
Surrogate: 2,4-Dibromophenol	*72*	*60-130*	%	*2024-03-02*	
Surrogate: 2,4,6-Tribromophenol	*97*	*60-130*	%	*2024-03-02*	
Surrogate: Phenol-d6	*98*	*70-130*	%	*2024-03-02*	
Polycyclic Aromatic Hydrocarbons (PAH)					
Acenaphthene	< 0.050	0.050	µg/L	2024-02-27	
Acenaphthylene	< 0.200	0.200	µg/L	2024-02-27	
Acridine	< 0.050	0.050	µg/L	2024-02-27	
Anthracene	< 0.010	0.010	µg/L	2024-02-27	
Benz(a)anthracene	< 0.010	0.010	µg/L	2024-02-27	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2024-02-27	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2024-02-27	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2024-02-27	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2024-02-27	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2024-02-27	
Chrysene	< 0.050	0.050	µg/L	2024-02-27	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2024-02-27	
Fluoranthene	< 0.030	0.030	µg/L	2024-02-27	
Fluorene	< 0.050	0.050	µg/L	2024-02-27	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2024-02-27	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2024-02-27	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2024-02-27	
Naphthalene	< 0.200	0.200	µg/L	2024-02-27	
Phenanthrene	< 0.100	0.100	µg/L	2024-02-27	
Pyrene	< 0.020	0.020	µg/L	2024-02-27	
Quinoline	< 0.050	0.050	µg/L	2024-02-27	
Surrogate: Acridine-d9	*101*	*50-140*	%	*2024-02-27*	
Surrogate: Naphthalene-d8	*123*	*50-140*	%	*2024-02-27*	
Surrogate: Perylene-d12	*133*	*50-140*	%	*2024-02-27*	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
PROJECT	704-SWM.SWOP03663-12	**REPORTED**	2024-04-26 12:28

Analyte	Result	RL	Units	Analyzed	Qualifier
SW2 (24B2509-06) | Matrix: Water | Sampled: 2024-02-22 09:15, Continued					
Resin and Fatty Acids					
Linoleic Acid	< 10	10	µg/L	2024-03-04	
Linolenic Acid	< 10	10	µg/L	2024-03-04	
Oleic Acid	< 10	10	µg/L	2024-03-04	
9,10-Dichlorostearic Acid	< 10	10	µg/L	2024-03-04	
Stearic Acid	< 10	10	µg/L	2024-03-04	
Fatty Acids, Total	< 10	10	µg/L	2024-03-04	
Pimaric Acid	< 10	10	µg/L	2024-03-04	
Sandaracopimaric Acid	< 10	10	µg/L	2024-03-04	
Isopimaric Acid	< 10	10	µg/L	2024-03-04	
Palustric Acid	< 10	10	µg/L	2024-03-04	
Levopimaric Acid	< 10	10	µg/L	2024-03-04	
Dehydroabietic Acid	< 10	10	µg/L	2024-03-04	
Abietic Acid	< 10	10	µg/L	2024-03-04	
Neoabietic Acid	< 10	10	µg/L	2024-03-04	
14-Chlorodehydroabietic Acid	< 10	10	µg/L	2024-03-04	
12-Chlorodehydroabietic Acid	< 10	10	µg/L	2024-03-04	
12,14-Dichlorodehydroabietic Acid	< 10	10	µg/L	2024-03-04	
Resin Acids, total	< 10	10	µg/L	2024-03-04	
Resin and Fatty Acids, total	< 10	10	µg/L	2024-03-04	
SW3 (24B2509-07) | Matrix: Water | Sampled: 2024-02-22 09:30					
Anions					
Chloride	**8.23**	0.10	mg/L	2024-02-24	
Fluoride	< 0.10	0.10	mg/L	2024-02-24	
Nitrate (as N)	**0.177**	0.010	mg/L	2024-02-24	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-02-24	
Sulfate	**3.5**	1.0	mg/L	2024-02-24	
BCMOE Aggregate Hydrocarbons					
VHw (6-10)	< 100	100	µg/L	2024-02-28	
EPHw10-19	< 250	250	µg/L	2024-02-26	
EPHw19-32	< 250	250	µg/L	2024-02-26	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	*98*	*60-140*	%	*2024-02-26*	
Calculated Parameters					
Total Non-Chlorinated Phenols	< 0.500	0.500	µg/L	N/A	
Total Phenolics	< 0.500	0.500	µg/L	N/A	
Total Chlorinated Phenols	< 0.500	0.500	µg/L	N/A	
Chlorinated Phenols					
2-Chlorophenol	< 0.10	0.10	µg/L	2024-03-02	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
PROJECT	704-SWM.SWOP03663-12	**REPORTED**	2024-04-26 12:28

Analyte	Result	RL	Units	Analyzed	Qualifier
SW3 (24B2509-07) | Matrix: Water | Sampled: 2024-02-22 09:30, Continued					
Chlorinated Phenols, Continued					
3 & 4-Chlorophenol	< 0.10	0.10	µg/L	2024-03-02	
4-Chloro-3-Methylphenol	< 0.50	0.50	µg/L	2024-03-02	
2,3-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
2,4 & 2,5-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
2,6-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
3,4-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
3,5-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
2,3,4-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,3,5-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,3,6-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,4,5-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,4,6-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
3,4,5-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,3,4,5 & 2,3,5,6-Tetrachlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,3,4,6-Tetrachlorophenol	< 0.50	0.50	µg/L	2024-03-02	
Pentachlorophenol	< 0.50	0.50	µg/L	2024-03-02	
Surrogate: 2,4-Dibromophenol	*76*	*60-130*	%	*2024-03-02*	
Surrogate: 2,4,6-Tribromophenol	*101*	*60-130*	%	*2024-03-02*	
Surrogate: Phenol-d6	*93*	*70-130*	%	*2024-03-02*	
General Parameters					
Alkalinity, Total (as CaCO3)	**28.7**	1.0	mg/L	2024-02-27	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-02-27	
Alkalinity, Bicarbonate (as CaCO3)	**28.7**	1.0	mg/L	2024-02-27	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-02-27	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-02-27	
Conductivity (EC)	**89.2**	2.0	µS/cm	2024-02-27	
pH	**6.52**	0.10	pH units	2024-02-27	HT2
Sulfide, Total	< 0.020	0.020	mg/L	2024-02-27	
Non-Chlorinated Phenols					
Phenol	< 0.50	0.50	µg/L	2024-03-02	
2-Methylphenol	< 0.50	0.50	µg/L	2024-03-02	
3 & 4-Methylphenol	< 0.50	0.50	µg/L	2024-03-02	
2,4-Dimethylphenol	< 0.50	0.50	µg/L	2024-03-02	
2-Nitrophenol	< 0.50	0.50	µg/L	2024-03-02	
4-Nitrophenol	< 0.50	0.50	µg/L	2024-03-02	
2,4-Dinitrophenol	< 0.50	0.50	µg/L	2024-03-02	
2-Methyl-4,6-dinitrophenol	< 0.50	0.50	µg/L	2024-03-02	
Surrogate: 2,4-Dibromophenol	*76*	*60-130*	%	*2024-03-02*	
Surrogate: 2,4,6-Tribromophenol	*101*	*60-130*	%	*2024-03-02*	
Surrogate: Phenol-d6	*93*	*70-130*	%	*2024-03-02*	
Polycyclic Aromatic Hydrocarbons (PAH)					

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
PROJECT	704-SWM.SWOP03663-12	**REPORTED**	2024-04-26 12:28

Analyte	Result	RL	Units	Analyzed	Qualifier
SW3 (24B2509-07) | Matrix: Water | Sampled: 2024-02-22 09:30, Continued					
Polycyclic Aromatic Hydrocarbons (PAH), Continued					
Acenaphthene	< 0.050	0.050	µg/L	2024-02-27	
Acenaphthylene	< 0.200	0.200	µg/L	2024-02-27	
Acridine	< 0.050	0.050	µg/L	2024-02-27	
Anthracene	< 0.010	0.010	µg/L	2024-02-27	
Benz(a)anthracene	< 0.010	0.010	µg/L	2024-02-27	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2024-02-27	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2024-02-27	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2024-02-27	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2024-02-27	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2024-02-27	
Chrysene	< 0.050	0.050	µg/L	2024-02-27	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2024-02-27	
Fluoranthene	< 0.030	0.030	µg/L	2024-02-27	
Fluorene	< 0.050	0.050	µg/L	2024-02-27	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2024-02-27	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2024-02-27	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2024-02-27	
Naphthalene	< 0.200	0.200	µg/L	2024-02-27	
Phenanthrene	< 0.100	0.100	µg/L	2024-02-27	
Pyrene	< 0.020	0.020	µg/L	2024-02-27	
Quinoline	< 0.050	0.050	µg/L	2024-02-27	
Surrogate: Acridine-d9	*106*	*50-140*	%	*2024-02-27*	
Surrogate: Naphthalene-d8	*124*	*50-140*	%	*2024-02-27*	
Surrogate: Perylene-d12	*132*	*50-140*	%	*2024-02-27*	
Resin and Fatty Acids					
Linoleic Acid	< 10	10	µg/L	2024-03-04	
Linolenic Acid	< 10	10	µg/L	2024-03-04	
Oleic Acid	< 10	10	µg/L	2024-03-04	
9,10-Dichlorostearic Acid	< 10	10	µg/L	2024-03-04	
Stearic Acid	< 10	10	µg/L	2024-03-04	
Fatty Acids, Total	< 10	10	µg/L	2024-03-04	
Pimaric Acid	< 10	10	µg/L	2024-03-04	
Sandaracopimaric Acid	< 10	10	µg/L	2024-03-04	
Isopimaric Acid	< 10	10	µg/L	2024-03-04	
Palustric Acid	< 10	10	µg/L	2024-03-04	
Levopimaric Acid	< 10	10	µg/L	2024-03-04	
Dehydroabietic Acid	< 10	10	µg/L	2024-03-04	
Abietic Acid	< 10	10	µg/L	2024-03-04	
Neoabietic Acid	< 10	10	µg/L	2024-03-04	
14-Chlorodehydroabietic Acid	< 10	10	µg/L	2024-03-04	
12-Chlorodehydroabietic Acid	< 10	10	µg/L	2024-03-04	
12,14-Dichlorodehydroabietic Acid	< 10	10	µg/L	2024-03-04	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
PROJECT	704-SWM.SWOP03663-12	**REPORTED**	2024-04-26 12:28

Analyte	Result	RL	Units	Analyzed	Qualifier
SW3 (24B2509-07) | Matrix: Water | Sampled: 2024-02-22 09:30, Continued					
Resin and Fatty Acids, Continued					
Resin Acids, total	< 10	10	µg/L	2024-03-04	
Resin and Fatty Acids, total	< 10	10	µg/L	2024-03-04	
SW4 (24B2509-08) | Matrix: Water | Sampled: 2024-02-22 12:40					
Anions					
Chloride	**9.69**	0.10	mg/L	2024-02-24	
Fluoride	< 0.10	0.10	mg/L	2024-02-24	
Nitrate (as N)	**0.043**	0.010	mg/L	2024-02-24	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-02-24	
Sulfate	**11.2**	1.0	mg/L	2024-02-24	
BCMOE Aggregate Hydrocarbons					
VHw (6-10)	< 100	100	µg/L	2024-02-28	
EPHw10-19	< 250	250	µg/L	2024-02-26	
EPHw19-32	< 250	250	µg/L	2024-02-26	
LEPHw	< 250	250	µg/L	N/A	
HEPHw	< 250	250	µg/L	N/A	
Surrogate: 2-Methylnonane (EPH/F2-4)	*84*	*60-140*	%	*2024-02-26*	
Calculated Parameters					
Total Non-Chlorinated Phenols	< 0.500	0.500	µg/L	N/A	
Total Phenolics	< 0.500	0.500	µg/L	N/A	
Total Chlorinated Phenols	< 0.500	0.500	µg/L	N/A	
Chlorinated Phenols					
2-Chlorophenol	< 0.10	0.10	µg/L	2024-03-02	
3 & 4-Chlorophenol	< 0.10	0.10	µg/L	2024-03-02	
4-Chloro-3-Methylphenol	< 0.50	0.50	µg/L	2024-03-02	
2,3-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
2,4 & 2,5-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
2,6-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
3,4-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
3,5-Dichlorophenol	< 0.20	0.20	µg/L	2024-03-02	
2,3,4-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,3,5-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,3,6-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,4,5-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,4,6-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
3,4,5-Trichlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,3,4,5 & 2,3,5,6-Tetrachlorophenol	< 0.50	0.50	µg/L	2024-03-02	
2,3,4,6-Tetrachlorophenol	< 0.50	0.50	µg/L	2024-03-02	
Pentachlorophenol	< 0.50	0.50	µg/L	2024-03-02	
Surrogate: 2,4-Dibromophenol	*81*	*60-130*	%	*2024-03-02*	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
PROJECT	704-SWM.SWOP03663-12	**REPORTED**	2024-04-26 12:28

Analyte	Result	RL	Units	Analyzed	Qualifier
SW4 (24B2509-08) | Matrix: Water | Sampled: 2024-02-22 12:40, Continued					
Chlorinated Phenols, Continued					
Surrogate: 2,4,6-Tribromophenol	*106*	*60-130*	%	*2024-03-02*	
Surrogate: Phenol-d6	*94*	*70-130*	%	*2024-03-02*	
General Parameters					
Alkalinity, Total (as CaCO3)	**56.7**	1.0	mg/L	2024-02-27	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-02-27	
Alkalinity, Bicarbonate (as CaCO3)	**56.7**	1.0	mg/L	2024-02-27	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-02-27	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-02-27	
Conductivity (EC)	**163**	2.0	µS/cm	2024-02-27	
pH	**6.61**	0.10	pH units	2024-02-27	HT2
Sulfide, Total	< 0.020	0.020	mg/L	2024-02-27	
Non-Chlorinated Phenols					
Phenol	< 0.50	0.50	µg/L	2024-03-02	
2-Methylphenol	< 0.50	0.50	µg/L	2024-03-02	
3 & 4-Methylphenol	< 0.50	0.50	µg/L	2024-03-02	
2,4-Dimethylphenol	< 0.50	0.50	µg/L	2024-03-02	
2-Nitrophenol	< 0.50	0.50	µg/L	2024-03-02	
4-Nitrophenol	< 0.50	0.50	µg/L	2024-03-02	
2,4-Dinitrophenol	< 0.50	0.50	µg/L	2024-03-02	
2-Methyl-4,6-dinitrophenol	< 0.50	0.50	µg/L	2024-03-02	
Surrogate: 2,4-Dibromophenol	*81*	*60-130*	%	*2024-03-02*	
Surrogate: 2,4,6-Tribromophenol	*106*	*60-130*	%	*2024-03-02*	
Surrogate: Phenol-d6	*94*	*70-130*	%	*2024-03-02*	
Polycyclic Aromatic Hydrocarbons (PAH)					
Acenaphthene	< 0.050	0.050	µg/L	2024-02-27	
Acenaphthylene	< 0.200	0.200	µg/L	2024-02-27	
Acridine	< 0.050	0.050	µg/L	2024-02-27	
Anthracene	< 0.010	0.010	µg/L	2024-02-27	
Benz(a)anthracene	< 0.010	0.010	µg/L	2024-02-27	
Benzo(a)pyrene	< 0.010	0.010	µg/L	2024-02-27	
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L	2024-02-27	
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L	2024-02-27	
Benzo(k)fluoranthene	< 0.050	0.050	µg/L	2024-02-27	
2-Chloronaphthalene	< 0.100	0.100	µg/L	2024-02-27	
Chrysene	< 0.050	0.050	µg/L	2024-02-27	
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L	2024-02-27	
Fluoranthene	< 0.030	0.030	µg/L	2024-02-27	
Fluorene	< 0.050	0.050	µg/L	2024-02-27	
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L	2024-02-27	
1-Methylnaphthalene	< 0.100	0.100	µg/L	2024-02-27	
2-Methylnaphthalene	< 0.100	0.100	µg/L	2024-02-27	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
PROJECT	704-SWM.SWOP03663-12	**REPORTED**	2024-04-26 12:28

Analyte	Result	RL	Units	Analyzed	Qualifier
SW4 (24B2509-08) | Matrix: Water | Sampled: 2024-02-22 12:40, Continued					
Polycyclic Aromatic Hydrocarbons (PAH), Continued					
Naphthalene	< 0.200	0.200	µg/L	2024-02-27	
Phenanthrene	< 0.100	0.100	µg/L	2024-02-27	
Pyrene	< 0.020	0.020	µg/L	2024-02-27	
Quinoline	< 0.050	0.050	µg/L	2024-02-27	
Surrogate: Acridine-d9	*108*	*50-140*	%	*2024-02-27*	
Surrogate: Naphthalene-d8	*118*	*50-140*	%	*2024-02-27*	
Surrogate: Perylene-d12	*126*	*50-140*	%	*2024-02-27*	
Resin and Fatty Acids					
Linoleic Acid	< 10	10	µg/L	2024-03-04	
Linolenic Acid	< 10	10	µg/L	2024-03-04	
Oleic Acid	< 10	10	µg/L	2024-03-04	
9,10-Dichlorostearic Acid	< 10	10	µg/L	2024-03-04	
Stearic Acid	< 10	10	µg/L	2024-03-04	
Fatty Acids, Total	< 10	10	µg/L	2024-03-04	
Pimaric Acid	< 10	10	µg/L	2024-03-04	
Sandaracopimaric Acid	< 10	10	µg/L	2024-03-04	
Isopimaric Acid	< 10	10	µg/L	2024-03-04	
Palustric Acid	< 10	10	µg/L	2024-03-04	
Levopimaric Acid	< 10	10	µg/L	2024-03-04	
Dehydroabietic Acid	< 10	10	µg/L	2024-03-04	
Abietic Acid	< 10	10	µg/L	2024-03-04	
Neoabietic Acid	< 10	10	µg/L	2024-03-04	
14-Chlorodehydroabietic Acid	< 10	10	µg/L	2024-03-04	
12-Chlorodehydroabietic Acid	< 10	10	µg/L	2024-03-04	
12,14-Dichlorodehydroabietic Acid	< 10	10	µg/L	2024-03-04	
Resin Acids, total	< 10	10	µg/L	2024-03-04	
Resin and Fatty Acids, total	< 10	10	µg/L	2024-03-04	
DUP1 (24B2509-09) | Matrix: Water | Sampled: 2024-02-22					
Anions					
Chloride	**8.18**	0.10	mg/L	2024-02-24	
Fluoride	< 0.10	0.10	mg/L	2024-02-24	
Nitrate (as N)	**0.175**	0.010	mg/L	2024-02-24	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-02-24	
Sulfate	**3.2**	1.0	mg/L	2024-02-24	
General Parameters					
Alkalinity, Total (as CaCO3)	**27.0**	1.0	mg/L	2024-02-27	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-02-27	
Alkalinity, Bicarbonate (as CaCO3)	**27.0**	1.0	mg/L	2024-02-27	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-02-27	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
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Analyte	Result	RL	Units	Analyzed	Qualifier
DUP1 (24B2509-09) | Matrix: Water | Sampled: 2024-02-22, Continued					
General Parameters, Continued					
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-02-27	
Ammonia, Total (as N)	< 0.050	0.050	mg/L	2024-02-27	
Conductivity (EC)	**85.4**	2.0	µS/cm	2024-02-27	
pH	**6.52**	0.10	pH units	2024-02-27	HT2

Sample Qualifiers:

HT2 The 15 minute recommended holding time (from sampling to analysis) has been exceeded - field analysis is recommended.

APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
PROJECT	704-SWM.SWOP03663-12	**REPORTED**	2024-04-26 12:28

Analysis Description	Method Ref.	Technique	Accredited	Location
Alkalinity in Water	SM 2320 B* (2021)	Titration with H2SO4	✓	Kelowna
Ammonia, Total in Water	SM 4500-NH3 G* (2021)	Automated Colorimetry (Phenate)	✓	Kelowna
Anions in Water	SM 4110 B (2020)	Ion Chromatography	✓	Richmond
Conductivity in Water	SM 2510 B (2021)	Conductivity Meter	✓	Kelowna
EPH in Water	EPA 3511* / BCMOE EPHw	Hexane MicroExtraction (Base/Neutral) / Gas Chromatography (GC-FID)	✓	Richmond
HEPHw in Water	BCMOE LEPH/HEPH	Calculation		N/A
LEPHw in Water	BCMOE LEPH/HEPH	Calculation		N/A
pH in Water	SM 4500-H+ B (2021)	Electrometry	✓	Kelowna
Phenols, Chlorinated in Water	EPA 3510C* / EPA 8270D	Liquid-Liquid DCM Extraction (Acidic) / GC-MSD (SIM)	✓	Richmond
Phenols, Non-Chlorinated in Water	EPA 3510C* / EPA 8270 D	Liquid-Liquid DCM Extraction (Acidic) / GC-MSD (SIM)	✓	Richmond
Polycyclic Aromatic Hydrocarbons in Water	EPA 3511* / EPA 8270D	Hexane MicroExtraction (Base/Neutral) / GC-MSD (SIM)	✓	Richmond
Resin and Fatty Acids in Water	MA414Acigr10	N/A		Sublet
Sulfide, Total in Water	SM 4500-S2 D* (2021)	Colorimetry (Methylene Blue)	✓	Edmonton
VH in Water	EPA 5030B / BCMOE VHw	Purge&Trap / Gas Chromatography (GC-FID)	✓	Richmond

Note: An asterisk in the Method Reference indicates that the CARO method has been modified from the reference method

Glossary of Terms:

RL	Reporting Limit (default)
<	Less than the specified Reporting Limit (RL) - the actual RL may be higher than the default RL due to various factors
mg/L	Milligrams per litre
pH units	pH < 7 = acidic, ph > 7 = basic
µg/L	Micrograms per litre
µS/cm	Microsiemens per centimetre
BCMOE	British Columbia Environmental Laboratory Manual, British Columbia Ministry of Environment
EPA	United States Environmental Protection Agency Test Methods
SM	Standard Methods for the Examination of Water and Wastewater, American Public Health Association

APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
PROJECT	704-SWM.SWOP03663-12	**REPORTED**	2024-04-26 12:28

General Comments:

The results in this report apply to the received samples analyzed in accordance with the Chain of Custody document. This analytical report must be reproduced in its entirety. CARO is not responsible for any loss or damage resulting directly or indirectly from error or omission in the conduct of testing. Liability is limited to the cost of analysis. Caro will dispose of all samples within 30 days of sample receipt, unless otherwise agreed.

Please note any regulatory guidelines applied to this report are added as a convenience to the client, at their request, to help provide some initial context to analytical results obtained. Although CARO makes every effort to ensure accuracy of the associated regulatory guideline(s) applied, the guidelines applied cannot be assumed to be correct due to a variety of factors and as such CARO Analytical Services assumes no liability or responsibility for the use of those guidelines to make any decisions. The original source of the regulation should be verified and a review of the guideline (s) should be validated as correct in order to make any decisions arising from the comparison of the analytical data obtained to the relevant regulatory guideline for one's particular circumstances. Further, CARO Analytical Services assumes no liability or responsibility for any loss attributed from the use of these guidelines in any way.

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
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The following section displays the quality control (QC) data that is associated with your sample data. Groups of samples are prepared in "batches" and analyzed in conjunction with QC samples that ensure your data is of the highest quality. Common QC types include:

- **Method Blank (Blk)**: A blank sample that undergoes sample processing identical to that carried out for the test samples. Method blank results are used to assess contamination from the laboratory environment and reagents.
- **Duplicate (Dup)**: An additional or second portion of a randomly selected sample in the analytical run carried through the entire analytical process. Duplicates provide a measure of the analytical method's precision (reproducibility).
- **Blank Spike (BS)**: A sample of known concentration which undergoes processing identical to that carried out for test samples, also referred to as a laboratory control sample (LCS). Blank spikes provide a measure of the analytical method's accuracy.
- **Matrix Spike (MS)**: A second aliquot of sample is fortified with a known concentration of target analytes and carried through the entire analytical process. Matrix spikes evaluate potential matrix effects that may affect the analyte recovery.
- **Reference Material (SRM)**: A homogenous material of similar matrix to the samples, certified for the parameter(s) listed. Reference Materials ensure that the analytical process is adequate to achieve acceptable recoveries of the parameter(s) tested.

Each QC type is analyzed at a 5-10% frequency, i.e. one blank/duplicate/spike for every 10-20 samples. For all types of QC, the specified recovery (% Rec) and relative percent difference (RPD) limits are derived from long-term method performance averages and/or prescribed by the reference method.

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Anions, Batch B4B3239										
Blank (B4B3239-BLK1)				Prepared: 2024-02-24, Analyzed: 2024-02-24						
Chloride	< 0.10	0.10	mg/L							
Fluoride	< 0.10	0.10	mg/L							
Nitrate (as N)	< 0.010	0.010	mg/L							
Nitrite (as N)	< 0.010	0.010	mg/L							
Sulfate	< 1.0	1.0	mg/L							
LCS (B4B3239-BS1)				Prepared: 2024-02-24, Analyzed: 2024-02-24						
Chloride	3.02	0.10	mg/L	3.00		101	85-115			
Fluoride	2.24	0.10	mg/L	2.00		112	85-115			
Nitrate (as N)	3.04	0.010	mg/L	3.00		101	85-115			
Nitrite (as N)	3.09	0.010	mg/L	3.00		103	85-115			
Sulfate	16.4	1.0	mg/L	15.0		109	85-115			
Duplicate (B4B3239-DUP1)		**Source: 24B2509-01**		Prepared: 2024-02-24, Analyzed: 2024-02-24						
Chloride	4.46	0.10	mg/L		4.42			< 1	20	
Fluoride	< 0.10	0.10	mg/L		< 0.10				20	
Nitrate (as N)	0.975	0.010	mg/L		0.977			< 1	20	
Sulfate	4.6	1.0	mg/L		4.6				20	
Matrix Spike (B4B3239-MS1)		**Source: 24B2509-01**		Prepared: 2024-02-24, Analyzed: 2024-02-24						
Chloride	7.48	0.10	mg/L	3.00	4.42	102	75-125			
Fluoride	2.14	0.10	mg/L	2.00	< 0.10	106	75-125			
Nitrate (as N)	4.02	0.010	mg/L	3.00	0.977	102	75-125			
Nitrite (as N)	3.11	0.010	mg/L	3.00	< 0.010	104	75-125			
Sulfate	20.0	1.0	mg/L	15.0	4.6	102	75-125			
BCMOE Aggregate Hydrocarbons, Batch B4B3317										
Blank (B4B3317-BLK1)				Prepared: 2024-02-26, Analyzed: 2024-02-26						
EPHw10-19	< 250	250	µg/L							
EPHw19-32	< 250	250	µg/L							
Surrogate: 2-Methylnonane (EPH/F2-4)	*2180*		*µg/L*	2200		*99*	*60-140*			
LCS (B4B3317-BS2)				Prepared: 2024-02-26, Analyzed: 2024-02-26						
EPHw10-19	18300	250	µg/L	15400		118	70-130			
EPHw19-32	24200	250	µg/L	22200		109	70-130			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
PROJECT	704-SWM.SWOP03663-12	**REPORTED**	2024-04-26 12:28

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
BCMOE Aggregate Hydrocarbons, Batch B4B3317, Continued										
LCS (B4B3317-BS2), Continued				Prepared: 2024-02-26, Analyzed: 2024-02-26						
Surrogate: 2-Methylnonane (EPH/F2-4)	*2190*		*µg/L*	2200		*99*	*60-140*			
LCS Dup (B4B3317-BSD2)				Prepared: 2024-02-26, Analyzed: 2024-02-26						
EPHw10-19	18600	250	µg/L	15400		120	70-130	2	20	
EPHw19-32	26700	250	µg/L	22200		120	70-130	10	20	
Surrogate: 2-Methylnonane (EPH/F2-4)	*2070*		*µg/L*	2200		*94*	*60-140*			
BCMOE Aggregate Hydrocarbons, Batch B4B3402										
Blank (B4B3402-BLK1)				Prepared: 2024-02-27, Analyzed: 2024-02-27						
EPHw10-19	< 250	250	µg/L							
EPHw19-32	< 250	250	µg/L							
Surrogate: 2-Methylnonane (EPH/F2-4)	*2240*		*µg/L*	2200		*102*	*60-140*			
LCS (B4B3402-BS2)				Prepared: 2024-02-27, Analyzed: 2024-02-27						
EPHw10-19	17200	250	µg/L	15400		112	70-130			
EPHw19-32	25900	250	µg/L	22200		116	70-130			
Surrogate: 2-Methylnonane (EPH/F2-4)	*2240*		*µg/L*	2200		*102*	*60-140*			
LCS Dup (B4B3402-BSD2)				Prepared: 2024-02-27, Analyzed: 2024-02-27						
EPHw10-19	17900	250	µg/L	15400		116	70-130	4	20	
EPHw19-32	26700	250	µg/L	22200		120	70-130	3	20	
Surrogate: 2-Methylnonane (EPH/F2-4)	*2200*		*µg/L*	2200		*100*	*60-140*			
BCMOE Aggregate Hydrocarbons, Batch B4B3412										
Blank (B4B3412-BLK1)				Prepared: 2024-02-27, Analyzed: 2024-02-27						
VHw (6-10)	< 100	100	µg/L							
LCS (B4B3412-BS2)				Prepared: 2024-02-27, Analyzed: 2024-02-27						
VHw (6-10)	1990	100	µg/L	2190		91	70-130			
BCMOE Aggregate Hydrocarbons, Batch B4B3634										
Blank (B4B3634-BLK1)				Prepared: 2024-02-29, Analyzed: 2024-02-29						
VHw (6-10)	< 100	100	µg/L							
LCS (B4B3634-BS2)				Prepared: 2024-02-29, Analyzed: 2024-02-29						
VHw (6-10)	2090	100	µg/L	2190		95	70-130			
Chlorinated Phenols, Batch B4B3755										
Blank (B4B3755-BLK1)				Prepared: 2024-02-29, Analyzed: 2024-03-02						
2-Chlorophenol	< 0.10	0.10	µg/L							
3 & 4-Chlorophenol	< 0.10	0.10	µg/L							
4-Chloro-3-Methylphenol	< 0.50	0.50	µg/L							
2,3-Dichlorophenol	< 0.20	0.20	µg/L							
2,4 & 2,5-Dichlorophenol	< 0.20	0.20	µg/L							
2,6-Dichlorophenol	< 0.20	0.20	µg/L							
3,4-Dichlorophenol	< 0.20	0.20	µg/L							
3,5-Dichlorophenol	< 0.20	0.20	µg/L							
2,3,4-Trichlorophenol	< 0.50	0.50	µg/L							
2,3,5-Trichlorophenol	< 0.50	0.50	µg/L							
2,3,6-Trichlorophenol	< 0.50	0.50	µg/L							
2,4,5-Trichlorophenol	< 0.50	0.50	µg/L							

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
PROJECT	704-SWM.SWOP03663-12	**REPORTED**	2024-04-26 12:28

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Chlorinated Phenols, Batch B4B3755, Continued										
Blank (B4B3755-BLK1), Continued				Prepared: 2024-02-29, Analyzed: 2024-03-02						
2,4,6-Trichlorophenol	< 0.50	0.50	µg/L							
3,4,5-Trichlorophenol	< 0.50	0.50	µg/L							
2,3,4,5 & 2,3,5,6-Tetrachlorophenol	< 0.50	0.50	µg/L							
2,3,4,6-Tetrachlorophenol	< 0.50	0.50	µg/L							
Pentachlorophenol	< 0.50	0.50	µg/L							
Surrogate: 2,4-Dibromophenol	*1.52*		*µg/L*	2.36		*64*	*60-130*			
Surrogate: 2,4,6-Tribromophenol	*2.03*		*µg/L*	2.68		*76*	*60-130*			
Surrogate: Phenol-d6	*2.52*		*µg/L*	2.52		*100*	*70-130*			
LCS (B4B3755-BS1)				Prepared: 2024-02-29, Analyzed: 2024-03-01						
2-Chlorophenol	8.22	0.10	µg/L	10.0		82	60-130			
3 & 4-Chlorophenol	16.7	0.10	µg/L	20.0		83	60-130			
4-Chloro-3-Methylphenol	10.3	0.50	µg/L	10.8		96	60-130			
2,3-Dichlorophenol	8.31	0.20	µg/L	10.0		83	60-130			
2,4 & 2,5-Dichlorophenol	16.9	0.20	µg/L	20.0		84	60-130			
2,6-Dichlorophenol	8.17	0.20	µg/L	10.0		82	60-130			
3,4-Dichlorophenol	8.78	0.20	µg/L	10.0		88	60-130			
3,5-Dichlorophenol	9.28	0.20	µg/L	10.0		93	60-130			
2,3,4-Trichlorophenol	9.09	0.50	µg/L	10.0		91	60-130			
2,3,5-Trichlorophenol	9.77	0.50	µg/L	10.0		98	60-130			
2,3,6-Trichlorophenol	8.82	0.50	µg/L	10.0		88	60-130			
2,4,5-Trichlorophenol	9.65	0.50	µg/L	10.0		96	60-130			
2,4,6-Trichlorophenol	9.09	0.50	µg/L	10.0		91	60-130			
3,4,5-Trichlorophenol	9.63	0.50	µg/L	10.0		96	60-130			
2,3,4,5 & 2,3,5,6-Tetrachlorophenol	18.1	0.50	µg/L	20.0		91	60-130			
2,3,4,6-Tetrachlorophenol	7.91	0.50	µg/L	10.0		79	60-130			
Pentachlorophenol	11.0	0.50	µg/L	10.0		110	60-130			
Surrogate: 2,4-Dibromophenol	*1.95*		*µg/L*	2.36		*83*	*60-130*			
Surrogate: 2,4,6-Tribromophenol	*2.51*		*µg/L*	2.68		*94*	*60-130*			
Surrogate: Phenol-d6	*2.29*		*µg/L*	2.52		*91*	*70-130*			
LCS Dup (B4B3755-BSD1)				Prepared: 2024-02-29, Analyzed: 2024-03-01						
2-Chlorophenol	8.66	0.10	µg/L	10.0		87	60-130	5	40	
3 & 4-Chlorophenol	17.3	0.10	µg/L	20.0		87	60-130	4	40	
4-Chloro-3-Methylphenol	10.3	0.50	µg/L	10.8		95	60-130	< 1	40	
2,3-Dichlorophenol	8.17	0.20	µg/L	10.0		82	60-130	2	40	
2,4 & 2,5-Dichlorophenol	16.9	0.20	µg/L	20.0		84	60-130	< 1	40	
2,6-Dichlorophenol	8.11	0.20	µg/L	10.0		81	60-130	< 1	40	
3,4-Dichlorophenol	8.96	0.20	µg/L	10.0		90	60-130	2	40	
3,5-Dichlorophenol	9.15	0.20	µg/L	10.0		91	60-130	1	40	
2,3,4-Trichlorophenol	8.84	0.50	µg/L	10.0		88	60-130	3	40	
2,3,5-Trichlorophenol	9.76	0.50	µg/L	10.0		98	60-130	< 1	40	
2,3,6-Trichlorophenol	8.63	0.50	µg/L	10.0		86	60-130	2	40	
2,4,5-Trichlorophenol	9.25	0.50	µg/L	10.0		93	60-130	4	40	
2,4,6-Trichlorophenol	9.12	0.50	µg/L	10.0		91	60-130	< 1	40	
3,4,5-Trichlorophenol	9.23	0.50	µg/L	10.0		92	60-130	4	40	
2,3,4,5 & 2,3,5,6-Tetrachlorophenol	17.4	0.50	µg/L	20.0		87	60-130	4	40	
2,3,4,6-Tetrachlorophenol	7.38	0.50	µg/L	10.0		74	60-130	7	40	
Pentachlorophenol	10.8	0.50	µg/L	10.0		108	60-130	2	40	
Surrogate: 2,4-Dibromophenol	*1.87*		*µg/L*	2.36		*79*	*60-130*			
Surrogate: 2,4,6-Tribromophenol	*2.65*		*µg/L*	2.68		*99*	*60-130*			
Surrogate: Phenol-d6	*2.61*		*µg/L*	2.52		*103*	*70-130*			
General Parameters, Batch B4B3403										

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
PROJECT	704-SWM.SWOP03663-12	**REPORTED**	2024-04-26 12:28

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
General Parameters, Batch B4B3403, Continued										
Blank (B4B3403-BLK1)				Prepared: 2024-02-27, Analyzed: 2024-02-27						
Alkalinity, Total (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L							
Conductivity (EC)	< 2.0	2.0	µS/cm							
pH	5.61	0.10	pH units							HT2
Blank (B4B3403-BLK2)				Prepared: 2024-02-27, Analyzed: 2024-02-27						
Alkalinity, Total (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L							
Conductivity (EC)	< 2.0	2.0	µS/cm							
pH	5.58	0.10	pH units							HT2
LCS (B4B3403-BS1)				Prepared: 2024-02-27, Analyzed: 2024-02-27						
Alkalinity, Total (as CaCO3)	99.8	1.0	mg/L	100		100	80-120			
Alkalinity, Phenolphthalein (as CaCO3)	64.2	1.0	mg/L	50.0		128	0-200			
LCS (B4B3403-BS2)				Prepared: 2024-02-27, Analyzed: 2024-02-27						
Alkalinity, Total (as CaCO3)	101	1.0	mg/L	100		101	80-120			
Alkalinity, Phenolphthalein (as CaCO3)	58.2	1.0	mg/L	50.0		116	0-200			
LCS (B4B3403-BS3)				Prepared: 2024-02-27, Analyzed: 2024-02-27						
Conductivity (EC)	1420	2.0	µS/cm	1410		100	95-105			
LCS (B4B3403-BS4)				Prepared: 2024-02-27, Analyzed: 2024-02-27						
Conductivity (EC)	1420	2.0	µS/cm	1410		100	95-105			
Duplicate (B4B3403-DUP1)			**Source: 24B2509-08**	Prepared: 2024-02-27, Analyzed: 2024-02-27						
Alkalinity, Total (as CaCO3)	55.5	1.0	mg/L		56.7			2	10	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L		< 1.0				10	
Alkalinity, Bicarbonate (as CaCO3)	55.5	1.0	mg/L		56.7			2	10	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L		< 1.0				10	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L		< 1.0				10	
Conductivity (EC)	163	2.0	µS/cm		163			< 1	5	
pH	6.67	0.10	pH units		6.61			< 1	4	HT2
Reference (B4B3403-SRM1)				Prepared: 2024-02-27, Analyzed: 2024-02-27						
pH	7.03	0.10	pH units	7.01		100	98-102			
Reference (B4B3403-SRM2)				Prepared: 2024-02-27, Analyzed: 2024-02-27						
pH	7.04	0.10	pH units	7.01		100	98-102			
General Parameters, Batch B4B3429										
Blank (B4B3429-BLK1)				Prepared: 2024-02-27, Analyzed: 2024-02-27						
Sulfide, Total	< 0.020	0.020	mg/L							
LCS (B4B3429-BS1)				Prepared: 2024-02-27, Analyzed: 2024-02-27						
Sulfide, Total	0.458	0.020	mg/L	0.520		88	80-120			
Matrix Spike (B4B3429-MS1)			**Source: 24B2509-07**	Prepared: 2024-02-27, Analyzed: 2024-02-27						
Sulfide, Total	0.467	0.020	mg/L	0.520	< 0.020	90	70-130			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
PROJECT	704-SWM.SWOP03663-12	**REPORTED**	2024-04-26 12:28

