TECHNICAL MEMORANDUM

To:	**Ian McAllister, Ashleigh Crompton, Mike Champion, Jackie Boruch and Ryan Schucroft (Woodfibre LNG)**	**Date:**	**10 Jan 2025**
From:	**Cheng Kuang, Holly Pelletier and Patrick Mueller (Lorax)**	**Project #:**	**A633-9**
Subject:	**PE-111578 Weekly Discharge and Compliance Report #45 for December 15, 2024 – January 4, 2025**		

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 #45) was prepared by Lorax Environmental and summarizes WDA monitoring conducted for the period of December 15, 2024 – January 4, 2025. 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 #45 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 December 15, 2024 – January 4, 2025 monitoring period. The East Wastewater Treatment Plant (WWTP), East Sedimentation Pond and West Sedimentation Pond are commissioned for operation.

Operation of the West WWTP was suspended September 25. 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.

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 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, 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 to Howe Sound of East WWTP treated contact water has been implemented since October 28.

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 and clarified E500GPM effluent are combined to discharge at location SP-E-OUT since December 2. Similarly, since November 28 the West Catchment discharge location, SP-W-OUT receives the combined clarified effluents from the ESC and W500GPM TSS settling systems. 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 Activities

Variable weather was observed during the monitoring period (December 15, 2024 – January 4, 2025), with precipitation recorded each day except on December 31, 2024, and January 1, 2025. The total precipitation amount during the monitoring period was 338 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
12-15-2024	4.2	7.9	2.0	Overcast
12-16-2024	8.4	3.5	1.3	Overcast
12-17-2024	35.0	4.0	2.0	Rain
12-18-2024	28.2	8.4	3.6	Rain
12-19-2024	48.6	5.9	3.8	Rain
12-20-2024	10.8	7.7	5.0	Overcast
12-21-2024	17.2	10.9	5.5	Rain
12-22-2024	33.4	7.0	5.3	Rain
12-23-2024	13.6	7.8	5.7	Overcast
12-24-2024	9.2	12.0	6.1	Overcast
12-25-2024	20.2	7.0	3.9	Rain
12-26-2024	31.8	5.9	2.7	Rain
12-27-2024	10.8	7.8	3.9	Overcast
12-28-2024	34.2	4.4	3.1	Rain
12-29-2024	5.0	5.4	3.3	Overcast
12-30-2024	8.0	5.6	3.2	Overcast
12-31-2024	0.0	5.8	2.4	Overcast
01-01-2025	0.0	4.5	2.0	Overcast
01-02-2025	8.0	3.4	0.5	Overcast
01-03-2025	7.8	3.7	1.0	Overcast
01-04-2025	3.6	4.7	1.7	Overcast

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

During the December 15, 2024 – January 4, 2025 monitoring period, the East Sedimentation Pond received contact water from Area 1100 Contact Sump and Tanks, Area 1200-C Contact Sump, Area 1300 Contact Sump and Collection Area, and the Hydrovac Dump (refer to Appendix A, Figure 2).

Routine operation of the East WWTP continued December 15, 2024 – January 4, 2025. Contact waters from the West Catchment wash bay and 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). A total of 8,006 m^3 of treated effluent from the East WWTP was directed to the authorized discharge location SP-E-OUT from December 15, 2024, through January 3, 2025. East Sedimentation Pond effluent was clarified through the TSS settling system (E500GPM) prior to discharge. Clarified effluent totalling 26,411 m^3 was directed to the authorized discharge location SP-E-OUT each day during the monitoring period (December 15, 2024 – January 4, 2025) except on December 17, 2024, and January 4, 2025. Daily discharge volumes from East WWTP, East TSS settling system (E500GPM) and the authorized discharge location SP-E-OUT are provided in Appendix B, Table B-9.

During the December 15, 2024 – January 4, 2025 monitoring period, contact waters from Area 4100 sump and the Surge Pond were directed to the West Sedimentation Pond (Appendix A, Figure 3). West Sedimentation Pond water was clarified through the ESC and

W500GPM TSS settling systems prior to discharge. Clarified effluent totaling 7,240 m^3 from the ESC system was directed to the SP-W-OUT authorized discharge location on December 15 through December 27, December 29, and January 1, 2025. A total of 23,286 m^3 of effluent was clarified through the W500GPM system and directed to the SP-W-OUT discharge location each day during the monitoring period (December 15, 2024 – January 4, 2025) except on January 1, 2025. Daily clarified effluent volumes from the ESC and W500GPM 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 PE-111578 authorized works were under construction December 15, 2024 – January 4, 2025. Compliance monitoring stations have been established. 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.

The following compliance and monitoring stations have been established (Figure 1):

- 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).

A flocculant-based TSS settling system (ESC) has been in use at the West Sedimentation Pond since September 25 and a second system (W500GPM) was commissioned November 28 (Section 1.2). Influent and effluent station names are ESC-W-IN and ESC-W-OUT, and W500GPM-IN

and W500GPM-OUT. A TSS settling system (E500GPM) at the East Sedimentation Pond was commissioned for use on December 4. The influent and effluent stations for this system are E500GPM-IN and E500GPM-OUT, respectively. There are no PE- 111578 monitoring requirements for TSS settling system stations, therefore they are monitored at the discretion of field staff.

Water quality was monitored at stations OUT-01, OUT-02, OUT-06, SW-01, SW-04, IDZ-E1, IDZ-E2, IDZ-W1, IDZ-W2, WWTP-E-IN, WWTP-E-OUT, E500GPM-IN, E500GPM-OUT, SP-E-IN, SP-E-OUT, ESC-W-IN, ESC-W-OUT, W500GPM-IN, W500GPM-OUT, SP-W-IN and SP-W-OUT during the monitoring period (December 15, 2024 – January 4, 2025). Sampling dates and parameters tested are summarized in Table 2.

Overall, the PE-111578 monitoring requirements that were applicable during the monitoring period (December 15, 2024 – January 4, 2025) were met.

Daily field parameters were not collected at the influent stations SP-E-IN (December 27) and SP-W-IN (December 26 and 31) nor at effluent stations SP-E-OUT (December 16, 23, 24, 30, 31, and January 1 and 2) and SP-W-OUT (December 23, 25, 31, January 3 and 4) since there was no influent reporting to the East and West Sedimentation Ponds or discharged from the authorized discharge locations at the time of monitoring. 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 December 15, 2024 – January 4, 2025.

Sampling Date	Sample	Description	Parameters Tested	Monitoring Frequency
December 15, 2024	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		
	WWTP-E-OUT	East WWTP at the effluent meter box	Field Parameters.	D
	WWTP-E-IN	East WWTP at the influent 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		
	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-02	Non-contact water diversion ditch outlet	Field, Physical & General Parameters, Total, and Dissolved Metals, Methylmercury.	M
	OUT-06	Non-contact water diversion ditch outlet		
	IDZ-W1-0.5	Howe Sound IDZ station W1; 0.5 m below surface	Field, Physical & General Parameters, VH & BTEX, EPHs & PAHs, Total, Dissolved and Speciated Metals, VOCs, Methylmercury, Dioxins & Furans.	M
	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		
December 16, 2024	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
	WWTP-E-OUT	East WWTP at the effluent 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-IN	East WWTP at the influent 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		
	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-E1-0.5	Howe Sound IDZ station E1; 0.5 m below surface	Field, Physical & General Parameters, VH & BTEX, EPHs & PAHs, Total, Dissolved and Speciated Metals, VOCs, Methylmercury, Dioxins & Furans.	M
	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		
December 17, 2024	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		
	WWTP-E-IN	East WWTP at the influent meter box	Field Parameters.	D
	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		
	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		
December 18, 2024	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		
	WWTP-E-OUT	East WWTP at the effluent meter box	Field Parameters.	D
	WWTP-E-IN	East WWTP at the influent 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		
	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		
	SW-01	Lower Reach of Woodfibre Creek (near the mouth)	Methylmercury.	M
	SW-04	Lower Reach of East Creek (near the outlet to the outfall culvert)	Field Parameters.	M

Table 2 (continued): Summary of PE-111578 Monitoring Samples Collected December 15, 2024 – January 4, 2025.

Sampling Date	Sample	Description	Parameters Tested	Monitoring Frequency
December 19, 2024	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		
	WWTP-E-OUT	East WWTP at the effluent meter box	Field Parameters.	D
	WWTP-E-IN	East WWTP at the influent 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		
	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		
December 20, 2024	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, 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	Field Parameters.	D
	WWTP-E-IN	East WWTP at the influent 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		
	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, and Dissolved Metals, Methylmercury.	M
December 21, 2024	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 and Physical Parameters, Total and Dissolved Copper.	P
	WWTP-E-OUT	East WWTP at the effluent meter box	Field and Physical Parameters, Total and Dissolved Copper.	P
	WWTP-E-IN	East WWTP at the influent meter box	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	Field and Physical Parameters, Total and Dissolved Copper.	P
	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		
	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		
December 22, 2024	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		
	WWTP-E-OUT	East WWTP at the effluent 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-IN	East WWTP at the influent 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		
	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		

Table 2 (continued): Summary of PE-111578 Monitoring Samples Collected December 15, 2024 – January 4, 2025.

Sampling Date	Sample	Description	Parameters Tested	Monitoring Frequency
December 23, 2024	SP-E-IN	East Sedimentation Pond influent entering the pond and collected at cell 1	Field Parameters.	D
	WWTP-E-OUT	East WWTP at the effluent meter box	Field Parameters.	D
	WWTP-E-IN	East WWTP at the influent 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
	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 and 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		
	IDZ-W1-0.5	Howe Sound IDZ station W1; 0.5 m below surface		
	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		
December 24, 2024	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
	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		
	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		
December 25, 2024	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		
	WWTP-E-OUT	East WWTP at the effluent meter box	Field Parameters.	D
	WWTP-E-IN	East WWTP at the influent 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
	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		
December 26, 2024	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		
	WWTP-E-IN	East WWTP at the influent meter box	Field Parameters.	D
	E500GPM-OUT	East Sedimentation Pond 500 GPM TSS settling system at the effluent meter box	Field Parameters.	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		
	ESC-W-OUT	West TSS settling system effluent at the ESC meter box	Field Parameters.	P
December 27, 2024	SP-E-OUT	East Sedimentation Pond clarified effluent discharge to Howe Sound, collected at sampling port	Field Parameters.	D
	WWTP-E-OUT	East WWTP at the effluent meter box	Field Parameters.	D
	WWTP-E-IN	East WWTP at the influent 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		
	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-OUT	West TSS settling system effluent at the ESC meter box	Field Parameters.	P

Table 2 (continued): Summary of PE-111578 Monitoring Samples Collected December 15, 2024 – January 4, 2025.

Sampling Date	Sample	Description	Parameters Tested	Monitoring Frequency
December 28, 2024	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		
	WWTP-E-OUT	East WWTP at the effluent meter box	Field Parameters.	D
	WWTP-E-IN	East WWTP at the influent 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		
	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		
December 29, 2024	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		
	WWTP-E-OUT	East WWTP at the effluent meter box	Field Parameters.	D
	WWTP-E-IN	East WWTP at the influent 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		
	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		
December 30, 2024	SP-E-IN	East Sedimentation Pond influent entering the pond and collected at cell 1	Field Parameters.	D
	WWTP-E-OUT	East WWTP at the effluent meter box	Field Parameters.	D
	WWTP-E-IN	East WWTP at the influent 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		
	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		
December 31, 2024	SP-E-IN	East Sedimentation Pond influent entering the pond and collected at cell 1	Field Parameters.	D
	WWTP-E-OUT	East WWTP at the effluent meter box	Field Parameters.	D
	WWTP-E-IN	East WWTP at the influent meter box		
January 1, 2025	SP-E-IN	East Sedimentation Pond influent entering the pond and collected at cell 1	Field Parameters.	D
	WWTP-E-OUT	East WWTP at the effluent meter box	Field Parameters.	D
	WWTP-E-IN	East WWTP at the influent 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		
	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-E1-0.5	Howe Sound IDZ station E1; 0.5 m below surface	Field and 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		
	IDZ-W1-0.5	Howe Sound IDZ station W1; 0.5 m below surface		
	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		
January 2, 2025	SP-E-IN	East Sedimentation Pond influent entering the pond and collected at cell 1	Field Parameters.	D
	WWTP-E-OUT	East WWTP at the effluent meter box	Field Parameters.	D
	WWTP-E-IN	East WWTP at the influent 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		
	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		

Table 2 (continued): Summary of PE-111578 Monitoring Samples Collected December 15, 2024 – January 4, 2025.

Sampling Date	Sample	Description	Parameters Tested	Monitoring Frequency
January 3, 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		
	WWTP-E-OUT	East WWTP at the effluent 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-IN	East WWTP at the influent 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
	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		
January 4, 2025	SP-E-IN	East Sedimentation Pond influent entering the pond and collected at cell 1	Field Parameters.	D
	WWTP-E-OUT	East WWTP at the effluent meter box	Field Parameters.	D
	WWTP-E-IN	East WWTP at the influent meter box		
	SP-W-IN	West Sedimentation Pond influent entering the pond and collected at cell 1	Field Parameters.	D

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.
W_4 – spring and fall high frequency sampling for all parameters at receiving environment stations (5 samples collected over a 30-day period).
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 that may 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 (December 15, 2024 – January 4, 2025) 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:

- IDZ-W2 collected November 25 (dioxins and furans)
- WQR1 collected December 5 (dioxins and furans)
- WQR2 collected December 6 (dioxins and furans)
- SW-02, SW-03, and SW-07 collected December 8 (dioxins and furans)
- SW-04 collected December 9 (dioxins and furans)
- IDZ-W1 and IDZ-W2 collected December 15 (dioxins and furans)
- SP-E-IN, WWTP-E-IN, WWTP-E-OUT, SP-W-IN, and SP-W-OUT collected December 16 (dioxins and furans)
- IDZ-E1 and IDZ-E2 collected December 16 (dioxins and furans)
- SP-E-OUT collected December 20 (methylmercury, dioxins and furans)
- OUT-01 collected December 20 (field parameters and all analytical parameters)
- SP-E-IN, SP-E-OUT, WWTP-E-IN, WWTP-E-OUT, SP-W-IN, and SP-W-OUT collected December 22 (methylmercury, dioxins and furans)
- SP-W-IN and SP-W-OUT collected January 1 (all analytical parameters)
- SP-E-IN, SP-E-OUT, WWTP-E-IN, and WWTP-E-OUT collected January 3 (methylmercury, dioxins and furans)

Table 3: Summary of Analytical Results Included in Weekly Discharge and Compliance Report #45.

Sample	Description	Sampling Date	Parameters Reported
IDZ-E1-0.5	Howe Sound IDZ station E1; 0.5 m below surface	2024-11-14	Dioxins and Furans.
IDZ-E2-0.5	Howe Sound IDZ station E2; 0.5 m below surface		
IDZ-W1-0.5	Howe Sound IDZ station W1; 0.5 m below surface		
IDZ-W2-0.5	Howe Sound IDZ station W2; 0.5 m below surface		
WQR1-0.5	Reference site 1; 0.5 m below surface		
WQR2-0.5	Reference site 2; 0.5 m below surface		
SW-02	Upper Reach of Mill Creek (upstream of third bridge)	2024-11-16	Methylmercury, Dioxins and Furans.
SW-03	Lower Reach of Mill Creek (near the mouth, in the estuarine zone)		
SW-07	Upstream Mill Creek (at the diversion inlet)		
SW-04	Lower Reach of East Creek (near the outlet to the outfall culvert)	2024-11-17	Methylmercury, Dioxins and Furans.
SP-E-OUT	East Sedimentation Pond clarified and/or treated effluent discharge to Howe Sound, collected at the sampling port	2024-11-19	Dioxins and Furans.
SP-W-IN	West Sedimentation Pond influent		
IDZ-W1-0.5	Howe Sound IDZ station W1; 0.5 m below surface		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 2; 2 m above the seafloor		
SP-E-IN	East Sedimentation Pond influent	2024-11-20	Dioxins and Furans.
IDZ-W2-0.5	Howe Sound IDZ station W2; 0.5 m below surface	2024-11-25	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, VOCs, and Methylmercury.
IDZ-W2-2m	Howe Sound IDZ station W2; 2 m below surface		
IDZ-W2-SF	Howe Sound IDZ station 2; 2 m above the seafloor		
SP-W-OUT	West Sedimentation Pond clarified effluent discharge to Howe Sound, collected at the sampling port	2024-11-28	Methylmercury.
SP-W-OUT	West Sedimentation Pond clarified effluent discharge to Howe Sound, collected at the sampling port	2024-12-04	Methylmercury.
SP-E-OUT	East Sedimentation Pond clarified and/or treated effluent discharge to Howe Sound, collected at the sampling port	2024-12-05	Methylmercury.
WQR1-0.5	Reference site 1; 0.5 m below surface		Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, VOCs, and Methylmercury.
WQR1-2m	Reference site 1; 2 m below surface		
WQR1-SF	Reference site 1; 2 m above the seafloor		
WQR2-0.5	Reference site 2; 0.5 m below surface	2024-12-06	
WQR2-2m	Reference site 2; 2 m below surface		
WQR2-SF	Reference site 2; 2 m above the seafloor		
SP-E-IN	East Sedimentation Pond influent entering the pond and collected at cell 1	2024-12-07	Methylmercury.
WWTP-E-IN	East WWTP at the influent meter box		
WWTP-E-OUT	East WWTP at the effluent 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-OUT	West Sedimentation Pond clarified effluent discharge to Howe Sound, collected at the sampling port		
SW-02	Upper Reach of Mill Creek (upstream of third bridge)	2024-12-08	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, VOCs, and Methylmercury.
SW-03	Lower Reach of Mill Creek (near the mouth, in the estuarine zone)		
SW-07	Upstream Mill Creek (at the diversion inlet)		
SW-04	Lower Reach of East Creek (near the outlet to the outfall culvert)	2024-12-09	
IDZ-W1-0.5	Howe Sound IDZ station W1; 0.5 m below surface	2024-12-11	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 2; 2 m above the seafloor		
SP-W-OUT	West Sedimentation Pond clarified effluent discharge to Howe Sound, collected at the sampling port	2024-12-12	Methylmercury.
W500GPM-IN	West Sedimentation Pond 500 GPM TSS settling system at the influent meter box		
W500GPM-OUT	West Sedimentation Pond 500 GPM TSS settling system at the effluent meter box		
OUT-02	Non-contact water diversion ditch outlet	2024-12-15	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, and Methylmercury.
OUT-06	Non-contact water diversion ditch outlet		
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 2; 2 m above the seafloor		

Table 3 (continued): Summary of Analytical Results Included in Weekly Discharge and Compliance Report #45.

