

TECHNICAL MEMORANDUM

To: Ian McAllister, Ashleigh Crompton, Mike Champion,
Jackie Boruch and Ryan Schucroft (Woodfibre LNG) **Date:** 2 May 2025

From: Cheng Kuang, Holly Pelletier and Patrick Mueller (Lorax) **Project #:** A633-9

Subject: PE-111578 Weekly Discharge and Compliance Report #61 for April 20 – 26

Waste Discharge Authorization (WDA) Effluent Permit PE-111578 was issued by the British Columbia Energy Regulator (BCER) to Woodfibre LNG on February 9, 2024. The associated WDA discharge and compliance monitoring program is conducted by on-site Environmental Monitors (Roe Environmental) that are sub-contracted to the civil works contractor (LB LNG). Analytical samples are submitted by Roe Environmental to ALS Environmental in Burnaby, BC, for testing. Lorax Environmental provides water quality database management and WDA compliance reporting services to Woodfibre LNG.

This technical memorandum (Report #61) was prepared by Lorax Environmental and summarizes WDA monitoring conducted for the period of April 20 – 26. Monitoring data and pending results from prior monitoring periods available at the time of reporting are tabulated and included as appendices to this memorandum. Report #61 has been prepared to meet the requirements specified in Condition 4.2 of PE-111578:

“The Permittee shall summarize the results of the discharge and compliance monitoring program in a report that shall be submitted to the BCER weekly over the term of this permit. Reports must include suitable tabulated data. The table must include any applicable regulatory limits/guidelines e.g. permit limits, BC Water Quality Guidelines etc. Any exceedances of respective regulatory limits/guidelines must be clearly highlighted. Any missed sampling events/missing data must be identified with an explanation provided. Reporting frequency may be reduced upon a history of compliance and by written confirmation from the BCER. These reports shall be submitted to Waste.Management@bc-er.ca. A copy of the reports shall be provided to each First Nation consulted with regarding this subject permit, and also made publicly available on the Woodfibre LNG Environmental Reporting webpage.”

Site layout and water management figures, and site images are included in Appendix A. Monitoring results are tabulated in Appendix B through Appendix G for contact water and treated water samples.

1. Current Conditions

1.1 Water Management Infrastructure

The Construction Phase of the Woodfibre LNG Export Facility commenced in October 2023. Shoring works along the foreshore areas were initiated in December 2023, and in early 2024 construction of water management infrastructure commenced and has continued through the April 20 – 26, 2025 monitoring period. Land-based construction occurs within two areas east and west of Mill Creek, referred to as the east and west catchments, respectively. Non-contact water is intercepted and diverted around the construction areas to Howe Sound and Mill Creek. Stormwater runoff collected within the east and west catchment areas (7.12 and 5.92 ha, respectively) is managed as site contact water and is conveyed to the East Wastewater Treatment Plant (WWTP) for treatment or to the East and West Sedimentation Ponds for settling of suspended particulate. Discharge to Howe Sound from the East and West Sedimentation Ponds commenced April and October 2024, respectively.

Non-contact water diversion ditches west of Mill Creek have been upgraded and discharge to Mill Creek at station OUT-06, or to Howe Sound at station OUT-02 (Appendix A, Figure 1). During heavy precipitation non-contact water from the diversion ditches is also conveyed to Howe Sound via station OUT-01. East of Mill Creek, non-contact water is diverted around the east catchment along pre-existing road ditches that flow to East Creek or Mill Creek. To facilitate the replacement of the East Creek discharge culvert at OUT-12 (station SW-04), the lower reach of East Creek was temporarily diverted to an adjacent culvert, OUT-11, on September 17, 2024.

The east and west catchments conveyance ditches described in PE- 111578 were designed to transport non-contaminated contact water (*i.e.*, stormwater) to the East and West Sedimentation Ponds and will be constructed following completion of site preparation activities (*e.g.*, site grading, bedrock excavation) along the ditch lines. Until the ditches are operational, contact waters within the catchments are managed to remain on site using a system of berms, sumps, temporary ditches and baker tanks for intermediate storage, and are then directed to the East and West Sedimentation Ponds for TSS settling prior to discharge.

Flocculant-based TSS settling systems are used at the East and West Sedimentation Ponds to remove TSS from non-contaminated contact water at the time of discharge. Some of the clarified water may be recirculated back to the ponds. The first West Sedimentation Pond TSS settling system (ESC) was commissioned for use on September 25, 2024, with an 820 m³/day installed capacity. A second TSS settling system (W500GPM) was added and commissioned for use on November 28 and provides an additional 2,725 m³/day installed capacity for clarifying water. A third TSS settling system (E500GPM) was commissioned for use at the East Sedimentation Pond on December 4, 2024, also with 2,725 m³/day installed capacity. Preparations are underway for the next stages of construction and include planned upgrades to water management in the east and

west catchments. The upgrades will consolidate the three TSS settling systems currently on site into a single high capacity system located adjacent to the West Sedimentation Pond and is expected to be implemented August 2025.

The West WWTP has been constructed, and pilot testing was conducted August and September 2024. Operation of the West WWTP was suspended September 25, 2024. The suspension was implemented for the temporary reconfiguration of the plant to conduct pilot-scale evaluation of alternative treatment processes for improving treatment outcomes. Any process modifications that may result from the pilot-scale evaluation will be submitted to BCER for approval prior to full-scale implementation. Site waters that require treatment will continue to be directed to the East WWTP while the operation of the West WWTP is suspended.

The East and West catchment permanent outfall structures have been completed; however, discharge from the East and West Sedimentation Ponds is controlled using pumps. Water stored in the sedimentation ponds is directed to a TSS settling system prior to discharge through the authorized outfall structures adjacent to each pond. In the east catchment, treated WWTP effluent is directed to the East Sedimentation Pond. Sedimentation pond effluent clarified through the E500GPM is discharged to Howe Sound at location SP-E-OUT. The west catchment discharge location, SP-W-OUT, receives the combined clarified effluents from the ESC and W500GPM TSS settling systems since November 28, 2024. Each of the authorized discharge locations (SP-E-OUT and SP-W-OUT) has an initial dilution zone (IDZ) where discharged water mixes with Howe Sound surface waters. The IDZ is defined in PE-111578 and extends 150 m from each point of discharge into Howe Sound.

The construction phase water management layout and monitoring stations are shown in Appendix A, Figure 1. Contact water collection and dewatering locations and photographs of the sedimentation ponds are shown in Appendix A, Figure 2 through Figure 5.

1.2 Weather and Water Management

Variable weather conditions were observed during the monitoring period (April 20 – 26), with a small amount of precipitation recorded on April 20 (1.4 mm). The daily weather conditions are summarized in Table 1.

Table 1: Summary of Certified Project Area (CPA) Daily Weather Conditions.

Date	Precipitation (mm)	Max. Temp (°C)	Min. Temp (°C)	Weather Description
2025-04-20	1.4	15.5	7.1	Overcast
2025-04-21	0	13.4	5.3	Mix of sun and cloud
2025-04-22	0	16.7	3.9	Mix of sun and cloud
2025-04-23	0	17.0	4.9	Mix of sun and cloud
2025-04-24	0	19.1	6.6	Mix of sun and cloud
2025-04-25	0	20.4	8.0	Mix of sun and cloud
2025-04-26	0	18.2	8.1	Mix of sun and cloud

Note: Data retrieved from the Stantec Woodfibre site weather station.

From April 20 – 26, the East Sedimentation Pond received non-contaminated contact water from Area 1100 north collection sump and recirculated water from the East WWTP and E500GPM TSS settling system (Appendix A, Figure 2). Non-contaminated contact waters from Area 4100 and Area 4200 collection sumps were directed to the West Sedimentation Pond, as well as recirculated water from the W500GPM and ESC TSS settling systems (Appendix A, Figure 3).

Routine operation of the East WWTP continued during the monitoring period (April 20 – 26). Concrete contact waters were periodically directed to the East WWTP for treatment, as well as water stored in the East Sedimentation Pond (Appendix A, Figure 2 and Figure 3). East WWTP treated effluent was discharged to the East Sedimentation Pond each day during the monitoring period (April 20 – 26). A portion of the pond water clarified through the E500GPM system was recirculated to the East Sedimentation Pond on April 23 and 24. A total of 335 m³ of East Sedimentation Pond effluent clarified through the TSS settling system (E500GPM) was directed to the authorized discharge location SP-E-OUT on April 24. Daily water volumes processed by the East WWTP and the East TSS settling system (E500GPM), and volumes discharged to Howe Sound from the East Catchment authorized discharge location (SP-E-OUT) are provided in Appendix B (Table B-6).

West Sedimentation Pond water was clarified through the W500GPM TSS settling system prior to discharge. A portion of the pond water clarified through the W500GPM settling system was recirculated to the West Sedimentation Pond on April 21. A total of 384 m³ of effluent was clarified through the W500GPM system and directed to the SP-W-OUT on April 21. The smaller ESC TSS settling system was operated April 25 and 26 and clarified effluent was recirculated to the West Sediment Pond. Daily clarified effluent volumes from the TSS settling systems, and volumes discharged to Howe Sound from the west catchment authorized discharge location (SP-W-OUT) are provided in Appendix C (Table C-6).

2. Monitoring Summary

The locations of the compliance and supplementary monitoring stations are shown on Figure 1. Monitoring is conducted by the on-site Environmental Monitors (Roe Environmental). Analytical samples are submitted by Roe Environmental to ALS Environmental in Burnaby, BC, for testing.

Compliance and supplementary monitoring stations have been established:

- Non-contact diversion ditch outlet monitoring stations (OUT-01, OUT-02, OUT-06, and OUT-11). East Creek water was temporarily diverted to OUT-11 on September 17, 2024 and is monitored at the inlet to temporary diversion (station SW-04), therefore OUT-11 is not currently monitored.
- Creek water monitoring stations for Woodfibre, Mill and East Creek (SW-01, SW-02, SW-03, SW-04, SW-07).

- Contact water monitoring locations (SP-E-IN, E500GPM-IN, E500GPM-OUT, WWTP-E-IN, WWTP-E-OUT, SP-W-IN, ESC-W-IN, ESC-W-OUT, W500GPM-IN and W500GPM-OUT).
- Effluent compliance stations (SP-E-OUT and SP-W-OUT).
- Howe Sound reference and IDZ monitoring stations (WQR1, WQR2, IDZ-E1, IDZ-E2, IDZ-W1, and IDZ-W2).

The influent culverts for East and West Sedimentation Ponds are not operational and the associated influent stations defined in PE-111578 (SP-E-IN-1, SP-E-IN-2, SP-W-IN-1 and SP-W-IN-2) have been replaced with temporary influent monitoring stations SP-E-IN and SP-W-IN (East and West Sedimentation Pond, respectively) located in-pond, at the influent end of each pond.

Two flocculant-based TSS settling systems are used at the West Sedimentation Pond (ESC and W500GPM). Influent and effluent are monitored for each system at stations ESC-W-IN, ESC-W-OUT, W500GPM-IN and W500GPM-OUT. One TSS settling system (E500GPM) is used at the East Sedimentation Pond. Influent and effluent are monitored at stations E500GPM-IN and E500GPM-OUT, respectively. The TSS settling system stations are supplemental to the PE-111578 monitoring requirements and are monitored at the discretion of field staff.

Water quality was monitored at stations OUT-02, SW-01, SW-02, SW-03, SW-04, SW-07, IDZ-E1, IDZ-E2, IDZ-W1, IDZ-W2, WQR1, WQR2, WWTP-E-IN, WWTP-E-OUT, SP-E-IN, SP-E-OUT, E500GPM-IN, E500GPM-OUT, SP-W-IN, SP-W-OUT, ESC-W-IN, ESC-W-OUT, W500GPM-IN, and W500GPM-OUT during the monitoring period (April 20 – 26). Sampling dates and parameters tested are summarized in Table 2.

Overall, the PE-111578 monitoring requirements that were applicable during the monitoring period (April 20 – 26) were met.

Daily field parameters were not collected at the East Catchment effluent station (SP-E-OUT) on April 20 through 23 and April 25 to 26 nor were daily field parameters collected from the West Catchment effluent station (SP-W-OUT) on April 20 and April 22 through 26 as there was no discharge on those days. Daily field parameters and a weekly analytical sample were not collected at the influent and effluent stations of the West WWTP (WWTP-W-IN and WWTP-W-OUT, respectively) as it was not operational during the monitoring period.

Table 2: Summary of PE-111578 Monitoring Samples Collected April 20 – 26.

Sampling Date	Sample	Description	Parameters Tested	Monitoring Frequency
April 20, 2025	SP-E-IN	East Sedimentation Pond influent entering the pond and collected at cell 1	Field Parameters.	D
	WWTP-E-IN	East WWTP at the influent meter box	Field Parameters.	D
	WWTP-E-OUT	East WWTP at the effluent meter box		
	SP-W-IN	West Sedimentation Pond influent entering the pond and collected at cell 1	Field Parameters.	D
	SW-02	Upper Reach of Mill Creek (upstream of the third bridge)	Field, Physical & General Parameters, VH & BTEX, EPHs & PAHs, Total, Dissolved and Speciated Metals, VOCs, Methylmercury, Dioxins & Furans.	M ₅
	SW-03	Mill Creek Estuary		
	SW-07	Upstream Mill Creek (at the diversion inlet)		
April 21, 2025	SP-E-IN	East Sedimentation Pond influent entering the pond and collected at cell 1	Field Parameters.	D
	WWTP-E-IN	East WWTP at the influent meter box	Field Parameters.	D
	WWTP-E-OUT	East WWTP at the effluent meter box		
	SP-W-IN	West Sedimentation Pond influent entering the pond and collected at cell 1	Field, Physical & General Parameters, VH & BTEX, EPHs & PAHs, Total, Dissolved and Speciated Metals, VOCs, Methylmercury, Dioxins & Furans.	D, W ₁ , W ₂
	SP-W-OUT	West Sedimentation Pond clarified effluent discharge to Howe Sound, collected at sampling port	Field, Physical & General Parameters, VH & BTEX, EPHs & PAHs, Total, Dissolved and Speciated Metals, VOCs, Methylmercury, Dioxins & Furans.	D, W ₁ , W ₂
	W500GPM-IN	West Sedimentation Pond 500 GPM TSS settling system at the influent meter box	Field Parameters.	P
	W500GPM-OUT	West Sedimentation Pond 500 GPM TSS settling system at the effluent meter box		
	IDZ-W1-0.5	Howe Sound IDZ station W1; 0.5 m below surface	Field, Physical & General Parameters, VH & BTEX, EPHs & PAHs, Total, Dissolved and Speciated Metals, VOCs, Methylmercury, Dioxins & Furans	M ₅
	IDZ-W1-2m	Howe Sound IDZ station W1; 2 m below surface		
	IDZ-W1-SF	Howe Sound IDZ station W1; 2 m above the seafloor		
	IDZ-W2-0.5	Howe Sound IDZ station W2; 0.5 m below surface		
	IDZ-W2-2m	Howe Sound IDZ station W2; 2 m below surface		
	IDZ-W2-SF	Howe Sound IDZ station W2; 2 m above the seafloor		
	WQR2-0.5	Reference site 2; 0.5 m below surface		
	WQR2-2m	Reference site 2; 2 m below surface		
	WQR2-SF	Reference site 2; 2 m above the seafloor		
April 22, 2025	SP-E-IN	East Sedimentation Pond influent entering the pond and collected at cell 1	Field Parameters.	D
	WWTP-E-IN	East WWTP at the influent meter box	Field Parameters.	D
	WWTP-E-OUT	East WWTP at the effluent meter box		
	SP-W-IN	West Sedimentation Pond influent entering the pond and collected at cell 1	Field Parameters.	D
	SW-01	Lower Reach of Woodfibre Creek (near the mouth)	Field, Physical & General Parameters, VH & BTEX, EPHs & PAHs, Total, Dissolved and Speciated Metals, VOCs, Methylmercury, Dioxins & Furans	M ₅
	SW-04	Lower Reach of East Creek (near the outlet to the outfall culvert)		
	OUT-02	Non-contact water diversion ditch outlet	Field, Physical & General Parameters, Total, Dissolved and Speciated Metals, and Methylmercury	M ₅
April 23, 2025	SP-E-IN	East Sedimentation Pond influent entering the pond and collected at cell 1	Field Parameters.	D
	WWTP-E-IN	East WWTP at the influent meter box	Field Parameters.	D
	WWTP-E-OUT	East WWTP at the effluent meter box		
	E500GPM-IN	East Sedimentation Pond 500 GPM TSS settling system at the influent meter box	Field Parameters.	P
	E500GPM-OUT	East Sedimentation Pond 500 GPM TSS settling system at the effluent meter box		
	SP-W-IN	West Sedimentation Pond influent entering the pond and collected at cell 1	Field Parameters.	D
	IDZ-E1-0.5	Howe Sound IDZ station E1; 0.5 m below surface	Field, Physical & General Parameters, VH & BTEX, EPHs & PAHs, Total, Dissolved and Speciated Metals, VOCs, Methylmercury, Dioxins & Furans	M ₅
	IDZ-E1-2m	Howe Sound IDZ station E1; 2 m below surface		
	IDZ-E1-SF	Howe Sound IDZ station E1; 2 m above the seafloor		
	IDZ-E2-0.5	Howe Sound IDZ station E2; 0.5 m below surface		
	IDZ-E2-2m	Howe Sound IDZ station E2; 2 m below surface		
	IDZ-E2-SF	Howe Sound IDZ station E2; 2 m above the seafloor		
	WQR1-0.5	Reference site 1; 0.5 m below surface		
	WQR1-2m	Reference site 1; 2 m below surface		
	WQR1-SF	Reference site 1; 2 m above the seafloor		
April 24, 2025	SP-E-IN	East Sedimentation Pond influent entering the pond and collected at cell 1	Field, Physical & General Parameters, VH & BTEX, EPHs & PAHs, Total, Dissolved and Speciated Metals, VOCs, Methylmercury, Dioxins & Furans.	D, W ₁ , W ₂
	SP-E-OUT	East Sedimentation Pond clarified effluent discharge to Howe Sound, collected at the manhole adjacent to the outfall	Field, Physical & General Parameters, VH & BTEX, EPHs & PAHs, Total, Dissolved and Speciated Metals, VOCs, Methylmercury, Dioxins & Furans.	D, W ₁ , W ₂
	WWTP-E-IN	East WWTP at the influent meter box	Field, Physical & General Parameters, VH & BTEX, EPHs & PAHs, Total, Dissolved and Speciated Metals, VOCs, Methylmercury, Dioxins & Furans.	D, W ₁ , W ₂
	WWTP-E-OUT	East WWTP at the effluent meter box		
	E500GPM-IN	East Sedimentation Pond 500 GPM TSS settling system at the influent meter box	Field Parameters.	P
	E500GPM-OUT	East Sedimentation Pond 500 GPM TSS settling system at the effluent meter box		
	SP-W-IN	West Sedimentation Pond influent entering the pond and collected at cell 1	Field Parameters.	D
April 25, 2025	SP-E-IN	East Sedimentation Pond influent entering the pond and collected at cell 1	Field Parameters.	D
	WWTP-E-IN	East WWTP at the influent meter box	Field Parameters.	D
	WWTP-E-OUT	East WWTP at the effluent meter box		
	SP-W-IN	West Sedimentation Pond influent entering the pond and collected at cell 1	Field Parameters.	D

Table 2 (continued): Summary of PE-111578 Monitoring Samples Collected April 20 – 26.

Sampling Date	Sample	Description	Parameters Tested	Monitoring Frequency
April 26, 2025	SP-E-IN	East Sedimentation Pond influent entering the pond and collected at cell 1	Field Parameters.	D
	WWTP-E-IN	East WWTP at the influent meter box	Field Parameters.	D
	WWTP-E-OUT	East WWTP at the effluent meter box		
	SP-W-IN	West Sedimentation Pond influent entering the pond and collected at cell 1	Field Parameters.	D
	ESC-W-IN	Influent to the West Sedimentation Pond TSS settling system	Field Parameters.	P
	ESC-W-OUT	West TSS settling system effluent at the ESC meter box		

Notes:

Monitoring frequency requirements under PE-111578 are indicated as follows:

D – daily monitoring of field parameters at WWTP and sedimentation pond influent and effluent stations.

M – monthly monitoring for all parameters at WWTP, sedimentation pond and receiving environment stations.

M₅ – spring high frequency (5-in-30) sampling for receiving environment stations.

W₁ – initial high frequency monitoring for physical parameters at WWTP and sedimentation pond influent and effluent stations.

W₂ – initial high frequency monitoring for all parameters at WWTP and sedimentation pond influent and effluent stations.

W₃ – initial high frequency monitoring for physical parameters at IDZ stations.

P – periodic monitoring for targeted parameters that is supplementary to PE-111578 requirements.

3. Water Quality Results

3.1 Screening and Reporting Overview

Water quality and flow monitoring results are screened against field quality control (QC) criteria, benchmark values, operational minimum discharge objectives (MDOs) that the WWTPs are currently being operated to meet, PE-111578 discharge limits, as well as Canadian, Federal and BC water quality guidelines (WQGs). All water quality data are recorded in the Woodfibre LNG environmental monitoring database. However, for brevity, a sub-set of the results are presented in the weekly report appendices. Results are reported for parameters with a freshwater, estuarine or marine water quality guideline for the protection of aquatic life, parameters with a discharge limit, parameters of potential concern (*i.e.*, dioxins and furans) as well as other parameters that are relevant for water quality interpretation.

Canadian, Federal and BC WQGs are not specified for dioxins and furans. The general term “dioxins and furans” refers to a total of 210 polychlorinated dibenzo-*p*-dioxin (PCDD) and polychlorinated dibenzofuran (PCDF) compounds. A sub-set of 17 of the most toxic PCDDs and PCDFs are typically evaluated for toxicity by converting the individual parameter concentrations to toxic equivalent (TEQ) values that are summed and evaluated as a single PCDD/F TEQ parameter. To address uncertainties for results reported as not detected, two PCDD/F TEQ values are reported. A “lower-bound PCDD/F TEQ” is calculated assuming a concentration of zero for results reported as not detected, therefore, if all 17 of the individual compounds in the sub-set are not detected the lower-bound PCDD/F TEQ will equal zero. An “upper-bound PCDD/F TEQ” is calculated assuming a concentration equal to the detection limit for results reported as not detected. These two parameters span the range of possible TEQs if one or more of the PCDDs and PCDFs are reported as not detected.

The BC WQG for total mercury is a sample-specific calculated value that is based on the concentration of methylmercury in a sample. Although an approved BC WQG for the protection of aquatic life for methylmercury has not been explicitly established, the BC Ambient Water Quality Guidelines for Mercury Overview Report indicates the total mercury WQG is derived from a methylmercury concentration threshold of 0.0001 µg/L (0.1 ng/L) that is set at a concentration that protects fish from mercury bioaccumulation to levels that could harm wildlife that consumes fish. Therefore, if methylmercury results are reported, the 0.0001 µg/L value is presented as a methylmercury WQG to support the interpretation of total mercury and methylmercury results.

3.2 Summary of Reported Results

Field measurements and analytical results included in this weekly report (Report #61) are listed below in Table 3. Testing for methylmercury, dioxins and furans typically requires up to four weeks to complete. Analytical results not reported will be included in future weekly reports. Reporting of results is pending for the following samples and parameters:

- SP-E-IN, SP-E-OUT, WWTP-E-IN, WWTP-E-OUT, SP-W-IN, and SP-W-OUT collected March 24 (dioxins and furans)
- IDZ-E1, IDZ-E2, IDZ-W1, IDZ-W2, WQR1, WQR2 collected March 25 at 0.5 m below surface (chronic toxicity)
- SP-W-IN and SP-W-OUT collected March 31 (dioxins and furans)
- SP-E-IN, SP-E-OUT, WWTP-E-IN, and WWTP-E-OUT collected April 1 (dioxins and furans)
- SW-01, SW-02, SW-03, SW-04, and SW-07 collected April 2 (dioxins and furans)
- SW-02, SW-03, SW-07 collected April 7 (dioxins and furans)
- SW-01 and SW-04 collected April 8 (dioxins and furans)
- IDZ-W1 and IDZ-W2 collected April 8 (dioxins and furans)
- SP-E-IN, SP-E-OUT, WWTP-E-IN, WWTP-E-OUT, SP-W-IN, and SP-W-OUT collected April 9 (dioxins and furans)
- IDZ-E1 and IDZ-E2 collected April 10 (dioxins and furans)
- OUT-01, OUT-02, and OUT-06 collected April 11 (methylmercury)
- WQR1 and WQR2 collected April 11 (dioxins and furans)
- SW-02, SW-03, and SW-07 collected April 12 (dioxins and furans)
- SW-01 and SW-04 collected April 13 (dioxins and furans)
- IDZ-W1, IDZ-W2, WQR2 collected April 13 (dioxins and furans)
- IDZ-E1, IDZ-E2, WQR1 collected April 14 (dioxins and furans)
- SP-E-IN, SP-E-OUT, SP-W-IN, SP-W-OUT collected April 16 (dioxins and furans)
- OUT-02 collected April 16 (methylmercury)
- WWTP-E-IN and WWTP-E-OUT collected April 19 (dioxins and furans)
- SW-02, SW-03, and SW-07 collected April 20 (field and all analytical parameters)

- SP-W-IN and SP-W-OUT collected April 21 (dioxins and furans)
- IDZ-W1, IDZ-W2, and WQR2 collected April 21 (methylmercury, dioxins and furans)
- SW-01 and SW-04 collected April 22 (field and all analytical parameters)
- OUT-02 collected April 22 (field and all analytical parameters)
- IDZ-E1, IDZ-E2, and WQR1 collected April 23 (field and all analytical parameters)
- SP-E-IN, SP-E-OUT, WWTP-E-IN, and WWTP-E-OUT collected April 24 (methylmercury, dioxins and furans)

Table 3: Summary of Analytical Results Included in Weekly Discharge and Compliance Report #61.

Sample	Description	Sampling Date	Parameters Reported
SP-W-IN	West Sedimentation Pond influent entering the pond and collected at cell 1	March 5, 2025	Dioxins and Furans.
SP-W-OUT	West Sedimentation Pond clarified effluent discharge to Howe Sound, collected at sampling port		
SP-E-IN	East Sedimentation Pond influent entering the pond and collected at cell 1	March 11, 2025	Dioxins and Furans.
SP-E-OUT	East Sedimentation Pond clarified effluent discharge to Howe Sound, collected at the manhole adjacent to the outfall		
WWTP-E-IN	East WWTP at the influent meter box		
WWTP-E-OUT	East WWTP at the effluent meter box		
SP-W-IN	West Sedimentation Pond influent entering the pond and collected at cell 1		
SP-W-OUT	West Sedimentation Pond clarified effluent discharge to Howe Sound, collected at sampling port		
SP-E-IN	East Sedimentation Pond influent entering the pond and collected at cell 1	March 17, 2025	Dioxins and Furans.
SP-E-OUT	East Sedimentation Pond clarified effluent discharge to Howe Sound, collected at the manhole adjacent to the outfall		
WWTP-E-IN	East WWTP at the influent meter box		
WWTP-E-OUT	East WWTP at the effluent meter box		
SP-W-IN	West Sedimentation Pond influent entering the pond and collected at cell 1	March 18, 2025	Dioxins and Furans.
SP-W-OUT	West Sedimentation Pond clarified effluent discharge to Howe Sound, collected at sampling port		
SP-E-IN	East Sedimentation Pond influent entering the pond and collected at cell 1	April 1, 2025	Methylmercury.
SP-E-OUT	East Sedimentation Pond clarified effluent discharge to Howe Sound, collected at the manhole adjacent to the outfall		
WWTP-E-IN	East WWTP at the influent meter box		
WWTP-E-OUT	East WWTP at the effluent meter box		
SW-01	Lower Reach of Woodfibre Creek (near the mouth)	April 2, 2025	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, VOCs, and Methylmercury.
SW-02	Upper Reach of Mill Creek (upstream of the third bridge)		
SW-03	Mill Creek Estuary		
SW-04	Lower Reach of East Creek (near the outlet to the outfall culvert)		
SW-07	Upstream Mill Creek (at the diversion inlet)		
OUT-02	Non-contact water diversion ditch outlet	April 6, 2025	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, and Methylmercury.
SW-02	Upper Reach of Mill Creek (upstream of the third bridge)	April 7, 2025	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, VOCs, and Methylmercury.
SW-03	Mill Creek Estuary		
SW-07	Upstream Mill Creek (at the diversion inlet)		
OUT-01	Non-contact water diversion ditch outlet		
OUT-06	Non-contact water diversion ditch outlet		
SW-01	Lower Reach of Woodfibre Creek (near the mouth)	April 8, 2025	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, VOCs, and Methylmercury.
SW-04	Lower Reach of East Creek (near the outlet to the outfall culvert)		
IDZ-W1-0.5	Howe Sound IDZ station W1; 0.5 m below surface		Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, VOCs, and Methylmercury.
IDZ-W1-2m	Howe Sound IDZ station W1; 2 m below surface		
IDZ-W1-SF	Howe Sound IDZ station W1; 2 m above the seafloor		
IDZ-W2-0.5	Howe Sound IDZ station W2; 0.5 m below surface		
IDZ-W2-2m	Howe Sound IDZ station W2; 2 m below surface		
IDZ-W2-SF	Howe Sound IDZ station W2; 2 m above the seafloor		
SP-E-IN	East Sedimentation Pond influent entering the pond and collected at cell 1	April 9, 2025	Methylmercury.
SP-E-OUT	East Sedimentation Pond clarified effluent discharge to Howe Sound, collected at the manhole adjacent to the outfall		
WWTP-E-IN	East WWTP at the influent meter box		
WWTP-E-OUT	East WWTP at the effluent meter box		
SP-W-IN	West Sedimentation Pond influent entering the pond and collected at cell 1		
SP-W-OUT	West Sedimentation Pond clarified effluent discharge to Howe Sound, collected at sampling port		
IDZ-E1-0.5	Howe Sound IDZ station E1; 0.5 m below surface	April 10, 2025	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, VOCs, and Methylmercury.
IDZ-E1-2m	Howe Sound IDZ station E1; 2 m below surface		
IDZ-E1-SF	Howe Sound IDZ station E1; 2 m above the seafloor		
IDZ-E2-0.5	Howe Sound IDZ station E2; 0.5 m below surface		
IDZ-E2-2m	Howe Sound IDZ station E2; 2 m below surface		
IDZ-E2-SF	Howe Sound IDZ station E2; 2 m above the seafloor		
OUT-01	Non-contact water diversion ditch outlet	April 11, 2025	Field, Physical and General Parameters, Total and Dissolved Metals, and Hexavalent Chromium.
OUT-02	Non-contact water diversion ditch outlet		
OUT-06	Non-contact water diversion ditch outlet		
WQR1-0.5	Reference site 1; 0.5 m below surface		Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, VOCs, and Methylmercury.
WQR1-2m	Reference site 1; 2 m below surface		
WQR1-SF	Reference site 1; 2 m above the seafloor		
WQR2-0.5	Reference site 2; 0.5 m below surface		
WQR2-2m	Reference site 2; 2 m below surface		
WQR2-SF	Reference site 2; 2 m above the seafloor		

Table 3 (continued): Summary of Analytical Results Included in Weekly Discharge and Compliance Report #61.