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
General Parameters, Batch B4B3460										
Blank (B4B3460-BLK1)				Prepared: 2024-02-27, Analyzed: 2024-02-27						
Ammonia, Total (as N)	< 0.050	0.050	mg/L							
Blank (B4B3460-BLK2)				Prepared: 2024-02-27, Analyzed: 2024-02-27						
Ammonia, Total (as N)	< 0.050	0.050	mg/L							
Blank (B4B3460-BLK3)				Prepared: 2024-02-27, Analyzed: 2024-02-27						
Ammonia, Total (as N)	< 0.050	0.050	mg/L							
LCS (B4B3460-BS1)				Prepared: 2024-02-27, Analyzed: 2024-02-27						
Ammonia, Total (as N)	0.985	0.050	mg/L	1.00		98	85-115			
LCS (B4B3460-BS2)				Prepared: 2024-02-27, Analyzed: 2024-02-27						
Ammonia, Total (as N)	0.964	0.050	mg/L	1.00		96	85-115			
LCS (B4B3460-BS3)				Prepared: 2024-02-27, Analyzed: 2024-02-27						
Ammonia, Total (as N)	0.979	0.050	mg/L	1.00		98	85-115			
Non-Chlorinated Phenols, Batch B4B3755										
Blank (B4B3755-BLK1)				Prepared: 2024-02-29, Analyzed: 2024-03-02						
Phenol	< 0.50	0.50	µg/L							
2-Methylphenol	< 0.50	0.50	µg/L							
3 & 4-Methylphenol	< 0.50	0.50	µg/L							
2,4-Dimethylphenol	< 0.50	0.50	µg/L							
2-Nitrophenol	< 0.50	0.50	µg/L							
4-Nitrophenol	< 0.50	0.50	µg/L							
2,4-Dinitrophenol	< 0.50	0.50	µg/L							
2-Methyl-4,6-dinitrophenol	< 0.50	0.50	µg/L							
Surrogate: 2,4-Dibromophenol	*1.52*		*µg/L*	2.36		*64*	*60-130*			
Surrogate: 2,4,6-Tribromophenol	*2.03*		*µg/L*	2.68		*76*	*60-130*			
Surrogate: Phenol-d6	*2.52*		*µg/L*	2.52		*100*	*70-130*			
LCS (B4B3755-BS1)				Prepared: 2024-02-29, Analyzed: 2024-03-01						
Phenol	6.43	0.50	µg/L	10.0		64	60-130			
2-Methylphenol	8.12	0.50	µg/L	10.0		81	60-130			
3 & 4-Methylphenol	15.1	0.50	µg/L	20.0		76	60-130			
2,4-Dimethylphenol	8.49	0.50	µg/L	10.0		85	60-130			
2-Nitrophenol	9.24	0.50	µg/L	10.0		92	30-130			
4-Nitrophenol	8.97	0.50	µg/L	10.0		90	30-130			
2,4-Dinitrophenol	12.5	0.50	µg/L	10.0		125	30-130			
2-Methyl-4,6-dinitrophenol	10.5	0.50	µg/L	10.0		105	30-130			
Surrogate: 2,4-Dibromophenol	*1.95*		*µg/L*	2.36		*83*	*60-130*			
Surrogate: 2,4,6-Tribromophenol	*2.51*		*µg/L*	2.68		*94*	*60-130*			
Surrogate: Phenol-d6	*2.29*		*µg/L*	2.52		*91*	*70-130*			
LCS Dup (B4B3755-BSD1)				Prepared: 2024-02-29, Analyzed: 2024-03-01						
Phenol	6.31	0.50	µg/L	10.0		63	60-130	2	40	
2-Methylphenol	9.04	0.50	µg/L	10.0		90	60-130	11	40	
3 & 4-Methylphenol	16.3	0.50	µg/L	20.0		81	60-130	7	40	
2,4-Dimethylphenol	9.06	0.50	µg/L	10.0		91	60-130	7	40	
2-Nitrophenol	9.60	0.50	µg/L	10.0		96	30-130	4	40	
4-Nitrophenol	8.92	0.50	µg/L	10.0		89	30-130	< 1	40	
2,4-Dinitrophenol	12.6	0.50	µg/L	10.0		126	30-130	< 1	40	
2-Methyl-4,6-dinitrophenol	10.4	0.50	µg/L	10.0		104	30-130	< 1	40	
Surrogate: 2,4-Dibromophenol	*1.87*		*µg/L*	2.36		*79*	*60-130*			
Surrogate: 2,4,6-Tribromophenol	*2.65*		*µg/L*	2.68		*99*	*60-130*			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
PROJECT	704-SWM.SWOP03663-12	**REPORTED**	2024-04-26 12:28

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Non-Chlorinated Phenols, Batch B4B3755, Continued										
LCS Dup (B4B3755-BSD1), Continued				Prepared: 2024-02-29, Analyzed: 2024-03-01						
Surrogate: Phenol-d6	*2.61*		*µg/L*	2.52		*103*	*70-130*			
Polycyclic Aromatic Hydrocarbons (PAH), Batch B4B3317										
Blank (B4B3317-BLK1)				Prepared: 2024-02-26, Analyzed: 2024-02-26						
Acenaphthene	< 0.050	0.050	µg/L							
Acenaphthylene	< 0.200	0.200	µg/L							
Acridine	< 0.050	0.050	µg/L							
Anthracene	< 0.010	0.010	µg/L							
Benz(a)anthracene	< 0.010	0.010	µg/L							
Benzo(a)pyrene	< 0.010	0.010	µg/L							
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L							
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L							
Benzo(k)fluoranthene	< 0.050	0.050	µg/L							
2-Chloronaphthalene	< 0.100	0.100	µg/L							
Chrysene	< 0.050	0.050	µg/L							
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L							
Fluoranthene	< 0.030	0.030	µg/L							
Fluorene	< 0.050	0.050	µg/L							
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L							
1-Methylnaphthalene	< 0.100	0.100	µg/L							
2-Methylnaphthalene	< 0.100	0.100	µg/L							
Naphthalene	< 0.200	0.200	µg/L							
Phenanthrene	< 0.100	0.100	µg/L							
Pyrene	< 0.020	0.020	µg/L							
Quinoline	< 0.050	0.050	µg/L							
Surrogate: Acridine-d9	*27.0*		*µg/L*	22.1		*122*	*50-140*			
Surrogate: Naphthalene-d8	*27.3*		*µg/L*	22.2		*123*	*50-140*			
Surrogate: Perylene-d12	*29.6*		*µg/L*	22.2		*133*	*50-140*			
LCS (B4B3317-BS1)				Prepared: 2024-02-26, Analyzed: 2024-02-26						
Acenaphthene	23.1	0.050	µg/L	22.1		104	50-140			
Acenaphthylene	23.7	0.200	µg/L	21.9		108	50-140			
Acridine	21.0	0.050	µg/L	22.0		95	50-140			
Anthracene	22.8	0.010	µg/L	22.1		103	50-140			
Benz(a)anthracene	21.7	0.010	µg/L	22.1		98	50-140			
Benzo(a)pyrene	25.2	0.010	µg/L	21.9		115	50-140			
Benzo(b+j)fluoranthene	47.2	0.050	µg/L	43.8		108	50-140			
Benzo(g,h,i)perylene	26.1	0.050	µg/L	21.9		119	50-140			
Benzo(k)fluoranthene	22.6	0.050	µg/L	22.0		103	50-140			
2-Chloronaphthalene	22.8	0.100	µg/L	21.9		104	50-140			
Chrysene	22.6	0.050	µg/L	21.8		104	50-140			
Dibenz(a,h)anthracene	26.7	0.010	µg/L	22.2		120	50-140			
Fluoranthene	25.0	0.030	µg/L	22.2		113	50-140			
Fluorene	23.5	0.050	µg/L	22.7		104	50-140			
Indeno(1,2,3-cd)pyrene	24.6	0.050	µg/L	21.9		113	50-140			
1-Methylnaphthalene	24.2	0.100	µg/L	22.0		110	50-140			
2-Methylnaphthalene	25.9	0.100	µg/L	22.0		118	50-140			
Naphthalene	25.0	0.200	µg/L	22.0		114	50-140			
Phenanthrene	23.1	0.100	µg/L	21.9		106	50-140			
Pyrene	25.7	0.020	µg/L	22.2		115	50-140			
Quinoline	22.4	0.050	µg/L	22.2		101	50-140			
Surrogate: Acridine-d9	*27.3*		*µg/L*	22.1		*123*	*50-140*			
Surrogate: Naphthalene-d8	*28.4*		*µg/L*	22.2		*128*	*50-140*			
Surrogate: Perylene-d12	*30.0*		*µg/L*	22.2		*135*	*50-140*			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
PROJECT	704-SWM.SWOP03663-12	**REPORTED**	2024-04-26 12:28

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Polycyclic Aromatic Hydrocarbons (PAH), Batch B4B3317, Continued										
LCS Dup (B4B3317-BSD1)				Prepared: 2024-02-26, Analyzed: 2024-02-26						
Acenaphthene	22.8	0.050	µg/L	22.1		103	50-140	1	30	
Acenaphthylene	23.4	0.200	µg/L	21.9		107	50-140	1	30	
Acridine	20.5	0.050	µg/L	22.0		93	50-140	2	30	
Anthracene	22.7	0.010	µg/L	22.1		103	50-140	< 1	30	
Benz(a)anthracene	21.1	0.010	µg/L	22.1		96	50-140	2	30	
Benzo(a)pyrene	24.6	0.010	µg/L	21.9		112	50-140	3	30	
Benzo(b+j)fluoranthene	46.5	0.050	µg/L	43.8		106	50-140	1	30	
Benzo(g,h,i)perylene	29.0	0.050	µg/L	21.9		132	50-140	10	30	
Benzo(k)fluoranthene	22.3	0.050	µg/L	22.0		101	50-140	1	30	
2-Chloronaphthalene	22.8	0.100	µg/L	21.9		104	50-140	< 1	30	
Chrysene	22.1	0.050	µg/L	21.8		102	50-140	2	30	
Dibenz(a,h)anthracene	25.6	0.010	µg/L	22.2		115	50-140	4	30	
Fluoranthene	24.3	0.030	µg/L	22.2		109	50-140	3	30	
Fluorene	23.3	0.050	µg/L	22.7		103	50-140	< 1	30	
Indeno(1,2,3-cd)pyrene	29.2	0.050	µg/L	21.9		133	50-140	17	30	
1-Methylnaphthalene	24.0	0.100	µg/L	22.0		109	50-140	< 1	30	
2-Methylnaphthalene	25.6	0.100	µg/L	22.0		116	50-140	1	30	
Naphthalene	24.8	0.200	µg/L	22.0		113	50-140	< 1	30	
Phenanthrene	22.5	0.100	µg/L	21.9		103	50-140	3	30	
Pyrene	25.2	0.020	µg/L	22.2		113	50-140	2	30	
Quinoline	22.3	0.050	µg/L	22.2		101	50-140	< 1	30	
Surrogate: Acridine-d9	*27.0*		*µg/L*	22.1		*122*	*50-140*			
Surrogate: Naphthalene-d8	*28.5*		*µg/L*	22.2		*128*	*50-140*			
Surrogate: Perylene-d12	*29.7*		*µg/L*	22.2		*133*	*50-140*			
Polycyclic Aromatic Hydrocarbons (PAH), Batch B4B3402										
Blank (B4B3402-BLK1)				Prepared: 2024-02-27, Analyzed: 2024-02-27						
Acenaphthene	< 0.050	0.050	µg/L							
Acenaphthylene	< 0.200	0.200	µg/L							
Acridine	< 0.050	0.050	µg/L							
Anthracene	< 0.010	0.010	µg/L							
Benz(a)anthracene	< 0.010	0.010	µg/L							
Benzo(a)pyrene	< 0.010	0.010	µg/L							
Benzo(b+j)fluoranthene	< 0.050	0.050	µg/L							
Benzo(g,h,i)perylene	< 0.050	0.050	µg/L							
Benzo(k)fluoranthene	< 0.050	0.050	µg/L							
2-Chloronaphthalene	< 0.100	0.100	µg/L							
Chrysene	< 0.050	0.050	µg/L							
Dibenz(a,h)anthracene	< 0.010	0.010	µg/L							
Fluoranthene	< 0.030	0.030	µg/L							
Fluorene	< 0.050	0.050	µg/L							
Indeno(1,2,3-cd)pyrene	< 0.050	0.050	µg/L							
1-Methylnaphthalene	< 0.100	0.100	µg/L							
2-Methylnaphthalene	< 0.100	0.100	µg/L							
Naphthalene	< 0.200	0.200	µg/L							
Phenanthrene	< 0.100	0.100	µg/L							
Pyrene	< 0.020	0.020	µg/L							
Quinoline	< 0.050	0.050	µg/L							
Surrogate: Acridine-d9	*19.0*		*µg/L*	22.1		*86*	*50-140*			
Surrogate: Naphthalene-d8	*23.6*		*µg/L*	22.2		*106*	*50-140*			
Surrogate: Perylene-d12	*26.6*		*µg/L*	22.2		*120*	*50-140*			
LCS (B4B3402-BS1)				Prepared: 2024-02-27, Analyzed: 2024-02-27						
Acenaphthene	22.4	0.050	µg/L	22.1		101	50-140			
Acenaphthylene	22.5	0.200	µg/L	21.9		103	50-140			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24B2509
PROJECT	704-SWM.SWOP03663-12	**REPORTED**	2024-04-26 12:28

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Polycyclic Aromatic Hydrocarbons (PAH), Batch B4B3402, Continued										
LCS (B4B3402-BS1), Continued				Prepared: 2024-02-27, Analyzed: 2024-02-27						
Acridine	19.4	0.050	µg/L	22.0		88	50-140			
Anthracene	24.0	0.010	µg/L	22.1		108	50-140			
Benz(a)anthracene	21.4	0.010	µg/L	22.1		97	50-140			
Benzo(a)pyrene	24.3	0.010	µg/L	21.9		111	50-140			
Benzo(b+j)fluoranthene	47.2	0.050	µg/L	43.8		108	50-140			
Benzo(g,h,i)perylene	26.4	0.050	µg/L	21.9		121	50-140			
Benzo(k)fluoranthene	21.9	0.050	µg/L	22.0		100	50-140			
2-Chloronaphthalene	21.6	0.100	µg/L	21.9		99	50-140			
Chrysene	22.5	0.050	µg/L	21.8		103	50-140			
Dibenz(a,h)anthracene	24.1	0.010	µg/L	22.2		109	50-140			
Fluoranthene	24.8	0.030	µg/L	22.2		112	50-140			
Fluorene	22.3	0.050	µg/L	22.7		98	50-140			
Indeno(1,2,3-cd)pyrene	27.4	0.050	µg/L	21.9		125	50-140			
1-Methylnaphthalene	23.2	0.100	µg/L	22.0		106	50-140			
2-Methylnaphthalene	25.2	0.100	µg/L	22.0		114	50-140			
Naphthalene	24.9	0.200	µg/L	22.0		113	50-140			
Phenanthrene	22.1	0.100	µg/L	21.9		101	50-140			
Pyrene	25.4	0.020	µg/L	22.2		114	50-140			
Quinoline	26.6	0.050	µg/L	22.2		120	50-140			
Surrogate: Acridine-d9	*21.7*		*µg/L*	22.1		*98*	*50-140*			
Surrogate: Naphthalene-d8	*24.0*		*µg/L*	22.2		*108*	*50-140*			
Surrogate: Perylene-d12	*24.6*		*µg/L*	22.2		*111*	*50-140*			
LCS Dup (B4B3402-BSD1)				Prepared: 2024-02-27, Analyzed: 2024-02-27						
Acenaphthene	20.4	0.050	µg/L	22.1		92	50-140	9	30	
Acenaphthylene	20.4	0.200	µg/L	21.9		93	50-140	10	30	
Acridine	19.5	0.050	µg/L	22.0		89	50-140	< 1	30	
Anthracene	20.9	0.010	µg/L	22.1		94	50-140	14	30	
Benz(a)anthracene	19.4	0.010	µg/L	22.1		88	50-140	10	30	
Benzo(a)pyrene	22.1	0.010	µg/L	21.9		101	50-140	10	30	
Benzo(b+j)fluoranthene	42.3	0.050	µg/L	43.8		97	50-140	11	30	
Benzo(g,h,i)perylene	24.5	0.050	µg/L	21.9		112	50-140	8	30	
Benzo(k)fluoranthene	19.5	0.050	µg/L	22.0		89	50-140	12	30	
2-Chloronaphthalene	19.7	0.100	µg/L	21.9		90	50-140	9	30	
Chrysene	20.4	0.050	µg/L	21.8		94	50-140	10	30	
Dibenz(a,h)anthracene	22.8	0.010	µg/L	22.2		103	50-140	6	30	
Fluoranthene	22.5	0.030	µg/L	22.2		101	50-140	10	30	
Fluorene	20.3	0.050	µg/L	22.7		90	50-140	9	30	
Indeno(1,2,3-cd)pyrene	24.6	0.050	µg/L	21.9		112	50-140	11	30	
1-Methylnaphthalene	21.2	0.100	µg/L	22.0		96	50-140	9	30	
2-Methylnaphthalene	23.0	0.100	µg/L	22.0		104	50-140	9	30	
Naphthalene	22.4	0.200	µg/L	22.0		102	50-140	11	30	
Phenanthrene	20.2	0.100	µg/L	21.9		92	50-140	9	30	
Pyrene	23.4	0.020	µg/L	22.2		105	50-140	8	30	
Quinoline	26.4	0.050	µg/L	22.2		119	50-140	< 1	30	
Surrogate: Acridine-d9	*20.7*		*µg/L*	22.1		*94*	*50-140*			
Surrogate: Naphthalene-d8	*22.0*		*µg/L*	22.2		*99*	*50-140*			
Surrogate: Perylene-d12	*22.1*		*µg/L*	22.2		*99*	*50-140*			

QC Qualifiers:

HT2 The 15 minute recommended holding time (from sampling to analysis) has been exceeded - field analysis is recommended.

CARO ANALYTICAL SERV
Caring About Results... Obv

24B2509

mond, BC V6V 2K9
604) 279-1599
elowna, BC V1X 5C3
250) 765-3893
monton, AB T5S 1H7
780) 489-9700

Clear Form | Print a Copy | Save a Copy | CARO Website | CARO BC COC, Rev 2015-09

CHAIN OF CUSTODY RECORD

COC# | PAGE OF

RELINQUISHED BY: Garrett Huber | DATE: Feb 22/24 | TIME: 3:00pm
RECEIVED BY: Texada/Mary | DATE: 23/02 | TIME: 10:30

PROJECT: Marine Avenue Site
PROJECT INFO:

REPORT TO:
COMPANY: Tetra Tech Canada
ADDRESS: Suite 1000-885 Dunsmuir Street
Vancouver, BC V8G 0A7
CONTACT: Emily Lai
TEL/FAX: 604.238.3573
DELIVERY METHOD: EMAIL ☒ MAIL ☐ OTHER* ☐
DATA FORMAT: EXCEL ☒ WATERTRAX ☐ ESdat ☒ EQuIS ☐ BC EMS ☐ OTHER* ☐
EMAIL 1: emily.lai@tetratech.com
EMAIL 2: mike.gallo@tetratech.com
EMAIL 3: lauren.quan@tetratech.com

INVOICE TO: SAME AS REPORT TO ☐
COMPANY: Tetra Tech Canada
ADDRESS: Accounts Payable Department
Edmonton, AB
CONTACT:
TEL/FAX:
DELIVERY METHOD: EMAIL ☒ MAIL ☐ OTHER* ☐
EMAIL 1: Accounts.Payable@tetratech.com
EMAIL 2:
EMAIL 3:
PO #: 704-SWM.SWOP03663-12

** NEW ** If you would like to sign up for ClientConnect and/or EnviroChain, CARO's online service offerings, check here: ☐

TURNAROUND TIME REQUESTED:
Routine: (5-7 Days) ☒
Rush: 1 Day* ☐ 2 Day* ☐ 3 Day* ☐
Other* ☐
*Contact Lab To Confirm, Surcharge May Apply

REGULATORY APPLICATION: Regs on Report? ☐
Canadian Drinking Water Quality Guidelines ☐
BC Drinking Water Protection Act / Reg. ☐
BC CSR ☒ AB TIER 1 ☐ CCME ☐ OTHER* ☐
AL ☐ PL ☐ RL ☐ CL ☐ IL ☐ AW ☐ IW ☐ LW ☐

SAMPLED BY: Regan Keil

CLIENT SAMPLE ID:	MATRIX: DRINKING WATER	OTHER WATER	SOIL	OTHER	# CONTAINERS	SAMPLING: DATE	TIME	COMMENTS: CHLORINATED	FILTERED	PRESERVED	(e.g. flow/volume media ID/notes)
MW13-01		✓				02/22	1220				
MW13-02		✓				2/22	1415				
MW13-03		✓				2/22	1420				
MW19-04		✓				2/22	1110				
SW1		✓				2/22	845				
SW2		✓				2/22	915				
SW3		✓				02/22	930				
SW4		✓				2/22	1240				
DUP1		✓				02/22					C13, C10

ANALYSES REQUESTED:

BTEX ☐	VPH ☐	PHC F1 ☐	VOC ☐	VPH ☐	EPH ☒	PHC F2-F4 ☐	PAH ☒	L/HEPH ☐	PHENOLS Chlorinated ☐	Non-Chlor. ☐	PCB ☐	GLYCOLS ☐	HAA ☐	PESTICIDES ☐	ACID HERBICIDES ☐	METALS - WATER TOTAL	Hg ☐	METALS - WATER DISSOLVED	Hg ☐	METALS - SOIL (SALM) ☐	inc. pH ☐	pH ☒	EC ☒	ALK ☒	TSS ☐	VSS ☐	TDS ☐	BOD ☐	COD ☐	TOG ☐	MOG ☐	FECAL COLIFORMS ☐	HPC ☐	TOTAL COLIFORMS ☐	E coli ☐	ASBESTOS	Resins and Fatty Acids	Low Level Sulphide	NH2, Cl, SO4, F, NO3, N2	Total Phenols	Volatile Hydrocarbons			HOLD
					✓		✓															✓	✓	✓													✓	✓	✓	✓	✓			
					✓		✓															✓	✓	✓													✓	✓	✓	✓	✓			
					✓		✓															✓	✓	✓													✓	✓	✓	✓	✓			
					✓		✓															✓	✓	✓													✓	✓	✓	✓	✓			
					✓		✓															✓	✓	✓													✓	✓	✓	✓	✓			
					✓		✓															✓	✓	✓													✓	✓	✓	✓	✓			
					✓		✓															✓	✓	✓													✓	✓	✓	✓	✓			
					✓		✓															✓	✓	✓													✓	✓	✓	✓	✓			
					✓		✓															✓	✓	✓													✓	✓	✓	✓	✓			
																						✓																	✓						

SHIPPING INSTRUCTIONS: Return Cooler(s) ☐
Supplies Needed:
-

SAMPLE RETENTION INSTRUCTIONS (Discarded 30 days after Report unless otherwise specified):
60 Days ☐ 90 Days ☒ Longer Date (Surcharges will Apply):

*** OTHER INSTRUCTIONS:**
C13, C31, C29, C03, C03, C04, C04, C10, C23

PAYMENT:
CHEQUE ☐
CREDIT ☐
DEBIT ☐
CASH ☐
INVOICE ☒

SAMPLE RECEIPT CONDITION:
COOLER 1 (°C): 0c1 ICE: Y ☐ N ☐
COOLER 2 (°C): ICE: Y ☐ N ☐
COOLER 3 (°C): ICE: Y ☐ N ☐
CUSTODY SEALS INTACT:

CERTIFICATE OF ANALYSIS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver) 1000 - 885 Dunsmuir Street Vancouver, BC V6C 1N5		
ATTENTION	Emily Lai	**WORK ORDER**	24F3072
PO NUMBER	704-SWM.SWOP03663-12	**RECEIVED / TEMP**	2024-06-25 11:05 / 12.2°C
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03
PROJECT INFO		**COC NUMBER**	No #

Introduction:

CARO Analytical Services is a testing laboratory full of smart, engaged scientists driven to make the world a safer and healthier place. Through our clients' projects we become an essential element for a better world. We employ methods conducted in accordance with recognized professional standards using accepted testing methodologies and quality control efforts. CARO is accredited by the Canadian Association for Laboratories Accreditation (CALA) to ISO/IEC 17025:2017 for specific tests listed in the scope of accreditation approved by CALA.

Big Picture Sidekicks

You know that the sample you collected after snowshoeing to site, digging 5 meters, and racing to get it on a plane so you can submit it to the lab for time sensitive results needed to make important and expensive decisions (whew) is VERY important. We know that too.

We've Got Chemistry

It's simple. We figure the more you enjoy working with our fun and engaged team members; the more likely you are to give us continued opportunities to support you.

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Through research, regulation knowledge, and instrumentation, we are your analytical centre for the technical knowledge you need, BEFORE you need it, so you can stay up to date and in the know.

By engaging our services, you are agreeing to CARO Analytical Service's Standard Terms and Conditions outlined here: https://www.caro.ca/terms-conditions

If you have any questions or concerns, please contact me at aquesada@caro.ca

Authorized By:

Adrian Quesada
Junior Account Manager

CARO ANALYTICAL SERVICES

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

Analyte	Result	RL	Units	Analyzed	Qualifier
MW13-01 (24F3072-01) | Matrix: Water | Sampled: 2024-06-24 12:00					
Anions					
Chloride	**6.03**	0.10	mg/L	2024-06-25	
Fluoride	< 0.10	0.10	mg/L	2024-06-25	
Nitrate (as N)	**0.264**	0.010	mg/L	2024-06-25	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-06-25	
Sulfate	**5.1**	1.0	mg/L	2024-06-25	
Calculated Parameters					
Hardness, Dissolved (as CaCO3)	**43.8**	0.500	mg/L	N/A	
Dissolved Metals					
Aluminum, dissolved	< 0.0050	0.0050	mg/L	2024-06-28	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2024-06-27	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Barium, dissolved	< 0.0050	0.0050	mg/L	2024-06-27	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Boron, dissolved	< 0.0500	0.0500	mg/L	2024-06-27	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2024-06-27	
Calcium, dissolved	**12.8**	0.20	mg/L	2024-06-27	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Cobalt, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Copper, dissolved	< 0.00040	0.00040	mg/L	2024-06-27	
Iron, dissolved	< 0.010	0.010	mg/L	2024-06-27	
Lead, dissolved	< 0.00020	0.00020	mg/L	2024-06-27	
Lithium, dissolved	**0.00088**	0.00010	mg/L	2024-06-28	
Magnesium, dissolved	**2.89**	0.010	mg/L	2024-06-27	
Manganese, dissolved	**0.00078**	0.00020	mg/L	2024-06-27	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2024-06-27	
Molybdenum, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Nickel, dissolved	< 0.00040	0.00040	mg/L	2024-06-27	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2024-06-27	
Potassium, dissolved	**1.33**	0.10	mg/L	2024-06-27	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Silicon, dissolved	**13.3**	1.0	mg/L	2024-06-28	
Silver, dissolved	< 0.000050	0.000050	mg/L	2024-06-27	
Sodium, dissolved	**7.92**	0.10	mg/L	2024-06-27	
Strontium, dissolved	**0.0698**	0.0010	mg/L	2024-06-27	
Sulfur, dissolved	< 3.0	3.0	mg/L	2024-06-27	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2024-06-27	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Tin, dissolved	< 0.00020	0.00020	mg/L	2024-06-27	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2024-06-27	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2024-06-27	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

Analyte	Result	RL	Units	Analyzed	Qualifier
MW13-01 (24F3072-01) | Matrix: Water | Sampled: 2024-06-24 12:00, Continued					
Dissolved Metals, Continued					
Uranium, dissolved	**0.000055**	0.000020	mg/L	2024-06-27	
Vanadium, dissolved	< 0.0050	0.0050	mg/L	2024-06-27	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2024-06-27	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
General Parameters					
Alkalinity, Total (as CaCO3)	**46.2**	1.0	mg/L	2024-06-27	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-06-27	
Alkalinity, Bicarbonate (as CaCO3)	**46.2**	1.0	mg/L	2024-06-27	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-06-27	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-06-27	
Ammonia, Total (as N)	< 0.050	0.050	mg/L	2024-06-28	
BOD, 5-day	< 3.2	2.0	mg/L	2024-06-30	
Carbon, Dissolved Organic	**1.25**	0.50	mg/L	2024-06-27	
Chemical Oxygen Demand	< 20	20	mg/L	2024-06-27	
Conductivity (EC)	**126**	2.0	µS/cm	2024-06-27	
pH	**6.40**	0.10	pH units	2024-06-27	HT2
Solids, Total Dissolved	**85**	10	mg/L	2024-06-26	
Sulfide, Total	< 0.020	0.020	mg/L	2024-06-26	
MW13-02 (24F3072-02) | Matrix: Water | Sampled: 2024-06-24 14:30					
Anions					
Chloride	**11.0**	0.10	mg/L	2024-06-25	
Fluoride	< 1.00	0.10	mg/L	2024-06-25	RA1
Nitrate (as N)	< 0.100	0.010	mg/L	2024-06-25	RA1
Nitrite (as N)	< 0.010	0.010	mg/L	2024-06-25	
Sulfate	**140**	1.0	mg/L	2024-06-25	
Calculated Parameters					
Hardness, Dissolved (as CaCO3)	**576**	0.500	mg/L	N/A	
Dissolved Metals					
Aluminum, dissolved	**0.0142**	0.0050	mg/L	2024-06-27	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2024-06-27	
Arsenic, dissolved	**0.00636**	0.00050	mg/L	2024-06-27	
Barium, dissolved	**0.109**	0.0050	mg/L	2024-06-27	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Boron, dissolved	**0.423**	0.0500	mg/L	2024-06-27	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2024-06-27	
Calcium, dissolved	**197**	0.20	mg/L	2024-06-27	
Chromium, dissolved	**0.00143**	0.00050	mg/L	2024-06-27	
Cobalt, dissolved	**0.00167**	0.00010	mg/L	2024-06-27	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

Analyte	Result	RL	Units	Analyzed	Qualifier
MW13-02 (24F3072-02) | Matrix: Water | Sampled: 2024-06-24 14:30, Continued					
Dissolved Metals, Continued					
Copper, dissolved	< 0.00040	0.00040	mg/L	2024-06-27	
Iron, dissolved	**68.6**	0.010	mg/L	2024-06-27	
Lead, dissolved	< 0.00020	0.00020	mg/L	2024-06-27	
Lithium, dissolved	**0.00071**	0.00010	mg/L	2024-06-27	
Magnesium, dissolved	**19.9**	0.010	mg/L	2024-06-27	
Manganese, dissolved	**1.73**	0.00020	mg/L	2024-06-27	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2024-06-27	
Molybdenum, dissolved	**0.00117**	0.00010	mg/L	2024-06-27	
Nickel, dissolved	**0.00055**	0.00040	mg/L	2024-06-27	
Phosphorus, dissolved	**0.096**	0.050	mg/L	2024-06-27	
Potassium, dissolved	**28.8**	0.10	mg/L	2024-06-27	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Silicon, dissolved	**12.0**	1.0	mg/L	2024-06-27	
Silver, dissolved	< 0.000050	0.000050	mg/L	2024-06-27	
Sodium, dissolved	**29.8**	0.10	mg/L	2024-06-27	
Strontium, dissolved	**1.01**	0.0010	mg/L	2024-06-27	
Sulfur, dissolved	**58.3**	3.0	mg/L	2024-06-27	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2024-06-27	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Tin, dissolved	< 0.00020	0.00020	mg/L	2024-06-27	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2024-06-27	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2024-06-27	
Uranium, dissolved	**0.000455**	0.000020	mg/L	2024-06-27	
Vanadium, dissolved	**0.0054**	0.0050	mg/L	2024-06-27	
Zinc, dissolved	**0.0085**	0.0040	mg/L	2024-06-27	
Zirconium, dissolved	**0.00042**	0.00010	mg/L	2024-06-27	
General Parameters					
Alkalinity, Total (as CaCO3)	**452**	1.0	mg/L	2024-06-27	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-06-27	
Alkalinity, Bicarbonate (as CaCO3)	**452**	1.0	mg/L	2024-06-27	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-06-27	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-06-27	
Ammonia, Total (as N)	**8.12**	0.050	mg/L	2024-06-28	
BOD, 5-day	**6.7**	2.0	mg/L	2024-06-30	
Carbon, Dissolved Organic	**26.8**	0.50	mg/L	2024-06-28	
Chemical Oxygen Demand	**72**	20	mg/L	2024-06-27	
Conductivity (EC)	**1190**	2.0	µS/cm	2024-06-27	
pH	**6.96**	0.10	pH units	2024-06-27	HT2
Solids, Total Dissolved	**790**	10	mg/L	2024-06-26	
Sulfide, Total	**0.039**	0.020	mg/L	2024-06-26	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

Analyte	Result	RL	Units	Analyzed	Qualifier
MW13-03 (24F3072-03) | Matrix: Water | Sampled: 2024-06-24 14:50					
Anions					
Chloride	**19.2**	0.10	mg/L	2024-06-25	
Fluoride	< 0.10	0.10	mg/L	2024-06-25	
Nitrate (as N)	**1.19**	0.010	mg/L	2024-06-25	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-06-25	
Sulfate	**38.5**	1.0	mg/L	2024-06-25	
Calculated Parameters					
Hardness, Dissolved (as CaCO3)	**165**	0.500	mg/L	N/A	
Dissolved Metals					
Aluminum, dissolved	< 0.0050	0.0050	mg/L	2024-06-27	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2024-06-27	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Barium, dissolved	**0.0157**	0.0050	mg/L	2024-06-27	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Boron, dissolved	**0.0922**	0.0500	mg/L	2024-06-27	
Cadmium, dissolved	**0.000022**	0.000010	mg/L	2024-06-27	
Calcium, dissolved	**50.5**	0.20	mg/L	2024-06-27	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Cobalt, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Copper, dissolved	**0.00213**	0.00040	mg/L	2024-06-27	
Iron, dissolved	< 0.010	0.010	mg/L	2024-06-27	
Lead, dissolved	< 0.00020	0.00020	mg/L	2024-06-27	
Lithium, dissolved	**0.00214**	0.00010	mg/L	2024-06-27	
Magnesium, dissolved	**9.48**	0.010	mg/L	2024-06-27	
Manganese, dissolved	**0.00155**	0.00020	mg/L	2024-06-27	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2024-06-27	
Molybdenum, dissolved	**0.00012**	0.00010	mg/L	2024-06-27	
Nickel, dissolved	**0.00060**	0.00040	mg/L	2024-06-27	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2024-06-27	
Potassium, dissolved	**4.29**	0.10	mg/L	2024-06-27	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Silicon, dissolved	**13.7**	1.0	mg/L	2024-06-27	
Silver, dissolved	< 0.000050	0.000050	mg/L	2024-06-27	
Sodium, dissolved	**28.5**	0.10	mg/L	2024-06-27	
Strontium, dissolved	**0.329**	0.0010	mg/L	2024-06-27	
Sulfur, dissolved	**15.1**	3.0	mg/L	2024-06-27	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2024-06-27	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Tin, dissolved	**0.00027**	0.00020	mg/L	2024-06-27	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2024-06-27	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2024-06-27	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

Analyte	Result	RL	Units	Analyzed	Qualifier
MW13-03 (24F3072-03) | Matrix: Water | Sampled: 2024-06-24 14:50, Continued					
Dissolved Metals, Continued					
Uranium, dissolved	**0.00196**	0.000020	mg/L	2024-06-27	
Vanadium, dissolved	< 0.0050	0.0050	mg/L	2024-06-27	
Zinc, dissolved	**0.0055**	0.0040	mg/L	2024-06-27	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
General Parameters					
Alkalinity, Total (as CaCO3)	**142**	1.0	mg/L	2024-06-27	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-06-27	
Alkalinity, Bicarbonate (as CaCO3)	**142**	1.0	mg/L	2024-06-27	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-06-27	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-06-27	
Ammonia, Total (as N)	< 0.050	0.050	mg/L	2024-06-28	
BOD, 5-day	< 3.2	2.0	mg/L	2024-06-30	
Carbon, Dissolved Organic	**4.62**	0.50	mg/L	2024-06-27	
Chemical Oxygen Demand	**36**	20	mg/L	2024-06-27	
Conductivity (EC)	**454**	2.0	µS/cm	2024-06-27	
pH	**6.66**	0.10	pH units	2024-06-27	HT2
Solids, Total Dissolved	**258**	10	mg/L	2024-06-26	
Sulfide, Total	< 0.020	0.020	mg/L	2024-06-26	
MW19-04 (24F3072-04) | Matrix: Water | Sampled: 2024-06-24 10:30					
Anions					
Chloride	**13.8**	0.10	mg/L	2024-06-26	
Fluoride	< 0.10	0.10	mg/L	2024-06-26	
Nitrate (as N)	< 0.010	0.010	mg/L	2024-06-26	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-06-26	
Sulfate	**1.2**	1.0	mg/L	2024-06-26	
Calculated Parameters					
Hardness, Dissolved (as CaCO3)	**192**	0.500	mg/L	N/A	
Dissolved Metals					
Aluminum, dissolved	**0.0095**	0.0050	mg/L	2024-06-27	
Antimony, dissolved	**0.00038**	0.00020	mg/L	2024-06-27	
Arsenic, dissolved	**0.00252**	0.00050	mg/L	2024-06-27	
Barium, dissolved	**0.0367**	0.0050	mg/L	2024-06-27	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Boron, dissolved	**0.0642**	0.0500	mg/L	2024-06-27	
Cadmium, dissolved	**0.000041**	0.000010	mg/L	2024-06-27	
Calcium, dissolved	**60.1**	0.20	mg/L	2024-06-27	
Chromium, dissolved	**0.00065**	0.00050	mg/L	2024-06-27	
Cobalt, dissolved	**0.00285**	0.00010	mg/L	2024-06-27	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