Sample	Description	Sampling Date	Parameters Reported
SP-E-IN	East Sedimentation Pond influent entering the pond and collected at cell 1	2024-12-16	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, VOCs, and Methylmercury.
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 the sampling port		
IDZ-E1-0.5	Howe Sound IDZ station E1; 0.5 m below surface		
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		
SW-01	Lower Reach of Woodfibre Creek (near the mouth)	2024-12-18	Methylmercury.
SP-E-OUT	East Sedimentation Pond clarified and/or treated effluent discharge to Howe Sound, collected at the sampling port	2024-12-20	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, and VOCs.
SP-E-OUT	East Sedimentation Pond clarified and/or treated effluent discharge to Howe Sound, collected at the sampling port	2024-12-21	Field Parameters, Total and Dissolved Copper.
WWTP-E-OUT	East WWTP at the effluent meter box		
E500GPM-OUT	East Sedimentation Pond 500 GPM TSS settling system at the effluent meter box		
SP-E-IN	East Sedimentation Pond influent entering the pond and collected at cell 1	2024-12-22	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, and VOCs.
SP-E-OUT	East Sedimentation Pond clarified and/or treated effluent discharge to Howe Sound, collected at the 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 the sampling port		
IDZ-E1-0.5	Howe Sound IDZ station E1; 0.5 m below surface	2024-12-23	Field and Physical Parameters.
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		
IDZ-W1-0.5	Howe Sound IDZ station W1; 0.5 m below surface		
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 2; 2 m above the seafloor		
IDZ-E1-0.5	Howe Sound IDZ station E1; 0.5 m below surface	2025-01-01	Field and Physical Parameters.
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		
IDZ-W1-0.5	Howe Sound IDZ station W1; 0.5 m below surface		
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 2; 2 m above the seafloor		
SP-E-IN	East Sedimentation Pond influent entering the pond and collected at cell 1	2025-01-03	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, and VOCs.
SP-E-OUT	East Sedimentation Pond clarified and/or treated effluent discharge to Howe Sound, collected at the sampling port		
WWTP-E-IN	East WWTP at the influent meter box		
WWTP-E-OUT	East WWTP at the effluent meter box		

Notes:

[1] As a result of the reconfigured pathway for effluent discharge at station SP-E-OUT effective October 28, contact water stored in the East Sedimentation Pond is directed to the East WWTP for treatment and East WWTP effluent is discharged at station SP-E-OUT. Field measurements and analytical samples collected at station SP-E-OUT also fulfill the water quality monitoring requirements for station WWTP-E-OUT until December 3. Beginning December 4, contact water stored in the pond is also clarified using the E500GPM TSS settling system and the clarified effluent is combined with East WWTP treated effluent prior to monitoring and discharge at SP-E-OUT.

[2] As a result of the reconfigured pathway for effluent discharge at station SP-W-OUT effective October 28, the West Sedimentation Pond discharge is routed through a TSS settling system (ESC) prior to discharge and the monitoring results are considered representative of water quality at station ESC-W-OUT until November 28 when clarified effluent from the second TSS settling system (W500GPM) was combined with effluent from ESC system prior to monitoring and discharge at SP-W-OUT. There are no PE-111578 monitoring requirements for TSS settling systems (ESC and W500GPM), therefore stations at these facilities are monitored at the discretion of field staff.

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.

Each day during the monitoring period (December 15, 2024 – January 4, 2025), East WWTP treated effluent and clarified water from the East Sedimentation Pond TSS settling system (E500GPM) were combined in the SP-E-OUT discharge tank and intermittently discharged to Howe Sound at the authorized discharge location (station SP-E-OUT) except on December 17 when only East WWTP treated effluent was discharged to Howe Sound. Daily discharge volumes from the East Catchment are summarized in Appendix B, Table B-9.

Field measurements were collected December 15, 2024 – January 4, 2025 at multiple influent and effluent locations, as outlined in Section 2, and are tabulated in Appendix B, Table B-8. Analytical samples collected on December 16 (stations WWTP-E-IN, WWTP-E-OUT, and SP-E-IN), December 20 (station SP-E-OUT), December 21 (E500GPM-OUT, WWTP-E-OUT, SP-E-OUT), December 22 (stations WWTP-E-IN, WWTP-E-OUT, SP-E-IN, and SP-E-OUT), and January 3 (stations WWTP-E-IN, WWTP-E-OUT, SP-E-IN, and SP-E-OUT) were available at the time of reporting. Screening results for East Catchment contact water influent and effluent quality are tabulated in Table B-1 through Table B-5 of Appendix B.

During the monitoring period (December 15, 2024 – January 4, 2025), analytical results and field measurements monitored at station SP-E-OUT met PE-111578 discharge limits and WQGs except for total copper on December 20 (Table 4).

Table 4:
Summary of Parameters Exceeding PE-111578 Discharge Limits in Effluent Discharged from SP-E-OUT for Field and Analytical Results Available at the Time of Reporting

Parameter	Units	Discharge Limit	N	N >Limit	Commentary
Total Copper	mg/L	0.0043	5	1	Total copper measured at station SP-E-OUT on December 20 (0.00444 mg/L) was 1.03 times greater than the PE-111578 discharge limit. BCER was notified on December 22.

N = number of samples.

Methylmercury analytical results were available at the time of reporting for WWTP influent (WWTP-E-IN) and East Sedimentation Pond influent (station SP-E-IN) collected December 7 (as discussed in Report #43) and December 16. Results were also reported for effluent discharged at station SP-E-OUT on December 5 (as discussed in Report #43), WWTP effluent (WWTP-E-OUT) and TSS settling system (E500GPM) effluent collected December 7 (as discussed in Report #43), and WWTP effluent collected December 16. The effluent discharged at station SP-E-OUT on December 5 had a methylmercury concentration of 0.000031 µg/L that met the WQG (Appendix B, Table B-6).

Dioxin and furan results were reported for East Sedimentation Pond influent (station SP-E-IN) collected November 20 (as discussed in Report #41) and for treated East WWTP effluent discharged at station SP-E-OUT collected November 19 (as discussed in Report #41). The PCDD/F TEQ concentrations in the November 19 station SP-E-OUT effluent samples were 0.00206 pg/L (lower bound) and 0.753 pg/L (upper bound).

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 (December 15, 2024 – January 4, 2025), the TSS settling systems (ESC and W500GPM) intermittently treated water stored in the West Sedimentation Pond and produced clarified effluent that was combined and discharged to Howe Sound December 15 – 27

and 29 at the authorized discharge location, SP-W-OUT. The W500GPM TSS settling system also treated water stored in the West Sedimentation Pond and discharged clarified effluent to Howe Sound at SP-W-OUT on December 28, 30, 31, and January 2, 3 and 4. The West ESC TSS settling system also discharged clarified effluent to Howe Sound at SP-W-OUT on January 1, 2025. Daily clarified effluent and discharge volumes from the West Catchment are summarized in Appendix C, Table C-6.

Field measurements were collected December 15, 2024 – January 4, 2025 at multiple influent and effluent locations, as outlined in Section 2, and are tabulated in Appendix C, Table C-5. Analytical samples collected on December 16 and 22 (SP-W-IN and SP-W-OUT) were available at the time of reporting. Screening results for West Catchment contact water influent quality and effluent quality are tabulated in Table C-1 and Table C-2 of Appendix C, respectively.

During the monitoring period (December 15, 2024 – January 4, 2025), analytical results and field measurements monitored at station SP-W-OUT 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) and effluent discharged at SP-W-OUT on December 7 (as discussed in Report #43) and December 16 and for effluent discharged at SP-W-OUT collected November 28 (as discussed in Report #42), December 4 (as discussed in Report #43), and December 12 (as discussed in Report #44). Methylmercury analytical results were also available for the TSS settling system (W500GPM) influent and effluent collected December 12 (as discussed in Report #44). Methylmercury concentrations ranged from <0.000020 µg/L to 0.000083 µg/L in effluent discharged at SP-W-OUT on November 28, December 7, December 12, and December 16 and met WQGs for methylmercury and total mercury (Appendix C, Table C-3). The effluent discharged at SP-W-OUT on December 4 showed 0.000338 µg/L methylmercury and did not meet the WQG for methylmercury (Table 5). The total mercury concentration was below detection limit but above the calculated WQG; however, the true concentration of total mercury is not known therefore the potential guideline exceedance could not be evaluated. A reanalysis for methylmercury has been initiated with the laboratory and this item is tracked in Table 7.

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

Parameter	Units	WQG[1]	N	N >WQG	Commentary
Methylmercury	mg/L	0.0001	5	1	Total methylmercury measured at station SP-W-OUT on December 4 (0.000338 ug/L) was 3.4 times greater than the WQG.

N = number of samples.
[1] The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.

Dioxin and furan results were reported for West Sedimentation Pond influent (station SP-W-IN) collected November 19 (as discussed in Report #41). Results are presented 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 December 15 non-contact water diversion ditch outlet samples collected at stations OUT-02 and OUT-06. Parameter concentrations met WQGs except total aluminum and dissolved copper (Table 6).

Table 6:
Summary of Parameters Exceeding WQGs at Non-Contact Water Diversion Ditch Outlets

Parameter	Units	WQG	N	N >WQG	Commentary
T-Al	mg/L	0.24 (OUT-02) 0.096 (OUT-06)	2	2	The total aluminum concentrations measured at OUT-02 (0.302 mg/L) and OUT-06 (0.184 mg/L) on December 15 were 1.3 and 1.9 times greater than the calculated long-term WQG.
D-Cu	mg/L	0.00038	2	1	The dissolved copper concentration measured at OUT-06 (0.00083 mg/L) on December 15 was 2.2 times greater than the calculated long-term WQG.

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

Methylmercury results were available at the time of reporting for the December 15 non-contact water diversion ditch outlet water samples collected at stations OUT-02 and OUT-06. The methylmercury concentrations from both stations ranged from 0.000022 to 0.000027 µg/L, and methylmercury and total mercury results met WQGs. Results are tabulated in Appendix D, Table D-2.

3.6 Freshwater and Estuarine Water Receiving Environment

Freshwater and estuarine water receiving environment samples are screened against Canadian, Federal and BC WQGs for the protection of freshwater and estuarine aquatic life. Parameter concentrations above a WQG value, but within the range of values observed in the baseline monitoring program are considered to represent the natural condition of the water and are not

flagged as a possible indicator of project influence. The analytical results, field parameters, and WQGs are summarized in Appendix E (freshwater) and Appendix F (estuarine).

Analytical results were available at the time of reporting for freshwater and estuarine water samples (as discussed in Weekly Report #44) collected near the mouth of Mill Creek (station SW-02), upstream on Mill Creek (station SW-07), and the Mill Creek Estuary (station SW-03) on December 8, and near the mouth of East Creek (station SW-04) on December 9.

Parameter concentrations met WQGs except pH, total aluminum, and dissolved copper in one or more samples. Field pH was below the lower limit of the applicable WQG at SW-03 (pH 6.3). Total aluminum was above the WQG in samples collected from SW-02 (0.115 mg/L) and SW-07 (0.170 mg/L). Dissolved copper was above the long-term WQG at Mill Creek stations SW-02 and SW-07 (0.00035 and 0.00050 mg/L, respectively); and was above the long-term WQG at East Creek (0.00068 mg/L).

The observed pH and concentrations of total aluminum were within concentration ranges observed in the pre-construction baseline monitoring program for freshwater and estuarine water receiving environment stations except the dissolved copper concentration observed in Mill Creek (station SW-02) on December 8 (0.00035 mg/L) was 1.1 times greater than the maximum concentration observed in the pre-construction baseline monitoring program at Mill Creek (0.00031 mg/L). However, the December 8 sample collected from upstream Mill Creek (station SW-07) that represents background concentrations in Mill Creek had a higher concentration (0.00050 mg/L) than that at station SW-02; therefore, the dissolved copper concentration measured at SW-02 is not flagged as an exceedance.

Methylmercury results were available at the time of reporting for freshwater and estuarine water samples collected November 16 and 17 (as discussed in Weekly Report #40 and #41, respectively), December 8 and 9 (as discussed in Weekly Report #44), and December 18 at Woodfibre Creek (SW-01). The methylmercury concentrations were <0.000020 µg/L in all samples except at East Creek on December 9 (0.000021 µg/L). Methylmercury results met the WQG. The corresponding total mercury results also met WQGs. Results are tabulated in Appendix E, Table E-2 and E-3 (freshwater) and Appendix F, Table F-2 (estuarine water).

Dioxins and furans analytical results were available at the time of reporting for freshwater and estuarine water samples collected on November 16 and 17 (as discussed in Weekly Report #40 and #41, respectively). For all stations the lower and upper bound PCDD/F TEQ concentrations ranged from 0.00155 to 0.610 pg/L, and 1.05 to 2.82 pg/L, respectively, and are within baseline concentration ranges (Appendix E, Table E-4; Appendix F, Table F-3).

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 November 25 at IDZ-W2 (as discussed in Weekly Report #42), on December 5 and 6 at marine reference stations WQR1 and WQR2, respectively, on December 11 and 15 at IDZ-W1 and IDZ-W2, on December 16 at IDZ-E1 and IDZ-E2, and on December 23 and January 1 at IDZ-E1, IDZ-E2, IDZ-W1, and IDZ-W2. Only field and physical parameters were collected on December 11, 23, and January 1. Parameter concentrations met WQGs except dissolved oxygen and total boron in some samples (Appendix G; Tables G-1 to G-9).

In the marine samples collected 2 m below the surface on November 25 and in marine samples collected 2 m above the seafloor on November 25, December 5, 6, 11, 16, 23, and January 1, dissolved oxygen was below the lower limit of the WQG (<8 mg/L) and ranged from 3.96 to 7.98 mg/L. Total boron was above the WQG (1.2 mg/L) and ranged from 1.60 to 3.82 mg/L in samples collected November 25, December 5, 6, 15, 16, and January 1. 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 the marine water receiving environment samples collected from station IDZ-E1, IDZ-E2, IDZ-W1, IDZ-W2, WQR1, and WQR2 on November 19 (as discussed in Weekly Report #41), IDZ-W2 on November 25 (as discussed in Weekly Report #42), samples collected from stations WQR1 and WQR2 on December 5 and 6, respectively (as discussed in Weekly Report #43), and samples collected from IDZ-W1, IDZ-W2, IDZ-E1, and IDZ-E2 on December 15 and December 16. For all samples,

methylmercury concentrations ranged from <0.000020 to 0.000057 ug/L and were below the WQG indicated in Section 3.1 (0.0001 µg/L). The associated total mercury concentrations also met the WQG (Appendix G; Tables G-10 to Table G-14).

Dioxins and furans analytical results were available at the time of reporting for marine samples collected from 0.5 m below surface at stations IDZ-E1, IDZ-E2, IDZ-W1, IDZ-W2, and marine reference stations WQR1 and WQR2 on November 14 (as discussed in Weekly Report #41). For all samples, the lower and upper bound PCDD/F TEQ concentrations ranged from 0 to 0.0488 pg/L, and 0.812 to 1.07 pg/L, respectively. The lower and upper bound PCDD/F TEQ concentrations were within the concentration ranges observed in the baseline monitoring program or within background ranges observed at marine reference stations. Dioxins and furans results are presented in Appendix G, Table G-15.

4. Quality Control

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

Table 7: Weekly Report QC Evaluations and Ongoing Items

QC Procedure	Observation	Investigation/Resolution
Reporting Period (December 15, 2024 – January 4, 2025, Report #45)		
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, 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 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 on October 28 to direct sedimentation pond water to the East WWTP and to only discharge East WWTP treated effluent. On November 28 and December 4 TSS settling systems were commissioned for use at the West and East Sedimentation Ponds, respectively, to increase the capacity for TSS settling in pond effluent. This item remains open.
Non-Compliant Effluent	Non-compliant discharge from the East Catchment on December 20.	Total copper measured at station SP-E-OUT on December 20 was above the PE-111578 discharge limit. Review of the non-compliance is underway, and outcomes will be communicated to BCER. This item remains open.
Data QC	Methylmercury above WQG at SP-W-OUT on December 4.	The methylmercury concentration was 3.4 times greater than the WQG in the West Catchment effluent discharged at SP-W-OUT on December 4. A reanalysis for methylmercury has been initiated with the laboratory to confirm the result. This item remains open.
Pending Data	Analytical results not reported.	Analytical results for samples collected December 20, 2024, and January 1, 2024, were not complete at the time of Report #45 preparation. Methylmercury, dioxins and furans results for samples collected December 15, 16, 20, 22, and January 3 were not complete at the time of Report #45 preparation. The pending results will be included in future weekly reports when available. This item remains open.
Ongoing Items from Previous Weekly Reports		
Report #40: Pending Data	Methylmercury, dioxins and furans results were not reported for samples collected November 14 and 16.	Methylmercury results for samples collected November 16 are discussed in Section 3.6 of Report #45. Dioxins and furans results for samples collected November 14 and 16 are discussed in Sections 3.7 and 3.6, respectively, of Report #45. This item is closed.
Report #41: Pending Data	Dioxins and furans results were not reported for samples collected November 19.	Methylmercury, dioxins and furans results for samples collected November 17, 19, and 20 are discussed in Sections 3.3, 3.4, 3.6, and 3.7 of Report #45. Dioxins and furans results for marine receiving environment samples collected November 19 were not complete at the time of Report #45 preparation. The pending results will be included in future weekly reports when available. This item remains open.
Report #42: Pending Data	Dioxins and furans results were not reported for samples collected November 24 and 28.	Analytical results for samples collected November 25 are discussed in Section 3.7 of Report #45. Methylmercury results for samples collected November 28 are discussed in Section 3.4 of Report #45. Dioxins and furans results for samples collected November 24 and 28 were not complete at the time of Report #45 preparation. The pending results will be included in future weekly reports when available. This item remains open.
Report #43: Pending Data	Dioxins and furans results were not reported for samples collected December 4, 5, 6, and 7.	Analytical results for samples collected December 5 and 6 are discussed in Section 3.7 of Report #45. Methylmercury results for samples collected December 4, 5, 6, and 7 are discussed in Sections 3.3, 3.4, and 3.7 of Report #45. Methylmercury results are not available for Woodfibre Creek (SW-01) on December 6 due to a lab error. An additional sample was collected at SW-01 on December 18 to meet the monthly sampling requirement for methylmercury and results are discussed in Section 3.6 of Report #45. Dioxins and furans results for samples collected December 4, 5, 6, and 7 were not complete at the time of Report #45 preparation. The pending results will be included in future weekly reports when available. This item remains open.
Report #44: Non-Compliant Effluent	Non-compliant discharge from the West Catchment on December 10.	Total zinc measured at station SP-W-OUT on December 10 was above the PE-111578 discharge limit. Review of the non-compliance is complete, and outcomes have been communicated to BCER. This item is closed.
Report #44: Pending Data	Methylmercury, dioxins and furans results were not reported for samples collected December 8, 9, 10, 12, and 14.	Analytical results for samples collected December 8, 9, and 11 are discussed in Sections 3.6 and 3.7 of Report #45. Methylmercury, dioxins and furans results for samples collected December 8, 9, 10, 12, and 14 were not complete at the time of Report #45 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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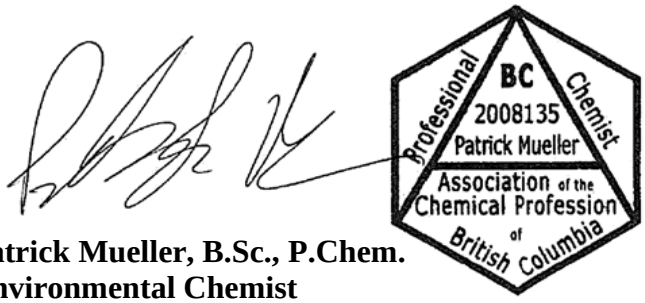
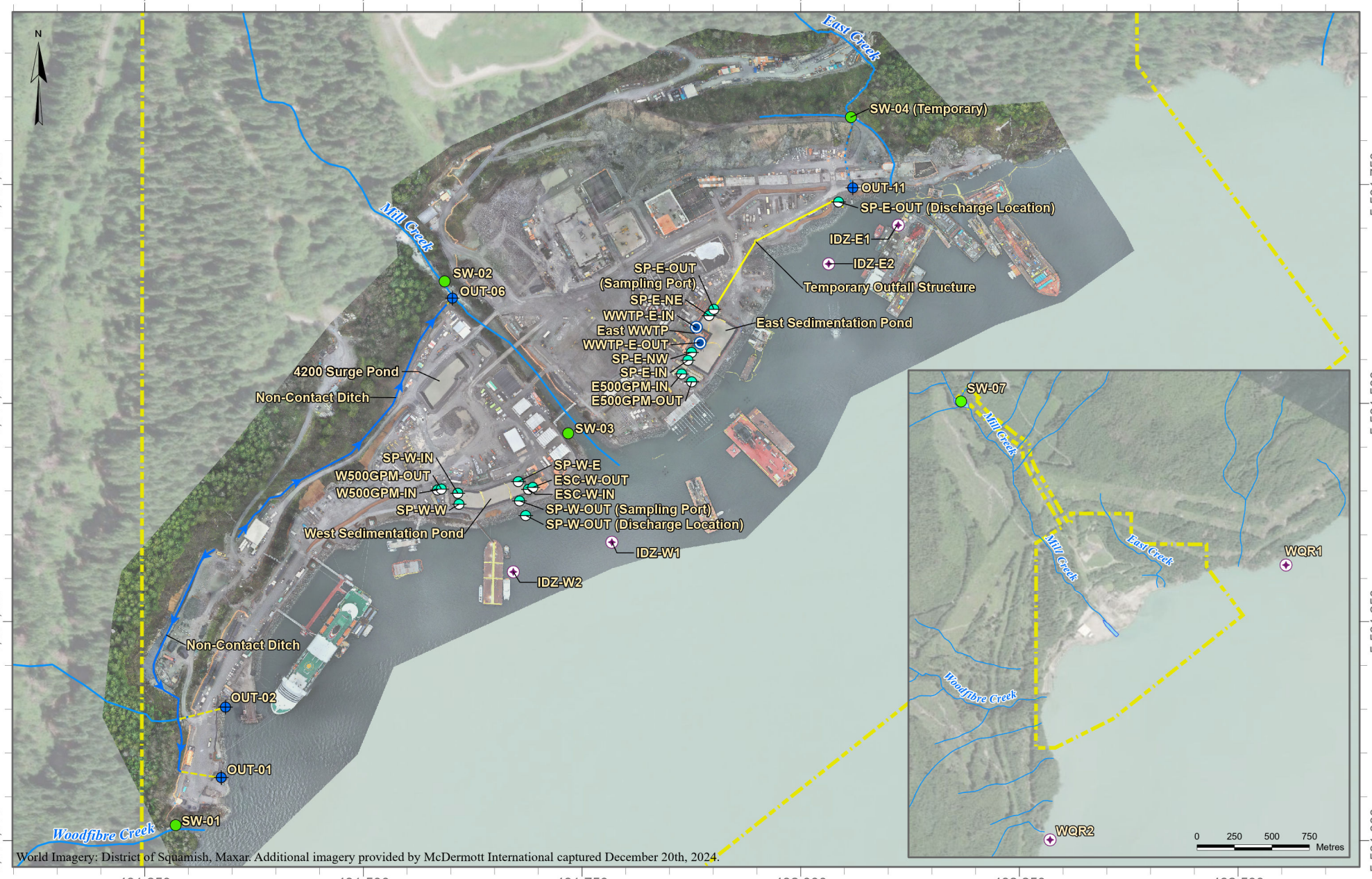
Environmental Scientist