Sample	Description	Sampling Date	Parameters Reported
SW-02	Upper Reach of Mill Creek (upstream of the third bridge)	April 12, 2025	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, VOCs, and Methylmercury.
SW-03	Mill Creek Estuary		
SW-07	Upstream Mill Creek (at the diversion inlet)		
SW-01	Lower Reach of Woodfibre Creek (near the mouth)	April 13, 2025	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, VOCs, and Methylmercury.
SW-04	Lower Reach of East Creek (near the outlet to the outfall culvert)		
IDZ-W1-0.5	Howe Sound IDZ station W1; 0.5 m below surface		Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, VOCs, and Methylmercury.
IDZ-W1-2m	Howe Sound IDZ station W1; 2 m below surface		
IDZ-W1-SF	Howe Sound IDZ station W1; 2 m above the seafloor		
IDZ-W2-0.5	Howe Sound IDZ station W2; 0.5 m below surface		
IDZ-W2-2m	Howe Sound IDZ station W2; 2 m below surface		
IDZ-W2-SF	Howe Sound IDZ station W2; 2 m above the seafloor		
WQR2-0.5	Reference site 2; 0.5 m below surface		
WQR2-2m	Reference site 2; 2 m below surface		
WQR2-SF	Reference site 2; 2 m above the seafloor		
IDZ-E1-0.5	Howe Sound IDZ station E1; 0.5 m below surface	April 14, 2025	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, VOCs, and Methylmercury.
IDZ-E1-2m	Howe Sound IDZ station E1; 2 m below surface		
IDZ-E1-SF	Howe Sound IDZ station E1; 2 m above the seafloor		
IDZ-E2-0.5	Howe Sound IDZ station E2; 0.5 m below surface		
IDZ-E2-2m	Howe Sound IDZ station E2; 2 m below surface		
IDZ-E2-SF	Howe Sound IDZ station E2; 2 m above the seafloor		
WQR1-0.5	Reference site 1; 0.5 m below surface		
WQR1-2m	Reference site 1; 2 m below surface		
WQR1-SF	Reference site 1; 2 m above the seafloor		
SP-E-IN	East Sedimentation Pond influent entering the pond and collected at cell 1	April 16, 2025	Methylmercury.
SP-E-OUT	East Sedimentation Pond clarified effluent discharge to Howe Sound, collected at the manhole adjacent to the outfall		
SP-W-IN	West Sedimentation Pond influent entering the pond and collected at cell 1		
SP-W-OUT	West Sedimentation Pond clarified effluent discharge to Howe Sound, collected at sampling port		Field, Physical and General Parameters, Total and Dissolved Metals, and Hexavalent Chromium.
OUT-02	Non-contact water diversion ditch outlet		
WWTP-E-IN	East WWTP at the influent meter box	April 19, 2025	Methylmercury.
WWTP-E-OUT	East WWTP at the effluent meter box		
SP-W-IN	West Sedimentation Pond influent entering the pond and collected at cell 1	April 21, 2025	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, VOCs, and Methylmercury.
SP-W-OUT	West Sedimentation Pond clarified effluent discharge to Howe Sound, collected at sampling port		
IDZ-W1-0.5	Howe Sound IDZ station W1; 0.5 m below surface		Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, and VOCs.
IDZ-W1-2m	Howe Sound IDZ station W1; 2 m below surface		
IDZ-W1-SF	Howe Sound IDZ station W1; 2 m above the seafloor		
IDZ-W2-0.5	Howe Sound IDZ station W2; 0.5 m below surface		
IDZ-W2-2m	Howe Sound IDZ station W2; 2 m below surface		
IDZ-W2-SF	Howe Sound IDZ station W2; 2 m above the seafloor		
WQR2-0.5	Reference site 2; 0.5 m below surface		
WQR2-2m	Reference site 2; 2 m below surface		
WQR2-SF	Reference site 2; 2 m above the seafloor		
SP-E-IN	East Sedimentation Pond influent entering the pond and collected at cell 1	April 24, 2025	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, and VOCs.
SP-E-OUT	East Sedimentation Pond clarified effluent discharge to Howe Sound, collected at the manhole adjacent to the outfall		
WWTP-E-IN	East WWTP at the influent meter box		
WWTP-E-OUT	East WWTP at the effluent meter box		

3.3 East Catchment

The east catchment water quality monitoring results for stations at the East Sedimentation Pond, East WWTP and the authorized discharge location are discussed in this section. Results for the sedimentation pond and authorized discharge location are screened against PE-111578 discharge limits. Parameters without a discharge limit are screened against Canadian, Federal and BC WQGs for the protection of marine water aquatic life. East WWTP monitoring results are screened against operational MDOs which are equivalent to the PE-111578 discharge limits and the lowest applicable WQGs for parameters without discharge limits. The screened water quality results for analytical samples available at the time of reporting and for field parameters collected during the monitoring period are presented in Appendix B. Exceedances of PE-111578 discharge limits and WQGs in samples of effluent discharged to Howe Sound and results received for methylmercury, dioxins and furans are summarized below.

During the monitoring period (April 20 – 26), clarified water from the East Sedimentation Pond TSS settling system (E500GPM) discharged to Howe Sound at the authorized discharge location (station SP-E-OUT) on April 24. Daily clarified effluent volumes, East WWTP treated effluent volumes, and discharge volumes from the east catchment are summarized in Appendix B, Table B-6.

Field measurements were collected April 20 – 26 at multiple influent and effluent locations, as outlined in Section 2, and are tabulated in Appendix B, Table B-5. Analytical samples collected on April 24 (stations SP-E-IN, SP-E-OUT, WWTP-E-IN, and WWTP-E-OUT) were available at the time of reporting. Screening results for east catchment contact water quality are tabulated in Table B-1 and Table B-2 of Appendix B.

During the monitoring period (April 20 – 26), field measurements and analytical results collected at station SP-E-OUT met PE-111578 discharge limits and WQGs.

Dissolved oxygen was below the lower limit of the MDO in East WWTP effluent (WWTP-E-OUT) collected April 25 and 26 and total copper was above the MDO in East WWTP effluent collected April 24. This item is tracked in Table 7. East WWTP treated effluent is directed to the East Sedimentation Pond.

Methylmercury analytical results were available at the time of reporting for East Sedimentation Pond influent (SP-E-IN) and effluent discharged at SP-E-OUT on April 1, 9, and 16 (as discussed in Reports #58, #59, and #60, respectively). Methylmercury results were also available for East WWTP influent and effluent (WWTP-E-IN and WWTP-E-OUT, respectively) collected April 1, 9, and 19 (as discussed in Reports #58, #59, and #60, respectively). The methylmercury concentrations in the effluent discharged at SP-E-OUT on April 1 and 9 were 0.000057 and 0.000028 µg/L, respectively, and 0.000095 and 0.000112 µg/L in the April 16 monitoring and

duplicate samples, respectively (Appendix B, Table B-3). Methylmercury results and the corresponding total mercury results were above the respective WQGs (see Section 3.1) in one of the two replicate SP-E-OUT samples collected April 16 (Table 4).

Table 4:
Summary of Parameters Exceeding WQGs in Effluent Discharged from SP-E-OUT for Field and Analytical Results Available at the Time of Reporting

Parameter	Units	WQG ¹	N	N >WQG	Commentary
T-Hg	µg/L	0.0053	4	1	Total mercury measured in one of two replicate samples at station SP-E-OUT on April 16 (0.00597 µg/L) was 1.1 times greater than the calculated WQG.
Methylmercury	µg/L	0.0001	4	1	Methylmercury measured in one of two replicate samples at station SP-E-OUT on April 16 (0.000112 µg/L) was 1.1 times greater than the WQG.

N = number of samples.

¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.

Dioxin and furan results were reported for East WWTP influent and effluent collected on March 11 and March 17 as well as East Sedimentation Pond influent (station SP-E-IN) and effluent (station SP-E-OUT) collected on March 11 and 17 (as discussed in Report #55 and #56). The lower and upper bound PCDD/F TEQ concentrations in effluent discharged at SP-E-OUT on March 11 and 17 ranged from 0 to 0.0356 pg/L and from 0.624 to 0.916 pg/L, respectively. Results are tabulated in Appendix B, Table B-4.

3.4 West Catchment

The west catchment water quality monitoring results for stations at the West Sedimentation Pond, the TSS settling systems (ESC and W500GPM) and West WWTP monitoring stations, and the authorized discharge location are discussed in this section. Results for sedimentation pond and TSS settling system influent and effluent stations are screened against PE-111578 discharge limits. Parameters without a discharge limit are screened against Canadian, Federal and BC WQGs for the protection of marine water aquatic life. The screened water quality results for analytical samples and field parameters are presented in Appendix C. Operation of the West WWTP is currently suspended (refer to Section 1.1) and monitoring results are therefore not available for this facility. Exceedances of PE-111578 discharge limits and WQGs in samples of effluent discharged to Howe Sound and results received for methylmercury, dioxins and furans are summarized below.

During the monitoring period (April 20 – 26), the TSS settling system (W500GPM) treated water stored in the West Sedimentation Pond on April 21 and produced clarified effluent that was discharged to Howe Sound at the authorized discharge location, SP-W-OUT. The smaller TSS settling system (ESC) was operational on April 25 and 26, and clarified effluent was recirculated

to the pond. Daily clarified effluent and discharge volumes from the west catchment are summarized in Appendix C, Table C-6.

Field measurements were collected April 20 – 26 at multiple influent and effluent locations, as outlined in Section 2, and are tabulated in Appendix C, Table C-5. Analytical samples collected on April 21 (stations SP-W-IN and SP-W-OUT) were available at the time of reporting. Screening results for west catchment contact water quality are tabulated in Table C-1 and Table C-2 of Appendix C.

During the monitoring period (April 20 – 26), field measurements and analytical results collected at station SP-W-OUT met PE-111578 discharge limits and WQGs except total copper and total zinc (Table 5).

Table 5:
Summary of Parameters Exceeding PE-111578 Discharge Limits in Effluent Discharged from SP-W-OUT for Field and Analytical Results Available at the Time of Reporting

Parameter	Units	Discharge Limit	N	N > Limit	Commentary
Total Copper	mg/L	0.0043	1	1	Total copper measured at station SP-W-OUT on April 21 was 0.0071 mg/L, 1.7 times above the PE-111578 discharge limit. BCER has been notified.
Total Zinc	mg/L	0.0133	1	1	Total zinc measured at station SP-W-OUT on April 21 was 0.0222 mg/L, 1.7 times above the PE-111578 discharge limit. BCER has been notified.

N = number of samples.

Methylmercury analytical results were available at the time of reporting for West Sedimentation Pond influent (SP-W-IN) and effluent discharged at SP-W-OUT on April 9 (as discussed in Report #59), April 16 (as discussed in Report #60), and April 21. The methylmercury concentrations in the effluent discharged at SP-W-OUT on April 9, 16, and 21 were 0.000032, 0.000020, and 0.000036 µg/L, respectively, and met the WQG for methylmercury (Appendix C, Table C-3).

Dioxin and furan results were reported for West Sedimentation Pond influent (station SP-W-IN) and effluent discharged at SP-W-OUT on March 5 (as discussed in Report #54), March 11 (as discussed in Report #55), and March 18 (as discussed in Report #56). The lower and upper bound PCDD/F TEQ concentrations in effluent discharged at SP-W-OUT on March 5, 11 and 18 ranged from 0 to 0.00751 pg/L and from 0.669 to 0.859 pg/L, respectively. Results are tabulated in Appendix C, Table C-4.

3.5 Non-Contact Water Diversion Ditch Outlets

Non-contact water diversion ditch samples are screened against Canadian, Federal and BC WQGs for the protection of freshwater aquatic life. The analytical results, field parameters, and WQGs are summarized in Appendix D.

East Creek was temporarily diverted to OUT-11 on September 17 to facilitate replacement of the OUT-12 culvert through which East Creek previously discharged. Only East Creek water is flowing through the OUT-11 culvert. East Creek is monitored at freshwater receiving environment station SW-04 and station OUT-11 is not monitored while diversion is in place.

Analytical results were available at the time of reporting for the March 9 non-contact water diversion ditch outlet samples collected at stations OUT-01, OUT-02, and OUT-06. Parameter concentrations met WQGs except total aluminum and dissolved copper which ranged from 0.108 to 0.498 mg/L, and 0.00041 to 0.00076 mg/L, respectively. The total aluminum and dissolved copper results are comparable to the baseline concentration ranges observed for diversion ditch water quality. The measured concentrations are considered to represent natural conditions for non-contact waters, therefore total aluminum and dissolved copper results above the WQGs are not flagged as project influenced exceedances.

Methylmercury results were available at the time of reporting for non-contact water diversion ditch samples collected April 6 and 7 (as discussed in Report #59). For all non-contact water diversion ditch stations, the methylmercury concentrations ranged from 0.000030 to 0.000042 µg/L in all samples. Methylmercury results met the WQG. The corresponding total mercury results also met WQGs. Results are tabulated in Appendix D, Table D-3.

3.6 Freshwater and Estuarine Water Receiving Environment

Freshwater and estuarine water receiving environment samples are screened against Canadian, Federal and BC WQGs for the protection of freshwater and estuarine aquatic life. Parameter concentrations above a WQG value, but within the range of values observed in the baseline monitoring program are considered to represent the natural condition of the water and are not flagged as a possible indicator of project influence. The analytical results, field parameters, and WQGs are summarized in Appendix E (freshwater) and Appendix F (estuarine).

Analytical results were available at the time of reporting for freshwater and estuarine water samples collected near the mouth of Woodfibre Creek, Mill Creek, and East Creek (stations SW-01, SW-02, and SW-04, respectively) as well as the Mill Creek estuary (SW-03) and upstream on Mill Creek (SW-07) on April 2 (as discussed in Report #58). Results were also available for Mill Creek stations (SW-02 and SW-07), and the Mill Creek Estuary (station SW-03) samples collected on April 7 and April 12, as well as samples collected near the mouths of Woodfibre Creek and East Creek (stations SW-01 and SW-04, respectively) on April 8 and April 13 (as discussed in Reports #59 and #60). The aforementioned freshwater and estuarine water samples reflect the first 3 sampling events for the spring high frequency monitoring (5-in-30) requirement.

Parameter concentrations met WQGs except field pH, total aluminum, and dissolved copper in one or more samples. Field pH was below the lower limit of the WQG in the Mill Creek estuary

samples (station SW-03) on April 7 (pH 6.8) and April 12 (pH 6.4) and at the mouth of Woodfibre Creek (SW-01) on April 2 (pH 6.4). Total aluminum was above the long-term WQG in all of the samples collected from Woodfibre Creek, Mill Creek, and East Creek (SW-01, SW-02, SW-04, and SW-07) and ranged from 0.0847 to 0.200 mg/L. Dissolved copper was above the calculated long-term WQG in samples collected at SW-01 on April 8 (0.00027 mg/L), at SW-02 on April 2 and 12 (0.00024 and 0.00023 mg/L, respectively), at SW-04 on April 2, 8, and 13 (0.00062, 0.00139, and 0.00062 mg/L, respectively), and at SW-07 on April 12 (0.00023 mg/L).

The observed field pH and total aluminum concentrations are within ranges observed in the pre-construction baseline monitoring program for the freshwater and estuarine water receiving environment stations. The samples collected from upstream Mill Creek (station SW-07) represent background water quality in Mill Creek. The observed field pH, total aluminum and dissolved copper concentrations are considered to represent background conditions in all sample and are not flagged as potential project-influenced exceedances, except for the April 8 sample collected at East Creek (SW-04) (Table 6). The review of this item is tracked in Table 7.

Table 6:
Summary of Parameters Exceeding WQGs at Freshwater and Estuarine Water Receiving Environment Stations

Parameter	Units	WQG ¹	N	N >WQG	Commentary
Dissolved Copper	mg/L	0.00072 (SW-04)	3	1	The dissolved copper concentration measured in East Creek (SW-04) on April 8 (0.00139 mg/L) was 1.9 times greater than the calculated long-term WQG. The dissolved copper concentration at SW-04 was 1.3 times greater than the maximum concentration observed in the pre-construction baseline monitoring program (0.00105 mg/L).

N = number of samples.

Non-detect results are screened using the detection limit value.

¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.

Methylmercury results were available at the time of reporting for freshwater and estuarine water samples collected April 2 (as discussed in Report #58), April 7 and April 8 (as discussed in Report #59) and April 12 and April 13 (as discussed in Report #60). For all freshwater and estuarine water stations, the methylmercury concentrations ranged from <0.000020 to 0.000030 µg/L in all samples. Methylmercury results met the WQG. The corresponding total mercury results also met WQGs. Results are tabulated in Appendix E, Table E-5 (freshwater) and Appendix F, Table F-2 (estuarine).

3.7 Marine Water Receiving Environment

Marine water receiving environment samples are screened against Canadian, Federal and BC WQGs for the protection of marine water aquatic life. Parameter concentrations above a WQG

value, but within the range of values observed in the baseline monitoring program or reference stations are considered to represent the natural condition of the water and not flagged as a possible indicator of project influence. Similarly, WQG exceedances at marine reference stations are considered to represent background conditions that are not influenced by the project. It is expected that samples collected within the IDZ (*i.e.*, mixing zone) defined in PE-111578 for the authorized discharge locations may have parameter concentrations above baseline or background (*i.e.*, reference station) concentrations due to project influence. The analytical results, field parameters and WQGs are summarized in Appendix G.

Analytical results and field measurements were available at the time of reporting for marine water samples collected at 0.5 and 2 m below the water surface and 2 m above the seafloor on April 8 at IDZ-W1 and IDZ-W2, on April 10 at IDZ-E1 and IDZ-E2, and on April 11 and marine reference stations WQR1 and WQR2 (as discussed in Report #59) as well as and on April 13 at IDZ-W1, IDZ-W2, and marine reference station WQR2 and on April 14 at IDZ-E1, IDZ-E2, and marine reference station WQR1 (as discussed in Report #60). Analytical results and field measurements were available for samples collected at IDZ-W1, IDZ-W2, and marine reference station WQR2 on April 21 at 0.5 and 2 m below the water surface and 2 m above the seafloor. Parameter concentrations met WQGs except dissolved oxygen, total boron, total copper, and total zinc in some samples (Appendix G; Tables G-1 through G-8).

In most of the samples collected at 2 m above the seafloor at IDZ and marine reference stations, dissolved oxygen was below the lower limit of the WQG (8 mg/L) and ranged from 6.19 to 7.87 mg/L. In most of the samples collected at IDZ and marine reference stations, total boron was above the WQG (1.2 mg/L) and ranged from 1.22 to 3.87 mg/L. Low concentrations of dissolved oxygen and elevated concentrations of total boron are indicative of influence from the deeper saline waters in the northern basin of Howe Sound and are a natural condition of marine water at the WDA monitoring stations. The dissolved oxygen and total boron concentrations observed at the IDZ monitoring stations are within concentrations that have been observed in the pre-construction baseline monitoring program or within background ranges observed at marine reference stations and are therefore not attributed to project influence.

In the marine sample collected 2 m below the water surface at IDZ-W1 on April 13, total copper (0.00674 mg/L) was above the short and long-term WQGs (0.002 and 0.003 mg/L, respectively). The total copper concentration observed at IDZ-W1 on April 13 is within concentrations that have been observed in the pre-construction baseline monitoring program or within background ranges observed at marine reference stations and are therefore not attributed to project influence. A reanalysis has been initiated with the laboratory to confirm the reported concentration. This item is tracked in Table 7.

In the sample collected from marine reference station WQR1 at 2 m above the seafloor, total zinc was above the long-term WQG (0.01 mg/L). A reanalysis has been initiated with the laboratory to confirm the reported concentration; however, water quality at marine reference stations reflects background conditions and is therefore not reported as an exceedance attributable to project influence. This item is tracked in Table 7.

Methylmercury analytical results were available at the time of reporting for marine samples collected from 0.5 and 2 m below the water surface and 2 m above the seafloor on April 8 at IDZ-W1 and IDZ-W2, on April 10 at IDZ-E1 and IDZ-E2, and on April 11 and marine reference stations WQR1 and WQR2 (as discussed in Report #59) as well as and on April 13 at IDZ-W1, IDZ-W2, and marine reference station WQR2 and on April 14 at IDZ-E1, IDZ-E2, and marine reference station WQR1 (as discussed in Report #60). For all samples, methylmercury concentrations ranged from <0.000020 to 0.000025 µg/L. Methylmercury results met the WQG and the corresponding total mercury results also met WQGs. Results are tabulated in Appendix G, Table G-9.

4. Quality Control

This section presents the results of the quality control (QC) evaluation for the PE-111578 weekly report (Table 7). The evaluation includes a review of field and lab QC, completeness of the weekly report (*e.g.*, pending data), completeness of the monitoring program, confirmation of recordkeeping, evaluation of compliance and review of water management activities. Items flagged for follow-up in Section 3 are also tracked in Table 7. Any items flagged for follow-up are carried forward to future reports until they are closed.

Table 7: Weekly Report QC Evaluations and Ongoing Items

QC Procedure	Observation	Investigation/Resolution
Reporting Period (April 20 – 26, Report #61)		
Authorized Works and Monitoring Program Evaluation	The authorized works and monitoring stations have not been established as described in PE-111578.	The PE-111578 authorized works for water management have been constructed, except for some of the conveyance ditches which require completion of site grading prior to installation. Sumps, pumps and hoses are used for temporary conveyance until the ditches are completed. The lower reach of East Creek has been temporarily diverted through OUT-11 outfall since September 17, 2024, to facilitate replacement of the East Creek outfall culvert (OUT-12). This item remains open.
Non-compliant Discharge	Total copper and total zinc exceeded discharge limits	Non-compliant effluent was discharged from SP-W-OUT on April 21, with total copper (0.0071 mg/L) and total zinc (0.0222 mg/L) both 1.7 times above their corresponding discharge limits. BCER has been notified. Review of the non-compliance is underway. This item remains open.
Potential Project Influence	Dissolved copper at East Creek above WQG and the baseline concentration range.	Dissolved copper concentration (0.00139 mg/L) observed at the East Creek station (SW-04) on April 8 was above the WQG and 1.3 times greater than the maximum concentration observed in the pre-construction baseline monitoring program (0.00105 mg/L). Potential influences to East Creek water quality at station SW-04 are being reviewed. This item remains open.
WWTP Performance Evaluation	Field pH, total copper, total mercury, total zinc, and hexavalent Cr above the MDO	<p>This item was first noted in Report #46 (January 8 sample) and has been updated with January 14 results (Report #47), January 24 and January 28 results (Report #49), February 5 and 6 results (Report #50), February 10 results (Report #51), February 15 and 20 results (Report #52), February 24 results (Report #53), March 8 results (Report #55), March 17 results (Report #56), and April 24 results (Report #61). The total copper concentrations were 0.00809, 0.00595, 0.00895, 0.00518, 0.00542, 0.00525, 0.00450, and 0.00734 mg/L in samples collected at WWTP-E-OUT on January 8, 14, 24, 28, February 24, March 8, 17, and April 24, respectively, and ranged from 0.00613 to 0.0108 mg/L in four replicate samples collected on February 15. The total mercury concentrations were 0.0000355, 0.000185, 0.000223, and 0.0000882 mg/L in samples collected on January 24, 30, February 20 and 24, respectively, and were 0.0000615 and 0.0000644 mg/L in two replicate samples collected February 15. The total zinc concentrations were 0.0137, 0.0152, and 0.0156 mg/L in the samples collected on January 24, February 20 and 24, and were 0.0223 and 0.0234 mg/L in two of four replicate samples collected February 15. Hexavalent chromium concentrations were 0.00197 and 0.00166 mg/L in samples collected January 24 and 28 at WWTP- E-OUT. Field pH was 9.1, 9.2, and 9.6 in samples collected at WWTP-E-OUT on February 5, 6 and 10, respectively.</p> <p>Review of possible causes has yielded inconclusive results. As of April 26, field pH and total metals have been consistently meeting MDOs except total copper. This item remains open.</p>
Pending Data	Analytical results not reported.	Analytical results and field parameters for receiving environment and diversion ditch samples collected April 20, 22, and 23 were not included with Report #61. Methylmercury, dioxins and furans results for contact water and treated water samples collected April 21 and 24 and receiving environment samples collected April 21 were not included with Report #61. The pending results will be included in future weekly reports when available. This item remains open.
Data QC	Total copper and total zinc measured in some marine receiving environment samples are higher than other samples collected on those days.	Total copper measured at IDZ-W1 at 2m below the surface on April 13 and total zinc measured at marine reference station WQR1 at 2 m above the seafloor on April 11 were notably higher than all other marine receiving environment samples collected on those days. Concentrations are within pre-construction baseline ranges or reflect background values and are therefore not reported as exceedances. Reanalysis with the laboratory has been initiated to confirm the results. This item remains open.
Ongoing Items from Previous Weekly Reports		
Report #54: Pending Data	Analytical results not reported.	Dioxins and furans results for contact water samples collected March 5 are discussed in Section 3.4 of Report #61. This item is closed.
Report #55: Pending Data	Analytical results not reported.	Dioxins and furans results for contact water samples collected March 11 are discussed in Sections 3.3 and 3.4 of Report #61. This item is closed.
Report #56: Pending Data	Analytical results not reported.	Dioxins and furans results for contact water samples collected March 17 and 18 are discussed in Sections 3.3 and 3.4 of Report #61. This item is closed.
Report #57: Pending Data	Analytical results not reported.	Dioxins and furans results for contact water samples collected March 24 and chronic toxicity results for marine receiving environment samples collected March 25 were not included with Report #61. The pending results will be included in future weekly reports when available. This item remains open.
Report #58: Pending Data	Analytical results not reported.	Analytical results for receiving environment samples collected April 2 are discussed in Section 3.6 of Report #61. Methylmercury results for contact water samples collected April 1 are discussed in Section 3.3 of Report #61. Dioxins and furans results for contact water samples collected March 31, April 1, and April 2 were not included with Report #61. The pending results will be included in future weekly reports when available. This item remains open.
Report #59: Pending Data	Analytical results not reported.	Analytical results for receiving environment samples collected during the monitoring period (April 6 – 12) are discussed in Sections 3.5, 3.6, and 3.7 of Report #61. Methylmercury results for contact water samples collected April 9 are discussed in Sections 3.3 and 3.4 of Report #61. Methylmercury results for diversion ditch samples collected April 11 were not include in Report #61. Dioxins and furans results for contact water samples collected April 9 and receiving environment samples collected April 7, 8, 10, 11, and 12 were not included with Report #61. The pending results will be included in future weekly reports when available. This item remains open.
Report #60: Pending Data	Analytical results not reported.	Analytical results and field parameters for receiving environment and diversion ditch samples collected during the monitoring period (April 13 – 19) are discussed in Sections 3.5, 3.6, and 3.7 of Report #61. Methylmercury results for contact water samples collected April 16 and 19 are discussed in Sections 3.3 and 3.4 of Report #61. Dioxins and furans results for receiving environment, contact water, and treated water samples collected April 13, 14, 16, and 19 were not included with Report #61. The pending results will be included in future weekly reports when available. This item remains open.