Analyte	Result	RL	Units	Analyzed	Qualifier
MW19-04 (24F3072-04) | Matrix: Water | Sampled: 2024-06-24 10:30, Continued					
Dissolved Metals, Continued					
Copper, dissolved	**0.00125**	0.00040	mg/L	2024-06-27	
Iron, dissolved	**12.6**	0.010	mg/L	2024-06-27	
Lead, dissolved	< 0.00020	0.00020	mg/L	2024-06-27	
Lithium, dissolved	**0.00286**	0.00010	mg/L	2024-06-27	
Magnesium, dissolved	**10.2**	0.010	mg/L	2024-06-27	
Manganese, dissolved	**2.01**	0.00020	mg/L	2024-06-27	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2024-06-27	
Molybdenum, dissolved	**0.00037**	0.00010	mg/L	2024-06-27	
Nickel, dissolved	**0.00143**	0.00040	mg/L	2024-06-27	
Phosphorus, dissolved	**0.079**	0.050	mg/L	2024-06-27	
Potassium, dissolved	**9.44**	0.10	mg/L	2024-06-27	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Silicon, dissolved	**19.2**	1.0	mg/L	2024-06-27	
Silver, dissolved	< 0.000050	0.000050	mg/L	2024-06-27	
Sodium, dissolved	**11.2**	0.10	mg/L	2024-06-27	
Strontium, dissolved	**0.360**	0.0010	mg/L	2024-06-27	
Sulfur, dissolved	< 3.0	3.0	mg/L	2024-06-27	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2024-06-27	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Tin, dissolved	< 0.00020	0.00020	mg/L	2024-06-27	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2024-06-27	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2024-06-27	
Uranium, dissolved	**0.000608**	0.000020	mg/L	2024-06-27	
Vanadium, dissolved	< 0.0050	0.0050	mg/L	2024-06-27	
Zinc, dissolved	**0.0042**	0.0040	mg/L	2024-06-27	
Zirconium, dissolved	**0.00015**	0.00010	mg/L	2024-06-27	
General Parameters					
Alkalinity, Total (as CaCO3)	**191**	1.0	mg/L	2024-06-27	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-06-27	
Alkalinity, Bicarbonate (as CaCO3)	**191**	1.0	mg/L	2024-06-27	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-06-27	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-06-27	
Ammonia, Total (as N)	**0.238**	0.050	mg/L	2024-06-28	
BOD, 5-day	< 3.2	2.0	mg/L	2024-07-02	
Carbon, Dissolved Organic	**14.8**	0.50	mg/L	2024-06-27	
Chemical Oxygen Demand	**56**	20	mg/L	2024-06-27	
Conductivity (EC)	**428**	2.0	µS/cm	2024-06-27	
pH	**6.80**	0.10	pH units	2024-06-27	HT2
Solids, Total Dissolved	**315**	10	mg/L	2024-06-27	
Sulfide, Total	< 0.020	0.020	mg/L	2024-06-26	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

Analyte	Result	RL	Units	Analyzed	Qualifier
SW1 (24F3072-05) | Matrix: Water | Sampled: 2024-06-24 08:00					
Anions					
Chloride	**8.68**	0.10	mg/L	2024-06-25	
Fluoride	< 0.10	0.10	mg/L	2024-06-25	
Nitrate (as N)	**0.076**	0.010	mg/L	2024-06-25	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-06-25	
Sulfate	**2.4**	1.0	mg/L	2024-06-25	
Calculated Parameters					
Hardness, Dissolved (as CaCO3)	**29.5**	0.500	mg/L	N/A	
Dissolved Metals					
Aluminum, dissolved	**0.0109**	0.0050	mg/L	2024-06-27	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2024-06-27	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Barium, dissolved	< 0.0050	0.0050	mg/L	2024-06-27	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Boron, dissolved	< 0.0500	0.0500	mg/L	2024-06-27	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2024-06-27	
Calcium, dissolved	**8.78**	0.20	mg/L	2024-06-27	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Cobalt, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Copper, dissolved	< 0.00040	0.00040	mg/L	2024-06-27	
Iron, dissolved	**0.242**	0.010	mg/L	2024-06-27	
Lead, dissolved	< 0.00020	0.00020	mg/L	2024-06-27	
Lithium, dissolved	**0.00034**	0.00010	mg/L	2024-06-27	
Magnesium, dissolved	**1.85**	0.010	mg/L	2024-06-27	
Manganese, dissolved	**0.0118**	0.00020	mg/L	2024-06-27	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2024-06-27	
Molybdenum, dissolved	**0.00011**	0.00010	mg/L	2024-06-27	
Nickel, dissolved	< 0.00040	0.00040	mg/L	2024-06-27	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2024-06-27	
Potassium, dissolved	**0.71**	0.10	mg/L	2024-06-27	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Silicon, dissolved	**5.5**	1.0	mg/L	2024-06-27	
Silver, dissolved	< 0.000050	0.000050	mg/L	2024-06-27	
Sodium, dissolved	**7.50**	0.10	mg/L	2024-06-27	
Strontium, dissolved	**0.0573**	0.0010	mg/L	2024-06-27	
Sulfur, dissolved	< 3.0	3.0	mg/L	2024-06-27	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2024-06-27	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Tin, dissolved	< 0.00020	0.00020	mg/L	2024-06-27	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2024-06-27	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2024-06-27	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

Analyte	Result	RL	Units	Analyzed	Qualifier
SW1 (24F3072-05) | Matrix: Water | Sampled: 2024-06-24 08:00, Continued					
Dissolved Metals, Continued					
Uranium, dissolved	< 0.000020	0.000020	mg/L	2024-06-27	
Vanadium, dissolved	< 0.0050	0.0050	mg/L	2024-06-27	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2024-06-27	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
General Parameters					
Alkalinity, Total (as CaCO3)	**31.4**	1.0	mg/L	2024-06-27	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-06-27	
Alkalinity, Bicarbonate (as CaCO3)	**31.4**	1.0	mg/L	2024-06-27	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-06-27	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-06-27	
Ammonia, Total (as N)	< 0.050	0.050	mg/L	2024-06-28	
BOD, 5-day	< 3.2	2.0	mg/L	2024-06-30	
Carbon, Dissolved Organic	**4.69**	0.50	mg/L	2024-06-27	
Chemical Oxygen Demand	**23**	20	mg/L	2024-06-27	
Conductivity (EC)	**97.4**	2.0	µS/cm	2024-06-27	
pH	**6.56**	0.10	pH units	2024-06-27	HT2
Solids, Total Dissolved	**58**	10	mg/L	2024-06-26	
Sulfide, Total	< 0.020	0.020	mg/L	2024-06-26	
Total Metals					
Aluminum, total	**0.134**	0.0050	mg/L	2024-06-26	
Antimony, total	< 0.00020	0.00020	mg/L	2024-06-26	
Arsenic, total	< 0.00050	0.00050	mg/L	2024-06-26	
Barium, total	< 0.0050	0.0050	mg/L	2024-06-26	
Beryllium, total	< 0.00010	0.00010	mg/L	2024-06-26	
Bismuth, total	< 0.00010	0.00010	mg/L	2024-06-26	
Boron, total	< 0.0500	0.0500	mg/L	2024-06-26	
Cadmium, total	< 0.000010	0.000010	mg/L	2024-06-26	
Calcium, total	**9.03**	0.20	mg/L	2024-06-26	
Chromium, total	< 0.00050	0.00050	mg/L	2024-06-26	
Cobalt, total	< 0.00010	0.00010	mg/L	2024-06-26	
Copper, total	**0.00048**	0.00040	mg/L	2024-06-26	
Iron, total	**0.612**	0.010	mg/L	2024-06-26	
Lead, total	< 0.00020	0.00020	mg/L	2024-06-26	
Lithium, total	**0.00038**	0.00010	mg/L	2024-06-26	
Magnesium, total	**1.97**	0.010	mg/L	2024-06-26	
Manganese, total	**0.0312**	0.00020	mg/L	2024-06-26	
Mercury, total	< 0.000010	0.000010	mg/L	2024-06-27	
Molybdenum, total	**0.00016**	0.00010	mg/L	2024-06-26	
Nickel, total	< 0.00040	0.00040	mg/L	2024-06-26	
Phosphorus, total	< 0.050	0.050	mg/L	2024-06-26	
Potassium, total	**0.81**	0.10	mg/L	2024-06-26	
Selenium, total	< 0.00050	0.00050	mg/L	2024-06-26	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

Analyte	Result	RL	Units	Analyzed	Qualifier
SW1 (24F3072-05) | Matrix: Water | Sampled: 2024-06-24 08:00, Continued					
Total Metals, Continued					
Silicon, total	**5.8**	1.0	mg/L	2024-06-26	
Silver, total	< 0.000050	0.000050	mg/L	2024-06-26	
Sodium, total	**7.27**	0.10	mg/L	2024-06-26	
Strontium, total	**0.0590**	0.0010	mg/L	2024-06-26	
Sulfur, total	< 3.0	3.0	mg/L	2024-06-26	
Tellurium, total	< 0.00050	0.00050	mg/L	2024-06-26	
Thallium, total	< 0.000020	0.000020	mg/L	2024-06-26	
Thorium, total	< 0.00010	0.00010	mg/L	2024-06-26	
Tin, total	< 0.00020	0.00020	mg/L	2024-06-26	
Titanium, total	**0.0062**	0.0050	mg/L	2024-06-26	
Tungsten, total	< 0.0010	0.0010	mg/L	2024-06-26	
Uranium, total	< 0.000020	0.000020	mg/L	2024-06-26	
Vanadium, total	< 0.0050	0.0050	mg/L	2024-06-26	
Zinc, total	< 0.0040	0.0040	mg/L	2024-06-26	
Zirconium, total	< 0.00010	0.00010	mg/L	2024-06-26	
SW2 (24F3072-06) | Matrix: Water | Sampled: 2024-06-24 08:40					
Anions					
Chloride	**9.32**	0.10	mg/L	2024-06-25	
Fluoride	< 0.10	0.10	mg/L	2024-06-25	
Nitrate (as N)	**0.106**	0.010	mg/L	2024-06-25	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-06-25	
Sulfate	**2.8**	1.0	mg/L	2024-06-25	
Calculated Parameters					
Hardness, Dissolved (as CaCO3)	**34.7**	0.500	mg/L	N/A	
Dissolved Metals					
Aluminum, dissolved	**0.0136**	0.0050	mg/L	2024-06-27	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2024-06-27	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Barium, dissolved	< 0.0050	0.0050	mg/L	2024-06-27	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Boron, dissolved	< 0.0500	0.0500	mg/L	2024-06-27	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2024-06-27	
Calcium, dissolved	**10.1**	0.20	mg/L	2024-06-27	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Cobalt, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Copper, dissolved	< 0.00040	0.00040	mg/L	2024-06-27	
Iron, dissolved	**0.193**	0.010	mg/L	2024-06-27	
Lead, dissolved	< 0.00020	0.00020	mg/L	2024-06-27	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

Analyte	Result	RL	Units	Analyzed	Qualifier
SW2 (24F3072-06) | Matrix: Water | Sampled: 2024-06-24 08:40, Continued					
Dissolved Metals, Continued					
Lithium, dissolved	**0.00045**	0.00010	mg/L	2024-06-27	
Magnesium, dissolved	**2.29**	0.010	mg/L	2024-06-27	
Manganese, dissolved	**0.00539**	0.00020	mg/L	2024-06-27	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2024-06-27	
Molybdenum, dissolved	**0.00012**	0.00010	mg/L	2024-06-27	
Nickel, dissolved	< 0.00040	0.00040	mg/L	2024-06-27	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2024-06-27	
Potassium, dissolved	**0.87**	0.10	mg/L	2024-06-27	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Silicon, dissolved	**6.8**	1.0	mg/L	2024-06-27	
Silver, dissolved	< 0.000050	0.000050	mg/L	2024-06-27	
Sodium, dissolved	**8.42**	0.10	mg/L	2024-06-27	
Strontium, dissolved	**0.0651**	0.0010	mg/L	2024-06-27	
Sulfur, dissolved	< 3.0	3.0	mg/L	2024-06-27	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2024-06-27	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Tin, dissolved	< 0.00020	0.00020	mg/L	2024-06-27	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2024-06-27	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2024-06-27	
Uranium, dissolved	< 0.000020	0.000020	mg/L	2024-06-27	
Vanadium, dissolved	< 0.0050	0.0050	mg/L	2024-06-27	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2024-06-27	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
General Parameters					
Alkalinity, Total (as CaCO3)	**33.1**	1.0	mg/L	2024-06-27	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-06-27	
Alkalinity, Bicarbonate (as CaCO3)	**33.1**	1.0	mg/L	2024-06-27	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-06-27	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-06-27	
Ammonia, Total (as N)	< 0.050	0.050	mg/L	2024-06-28	
BOD, 5-day	< 3.2	2.0	mg/L	2024-06-30	
Carbon, Dissolved Organic	**3.61**	0.50	mg/L	2024-06-27	
Chemical Oxygen Demand	< 20	20	mg/L	2024-06-27	
Conductivity (EC)	**109**	2.0	µS/cm	2024-06-27	
pH	**6.51**	0.10	pH units	2024-06-27	HT2
Solids, Total Dissolved	**85**	10	mg/L	2024-06-26	
Sulfide, Total	< 0.020	0.020	mg/L	2024-06-26	
Total Metals					
Aluminum, total	**0.177**	0.0050	mg/L	2024-06-26	
Antimony, total	< 0.00020	0.00020	mg/L	2024-06-26	
Arsenic, total	< 0.00050	0.00050	mg/L	2024-06-26	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

Analyte	Result	RL	Units	Analyzed	Qualifier
SW2 (24F3072-06) | Matrix: Water | Sampled: 2024-06-24 08:40, Continued					
Total Metals, Continued					
Barium, total	< 0.0050	0.0050	mg/L	2024-06-26	
Beryllium, total	< 0.00010	0.00010	mg/L	2024-06-26	
Bismuth, total	< 0.00010	0.00010	mg/L	2024-06-26	
Boron, total	< 0.0500	0.0500	mg/L	2024-06-26	
Cadmium, total	< 0.000010	0.000010	mg/L	2024-06-26	
Calcium, total	**10.1**	0.20	mg/L	2024-06-26	
Chromium, total	< 0.00050	0.00050	mg/L	2024-06-26	
Cobalt, total	< 0.00010	0.00010	mg/L	2024-06-26	
Copper, total	**0.00061**	0.00040	mg/L	2024-06-26	
Iron, total	**0.584**	0.010	mg/L	2024-06-26	
Lead, total	< 0.00020	0.00020	mg/L	2024-06-26	
Lithium, total	**0.00048**	0.00010	mg/L	2024-06-26	
Magnesium, total	**2.25**	0.010	mg/L	2024-06-26	
Manganese, total	**0.0282**	0.00020	mg/L	2024-06-26	
Mercury, total	< 0.000010	0.000010	mg/L	2024-06-27	
Molybdenum, total	**0.00017**	0.00010	mg/L	2024-06-26	
Nickel, total	< 0.00040	0.00040	mg/L	2024-06-26	
Phosphorus, total	< 0.050	0.050	mg/L	2024-06-26	
Potassium, total	**0.95**	0.10	mg/L	2024-06-26	
Selenium, total	< 0.00050	0.00050	mg/L	2024-06-26	
Silicon, total	**6.7**	1.0	mg/L	2024-06-26	
Silver, total	< 0.000050	0.000050	mg/L	2024-06-26	
Sodium, total	**7.82**	0.10	mg/L	2024-06-26	
Strontium, total	**0.0671**	0.0010	mg/L	2024-06-26	
Sulfur, total	< 3.0	3.0	mg/L	2024-06-26	
Tellurium, total	< 0.00050	0.00050	mg/L	2024-06-26	
Thallium, total	< 0.000020	0.000020	mg/L	2024-06-26	
Thorium, total	< 0.00010	0.00010	mg/L	2024-06-26	
Tin, total	< 0.00020	0.00020	mg/L	2024-06-26	
Titanium, total	**0.0087**	0.0050	mg/L	2024-06-26	
Tungsten, total	< 0.0010	0.0010	mg/L	2024-06-26	
Uranium, total	**0.000034**	0.000020	mg/L	2024-06-26	
Vanadium, total	< 0.0050	0.0050	mg/L	2024-06-26	
Zinc, total	< 0.0040	0.0040	mg/L	2024-06-26	
Zirconium, total	< 0.00010	0.00010	mg/L	2024-06-26	
SW3 (24F3072-07) | Matrix: Water | Sampled: 2024-06-24 08:30					
Anions					
Chloride	**9.24**	0.10	mg/L	2024-06-25	
Fluoride	< 0.10	0.10	mg/L	2024-06-25	
Nitrate (as N)	**0.108**	0.010	mg/L	2024-06-25	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-06-25	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

Analyte	Result	RL	Units	Analyzed	Qualifier
SW3 (24F3072-07) | Matrix: Water | Sampled: 2024-06-24 08:30, Continued					
Anions, Continued					
Sulfate	**3.4**	1.0	mg/L	2024-06-25	
Calculated Parameters					
Hardness, Dissolved (as CaCO3)	**37.8**	0.500	mg/L	N/A	
Dissolved Metals					
Aluminum, dissolved	**0.0137**	0.0050	mg/L	2024-06-28	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2024-06-27	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Barium, dissolved	< 0.0050	0.0050	mg/L	2024-06-27	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Boron, dissolved	< 0.0500	0.0500	mg/L	2024-06-27	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2024-06-27	
Calcium, dissolved	**11.1**	0.20	mg/L	2024-06-27	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Cobalt, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Copper, dissolved	< 0.00040	0.00040	mg/L	2024-06-27	
Iron, dissolved	**0.186**	0.010	mg/L	2024-06-27	
Lead, dissolved	< 0.00020	0.00020	mg/L	2024-06-27	
Lithium, dissolved	**0.00048**	0.00010	mg/L	2024-06-28	
Magnesium, dissolved	**2.47**	0.010	mg/L	2024-06-27	
Manganese, dissolved	**0.00679**	0.00020	mg/L	2024-06-27	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2024-06-27	
Molybdenum, dissolved	**0.00015**	0.00010	mg/L	2024-06-27	
Nickel, dissolved	< 0.00040	0.00040	mg/L	2024-06-27	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2024-06-27	
Potassium, dissolved	**0.98**	0.10	mg/L	2024-06-27	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Silicon, dissolved	**6.6**	1.0	mg/L	2024-06-28	
Silver, dissolved	< 0.000050	0.000050	mg/L	2024-06-27	
Sodium, dissolved	**9.10**	0.10	mg/L	2024-06-27	
Strontium, dissolved	**0.0708**	0.0010	mg/L	2024-06-27	
Sulfur, dissolved	< 3.0	3.0	mg/L	2024-06-27	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2024-06-27	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Tin, dissolved	< 0.00020	0.00020	mg/L	2024-06-27	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2024-06-27	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2024-06-27	
Uranium, dissolved	**0.000021**	0.000020	mg/L	2024-06-27	
Vanadium, dissolved	< 0.0050	0.0050	mg/L	2024-06-27	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2024-06-27	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

Analyte	Result	RL	Units	Analyzed	Qualifier
SW3 (24F3072-07) | Matrix: Water | Sampled: 2024-06-24 08:30, Continued					
General Parameters					
Alkalinity, Total (as CaCO3)	**38.5**	1.0	mg/L	2024-06-27	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-06-27	
Alkalinity, Bicarbonate (as CaCO3)	**38.5**	1.0	mg/L	2024-06-27	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-06-27	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-06-27	
Ammonia, Total (as N)	< 0.050	0.050	mg/L	2024-06-28	
BOD, 5-day	< 3.2	2.0	mg/L	2024-06-30	
Carbon, Dissolved Organic	**3.81**	0.50	mg/L	2024-06-27	
Chemical Oxygen Demand	**25**	20	mg/L	2024-06-27	
Conductivity (EC)	**120**	2.0	µS/cm	2024-06-27	
pH	**6.56**	0.10	pH units	2024-06-27	HT2
Solids, Total Dissolved	**72**	10	mg/L	2024-06-26	
Sulfide, Total	< 0.020	0.020	mg/L	2024-06-26	
Total Metals					
Aluminum, total	**0.224**	0.0050	mg/L	2024-06-27	
Antimony, total	< 0.00020	0.00020	mg/L	2024-06-27	
Arsenic, total	< 0.00050	0.00050	mg/L	2024-06-27	
Barium, total	**0.0053**	0.0050	mg/L	2024-06-27	
Beryllium, total	< 0.00010	0.00010	mg/L	2024-06-27	
Bismuth, total	< 0.00010	0.00010	mg/L	2024-06-27	
Boron, total	< 0.0500	0.0500	mg/L	2024-06-27	
Cadmium, total	< 0.000010	0.000010	mg/L	2024-06-27	
Calcium, total	**11.2**	0.20	mg/L	2024-06-27	
Chromium, total	< 0.00050	0.00050	mg/L	2024-06-27	
Cobalt, total	**0.00012**	0.00010	mg/L	2024-06-27	
Copper, total	**0.00064**	0.00040	mg/L	2024-06-27	
Iron, total	**0.667**	0.010	mg/L	2024-06-27	
Lead, total	< 0.00020	0.00020	mg/L	2024-06-27	
Lithium, total	**0.00054**	0.00010	mg/L	2024-06-27	
Magnesium, total	**2.42**	0.010	mg/L	2024-06-27	
Manganese, total	**0.0341**	0.00020	mg/L	2024-06-27	
Mercury, total	< 0.000010	0.000010	mg/L	2024-06-27	
Molybdenum, total	**0.00022**	0.00010	mg/L	2024-06-27	
Nickel, total	< 0.00040	0.00040	mg/L	2024-06-27	
Phosphorus, total	< 0.050	0.050	mg/L	2024-06-27	
Potassium, total	**1.13**	0.10	mg/L	2024-06-27	
Selenium, total	< 0.00050	0.00050	mg/L	2024-06-27	
Silicon, total	**6.8**	1.0	mg/L	2024-06-27	
Silver, total	< 0.000050	0.000050	mg/L	2024-06-27	
Sodium, total	**8.51**	0.10	mg/L	2024-06-27	
Strontium, total	**0.0735**	0.0010	mg/L	2024-06-27	
Sulfur, total	< 3.0	3.0	mg/L	2024-06-27	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

Analyte	Result	RL	Units	Analyzed	Qualifier
SW3 (24F3072-07) | Matrix: Water | Sampled: 2024-06-24 08:30, Continued					
Total Metals, Continued					
Tellurium, total	< 0.00050	0.00050	mg/L	2024-06-27	
Thallium, total	< 0.000020	0.000020	mg/L	2024-06-27	
Thorium, total	< 0.00010	0.00010	mg/L	2024-06-27	
Tin, total	< 0.00020	0.00020	mg/L	2024-06-27	
Titanium, total	**0.0103**	0.0050	mg/L	2024-06-27	
Tungsten, total	< 0.0010	0.0010	mg/L	2024-06-27	
Uranium, total	**0.000043**	0.000020	mg/L	2024-06-27	
Vanadium, total	< 0.0050	0.0050	mg/L	2024-06-27	
Zinc, total	< 0.0040	0.0040	mg/L	2024-06-27	
Zirconium, total	< 0.00010	0.00010	mg/L	2024-06-27	
SW4 (24F3072-08) | Matrix: Water | Sampled: 2024-06-24 12:15					
Anions					
Chloride	**9.82**	0.10	mg/L	2024-06-25	
Fluoride	< 0.10	0.10	mg/L	2024-06-25	
Nitrate (as N)	< 0.010	0.010	mg/L	2024-06-25	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-06-25	
Sulfate	**5.2**	1.0	mg/L	2024-06-25	
Calculated Parameters					
Hardness, Dissolved (as CaCO3)	**58.5**	0.500	mg/L	N/A	
Dissolved Metals					
Aluminum, dissolved	**0.0105**	0.0050	mg/L	2024-06-27	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2024-06-27	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Barium, dissolved	< 0.0050	0.0050	mg/L	2024-06-27	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Boron, dissolved	< 0.0500	0.0500	mg/L	2024-06-27	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2024-06-27	
Calcium, dissolved	**16.9**	0.20	mg/L	2024-06-27	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Cobalt, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Copper, dissolved	< 0.00040	0.00040	mg/L	2024-06-27	
Iron, dissolved	**0.199**	0.010	mg/L	2024-06-27	
Lead, dissolved	< 0.00020	0.00020	mg/L	2024-06-27	
Lithium, dissolved	**0.00126**	0.00010	mg/L	2024-06-27	
Magnesium, dissolved	**3.91**	0.010	mg/L	2024-06-27	
Manganese, dissolved	**0.0218**	0.00020	mg/L	2024-06-27	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2024-06-27	
Molybdenum, dissolved	**0.00014**	0.00010	mg/L	2024-06-28	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

Analyte	Result	RL	Units	Analyzed	Qualifier
SW4 (24F3072-08) | Matrix: Water | Sampled: 2024-06-24 12:15, Continued					
Dissolved Metals, Continued					
Nickel, dissolved	< 0.00040	0.00040	mg/L	2024-06-27	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2024-06-27	
Potassium, dissolved	**1.60**	0.10	mg/L	2024-06-27	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Silicon, dissolved	**12.3**	1.0	mg/L	2024-06-27	
Silver, dissolved	< 0.000050	0.000050	mg/L	2024-06-27	
Sodium, dissolved	**9.57**	0.10	mg/L	2024-06-27	
Strontium, dissolved	**0.0964**	0.0010	mg/L	2024-06-27	
Sulfur, dissolved	< 3.0	3.0	mg/L	2024-06-27	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2024-06-27	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Tin, dissolved	< 0.00020	0.00020	mg/L	2024-06-27	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2024-06-27	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2024-06-27	
Uranium, dissolved	**0.000036**	0.000020	mg/L	2024-06-28	
Vanadium, dissolved	< 0.0050	0.0050	mg/L	2024-06-27	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2024-06-27	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
General Parameters					
Alkalinity, Total (as CaCO3)	**59.6**	1.0	mg/L	2024-06-27	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-06-27	
Alkalinity, Bicarbonate (as CaCO3)	**59.6**	1.0	mg/L	2024-06-27	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-06-27	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-06-27	
Ammonia, Total (as N)	< 0.050	0.050	mg/L	2024-06-28	
BOD, 5-day	< 3.2	2.0	mg/L	2024-06-30	
Carbon, Dissolved Organic	**2.38**	0.50	mg/L	2024-06-27	
Chemical Oxygen Demand	**20**	20	mg/L	2024-06-27	
Conductivity (EC)	**162**	2.0	µS/cm	2024-06-27	
pH	**6.57**	0.10	pH units	2024-06-27	HT2
Solids, Total Dissolved	**55**	10	mg/L	2024-06-26	
Sulfide, Total	< 0.020	0.020	mg/L	2024-06-26	
Total Metals					
Aluminum, total	**0.0402**	0.0050	mg/L	2024-06-27	
Antimony, total	< 0.00020	0.00020	mg/L	2024-06-27	
Arsenic, total	< 0.00050	0.00050	mg/L	2024-06-27	
Barium, total	< 0.0050	0.0050	mg/L	2024-06-27	
Beryllium, total	< 0.00010	0.00010	mg/L	2024-06-27	
Bismuth, total	< 0.00010	0.00010	mg/L	2024-06-27	
Boron, total	< 0.0500	0.0500	mg/L	2024-06-27	
Cadmium, total	< 0.000010	0.000010	mg/L	2024-06-27	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

Analyte	Result	RL	Units	Analyzed	Qualifier
SW4 (24F3072-08) | Matrix: Water | Sampled: 2024-06-24 12:15, Continued					
Total Metals, Continued					
Calcium, total	**16.9**	0.20	mg/L	2024-06-27	
Chromium, total	< 0.00050	0.00050	mg/L	2024-06-27	
Cobalt, total	< 0.00010	0.00010	mg/L	2024-06-27	
Copper, total	< 0.00040	0.00040	mg/L	2024-06-27	
Iron, total	**0.376**	0.010	mg/L	2024-06-27	
Lead, total	< 0.00020	0.00020	mg/L	2024-06-27	
Lithium, total	**0.00108**	0.00010	mg/L	2024-06-27	
Magnesium, total	**3.85**	0.010	mg/L	2024-06-27	
Manganese, total	**0.0240**	0.00020	mg/L	2024-06-27	
Mercury, total	< 0.000010	0.000010	mg/L	2024-06-27	
Molybdenum, total	**0.00017**	0.00010	mg/L	2024-06-27	
Nickel, total	< 0.00040	0.00040	mg/L	2024-06-27	
Phosphorus, total	< 0.050	0.050	mg/L	2024-06-27	
Potassium, total	**1.76**	0.10	mg/L	2024-06-27	
Selenium, total	< 0.00050	0.00050	mg/L	2024-06-27	
Silicon, total	**12.0**	1.0	mg/L	2024-06-27	
Silver, total	< 0.000050	0.000050	mg/L	2024-06-27	
Sodium, total	**9.03**	0.10	mg/L	2024-06-27	
Strontium, total	**0.0991**	0.0010	mg/L	2024-06-27	
Sulfur, total	< 3.0	3.0	mg/L	2024-06-27	
Tellurium, total	< 0.00050	0.00050	mg/L	2024-06-27	
Thallium, total	< 0.000020	0.000020	mg/L	2024-06-27	
Thorium, total	< 0.00010	0.00010	mg/L	2024-06-27	
Tin, total	< 0.00020	0.00020	mg/L	2024-06-27	
Titanium, total	< 0.0050	0.0050	mg/L	2024-06-27	
Tungsten, total	< 0.0010	0.0010	mg/L	2024-06-27	
Uranium, total	**0.000039**	0.000020	mg/L	2024-06-27	
Vanadium, total	< 0.0050	0.0050	mg/L	2024-06-27	
Zinc, total	**0.0079**	0.0040	mg/L	2024-06-27	
Zirconium, total	< 0.00010	0.00010	mg/L	2024-06-27	
Dup 1 (24F3072-09) | Matrix: Water | Sampled: 2024-06-24 12:15					
Anions					
Chloride	**9.35**	0.10	mg/L	2024-06-25	
Fluoride	< 0.10	0.10	mg/L	2024-06-25	
Nitrate (as N)	**0.104**	0.010	mg/L	2024-06-25	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-06-25	
Sulfate	**2.8**	1.0	mg/L	2024-06-25	
Calculated Parameters					
Hardness, Dissolved (as CaCO3)	**33.8**	0.500	mg/L	N/A	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

Analyte	Result	RL	Units	Analyzed	Qualifier
Dup 1 (24F3072-09) | Matrix: Water | Sampled: 2024-06-24 12:15, Continued					
Dissolved Metals					
Aluminum, dissolved	**0.0118**	0.0050	mg/L	2024-06-27	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2024-06-27	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Barium, dissolved	< 0.0050	0.0050	mg/L	2024-06-27	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Boron, dissolved	< 0.0500	0.0500	mg/L	2024-06-27	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2024-06-27	
Calcium, dissolved	**9.86**	0.20	mg/L	2024-06-27	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Cobalt, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Copper, dissolved	< 0.00040	0.00040	mg/L	2024-06-27	
Iron, dissolved	**0.193**	0.010	mg/L	2024-06-27	
Lead, dissolved	< 0.00020	0.00020	mg/L	2024-06-27	
Lithium, dissolved	**0.00047**	0.00010	mg/L	2024-06-27	
Magnesium, dissolved	**2.22**	0.010	mg/L	2024-06-27	
Manganese, dissolved	**0.00547**	0.00020	mg/L	2024-06-27	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2024-06-27	
Molybdenum, dissolved	**0.00014**	0.00010	mg/L	2024-06-27	
Nickel, dissolved	< 0.00040	0.00040	mg/L	2024-06-27	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2024-06-27	
Potassium, dissolved	**0.91**	0.10	mg/L	2024-06-27	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Silicon, dissolved	**6.4**	1.0	mg/L	2024-06-27	
Silver, dissolved	< 0.000050	0.000050	mg/L	2024-06-27	
Sodium, dissolved	**7.91**	0.10	mg/L	2024-06-27	
Strontium, dissolved	**0.0692**	0.0010	mg/L	2024-06-27	
Sulfur, dissolved	< 3.0	3.0	mg/L	2024-06-27	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2024-06-27	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Tin, dissolved	< 0.00020	0.00020	mg/L	2024-06-27	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2024-06-27	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2024-06-27	
Uranium, dissolved	< 0.000020	0.000020	mg/L	2024-06-27	
Vanadium, dissolved	< 0.0050	0.0050	mg/L	2024-06-27	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2024-06-27	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
General Parameters					
Alkalinity, Total (as CaCO3)	**59.0**	1.0	mg/L	2024-06-28	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-06-28	
Alkalinity, Bicarbonate (as CaCO3)	**59.0**	1.0	mg/L	2024-06-28	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

Analyte	Result	RL	Units	Analyzed	Qualifier
Dup 1 (24F3072-09) | Matrix: Water | Sampled: 2024-06-24 12:15, Continued					
General Parameters, Continued					
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-06-28	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-06-28	
Ammonia, Total (as N)	< 0.050	0.050	mg/L	2024-06-28	
Conductivity (EC)	**162**	2.0	µS/cm	2024-06-28	
pH	**6.78**	0.10	pH units	2024-06-28	HT2
MW24-05 (24F3072-10) | Matrix: Water | Sampled: 2024-06-24 10:30					
Anions					
Chloride	**5.18**	0.10	mg/L	2024-06-26	
Fluoride	< 0.10	0.10	mg/L	2024-06-26	
Nitrate (as N)	< 0.010	0.010	mg/L	2024-06-26	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-06-26	
Sulfate	**6.9**	1.0	mg/L	2024-06-26	
Calculated Parameters					
Hardness, Dissolved (as CaCO3)	**97.3**	0.500	mg/L	N/A	
Dissolved Metals					
Aluminum, dissolved	**0.0831**	0.0050	mg/L	2024-06-27	
Antimony, dissolved	**0.00073**	0.00020	mg/L	2024-06-27	
Arsenic, dissolved	**0.00053**	0.00050	mg/L	2024-06-27	
Barium, dissolved	**0.0181**	0.0050	mg/L	2024-06-27	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Boron, dissolved	< 0.0500	0.0500	mg/L	2024-06-27	
Cadmium, dissolved	**0.00271**	0.000010	mg/L	2024-06-27	
Calcium, dissolved	**29.8**	0.20	mg/L	2024-06-27	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Cobalt, dissolved	**0.00482**	0.00010	mg/L	2024-06-27	
Copper, dissolved	**0.100**	0.00040	mg/L	2024-06-27	
Iron, dissolved	**0.869**	0.010	mg/L	2024-06-27	
Lead, dissolved	**0.00560**	0.00020	mg/L	2024-06-27	
Lithium, dissolved	**0.00033**	0.00010	mg/L	2024-06-27	
Magnesium, dissolved	**5.55**	0.010	mg/L	2024-06-27	
Manganese, dissolved	**0.0842**	0.00020	mg/L	2024-06-27	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2024-06-27	
Molybdenum, dissolved	**0.00064**	0.00010	mg/L	2024-06-27	
Nickel, dissolved	**0.00168**	0.00040	mg/L	2024-06-27	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2024-06-27	
Potassium, dissolved	**4.10**	0.10	mg/L	2024-06-27	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Silicon, dissolved	**10.8**	1.0	mg/L	2024-06-27	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

Analyte	Result	RL	Units	Analyzed	Qualifier
MW24-05 (24F3072-10) | Matrix: Water | Sampled: 2024-06-24 10:30, Continued					
Dissolved Metals, Continued					
Silver, dissolved	< 0.000050	0.000050	mg/L	2024-06-27	
Sodium, dissolved	**12.0**	0.10	mg/L	2024-06-27	
Strontium, dissolved	**0.146**	0.0010	mg/L	2024-06-27	
Sulfur, dissolved	**3.3**	3.0	mg/L	2024-06-27	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2024-06-27	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2024-06-27	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
Tin, dissolved	< 0.00020	0.00020	mg/L	2024-06-27	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2024-06-27	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2024-06-27	
Uranium, dissolved	**0.000210**	0.000020	mg/L	2024-06-27	
Vanadium, dissolved	< 0.0050	0.0050	mg/L	2024-06-27	
Zinc, dissolved	**0.0107**	0.0040	mg/L	2024-06-27	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2024-06-27	
General Parameters					
Alkalinity, Total (as CaCO3)	**103**	1.0	mg/L	2024-06-28	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-06-28	
Alkalinity, Bicarbonate (as CaCO3)	**103**	1.0	mg/L	2024-06-28	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-06-28	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-06-28	
Ammonia, Total (as N)	**0.131**	0.050	mg/L	2024-06-28	
BOD, 5-day	**17.1**	2.0	mg/L	2024-07-02	
Carbon, Dissolved Organic	**32.8**	0.50	mg/L	2024-06-28	
Chemical Oxygen Demand	**288**	20	mg/L	2024-06-27	
Conductivity (EC)	**236**	2.0	µS/cm	2024-06-28	
pH	**6.51**	0.10	pH units	2024-06-28	HT2
Solids, Total Dissolved	**252**	10	mg/L	2024-06-27	
Sulfide, Total	< 0.020	0.020	mg/L	2024-06-26	

Sample Qualifiers:

HT2 The 15 minute recommended holding time (from sampling to analysis) has been exceeded - field analysis is recommended.

RA1 The Reporting Limit for this sample has been raised due to matrix interference.

APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

Analysis Description	Method Ref.	Technique	Accredited	Location
Alkalinity in Water	SM 2320 B* (2021)	Titration with H2SO4	✓	Kelowna
Ammonia, Total in Water	SM 4500-NH3 G* (2021)	Automated Colorimetry (Phenate)	✓	Kelowna
Anions in Water	SM 4110 B (2020)	Ion Chromatography	✓	Richmond
Biochemical Oxygen Demand in Water	SM 5210 B (2019)	Dissolved Oxygen Meter	✓	Richmond
Carbon, Dissolved Organic in Water	SM 5310 B (2022)	Combustion, Infrared CO2 Detection	✓	Kelowna
Chemical Oxygen Demand in Water	SM 5220 D* (2022)	Closed Reflux, Colorimetry	✓	Kelowna
Conductivity in Water	SM 2510 B (2021)	Conductivity Meter	✓	Kelowna
Dissolved Metals in Water	EPA 200.8 / EPA 6020B	0.45 µm Filtration / Inductively Coupled Plasma-Mass Spectroscopy (ICP-MS)	✓	Richmond
Hardness in Water	SM 2340 B (2021)	Calculation: 2.497 [diss Ca] + 4.118 [diss Mg]	✓	N/A
Mercury, dissolved in Water	EPA 245.7*	BrCl2 Oxidation / Cold Vapor Atomic Fluorescence Spectrometry (CVAFS)	✓	Richmond
Mercury, total in Water	EPA 245.7*	BrCl2 Oxidation / Cold Vapor Atomic Fluorescence Spectrometry (CVAFS)	✓	Richmond
pH in Water	SM 4500-H+ B (2021)	Electrometry	✓	Kelowna
Solids, Total Dissolved in Water	SM 2540 C* (2020)	Gravimetry (Dried at 103-105C)		Richmond
Sulfide, Total in Water	SM 4500-S2 D* (2021)	Colorimetry (Methylene Blue)	✓	Edmonton
Total Metals in Water	EPA 200.2 / EPA 6020B	HNO3+HCl Hot Block Digestion / Inductively Coupled Plasma-Mass Spectroscopy (ICP-MS)	✓	Richmond

Note: An asterisk in the Method Reference indicates that the CARO method has been modified from the reference method

Glossary of Terms:

RL	Reporting Limit (default)
<	Less than the specified Reporting Limit (RL) - the actual RL may be higher than the default RL due to various factors
mg/L	Milligrams per litre
pH units	pH < 7 = acidic, ph > 7 = basic
µS/cm	Microsiemens per centimetre
EPA	United States Environmental Protection Agency Test Methods
SM	Standard Methods for the Examination of Water and Wastewater, American Public Health Association

APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

General Comments:

The results in this report apply to the received samples analyzed in accordance with the Chain of Custody document. This analytical report must be reproduced in its entirety. CARO is not responsible for any loss or damage resulting directly or indirectly from error or omission in the conduct of testing. Liability is limited to the cost of analysis. Caro will dispose of all samples within 30 days of sample receipt, unless otherwise agreed.

