TECHNICAL MEMORANDUM

To:	**Ian McAllister, Ashleigh Crompton, Mike Champion, Jackie Boruch and Ryan Schucroft (Woodfibre LNG)**	**Date:**	**7 Mar 2025**
From:	**Holly Pelletier, Cheng Kuang and Patrick Mueller (Lorax)**	**Project #:**	**A633-9**
Subject:	**PE-111578 Weekly Discharge and Compliance Report #53 for February 23 – March 1**		

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 #53) was prepared by Lorax Environmental and summarizes WDA monitoring conducted for the period of February 23 – March 1. 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 #53 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, treated water and receiving environment samples.

1. Current Conditions

1.1 Water Management Infrastructure

The Construction Phase of the Woodfibre LNG Export Facility commenced in October 2023. Early-stage civil works are ongoing, and these include site grading, levelling, overburden and bedrock excavation, pouring of concrete foundations and construction of contact water management facilities. 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 February 23 – March 1, 2025 monitoring period. Land-based construction occurs within two areas east and west of Mill Creek. Non-contact water is intercepted and diverted around the construction areas to Howe Sound and Mill Creek. Contact water collected within the east and west catchment areas (7.12 and 5.92 ha, respectively) is conveyed to the East Wastewater Treatment Plant (WWTP) or the East and West Sedimentation Ponds for treatment or settling of suspended particulate.

The West WWTP has been constructed and pilot testing initiated in August 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.

Non-contact water diversion ditches west of Mill Creek have been fully or partially 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, 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 m^3/day installed capacity. A second TSS settling system (W500GPM) was added and commissioned for use on November 28 and provides an additional 2,725 m^3/day installed capacity for clarifying water. A TSS settling system (E500GPM) for the East Sedimentation Pond was commissioned on December 4, 2024, also with 2,725 m^3/day installed capacity.

Contaminated contact water from within the East and West Catchments, and non-contaminated contact water stored in the East Sedimentation Pond are directed to the East WWTP for treatment prior to discharge to Howe Sound. Direct discharge of East WWTP treated contact water to Howe Sound was implemented from October 28, 2024, until January 23, 2025, after which WWTP effluent was redirected to the East Sedimentation Pond and only clarified pond water was discharged to Howe Sound.

The east and west catchment permanent outfall structures have not been completed. Temporary discharge systems (*i.e.*, pumps, hosing and diffusors) are used to convey clarified or treated effluent to the discharge locations authorized for the east and west catchments. In the east catchment, treated WWTP effluent is either directed to the pond or discharge tank. Clarified E500GPM effluent is directed to the discharge tank prior to discharge at location SP-E-OUT since December 2, 2024. 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 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 was observed during the monitoring period (February 23 – March 1), with precipitation recorded on February 23, 24, 25, and 26. The total precipitation amount during the monitoring period was 38.4 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
02-23-2025	13.4	10.6	4.4	Rain
02-24-2025	9.2	10.3	5.6	Rain, mix of sun and cloud
02-25-2025	15.0	11.0	5.1	Rain
02-26-2025	0.8	12.7	4.7	Overcast
02-27-2025	0	8.6	4.2	Mix of sun and cloud
02-28-2025	0	15.1	6.4	Mix of sun and cloud
03-01-2025	0	14.6	4.3	Mix of sun and cloud

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

From February 23 – March 1, the East Sedimentation Pond received contact water from Area 1100 Sump, Area 1200-C Ditch, and Area 1300 Ditch (Appendix A, Figure 2). Contact waters from Area 4100 Sump and Area 4200 Sump were directed to the West Sedimentation Pond (Appendix A, Figure 3).

Routine operation of the East WWTP continued during the monitoring period. Contact waters from the concrete batch plant 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. Pond water clarified through the E500GPM TSS settling system was recirculated to the East Sedimentation Pond on February 24, 25, 26, and 27. A total of 6,462 m^3 of East Sedimentation Pond effluent clarified through the TSS settling system (E500GPM) was directed to the authorized discharge location SP-E-OUT on February 23, 24, 25, and 27. 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 and ESC TSS settling systems prior to discharge. The ESC system was not operational February 25 through March 1. A total of 12,453 m^3 of effluent was clarified through the W500GPM system and directed to the SP-W-OUT discharge location on February 23 through 27 and March 1, and a total of 1,328 m^3 of effluent was clarified through the ESC system and directed to SP-W-OUT on February 23 and 24. 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 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, SP-E-NE, SP-E-NW, E500GPM-IN, E500GPM-OUT, WWTP-E-IN, WWTP-E-OUT, SP-W-IN, SP-W-W, SP-W-E, 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 yet 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).

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. The influent and effluent stations for this system are 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 IDZ-E1, IDZ-E2, IDZ-W1, IDZ-W2, OUT-01, OUT-02, WWTP-E-IN, WWTP-E-OUT, SP-E-IN, SP-E-OUT, E500GPM-IN, E500GPM-OUT, SP-W-E, SP-W-IN, SP-W-OUT, W500GPM-IN, W500GPM-OUT, ESC-W-IN, and ESC-W-OUT during the monitoring period (February 23 – March 1). Sampling dates and parameters tested are summarized in Table 2.

Overall, the PE-111578 monitoring requirements that were applicable during the monitoring period (February 23 – March 1) were met.

Daily field parameters were not collected at effluent stations SP-E-OUT (February 26, 27, 28, and March 1) and SP-W-OUT (February 26 and 28) since there was no effluent discharged from the authorized discharge locations at the time of monitoring. Daily field parameters were not collected on February 26 at the influent and effluent stations of the East WWTP (WWTP-E-IN and

WWTP-E-OUT, respectively) since the East WWTP was not operational at the time of monitoring for maintenance. 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 the West WWTP was not operational during the monitoring period.

Table 2: Summary of PE-111578 Monitoring Samples Collected February 23 – March 1.

Sampling Date	Sample	Description	Parameters Tested	Monitoring Frequency
February 23, 2025	SP-E-IN	East Sedimentation Pond influent entering the pond and collected at cell 1	Field Parameters.	D
	SP-E-OUT	East Sedimentation Pond clarified effluent discharge to Howe Sound, collected at sampling port	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
	SP-W-OUT	West Sedimentation Pond clarified effluent discharge to Howe Sound, collected at sampling port	Field Parameters.	D
	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		
	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		
	OUT-01	Non-contact water diversion ditch outlet	Field, Physical & General Parameters, Total, Dissolved and Speciated Metals, and Methylmercury.	M
	OUT-02	Non-contact water diversion ditch outlet		
	IDZ-W2-0.5	Howe Sound IDZ station W2; 0.5 m below surface	Field Parameters.	P
	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		
February 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 sampling port	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, 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
	SP-W-E	West Sedimentation Pond, in-pond sample	Field Parameters.	P
	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		
	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		
	IDZ-W1-0.5	Howe Sound IDZ station W1; 0.5 m below surface	Field & Physical Parameters.	W_3
	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		
February 25, 2025	SP-E-IN	East Sedimentation Pond influent entering the pond and collected at cell 1	Field Parameters.	D
	SP-E-OUT	East Sedimentation Pond clarified effluent discharge to Howe Sound, collected at sampling port	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 & Physical Parameters, Total and Dissolved Hexavalent Chromium.	D, P
	SP-W-OUT	West Sedimentation Pond clarified effluent discharge to Howe Sound, collected at sampling port	Field Parameters.	D
	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-E1-0.5	Howe Sound IDZ station E1; 0.5 m below surface	Field & Physical Parameters.	W_3
	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		
February 26, 2025	SP-E-IN	East Sedimentation Pond influent entering the pond and collected at cell 1	Field Parameters.	D
	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
	W500GPM-IN	West Sedimentation Pond 500 GPM TSS settling system at the influent meter box	Field Parameters.	P

Table 2 (continued): Summary of PE-111578 Monitoring Samples Collected February 23 – March 1.

Sampling Date	Sample	Description	Parameters Tested	Monitoring Frequency
February 27, 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
	SP-W-OUT	West Sedimentation Pond clarified effluent discharge to Howe Sound, collected at sampling port	Field Parameters.	D
	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		
February 28, 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
	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		
March 1, 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
	SP-W-OUT	West Sedimentation Pond clarified effluent discharge to Howe Sound, collected at sampling port	Field Parameters.	D
	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		

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.
W_1 – initial high frequency monitoring for physical parameters at WWTP and sedimentation pond influent and effluent stations.
W_2 – initial high frequency monitoring for all parameters at WWTP and sedimentation pond influent and effluent stations.
W_3 – 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 chlorinated dibenzo-*p*-dioxins and chlorinated dibenzofurans. A sub-set of 17 polychlorinated dibenzo-*p*-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs) are typically evaluated for toxicity and the individual parameter concentrations are converted to toxic equivalent (TEQ) values that are summed and reported 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 sub-set of 17 individual 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 available at the time of reporting for samples collected during the monitoring period (February 23 – March 1) and for other samples that have not been previously reported are listed below in Table 3. Testing for methylmercury, dioxins and furans typically requires up to four weeks to complete. Analytical results not available at the time of reporting will be included in future weekly reports when testing is completed. Reporting of results is pending for the following samples and parameters:

- WWTP-E-IN and WWTP-E-OUT collected February 5 (dioxins and furans)
- SP-E-IN, WWTP-E-IN, WWTP-E-OUT, and SP-W-IN collected February 15 (dioxins and furans)
- SP-W-IN and SP-W-OUT collected February 18 (dioxins and furans)
- IDZ-W1, IDZ-W2, and WQR2 collected February 18 (dioxins and furans)
- SW-02, SW-03, and SW-07 collected February 19 (field and all analytical parameters)
- SP-E-IN, SP-E-OUT, WWTP-E-IN, and WWTP-E-OUT collected February 20 (methylmercury, dioxins and furans)
- IDZ-E1, IDZ-E2, and WQR1 collected February 20 (methylmercury, dioxins and furans)
- SW-01 and SW-04 collected February 21 (dioxins and furans)
- SP-E-IN, SP-E-OUT, WWTP-E-IN, WWTP-E-OUT, SP-W-IN, and SP-W-OUT collected February 24 (dioxins and furans)
- IDZ-E1 and DIZ-E2 collected February 25 (field and all analytical parameters)

Table 3: Summary of Analytical Results Included in Weekly Discharge and Compliance Report #53.