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

Appendix A: Figures and Site Images



World Imagery: District of Squamish, Maxar. Additional imagery provided by McDermott International captured December 20th, 2024.

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:	Jan 07, 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 (January 4, 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 (December 15, 2024 – January 4, 2025).

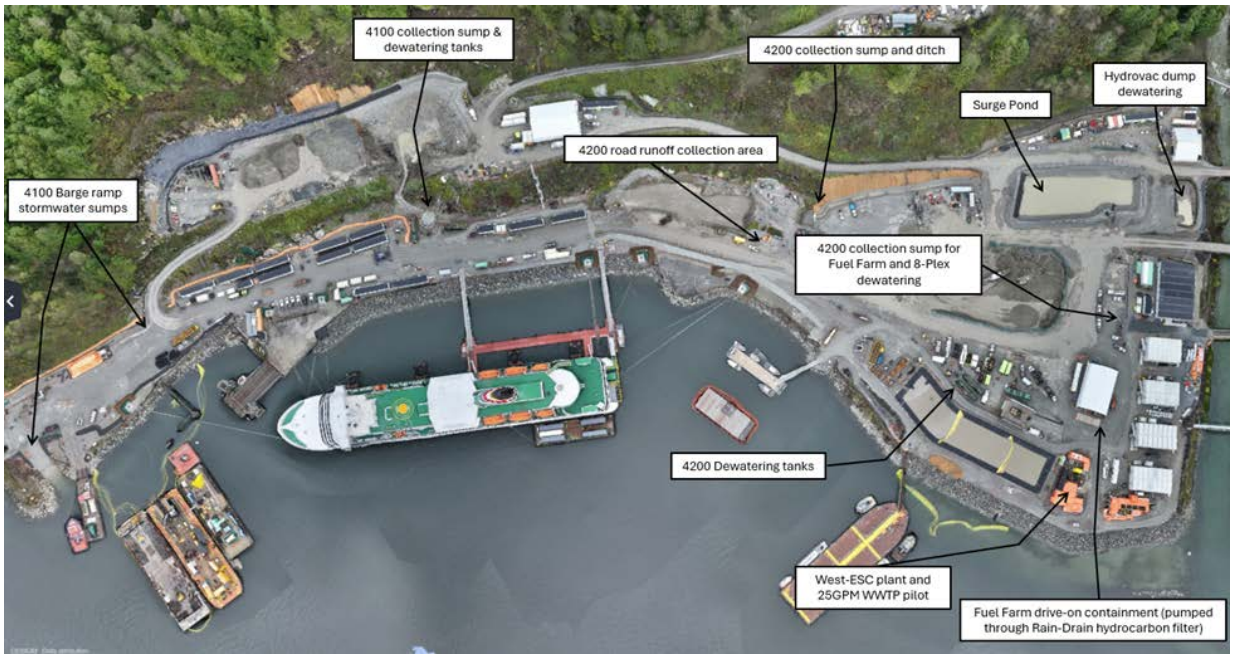


Figure 3: West Catchment contact water management facilities (December 15, 2024 – January 4, 2025).

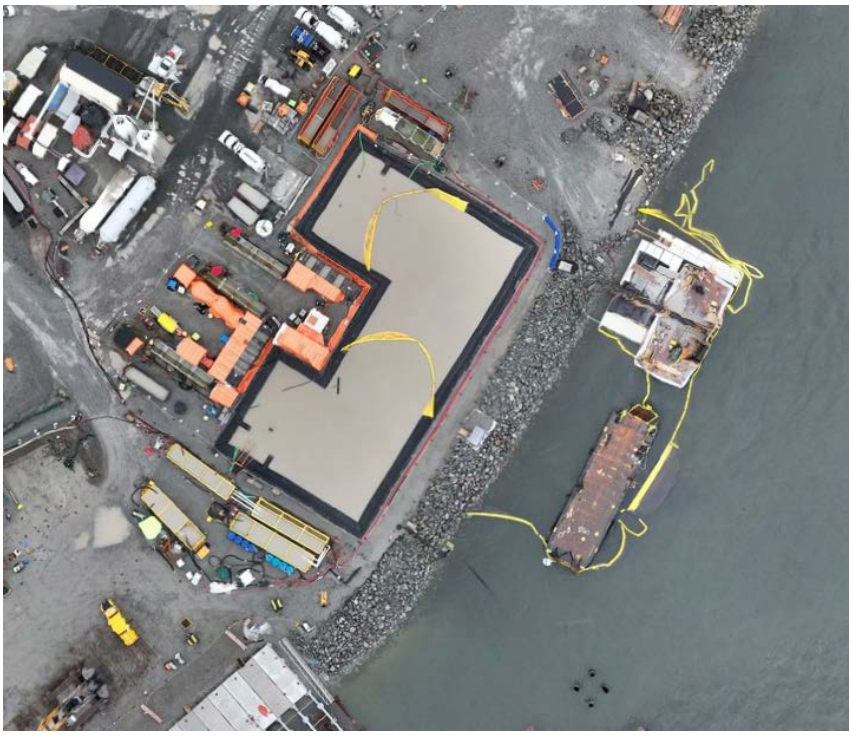


Figure 4: Aerial view of the East Sedimentation Pond (December 20, 2024). The East WWTP is located on the left side and the E500GPM TSS settling system is situated along the bottom edge of the pond.

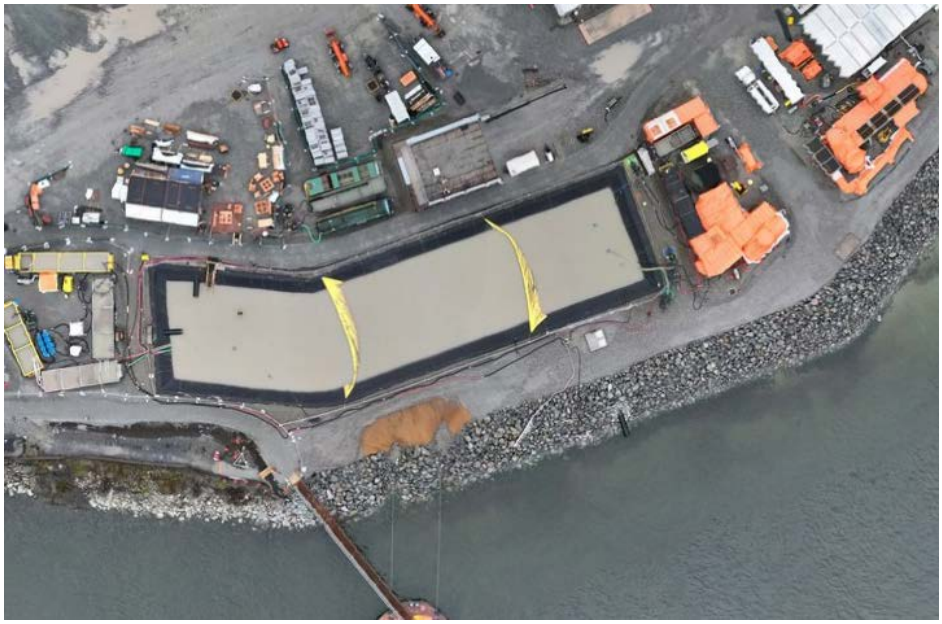


Figure 5: Aerial view of the West Sedimentation Pond (December 20, 2024). The TSS settling systems are located to the left (W500GPM) and right (ESC) of the pond.

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 Influent WWTP-E-IN VA24D3643-003 2024-12-16 11:00	Station WWTP-E-IN Influent WWTP-E-IN VA24D4203-005 2024-12-22 12:55	Station WWTP-E-IN Influent WWTP-E-IN VA25A0151-002 2025-01-03 10:49
		Long Term	Short Term				
General Parameters							
pH - Field	pH units	- [2]	-	5.5 - 9.0	7.3	7.6	7.0
Conductivity - Field	µS/cm	-	-	-	270	195	360
Temperature - Field	°C	-	-	-	5.4	7.1	4.4
Salinity - Field	ppt	-	-	-	0.21	0.14	0.29
Turbidity - Field	NTU	-	-	-	20.19	34.68	5.09
TSS	mg/L	-	-	25 or 75 [6]	21.9	29.4	<3.0
Dissolved Oxygen - Field	mg/L	>=8	-	-	12.37	12.14	12.57
Anions and Nutrients							
Sulphate	mg/L	-	-	-	74.1	46.2	57.7
Chloride	mg/L	-	-	-	11	5.19	5.63
Fluoride	mg/L	-	1.5	-	0.162	0.123	0.143
Ammonia ($N\text{-}NH_3$)	mg/L	7.2-41 [3]	48-270 [3]	-	0.118	0.0365	0.016
Nitrite ($N\text{-}NO_2$)	mg/L	-	-	-	0.075	0.030	0.0131
Nitrate ($N\text{-}NO_3$)	mg/L	3.7	339	-	3.73	1.81	1.10
Total Metals							
Aluminum, total (T-Al)	mg/L	-	-	-	1.48	2.58	0.29
Antimony, total (T-Sb)	mg/L	-	0.27 [4]	-	0.00171	0.00146	0.00156
Arsenic, total (T-As)	mg/L	0.0125	0.0125	-	0.00304	0.00319	0.00217
Barium, total (T-Ba)	mg/L	-	-	-	0.0199	0.0259	0.00653
Beryllium, total (T-Be)	mg/L	0.1	-	-	0.000029	0.00004	<0.000020
Boron, total (T-B)	mg/L	1.2	-	-	0.044	0.037	0.057
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	<0.0000400	0.0000584	<0.0000250
Chromium, total (T-Cr)	mg/L	-	-	-	0.00248	0.00324	0.00077
Cobalt, total (T-Co)	mg/L	-	-	-	0.0006	0.00083	0.00015
Copper, total (T-Cu)	mg/L	- [2]	- [2]	0.0043	0.00444	0.00613	0.00243
Iron, total (T-Fe)	mg/L	-	-	-	0.99	1.91	0.178
Lead, total (T-Pb)	mg/L	- [2]	- [2]	0.0035	0.00218	0.00348	0.000548
Manganese, total (T-Mn)	mg/L	-	-	-	0.052	0.0735	0.0118
Mercury, total (T-Hg)	mg/L	0.000016 [5]	-	-	0.00000809	***0.0000197***	0.00000491
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.0611	0.0371	0.0374
Nickel, total (T-Ni)	mg/L	0.0083	-	-	0.00065	0.00087	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	-	0.000258	0.000237	0.000177
Silver, total (T-Ag)	mg/L	0.0015	0.003	-	<0.000010	0.000013	<0.000010
Thallium, total (T-Tl)	mg/L	-	-	-	0.000014	0.000018	<0.000010
Uranium, total (T-U)	mg/L	-	-	-	0.0214	0.0134	0.0221
Vanadium, total (T-V)	mg/L	- [2]	-	0.0081	0.00597	0.0075	0.0039
Zinc, total (T-Zn)	mg/L	- [2]	- [2]	0.0133	0.0173	0.0194	0.0245
Hexavalent Chromium, total	mg/L	0.0015	-	-	***0.00184***	0.00145	<0.00050
Dissolved Metals							
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	<0.0000250	<0.0000150	<0.0000150
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.00228	0.00177	0.00179
Iron, dissolved (D-Fe)	mg/L	-	-	-	0.021	<0.010	0.011
Lead, dissolved (D-Pb)	mg/L	-	-	-	0.000061	<0.000050	<0.000050
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.0224	0.0149	0.00788
Nickel, dissolved (D-Ni)	mg/L	-	-	-	<0.00050	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.139	0.123	0.0946
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00402	0.00388	0.0036
Zinc, dissolved (D-Zn)	mg/L	-	-	-	0.0176	0.0038	0.0163
Polycyclic Aromatic Hydrocarbons (PAHs)							
Acenaphthene	mg/L	0.006	-	-	0.00001	0.000014	<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	0.00001	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	-	<0.0000050	0.0000073	<0.0000050
Chrysene	mg/L	0.0001	-	-	<0.000010	<0.000010	<0.000010
Fluoranthene	mg/L	-	-	-	0.000015	0.000026	<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	-	-	-	0.000016	0.000029	<0.000010
Quinoline	mg/L	-	-	-	<0.000050	0.000061	<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.
Results in orange text exceeded the PE-111578 East Sedimentation Pond Discharge Limit.
The East Sedimentation Pond discharged each day during the monitoring period (December 15, 2024 – January 4, 2025) except on January 4, 2025.
[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 Wet Conditions. Wet Conditions applied December 17 to 20, December 22 to 23, and December 25 to 29.

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

Parameter	Unit	Lowest Applicable Guideline [1]		PE-111578 Discharge Limit	Station SP-E-IN	Station SP-E-IN	Station SP-E-IN
					Influent	Influent	Influent
					SP-E-IN	SP-E-IN	SP-E-IN
					VA24D3643-001	VA24D4203-001	VA25A0151-004
		Long Term	Short Term		2024-12-16 10:15	2024-12-22 13:19	2025-01-03 12:04
General Parameters							
pH - Field	pH units	- [2]	-	5.5 - 9.0	6.9	8.6	7.2
Conductivity - Field	µS/cm	-	-	-	270	185	423
Temperature - Field	°C	-	-	-	5.8	7.1	5.2
Salinity - Field	ppt	-	-	-	0.21	0.14	0.33
Turbidity - Field	NTU	-	-	-	20.29	31.66	4.37
TSS	mg/L	-	-	25 [6]	24.7	24.8	6.1
Dissolved Oxygen - Field	mg/L	>=8	-	-	11.57	12	12.42
Anions and Nutrients							
Sulphate	mg/L	-	-	-	59.2	36.8	79
Chloride	mg/L	-	-	-	12.1	4.91	5.69
Fluoride	mg/L	-	1.5	-	0.166	0.11	0.111
Ammonia ($N\text{-}NH_3$)	mg/L	0.75-29 [3]	5-191 [3]	-	0.0689	0.0358	0.0185
Nitrite ($N\text{-}NO_2$)	mg/L	-	-	-	0.0545	0.0322	0.0144
Nitrate ($N\text{-}NO_3$)	mg/L	3.7	339	-	2.67	1.99	1.06
Total Metals							
Aluminum, total (T-Al)	mg/L	-	-	-	1.29	2.33	0.395
Antimony, total (T-Sb)	mg/L	-	0.27 [4]	-	0.0016	0.00168	0.00159
Arsenic, total (T-As)	mg/L	0.0125	0.0125	-	0.0027	0.0034	0.00215
Barium, total (T-Ba)	mg/L	-	-	-	0.0182	0.0243	0.00565
Beryllium, total (T-Be)	mg/L	0.1	-	-	<0.000020	0.000037	<0.000020
Boron, total (T-B)	mg/L	1.2	-	-	0.073	0.04	0.058
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	<0.0000550	0.0000475	<0.0000250
Chromium, total (T-Cr)	mg/L	-	-	-	0.00269	0.00271	0.00127
Cobalt, total (T-Co)	mg/L	-	-	-	0.00051	0.00071	0.00019
Copper, total (T-Cu)	mg/L	- [2]	- [2]	0.0043	0.00431	0.00525	0.00246
Iron, total (T-Fe)	mg/L	-	-	-	0.976	1.63	0.25
Lead, total (T-Pb)	mg/L	- [2]	- [2]	0.0035	0.00204	0.00326	0.000782
Manganese, total (T-Mn)	mg/L	-	-	-	0.0434	0.0568	0.0178
Mercury, total (T-Hg)	mg/L	0.000016 [5]	-	-	0.00000794	***0.0000135***	***0.0000254***
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.0582	0.0338	0.0335
Nickel, total (T-Ni)	mg/L	0.0083	-	-	0.00077	0.0008	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	-	0.000281	0.000275	0.000164
Silver, total (T-Ag)	mg/L	0.0015	0.003	-	<0.000010	0.000011	<0.000010
Thallium, total (T-Tl)	mg/L	-	-	-	0.000015	0.000018	<0.000010
Uranium, total (T-U)	mg/L	-	-	-	0.0235	0.0136	0.0194
Vanadium, total (T-V)	mg/L	- [2]	-	0.0081	0.00556	0.00754	0.00336
Zinc, total (T-Zn)	mg/L	- [2]	- [2]	0.0133	0.0065	0.0111	0.0056
Hexavalent Chromium, total	mg/L	0.0015	-	-	***0.00174***	***0.00155***	<0.00050
Dissolved Metals							
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	<0.0000300	<0.0000100	<0.0000150
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.00267	0.00163	0.00143
Iron, dissolved (D-Fe)	mg/L	-	-	-	<0.010	<0.010	0.012
Lead, dissolved (D-Pb)	mg/L	-	-	-	<0.000050	<0.000050	<0.000050
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.0198	0.0093	0.0107
Nickel, dissolved (D-Ni)	mg/L	-	-	-	<0.00050	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.164	0.13	0.0778
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00389	0.00438	0.00296
Zinc, dissolved (D-Zn)	mg/L	-	-	-	0.0021	0.0013	0.0016
Polycyclic Aromatic Hydrocarbons (PAHs)							
Acenaphthene	mg/L	0.006	-	-	0.000011	0.000023	<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	0.000012	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	-	<0.0000050	<0.0000093	<0.0000050
Chrysene	mg/L	0.0001	-	-	<0.000010	<0.000012	<0.000010
Fluoranthene	mg/L	-	-	-	0.000014	0.000042	<0.000010
Fluorene	mg/L	0.012	-	-	<0.000010	0.000014	<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	0.000027	<0.000020
Pyrene	mg/L	-	-	-	0.000015	0.000045	<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.
Results in orange text exceeded the PE-111578 East Sedimentation Pond Discharge Limit.
The East Sedimentation Pond discharged each day during the monitoring period (December 15, 2024 – January 4, 2025) except on January 4, 2025.
[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 Wet Conditions. Wet Conditions applied December 17 to 20, December 22 to 23, and December 25 to 29.