Notes:

Result QA/QC screening includes the evaluation of field and lab QC results, comparison of total and dissolved metal results and review for modified detection limits.

Pending data are outstanding results from monitoring samples reported in the current or previous weekly reports.

Authorized works and monitoring program evaluation is an assessment of the completeness of the authorized works and monitoring program compared to PE-111578 specified or implied requirements.

WWTP performance evaluation is an assessment of WWTP effluent quality compared to operational MDOs.

Data QC indicates an evaluation of data trends or inter-parameter relationships that suggest a test result may not be representative of water quality at the time of monitoring.

Non-compliant discharge indicates exceedance of a discharge limit or a discharge that bypasses the sedimentation pond discharge location.

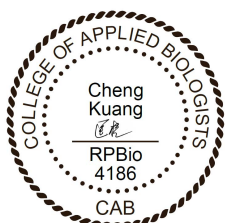
Potential project influence is an assessment that water quality at creek and Howe Sound baseline stations are above the baseline concentration range and may indicate project influence at these stations.

5. Closure

This weekly report is a desktop review by Lorax of the PE-111578 discharge and compliance monitoring program records, reports and results provided by Woodfibre LNG and prime contractor McDermott International and their sub-contractors. The records reviewed and analyzed by Lorax include ALS Environmental laboratory test reports and site reports (from Roe Environmental, LB LNG, McDermott and Woodfibre LNG). Verbal or electronic communications between Lorax, and Roe Environmental, LB LNG, McDermott, and Woodfibre LNG staff are conducted as needed to confirm the information presented in this report.

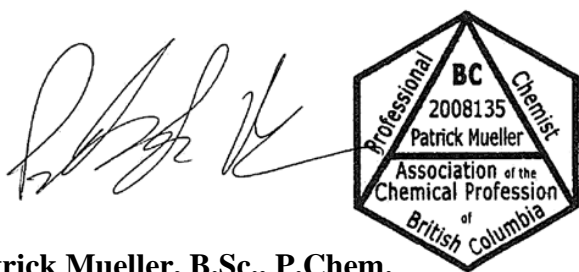
Regards,

LORAX ENVIRONMENTAL SERVICES LTD.



**Cheng Kuang, M.Sc., RPBio.
Environmental Scientist**

**Holly Pelletier, B.Sc., GIT.
Environmental Geoscientist**



**Patrick Mueller, B.Sc., P.Chem.
Environmental Chemist**

Appendix A: Figures and Site Images



World Imagery: District of Squamish. Additional imagery provided by McDermott International captured April 28th, 2025.

- LEGEND**
- Freshwater Monitoring Station
 - Marine Water Monitoring Station
 - Certified Project Area
 - Watercourse
 - East Creek Temporary Diversion
 - Non Contact Ditch (Under Construction)
 - Outfall / Culvert
 - Clean Water Diversion Discharge Station
 - Sedimentation Pond Monitoring Stations (Water Quality)
 - Wastewater Treatment Plant (WWTP)

DATE SAVED: May 02, 2025
DRAWN BY: DM
REVIEWED: PM
VERSION: 1

Coordinate System: NAD 1983 UTM Zone 10N
Projection: Transverse Mercator
Datum: North American 1983
Units: Metre
1:6,000
0 50 100 150 Metres



CLIENT: Woodfibre LNG

PROJECT: Woodfibre LNG Project Construction Phase

TITLE: Completed or Under Construction Water Management Facilities and Established PE-111578 Monitoring Stations (April 26, 2025)

PROJECT #: A633-7

FIGURE: 1



Figure 2: East Catchment contact water management facilities (April 20 – 26).

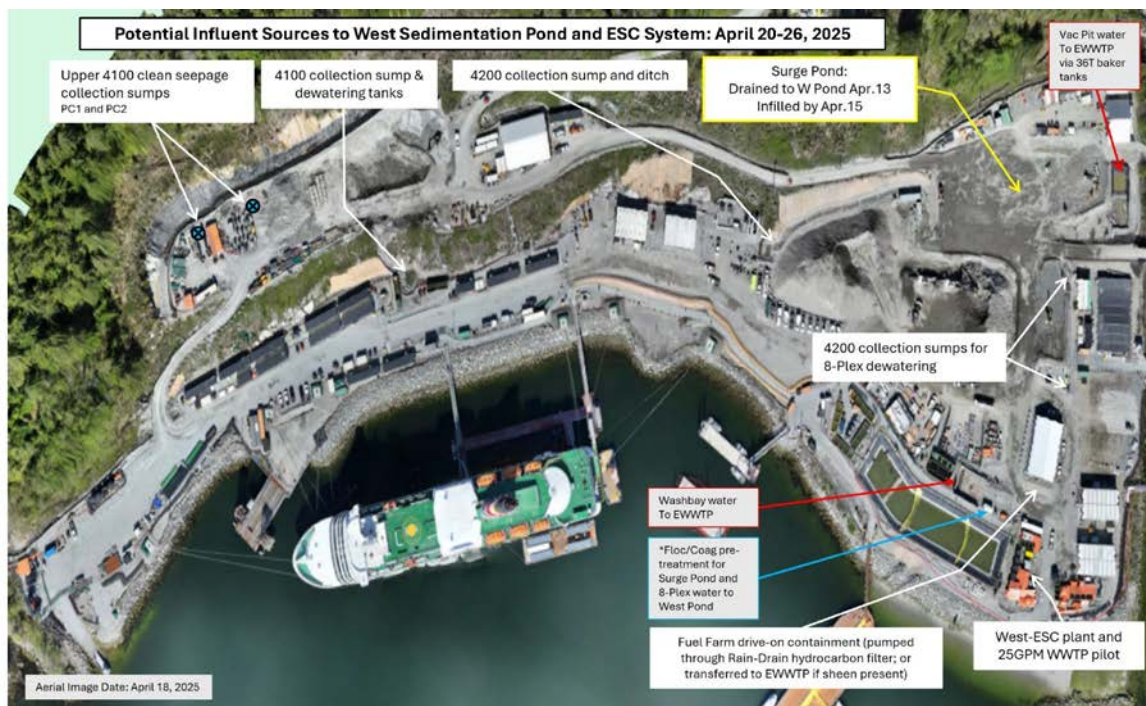


Figure 3: West Catchment contact water management facilities (April 20 – 26).

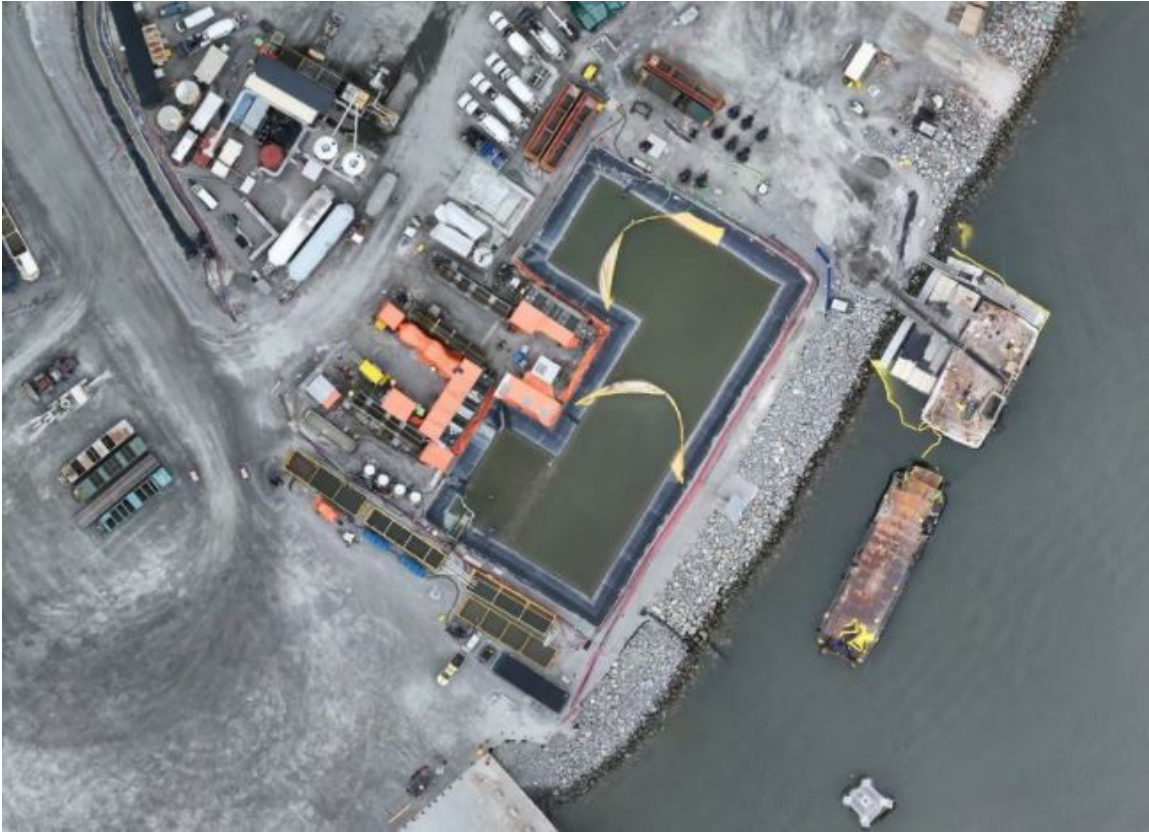


Figure 4: Aerial view of the East Sedimentation Pond (April 25, 2025). The East WWTP is located on the left side and the E500GPM TSS settling system is situated along the bottom edge of the pond.



Figure 5: Aerial view of the West Sedimentation Pond (April 25, 2025). The TSS settling systems are located to the left (W500GPM) and right (ESC) of the pond.

Appendix B: East Catchment Monitoring Results

Table B-1: East Catchment Contact Water Influent Analytical Results Received at the Time of Reporting.

Parameter	Unit	Lowest Applicable Guideline ¹		PE-111578 Discharge Limit	Station WWTP-E-IN	Station SP-E-IN
					Influent	Influent
					WWTP-E-IN	SP-E-IN
		VA25A9268-001	VA25A9268-003			
		Long Term	Short Term		2025-04-24 9:10	2025-04-24 10:25
General Parameters						
pH - Field	pH units	- ²	-	5.5 - 9.0	7.5	7.3
Conductivity - Field	µS/cm	-	-	-	781	805
Temperature - Field	°C	-	-	-	14.9	15.7
Salinity - Field	ppt	-	-	-	0.48	0.49
Turbidity - Field	NTU	-	-	-	7.16	9.09
TSS	mg/L	-	-	25 or 75 ⁶	7.5	22.5
Dissolved Oxygen - Field	mg/L	≥8	-	-	10.16	10.6
Anions and Nutrients						
Sulphate	mg/L	-	-	-	208	212
Chloride	mg/L	-	-	-	12.8	12.7
Fluoride	mg/L	-	1.5	-	0.209	0.208
Ammonia (N-NH ₃)	mg/L	7.8-8.7 ³	52-58 ³	-	<0.0050	<0.0050
Nitrite (N-NO ₂)	mg/L	-	-	-	<0.0050	<0.0050
Nitrate (N-NO ₃)	mg/L	3.7	339	-	<0.0250	<0.0250
Total Metals						
Aluminum, total (T-Al)	mg/L	-	-	-	0.418	0.886
Antimony, total (T-Sb)	mg/L	-	0.27 ⁴	-	0.00143	0.00142
Arsenic, total (T-As)	mg/L	0.0125	0.0125	-	0.00186	0.00212
Barium, total (T-Ba)	mg/L	-	-	-	0.00778	0.0102
Beryllium, total (T-Be)	mg/L	0.1	-	-	<0.000020	0.000021
Boron, total (T-B)	mg/L	1.2	-	-	0.066	0.064
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	<0.0000350	<0.0000400
Chromium, total (T-Cr)	mg/L	-	-	-	0.00121	0.00192
Cobalt, total (T-Co)	mg/L	-	-	-	0.00018	0.00032
Copper, total (T-Cu)	mg/L	- ²	- ²	0.0043	0.00253	0.00349
Iron, total (T-Fe)	mg/L	-	-	-	0.293	0.721
Lead, total (T-Pb)	mg/L	- ²	- ²	0.0035	0.000679	0.00141
Manganese, total (T-Mn)	mg/L	-	-	-	0.0353	0.0464
Mercury, total (T-Hg)	mg/L	0.000016 ⁵	-	-	0.0000124	<u>0.0000223</u>
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.109	0.108
Nickel, total (T-Ni)	mg/L	0.0083	-	-	0.0005	0.00064
Selenium, total (T-Se)	mg/L	0.002	-	-	0.000318	0.000348
Silver, total (T-Ag)	mg/L	0.0005	0.0037	-	<0.000010	<0.000010
Thallium, total (T-Tl)	mg/L	-	-	-	0.000027	0.000031
Uranium, total (T-U)	mg/L	-	-	-	0.0324	0.0317
Vanadium, total (T-V)	mg/L	- ²	-	0.0081	0.00255	0.00318
Zinc, total (T-Zn)	mg/L	- ²	- ²	0.0133	0.0101	0.007
Hexavalent Chromium, total	mg/L	0.0015	-	-	<u>0.00055</u>	0.00058
Dissolved Metals						
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	<0.0000350	<0.0000250
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.0018	0.0015
Iron, dissolved (D-Fe)	mg/L	-	-	-	0.024	0.024
Lead, dissolved (D-Pb)	mg/L	-	-	-	0.000066	0.000051
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.0266	0.0169
Nickel, dissolved (D-Ni)	mg/L	-	-	-	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.154	0.165
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00207	0.00167
Zinc, dissolved (D-Zn)	mg/L	-	-	-	0.0074	0.0011
Polycyclic Aromatic Hydrocarbons (PAHs)						
Acenaphthene	mg/L	0.006	-	-	<0.000010	<0.000010
Acridine	mg/L	-	-	-	<0.000010	<0.000010
Anthracene	mg/L	-	-	-	<0.000010	<0.000010
Benz(a)anthracene	mg/L	-	-	-	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	-	<0.0000050	<0.0000050
Chrysene	mg/L	0.0001	-	-	<0.000010	<0.000010
Fluoranthene	mg/L	-	-	-	<0.000010	<0.000010
Fluorene	mg/L	0.012	-	-	<0.000010	<0.000010
1-methylnaphthalene	mg/L	0.001	-	-	<0.000010	<0.000010
2-methylnaphthalene	mg/L	0.001	-	-	<0.000010	<0.000010
Naphthalene	mg/L	0.001	-	-	<0.000050	<0.000050
Phenanthrene	mg/L	-	-	-	<0.000020	<0.000020
Pyrene	mg/L	-	-	-	<0.000010	<0.000010
Quinoline	mg/L	-	-	-	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)						
Benzene	mg/L	0.11	-	-	<0.00050	<0.00050
Ethylbenzene	mg/L	0.25	-	-	<0.00050	<0.00050
Methyl-tert-butyl-ether	mg/L	5	0.44	-	<0.00050	<0.00050
Styrene	mg/L	-	-	-	<0.00050	<0.00050
Toluene	mg/L	0.215	-	-	<0.00040	<0.00040
Total Xylenes	mg/L	-	-	-	<0.00050	<0.00050
Chlorobenzene	mg/L	0.025	-	-	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	-	-	<0.00050	<0.00050

Notes: Results **underlined in bold italics** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life. Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life. Results in orange text exceeded the PE-111578 East Sedimentation Pond Discharge Limit. The East Catchment discharged during the monitoring period (April 20 – 26) on April 24.

¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.

² The WQG was not evaluated for parameters with discharge limits.

³ The BC WQG for total ammonia is salinity, pH and temperature dependent; see Tables 27E and 27F in BC WQG guidance document.

⁴ The working BC WQG for trivalent antimony [SB(III)] is 0.27 mg/L and is applied to total antimony results.

⁵ When MeHg ≤0.5% of total Hg, the BC WQG = 0.00002 mg/L. The Canadian WQG = 0.000016 mg/L.

⁶ The PE-111578 discharge limit for TSS is 25 mg/L under dry conditions and 75 mg/L for each day of Wet Conditions.

Table B-2: East Catchment Effluent Analytical Results Received at the Time of Reporting.

Parameter	Unit	Lowest Applicable Guideline ¹		PE-111578 Discharge Limit	Station WWTP-E-OUT	Station SP-E-OUT
					Effluent	Effluent
					WWTP-E-OUT	SP-E-OUT
		VA25A9268-002	VA25A9268-004			
		2025-04-24 10:10	2025-04-24 9:25			
General Parameters						
pH - Field	pH units	- ²	-	5.5 - 9.0	6.8	7.5
Conductivity - Field	µS/cm	-	-	-	820	659
Temperature - Field	°C	-	-	-	16.0	11.6
Salinity - Field	ppt	-	-	-	0.49	0.44
Turbidity - Field	NTU	-	-	-	2.58	3.55
TSS	mg/L	-	-	25 or 75 ⁶	<3.0	<3.0
Dissolved Oxygen - Field	mg/L	≥8	-	-	9.38	9.59
Anions and Nutrients						
Sulphate	mg/L	-	-	-	214	211
Chloride	mg/L	-	-	-	12.4	19.5
Fluoride	mg/L	-	1.5	-	0.195	0.171
Ammonia (N-NH ₃)	mg/L	7.8-14 ³	52-92 ³	-	<0.0050	0.0051
Nitrite (N-NO ₂)	mg/L	-	-	-	<0.0050	0.0278
Nitrate (N-NO ₃)	mg/L	3.7	339	-	<0.0250	0.0717
Total Metals						
Aluminum, total (T-Al)	mg/L	-	-	-	0.0744	0.133
Antimony, total (T-Sb)	mg/L	-	0.27 ⁴	-	0.00138	0.00136
Arsenic, total (T-As)	mg/L	0.0125	0.0125	-	0.00159	0.00169
Barium, total (T-Ba)	mg/L	-	-	-	0.00378	0.00511
Beryllium, total (T-Be)	mg/L	0.1	-	-	<0.000020	<0.000020
Boron, total (T-B)	mg/L	1.2	-	-	0.063	0.058
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	0.0000196	<0.0000250
Chromium, total (T-Cr)	mg/L	-	-	-	0.0009	0.00111
Cobalt, total (T-Co)	mg/L	-	-	-	<0.00010	0.00012
Copper, total (T-Cu)	mg/L	- ²	- ²	0.0043	0.00734	0.0018
Iron, total (T-Fe)	mg/L	-	-	-	0.051	0.09
Lead, total (T-Pb)	mg/L	- ²	- ²	0.0035	0.000684	0.000216
Manganese, total (T-Mn)	mg/L	-	-	-	0.0128	0.0283
Mercury, total (T-Hg)	mg/L	0.000016 ⁵	-	-	0.0000101	0.00000851
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.105	0.111
Nickel, total (T-Ni)	mg/L	0.0083	-	-	<0.00050	0.0005
Selenium, total (T-Se)	mg/L	0.002	-	-	0.000293	0.000295
Silver, total (T-Ag)	mg/L	0.0005	0.0037	-	<0.000010	<0.000010
Thallium, total (T-Tl)	mg/L	-	-	-	0.00002	0.000024
Uranium, total (T-U)	mg/L	-	-	-	0.0287	0.0335
Vanadium, total (T-V)	mg/L	- ²	-	0.0081	0.00146	0.0024
Zinc, total (T-Zn)	mg/L	- ²	- ²	0.0133	0.0058	<0.0030
Hexavalent Chromium, total	mg/L	0.0015	-	-	<0.00050	0.00056
Dissolved Metals						
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	<0.0000250	<0.0000250
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.00166	0.00116
Iron, dissolved (D-Fe)	mg/L	-	-	-	0.021	0.026
Lead, dissolved (D-Pb)	mg/L	-	-	-	0.000106	<0.000050
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.011	0.024
Nickel, dissolved (D-Ni)	mg/L	-	-	-	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.174	0.147
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.0013	0.00209
Zinc, dissolved (D-Zn)	mg/L	-	-	-	0.0019	<0.0010
Polycyclic Aromatic Hydrocarbons (PAHs)						
Acenaphthene	mg/L	0.006	-	-	<0.000010	<0.000010
Acridine	mg/L	-	-	-	<0.000010	<0.000010
Anthracene	mg/L	-	-	-	<0.000010	<0.000010
Benz(a)anthracene	mg/L	-	-	-	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	-	<0.0000050	<0.0000050
Chrysene	mg/L	0.0001	-	-	<0.000010	<0.000010
Fluoranthene	mg/L	-	-	-	<0.000010	<0.000010
Fluorene	mg/L	0.012	-	-	<0.000010	<0.000010
1-methylnaphthalene	mg/L	0.001	-	-	<0.000010	<0.000010
2-methylnaphthalene	mg/L	0.001	-	-	<0.000010	<0.000010
Naphthalene	mg/L	0.001	-	-	<0.000050	<0.000050
Phenanthrene	mg/L	-	-	-	<0.000020	<0.000020
Pyrene	mg/L	-	-	-	<0.000010	<0.000010
Quinoline	mg/L	-	-	-	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)						
Benzene	mg/L	0.11	-	-	<0.00050	<0.00050
Ethylbenzene	mg/L	0.25	-	-	<0.00050	<0.00050
Methyl-tert-butyl-ether	mg/L	5	0.44	-	<0.00050	<0.00050
Styrene	mg/L	-	-	-	<0.00050	<0.00050
Toluene	mg/L	0.215	-	-	<0.00040	<0.00040
Total Xylenes	mg/L	-	-	-	<0.00050	<0.00050
Chlorobenzene	mg/L	0.025	-	-	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	-	-	<0.00050	<0.00050

Notes: Results **underlined in bold italics** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life. Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life. Results in orange text exceeded the PE-111578 East Sedimentation Pond Discharge Limit. The East Catchment discharged during the monitoring period (April 20 – 26) on April 24.

¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.

² The WQG was not evaluated for parameters with discharge limits.

³ The BC WQG for total ammonia is salinity, pH and temperature dependent; see Tables 27E and 27F in BC WQG guidance document.

⁴ The working BC WQG for trivalent antimony [SB(III)] is 0.27 mg/L and is applied to total antimony results.

⁵ When MeHg ≤0.5% of total Hg, the BC WQG = 0.00002 mg/L. The Canadian WQG = 0.000016 mg/L.

⁶ The PE-111578 discharge limit for TSS is 25 mg/L under dry conditions and 75 mg/L for each day of Wet Conditions.

Table B-3: East Catchment Methylmercury and Corresponding Total Mercury Results Received at the Time of Reporting.

Parameter					Total Methylmercury	Total Mercury
Unit					µg/L	µg/L
Lowest Applicable Guideline ¹					0.0001 ²	0.0025 – 0.020 ^{3,4}
Station	Water Type	Sample ID	Lab ID	Sampling Date		
Influent						
SP-E-IN	Influent	SP-E-IN	VA25A7142-001	2025-04-01	<u>0.000135</u>	<u>0.0439</u>
SP-E-IN	Influent	SP-E-IN	VA25A7962-003	2025-04-09	<u>0.000131</u>	<u>0.0836</u>
SP-E-IN	Influent	SP-E-IN	VA25A8533-001	2025-04-16	<u>0.000120</u>	<u>0.0187</u>
WWTP-E-IN	Influent	WWTP-E-IN	VA25A7142-003	2025-04-01	0.000095	0.0135
WWTP-E-IN	Influent	WWTP-E-IN	VA25A7962-001	2025-04-09	<u>0.000130</u>	<u>0.0301</u>
WWTP-E-IN	Influent	WWTP-E-IN	VA25A8764-001	2025-04-19	<u>0.000333</u>	<u>0.0198</u>
Effluent						
SP-E-OUT	Effluent	SP-E-OUT	VA25A7142-002	2025-04-01	0.000057	0.00205
SP-E-OUT	Effluent	SP-E-OUT	VA25A7962-004	2025-04-09	0.000028	0.00368
SP-E-OUT	Effluent	SP-E-OUT	VA25A8533-002	2025-04-16	0.000095	0.00580
SP-E-OUT	Effluent	SP-E-OUT-DUP	VA25A8533-003	2025-04-16	<u>0.000112</u>	<u>0.00597</u>
WWTP-E-OUT	Effluent	WWTP-E-OUT	VA25A7142-004	2025-04-01	<0.000020	0.00184
WWTP-E-OUT	Effluent	WWTP-E-OUT	VA25A7962-002	2025-04-09	<0.000020	0.00178
WWTP-E-OUT	Effluent	WWTP-E-OUT	VA25A8764-002	2025-04-19	<u>0.000308</u>	<u>0.00784</u>

Notes:
Results **underlined in bold italics** exceed the applicable long-term water quality guideline for the protection of marine aquatic life.
¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
² From BC Ambient Water Quality Guidelines for Mercury Overview Report. The methylmercury concentration threshold of 0.0001 µg/L (0.1 ng/L) is indicated as a WQG for the protection of wildlife and is set at a concentration that protects fish from mercury bioaccumulation to a level that may harm wildlife that consume fish.
³ CCME guideline for total mercury = 0.016 µg/L.
⁴ When MeHg ≤ 0.5% of total Hg, BC WQG = 0.02 µg/L. When MeHg > 0.5% of total Hg, BC WQG = 0.0001/(MeHg/Total Hg). Detection limit values are used to calculate the WQG for result reported as not detected.
Non-detect results are screened using the detection limit value.

Table B-4: East Catchment Dioxin and Furan Toxicity Equivalency Quantity (TEQ) Results Received at the Time of Reporting.

Parameter					Lower Bound PCDD/F TEQ	Upper Bound PCDD/F TEQ
Unit					pg/L	pg/L
Station	Water Type	Sample ID	Lab ID	Sampling Date		
Influent						
SP-E-IN	Influent	SP-E-IN	L2759190-5	2025-03-11	0.0221	0.766
SP-E-IN	Influent	SP-E-IN	L2759236-4	2025-03-17	0.0179	0.891
WWTP-E-IN	Influent	WWTP-E-IN	L2759190-3	2025-03-11	0.273	2.24
WWTP-E-IN	Influent	WWTP-E-IN	L2759236-1	2025-03-17	0.0540	1.31
Effluent						
SP-E-OUT	Effluent	SP-E-OUT	L2759190-6	2025-03-11	0.0303	0.916
SP-E-OUT	Effluent	SP-E-OUT-Dup	L2759190-7	2025-03-11	0.0356	0.728
SP-E-OUT	Effluent	SP-E-OUT	L2759236-3	2025-03-17	0	0.624
WWTP-E-OUT	Effluent	WWTP-E-OUT	L2759190-4	2025-03-11	0.00762	0.522
WWTP-E-OUT	Effluent	WWTP-E-OUT	L2759236-2	2025-03-17	0	0.600

Notes:
PCDD = polychlorinated dibenzodioxins (dioxins)
PCDF = polychlorinated dibenzofurans (furans)
TEQ = toxic equivalency
Lower bound PCDD/F TEQ is the sum of the toxic equivalency results for the individual PCDD/F parameters. Non-detectable parameters are assigned a value of zero (0).
Upper bound PCDD/F TEQ is the sum of the toxic equivalency results for the individual PCDD/F parameters. Non-detectable parameters are assigned the value of the detection limit.

Table B-5: East Catchment Field Measurements Collected During the Monitoring Period (April 20 – 26).