Sample	Description	Sampling Date	Parameters Reported
WWTP-E-IN	East WWTP at the influent meter box	January 24, 2025	Dioxins and Furans.
WWTP-E-OUT	East WWTP at the effluent meter box		
SW-01	Lower Reach of Woodfibre Creek (near the mouth)		
SW-02	Upper Reach of Mill Creek (upstream of third bridge)		
SW-03	Lower Reach of Mill Creek (near the mouth, in the estuarine zone)		
SW-04	Lower Reach of East Creek (near the outlet to the outfall culvert)	January 25, 2025	Dioxins and Furans.
SW-07	Upstream Mill Creek (at the diversion inlet)		
WWTP-E-IN	East WWTP at the influent meter box	January 28, 2025	Dioxins and Furans.
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	January 30, 2025	Dioxins and Furans.
SP-E-OUT	East Sedimentation Pond clarified effluent discharge to Howe Sound, collected at sampling port	January 31, 2025	Dioxins and Furans.
SP-W-OUT	West Sedimentation Pond clarified effluent discharge to Howe Sound, collected at sampling port	February 1, 2025	Dioxins and Furans.
SP-E-IN	East Sedimentation Pond influent entering the pond and collected at cell 1	February 7, 2025	Dioxins and Furans.
SP-W-IN	West Sedimentation Pond influent entering the pond and collected at cell 1		
SP-E-IN	East Sedimentation Pond influent entering the pond and collected at cell 1	February 15, 2025	Methylmercury.
WWTP-E-IN	East WWTP at the influent meter box		
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		
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		
SP-W-IN	West Sedimentation Pond influent entering the pond and collected at cell 1	February 18, 2025	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, 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		
OUT-06	Non-contact water diversion ditch outlet	February 20, 2025	Field, Physical and General Parameters, Total and Dissolved Metals, and Methylmercury.
SW-01	Lower Reach of Woodfibre Creek (near the mouth)	February 21, 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)		
OUT-01	Non-contact water diversion ditch outlet	February 23, 2025	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, and Methylmercury.
OUT-02	Non-contact water diversion ditch outlet		
SP-E-IN	East Sedimentation Pond influent entering the pond and collected at cell 1	February 24, 2025	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, VOCs, and Methylmercury.
SP-E-OUT	East Sedimentation Pond clarified effluent discharge to Howe Sound, collected at sampling port		
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-W1-0.5	Howe Sound IDZ station W1; 0.5 m below surface		Field and Physical Parameters.
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-W-IN	West Sedimentation Pond influent entering the pond and collected at cell 1	February 25, 2025	Field and Physical Parameters, Total Hexavalent Chromium.

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 (February 23 – March 1), 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 February 23, 24, 25, and 27. Daily discharge volumes from the East Catchment are summarized in Appendix B, Table B-6.

Field measurements were collected February 23 – March 1 at multiple influent and effluent locations, as outlined in Section 2, and are tabulated in Appendix B, Table B-5. Analytical samples collected on February 24 (stations SP-E-IN, WWTP-E-IN, WWTP-E-OUT, and SP-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.

Field measurements and analytical results monitored at station SP-E-OUT on February 24 met PE-111578 discharge limits and WQGs.

Total copper, total mercury, and total zinc were above the MDOs in East WWTP effluent (WWTP-E-OUT) collected February 24. East WWTP treated effluent has been directed to the East Sedimentation Pond since January 24. This item is tracked in Table 6.

Methylmercury analytical results were available at the time of reporting for East Sedimentation Pond influent (SP-E-IN), E500GPM TSS settling system influent (E500GPM-IN), and East WWTP influent (WWTP-E-IN) collected February 15 (as discussed in Report #52) and February 24. Methylmercury analytical results were also available at the time of reporting for E500GPM TSS settling system effluent (E500GPM-OUT) and East WWTP effluent (WWTP-E-OUT) collected February 15 (as discussed in Report #52) as well as East WWTP effluent and effluent discharged at SP-E-OUT on February 24. The methylmercury concentration was 0.000051 µg/L in effluent discharged at SP-E-OUT on February 24, and met the WQG for methylmercury (Appendix B, Table B-3).

Dioxin and furan results were reported for East WWTP influent collected on January 24 and 28 (as discussed in Report #48 and #49, respectively) and East Sedimentation Pond influent (station SP-E-IN) collected on February 7 (as discussed in Report #50). Dioxins and furans results were also reported for East WWTP effluent (station WWTP-E-OUT) collected on January 24 and 28 (as discussed in Report #48 and #49, respectively) and effluent discharged at SP-E-OUT on January 31 (as discussed in Report #49). The lower and upper bound PCDD/F TEQ concentrations in effluent discharged at SP-E-OUT ranged from 0 to 0.0159 pg/L and from 1.56 to 2.35 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. 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 (February 23 – March 1), the TSS settling system (W500GPM) treated water stored in the West Sedimentation Pond each day and produced clarified effluent that was discharged to Howe Sound on each day, except February 28, at the authorized discharge location, SP-W-OUT. The smaller TSS settling system (ESC) was operated February 23 and 24 and produced clarified effluent that was discharged to Howe Sound on these days. Daily clarified effluent and discharge volumes from the West Catchment are summarized in Appendix C, Table C-6.

Field measurements were collected February 23 – March 1 at multiple influent and effluent locations, as outlined in Section 2, and are tabulated in Appendix C, Table C-5. Analytical samples collected on February 24 (SP-W-IN and SP-W-OUT) and February 25 (SP-W-IN) 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.

Field measurements and analytical results monitored at station SP-W-OUT on February 24 met PE-111578 discharge limits and WQGs.

Methylmercury analytical results were available at the time of reporting for West Sedimentation Pond influent (station SP-W-IN) collected February 15 (as discussed in Report #51), February 18

(as discussed in Report #52), and February 24 and effluent discharged at SP-W-OUT on February 18 (as discussed in Report #52) and February 24. The methylmercury concentration was <0.000020 and 0.000035 µg/L in effluent discharged at SP-W-OUT on February 18 and 24, 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) on January 30 (as discussed in Report #49) and February 7 (as discussed in Report #50) and effluent discharged at SP-W-OUT on February 1 (as discussed in Report #49). The lower and upper bound PCDD/F TEQ concentrations were 0 and 1.06 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 February 20 non-contact water diversion ditch outlet sample collected at station OUT-06 (as discussed in Report #52) and for the February 23 samples collected at stations OUT-01 and OUT-02. Parameter concentrations met WQGs except total aluminum and dissolved copper (Table 4).

Methylmercury results were available at the time of reporting for the non-contact water diversion ditch outlet samples collected February 20 (as discussed in Report #52) and February 23. The methylmercury concentrations were 0.000141, 0.000059, and 0.000225 µg/L in samples collected from OUT-01, OUT-02, and OUT-06, respectively. Methylmercury and corresponding total mercury results were above the WQGs at OUT-01 and OUT-06 (Table 4). Methylmercury and total mercury results met the WQGs at OUT-02. Results are tabulated in Appendix D, Table D-2.

Table 4:
Summary of Parameters Exceeding WQGs at Non-Contact Water Diversion Ditch Outlets

Parameter	Units	WQG	N	N >WQG	Commentary
T-Al	mg/L	0.067 (OUT-06) 0.068 (OUT-01)	3	2	The total aluminum concentrations measured at OUT-06 on February 20 (0.192 mg/L) and OUT-01 on February 23 (0.152 mg/L) were 2.9 and 2.2 times greater than the calculated long-term WQG, respectively.
D-Cu	mg/L	0.00020 (OUT-06) 0.00027 (OUT-01)	3	2	The dissolved copper concentrations measured at OUT-06 on February 20 (0.00080 mg/L) and OUT-01 on February 23 (0.00062 mg/L) were 4.0 and 2.3 times greater than the calculated long-term WQG, respectively.
T-Hg	ug/L	0.0020 (OUT-06) 0.0018 (OUT-01)	3	2	The total mercury concentrations measured at OUT-06 on February 20 (0.00447 ug/L) and OUT-01 on February 23 (0.00248 ug/L) were 2.3 and 1.4 times greater than the calculated long-term WQG, respectively.
T-MeHg	ug/L	0.0001	3	2	The total methylmercury concentrations measured at OUT-06 on February 20 (0.000225 ug/L) and OUT-01 on February 23 (0.000141 ug/L) were 2.3 and 1.4 times greater than the WQG (Section 3.1), respectively.

N = number of samples.
Non-detect results are screened using the detection limit value.
MeHg = methylmercury.

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 samples collected near the mouths of Woodfibre and East Creek (stations SW-01 and SW-04, respectively) on February 21 (as discussed in Report #52).

Parameter concentrations met WQGs except field pH, total aluminum, total chromium, total iron, and dissolved copper in one or more samples. Field pH was below the lower limit of the WQG in the sample collected from SW-01 (pH 6.2). Total aluminum was above the long-term WQG in samples collected from SW-01 (0.166 mg/L) and SW-04 (1.68 mg/L). Total chromium and total iron were above the respective WQGs in the sample collected from East Creek (0.0014 and 1.54 mg/L, respectively). Dissolved copper was above the long-term WQG at Woodfibre Creek (0.00034 mg/L) and at East Creek (0.00162 mg/L).

The observed field pH and concentrations of total aluminum and dissolved copper in Woodfibre Creek were within concentration ranges observed in the pre-construction baseline monitoring program for station SW-01. The observed concentrations of total aluminum, total chromium, total iron, and dissolved copper were above the upper ranges observed in the pre-construction baseline monitoring program at East Creek (Table 5). Elevated turbidity (26.05 NTU) and TSS (32.5 mg/L) were observed in the East Creek sample collected February 21 and total metal exceedances are attributable to particulate-bound forms of the metals. This item is tracked in Table 6.

Table 5:
Summary of Parameters Outside Baseline and Background Conditions at Freshwater Receiving Environment Stations

Parameter	Units	WQG	N	N >WQG	Commentary
T-Al	mg/L	0.19	2	1	The total aluminum concentration measured in East Creek (SW-04) on February 21 (1.68 mg/L) was 8.8 times greater than the long-term WQG. The total aluminum concentration at SW-04 was 6.4 times greater than the maximum concentration observed in the pre-construction baseline monitoring program (0.264 mg/L).
T-Cr	mg/L	0.001 [1]	2	1	The total chromium concentration measured in East Creek (SW-04) on February 21 (0.0014 mg/L) was 1.4 times greater than the long-term WQG for hexavalent chromium. The total chromium concentration at SW-04 was 4.5 times greater than the maximum concentration observed in the pre-construction baseline monitoring program (0.00031 mg/L). The total chromium in the sample is attributed to particulate-bound forms of the metal.
T-Fe	mg/L	0.3	2	1	The total iron concentration measured in East Creek (SW-04) on February 21 (1.54 mg/L) was 5.1 and 1.5 times greater than the long-term and short-term WQGs, respectively. The total iron concentration at SW-04 was 5.6 times greater than the maximum concentration observed in the pre-construction baseline monitoring program (0.273 mg/L). The total iron in the sample is attributed to particulate-bound forms of the metal.
D-Cu	mg/L	0.00103	2	1	The dissolved copper concentration measured in East Creek (SW-04) on February 21 (0.00162 mg/L) was 1.6 times greater than the long-term WQG. The dissolved copper concentration at SW-04 was 1.5 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 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.

Methylmercury analytical results were available at the time of reporting for freshwater samples collected February 21 at Woodfibre and East Creek (as discussed in Report #52). The methylmercury concentrations were <0.000020 µg/L in Woodfibre Creek and 0.000068 µg/L in East Creek. Methylmercury results met the WQG. The corresponding total mercury results also met WQGs. Results are tabulated in Appendix E, Table E-2.

Dioxins and furans analytical results were available at the time of reporting for freshwater and estuarine water samples collected January 24 and 25 (as discussed in Report #48). For all samples, the lower and upper bound PCDD/F TEQ concentrations ranged from 0 to 0.000837 pg/L, and 1.30 to 2.44 pg/L, respectively. The lower and upper bound PCDD/F TEQ concentrations were within the concentration ranges observed in the baseline monitoring program. Results are tabulated in Appendix E, Table E-3 (freshwater) and Appendix F, Table F-1 (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 February 18 at IDZ-W1, IDZ-W2, and WQR2 (as discussed in Report #52) and on February 24 at IDZ-W1 and IDZ-W2. Only field and physical parameters were collected on February 24. Parameter concentrations met WQGs except dissolved oxygen and total boron in some samples (Appendix G; Tables G-1 through G-3).