Table B-3: East Catchment Effluent Analytical Results Received at the Time of Reporting

Parameter	Unit	Lowest Applicable Guideline [1]		PE-111578 Discharge Limit	Station E500GPM-OUT	Station WWTP-E-OUT	Station WWTP-E-OUT	Station WWTP-E-OUT
					Effluent	Effluent	Effluent	Effluent
					E500GPM-OUT	WWTP-E-OUT	WWTP-E-OUT	WWTP-E-OUT
					VA24D4206-001	VA24D3643-002	VA24D4206-002	VA24D4203-006
		Long Term	Short Term		2024-12-21 17:00	2024-12-16 10:35	2024-12-21 17:15	2024-12-22 15:17
General Parameters								
pH - Field	pH units	- [2]	-	5.5 - 9.0	8.2	6.2	5.6	6.1
Conductivity - Field	µS/cm	-	-	-	181	266	484	60
Temperature - Field	°C	-	-	-	7.5	6.9	8.4	8.4
Salinity - Field	ppt	-	-	-	0.13	0.2	0.35	0.43
Turbidity - Field	NTU	-	-	-	1.8	2.76	0.97	0.75
TSS	mg/L	-	-	25 [6]	<3.0	<3.0	<3.0	<3.0
Dissolved Oxygen - Field	mg/L	>=8	-	-	13.27	12.69	10.34	10.3
Anions and Nutrients								
Sulphate	mg/L	-	-	-	-[8]	111	-[8]	371
Chloride	mg/L	-	-	-	-[8]	10.8	-[8]	4.67
Fluoride	mg/L	-	1.5	-	-[8]	0.151	-[8]	0.147
Ammonia (N-NH_3)	mg/L	29 [3]	191 [3]	-	-[8]	0.102	-[8]	0.061
Nitrite (N-NO_2)	mg/L	-	-	-	-[8]	0.0813	-[8]	0.0318
Nitrate (N-NO_3)	mg/L	3.7	339	-	-[8]	3.37	-[8]	1.33
Total Metals								
Aluminum, total (T-Al)	mg/L	-	-	-	-[8]	0.114	-[8]	0.266
Antimony, total (T-Sb)	mg/L	-	0.27 [4]	-	-[8]	0.00165	-[8]	0.0012
Arsenic, total (T-As)	mg/L	0.0125	0.0125	-	-[8]	0.00218	-[8]	0.00112
Barium, total (T-Ba)	mg/L	-	-	-	-[8]	0.00596	-[8]	0.015
Beryllium, total (T-Be)	mg/L	0.1	-	-	-[8]	<0.000020	-[8]	0.000023
Boron, total (T-B)	mg/L	1.2	-	-	-[8]	0.037	-[8]	0.043
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	-[8]	<0.0000200	-[8]	<0.0000300
Chromium, total (T-Cr)	mg/L	-	-	-	-[8]	0.00225	-[8]	0.00085
Cobalt, total (T-Co)	mg/L	-	-	-	-[8]	0.0002	-[8]	0.00018
Copper, total (T-Cu)	mg/L	- [2]	- [2]	0.0043	0.00157	0.00242	0.00227	0.00450 [9]
Iron, total (T-Fe)	mg/L	-	-	-	-[8]	0.015	-[8]	0.033
Lead, total (T-Pb)	mg/L	- [2]	- [2]	0.0035	-[8]	0.000114	-[8]	0.000232
Manganese, total (T-Mn)	mg/L	-	-	-	-[8]	0.0139	-[8]	0.0494
Mercury, total (T-Hg)	mg/L	0.000016 [5]	-	-	-[8]	0.00000301	-[8]	0.00000292
Molybdenum, total (T-Mo)	mg/L	-	-	-	-[8]	0.0655	-[8]	0.0451
Nickel, total (T-Ni)	mg/L	0.0083	-	-	-[8]	<0.00050	-[8]	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	-	-[8]	0.000291	-[8]	0.000216
Silver, total (T-Ag)	mg/L	0.0015	0.003	-	-[8]	<0.000010	-[8]	<0.000010
Thallium, total (T-Tl)	mg/L	-	-	-	-[8]	<0.000010	-[8]	0.00001
Uranium, total (T-U)	mg/L	-	-	-	-[8]	0.0124	-[8]	0.00587
Vanadium, total (T-V)	mg/L	- [2]	-	0.0081	-[8]	0.00378	-[8]	0.00231
Zinc, total (T-Zn)	mg/L	- [2]	- [2]	0.0133	-[8]	<0.0030	-[8]	0.0077
Hexavalent Chromium, total	mg/L	0.0015	-	-	-[8]	***0.00214***	-[8]	<0.00050
Dissolved Metals								
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	-[8]	<0.0000150	-[8]	<0.0000200
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.00138	0.00270	0.00382	0.00218
Iron, dissolved (D-Fe)	mg/L	-	-	-	-[8]	0.011	-[8]	0.02
Lead, dissolved (D-Pb)	mg/L	-	-	-	-[8]	0.000159	-[8]	0.000219
Manganese, dissolved (D-Mn)	mg/L	-	-	-	-[8]	0.0138	-[8]	0.0553
Nickel, dissolved (D-Ni)	mg/L	-	-	-	-[8]	<0.00050	-[8]	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	-	-[8]	0.162	-[8]	0.369
Vanadium, dissolved (D-V)	mg/L	-	-	-	-[8]	0.00371	-[8]	0.00216
Zinc, dissolved (D-Zn)	mg/L	-	-	-	-[8]	0.0052	-[8]	0.0055
Polycyclic Aromatic Hydrocarbons (PAHs)								
Acenaphthene	mg/L	0.006	-	-	-[8]	<0.000010	-[8]	<0.000010
Acridine	mg/L	-	-	-	-[8]	<0.000010	-[8]	<0.000010
Anthracene	mg/L	-	-	-	-[8]	<0.000010	-[8]	<0.000010
Benz(a)anthracene	mg/L	-	-	-	-[8]	<0.000010	-[8]	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	-	-[8]	<0.0000050	-[8]	<0.0000050
Chrysene	mg/L	0.0001	-	-	-[8]	<0.000010	-[8]	<0.000010
Fluoranthene	mg/L	-	-	-	-[8]	<0.000010	-[8]	<0.000010
Fluorene	mg/L	0.012	-	-	-[8]	<0.000010	-[8]	<0.000010
1-methylnaphthalene	mg/L	0.001	-	-	-[8]	<0.000010	-[8]	<0.000010
2-methylnaphthalene	mg/L	0.001	-	-	-[8]	<0.000010	-[8]	<0.000010
Naphthalene	mg/L	0.001	-	-	-[8]	<0.000050	-[8]	<0.000050
Phenanthrene	mg/L	-	-	-	-[8]	<0.000020	-[8]	<0.000020
Pyrene	mg/L	-	-	-	-[8]	<0.000010	-[8]	<0.000010
Quinoline	mg/L	-	-	-	-[8]	<0.000050	-[8]	<0.000050
Volatile Organic Compounds (VOCs)								
Benzene	mg/L	0.11	-	-	-[8]	<0.00050	-[8]	<0.00050
Ethylbenzene	mg/L	0.25	-	-	-[8]	<0.00050	-[8]	<0.00050
Methyl-tert-butyl-ether	mg/L	5	0.44	-	-[8]	<0.00050	-[8]	<0.00050
Styrene	mg/L	-	-	-	-[8]	<0.00050	-[8]	<0.00050
Toluene	mg/L	0.215	-	-	-[8]	<0.00040	-[8]	<0.00040
Total Xylenes	mg/L	-	-	-	-[8]	<0.00050	-[8]	<0.00050
Chlorobenzene	mg/L	0.025	-	-	-[8]	<0.00050	-[8]	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	-	-	-[8]	<0.00050	-[8]	<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 each day during the monitoring period (December 15, 2024 – January 4, 2025) except on January 4, 2025.
[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 Wet Conditions. Wet Conditions applied December 17 to 20, December 22 to 23, and December 25 to 29.
[7] Field measurements and analytical samples were collected at the SP-E-OUT sample collection port.
[8] Testing for General Parameters, PAHs, and VOCs was not conducted for the E500GPM-OUT and WWTP-E-OUT samples collected on December 21. Only field parameters and total and dissolved copper were analyzed.
[9] East WWTP treated effluent was combined with TSS clarified water from the East TSS settling system (E500GPM) and discharged at station SP-E-OUT on December 22. The effluent discharged at station SP-E-OUT on December 22 (Table B-5) met PE-111578 discharge limits and WQGs.

Table B-4: 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 [7]	Station SP-E-OUT [7]	Station SP-E-OUT [7]
					Effluent	Effluent	Effluent	Effluent
					WWTP-E-OUT	SP-E-OUT	SP-E-OUT-DUP	SP-E-OUT
					VA25A0151-003	VA24D4145-001	VA24D4145-002	VA24D4183-001
		Long Term	Short Term		2025-01-03 11:37	2024-12-20 13:50	2024-12-20 13:50	2024-12-21 15:03
General Parameters								
pH - Field	pH units	- [2]	-	5.5 - 9.0	6.7	7.6	7.6	7.7
Conductivity - Field	µS/cm	-	-	-	460	232	232	196
Temperature - Field	°C	-	-	-	6.0	6.9	6.9	7.5
Salinity - Field	ppt	-	-	-	0.35	0.17	0.17	0.14
Turbidity - Field	NTU	-	-	-	1.77	7.64	7.64	2.77
TSS	mg/L	-	-	25 [6]	<3.0	<3.0	<3.0	<3.0
Dissolved Oxygen - Field	mg/L	>=8	-	-	13.46	12.87	12.87	12.62
Anions and Nutrients								
Sulphate	mg/L	-	-	-	124	74.6	74.5	-[8]
Chloride	mg/L	-	-	-	5.45	5.24	5.26	-[8]
Fluoride	mg/L	-	1.5	-	<0.100	0.11	0.109	-[8]
Ammonia (N-NH_3)	mg/L	7.2-29 [3]	48-191 [3]	-	0.0197	0.104	0.101	-[8]
Nitrite (N-NO_2)	mg/L	-	-	-	0.014	0.0396	0.0411	-[8]
Nitrate (N-NO_3)	mg/L	3.7	339	-	1.04	2.00	2.00	-[8]
Total Metals								
Aluminum, total (T-Al)	mg/L	-	-	-	0.0382	0.651	0.680	-[8]
Antimony, total (T-Sb)	mg/L	-	0.27 [4]	-	0.00154	0.00136	0.0014	-[8]
Arsenic, total (T-As)	mg/L	0.0125	0.0125	-	0.00142	0.00275	0.00272	-[8]
Barium, total (T-Ba)	mg/L	-	-	-	0.00208	0.00756	0.00766	-[8]
Beryllium, total (T-Be)	mg/L	0.1	-	-	<0.000020	<0.000020	<0.000020	-[8]
Boron, total (T-B)	mg/L	1.2	-	-	0.047	0.027	0.027	-[8]
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	<0.0000100	<0.0000200	<0.0000200	-[8]
Chromium, total (T-Cr)	mg/L	-	-	-	0.00053	0.00214	0.00208	-[8]
Cobalt, total (T-Co)	mg/L	-	-	-	<0.00010	0.00021	0.00021	-[8]
Copper, total (T-Cu)	mg/L	- [2]	- [2]	0.0043	0.00322	0.00444	0.00232	0.00251
Iron, total (T-Fe)	mg/L	-	-	-	0.021	0.281	0.295	-[8]
Lead, total (T-Pb)	mg/L	- [2]	- [2]	0.0035	0.000211	0.00123	0.00128	-[8]
Manganese, total (T-Mn)	mg/L	-	-	-	0.00299	0.0209	0.0212	-[8]
Mercury, total (T-Hg)	mg/L	0.000016 [5]	-	-	0.00000720	0.00000383	0.00000374	-[8]
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.0353	0.0314	0.0323	-[8]
Nickel, total (T-Ni)	mg/L	0.0083	-	-	<0.00050	<0.00050	<0.00050	-[8]
Selenium, total (T-Se)	mg/L	0.002	-	-	0.000136	0.000178	0.000193	-[8]
Silver, total (T-Ag)	mg/L	0.0015	0.003	-	<0.000010	<0.000010	<0.000010	-[8]
Thallium, total (T-Tl)	mg/L	-	-	-	<0.000010	<0.000010	<0.000010	-[8]
Uranium, total (T-U)	mg/L	-	-	-	0.011	0.0114	0.0111	-[8]
Vanadium, total (T-V)	mg/L	- [2]	-	0.0081	0.00286	0.00436	0.00438	-[8]
Zinc, total (T-Zn)	mg/L	- [2]	- [2]	0.0133	0.0035	0.0065	0.0049	-[8]
Hexavalent Chromium, total	mg/L	0.0015	-	-	<0.00050	0.00145	0.00148	-[8]
Dissolved Metals								
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	<0.0000100	<0.0000150	<0.0000150	-[8]
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.00158	0.00141	0.00141	0.00172
Iron, dissolved (D-Fe)	mg/L	-	-	-	0.012	0.01	<0.010	-[8]
Lead, dissolved (D-Pb)	mg/L	-	-	-	<0.000050	<0.000050	<0.000050	-[8]
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.00323	0.0144	0.0146	-[8]
Nickel, dissolved (D-Ni)	mg/L	-	-	-	<0.00050	<0.00050	<0.00050	-[8]
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.0578	0.1	0.101	-[8]
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00287	0.00372	0.0038	-[8]
Zinc, dissolved (D-Zn)	mg/L	-	-	-	0.0012	0.002	0.0022	-[8]
Polycyclic Aromatic Hydrocarbons (PAHs)								
Acenaphthene	mg/L	0.006	-	-	<0.000010	<0.000010	<0.000010	-[8]
Acridine	mg/L	-	-	-	<0.000010	<0.000010	<0.000010	-[8]
Anthracene	mg/L	-	-	-	<0.000010	<0.000010	<0.000010	-[8]
Benz(a)anthracene	mg/L	-	-	-	<0.000010	<0.000010	<0.000010	-[8]
Benzo(a)pyrene	mg/L	0.00001	-	-	<0.0000050	<0.0000050	<0.0000050	-[8]
Chrysene	mg/L	0.0001	-	-	<0.000010	<0.000010	<0.000010	-[8]
Fluoranthene	mg/L	-	-	-	<0.000010	<0.000010	<0.000010	-[8]
Fluorene	mg/L	0.012	-	-	<0.000010	<0.000010	<0.000010	-[8]
1-methylnaphthalene	mg/L	0.001	-	-	<0.000010	<0.000010	<0.000010	-[8]
2-methylnaphthalene	mg/L	0.001	-	-	<0.000010	<0.000010	<0.000010	-[8]
Naphthalene	mg/L	0.001	-	-	<0.000050	<0.000050	<0.000050	-[8]
Phenanthrene	mg/L	-	-	-	<0.000020	<0.000020	<0.000020	-[8]
Pyrene	mg/L	-	-	-	<0.000010	<0.000010	<0.000010	-[8]
Quinoline	mg/L	-	-	-	<0.000050	<0.000050	<0.000050	-[8]
Volatile Organic Compounds (VOCs)								
Benzene	mg/L	0.11	-	-	<0.00050	<0.00050	<0.00050	-[8]
Ethylbenzene	mg/L	0.25	-	-	<0.00050	<0.00050	<0.00050	-[8]
Methyl-tert-butyl-ether	mg/L	5	0.44	-	<0.00050	<0.00050	<0.00050	-[8]
Styrene	mg/L	-	-	-	<0.00050	<0.00050	<0.00050	-[8]
Toluene	mg/L	0.215	-	-	<0.00040	<0.00040	<0.00040	-[8]
Total Xylenes	mg/L	-	-	-	<0.00050	<0.00050	<0.00050	-[8]
Chlorobenzene	mg/L	0.025	-	-	<0.00050	<0.00050	<0.00050	-[8]
1,2-Dichlorobenzene	mg/L	0.042	-	-	<0.00050	<0.00050	<0.00050	-[8]

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 each day during the monitoring period (December 15, 2024 – January 4, 2025) except on January 4, 2025.
[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 Wet Conditions. Wet Conditions applied December 17 to 20, December 22 to 23, and December 25 to 29.
[7] Field measurements and analytical samples were collected at the SP-E-OUT sample collection port.
[8] Testing for General Parameters, PAHs, and VOCs was not conducted for the SP-E-OUT samples collected on December 21. Only field parameters and total and dissolved copper were analyzed.