Parameter			Temp.	Dissolved Oxygen (DO)	Salinity	Turbidity	Estimated TSS ³	pH	Conductivity	Visibility of Sheen
Unit			°C	mg/L	ppt	NTU	mg/L	s.u.	µS/cm	
PE-111578 Discharge Limit			-	-	-	-	25 or 75 ⁶	5.5 - 9.0	-	-
Lowest Applicable Guideline ¹			-	≥8	-	-	- ²	- ²	-	-
Station ID	Water Type	Date								
Influent ⁴										
SP-E-IN	Influent	2025-04-20 14:36	16.6	10.28	0.50	5.75	7.3	7.2	845	No
SP-E-IN	Influent	2025-04-21 11:29	15.5	11.04	0.51	7.57	8.6	6.7	846	No
SP-E-IN	Influent	2025-04-22 10:08	15.2	10.46	0.47	6.44	7.8	8.5	772	No
SP-E-IN	Influent	2025-04-23 15:13	17.1	10.21	0.45	6.94	8.2	7.4	770	No
SP-E-IN	Influent	2025-04-24 10:25	15.7	10.60	0.49	9.09	9.8	7.3	805	No
SP-E-IN	Influent	2025-04-25 13:21	18.1	9.68	0.50	6.21	7.6	6.8	873	No
SP-E-IN	Influent	2025-04-26 13:30	17.9	9.64	0.37	10.36	10.7	7.0	658	No
WWTP-E-IN	Influent	2025-04-20 14:42	16.7	11.31	0.50	6.70	8.0	6.9	850	No
WWTP-E-IN	Influent	2025-04-21 11:19	14.9	11.55	0.52	4.14	6.1	6.9	838	No
WWTP-E-IN	Influent	2025-04-22 9:55	13.3	11.95	0.45	2.87	5.1	7.1	700	No
WWTP-E-IN	Influent	2025-04-23 15:23	17.4	11.56	0.50	6.18	7.6	7.1	857	No
WWTP-E-IN	Influent	2025-04-24 9:10	14.9	10.16	0.48	7.16	8.3	7.5	781	No
WWTP-E-IN	Influent	2025-04-25 13:13	17.8	11.47	0.49	4.66	6.5	7.1	849	No
WWTP-E-IN	Influent	2025-04-26 13:19	17.7	11.05	0.43	3.20	5.4	7.0	756	No
E500GPM-IN	Influent	2025-04-23 15:06	17.4	10.86	0.50	8.79	9.6	7.3	855	No
E500GPM-IN	Influent	2025-04-24 10:12	15.4	11.15	0.48	8.95	9.7	7.7	791	No
Effluent ⁵										
SP-E-OUT	Effluent	2025-04-24 9:25	11.6	9.59	0.44	3.55	5.6	7.5	659	No
WWTP-E-OUT	Effluent	2025-04-20 14:40	16.1	10.43	0.50	3.72	5.8	7.7	827	No
WWTP-E-OUT	Effluent	2025-04-21 11:23	14.7	11.56	0.50	1.81	4.3	7.1	813	No
WWTP-E-OUT	Effluent	2025-04-22 10:04	14.8	9.63	0.48	3.13	5.3	7.9	777	No
WWTP-E-OUT	Effluent	2025-04-23 15:20	16.3	9.96	0.54	2.67	5.0	6.9	900	No
WWTP-E-OUT	Effluent	2025-04-24 10:10	16.0	9.38	0.49	2.58	4.9	6.8	820	No
WWTP-E-OUT	Effluent	2025-04-25 13:18	17.2	6.95	0.50	2.03	4.5	6.6	858	No
WWTP-E-OUT	Effluent	2025-04-26 13:27	17.6	7.72	0.45	1.18	3.9	6.5	773	No
E500GPM-OUT	Effluent	2025-04-23 15:09	17.0	10.22	0.49	2.19	4.6	7.5	842	No
E500GPM-OUT	Effluent	2025-04-24 8:58	14.5	10.46	0.48	2.20	4.6	7.7	771	No

Notes:
Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.
Results in orange text exceeded the PE-111578 East Sedimentation Pond Discharge Limit.
¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
² The WQG was not evaluated for parameters with discharge limits.
³ TSS concentration is estimated from field turbidity measurements using a site-specific relationship TSS = 0.7458 * [turbidity as NTU] + 3.
⁴ Daily field measurements for station SP-E-IN were collected from cell 1 of the East Sedimentation Pond.
⁵ Daily field measurements were not collected at SP-E-OUT on April 20-23 and April 25-26 as there was no discharge on those days.
⁶ The PE-111578 discharge limit for TSS is 25 mg/L under dry conditions and 75 mg/L for each day of Wet Conditions.

Table B-6: East Catchment Daily Discharge Volumes for the Monitoring Period (April 20 – 26).

	East Sedimentation Pond Effluent	East TSS Settling System (E500GPM) Clarified Effluent (Station E500GPM-OUT)	East WWTP Treated Effluent (Station WWTP-E-OUT)	Discharge to Howe Sound (Station SP-E-OUT)
Unit	m ³	m ³	m ³	m ³
PE-111578 Discharge Limit	- ¹	- ¹	1100	- ¹
Date				
2025-04-20	0	0	612 ³	0
2025-04-21	0	0	860 ³	0
2025-04-22	0	0	480 ³	0
2025-04-23	0	1,406 ²	907 ³	0
2025-04-24	0	3,303 ²	879 ³	335
2025-04-25	0	0	784 ³	0
2025-04-26	0	0	841 ³	0

Notes:
Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.
Results in orange text exceeded the PE-111578 East Sedimentation Pond Discharge Limit.
¹ The annual average authorized discharge rate from the East Sedimentation Pond is 650 m³/day. As noted in PE-111578 Condition 2.1.4, the actual discharge rate may deviate from the annual average rate due to annual variations in precipitation amounts within the catchment area. Therefore, the annual average authorized discharge rate is not evaluated as a discharge limit.
² E500GPM clarified effluent is discharged to Howe Sound or recirculated to the East Sedimentation Pond based on operational considerations. Therefore, the E500GPM clarified effluent volume is generally higher than the volume discharged to Howe Sound. The E500GPM was operational on April 23 and April 24 during the monitoring period (April 20-26).
³ East WWTP treated effluent was recirculated to the East Sedimentation Pond.

Appendix C: West Catchment Monitoring Results

Table C-1: West Catchment Contact Water Influent Analytical Results Received at the Time of Reporting.

Parameter	Unit	Lowest Applicable Guideline ¹		PE-111578 Discharge Limit	Station SP-W-IN
					Influent
					SP-W-IN
		Long Term	Short Term		VA25A8853-001
					2025-04-21 9:30
General Parameters					
pH - Field	pH units	- ²	-	5.5 - 9.0	6.8
Conductivity - Field	µS/cm	-	-	-	133
Temperature - Field	°C	-	-	-	13.0
Salinity - Field	ppt	-	-	-	0.08
Turbidity - Field	NTU	-	-	-	7.27
TSS	mg/L	-	-	25 or 75 ⁶	4.1
Dissolved Oxygen - Field	mg/L	≥8	-	-	12.49
Anions and Nutrients					
Sulphate	mg/L	-	-	-	25.6
Chloride	mg/L	-	-	-	7.66
Fluoride	mg/L	-	1.5	-	0.069
Ammonia (N-NH ₃)	mg/L	20 ³	131 ³	-	0.0211
Nitrite (N-NO ₂)	mg/L	-	-	-	0.0619
Nitrate (N-NO ₃)	mg/L	3.7	339	-	1.02
Total Metals					
Aluminum, total (T-Al)	mg/L	-	-	-	0.355
Antimony, total (T-Sb)	mg/L	-	0.27 ⁴	-	0.00095
Arsenic, total (T-As)	mg/L	0.0125	0.0125	-	0.00141
Barium, total (T-Ba)	mg/L	-	-	-	0.00369
Beryllium, total (T-Be)	mg/L	0.1	-	-	<0.000020
Boron, total (T-B)	mg/L	1.2	-	-	0.012
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	<0.0000150
Chromium, total (T-Cr)	mg/L	-	-	-	0.00066
Cobalt, total (T-Co)	mg/L	-	-	-	0.00012
Copper, total (T-Cu)	mg/L	- ²	- ²	0.0043	0.00165
Iron, total (T-Fe)	mg/L	-	-	-	0.169
Lead, total (T-Pb)	mg/L	- ²	- ²	0.0035	0.000464
Manganese, total (T-Mn)	mg/L	-	-	-	0.0167
Mercury, total (T-Hg)	mg/L	0.000016 ⁵	-	-	0.0000016
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.0287
Nickel, total (T-Ni)	mg/L	0.0083	-	-	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	-	0.00016
Silver, total (T-Ag)	mg/L	0.0005	0.0037	-	<0.000010
Thallium, total (T-Tl)	mg/L	-	-	-	0.000016
Uranium, total (T-U)	mg/L	-	-	-	0.00589
Vanadium, total (T-V)	mg/L	- ²	-	0.0081	0.0023
Zinc, total (T-Zn)	mg/L	- ²	- ²	0.0133	<0.0030
Hexavalent Chromium, total	mg/L	0.0015	-	-	0.00054
Dissolved Metals					
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	<0.0000100
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.00117
Iron, dissolved (D-Fe)	mg/L	-	-	-	0.025
Lead, dissolved (D-Pb)	mg/L	-	-	-	0.000071
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.0152
Nickel, dissolved (D-Ni)	mg/L	-	-	-	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.0619
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00197
Zinc, dissolved (D-Zn)	mg/L	-	-	-	0.0011
Polycyclic Aromatic Hydrocarbons (PAHs)					
Acenaphthene	mg/L	0.006	-	-	<0.000010
Acridine	mg/L	-	-	-	<0.000010
Anthracene	mg/L	-	-	-	<0.000010
Benz(a)anthracene	mg/L	-	-	-	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	-	<0.0000050
Chrysene	mg/L	0.0001	-	-	<0.000010
Fluoranthene	mg/L	-	-	-	<0.000010
Fluorene	mg/L	0.012	-	-	<0.000010
1-methylnaphthalene	mg/L	0.001	-	-	<0.000010
2-methylnaphthalene	mg/L	0.001	-	-	<0.000010
Naphthalene	mg/L	0.001	-	-	<0.000050
Phenanthrene	mg/L	-	-	-	<0.000020
Pyrene	mg/L	-	-	-	<0.000010
Quinoline	mg/L	-	-	-	<0.000050
Volatile Organic Compounds (VOCs)					
Benzene	mg/L	0.11	-	-	<0.00050
Ethylbenzene	mg/L	0.25	-	-	<0.00050
Methyl-tert-butyl-ether	mg/L	5	0.44	-	<0.00050
Styrene	mg/L	-	-	-	<0.00050
Toluene	mg/L	0.215	-	-	<0.00040
Total Xylenes	mg/L	-	-	-	<0.00050
Chlorobenzene	mg/L	0.025	-	-	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	-	-	<0.00050

Notes: Results **underlined in bold italics** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life. Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life. Results in orange text exceeded the PE-111578 West Sedimentation Pond Discharge Limit. The West Catchment discharged during the monitoring period (April 20 – 26 on April 21). ¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs. ² The WQG was not evaluated for parameters with discharge limits. ³ The BC WQG for total ammonia is salinity, pH and temperature dependent; see Tables 27E and 27F in BC WQG guidance document. ⁴ The working BC WQG for trivalent antimony [SB(III)] is 0.27 mg/L and is applied to total antimony results. ⁵ When MeHg ≤0.5% of total Hg, the BC WQG = 0.00002 mg/L. The Canadian WQG = 0.000016 mg/L. ⁶ The PE-111578 discharge limit for TSS is 25 mg/L under dry conditions and 75 mg/L for each day of Wet Conditions.

Table C-2: West Catchment Contact Water Effluent Analytical Results Received at the Time of Reporting.

Parameter	Unit	Lowest Applicable Guideline ¹		PE-111578 Discharge Limit	Station SP-W-OUT
					Effluent
					SP-W-OUT
					VA25A8853-002
		Long Term	Short Term		2025-04-21 10:10
General Parameters					
pH - Field	pH units	- ²	-	5.5 - 9.0	6.8
Conductivity - Field	µS/cm	-	-	-	137
Temperature - Field	°C	-	-	-	14.1
Salinity - Field	ppt	-	-	-	0.08
Turbidity - Field	NTU	-	-	-	2.15
TSS	mg/L	-	-	25 or 75 ⁶	<3.0
Dissolved Oxygen - Field	mg/L	≥8	-	-	12.48
Anions and Nutrients					
Sulphate	mg/L	-	-	-	25.2
Chloride	mg/L	-	-	-	7.57
Fluoride	mg/L	-	1.5	-	0.067
Ammonia (N-NH ₃)	mg/L	20 ³	131 ³	-	0.0218
Nitrite (N-NO ₂)	mg/L	-	-	-	0.0578
Nitrate (N-NO ₃)	mg/L	3.7	339	-	1.02
Total Metals					
Aluminum, total (T-Al)	mg/L	-	-	-	0.278
Antimony, total (T-Sb)	mg/L	-	0.27 ⁴	-	0.00096
Arsenic, total (T-As)	mg/L	0.0125	0.0125	-	0.00139
Barium, total (T-Ba)	mg/L	-	-	-	0.00195
Beryllium, total (T-Be)	mg/L	0.1	-	-	<0.000020
Boron, total (T-B)	mg/L	1.2	-	-	0.01
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	<0.0000150
Chromium, total (T-Cr)	mg/L	-	-	-	0.00065
Cobalt, total (T-Co)	mg/L	-	-	-	<0.00010
Copper, total (T-Cu)	mg/L	- ²	- ²	0.0043	0.0071
Iron, total (T-Fe)	mg/L	-	-	-	0.083
Lead, total (T-Pb)	mg/L	- ²	- ²	0.0035	0.000621
Manganese, total (T-Mn)	mg/L	-	-	-	0.0139
Mercury, total (T-Hg)	mg/L	0.000016 ⁵	-	-	0.00000124
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.0294
Nickel, total (T-Ni)	mg/L	0.0083	-	-	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	-	0.000176
Silver, total (T-Ag)	mg/L	0.0005	0.0037	-	<0.000010
Thallium, total (T-Tl)	mg/L	-	-	-	0.000016
Uranium, total (T-U)	mg/L	-	-	-	0.00597
Vanadium, total (T-V)	mg/L	- ²	-	0.0081	0.00219
Zinc, total (T-Zn)	mg/L	- ²	- ²	0.0133	0.0222
Hexavalent Chromium, total	mg/L	0.0015	-	-	0.00062
Dissolved Metals					
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	<0.0000150
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.00134
Iron, dissolved (D-Fe)	mg/L	-	-	-	0.024
Lead, dissolved (D-Pb)	mg/L	-	-	-	0.0001
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.0122
Nickel, dissolved (D-Ni)	mg/L	-	-	-	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.0587
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00206
Zinc, dissolved (D-Zn)	mg/L	-	-	-	0.006
Polycyclic Aromatic Hydrocarbons (PAHs)					
Acenaphthene	mg/L	0.006	-	-	<0.000010
Acridine	mg/L	-	-	-	<0.000010
Anthracene	mg/L	-	-	-	<0.000010
Benz(a)anthracene	mg/L	-	-	-	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	-	<0.0000050
Chrysene	mg/L	0.0001	-	-	<0.000010
Fluoranthene	mg/L	-	-	-	<0.000010
Fluorene	mg/L	0.012	-	-	<0.000010
1-methylnaphthalene	mg/L	0.001	-	-	<0.000010
2-methylnaphthalene	mg/L	0.001	-	-	<0.000010
Naphthalene	mg/L	0.001	-	-	<0.000050
Phenanthrene	mg/L	-	-	-	<0.000020
Pyrene	mg/L	-	-	-	<0.000010
Quinoline	mg/L	-	-	-	<0.000050
Volatile Organic Compounds (VOCs)					
Benzene	mg/L	0.11	-	-	<0.00050
Ethylbenzene	mg/L	0.25	-	-	<0.00050
Methyl-tert-butyl-ether	mg/L	5	0.44	-	<0.00050
Styrene	mg/L	-	-	-	<0.00050
Toluene	mg/L	0.215	-	-	<0.00040
Total Xylenes	mg/L	-	-	-	<0.00050
Chlorobenzene	mg/L	0.025	-	-	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	-	-	<0.00050

Notes: Results **underlined in bold italics** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life. Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life. Results in orange text exceeded the PE-111578 West Sedimentation Pond Discharge Limit. The West Catchment discharged during the monitoring period (April 20 – 26 on April 21). ¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs. ² The WQG was not evaluated for parameters with discharge limits. ³ The BC WQG for total ammonia is salinity, pH and temperature dependent; see Tables 27E and 27F in BC WQG guidance document. ⁴ The working BC WQG for trivalent antimony [SB(III)] is 0.27 mg/L and is applied to total antimony results. ⁵ When MeHg ≤0.5% of total Hg, the BC WQG = 0.00002 mg/L. The Canadian WQG = 0.000016 mg/L. ⁶ The PE-111578 discharge limit for TSS is 25 mg/L under dry conditions and 75 mg/L for each day of Wet Conditions.

Table C-3: West Catchment Methylmercury and Corresponding Total Mercury Results Received at the Time of Reporting.

Parameter					Total Methylmercury	Total Mercury
Unit					µg/L	µg/L
Lowest Applicable Guideline ¹					0.0001 ²	0.0035 – 0.013 ^{3,4}
Station	Water Type	Sample ID	Lab ID	Sampling Date		
Influent						
SP-W-IN	Influent	SP-W-IN	VA25A7962-005	2025-04-09	0.000052	0.00656
SP-W-IN	Influent	SP-W-IN	VA25A8533-005	2025-04-16	0.000026	0.00222
SP-W-IN	Influent	SP-W-IN	VA25A8853-001	2025-04-21	0.000024	0.00160
Effluent						
SP-W-OUT	Effluent	SP-W-OUT	VA25A7962-006	2025-04-09	0.000032	0.00112
SP-W-OUT	Effluent	SP-W-OUT	VA25A8533-006	2025-04-16	0.000020	0.00138
SP-W-OUT	Effluent	SP-W-OUT	VA25A8853-002	2025-04-21	0.000036	0.00124

Notes:
Results **underlined in bold italics** exceed the applicable long-term water quality guideline for the protection of marine aquatic life.
¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
² From BC Ambient Water Quality Guidelines for Mercury Overview Report. The methylmercury concentration threshold of 0.0001 µg/L (0.1 ng/L) is indicated as a WQG for the protection of wildlife and is set at a concentration that protects fish from mercury bioaccumulation to a level that may harm wildlife that consume fish.
³ CCME guideline for total mercury = 0.016 µg/L.
⁴ When MeHg ≤ 0.5% of total Hg, BC WQG = 0.02 µg/L. When MeHg > 0.5% of total Hg, BC WQG = 0.0001/(MeHg/Total Hg). Detection limit values are used to calculate the WQG for result reported as not detected.
Non-detect results are screened using the detection limit value.

Table C-4: West Catchment Dioxin and Furan Toxicity Equivalency Quantity (TEQ) Results Received at the Time of Reporting.

Parameter					Lower Bound PCDD/F TEQ	Upper Bound PCDD/F TEQ
Unit					pg/L	pg/L
Station	Water Type	Sample ID	Lab ID	Sampling Date		
Influent						
SP-W-IN	Influent	SP-W-IN	L2759155-1	2025-03-05	0.0297	0.851
SP-W-IN	Influent	SP-W-IN	L2759190-1	2025-03-11	0.0262	0.881
SP-W-IN	Influent	SP-W-IN	L2759248-3	2025-03-18	0.00296	0.868
Effluent						
SP-W-OUT	Effluent	SP-W-OUT	L2759155-2	2025-03-05	0.00109	0.859
SP-W-OUT	Effluent	SP-W-OUT	L2759190-2	2025-03-11	0.00751	0.840
SP-W-OUT	Effluent	SP-W-OUT	L2759248-1	2025-03-18	0	0.669

Notes:
PCDD = polychlorinated dibenzodioxins (dioxins)
PCDF = polychlorinated dibenzofurans (furans)
TEQ = toxic equivalency
Lower bound PCDD/F TEQ is the sum of the toxic equivalency results for the individual PCDD/F parameters. Non-detectable parameters are assigned a value of zero (0).
Upper bound PCDD/F TEQ is the sum of the toxic equivalency results for the individual PCDD/F parameters. Non-detectable parameters are assigned the value of the detection limit.

Table C-5: West Catchment Field Measurements Collected During the Monitoring Period (April 20 – 26).

Parameter			Temperature	Dissolved Oxygen (DO)	Salinity	Turbidity	Estimated TSS ³	pH	Conductivity	Visibility of Sheen
Unit			°C	mg/L	ppt	NTU	mg/L	s.u.	µS/cm	
PE-111578 Discharge Limit			-	-	-	-	25 or 75 ⁶	5.5 - 9.0	-	-
Lowest Applicable Guideline ¹			-	≥8	-	-	- ²	- ²	-	-
Station ID	Water Type	Date								
Influent ⁴										
SP-W-IN	Influent	2025-04-20 14:20	15.1	11.81	0.08	11.68	11.7	9.0	132	No
SP-W-IN	Influent	2025-04-21 9:30	13.0	12.49	0.08	7.27	8.4	6.8	133	No
SP-W-IN	Influent	2025-04-22 10:35	11.6	12.26	0.06	15.63	14.7	7.8	101	No
SP-W-IN	Influent	2025-04-23 14:48	16.6	12.07	0.08	12.74	12.5	8.1	140	No
SP-W-IN	Influent	2025-04-24 10:40	14.1	11.73	0.08	13.26	12.9	8.6	131	No
SP-W-IN	Influent	2025-04-25 13:41	17.8	12.07	0.08	10.87	11.1	8.7	148	No
SP-W-IN	Influent	2025-04-26 14:05	18.8	10.68	0.07	13.10	12.8	8.6	131	No
W500GPM-IN	Influent	2025-04-21 8:51	12.7	11.77	0.08	6.29	7.7	9.2	131	No
ESC-W-IN	Influent	2025-04-26 14:01	18.5	10.23	0.07	3.22	5.4	8.4	129	No
Effluent ⁵										
SP-W-OUT	Effluent	2025-04-21 10:10	14.1	12.48	0.08	2.15	4.6	6.8	137	No
W500GPM-OUT	Effluent	2025-04-21 9:24	13.3	13.31	0.08	2.13	4.6	6.6	135	No
ESC-W-OUT	Effluent	2025-04-26 13:56	18.0	9.63	0.07	2.00	4.5	8.0	129	No

Notes: Results **underlined in bold italics** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.
Results in orange text exceeded the PE-111578 West Sedimentation Pond Discharge Limit.
¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
² The WQG was not evaluated for parameters with discharge limits.
³ TSS concentration is estimated from field turbidity measurements using a site-specific relationship TSS = 0.7458 * [turbidity as NTU] + 3.
⁴ Daily field measurements for station SP-W-IN were collected from cell 1 of the West Sedimentation Pond.
⁵ There was no discharge at the authorized discharge location (SP-W-OUT) on April 20 and April 22-26, therefore daily field measurements for SP-W-OUT were not collected on those days.
⁶ The PE-111578 discharge limit for TSS is 25 mg/L under dry conditions and 75 mg/L for each day of Wet Conditions.

Table C-6: West Catchment Daily Discharge Volumes for the Monitoring Period (April 20 – 26).

	West Sedimentation Pond Effluent	West TSS Settling System (W500GPM) Clarified Effluent (Station W500GPM-OUT)	West TSS Settling System (ESC) Clarified Effluent (Station ESC-W-OUT)	West WWTP Treated Effluent ¹ (Station WWTP-W-OUT)	Discharge to Howe Sound (Station SP-W-OUT)
Unit	m ³	m ³	m ³	m ³	m ³
PE-111578 Discharge Limit	_ ²	_ ²	_ ²	120	_ ²
Date					
2025-04-20	0	0	0	0	0
2025-04-21	0	442 ³	0	0	384
2025-04-22	0	0	0	0	0
2025-04-23	0	0	0	0	0
2025-04-24	0	0	0	0	0
2025-04-25	0	0	156 ⁴	0	0
2025-04-26	0	0	867 ⁴	0	0

Notes:

Results **underlined in bold italics** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.

Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.

Results in orange text exceeded the PE-111578 West Sedimentation Pond Discharge Limit.

¹ The West WWTP is not being operated, therefore discharges are not expected from this facility.

² The annual average authorized discharge rate from the West Sedimentation Pond is 310 m³/day. As noted in PE-111578 Condition 2.1.4, the actual discharge rate may deviate from the annual average rate due to annual variations in precipitation amounts within the catchment area. Therefore, the annual average authorized discharge rate is not evaluated as a discharge limit.

³ W500GPM clarified effluent is discharged to Howe Sound or recirculated to the West Sedimentation Pond based on operational considerations. Therefore, the W500GPM clarified effluent volume may be higher than the volume discharged to Howe Sound at station SP-W-OUT. The W500GPM was operational on April 21 during the monitoring period (April 20-26).

⁴ ESC clarified effluent was recirculated to the West Sedimentation Pond on April 25 and 26.

Appendix D: Non-Contact Water Diversion Ditch Outlets Results

Table D-1: Summary of Non-Contact Water Diversion Ditch Outlet Water Quality Results Received at the Time of Reporting.

Parameter	Unit	Lowest Applicable Guideline ^{1, 2}		Station OUT-01	Station OUT-01	Station OUT-02	Station OUT-02
				Non-Contact	Non-Contact	Non-Contact	Non-Contact
				Water Diversion	Water Diversion	Water Diversion	Water Diversion
		Ditch Outlet	Ditch Outlet	Ditch Outlet	Ditch Outlet		
OUT-01	OUT-01	OUT-02	OUT-02				
VA25A7638-004	VA25A8149-001	VA25A7638-005	VA25A8149-002				
Long Term	Short Term	2025-04-07 14:15	2025-04-11 12:45	2025-04-06 16:00	2025-04-11 12:15		
General Parameters							
pH - Field	pH units	6.5 - 9.0	-	6.6	<u>6.3</u>	7.1	8.0
Specific Conductivity - Field	µS/cm	-	-	16	44	9	131
Temperature - Field	°C	-	-	9.1	10.9	7.7	10.4
Salinity - Field	ppt	-	-	0.01	0.01	0.01	0.09
Turbidity - Field	NTU	-	-	1.19	0.31	1.28	1.56
TSS	mg/L	-	-	<3.0	<3.0	<3.0	<3.0
Dissolved Oxygen - Field	mg/L	>=8	>=5	11.42	12.26	12.11	14.33
Anions and Nutrients							
Sulphate ²	mg/L	128-218	-	1.67	1.44	1.66	1.54
Chloride	mg/L	120	600	<0.50	<0.50	<0.50	<0.50
Fluoride ²	mg/L	-	0.40-0.88	<0.020	<0.020	<0.020	<0.020
Ammonia (N-NH ₃) ²	mg/L	0.343-32.4	5.86-25.5	<0.0050	<0.0050	<0.0050	<0.0050
Nitrite (N-NO ₂) ²	mg/L	0.02	0.06	<0.0010	<0.0010	<0.0010	<0.0010
Nitrate (N-NO ₃)	mg/L	3	32.8	0.0807	0.0551	0.0573	0.0287
Total Metals							
Aluminum, total (T-Al) ²	mg/L	0.026-0.32	-	<u>0.143</u>	<u>0.164</u>	<u>0.498</u>	0.200
Antimony, total (T-Sb)	mg/L	0.074	-	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic, total (T-As)	mg/L	0.005	-	0.00015	0.00018	0.00014	<0.00010
Barium, total (T-Ba)	mg/L	1	-	0.00446	0.00463	0.00557	0.00331
Beryllium, total (T-Be)	mg/L	0.00013	-	<0.000020	<0.000020	<0.000020	<0.000020
Boron, total (T-B)	mg/L	1.2	29	<0.010	<0.010	<0.010	<0.010
Cadmium, total (T-Cd) ²	mg/L	0.000036-0.000063	0.00011-0.00067	<0.0000050	0.0000055	0.0000104	<0.0000050
Chromium, total (T-Cr) ⁴	mg/L	0.001	-	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, total (T-Co)	mg/L	0.001	0.11	<0.00010	0.00016	0.00012	<0.00010
Copper, total (T-Cu)	mg/L	-	-	0.00085	0.0007	0.00104	0.00073
Iron, total (T-Fe)	mg/L	0.3	1	0.036	0.084	0.182	0.082
Lead, total (T-Pb)	mg/L	-	-	0.000102	0.000158	0.000437	0.000116
Manganese, total (T-Mn) ²	mg/L	0.768	0.816-0.899	0.00207	0.00585	0.0082	0.00289
Mercury, total (T-Hg) ³	mg/L	0.00002	-	0.00000263	0.00000143	0.00000378	0.00000298
Molybdenum, total (T-Mo)	mg/L	0.073	46	0.000395	0.000482	0.000839	0.00073
Nickel, total (T-Ni) ²	mg/L	0.025	-	<0.00050	<0.00050	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	0.001	-	<0.000050	<0.000050	<0.000050	<0.000050
Silver, total (T-Ag)	mg/L	0.00012	-	<0.000010	<0.000010	<0.000010	<0.000010
Thallium, total (T-Tl)	mg/L	0.0008	-	<0.000010	<0.000010	<0.000010	<0.000010
Uranium, total (T-U)	mg/L	0.0085	0.033	0.000127	0.000236	0.000323	0.000173
Vanadium, total (T-V)	mg/L	0.12	-	<0.00050	<0.00050	0.00059	<0.00050
Zinc, total (T-Zn)	mg/L	-	-	<0.0030	<0.0030	<0.0030	<0.0030
Hexavalent Chromium, total	mg/L	0.001	-	<0.00050	<0.00050	<0.00050	<0.00050
Dissolved Metals							
Cadmium, dissolved (D-Cd) ²	mg/L	0.000020-0.000093	0.000038-0.000185	0.0000052	<0.0000050	0.0000060	<0.0000050
Copper, dissolved (D-Cu) ²	mg/L	0.00020-0.0012	0.00045-0.0069	<u>0.00080</u>	<u>0.00056</u>	<u>0.00062</u>	0.00062
Iron, dissolved (D-Fe)	mg/L	-	0.35	0.017	0.015	0.026	0.015
Lead, dissolved (D-Pb) ²	mg/L	0.0019-0.0034	-	0.000051	<0.000050	0.000053	<0.000050
Manganese, dissolved (D-Mn) ²	mg/L	0.27-0.38	1.97-2.48	0.00122	0.00146	0.00191	0.00048
Nickel, dissolved (D-Ni) ²	mg/L	0.00070-0.0016	0.011-0.018	<0.00050	<0.00050	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	2.5	-	0.012	0.0117	0.00793	0.0067
Vanadium, dissolved (D-V)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050
Zinc, dissolved (D-Zn) ²	mg/L	0.0025-0.0086	0.0094-0.021	0.0010	<0.0010	0.0013	0.0011
Polycyclic Aromatic Hydrocarbons (PAHs)							
Acenaphthene	mg/L	0.0058	-	-	-	-	-
Acridine	mg/L	0.003	-	-	-	-	-
Anthracene	mg/L	0.000012	-	-	-	-	-
Benz(a)anthracene	mg/L	0.000018	-	-	-	-	-
Benzo(a)pyrene	mg/L	0.00001	-	-	-	-	-
Chrysene	mg/L	-	-	-	-	-	-
Fluoranthene	mg/L	0.00004	-	-	-	-	-
Fluorene	mg/L	0.003	-	-	-	-	-
1-methylnaphthalene	mg/L	-	-	-	-	-	-
2-methylnaphthalene	mg/L	-	-	-	-	-	-
Naphthalene	mg/L	0.001	0.001	-	-	-	-
Phenanthrene	mg/L	0.0003	-	-	-	-	-
Pyrene	mg/L	0.00002	-	-	-	-	-
Quinoline	mg/L	0.0034	-	-	-	-	-
Volatile Organic Compounds (VOCs)							
Benzene	mg/L	0.04	-	-	-	-	-
Ethylbenzene	mg/L	0.09	-	-	-	-	-
Methyl-tert-butyl-ether	mg/L	10	3.4	-	-	-	-
Styrene	mg/L	0.072	-	-	-	-	-
Toluene	mg/L	0.0005	-	-	-	-	-
Total Xylenes	mg/L	0.03	-	-	-	-	-
Chlorobenzene	mg/L	-	-	-	-	-	-
1,2-Dichlorobenzene	mg/L	-	-	-	-	-	-

Notes:

Results **underlined in bold italics** exceed the applicable long-term water quality guideline for the protection of freshwater aquatic life.