In the marine samples collected 2 m above the seafloor at IDZ-W1, IDZ-W2, and reference station WQR2 on February 18, dissolved oxygen was below the lower limit of the WQG (<8 mg/L) and ranged from 7.69 to 7.72 mg/L. Total boron was above the WQG (1.2 mg/L) and ranged from 2.60 to 3.21 mg/L in all samples collected February 18 at IDZ-W1, IDZ-W2, and reference station WQR2. 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 the 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.

Methylmercury analytical results 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 February 18 at

IDZ-W1, IDZ-W2, and marine reference station WQR2 (as discussed in Report #52). For all stations, methylmercury concentrations were <0.000020 µg/L. Methylmercury results met the WQG. The corresponding total mercury results also met WQGs. Results are tabulated in Appendix G, Table G-4.

4. Quality Control

This section presents the results of the quality control (QC) evaluation for the PE-111578 weekly report (Table 6). 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 6. Any items flagged for follow-up are carried forward to future reports until they are closed.

Table 6: Weekly Report QC Evaluations and Ongoing Items

QC Procedure	Observation	Investigation/Resolution
Reporting Period (February 23 – March 1, Report #53)		
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 were under construction during the reporting period. The East and West Sedimentation Ponds and WWTPs have been constructed. The sedimentation pond conveyance ditches have not been constructed, and influent culverts have not been activated, and the associated influent monitoring stations have not been established. Temporary outfalls are used for the East and West authorized discharge locations until the permanent structures are completed. Operation of the West WWTP has been suspended since September 25, 2024, and the plant has been repurposed to evaluate alternative treatment processes. 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). East Creek is monitored at SW-04 therefore monitoring at OUT-11 has been suspended. As communicated to BCER, the East Catchment discharge pathway for authorized discharge location SP-E-OUT was reconfigured from October 28, 2024, through January 24, 2025, to direct sedimentation pond water to the East WWTP and to discharge East WWTP treated effluent. From January 24, 2025 onwards the East WWTP discharge is directed to the East Sedimentation Pond. On November 28 and December 4, 2024, TSS settling systems were commissioned for use at the West and East Sedimentation Ponds, respectively, and are configured to discharge the clarified sediment pond water to Howe Sound. This item remains open.
WWTP Performance Evaluation	Field pH, T-Cu, T-Hg, T-Zn, and hexavalent Cr above the MDO	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), and February 24 results (this report). The total copper concentrations were 0.00809, 0.00595, 0.00895, 0.00518 and 0.00542 mg/L in samples collected at WWTP-E-OUT on January 8, 14, 24, 28 and February 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. Review of possible causes is ongoing. The effluent discharged to Howe Sound at SP-E-OUT met the discharge limits on January 8. East WWTP effluent was routed to the pre-discharge holding tank and did not discharge to Howe Sound on January 14. East WWTP effluent has been directed to the East Sedimentation Pond since January 24. This item remains open.
Potential Project Influence	Total aluminum, total chromium, total iron, and dissolved copper at East Creek were above concentration ranges observed in the pre-construction baseline program.	Total aluminum, total chromium, total iron, and dissolved copper concentrations observed at the East Creek station (SW-04) on February 21 were 6.4, 4.5, 5.6, and 1.5 times greater than the maximum concentrations observed in the pre-construction baseline monitoring program at East Creek, respectively. Elevated turbidity (26.05 NTU) and TSS (32.5 mg/L) were observed in the East Creek sample collected February 21 and total metal exceedances are attributable to particulate-bound forms of the metals. Potential influences to East Creek water quality at station SW-04 are being reviewed. This item remains open.
Pending Data	Analytical results not reported.	Analytical results for receiving environment samples collected February 25 were not complete at the time of Report #53 preparation. Dioxins and furans results for contact water samples collected February 24 were not complete at the time of Report #53 preparation. The pending results will be included in future weekly reports when available. This item remains open.
Ongoing Items from Previous Weekly Reports		
Report #48: Pending Data	Analytical results not reported.	Dioxins and furans results for samples collected January 24 and 25 are discussed in Sections 3.3 and 3.6 of Report #53. This item is closed.
Report #49: Pending Data	Analytical results not reported.	Dioxin and furans results for samples collected January 28, 30, 31, and February 1 are discussed in Sections 3.3 and 3.4 of Report #53. This item is closed.
Report #50: Pending Data	Analytical results not reported.	Dioxin and furans results for samples collected February 7 are discussed in Sections 3.3 and 3.4 of Report #53. Dioxin and furans results for samples collected February 5 were not complete at the time of Report #53 preparation. The pending results will be included in future weekly reports when available. This item remains open.
Report #51: Pending Data	Analytical results not reported.	Methylmercury analytical results for contact water samples collected February 15 are discussed in Sections 3.3 and 3.4 of Report #53. Dioxins and furans results for contact water samples collected February 15 were not complete at the time of Report #53 preparation. The pending results will be included in future weekly reports when available. This item remains open.
Report #52: Data QC	D-Cu and D-Zn greater than T- Cu and T-Zn	This item was first noted in Report #49 (January 31 samples) and has been updated with February 15 and February 18 results (Report #53). The dissolved copper and zinc concentrations were 2.2 to 2.5 times greater than the total copper concentration and 1.5 to 1.8 times the total zinc concentrations in two of four replicate samples collected at SP-E-OUT on January 31. The dissolved zinc concentrations were 3.6 and 5.5 times greater than the total zinc concentrations in the samples collected from WWTP-E-IN on February 15 and from SP-W-OUT on February 18, respectively. It is suspected that the dissolved metal sample bottles were contaminated during sample processing. Enhanced sampling and testing for copper and zinc is ongoing to identify specific sources of contamination. This item remains open.
Report #52: Pending Data	Analytical results not reported.	Analytical results for receiving environment samples collected February 18, 20, and 21 are discussed in Sections 3.5, 3.6, and 3.7 of Report #53. Methylmercury analytical results for contact water samples collected February 18 are discussed in Section 3.4 of Report #53. Analytical results for receiving environment samples collected February 19 were not complete at the time of Report #53 preparation. Methylmercury, dioxins and furans results for contact water and receiving environment samples collected February 18, 20, and 21 were not complete at the time of Report #53 preparation. The pending results will be included in future weekly reports when available. This item remains open.

Notes:

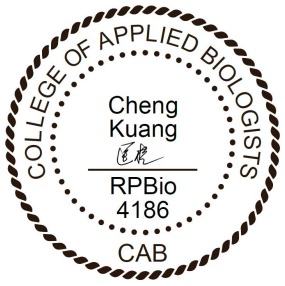
Result QA/QC screening includes the evaluation of field and lab QC results, comparison of total and dissolved metal results and review for modified detection limits.
Pending data are outstanding results from monitoring samples reported in the current or previous weekly reports.
Authorized works and monitoring 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.



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

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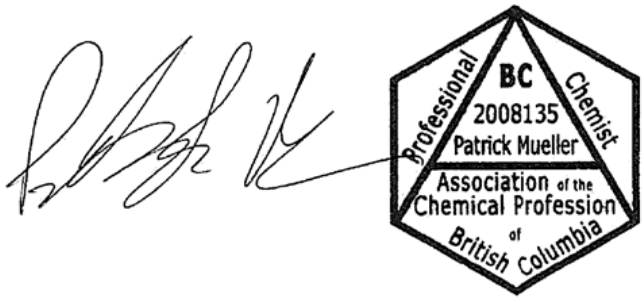
Environmental Scientist



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

Appendix A: Figures and Site Images

LEGEND

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

DATE SAVED:	Mar 05, 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

LORAX ENVIRONMENTAL

PROJECT:

Woodfibre LNG Project Construction Phase

TITLE: Completed or Under Construction Water Management Facilities and Established PE-111578 Monitoring Stations (March 1, 2025)

PROJECT #: A633-7

FIGURE: 1

P:\@Drafting\Woodfibre\Drafting Figures\APRX\WLNG Construction Phase 2024\WLNG Construction Phase 2024 - Weekly Reporting.aprx

Figure 1 Monitoring and Compliance Locations

Figure 2: East Catchment contact water management facilities (February 23 – March 1).

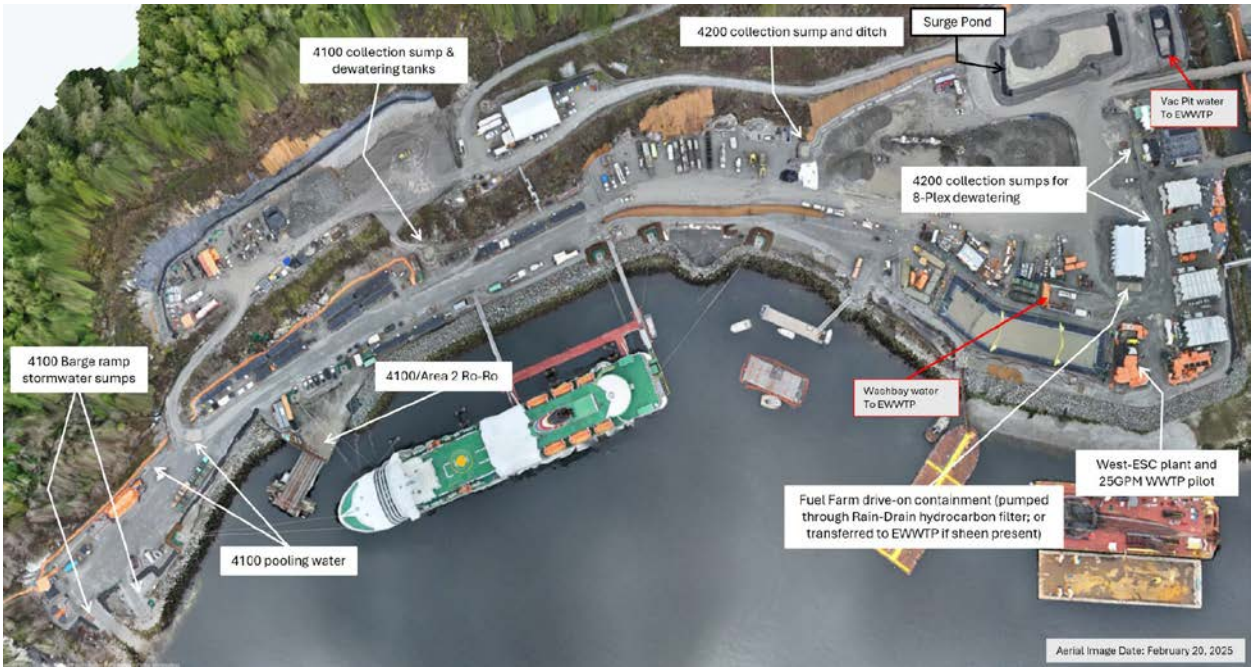


Figure 3: West Catchment contact water management facilities (February 23 – March 1).