Table B-5: East Catchment Effluent Analytical Results Received at the Time of Reporting

Parameter	Unit	Lowest Applicable Guideline [1]		PE-111578 Discharge Limit	Station SP-E-OUT [7]	Station SP-E-OUT [7]
					Effluent	Effluent
					SP-E-OUT	SP-E-OUT
					VA24D4203-002	VA25A0151-001
		Long Term	Short Term		2024-12-22 13:02	2025-01-03 10:14
General Parameters						
pH - Field	pH units	- [2]	-	5.5 - 9.0	6.5	7.2
Conductivity - Field	µS/cm	-	-	-	302	390
Temperature - Field	°C	-	-	-	7.3	3.8
Salinity - Field	ppt	-	-	-	0.22	0.32
Turbidity - Field	NTU	-	-	-	1.28	0.9
TSS	mg/L	-	-	25 [6]	<3.0	<3.0
Dissolved Oxygen - Field	mg/L	>=8	-	-	12.35	13.13
Anions and Nutrients						
Sulphate	mg/L	-	-	-	117	82.1
Chloride	mg/L	-	-	-	5.15	5.75
Fluoride	mg/L	-	1.5	-	0.127	0.114
Ammonia ($N\text{-}NH_3$)	mg/L	26-29 [3]	175-191 [3]	-	0.0249	0.0288
Nitrite ($N\text{-}NO_2$)	mg/L	-	-	-	0.0292	0.0142
Nitrate ($N\text{-}NO_3$)	mg/L	3.7	339	-	1.71	1.04
Total Metals						
Aluminum, total (T-Al)	mg/L	-	-	-	0.138	0.0371
Antimony, total (T-Sb)	mg/L	-	0.27 [4]	-	0.00133	0.00159
Arsenic, total (T-As)	mg/L	0.0125	0.0125	-	0.00211	0.00165
Barium, total (T-Ba)	mg/L	-	-	-	0.00958	0.00403
Beryllium, total (T-Be)	mg/L	0.1	-	-	<0.000020	<0.000020
Boron, total (T-B)	mg/L	1.2	-	-	0.038	0.06
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	<0.0000250	<0.0000150
Chromium, total (T-Cr)	mg/L	-	-	-	0.00132	0.00052
Cobalt, total (T-Co)	mg/L	-	-	-	0.00014	0.0001
Copper, total (T-Cu)	mg/L	- [2]	- [2]	0.0043	0.00248	0.00148
Iron, total (T-Fe)	mg/L	-	-	-	0.027	0.018
Lead, total (T-Pb)	mg/L	- [2]	- [2]	0.0035	0.000253	0.000146
Manganese, total (T-Mn)	mg/L	-	-	-	0.0269	0.0143
Mercury, total (T-Hg)	mg/L	0.000016 [5]	-	-	0.00000157	0.00000334
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.0379	0.0343
Nickel, total (T-Ni)	mg/L	0.0083	-	-	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	-	0.00021	0.000117
Silver, total (T-Ag)	mg/L	0.0015	0.003	-	<0.000010	<0.000010
Thallium, total (T-Tl)	mg/L	-	-	-	<0.000010	<0.000010
Uranium, total (T-U)	mg/L	-	-	-	0.0115	0.0157
Vanadium, total (T-V)	mg/L	- [2]	-	0.0081	0.00311	0.00256
Zinc, total (T-Zn)	mg/L	- [2]	- [2]	0.0133	0.0132	0.0050
Hexavalent Chromium, total	mg/L	0.0015	-	-	0.00104	<0.00050
Dissolved Metals						
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	<0.0000150	<0.0000150
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.00144	0.00159
Iron, dissolved (D-Fe)	mg/L	-	-	-	0.013	0.012
Lead, dissolved (D-Pb)	mg/L	-	-	-	0.000095	0.000124
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.025	0.0164
Nickel, dissolved (D-Ni)	mg/L	-	-	-	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.176	0.101
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00311	0.00244
Zinc, dissolved (D-Zn)	mg/L	-	-	-	0.0043	0.008
Polycyclic Aromatic Hydrocarbons (PAHs)						
Acenaphthene	mg/L	0.006	-	-	<0.000010	<0.000010
Acridine	mg/L	-	-	-	<0.000010	<0.000010
Anthracene	mg/L	-	-	-	<0.000010	<0.000010
Benz(a)anthracene	mg/L	-	-	-	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	-	<0.0000050	<0.0000050
Chrysene	mg/L	0.0001	-	-	<0.000010	<0.000010
Fluoranthene	mg/L	-	-	-	<0.000010	<0.000010
Fluorene	mg/L	0.012	-	-	<0.000010	<0.000010
1-methylnaphthalene	mg/L	0.001	-	-	<0.000010	<0.000010
2-methylnaphthalene	mg/L	0.001	-	-	<0.000010	<0.000010
Naphthalene	mg/L	0.001	-	-	<0.000050	<0.000050
Phenanthrene	mg/L	-	-	-	<0.000020	<0.000020
Pyrene	mg/L	-	-	-	<0.000010	<0.000010
Quinoline	mg/L	-	-	-	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)						
Benzene	mg/L	0.11	-	-	<0.00050	<0.00050
Ethylbenzene	mg/L	0.25	-	-	<0.00050	<0.00050
Methyl-tert-butyl-ether	mg/L	5	0.44	-	<0.00050	<0.00050
Styrene	mg/L	-	-	-	<0.00050	<0.00050
Toluene	mg/L	0.215	-	-	<0.00040	<0.00040
Total Xylenes	mg/L	-	-	-	<0.00050	<0.00050
Chlorobenzene	mg/L	0.025	-	-	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	-	-	<0.00050	<0.00050

Notes: Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.
Results in orange text exceeded the PE-111578 East Sedimentation Pond Discharge Limit.
The East Sedimentation Pond discharged each day during the monitoring period (December 15, 2024 – January 4, 2025) except on January 4, 2025.
[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 Wet Conditions. Wet Conditions applied December 17 to 20, December 22 to 23, and December 25 to 29.
[7] Field measurements and analytical samples were collected at the SP-E-OUT sample collection port.

Table B-6: 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]	0.0098 – 0.020 [3,4]
Station	**Water Type**	**Sample ID**	**Lab ID**	**Sampling Date**		
Influent						
SP-E-IN	Influent	SP-E-IN	VA24D3034-001	2024-12-07	***0.000277***	***0.123***
SP-E-IN	Influent	SP-E-IN	VA24D3643-001	2024-12-16	***0.000101***	***0.00794***
WWTP-E-IN	Influent	WWTP-E-IN	VA24D3034-002	2024-12-07	***0.000127***	***0.0645***
WWTP-E-IN	Influent	WWTP-E-IN	VA24D3643-003	2024-12-16	***0.000106***	***0.00809***
Effluent						
SP-E-OUT	Effluent	SP-E-OUT	VA24D2836-001	2024-12-05	0.000031	0.00486
WWTP-E-OUT	Effluent	WWTP-E-OUT	VA24D3034-003	2024-12-07	0.000040	0.00570
WWTP-E-OUT	Effluent	WWTP-E-OUT	VA24D3643-002	2024-12-16	0.000071	0.00301
E500GPM-OUT	Effluent	E500GPM-OUT	VA24D3034-007	2024-12-07	0.000034	0.00182

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

Table B-7: 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	L2758200-2	2024-11-20	3.46	10.7
Effluent						
SP-E-OUT	Effluent	SP-E-OUT	L2758200-1	2024-11-19	0.00206	0.753

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-8: East Catchment Field Measurements Collected During the Monitoring Period (December 15, 2024 – January 4, 2025).

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	2024-12-15 10:27	6.1	12.08	0.20	68.29	53.9	8.0	264	No
SP-E-IN	Influent	2024-12-16 10:15	5.8	11.57	0.21	20.29	18.1	6.9	270	No
SP-E-IN	Influent	2024-12-17 14:05	5.6	11.55	0.21	7.79	8.8	7.1	269	No
SP-E-IN	Influent	2024-12-18 15:56	5.7	12.26	0.14	180.85	137.9	6.8	192	No
SP-E-IN	Influent	2024-12-19 15:25	6.7	12.10	0.19	96.76	75.2	6.5	253	No
SP-E-IN	Influent	2024-12-20 12:14	6.4	12.89	0.11	143.32	109.9	8.9	153	No
SP-E-IN	Influent	2024-12-21 13:44	7.4	12.30	0.13	62.79	49.8	8.2	187	No
SP-E-IN	Influent	2024-12-22 13:19	7.1	12.00	0.14	31.66	26.6	8.6	185	No
SP-E-IN	Influent	2024-12-23 15:10	7.8	11.61	0.20	20.91	18.6	8.7	280	No
SP-E-IN	Influent	2024-12-24 11:13	8.1	11.28	0.13	31.29	26.3	8.6	187	No
SP-E-IN	Influent	2024-12-25 14:34	6.8	11.61	0.17	20.89	18.6	9.1	234	No
SP-E-IN	Influent	2024-12-26 10:51	6.5	11.72	0.12	36.01	29.9	9.3	158	No
SP-E-IN	Influent	2024-12-28 11:47	6.5	12.60	0.13	58.82	46.9	8.6	181	No
SP-E-IN	Influent	2024-12-29 15:28	7.1	11.86	0.16	97.45	75.7	8.3	214	No
SP-E-IN	Influent	2024-12-30 15:17	7.1	11.05	0.16	12.10	12.0	7.6	219	No
SP-E-IN	Influent	2024-12-31 13:41	6.9	11.92	0.29	6.79	8.1	6.8	387	No
SP-E-IN	Influent	2025-01-01 15:53	5.7	11.36	0.25	8.19	9.1	7.0	320	No
SP-E-IN	Influent	2025-01-02 15:35	5.2	12.31	0.29	19.69	17.7	6.6	367	No
SP-E-IN	Influent	2025-01-03 12:04	5.2	12.42	0.33	4.37	6.3	7.2	423	No
SP-E-IN	Influent	2025-01-04 14:07	5.9	12.31	0.29	12.09	12.0	6.7	3814	No
WWTP-E-IN	Influent	2024-12-15 10:35	6.3	12.04	0.21	54.5	43.6	8.0	281	No
WWTP-E-IN	Influent	2024-12-16 11:00	5.4	12.37	0.21	20.19	18.1	7.3	270	No
WWTP-E-IN	Influent	2024-12-17 14:19	5.1	12.12	0.21	34.11	28.4	7.0	266	No
WWTP-E-IN	Influent	2024-12-18 15:47	5.8	12.43	0.14	143.66	110.1	7.3	190	No
WWTP-E-IN	Influent	2024-12-19 15:19	6.2	12.57	0.17	60.53	48.1	7.4	222	No
WWTP-E-IN	Influent	2024-12-20 12:24	6.6	12.96	0.12	185.51	141.4	7.9	163	No
WWTP-E-IN	Influent	2024-12-21 13:29	7.7	11.89	0.13	61.27	48.7	8.2	184	No
WWTP-E-IN	Influent	2024-12-22 12:55	7.1	12.14	0.14	34.68	28.9	7.6	195	No
WWTP-E-IN	Influent	2024-12-23 10:44	7.9	12.32	0.14	30.04	25.4	8.3	202	No
WWTP-E-IN	Influent	2024-12-24 11:07	8.4	11.53	0.21	20.41	18.2	7.6	292	No
WWTP-E-IN	Influent	2024-12-25 14:10	7.3	11.78	0.15	27.86	23.8	8.1	210	No
WWTP-E-IN	Influent	2024-12-26 10:45	6.4	11.89	0.12	40.23	33.0	8.9	160	No
WWTP-E-IN	Influent	2024-12-27 12:19	7.1	12.19	0.16	20.66	18.4	8.4	213	No
WWTP-E-IN	Influent	2024-12-28 11:41	5.5	10.13	0.19	234.06	177.6	10.3	245	No
WWTP-E-IN	Influent	2024-12-29 15:22	6.8	12.11	0.15	14.89	14.1	8.1	206	No
WWTP-E-IN	Influent	2024-12-30 15:30	7.1	12.73	0.17	12.01	12.0	8.0	236	No
WWTP-E-IN	Influent	2024-12-31 13:50	6.6	12.06	0.27	8.35	9.2	7.3	356	No
WWTP-E-IN	Influent	2025-01-01 15:40	5.8	12.31	0.26	2.85	5.1	6.8	342	No
WWTP-E-IN	Influent	2025-01-02 15:25	5.9	12.79	0.29	9.73	10.3	6.9	378	No
WWTP-E-IN	Influent	2025-01-03 10:49	4.4	12.57	0.29	5.09	6.8	7.0	360	No
WWTP-E-IN	Influent	2025-01-04 13:57	5.7	12.61	0.31	15.29	14.4	7.2	397	No
E500GPM-IN	Influent	2024-12-15 10:15	8.2	12.34	0.11	122.37	94.3	8.0	157	No
E500GPM-IN	Influent	2024-12-18 14:38	5.8	14.14	0.15	123.79	95.3	7.6	195	No
E500GPM-IN	Influent	2024-12-20 12:59	6.5	13.01	0.11	206.9	157.3	8.6	153	No
E500GPM-IN	Influent	2024-12-21 13:53	7.0	12.09	0.13	60.16	47.9	8.4	176	No
E500GPM-IN	Influent	2024-12-22 13:37	6.8	12.34	0.14	33.78	28.2	7.7	194	No
E500GPM-IN	Influent	2024-12-23 11:11	7.6	12.89	0.14	37.27	30.8	8.1	197	No
E500GPM-IN	Influent	2024-12-24 11:15	8.2	11.50	0.21	20.62	18.4	7.6	289	No
E500GPM-IN	Influent	2024-12-25 14:37	6.8	11.85	0.15	9.77	10.3	8.2	209	No
E500GPM-IN	Influent	2024-12-27 12:25	7.0	12.09	0.15	15.51	14.6	7.8	210	No
E500GPM-IN	Influent	2024-12-28 11:51	6.5	12.21	0.17	35.88	29.8	8.2	23	No
E500GPM-IN	Influent	2024-12-30 15:45	7.9	12.88	0.17	65.06	51.5	8.4	240	No
E500GPM-IN	Influent	2025-01-03 12:37	6.9	12.84	0.29	29.25	24.8	7.3	394	No
Effluent [5]										
SP-E-OUT	Effluent	2024-12-15 11:56	6.9	12.85	0.26	2.10	4.6	7.5	359	No
SP-E-OUT	Effluent	2024-12-16	4.4 [5]	-[5]	-[5]	7.9 [5]	8.9 [5]	6.1 [5]	-[5]	-[5]
SP-E-OUT	Effluent	2024-12-17 14:21	5.3	13.91	0.05	7.85	8.9	7.9	63	No
SP-E-OUT	Effluent	2024-12-18 15:39	6.4	12.86	0.2	1.53	4.1	6.7	268	No
SP-E-OUT	Effluent	2024-12-19 15:04	6.6	12.86	0.21	1.09	3.8	7.6	282	No
SP-E-OUT	Effluent	2024-12-20 13:37	6.9	12.87	0.17	7.64	8.7	7.6	232	No
SP-E-OUT	Effluent	2024-12-21 13:40	7.2	12.58	0.15	3.39	5.5	7.6	205	No
SP-E-OUT	Effluent	2024-12-21 15:03	7.5	12.62	0.14	2.77	5.1	7.7	196	No
SP-E-OUT	Effluent	2024-12-22 13:02	7.3	12.35	0.22	1.28	4.0	6.5	302	No
SP-E-OUT	Effluent	2024-12-23	8.7 [5]	-[5]	-[5]	7.6 [5]	8.7 [5]	6.9 [5]	-[5]	-[5]
SP-E-OUT	Effluent	2024-12-24	9.1 [5]	-[5]	-[5]	5.7 [5]	7.3 [5]	6.3 [5]	-[5]	-[5]
SP-E-OUT	Effluent	2024-12-25 14:05	7.9	12.34	0.19	1.60	4.2	8.4	261	No
SP-E-OUT	Effluent	2024-12-26 12:11	6.4	12.53	0.17	5.51	7.1	7.7	233	No
SP-E-OUT	Effluent	2024-12-27 12:17	7.4	12.79	0.26	3.81	5.8	6.9	352	No
SP-E-OUT	Effluent	2024-12-28 11:34	7.4	12.62	0.3	1.81	4.3	6.7	402	No
SP-E-OUT	Effluent	2024-12-29 15:18	6.7	12.50	0.37	1.45	4.1	7.0	488	No
SP-E-OUT	Effluent	2024-12-30	7.1 [5]	-[5]	-[5]	3.5 [5]	5.6 [5]	6.5 [5]	-[5]	-[5]
SP-E-OUT	Effluent	2024-12-31	5.5 [5]	-[5]	-[5]	0.9 [5]	3.7 [5]	5.6 [5]	-[5]	-[5]
SP-E-OUT	Effluent	2025-01-01	5.4 [5]	-[5]	-[5]	0.1 [5]	3.1 [5]	5.8 [5]	-[5]	-[5]
SP-E-OUT	Effluent	2025-01-02	4.2 [5]	-[5]	-[5]	15.4 [5]	14.5 [5]	6.8 [5]	-[5]	-[5]
SP-E-OUT	Effluent	2025-01-03 10:14	3.8	13.13	0.32	0.90	3.7	7.2	390	No

Table B-8 (continued): East Catchment Field Measurements Collected During the Monitoring Period (December 15, 2024 – January 4, 2025).

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**								
Effluent [5]										
WWTP-E-OUT	Effluent	2024-12-15 10:44	6.7	13.38	0.48	2.61	4.9	7.0	634	No
WWTP-E-OUT	Effluent	2024-12-18 15:51	6.0	11.71	0.36	0.62	3.5	5.7	475	No
WWTP-E-OUT	Effluent	2024-12-19 15:22	6.7	11.31	0.35	1.32	4.0	5.8	468	No
WWTP-E-OUT	Effluent	2024-12-20 12:21	6.9	11.41	0.37	1.84	4.4	5.8	489	No
WWTP-E-OUT	Effluent	2024-12-21 13:37	8.4	11.06	0.37	0.79	3.6	7.0	509	No
WWTP-E-OUT	Effluent	2024-12-21 17:15	8.4	10.34	0.35	0.97	3.7	5.6	484	No
WWTP-E-OUT	Effluent	2024-12-22 15:17	8.4	10.30	0.43	0.75	3.6	6.1	60	No
WWTP-E-OUT	Effluent	2024-12-23 10:53	8.1	11.46	0.46	3.41	5.5	7.0	623	No
WWTP-E-OUT	Effluent	2024-12-25 14:14	8.0	12.85	0.27	1.34	4.0	9.8 [7]	371	No
WWTP-E-OUT	Effluent	2024-12-27 12:22	7.4	12.55	0.31	1.91	4.4	6.7	424	No
WWTP-E-OUT	Effluent	2024-12-28 11:43	7.3	12.51	0.22	1.70	4.3	6.8	299	No
WWTP-E-OUT	Effluent	2024-12-29 15:24	6.7	12.88	0.37	1.79	4.3	6.1	490	No
WWTP-E-OUT	Effluent	2024-12-30 15:26	7.5	11.96	0.29	0.81	3.6	6.9	395	No
WWTP-E-OUT	Effluent	2024-12-31 13:48	7.2	11.42	0.23	1.00	3.7	8.9	315	No
WWTP-E-OUT	Effluent	2025-01-01 15:48	6.6	12.17	0.28	3.17	5.4	7.5	380	No
WWTP-E-OUT	Effluent	2025-01-02 15:30	6.5	11.65	0.29	0.67	3.5	6.8	389	No
WWTP-E-OUT	Effluent	2025-01-04 14:02	6.1	13.36	0.35	0.57	3.4	6.7	455	No
E500GPM-OUT	Effluent	2024-12-15 10:19	6.6	13.01	0.22	0.85	3.6	7.8	293	No
E500GPM-OUT	Effluent	2024-12-18 14:43	6.0	13.69	0.15	1.25	3.9	7.7	201	No
E500GPM-OUT	Effluent	2024-12-20 12:46	6.7	13.41	0.12	9.39	10.0	8.0	159	No
E500GPM-OUT	Effluent	2024-12-21 13:48	7.1	12.79	0.13	3.55	5.6	8.1	175	No
E500GPM-OUT	Effluent	2024-12-21 17:00	7.5	13.27	0.13	1.8	4.3	8.2	181	No
E500GPM-OUT	Effluent	2024-12-22 13:41	7.1	12.99	0.14	1.79	4.3	7.9	188	No
E500GPM-OUT	Effluent	2024-12-23 11:05	7.3	12.96	0.14	1.74	4.3	8.0	191	No
E500GPM-OUT	Effluent	2024-12-24 11:17	8.2	11.46	0.24	0.89	3.7	7.8	330	No
E500GPM-OUT	Effluent	2024-12-25 14:40	6.8	13.2	0.16	2.68	5.0	8.0	211	No
E500GPM-OUT	Effluent	2024-12-26 10:56	6.4	12.49	0.13	5.92	7.4	8.5	170	No
E500GPM-OUT	Effluent	2024-12-27 12:27	7.0	13.33	0.15	2.34	4.7	7.8	203	No
E500GPM-OUT	Effluent	2024-12-28 11:54	6.5	13.15	0.19	0.87	3.6	8.0	252	No
E500GPM-OUT	Effluent	2024-12-30 15:39	6.9	13.45	0.17	4.58	6.4	8.1	233	No
E500GPM-OUT	Effluent	2025-01-03 12:30	3.9	14.08	0.28	0.94	3.7	7.4	349	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] Site staff noted there was no active input of influent to the pond at the time of monitoring on December 27, therefore daily measurements for station SP-E-IN were not collected.
[5] On December 16, December 23, December 24, and December 30 through January 2, 2025, field measurements were not collected at SP-E-OUT because there was no discharge at the time of monitoring; average temperature, turbidity and pH measurements logged at the SP-E-OUT meter box during the discharge period are reported. There was no discharge January 4, therefore daily measurements for SP-E-OUT were not collected on that 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 applied December 17 to 20, December 22 to 23, and December 25 to 29.
[7] East WWTP treated effluent was combined with TSS clarified water from the East TSS settling system (E500GPM) and discharged at station SP-E-OUT on December 25. Field staff notified the water treatment subcontractor of the elevated pH at WWTP-E-OUT and water was temporarily recirculated through the East WWTP to lower the pH at WWTP-E-OUT. Field measurements collected at the SP-E-OUT sampling port on December 25 at 14:05 met the PE-111578 discharge limit for pH.