Shaded results exceed the applicable short-term water quality guideline for the protection of freshwater aquatic life.

¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.

² BC WQG or CWQG indicated to be variable are calculated from sample-specific measurements for temperature, field pH, total hardness and dissolved organic carbon (DOC) content.

³ When MeHg ≤ 0.5% of total Hg, BC WQG = 0.00002 mg/L.

⁴ The approved BC WQG for hexavalent chromium [Cr(VI)] is 0.001 mg/L and 0.0089 mg/L for trivalent chromium [Cr(III)]. The more conservative criteria for Cr(VI) is applied to total chromium results.

The lowest applicable guidelines are shown in the table; however, water quality data was screened to all applicable guidelines.

Table D-2: Summary of Non-Contact Water Diversion Ditch Outlet Water Quality Results Received at the Time of Reporting.

Parameter	Unit	Lowest Applicable Guideline ^{1, 2}		Station OUT-02	Station OUT-06	Station OUT-06
				Non-Contact Water Diversion Ditch Outlet	Non-Contact Water Diversion Ditch Outlet	Non-Contact Water Diversion Ditch Outlet
				OUT-02	OUT-06	OUT-06
		VA25A8563-001	VA25A7638-006	VA25A8149-003		
		Long Term	Short Term	2025-04-16 16:10	2025-04-07 11:20	2025-04-11 13:35
General Parameters						
pH - Field	pH units	6.5 - 9.0	-	6.6	7.3	6.9
Specific Conductivity - Field	µS/cm	-	-	8	18	45
Temperature - Field	°C	-	-	7.8	8.9	10.6
Salinity - Field	ppt	-	-	0	0.01	0.03
Turbidity - Field	NTU	-	-	0.12	1.75	0.41
TSS	mg/L	-	-	<3.0	<3.0	<3.0
Dissolved Oxygen - Field	mg/L	>=8	>=5	11.7	11.63	11.88
Anions and Nutrients						
Sulphate ²	mg/L	128-218	-	1.7	1.8	3.3
Chloride	mg/L	120	600	<0.50	<0.50	<0.50
Fluoride ²	mg/L	-	0.40-0.88	<0.020	<0.020	<0.020
Ammonia (N-NH ₃) ²	mg/L	0.343-32.4	5.86-25.5	<0.0050	<0.0050	<0.0050
Nitrite (N-NO ₂) ²	mg/L	0.02	0.06	<0.0010	<0.0010	<0.0010
Nitrate (N-NO ₃)	mg/L	3	32.8	0.0348	0.068	0.0987
Total Metals						
Aluminum, total (T-Al) ²	mg/L	0.026-0.32	-	<u>0.108</u>	<u>0.203</u>	<u>0.138</u>
Antimony, total (T-Sb)	mg/L	0.074	-	<0.00010	<0.00010	0.0002
Arsenic, total (T-As)	mg/L	0.005	-	<0.00010	0.00022	0.00017
Barium, total (T-Ba)	mg/L	1	-	0.0029	0.00343	0.00889
Beryllium, total (T-Be)	mg/L	0.00013	-	<0.000020	<0.000020	<0.000020
Boron, total (T-B)	mg/L	1.2	29	<0.010	<0.010	0.011
Cadmium, total (T-Cd) ²	mg/L	0.000036-0.000063	0.00011-0.00067	<0.0000050	<0.0000050	0.0000053
Chromium, total (T-Cr) ⁴	mg/L	0.001	-	<0.00050	<0.00050	<0.00050
Cobalt, total (T-Co)	mg/L	0.001	0.11	<0.00010	<0.00010	<0.00010
Copper, total (T-Cu)	mg/L	-	-	<0.00050	0.00084	0.00075
Iron, total (T-Fe)	mg/L	0.3	1	0.016	0.034	0.019
Lead, total (T-Pb)	mg/L	-	-	<0.000050	0.000133	0.000093
Manganese, total (T-Mn) ²	mg/L	0.768	0.816-0.899	0.00087	0.00126	0.00088
Mercury, total (T-Hg) ³	mg/L	0.00002	-	0.00000153	0.00000474	0.00000285
Molybdenum, total (T-Mo)	mg/L	0.073	46	0.000566	0.000586	0.00111
Nickel, total (T-Ni) ²	mg/L	0.025	-	<0.00050	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	0.001	-	<0.000050	<0.000050	<0.000050
Silver, total (T-Ag)	mg/L	0.00012	-	<0.000010	<0.000010	<0.000010
Thallium, total (T-Tl)	mg/L	0.0008	-	<0.000010	<0.000010	<0.000010
Uranium, total (T-U)	mg/L	0.0085	0.033	0.000096	0.000045	0.000191
Vanadium, total (T-V)	mg/L	0.12	-	<0.00050	0.0006	<0.00050
Zinc, total (T-Zn)	mg/L	-	-	<0.0030	<0.0030	<0.0030
Hexavalent Chromium, total	mg/L	0.001	-	<0.00050	<0.00050	<0.00050
Dissolved Metals						
Cadmium, dissolved (D-Cd) ²	mg/L	0.000020-0.000093	0.000038-0.000185	<0.0000050	<0.0000050	0.0000061
Copper, dissolved (D-Cu) ²	mg/L	0.00020-0.0012	0.00045-0.0069	<u>0.00041</u>	0.00074	<u>0.00076</u>
Iron, dissolved (D-Fe)	mg/L	-	0.35	0.010	0.014	0.010
Lead, dissolved (D-Pb) ²	mg/L	0.0019-0.0034	-	<0.000050	0.000052	<0.000050
Manganese, dissolved (D-Mn) ²	mg/L	0.27-0.38	1.97-2.48	0.00047	0.00107	0.0006
Nickel, dissolved (D-Ni) ²	mg/L	0.00070-0.0016	0.011-0.018	<0.00050	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	2.5	-	0.00606	0.019	0.0442
Vanadium, dissolved (D-V)	mg/L	-	-	<0.00050	<0.00050	<0.00050
Zinc, dissolved (D-Zn) ²	mg/L	0.0025-0.0086	0.0094-0.021	<0.0010	0.0011	<0.0010
Polycyclic Aromatic Hydrocarbons (PAHs)						
Acenaphthene	mg/L	0.0058	-	-	-	-
Acridine	mg/L	0.003	-	-	-	-
Anthracene	mg/L	0.000012	-	-	-	-
Benz(a)anthracene	mg/L	0.000018	-	-	-	-
Benzo(a)pyrene	mg/L	0.000001	-	-	-	-
Chrysene	mg/L	-	-	-	-	-
Fluoranthene	mg/L	0.00004	-	-	-	-
Fluorene	mg/L	0.003	-	-	-	-
1-methylnaphthalene	mg/L	-	-	-	-	-
2-methylnaphthalene	mg/L	-	-	-	-	-
Naphthalene	mg/L	0.001	0.001	-	-	-
Phenanthrene	mg/L	0.0003	-	-	-	-
Pyrene	mg/L	0.00002	-	-	-	-
Quinoline	mg/L	0.0034	-	-	-	-
Volatile Organic Compounds (VOCs)						
Benzene	mg/L	0.04	-	-	-	-
Ethylbenzene	mg/L	0.09	-	-	-	-
Methyl-tert-butyl-ether	mg/L	10	3.4	-	-	-
Styrene	mg/L	0.072	-	-	-	-
Toluene	mg/L	0.0005	-	-	-	-
Total Xylenes	mg/L	0.03	-	-	-	-
Chlorobenzene	mg/L	-	-	-	-	-
1,2-Dichlorobenzene	mg/L	-	-	-	-	-

Notes:

Results **underlined in bold italics** exceed the applicable long-term water quality guideline for the protection of freshwater aquatic life.

Shaded results exceed the applicable short-term water quality guideline for the protection of freshwater aquatic life.

¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.

² BC WQG or CWQG indicated to be variable are calculated from sample-specific measurements for temperature, field pH, total hardness and dissolved organic carbon (DOC) content.

³ When MeHg ≤ 0.5% of total Hg, BC WQG = 0.00002 mg/L.

⁴ The approved BC WQG for hexavalent chromium [Cr(VI)] is 0.001 mg/L and 0.0089 mg/L for trivalent chromium [Cr(III)]. The more conservative criteria for Cr(VI) is applied to total chromium results. The lowest applicable guidelines are shown in the table; however, water quality data was screened to all applicable guidelines.

Table D-3: Non-contact Water Diversion Ditch Outlet Methylmercury and Corresponding Total Mercury Results Received at the Time of Reporting.

Parameter					Total Methylmercury	Total Mercury
Unit					µg/L	µg/L
Lowest Applicable Guideline ¹					0.0001 ²	0.0088-0.012 ^{3,4}
Station	Water Type	Sample ID	Lab ID	Sampling Date		
OUT-01	Non-Contact Water	OUT-01	VA25A7638-004	2025-04-07	0.000030	0.00263
OUT-02	Non-Contact Water	OUT-02	VA25A7638-005	2025-04-06	0.000042	0.00378
OUT-06	Non-Contact Water	OUT-06	VA25A7638-006	2025-04-07	0.000038	0.00474

Notes:

Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of freshwater aquatic life.

¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.

² From BC Ambient Water Quality Guidelines for Mercury Overview Report. The methylmercury concentration threshold of 0.0001 µg/L (0.1 ng/L) is indicated as a WQG for the protection of wildlife and is set at a concentration that protects fish from mercury bioaccumulation to a level that may harm wildlife that consume fish.

³ CCME guideline for total mercury = 0.026 µg/L.

⁴ When MeHg ≤ 0.5% of total Hg, BC WQG = 0.02 µg/L. When MeHg > 0.5% of total Hg, BC WQG = 0.0001/(MeHg/Total Hg). Detection limit values are used to calculate the WQG for result reported as not detected.

Non-detect results are screened using the detection limit value.

Appendix E: Freshwater Receiving Environment Results

Table E-1: Summary of Freshwater Water Quality Results Received at the Time of Reporting.

Parameter	Unit	Lowest Applicable Guideline ^{1, 2}		Station SW-01	Station SW-01	Station SW-01
				Woodfibre	Woodfibre	Woodfibre
				Creek Lower	Creek Lower	Creek Lower
		Reach	Reach	Reach		
SW-01	SW-01	SW-01				
VA25A7260-001	VA25A7741-001	VA25A8192-004				
Long Term	Short Term	2025-04-02 10:25	2025-04-08 13:00	2025-04-13 9:07		
General Parameters						
pH - Field	pH units	6.5 - 9.0	-	<u>6.4</u>	6.9	6.5
Specific Conductivity - Field	µS/cm	-	-	5	4	4
Temperature - Field	°C	-	-	4.2	4.5	3.5
Salinity - Field	ppt	-	-	0	0	0
Turbidity - Field	NTU	-	-	0.26	0.48	0.49
TSS	mg/L	-	-	<3.0	<3.0	<3.0
Dissolved Oxygen - Field	mg/L	>=8	>=5	12.59	13.21	13.68
Anions and Nutrients						
Sulphate ²	mg/L	128-218	-	0.51	0.43	0.54
Chloride	mg/L	120	600	<0.50	<0.50	<0.50
Fluoride ²	mg/L	-	0.40-0.86	<0.020	<0.020	<0.020
Ammonia (N-NH ₃) ²	mg/L	1.54-73	7.17-27.5	<0.0050	<0.0050	0.0068
Nitrite (N-NO ₂) ²	mg/L	0.020-0.060	0.060-0.18	<0.0010	<0.0010	<0.0010
Nitrate (N-NO ₃)	mg/L	3	32.8	0.0300	0.0239	0.0257
Total Metals						
Aluminum, total (T-Al) ²	mg/L	0.033-0.17	-	<u>0.149</u>	<u>0.163</u>	<u>0.149</u>
Antimony, total (T-Sb)	mg/L	0.074	-	<0.00010	<0.00010	<0.00010
Arsenic, total (T-As)	mg/L	0.005	-	<0.00010	<0.00010	<0.00010
Barium, total (T-Ba)	mg/L	1	-	0.00165	0.00168	0.00165
Beryllium, total (T-Be)	mg/L	0.00013	-	<0.000020	<0.000020	<0.000020
Boron, total (T-B)	mg/L	1.2	29	<0.010	<0.010	<0.010
Cadmium, total (T-Cd) ²	mg/L	0.000036-0.000059	0.00011-0.00063	<0.0000050	<0.0000050	<0.0000050
Chromium, total (T-Cr) ⁴	mg/L	0.001	-	<0.00050	<0.00050	<0.00050
Cobalt, total (T-Co)	mg/L	0.001	0.11	<0.00010	<0.00010	<0.00010
Copper, total (T-Cu)	mg/L	-	-	<0.00050	<0.00050	<0.00050
Iron, total (T-Fe)	mg/L	0.3	1	0.033	0.033	0.03
Lead, total (T-Pb)	mg/L	-	-	0.000057	0.00005	<0.000050
Manganese, total (T-Mn) ²	mg/L	0.768	0.816-0.877	0.00099	0.00104	0.00066
Mercury, total (T-Hg) ³	mg/L	0.00002	-	0.00000127	0.0000019	0.00000144
Molybdenum, total (T-Mo)	mg/L	0.073	46	0.000236	0.000159	0.000222
Nickel, total (T-Ni) ²	mg/L	0.025	-	<0.00050	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	0.001	-	<0.000050	<0.000050	<0.000050
Silver, total (T-Ag)	mg/L	0.00012	-	<0.000010	<0.000010	<0.000010
Thallium, total (T-Tl)	mg/L	0.0008	-	<0.000010	<0.000010	<0.000010
Uranium, total (T-U)	mg/L	0.0085	0.033	0.000651	0.000533	0.000662
Vanadium, total (T-V)	mg/L	0.12	-	<0.00050	<0.00050	<0.00050
Zinc, total (T-Zn)	mg/L	-	-	<0.0030	<0.0030	<0.0030
Hexavalent Chromium, total	mg/L	0.001	-	<0.00050	<0.00050	<0.00050
Dissolved Metals						
Cadmium, dissolved (D-Cd) ²	mg/L	0.000018-0.000088	0.000038-0.00017	<0.0000050	<0.0000050	<0.0000050
Copper, dissolved (D-Cu) ²	mg/L	0.00020-0.00072	0.00020-0.0043	<0.00020	<u>0.00027</u>	<0.00020
Iron, dissolved (D-Fe)	mg/L	-	0.35	0.025	0.021	0.025
Lead, dissolved (D-Pb) ²	mg/L	0.0013-0.0027	-	<0.000050	<0.000050	<0.000050
Manganese, dissolved (D-Mn) ²	mg/L	0.31-0.38	1.97-2.35	0.00043	0.0007	0.00065
Nickel, dissolved (D-Ni) ²	mg/L	0.00060-0.00090	0.0093-0.0134	<0.00050	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	2.5	-	0.00349	0.0029	0.00334
Vanadium, dissolved (D-V)	mg/L	-	-	<0.00050	<0.00050	<0.00050
Zinc, dissolved (D-Zn) ²	mg/L	0.0021-0.0078	0.0081-0.016	<0.0010	<0.0010	<0.0010
Polycyclic Aromatic Hydrocarbons (PAHs)						
Acenaphthene	mg/L	0.0058	-	<0.000010	<0.000010	<0.000010
Acridine	mg/L	0.003	-	<0.000010	<0.000010	<0.000010
Anthracene	mg/L	0.000012	-	<0.000010	<0.000010	<0.000010
Benz(a)anthracene	mg/L	0.000018	-	<0.000010	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	<0.0000050	<0.0000050	<0.0000050
Chrysene	mg/L	-	-	<0.000010	<0.000010	<0.000010
Fluoranthene	mg/L	0.00004	-	<0.000010	<0.000010	<0.000010
Fluorene	mg/L	0.003	-	<0.000010	<0.000010	<0.000010
1-methylnaphthalene	mg/L	-	-	<0.000010	<0.000010	<0.000010
2-methylnaphthalene	mg/L	-	-	<0.000010	<0.000010	<0.000010
Naphthalene	mg/L	0.001	0.001	<0.000050	<0.000050	<0.000050
Phenanthrene	mg/L	0.0003	-	<0.000020	<0.000020	<0.000020
Pyrene	mg/L	0.00002	-	<0.000010	<0.000010	<0.000010
Quinoline	mg/L	0.0034	-	<0.000050	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)						
Benzene	mg/L	0.04	-	<0.00050	<0.00050	<0.00050
Ethylbenzene	mg/L	0.09	-	<0.00050	<0.00050	<0.00050
Methyl-tert-butyl-ether	mg/L	10	3.4	<0.00050	<0.00050	<0.00050
Styrene	mg/L	0.072	-	<0.00050	<0.00050	<0.00050
Toluene	mg/L	0.0005	-	<0.00040	<0.00040	<0.00040
Total Xylenes	mg/L	0.03	-	<0.00050	<0.00050	<0.00050
Chlorobenzene	mg/L	-	-	<0.00050	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	-	-	<0.00050	<0.00050	<0.00050

Notes:

Results **underlined in bold italics** exceed the applicable long-term water quality guideline for the protection of freshwater aquatic life. Shaded results exceed the applicable short-term water quality guideline for the protection of freshwater aquatic life.

¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.

² BC WQG or CWQG indicated to be variable are calculated from sample-specific measurements for temperature, field pH, total hardness and dissolved organic carbon (DOC) content.

³ When MeHg ≤ 0.5% of total Hg, BC WQG = 0.00002 mg/L.

⁴ The approved BC WQG for hexavalent chromium [Cr(VI)] is 0.001 mg/L and 0.0089 mg/L for trivalent chromium [Cr(III)]. The more conservative criteria for Cr(VI) is applied to total chromium results.

The lowest applicable guidelines are shown in the table; however, water quality data was screened to all applicable guidelines.

Table E-2: Summary of Freshwater Water Quality Results Received at the Time of Reporting.

Parameter	Unit	Lowest Applicable Guideline ^{1, 2}		Station SW-02	Station SW-02	Station SW-02
				Mill Creek	Mill Creek	Mill Creek
				Upper Reach	Upper Reach	Upper Reach
		SW-02	SW-02	SW-02		
		VA25A7260-002	VA25A7638-001	VA25A8192-001		
		2025-04-02 11:30	2025-04-07 11:00	2025-04-12 9:47		
General Parameters						
pH - Field	pH units	6.5 - 9.0	-	7.2	7.1	7
Specific Conductivity - Field	µS/cm	-	-	9	6	7
Temperature - Field	°C	-	-	4.8	5.5	5.1
Salinity - Field	ppt	-	-	0.01	0	0
Turbidity - Field	NTU	-	-	0.45	0.96	0.48
TSS	mg/L	-	-	<3.0	<3.0	<3.0
Dissolved Oxygen - Field	mg/L	>=8	>=5	13.4	13.09	13.15
Anions and Nutrients						
Sulphate ²	mg/L	128-218	-	2.3	1.18	1.98
Chloride	mg/L	120	600	0.58	<0.50	<0.50
Fluoride ²	mg/L	-	0.40-0.86	<0.020	<0.020	<0.020
Ammonia (N-NH ₃) ²	mg/L	1.54-73	7.17-27.5	<0.0050	<0.0050	<0.0050
Nitrite (N-NO ₂) ²	mg/L	0.020-0.060	0.060-0.18	<0.0010	<0.0010	<0.0010
Nitrate (N-NO ₃)	mg/L	3	32.8	0.0527	0.0381	0.043
Total Metals						
Aluminum, total (T-Al) ²	mg/L	0.033-0.17	-	<u>0.148</u>	<u>0.166</u>	<u>0.0864</u>
Antimony, total (T-Sb)	mg/L	0.074	-	<0.00010	<0.00010	<0.00010
Arsenic, total (T-As)	mg/L	0.005	-	<0.00010	<0.00010	<0.00010
Barium, total (T-Ba)	mg/L	1	-	0.00288	0.00207	0.00211
Beryllium, total (T-Be)	mg/L	0.00013	-	<0.000020	<0.000020	<0.000020
Boron, total (T-B)	mg/L	1.2	29	<0.010	<0.010	<0.010
Cadmium, total (T-Cd) ²	mg/L	0.000036-0.000059	0.00011-0.00063	0.0000085	<0.0000050	0.0000071
Chromium, total (T-Cr) ⁴	mg/L	0.001	-	<0.00050	<0.00050	<0.00050
Cobalt, total (T-Co)	mg/L	0.001	0.11	<0.00010	<0.00010	<0.00010
Copper, total (T-Cu)	mg/L	-	-	0.00052	<0.00050	<0.00050
Iron, total (T-Fe)	mg/L	0.3	1	0.062	0.047	0.012
Lead, total (T-Pb)	mg/L	-	-	0.000083	<0.000050	<0.000050
Manganese, total (T-Mn) ²	mg/L	0.768	0.816-0.877	0.00236	0.00187	0.00066
Mercury, total (T-Hg) ³	mg/L	0.00002	-	0.00000102	0.0000013	0.000001
Molybdenum, total (T-Mo)	mg/L	0.073	46	0.000388	0.000229	0.000318
Nickel, total (T-Ni) ²	mg/L	0.025	-	<0.00050	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	0.001	-	<0.000050	<0.000050	<0.000050
Silver, total (T-Ag)	mg/L	0.00012	-	<0.000010	<0.000010	<0.000010
Thallium, total (T-Tl)	mg/L	0.0008	-	<0.000010	<0.000010	<0.000010
Uranium, total (T-U)	mg/L	0.0085	0.033	0.000204	0.000177	0.000172
Vanadium, total (T-V)	mg/L	0.12	-	<0.00050	<0.00050	<0.00050
Zinc, total (T-Zn)	mg/L	-	-	<0.0030	<0.0030	<0.0030
Hexavalent Chromium, total	mg/L	0.001	-	<0.00050	<0.00050	<0.00050
Dissolved Metals						
Cadmium, dissolved (D-Cd) ²	mg/L	0.000018-0.000088	0.000038-0.00017	0.0000095	0.0000063	<0.0000050
Copper, dissolved (D-Cu) ²	mg/L	0.00020-0.00072	0.00020-0.0043	<u>0.00024</u>	0.00024	<u>0.00023</u>
Iron, dissolved (D-Fe)	mg/L	-	0.35	<0.010	0.012	<0.010
Lead, dissolved (D-Pb) ²	mg/L	0.0013-0.0027	-	<0.000050	<0.000050	<0.000050
Manganese, dissolved (D-Mn) ²	mg/L	0.31-0.38	1.97-2.35	0.00051	0.00082	0.00054
Nickel, dissolved (D-Ni) ²	mg/L	0.00060-0.00090	0.0093-0.0134	<0.00050	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	2.5	-	0.00648	0.00402	0.00566
Vanadium, dissolved (D-V)	mg/L	-	-	<0.00050	<0.00050	<0.00050
Zinc, dissolved (D-Zn) ²	mg/L	0.0021-0.0078	0.0081-0.016	<0.0010	0.001	<0.0010
Polycyclic Aromatic Hydrocarbons (PAHs)						
Acenaphthene	mg/L	0.0058	-	<0.000010	<0.000010	<0.000010
Acridine	mg/L	0.003	-	<0.000010	<0.000010	<0.000010
Anthracene	mg/L	0.000012	-	<0.000010	<0.000010	<0.000010
Benz(a)anthracene	mg/L	0.000018	-	<0.000010	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	<0.0000050	<0.0000050	<0.0000050
Chrysene	mg/L	-	-	<0.000010	<0.000010	<0.000010
Fluoranthene	mg/L	0.00004	-	<0.000010	<0.000010	<0.000010
Fluorene	mg/L	0.003	-	<0.000010	<0.000010	<0.000010
1-methylnaphthalene	mg/L	-	-	<0.000010	<0.000010	<0.000010
2-methylnaphthalene	mg/L	-	-	<0.000010	<0.000010	<0.000010
Naphthalene	mg/L	0.001	0.001	<0.000050	<0.000050	<0.000050
Phenanthrene	mg/L	0.0003	-	<0.000020	<0.000020	<0.000020
Pyrene	mg/L	0.00002	-	<0.000010	<0.000010	<0.000010
Quinoline	mg/L	0.0034	-	<0.000050	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)						
Benzene	mg/L	0.04	-	<0.00050	<0.00050	<0.00050
Ethylbenzene	mg/L	0.09	-	<0.00050	<0.00050	<0.00050
Methyl-tert-butyl-ether	mg/L	10	3.4	<0.00050	<0.00050	<0.00050
Styrene	mg/L	0.072	-	<0.00050	<0.00050	<0.00050
Toluene	mg/L	0.0005	-	<0.00040	<0.00040	<0.00040
Total Xylenes	mg/L	0.03	-	<0.00050	<0.00050	<0.00050
Chlorobenzene	mg/L	-	-	<0.00050	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	-	-	<0.00050	<0.00050	<0.00050

Notes:
Results **underlined in bold italics** exceed the applicable long-term water quality guideline for the protection of freshwater aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of freshwater aquatic life.
¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
² BC WQG or CWQG indicated to be variable are calculated from sample-specific measurements for temperature, field pH, total hardness and dissolved organic carbon (DOC) content.
³ When MeHg ≤ 0.5% of total Hg, BC WQG = 0.00002 mg/L.
⁴ The approved BC WQG for hexavalent chromium [Cr(VI)] is 0.001 mg/L and 0.0089 mg/L for trivalent chromium [Cr(III)]. The more conservative criteria for Cr(VI) is applied to total chromium results.
The lowest applicable guidelines are shown in the table; however, water quality data was screened to all applicable guidelines.

Table E-3: Summary of Freshwater Water Quality Results Received at the Time of Reporting.