Figure 4: Aerial view of the East Sedimentation Pond (February 28, 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 (February 28, 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
					VA25A3951-001	VA25A3951-003
		Long Term	Short Term		2025-02-24 12:34	2025-02-24 13:36
General Parameters						
pH - Field	pH units	- [2]	-	5.5 - 9.0	6.9	6.7
Conductivity - Field	µS/cm	-	-	-	468	523
Temperature - Field	°C	-	-	-	8.0	8.5
Salinity - Field	ppt	-	-	-	0.34	0.38
Turbidity - Field	NTU	-	-	-	63.56	50.25
TSS	mg/L	-	-	25 [6]	29.1	47.1
Dissolved Oxygen - Field	mg/L	≥8	-	-	11.72	11.83
Anions and Nutrients						
Sulphate	mg/L	-	-	-	232	287
Chloride	mg/L	-	-	-	9.64	9.99
Fluoride	mg/L	-	1.5	-	0.147	0.136
Ammonia (N-NH_3)	mg/L	29 [3]	191 [3]	-	0.068	0.0775
Nitrite (N-NO_2)	mg/L	-	-	-	0.0708	0.0772
Nitrate (N-NO_3)	mg/L	3.7	339	-	2.27	2.8
Total Metals						
Aluminum, total (T-Al)	mg/L	-	-	-	4.49	3.36
Antimony, total (T-Sb)	mg/L	-	0.27 [4]	-	0.00155	0.0015
Arsenic, total (T-As)	mg/L	0.0125	0.0125	-	0.00339	0.00291
Barium, total (T-Ba)	mg/L	-	-	-	0.0537	0.0406
Beryllium, total (T-Be)	mg/L	0.1	-	-	0.000082	0.000063
Boron, total (T-B)	mg/L	1.2	-	-	0.044	0.042
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	0.000097	0.0000979
Chromium, total (T-Cr)	mg/L	-	-	-	0.0042	0.00408
Cobalt, total (T-Co)	mg/L	-	-	-	0.00147	0.00118
Copper, total (T-Cu)	mg/L	- [2]	- [2]	0.0043	0.0105	0.00815
Iron, total (T-Fe)	mg/L	-	-	-	3.46	2.62
Lead, total (T-Pb)	mg/L	- [2]	- [2]	0.0035	0.00578	0.00445
Manganese, total (T-Mn)	mg/L	-	-	-	0.124	0.100
Mercury, total (T-Hg)	mg/L	0.000016 [5]	-	-	***0.0000384***	***0.0000521***
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.0456	0.0446
Nickel, total (T-Ni)	mg/L	0.0083	-	-	0.00187	0.00142
Selenium, total (T-Se)	mg/L	0.002	-	-	0.000242	0.000276
Silver, total (T-Ag)	mg/L	0.0015	0.003	-	0.000024	0.000019
Thallium, total (T-Tl)	mg/L	-	-	-	0.00004	0.000034
Uranium, total (T-U)	mg/L	-	-	-	0.0132	0.0124
Vanadium, total (T-V)	mg/L	- [2]	-	0.0081	0.00982	0.00828
Zinc, total (T-Zn)	mg/L	- [2]	- [2]	0.0133	0.0379	0.0200
Hexavalent Chromium, total	mg/L	0.0015	-	-	0.00136	0.00101
Dissolved Metals						
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	0.0000215	0.0000435
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.00236	0.00218
Iron, dissolved (D-Fe)	mg/L	-	-	-	0.015	0.012
Lead, dissolved (D-Pb)	mg/L	-	-	-	<0.000050	<0.000050
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.0358	0.0465
Nickel, dissolved (D-Ni)	mg/L	-	-	-	<0.00050	0.00052
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.2	0.211
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00300	0.00284
Zinc, dissolved (D-Zn)	mg/L	-	-	-	0.0116	0.0051
Polycyclic Aromatic Hydrocarbons (PAHs)						
Acenaphthene	mg/L	0.006	-	-	0.000038	0.000026
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	-	-	0.0000079	<0.0000050
Chrysene	mg/L	0.0001	-	-	<0.000020	<0.000010
Fluoranthene	mg/L	-	-	-	0.000035	0.000024
Fluorene	mg/L	0.012	-	-	0.000018	0.000011
1-methylnaphthalene	mg/L	0.001	-	-	0.000012	<0.000010
2-methylnaphthalene	mg/L	0.001	-	-	0.000016	0.000011
Naphthalene	mg/L	0.001	-	-	<0.000050	<0.000050
Phenanthrene	mg/L	-	-	-	0.000041	0.000027
Pyrene	mg/L	-	-	-	0.000031	0.000023
Quinoline	mg/L	-	-	-	0.00012	0.00012
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 Sedimentation Pond discharged during the monitoring period (February 23 – March 1) on February 23, 24, 25, and 27.
[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. Wet Conditions did not apply during the monitoring period.

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
					VA25A3951-002	VA25A3951-004
		Long Term	Short Term		2025-02-24 12:51	2025-02-24 12:28
General Parameters						
pH - Field	pH units	- [2]	-	5.5 - 9.0	6.0	7.4
Conductivity - Field	µS/cm	-	-	-	886	461
Temperature - Field	°C	-	-	-	8.6	9.9
Salinity - Field	ppt	-	-	-	0.7	0.32
Turbidity - Field	NTU	-	-	-	24.19	1.88
TSS	mg/L	-	-	25 [6]	14.5	<3.0
Dissolved Oxygen - Field	mg/L	≥8	-	-	11	12.01
Anions and Nutrients						
Sulphate	mg/L	-	-	-	512	211
Chloride	mg/L	-	-	-	10.8	9.8
Fluoride	mg/L	-	1.5	-	0.133	0.14
Ammonia ($N\text{-}NH_3$)	mg/L	12-29 [3]	77.7-191 [3]	-	0.0379	0.047
Nitrite ($N\text{-}NO_2$)	mg/L	-	-	-	0.0718	0.0712
Nitrate ($N\text{-}NO_3$)	mg/L	3.7	339	-	3.18	2.3
Total Metals						
Aluminum, total (T-Al)	mg/L	-	-	-	1.41	0.06
Antimony, total (T-Sb)	mg/L	-	0.27 [4]	-	0.0013	0.00145
Arsenic, total (T-As)	mg/L	0.0125	0.0125	-	0.00178	0.00129
Barium, total (T-Ba)	mg/L	-	-	-	0.0136	0.00621
Beryllium, total (T-Be)	mg/L	0.1	-	-	0.000031	<0.000020
Boron, total (T-B)	mg/L	1.2	-	-	0.036	0.042
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	0.0000239	0.0000124
Chromium, total (T-Cr)	mg/L	-	-	-	0.00383	0.00116
Cobalt, total (T-Co)	mg/L	-	-	-	0.00047	0.00025
Copper, total (T-Cu)	mg/L	- [2]	- [2]	0.0043	0.00542 [7]	0.00199
Iron, total (T-Fe)	mg/L	-	-	-	0.775	0.036
Lead, total (T-Pb)	mg/L	- [2]	- [2]	0.0035	0.00221	0.00007
Manganese, total (T-Mn)	mg/L	-	-	-	0.0374	0.0399
Mercury, total (T-Hg)	mg/L	0.000016 [5]	-	-	***0.0000882*** [7]	0.00000366
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.0502	0.0419
Nickel, total (T-Ni)	mg/L	0.0083	-	-	0.00075	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	-	0.000252	0.000165
Silver, total (T-Ag)	mg/L	0.0015	0.003	-	<0.000010	<0.000010
Thallium, total (T-Tl)	mg/L	-	-	-	0.000026	0.000014
Uranium, total (T-U)	mg/L	-	-	-	0.00389	0.0108
Vanadium, total (T-V)	mg/L	- [2]	-	0.0081	0.00694	0.0024
Zinc, total (T-Zn)	mg/L	- [2]	- [2]	0.0133	0.0156 [7]	<0.0030
Hexavalent Chromium, total	mg/L	0.0015	-	-	0.00050	0.00109
Dissolved Metals						
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	0.0000219	0.0000164
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.00278	0.00181
Iron, dissolved (D-Fe)	mg/L	-	-	-	0.011	<0.010
Lead, dissolved (D-Pb)	mg/L	-	-	-	0.000187	<0.000050
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.0176	0.0399
Nickel, dissolved (D-Ni)	mg/L	-	-	-	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.225	0.179
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.0056	0.00231
Zinc, dissolved (D-Zn)	mg/L	-	-	-	0.0118	0.0026
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	-	-	-	0.000068	<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 Sedimentation Pond discharged during the monitoring period (February 23 – March 1) on February 23, 24, 25, and 27.
[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. Wet Conditions did not apply during the monitoring period.
[7] Treated East WTTP effluent directed to the East Sedimentation Pond during the monitoring period.

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]	0.0072-0.020 [3,4]
Station	**Water Type**	**Sample ID**	**Lab ID**	**Sampling Date**		
Influent						
SP-E-IN	Influent	SP-E-IN	VA25A3314-002	2025-02-15	0.000028	***0.123***
SP-E-IN	Influent	SP-E-IN	VA25A3951-003	2025-02-24	***0.000170***	***0.0521***
WWTP-E-IN	Influent	WWTP-E-IN	VA25A3315-001	2025-02-15	***0.000218***	***0.122***
WWTP-E-IN	Influent	WWTP-E-IN	VA25A3951-001	2025-02-24	***0.000116***	***0.0384***
E500GPM-IN	Influent	E500GPM-IN	VA25A3314-003	2025-02-15	***0.000129***	***0.110***
Effluent						
SP-E-OUT	Effluent	SP-E-OUT	VA25A3951-004	2025-02-24	0.000051	0.00366
WWTP-E-OUT	Effluent	WWTP-E-OUT	VA25A3315-002	2025-02-15	***0.000129*** [5]	***0.0615*** [5]
WWTP-E-OUT	Effluent	WWTP-E-OUT-Dup	VA25A3315-004	2025-02-15	***0.000129*** [5]	***0.0644*** [5]
WWTP-E-OUT	Effluent	WWTP-E-OUT	VA25A3951-002	2025-02-24	***0.000147*** [6]	***0.0882*** [6]
E500GPM-OUT	Effluent	E500GPM-OUT	VA25A3314-004	2025-02-15	***0.000116*** [5]	***0.0848*** [5]
E500GPM-OUT	Effluent	E500GPM-OUT-Dup	VA25A3314-006	2025-02-15	***0.000147*** [5]	***0.0793*** [5]

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.
[5] East WWTP treated effluent and clarified water through the E500GPM TSS settling system were directed to the East Sedimentation Pond. The East Catchment did not discharge to Howe Sound on February 15.
[6] East WWTP treated effluent was directed to the East Sedimentation Pond on February 24.
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	L2758894-2	2025-02-07	0.0144	0.327
WWTP-E-IN	Influent	WWTP-E-IN	L2758766-1	2025-01-24	0.0492	2.35
WWTP-E-IN	Influent	WWTP-E-IN	L2758794-1	2025-01-28	0.0243	1.22
Effluent						
SP-E-OUT	Effluent	SP-E-OUT	L2758844-1	2025-01-31	0	1.56
SP-E-OUT	Effluent	SP-E-OUT-Dup	L2758844-2	2025-01-31	0.0159	2.35
WWTP-E-OUT	Effluent	WWTP-E-OUT	L2758766-2	2025-01-24	0	1.93
WWTP-E-OUT	Effluent	WWTP-E-OUT	L2758794-2	2025-01-28	0	1.39

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 (February 23 – March 1).