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APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

The following section displays the quality control (QC) data that is associated with your sample data. Groups of samples are prepared in "batches" and analyzed in conjunction with QC samples that ensure your data is of the highest quality. Common QC types include:

- **Method Blank (Blk)**: A blank sample that undergoes sample processing identical to that carried out for the test samples. Method blank results are used to assess contamination from the laboratory environment and reagents.
- **Duplicate (Dup)**: An additional or second portion of a randomly selected sample in the analytical run carried through the entire analytical process. Duplicates provide a measure of the analytical method's precision (reproducibility).
- **Blank Spike (BS)**: A sample of known concentration which undergoes processing identical to that carried out for test samples, also referred to as a laboratory control sample (LCS). Blank spikes provide a measure of the analytical method's accuracy.
- **Matrix Spike (MS)**: A second aliquot of sample is fortified with a known concentration of target analytes and carried through the entire analytical process. Matrix spikes evaluate potential matrix effects that may affect the analyte recovery.
- **Reference Material (SRM)**: A homogenous material of similar matrix to the samples, certified for the parameter(s) listed. Reference Materials ensure that the analytical process is adequate to achieve acceptable recoveries of the parameter(s) tested.

Each QC type is analyzed at a 5-10% frequency, i.e. one blank/duplicate/spike for every 10-20 samples. For all types of QC, the specified recovery (% Rec) and relative percent difference (RPD) limits are derived from long-term method performance averages and/or prescribed by the reference method.

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Anions, Batch B4F4078										
Blank (B4F4078-BLK1)				Prepared: 2024-06-25, Analyzed: 2024-06-25						
Chloride	< 0.10	0.10	mg/L							
Fluoride	< 0.10	0.10	mg/L							
Nitrate (as N)	< 0.010	0.010	mg/L							
Nitrite (as N)	< 0.010	0.010	mg/L							
Sulfate	< 1.0	1.0	mg/L							
LCS (B4F4078-BS1)				Prepared: 2024-06-25, Analyzed: 2024-06-25						
Chloride	2.82	0.10	mg/L	3.00		94	85-115			
Fluoride	1.93	0.10	mg/L	2.00		97	85-115			
Nitrate (as N)	2.85	0.010	mg/L	3.00		95	85-115			
Nitrite (as N)	2.94	0.010	mg/L	3.00		98	85-115			
Sulfate	13.3	1.0	mg/L	15.0		89	85-115			
Duplicate (B4F4078-DUP1)		**Source: 24F3072-01**		Prepared: 2024-06-25, Analyzed: 2024-06-25						
Chloride	6.08	0.10	mg/L		6.03			< 1	20	
Fluoride	< 0.10	0.10	mg/L		< 0.10				20	
Nitrate (as N)	0.263	0.010	mg/L		0.264			< 1	20	
Nitrite (as N)	< 0.010	0.010	mg/L		< 0.010				20	
Sulfate	5.1	1.0	mg/L		5.1			< 1	20	
Matrix Spike (B4F4078-MS1)		**Source: 24F3072-01**		Prepared: 2024-06-25, Analyzed: 2024-06-25						
Chloride	8.85	0.10	mg/L	3.00	6.03	94	75-125			
Fluoride	1.91	0.10	mg/L	2.00	< 0.10	95	75-125			
Nitrate (as N)	3.08	0.010	mg/L	3.00	0.264	94	75-125			
Nitrite (as N)	2.98	0.010	mg/L	3.00	< 0.010	99	75-125			
Sulfate	18.1	1.0	mg/L	15.0	5.1	86	75-125			
Anions, Batch B4F4203										
Blank (B4F4203-BLK1)				Prepared: 2024-06-26, Analyzed: 2024-06-26						
Chloride	< 0.10	0.10	mg/L							
Fluoride	< 0.10	0.10	mg/L							
Nitrate (as N)	< 0.010	0.010	mg/L							
Nitrite (as N)	< 0.010	0.010	mg/L							
Sulfate	< 1.0	1.0	mg/L							

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Anions, Batch B4F4203, Continued										
LCS (B4F4203-BS1)				Prepared: 2024-06-26, Analyzed: 2024-06-26						
Chloride	2.92	0.10	mg/L	3.00		97	85-115			
Fluoride	2.01	0.10	mg/L	2.00		100	85-115			
Nitrate (as N)	2.92	0.010	mg/L	3.00		97	85-115			
Nitrite (as N)	3.09	0.010	mg/L	3.00		103	85-115			
Sulfate	13.4	1.0	mg/L	15.0		89	85-115			
Duplicate (B4F4203-DUP1)				**Source: 24F3072-10**	Prepared: 2024-06-26, Analyzed: 2024-06-26					
Chloride	5.21	0.10	mg/L		5.18			< 1	20	
Fluoride	< 0.10	0.10	mg/L		< 0.10				20	
Nitrate (as N)	< 0.010	0.010	mg/L		< 0.010				20	
Nitrite (as N)	< 0.010	0.010	mg/L		< 0.010				20	
Sulfate	7.2	1.0	mg/L		6.9			5	20	
Matrix Spike (B4F4203-MS1)				**Source: 24F3072-10**	Prepared: 2024-06-26, Analyzed: 2024-06-26					
Chloride	7.98	0.10	mg/L	3.00	5.18	93	75-125			
Fluoride	2.00	0.10	mg/L	2.00	< 0.10	99	75-125			
Nitrate (as N)	2.82	0.010	mg/L	3.00	< 0.010	94	75-125			
Nitrite (as N)	3.00	0.010	mg/L	3.00	< 0.010	100	75-125			
Sulfate	19.7	1.0	mg/L	15.0	6.9	86	75-125			
Dissolved Metals, Batch B4F4241										
Blank (B4F4241-BLK1)				Prepared: 2024-06-27, Analyzed: 2024-06-27						
Aluminum, dissolved	< 0.0050	0.0050	mg/L							
Antimony, dissolved	< 0.00020	0.00020	mg/L							
Arsenic, dissolved	< 0.00050	0.00050	mg/L							
Barium, dissolved	< 0.0050	0.0050	mg/L							
Beryllium, dissolved	< 0.00010	0.00010	mg/L							
Bismuth, dissolved	< 0.00010	0.00010	mg/L							
Boron, dissolved	< 0.0500	0.0500	mg/L							
Cadmium, dissolved	< 0.000010	0.000010	mg/L							
Calcium, dissolved	< 0.20	0.20	mg/L							
Chromium, dissolved	< 0.00050	0.00050	mg/L							
Cobalt, dissolved	< 0.00010	0.00010	mg/L							
Copper, dissolved	< 0.00040	0.00040	mg/L							
Iron, dissolved	< 0.010	0.010	mg/L							
Lead, dissolved	< 0.00020	0.00020	mg/L							
Lithium, dissolved	< 0.00010	0.00010	mg/L							
Magnesium, dissolved	< 0.010	0.010	mg/L							
Manganese, dissolved	< 0.00020	0.00020	mg/L							
Molybdenum, dissolved	< 0.00010	0.00010	mg/L							
Nickel, dissolved	< 0.00040	0.00040	mg/L							
Phosphorus, dissolved	< 0.050	0.050	mg/L							
Potassium, dissolved	< 0.10	0.10	mg/L							
Selenium, dissolved	< 0.00050	0.00050	mg/L							
Silicon, dissolved	< 1.0	1.0	mg/L							
Silver, dissolved	< 0.000050	0.000050	mg/L							
Sodium, dissolved	< 0.10	0.10	mg/L							
Strontium, dissolved	< 0.0010	0.0010	mg/L							
Sulfur, dissolved	< 3.0	3.0	mg/L							
Tellurium, dissolved	< 0.00050	0.00050	mg/L							
Thallium, dissolved	< 0.000020	0.000020	mg/L							
Thorium, dissolved	< 0.00010	0.00010	mg/L							
Tin, dissolved	< 0.00020	0.00020	mg/L							
Titanium, dissolved	< 0.0050	0.0050	mg/L							
Tungsten, dissolved	< 0.0010	0.0010	mg/L							

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Dissolved Metals, Batch B4F4241, Continued										
Blank (B4F4241-BLK1), Continued				Prepared: 2024-06-27, Analyzed: 2024-06-27						
Uranium, dissolved	< 0.000020	0.000020	mg/L							
Vanadium, dissolved	< 0.0050	0.0050	mg/L							
Zinc, dissolved	< 0.0040	0.0040	mg/L							
Zirconium, dissolved	< 0.00010	0.00010	mg/L							
LCS (B4F4241-BS1)				Prepared: 2024-06-27, Analyzed: 2024-06-27						
Aluminum, dissolved	4.19	0.0050	mg/L	4.00		105	80-120			
Antimony, dissolved	0.0412	0.00020	mg/L	0.0400		103	80-120			
Arsenic, dissolved	0.407	0.00050	mg/L	0.400		102	80-120			
Barium, dissolved	0.0406	0.0050	mg/L	0.0400		101	80-120			
Beryllium, dissolved	0.0434	0.00010	mg/L	0.0400		109	80-120			
Bismuth, dissolved	0.0396	0.00010	mg/L	0.0400		99	80-120			
Boron, dissolved	0.435	0.0500	mg/L	0.400		109	80-120			
Cadmium, dissolved	0.0409	0.000010	mg/L	0.0400		102	80-120			
Calcium, dissolved	4.06	0.20	mg/L	4.00		102	80-120			
Chromium, dissolved	0.0406	0.00050	mg/L	0.0400		102	80-120			
Cobalt, dissolved	0.0416	0.00010	mg/L	0.0400		104	80-120			
Copper, dissolved	0.0407	0.00040	mg/L	0.0400		102	80-120			
Iron, dissolved	4.21	0.010	mg/L	4.00		105	80-120			
Lead, dissolved	0.0394	0.00020	mg/L	0.0400		98	80-120			
Lithium, dissolved	0.0444	0.00010	mg/L	0.0400		111	80-120			
Magnesium, dissolved	4.16	0.010	mg/L	4.00		104	80-120			
Manganese, dissolved	0.0416	0.00020	mg/L	0.0400		104	80-120			
Molybdenum, dissolved	0.0407	0.00010	mg/L	0.0400		102	80-120			
Nickel, dissolved	0.0403	0.00040	mg/L	0.0400		101	80-120			
Phosphorus, dissolved	4.17	0.050	mg/L	4.00		104	80-120			
Potassium, dissolved	4.17	0.10	mg/L	4.00		104	80-120			
Selenium, dissolved	0.411	0.00050	mg/L	0.400		103	80-120			
Silicon, dissolved	4.2	1.0	mg/L	4.00		104	80-120			
Silver, dissolved	0.0410	0.000050	mg/L	0.0400		102	80-120			
Sodium, dissolved	4.18	0.10	mg/L	4.00		105	80-120			
Strontium, dissolved	0.0404	0.0010	mg/L	0.0400		101	80-120			
Sulfur, dissolved	41.0	3.0	mg/L	40.0		102	80-120			
Tellurium, dissolved	0.0404	0.00050	mg/L	0.0400		101	80-120			
Thallium, dissolved	0.0395	0.000020	mg/L	0.0400		99	80-120			
Thorium, dissolved	0.0390	0.00010	mg/L	0.0400		97	80-120			
Tin, dissolved	0.0416	0.00020	mg/L	0.0400		104	80-120			
Titanium, dissolved	0.0400	0.0050	mg/L	0.0400		100	80-120			
Tungsten, dissolved	0.0397	0.0010	mg/L	0.0400		99	80-120			
Uranium, dissolved	0.0399	0.000020	mg/L	0.0400		100	80-120			
Vanadium, dissolved	0.0408	0.0050	mg/L	0.0400		102	80-120			
Zinc, dissolved	0.412	0.0040	mg/L	0.400		103	80-120			
Zirconium, dissolved	0.0392	0.00010	mg/L	0.0400		98	80-120			
Dissolved Metals, Batch B4F4243										
Blank (B4F4243-BLK1)				Prepared: 2024-06-27, Analyzed: 2024-06-27						
Aluminum, dissolved	< 0.0050	0.0050	mg/L							
Antimony, dissolved	< 0.00020	0.00020	mg/L							
Arsenic, dissolved	< 0.00050	0.00050	mg/L							
Barium, dissolved	< 0.0050	0.0050	mg/L							
Beryllium, dissolved	< 0.00010	0.00010	mg/L							
Bismuth, dissolved	< 0.00010	0.00010	mg/L							
Boron, dissolved	< 0.0500	0.0500	mg/L							
Cadmium, dissolved	< 0.000010	0.000010	mg/L							
Calcium, dissolved	< 0.20	0.20	mg/L							

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Dissolved Metals, Batch B4F4243, Continued										
Blank (B4F4243-BLK1), Continued				Prepared: 2024-06-27, Analyzed: 2024-06-27						
Chromium, dissolved	< 0.00050	0.00050	mg/L							
Cobalt, dissolved	< 0.00010	0.00010	mg/L							
Copper, dissolved	< 0.00040	0.00040	mg/L							
Iron, dissolved	< 0.010	0.010	mg/L							
Lead, dissolved	< 0.00020	0.00020	mg/L							
Lithium, dissolved	< 0.00010	0.00010	mg/L							
Magnesium, dissolved	< 0.010	0.010	mg/L							
Manganese, dissolved	< 0.00020	0.00020	mg/L							
Molybdenum, dissolved	< 0.00010	0.00010	mg/L							
Nickel, dissolved	< 0.00040	0.00040	mg/L							
Phosphorus, dissolved	< 0.050	0.050	mg/L							
Potassium, dissolved	< 0.10	0.10	mg/L							
Selenium, dissolved	< 0.00050	0.00050	mg/L							
Silicon, dissolved	< 1.0	1.0	mg/L							
Silver, dissolved	< 0.000050	0.000050	mg/L							
Sodium, dissolved	< 0.10	0.10	mg/L							
Strontium, dissolved	< 0.0010	0.0010	mg/L							
Sulfur, dissolved	< 3.0	3.0	mg/L							
Tellurium, dissolved	< 0.00050	0.00050	mg/L							
Thallium, dissolved	< 0.000020	0.000020	mg/L							
Thorium, dissolved	< 0.00010	0.00010	mg/L							
Tin, dissolved	< 0.00020	0.00020	mg/L							
Titanium, dissolved	< 0.0050	0.0050	mg/L							
Tungsten, dissolved	< 0.0010	0.0010	mg/L							
Uranium, dissolved	< 0.000020	0.000020	mg/L							
Vanadium, dissolved	< 0.0050	0.0050	mg/L							
Zinc, dissolved	< 0.0040	0.0040	mg/L							
Zirconium, dissolved	< 0.00010	0.00010	mg/L							
LCS (B4F4243-BS1)				Prepared: 2024-06-27, Analyzed: 2024-06-27						
Aluminum, dissolved	4.40	0.0050	mg/L	4.00		110	80-120			
Antimony, dissolved	0.0401	0.00020	mg/L	0.0400		100	80-120			
Arsenic, dissolved	0.398	0.00050	mg/L	0.400		100	80-120			
Barium, dissolved	0.0392	0.0050	mg/L	0.0400		98	80-120			
Beryllium, dissolved	0.0404	0.00010	mg/L	0.0400		101	80-120			
Bismuth, dissolved	0.0404	0.00010	mg/L	0.0400		101	80-120			
Boron, dissolved	0.402	0.0500	mg/L	0.400		101	80-120			
Cadmium, dissolved	0.0403	0.000010	mg/L	0.0400		101	80-120			
Calcium, dissolved	4.07	0.20	mg/L	4.00		102	80-120			
Chromium, dissolved	0.0402	0.00050	mg/L	0.0400		101	80-120			
Cobalt, dissolved	0.0404	0.00010	mg/L	0.0400		101	80-120			
Copper, dissolved	0.0398	0.00040	mg/L	0.0400		99	80-120			
Iron, dissolved	4.06	0.010	mg/L	4.00		102	80-120			
Lead, dissolved	0.0402	0.00020	mg/L	0.0400		100	80-120			
Lithium, dissolved	0.0408	0.00010	mg/L	0.0400		102	80-120			
Magnesium, dissolved	4.11	0.010	mg/L	4.00		103	80-120			
Manganese, dissolved	0.0404	0.00020	mg/L	0.0400		101	80-120			
Molybdenum, dissolved	0.0397	0.00010	mg/L	0.0400		99	80-120			
Nickel, dissolved	0.0402	0.00040	mg/L	0.0400		101	80-120			
Phosphorus, dissolved	4.08	0.050	mg/L	4.00		102	80-120			
Potassium, dissolved	4.15	0.10	mg/L	4.00		104	80-120			
Selenium, dissolved	0.396	0.00050	mg/L	0.400		99	80-120			
Silicon, dissolved	4.4	1.0	mg/L	4.00		109	80-120			
Silver, dissolved	0.0398	0.000050	mg/L	0.0400		99	80-120			
Sodium, dissolved	4.32	0.10	mg/L	4.00		108	80-120			
Strontium, dissolved	0.0406	0.0010	mg/L	0.0400		102	80-120			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Dissolved Metals, Batch B4F4243, Continued										
LCS (B4F4243-BS1), Continued				Prepared: 2024-06-27, Analyzed: 2024-06-27						
Sulfur, dissolved	42.7	3.0	mg/L	40.0		107	80-120			
Tellurium, dissolved	0.0387	0.00050	mg/L	0.0400		97	80-120			
Thallium, dissolved	0.0404	0.000020	mg/L	0.0400		101	80-120			
Thorium, dissolved	0.0395	0.00010	mg/L	0.0400		99	80-120			
Tin, dissolved	0.0403	0.00020	mg/L	0.0400		101	80-120			
Titanium, dissolved	0.0408	0.0050	mg/L	0.0400		102	80-120			
Tungsten, dissolved	0.0397	0.0010	mg/L	0.0400		99	80-120			
Uranium, dissolved	0.0408	0.000020	mg/L	0.0400		102	80-120			
Vanadium, dissolved	0.0408	0.0050	mg/L	0.0400		102	80-120			
Zinc, dissolved	0.401	0.0040	mg/L	0.400		100	80-120			
Zirconium, dissolved	0.0390	0.00010	mg/L	0.0400		97	80-120			
Dissolved Metals, Batch B4F4383										
Duplicate (B4F4383-DUP6)		**Source: 24F3072-09**		Prepared: 2024-06-27, Analyzed: 2024-06-27						
Mercury, dissolved	< 0.000010	0.000010	mg/L		< 0.000010				20	
General Parameters, Batch B4F3938										
Blank (B4F3938-BLK1)				Prepared: 2024-06-24, Analyzed: 2024-06-27						
Carbon, Dissolved Organic	< 0.50	0.50	mg/L							
Blank (B4F3938-BLK2)				Prepared: 2024-06-24, Analyzed: 2024-06-27						
Carbon, Dissolved Organic	< 0.50	0.50	mg/L							
Blank (B4F3938-BLK3)				Prepared: 2024-06-24, Analyzed: 2024-06-27						
Carbon, Dissolved Organic	< 0.50	0.50	mg/L							
Blank (B4F3938-BLK4)				Prepared: 2024-06-27, Analyzed: 2024-06-27						
Carbon, Dissolved Organic	< 0.50	0.50	mg/L							
LCS (B4F3938-BS1)				Prepared: 2024-06-24, Analyzed: 2024-06-27						
Carbon, Dissolved Organic	10.4	0.50	mg/L	10.0		104	78-116			
LCS (B4F3938-BS2)				Prepared: 2024-06-24, Analyzed: 2024-06-27						
Carbon, Dissolved Organic	10.7	0.50	mg/L	10.0		107	78-116			
LCS (B4F3938-BS3)				Prepared: 2024-06-24, Analyzed: 2024-06-27						
Carbon, Dissolved Organic	10.6	0.50	mg/L	10.0		106	78-116			
LCS (B4F3938-BS4)				Prepared: 2024-06-27, Analyzed: 2024-06-27						
Carbon, Dissolved Organic	10.4	0.50	mg/L	10.0		104	78-116			
General Parameters, Batch B4F4114										
Blank (B4F4114-BLK1)				Prepared: 2024-06-25, Analyzed: 2024-06-30						
BOD, 5-day	< 2.0	2.0	mg/L							
LCS (B4F4114-BS1)				Prepared: 2024-06-25, Analyzed: 2024-06-30						
BOD, 5-day	183	63.1	mg/L	198		92	85-115			
Reference (B4F4114-SRM1)				Prepared: 2024-06-25, Analyzed: 2024-06-30						
BOD, 5-day	292	105	mg/L	500		58	85-115			SPK1
General Parameters, Batch B4F4181										

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
General Parameters, Batch B4F4181, Continued										
Blank (B4F4181-BLK1)				Prepared: 2024-06-26, Analyzed: 2024-06-26						
Solids, Total Dissolved	< 10	10	mg/L							
LCS (B4F4181-BS1)				Prepared: 2024-06-26, Analyzed: 2024-06-26						
Solids, Total Dissolved	52	10	mg/L	51.0		102	85-115			
LCS (B4F4181-BS2)				Prepared: 2024-06-26, Analyzed: 2024-06-26						
Solids, Total Dissolved	212	10	mg/L	203		105	85-115			
Duplicate (B4F4181-DUP1)		**Source: 24F3072-08**		Prepared: 2024-06-26, Analyzed: 2024-06-26						
Solids, Total Dissolved	52	10	mg/L		55			5	20	
General Parameters, Batch B4F4262										
Blank (B4F4262-BLK1)				Prepared: 2024-06-26, Analyzed: 2024-06-26						
Sulfide, Total	< 0.020	0.020	mg/L							
LCS (B4F4262-BS1)				Prepared: 2024-06-26, Analyzed: 2024-06-26						
Sulfide, Total	0.521	0.020	mg/L	0.530		98	80-120			
General Parameters, Batch B4F4306										
Blank (B4F4306-BLK1)				Prepared: 2024-06-27, Analyzed: 2024-07-02						
BOD, 5-day	< 2.0	2.0	mg/L							
LCS (B4F4306-BS1)				Prepared: 2024-06-27, Analyzed: 2024-07-02						
BOD, 5-day	160	63.0	mg/L	198		81	85-115			SPK1
Reference (B4F4306-SRM1)				Prepared: 2024-06-27, Analyzed: 2024-07-02						
BOD, 5-day	460	105	mg/L	500		92	85-115			
General Parameters, Batch B4F4320										
Blank (B4F4320-BLK1)				Prepared: 2024-06-27, Analyzed: 2024-06-27						
Solids, Total Dissolved	< 10	10	mg/L							
LCS (B4F4320-BS1)				Prepared: 2024-06-27, Analyzed: 2024-06-27						
Solids, Total Dissolved	55	10	mg/L	51.0		108	85-115			
LCS (B4F4320-BS2)				Prepared: 2024-06-27, Analyzed: 2024-06-27						
Solids, Total Dissolved	220	10	mg/L	203		108	85-115			
Duplicate (B4F4320-DUP1)		**Source: 24F3072-10**		Prepared: 2024-06-27, Analyzed: 2024-06-27						
Solids, Total Dissolved	302	10	mg/L		252			18	20	
General Parameters, Batch B4F4355										
Blank (B4F4355-BLK1)				Prepared: 2024-06-27, Analyzed: 2024-06-27						
Alkalinity, Total (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L							
Conductivity (EC)	< 1.0	1.0	µS/cm							

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
General Parameters, Batch B4F4355, Continued										
Blank (B4F4355-BLK2)				Prepared: 2024-06-27, Analyzed: 2024-06-27						
Alkalinity, Total (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L							
Conductivity (EC)	< 1.0	1.0	µS/cm							
LCS (B4F4355-BS1)				Prepared: 2024-06-27, Analyzed: 2024-06-27						
Alkalinity, Total (as CaCO3)	96.0	1.0	mg/L	100		96	80-120			
Alkalinity, Phenolphthalein (as CaCO3)	70.9	1.0	mg/L	50.0		142	0-200			
LCS (B4F4355-BS2)				Prepared: 2024-06-27, Analyzed: 2024-06-27						
Conductivity (EC)	1430	1.0	µS/cm	1410		101	95-105			
LCS (B4F4355-BS3)				Prepared: 2024-06-27, Analyzed: 2024-06-27						
Alkalinity, Total (as CaCO3)	96.1	1.0	mg/L	100		96	80-120			
Alkalinity, Phenolphthalein (as CaCO3)	49.9	1.0	mg/L	50.0		100	0-200			
LCS (B4F4355-BS4)				Prepared: 2024-06-27, Analyzed: 2024-06-27						
Conductivity (EC)	1420	1.0	µS/cm	1410		101	95-105			
Duplicate (B4F4355-DUP2)		**Source: 24F3072-08**		Prepared: 2024-06-27, Analyzed: 2024-06-27						
Alkalinity, Total (as CaCO3)	57.4	1.0	mg/L		59.6			4	10	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L		< 1.0				10	
Alkalinity, Bicarbonate (as CaCO3)	57.4	1.0	mg/L		59.6			4	10	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L		< 1.0				10	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L		< 1.0				10	
Conductivity (EC)	162	2.0	µS/cm		162			< 1	5	
pH	6.59	0.10	pH units		6.57			< 1	4	HT2
Reference (B4F4355-SRM1)				Prepared: 2024-06-27, Analyzed: 2024-06-27						
pH	7.02	0.10	pH units	7.01		100	98-102			
Reference (B4F4355-SRM2)				Prepared: 2024-06-27, Analyzed: 2024-06-27						
pH	7.02	0.10	pH units	7.01		100	98-102			
General Parameters, Batch B4F4380										
Blank (B4F4380-BLK1)				Prepared: 2024-06-27, Analyzed: 2024-06-27						
Chemical Oxygen Demand	< 20	20	mg/L							
LCS (B4F4380-BS1)				Prepared: 2024-06-27, Analyzed: 2024-06-27						
Chemical Oxygen Demand	505	20	mg/L	500		101	89-115			
General Parameters, Batch B4F4387										
Blank (B4F4387-BLK1)				Prepared: 2024-06-28, Analyzed: 2024-06-28						
Ammonia, Total (as N)	< 0.050	0.050	mg/L							
Blank (B4F4387-BLK2)				Prepared: 2024-06-28, Analyzed: 2024-06-28						
Ammonia, Total (as N)	< 0.050	0.050	mg/L							
Blank (B4F4387-BLK3)				Prepared: 2024-06-28, Analyzed: 2024-06-28						
Ammonia, Total (as N)	< 0.050	0.050	mg/L							
LCS (B4F4387-BS1)				Prepared: 2024-06-28, Analyzed: 2024-06-28						
Ammonia, Total (as N)	0.909	0.050	mg/L	1.00		91	85-115			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
General Parameters, Batch B4F4387, Continued										
LCS (B4F4387-BS2)				Prepared: 2024-06-28, Analyzed: 2024-06-28						
Ammonia, Total (as N)	0.889	0.050	mg/L	1.00		89	85-115			
LCS (B4F4387-BS3)				Prepared: 2024-06-28, Analyzed: 2024-06-28						
Ammonia, Total (as N)	0.848	0.050	mg/L	1.00		85	85-115			
General Parameters, Batch B4F4422										
Blank (B4F4422-BLK1)				Prepared: 2024-06-28, Analyzed: 2024-06-28						
Alkalinity, Total (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L							
Conductivity (EC)	< 2.0	2.0	µS/cm							
Blank (B4F4422-BLK2)				Prepared: 2024-06-28, Analyzed: 2024-06-28						
Alkalinity, Total (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L							
Conductivity (EC)	< 2.0	2.0	µS/cm							
Blank (B4F4422-BLK3)				Prepared: 2024-06-28, Analyzed: 2024-06-28						
Alkalinity, Total (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L							
Conductivity (EC)	< 2.0	2.0	µS/cm							
LCS (B4F4422-BS1)				Prepared: 2024-06-28, Analyzed: 2024-06-28						
Alkalinity, Total (as CaCO3)	97.9	1.0	mg/L	100		98	80-120			
Alkalinity, Phenolphthalein (as CaCO3)	61.2	1.0	mg/L	50.0		122	0-200			
LCS (B4F4422-BS2)				Prepared: 2024-06-28, Analyzed: 2024-06-28						
Conductivity (EC)	1420	2.0	µS/cm	1410		101	95-105			
LCS (B4F4422-BS3)				Prepared: 2024-06-28, Analyzed: 2024-06-28						
Alkalinity, Total (as CaCO3)	96.6	1.0	mg/L	100		97	80-120			
Alkalinity, Phenolphthalein (as CaCO3)	71.5	1.0	mg/L	50.0		143	0-200			
LCS (B4F4422-BS4)				Prepared: 2024-06-28, Analyzed: 2024-06-28						
Conductivity (EC)	1420	2.0	µS/cm	1410		101	95-105			
LCS (B4F4422-BS5)				Prepared: 2024-06-28, Analyzed: 2024-06-28						
Alkalinity, Total (as CaCO3)	98.0	1.0	mg/L	100		98	80-120			
Alkalinity, Phenolphthalein (as CaCO3)	59.8	1.0	mg/L	50.0		120	0-200			
LCS (B4F4422-BS6)				Prepared: 2024-06-28, Analyzed: 2024-06-28						
Conductivity (EC)	1420	2.0	µS/cm	1410		101	95-105			
Reference (B4F4422-SRM1)				Prepared: 2024-06-28, Analyzed: 2024-06-28						
pH	7.02	0.10	pH units	7.01		100	98-102			
Reference (B4F4422-SRM2)				Prepared: 2024-06-28, Analyzed: 2024-06-28						
pH	7.02	0.10	pH units	7.01		100	98-102			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
General Parameters, Batch B4F4422, Continued										
Reference (B4F4422-SRM3)				Prepared: 2024-06-28, Analyzed: 2024-06-28						
pH	7.03	0.10	pH units	7.01		100	98-102			
Total Metals, Batch B4F4222										
Blank (B4F4222-BLK1)				Prepared: 2024-06-26, Analyzed: 2024-06-26						
Aluminum, total	< 0.0050	0.0050	mg/L							
Antimony, total	< 0.00020	0.00020	mg/L							
Arsenic, total	< 0.00050	0.00050	mg/L							
Barium, total	< 0.0050	0.0050	mg/L							
Beryllium, total	< 0.00010	0.00010	mg/L							
Bismuth, total	< 0.00010	0.00010	mg/L							
Boron, total	< 0.0500	0.0500	mg/L							
Cadmium, total	< 0.000010	0.000010	mg/L							
Calcium, total	< 0.20	0.20	mg/L							
Chromium, total	< 0.00050	0.00050	mg/L							
Cobalt, total	< 0.00010	0.00010	mg/L							
Copper, total	< 0.00040	0.00040	mg/L							
Iron, total	< 0.010	0.010	mg/L							
Lead, total	< 0.00020	0.00020	mg/L							
Lithium, total	< 0.00010	0.00010	mg/L							
Magnesium, total	< 0.010	0.010	mg/L							
Manganese, total	< 0.00020	0.00020	mg/L							
Molybdenum, total	< 0.00010	0.00010	mg/L							
Nickel, total	< 0.00040	0.00040	mg/L							
Phosphorus, total	< 0.050	0.050	mg/L							
Potassium, total	< 0.10	0.10	mg/L							
Selenium, total	< 0.00050	0.00050	mg/L							
Silicon, total	< 1.0	1.0	mg/L							
Silver, total	< 0.000050	0.000050	mg/L							
Sodium, total	< 0.10	0.10	mg/L							
Strontium, total	< 0.0010	0.0010	mg/L							
Sulfur, total	< 3.0	3.0	mg/L							
Tellurium, total	< 0.00050	0.00050	mg/L							
Thallium, total	< 0.000020	0.000020	mg/L							
Thorium, total	< 0.00010	0.00010	mg/L							
Tin, total	< 0.00020	0.00020	mg/L							
Titanium, total	< 0.0050	0.0050	mg/L							
Tungsten, total	< 0.0010	0.0010	mg/L							
Uranium, total	< 0.000020	0.000020	mg/L							
Vanadium, total	< 0.0050	0.0050	mg/L							
Zinc, total	< 0.0040	0.0040	mg/L							
Zirconium, total	< 0.00010	0.00010	mg/L							
LCS (B4F4222-BS1)				Prepared: 2024-06-26, Analyzed: 2024-06-26						
Aluminum, total	4.17	0.0050	mg/L	4.00		104	80-120			
Antimony, total	0.0392	0.00020	mg/L	0.0400		98	80-120			
Arsenic, total	0.404	0.00050	mg/L	0.400		101	80-120			
Barium, total	0.0399	0.0050	mg/L	0.0400		100	80-120			
Beryllium, total	0.0420	0.00010	mg/L	0.0400		105	80-120			
Bismuth, total	0.0382	0.00010	mg/L	0.0400		95	80-120			
Boron, total	0.438	0.0500	mg/L	0.400		110	80-120			
Cadmium, total	0.0394	0.000010	mg/L	0.0400		98	80-120			
Calcium, total	4.13	0.20	mg/L	4.00		103	80-120			
Chromium, total	0.0412	0.00050	mg/L	0.0400		103	80-120			
Cobalt, total	0.0418	0.00010	mg/L	0.0400		105	80-120			
Copper, total	0.0411	0.00040	mg/L	0.0400		103	80-120			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Total Metals, Batch B4F4222, Continued										
LCS (B4F4222-BS1), Continued				Prepared: 2024-06-26, Analyzed: 2024-06-26						
Iron, total	4.30	0.010	mg/L	4.00		108	80-120			
Lead, total	0.0384	0.00020	mg/L	0.0400		96	80-120			
Lithium, total	0.0425	0.00010	mg/L	0.0400		106	80-120			
Magnesium, total	4.20	0.010	mg/L	4.00		105	80-120			
Manganese, total	0.0415	0.00020	mg/L	0.0400		104	80-120			
Molybdenum, total	0.0399	0.00010	mg/L	0.0400		100	80-120			
Nickel, total	0.0402	0.00040	mg/L	0.0400		101	80-120			
Phosphorus, total	4.16	0.050	mg/L	4.00		104	80-120			
Potassium, total	4.19	0.10	mg/L	4.00		105	80-120			
Selenium, total	0.399	0.00050	mg/L	0.400		100	80-120			
Silicon, total	4.1	1.0	mg/L	4.00		104	80-120			
Silver, total	0.0403	0.000050	mg/L	0.0400		101	80-120			
Sodium, total	4.29	0.10	mg/L	4.00		107	80-120			
Strontium, total	0.0408	0.0010	mg/L	0.0400		102	80-120			
Sulfur, total	41.9	3.0	mg/L	40.0		105	80-120			
Tellurium, total	0.0380	0.00050	mg/L	0.0400		95	80-120			
Thallium, total	0.0375	0.000020	mg/L	0.0400		94	80-120			
Thorium, total	0.0383	0.00010	mg/L	0.0400		96	80-120			
Tin, total	0.0393	0.00020	mg/L	0.0400		98	80-120			
Titanium, total	0.0400	0.0050	mg/L	0.0400		100	80-120			
Tungsten, total	0.0383	0.0010	mg/L	0.0400		96	80-120			
Uranium, total	0.0392	0.000020	mg/L	0.0400		98	80-120			
Vanadium, total	0.0415	0.0050	mg/L	0.0400		104	80-120			
Zinc, total	0.405	0.0040	mg/L	0.400		101	80-120			
Zirconium, total	0.0387	0.00010	mg/L	0.0400		97	80-120			
Total Metals, Batch B4F4226										
Blank (B4F4226-BLK1)				Prepared: 2024-06-26, Analyzed: 2024-06-27						
Aluminum, total	< 0.0050	0.0050	mg/L							
Antimony, total	< 0.00020	0.00020	mg/L							
Arsenic, total	< 0.00050	0.00050	mg/L							
Barium, total	< 0.0050	0.0050	mg/L							
Beryllium, total	< 0.00010	0.00010	mg/L							
Bismuth, total	< 0.00010	0.00010	mg/L							
Boron, total	< 0.0500	0.0500	mg/L							
Cadmium, total	< 0.000010	0.000010	mg/L							
Calcium, total	< 0.20	0.20	mg/L							
Chromium, total	< 0.00050	0.00050	mg/L							
Cobalt, total	< 0.00010	0.00010	mg/L							
Copper, total	< 0.00040	0.00040	mg/L							
Iron, total	< 0.010	0.010	mg/L							
Lead, total	< 0.00020	0.00020	mg/L							
Lithium, total	< 0.00010	0.00010	mg/L							
Magnesium, total	< 0.010	0.010	mg/L							
Manganese, total	< 0.00020	0.00020	mg/L							
Molybdenum, total	< 0.00010	0.00010	mg/L							
Nickel, total	< 0.00040	0.00040	mg/L							
Phosphorus, total	< 0.050	0.050	mg/L							
Potassium, total	< 0.10	0.10	mg/L							
Selenium, total	< 0.00050	0.00050	mg/L							
Silicon, total	< 1.0	1.0	mg/L							
Silver, total	< 0.000050	0.000050	mg/L							
Sodium, total	< 0.10	0.10	mg/L							
Strontium, total	< 0.0010	0.0010	mg/L							
Sulfur, total	< 3.0	3.0	mg/L							

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Total Metals, Batch B4F4226, Continued										
Blank (B4F4226-BLK1), Continued				Prepared: 2024-06-26, Analyzed: 2024-06-27						
Tellurium, total	< 0.00050	0.00050	mg/L							
Thallium, total	< 0.000020	0.000020	mg/L							
Thorium, total	< 0.00010	0.00010	mg/L							
Tin, total	< 0.00020	0.00020	mg/L							
Titanium, total	< 0.0050	0.0050	mg/L							
Tungsten, total	< 0.0010	0.0010	mg/L							
Uranium, total	< 0.000020	0.000020	mg/L							
Vanadium, total	< 0.0050	0.0050	mg/L							
Zinc, total	< 0.0040	0.0040	mg/L							
Zirconium, total	< 0.00010	0.00010	mg/L							
LCS (B4F4226-BS1)				Prepared: 2024-06-26, Analyzed: 2024-06-27						
Aluminum, total	4.23	0.0050	mg/L	4.00		106	80-120			
Antimony, total	0.0403	0.00020	mg/L	0.0400		101	80-120			
Arsenic, total	0.407	0.00050	mg/L	0.400		102	80-120			
Barium, total	0.0410	0.0050	mg/L	0.0400		103	80-120			
Beryllium, total	0.0452	0.00010	mg/L	0.0400		113	80-120			
Bismuth, total	0.0389	0.00010	mg/L	0.0400		97	80-120			
Boron, total	0.400	0.0500	mg/L	0.400		100	80-120			
Cadmium, total	0.0397	0.000010	mg/L	0.0400		99	80-120			
Calcium, total	4.00	0.20	mg/L	4.00		100	80-120			
Chromium, total	0.0411	0.00050	mg/L	0.0400		103	80-120			
Cobalt, total	0.0418	0.00010	mg/L	0.0400		105	80-120			
Copper, total	0.0412	0.00040	mg/L	0.0400		103	80-120			
Iron, total	4.25	0.010	mg/L	4.00		106	80-120			
Lead, total	0.0392	0.00020	mg/L	0.0400		98	80-120			
Lithium, total	0.0482	0.00010	mg/L	0.0400		120	80-120			
Magnesium, total	4.16	0.010	mg/L	4.00		104	80-120			
Manganese, total	0.0418	0.00020	mg/L	0.0400		104	80-120			
Molybdenum, total	0.0405	0.00010	mg/L	0.0400		101	80-120			
Nickel, total	0.0410	0.00040	mg/L	0.0400		102	80-120			
Phosphorus, total	4.13	0.050	mg/L	4.00		103	80-120			
Potassium, total	4.16	0.10	mg/L	4.00		104	80-120			
Selenium, total	0.404	0.00050	mg/L	0.400		101	80-120			
Silicon, total	4.1	1.0	mg/L	4.00		102	80-120			
Silver, total	0.0397	0.000050	mg/L	0.0400		99	80-120			
Sodium, total	4.22	0.10	mg/L	4.00		106	80-120			
Strontium, total	0.0411	0.0010	mg/L	0.0400		103	80-120			
Sulfur, total	40.4	3.0	mg/L	40.0		101	80-120			
Tellurium, total	0.0391	0.00050	mg/L	0.0400		98	80-120			
Thallium, total	0.0391	0.000020	mg/L	0.0400		98	80-120			
Thorium, total	0.0402	0.00010	mg/L	0.0400		101	80-120			
Tin, total	0.0409	0.00020	mg/L	0.0400		102	80-120			
Titanium, total	0.0403	0.0050	mg/L	0.0400		101	80-120			
Tungsten, total	0.0394	0.0010	mg/L	0.0400		99	80-120			
Uranium, total	0.0404	0.000020	mg/L	0.0400		101	80-120			
Vanadium, total	0.0405	0.0050	mg/L	0.0400		101	80-120			
Zinc, total	0.409	0.0040	mg/L	0.400		102	80-120			
Zirconium, total	0.0388	0.00010	mg/L	0.0400		97	80-120			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24F3072
PROJECT	Marine Avenue Site	**REPORTED**	2024-07-03 09:03

QC Qualifiers:

HT2	The 15 minute recommended holding time (from sampling to analysis) has been exceeded - field analysis is recommended.
SPK1	The recovery of this analyte was outside of established control limits. The data was accepted based on performance of other batch QC.