Parameter	Unit	Lowest Applicable Guideline ^{1, 2}		Station SW-04	Station SW-04	Station SW-04
				East Creek Lower Reach	East Creek Lower Reach	East Creek Lower Reach
				SW-04	SW-04	SW-04
				VA25A7260-004	VA25A7741-002	VA25A8192-005
2025-04-02 13:25	2025-04-08 14:15			2025-04-13 10:27		
General Parameters						
pH - Field	pH units	6.5 - 9.0	-	7.5	7.5	7.9
Specific Conductivity - Field	µS/cm	-	-	47	23	39
Temperature - Field	°C	-	-	8.2	7.7	7.7
Salinity - Field	ppt	-	-	0.03	0.02	0.03
Turbidity - Field	NTU	-	-	2.11	2.45	2.38
TSS	mg/L	-	-	<3.0	<3.0	<3.0
Dissolved Oxygen - Field	mg/L	>=8	>=5	12.04	11.9	12.07
Anions and Nutrients						
Sulphate ²	mg/L	128-218	-	4.15	2.89	3.7
Chloride	mg/L	120	600	3.53	2.32	4.24
Fluoride ²	mg/L	-	0.40-0.86	0.07	0.042	0.068
Ammonia (N-NH ₃) ²	mg/L	1.54-73	7.17-27.5	<0.0050	<0.0050	<0.0050
Nitrite (N-NO ₂) ²	mg/L	0.020-0.060	0.060-0.18	0.0042	<0.0010	<0.0010
Nitrate (N-NO ₃)	mg/L	3	32.8	0.0128	0.0203	0.0088
Total Metals						
Aluminum, total (T-Al) ²	mg/L	0.033-0.17	-	<u>0.120</u>	<u>0.191</u>	<u>0.200</u>
Antimony, total (T-Sb)	mg/L	0.074	-	0.0001	0.00016	<0.00010
Arsenic, total (T-As)	mg/L	0.005	-	0.00057	0.00052	0.00034
Barium, total (T-Ba)	mg/L	1	-	0.0055	0.00569	0.00478
Beryllium, total (T-Be)	mg/L	0.00013	-	<0.000020	<0.000020	<0.000020
Boron, total (T-B)	mg/L	1.2	29	<0.010	<0.010	<0.010
Cadmium, total (T-Cd) ²	mg/L	0.000036-0.000059	0.00011-0.00063	0.0000123	0.000006	0.0000133
Chromium, total (T-Cr) ⁴	mg/L	0.001	-	0.0005	<0.00050	<0.00050
Cobalt, total (T-Co)	mg/L	0.001	0.11	<0.00010	<0.00010	<0.00010
Copper, total (T-Cu)	mg/L	-	-	0.00103	0.00172	0.00071
Iron, total (T-Fe)	mg/L	0.3	1	0.074	0.142	0.087
Lead, total (T-Pb)	mg/L	-	-	0.000062	0.000102	0.000051
Manganese, total (T-Mn) ²	mg/L	0.768	0.816-0.877	0.00554	0.00776	0.00603
Mercury, total (T-Hg) ³	mg/L	0.00002	-	0.00000112	0.00000266	0.00000137
Molybdenum, total (T-Mo)	mg/L	0.073	46	0.00714	0.00337	0.00572
Nickel, total (T-Ni) ²	mg/L	0.025	-	<0.00050	0.00053	<0.00050
Selenium, total (T-Se)	mg/L	0.001	-	0.000059	<0.000050	<0.000050
Silver, total (T-Ag)	mg/L	0.00012	-	<0.000010	<0.000010	<0.000010
Thallium, total (T-Tl)	mg/L	0.0008	-	<0.000010	<0.000010	<0.000010
Uranium, total (T-U)	mg/L	0.0085	0.033	0.00043	0.000445	0.000566
Vanadium, total (T-V)	mg/L	0.12	-	<0.00050	<0.00050	<0.00050
Zinc, total (T-Zn)	mg/L	-	-	<0.0030	<0.0030	<0.0030
Hexavalent Chromium, total	mg/L	0.001	-	<0.00050	<0.00050	<0.00050
Dissolved Metals						
Cadmium, dissolved (D-Cd) ²	mg/L	0.000018-0.000088	0.000038-0.00017	0.0000097	0.0000063	0.0000079
Copper, dissolved (D-Cu) ²	mg/L	0.00020-0.00072	0.00020-0.0043	<u>0.00062</u>	<u>0.00139</u>	<u>0.00062</u>
Iron, dissolved (D-Fe)	mg/L	-	0.35	0.014	0.022	0.011
Lead, dissolved (D-Pb) ²	mg/L	0.0013-0.0027	-	<0.000050	<0.000050	<0.000050
Manganese, dissolved (D-Mn) ²	mg/L	0.31-0.38	1.97-2.35	0.00334	0.00269	0.00279
Nickel, dissolved (D-Ni) ²	mg/L	0.00060-0.00090	0.0093-0.0134	<0.00050	0.00052	<0.00050
Strontium, dissolved (D-Sr)	mg/L	2.5	-	0.0276	0.0185	0.0244
Vanadium, dissolved (D-V)	mg/L	-	-	<0.00050	<0.00050	<0.00050
Zinc, dissolved (D-Zn) ²	mg/L	0.0021-0.0078	0.0081-0.016	0.0013	0.0024	0.0014
Polycyclic Aromatic Hydrocarbons (PAHs)						
Acenaphthene	mg/L	0.0058	-	<0.000010	<0.000010	<0.000010
Acridine	mg/L	0.003	-	<0.000010	<0.000010	<0.000010
Anthracene	mg/L	0.000012	-	<0.000010	<0.000010	<0.000010
Benz(a)anthracene	mg/L	0.000018	-	<0.000010	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	<0.0000050	<0.0000050	<0.0000050
Chrysene	mg/L	-	-	<0.000010	<0.000010	<0.000010
Fluoranthene	mg/L	0.00004	-	<0.000010	<0.000010	<0.000010
Fluorene	mg/L	0.003	-	<0.000010	<0.000010	<0.000010
1-methylnaphthalene	mg/L	-	-	0.000018	0.000012	0.000011
2-methylnaphthalene	mg/L	-	-	0.000027	0.000015	0.000012
Naphthalene	mg/L	0.001	0.001	<0.000050	<0.000050	<0.000050
Phenanthrene	mg/L	0.0003	-	<0.000020	<0.000020	<0.000020
Pyrene	mg/L	0.00002	-	<0.000010	<0.000010	<0.000010
Quinoline	mg/L	0.0034	-	<0.000050	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)						
Benzene	mg/L	0.04	-	<0.00050	<0.00050	<0.00050
Ethylbenzene	mg/L	0.09	-	<0.00050	<0.00050	<0.00050
Methyl-tert-butyl-ether	mg/L	10	3.4	<0.00050	<0.00050	<0.00050
Styrene	mg/L	0.072	-	<0.00050	<0.00050	<0.00050
Toluene	mg/L	0.0005	-	<0.00040	<0.00040	<0.00040
Total Xylenes	mg/L	0.03	-	<0.00050	<0.00050	<0.00050
Chlorobenzene	mg/L	-	-	<0.00050	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	-	-	<0.00050	<0.00050	<0.00050

Notes:
Results **underlined in bold italics** exceed the applicable long-term water quality guideline for the protection of freshwater aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of freshwater aquatic life.
¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
² BC WQG or CWQG indicated to be variable are calculated from sample-specific measurements for temperature, field pH, total hardness and dissolved organic carbon (DOC) content.
³ When MeHg ≤ 0.5% of total Hg, BC WQG = 0.00002 mg/L.
⁴ The approved BC WQG for hexavalent chromium [Cr(VI)] is 0.001 mg/L and 0.0089 mg/L for trivalent chromium [Cr(III)]. The more conservative criteria for Cr(VI) is applied to total chromium results.
The lowest applicable guidelines are shown in the table; however, water quality data was screened to all applicable guidelines.

Table E-4: Summary of Freshwater Water Quality Results Received at the Time of Reporting.

Parameter	Unit	Lowest Applicable Guideline ^{1, 2}		Station SW-07	Station SW-07	Station SW-07
				Upstream Mill Creek	Upstream Mill Creek	Upstream Mill Creek
				SW-07	SW-07	SW-07
		VA25A7260-005	VA25A7638-003	VA25A8192-003		
		2025-04-02 12:30	2025-04-07 9:30	2025-04-12 12:29		
General Parameters						
pH - Field	pH units	6.5 - 9.0	-	7.1	7.6	6.9
Specific Conductivity - Field	µS/cm	-	-	8	9	6
Temperature - Field	°C	-	-	4.5	6.0	4.8
Salinity - Field	ppt	-	-	0	0.01	0.00
Turbidity - Field	NTU	-	-	0.16	0.86	0.4
TSS	mg/L	-	-	<3.0	<3.0	<3.0
Dissolved Oxygen - Field	mg/L	>=8	>=5	13.11	13.1	12.79
Anions and Nutrients						
Sulphate ²	mg/L	128-218	-	2.22	1.13	2.23
Chloride	mg/L	120	600	0.55	<0.50	1.84
Fluoride ²	mg/L	-	0.40-0.86	<0.020	<0.020	<0.020
Ammonia (N-NH ₃) ²	mg/L	1.54-73	7.17-27.5	<0.0050	0.0103	<0.0050
Nitrite (N-NO ₂) ²	mg/L	0.020-0.060	0.060-0.18	<0.0010	<0.0010	<0.0010
Nitrate (N-NO ₃)	mg/L	3	32.8	0.048	0.0369	0.0423
Total Metals						
Aluminum, total (T-Al) ²	mg/L	0.033-0.17	-	<u>0.0874</u>	<u>0.147</u>	<u>0.0847</u>
Antimony, total (T-Sb)	mg/L	0.074	-	<0.00010	<0.00010	<0.00010
Arsenic, total (T-As)	mg/L	0.005	-	<0.00010	0.0001	<0.00010
Barium, total (T-Ba)	mg/L	1	-	0.00208	0.00166	0.00187
Beryllium, total (T-Be)	mg/L	0.00013	-	<0.000020	<0.000020	<0.000020
Boron, total (T-B)	mg/L	1.2	29	<0.010	<0.010	<0.010
Cadmium, total (T-Cd) ²	mg/L	0.000036-0.000059	0.00011-0.00063	0.0000057	<0.0000050	<0.0000057
Chromium, total (T-Cr) ⁴	mg/L	0.001	-	<0.00050	<0.00050	<0.00050
Cobalt, total (T-Co)	mg/L	0.001	0.11	<0.00010	<0.00010	<0.00010
Copper, total (T-Cu)	mg/L	-	-	0.00061	<0.00050	<0.00050
Iron, total (T-Fe)	mg/L	0.3	1	0.012	0.03	0.01
Lead, total (T-Pb)	mg/L	-	-	<0.000050	<0.000050	<0.000050
Manganese, total (T-Mn) ²	mg/L	0.768	0.816-0.877	0.0006	0.0012	0.00072
Mercury, total (T-Hg) ³	mg/L	0.00002	-	0.00000067	0.00000125	<0.00000089
Molybdenum, total (T-Mo)	mg/L	0.073	46	0.000331	0.000182	0.000301
Nickel, total (T-Ni) ²	mg/L	0.025	-	<0.00050	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	0.001	-	<0.000050	<0.000050	<0.000050
Silver, total (T-Ag)	mg/L	0.00012	-	<0.000010	<0.000010	<0.000010
Thallium, total (T-Tl)	mg/L	0.0008	-	<0.000010	<0.000010	<0.000010
Uranium, total (T-U)	mg/L	0.0085	0.033	0.000176	0.000166	0.000156
Vanadium, total (T-V)	mg/L	0.12	-	<0.00050	<0.00050	<0.00050
Zinc, total (T-Zn)	mg/L	-	-	<0.0030	<0.0030	<0.0030
Hexavalent Chromium, total	mg/L	0.001	-	<0.00050	<0.00050	<0.00050
Dissolved Metals						
Cadmium, dissolved (D-Cd) ²	mg/L	0.000018-0.000088	0.000038-0.00017	0.0000051	<0.0000050	<0.0000050
Copper, dissolved (D-Cu) ²	mg/L	0.00020-0.00072	0.00020-0.0043	0.00020	0.00023	<u>0.00023</u>
Iron, dissolved (D-Fe)	mg/L	-	0.35	<0.010	0.012	<0.010
Lead, dissolved (D-Pb) ²	mg/L	0.0013-0.0027	-	<0.000050	<0.000050	<0.000050
Manganese, dissolved (D-Mn) ²	mg/L	0.31-0.38	1.97-2.35	0.00051	0.00084	0.00058
Nickel, dissolved (D-Ni) ²	mg/L	0.00060-0.00090	0.0093-0.0134	<0.00050	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	2.5	-	0.00584	0.00375	0.00538
Vanadium, dissolved (D-V)	mg/L	-	-	<0.00050	<0.00050	<0.00050
Zinc, dissolved (D-Zn) ²	mg/L	0.0021-0.0078	0.0081-0.016	<0.0010	<0.0010	0.0012
Polycyclic Aromatic Hydrocarbons (PAHs)						
Acenaphthene	mg/L	0.0058	-	<0.000010	<0.000010	<0.000010
Acridine	mg/L	0.003	-	<0.000010	<0.000010	<0.000010
Anthracene	mg/L	0.000012	-	<0.000010	<0.000010	<0.000010
Benz(a)anthracene	mg/L	0.000018	-	<0.000010	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	<0.0000050	<0.0000050	<0.0000050
Chrysene	mg/L	-	-	<0.000010	<0.000010	<0.000010
Fluoranthene	mg/L	0.00004	-	<0.000010	<0.000010	<0.000010
Fluorene	mg/L	0.003	-	<0.000010	<0.000010	<0.000010
1-methylnaphthalene	mg/L	-	-	<0.000010	<0.000010	<0.000010
2-methylnaphthalene	mg/L	-	-	<0.000010	<0.000010	<0.000010
Naphthalene	mg/L	0.001	0.001	<0.000050	<0.000050	<0.000050
Phenanthrene	mg/L	0.0003	-	<0.000020	<0.000020	<0.000020
Pyrene	mg/L	0.00002	-	<0.000010	<0.000010	<0.000010
Quinoline	mg/L	0.0034	-	<0.000050	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)						
Benzene	mg/L	0.04	-	<0.00050	<0.00050	<0.00050
Ethylbenzene	mg/L	0.09	-	<0.00050	<0.00050	<0.00050
Methyl-tert-butyl-ether	mg/L	10	3.4	<0.00050	<0.00050	<0.00050
Styrene	mg/L	0.072	-	<0.00050	<0.00050	<0.00050
Toluene	mg/L	0.0005	-	<0.00040	<0.00040	<0.00040
Total Xylenes	mg/L	0.03	-	<0.00050	<0.00050	<0.00050
Chlorobenzene	mg/L	-	-	<0.00050	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	-	-	<0.00050	<0.00050	<0.00050

Notes:
Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of freshwater aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of freshwater aquatic life.
¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
² BC WQG or CWQG indicated to be variable are calculated from sample-specific measurements for temperature, field pH, total hardness and dissolved organic carbon (DOC) content.
³ When MeHg ≤ 0.5% of total Hg, BC WQG = 0.00002 mg/L.
⁴ The approved BC WQG for hexavalent chromium [Cr(VI)] is 0.001 mg/L and 0.0089 mg/L for trivalent chromium [Cr(III)]. The more conservative criteria for Cr(VI) is applied to total chromium results.
The lowest applicable guidelines are shown in the table; however, water quality data was screened to all applicable guidelines.

Table E-5: Freshwater Methylmercury and Corresponding Total Mercury Results Received at the Time of Reporting.

Parameter					Total Methylmercury	Total Mercury
Unit					µg/L	µg/L
Lowest Applicable Guideline ¹					0.0001 ²	0.0034-0.0095 ^{3,4}
Station	Water Type	Sample ID	Lab ID	Sampling Date		
SW-01	Woodfibre Creek, lower reach	SW-01	VA25A7260-001	2025-04-02	<0.000020	0.00127
SW-01	Woodfibre Creek, lower reach	SW-01	VA25A7741-001	2025-04-08	<0.000020	0.00190
SW-01	Woodfibre Creek, lower reach	SW-01	VA25A8192-004	2025-04-13	<0.000020	0.00144
SW-02	Mill Creek, upper reach	SW-02	VA25A7260-002	2025-04-02	<0.000020	0.00102
SW-02	Mill Creek, upper reach	SW-02	VA25A7638-001	2025-04-07	<0.000020	0.00130
SW-02	Mill Creek, upper reach	SW-02	VA25A8192-001	2025-04-12	<0.000020	0.00100
SW-04	East Creek, lower reach	SW-04	VA25A7260-004	2025-04-02	<0.000020	0.00112
SW-04	East Creek, lower reach	SW-04	VA25A7741-002	2025-04-08	0.000030	0.00266
SW-04	East Creek, lower reach	SW-04	VA25A8192-005	2025-04-13	<0.000020	0.00137
SW-07	Mill Creek, upstream	SW-07	VA25A7260-005	2025-04-02	<0.000020	0.00067
SW-07	Mill Creek, upstream	SW-07	VA25A7638-003	2025-04-07	<0.000020	0.00125
SW-07	Mill Creek, upstream	SW-07	VA25A8192-003	2025-04-12	<0.000020	0.00089

Notes:

Results **underlined in bold italics** exceed the applicable long-term water quality guideline for the protection of freshwater aquatic life.

¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.

² From BC Ambient Water Quality Guidelines for Mercury Overview Report. The methylmercury concentration threshold of 0.0001 µg/L (0.1 ng/L) is indicated as a WQG for the protection of wildlife and is set at a concentration that protects fish from mercury bioaccumulation to a level that may harm wildlife that consume fish.

³ CCME guideline for total mercury = 0.026 µg/L.

⁴ When MeHg ≤ 0.5% of total Hg, BC WQG = 0.02 µg/L. When MeHg > 0.5% of total Hg, BC WQG = 0.0001/(MeHg/Total Hg). Detection limit values are used to calculate the WQG for result reported as not detected.

Non-detect results are screened using the detection limit value.

Appendix F: Estuarine Water Receiving Environment Results

Table F-1: Summary of Mill Creek Estuary Water Quality Results Received at the Time of Reporting.

Parameter	Unit	Lowest Applicable Guideline ¹		Station SW-03	Station SW-03	Station SW-03
				Mill Creek Estuary	Mill Creek Estuary	Mill Creek Estuary
				SW-03	SW-03	SW-03
		VA25A7260-003	VA25A7638-002	VA25A8192-002		
Long Term	Short Term	2025-04-02 11:50	2025-04-07 11:45	2025-04-12 10:10		
General Parameters						
pH - Field	pH units	7.0 - 8.7	-	7.8	<u>6.8</u>	<u>6.4</u>
Specific Conductivity - Field	µS/cm	-	-	1952	7	131
Temperature - Field	°C	-	-	5.5	5.3	5.3
Salinity - Field	ppt	-	-	1.6	0.0	0.1
Turbidity - Field	NTU	-	-	0.69	1.25	0.39
TSS	mg/L	-	-	<3.0	<3.0	<3.0
Dissolved Oxygen - Field	mg/L	-	-	13.27	13.07	13.10
Anions and Nutrients						
Sulphate	mg/L	-	-	146	5.43	16.4
Chloride	mg/L	-	-	1080	29.7	99.1
Fluoride	mg/L	-	-	<0.400	<0.020	<0.020
Ammonia (N-NH ₃)	mg/L	-	-	<0.0050	<0.0050	<0.0050
Nitrite (N-NO ₂)	mg/L	-	-	<0.0200	<0.0010	<0.0010
Nitrate (N-NO ₃)	mg/L	-	-	0.115	0.0358	0.0454
Total Metals						
Aluminum, total (T-Al)	mg/L	-	-	0.162	0.169	0.0922
Antimony, total (T-Sb)	mg/L	-	-	<0.00020	<0.00010	<0.00010
Arsenic, total (T-As)	mg/L	-	-	0.00022	<0.00010	<0.00010
Barium, total (T-Ba)	mg/L	-	-	0.00474	0.00204	0.00234
Beryllium, total (T-Be)	mg/L	-	-	<0.000040	<0.000020	<0.000020
Boron, total (T-B)	mg/L	-	-	0.301	0.013	0.03
Cadmium, total (T-Cd)	mg/L	-	-	0.0000125	0.0000051	0.0000066
Chromium, total (T-Cr)	mg/L	-	-	<0.00100	<0.00050	<0.00050
Cobalt, total (T-Co)	mg/L	-	-	<0.00020	<0.00010	<0.00010
Copper, total (T-Cu)	mg/L	0.002	0.003	0.00116	0.00056	0.00055
Iron, total (T-Fe)	mg/L	-	-	0.115	0.05	0.021
Lead, total (T-Pb)	mg/L	0.002	0.14	0.000159	<0.000050	<0.000050
Manganese, total (T-Mn)	mg/L	-	-	0.00366	0.00186	0.00101
Mercury, total (T-Hg) ²	mg/L	0.00002	-	0.00000093	0.00000138	0.00000085
Molybdenum, total (T-Mo)	mg/L	-	-	0.00139	0.000282	0.000464
Nickel, total (T-Ni)	mg/L	-	-	<0.00100	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	-	-	<0.000100	<0.000050	<0.000050
Silver, total (T-Ag)	mg/L	-	-	<0.000020	<0.000010	<0.000010
Thallium, total (T-Tl)	mg/L	-	-	<0.000020	<0.000010	<0.000010
Uranium, total (T-U)	mg/L	-	-	0.000393	0.000173	0.000193
Vanadium, total (T-V)	mg/L	-	-	<0.00100	<0.00050	<0.00050
Zinc, total (T-Zn)	mg/L	-	-	<0.0060	<0.0030	<0.0030
Hexavalent Chromium, total	mg/L	-	-	<0.00050	<0.00050	<0.00050
Dissolved Metals						
Cadmium, dissolved (D-Cd)	mg/L	-	-	<0.0000250	<0.0000050	<0.0000050
Copper, dissolved (D-Cu)	mg/L	-	-	<0.00100	0.00024	0.00026
Iron, dissolved (D-Fe)	mg/L	-	-	<0.050	0.011	<0.010
Lead, dissolved (D-Pb)	mg/L	-	-	<0.000250	<0.000050	<0.000050
Manganese, dissolved (D-Mn)	mg/L	-	-	0.00092	0.00061	0.00059
Nickel, dissolved (D-Ni)	mg/L	-	-	<0.00250	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	0.472	0.00594	0.0368
Vanadium, dissolved (D-V)	mg/L	-	-	<0.00250	<0.00050	<0.00050
Zinc, dissolved (D-Zn)	mg/L	-	-	<0.0050	<0.0010	<0.0010
Polycyclic Aromatic Hydrocarbons (PAHs)						
Acenaphthene	mg/L	-	-	<0.000010	<0.000010	<0.000010
Acridine	mg/L	-	-	<0.000010	<0.000010	<0.000010
Anthracene	mg/L	-	-	<0.000010	<0.000010	<0.000010
Benz(a)anthracene	mg/L	-	-	<0.000010	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	-	-	<0.0000050	<0.0000050	<0.0000050
Chrysene	mg/L	-	-	<0.000010	<0.000010	<0.000010
Fluoranthene	mg/L	-	-	<0.000010	<0.000010	<0.000010
Fluorene	mg/L	-	-	<0.000010	<0.000010	<0.000010
1-methylnaphthalene	mg/L	-	-	<0.000010	<0.000010	<0.000010
2-methylnaphthalene	mg/L	-	-	<0.000010	<0.000010	<0.000010
Naphthalene	mg/L	-	-	<0.000050	<0.000050	<0.000050
Phenanthrene	mg/L	-	-	<0.000020	<0.000020	<0.000020
Pyrene	mg/L	-	-	<0.000010	<0.000010	<0.000010
Quinoline	mg/L	-	-	<0.000050	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)						
Benzene	mg/L	-	-	<0.00050	<0.00050	<0.00050
Ethylbenzene	mg/L	-	-	<0.00050	<0.00050	<0.00050
Methyl-tert-butyl-ether	mg/L	-	-	<0.00050	<0.00050	<0.00050
Styrene	mg/L	-	-	<0.00050	<0.00050	<0.00050
Toluene	mg/L	-	-	<0.00040	<0.00040	<0.00040
Total Xylenes	mg/L	-	-	<0.00050	<0.00050	<0.00050
Chlorobenzene	mg/L	-	-	<0.00050	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	-	-	<0.00050	<0.00050	<0.00050

Notes:
Results in **underlined in bold italics** exceed the applicable long-term water quality guideline for the protection of estuarine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of estuarine water aquatic life.
¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
² When MeHg ≤ 0.5% of total Hg, BC WQG = 0.00002 mg/L.

Table F-2: Estuarine Water Methylmercury and Corresponding Total Mercury Results Received at the Time of Reporting.

Parameter					Total Methylmercury	Total Mercury
Unit					µg/L	µg/L
Lowest Applicable Guideline ¹					0.0001 ²	0.0043-0.0069 ^{3,4}
Station	Water Type	Sample ID	Lab ID	Sampling Date		
SW-03	Mill Creek Estuary	SW-03	VA25A7260-003	2025-04-02	<0.000020	0.00093
SW-03	Mill Creek Estuary	SW-03	VA25A7638-002	2025-04-07	<0.000020	0.00138
SW-03	Mill Creek Estuary	SW-03	VA25A8192-002	2025-04-12	<0.000020	0.00085

Notes:

Results **underlined in bold italics** exceed the applicable long-term water quality guideline for the protection of freshwater aquatic life.

¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.

² From BC Ambient Water Quality Guidelines for Mercury Overview Report. The methylmercury concentration threshold of 0.0001 µg/L (0.1 ng/L) is indicated as a WQG for the protection of wildlife and is set at a concentration that protects fish from mercury bioaccumulation to a level that may harm wildlife that consume fish.

³ CCME guideline for total mercury = 0.026 µg/L.

⁴ When MeHg ≤ 0.5% of total Hg, BC WQG = 0.02 µg/L. When MeHg > 0.5% of total Hg, BC WQG = 0.0001/(MeHg/Total Hg). Detection limit values are used to calculate the WQG for result reported as not detected.

Non-detect results are screened using the detection limit value.

Appendix G: Marine Water Receiving Environment Results

Table G-1: Summary of Marine Water Quality Results Received at the Time of Reporting

Parameter	Unit	Lowest Applicable Guideline ¹		Station IDZ-W1			Station IDZ-W2		
				0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor	0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor
				IDZ-W1-0.5	IDZ-W1-2m	IDZ-W1-SF	IDZ-W2-0.5	IDZ-W2-2m	IDZ-W2-SF
		VA25A7739-001	VA25A7739-002	VA25A7739-003	VA25A7739-004	VA25A7739-005	VA25A7739-006		
		Long Term	Short Term	2025-04-08 13:40	2025-04-08 14:00	2025-04-08 14:20	2025-04-08 12:00	2025-04-08 12:20	2025-04-08 12:40
General Parameters									
pH - Field	pH units	7.0 - 8.7	-	7.35	7.95	7.58	7.65	7.57	7.57
Specific Conductivity - Field	µS/cm	-	-	2392	12313	30204	3185	4126	30156
Temperature - Field	°C	-	-	5.7	7.2	8.2	5.9	6.2	8.2
Salinity - Field	ppt	Narrative ²	-	2.00	10.99	28.47	2.68	3.51	28.43
Turbidity - Field	NTU	3.0-4.3 ²	9.0-10.3 ²	2.48	3.15	0.93	3.23	3.62	0.92
TSS	mg/L	7.0-7.9 ²	27.0-27.9 ²	<2.0	<2.0	<2.0	<2.0	2.4	2.7
Dissolved Oxygen - Field	mg/L	>=8	-	12.69	12.3	<u>7.51</u>	12.41	12.47	<u>7.87</u>
Anions and Nutrients									
Sulphate	mg/L	-	-	105	224	1900	150	458	2160
Chloride	mg/L	-	-	940	1900	13800	1300	3570	15600
Fluoride	mg/L	-	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia (N-NH ₃)	mg/L	4.7-20 ³	31-135 ³	<0.0050	<0.0050	0.0063	<0.0050	<0.0050	0.0166
Nitrite (N-NO ₂)	mg/L	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrate (N-NO ₃)	mg/L	3.7	339	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Total Metals									
Aluminum, total (T-Al)	mg/L	-	-	0.195	0.214	0.0256	0.196	0.168	0.0287
Antimony, total (T-Sb)	mg/L	-	0.27 ⁴	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Arsenic, total (T-As)	mg/L	0.0125	0.0125	<0.00040	<0.00040	0.00125	<0.00040	0.00052	0.00142
Barium, total (T-Ba)	mg/L	-	-	0.0049	0.0066	0.0086	0.0062	0.0072	0.0101
Beryllium, total (T-Be)	mg/L	0.1	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron, total (T-B)	mg/L	1.2	-	<0.30	0.46	<u>2.20</u>	0.33	0.82	<u>2.48</u>
Cadmium, total (T-Cd)	mg/L	0.00012	-	<0.000020	<0.000020	0.000053	<0.000020	0.000022	0.000065
Chromium, total (T-Cr)	mg/L	-	-	<0.00050	0.00314	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, total (T-Co)	mg/L	-	-	0.0001	0.000114	0.000099	0.000106	0.000117	0.000108
Copper, total (T-Cu)	mg/L	0.002	0.003	0.00076	0.00099	0.00059	0.00094	0.00111	0.00063
Iron, total (T-Fe)	mg/L	-	-	0.11	0.19	0.037	0.15	0.153	0.048
Lead, total (T-Pb)	mg/L	0.002	0.14	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Manganese, total (T-Mn)	mg/L	-	-	0.00438	0.007	0.00215	0.00582	0.00618	0.0022
Mercury, total (T-Hg)	mg/L	0.000016 ⁵	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, total (T-Mo)	mg/L	-	-	0.00099	0.00172	0.00723	0.00103	0.00248	0.00811
Nickel, total (T-Ni)	mg/L	0.0083	-	<0.00050	0.00051	0.00072	<0.00050	<0.00050	0.00076
Selenium, total (T-Se)	mg/L	0.002	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Silver, total (T-Ag)	mg/L	0.0005	0.0037	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Thallium, total (T-Tl)	mg/L	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Uranium, total (T-U)	mg/L	-	-	0.000311	0.000434	0.0021	0.000333	0.000722	0.00239
Vanadium, total (T-V)	mg/L	0.005	-	0.00055	0.00104	0.00122	0.00066	0.00089	0.00165
Zinc, total (T-Zn)	mg/L	0.01	0.055	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Hexavalent Chromium, total	mg/L	0.0015	-	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150
Dissolved Metals									
Cadmium, dissolved (D-Cd)	mg/L	-	-	<0.000020	<0.000020	0.000061	0.000042	0.000056	0.000081
Copper, dissolved (D-Cu)	mg/L	-	-	<0.00050	0.00053	<0.00050	0.00063	0.00054	<0.00050
Iron, dissolved (D-Fe)	mg/L	-	-	0.021	0.03	<0.010	0.037	0.024	<0.010
Lead, dissolved (D-Pb)	mg/L	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Manganese, dissolved (D-Mn)	mg/L	-	-	0.00298	0.0041	0.00081	0.00429	0.00353	0.00124
Nickel, dissolved (D-Ni)	mg/L	-	-	<0.00050	<0.00050	0.00059	<0.00050	<0.00050	0.0007
Strontium, dissolved (D-Sr)	mg/L	-	-	0.39	0.528	5.62	0.572	0.619	5.80
Vanadium, dissolved (D-V)	mg/L	-	-	<0.00050	<0.00050	0.00126	<0.00050	<0.00050	0.00141
Zinc, dissolved (D-Zn)	mg/L	-	-	0.001	<0.0010	<0.0010	0.0013	0.0012	<0.0010
Polycyclic Aromatic Hydrocarbons (PAHs)									
Acenaphthene	mg/L	0.006	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Acridine	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Anthracene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Benz(a)anthracene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Chrysene	mg/L	0.0001	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Fluoranthene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Fluorene	mg/L	0.012	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
1-methylnaphthalene	mg/L	0.001	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
2-methylnaphthalene	mg/L	0.001	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Naphthalene	mg/L	0.001	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Phenanthrene	mg/L	-	-	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Pyrene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Quinoline	mg/L	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)									
Benzene	mg/L	0.11	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Ethylbenzene	mg/L	0.25	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Methyl-tert-butyl-ether	mg/L	5	0.44	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Styrene	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Toluene	mg/L	0.215	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Total Xylenes	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chlorobenzene	mg/L	0.025	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050

Notes:

Results **underlined in bold italics** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.

Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.

¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.

² Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. Salinity WQG was not evaluated. The water quality data presented in the table were collected when the site was discharging, therefore the turbidity and TSS WQGs were evaluated. Background values used to evaluate the April 8 IDZ-W1 and IDZ-W2 samples are the maximum values measured in the April 11, 13 and 14 WQR1 and WQR2 reference station samples at 0.5 and 2 m below the surface and 2 m above the seafloor (Report #61).

³ The approved total ammonia nitrogen BC WQG is salinity, pH and temperature dependent; see Tables 26E and 26F in BC WQG guidance document.

⁴ The working BC WQG for trivalent antimony [SB(III)] is 0.27 mg/L and is applied to total antimony results.

⁵ When MeHg ≤ 0.5% of total Hg, BC WQG = 0.00002 mg/L. The Canadian WQG = 0.000016 mg/L.

Table G-2: Summary of Marine Water Quality Results Received at the Time of Reporting

Parameter	Unit	Lowest Applicable Guideline ¹		Station IDZ-E1			Station IDZ-E2		
				0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor	0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor
				IDZ-E1-0.5	IDZ-E1-2m	IDZ-E1-SF	IDZ-E2-0.5	IDZ-E2-2m	IDZ-E2-SF
		VA25A8108-001	VA25A8108-002	VA25A8108-003	VA25A8108-004	VA25A8108-005	VA25A8108-006		
		Long Term	Short Term	2025-04-10 12:30	2025-04-10 12:50	2025-04-10 13:15	2025-04-10 11:20	2025-04-10 11:40	2025-04-10 12:00
General Parameters									
pH - Field	pH units	7.0 - 8.7	-	8.24	8.33	7.70	8.29	8.36	7.83
Specific Conductivity - Field	µS/cm	-	-	12134	17589	29708	10283	17374	29231
Temperature - Field	°C	-	-	7.9	8.5	8.3	7.7	8.4	8.4
Salinity - Field	ppt	Narrative ²	-	10.6	15.62	27.86	8.94	15.44	27.28
Turbidity - Field	NTU	3.0-4.3 ²	9.0-10.3 ²	1.93	1.83	1.46	2.05	1.78	1.39
TSS	mg/L	7.0-7.9 ²	27.0-27.9 ²	<2.0	<2.0	2.7	<2.0	<2.0	<2.0
Dissolved Oxygen - Field	mg/L	>=8	-	12.12	12.57	9.42	12.33	12.53	11.01
Anions and Nutrients									
Sulphate	mg/L	-	-	769	1110	2070	576	735	2140
Chloride	mg/L	-	-	5640	8050	14800	4320	5370	15200
Fluoride	mg/L	-	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia (N-NH ₃)	mg/L	1.8-8.1 ³	12-54 ³	<0.0050	0.0065	0.0138	<0.0050	<0.0050	0.0128
Nitrite (N-NO ₂)	mg/L	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrate (N-NO ₃)	mg/L	3.7	339	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Total Metals									
Aluminum, total (T-Al)	mg/L	-	-	0.197	0.078	0.019	0.0981	0.105	0.0208
Antimony, total (T-Sb)	mg/L	-	0.27 ⁴	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Arsenic, total (T-As)	mg/L	0.0125	0.0125	0.00051	0.00085	0.00139	<0.00040	0.00057	0.00133
Barium, total (T-Ba)	mg/L	-	-	0.0072	0.0075	0.0082	0.0061	0.0074	0.0081
Beryllium, total (T-Be)	mg/L	0.1	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron, total (T-B)	mg/L	1.2	-	1.03	<u>1.74</u>	<u>2.90</u>	0.62	<u>1.25</u>	<u>3.03</u>
Cadmium, total (T-Cd)	mg/L	0.00012	-	0.000031	0.00004	0.000069	<0.000020	0.000022	0.000058
Chromium, total (T-Cr)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, total (T-Co)	mg/L	-	-	0.000089	0.000087	0.00008	0.000058	0.000084	0.000076
Copper, total (T-Cu)	mg/L	0.002	0.003	0.00097	0.00079	<0.00050	0.00072	0.0008	<0.00050
Iron, total (T-Fe)	mg/L	-	-	0.161	0.078	0.022	0.073	0.11	0.025
Lead, total (T-Pb)	mg/L	0.002	0.14	0.00032	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Manganese, total (T-Mn)	mg/L	-	-	0.0062	0.00434	0.0016	0.00499	0.00526	0.00156
Mercury, total (T-Hg)	mg/L	0.000016 ⁵	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, total (T-Mo)	mg/L	-	-	0.004	0.00481	0.0082	0.00419	0.00308	0.0081
Nickel, total (T-Ni)	mg/L	0.0083	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Silver, total (T-Ag)	mg/L	0.0005	0.0037	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Thallium, total (T-Tl)	mg/L	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Uranium, total (T-U)	mg/L	-	-	0.00101	0.00137	0.00247	0.000694	0.000926	0.00242
Vanadium, total (T-V)	mg/L	0.005	-	0.00075	0.0008	0.00127	0.00053	0.0007	0.00128
Zinc, total (T-Zn)	mg/L	0.01	0.055	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Hexavalent Chromium, total	mg/L	0.0015	-	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150
Dissolved Metals									
Cadmium, dissolved (D-Cd)	mg/L	-	-	0.000034	0.000043	0.000062	0.00003	0.000032	0.000047
Copper, dissolved (D-Cu)	mg/L	-	-	0.00071	0.00053	<0.00050	<0.00050	0.00056	<0.00050
Iron, dissolved (D-Fe)	mg/L	-	-	0.026	0.016	<0.010	0.032	0.029	<0.010
Lead, dissolved (D-Pb)	mg/L	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Manganese, dissolved (D-Mn)	mg/L	-	-	0.00394	0.00312	0.00097	0.00427	0.00401	0.00097
Nickel, dissolved (D-Ni)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	1.77	3.00	5.71	1.62	1.99	5.63
Vanadium, dissolved (D-V)	mg/L	-	-	0.00056	0.00072	0.00118	0.00058	0.00058	0.00115
Zinc, dissolved (D-Zn)	mg/L	-	-	0.0018	0.0013	<0.0010	<0.0010	<0.0010	<0.0010
Polycyclic Aromatic Hydrocarbons (PAHs)									
Acenaphthene	mg/L	0.006	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Acridine	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Anthracene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Benz(a)anthracene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Chrysene	mg/L	0.0001	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Fluoranthene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Fluorene	mg/L	0.012	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
1-methylnaphthalene	mg/L	0.001	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
2-methylnaphthalene	mg/L	0.001	-	0.000014	0.000014	<0.000010	<0.000010	<0.000010	<0.000010
Naphthalene	mg/L	0.001	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Phenanthrene	mg/L	-	-	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Pyrene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Quinoline	mg/L	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)									
Benzene	mg/L	0.11	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Ethylbenzene	mg/L	0.25	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Methyl-tert-butyl-ether	mg/L	5	0.44	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Styrene	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Toluene	mg/L	0.215	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Total Xylenes	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chlorobenzene	mg/L	0.025	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050

Notes:

Results **underlined in bold italics** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.

Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.

¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.

² Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. Salinity WQG was not evaluated. The water quality data presented in the table were collected when the site was discharging, therefore the turbidity and TSS WQGs were evaluated. Background values used to evaluate the April 10 IDZ-E1 and IDZ-E2 samples are the maximum values measured in the April 11, 13 and 14 WQR1 and WQR2 reference station samples at 0.5 and 2 m below the surface and 2 m above the seafloor (Report #61).

³ The approved total ammonia nitrogen BC WQG is salinity, pH and temperature dependent; see Tables 26E and 26F in BC WQG guidance document.

⁴ The working BC WQG for trivalent antimony [SB(III)] is 0.27 mg/L and is applied to total antimony results.

⁵ When MeHg ≤ 0.5% of total Hg, BC WQG = 0.00002 mg/L. The Canadian WQG = 0.000016 mg/L.

Table G-3: Summary of Marine Water Quality Results Received at the Time of Reporting

Parameter	Unit	Lowest Applicable Guideline ¹		Station IDZ-W1			Station IDZ-W2		
				0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor	0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor
				IDZ-W1-0.5	IDZ-W1-2m	IDZ-W1-SF	IDZ-W2-0.5	IDZ-W2-2m	IDZ-W2-SF
		VA25A8280-001	VA25A8280-002	VA25A8280-003	VA25A8280-004	VA25A8280-005	VA25A8280-006		
		Long Term	Short Term	2025-04-13 15:40	2025-04-13 15:55	2025-04-13 16:10	2025-04-13 13:35	2025-04-13 13:45	2025-04-13 14:35
General Parameters									
pH - Field	pH units	7.0 - 8.7	-	8.38	8.32	7.54	8.07	8.06	7.52
Specific Conductivity - Field	µS/cm	-	-	15341	24767	31813	10350	14544	31848
Temperature - Field	°C	-	-	8.9	9.2	8.3	8.4	8.5	8.3
Salinity - Field	ppt	Narrative ²	-	13.32	22.24	30.03	8.82	12.70	30.06
Turbidity - Field	NTU	3.0-4.3 ²	9.0-10.3 ²	1.37	0.68	0.75	1.43	1.22	0.78
TSS	mg/L	7.0-7.9 ²	27.0-27.9 ²	<2.0	<2.0	<2.0	<2.0	3.6	<2.0
Dissolved Oxygen - Field	mg/L	>=8	-	10.84	11.09	<u>6.49</u>	11.69	11.37	<u>6.19</u>
Anions and Nutrients									
Sulphate	mg/L	-	-	1050	1670	2250	627	846	2270
Chloride	mg/L	-	-	7350	11700	16000	4500	6010	16000
Fluoride	mg/L	-	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia (N-NH ₃)	mg/L	1.8-13 ³	12-85 ³	0.0097	0.0103	0.0124	0.0077	0.0079	0.0101
Nitrite (N-NO ₂)	mg/L	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrate (N-NO ₃)	mg/L	3.7	339	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Total Metals									
Aluminum, total (T-Al)	mg/L	-	-	0.0481	0.0206	0.0077	0.0662	0.0688	0.0085
Antimony, total (T-Sb)	mg/L	-	0.27 ⁴	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Arsenic, total (T-As)	mg/L	0.0125	0.0125	0.00067	0.00097	0.00149	0.00049	0.00052	0.00154
Barium, total (T-Ba)	mg/L	-	-	0.0077	0.0073	0.0093	0.0077	0.0074	0.0096
Beryllium, total (T-Be)	mg/L	0.1	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron, total (T-B)	mg/L	1.2	-	<u>1.70</u>	<u>2.40</u>	<u>3.20</u>	1.15	<u>1.30</u>	<u>3.17</u>
Cadmium, total (T-Cd)	mg/L	0.00012	-	0.000033	0.000048	0.000071	0.000033	0.000028	0.000078
Chromium, total (T-Cr)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, total (T-Co)	mg/L	-	-	0.000063	0.000067	<0.000050	0.000068	0.000076	<0.000050
Copper, total (T-Cu)	mg/L	0.002	0.003	0.00062	<u>0.00674</u>	<0.00050	0.00096	0.00075	<0.00050
Iron, total (T-Fe)	mg/L	-	-	0.068	0.024	0.014	0.095	0.087	0.015
Lead, total (T-Pb)	mg/L	0.002	0.14	<0.00010	0.00039	<0.00010	<0.00010	<0.00010	<0.00010
Manganese, total (T-Mn)	mg/L	-	-	0.00481	0.00293	0.00152	0.0059	0.00572	0.00152
Mercury, total (T-Hg)	mg/L	0.000016 ⁵	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, total (T-Mo)	mg/L	-	-	0.00416	0.0068	0.00852	0.0027	0.00366	0.00875
Nickel, total (T-Ni)	mg/L	0.0083	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	<0.00050	<0.00050	0.00069	<0.00050	<0.00050	0.00057
Silver, total (T-Ag)	mg/L	0.0005	0.0037	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Thallium, total (T-Tl)	mg/L	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Uranium, total (T-U)	mg/L	-	-	0.00118	0.00174	0.00232	0.00075	0.00102	0.00243
Vanadium, total (T-V)	mg/L	0.005	-	0.00072	0.00092	0.00136	0.00063	0.00077	0.00136
Zinc, total (T-Zn)	mg/L	0.01	0.055	0.004	0.005	<0.0030	<0.0030	<0.0030	<0.0030
Hexavalent Chromium, total	mg/L	0.0015	-	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150
Dissolved Metals									
Cadmium, dissolved (D-Cd)	mg/L	-	-	0.000023	0.000025	0.000073	0.000032	0.000022	0.000057
Copper, dissolved (D-Cu)	mg/L	-	-	<0.00050	<0.00050	<0.00050	0.00052	<0.00050	<0.00050
Iron, dissolved (D-Fe)	mg/L	-	-	0.024	0.015	<0.010	0.034	0.021	<0.010
Lead, dissolved (D-Pb)	mg/L	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Manganese, dissolved (D-Mn)	mg/L	-	-	0.00512	0.00319	0.00141	0.00532	0.00514	0.0011
Nickel, dissolved (D-Ni)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	2.55	2.28	6.23	1.76	3.04	6.43
Vanadium, dissolved (D-V)	mg/L	-	-	0.00063	0.00055	0.00136	0.00056	0.00076	0.00138
Zinc, dissolved (D-Zn)	mg/L	-	-	0.001	0.0012	<0.0010	<0.0010	<0.0010	0.001
Polycyclic Aromatic Hydrocarbons (PAHs)									
Acenaphthene	mg/L	0.006	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Acridine	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Anthracene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Benz(a)anthracene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Chrysene	mg/L	0.0001	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Fluoranthene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Fluorene	mg/L	0.012	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
1-methylnaphthalene	mg/L	0.001	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
2-methylnaphthalene	mg/L	0.001	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Naphthalene	mg/L	0.001	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Phenanthrene	mg/L	-	-	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Pyrene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Quinoline	mg/L	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)									
Benzene	mg/L	0.11	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Ethylbenzene	mg/L	0.25	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Methyl-tert-butyl-ether	mg/L	5	0.44	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Styrene	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Toluene	mg/L	0.215	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Total Xylenes	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chlorobenzene	mg/L	0.025	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050

Notes:

Results **underlined in bold italics** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.

Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.

¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.

² Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. Salinity WQG was not evaluated. The water quality data presented in the table were collected when the site was discharging, therefore the turbidity and TSS WQGs were evaluated. Background values used to evaluate the April 13 IDZ-W1 and IDZ-W2 samples are the maximum values measured in the April 11, 13 and 14 WQR1 and WQR2 reference station samples at 0.5 and 2 m below the surface and 2 m above the seafloor (Report #61).

³ The approved total ammonia nitrogen BC WQG is salinity, pH and temperature dependent; see Tables 26E and 26F in BC WQG guidance document.

⁴ The working BC WQG for trivalent antimony [SB(III)] is 0.27 mg/L and is applied to total antimony results.

⁵ When MeHg ≤ 0.5% of total Hg, BC WQG = 0.00002 mg/L. The Canadian WQG = 0.000016 mg/L.

Table G-4: Summary of Marine Water Quality Results Received at the Time of Reporting

Parameter	Unit	Lowest Applicable Guideline ¹		Station IDZ-E1			Station IDZ-E2		
				0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor	0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor
				IDZ-E1-0.5	IDZ-E1-2m	IDZ-E1-SF	IDZ-E2-0.5	IDZ-E2-2m	IDZ-E2-SF
		VA25A8281-001	VA25A8281-002	VA25A8281-003	VA25A8281-004	VA25A8281-005	VA25A8281-006		
Long Term	Short Term	2025-04-14 11:55	2025-04-14 12:20	2025-04-14 12:28	2025-04-14 14:15	2025-04-14 14:30	2025-04-14 14:45		
General Parameters									
pH - Field	pH units	7.0 - 8.7	-	8.03	8.02	7.52	7.94	7.97	7.51
Specific Conductivity - Field	µS/cm	-	-	9324	17906	31729	10489	21328	32071
Temperature - Field	°C	-	-	8.9	8.5	8.3	9.5	8.9	8.4
Salinity - Field	ppt	Narrative ²	-	7.77	15.9	29.93	8.67	19.06	30.21
Turbidity - Field	NTU	3.0-4.3 ²	9.0-10.3 ²	1.58	1.34	1.14	1.35	1.03	1.03
TSS	mg/L	7.0-7.9 ²	27.0-27.9 ²	<2.0	4.4	<2.0	2.2	<2.0	3.3
Dissolved Oxygen - Field	mg/L	>=8	-	11.25	10.81	<u>7.65</u>	11.1	10.68	<u>6.21</u>
Anions and Nutrients									
Sulphate	mg/L	-	-	559	918	2250	626	1160	2360
Chloride	mg/L	-	-	4090	6460	15800	4580	8140	16700
Fluoride	mg/L	-	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia (N-NH ₃)	mg/L	2.9-13 ³	19-85 ³	0.0083	0.0109	0.0184	0.0091	0.012	0.0069
Nitrite (N-NO ₂)	mg/L	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrate (N-NO ₃)	mg/L	3.7	339	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Total Metals									
Aluminum, total (T-Al)	mg/L	-	-	0.0619	0.0531	0.0088	0.0606	0.0426	0.0075
Antimony, total (T-Sb)	mg/L	-	0.27 ⁴	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Arsenic, total (T-As)	mg/L	0.0125	0.0125	0.0004	0.0006	0.00153	0.00048	0.00074	0.00149
Barium, total (T-Ba)	mg/L	-	-	0.0074	0.0078	0.0092	0.0079	0.0089	0.0091
Beryllium, total (T-Be)	mg/L	0.1	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron, total (T-B)	mg/L	1.2	-	1.04	<u>1.39</u>	<u>3.13</u>	1.17	<u>1.68</u>	<u>3.19</u>
Cadmium, total (T-Cd)	mg/L	0.00012	-	0.000022	0.000026	0.00007	0.000031	0.000031	0.000083
Chromium, total (T-Cr)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, total (T-Co)	mg/L	-	-	0.000059	0.00007	<0.000050	0.000071	0.000065	<0.000050
Copper, total (T-Cu)	mg/L	0.002	0.003	0.00058	0.00057	<0.00050	0.00075	0.00058	<0.00050
Iron, total (T-Fe)	mg/L	-	-	0.09	0.084	0.015	0.102	0.074	0.012
Lead, total (T-Pb)	mg/L	0.002	0.14	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Manganese, total (T-Mn)	mg/L	-	-	0.0061	0.00557	0.00164	0.00683	0.00522	0.00144
Mercury, total (T-Hg)	mg/L	0.000016 ⁵	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, total (T-Mo)	mg/L	-	-	0.00315	0.00378	0.00879	0.00279	0.00439	0.00925
Nickel, total (T-Ni)	mg/L	0.0083	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	<0.00050	<0.00050	0.00056	<0.00050	<0.00050	<0.00050
Silver, total (T-Ag)	mg/L	0.0005	0.0037	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Thallium, total (T-Tl)	mg/L	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Uranium, total (T-U)	mg/L	-	-	0.000738	0.00106	0.00238	0.00076	0.00125	0.00238
Vanadium, total (T-V)	mg/L	0.005	-	0.00059	0.00072	0.00136	0.00062	0.00078	0.00141
Zinc, total (T-Zn)	mg/L	0.01	0.055	<0.0030	0.0032	0.0043	<0.0030	<0.0030	<0.0030
Hexavalent Chromium, total	mg/L	0.0015	-	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150
Dissolved Metals									
Cadmium, dissolved (D-Cd)	mg/L	-	-	0.000022	0.00003	0.000069	<0.000020	0.000042	0.000083
Copper, dissolved (D-Cu)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Iron, dissolved (D-Fe)	mg/L	-	-	0.033	0.028	<0.010	0.035	0.023	<0.010
Lead, dissolved (D-Pb)	mg/L	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Manganese, dissolved (D-Mn)	mg/L	-	-	0.00543	0.00476	0.00121	0.00619	0.00439	0.001
Nickel, dissolved (D-Ni)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	1.52	2.26	5.78	1.66	2.64	5.94
Vanadium, dissolved (D-V)	mg/L	-	-	<0.00050	0.0006	0.00128	<0.00050	0.00066	0.00127
Zinc, dissolved (D-Zn)	mg/L	-	-	0.002	0.0027	<0.0010	<0.0010	0.0012	<0.0010
Polycyclic Aromatic Hydrocarbons (PAHs)									
Acenaphthene	mg/L	0.006	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Acridine	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Anthracene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Benz(a)anthracene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Chrysene	mg/L	0.0001	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Fluoranthene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Fluorene	mg/L	0.012	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
1-methylnaphthalene	mg/L	0.001	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
2-methylnaphthalene	mg/L	0.001	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Naphthalene	mg/L	0.001	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Phenanthrene	mg/L	-	-	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Pyrene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Quinoline	mg/L	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)									
Benzene	mg/L	0.11	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Ethylbenzene	mg/L	0.25	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Methyl-tert-butyl-ether	mg/L	5	0.44	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Styrene	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Toluene	mg/L	0.215	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Total Xylenes	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chlorobenzene	mg/L	0.025	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050

Notes:

Results **underlined in bold italics** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.

Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.

¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.

² Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. Salinity WQG was not evaluated. The water quality data presented in the table were collected when the site was discharging, therefore the turbidity and TSS WQGs were evaluated. Background values used to evaluate the April 14 IDZ-E1 and IDZ-E2 samples are the maximum values measured in the April 11, 13 and 14 WQR1 and WQR2 reference station samples at 0.5 and 2 m below the surface and 2 m above the seafloor (Report #61).

³ The approved total ammonia nitrogen BC WQG is salinity, pH and temperature dependent; see Tables 26E and 26F in BC WQG guidance document.

⁴ The working BC WQG for trivalent antimony [SB(III)] is 0.27 mg/L and is applied to total antimony results.

⁵ When MeHg ≤ 0.5% of total Hg, BC WQG = 0.00002 mg/L. The Canadian WQG = 0.000016 mg/L.

Table G-5: Summary of Marine Water Quality Results Received at the Time of Reporting

Parameter	Unit	Lowest Applicable Guideline ¹		Station IDZ-W1			Station IDZ-W2		
				0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor	0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor
				IDZ-W1-0.5	IDZ-W1-2m	IDZ-W1-SF	IDZ-W2-0.5	IDZ-W2-2m	IDZ-W2-SF
		VA25A8854-001	VA25A8854-002	VA25A8854-003	VA25A8854-004	VA25A8854-005	VA25A8854-006		
		Long Term	Short Term	2025-04-21 10:40	2025-04-21 11:00	2025-04-21 11:15	2025-04-21 11:40	2025-04-21 12:00	2025-04-21 12:15
General Parameters									
pH - Field	pH units	7.0 - 8.7	-	7.99	8.22	7.61	8.11	8.29	7.64
Specific Conductivity - Field	µS/cm	-	-	7887	18284	31476	8208	25254	31562
Temperature - Field	°C	-	-	9.4	10.6	8.6	9.6	10.8	8.5
Salinity - Field	ppt	Narrative ²	-	6.4	15.35	29.48	6.64	21.73	29.62
Turbidity - Field	NTU	3.0-4.3 ²	9.0-10.3 ²	1.92	1.13	1.24	1.9	0.83	1.39
TSS	mg/L	7.0-7.9 ²	27.0-27.9 ²	<2.0	2.8	2.4	2.1	<2.0	<2.0
Dissolved Oxygen - Field	mg/L	>=8	-	11.34	11.1	8.32	11.46	11.21	<u>7.39</u>
Anions and Nutrients									
Sulphate	mg/L	-	-	660	691	2220	320	584	2240
Chloride	mg/L	-	-	4990	5210	16000	2570	4480	16200
Fluoride	mg/L	-	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia (N-NH ₃)	mg/L	1.3-8.1 ³	8.5-54 ³	0.0076	0.0059	0.0231	<0.0050	0.0125	0.0275
Nitrite (N-NO ₂)	mg/L	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrate (N-NO ₃)	mg/L	3.7	339	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Total Metals									
Aluminum, total (T-Al)	mg/L	-	-	0.0828	0.0743	0.0089	0.104	0.0871	0.0089
Antimony, total (T-Sb)	mg/L	-	0.27 ⁴	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Arsenic, total (T-As)	mg/L	0.0125	0.0125	0.00051	0.00049	0.00147	<0.00040	0.00044	0.00147
Barium, total (T-Ba)	mg/L	-	-	0.008	0.0079	0.0094	0.0073	0.0079	0.0094
Beryllium, total (T-Be)	mg/L	0.1	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron, total (T-B)	mg/L	1.2	-	<u>1.41</u>	<u>1.39</u>	<u>3.87</u>	0.77	1.09	<u>3.80</u>
Cadmium, total (T-Cd)	mg/L	0.00012	-	0.000034	0.000027	0.000072	<0.000020	0.00002	0.000075
Chromium, total (T-Cr)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, total (T-Co)	mg/L	-	-	0.000084	0.000076	0.00007	0.000082	0.000089	0.000071
Copper, total (T-Cu)	mg/L	0.002	0.003	0.00093	0.00086	<0.00050	0.00086	0.00087	<0.00050
Iron, total (T-Fe)	mg/L	-	-	0.109	0.095	0.015	0.126	0.124	0.015
Lead, total (T-Pb)	mg/L	0.002	0.14	<0.00010	<0.00010	<0.00010	0.00017	<0.00010	<0.00010
Manganese, total (T-Mn)	mg/L	-	-	0.00593	0.00595	0.00152	0.00651	0.0061	0.00156
Mercury, total (T-Hg)	mg/L	0.000016 ⁵	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, total (T-Mo)	mg/L	-	-	0.00297	0.00306	0.00846	0.00176	0.00261	0.00861
Nickel, total (T-Ni)	mg/L	0.0083	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Silver, total (T-Ag)	mg/L	0.0005	0.0037	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Thallium, total (T-Tl)	mg/L	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Uranium, total (T-U)	mg/L	-	-	0.000825	0.000798	0.00225	0.000439	0.000697	0.0023
Vanadium, total (T-V)	mg/L	0.005	-	0.00065	0.00062	0.00165	0.00062	0.0006	0.0016
Zinc, total (T-Zn)	mg/L	0.01	0.055	<0.0030	<0.0030	<0.0030	0.0059	<0.0030	<0.0030
Hexavalent Chromium, total	mg/L	0.0015	-	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150
Dissolved Metals									
Cadmium, dissolved (D-Cd)	mg/L	-	-	<0.000020	0.00003	0.000078	<0.000020	<0.000020	0.00007
Copper, dissolved (D-Cu)	mg/L	-	-	0.00083	0.00061	<0.00050	0.00057	0.00062	<0.00050
Iron, dissolved (D-Fe)	mg/L	-	-	0.029	<0.010	<0.010	0.033	0.013	<0.010
Lead, dissolved (D-Pb)	mg/L	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Manganese, dissolved (D-Mn)	mg/L	-	-	0.00528	0.00395	0.00122	0.00538	0.0042	0.0015
Nickel, dissolved (D-Ni)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	1.06	2.94	6.13	0.924	2.47	6.10
Vanadium, dissolved (D-V)	mg/L	-	-	<0.00050	0.00052	0.00135	<0.00050	<0.00050	0.00139
Zinc, dissolved (D-Zn)	mg/L	-	-	0.0014	0.0013	0.0012	0.0016	0.0012	<0.0010
Polycyclic Aromatic Hydrocarbons (PAHs)									
Acenaphthene	mg/L	0.006	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Acridine	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Anthracene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Benz(a)anthracene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Chrysene	mg/L	0.0001	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Fluoranthene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Fluorene	mg/L	0.012	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
1-methylnaphthalene	mg/L	0.001	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
2-methylnaphthalene	mg/L	0.001	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Naphthalene	mg/L	0.001	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Phenanthrene	mg/L	-	-	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Pyrene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Quinoline	mg/L	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)									
Benzene	mg/L	0.11	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Ethylbenzene	mg/L	0.25	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Methyl-tert-butyl-ether	mg/L	5	0.44	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Styrene	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Toluene	mg/L	0.215	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Total Xylenes	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chlorobenzene	mg/L	0.025	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050

Notes:

Results **underlined in bold italics** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.

Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.

¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.

² Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. Salinity WQG was not evaluated. The water quality data presented in the table were collected when the site was discharging, therefore the turbidity and TSS WQGs were evaluated. Background values used to evaluate the April 21 IDZ-W1 and IDZ-W2 samples are the maximum values measured in the April 11, 13 and 14 WQR1 and WQR2 reference station samples at 0.5 and 2 m below the surface and 2 m above the seafloor (Report #61).

³ The approved total ammonia nitrogen BC WQG is salinity, pH and temperature dependent; see Tables 26E and 26F in BC WQG guidance document.

⁴ The working BC WQG for trivalent antimony [SB(III)] is 0.27 mg/L and is applied to total antimony results.

⁵ When MeHg ≤ 0.5% of total Hg, BC WQG = 0.00002 mg/L. The Canadian WQG = 0.000016 mg/L.

Table G-6: Summary of Marine Water Quality Results Received at the Time of Reporting

Parameter	Unit	Lowest Applicable Guideline ¹		Reference Station WQR1			Reference Station WQR2		
				0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor	0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor
				WQR1-0.5	WQR1-2m	WQR1-SF	WQR2-0.5	WQR2-2m	WQR2-SF
				VA25A8147-001	VA25A8147-002	VA25A8147-003	VA25A8147-004	VA25A8147-005	VA25A8147-006
		Long Term	Short Term	2025-04-11 13:40	2025-04-11 14:00	2025-04-11 14:10	2025-04-11 11:30	2025-04-11 12:50	2025-04-11 13:10
General Parameters									
pH - Field	pH units	7.0 - 8.7	-	8.01	8.33	7.59	7.76	8.19	7.93
Specific Conductivity - Field	µS/cm	-	-	7075	15972	31500	5810	16309	29930
Temperature - Field	°C	-	-	7.3	8.1	8.3	7.1	8.4	8.5
Salinity - Field	ppt	Narrative ²	-	6.04	14.2	29.75	4.93	14.25	27.97
Turbidity - Field	NTU	Narrative ²	Narrative ²	2.34	1.63	0.86	1.98	1.42	1.00
TSS	mg/L	Narrative ²	Narrative ²	<2.0	<2.0	2.9	<2.0	<2.0	2.3
Dissolved Oxygen - Field	mg/L	>=8	-	11.66	11.47	<u>6.80</u>	11.68	11.29	10.19
Anions and Nutrients									
Sulphate	mg/L	-	-	294	974	1950	284	628	1870
Chloride	mg/L	-	-	2520	7480	14700	2420	5040	14000
Fluoride	mg/L	-	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia (N-NH ₃)	mg/L	1.8-13 ³	12-85 ³	0.0081	0.0054	0.0078	0.008	0.0068	0.0073
Nitrite (N-NO ₂)	mg/L	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrate (N-NO ₃)	mg/L	3.7	339	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Total Metals									
Aluminum, total (T-Al)	mg/L	-	-	0.134	0.0915	0.0188	0.127	0.0968	0.0268
Antimony, total (T-Sb)	mg/L	-	0.27 ⁴	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Arsenic, total (T-As)	mg/L	0.0125	0.0125	<0.00040	0.00064	0.00122	<0.00040	0.00054	0.00116
Barium, total (T-Ba)	mg/L	-	-	0.0076	0.0077	0.008	0.0076	0.0076	0.0078
Beryllium, total (T-Be)	mg/L	0.1	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron, total (T-B)	mg/L	1.2	-	0.66	<u>1.76</u>	<u>3.11</u>	0.83	<u>1.25</u>	<u>2.93</u>
Cadmium, total (T-Cd)	mg/L	0.00012	-	<0.000020	0.000046	0.000057	0.000022	0.000024	0.000059
Chromium, total (T-Cr)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, total (T-Co)	mg/L	-	-	0.00009	0.000092	0.000083	0.000092	0.000082	0.000076
Copper, total (T-Cu)	mg/L	0.002	0.003	0.00079	0.00069	0.0005	0.00078	0.00072	<0.00050
Iron, total (T-Fe)	mg/L	-	-	0.166	0.109	0.02	0.159	0.126	0.031
Lead, total (T-Pb)	mg/L	0.002	0.14	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Manganese, total (T-Mn)	mg/L	-	-	0.00691	0.00486	0.00154	0.00684	0.00568	0.00205
Mercury, total (T-Hg)	mg/L	0.000016 ⁵	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, total (T-Mo)	mg/L	-	-	0.00161	0.00417	0.00753	0.0018	0.00284	0.00683
Nickel, total (T-Ni)	mg/L	0.0083	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Silver, total (T-Ag)	mg/L	0.0005	0.0037	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Thallium, total (T-Tl)	mg/L	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Uranium, total (T-U)	mg/L	-	-	0.00043	0.00128	0.00244	0.000548	0.000882	0.00221
Vanadium, total (T-V)	mg/L	0.005	-	0.0011	0.00087	0.00117	0.00063	0.00073	0.00111
Zinc, total (T-Zn)	mg/L	0.01	0.055	<0.0030	<0.0030	<u>0.042</u>	<0.0030	<0.0030	<0.0030
Hexavalent Chromium, total	mg/L	0.0015	-	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150
Dissolved Metals									
Cadmium, dissolved (D-Cd)	mg/L	-	-	<0.000020	0.000034	0.00007	<0.000020	0.000022	0.000058
Copper, dissolved (D-Cu)	mg/L	-	-	0.00052	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Iron, dissolved (D-Fe)	mg/L	-	-	0.05	0.016	<0.010	0.054	0.048	<0.010
Lead, dissolved (D-Pb)	mg/L	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Manganese, dissolved (D-Mn)	mg/L	-	-	0.00536	0.00305	0.00104	0.00542	0.00507	0.00118
Nickel, dissolved (D-Ni)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	0.877	3.10	5.14	0.842	1.28	4.70
Vanadium, dissolved (D-V)	mg/L	-	-	<0.00050	0.00076	0.00115	<0.00050	<0.00050	0.00106
Zinc, dissolved (D-Zn)	mg/L	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Polycyclic Aromatic Hydrocarbons (PAHs)									
Acenaphthene	mg/L	0.006	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Acridine	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Anthracene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Benz(a)anthracene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Chrysene	mg/L	0.0001	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Fluoranthene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Fluorene	mg/L	0.012	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
1-methylnaphthalene	mg/L	0.001	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
2-methylnaphthalene	mg/L	0.001	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Naphthalene	mg/L	0.001	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Phenanthrene	mg/L	-	-	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Pyrene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Quinoline	mg/L	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)									
Benzene	mg/L	0.11	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Ethylbenzene	mg/L	0.25	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Methyl-tert-butyl-ether	mg/L	5	0.44	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Styrene	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Toluene	mg/L	0.215	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Total Xylenes	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chlorobenzene	mg/L	0.025	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050

Notes:

Results **underlined in bold italics** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.

Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.

¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.

² Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. Salinity WQG was not evaluated. The water quality data presented in the table were collected from marine reference stations, therefore the turbidity and TSS WQGs were not evaluated.

³ The approved total ammonia nitrogen BC WQG is salinity, pH and temperature dependent; see Tables 26E and 26F in BC WQG guidance document.

⁴ The working BC WQG for trivalent antimony [SB(III)] is 0.27 mg/L and is applied to total antimony results.

⁵ When MeHg ≤ 0.5% of total Hg, BC WQG = 0.00002 mg/L. The Canadian WQG = 0.000016 mg/L.

Table G-7: Summary of Marine Water Quality Results Received at the Time of Reporting

Parameter	Unit	Lowest Applicable Guideline ¹		Reference Station WQR2			Reference Station WQR1		
				0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor	0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor
				WQR2-0.5	WQR2-2m	WQR2-SF	WQR1-0.5	WQR1-2m	WQR1-SF
				VA25A8280-007	VA25A8280-008	VA25A8280-009	VA25A8281-007	VA25A8281-008	VA25A8281-009
		Long Term	Short Term	2025-04-13 11:10	2025-04-13 11:35	2025-04-13 11:55	2025-04-14 15:00	2025-04-14 15:15	2025-04-14 15:30
General Parameters									
pH - Field	pH units	7.0 - 8.7	-	7.83	7.84	7.55	8.06	8.28	7.58
Specific Conductivity - Field	µS/cm	-	-	5392	7981	31604	11072	22700	32119
Temperature - Field	°C	-	-	7.9	8.2	8.3	9.1	9.2	8.4
Salinity - Field	ppt	Narrative ²	-	4.44	6.7	29.85	9.29	20.19	30.25
Turbidity - Field	NTU	Narrative ²	Narrative ²	1.39	1.39	0.6	1.46	1.08	0.82
TSS	mg/L	Narrative ²	Narrative ²	<2.0	<2.0	<2.0	<2.0	2.4	<2.0
Dissolved Oxygen - Field	mg/L	>=8	-	11.65	11.71	<u>6.54</u>	11.47	12.11	<u>6.23</u>
Anions and Nutrients									
Sulphate	mg/L	-	-	281	414	2280	697	1240	2180
Chloride	mg/L	-	-	2100	3010	16100	4950	8640	15900
Fluoride	mg/L	-	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia (N-NH ₃)	mg/L	1.8-13 ³	12-85 ³	0.007	0.0094	0.0218	0.0089	0.007	0.008
Nitrite (N-NO ₂)	mg/L	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrate (N-NO ₃)	mg/L	3.7	339	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Total Metals									
Aluminum, total (T-Al)	mg/L	-	-	0.0829	0.0744	0.0054	0.0547	0.0386	0.0072
Antimony, total (T-Sb)	mg/L	-	0.27 ⁴	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Arsenic, total (T-As)	mg/L	0.0125	0.0125	<0.00040	<0.00040	0.00156	0.0005	0.00076	0.00145
Barium, total (T-Ba)	mg/L	-	-	0.0061	0.0076	0.0093	0.008	0.008	0.0091
Beryllium, total (T-Be)	mg/L	0.1	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron, total (T-B)	mg/L	1.2	-	0.59	0.76	<u>3.11</u>	<u>1.22</u>	<u>1.91</u>	<u>3.21</u>
Cadmium, total (T-Cd)	mg/L	0.00012	-	<0.000020	<0.000020	0.000075	0.000029	0.000039	0.000067
Chromium, total (T-Cr)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, total (T-Co)	mg/L	-	-	<0.000050	0.000067	<0.000050	0.00007	0.00007	<0.000050
Copper, total (T-Cu)	mg/L	0.002	0.003	<0.00050	0.00067	<0.00050	0.00062	0.00055	<0.00050
Iron, total (T-Fe)	mg/L	-	-	0.088	0.113	<0.010	0.105	0.067	0.012
Lead, total (T-Pb)	mg/L	0.002	0.14	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Manganese, total (T-Mn)	mg/L	-	-	0.00498	0.00669	0.00121	0.00693	0.005	0.00138
Mercury, total (T-Hg)	mg/L	0.000016 ⁵	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, total (T-Mo)	mg/L	-	-	0.00129	0.00185	0.0088	0.00296	0.00504	0.00933
Nickel, total (T-Ni)	mg/L	0.0083	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Silver, total (T-Ag)	mg/L	0.0005	0.0037	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Thallium, total (T-Tl)	mg/L	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Uranium, total (T-U)	mg/L	-	-	0.000479	0.000503	0.00244	0.000833	0.0013	0.00229
Vanadium, total (T-V)	mg/L	0.005	-	<0.00050	0.00058	0.00141	0.00071	0.00083	0.00142
Zinc, total (T-Zn)	mg/L	0.01	0.055	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Hexavalent Chromium, total	mg/L	0.0015	-	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150
Dissolved Metals									
Cadmium, dissolved (D-Cd)	mg/L	-	-	<0.000020	<0.000020	0.00007	0.000026	0.000037	0.00007
Copper, dissolved (D-Cu)	mg/L	-	-	<0.00050	0.00051	<0.00050	<0.00050	<0.00050	<0.00050
Iron, dissolved (D-Fe)	mg/L	-	-	0.038	0.055	<0.010	0.028	0.014	<0.010
Lead, dissolved (D-Pb)	mg/L	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Manganese, dissolved (D-Mn)	mg/L	-	-	0.00456	0.00612	0.00087	0.00579	0.00369	0.00091
Nickel, dissolved (D-Ni)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	0.76	1.08	5.82	1.65	3.43	6.64
Vanadium, dissolved (D-V)	mg/L	-	-	<0.00050	<0.00050	0.00124	<0.00050	0.00068	0.00141
Zinc, dissolved (D-Zn)	mg/L	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Polycyclic Aromatic Hydrocarbons (PAHs)									
Acenaphthene	mg/L	0.006	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Acridine	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Anthracene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Benz(a)anthracene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Chrysene	mg/L	0.0001	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Fluoranthene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Fluorene	mg/L	0.012	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
1-methylnaphthalene	mg/L	0.001	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
2-methylnaphthalene	mg/L	0.001	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Naphthalene	mg/L	0.001	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Phenanthrene	mg/L	-	-	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Pyrene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Quinoline	mg/L	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)									
Benzene	mg/L	0.11	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Ethylbenzene	mg/L	0.25	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Methyl-tert-butyl-ether	mg/L	5	0.44	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Styrene	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Toluene	mg/L	0.215	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Total Xylenes	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chlorobenzene	mg/L	0.025	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050

Notes:

Results **underlined in bold italics** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.

Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.

¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.

² Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. Salinity WQG was not evaluated. The water quality data presented in the table were collected from marine reference stations, therefore the turbidity and TSS WQGs were not evaluated.

³ The approved total ammonia nitrogen BC WQG is salinity, pH and temperature dependent; see Tables 26E and 26F in BC WQG guidance document.

⁴ The working BC WQG for trivalent antimony [SB(III)] is 0.27 mg/L and is applied to total antimony results.

⁵ When MeHg ≤ 0.5% of total Hg, BC WQG = 0.00002 mg/L. The Canadian WQG = 0.000016 mg/L.

Table G-8: Summary of Marine Water Quality Results Received at the Time of Reporting

Parameter	Unit	Lowest Applicable Guideline ¹		Reference Station WQR2		
				0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor
				WQR2-0.5	WQR2-2m	WQR2-SF
				VA25A8854-007	VA25A8854-008	VA25A8854-009
		Long Term	Short Term	2025-04-21 8:15	2025-04-21 8:30	2025-04-21 8:55
General Parameters						
pH - Field	pH units	7.0 - 8.7	-	8.07	8.29	8.05
Specific Conductivity - Field	µS/cm	-	-	2269	20789	31014
Temperature - Field	°C	-	-	7.7	11.2	9.0
Salinity - Field	ppt	Narrative ²	-	1.78	17.36	28.68
Turbidity - Field	NTU	Narrative ²	Narrative ²	2.54	1.3	1.52
TSS	mg/L	Narrative ²	Narrative ²	<2.0	2.3	3.2
Dissolved Oxygen - Field	mg/L	>=8	-	12.3	11.39	12.11
Anions and Nutrients						
Sulphate	mg/L	-	-	116	630	2260
Chloride	mg/L	-	-	1050	4620	16000
Fluoride	mg/L	-	1.5	<1.0	<1.0	<1.0
Ammonia (N-NH ₃)	mg/L	1.3-3.1 ³	8.5-21 ³	0.0078	<0.0050	0.0232
Nitrite (N-NO ₂)	mg/L	-	-	<0.10	<0.10	<0.10
Nitrate (N-NO ₃)	mg/L	3.7	339	<0.50	<0.50	<0.50
Total Metals						
Aluminum, total (T-Al)	mg/L	-	-	0.128	0.0903	0.0106
Antimony, total (T-Sb)	mg/L	-	0.27 ⁴	<0.0010	<0.0010	<0.0010
Arsenic, total (T-As)	mg/L	0.0125	0.0125	<0.00040	0.00044	0.00151
Barium, total (T-Ba)	mg/L	-	-	0.0077	0.008	0.0092
Beryllium, total (T-Be)	mg/L	0.1	-	<0.00050	<0.00050	<0.00050
Boron, total (T-B)	mg/L	1.2	-	0.38	1.09	<u>3.71</u>
Cadmium, total (T-Cd)	mg/L	0.00012	-	<0.000020	0.00003	0.000079
Chromium, total (T-Cr)	mg/L	-	-	<0.00050	<0.00050	<0.00050
Cobalt, total (T-Co)	mg/L	-	-	0.000093	0.000087	0.000068
Copper, total (T-Cu)	mg/L	0.002	0.003	0.00096	0.0009	<0.00050
Iron, total (T-Fe)	mg/L	-	-	0.167	0.12	0.014
Lead, total (T-Pb)	mg/L	0.002	0.14	<0.00010	<0.00010	<0.00010
Manganese, total (T-Mn)	mg/L	-	-	0.00805	0.00639	0.0015
Mercury, total (T-Hg)	mg/L	0.000016 ⁵	-	<0.0000050	<0.0000050	<0.0000050
Molybdenum, total (T-Mo)	mg/L	-	-	0.00102	0.00271	0.00867
Nickel, total (T-Ni)	mg/L	0.0083	-	<0.00050	<0.00050	0.00052
Selenium, total (T-Se)	mg/L	0.002	-	<0.00050	<0.00050	<0.00050
Silver, total (T-Ag)	mg/L	0.0005	0.0037	<0.00010	<0.00010	<0.00010
Thallium, total (T-Tl)	mg/L	-	-	<0.000050	<0.000050	<0.000050
Uranium, total (T-U)	mg/L	-	-	0.000203	0.000707	0.00223
Vanadium, total (T-V)	mg/L	0.005	-	0.00065	0.00067	0.0019
Zinc, total (T-Zn)	mg/L	0.01	0.055	<0.0030	<0.0030	<0.0030
Hexavalent Chromium, total	mg/L	0.0015	-	<0.00150	<0.00150	<0.00150
Dissolved Metals						
Cadmium, dissolved (D-Cd)	mg/L	-	-	<0.000020	<0.000020	0.000073
Copper, dissolved (D-Cu)	mg/L	-	-	0.00062	0.00057	<0.00050
Iron, dissolved (D-Fe)	mg/L	-	-	0.048	0.047	<0.010
Lead, dissolved (D-Pb)	mg/L	-	-	<0.00010	<0.00010	<0.00010
Manganese, dissolved (D-Mn)	mg/L	-	-	0.00687	0.00648	0.00107
Nickel, dissolved (D-Ni)	mg/L	-	-	<0.00050	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	0.421	0.382	6.07
Vanadium, dissolved (D-V)	mg/L	-	-	<0.00050	<0.00050	0.00134
Zinc, dissolved (D-Zn)	mg/L	-	-	0.002	0.0011	<0.0010
Polycyclic Aromatic Hydrocarbons (PAHs)						
Acenaphthene	mg/L	0.006	-	<0.000010	<0.000010	<0.000010
Acridine	mg/L	-	-	<0.000010	<0.000010	<0.000010
Anthracene	mg/L	-	-	<0.000010	<0.000010	<0.000010
Benz(a)anthracene	mg/L	-	-	<0.000010	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	<0.0000050	<0.0000050	<0.0000050
Chrysene	mg/L	0.0001	-	<0.000010	<0.000010	<0.000010
Fluoranthene	mg/L	-	-	<0.000010	<0.000010	<0.000010
Fluorene	mg/L	0.012	-	<0.000010	<0.000010	<0.000010
1-methylnaphthalene	mg/L	0.001	-	<0.000010	<0.000010	<0.000010
2-methylnaphthalene	mg/L	0.001	-	<0.000010	<0.000010	<0.000010
Naphthalene	mg/L	0.001	-	<0.000050	<0.000050	<0.000050
Phenanthrene	mg/L	-	-	<0.000020	<0.000020	<0.000020
Pyrene	mg/L	-	-	<0.000010	<0.000010	<0.000010
Quinoline	mg/L	-	-	<0.000050	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)						
Benzene	mg/L	0.11	-	<0.00050	<0.00050	<0.00050
Ethylbenzene	mg/L	0.25	-	<0.00050	<0.00050	<0.00050
Methyl-tert-butyl-ether	mg/L	5	0.44	<0.00050	<0.00050	<0.00050
Styrene	mg/L	-	-	<0.00050	<0.00050	<0.00050
Toluene	mg/L	0.215	-	<0.00040	<0.00040	<0.00040
Total Xylenes	mg/L	-	-	<0.00050	<0.00050	<0.00050
Chlorobenzene	mg/L	0.025	-	<0.00050	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	-	<0.00050	<0.00050	<0.00050

Notes:

Results **underlined in bold italics** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.

Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.

¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.

² Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. Salinity WQG was not evaluated. The water quality data presented in the table were collected from marine reference stations, therefore the turbidity and TSS WQGs were not evaluated.

³ The approved total ammonia nitrogen BC WQG is salinity, pH and temperature dependent; see Tables 26E and 26F in BC WQG guidance document.

⁴ The working BC WQG for trivalent antimony [SB(III)] is 0.27 mg/L and is applied to total antimony results.

⁵ When MeHg ≤ 0.5% of total Hg, BC WQG = 0.00002 mg/L. The Canadian WQG = 0.000016 mg/L.

Table G-9: Marine Water Methylmercury and Corresponding Total Mercury Results Received at the Time of Reporting.

Parameter					Total Methylmercury	Total Mercury
Unit					µg/L	µg/L
Lowest Applicable Guideline ¹					0.0001 ²	0.016-0.020 ^{3,4}
Station	Position in Water Column	Sample ID	Lab ID	Sampling Date		
Station IDZ-E1						
IDZ-E1	0.5 m Below Surface	IDZ-E1-0.5	VA25A8108-001	2025-04-10	<0.000020	<0.0050
IDZ-E1	0.5 m Below Surface	IDZ-E1-0.5	VA25A8281-001	2025-04-14	<0.000020	<0.0050
IDZ-E1	2 m Below Surface	IDZ-E1-2m	VA25A8108-002	2025-04-10	<0.000020	<0.0050
IDZ-E1	2 m Below Surface	IDZ-E1-2m	VA25A8281-002	2025-04-14	<0.000020	<0.0050
IDZ-E1	2 m Above Seafloor	IDZ-E1-SF	VA25A8108-003	2025-04-10	<0.000020	<0.0050
IDZ-E1	2 m Above Seafloor	IDZ-E1-SF	VA25A8281-003	2025-04-14	<0.000020	<0.0050
Station IDZ-E2						
IDZ-E2	0.5 m Below Surface	IDZ-E2-0.5	VA25A8108-004	2025-04-10	<0.000020	<0.0050
IDZ-E2	0.5 m Below Surface	IDZ-E2-0.5	VA25A8281-004	2025-04-14	<0.000020	<0.0050
IDZ-E2	2 m Below Surface	IDZ-E2-2m	VA25A8108-005	2025-04-10	<0.000020	<0.0050
IDZ-E2	2 m Below Surface	IDZ-E2-2m	VA25A8281-005	2025-04-14	<0.000020	<0.0050
IDZ-E2	2 m Above Seafloor	IDZ-E2-SF	VA25A8108-006	2025-04-10	<0.000020	<0.0050
IDZ-E2	2 m Above Seafloor	IDZ-E2-SF	VA25A8281-006	2025-04-14	0.000024	<0.0050
Station IDZ-W1						
IDZ-W1	0.5 m Below Surface	IDZ-W1-0.5	VA25A7739-001	2025-04-08	<0.000020	<0.0050
IDZ-W1	0.5 m Below Surface	IDZ-W1-0.5	VA25A8280-001	2025-04-13	<0.000020	<0.0050
IDZ-W1	2 m Below Surface	IDZ-W1-2m	VA25A7739-002	2025-04-08	<0.000020	<0.0050
IDZ-W1	2 m Below Surface	IDZ-W1-2m	VA25A8280-002	2025-04-13	<0.000020	<0.0050
IDZ-W1	2 m Above Seafloor	IDZ-W1-SF	VA25A7739-003	2025-04-08	<0.000020	<0.0050
IDZ-W1	2 m Above Seafloor	IDZ-W1-SF	VA25A8280-003	2025-04-13	<0.000020	<0.0050
Station IDZ-W2						
IDZ-W2	0.5 m Below Surface	IDZ-W2-0.5	VA25A7739-004	2025-04-08	0.000025	<0.0050
IDZ-W2	0.5 m Below Surface	IDZ-W2-0.5	VA25A8280-004	2025-04-13	<0.000020	<0.0050
IDZ-W2	2 m Below Surface	IDZ-W2-2m	VA25A7739-005	2025-04-08	<0.000020	<0.0050
IDZ-W2	2 m Below Surface	IDZ-W2-2m	VA25A8280-005	2025-04-13	<0.000020	<0.0050
IDZ-W2	2 m Above Seafloor	IDZ-W2-SF	VA25A7739-006	2025-04-08	<0.000020	<0.0050
IDZ-W2	2 m Above Seafloor	IDZ-W2-SF	VA25A8280-006	2025-04-13	<0.000020	<0.0050
Reference Station WQR1						
WQR1	0.5 m Below Surface	WQR1-0.5	VA25A8147-001	2025-04-11	<0.000020	<0.0050
WQR1	0.5 m Below Surface	WQR1-0.5	VA25A8281-007	2025-04-14	<0.000020	<0.0050
WQR1	2 m Below Surface	WQR1-2m	VA25A8147-002	2025-04-11	<0.000020	<0.0050
WQR1	2 m Below Surface	WQR1-2m	VA25A8281-008	2025-04-14	<0.000020	<0.0050
WQR1	2 m Above Seafloor	WQR1-SF	VA25A8147-003	2025-04-11	<0.000020	<0.0050
WQR1	2 m Above Seafloor	WQR1-SF	VA25A8281-009	2025-04-14	<0.000020	<0.0050
Reference Station WQR2						
WQR2	0.5 m Below Surface	WQR2-0.5	VA25A8147-004	2025-04-11	<0.000020	<0.0050
WQR2	0.5 m Below Surface	WQR2-0.5	VA25A8280-007	2025-04-13	<0.000020	<0.0050
WQR2	2 m Below Surface	WQR2-2m	VA25A8147-005	2025-04-11	<0.000020	<0.0050
WQR2	2 m Below Surface	WQR2-2m	VA25A8280-008	2025-04-13	<0.000020	<0.0050
WQR2	2 m Above Seafloor	WQR2-SF	VA25A8147-006	2025-04-11	<0.000020	<0.0050
WQR2	2 m Above Seafloor	WQR2-SF	VA25A8280-009	2025-04-13	<0.000020	<0.0050

Notes:

Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine aquatic life.

¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.

² From BC Ambient Water Quality Guidelines for Mercury Overview Report. The methylmercury concentration threshold of 0.0001 µg/L (0.1 ng/L) is indicated as a WQG for the protection of wildlife and is set at a concentration that protects fish from mercury bioaccumulation to a level that may harm wildlife that consume fish.

³ CCME guideline for total mercury = 0.016 µg/L.

⁴ When MeHg ≤ 0.5% of total Hg, BC WQG = 0.02 µg/L. When MeHg > 0.5% of total Hg, BC WQG = 0.0001/(MeHg/Total Hg). Detection limit values are used to calculate the WQG for result reported as not detected.

Non-detect results are screened using the detection limit value.