Table B-9: East Catchment Daily Discharge Volumes for the Monitoring Period (December 15, 2024 – January 4, 2025).

	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				
2024-12-15	0	1,988	341	2,329
2024-12-16	0	1,149	283	1,432
2024-12-17	0	0	174	174
2024-12-18	0	872	490	1,362
2024-12-19	0	2,289	591	2,880
2024-12-20	0	1,700	790	2,490
2024-12-21	0	2,428	615	3,043
2024-12-22	0	2,401	467	2,868
2024-12-23	0	2,050	401	2,451
2024-12-24	0	1,577	270	1,847
2024-12-25	0	1,698	609	2,307
2024-12-26	0	2,062	464	2,526
2024-12-27	0	1,802	634	2,436
2024-12-28	0	1,470	496	1,966
2024-12-29	0	1,329	676	2,005
2024-12-30	0	271	432	703
2024-12-31	0	697	104	801
2025-01-01	0	245	78	323
2025-01-02	0	213	9	222
2025-01-03	0	173	82	255
2025-01-04	0	0	0	0

Notes:
Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.
Results in orange text exceeded the PE-111578 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.

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 VA24D3643-005 2024-12-16 12:18	Station SP-W-IN Influent SP-W-IN VA24D4203-003 2024-12-22 14:30
		Long Term	Short Term			
General Parameters						
pH - Field	pH units	- [2]	-	5.5 - 9.0	8.2	8.3
Conductivity - Field	µS/cm	-	-	-	53	98
Temperature - Field	°C	-	-	-	5.4	6.8
Salinity - Field	ppt	-	-	-	0.04	0.07
Turbidity - Field	NTU	-	-	-	49.35	34.57
TSS	mg/L	-	-	25[6]	28.9	141
Dissolved Oxygen - Field	mg/L	>=8	-	-	12.87	11.88
Anions and Nutrients						
Sulphate	mg/L	-	-	-	5.95	10.0
Chloride	mg/L	-	-	-	1.63	1.76
Fluoride	mg/L	-	1.5	-	0.068	0.045
Ammonia (N-NH_3)	mg/L	1.8 [3]	12 [3]	-	0.0091	0.0086
Nitrite (N-NO_2)	mg/L	-	-	-	0.004	0.0048
Nitrate (N-NO_3)	mg/L	3.7	339	-	0.625	0.707
Total Metals						
Aluminum, total (T-Al)	mg/L	-	-	-	3.70	9.55
Antimony, total (T-Sb)	mg/L	-	0.27 [4]	-	0.00065	0.00142
Arsenic, total (T-As)	mg/L	0.0125	0.0125	-	0.00178	0.00397
Barium, total (T-Ba)	mg/L	-	-	-	0.0358	0.0829
Beryllium, total (T-Be)	mg/L	0.1	-	-	0.000065	0.00016
Boron, total (T-B)	mg/L	1.2	-	-	0.015	0.024
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	0.0000742	***0.000165***
Chromium, total (T-Cr)	mg/L	-	-	-	0.00194	0.00415
Cobalt, total (T-Co)	mg/L	-	-	-	0.00108	0.00266
Copper, total (T-Cu)	mg/L	- [2]	- [2]	0.0043	0.00808	0.0179
Iron, total (T-Fe)	mg/L	-	-	-	2.79	7.11
Lead, total (T-Pb)	mg/L	- [2]	- [2]	0.0035	0.00901	0.0169
Manganese, total (T-Mn)	mg/L	-	-	-	0.0841	0.215
Mercury, total (T-Hg)	mg/L	0.000016 [5]	-	-	0.0000141	***0.0000326***
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.0125	0.0114
Nickel, total (T-Ni)	mg/L	0.0083	-	-	0.00121	0.00281
Selenium, total (T-Se)	mg/L	0.002	-	-	0.000122	0.000127
Silver, total (T-Ag)	mg/L	0.0015	0.003	-	0.000029	0.000054
Thallium, total (T-Tl)	mg/L	-	-	-	0.000027	0.000077
Uranium, total (T-U)	mg/L	-	-	-	0.00753	0.00632
Vanadium, total (T-V)	mg/L	- [2]	-	0.0081	0.00619	0.0155
Zinc, total (T-Zn)	mg/L	- [2]	- [2]	0.0133	0.0176	0.0462
Hexavalent Chromium, total	mg/L	0.0015	-	-	<0.00050	0.00074
Dissolved Metals						
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	<0.0000050	<0.0000050
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.00163	0.00124
Iron, dissolved (D-Fe)	mg/L	-	-	-	0.017	<0.010
Lead, dissolved (D-Pb)	mg/L	-	-	-	0.000164	<0.000050
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.00453	0.0043
Nickel, dissolved (D-Ni)	mg/L	-	-	-	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.0335	0.0726
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00118	0.00292
Zinc, dissolved (D-Zn)	mg/L	-	-	-	<0.0010	<0.0010
Polycyclic Aromatic Hydrocarbons (PAHs)						
Acenaphthene	mg/L	0.006	-	-	0.000011	<0.000010
Acridine	mg/L	-	-	-	<0.000010	<0.000010
Anthracene	mg/L	-	-	-	<0.000010	<0.000010
Benz(a)anthracene	mg/L	-	-	-	<0.000010	0.000015
Benzo(a)pyrene	mg/L	0.00001	-	-	0.0000063	***0.0000116***
Chrysene	mg/L	0.0001	-	-	<0.000020	<0.000014
Fluoranthene	mg/L	-	-	-	0.000031	0.000043
Fluorene	mg/L	0.012	-	-	<0.000010	<0.000010
1-methylnaphthalene	mg/L	0.001	-	-	<0.000010	0.000013
2-methylnaphthalene	mg/L	0.001	-	-	<0.000010	0.000023
Naphthalene	mg/L	0.001	-	-	<0.000050	<0.000050
Phenanthrene	mg/L	-	-	-	<0.000020	0.000028
Pyrene	mg/L	-	-	-	0.00003	0.00005
Quinoline	mg/L	-	-	-	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)						
Benzene	mg/L	0.11	-	-	<0.00050	<0.00050
Ethylbenzene	mg/L	0.25	-	-	<0.00050	<0.00050
Methyl-tert-butyl-ether	mg/L	5	0.44	-	<0.00050	<0.00050
Styrene	mg/L	-	-	-	<0.00050	<0.00050
Toluene	mg/L	0.215	-	-	<0.00040	<0.00040
Total Xylenes	mg/L	-	-	-	<0.00050	<0.00050
Chlorobenzene	mg/L	0.025	-	-	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	-	-	<0.00050	<0.00050

Notes: Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.
Results in orange text exceeded the PE-111578 West Sedimentation Pond Discharge Limit.
The West Sedimentation Pond discharged each day during the monitoring period (December 15, 2024 – January 4, 2025).
[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 applied December 17 to 20, December 22 to 23, and December 25 to 29.

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

Parameter	Unit	Lowest Applicable Guideline [1]		PE-111578 Discharge Limit	Station SP-W-OUT [7]	Station SP-W-OUT [7]
					Effluent	Effluent
					SP-W-OUT	SP-W-OUT
					VA24D3643-004	VA24D4203-004
		Long Term	Short Term		2024-12-16 12:03	2024-12-22 14:06
General Parameters						
pH - Field	pH units	- [2]	-	5.5 - 9.0	8.0	8.0
Conductivity - Field	µS/cm	-	-	-	74	40
Temperature - Field	°C	-	-	-	5.0	6.8
Salinity - Field	ppt	-	-	-	0.06	0.03
Turbidity - Field	NTU	-	-	-	9.45	4.56
TSS	mg/L	-	-	25 [6]	<3.0	<3.0
Dissolved Oxygen - Field	mg/L	>=8	-	-	13.08	12.34
Anions and Nutrients						
Sulphate	mg/L	-	-	-	8.27	6.34
Chloride	mg/L	-	-	-	2.79	1.40
Fluoride	mg/L	-	1.5	-	0.063	0.046
Ammonia ($N\text{-}NH_3$)	mg/L	2.9 [3]	19 [3]	-	0.0085	<0.0050
Nitrite ($N\text{-}NO_2$)	mg/L	-	-	-	0.0096	0.0035
Nitrate ($N\text{-}NO_3$)	mg/L	3.7	339	-	0.646	0.470
Total Metals						
Aluminum, total (T-Al)	mg/L	-	-	-	0.0953	0.149
Antimony, total (T-Sb)	mg/L	-	0.27 [4]	-	0.00104	0.00084
Arsenic, total (T-As)	mg/L	0.0125	0.0125	-	0.00129	0.00118
Barium, total (T-Ba)	mg/L	-	-	-	0.00239	0.003
Beryllium, total (T-Be)	mg/L	0.1	-	-	<0.000020	<0.000020
Boron, total (T-B)	mg/L	1.2	-	-	<0.010	0.010
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	<0.0000050	<0.0000100
Chromium, total (T-Cr)	mg/L	-	-	-	<0.00050	<0.00050
Cobalt, total (T-Co)	mg/L	-	-	-	<0.00010	<0.00010
Copper, total (T-Cu)	mg/L	- [2]	- [2]	0.0043	0.00078	0.00123
Iron, total (T-Fe)	mg/L	-	-	-	0.040	0.075
Lead, total (T-Pb)	mg/L	- [2]	- [2]	0.0035	0.000202	0.000341
Manganese, total (T-Mn)	mg/L	-	-	-	0.015	0.0077
Mercury, total (T-Hg)	mg/L	0.000016 [5]	-	-	0.00000091	0.00000166
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.0123	0.0081
Nickel, total (T-Ni)	mg/L	0.0083	-	-	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	-	0.000084	0.000073
Silver, total (T-Ag)	mg/L	0.0015	0.003	-	<0.000010	<0.000010
Thallium, total (T-Tl)	mg/L	-	-	-	<0.000010	<0.000010
Uranium, total (T-U)	mg/L	-	-	-	0.00386	0.00308
Vanadium, total (T-V)	mg/L	- [2]	-	0.0081	0.00083	0.00131
Zinc, total (T-Zn)	mg/L	- [2]	- [2]	0.0133	<0.0030	<0.0030
Hexavalent Chromium, total	mg/L	0.0015	-	-	<0.00050	<0.00050
Dissolved Metals						
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	<0.0000050	<0.0000050
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.00077	0.00106
Iron, dissolved (D-Fe)	mg/L	-	-	-	0.015	0.034
Lead, dissolved (D-Pb)	mg/L	-	-	-	0.000081	0.000174
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.0136	0.00659
Nickel, dissolved (D-Ni)	mg/L	-	-	-	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.0380	0.0432
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.0008	0.00122
Zinc, dissolved (D-Zn)	mg/L	-	-	-	<0.0010	0.0014
Polycyclic Aromatic Hydrocarbons (PAHs)						
Acenaphthene	mg/L	0.006	-	-	<0.000010	<0.000010
Acridine	mg/L	-	-	-	<0.000010	<0.000010
Anthracene	mg/L	-	-	-	<0.000010	<0.000010
Benz(a)anthracene	mg/L	-	-	-	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	-	<0.0000050	<0.0000050
Chrysene	mg/L	0.0001	-	-	<0.000010	<0.000010
Fluoranthene	mg/L	-	-	-	<0.000010	<0.000010
Fluorene	mg/L	0.012	-	-	<0.000010	<0.000010
1-methylnaphthalene	mg/L	0.001	-	-	<0.000010	<0.000010
2-methylnaphthalene	mg/L	0.001	-	-	<0.000010	<0.000010
Naphthalene	mg/L	0.001	-	-	<0.000050	<0.000050
Phenanthrene	mg/L	-	-	-	<0.000020	<0.000020
Pyrene	mg/L	-	-	-	<0.000010	<0.000010
Quinoline	mg/L	-	-	-	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)						
Benzene	mg/L	0.11	-	-	<0.00050	<0.00050
Ethylbenzene	mg/L	0.25	-	-	<0.00050	<0.00050
Methyl-tert-butyl-ether	mg/L	5	0.44	-	<0.00050	<0.00050
Styrene	mg/L	-	-	-	<0.00050	<0.00050
Toluene	mg/L	0.215	-	-	<0.00040	<0.00040
Total Xylenes	mg/L	-	-	-	<0.00050	<0.00050
Chlorobenzene	mg/L	0.025	-	-	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	-	-	<0.00050	<0.00050

Notes: Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.
Results in orange text exceeded the PE-111578 West Sedimentation Pond Discharge Limit.
The West Sedimentation Pond discharged each day during the monitoring period (December 15, 2024 – January 4, 2025).
[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 applied December 17 to 20, December 22 to 23, and December 25 to 29.
[7] Field measurements and analytical samples were collected at the SP-W-OUT sampling port.

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]	0.00015 – 0.024 [3,4]
Station	**Water Type**	**Sample ID**	**Lab ID**	**Sampling Date**		
Influent						
SP-W-IN	Influent	SP-W-IN	VA24D3034-005	2024-12-07	***0.000386***	***0.0919***
SP-W-IN	Influent	SP-W-IN	VA24D3643-005	2024-12-16	0.000080	0.0141
W500GPM-IN	Influent	W500GPM-IN	VA24D3470-001	2024-12-12	0.000038	0.00848
Effluent						
SP-W-OUT	Effluent	SP-W-OUT	VA24D2315-001	2024-11-28	0.000083	0.00107
SP-W-OUT	Effluent	SP-W-OUT	VA24D2718-001	2024-12-04	***0.000338*** [5]	***<0.00050***
SP-W-OUT	Effluent	SP-W-OUT	VA24D3034-006	2024-12-07	<0.000020	0.00059
SP-W-OUT	Effluent	SP-W-OUT	VA24D3470-003	2024-12-12	<0.000020	0.00197
SP-W-OUT	Effluent	SP-W-OUT	VA24D3643-004	2024-12-16	0.000020	0.00091
W500GPM-OUT	Effluent	W500GPM-OUT	VA24D3470-002	2024-12-12	0.000020	0.00201

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] A reanalysis for the methylmercury has been initiated with the laboratory to confirm the result for the SP-W-OUT sample collected on December 4.

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	L2758171-1	2024-11-19	1.83	4.12

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 (December 15, 2024 – January 4, 2025).