CARO ANALYTICAL SERVICES
Caring About Results... Obviously

24F3072

V6V 2K9
99
V1X 5C3
93
T5S 1H7
00

3072

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CHAIN OF CUSTODY RECORD

COC# _____ PAGE _____ OF _____

RELINQUISHED BY:	DATE: June 24,16	RECEIVED BY:	DATE: 24/6
Regan	TIME: 3:00	BIA Loomis	TIME: 11:05

PROJECT: Marine Avenue Site

PROJECT INFO:

TURNAROUND TIME REQUESTED:
Routine: (5-7 Days) ☒
Rush: 1 Day* ☐ 2 Day* ☐ 3 Day* ☐
Other* _____
*Contact Lab To Confirm. Surcharge May Apply

REGULATORY APPLICATION:
Canadian Drinking Water Quality Guidelines ☐
BC Drinking Water Protection Act / Reg. ☐
BC CSR ☒ AB TIER 1 ☐ CCME ☐ OTHER* ☐
AL ☐ PL ☐ RL ☐ CL ☐ IL ☐ AW ☐ IW ☐ LW ☐
Regs on Report? ☐

REPORT TO:
COMPANY: Tetra Tech Canada
ADDRESS: Suite 1000-885 Dunsmuir Street
Vancouver, BC V8G 0A7
CONTACT: Emily Lai
TEL/FAX: 604.238.3573
DELIVERY METHOD: EMAIL ☒ MAIL ☐ OTHER* ☐
DATA FORMAT: EXCEL ☒ WATERTRAX ☐ ESdat ☒ EQuIS ☐ BC EMS ☐ OTHER* ☐
EMAIL 1: emily.lai@tetratech.com
EMAIL 2: mike.gallo@tetratech.com
EMAIL 3: sean.buckles@tetratech.com

INVOICE TO: SAME AS REPORT TO ☐
COMPANY: Tetra Tech Canada
ADDRESS: Accounts Payable Department
Edmonton, AB
CONTACT:
TEL/FAX:
DELIVERY METHOD: EMAIL ☒ MAIL ☐ OTHER* ☐
EMAIL 1: Accounts.Payable@tetratech.com
EMAIL 2:
EMAIL 3:
PO #: 704-SWM.SWOP03663-12

** NEW ** If you would like to sign up for ClientConnect and/or EnviroChain, CARO's online service offerings, check here: ☐

SAMPLED BY: Regan Keil

ANALYSES REQUESTED:

	CLIENT SAMPLE ID:	MATRIX: DRINKING WATER	OTHER WATER	SOIL	OTHER	# CONTAINERS	SAMPLING: DATE	TIME	COMMENTS: CHLORINATED	FILTERED	PRESERVED	(e.g. flow/volume media ID/notes)	BTEX ☐ VPH ☐ PHC F1 ☐	VOC ☐ VPH ☐	EPH ☐ PHC F2-F4 ☐	PAH ☐ L/HEPH ☐	PHENOLS Chlorinated ☐ Non-Chlor. ☐	PCB ☐ GLYCOLS ☐ HAA ☐	PESTICIDES ☐ ACID HERBICIDES ☐	METALS - WATER TOTAL Hg ☒	METALS - WATER DISSOLVED Hg ☒	METALS - SOIL (SALM) ☐ inc. pH ☐	pH ☒ EC ☒ ALK ☒	TSS ☐ VSS ☐ TDS ☒	BOD ☒ COD ☒	TOG ☐ MOG ☐	FECAL COLIFORMS ☐ HPC ☐	TOTAL COLIFORMS ☐ E.coli ☐	ASBESTOS		Low Level Sulphide	NH2, Cl, SO4, F, NO3, N2, Hardness as CaCO3	Dissolved Organic Carbon			HOLD
1	MW13-01		✓				24/6	12:00													✓		✓	✓	✓						✓	✓		✓			
2	MW13-02		✓				"	2:30													✓		✓	✓	✓						✓	✓		✓			
3	MW13-03		✓				"	2:50													✓		✓	✓	✓						✓	✓		✓			
4	MW19-04		✓					10:30													✓		✓	✓	✓						✓	✓		✓			
5	SW1		✓					8:00												✓	✓		✓	✓	✓						✓	✓		✓			
6	SW2		✓					8:40												✓	✓		✓	✓	✓						✓	✓		✓			
7	SW3		✓					8:30												✓	✓		✓	✓	✓						✓	✓		✓			
8	SW4		✓					12:15												✓	✓		✓	✓	✓						✓	✓		✓			
9	DUP1		✓					8:18													✓		✓									✓					
10	MW24-05		✓																		✓		✓	✓	✓						✓	✓		✓			

SHIPPING INSTRUCTIONS: Return Cooler(s) ☐
Supplies Needed:
-

SAMPLE RETENTION INSTRUCTIONS (Discarded 30 days after Report unless otherwise specified):
60 Days ☐ 90 Days ☒ Longer Date (Surcharges will Apply): _____
* OTHER INSTRUCTIONS:

PAYMENT:
CHEQUE ☐
CREDIT ☐
DEBIT ☐
CASH ☐
INVOICE ☒

SAMPLE RECEIPT CONDITION:
COOLER 1 (°C): 12.2 ICE: Y ☐ N ☐
COOLER 2 (°C): _____ ICE: Y ☐ N ☐
COOLER 3 (°C): _____ ICE: Y ☐ N ☐
CUSTODY SEALS INTACT: NA ☐ Y ☐ N ☐

CERTIFICATE OF ANALYSIS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver) 1000 - 885 Dunsmuir Street Vancouver, BC V6C 1N5		
ATTENTION	Emily Lai	**WORK ORDER**	24I2276
PO NUMBER	704-SWM.SWOP03663-12	**RECEIVED / TEMP**	2024-09-18 10:25 / 6.5°C
PROJECT	Marine Avenue Site	**REPORTED**	2024-09-25 09:03
PROJECT INFO		**COC NUMBER**	No #

Introduction:

CARO Analytical Services is a testing laboratory full of smart, engaged scientists driven to make the world a safer and healthier place. Through our clients' projects we become an essential element for a better world. We employ methods conducted in accordance with recognized professional standards using accepted testing methodologies and quality control efforts. CARO is accredited by the Canadian Association for Laboratories Accreditation (CALA) to ISO/IEC 17025:2017 for specific tests listed in the scope of accreditation approved by CALA.

Big Picture Sidekicks

You know that the sample you collected after snowshoeing to site, digging 5 meters, and racing to get it on a plane so you can submit it to the lab for time sensitive results needed to make important and expensive decisions (whew) is VERY important. We know that too.

We've Got Chemistry

It's simple. We figure the more you enjoy working with our fun and engaged team members; the more likely you are to give us continued opportunities to support you.

Ahead of the Curve

Through research, regulation knowledge, and instrumentation, we are your analytical centre for the technical knowledge you need, BEFORE you need it, so you can stay up to date and in the know.

By engaging our services, you are agreeing to CARO Analytical Service's Standard Terms and Conditions outlined here: https://www.caro.ca/terms-conditions

If you have any questions or concerns, please contact me at sgulenchyn@caro.ca

Authorized By:

Sara Gulenchyn, B.Sc, P.Chem.
Client Services Manager

CARO ANALYTICAL SERVICES

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24I2276
PROJECT	Marine Avenue Site	**REPORTED**	2024-09-25 09:03

Analyte	Result	RL	Units	Analyzed	Qualifier
MW13-01 (24I2276-01) | Matrix: Water | Sampled: 2024-09-16					F3
Anions					
Chloride	**6.65**	0.10	mg/L	2024-09-19	
Fluoride	< 0.10	0.10	mg/L	2024-09-19	
Nitrate (as N)	**0.175**	0.010	mg/L	2024-09-19	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-09-19	
Sulfate	**6.1**	1.0	mg/L	2024-09-19	
General Parameters					
Alkalinity, Total (as CaCO3)	**45.2**	1.0	mg/L	2024-09-20	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-09-20	
Alkalinity, Bicarbonate (as CaCO3)	**45.2**	1.0	mg/L	2024-09-20	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-09-20	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-09-20	
Ammonia, Total (as N)	**0.054**	0.050	mg/L	2024-09-20	
Conductivity (EC)	**128**	2.0	µS/cm	2024-09-20	
pH	**6.87**	0.10	pH units	2024-09-20	HT2
Sulfide, Total	< 0.020	0.020	mg/L	2024-09-20	
MW13-02 (24I2276-02) | Matrix: Water | Sampled: 2024-09-16					F3
Anions					
Chloride	**14.7**	0.10	mg/L	2024-09-19	
Fluoride	< 1.00	0.10	mg/L	2024-09-19	RA1
Nitrate (as N)	< 0.100	0.010	mg/L	2024-09-19	RA1
Nitrite (as N)	< 0.010	0.010	mg/L	2024-09-19	
Sulfate	**156**	1.0	mg/L	2024-09-19	
General Parameters					
Alkalinity, Total (as CaCO3)	**347**	1.0	mg/L	2024-09-20	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-09-20	
Alkalinity, Bicarbonate (as CaCO3)	**347**	1.0	mg/L	2024-09-20	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-09-20	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-09-20	
Ammonia, Total (as N)	**7.05**	0.050	mg/L	2024-09-20	
Conductivity (EC)	**1040**	2.0	µS/cm	2024-09-20	
pH	**7.05**	0.10	pH units	2024-09-20	HT2
Sulfide, Total	< 0.020	0.020	mg/L	2024-09-20	
MW13-03 (24I2276-03) | Matrix: Water | Sampled: 2024-09-16					F3
Anions					
Chloride	**16.6**	0.10	mg/L	2024-09-19	
Fluoride	< 0.10	0.10	mg/L	2024-09-19	
Nitrate (as N)	**0.746**	0.010	mg/L	2024-09-19	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24I2276
PROJECT	Marine Avenue Site	**REPORTED**	2024-09-25 09:03

Analyte	Result	RL	Units	Analyzed	Qualifier
MW13-03 (24I2276-03) | Matrix: Water | Sampled: 2024-09-16, Continued					F3
Anions, Continued					
Nitrite (as N)	< 0.010	0.010	mg/L	2024-09-19	
Sulfate	**39.2**	1.0	mg/L	2024-09-19	
General Parameters					
Alkalinity, Total (as CaCO3)	**137**	1.0	mg/L	2024-09-20	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-09-20	
Alkalinity, Bicarbonate (as CaCO3)	**137**	1.0	mg/L	2024-09-20	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-09-20	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-09-20	
Ammonia, Total (as N)	**0.100**	0.050	mg/L	2024-09-20	
Conductivity (EC)	**420**	2.0	µS/cm	2024-09-20	
pH	**6.88**	0.10	pH units	2024-09-20	HT2
Sulfide, Total	< 0.020	0.020	mg/L	2024-09-20	
MW19-04 (24I2276-04) | Matrix: Water | Sampled: 2024-09-16					F3
Anions					
Chloride	**10.6**	0.10	mg/L	2024-09-19	
Fluoride	< 0.10	0.10	mg/L	2024-09-19	
Nitrate (as N)	< 0.100	0.010	mg/L	2024-09-19	RA1
Nitrite (as N)	< 0.010	0.010	mg/L	2024-09-19	
Sulfate	**2.0**	1.0	mg/L	2024-09-19	
General Parameters					
Alkalinity, Total (as CaCO3)	**171**	1.0	mg/L	2024-09-20	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-09-20	
Alkalinity, Bicarbonate (as CaCO3)	**171**	1.0	mg/L	2024-09-20	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-09-20	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-09-20	
Ammonia, Total (as N)	**0.306**	0.050	mg/L	2024-09-20	
Conductivity (EC)	**382**	2.0	µS/cm	2024-09-20	
pH	**7.12**	0.10	pH units	2024-09-20	HT2
Sulfide, Total	< 0.020	0.020	mg/L	2024-09-20	
SW1 (24I2276-05) | Matrix: Water | Sampled: 2024-09-16					F3
Anions					
Chloride	**9.63**	0.10	mg/L	2024-09-19	
Fluoride	< 0.10	0.10	mg/L	2024-09-19	
Nitrate (as N)	**0.064**	0.010	mg/L	2024-09-19	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-09-19	
Sulfate	**3.3**	1.0	mg/L	2024-09-19	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24I2276
PROJECT	Marine Avenue Site	**REPORTED**	2024-09-25 09:03

Analyte	Result	RL	Units	Analyzed	Qualifier
SW1 (24I2276-05) | Matrix: Water | Sampled: 2024-09-16, Continued					F3
General Parameters					
Alkalinity, Total (as CaCO3)	**34.8**	1.0	mg/L	2024-09-20	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-09-20	
Alkalinity, Bicarbonate (as CaCO3)	**34.8**	1.0	mg/L	2024-09-20	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-09-20	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-09-20	
Ammonia, Total (as N)	**0.252**	0.050	mg/L	2024-09-20	
Conductivity (EC)	**109**	2.0	µS/cm	2024-09-20	
pH	**6.93**	0.10	pH units	2024-09-20	HT2
Sulfide, Total	< 0.020	0.020	mg/L	2024-09-20	
SW2 (24I2276-06) | Matrix: Water | Sampled: 2024-09-16					F3
Anions					
Chloride	**10.8**	0.10	mg/L	2024-09-19	
Fluoride	< 0.10	0.10	mg/L	2024-09-19	
Nitrate (as N)	**0.141**	0.010	mg/L	2024-09-19	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-09-19	
Sulfate	**3.7**	1.0	mg/L	2024-09-19	
General Parameters					
Alkalinity, Total (as CaCO3)	**42.7**	1.0	mg/L	2024-09-20	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-09-20	
Alkalinity, Bicarbonate (as CaCO3)	**42.7**	1.0	mg/L	2024-09-20	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-09-20	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-09-20	
Ammonia, Total (as N)	**0.100**	0.050	mg/L	2024-09-20	
Conductivity (EC)	**130**	2.0	µS/cm	2024-09-20	
pH	**6.99**	0.10	pH units	2024-09-20	HT2
Sulfide, Total	< 0.020	0.020	mg/L	2024-09-20	
SW3 (24I2276-07) | Matrix: Water | Sampled: 2024-09-16					F3
Anions					
Chloride	**10.8**	0.10	mg/L	2024-09-19	
Fluoride	< 0.10	0.10	mg/L	2024-09-19	
Nitrate (as N)	**0.140**	0.010	mg/L	2024-09-19	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-09-19	
Sulfate	**4.4**	1.0	mg/L	2024-09-19	
General Parameters					
Alkalinity, Total (as CaCO3)	**46.5**	1.0	mg/L	2024-09-20	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-09-20	
Alkalinity, Bicarbonate (as CaCO3)	**46.5**	1.0	mg/L	2024-09-20	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24I2276
PROJECT	Marine Avenue Site	**REPORTED**	2024-09-25 09:03

Analyte	Result	RL	Units	Analyzed	Qualifier
SW3 (24I2276-07) | Matrix: Water | Sampled: 2024-09-16, Continued					F3
General Parameters, Continued					
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-09-20	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-09-20	
Ammonia, Total (as N)	**0.140**	0.050	mg/L	2024-09-20	
Conductivity (EC)	**138**	2.0	µS/cm	2024-09-20	
pH	**7.05**	0.10	pH units	2024-09-20	HT2
Sulfide, Total	< 0.020	0.020	mg/L	2024-09-20	
SW4 (24I2276-08) | Matrix: Water | Sampled: 2024-09-16					F3
Anions					
Chloride	**10.6**	0.10	mg/L	2024-09-19	
Fluoride	< 0.10	0.10	mg/L	2024-09-19	
Nitrate (as N)	< 0.010	0.010	mg/L	2024-09-19	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-09-19	
Sulfate	**6.7**	1.0	mg/L	2024-09-19	
General Parameters					
Alkalinity, Total (as CaCO3)	**57.0**	1.0	mg/L	2024-09-20	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-09-20	
Alkalinity, Bicarbonate (as CaCO3)	**57.0**	1.0	mg/L	2024-09-20	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-09-20	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-09-20	
Ammonia, Total (as N)	< 0.050	0.050	mg/L	2024-09-20	
Conductivity (EC)	**165**	2.0	µS/cm	2024-09-20	
pH	**7.11**	0.10	pH units	2024-09-20	HT2
Sulfide, Total	< 0.020	0.020	mg/L	2024-09-20	
DUP1 (24I2276-09) | Matrix: Water | Sampled: 2024-09-16					F3
Anions					
Chloride	**2.76**	0.10	mg/L	2024-09-20	
Fluoride	< 0.10	0.10	mg/L	2024-09-20	
Nitrate (as N)	**1.26**	0.010	mg/L	2024-09-19	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-09-19	
Sulfate	**7.3**	1.0	mg/L	2024-09-20	
General Parameters					
Alkalinity, Total (as CaCO3)	**87.2**	1.0	mg/L	2024-09-20	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-09-20	
Alkalinity, Bicarbonate (as CaCO3)	**87.2**	1.0	mg/L	2024-09-20	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-09-20	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-09-20	
Ammonia, Total (as N)	< 0.050	0.050	mg/L	2024-09-20	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24I2276
PROJECT	Marine Avenue Site	**REPORTED**	2024-09-25 09:03

Analyte	Result	RL	Units	Analyzed	Qualifier
DUP1 (24I2276-09) | Matrix: Water | Sampled: 2024-09-16, Continued					F3
General Parameters, Continued					
Conductivity (EC)	**214**	2.0	µS/cm	2024-09-20	
pH	**6.85**	0.10	pH units	2024-09-20	HT2
MW24-05 (24I2276-10) | Matrix: Water | Sampled: 2024-09-16					F3
Anions					
Chloride	**2.75**	0.10	mg/L	2024-09-20	
Fluoride	< 0.10	0.10	mg/L	2024-09-20	
Nitrate (as N)	**1.26**	0.010	mg/L	2024-09-19	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-09-19	
Sulfate	**7.8**	1.0	mg/L	2024-09-20	
General Parameters					
Alkalinity, Total (as CaCO3)	**87.4**	1.0	mg/L	2024-09-20	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-09-20	
Alkalinity, Bicarbonate (as CaCO3)	**87.4**	1.0	mg/L	2024-09-20	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-09-20	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-09-20	
Ammonia, Total (as N)	< 0.050	0.050	mg/L	2024-09-20	
Conductivity (EC)	**214**	2.0	µS/cm	2024-09-20	
pH	**6.86**	0.10	pH units	2024-09-20	HT2
Sulfide, Total	< 0.020	0.020	mg/L	2024-09-20	

Sample Qualifiers:

F3	Results may be biased low due to sub-sampling from general container.
HT2	The 15 minute recommended holding time (from sampling to analysis) has been exceeded - field analysis is recommended.
RA1	The Reporting Limit for this sample has been raised due to matrix interference.

APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24I2276
PROJECT	Marine Avenue Site	**REPORTED**	2024-09-25 09:03

Analysis Description	Method Ref.	Technique	Accredited	Location
Alkalinity in Water	SM 2320 B* (2021)	Titration with H2SO4	✓	Kelowna
Ammonia, Total in Water	SM 4500-NH3 G* (2021)	Automated Colorimetry (Phenate)	✓	Kelowna
Anions in Water	SM 4110 B (2020)	Ion Chromatography	✓	Richmond
Conductivity in Water	SM 2510 B (2021)	Conductivity Meter	✓	Kelowna
pH in Water	SM 4500-H+ B (2021)	Electrometry	✓	Kelowna
Sulfide, Total in Water	SM 4500-S2 D* (2021)	Colorimetry (Methylene Blue)	✓	Edmonton

Note: An asterisk in the Method Reference indicates that the CARO method has been modified from the reference method

Glossary of Terms:

RL	Reporting Limit (default)
<	Less than the specified Reporting Limit (RL) - the actual RL may be higher than the default RL due to various factors
mg/L	Milligrams per litre
pH units	pH < 7 = acidic, ph > 7 = basic
µS/cm	Microsiemens per centimetre
SM	Standard Methods for the Examination of Water and Wastewater, American Public Health Association

General Comments:

The results in this report apply to the received samples analyzed in accordance with the Chain of Custody document. This analytical report must be reproduced in its entirety. CARO is not responsible for any loss or damage resulting directly or indirectly from error or omission in the conduct of testing. Liability is limited to the cost of analysis. Caro will dispose of all samples within 30 days of sample receipt, unless otherwise agreed.

Please note any regulatory guidelines applied to this report are added as a convenience to the client, at their request, to help provide some initial context to analytical results obtained. Although CARO makes every effort to ensure accuracy of the associated regulatory guideline(s) applied, the guidelines applied cannot be assumed to be correct due to a variety of factors and as such CARO Analytical Services assumes no liability or responsibility for the use of those guidelines to make any decisions. The original source of the regulation should be verified and a review of the guideline (s) should be validated as correct in order to make any decisions arising from the comparison of the analytical data obtained to the relevant regulatory guideline for one's particular circumstances. Further, CARO Analytical Services assumes no liability or responsibility for any loss attributed from the use of these guidelines in any way.

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24I2276
PROJECT	Marine Avenue Site	**REPORTED**	2024-09-25 09:03

The following section displays the quality control (QC) data that is associated with your sample data. Groups of samples are prepared in "batches" and analyzed in conjunction with QC samples that ensure your data is of the highest quality. Common QC types include:

- **Method Blank (Blk)**: A blank sample that undergoes sample processing identical to that carried out for the test samples. Method blank results are used to assess contamination from the laboratory environment and reagents.
- **Duplicate (Dup)**: An additional or second portion of a randomly selected sample in the analytical run carried through the entire analytical process. Duplicates provide a measure of the analytical method's precision (reproducibility).
- **Blank Spike (BS)**: A sample of known concentration which undergoes processing identical to that carried out for test samples, also referred to as a laboratory control sample (LCS). Blank spikes provide a measure of the analytical method's accuracy.
- **Matrix Spike (MS)**: A second aliquot of sample is fortified with a known concentration of target analytes and carried through the entire analytical process. Matrix spikes evaluate potential matrix effects that may affect the analyte recovery.
- **Reference Material (SRM)**: A homogenous material of similar matrix to the samples, certified for the parameter(s) listed. Reference Materials ensure that the analytical process is adequate to achieve acceptable recoveries of the parameter(s) tested.

Each QC type is analyzed at a 5-10% frequency, i.e. one blank/duplicate/spike for every 10-20 samples. For all types of QC, the specified recovery (% Rec) and relative percent difference (RPD) limits are derived from long-term method performance averages and/or prescribed by the reference method.

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Anions, Batch B4I3391										
Blank (B4I3391-BLK1)				Prepared: 2024-09-19, Analyzed: 2024-09-19						
Chloride	< 0.10	0.10	mg/L							
Fluoride	< 0.10	0.10	mg/L							
Nitrate (as N)	< 0.010	0.010	mg/L							
Nitrite (as N)	< 0.002	0.002	mg/L							
Sulfate	< 1.0	1.0	mg/L							
Blank (B4I3391-BLK2)				Prepared: 2024-09-20, Analyzed: 2024-09-20						
Chloride	< 0.10	0.10	mg/L							
Fluoride	< 0.10	0.10	mg/L							
Nitrate (as N)	< 0.010	0.010	mg/L							
Nitrite (as N)	< 0.002	0.002	mg/L							
Sulfate	< 1.0	1.0	mg/L							
LCS (B4I3391-BS1)				Prepared: 2024-09-20, Analyzed: 2024-09-20						
Chloride	2.99	0.10	mg/L	3.00		100	85-115			
Fluoride	1.96	0.10	mg/L	2.00		98	85-115			
Nitrate (as N)	3.03	0.010	mg/L	3.00		101	85-115			
Nitrite (as N)	3.18	0.002	mg/L	3.00		106	85-115			
Sulfate	15.7	1.0	mg/L	15.0		105	85-115			
LCS (B4I3391-BS2)				Prepared: 2024-09-20, Analyzed: 2024-09-20						
Chloride	2.98	0.10	mg/L	3.00		99	85-115			
Fluoride	1.99	0.10	mg/L	2.00		99	85-115			
Nitrate (as N)	3.02	0.010	mg/L	3.00		101	85-115			
Nitrite (as N)	3.18	0.002	mg/L	3.00		106	85-115			
Sulfate	15.7	1.0	mg/L	15.0		105	85-115			
Duplicate (B4I3391-DUP1)			**Source: 24I2276-01**	Prepared: 2024-09-19, Analyzed: 2024-09-19						
Chloride	6.68	0.10	mg/L		6.65			< 1	20	
Fluoride	< 0.10	0.10	mg/L		< 0.10				20	
Nitrate (as N)	0.177	0.010	mg/L		0.175			1	20	
Nitrite (as N)	< 0.002	0.010	mg/L		< 0.010				20	
Sulfate	6.1	1.0	mg/L		6.1			< 1	20	
Matrix Spike (B4I3391-MS1)			**Source: 24I2276-01**	Prepared: 2024-09-20, Analyzed: 2024-09-20						
Chloride	9.70	0.10	mg/L	3.00	6.65	101	75-125			
Fluoride	1.95	0.10	mg/L	2.00	< 0.10	97	75-125			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24I2276
PROJECT	Marine Avenue Site	**REPORTED**	2024-09-25 09:03

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Anions, Batch B4I3391, Continued										
Matrix Spike (B4I3391-MS1), Continued	**Source: 24I2276-01**			Prepared: 2024-09-20, Analyzed: 2024-09-20						
Nitrate (as N)	3.19	0.010	mg/L	3.00	0.175	100	75-125			
Nitrite (as N)	3.18	0.002	mg/L	3.00	< 0.010	106	75-125			
Sulfate	21.7	1.0	mg/L	15.0	6.1	104	75-125			
General Parameters, Batch B4I3471										
Blank (B4I3471-BLK1)				Prepared: 2024-09-20, Analyzed: 2024-09-20						
Ammonia, Total (as N)	< 0.050	0.050	mg/L							
Blank (B4I3471-BLK2)				Prepared: 2024-09-20, Analyzed: 2024-09-20						
Ammonia, Total (as N)	< 0.050	0.050	mg/L							
Blank (B4I3471-BLK3)				Prepared: 2024-09-20, Analyzed: 2024-09-20						
Ammonia, Total (as N)	< 0.050	0.050	mg/L							
Blank (B4I3471-BLK4)				Prepared: 2024-09-20, Analyzed: 2024-09-20						
Ammonia, Total (as N)	< 0.050	0.050	mg/L							
LCS (B4I3471-BS1)				Prepared: 2024-09-20, Analyzed: 2024-09-20						
Ammonia, Total (as N)	1.05	0.050	mg/L	1.00		105	85-115			
LCS (B4I3471-BS2)				Prepared: 2024-09-20, Analyzed: 2024-09-20						
Ammonia, Total (as N)	0.994	0.050	mg/L	1.00		99	85-115			
LCS (B4I3471-BS3)				Prepared: 2024-09-20, Analyzed: 2024-09-20						
Ammonia, Total (as N)	0.974	0.050	mg/L	1.00		97	85-115			
LCS (B4I3471-BS4)				Prepared: 2024-09-20, Analyzed: 2024-09-20						
Ammonia, Total (as N)	0.987	0.050	mg/L	1.00		99	85-115			
General Parameters, Batch B4I3476										
Blank (B4I3476-BLK1)				Prepared: 2024-09-20, Analyzed: 2024-09-20						
Alkalinity, Total (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L							
Conductivity (EC)	< 2.0	2.0	µS/cm							
Blank (B4I3476-BLK2)				Prepared: 2024-09-20, Analyzed: 2024-09-20						
Alkalinity, Total (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L							
Conductivity (EC)	< 2.0	2.0	µS/cm							
LCS (B4I3476-BS1)				Prepared: 2024-09-20, Analyzed: 2024-09-20						
Alkalinity, Total (as CaCO3)	93.3	1.0	mg/L	100		93	80-120			
Alkalinity, Phenolphthalein (as CaCO3)	45.0	1.0	mg/L	50.0		90	0-200			
LCS (B4I3476-BS2)				Prepared: 2024-09-20, Analyzed: 2024-09-20						
Conductivity (EC)	1410	2.0	µS/cm	1410		100	95-105			
LCS (B4I3476-BS3)				Prepared: 2024-09-20, Analyzed: 2024-09-20						
Alkalinity, Total (as CaCO3)	93.8	1.0	mg/L	100		94	80-120			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24I2276
PROJECT	Marine Avenue Site	**REPORTED**	2024-09-25 09:03

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
General Parameters, Batch B4I3476, Continued										
LCS (B4I3476-BS3), Continued				Prepared: 2024-09-20, Analyzed: 2024-09-20						
Alkalinity, Phenolphthalein (as CaCO3)	45.3	1.0	mg/L	50.0		91	0-200			
LCS (B4I3476-BS4)				Prepared: 2024-09-20, Analyzed: 2024-09-20						
Conductivity (EC)	1410	2.0	µS/cm	1410		100	95-105			
Duplicate (B4I3476-DUP1)				**Source: 24I2276-08**	Prepared: 2024-09-20, Analyzed: 2024-09-20					
Alkalinity, Total (as CaCO3)	57.2	1.0	mg/L		57.0			< 1	10	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L		< 1.0				10	
Alkalinity, Bicarbonate (as CaCO3)	57.2	1.0	mg/L		57.0			< 1	10	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L		< 1.0				10	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L		< 1.0				10	
Conductivity (EC)	165	2.0	µS/cm		165			< 1	5	
pH	7.15	0.10	pH units		7.11			< 1	4	HT2
Reference (B4I3476-SRM1)				Prepared: 2024-09-20, Analyzed: 2024-09-20						
pH	7.02	0.10	pH units	7.01		100	98-102			
Reference (B4I3476-SRM2)				Prepared: 2024-09-20, Analyzed: 2024-09-20						
pH	7.01	0.10	pH units	7.01		100	98-102			
General Parameters, Batch B4I3573										
Blank (B4I3573-BLK1)				Prepared: 2024-09-20, Analyzed: 2024-09-20						
Sulfide, Total	< 0.020	0.020	mg/L							
LCS (B4I3573-BS1)				Prepared: 2024-09-20, Analyzed: 2024-09-20						
Sulfide, Total	0.464	0.020	mg/L	0.540		86	80-120			
Duplicate (B4I3573-DUP1)				**Source: 24I2276-01**	Prepared: 2024-09-20, Analyzed: 2024-09-20					
Sulfide, Total	< 0.020	0.020	mg/L		< 0.020				15	
Matrix Spike (B4I3573-MS1)				**Source: 24I2276-08**	Prepared: 2024-09-20, Analyzed: 2024-09-20					
Sulfide, Total	0.502	0.020	mg/L	0.540	< 0.020	93	70-130			

QC Qualifiers:

HT2 The 15 minute recommended holding time (from sampling to analysis) has been exceeded - field analysis is recommended.

CARO ANALYTICAL SERVICES
Caring About Results... Obviously

2412276

Clear Form | Print a Copy | Save a Copy | CARO Website | CARO BC COC, Rev 2015-09

CHAIN OF CUSTODY RECORD

COC# _____ PAGE _____ OF _____

RELINQUISHED BY:	DATE: Sept 16	RECEIVED BY:	DATE: 18/09
RY	TIME: 4:00	AWS, Terada	TIME: 10:25

PROJECT: Marine Avenue Site

PROJECT INFO:

TURNAROUND TIME REQUESTED:
Routine: (5-7 Days) ☒
Rush: 1 Day* ☐ 2 Day* ☐ 3 Day* ☐
Other* _____
*Contact Lab To Confirm. Surcharge May Apply

REGULATORY APPLICATION:
Canadian Drinking Water Quality Guidelines ☐ Regs on Report? ☐
BC Drinking Water Protection Act / Reg. ☐
BC CSR ☒ AB TIER 1 ☐ CCME ☐ OTHER* ☐
AL ☐ PL ☐ RL ☐ CL ☐ IL ☐ AW ☐ IW ☐ LW ☐

REPORT TO:
COMPANY: Tetra Tech Canada
ADDRESS: Suite 1000-885 Dunsmuir Street
Vancouver, BC V8G 0A7
CONTACT: Emily Lai
TEL/FAX: 604.238.3573
DELIVERY METHOD: EMAIL ☒ MAIL ☐ OTHER* ☐
DATA FORMAT: EXCEL ☒ WATERTRAX ☐ ESdat ☒ EQuIS ☐ BC EMS ☐ OTHER* ☐
EMAIL 1: emily.lai@tetratech.com
EMAIL 2: mike.gallo@tetratech.com
EMAIL 3: sean.buckles@tetratech.com

INVOICE TO: SAME AS REPORT TO ☐
COMPANY: Tetra Tech Canada
ADDRESS: Accounts Payable Department
Edmonton, AB
CONTACT:
TEL/FAX:
DELIVERY METHOD: EMAIL ☒ MAIL ☐ OTHER* ☐
EMAIL 1: Accounts.Payable@tetratech.com
EMAIL 2:
EMAIL 3:
PO #: 704-SWM.SWOP03663-12

** NEW ** If you would like to sign up for ClientConnect and/or EnviroChain, CARO's online service offerings, check here: ☐

SAMPLED BY: Regan Keil

ANALYSES REQUESTED:

	CLIENT SAMPLE ID:	MATRIX: DRINKING WATER	OTHER WATER	SOIL	OTHER	# CONTAINERS	SAMPLING: DATE	TIME	COMMENTS: CHLORINATED	FILTERED	PRESERVED	(e.g. flow/volume media ID/notes)	BTEX ☐ VPH ☐ PHC F1 ☐	VOC ☐ VPH ☐	EPH ☐ PHC F2-F4 ☐	PAH ☐ L/HEPH ☐	PHENOLS Chlorinated ☐ Non-Chlor. ☐	PCB ☐ GLYCOLS ☐ HAA ☐	PESTICIDES ☐ ACID HERBICIDES ☐	METALS - WATER TOTAL ☐ Hg	METALS - WATER DISSOLVED ☐ Hg	METALS - SOIL (SALM) ☐ inc. pH ☐	pH ☒ EC ☒ ALK ☒	TSS ☐ VSS ☐ TDS ☐	BOD ☐ COD ☐	TOG ☐ MOG ☐	FECAL COLIFORMS ☐ HPC ☐	TOTAL COLIFORMS ☐ *E. coli* ☐	ASBESTOS		Low Level Sulphide	NH2, Cl, SO4, F, NO3, N2					HOLD
1	MW13-01		✓																				✓								✓	✓					
2	MW13-02		✓																				✓								✓	✓					
3	MW13-03		✓																				✓								✓	✓					
4	MW19-04		✓																				✓								✓	✓					
5	SW1		✓																				✓								✓	✓					
6	SW2		✓																				✓								✓	✓					
7	SW3		✓																				✓								✓	✓					
8	SW4		✓																				✓								✓	✓					
9	DUP1		✓																				✓									✓					
10	MW24-05		✓																				✓								✓	✓					

SHIPPING INSTRUCTIONS: Return Cooler(s) ☐
Supplies Needed:
-

SAMPLE RETENTION INSTRUCTIONS (Discarded 30 days after Report unless otherwise specified):
60 Days ☐ 90 Days ☒ Longer Date (Surcharges will Apply): _____

*** OTHER INSTRUCTIONS:**

PAYMENT:
CHEQUE ☐
CREDIT ☐
DEBIT ☐
CASH ☐
INVOICE ☒

SAMPLE RECEIPT CONDITION:
COOLER 1 (°C): 6.5 ICE: Y ✓ N ☐
COOLER 2 (°C): _____ ICE: Y ☐ N ☐
COOLER 3 (°C): _____ ICE: Y ☐ N ☐
CUSTODY SEALS INTACT: NA ☐ Y ☐ N ☐

CERTIFICATE OF ANALYSIS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver) 1000 - 885 Dunsmuir Street Vancouver, BC V6C 1N5		
ATTENTION	Emily Lai	**WORK ORDER**	24L1123
PO NUMBER	704-SWM.SWOP03663-12	**RECEIVED / TEMP**	2024-12-10 10:17 / 5.0°C
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35
PROJECT INFO		**COC NUMBER**	No #

Introduction:

CARO Analytical Services is a testing laboratory full of smart, engaged scientists driven to make the world a safer and healthier place. Through our clients' projects we become an essential element for a better world. We employ methods conducted in accordance with recognized professional standards using accepted testing methodologies and quality control efforts. CARO is accredited by the Canadian Association for Laboratories Accreditation (CALA) to ISO/IEC 17025:2017 for specific tests listed in the scope of accreditation approved by CALA.