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	2025-02-23 16:27	7.3	12.22	0.36	107.96	83.5	6.9	492	No
SP-E-IN	Influent	2025-02-24 13:36	8.5	11.83	0.38	50.25	40.5	6.7	523	No
SP-E-IN	Influent	2025-02-24 15:31	8.3	11.82	0.44	32.65	27.4	6.6	606	No
SP-E-IN	Influent	2025-02-25 13:56	8.8	11.82	0.44	72.78	57.3	6.4	612	No
SP-E-IN	Influent	2025-02-26 15:37	11.0	11.23	0.53	1.06	3.8	7.7	778	No
SP-E-IN	Influent	2025-02-27 14:41	9.4	11.81	0.63	15.38	14.5	9.5	885	No
SP-E-IN	Influent	2025-02-28 11:53	10.9	11.50	0.65	39.95	32.8	6.4	946	No
SP-E-IN	Influent	2025-03-01 9:34	10.7	12.27	0.68	12.91	12.6	7.8	975	No
WWTP-E-IN	Influent	2025-02-23 9:17	7.9	11.77	0.32	80.02	62.7	6.9	436	No
WWTP-E-IN	Influent	2025-02-24 12:34	8.0	11.72	0.34	63.56	50.4	6.9	468	No
WWTP-E-IN	Influent	2025-02-24 15:19	8.1	11.7	0.40	51.9	41.7	6.9	504	No
WWTP-E-IN	Influent	2025-02-25 13:46	9.1	11.43	0.32	129.65	99.7	6.8	451	No
WWTP-E-IN	Influent	2025-02-27 14:57	10.4	11.67	0.57	18.86	17.1	9.7	818	No
WWTP-E-IN	Influent	2025-02-28 11:41	10.7	11.46	0.66	21.16	18.8	7.2	956	No
WWTP-E-IN	Influent	2025-03-01 9:22	9.6	11.39	0.67	11.07	11.3	7.7	945	No
E500GPM-IN	Influent	2025-02-23 16:47	7.2	13.25	0.29	106.99	82.8	7.5	396	No
E500GPM-IN	Influent	2025-02-24 13:18	8.0	12.83	0.34	65.08	51.5	7.0	469	No
E500GPM-IN	Influent	2025-02-25 13:53	9.3	13.01	0.31	146.62	112.3	7.0	446	No
E500GPM-IN	Influent	2025-02-26 17:14	10.9	12.23	0.53	8.26	9.2	7.6	774	No
Effluent [5]										
SP-E-OUT	Effluent	2025-02-23 16:37	7.4	12.70	0.30	4.48	6.3	7.4	383	No
SP-E-OUT	Effluent	2025-02-24 12:28	9.9	12.01	0.32	1.88	4.4	7.4	461	No
SP-E-OUT	Effluent	2025-02-24 15:15	8.4	12.14	0.34	2.52	4.9	7.3	475	No
SP-E-OUT	Effluent	2025-02-25 13:41	9.6	12.60	0.29	4.64	6.5	7.0	425	No
WWTP-E-OUT	Effluent	2025-02-23 16:55	7.8	10.11	0.71	5.41	7.0	6.4	946	No
WWTP-E-OUT	Effluent	2025-02-24 12:51	8.6	11.00	0.70	24.19	21.0	6.0	886	No
WWTP-E-OUT	Effluent	2025-02-24 15:23	8.5	11.00	0.60	8.13	9.1	6.2	865	No
WWTP-E-OUT	Effluent	2025-02-25 14:36	8.6	10.17	0.56	1.51	4.1	5.7	771	No
WWTP-E-OUT	Effluent	2025-02-27 14:54	9.5	11.94	0.67	1.48	4.1	9.7 [7]	934	No
WWTP-E-OUT	Effluent	2025-02-28 11:48	10.5	11.40	0.64	2.55	4.9	7.7	920	No
WWTP-E-OUT	Effluent	2025-03-01 9:18	10.1	13.04	0.68	1.44	4.1	7.7	965	No
E500GPM-OUT	Effluent	2025-02-23 9:21	7.7	12.83	0.30	2.65	5.0	7.4	13	No
E500GPM-OUT	Effluent	2025-02-24 13:14	8.4	12.27	0.33	1.1	3.8	7.1	454	No
E500GPM-OUT	Effluent	2025-02-25 13:50	8.7	12.62	0.29	4.78	6.6	7.1	416	No
E500GPM-OUT	Effluent	2025-02-26 15:21	11.1	11.24	0.52	1.82	4.4	7.5	767	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. There was no influent to the East WWTP at the time of monitoring on February 26, therefore daily field measurements for WWTP-E-IN were not collected on this day.
[5] On February 27, field measurements were not collected at SP-E-OUT because there was no discharge at the time of monitoring. There was no discharge February 26, 28, and March 1, therefore daily measurements for SP-E-OUT were not collected on those days. There was no effluent discharged from the East WWTP at the time of monitoring on February 26, therefore daily field measurements for WWTP-E-OUT were not collected on this day.
[6] The PE-111578 discharge limit for TSS is 25 mg/L under dry conditions and 75 mg/L for Wet Conditions. Wet Conditions did not apply during the monitoring period.
[7] Treated East WWTP effluent was directed to the East Sedimentation Pond on February 27.

Table B-6: East Catchment Daily Discharge Volumes for the Monitoring Period (February 23 – March 1).

	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				
2025-02-23	0	2,503 [2]	512 [3]	2,503
2025-02-24	0	2,402 [2]	588 [3]	2,124
2025-02-25	0	2,062 [2]	689 [3]	1,645
2025-02-26	0	1,608 [2]	311 [3]	0
2025-02-27	0	414 [2]	568 [3]	189
2025-02-28	0	0	561 [3]	0
2025-03-01	0	0	831 [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 m^3/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] Clarified effluent from the E500GPM TSS Settling System were recirculated to the East Sedimentation Pond on February 24 through February 27. A total of 2,124 m^3 were discharged to Howe Sound at SP-E-OUT and a total of 278 m^3 were recirculated to the West Sedimentation Pond on February 24. A total of 1,645 m^3 were discharged to Howe Sound at SP-E-OUT and a total of 416 m^3 were recirculated to the West Sedimentation Pond on February 25. A total of 1,608 m^3 were recirculated to the West Sedimentation Pond on February 26. A total of 189 m^3 were discharged to Howe Sound at SP-E-OUT and a total of 225 m^3 were recirculated to the West Sedimentation Pond on February 27.
[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 VA25A3951-005 2025-02-24 14:10	Station SP-W-IN Influent SP-W-IN VA25A4082-001 2025-02-25 12:05
		Long Term	Short Term			
General Parameters						
pH - Field	pH units	- [2]	-	5.5 - 9.0	8.7	7.9
Conductivity - Field	µS/cm	-	-	-	108	92
Temperature - Field	°C	-	-	-	6.7	7.8
Salinity - Field	ppt	-	-	-	0.08	0.06
Turbidity - Field	NTU	-	-	-	32.56	61.60
TSS	mg/L	-	-	25 [6]	33.1	65.4
Dissolved Oxygen - Field	mg/L	≥8	-	-	12.53	13.20
Anions and Nutrients						
Sulphate	mg/L	-	-	-	14.4	-[7]
Chloride	mg/L	-	-	-	4.59	-[7]
Fluoride	mg/L	-	1.5	-	0.064	-[7]
Ammonia (N-NH_3)	mg/L	0.75 [3]	5 [3]	-	0.0277	-[7]
Nitrite (N-NO_2)	mg/L	-	-	-	0.0195	-[7]
Nitrate (N-NO_3)	mg/L	3.7	339	-	1.11	-[7]
Total Metals						
Aluminum, total (T-Al)	mg/L	-	-	-	2.85	-[7]
Antimony, total (T-Sb)	mg/L	-	0.27 [4]	-	0.00148	-[7]
Arsenic, total (T-As)	mg/L	0.0125	0.0125	-	0.00266	-[7]
Barium, total (T-Ba)	mg/L	-	-	-	0.0315	-[7]
Beryllium, total (T-Be)	mg/L	0.1	-	-	0.000051	-[7]
Boron, total (T-B)	mg/L	1.2	-	-	0.024	-[7]
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	0.0000479	-[7]
Chromium, total (T-Cr)	mg/L	-	-	-	0.00215	-[7]
Cobalt, total (T-Co)	mg/L	-	-	-	0.00076	-[7]
Copper, total (T-Cu)	mg/L	- [2]	- [2]	0.0043	0.00498	-[7]
Iron, total (T-Fe)	mg/L	-	-	-	1.93	-[7]
Lead, total (T-Pb)	mg/L	- [2]	- [2]	0.0035	0.00338	-[7]
Manganese, total (T-Mn)	mg/L	-	-	-	0.0628	-[7]
Mercury, total (T-Hg)	mg/L	0.000016 [5]	-	-	0.00000801	-[7]
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.024	-[7]
Nickel, total (T-Ni)	mg/L	0.0083	-	-	0.00072	-[7]
Selenium, total (T-Se)	mg/L	0.002	-	-	0.000175	-[7]
Silver, total (T-Ag)	mg/L	0.0015	0.003	-	0.000018	-[7]
Thallium, total (T-Tl)	mg/L	-	-	-	0.000024	-[7]
Uranium, total (T-U)	mg/L	-	-	-	0.00636	-[7]
Vanadium, total (T-V)	mg/L	- [2]	-	0.0081	0.00707	-[7]
Zinc, total (T-Zn)	mg/L	- [2]	- [2]	0.0133	0.0106	-[7]
Hexavalent Chromium, total	mg/L	0.0015	-	-	0.00122	0.00097
Dissolved Metals						
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	<0.0000050	-[7]
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.00173	-[7]
Iron, dissolved (D-Fe)	mg/L	-	-	-	<0.010	-[7]
Lead, dissolved (D-Pb)	mg/L	-	-	-	<0.000050	-[7]
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.00474	-[7]
Nickel, dissolved (D-Ni)	mg/L	-	-	-	<0.00050	-[7]
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.0638	-[7]
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00364	-[7]
Zinc, dissolved (D-Zn)	mg/L	-	-	-	<0.0010	-[7]
Polycyclic Aromatic Hydrocarbons (PAHs)						
Acenaphthene	mg/L	0.006	-	-	0.000116	-[7]
Acridine	mg/L	-	-	-	<0.000010	-[7]
Anthracene	mg/L	-	-	-	<0.000020	-[7]
Benz(a)anthracene	mg/L	-	-	-	0.00001	-[7]
Benzo(a)pyrene	mg/L	0.00001	-	-	0.0000068	-[7]
Chrysene	mg/L	0.0001	-	-	<0.000020	-[7]
Fluoranthene	mg/L	-	-	-	0.000048	-[7]
Fluorene	mg/L	0.012	-	-	0.000044	-[7]
1-methylnaphthalene	mg/L	0.001	-	-	0.000024	-[7]
2-methylnaphthalene	mg/L	0.001	-	-	0.000026	-[7]
Naphthalene	mg/L	0.001	-	-	0.000056	-[7]
Phenanthrene	mg/L	-	-	-	0.000062	-[7]
Pyrene	mg/L	-	-	-	0.000037	-[7]
Quinoline	mg/L	-	-	-	<0.000050	-[7]
Volatile Organic Compounds (VOCs)						
Benzene	mg/L	0.11	-	-	<0.00050	-[7]
Ethylbenzene	mg/L	0.25	-	-	<0.00050	-[7]
Methyl-tert-butyl-ether	mg/L	5	0.44	-	<0.00050	-[7]
Styrene	mg/L	-	-	-	<0.00050	-[7]
Toluene	mg/L	0.215	-	-	<0.00040	-[7]
Total Xylenes	mg/L	-	-	-	<0.00050	-[7]
Chlorobenzene	mg/L	0.025	-	-	<0.00050	-[7]
1,2-Dichlorobenzene	mg/L	0.042	-	-	<0.00050	-[7]

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 Sedimentation Pond discharged each day during the monitoring period (February 23 – March 1) except on February 28.
[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. Wet Conditions did not apply during the monitoring period.
[7] Only field and physical parameters, total and dissolved hexavalent chromium were tested in the SP-W-IN sample collected February 25.