Parameter			Temperature	Dissolved Oxygen (DO)	Salinity	Turbidity	Estimated TSS [3]	pH	Conductivity	Visibility of Sheen
Unit			°C	mg/L	ppt	NTU	mg/L	s.u.	µS/cm	
PE-111578 Discharge Limit			-	-	-	-	25 or 75 [6]	5.5 - 9.0	-	-
Lowest Applicable Guideline [1]			-	>=8	-	-	- [2]	- [2]	-	-
Station ID	Water Type	Date								
Influent [4]										
SP-W-IN	Influent	2024-12-15 9:54	6.1	12.73	0.06	210.52	160.0	8.8	77	No
SP-W-IN	Influent	2024-12-16 12:18	5.4	12.87	0.04	49.35	39.8	8.2	53	No
SP-W-IN	Influent	2024-12-17 13:08	5.9	12.60	0.04	40.89	33.5	8.3	59	No
SP-W-IN	Influent	2024-12-18 16:03	6.0	12.48	0.05	120.97	93.2	8.0	65	No
SP-W-IN	Influent	2024-12-19 15:38	6.2	12.25	0.05	95.37	74.1	7.7	85	No
SP-W-IN	Influent	2024-12-20 11:49	6.6	12.55	0.04	64.39	51.0	8.3	59	No
SP-W-IN	Influent	2024-12-21 14:14	6.8	12.24	0.06	119.47	92.1	8.4	87	No
SP-W-IN	Influent	2024-12-22 14:30	6.8	11.88	0.07	34.57	28.8	8.3	98	No
SP-W-IN	Influent	2024-12-23 15:02	7.4	11.92	0.05	39.41	32.4	7.7	71	No
SP-W-IN	Influent	2024-12-24 11:58	7.7	12.35	0.06	29.04	24.7	8.1	81	No
SP-W-IN	Influent	2024-12-25 15:03	6.6	13.30	0.07	6.57	7.9	7.9	92	No
SP-W-IN	Influent	2024-12-27 15:37	7.3	12.51	0.06	16.59	15.4	8.4	78	No
SP-W-IN	Influent	2024-12-28 14:02	6.6	13.22	0.06	80.92	63.4	7.5	79	No
SP-W-IN	Influent	2024-12-29 14:53	6.6	13.32	0.06	55.3	44.2	8.0	82	No
SP-W-IN	Influent	2024-12-30 14:32	7.1	13.06	0.05	18.13	16.5	7.9	75	No
SP-W-IN	Influent	2025-01-01 10:45	5.1	12.18	0.08	24.90	21.6	8.2	103	No
SP-W-IN	Influent	2025-01-02 10:40	4.4	13.70	0.07	16.27	15.1	7.9	91	No
SP-W-IN	Influent	2025-01-03 12:55	3.9	15.11	0.08	4.54	6.4	8.1	97	No
SP-W-IN	Influent	2025-01-04 14:26	4.6	14.15	0.08	7.07	8.3	7.4	100	No
W500GPM-IN	Influent	2024-12-15 9:46	8.2	12.37	0.06	191.12	145.5	8.5	83	No
W500GPM-IN	Influent	2024-12-16 12:34	7.1	13.15	0.05	179.36	136.8	8.4	75	No
W500GPM-IN	Influent	2024-12-17 12:45	8.6	12.99	0.05	38.22	31.5	7.6	70	No
W500GPM-IN	Influent	2024-12-18 13:50	6.2	13.41	0.06	110.96	85.8	8.5	77	No
W500GPM-IN	Influent	2024-12-19 14:19	7.2	13.41	0.05	74.30	58.4	8.0	65	No
W500GPM-IN	Influent	2024-12-20 11:39	6.6	12.76	0.04	84.30	65.9	8.2	61	No
W500GPM-IN	Influent	2024-12-21 14:18	8.7	12.58	0.06	58.23	46.4	8.1	87	No
W500GPM-IN	Influent	2024-12-22 14:41	7.0	12.70	0.06	17.08	15.7	8.3	83	No
W500GPM-IN	Influent	2024-12-23 12:24	7.2	12.54	0.05	29.43	24.9	8.1	66	No
W500GPM-IN	Influent	2024-12-24 12:05	7.5	12.10	0.05	39.68	32.6	8.0	77	No
W500GPM-IN	Influent	2024-12-26 16:34	6.0	12.59	0.05	29.56	25.0	8.2	73	No
W500GPM-IN	Influent	2024-12-27 13:13	6.7	12.44	0.04	13.42	13.0	8.1	53	No
W500GPM-IN	Influent	2024-12-28 14:29	6.1	12.69	0.05	68.89	54.4	8.0	72	No
W500GPM-IN	Influent	2024-12-29 14:46	9.0	12.81	0.06	85.20	66.5	7.9	92	No
W500GPM-IN	Influent	2024-12-30 14:27	8.3	13.38	0.07	25.21	21.8	8.0	100	No
W500GPM-IN	Influent	2025-01-02 10:35	5.4	14.34	0.07	7.71	8.8	8.9	92	No
W500GPM-IN	Influent	2025-01-03 13:04	7.8	13.32	0.07	39.49	32.5	8.0	101	No
ESC-W-IN	Influent	2024-12-15 17:28	6.2	12.59	0.06	193.92	147.6	8.3	78	No
ESC-W-IN	Influent	2024-12-16 11:43	5.1	12.75	0.05	47.29	38.3	8.5	70	No
ESC-W-IN	Influent	2024-12-17 13:17	5.2	13.34	0.05	36.53	30.2	8.2	61	No
ESC-W-IN	Influent	2024-12-18 14:12	5.5	13.38	0.05	94.76	73.7	8.6	71	No
ESC-W-IN	Influent	2024-12-19 14:27	6.2	12.60	0.04	62.84	49.9	7.9	58	No
ESC-W-IN	Influent	2024-12-20 11:58	6.2	12.71	0.13	101.69	78.8	8.4	178	No
ESC-W-IN	Influent	2024-12-21 14:04	7.0	12.13	0.06	55.70	44.5	8.1	83	No
ESC-W-IN	Influent	2024-12-22 14:04	6.1	11.96	0.06	9.07	9.8	7.9	83	No
ESC-W-IN	Influent	2024-12-24 11:52	8.5	11.43	0.07	9.15	9.8	8.0	99	No
ESC-W-IN	Influent	2024-12-25 14:59	4.8	12.30	0.03	13.33	12.9	7.9	41	No
ESC-W-IN	Influent	2024-12-29 14:57	6.3	12.76	0.06	35.70	29.6	8.0	85	No
ESC-W-IN	Influent	2025-01-01 10:25	5.5	12.81	0.06	7.31	8.5	7.9	83	No
Effluent [5]										
SP-W-OUT	Effluent	2024-12-15 17:31	5.8	13.28	0.06	3.66	5.7	8.1	76	No
SP-W-OUT	Effluent	2024-12-16 12:03	5.0	13.08	0.06	9.45	10.0	8.0	74	Yes [7]
SP-W-OUT	Effluent	2024-12-17 15:51	5.3	13.91	0.05	3.33	5.5	7.9	63	No
SP-W-OUT	Effluent	2024-12-18 14:17	5.7	15.20	0.05	0.62	3.5	8.2	73	No
SP-W-OUT	Effluent	2024-12-19 14:23	6.2	13.43	0.05	4.65	6.5	8.0	62	No
SP-W-OUT	Effluent	2024-12-20 11:53	6.3	12.91	0.05	2.84	5.1	8.1	70	No
SP-W-OUT	Effluent	2024-12-21 14:01	7.2	12.49	0.05	2.67	5.0	7.8	69	No
SP-W-OUT	Effluent	2024-12-22 14:06	6.8	12.34	0.03	4.56	6.4	8.0	40	No
SP-W-OUT	Effluent	2024-12-23	7.6 [5]	-[5]	-[5]	0.6 [5]	3.4 [5]	7.9 [5]	-[5]	-[5]
SP-W-OUT	Effluent	2024-12-24 11:54	7.8	12.62	0.05	3.64	5.7	8.0	70	No
SP-W-OUT	Effluent	2024-12-25	7.8 [5]	-[5]	-[5]	6.8 [5]	8.1 [5]	7.8 [5]	-[5]	-[5]
SP-W-OUT	Effluent	2024-12-26 16:24	6.2	14.94	0.05	6.38	7.8	8.0	74	No
SP-W-OUT	Effluent	2024-12-27 13:01	6.9	15.79	0.06	6.71	8.0	7.8	84	No
SP-W-OUT	Effluent	2024-12-28 15:08	6.0	15.4	0.05	8.39	9.3	7.7	74	No
SP-W-OUT	Effluent	2024-12-29 15:01	8.4	14.56	0.06	3.78	5.8	7.8	82	No

Table C-5 (continued): West Catchment Field Measurements Collected During the Monitoring Period (December 15, 2024 – January 4, 2025).

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**								
Effluent [5]										
SP-W-OUT	Effluent	2024-12-30 14:42	7.1	15.34	0.07	3.95	5.9	7.9	97	No
SP-W-OUT	Effluent	2024-12-31	5.4 [5]	-[5]	-[5]	1.6 [5]	4.2 [5]	7.7 [5]	-[5]	-[5]
SP-W-OUT	Effluent	2025-01-01 10:17	6.5	13.76	0.06	1.90	4.4	7.6	89	No
SP-W-OUT	Effluent	2025-01-02 10:46	4.4	14.27	0.06	2.58	4.9	7.7	84	No
SP-W-OUT	Effluent	2025-01-03	-[5]	-[5]	-[5]	-[5]	-[5]	-[5]	-[5]	-[5]
SP-W-OUT	Effluent	2025-01-04	4.0 [5]	-[5]	-[5]	4.0 [5]	6.0 [5]	7.7 [5]	-[5]	-[5]
W500GPM-OUT	Effluent	2024-12-15 9:36	6.5	13.41	0.06	4.39	6.3	7.3	79	No
W500GPM-OUT	Effluent	2024-12-16 12:41	4.9	16.03	0.03	4.07	6.0	7.9	39	No
W500GPM-OUT	Effluent	2024-12-17 12:49	5.4	13.70	0.05	5.90	7.4	7.9	64	No
W500GPM-OUT	Effluent	2024-12-18 13:56	5.8	16.19	0.06	0.90	3.7	8.1	75	No
W500GPM-OUT	Effluent	2024-12-19 14:15	8.7	12.86	0.02	7.13	8.3	7.9	28	No
W500GPM-OUT	Effluent	2024-12-20 11:43	6.6	13.63	0.04	4.67	6.5	8.0	63	No
W500GPM-OUT	Effluent	2024-12-21 14:21	7.4	13.14	0.05	2.12	4.6	8.0	77	No
W500GPM-OUT	Effluent	2024-12-22 14:46	7.2	14.04	0.05	7.01	8.2	8.0	76	No
W500GPM-OUT	Effluent	2024-12-23 12:17	7.4	14.34	0.05	7.55	8.6	8.0	67	No
W500GPM-OUT	Effluent	2024-12-24 12:03	7.7	14.91	0.04	4.95	6.7	7.9	54	No
W500GPM-OUT	Effluent	2024-12-26 16:32	6.3	15.00	0.03	6.97	8.2	8.0	43	No
W500GPM-OUT	Effluent	2024-12-27 13:10	6.7	15.09	0.06	6.90	8.1	7.9	82	No
W500GPM-OUT	Effluent	2024-12-28 15:14	6.1	14.15	0.06	10.54	10.9	7.9	75	No
W500GPM-OUT	Effluent	2024-12-29 14:50	7.0	15.39	0.06	7.94	8.9	7.9	86	No
W500GPM-OUT	Effluent	2024-12-30 14:22	6.6	16.18	0.07	2.27	4.7	7.7	100	No
W500GPM-OUT	Effluent	2025-01-02 10:37	4.6	14.58	0.07	1.87	4.4	7.9	54	No
W500GPM-OUT	Effluent	2025-01-03 12:59	3.8	14.90	0.07	2.51	4.9	7.9	92	No
ESC-W-OUT	Effluent	2024-12-15 17:34	6.1	13.25	0.06	3.19	5.4	8.0	81	No
ESC-W-OUT	Effluent	2024-12-16 11:37	5.6	13.40	0.06	3.65	5.7	7.8	76	No
ESC-W-OUT	Effluent	2024-12-17 15:41	5.5	13.63	0.05	0.57	3.4	7.8	64	No
ESC-W-OUT	Effluent	2024-12-18 14:25	5.7	12.76	0.03	0.50	3.4	7.9	42	No
ESC-W-OUT	Effluent	2024-12-19 14:30	6.1	12.39	0.05	1.16	3.9	8.0	63	No
ESC-W-OUT	Effluent	2024-12-20 12:02	6.2	12.20	0.05	2.24	4.7	8.1	66	No
ESC-W-OUT	Effluent	2024-12-21 14:08	7.0	12.03	0.05	1.39	4.0	7.8	66	No
ESC-W-OUT	Effluent	2024-12-22 13:53	7.0	11.79	0.05	1.23	3.9	7.9	76	No
ESC-W-OUT	Effluent	2024-12-24 11:48	7.9	11.49	0.05	0.97	3.7	8.0	73	No
ESC-W-OUT	Effluent	2024-12-25 14:55	6.7	13.15	0.07	2.06	4.5	7.9	94	No
ESC-W-OUT	Effluent	2024-12-26 16:20	6.1	12.55	0.05	21.41	19.0	8.0	74	No
ESC-W-OUT	Effluent	2024-12-27 12:52	8.4	11.86	0.05	4.60	6.4	7.3	76	No
ESC-W-OUT	Effluent	2024-12-29 15:07	6.5	13.49	0.06	0.61	3.5	7.7	81	No
ESC-W-OUT	Effluent	2025-01-01 10:35	5.3	13.54	0.06	2.09	4.6	7.8	80	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] Site staff noted there was no active input of influent sources to the pond at the time of monitoring on December 26 and 31, therefore daily measurements for station SP-W-IN were not collected on these days.

[5] On December 23, December 25, December 31, January 3, and January 4, 2025, field measurements were not collected at SP-W-OUT because there was no discharge at the time of monitoring. The ESC and W500GPM TSS settling systems clarified effluent was discharged to Howe Sound on December 23 and 25. Field measurements were not collected at ESC-W-OUT on December 23 and W500GPM-OUT on December 25, therefore average temperature, turbidity, and pH measurements logged at the meter box during the discharge period are reported. The W500GPM TSS settling system clarified effluent was discharged to Howe Sound on December 31, January 3, and January 4, 2025. Field measurements were not collected at W500GPM-OUT on December 31 nor on January 4, therefore average temperature, turbidity, and pH measurements logged at the meter box during the discharge period are reported. Field measurements were collected at W500GPM-OUT on January 3.

[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 applied December 17 to 20, December 22 to 23, and December 25 to 29.

[7] Upon routine sampling of SP-W-OUT, the field staff identified a potential visible sheen on samples taken from the SP-W-OUT sample port. The onsite QEP recommended a temporary halt of discharge to allow for a joint assessment of conditions prior to continued discharge. The onsite QEP and subcontractors completed a joint inspection of upstream plant facilities including the ESC and W500GPM TSS settling systems, and no obvious signs of malfunction or contamination were observed. Based on field observations (i.e., lack of odour and coloration not consistent with hydrocarbon), the onsite QEP concluded that the sheen was likely to be associated with hydrocarbon contamination. Analytical results received for SP-W-OUT (Table C-2) support this conclusion as hydrocarbon compounds tested were below detectable limits.

Table C-6: West Catchment Daily Discharge Volumes for the Monitoring Period (December 15, 2024 – January 4, 2025).

	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]	1100	- [2]
Date					
2024-12-15	0	763	502	0	1,265
2024-12-16	0	373	703	0	1,076
2024-12-17	0	548	209	0	757
2024-12-18	0	1,609	263	0	1,872
2024-12-19	0	1,344	387	0	1,731
2024-12-20	0	1,959	713	0	2,672
2024-12-21	0	1,906	725	0	2,631
2024-12-22	0	1,468	447	0	1,915
2024-12-23	0	1,244	448	0	1,692
2024-12-24	0	1,661	596	0	2,257
2024-12-25	0	732	608	0	1,340
2024-12-26	0	1,666	641	0	2,307
2024-12-27	0	1,530	292	0	1,822
2024-12-28	0	1,451	0	0	1,451
2024-12-29	0	1,823	258	0	2,081
2024-12-30	0	1,264	0	0	1,264
2024-12-31	0	162	0	0	162
2025-01-01	0	0	448	0	448
2025-01-02	0	959	0	0	959
2025-01-03	0	165	0	0	165
2025-01-04	0	661	0	0	661

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.

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-02 Non-Contact Water Diversion Ditch Outlet OUT-02 VA24D3590-001 2024-12-15 13:28	Station OUT-06 Non-Contact Water Diversion Ditch Outlet OUT-06 VA24D3590-002 2024-12-15 14:19
		Long Term	Short Term		
General Parameters					
pH - Field	pH units	6.5 - 9.0	-	7.7	6.8
Specific Conductivity - Field	µS/cm	-	-	19	38
Temperature - Field	°C	-	-	7.0	7.9
Salinity - Field	ppt	-	-	0.01	0.03
Turbidity - Field	NTU	-	-	1.5	0.84
TSS	mg/L	-	-	<3.0	<3.0
Dissolved Oxygen - Field	mg/L	>=8	>=5	12.39	12.03
Anions and Nutrients					
Sulphate [2]	mg/L	128	-	1.62	2.57
Chloride	mg/L	120	600	0.75	0.64
Fluoride [2]	mg/L	-	0.40-0.67	<0.020	<0.020
Ammonia ($N\text{-}NH_3$) [2]	mg/L	1.54-15.3	9.92-23.6	<0.007	<0.0050
Nitrite ($N\text{-}NO_2$) [2]	mg/L	0.02	0.06	<0.0010	<0.0010
Nitrate ($N\text{-}NO_3$)	mg/L	3	32.8	0.0771	0.165
Total Metals					
Aluminum, total (T-Al) [2]	mg/L	0.096-0.24	-	***0.302***	***0.184***
Antimony, total (T-Sb)	mg/L	0.074	-	<0.00010	0.00014
Arsenic, total (T-As)	mg/L	0.005	-	0.00011	0.0002
Barium, total (T-Ba)	mg/L	1	-	0.00363	0.00633
Beryllium, total (T-Be)	mg/L	0.00013	-	<0.000020	<0.000020
Boron, total (T-B)	mg/L	1.2	29	<0.010	<0.010
Cadmium, total (T-Cd) [2]	mg/L	0.000036-0.000040	0.00011-0.00039	0.0000067	<0.0000050
Chromium, total (T-Cr) [4]	mg/L	0.001	-	<0.00050	<0.00050
Cobalt, total (T-Co)	mg/L	0.001	0.11	<0.00010	<0.00010
Copper, total (T-Cu)	mg/L	-	-	0.00112	0.00094
Iron, total (T-Fe)	mg/L	0.3	1	0.079	0.030
Lead, total (T-Pb)	mg/L	-	-	0.000262	0.000136
Manganese, total (T-Mn) [2]	mg/L	0.768	0.816	0.0036	0.00115
Mercury, total (T-Hg) [3]	mg/L	0.00002	-	0.00000333	0.00000365
Molybdenum, total (T-Mo)	mg/L	0.073	46	0.000679	0.000761
Nickel, total (T-Ni) [2]	mg/L	0.025	-	0.00052	<0.00050
Selenium, total (T-Se)	mg/L	0.001	-	0.000052	<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	<0.000010
Uranium, total (T-U)	mg/L	0.0085	0.033	0.000181	0.000077
Vanadium, total (T-V)	mg/L	0.12	-	<0.00050	0.00056
Zinc, total (T-Zn)	mg/L	-	-	<0.0030	<0.0030
Hexavalent Chromium, total	mg/L	0.001	-	<0.00050	<0.00050
Dissolved Metals					
Cadmium, dissolved (D-Cd) [2]	mg/L	0.000024-0.000063	0.000038-0.00011	<0.0000050	<0.0000050
Copper, dissolved (D-Cu) [2]	mg/L	0.00038-0.0013	0.0025-0.0073	0.00085	***0.00083***
Iron, dissolved (D-Fe)	mg/L	-	0.35	0.020	0.014
Lead, dissolved (D-Pb) [2]	mg/L	0.0024-0.0033	-	0.000074	0.00006
Manganese, dissolved (D-Mn) [2]	mg/L	0.32-0.35	1.97	0.00082	0.00172
Nickel, dissolved (D-Ni) [2]	mg/L	0.0016-0.00090	0.015-0.020	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	2.5	-	0.00714	0.0298
Vanadium, dissolved (D-V)	mg/L	-	-	<0.00050	<0.00050
Zinc, dissolved (D-Zn) [2]	mg/L	0.0035-0.0075	0.011-0.015	0.0015	<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 $\leqslant$ 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 D-2: Summary of Non-Contact Water Diversion Ditch Outlet Quality Results for Methylmercury Received at the Time of Reporting.