Big Picture Sidekicks

You know that the sample you collected after snowshoeing to site, digging 5 meters, and racing to get it on a plane so you can submit it to the lab for time sensitive results needed to make important and expensive decisions (whew) is VERY important. We

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By engaging our services, you are agreeing to CARO Analytical Service's Standard Terms and Conditions outlined here: https://www.caro.ca/terms-conditions

If you have any questions or concerns, please contact me at sgulenchyn@caro.ca

Authorized By:

Sara Gulenchyn, B.Sc, P.Chem.
Client Services Manager

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analyte	Result	RL	Units	Analyzed	Qualifier
MW13-01 (24L1123-01) | Matrix: Water | Sampled: 2024-12-09					
Anions					
Chloride	**5.70**	0.10	mg/L	2024-12-11	
Fluoride	< 0.10	0.10	mg/L	2024-12-11	
Nitrate (as N)	**0.202**	0.010	mg/L	2024-12-11	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-12-11	
Sulfate	**5.0**	1.0	mg/L	2024-12-11	
Calculated Parameters					
Hardness, Dissolved (as CaCO3)	**40.0**	0.500	mg/L	N/A	
Dissolved Metals					
Aluminum, dissolved	< 0.0050	0.0050	mg/L	2024-12-10	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2024-12-10	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2024-12-10	
Barium, dissolved	< 0.0050	0.0050	mg/L	2024-12-10	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Boron, dissolved	< 0.0500	0.0500	mg/L	2024-12-10	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2024-12-10	
Calcium, dissolved	**11.9**	0.20	mg/L	2024-12-10	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2024-12-10	
Cobalt, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Copper, dissolved	< 0.00040	0.00040	mg/L	2024-12-10	
Iron, dissolved	< 0.010	0.010	mg/L	2024-12-10	
Lead, dissolved	< 0.00020	0.00020	mg/L	2024-12-10	
Lithium, dissolved	**0.00081**	0.00010	mg/L	2024-12-10	
Magnesium, dissolved	**2.50**	0.010	mg/L	2024-12-10	
Manganese, dissolved	**0.00021**	0.00020	mg/L	2024-12-10	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2024-12-11	
Molybdenum, dissolved	**0.00013**	0.00010	mg/L	2024-12-10	
Nickel, dissolved	< 0.00040	0.00040	mg/L	2024-12-10	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2024-12-10	
Potassium, dissolved	**1.29**	0.10	mg/L	2024-12-10	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2024-12-10	
Silicon, dissolved	**13.6**	1.0	mg/L	2024-12-10	
Silver, dissolved	< 0.000050	0.000050	mg/L	2024-12-10	
Sodium, dissolved	**7.12**	0.10	mg/L	2024-12-10	
Strontium, dissolved	**0.0606**	0.0010	mg/L	2024-12-10	
Sulfur, dissolved	< 3.0	3.0	mg/L	2024-12-10	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2024-12-10	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2024-12-10	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Tin, dissolved	< 0.00020	0.00020	mg/L	2024-12-10	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2024-12-10	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2024-12-10	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analyte	Result	RL	Units	Analyzed	Qualifier
MW13-01 (24L1123-01) | Matrix: Water | Sampled: 2024-12-09, Continued					
Dissolved Metals, Continued					
Uranium, dissolved	**0.000056**	0.000020	mg/L	2024-12-10	
Vanadium, dissolved	< 0.0050	0.0050	mg/L	2024-12-10	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2024-12-10	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
General Parameters					
Alkalinity, Total (as CaCO3)	**40.1**	1.0	mg/L	2024-12-11	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-12-11	
Alkalinity, Bicarbonate (as CaCO3)	**40.1**	1.0	mg/L	2024-12-11	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-12-11	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-12-11	
Ammonia, Total (as N)	< 0.050	0.050	mg/L	2024-12-12	
BOD, 5-day	**4.0**	2.0	mg/L	2024-12-15	
Carbon, Dissolved Organic	**1.46**	0.50	mg/L	2024-12-11	
Chemical Oxygen Demand	< 20	20	mg/L	2024-12-13	
Conductivity (EC)	**117**	2.0	µS/cm	2024-12-11	
pH	**6.86**	0.10	pH units	2024-12-11	HT2
Solids, Total Dissolved	**112**	10	mg/L	2024-12-12	
Sulfide, Total	< 0.020	0.020	mg/L	2024-12-12	
Total Metals					
Aluminum, total	< 0.0050	0.0050	mg/L	2024-12-11	
Antimony, total	< 0.00020	0.00020	mg/L	2024-12-11	
Arsenic, total	< 0.00050	0.00050	mg/L	2024-12-11	
Barium, total	< 0.0050	0.0050	mg/L	2024-12-11	
Beryllium, total	< 0.00010	0.00010	mg/L	2024-12-11	
Bismuth, total	< 0.00010	0.00010	mg/L	2024-12-11	
Boron, total	< 0.0500	0.0500	mg/L	2024-12-11	
Cadmium, total	< 0.000010	0.000010	mg/L	2024-12-11	
Calcium, total	**12.0**	0.20	mg/L	2024-12-11	
Chromium, total	< 0.00050	0.00050	mg/L	2024-12-11	
Cobalt, total	< 0.00010	0.00010	mg/L	2024-12-11	
Copper, total	< 0.00040	0.00040	mg/L	2024-12-11	
Iron, total	< 0.010	0.010	mg/L	2024-12-11	
Lead, total	< 0.00020	0.00020	mg/L	2024-12-11	
Lithium, total	**0.00085**	0.00010	mg/L	2024-12-11	
Magnesium, total	**2.56**	0.010	mg/L	2024-12-11	
Manganese, total	< 0.00020	0.00020	mg/L	2024-12-11	
Mercury, total	< 0.000010	0.000010	mg/L	2024-12-11	
Molybdenum, total	**0.00013**	0.00010	mg/L	2024-12-11	
Nickel, total	< 0.00040	0.00040	mg/L	2024-12-11	
Phosphorus, total	< 0.050	0.050	mg/L	2024-12-11	
Potassium, total	**1.32**	0.10	mg/L	2024-12-11	
Selenium, total	< 0.00050	0.00050	mg/L	2024-12-11	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analyte	Result	RL	Units	Analyzed	Qualifier
MW13-01 (24L1123-01) | Matrix: Water | Sampled: 2024-12-09, Continued					
Total Metals, Continued					
Silicon, total	**13.8**	1.0	mg/L	2024-12-11	
Silver, total	< 0.000050	0.000050	mg/L	2024-12-11	
Sodium, total	**7.15**	0.10	mg/L	2024-12-11	
Strontium, total	**0.0618**	0.0010	mg/L	2024-12-11	
Sulfur, total	< 3.0	3.0	mg/L	2024-12-11	
Tellurium, total	< 0.00050	0.00050	mg/L	2024-12-11	
Thallium, total	< 0.000020	0.000020	mg/L	2024-12-11	
Thorium, total	< 0.00010	0.00010	mg/L	2024-12-11	
Tin, total	< 0.00020	0.00020	mg/L	2024-12-11	
Titanium, total	< 0.0050	0.0050	mg/L	2024-12-11	
Tungsten, total	< 0.0010	0.0010	mg/L	2024-12-11	
Uranium, total	**0.000058**	0.000020	mg/L	2024-12-11	
Vanadium, total	< 0.0050	0.0050	mg/L	2024-12-11	
Zinc, total	< 0.0040	0.0040	mg/L	2024-12-11	
Zirconium, total	< 0.00010	0.00010	mg/L	2024-12-11	
MW13-02 (24L1123-02) | Matrix: Water | Sampled: 2024-12-09					
Anions					
Chloride	**6.92**	0.10	mg/L	2024-12-11	
Fluoride	**0.14**	0.10	mg/L	2024-12-11	
Nitrate (as N)	< 0.100	0.010	mg/L	2024-12-11	RA1
Nitrite (as N)	< 0.010	0.010	mg/L	2024-12-11	
Sulfate	**62.6**	1.0	mg/L	2024-12-11	
Calculated Parameters					
Hardness, Dissolved (as CaCO3)	**490**	0.500	mg/L	N/A	
Dissolved Metals					
Aluminum, dissolved	**0.0191**	0.0050	mg/L	2024-12-10	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2024-12-10	
Arsenic, dissolved	**0.00357**	0.00050	mg/L	2024-12-10	
Barium, dissolved	**0.0717**	0.0050	mg/L	2024-12-10	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Boron, dissolved	**0.172**	0.0500	mg/L	2024-12-10	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2024-12-10	
Calcium, dissolved	**178**	0.20	mg/L	2024-12-10	
Chromium, dissolved	**0.00163**	0.00050	mg/L	2024-12-10	
Cobalt, dissolved	**0.00094**	0.00010	mg/L	2024-12-10	
Copper, dissolved	< 0.00040	0.00040	mg/L	2024-12-10	
Iron, dissolved	**66.5**	0.010	mg/L	2024-12-10	
Lead, dissolved	< 0.00020	0.00020	mg/L	2024-12-10	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analyte	Result	RL	Units	Analyzed	Qualifier
MW13-02 (24L1123-02) | Matrix: Water | Sampled: 2024-12-09, Continued					
Dissolved Metals, Continued					
Lithium, dissolved	**0.00053**	0.00010	mg/L	2024-12-10	
Magnesium, dissolved	**10.6**	0.010	mg/L	2024-12-10	
Manganese, dissolved	**1.58**	0.00020	mg/L	2024-12-10	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2024-12-11	
Molybdenum, dissolved	**0.00070**	0.00010	mg/L	2024-12-10	
Nickel, dissolved	< 0.00040	0.00040	mg/L	2024-12-10	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2024-12-10	
Potassium, dissolved	**17.6**	0.10	mg/L	2024-12-10	
Selenium, dissolved	**0.00063**	0.00050	mg/L	2024-12-10	
Silicon, dissolved	**12.5**	1.0	mg/L	2024-12-10	
Silver, dissolved	< 0.000050	0.000050	mg/L	2024-12-10	
Sodium, dissolved	**13.1**	0.10	mg/L	2024-12-10	
Strontium, dissolved	**0.615**	0.0010	mg/L	2024-12-10	
Sulfur, dissolved	**21.8**	3.0	mg/L	2024-12-10	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2024-12-10	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2024-12-10	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Tin, dissolved	< 0.00020	0.00020	mg/L	2024-12-10	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2024-12-10	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2024-12-10	
Uranium, dissolved	**0.000339**	0.000020	mg/L	2024-12-10	
Vanadium, dissolved	**0.0055**	0.0050	mg/L	2024-12-10	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2024-12-10	
Zirconium, dissolved	**0.00044**	0.00010	mg/L	2024-12-10	
General Parameters					
Alkalinity, Total (as CaCO3)	**479**	1.0	mg/L	2024-12-11	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-12-11	
Alkalinity, Bicarbonate (as CaCO3)	**479**	1.0	mg/L	2024-12-11	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-12-11	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-12-11	
Ammonia, Total (as N)	**5.09**	0.050	mg/L	2024-12-12	
BOD, 5-day	**10.8**	2.0	mg/L	2024-12-15	
Carbon, Dissolved Organic	**17.8**	0.50	mg/L	2024-12-11	
Chemical Oxygen Demand	**60**	20	mg/L	2024-12-13	
Conductivity (EC)	**1080**	2.0	µS/cm	2024-12-11	
pH	**6.87**	0.10	pH units	2024-12-11	HT2
Solids, Total Dissolved	**622**	10	mg/L	2024-12-12	
Sulfide, Total	**0.036**	0.020	mg/L	2024-12-12	
Total Metals					
Aluminum, total	**0.0301**	0.0050	mg/L	2024-12-11	
Antimony, total	< 0.00020	0.00020	mg/L	2024-12-11	
Arsenic, total	**0.00371**	0.00050	mg/L	2024-12-11	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analyte	Result	RL	Units	Analyzed	Qualifier
MW13-02 (24L1123-02) | Matrix: Water | Sampled: 2024-12-09, Continued					
Total Metals, Continued					
Barium, total	**0.0726**	0.0050	mg/L	2024-12-11	
Beryllium, total	< 0.00010	0.00010	mg/L	2024-12-11	
Bismuth, total	< 0.00010	0.00010	mg/L	2024-12-11	
Boron, total	**0.187**	0.0500	mg/L	2024-12-11	
Cadmium, total	< 0.000010	0.000010	mg/L	2024-12-11	
Calcium, total	**177**	0.20	mg/L	2024-12-11	
Chromium, total	**0.00165**	0.00050	mg/L	2024-12-11	
Cobalt, total	**0.00104**	0.00010	mg/L	2024-12-11	
Copper, total	< 0.00040	0.00040	mg/L	2024-12-11	
Iron, total	**68.2**	0.010	mg/L	2024-12-11	
Lead, total	< 0.00020	0.00020	mg/L	2024-12-11	
Lithium, total	**0.00055**	0.00010	mg/L	2024-12-11	
Magnesium, total	**11.2**	0.010	mg/L	2024-12-11	
Manganese, total	**1.60**	0.00020	mg/L	2024-12-11	
Mercury, total	< 0.000010	0.000010	mg/L	2024-12-11	
Molybdenum, total	**0.00078**	0.00010	mg/L	2024-12-11	
Nickel, total	< 0.00040	0.00040	mg/L	2024-12-11	
Phosphorus, total	< 0.050	0.050	mg/L	2024-12-11	
Potassium, total	**18.3**	0.10	mg/L	2024-12-11	
Selenium, total	< 0.00050	0.00050	mg/L	2024-12-11	
Silicon, total	**13.0**	1.0	mg/L	2024-12-11	
Silver, total	< 0.000050	0.000050	mg/L	2024-12-11	
Sodium, total	**14.1**	0.10	mg/L	2024-12-11	
Strontium, total	**0.638**	0.0010	mg/L	2024-12-11	
Sulfur, total	**24.3**	3.0	mg/L	2024-12-11	
Tellurium, total	< 0.00050	0.00050	mg/L	2024-12-11	
Thallium, total	< 0.000020	0.000020	mg/L	2024-12-11	
Thorium, total	**0.00012**	0.00010	mg/L	2024-12-11	
Tin, total	< 0.00020	0.00020	mg/L	2024-12-11	
Titanium, total	< 0.0050	0.0050	mg/L	2024-12-11	
Tungsten, total	< 0.0010	0.0010	mg/L	2024-12-11	
Uranium, total	**0.000369**	0.000020	mg/L	2024-12-11	
Vanadium, total	**0.0057**	0.0050	mg/L	2024-12-11	
Zinc, total	< 0.0040	0.0040	mg/L	2024-12-11	
Zirconium, total	**0.00044**	0.00010	mg/L	2024-12-11	
MW13-03 (24L1123-03) | Matrix: Water | Sampled: 2024-12-09					
Anions					
Chloride	**12.6**	0.10	mg/L	2024-12-11	
Fluoride	< 0.10	0.10	mg/L	2024-12-11	
Nitrate (as N)	**0.628**	0.010	mg/L	2024-12-11	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-12-11	

TEST RESULTS

REPORTED TO Tetra Tech EBA Inc. (Vancouver)
PROJECT Marine Avenue Site

WORK ORDER 24L1123
REPORTED 2024-12-17 11:35

Analyte	Result	RL	Units	Analyzed	Qualifier
MW13-03 (24L1123-03) | Matrix: Water | Sampled: 2024-12-09, Continued					
Anions, Continued					
Sulfate	**22.5**	1.0	mg/L	2024-12-11	
Calculated Parameters					
Hardness, Dissolved (as CaCO3)	**99.8**	0.500	mg/L	N/A	
Dissolved Metals					
Aluminum, dissolved	**0.0144**	0.0050	mg/L	2024-12-10	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2024-12-10	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2024-12-10	
Barium, dissolved	**0.0094**	0.0050	mg/L	2024-12-10	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Boron, dissolved	**0.0603**	0.0500	mg/L	2024-12-10	
Cadmium, dissolved	**0.000013**	0.000010	mg/L	2024-12-10	
Calcium, dissolved	**31.2**	0.20	mg/L	2024-12-10	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2024-12-10	
Cobalt, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Copper, dissolved	**0.00127**	0.00040	mg/L	2024-12-10	
Iron, dissolved	< 0.010	0.010	mg/L	2024-12-10	
Lead, dissolved	< 0.00020	0.00020	mg/L	2024-12-10	
Lithium, dissolved	**0.00179**	0.00010	mg/L	2024-12-10	
Magnesium, dissolved	**5.26**	0.010	mg/L	2024-12-10	
Manganese, dissolved	**0.00096**	0.00020	mg/L	2024-12-10	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2024-12-11	
Molybdenum, dissolved	**0.00012**	0.00010	mg/L	2024-12-10	
Nickel, dissolved	**0.00062**	0.00040	mg/L	2024-12-10	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2024-12-10	
Potassium, dissolved	**3.48**	0.10	mg/L	2024-12-10	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2024-12-10	
Silicon, dissolved	**13.1**	1.0	mg/L	2024-12-10	
Silver, dissolved	< 0.000050	0.000050	mg/L	2024-12-10	
Sodium, dissolved	**21.1**	0.10	mg/L	2024-12-10	
Strontium, dissolved	**0.195**	0.0010	mg/L	2024-12-10	
Sulfur, dissolved	**7.2**	3.0	mg/L	2024-12-10	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2024-12-10	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2024-12-10	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Tin, dissolved	< 0.00020	0.00020	mg/L	2024-12-10	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2024-12-10	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2024-12-10	
Uranium, dissolved	**0.000705**	0.000020	mg/L	2024-12-10	
Vanadium, dissolved	< 0.0050	0.0050	mg/L	2024-12-10	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2024-12-10	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analyte	Result	RL	Units	Analyzed	Qualifier
MW13-03 (24L1123-03) | Matrix: Water | Sampled: 2024-12-09, Continued					
General Parameters					
Alkalinity, Total (as CaCO3)	**95.6**	1.0	mg/L	2024-12-11	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-12-11	
Alkalinity, Bicarbonate (as CaCO3)	**95.6**	1.0	mg/L	2024-12-11	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-12-11	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-12-11	
Ammonia, Total (as N)	**0.050**	0.050	mg/L	2024-12-12	
BOD, 5-day	< 2.7	2.0	mg/L	2024-12-15	
Carbon, Dissolved Organic	**2.98**	0.50	mg/L	2024-12-11	
Chemical Oxygen Demand	**25**	20	mg/L	2024-12-13	
Conductivity (EC)	**298**	2.0	µS/cm	2024-12-11	
pH	**6.73**	0.10	pH units	2024-12-11	HT2
Solids, Total Dissolved	**222**	10	mg/L	2024-12-12	
Sulfide, Total	< 0.020	0.020	mg/L	2024-12-12	
Total Metals					
Aluminum, total	**8.33**	0.0050	mg/L	2024-12-11	
Antimony, total	< 0.00020	0.00020	mg/L	2024-12-11	
Arsenic, total	**0.00088**	0.00050	mg/L	2024-12-11	
Barium, total	**0.0649**	0.0050	mg/L	2024-12-11	
Beryllium, total	**0.00010**	0.00010	mg/L	2024-12-11	
Bismuth, total	< 0.00010	0.00010	mg/L	2024-12-11	
Boron, total	**0.0610**	0.0500	mg/L	2024-12-11	
Cadmium, total	**0.000035**	0.000010	mg/L	2024-12-11	
Calcium, total	**33.6**	0.20	mg/L	2024-12-11	
Chromium, total	**0.00499**	0.00050	mg/L	2024-12-11	
Cobalt, total	**0.00459**	0.00010	mg/L	2024-12-11	
Copper, total	**0.0170**	0.00040	mg/L	2024-12-11	
Iron, total	**8.07**	0.010	mg/L	2024-12-11	
Lead, total	**0.00144**	0.00020	mg/L	2024-12-11	
Lithium, total	**0.00640**	0.00010	mg/L	2024-12-11	
Magnesium, total	**8.62**	0.010	mg/L	2024-12-11	
Manganese, total	**0.171**	0.00020	mg/L	2024-12-11	
Mercury, total	**0.000015**	0.000010	mg/L	2024-12-11	
Molybdenum, total	**0.00040**	0.00010	mg/L	2024-12-11	
Nickel, total	**0.00390**	0.00040	mg/L	2024-12-11	
Phosphorus, total	**0.382**	0.050	mg/L	2024-12-11	
Potassium, total	**4.88**	0.10	mg/L	2024-12-11	
Selenium, total	< 0.00050	0.00050	mg/L	2024-12-11	
Silicon, total	**24.8**	1.0	mg/L	2024-12-11	
Silver, total	**0.000086**	0.000050	mg/L	2024-12-11	
Sodium, total	**22.1**	0.10	mg/L	2024-12-11	
Strontium, total	**0.225**	0.0010	mg/L	2024-12-11	
Sulfur, total	**7.6**	3.0	mg/L	2024-12-11	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analyte	Result	RL	Units	Analyzed	Qualifier
MW13-03 (24L1123-03) | Matrix: Water | Sampled: 2024-12-09, Continued					
Total Metals, Continued					
Tellurium, total	< 0.00050	0.00050	mg/L	2024-12-11	
Thallium, total	**0.000046**	0.000020	mg/L	2024-12-11	
Thorium, total	**0.00104**	0.00010	mg/L	2024-12-11	
Tin, total	**0.00032**	0.00020	mg/L	2024-12-11	
Titanium, total	**0.516**	0.0050	mg/L	2024-12-11	
Tungsten, total	< 0.0010	0.0010	mg/L	2024-12-11	
Uranium, total	**0.00128**	0.000020	mg/L	2024-12-11	
Vanadium, total	**0.0169**	0.0050	mg/L	2024-12-11	
Zinc, total	**0.0345**	0.0040	mg/L	2024-12-11	
Zirconium, total	**0.00044**	0.00010	mg/L	2024-12-11	
MW19-04 (24L1123-04) | Matrix: Water | Sampled: 2024-12-09					
Anions					
Chloride	**17.4**	0.10	mg/L	2024-12-11	
Fluoride	< 0.10	0.10	mg/L	2024-12-11	
Nitrate (as N)	< 0.100	0.010	mg/L	2024-12-12	RA1
Nitrite (as N)	< 0.010	0.010	mg/L	2024-12-11	
Sulfate	**2.6**	1.0	mg/L	2024-12-11	
Calculated Parameters					
Hardness, Dissolved (as CaCO3)	**210**	0.500	mg/L	N/A	
Dissolved Metals					
Aluminum, dissolved	**0.0084**	0.0050	mg/L	2024-12-10	
Antimony, dissolved	**0.00042**	0.00020	mg/L	2024-12-10	
Arsenic, dissolved	**0.00228**	0.00050	mg/L	2024-12-10	
Barium, dissolved	**0.0353**	0.0050	mg/L	2024-12-10	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Boron, dissolved	< 0.0500	0.0500	mg/L	2024-12-10	
Cadmium, dissolved	**0.000044**	0.000010	mg/L	2024-12-10	
Calcium, dissolved	**68.0**	0.20	mg/L	2024-12-10	
Chromium, dissolved	**0.00065**	0.00050	mg/L	2024-12-10	
Cobalt, dissolved	**0.00301**	0.00010	mg/L	2024-12-10	
Copper, dissolved	**0.00388**	0.00040	mg/L	2024-12-10	
Iron, dissolved	**14.4**	0.010	mg/L	2024-12-10	
Lead, dissolved	< 0.00020	0.00020	mg/L	2024-12-10	
Lithium, dissolved	**0.00209**	0.00010	mg/L	2024-12-10	
Magnesium, dissolved	**9.70**	0.010	mg/L	2024-12-10	
Manganese, dissolved	**2.18**	0.00020	mg/L	2024-12-10	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2024-12-11	
Molybdenum, dissolved	**0.00050**	0.00010	mg/L	2024-12-10	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analyte	Result	RL	Units	Analyzed	Qualifier
MW19-04 (24L1123-04) | Matrix: Water | Sampled: 2024-12-09, Continued					
Dissolved Metals, Continued					
Nickel, dissolved	**0.00059**	0.00040	mg/L	2024-12-10	
Phosphorus, dissolved	**0.121**	0.050	mg/L	2024-12-10	
Potassium, dissolved	**7.90**	0.10	mg/L	2024-12-10	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2024-12-10	
Silicon, dissolved	**16.5**	1.0	mg/L	2024-12-10	
Silver, dissolved	< 0.000050	0.000050	mg/L	2024-12-10	
Sodium, dissolved	**10.3**	0.10	mg/L	2024-12-10	
Strontium, dissolved	**0.340**	0.0010	mg/L	2024-12-10	
Sulfur, dissolved	< 3.0	3.0	mg/L	2024-12-10	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2024-12-10	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2024-12-10	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Tin, dissolved	< 0.00020	0.00020	mg/L	2024-12-10	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2024-12-10	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2024-12-10	
Uranium, dissolved	**0.000826**	0.000020	mg/L	2024-12-10	
Vanadium, dissolved	< 0.0050	0.0050	mg/L	2024-12-10	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2024-12-10	
Zirconium, dissolved	**0.00014**	0.00010	mg/L	2024-12-10	
General Parameters					
Alkalinity, Total (as CaCO3)	**195**	1.0	mg/L	2024-12-11	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-12-11	
Alkalinity, Bicarbonate (as CaCO3)	**195**	1.0	mg/L	2024-12-11	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-12-11	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-12-11	
Ammonia, Total (as N)	**0.298**	0.050	mg/L	2024-12-12	
BOD, 5-day	**4.2**	2.0	mg/L	2024-12-15	
Carbon, Dissolved Organic	**13.3**	0.50	mg/L	2024-12-11	
Chemical Oxygen Demand	**50**	20	mg/L	2024-12-13	
Conductivity (EC)	**457**	2.0	µS/cm	2024-12-11	
pH	**7.09**	0.10	pH units	2024-12-11	HT2
Solids, Total Dissolved	**272**	10	mg/L	2024-12-12	
Sulfide, Total	< 0.020	0.020	mg/L	2024-12-12	
Total Metals					
Aluminum, total	**0.552**	0.0050	mg/L	2024-12-11	
Antimony, total	**0.00048**	0.00020	mg/L	2024-12-11	
Arsenic, total	**0.00367**	0.00050	mg/L	2024-12-11	
Barium, total	**0.0393**	0.0050	mg/L	2024-12-11	
Beryllium, total	< 0.00010	0.00010	mg/L	2024-12-11	
Bismuth, total	< 0.00010	0.00010	mg/L	2024-12-11	
Boron, total	< 0.0500	0.0500	mg/L	2024-12-11	
Cadmium, total	**0.000053**	0.000010	mg/L	2024-12-11	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analyte	Result	RL	Units	Analyzed	Qualifier
MW19-04 (24L1123-04) | Matrix: Water | Sampled: 2024-12-09, Continued					
Total Metals, Continued					
Calcium, total	**68.1**	0.20	mg/L	2024-12-11	
Chromium, total	**0.00111**	0.00050	mg/L	2024-12-11	
Cobalt, total	**0.00315**	0.00010	mg/L	2024-12-11	
Copper, total	**0.00510**	0.00040	mg/L	2024-12-11	
Iron, total	**18.9**	0.010	mg/L	2024-12-11	
Lead, total	**0.00021**	0.00020	mg/L	2024-12-11	
Lithium, total	**0.00248**	0.00010	mg/L	2024-12-11	
Magnesium, total	**10.2**	0.010	mg/L	2024-12-11	
Manganese, total	**2.14**	0.00020	mg/L	2024-12-11	
Mercury, total	< 0.000010	0.000010	mg/L	2024-12-11	
Molybdenum, total	**0.00059**	0.00010	mg/L	2024-12-11	
Nickel, total	**0.00083**	0.00040	mg/L	2024-12-11	
Phosphorus, total	**0.236**	0.050	mg/L	2024-12-11	
Potassium, total	**7.92**	0.10	mg/L	2024-12-11	
Selenium, total	< 0.00050	0.00050	mg/L	2024-12-11	
Silicon, total	**17.9**	1.0	mg/L	2024-12-11	
Silver, total	< 0.000050	0.000050	mg/L	2024-12-11	
Sodium, total	**10.5**	0.10	mg/L	2024-12-11	
Strontium, total	**0.342**	0.0010	mg/L	2024-12-11	
Sulfur, total	< 3.0	3.0	mg/L	2024-12-11	
Tellurium, total	< 0.00050	0.00050	mg/L	2024-12-11	
Thallium, total	< 0.000020	0.000020	mg/L	2024-12-11	
Thorium, total	**0.00020**	0.00010	mg/L	2024-12-11	
Tin, total	< 0.00020	0.00020	mg/L	2024-12-11	
Titanium, total	**0.0280**	0.0050	mg/L	2024-12-11	
Tungsten, total	< 0.0010	0.0010	mg/L	2024-12-11	
Uranium, total	**0.00105**	0.000020	mg/L	2024-12-11	
Vanadium, total	**0.0072**	0.0050	mg/L	2024-12-11	
Zinc, total	**0.0386**	0.0040	mg/L	2024-12-11	
Zirconium, total	**0.00025**	0.00010	mg/L	2024-12-11	
SW1 (24L1123-05) | Matrix: Water | Sampled: 2024-12-09					
Anions					
Chloride	**7.90**	0.10	mg/L	2024-12-11	
Fluoride	< 0.10	0.10	mg/L	2024-12-11	
Nitrate (as N)	**0.097**	0.010	mg/L	2024-12-11	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-12-11	
Sulfate	**2.1**	1.0	mg/L	2024-12-11	
Calculated Parameters					
Hardness, Dissolved (as CaCO3)	**27.2**	0.500	mg/L	N/A	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analyte	Result	RL	Units	Analyzed	Qualifier
SW1 (24L1123-05) | Matrix: Water | Sampled: 2024-12-09, Continued					
Dissolved Metals					
Aluminum, dissolved	**0.0302**	0.0050	mg/L	2024-12-10	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2024-12-10	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2024-12-10	
Barium, dissolved	< 0.0050	0.0050	mg/L	2024-12-10	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Boron, dissolved	< 0.0500	0.0500	mg/L	2024-12-10	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2024-12-10	
Calcium, dissolved	**8.29**	0.20	mg/L	2024-12-10	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2024-12-10	
Cobalt, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Copper, dissolved	**0.00045**	0.00040	mg/L	2024-12-10	
Iron, dissolved	**0.563**	0.010	mg/L	2024-12-10	
Lead, dissolved	< 0.00020	0.00020	mg/L	2024-12-10	
Lithium, dissolved	**0.00024**	0.00010	mg/L	2024-12-10	
Magnesium, dissolved	**1.58**	0.010	mg/L	2024-12-10	
Manganese, dissolved	**0.00652**	0.00020	mg/L	2024-12-10	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2024-12-11	
Molybdenum, dissolved	**0.00015**	0.00010	mg/L	2024-12-10	
Nickel, dissolved	< 0.00040	0.00040	mg/L	2024-12-10	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2024-12-10	
Potassium, dissolved	**0.75**	0.10	mg/L	2024-12-10	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2024-12-10	
Silicon, dissolved	**6.1**	1.0	mg/L	2024-12-10	
Silver, dissolved	< 0.000050	0.000050	mg/L	2024-12-10	
Sodium, dissolved	**6.53**	0.10	mg/L	2024-12-10	
Strontium, dissolved	**0.0494**	0.0010	mg/L	2024-12-10	
Sulfur, dissolved	< 3.0	3.0	mg/L	2024-12-10	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2024-12-10	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2024-12-10	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Tin, dissolved	< 0.00020	0.00020	mg/L	2024-12-10	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2024-12-10	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2024-12-10	
Uranium, dissolved	< 0.000020	0.000020	mg/L	2024-12-10	
Vanadium, dissolved	< 0.0050	0.0050	mg/L	2024-12-10	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2024-12-10	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
General Parameters					
Alkalinity, Total (as CaCO3)	**26.2**	1.0	mg/L	2024-12-11	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-12-11	
Alkalinity, Bicarbonate (as CaCO3)	**26.2**	1.0	mg/L	2024-12-11	