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
					Influent
					SP-W-OUT
					VA25A3951-006
		Long Term	Short Term		2025-02-24 14:56
General Parameters					
pH - Field	pH units	- [2]	-	5.5 - 9.0	8.1
Conductivity - Field	µS/cm	-	-	-	108
Temperature - Field	°C	-	-	-	7.0
Salinity - Field	ppt	-	-	-	0.08
Turbidity - Field	NTU	-	-	-	1.32
TSS	mg/L	-	-	25 [6]	<3.0
Dissolved Oxygen - Field	mg/L	≥8	-	-	12
Anions and Nutrients					
Sulphate	mg/L	-	-	-	14.8
Chloride	mg/L	-	-	-	5.47
Fluoride	mg/L	-	1.5	-	0.065
Ammonia (N-NH_3)	mg/L	2.9 [3]	19 [3]	-	0.022
Nitrite (N-NO_2)	mg/L	-	-	-	0.0319
Nitrate (N-NO_3)	mg/L	3.7	339	-	1.06
Total Metals					
Aluminum, total (T-Al)	mg/L	-	-	-	0.0584
Antimony, total (T-Sb)	mg/L	-	0.27 [4]	-	0.00143
Arsenic, total (T-As)	mg/L	0.0125	0.0125	-	0.00193
Barium, total (T-Ba)	mg/L	-	-	-	0.00289
Beryllium, total (T-Be)	mg/L	0.1	-	-	<0.000020
Boron, total (T-B)	mg/L	1.2	-	-	0.018
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	<0.0000050
Chromium, total (T-Cr)	mg/L	-	-	-	0.00114
Cobalt, total (T-Co)	mg/L	-	-	-	<0.00010
Copper, total (T-Cu)	mg/L	- [2]	- [2]	0.0043	0.00162
Iron, total (T-Fe)	mg/L	-	-	-	0.046
Lead, total (T-Pb)	mg/L	- [2]	- [2]	0.0035	0.000135
Manganese, total (T-Mn)	mg/L	-	-	-	0.0106
Mercury, total (T-Hg)	mg/L	0.000016 [5]	-	-	0.00000091
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.025
Nickel, total (T-Ni)	mg/L	0.0083	-	-	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	-	0.000171
Silver, total (T-Ag)	mg/L	0.0015	0.003	-	<0.000010
Thallium, total (T-Tl)	mg/L	-	-	-	<0.000010
Uranium, total (T-U)	mg/L	-	-	-	0.0058
Vanadium, total (T-V)	mg/L	- [2]	-	0.0081	0.00251
Zinc, total (T-Zn)	mg/L	- [2]	- [2]	0.0133	0.0074
Hexavalent Chromium, total	mg/L	0.0015	-	-	0.0012
Dissolved Metals					
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	0.0000062
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.0013
Iron, dissolved (D-Fe)	mg/L	-	-	-	<0.010
Lead, dissolved (D-Pb)	mg/L	-	-	-	<0.000050
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.0093
Nickel, dissolved (D-Ni)	mg/L	-	-	-	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.0606
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00246
Zinc, dissolved (D-Zn)	mg/L	-	-	-	<0.0010
Polycyclic Aromatic Hydrocarbons (PAHs)					
Acenaphthene	mg/L	0.006	-	-	0.000015
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 Sedimentation Pond discharged each day during the monitoring period (February 23 – March 1) except on February 28.
[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. Wet Conditions did not apply during the monitoring period.

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]	0.0046-0.011 [3,4]
Station	**Water Type**	**Sample ID**	**Lab ID**	**Sampling Date**		
Influent						
SP-W-IN	Influent	SP-W-IN	VA25A3314-001	2025-02-15	0.000033	0.00254
SP-W-IN	Influent	SP-W-IN	VA25A3413-001	2025-02-18	<0.000020	-[5]
SP-W-IN	Influent	SP-W-IN	VA25A3951-005	2025-02-24	0.000070	0.00801
Effluent						
SP-W-OUT	Effluent	SP-W-OUT	VA25A3413-002	2025-02-18	<0.000020	<0.00050
SP-W-OUT	Effluent	SP-W-OUT	VA25A3951-006	2025-02-24	0.000035	0.00091

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.
[5] The total mercury sample bottle for the SP-W-IN sample collected February 18 was broken in transit to the laboratory; therefore, testing could not be completed. Another sample for SP-W-IN was collected February 19 and tested for total and dissolved mercury. The total mercury concentration (0.00896 ug/L) in the SP-W-IN sample collected February 19 met WQGs.
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	L2758848-1	2025-01-30	0.118	1.73
SP-W-IN	Influent	SP-W-IN	L2758894-1	2025-02-07	0.327	0.618
Effluent						
SP-W-OUT	Effluent	SP-W-OUT	L2758845-1	2025-02-01	0	1.06

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 (February 23 – March 1).

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-E	In-pond	2025-02-24 9:38	6.4	12.32	0.08	5.48	7.1	8.2	111	No
SP-W-IN	Influent	2025-02-23 17:31	6.1	13.25	0.07	109.41	84.6	9.4	99	No
SP-W-IN	Influent	2025-02-24 7:56	5.9	13.50	0.10	111.07	85.8	7.8	101	No
SP-W-IN	Influent	2025-02-24 14:10		12.53	0.08	32.56	27.3	8.7	108	No
SP-W-IN	Influent	2025-02-24 15:49	6.7	12.63	0.07	52.22	41.9	8.6	100	No
SP-W-IN	Influent	2025-02-25 12:05	7.8	13.24	0.06	61.6	48.9	7.9	92	No
SP-W-IN	Influent	2025-02-26 14:35	8.8	13.43	0.06	25.12	21.7	8.1	89	No
SP-W-IN	Influent	2025-02-27 14:03	7.3	11.29	0.07	15.01	14.2	8.5	92	No
SP-W-IN	Influent	2025-02-28 11:19	8.4	12.44	0.09	7.92	8.9	7.3	128	No
SP-W-IN	Influent	2025-03-01 10:16	7.5	12.05	0.08	33.22	27.8	8.4	106	No
W500GPM-IN	Influent	2025-02-23 17:27	6.8	12.87	0.07	255.81	193.8	9.4	91	No
W500GPM-IN	Influent	2025-02-24 7:46	7.2	12.93	0.08	158.65	121.3	7.4	110	No
W500GPM-IN	Influent	2025-02-24 17:14	8.4	12.61	0.08	86.7	67.7	8.0	110	No
W500GPM-IN	Influent	2025-02-25 12:26	7.3	13.03	0.07	203.16	154.5	8.7	91	No
W500GPM-IN	Influent	2025-02-26 17:28	9.3	12.6	0.06	19.91	17.8	8.2	91	No
W500GPM-IN	Influent	2025-02-27 16:01	8.1	12.96	0.06	19.3	17.4	8.4	81	No
W500GPM-IN	Influent	2025-02-28 11:12	8.7	12.78	0.09	7.36	8.5	6.9	131	No
W500GPM-IN	Influent	2025-03-01 10:32	8.8	12.31	0.08	4.8	6.6	7.8	114	No
ESC-W-IN	Influent	2025-02-23 17:14	6.6	12.94	0.07	116.36	89.8	9.4	91	No
ESC-W-IN	Influent	2025-02-24 8:01	6.0	13.01	0.08	127.04	97.7	7.4	106	No
ESC-W-IN	Influent	2025-02-24 17:23	6.8	12.61	0.08	42.05	34.4	8.4	105	No
Effluent [5]										
SP-W-OUT	Effluent	2025-02-23 17:06	6.8	13.97	0.06	21.79	19.3	9.0	86	No
SP-W-OUT	Effluent	2025-02-23 17:08	6.9	13.65	0.06	8.2	9.1	9.0	87	No
SP-W-OUT	Effluent	2025-02-23 18:49	7.4	12.22	0.06	3.03	5.3	8.9	88	No
SP-W-OUT	Effluent	2025-02-23 18:55	8.2	12.12	0.06	2.88	5.1	8.7	93	No
SP-W-OUT	Effluent	2025-02-24 8:13	6.3	13.63	0.08	4.58	6.4	8.3	110	No
SP-W-OUT	Effluent	2025-02-24 9:34	6.4	13.06	0.08	1.24	3.9	7.9	111	No
SP-W-OUT	Effluent	2025-02-24 14:56	7.0	12.00	0.08	1.32	4.0	8.1	108	No
SP-W-OUT	Effluent	2025-02-25 14:07	8.1	13.04	0.07	1.04	3.8	7.9	94	No
SP-W-OUT	Effluent	2025-02-27 15:51	8.8	12.94	0.06	3.22	5.4	8.0	92	No
SP-W-OUT	Effluent	2025-03-01 10:22	9.1	12.49	0.08	2.08	4.6	7.8	114	No
W500GPM-OUT	Effluent	2025-02-23 17:35	6.8	12.82	0.06	24.47	21.2	9.1 [7]	88	No
W500GPM-OUT	Effluent	2025-02-24 7:51	6.6	15.57	0.08	13.00	12.7	8.2	111	No
W500GPM-OUT	Effluent	2025-02-24 17:19	7.3	12.87	0.08	0.65	3.5	7.9	108	No
W500GPM-OUT	Effluent	2025-02-25 12:22	7.4	12.93	0.07	4.36	6.3	8.1	93	No
W500GPM-OUT	Effluent	2025-02-27 15:57	8.7	12.67	0.06	3.08	5.3	8.0	89	No
W500GPM-OUT	Effluent	2025-02-28 11:15	8.5	12.43	0.09	1.39	4.0	7.1	134	No
W500GPM-OUT	Effluent	2025-03-01 10:28	8.9	12.49	0.08	1.78	4.3	7.7	114	No
ESC-W-OUT	Effluent	2025-02-23 17:03	6.8	12.36	0.06	3.2	5.4	8.7	86	No
ESC-W-OUT	Effluent	2025-02-23 18:58	6.9	12.43	0.06	4.23	6.2	9.0	88	No
ESC-W-OUT	Effluent	2025-02-23 18:59	6.8	14.18	0.07	6.13	7.6	8.8	91	No
ESC-W-OUT	Effluent	2025-02-24 8:07	6.5	13.49	0.08	4.34	6.2	8.3	110	No
ESC-W-OUT	Effluent	2025-02-24 17:29	7.0	12.24	0.08	0.8	3.6	8.0	109	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) at the time of monitoring on February 26 and 28, 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. Wet Conditions dd not apply during the monitoring period.
[7] Clarified water from the W500GPM system was combined with clarified water from the ESC (150 GPM) system and discharged at SP-W-OUT on February 23. Field measurements collected at SP-W-OUT on February 23 met the PE-111578 discharge limit for pH.

Table C-6: West Catchment Daily Discharge Volumes for the Monitoring Period (February 23 – March 1).

	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					
2025-02-23	0	2,731 [3]	858 [4]	0	3,479
2025-02-24	0	3,136 [3]	707 [4]	0	3,716
2025-02-25	0	2,061 [3]	0	0	2,061
2025-02-26	0	1,976 [3]	0	0	1,976
2025-02-27	0	735 [3]	0	0	735
2025-02-28	0	1,564 [3]	0	0	0
2025-03-01	0	1,814 [3]	0	0	1,814

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 m^3/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] All of the effluent volumes clarified through the W500GPM TSS Settling System were discharged to Howe Sound except on February 28 when W500GPM effluent was directed to the West Sedimentation Pond.
[4] Clarified effluent from the West 150GPM (ESC) TSS Settling System was recirculated to the West Sedimentation Pond and discharged to Howe Sound on February 23 and 24. A total of 748 m^3 were discharged to Howe Sound at SP-W-OUT and a total of 110 m^3 were recirculated to the West Sedimentation Pond on February 23. A total of 579 m^3 were discharged to Howe Sound at SP-W-OUT and a total of 128 m^3 were recirculated to the West Sedimentation Pond on February 24.