TEST RESULTS

REPORTED TO Tetra Tech EBA Inc. (Vancouver)
PROJECT Marine Avenue Site

WORK ORDER 24L1123
REPORTED 2024-12-17 11:35

Analyte	Result	RL	Units	Analyzed	Qualifier
SW1 (24L1123-05) | Matrix: Water | Sampled: 2024-12-09, Continued					
General Parameters, Continued					
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-12-11	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-12-11	
Ammonia, Total (as N)	**0.062**	0.050	mg/L	2024-12-12	
BOD, 5-day	**5.1**	2.0	mg/L	2024-12-15	
Carbon, Dissolved Organic	**4.97**	0.50	mg/L	2024-12-11	
Chemical Oxygen Demand	< 20	20	mg/L	2024-12-13	
Conductivity (EC)	**87.7**	2.0	µS/cm	2024-12-11	
pH	**7.17**	0.10	pH units	2024-12-11	HT2
Solids, Total Dissolved	**58**	10	mg/L	2024-12-12	
Sulfide, Total	< 0.020	0.020	mg/L	2024-12-13	
Total Metals					
Aluminum, total	**0.0756**	0.0050	mg/L	2024-12-11	
Antimony, total	< 0.00020	0.00020	mg/L	2024-12-11	
Arsenic, total	< 0.00050	0.00050	mg/L	2024-12-11	
Barium, total	< 0.0050	0.0050	mg/L	2024-12-11	
Beryllium, total	< 0.00010	0.00010	mg/L	2024-12-11	
Bismuth, total	< 0.00010	0.00010	mg/L	2024-12-11	
Boron, total	< 0.0500	0.0500	mg/L	2024-12-11	
Cadmium, total	< 0.000010	0.000010	mg/L	2024-12-11	
Calcium, total	**8.43**	0.20	mg/L	2024-12-11	
Chromium, total	< 0.00050	0.00050	mg/L	2024-12-11	
Cobalt, total	< 0.00010	0.00010	mg/L	2024-12-11	
Copper, total	**0.00050**	0.00040	mg/L	2024-12-11	
Iron, total	**0.712**	0.010	mg/L	2024-12-11	
Lead, total	< 0.00020	0.00020	mg/L	2024-12-11	
Lithium, total	**0.00027**	0.00010	mg/L	2024-12-11	
Magnesium, total	**1.53**	0.010	mg/L	2024-12-11	
Manganese, total	**0.0120**	0.00020	mg/L	2024-12-11	
Mercury, total	< 0.000010	0.000010	mg/L	2024-12-11	
Molybdenum, total	**0.00016**	0.00010	mg/L	2024-12-11	
Nickel, total	< 0.00040	0.00040	mg/L	2024-12-11	
Phosphorus, total	< 0.050	0.050	mg/L	2024-12-11	
Potassium, total	**0.75**	0.10	mg/L	2024-12-11	
Selenium, total	< 0.00050	0.00050	mg/L	2024-12-11	
Silicon, total	**6.0**	1.0	mg/L	2024-12-11	
Silver, total	< 0.000050	0.000050	mg/L	2024-12-11	
Sodium, total	**6.16**	0.10	mg/L	2024-12-11	
Strontium, total	**0.0503**	0.0010	mg/L	2024-12-11	
Sulfur, total	< 3.0	3.0	mg/L	2024-12-11	
Tellurium, total	< 0.00050	0.00050	mg/L	2024-12-11	
Thallium, total	< 0.000020	0.000020	mg/L	2024-12-11	
Thorium, total	< 0.00010	0.00010	mg/L	2024-12-11	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analyte	Result	RL	Units	Analyzed	Qualifier
SW1 (24L1123-05) | Matrix: Water | Sampled: 2024-12-09, Continued					
Total Metals, Continued					
Tin, total	< 0.00020	0.00020	mg/L	2024-12-11	
Titanium, total	< 0.0050	0.0050	mg/L	2024-12-11	
Tungsten, total	< 0.0010	0.0010	mg/L	2024-12-11	
Uranium, total	< 0.000020	0.000020	mg/L	2024-12-11	
Vanadium, total	< 0.0050	0.0050	mg/L	2024-12-11	
Zinc, total	< 0.0040	0.0040	mg/L	2024-12-11	
Zirconium, total	< 0.00010	0.00010	mg/L	2024-12-11	
SW2 (24L1123-06) | Matrix: Water | Sampled: 2024-12-09					
Anions					
Chloride	**8.31**	0.10	mg/L	2024-12-11	
Fluoride	< 0.10	0.10	mg/L	2024-12-11	
Nitrate (as N)	**0.122**	0.010	mg/L	2024-12-11	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-12-11	
Sulfate	**2.2**	1.0	mg/L	2024-12-11	
Calculated Parameters					
Hardness, Dissolved (as CaCO3)	**29.6**	0.500	mg/L	N/A	
Dissolved Metals					
Aluminum, dissolved	**0.0296**	0.0050	mg/L	2024-12-10	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2024-12-10	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2024-12-10	
Barium, dissolved	< 0.0050	0.0050	mg/L	2024-12-10	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Boron, dissolved	< 0.0500	0.0500	mg/L	2024-12-10	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2024-12-10	
Calcium, dissolved	**9.01**	0.20	mg/L	2024-12-10	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2024-12-10	
Cobalt, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Copper, dissolved	**0.00048**	0.00040	mg/L	2024-12-10	
Iron, dissolved	**0.511**	0.010	mg/L	2024-12-10	
Lead, dissolved	< 0.00020	0.00020	mg/L	2024-12-10	
Lithium, dissolved	**0.00027**	0.00010	mg/L	2024-12-10	
Magnesium, dissolved	**1.73**	0.010	mg/L	2024-12-10	
Manganese, dissolved	**0.00561**	0.00020	mg/L	2024-12-10	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2024-12-11	
Molybdenum, dissolved	**0.00015**	0.00010	mg/L	2024-12-10	
Nickel, dissolved	< 0.00040	0.00040	mg/L	2024-12-10	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2024-12-10	
Potassium, dissolved	**0.81**	0.10	mg/L	2024-12-10	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analyte	Result	RL	Units	Analyzed	Qualifier
SW2 (24L1123-06) | Matrix: Water | Sampled: 2024-12-09, Continued					
Dissolved Metals, Continued					
Selenium, dissolved	< 0.00050	0.00050	mg/L	2024-12-10	
Silicon, dissolved	**6.3**	1.0	mg/L	2024-12-10	
Silver, dissolved	< 0.000050	0.000050	mg/L	2024-12-10	
Sodium, dissolved	**6.81**	0.10	mg/L	2024-12-10	
Strontium, dissolved	**0.0533**	0.0010	mg/L	2024-12-10	
Sulfur, dissolved	< 3.0	3.0	mg/L	2024-12-10	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2024-12-10	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2024-12-10	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Tin, dissolved	< 0.00020	0.00020	mg/L	2024-12-10	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2024-12-10	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2024-12-10	
Uranium, dissolved	< 0.000020	0.000020	mg/L	2024-12-10	
Vanadium, dissolved	< 0.0050	0.0050	mg/L	2024-12-10	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2024-12-10	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
General Parameters					
Alkalinity, Total (as CaCO3)	**28.5**	1.0	mg/L	2024-12-11	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-12-11	
Alkalinity, Bicarbonate (as CaCO3)	**28.5**	1.0	mg/L	2024-12-11	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-12-11	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-12-11	
Ammonia, Total (as N)	< 0.050	0.050	mg/L	2024-12-12	
BOD, 5-day	< 2.7	2.0	mg/L	2024-12-15	
Carbon, Dissolved Organic	**4.91**	0.50	mg/L	2024-12-11	
Chemical Oxygen Demand	< 20	20	mg/L	2024-12-13	
Conductivity (EC)	**94.4**	2.0	µS/cm	2024-12-11	
pH	**7.21**	0.10	pH units	2024-12-11	HT2
Solids, Total Dissolved	**50**	10	mg/L	2024-12-12	
Sulfide, Total	< 0.020	0.020	mg/L	2024-12-13	
Total Metals					
Aluminum, total	**0.183**	0.0050	mg/L	2024-12-11	
Antimony, total	< 0.00020	0.00020	mg/L	2024-12-11	
Arsenic, total	< 0.00050	0.00050	mg/L	2024-12-11	
Barium, total	< 0.0050	0.0050	mg/L	2024-12-11	
Beryllium, total	< 0.00010	0.00010	mg/L	2024-12-11	
Bismuth, total	< 0.00010	0.00010	mg/L	2024-12-11	
Boron, total	< 0.0500	0.0500	mg/L	2024-12-11	
Cadmium, total	< 0.000010	0.000010	mg/L	2024-12-11	
Calcium, total	**9.09**	0.20	mg/L	2024-12-11	
Chromium, total	< 0.00050	0.00050	mg/L	2024-12-11	
Cobalt, total	< 0.00010	0.00010	mg/L	2024-12-11	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analyte	Result	RL	Units	Analyzed	Qualifier
SW2 (24L1123-06) | Matrix: Water | Sampled: 2024-12-09, Continued					
Total Metals, Continued					
Copper, total	**0.00063**	0.00040	mg/L	2024-12-11	
Iron, total	**0.805**	0.010	mg/L	2024-12-11	
Lead, total	< 0.00020	0.00020	mg/L	2024-12-11	
Lithium, total	**0.00035**	0.00010	mg/L	2024-12-11	
Magnesium, total	**1.74**	0.010	mg/L	2024-12-11	
Manganese, total	**0.0209**	0.00020	mg/L	2024-12-11	
Mercury, total	< 0.000010	0.000010	mg/L	2024-12-11	
Molybdenum, total	**0.00016**	0.00010	mg/L	2024-12-11	
Nickel, total	< 0.00040	0.00040	mg/L	2024-12-11	
Phosphorus, total	< 0.050	0.050	mg/L	2024-12-11	
Potassium, total	**0.83**	0.10	mg/L	2024-12-11	
Selenium, total	< 0.00050	0.00050	mg/L	2024-12-11	
Silicon, total	**6.6**	1.0	mg/L	2024-12-11	
Silver, total	< 0.000050	0.000050	mg/L	2024-12-11	
Sodium, total	**6.76**	0.10	mg/L	2024-12-11	
Strontium, total	**0.0549**	0.0010	mg/L	2024-12-11	
Sulfur, total	< 3.0	3.0	mg/L	2024-12-11	
Tellurium, total	< 0.00050	0.00050	mg/L	2024-12-11	
Thallium, total	< 0.000020	0.000020	mg/L	2024-12-11	
Thorium, total	< 0.00010	0.00010	mg/L	2024-12-11	
Tin, total	< 0.00020	0.00020	mg/L	2024-12-11	
Titanium, total	**0.0089**	0.0050	mg/L	2024-12-11	
Tungsten, total	< 0.0010	0.0010	mg/L	2024-12-11	
Uranium, total	**0.000034**	0.000020	mg/L	2024-12-11	
Vanadium, total	< 0.0050	0.0050	mg/L	2024-12-11	
Zinc, total	< 0.0040	0.0040	mg/L	2024-12-11	
Zirconium, total	< 0.00010	0.00010	mg/L	2024-12-11	
SW3 (24L1123-07) | Matrix: Water | Sampled: 2024-12-09					
Anions					
Chloride	**8.34**	0.10	mg/L	2024-12-11	
Fluoride	< 0.10	0.10	mg/L	2024-12-11	
Nitrate (as N)	**0.121**	0.010	mg/L	2024-12-11	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-12-11	
Sulfate	**2.5**	1.0	mg/L	2024-12-11	
Calculated Parameters					
Hardness, Dissolved (as CaCO3)	**31.0**	0.500	mg/L	N/A	
Dissolved Metals					
Aluminum, dissolved	**0.0289**	0.0050	mg/L	2024-12-10	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2024-12-10	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analyte	Result	RL	Units	Analyzed	Qualifier
SW3 (24L1123-07) | Matrix: Water | Sampled: 2024-12-09, Continued					
Dissolved Metals, Continued					
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2024-12-10	
Barium, dissolved	< 0.0050	0.0050	mg/L	2024-12-10	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Boron, dissolved	< 0.0500	0.0500	mg/L	2024-12-10	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2024-12-10	
Calcium, dissolved	**9.32**	0.20	mg/L	2024-12-10	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2024-12-10	
Cobalt, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Copper, dissolved	**0.00042**	0.00040	mg/L	2024-12-10	
Iron, dissolved	**0.519**	0.010	mg/L	2024-12-10	
Lead, dissolved	< 0.00020	0.00020	mg/L	2024-12-10	
Lithium, dissolved	**0.00028**	0.00010	mg/L	2024-12-10	
Magnesium, dissolved	**1.87**	0.010	mg/L	2024-12-10	
Manganese, dissolved	**0.00581**	0.00020	mg/L	2024-12-10	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2024-12-11	
Molybdenum, dissolved	**0.00016**	0.00010	mg/L	2024-12-10	
Nickel, dissolved	< 0.00040	0.00040	mg/L	2024-12-10	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2024-12-10	
Potassium, dissolved	**0.91**	0.10	mg/L	2024-12-10	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2024-12-10	
Silicon, dissolved	**6.3**	1.0	mg/L	2024-12-10	
Silver, dissolved	< 0.000050	0.000050	mg/L	2024-12-10	
Sodium, dissolved	**7.34**	0.10	mg/L	2024-12-10	
Strontium, dissolved	**0.0573**	0.0010	mg/L	2024-12-10	
Sulfur, dissolved	< 3.0	3.0	mg/L	2024-12-10	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2024-12-10	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2024-12-10	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Tin, dissolved	< 0.00020	0.00020	mg/L	2024-12-10	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2024-12-10	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2024-12-10	
Uranium, dissolved	**0.000021**	0.000020	mg/L	2024-12-10	
Vanadium, dissolved	< 0.0050	0.0050	mg/L	2024-12-10	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2024-12-10	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
General Parameters					
Alkalinity, Total (as CaCO3)	**29.3**	1.0	mg/L	2024-12-11	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-12-11	
Alkalinity, Bicarbonate (as CaCO3)	**29.3**	1.0	mg/L	2024-12-11	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-12-11	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-12-11	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analyte	Result	RL	Units	Analyzed	Qualifier
SW3 (24L1123-07) | Matrix: Water | Sampled: 2024-12-09, Continued					
General Parameters, Continued					
Ammonia, Total (as N)	**0.073**	0.050	mg/L	2024-12-12	
BOD, 5-day	< 2.7	2.0	mg/L	2024-12-15	
Carbon, Dissolved Organic	**5.24**	0.50	mg/L	2024-12-11	
Chemical Oxygen Demand	< 20	20	mg/L	2024-12-13	
Conductivity (EC)	**98.1**	2.0	µS/cm	2024-12-11	
pH	**7.23**	0.10	pH units	2024-12-11	HT2
Solids, Total Dissolved	**58**	10	mg/L	2024-12-12	
Sulfide, Total	< 0.020	0.020	mg/L	2024-12-13	
Total Metals					
Aluminum, total	**0.0941**	0.0050	mg/L	2024-12-11	
Antimony, total	< 0.00020	0.00020	mg/L	2024-12-11	
Arsenic, total	< 0.00050	0.00050	mg/L	2024-12-11	
Barium, total	< 0.0050	0.0050	mg/L	2024-12-11	
Beryllium, total	< 0.00010	0.00010	mg/L	2024-12-11	
Bismuth, total	< 0.00010	0.00010	mg/L	2024-12-11	
Boron, total	< 0.0500	0.0500	mg/L	2024-12-11	
Cadmium, total	< 0.000010	0.000010	mg/L	2024-12-11	
Calcium, total	**9.38**	0.20	mg/L	2024-12-11	
Chromium, total	< 0.00050	0.00050	mg/L	2024-12-11	
Cobalt, total	< 0.00010	0.00010	mg/L	2024-12-11	
Copper, total	**0.00062**	0.00040	mg/L	2024-12-11	
Iron, total	**0.665**	0.010	mg/L	2024-12-11	
Lead, total	< 0.00020	0.00020	mg/L	2024-12-11	
Lithium, total	**0.00032**	0.00010	mg/L	2024-12-11	
Magnesium, total	**1.81**	0.010	mg/L	2024-12-11	
Manganese, total	**0.0141**	0.00020	mg/L	2024-12-11	
Mercury, total	< 0.000010	0.000010	mg/L	2024-12-11	
Molybdenum, total	**0.00017**	0.00010	mg/L	2024-12-11	
Nickel, total	< 0.00040	0.00040	mg/L	2024-12-11	
Phosphorus, total	< 0.050	0.050	mg/L	2024-12-11	
Potassium, total	**0.89**	0.10	mg/L	2024-12-11	
Selenium, total	< 0.00050	0.00050	mg/L	2024-12-11	
Silicon, total	**6.5**	1.0	mg/L	2024-12-11	
Silver, total	< 0.000050	0.000050	mg/L	2024-12-11	
Sodium, total	**7.10**	0.10	mg/L	2024-12-11	
Strontium, total	**0.0564**	0.0010	mg/L	2024-12-11	
Sulfur, total	< 3.0	3.0	mg/L	2024-12-11	
Tellurium, total	< 0.00050	0.00050	mg/L	2024-12-11	
Thallium, total	< 0.000020	0.000020	mg/L	2024-12-11	
Thorium, total	< 0.00010	0.00010	mg/L	2024-12-11	
Tin, total	< 0.00020	0.00020	mg/L	2024-12-11	
Titanium, total	< 0.0050	0.0050	mg/L	2024-12-11	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analyte	Result	RL	Units	Analyzed	Qualifier
SW3 (24L1123-07) | Matrix: Water | Sampled: 2024-12-09, Continued					
Total Metals, Continued					
Tungsten, total	< 0.0010	0.0010	mg/L	2024-12-11	
Uranium, total	**0.000028**	0.000020	mg/L	2024-12-11	
Vanadium, total	< 0.0050	0.0050	mg/L	2024-12-11	
Zinc, total	< 0.0040	0.0040	mg/L	2024-12-11	
Zirconium, total	< 0.00010	0.00010	mg/L	2024-12-11	
SW4 (24L1123-08) | Matrix: Water | Sampled: 2024-12-09					
Anions					
Chloride	**10.3**	0.10	mg/L	2024-12-11	
Fluoride	< 0.10	0.10	mg/L	2024-12-11	
Nitrate (as N)	**0.038**	0.010	mg/L	2024-12-11	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-12-11	
Sulfate	**6.5**	1.0	mg/L	2024-12-11	
Calculated Parameters					
Hardness, Dissolved (as CaCO3)	**59.5**	0.500	mg/L	N/A	
Dissolved Metals					
Aluminum, dissolved	**0.0062**	0.0050	mg/L	2024-12-10	
Antimony, dissolved	< 0.00020	0.00020	mg/L	2024-12-10	
Arsenic, dissolved	< 0.00050	0.00050	mg/L	2024-12-10	
Barium, dissolved	< 0.0050	0.0050	mg/L	2024-12-10	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Boron, dissolved	< 0.0500	0.0500	mg/L	2024-12-10	
Cadmium, dissolved	< 0.000010	0.000010	mg/L	2024-12-10	
Calcium, dissolved	**17.7**	0.20	mg/L	2024-12-10	
Chromium, dissolved	< 0.00050	0.00050	mg/L	2024-12-10	
Cobalt, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Copper, dissolved	< 0.00040	0.00040	mg/L	2024-12-10	
Iron, dissolved	**0.028**	0.010	mg/L	2024-12-10	
Lead, dissolved	< 0.00020	0.00020	mg/L	2024-12-10	
Lithium, dissolved	**0.00120**	0.00010	mg/L	2024-12-10	
Magnesium, dissolved	**3.72**	0.010	mg/L	2024-12-10	
Manganese, dissolved	**0.00339**	0.00020	mg/L	2024-12-10	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2024-12-11	
Molybdenum, dissolved	**0.00015**	0.00010	mg/L	2024-12-10	
Nickel, dissolved	< 0.00040	0.00040	mg/L	2024-12-10	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2024-12-10	
Potassium, dissolved	**1.86**	0.10	mg/L	2024-12-10	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2024-12-10	
Silicon, dissolved	**13.1**	1.0	mg/L	2024-12-10	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analyte	Result	RL	Units	Analyzed	Qualifier
SW4 (24L1123-08) | Matrix: Water | Sampled: 2024-12-09, Continued					
Dissolved Metals, Continued					
Silver, dissolved	< 0.000050	0.000050	mg/L	2024-12-10	
Sodium, dissolved	**9.10**	0.10	mg/L	2024-12-10	
Strontium, dissolved	**0.0943**	0.0010	mg/L	2024-12-10	
Sulfur, dissolved	< 3.0	3.0	mg/L	2024-12-10	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2024-12-10	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2024-12-10	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Tin, dissolved	< 0.00020	0.00020	mg/L	2024-12-10	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2024-12-10	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2024-12-10	
Uranium, dissolved	**0.000071**	0.000020	mg/L	2024-12-10	
Vanadium, dissolved	< 0.0050	0.0050	mg/L	2024-12-10	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2024-12-10	
Zirconium, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
General Parameters					
Alkalinity, Total (as CaCO3)	**56.0**	1.0	mg/L	2024-12-11	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-12-11	
Alkalinity, Bicarbonate (as CaCO3)	**56.0**	1.0	mg/L	2024-12-11	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-12-11	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-12-11	
Ammonia, Total (as N)	< 0.050	0.050	mg/L	2024-12-12	
BOD, 5-day	< 2.7	2.0	mg/L	2024-12-15	
Carbon, Dissolved Organic	**1.62**	0.50	mg/L	2024-12-11	
Chemical Oxygen Demand	< 20	20	mg/L	2024-12-13	
Conductivity (EC)	**166**	2.0	µS/cm	2024-12-11	
pH	**7.43**	0.10	pH units	2024-12-11	HT2
Solids, Total Dissolved	**130**	10	mg/L	2024-12-12	
Sulfide, Total	< 0.020	0.020	mg/L	2024-12-13	
Total Metals					
Aluminum, total	**0.0366**	0.0050	mg/L	2024-12-11	
Antimony, total	< 0.00020	0.00020	mg/L	2024-12-11	
Arsenic, total	< 0.00050	0.00050	mg/L	2024-12-11	
Barium, total	< 0.0050	0.0050	mg/L	2024-12-11	
Beryllium, total	< 0.00010	0.00010	mg/L	2024-12-11	
Bismuth, total	< 0.00010	0.00010	mg/L	2024-12-11	
Boron, total	< 0.0500	0.0500	mg/L	2024-12-11	
Cadmium, total	< 0.000010	0.000010	mg/L	2024-12-11	
Calcium, total	**17.7**	0.20	mg/L	2024-12-11	
Chromium, total	< 0.00050	0.00050	mg/L	2024-12-11	
Cobalt, total	< 0.00010	0.00010	mg/L	2024-12-11	
Copper, total	< 0.00040	0.00040	mg/L	2024-12-11	
Iron, total	**0.185**	0.010	mg/L	2024-12-11	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analyte	Result	RL	Units	Analyzed	Qualifier
SW4 (24L1123-08) | Matrix: Water | Sampled: 2024-12-09, Continued					
Total Metals, Continued					
Lead, total	< 0.00020	0.00020	mg/L	2024-12-11	
Lithium, total	**0.00127**	0.00010	mg/L	2024-12-11	
Magnesium, total	**3.83**	0.010	mg/L	2024-12-11	
Manganese, total	**0.0163**	0.00020	mg/L	2024-12-11	
Mercury, total	< 0.000010	0.000010	mg/L	2024-12-11	
Molybdenum, total	**0.00015**	0.00010	mg/L	2024-12-11	
Nickel, total	< 0.00040	0.00040	mg/L	2024-12-11	
Phosphorus, total	< 0.050	0.050	mg/L	2024-12-11	
Potassium, total	**1.88**	0.10	mg/L	2024-12-11	
Selenium, total	< 0.00050	0.00050	mg/L	2024-12-11	
Silicon, total	**13.4**	1.0	mg/L	2024-12-11	
Silver, total	< 0.000050	0.000050	mg/L	2024-12-11	
Sodium, total	**9.22**	0.10	mg/L	2024-12-11	
Strontium, total	**0.0964**	0.0010	mg/L	2024-12-11	
Sulfur, total	< 3.0	3.0	mg/L	2024-12-11	
Tellurium, total	< 0.00050	0.00050	mg/L	2024-12-11	
Thallium, total	< 0.000020	0.000020	mg/L	2024-12-11	
Thorium, total	< 0.00010	0.00010	mg/L	2024-12-11	
Tin, total	< 0.00020	0.00020	mg/L	2024-12-11	
Titanium, total	< 0.0050	0.0050	mg/L	2024-12-11	
Tungsten, total	< 0.0010	0.0010	mg/L	2024-12-11	
Uranium, total	**0.000090**	0.000020	mg/L	2024-12-11	
Vanadium, total	< 0.0050	0.0050	mg/L	2024-12-11	
Zinc, total	< 0.0040	0.0040	mg/L	2024-12-11	
Zirconium, total	< 0.00010	0.00010	mg/L	2024-12-11	
DUP1 (24L1123-09) | Matrix: Water | Sampled: 2024-12-09					F3
Anions					
Chloride	**17.6**	0.10	mg/L	2024-12-11	
Fluoride	< 0.10	0.10	mg/L	2024-12-11	
Nitrate (as N)	< 0.100	0.010	mg/L	2024-12-11	RA1
Nitrite (as N)	< 0.010	0.010	mg/L	2024-12-11	
Sulfate	**2.6**	1.0	mg/L	2024-12-11	
Calculated Parameters					
Hardness, Dissolved (as CaCO3)	**204**	0.500	mg/L	N/A	
Dissolved Metals					
Aluminum, dissolved	**0.0086**	0.0050	mg/L	2024-12-10	
Antimony, dissolved	**0.00044**	0.00020	mg/L	2024-12-10	
Arsenic, dissolved	**0.00232**	0.00050	mg/L	2024-12-10	
Barium, dissolved	**0.0346**	0.0050	mg/L	2024-12-10	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analyte	Result	RL	Units	Analyzed	Qualifier
DUP1 (24L1123-09) | Matrix: Water | Sampled: 2024-12-09, Continued					F3
Dissolved Metals, Continued					
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Boron, dissolved	< 0.0500	0.0500	mg/L	2024-12-10	
Cadmium, dissolved	**0.000037**	0.000010	mg/L	2024-12-10	
Calcium, dissolved	**65.8**	0.20	mg/L	2024-12-10	
Chromium, dissolved	**0.00062**	0.00050	mg/L	2024-12-10	
Cobalt, dissolved	**0.00303**	0.00010	mg/L	2024-12-10	
Copper, dissolved	**0.00174**	0.00040	mg/L	2024-12-10	
Iron, dissolved	**14.4**	0.010	mg/L	2024-12-10	
Lead, dissolved	< 0.00020	0.00020	mg/L	2024-12-10	
Lithium, dissolved	**0.00200**	0.00010	mg/L	2024-12-10	
Magnesium, dissolved	**9.65**	0.010	mg/L	2024-12-10	
Manganese, dissolved	**2.18**	0.00020	mg/L	2024-12-10	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2024-12-11	
Molybdenum, dissolved	**0.00048**	0.00010	mg/L	2024-12-10	
Nickel, dissolved	**0.00055**	0.00040	mg/L	2024-12-10	
Phosphorus, dissolved	**0.117**	0.050	mg/L	2024-12-10	
Potassium, dissolved	**7.84**	0.10	mg/L	2024-12-10	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2024-12-10	
Silicon, dissolved	**16.2**	1.0	mg/L	2024-12-10	
Silver, dissolved	< 0.000050	0.000050	mg/L	2024-12-10	
Sodium, dissolved	**10.1**	0.10	mg/L	2024-12-10	
Strontium, dissolved	**0.336**	0.0010	mg/L	2024-12-10	
Sulfur, dissolved	< 3.0	3.0	mg/L	2024-12-10	
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2024-12-10	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2024-12-10	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Tin, dissolved	< 0.00020	0.00020	mg/L	2024-12-10	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2024-12-10	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2024-12-10	
Uranium, dissolved	**0.000818**	0.000020	mg/L	2024-12-10	
Vanadium, dissolved	< 0.0050	0.0050	mg/L	2024-12-10	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2024-12-10	
Zirconium, dissolved	**0.00013**	0.00010	mg/L	2024-12-10	
General Parameters					
Alkalinity, Total (as CaCO3)	**195**	1.0	mg/L	2024-12-11	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-12-11	
Alkalinity, Bicarbonate (as CaCO3)	**195**	1.0	mg/L	2024-12-11	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-12-11	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-12-11	
Ammonia, Total (as N)	**0.213**	0.050	mg/L	2024-12-12	
Conductivity (EC)	**457**	2.0	µS/cm	2024-12-11	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analyte	Result	RL	Units	Analyzed	Qualifier
DUP1 (24L1123-09) | Matrix: Water | Sampled: 2024-12-09, Continued					F3
General Parameters, Continued					
pH	**7.30**	0.10	pH units	2024-12-11	HT2
MW24-05 (24L1123-10) | Matrix: Water | Sampled: 2024-12-09					
Anions					
Chloride	**0.53**	0.10	mg/L	2024-12-11	
Fluoride	< 0.10	0.10	mg/L	2024-12-11	
Nitrate (as N)	**0.111**	0.010	mg/L	2024-12-11	
Nitrite (as N)	< 0.010	0.010	mg/L	2024-12-11	
Sulfate	**2.6**	1.0	mg/L	2024-12-11	
Calculated Parameters					
Hardness, Dissolved (as CaCO3)	**50.5**	0.500	mg/L	N/A	
Dissolved Metals					
Aluminum, dissolved	**0.170**	0.0050	mg/L	2024-12-10	
Antimony, dissolved	**0.00084**	0.00020	mg/L	2024-12-10	
Arsenic, dissolved	**0.00059**	0.00050	mg/L	2024-12-10	
Barium, dissolved	< 0.0050	0.0050	mg/L	2024-12-10	
Beryllium, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Bismuth, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Boron, dissolved	< 0.0500	0.0500	mg/L	2024-12-10	
Cadmium, dissolved	**0.000062**	0.000010	mg/L	2024-12-10	
Calcium, dissolved	**15.7**	0.20	mg/L	2024-12-10	
Chromium, dissolved	**0.00105**	0.00050	mg/L	2024-12-10	
Cobalt, dissolved	**0.00012**	0.00010	mg/L	2024-12-10	
Copper, dissolved	**0.0119**	0.00040	mg/L	2024-12-10	
Iron, dissolved	**0.096**	0.010	mg/L	2024-12-10	
Lead, dissolved	< 0.00020	0.00020	mg/L	2024-12-10	
Lithium, dissolved	**0.00014**	0.00010	mg/L	2024-12-10	
Magnesium, dissolved	**2.72**	0.010	mg/L	2024-12-10	
Manganese, dissolved	**0.00957**	0.00020	mg/L	2024-12-10	
Mercury, dissolved	< 0.000010	0.000010	mg/L	2024-12-11	
Molybdenum, dissolved	**0.00048**	0.00010	mg/L	2024-12-10	
Nickel, dissolved	**0.00079**	0.00040	mg/L	2024-12-10	
Phosphorus, dissolved	< 0.050	0.050	mg/L	2024-12-10	
Potassium, dissolved	**1.94**	0.10	mg/L	2024-12-10	
Selenium, dissolved	< 0.00050	0.00050	mg/L	2024-12-10	
Silicon, dissolved	**6.9**	1.0	mg/L	2024-12-10	
Silver, dissolved	< 0.000050	0.000050	mg/L	2024-12-10	
Sodium, dissolved	**4.23**	0.10	mg/L	2024-12-10	
Strontium, dissolved	**0.0592**	0.0010	mg/L	2024-12-10	
Sulfur, dissolved	< 3.0	3.0	mg/L	2024-12-10	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analyte	Result	RL	Units	Analyzed	Qualifier
MW24-05 (24L1123-10) | Matrix: Water | Sampled: 2024-12-09, Continued					
Dissolved Metals, Continued					
Tellurium, dissolved	< 0.00050	0.00050	mg/L	2024-12-10	
Thallium, dissolved	< 0.000020	0.000020	mg/L	2024-12-10	
Thorium, dissolved	< 0.00010	0.00010	mg/L	2024-12-10	
Tin, dissolved	< 0.00020	0.00020	mg/L	2024-12-10	
Titanium, dissolved	< 0.0050	0.0050	mg/L	2024-12-10	
Tungsten, dissolved	< 0.0010	0.0010	mg/L	2024-12-10	
Uranium, dissolved	**0.000592**	0.000020	mg/L	2024-12-10	
Vanadium, dissolved	< 0.0050	0.0050	mg/L	2024-12-10	
Zinc, dissolved	< 0.0040	0.0040	mg/L	2024-12-10	
Zirconium, dissolved	**0.00016**	0.00010	mg/L	2024-12-10	
General Parameters					
Alkalinity, Total (as CaCO3)	**50.7**	1.0	mg/L	2024-12-11	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L	2024-12-11	
Alkalinity, Bicarbonate (as CaCO3)	**50.7**	1.0	mg/L	2024-12-11	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L	2024-12-11	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L	2024-12-11	
Ammonia, Total (as N)	< 0.050	0.050	mg/L	2024-12-12	
BOD, 5-day	< 2.7	2.0	mg/L	2024-12-15	
Carbon, Dissolved Organic	**14.0**	0.50	mg/L	2024-12-11	
Chemical Oxygen Demand	**38**	20	mg/L	2024-12-13	
Conductivity (EC)	**119**	2.0	µS/cm	2024-12-11	
pH	**6.93**	0.10	pH units	2024-12-11	HT2
Solids, Total Dissolved	**78**	10	mg/L	2024-12-12	
Sulfide, Total	< 0.020	0.020	mg/L	2024-12-13	
Total Metals					
Aluminum, total	**0.336**	0.0050	mg/L	2024-12-11	
Antimony, total	**0.00080**	0.00020	mg/L	2024-12-11	
Arsenic, total	**0.00063**	0.00050	mg/L	2024-12-11	
Barium, total	< 0.0050	0.0050	mg/L	2024-12-11	
Beryllium, total	< 0.00010	0.00010	mg/L	2024-12-11	
Bismuth, total	< 0.00010	0.00010	mg/L	2024-12-11	
Boron, total	< 0.0500	0.0500	mg/L	2024-12-11	
Cadmium, total	**0.000068**	0.000010	mg/L	2024-12-11	
Calcium, total	**16.2**	0.20	mg/L	2024-12-11	
Chromium, total	**0.00116**	0.00050	mg/L	2024-12-11	
Cobalt, total	**0.00015**	0.00010	mg/L	2024-12-11	
Copper, total	**0.0120**	0.00040	mg/L	2024-12-11	
Iron, total	**0.195**	0.010	mg/L	2024-12-11	
Lead, total	< 0.00020	0.00020	mg/L	2024-12-11	
Lithium, total	**0.00020**	0.00010	mg/L	2024-12-11	
Magnesium, total	**2.74**	0.010	mg/L	2024-12-11	
Manganese, total	**0.0111**	0.00020	mg/L	2024-12-11	

TEST RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analyte	Result	RL	Units	Analyzed	Qualifier
MW24-05 (24L1123-10) | Matrix: Water | Sampled: 2024-12-09, Continued					
Total Metals, Continued					
Mercury, total	< 0.000010	0.000010	mg/L	2024-12-11	
Molybdenum, total	**0.00052**	0.00010	mg/L	2024-12-11	
Nickel, total	**0.00089**	0.00040	mg/L	2024-12-11	
Phosphorus, total	< 0.050	0.050	mg/L	2024-12-11	
Potassium, total	**1.99**	0.10	mg/L	2024-12-11	
Selenium, total	< 0.00050	0.00050	mg/L	2024-12-11	
Silicon, total	**7.3**	1.0	mg/L	2024-12-11	
Silver, total	< 0.000050	0.000050	mg/L	2024-12-11	
Sodium, total	**4.32**	0.10	mg/L	2024-12-11	
Strontium, total	**0.0625**	0.0010	mg/L	2024-12-11	
Sulfur, total	< 3.0	3.0	mg/L	2024-12-11	
Tellurium, total	< 0.00050	0.00050	mg/L	2024-12-11	
Thallium, total	< 0.000020	0.000020	mg/L	2024-12-11	
Thorium, total	< 0.00010	0.00010	mg/L	2024-12-11	
Tin, total	< 0.00020	0.00020	mg/L	2024-12-11	
Titanium, total	**0.0066**	0.0050	mg/L	2024-12-11	
Tungsten, total	< 0.0010	0.0010	mg/L	2024-12-11	
Uranium, total	**0.000616**	0.000020	mg/L	2024-12-11	
Vanadium, total	< 0.0050	0.0050	mg/L	2024-12-11	
Zinc, total	< 0.0040	0.0040	mg/L	2024-12-11	
Zirconium, total	**0.00014**	0.00010	mg/L	2024-12-11	

Sample Qualifiers:

F3	Results may be biased low due to sub-sampling from general container.
HT2	The 15 minute recommended holding time (from sampling to analysis) has been exceeded - field analysis is recommended.
RA1	The Reporting Limit for this sample has been raised due to matrix interference.

APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analysis Description	Method Ref.	Technique	Accredited	Location
Alkalinity in Water	SM 2320 B* (2021)	Titration with H2SO4	✓	Kelowna
Ammonia, Total in Water	SM 4500-NH3 G* (2021)	Automated Colorimetry (Phenate)	✓	Kelowna
Anions in Water	SM 4110 B (2020)	Ion Chromatography	✓	Richmond
Biochemical Oxygen Demand in Water	SM 5210 B (2019)	Dissolved Oxygen Meter	✓	Richmond
Carbon, Dissolved Organic in Water	SM 5310 B (2022)	Combustion, Infrared CO2 Detection	✓	Kelowna
Chemical Oxygen Demand in Water	SM 5220 D* (2022)	Closed Reflux, Colorimetry	✓	Kelowna
Conductivity in Water	SM 2510 B (2021)	Conductivity Meter	✓	Kelowna
Dissolved Metals in Water	EPA 200.8 / EPA 6020B	0.45 µm Filtration / Inductively Coupled Plasma-Mass Spectroscopy (ICP-MS)	✓	Richmond
Hardness in Water	SM 2340 B (2021)	Calculation: 2.497 [diss Ca] + 4.118 [diss Mg]	✓	N/A
Hardness in Water	SM 2340 B* (2021)	Calculation: 2.497 [total Ca] + 4.118 [total Mg] (Est)	✓	N/A
Mercury, dissolved in Water	EPA 245.7*	BrCl2 Oxidation / Cold Vapor Atomic Fluorescence Spectrometry (CVAFS)	✓	Richmond
Mercury, total in Water	EPA 245.7*	BrCl2 Oxidation / Cold Vapor Atomic Fluorescence Spectrometry (CVAFS)	✓	Richmond
pH in Water	SM 4500-H+ B (2021)	Electrometry	✓	Kelowna
Solids, Total Dissolved in Water	SM 2540 C* (2020)	Gravimetry (Dried at 103-105C)		Richmond
Sulfide, Total in Water	SM 4500-S2 D* (2021)	Colorimetry (Methylene Blue)	✓	Edmonton
Total Metals in Water	EPA 200.2 / EPA 6020B	HNO3+HCl Hot Block Digestion / Inductively Coupled Plasma-Mass Spectroscopy (ICP-MS)	✓	Richmond

Note: An asterisk in the Method Reference indicates that the CARO method has been modified from the reference method

Glossary of Terms:

RL	Reporting Limit (default)
<	Less than the specified Reporting Limit (RL) - the actual RL may be higher than the default RL due to various factors
mg/L	Milligrams per litre
pH units	pH < 7 = acidic, ph > 7 = basic
µS/cm	Microsiemens per centimetre
EPA	United States Environmental Protection Agency Test Methods
SM	Standard Methods for the Examination of Water and Wastewater, American Public Health Association

APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

General Comments:

The results in this report apply to the received samples analyzed in accordance with the Chain of Custody document. This analytical report must be reproduced in its entirety. CARO is not responsible for any loss or damage resulting directly or indirectly from error or omission in the conduct of testing. Liability is limited to the cost of analysis. Caro will dispose of all samples within 30 days of sample receipt, unless otherwise agreed.

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APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

The following section displays the quality control (QC) data that is associated with your sample data. Groups of samples are prepared in "batches" and analyzed in conjunction with QC samples that ensure your data is of the highest quality. Common QC types include:

- **Method Blank (Blk)**: A blank sample that undergoes sample processing identical to that carried out for the test samples. Method blank results are used to assess contamination from the laboratory environment and reagents.
- **Duplicate (Dup)**: An additional or second portion of a randomly selected sample in the analytical run carried through the entire analytical process. Duplicates provide a measure of the analytical method's precision (reproducibility).
- **Blank Spike (BS)**: A sample of known concentration which undergoes processing identical to that carried out for test samples, also referred to as a laboratory control sample (LCS). Blank spikes provide a measure of the analytical method's accuracy.
- **Matrix Spike (MS)**: A second aliquot of sample is fortified with a known concentration of target analytes and carried through the entire analytical process. Matrix spikes evaluate potential matrix effects that may affect the analyte recovery.
- **Reference Material (SRM)**: A homogenous material of similar matrix to the samples, certified for the parameter(s) listed. Reference Materials ensure that the analytical process is adequate to achieve acceptable recoveries of the parameter(s) tested.

Each QC type is analyzed at a 5-10% frequency, i.e. one blank/duplicate/spike for every 10-20 samples. For all types of QC, the

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Anions, Batch B4L2372										
Blank (B4L2372-BLK1)				Prepared: 2024-12-11, Analyzed: 2024-12-11						
Chloride	< 0.10	0.10	mg/L							
Fluoride	< 0.10	0.10	mg/L							
Nitrate (as N)	< 0.010	0.010	mg/L							
Nitrite (as N)	< 0.002	0.002	mg/L							
Sulfate	< 1.0	1.0	mg/L							
Blank (B4L2372-BLK2)				Prepared: 2024-12-12, Analyzed: 2024-12-12						
Chloride	< 0.10	0.10	mg/L							
Fluoride	< 0.10	0.10	mg/L							
Nitrate (as N)	< 0.010	0.010	mg/L							
Nitrite (as N)	< 0.002	0.002	mg/L							
Sulfate	< 1.0	1.0	mg/L							
LCS (B4L2372-BS1)				Prepared: 2024-12-11, Analyzed: 2024-12-11						
Chloride	2.94	0.10	mg/L	3.00		98	85-115			
Fluoride	2.00	0.10	mg/L	2.00		100	85-115			
Nitrate (as N)	3.04	0.010	mg/L	3.00		101	85-115			
Nitrite (as N)	2.94	0.002	mg/L	3.00		98	85-115			
Sulfate	15.3	1.0	mg/L	15.0		102	85-115			
LCS (B4L2372-BS2)				Prepared: 2024-12-12, Analyzed: 2024-12-12						
Chloride	3.00	0.10	mg/L	3.00		100	85-115			
Fluoride	2.02	0.10	mg/L	2.00		101	85-115			
Nitrate (as N)	3.04	0.010	mg/L	3.00		101	85-115			
Nitrite (as N)	2.95	0.002	mg/L	3.00		98	85-115			
Sulfate	15.3	1.0	mg/L	15.0		102	85-115			
Dissolved Metals, Batch B4L2318										
Blank (B4L2318-BLK1)				Prepared: 2024-12-10, Analyzed: 2024-12-10						
Aluminum, dissolved	< 0.0050	0.0050	mg/L							
Antimony, dissolved	< 0.00020	0.00020	mg/L							
Arsenic, dissolved	< 0.00050	0.00050	mg/L							
Barium, dissolved	< 0.0050	0.0050	mg/L							

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Dissolved Metals, Batch B4L2318, Continued										
Blank (B4L2318-BLK1), Continued				Prepared: 2024-12-10, Analyzed: 2024-12-10						
Beryllium, dissolved	< 0.00010	0.00010	mg/L							
Bismuth, dissolved	< 0.00010	0.00010	mg/L							
Boron, dissolved	< 0.0500	0.0500	mg/L							
Cadmium, dissolved	< 0.000010	0.000010	mg/L							
Calcium, dissolved	< 0.20	0.20	mg/L							
Chromium, dissolved	< 0.00050	0.00050	mg/L							
Cobalt, dissolved	< 0.00010	0.00010	mg/L							
Copper, dissolved	< 0.00040	0.00040	mg/L							
Iron, dissolved	< 0.010	0.010	mg/L							
Lead, dissolved	< 0.00020	0.00020	mg/L							
Lithium, dissolved	< 0.00010	0.00010	mg/L							
Magnesium, dissolved	< 0.010	0.010	mg/L							
Manganese, dissolved	< 0.00020	0.00020	mg/L							
Molybdenum, dissolved	< 0.00010	0.00010	mg/L							
Nickel, dissolved	< 0.00040	0.00040	mg/L							
Phosphorus, dissolved	< 0.050	0.050	mg/L							
Potassium, dissolved	< 0.10	0.10	mg/L							
Selenium, dissolved	< 0.00050	0.00050	mg/L							
Silicon, dissolved	< 1.0	1.0	mg/L							
Silver, dissolved	< 0.000050	0.000050	mg/L							
Sodium, dissolved	< 0.10	0.10	mg/L							
Strontium, dissolved	< 0.0010	0.0010	mg/L							
Sulfur, dissolved	< 3.0	3.0	mg/L							
Tellurium, dissolved	< 0.00050	0.00050	mg/L							
Thallium, dissolved	< 0.000020	0.000020	mg/L							
Thorium, dissolved	< 0.00010	0.00010	mg/L							
Tin, dissolved	< 0.00020	0.00020	mg/L							
Titanium, dissolved	< 0.0050	0.0050	mg/L							
Tungsten, dissolved	< 0.0010	0.0010	mg/L							
Uranium, dissolved	< 0.000020	0.000020	mg/L							
Vanadium, dissolved	< 0.0050	0.0050	mg/L							
Zinc, dissolved	< 0.0040	0.0040	mg/L							
Zirconium, dissolved	< 0.00010	0.00010	mg/L							
LCS (B4L2318-BS1)				Prepared: 2024-12-10, Analyzed: 2024-12-10						
Aluminum, dissolved	4.10	0.0050	mg/L	4.00		102	80-120			
Antimony, dissolved	0.0399	0.00020	mg/L	0.0400		100	80-120			
Arsenic, dissolved	0.401	0.00050	mg/L	0.400		100	80-120			
Barium, dissolved	0.0406	0.0050	mg/L	0.0400		101	80-120			
Beryllium, dissolved	0.0432	0.00010	mg/L	0.0400		108	80-120			
Bismuth, dissolved	0.0389	0.00010	mg/L	0.0400		97	80-120			
Boron, dissolved	0.437	0.0500	mg/L	0.400		109	80-120			
Cadmium, dissolved	0.0398	0.000010	mg/L	0.0400		100	80-120			
Calcium, dissolved	4.02	0.20	mg/L	4.00		101	80-120			
Chromium, dissolved	0.0406	0.00050	mg/L	0.0400		101	80-120			
Cobalt, dissolved	0.0403	0.00010	mg/L	0.0400		101	80-120			
Copper, dissolved	0.0402	0.00040	mg/L	0.0400		101	80-120			
Iron, dissolved	3.97	0.010	mg/L	4.00		99	80-120			
Lead, dissolved	0.0393	0.00020	mg/L	0.0400		98	80-120			
Lithium, dissolved	0.0443	0.00010	mg/L	0.0400		111	80-120			
Magnesium, dissolved	4.12	0.010	mg/L	4.00		103	80-120			
Manganese, dissolved	0.0408	0.00020	mg/L	0.0400		102	80-120			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Dissolved Metals, Batch B4L2318, Continued										
LCS (B4L2318-BS1), Continued				Prepared: 2024-12-10, Analyzed: 2024-12-10						
Molybdenum, dissolved	0.0402	0.00010	mg/L	0.0400		100	80-120			
Nickel, dissolved	0.0406	0.00040	mg/L	0.0400		101	80-120			
Phosphorus, dissolved	4.17	0.050	mg/L	4.00		104	80-120			
Potassium, dissolved	4.05	0.10	mg/L	4.00		101	80-120			
Selenium, dissolved	0.392	0.00050	mg/L	0.400		98	80-120			
Silicon, dissolved	4.1	1.0	mg/L	4.00		103	80-120			
Silver, dissolved	0.0394	0.000050	mg/L	0.0400		98	80-120			
Sodium, dissolved	4.12	0.10	mg/L	4.00		103	80-120			
Strontium, dissolved	0.0398	0.0010	mg/L	0.0400		99	80-120			
Sulfur, dissolved	40.4	3.0	mg/L	40.0		101	80-120			
Tellurium, dissolved	0.0389	0.00050	mg/L	0.0400		97	80-120			
Thallium, dissolved	0.0401	0.000020	mg/L	0.0400		100	80-120			
Thorium, dissolved	0.0392	0.00010	mg/L	0.0400		98	80-120			
Tin, dissolved	0.0401	0.00020	mg/L	0.0400		100	80-120			
Titanium, dissolved	0.0409	0.0050	mg/L	0.0400		102	80-120			
Tungsten, dissolved	0.0403	0.0010	mg/L	0.0400		101	80-120			
Uranium, dissolved	0.0396	0.000020	mg/L	0.0400		99	80-120			
Vanadium, dissolved	0.0404	0.0050	mg/L	0.0400		101	80-120			
Zinc, dissolved	0.404	0.0040	mg/L	0.400		101	80-120			
Zirconium, dissolved	0.0399	0.00010	mg/L	0.0400		100	80-120			
Matrix Spike (B4L2318-MS1)		**Source: 24L1123-10**		Prepared: 2024-12-10, Analyzed: 2024-12-10						
Aluminum, dissolved	4.29	0.0050	mg/L	4.00	0.170	103	70-130			
Antimony, dissolved	0.0409	0.00020	mg/L	0.0400	0.00084	100	70-130			
Arsenic, dissolved	0.401	0.00050	mg/L	0.400	0.00059	100	70-130			
Barium, dissolved	0.0424	0.0050	mg/L	0.0400	< 0.0050	102	70-130			
Beryllium, dissolved	0.0439	0.00010	mg/L	0.0400	< 0.00010	110	70-130			
Bismuth, dissolved	0.0387	0.00010	mg/L	0.0400	< 0.00010	97	70-130			
Boron, dissolved	0.460	0.0500	mg/L	0.400	< 0.0500	108	70-130			
Cadmium, dissolved	0.0406	0.000010	mg/L	0.0400	0.000062	101	70-130			
Calcium, dissolved	19.2	0.20	mg/L	4.00	15.7	89	70-130			
Chromium, dissolved	0.0410	0.00050	mg/L	0.0400	0.00105	100	70-130			
Cobalt, dissolved	0.0397	0.00010	mg/L	0.0400	0.00012	99	70-130			
Copper, dissolved	0.0514	0.00040	mg/L	0.0400	0.0119	99	70-130			
Iron, dissolved	4.04	0.010	mg/L	4.00	0.096	99	70-130			
Lead, dissolved	0.0391	0.00020	mg/L	0.0400	< 0.00020	97	70-130			
Lithium, dissolved	0.0444	0.00010	mg/L	0.0400	0.00014	111	70-130			
Magnesium, dissolved	6.77	0.010	mg/L	4.00	2.72	101	70-130			
Manganese, dissolved	0.0494	0.00020	mg/L	0.0400	0.00957	99	70-130			
Molybdenum, dissolved	0.0411	0.00010	mg/L	0.0400	0.00048	102	70-130			
Nickel, dissolved	0.0409	0.00040	mg/L	0.0400	0.00079	100	70-130			
Phosphorus, dissolved	4.18	0.050	mg/L	4.00	< 0.050	104	70-130			
Potassium, dissolved	6.21	0.10	mg/L	4.00	1.94	107	70-130			
Selenium, dissolved	0.401	0.00050	mg/L	0.400	< 0.00050	100	70-130			
Silicon, dissolved	11.0	1.0	mg/L	4.00	6.9	102	70-130			
Silver, dissolved	0.0383	0.000050	mg/L	0.0400	< 0.000050	96	70-130			
Sodium, dissolved	8.22	0.10	mg/L	4.00	4.23	100	70-130			
Strontium, dissolved	0.0984	0.0010	mg/L	0.0400	0.0592	98	70-130			
Sulfur, dissolved	42.4	3.0	mg/L	40.0	< 3.0	104	70-130			
Tellurium, dissolved	0.0411	0.00050	mg/L	0.0400	< 0.00050	103	70-130			
Thallium, dissolved	0.0392	0.000020	mg/L	0.0400	< 0.000020	98	70-130			
Thorium, dissolved	0.0398	0.00010	mg/L	0.0400	< 0.00010	99	70-130			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Dissolved Metals, Batch B4L2318, Continued										
Matrix Spike (B4L2318-MS1), Continued		**Source: 24L1123-10**		Prepared: 2024-12-10, Analyzed: 2024-12-10						
Tin, dissolved	0.0409	0.00020	mg/L	0.0400	< 0.00020	102	70-130			
Titanium, dissolved	0.0434	0.0050	mg/L	0.0400	< 0.0050	103	70-130			
Tungsten, dissolved	0.0401	0.0010	mg/L	0.0400	< 0.0010	100	70-130			
Uranium, dissolved	0.0404	0.000020	mg/L	0.0400	0.000592	99	70-130			
Vanadium, dissolved	0.0430	0.0050	mg/L	0.0400	< 0.0050	102	70-130			
Zinc, dissolved	0.406	0.0040	mg/L	0.400	< 0.0040	101	70-130			
Zirconium, dissolved	0.0415	0.00010	mg/L	0.0400	0.00016	103	70-130			
Dissolved Metals, Batch B4L2342										
Blank (B4L2342-BLK1)				Prepared: 2024-12-11, Analyzed: 2024-12-11						
Mercury, dissolved	< 0.000010	0.000010	mg/L							
Blank (B4L2342-BLK2)				Prepared: 2024-12-11, Analyzed: 2024-12-11						
Mercury, dissolved	< 0.000010	0.000010	mg/L							
Blank (B4L2342-BLK3)				Prepared: 2024-12-11, Analyzed: 2024-12-11						
Mercury, dissolved	< 0.000010	0.000010	mg/L							
LCS (B4L2342-BS1)				Prepared: 2024-12-11, Analyzed: 2024-12-11						
Mercury, dissolved	0.00255	0.000010	mg/L	0.00250		102	80-120			
LCS (B4L2342-BS2)				Prepared: 2024-12-11, Analyzed: 2024-12-11						
Mercury, dissolved	0.00246	0.000010	mg/L	0.00250		98	80-120			
LCS (B4L2342-BS3)				Prepared: 2024-12-11, Analyzed: 2024-12-11						
Mercury, dissolved	0.00252	0.000010	mg/L	0.00250		101	80-120			
Matrix Spike (B4L2342-MS1)		**Source: 24L1123-03**		Prepared: 2024-12-11, Analyzed: 2024-12-11						
Mercury, dissolved	0.00209	0.000010	mg/L	0.00250	< 0.000010	84	70-130			
Matrix Spike (B4L2342-MS2)		**Source: 24L1123-01**		Prepared: 2024-12-11, Analyzed: 2024-12-11						
Mercury, dissolved	0.00222	0.000010	mg/L	0.00250	< 0.000010	89	70-130			
General Parameters, Batch B4L2132										
Blank (B4L2132-BLK1)				Prepared: 2024-12-09, Analyzed: 2024-12-10						
Carbon, Dissolved Organic	< 0.50	0.50	mg/L							
Blank (B4L2132-BLK2)				Prepared: 2024-12-09, Analyzed: 2024-12-10						
Carbon, Dissolved Organic	< 0.50	0.50	mg/L							
Blank (B4L2132-BLK3)				Prepared: 2024-12-10, Analyzed: 2024-12-12						
Carbon, Dissolved Organic	< 0.50	0.50	mg/L							
LCS (B4L2132-BS1)				Prepared: 2024-12-09, Analyzed: 2024-12-12						
Carbon, Dissolved Organic	9.66	0.50	mg/L	10.0		97	78-116			
LCS (B4L2132-BS2)				Prepared: 2024-12-09, Analyzed: 2024-12-12						
Carbon, Dissolved Organic	9.71	0.50	mg/L	10.0		97	78-116			
LCS (B4L2132-BS3)				Prepared: 2024-12-10, Analyzed: 2024-12-12						
Carbon, Dissolved Organic	9.72	0.50	mg/L	10.0		97	78-116			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
General Parameters, Batch B4L2280										
Blank (B4L2280-BLK1)				Prepared: 2024-12-10, Analyzed: 2024-12-15						
BOD, 5-day	< 2.0	2.0	mg/L							
LCS (B4L2280-BS1)				Prepared: 2024-12-10, Analyzed: 2024-12-15						
BOD, 5-day	185	54.9	mg/L	198		94	85-115			
Reference (B4L2280-SRM1)				Prepared: 2024-12-10, Analyzed: 2024-12-15						
BOD, 5-day	562	91.5	mg/L	500		112	85-115			
General Parameters, Batch B4L2333										
Blank (B4L2333-BLK1)				Prepared: 2024-12-11, Analyzed: 2024-12-11						
Alkalinity, Total (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L							
Conductivity (EC)	< 2.0	2.0	µS/cm							
Blank (B4L2333-BLK2)				Prepared: 2024-12-11, Analyzed: 2024-12-11						
Alkalinity, Total (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Bicarbonate (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L							
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L							
Conductivity (EC)	< 2.0	2.0	µS/cm							
LCS (B4L2333-BS1)				Prepared: 2024-12-11, Analyzed: 2024-12-11						
Alkalinity, Total (as CaCO3)	89.3	1.0	mg/L	100		89	80-120			
Alkalinity, Phenolphthalein (as CaCO3)	36.8	1.0	mg/L	50.0		74	0-200			
LCS (B4L2333-BS2)				Prepared: 2024-12-11, Analyzed: 2024-12-11						
Conductivity (EC)	1410	2.0	µS/cm	1410		100	95-105			
LCS (B4L2333-BS3)				Prepared: 2024-12-11, Analyzed: 2024-12-11						
Alkalinity, Total (as CaCO3)	89.7	1.0	mg/L	100		90	80-120			
Alkalinity, Phenolphthalein (as CaCO3)	35.0	1.0	mg/L	50.0		70	0-200			
LCS (B4L2333-BS4)				Prepared: 2024-12-11, Analyzed: 2024-12-11						
Conductivity (EC)	1420	2.0	µS/cm	1410		100	95-105			
Duplicate (B4L2333-DUP1)		**Source: 24L1123-01**		Prepared: 2024-12-11, Analyzed: 2024-12-11						
Alkalinity, Total (as CaCO3)	41.1	1.0	mg/L		40.1			3	10	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	1.0	mg/L		< 1.0				10	
Alkalinity, Bicarbonate (as CaCO3)	41.1	1.0	mg/L		40.1			3	10	
Alkalinity, Carbonate (as CaCO3)	< 1.0	1.0	mg/L		< 1.0				10	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	1.0	mg/L		< 1.0				10	
Conductivity (EC)	118	2.0	µS/cm		117			< 1	5	
pH	6.91	0.10	pH units		6.86			< 1	4	HT2
Reference (B4L2333-SRM1)				Prepared: 2024-12-11, Analyzed: 2024-12-11						
pH	7.02	0.10	pH units	7.01		100	98-102			
Reference (B4L2333-SRM2)				Prepared: 2024-12-11, Analyzed: 2024-12-11						
pH	7.02	0.10	pH units	7.01		100	98-102			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
General Parameters, Batch B4L2482										
Blank (B4L2482-BLK1)				Prepared: 2024-12-12, Analyzed: 2024-12-13						
Chemical Oxygen Demand	< 20	20	mg/L							
LCS (B4L2482-BS1)				Prepared: 2024-12-12, Analyzed: 2024-12-13						
Chemical Oxygen Demand	514	20	mg/L	500		103	89-115			
Duplicate (B4L2482-DUP1)		**Source: 24L1123-02**		Prepared: 2024-12-12, Analyzed: 2024-12-13						
Chemical Oxygen Demand	59	20	mg/L		60				14	
Matrix Spike (B4L2482-MS1)		**Source: 24L1123-02**		Prepared: 2024-12-12, Analyzed: 2024-12-13						
Chemical Oxygen Demand	189	20	mg/L	125	60	103	75-125			
General Parameters, Batch B4L2512										
Blank (B4L2512-BLK1)				Prepared: 2024-12-12, Analyzed: 2024-12-12						
Sulfide, Total	< 0.020	0.020	mg/L							
LCS (B4L2512-BS1)				Prepared: 2024-12-12, Analyzed: 2024-12-12						
Sulfide, Total	0.479	0.020	mg/L	0.530		90	80-120			
Duplicate (B4L2512-DUP1)		**Source: 24L1123-02**		Prepared: 2024-12-12, Analyzed: 2024-12-12						
Sulfide, Total	0.033	0.020	mg/L		0.036				15	
General Parameters, Batch B4L2525										
Blank (B4L2525-BLK1)				Prepared: 2024-12-12, Analyzed: 2024-12-12						
Ammonia, Total (as N)	< 0.050	0.050	mg/L							SPK1
Blank (B4L2525-BLK2)				Prepared: 2024-12-12, Analyzed: 2024-12-12						
Ammonia, Total (as N)	< 0.050	0.050	mg/L							SPK1
Blank (B4L2525-BLK3)				Prepared: 2024-12-12, Analyzed: 2024-12-12						
Ammonia, Total (as N)	< 0.050	0.050	mg/L							SPK1
Blank (B4L2525-BLK4)				Prepared: 2024-12-12, Analyzed: 2024-12-12						
Ammonia, Total (as N)	< 0.050	0.050	mg/L							SPK1
LCS (B4L2525-BS1)				Prepared: 2024-12-12, Analyzed: 2024-12-12						
Ammonia, Total (as N)	0.977	0.050	mg/L	1.00		98	85-115			
LCS (B4L2525-BS2)				Prepared: 2024-12-12, Analyzed: 2024-12-12						
Ammonia, Total (as N)	1.04	0.050	mg/L	1.00		104	85-115			
LCS (B4L2525-BS3)				Prepared: 2024-12-12, Analyzed: 2024-12-12						
Ammonia, Total (as N)	1.05	0.050	mg/L	1.00		105	85-115			
LCS (B4L2525-BS4)				Prepared: 2024-12-12, Analyzed: 2024-12-12						
Ammonia, Total (as N)	1.04	0.050	mg/L	1.00		104	85-115			
Duplicate (B4L2525-DUP3)		**Source: 24L1123-02**		Prepared: 2024-12-12, Analyzed: 2024-12-12						
Ammonia, Total (as N)	5.16	0.050	mg/L		5.09			1	15	
Matrix Spike (B4L2525-MS3)		**Source: 24L1123-02**		Prepared: 2024-12-12, Analyzed: 2024-12-12						
Ammonia, Total (as N)	5.26	0.050	mg/L	0.204	5.09	84	75-125			
General Parameters, Batch B4L2576										

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
General Parameters, Batch B4L2576, Continued										
Blank (B4L2576-BLK1)				Prepared: 2024-12-12, Analyzed: 2024-12-12						
Solids, Total Dissolved	< 10	10	mg/L							
LCS (B4L2576-BS1)				Prepared: 2024-12-12, Analyzed: 2024-12-12						
Solids, Total Dissolved	58	10	mg/L	51.0		113	85-115			
LCS (B4L2576-BS2)				Prepared: 2024-12-12, Analyzed: 2024-12-12						
Solids, Total Dissolved	195	10	mg/L	203		96	85-115			
Duplicate (B4L2576-DUP1)		**Source: 24L1123-01**		Prepared: 2024-12-12, Analyzed: 2024-12-12						
Solids, Total Dissolved	120	10	mg/L		112			6	20	
General Parameters, Batch B4L2643										
Blank (B4L2643-BLK1)				Prepared: 2024-12-13, Analyzed: 2024-12-13						
Sulfide, Total	< 0.020	0.020	mg/L							
LCS (B4L2643-BS1)				Prepared: 2024-12-13, Analyzed: 2024-12-13						
Sulfide, Total	0.489	0.020	mg/L	0.530		92	80-120			
Duplicate (B4L2643-DUP1)		**Source: 24L1123-10**		Prepared: 2024-12-13, Analyzed: 2024-12-13						
Sulfide, Total	< 0.020	0.020	mg/L		< 0.020				15	
Total Metals, Batch B4L2314										
Blank (B4L2314-BLK1)				Prepared: 2024-12-10, Analyzed: 2024-12-11						
Aluminum, total	< 0.0050	0.0050	mg/L							
Antimony, total	< 0.00020	0.00020	mg/L							
Arsenic, total	< 0.00050	0.00050	mg/L							
Barium, total	< 0.0050	0.0050	mg/L							
Beryllium, total	< 0.00010	0.00010	mg/L							
Bismuth, total	< 0.00010	0.00010	mg/L							
Boron, total	< 0.0500	0.0500	mg/L							
Cadmium, total	< 0.000010	0.000010	mg/L							
Calcium, total	< 0.20	0.20	mg/L							
Chromium, total	< 0.00050	0.00050	mg/L							
Cobalt, total	< 0.00010	0.00010	mg/L							
Copper, total	< 0.00040	0.00040	mg/L							
Iron, total	< 0.010	0.010	mg/L							
Lead, total	< 0.00020	0.00020	mg/L							
Lithium, total	< 0.00010	0.00010	mg/L							
Magnesium, total	< 0.010	0.010	mg/L							
Manganese, total	< 0.00020	0.00020	mg/L							
Molybdenum, total	< 0.00010	0.00010	mg/L							
Nickel, total	< 0.00040	0.00040	mg/L							
Phosphorus, total	< 0.050	0.050	mg/L							
Potassium, total	< 0.10	0.10	mg/L							
Selenium, total	< 0.00050	0.00050	mg/L							
Silicon, total	< 1.0	1.0	mg/L							
Silver, total	< 0.000050	0.000050	mg/L							
Sodium, total	< 0.10	0.10	mg/L							
Strontium, total	< 0.0010	0.0010	mg/L							
Sulfur, total	< 3.0	3.0	mg/L							
Tellurium, total	< 0.00050	0.00050	mg/L							

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Total Metals, Batch B4L2314, Continued										
Blank (B4L2314-BLK1), Continued				Prepared: 2024-12-10, Analyzed: 2024-12-11						
Thallium, total	< 0.000020	0.000020	mg/L							
Thorium, total	< 0.00010	0.00010	mg/L							
Tin, total	< 0.00020	0.00020	mg/L							
Titanium, total	< 0.0050	0.0050	mg/L							
Tungsten, total	< 0.0010	0.0010	mg/L							
Uranium, total	< 0.000020	0.000020	mg/L							
Vanadium, total	< 0.0050	0.0050	mg/L							
Zinc, total	< 0.0040	0.0040	mg/L							
Zirconium, total	< 0.00010	0.00010	mg/L							
LCS (B4L2314-BS1)				Prepared: 2024-12-10, Analyzed: 2024-12-11						
Aluminum, total	3.99	0.0050	mg/L	4.00		100	80-120			
Antimony, total	0.0387	0.00020	mg/L	0.0400		97	80-120			
Arsenic, total	0.391	0.00050	mg/L	0.400		98	80-120			
Barium, total	0.0393	0.0050	mg/L	0.0400		98	80-120			
Beryllium, total	0.0411	0.00010	mg/L	0.0400		103	80-120			
Bismuth, total	0.0388	0.00010	mg/L	0.0400		97	80-120			
Boron, total	0.427	0.0500	mg/L	0.400		107	80-120			
Cadmium, total	0.0392	0.000010	mg/L	0.0400		98	80-120			
Calcium, total	3.96	0.20	mg/L	4.00		99	80-120			
Chromium, total	0.0394	0.00050	mg/L	0.0400		99	80-120			
Cobalt, total	0.0399	0.00010	mg/L	0.0400		100	80-120			
Copper, total	0.0397	0.00040	mg/L	0.0400		99	80-120			
Iron, total	3.96	0.010	mg/L	4.00		99	80-120			
Lead, total	0.0389	0.00020	mg/L	0.0400		97	80-120			
Lithium, total	0.0418	0.00010	mg/L	0.0400		105	80-120			
Magnesium, total	3.97	0.010	mg/L	4.00		99	80-120			
Manganese, total	0.0394	0.00020	mg/L	0.0400		99	80-120			
Molybdenum, total	0.0393	0.00010	mg/L	0.0400		98	80-120			
Nickel, total	0.0397	0.00040	mg/L	0.0400		99	80-120			
Phosphorus, total	3.97	0.050	mg/L	4.00		99	80-120			
Potassium, total	3.94	0.10	mg/L	4.00		99	80-120			
Selenium, total	0.393	0.00050	mg/L	0.400		98	80-120			
Silicon, total	4.0	1.0	mg/L	4.00		101	80-120			
Silver, total	0.0385	0.000050	mg/L	0.0400		96	80-120			
Sodium, total	4.01	0.10	mg/L	4.00		100	80-120			
Strontium, total	0.0391	0.0010	mg/L	0.0400		98	80-120			
Sulfur, total	40.1	3.0	mg/L	40.0		100	80-120			
Tellurium, total	0.0370	0.00050	mg/L	0.0400		92	80-120			
Thallium, total	0.0393	0.000020	mg/L	0.0400		98	80-120			
Thorium, total	0.0393	0.00010	mg/L	0.0400		98	80-120			
Tin, total	0.0382	0.00020	mg/L	0.0400		96	80-120			
Titanium, total	0.0401	0.0050	mg/L	0.0400		100	80-120			
Tungsten, total	0.0396	0.0010	mg/L	0.0400		99	80-120			
Uranium, total	0.0395	0.000020	mg/L	0.0400		99	80-120			
Vanadium, total	0.0393	0.0050	mg/L	0.0400		98	80-120			
Zinc, total	0.384	0.0040	mg/L	0.400		96	80-120			
Zirconium, total	0.0391	0.00010	mg/L	0.0400		98	80-120			
Total Metals, Batch B4L2342										

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Total Metals, Batch B4L2342, Continued										
Blank (B4L2342-BLK1)				Prepared: 2024-12-11, Analyzed: 2024-12-11						
Mercury, total	< 0.000010	0.000010	mg/L							
Blank (B4L2342-BLK2)				Prepared: 2024-12-11, Analyzed: 2024-12-11						
Mercury, total	< 0.000010	0.000010	mg/L							
Blank (B4L2342-BLK3)				Prepared: 2024-12-11, Analyzed: 2024-12-11						
Mercury, total	< 0.000010	0.000010	mg/L							
LCS (B4L2342-BS1)				Prepared: 2024-12-11, Analyzed: 2024-12-11						
Mercury, total	0.00255	0.000010	mg/L	0.00250		102	80-120			
LCS (B4L2342-BS2)				Prepared: 2024-12-11, Analyzed: 2024-12-11						
Mercury, total	0.00246	0.000010	mg/L	0.00250		98	80-120			
LCS (B4L2342-BS3)				Prepared: 2024-12-11, Analyzed: 2024-12-11						
Mercury, total	0.00252	0.000010	mg/L	0.00250		101	80-120			
Matrix Spike (B4L2342-MS3)		**Source: 24L1123-01**		Prepared: 2024-12-11, Analyzed: 2024-12-11						
Mercury, total	0.00230	0.000010	mg/L	0.00250	< 0.000010	92	70-130			
Total Metals, Batch B4L2471										
Blank (B4L2471-BLK1)				Prepared: 2024-12-11, Analyzed: 2024-12-11						
Aluminum, total	< 0.0050	0.0050	mg/L							
Antimony, total	< 0.00020	0.00020	mg/L							
Arsenic, total	< 0.00050	0.00050	mg/L							
Barium, total	< 0.0050	0.0050	mg/L							
Beryllium, total	< 0.00010	0.00010	mg/L							
Bismuth, total	< 0.00010	0.00010	mg/L							
Boron, total	< 0.0500	0.0500	mg/L							
Cadmium, total	< 0.000010	0.000010	mg/L							
Calcium, total	< 0.20	0.20	mg/L							
Chromium, total	< 0.00050	0.00050	mg/L							
Cobalt, total	< 0.00010	0.00010	mg/L							
Copper, total	< 0.00040	0.00040	mg/L							
Iron, total	< 0.010	0.010	mg/L							
Lead, total	< 0.00020	0.00020	mg/L							
Lithium, total	< 0.00010	0.00010	mg/L							
Magnesium, total	< 0.010	0.010	mg/L							
Manganese, total	< 0.00020	0.00020	mg/L							
Molybdenum, total	< 0.00010	0.00010	mg/L							
Nickel, total	< 0.00040	0.00040	mg/L							
Phosphorus, total	< 0.050	0.050	mg/L							
Potassium, total	< 0.10	0.10	mg/L							
Selenium, total	< 0.00050	0.00050	mg/L							
Silicon, total	< 1.0	1.0	mg/L							
Silver, total	< 0.000050	0.000050	mg/L							
Sodium, total	< 0.10	0.10	mg/L							
Strontium, total	< 0.0010	0.0010	mg/L							
Sulfur, total	< 3.0	3.0	mg/L							
Tellurium, total	< 0.00050	0.00050	mg/L							
Thallium, total	< 0.000020	0.000020	mg/L							
Thorium, total	< 0.00010	0.00010	mg/L							

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

Analyte	Result	RL	Units	Spike Level	Source Result	% REC	REC Limit	% RPD	RPD Limit	Qualifier
Total Metals, Batch B4L2471, Continued										
Blank (B4L2471-BLK1), Continued				Prepared: 2024-12-11, Analyzed: 2024-12-11						
Tin, total	< 0.00020	0.00020	mg/L							
Titanium, total	< 0.0050	0.0050	mg/L							
Tungsten, total	< 0.0010	0.0010	mg/L							
Uranium, total	< 0.000020	0.000020	mg/L							
Vanadium, total	< 0.0050	0.0050	mg/L							
Zinc, total	< 0.0040	0.0040	mg/L							
Zirconium, total	< 0.00010	0.00010	mg/L							
LCS (B4L2471-BS1)				Prepared: 2024-12-11, Analyzed: 2024-12-11						
Aluminum, total	3.93	0.0050	mg/L	4.00		98	80-120			
Antimony, total	0.0389	0.00020	mg/L	0.0400		97	80-120			
Arsenic, total	0.392	0.00050	mg/L	0.400		98	80-120			
Barium, total	0.0390	0.0050	mg/L	0.0400		97	80-120			
Beryllium, total	0.0391	0.00010	mg/L	0.0400		98	80-120			
Bismuth, total	0.0404	0.00010	mg/L	0.0400		101	80-120			
Boron, total	0.399	0.0500	mg/L	0.400		100	80-120			
Cadmium, total	0.0392	0.000010	mg/L	0.0400		98	80-120			
Calcium, total	4.29	0.20	mg/L	4.00		107	80-120			
Chromium, total	0.0400	0.00050	mg/L	0.0400		100	80-120			
Cobalt, total	0.0388	0.00010	mg/L	0.0400		97	80-120			
Copper, total	0.0389	0.00040	mg/L	0.0400		97	80-120			
Iron, total	3.93	0.010	mg/L	4.00		98	80-120			
Lead, total	0.0405	0.00020	mg/L	0.0400		101	80-120			
Lithium, total	0.0420	0.00010	mg/L	0.0400		105	80-120			
Magnesium, total	3.87	0.010	mg/L	4.00		97	80-120			
Manganese, total	0.0397	0.00020	mg/L	0.0400		99	80-120			
Molybdenum, total	0.0396	0.00010	mg/L	0.0400		99	80-120			
Nickel, total	0.0393	0.00040	mg/L	0.0400		98	80-120			
Phosphorus, total	3.94	0.050	mg/L	4.00		99	80-120			
Potassium, total	4.00	0.10	mg/L	4.00		100	80-120			
Selenium, total	0.399	0.00050	mg/L	0.400		100	80-120			
Silicon, total	4.1	1.0	mg/L	4.00		103	80-120			
Silver, total	0.0394	0.000050	mg/L	0.0400		98	80-120			
Sodium, total	3.89	0.10	mg/L	4.00		97	80-120			
Strontium, total	0.0405	0.0010	mg/L	0.0400		101	80-120			
Sulfur, total	41.1	3.0	mg/L	40.0		103	80-120			
Tellurium, total	0.0381	0.00050	mg/L	0.0400		95	80-120			
Thallium, total	0.0400	0.000020	mg/L	0.0400		100	80-120			
Thorium, total	0.0402	0.00010	mg/L	0.0400		100	80-120			
Tin, total	0.0394	0.00020	mg/L	0.0400		99	80-120			
Titanium, total	0.0411	0.0050	mg/L	0.0400		103	80-120			
Tungsten, total	0.0403	0.0010	mg/L	0.0400		101	80-120			
Uranium, total	0.0411	0.000020	mg/L	0.0400		103	80-120			
Vanadium, total	0.0395	0.0050	mg/L	0.0400		99	80-120			
Zinc, total	0.387	0.0040	mg/L	0.400		97	80-120			
Zirconium, total	0.0397	0.00010	mg/L	0.0400		99	80-120			

APPENDIX 2: QUALITY CONTROL RESULTS

REPORTED TO	Tetra Tech EBA Inc. (Vancouver)	**WORK ORDER**	24L1123
PROJECT	Marine Avenue Site	**REPORTED**	2024-12-17 11:35

QC Qualifiers:

HT2	The 15 minute recommended holding time (from sampling to analysis) has been exceeded - field analysis is recommended.
SPK1	The recovery of this analyte was outside of established control limits. The data was accepted based on performance of other batch QC.

CARO ANALYTICAL SERVICES
Caring About Results... Obviously

☒ 110-40 Tel: (60
☐ 102-36 Tel: (25
☐ 17225 Tel: (78

24L1123

Clear Form | Print a Copy | Save a Copy | CARO Website | CARO BC COC, Rev 2015-09

CHAIN OF CUSTODY RECORD

COC# _____ PAGE _____ OF _____

RELINQUISHED BY:	DATE: Dec 9/21	RECEIVED BY:	DATE: 10/12
RC	TIME: 3:30	BIA Texada	TIME: 10:17

PROJECT: Marine Avenue Site

PROJECT INFO:

TURNAROUND TIME REQUESTED:
Routine: (5-7 Days) ☒
Rush: 1 Day* ☐ 2 Day* ☐ 3 Day* ☐
Other* _____
*Contact Lab To Confirm. Surcharge May Apply

REGULATORY APPLICATION:
Canadian Drinking Water Quality Guidelines ☐
BC Drinking Water Protection Act / Reg. ☐
BC CSR ☒ AB TIER 1 ☐ CCME ☐ OTHER* ☐
AL ☐ PL ☐ RL ☐ CL ☐ IL ☐ AW ☐ IW ☐ LW ☐
Regs on Report? ☐

REPORT TO:
COMPANY: Tetra Tech Canada
ADDRESS: Suite 1000-885 Dunsmuir Street
Vancouver, BC V8G 0A7
CONTACT: Jeremy Reid
TEL/FAX: 604.916.3902
DELIVERY METHOD: EMAIL ☒ MAIL ☐ OTHER* ☐
DATA FORMAT: EXCEL ☒ WATERTRAX ☐ ESdat ☒ EQuIS ☐ BC EMS ☐ OTHER* ☐
EMAIL 1: emily.lai@tetratech.com
EMAIL 2: mike.gallo@tetratech.com
EMAIL 3: sean.buckles@tetratech.com

INVOICE TO: SAME AS REPORT TO ☐
COMPANY: Tetra Tech Canada
ADDRESS: Accounts Payable Department
Edmonton, AB
CONTACT:
TEL/FAX:
DELIVERY METHOD: EMAIL ☒ MAIL ☐ OTHER* ☐
EMAIL 1: Accounts.Payable@tetratech.com
EMAIL 2:
EMAIL 3:
PO #: 704-SWM.SWOP03663-12

** NEW ** If you would like to sign up for ClientConnect and/or EnviroChain, CARO's online service offerings, check here: ☐

SAMPLED BY: Regan Keil

ANALYSES REQUESTED:

	CLIENT SAMPLE ID:	MATRIX: DRINKING WATER	OTHER WATER	SOIL	OTHER	# CONTAINERS	SAMPLING: DATE	TIME	COMMENTS: CHLORINATED	FILTERED	PRESERVED	(e.g. flow/volume media ID/notes)	BTEX ☐ VPH ☐ PHC F1 ☐	VOC ☐ VPH ☐	EPH ☐ PHC F2-F4 ☐	PAH ☐ L/HEPH ☐	PHENOLS Chlorinated ☐ Non-Chlor. ☐	PCB ☐ GLYCOLS ☐ HAA ☐	PESTICIDES ☐ ACID HERBICIDES ☐	METALS - WATER TOTAL Hg ☒	METALS - WATER DISSOLVED Hg ☒	METALS - SOIL (SALM) ☐ inc. pH ☐	pH ☒ EC ☒ ALK ☒	TSS ☐ VSS ☐ TDS ☒	BOD ☒ COD ☒	TOG ☐ MOG ☐	FECAL COLIFORMS ☐ HPC ☐	TOTAL COLIFORMS ☐ *E. coli* ☐	ASBESTOS		Low Level Sulphide	NH2, Cl, SO4, F, NO3, N2, Hardness as CaCO3		Dissolved Organic Carbon			HOLD
1	MW13-01		✓																✓	✓		✓	✓	✓						✓	✓		✓			
2	MW13-02		✓																✓	✓		✓	✓	✓						✓	✓		✓			
3	MW13-03		✓																✓	✓		✓	✓	✓						✓	✓		✓			
4	MW19-04		✓																✓	✓		✓	✓	✓						✓	✓		✓			
5	SW1		✓																✓	✓		✓	✓	✓						✓	✓		✓			
6	SW2		✓																✓	✓		✓	✓	✓						✓	✓		✓			
7	SW3		✓																✓	✓		✓	✓	✓						✓	✓		✓			
8	SW4		✓																✓	✓		✓	✓	✓						✓	✓		✓			
9	DUP1		✓																	✓		✓									✓					
10	MW24-05		✓																✓	✓		✓	✓	✓						✓	✓		✓			

SHIPPING INSTRUCTIONS: Return Cooler(s) ☐
Supplies Needed:
-

SAMPLE RETENTION INSTRUCTIONS (Discarded 30 days after Report unless otherwise specified):
60 Days ☐ 90 Days ☒ Longer Date (Surcharges will Apply): _____

*** OTHER INSTRUCTIONS:**

PAYMENT:
CHEQUE ☐
CREDIT ☐
DEBIT ☐
CASH ☐
INVOICE ☒

SAMPLE RECEIPT CONDITION:
COOLER 1 (°C): 5 - 8 ICE: Y ☐ N ☐
COOLER 2 (°C): 4-12 ICE: Y ☐ N ☐
COOLER 3 (°C): _____ ICE: Y ☐ N ☐
CUSTODY SEALS INTACT: NA ☐ Y ☐ N ☐