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-06	Station OUT-01	Station OUT-02
				Non-Contact Water Diversion Ditch Outlet	Non-Contact Water Diversion Ditch Outlet	Non-Contact Water Diversion Ditch Outlet
				OUT-06	OUT-01	OUT-02
				VA25A3682-001	VA25A3846-001	VA25A3846-002
		Long Term	Short Term	2025-02-20 14:00	2025-02-23 11:31	2025-02-23 11:58
General Parameters						
pH - Field	pH units	6.5 - 9.0	-	6.7	6.8	7.5
Specific Conductivity - Field	µS/cm	-	-	16.3	9.0	7.0
Temperature - Field	°C	-	-	5.5	4.9	4.5
Salinity - Field	ppt	-	-	0.01	0.01	0.0
Turbidity - Field	NTU	-	-	1.03	0.15	1.14
TSS	mg/L	-	-	<3.0	<3.0	<3.0
Dissolved Oxygen - Field	mg/L	>=8	>=5	13.42	12.32	12.57
Anions and Nutrients						
Sulphate [2]	mg/L	128	-	1.79	1.50	1.49
Chloride	mg/L	120	600	0.51	<0.50	<0.50
Fluoride [2]	mg/L	-	0.40-0.46	<0.020	<0.020	<0.020
Ammonia ($N\text{-}NH_3$) [2]	mg/L	1.94-1.97	13.6-25.2	0.0052	<0.0050	<0.0050
Nitrite ($N\text{-}NO_2$) [2]	mg/L	0.02	0.06	<0.0010	<0.0010	<0.0010
Nitrate ($N\text{-}NO_3$)	mg/L	3	32.8	0.236	0.186	0.0844
Total Metals						
Aluminum, total (T-Al) [2]	mg/L	0.067-0.18	-	***0.192***	***0.152***	0.172
Antimony, total (T-Sb)	mg/L	0.074	-	<0.00010	<0.00010	<0.00010
Arsenic, total (T-As)	mg/L	0.005	-	0.00017	0.00012	<0.00010
Barium, total (T-Ba)	mg/L	1	-	0.00342	0.00311	0.00298
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	0.00011-0.00023	<0.0000050	0.0000058	<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	-	-	0.00087	0.00078	0.00069
Iron, total (T-Fe)	mg/L	0.3	1	0.041	0.026	0.026
Lead, total (T-Pb)	mg/L	-	-	0.000157	0.000078	<0.000050
Manganese, total (T-Mn) [2]	mg/L	0.768	0.816	0.00148	0.00136	0.0017
Mercury, total (T-Hg) [3]	mg/L	0.00002	-	0.00000447	0.00000248	0.00000282
Molybdenum, total (T-Mo)	mg/L	0.073	46	0.000543	0.000269	0.000269
Nickel, total (T-Ni) [2]	mg/L	0.025	-	<0.00050	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	0.001	-	0.00006	<0.000050	<0.000050
Silver, total (T-Ag) [2]	mg/L	0.000050	0.00010	<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	0.000051	0.000081	0.000048
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
Dissolved Metals						
Cadmium, dissolved (D-Cd) [2]	mg/L	0.000019-0.000043	0.000038-0.000063	<0.0000050	<0.0000050	<0.0000050
Copper, dissolved (D-Cu) [2]	mg/L	0.00020-0.00093	0.0018-0.0053	***0.00080***	***0.00062***	0.00045
Iron, dissolved (D-Fe)	mg/L	-	0.35	0.015	0.014	0.016
Lead, dissolved (D-Pb) [2]	mg/L	0.0022-0.0028	-	0.000067	<0.000050	<0.000050
Manganese, dissolved (D-Mn) [2]	mg/L	0.35	1.97	0.00115	0.00077	0.00075
Nickel, dissolved (D-Ni) [2]	mg/L	0.00080-0.0011	0.013-0.016	<0.00050	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	2.5	-	0.019	0.00635	0.00546
Vanadium, dissolved (D-V)	mg/L	-	-	<0.00050	<0.00050	<0.00050
Zinc, dissolved (D-Zn) [2]	mg/L	0.0040-0.0078	0.011	0.0012	<0.0010	<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	0.00001	-	-	-	-
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: 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]	0.0018 – 0.0048 [3,4]
Station	**Water Type**	**Sample ID**	**Lab ID**	**Sampling Date**		
OUT-01	Non-Contact Water Diversion Ditch Outlet	OUT-01	VA25A3846-001	2025-02-23	***0.000141***	***0.00248***
OUT-02	Non-Contact Water Diversion Ditch Outlet	OUT-02	VA25A3846-002	2025-02-23	0.000059	0.00282
OUT-06	Non-Contact Water Diversion Ditch Outlet	OUT-06	VA25A3682-001	2025-02-20	***0.000225***	***0.00447***

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-04
				Woodfibre Creek Lower Reach	East Creek Lower Reach
				SW-01	SW-04
				VA25A3804-001	VA25A3804-002
		Long Term	Short Term	2025-02-21 8:50	2025-02-21 11:00
General Parameters					
pH - Field	pH units	6.5 - 9.0	-	***6.2***	7.4
Specific Conductivity - Field	µS/cm	-	-	5	43
Temperature - Field	°C	-	-	2.9	5.1
Salinity - Field	ppt	-	-	0	0.03
Turbidity - Field	NTU	-	-	1.84	26.05
TSS	mg/L	-	-	<3.0	32.5
Dissolved Oxygen - Field	mg/L	>=8	>=5	13.62	12.91
Anions and Nutrients					
Sulphate [2]	mg/L	128-218	-	0.65	4.67
Chloride	mg/L	120	600	0.72	2.56
Fluoride [2]	mg/L	-	0.40-0.90	<0.020	0.040
Ammonia ($N\text{-}NH_3$) [2]	mg/L	1.95-2.02	15.2-27.9	<0.0050	<0.0050
Nitrite ($N\text{-}NO_2$) [2]	mg/L	0.020-0.040	0.060-0.12	<0.0010	0.0019
Nitrate ($N\text{-}NO_3$)	mg/L	3	32.8	0.0539	0.0886
Total Metals					
Aluminum, total (T-Al) [2]	mg/L	0.028-0.19	-	***0.166***	***1.68***
Antimony, total (T-Sb)	mg/L	0.074	-	<0.00010	0.00017
Arsenic, total (T-As)	mg/L	0.005	-	0.0001	0.0007
Barium, total (T-Ba)	mg/L	1	-	0.00257	0.019
Beryllium, total (T-Be)	mg/L	0.00013	-	<0.000020	0.000026
Boron, total (T-B)	mg/L	1.2	29	<0.010	<0.010
Cadmium, total (T-Cd) [2]	mg/L	0.000036-0.000065	0.00011-0.00071	<0.0000050	0.0000278
Chromium, total (T-Cr) [4]	mg/L	0.001	-	<0.00050	***0.0014***
Cobalt, total (T-Co)	mg/L	0.001	0.11	<0.00010	0.00052
Copper, total (T-Cu)	mg/L	-	-	<0.00050	0.00437
Iron, total (T-Fe)	mg/L	0.3	1	0.050	***1.54***
Lead, total (T-Pb)	mg/L	-	-	0.000079	0.00104
Manganese, total (T-Mn) [2]	mg/L	0.768	0.816-0.918	0.00202	0.050
Mercury, total (T-Hg) [3]	mg/L	0.00002	-	0.0000019	0.00000508
Molybdenum, total (T-Mo)	mg/L	0.073	46	0.000258	0.00298
Nickel, total (T-Ni) [2]	mg/L	0.025	-	<0.00050	0.001
Selenium, total (T-Se)	mg/L	0.001	-	<0.000050	<0.000050
Silver, total (T-Ag) [2]	mg/L	0.000050	0.00010	<0.000010	<0.000010
Thallium, total (T-Tl)	mg/L	0.0008	-	<0.000010	0.000015
Uranium, total (T-U)	mg/L	0.0085	0.033	0.000546	0.000793
Vanadium, total (T-V)	mg/L	0.12	-	<0.00050	0.00323
Zinc, total (T-Zn)	mg/L	-	-	<0.0030	0.0087
Hexavalent Chromium, total	mg/L	0.001	-	<0.00050	0.00067
Dissolved Metals					
Cadmium, dissolved (D-Cd) [2]	mg/L	0.000018-0.000096	0.000038-0.000195	<0.0000050	0.0000108
Copper, dissolved (D-Cu) [2]	mg/L	0.00020-0.0010	0.00048-0.0062	***0.00034***	***0.00162***
Iron, dissolved (D-Fe)	mg/L	-	0.35	0.026	0.027
Lead, dissolved (D-Pb) [2]	mg/L	0.0021-0.0035	-	<0.000050	<0.000050
Manganese, dissolved (D-Mn) [2]	mg/L	0.29-0.38	1.97-2.60	0.00088	0.00335
Nickel, dissolved (D-Ni) [2]	mg/L	0.00070-0.0013	0.012-0.016	<0.00050	0.00050
Strontium, dissolved (D-Sr)	mg/L	2.5	-	0.0039	0.0301
Vanadium, dissolved (D-V)	mg/L	-	-	<0.00050	0.00082
Zinc, dissolved (D-Zn) [2]	mg/L	0.0062-0.0084	0.010-0.023	<0.0010	0.0029
Polycyclic Aromatic Hydrocarbons (PAHs)					
Acenaphthene	mg/L	0.0058	-	<0.000010	<0.000010
Acridine	mg/L	0.003	-	<0.000010	<0.000010
Anthracene	mg/L	0.000012	-	<0.000010	<0.000010
Benz(a)anthracene	mg/L	0.000018	-	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	<0.0000050	<0.0000050
Chrysene	mg/L	-	-	<0.000010	<0.000010
Fluoranthene	mg/L	0.00004	-	<0.000010	<0.000010
Fluorene	mg/L	0.003	-	<0.000010	<0.000010
1-methylnaphthalene	mg/L	-	-	<0.000010	<0.000010
2-methylnaphthalene	mg/L	-	-	<0.000010	<0.000010
Naphthalene	mg/L	0.001	0.001	<0.000050	<0.000050
Phenanthrene	mg/L	0.0003	-	<0.000020	<0.000020
Pyrene	mg/L	0.00002	-	<0.000010	<0.000010
Quinoline	mg/L	0.0034	-	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)					
Benzene	mg/L	0.04	-	<0.00050	<0.00050
Ethylbenzene	mg/L	0.09	-	<0.00050	<0.00050
Methyl-tert-butyl-ether	mg/L	10	3.4	<0.00050	<0.00050
Styrene	mg/L	0.072	-	<0.00050	<0.00050
Toluene	mg/L	0.0005	-	<0.00040	<0.00040
Total Xylenes	mg/L	0.03	-	<0.00050	<0.00050
Chlorobenzene	mg/L	-	-	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	-	-	<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 $\leqslant$ 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: 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]	0.0095 – 0.02 [3,4]
Station	**Water Type**	**Sample ID**	**Lab ID**	**Sampling Date**		
SW-01	Lower Reach of Woodfibre Creek (near the mouth)	SW-01	VA25A3804-001	2025-02-21	<0.000020	0.00190
SW-04	Lower Reach of East Creek (near the outlet to the outfall culvert)	SW-04	VA25A3804-002	2025-02-21	0.000068	0.00508

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.

Table E-3: Freshwater 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**		
SW-01	Lower Reach of Woodfibre Creek (near the mouth)	SW-01	L2758769-1	2025-01-24	0	1.58
SW-02	Upper Reach of Mill Creek (upstream of the third bridge)	SW-02	L2758769-2	2025-01-24	0	1.30
SW-07	Upstream Mill Creek (at the diversion inlet)	SW-07	L2758765-2	2025-01-25	0	2.44
SW-04	Lower Reach of East Creek (near the outlet to the outfall culvert)	SW-04	L2758765-1	2025-01-25	0.000837	1.51

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.

Appendix F: Estuarine Water Receiving Environment Results

Table F-1: Estuarine Water 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**		
SW-03	Mill Creek Estuary	SW-03	L2758769-3	2025-01-24	0	1.57

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.

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
				VA25A3415-001	VA25A3415-002	VA25A3415-003	VA25A3415-004	VA25A3415-005	VA25A3415-006
		Long Term	Short Term	2025-02-18 14:00	2025-02-18 14:20	2025-02-18 14:35	2025-02-18 13:00	2025-02-18 13:20	2025-02-18 13:30
General Parameters									
pH - Field	pH units	7.0 - 8.7	-	7.85	7.78	7.67	7.86	7.87	7.67
Specific Conductivity - Field	µS/cm	-	-	22283	29915	31424	24542	25414	31433
Temperature - Field	℃	-	-	6.8	7.4	8.1	6.6	6.7	8.1
Salinity - Field	ppt	Narrative [2]	-	21.19	28.78	29.83	23.7	24.56	29.83
Turbidity - Field	NTU	2.79-3.25 [2]	8.79-9.25 [2]	0.67	0.57	0.33	0.50	0.62	0.41
TSS	mg/L	7.0-8.5 [2]	27.0-29.5 [2]	4.8	3.5	6.0	2.8	7.8	4.1
Dissolved Oxygen - Field	mg/L	>=8	-	10.68	10.05	***7.72***	10.43	10.26	***7.72***
Anions and Nutrients									
Sulphate	mg/L	-	-	1850	1530	2340	1800	1840	2320
Chloride	mg/L	-	-	13500	11200	17100	13100	13400	16800
Fluoride	mg/L	-	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia (N-NH_3)	mg/L	4.7-8.1 [3]	31-54 [3]	0.0057	0.0059	<0.0050	0.0602	0.0125	0.112
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	-	-	0.0185	0.0167	0.015	0.016	0.0145	0.021
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	0.00133	0.00129	0.00167	0.00129	0.00136	0.00167
Barium, total (T-Ba)	mg/L	-	-	0.0111	0.0115	0.0094	0.0109	0.011	0.01
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	-	***3.07***	***2.70***	***3.10***	***2.60***	***2.66***	***3.21***
Cadmium, total (T-Cd)	mg/L	0.00012	-	0.000059	0.00007	0.000075	0.000061	0.000065	0.000076
Chromium, total (T-Cr)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	0.0009	<0.00050
Cobalt, total (T-Co)	mg/L	-	-	0.00007	0.000086	0.000059	0.00008	0.000079	0.000067
Copper, total (T-Cu)	mg/L	0.002	0.003	0.00088	0.0007	<0.00050	0.00054	0.00101	0.00059
Iron, total (T-Fe)	mg/L	-	-	0.073	0.076	0.022	0.076	0.083	0.033
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	-	-	0.00809	0.00816	0.00261	0.0081	0.00789	0.00297
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	-	-	0.00691	0.00713	0.00844	0.00678	0.00695	0.00866
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	0.0015	0.003	<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	-	-	0.00198	0.00202	0.00245	0.00193	0.00198	0.00248
Vanadium, total (T-V)	mg/L	0.005	-	0.00123	0.00127	0.00138	0.00122	0.00118	0.00136
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	-	-	0.000060	0.000068	0.000075	0.000057	0.000066	0.000082
Copper, dissolved (D-Cu)	mg/L	-	-	0.00067	<0.00050	<0.00050	0.00058	0.00058	<0.00050
Iron, dissolved (D-Fe)	mg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<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	-	-	0.00752	0.00557	0.00113	0.00939	0.00695	0.00107
Nickel, dissolved (D-Ni)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	4.74	5.05	6.05	4.61	4.83	5.92
Vanadium, dissolved (D-V)	mg/L	-	-	0.00113	0.00114	0.00136	0.00107	0.00106	0.00124
Zinc, dissolved (D-Zn)	mg/L	-	-	0.0021	0.0019	<0.0010	0.0022	0.0024	<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 February 18 IDZ-W1 and IDZ-W2 samples are the maximum values measured in the February 18 WQR2 and February 20 WQR1 reference station samples at 0.5 and 2 m below the surface and 2 m above the seafloor (Report #52 and #53, respectively).
[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.
The lowest applicable guidelines are shown in the table; however, water quality data was screened to all applicable guidelines.

Table G-2: 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
				VA25A3415-007	VA25A3415-008	VA25A3415-009
		Long Term	Short Term	2025-02-18 15:30	2025-02-18 15:45	2025-02-18 16:00
General Parameters						
pH - Field	pH units	7.0 - 8.7	-	7.88	7.90	7.66
Specific Conductivity - Field	µS/cm	-	-	24844	27848	31389
Temperature - Field	℃	-	-	6.8	7.1	8.1
Salinity - Field	ppt	Narrative [2]	-	23.91	26.89	29.81
Turbidity - Field	NTU	Narrative [2]	Narrative [2]	0.88	0.68	0.64
TSS	mg/L	Narrative [2]	Narrative [2]	<2.0	3.5	2.8
Dissolved Oxygen - Field	mg/L	>=8	-	10.61	10.50	***7.69***
Anions and Nutrients						
Sulphate	mg/L	-	-	1870	2140	2230
Chloride	mg/L	-	-	13700	15800	16200
Fluoride	mg/L	-	1.5	<1.0	<1.0	<1.0
Ammonia (N-NH_3)	mg/L	4.7-8.1 [3]	31-54 [3]	0.0101	<0.0050	<0.0050
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	-	-	0.0143	0.0129	0.0163
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	0.00138	0.00154	0.00166
Barium, total (T-Ba)	mg/L	-	-	0.011	0.01	0.0098
Beryllium, total (T-Be)	mg/L	0.1	-	<0.00050	<0.00050	<0.00050
Boron, total (T-B)	mg/L	1.2	-	***2.62***	***3.08***	***3.14***
Cadmium, total (T-Cd)	mg/L	0.00012	-	0.000074	0.000078	0.000084
Chromium, total (T-Cr)	mg/L	-	-	<0.00050	<0.00050	<0.00050
Cobalt, total (T-Co)	mg/L	-	-	0.000078	0.000065	0.000061
Copper, total (T-Cu)	mg/L	0.002	0.003	<0.00050	<0.00050	<0.00050
Iron, total (T-Fe)	mg/L	-	-	0.075	0.031	0.023
Lead, total (T-Pb)	mg/L	0.002	0.14	<0.00010	<0.00010	<0.00010
Manganese, total (T-Mn)	mg/L	-	-	0.00795	0.00411	0.0026
Mercury, total (T-Hg)	mg/L	0.000016 [5]	-	<0.0000050	<0.0000050	<0.0000050
Molybdenum, total (T-Mo)	mg/L	-	-	0.00698	0.00809	0.0084
Nickel, total (T-Ni)	mg/L	0.0083	-	<0.00050	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	<0.00050	<0.00050	<0.00050
Silver, total (T-Ag)	mg/L	0.0015	0.003	<0.00010	<0.00010	<0.00010
Thallium, total (T-Tl)	mg/L	-	-	<0.000050	<0.000050	<0.000050
Uranium, total (T-U)	mg/L	-	-	0.00193	0.00232	0.00232
Vanadium, total (T-V)	mg/L	0.005	-	0.00131	0.00132	0.00133
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	-	-	0.000066	0.000086	0.000072
Copper, dissolved (D-Cu)	mg/L	-	-	<0.00050	<0.00050	<0.00050
Iron, dissolved (D-Fe)	mg/L	-	-	<0.010	<0.010	<0.010
Lead, dissolved (D-Pb)	mg/L	-	-	<0.00010	<0.00010	<0.00010
Manganese, dissolved (D-Mn)	mg/L	-	-	0.00674	0.00312	0.00134
Nickel, dissolved (D-Ni)	mg/L	-	-	<0.00050	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	4.79	5.51	5.86
Vanadium, dissolved (D-V)	mg/L	-	-	0.00107	0.00118	0.00127
Zinc, dissolved (D-Zn)	mg/L	-	-	0.0017	<0.0010	<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 reference station WQR and represent background conditions; 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.

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

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
				VA25A3967-001	VA25A3967-002	VA25A3967-003	VA25A3967-004	VA25A3967-005	VA25A3967-006
		Long Term	Short Term	2025-02-24 14:30	2025-02-24 14:33	2025-02-24 14:36	2025-02-24 14:20	2025-02-24 14:23	2025-02-24 14:26
General Parameters									
pH - Field	pH units	7.0 - 8.7	-	7.76	7.96	7.77	7.65	7.92	7.75
Specific Conductivity - Field	µS/cm	-	-	6754	24183	29977	8102	23766	29930
Temperature - Field	℃	-	-	5.1	6.5	7.2	5.1	6.5	7.2
Salinity - Field	ppt	Narrative [2]	-	6.12	23.41	29.04	7.45	22.95	28.00
Turbidity - Field	NTU	2.79-3.25 [2]	8.79-9.25 [2]	3.00	2.02	1.10	3.15	1.38	0.87
TSS	mg/L	7.0-8.5 [2]	27.0-29.5 [2]	<2.3	2.2	3.1	<2.0	2.4	2.8
Dissolved Oxygen - Field	mg/L	≥8	-	12.38	11.47	9.98	12.50	11.62	10.07

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 February 24 IDZ-W1 and IDZ-W2 samples are the maximum values measured in the February 18 WQR2 and February 20 WQR1 reference station samples at 0.5 and 2 m below the surface and 2 m above the seafloor (Report #52 and #53, respectively).

Table G-4: 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]	0.0095 – 0.02 [3,4]
Station	**Water Type**	**Sample ID**	**Lab ID**	**Sampling Date**		
Station IDZ-W1						
IDZ-W1	0.5 m Below Surface	IDZ-W1-0.5	VA25A3415-001	2025-02-18	<0.000020	<0.0050
IDZ-W1	2 m Below Surface	IDZ-W1-2m	VA25A3415-002	2025-02-18	<0.000020	<0.0050
IDZ-W1	2 m Above Seafloor	IDZ-W1-SF	VA25A3415-003	2025-02-18	<0.000020	<0.0050
Station IDZ-W2						
IDZ-W2	0.5 m Below Surface	IDZ-W2-0.5	VA25A3415-004	2025-02-18	<0.000020	<0.0050
IDZ-W2	2 m Below Surface	IDZ-W2-2m	VA25A3415-005	2025-02-18	<0.000020	<0.0050
IDZ-W2	2 m Above Seafloor	IDZ-W2-SF	VA25A3415-006	2025-02-18	<0.000020	<0.0050
Reference Station WQR1						
WQR1	0.5 m Below Surface	WQR2-0.5	VA25A3415-007	2025-02-18	<0.000020	<0.0050
WQR1	2 m Below Surface	WQR2-2m	VA25A3415-008	2025-02-18	<0.000020	<0.0050
WQR1	2 m Above Seafloor	WQR2-SF	VA25A3415-009	2025-02-18	<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.