Parameter	Unit	Lowest Applicable Guideline[1]	Station OUT-02	Station OUT-06
			Non-Contact Water Diversion Ditch Outlet	Non-Contact Water Diversion Ditch Outlet
			OUT-02	OUT-06
			VA24D3590-001	VA24D3590-002
			2024-12-15	2024-12-15
Total Methylmercury	**µg/L**	0.0001 [2]	0.000027	0.000022
Total Mercury	**µg/L**	0.012-0.016 [3,4]	0.00333	0.00365

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-02 Mill Creek Mid-Reach SW-02 VA24D3099-001 2024-12-08 13:45	Station SW-04 East Creek Lower Reach SW-04 VA24D3099-003 2024-12-09 11:00	Station SW-07 Mill Creek Background SW-07 VA24D3099-004 2024-12-08 12:10
		Long Term	Short Term			
General Parameters						
pH - Field	pH units	6.5 - 9.0	-	6.7	7.4	6.9
Specific Conductivity - Field	µS/cm	-	-	16	26 [5]	9.0
Temperature - Field	℃	-	-	6.2	9.3	4.6
Salinity - Field	ppt	-	-	0.01	0.02 [5]	0.01
Turbidity - Field	NTU	-	-	1.89	0.26	1.14
TSS	mg/L	-	-	<3.0	<3.0	<3.0
Dissolved Oxygen - Field	mg/L	>=8	>=5	12.97	12.22 [5]	12.86
Anions and Nutrients						
Sulphate [2]	mg/L	128-218	-	1.90	4.24	1.70
Chloride	mg/L	120	600	0.57	0.90	<0.50
Fluoride [2]	mg/L	-	0.400-0.921	<0.020	0.066	<0.020
Ammonia ($N\text{-}NH_3$) [2]	mg/L	1.87-1.97	14.5-24.9	0.0051	0.0061	<0.0050
Nitrite ($N\text{-}NO_2$) [2]	mg/L	0.020	0.06	<0.0010	<0.0010	<0.0010
Nitrate ($N\text{-}NO_3$)	mg/L	3	32.8	0.0624	0.0434	0.0598
Total Metals						
Aluminum, total (T-Al) [2]	mg/L	0.034-0.10	-	***0.115***	0.0983	***0.170***
Antimony, total (T-Sb)	mg/L	0.074	-	<0.00010	<0.00010	<0.00010
Arsenic, total (T-As)	mg/L	0.005	-	<0.00010	0.00052	<0.00010
Barium, total (T-Ba)	mg/L	1	-	0.00241	0.00624	0.00318
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	0.000036-0.000068	0.00011-0.00074	0.0000056	0.000009	0.0000051
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	0.00016
Copper, total (T-Cu)	mg/L	-	-	<0.00050	0.00091	0.00062
Iron, total (T-Fe)	mg/L	0.3	1	0.026	0.164	0.112
Lead, total (T-Pb)	mg/L	-	-	<0.000050	0.000095	<0.000050
Manganese, total (T-Mn) [2]	mg/L	0.768	0.816-0.935	0.00129	0.0126	0.00236
Mercury, total (T-Hg) [3]	mg/L	0.00002	-	0.00000129	0.00000159	0.00000123
Molybdenum, total (T-Mo)	mg/L	0.073	46	0.000337	0.00517	0.000302
Nickel, total (T-Ni) [2]	mg/L	0.025	-	<0.00050	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	0.001	-	<0.000050	<0.000050	<0.000050
Silver, total (T-Ag) [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	0.000174	0.00171	0.000183
Vanadium, total (T-V)	mg/L	0.12	-	<0.00050	<0.00050	<0.00050
Zinc, total (T-Zn)	mg/L	-	-	<0.0030	0.0033	<0.0030
Hexavalent Chromium, total	mg/L	0.001	-	<0.00050	<0.00050	<0.00050
Dissolved Metals						
Cadmium, dissolved (D-Cd) [2]	mg/L	0.000018-0.000099	0.000038-0.00020	0.0000095	<0.0000100	0.0000071
Copper, dissolved (D-Cu) [2]	mg/L	0.00020-0.00037	0.00073-0.0022	***0.00035***	***0.00068***	***0.00050***
Iron, dissolved (D-Fe)	mg/L	-	0.35	0.011	0.023	<0.010
Lead, dissolved (D-Pb) [2]	mg/L	0.0014-0.0021	-	<0.000050	<0.000050	<0.000050
Manganese, dissolved (D-Mn) [2]	mg/L	0.35-0.38	1.97-2.70	0.00279	0.00542	0.00098
Nickel, dissolved (D-Ni) [2]	mg/L	0.00060-0.00080	0.0094-0.0113	<0.00050	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	2.5	-	0.00574	0.0342	0.00498
Vanadium, dissolved (D-V)	mg/L	-	-	<0.00050	<0.00050	<0.00050
Zinc, dissolved (D-Zn) [2]	mg/L	0.0059-0.0087	0.0086-0.019	0.0010	0.0036	<0.0010
Polycyclic Aromatic Hydrocarbons (PAHs)						
Acenaphthene	mg/L	0.0058	-	<0.000010	<0.000010	<0.000010
Acridine	mg/L	0.003	-	<0.000010	<0.000010	<0.000010
Anthracene	mg/L	0.000012	-	<0.000010	<0.000010	<0.000010
Benz(a)anthracene	mg/L	0.000018	-	<0.000010	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	<0.0000050	<0.0000050	<0.0000050
Chrysene	mg/L	-	-	<0.000010	<0.000010	<0.000010
Fluoranthene	mg/L	0.00004	-	<0.000010	<0.000010	<0.000010
Fluorene	mg/L	0.003	-	<0.000010	<0.000010	<0.000010
1-methylnaphthalene	mg/L	-	-	<0.000010	<0.000010	<0.000010
2-methylnaphthalene	mg/L	-	-	<0.000010	<0.000010	<0.000010
Naphthalene	mg/L	0.001	0.001	<0.000050	<0.000050	<0.000050
Phenanthrene	mg/L	0.0003	-	<0.000020	<0.000020	<0.000020
Pyrene	mg/L	0.00002	-	<0.000010	<0.000010	<0.000010
Quinoline	mg/L	0.0034	-	<0.000050	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)						
Benzene	mg/L	0.04	-	<0.00050	<0.00050	<0.00050
Ethylbenzene	mg/L	0.09	-	<0.00050	<0.00050	<0.00050
Methyl-tert-butyl-ether	mg/L	10	3.4	<0.00050	<0.00050	<0.00050
Styrene	mg/L	0.072	-	<0.00050	<0.00050	<0.00050
Toluene	mg/L	0.0005	-	<0.00040	<0.00040	<0.00040
Total Xylenes	mg/L	0.03	-	<0.00050	<0.00050	<0.00050
Chlorobenzene	mg/L	-	-	<0.00050	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	-	-	<0.00050	<0.00050	<0.00050

Notes:
Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of freshwater aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of freshwater aquatic life.
[1] The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
[2] BC WQG or CWQG indicated to be variable are calculated from sample-specific measurements for temperature, field pH, total hardness and dissolved organic carbon (DOC) content.
[3] When MeHg ⩽ 0.5% of total Hg, BC WQG = 0.00002 mg/L.
[4] The approved BC WQG for hexavalent chromium [Cr(VI)] is 0.001 mg/L and 0.0089 mg/L for trivalent chromium [Cr(III)]. The more conservative criteria for Cr(VI) is applied to total chromium results.
[5] Field measurements for conductivity, salinity, and turbidity at East Creek (SW-04) were collected December 18.

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

Parameter	Unit	Lowest Applicable Guideline[1]	Station SW-02	Station SW-07	Station SW-04
			Upper Reach of Mill Creek (upstream of the third bridge)	Upstream Mill Creek (at the diversion inlet)	Lower Reach of East Creek (near the outlet to the outfall culvert)
			SW-02	SW-07	SW-04
			VA24D1148-003	VA24D1148-001	VA24D1148-004
			2024-11-16	2024-11-16	2024-11-17
Total Methylmercury	**µg/L**	0.0001 [2]	<0.000020	<0.000020	<0.000020
Total Mercury	**µg/L**	0.0043-0.011 [3,4]	0.00095	0.00086	0.00222

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: Summary of Freshwater Quality Results for Methylmercury Received at the Time of Reporting.

Parameter	Unit	Lowest Applicable Guideline[1]	Station SW-01	Station SW-02	Station SW-07	Station SW-04
			Lower Reach of Woodfibre Creek (near the mouth)	Upper Reach of Mill Creek (upstream of the third bridge)	Upstream Mill Creek (at the diversion inlet)	Lower Reach of East Creek (near the outlet to the outfall culvert)
			SW-01	SW-02	SW-07	SW-04
			VA24D3920-001	VA24D3099-001	VA24D3099-004	VA24D3099-003
			2024-12-18	2024-12-08	2024-12-08	2024-12-09
Total Methylmercury	**µg/L**	0.0001 [2]	<0.000020	<0.000020	<0.000020	0.000021
Total Mercury	**µg/L**	0.0065-0.0080 [3,4]	-[5]	0.00129	0.00123	0.00159

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.
[5] Total mercury was not analyzed for the sample collected on December 18 at SW-01.
Non-detect results are screened using the detection limit value.

Table E-4: Summary of Freshwater Quality Results for Dioxins and Furans Received at the Time of Reporting.

Parameter	Unit	Station SW-02	Station SW-07	Station SW-04
		Upper Reach of Mill Creek (upstream of the third bridge)	Upstream Mill Creek (at the diversion inlet)	Lower Reach of East Creek (near the outlet to the outfall culvert)
		SW-02	SW-07	SW-04
		L2758155-3	L2758155-1	L2758155-4
		2024-11-16	2024-11-16	2024-11-17
Lower Bound PCDD/F TEQ	**pg/L**	0.00155	0.610	0.103
Upper Bound PCDD/F TEQ	**pg/L**	1.18	2.82	1.10

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: Summary of Mill Creek Estuary Water Quality Results Received at the Time of Reporting.

Parameter	Unit	Lowest Applicable Guideline [1]		Station SW-03 Mill Creek Estuary SW-03 VA24D3099-002 2024-12-08 15:15
		Long Term	Short Term	
General Parameters				
pH - Field	pH units	7.0 - 8.7	-	***6.3***
Specific Conductivity - Field	µS/cm	-	-	135
Temperature - Field	℃	-	-	5.2
Salinity - Field	ppt	-	-	0.1
Turbidity - Field	NTU	-	-	1.02
TSS	mg/L	-	-	<3.0
Dissolved Oxygen - Field	mg/L	-	-	13.03
Anions and Nutrients				
Sulphate	mg/L	-	-	8.57
Chloride	mg/L	-	-	46.9
Fluoride	mg/L	-	-	<0.020
Ammonia (N-NH_3)	mg/L	-	-	0.0053
Nitrite (N-NO_2)	mg/L	-	-	<0.0010
Nitrate (N-NO_3)	mg/L	-	-	0.058
Total Metals				
Aluminum, total (T-Al)	mg/L	-	-	0.108
Antimony, total (T-Sb)	mg/L	-	-	<0.00010
Arsenic, total (T-As)	mg/L	-	-	<0.00010
Barium, total (T-Ba)	mg/L	-	-	0.00263
Beryllium, total (T-Be)	mg/L	-	-	<0.000020
Boron, total (T-B)	mg/L	-	-	0.014
Cadmium, total (T-Cd)	mg/L	-	-	0.0000058
Chromium, total (T-Cr)	mg/L	-	-	<0.00050
Cobalt, total (T-Co)	mg/L	-	-	<0.00010
Copper, total (T-Cu)	mg/L	0.002	0.003	<0.00050
Iron, total (T-Fe)	mg/L	-	-	0.022
Lead, total (T-Pb)	mg/L	0.002	0.14	<0.000050
Manganese, total (T-Mn)	mg/L	-	-	0.00103
Mercury, total (T-Hg) [2]	mg/L	0.00002	-	0.00000098
Molybdenum, total (T-Mo)	mg/L	-	-	0.000398
Nickel, total (T-Ni)	mg/L	-	-	<0.00050
Selenium, total (T-Se)	mg/L	-	-	<0.000050
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	-	-	0.000192
Vanadium, total (T-V)	mg/L	-	-	<0.00050
Zinc, total (T-Zn)	mg/L	-	-	<0.0030
Hexavalent Chromium, total	mg/L	-	-	<0.00050
Dissolved Metals				
Cadmium, dissolved (D-Cd)	mg/L	-	-	0.0000062
Copper, dissolved (D-Cu)	mg/L	-	-	0.00031
Iron, dissolved (D-Fe)	mg/L	-	-	<0.010
Lead, dissolved (D-Pb)	mg/L	-	-	<0.000050
Manganese, dissolved (D-Mn)	mg/L	-	-	0.00113
Nickel, dissolved (D-Ni)	mg/L	-	-	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	0.0225
Vanadium, dissolved (D-V)	mg/L	-	-	<0.00050
Zinc, dissolved (D-Zn)	mg/L	-	-	0.0012
Polycyclic Aromatic Hydrocarbons (PAHs)				
Acenaphthene	mg/L	-	-	<0.000010
Acridine	mg/L	-	-	<0.000010
Anthracene	mg/L	-	-	<0.000010
Benz(a)anthracene	mg/L	-	-	<0.000010
Benzo(a)pyrene	mg/L	-	-	<0.0000050
Chrysene	mg/L	-	-	<0.000010
Fluoranthene	mg/L	-	-	<0.000010
Fluorene	mg/L	-	-	<0.000010
1-methylnaphthalene	mg/L	-	-	<0.000010
2-methylnaphthalene	mg/L	-	-	<0.000010
Naphthalene	mg/L	-	-	<0.000050
Phenanthrene	mg/L	-	-	<0.000020
Pyrene	mg/L	-	-	<0.000010
Quinoline	mg/L	-	-	<0.000050
Volatile Organic Compounds (VOCs)				
Benzene	mg/L	-	-	<0.00050
Ethylbenzene	mg/L	-	-	<0.00050
Methyl-tert-butyl-ether	mg/L	-	-	<0.00050
Styrene	mg/L	-	-	<0.00050
Toluene	mg/L	-	-	<0.00040
Total Xylenes	mg/L	-	-	<0.00050
Chlorobenzene	mg/L	-	-	<0.00050
1,2-Dichlorobenzene	mg/L	-	-	<0.00050

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

Table F-2: Summary of Estuarine Water Quality Results for Methylmercury Received at the Time of Reporting.

Parameter	Unit	Lowest Applicable Guideline[1]	Station SW-03	Station SW-03
			Mill Creek Estuary	Mill Creek Estuary
			SW-03	SW-03
			VA24D1148-002	VA24D3099-002
			2024-11-16	2024-12-08
Methylmercury	**µg/L**	0.0001 [2]	<0.000020	<0.000020
Total Mercury	**µg/L**	0.0049 [3]	0.00100	0.00098

Notes:
Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of estuarine 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] 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 F-3: Summary of Estuarine Water Quality Results for Dioxins and Furans Received at the Time of Reporting.

Parameter	Unit	Station SW-03
		Mill Creek Estuary
		SW-03
		L2758155-2
		2024-11-16
Lower Bound PCDD/F TEQ	**pg/L**	0.00212
Upper Bound PCDD/F TEQ	**pg/L**	1.05

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]		Reference Station WQR-1			Reference Station WQR-1		
				0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor	0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor
				WQR1-0.5	WQR1-2m	WQR1-SF	WQR2-0.5	WQR2-2m	WQR2-SF
				VA24D2842-001	VA24D2842-002	VA24D2842-003	VA24D3008-001	VA24D3008-002	VA24D3008-003
		Long Term	Short Term	2024-12-05 10:10	2024-12-05 10:30	2024-12-05 11:00	2024-12-06 10:35	2024-12-06 10:45	2024-12-06 11:10
General Parameters									
pH - Field	pH units	7.0 - 8.7	-	7.5	7.5	7.4	7.5	7.5	7.4
Specific Conductivity - Field	µS/cm	-	-	14912	27927	32742	13471	28818	33667
Temperature - Field	℃	-	-	5.3	8.1	9.5	5.9	8.2	9.7
Salinity - Field	ppt	Narrative [2]	-	14.3	26.21	30.0	12.59	26.99	30.8
Turbidity - Field	NTU	Narrative [2]	Narrative[2]	2.03	1.55	1.34	1.97	1.37	1.43
TSS	mg/L	Narrative [2]	Narrative[2]	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Oxygen - Field	mg/L	>=8	-	10.96	8.97	***6.25***	11.1	8.24	***5.33***
Anions and Nutrients									
Sulphate	mg/L	-	-	1180	1270	2220	937	1400	2230
Chloride	mg/L	-	-	8550	9260	16000	6840	10100	16200
Fluoride	mg/L	-	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia (N-NH_3)	mg/L	12-13 [3]	77.7-85 [3]	0.0165	0.0130	<0.0050	0.0179	0.0133	<0.0050
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	-	-	0.0323	0.0238	0.0132	0.0407	0.0284	0.0144
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	0.0009	0.00095	0.00149	0.00083	0.00111	0.00159
Barium, total (T-Ba)	mg/L	-	-	0.0112	0.0108	0.0102	0.011	0.0109	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	-	***1.84***	***2.13***	***3.27***	***1.70***	***2.44***	***3.63***
Cadmium, total (T-Cd)	mg/L	0.00012	-	0.000052	0.000056	0.000079	0.000038	0.000054	0.000086
Chromium, total (T-Cr)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, total (T-Co)	mg/L	-	-	0.000142	0.000119	0.000115	0.000118	0.000107	0.000105
Copper, total (T-Cu)	mg/L	0.002	0.003	0.00078	0.00058	<0.00050	0.00057	0.00076	<0.00050
Iron, total (T-Fe)	mg/L	-	-	0.11	0.093	0.010	0.101	0.071	0.018
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	-	-	0.0126	0.012	0.00427	0.0118	0.00919	0.00404
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	-	-	0.00528	0.00537	0.00891	0.00429	0.00613	0.00895
Nickel, total (T-Ni)	mg/L	0.0083	-	0.00053	<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	-	-	0.00135	0.00155	0.00234	0.00111	0.00159	0.00246
Vanadium, total (T-V)	mg/L	0.005	-	0.00112	0.00118	0.00147	0.00099	0.00118	0.00151
Zinc, total (T-Zn)	mg/L	0.01	0.055	0.0032	<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	-	-	0.000042	0.000069	0.000067	0.000026	0.000076	0.000075
Copper, dissolved (D-Cu)	mg/L	-	-	0.00055	0.00066	<0.00050	0.00059	0.00064	<0.00050
Iron, dissolved (D-Fe)	mg/L	-	-	<0.010	<0.010	<0.010	0.017	<0.010	<0.010
Lead, dissolved (D-Pb)	mg/L	-	-	0.00014	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Manganese, dissolved (D-Mn)	mg/L	-	-	0.0124	0.00509	0.00309	0.0105	0.00512	0.00274
Nickel, dissolved (D-Ni)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00054
Strontium, dissolved (D-Sr)	mg/L	-	-	3.10	5.30	6.18	2.34	4.96	5.80
Vanadium, dissolved (D-V)	mg/L	-	-	0.00086	0.00138	0.0014	0.00076	0.00117	0.00136
Zinc, dissolved (D-Zn)	mg/L	-	-	<0.0010	0.0019	0.0011	<0.0010	0.0019	0.0014
Polycyclic Aromatic Hydrocarbons (PAHs)									
Acenaphthene	mg/L	0.006	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Acridine	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Anthracene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Benz(a)anthracene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Chrysene	mg/L	0.0001	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Fluoranthene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Fluorene	mg/L	0.012	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
1-methylnaphthalene	mg/L	0.001	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
2-methylnaphthalene	mg/L	0.001	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Naphthalene	mg/L	0.001	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Phenanthrene	mg/L	-	-	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Pyrene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Quinoline	mg/L	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)									
Benzene	mg/L	0.11	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Ethylbenzene	mg/L	0.25	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Methyl-tert-butyl-ether	mg/L	5	0.44	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Styrene	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Toluene	mg/L	0.215	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Total Xylenes	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chlorobenzene	mg/L	0.025	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050

Notes:
Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.
[1] The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
[2] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. Salinity WQG was not evaluated. The water quality data presented in the table were collected from reference station WQR1 and WQR2 and represent background conditions.
[3] The approved total ammonia nitrogen BC WQG is salinity, pH and temperature dependent; see Tables 26E and 26F in BC WQG guidance document.
[4] The working BC WQG for trivalent antimony [SB(III)] is 0.27 mg/L and is applied to total antimony results.
[5] When MeHg ⩽ 0.5% of total Hg, BC WQG = 0.00002 mg/L. The Canadian WQG = 0.000016 mg/L.

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

Parameter	Unit	Lowest Applicable Guideline [1]		Station IDZ-W2			Station IDZ-W1		
				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-W2-0.5	IDZ-W2-2m	IDZ-W2-SF	IDZ-W1-0.5	IDZ-W1-2m	IDZ-W1-SF
				VA24D1917-001	VA24D1917-002	VA24D1917-003	VA24D3591-001	VA24D3591-002	VA24D3591-003
		Long Term	Short Term	2024-11-25 11:45	2024-11-25 12:05	2024-11-25 12:25	2024-12-15 15:02	2024-12-15 15:02	2024-12-15 15:06
General Parameters									
pH - Field	pH units	7.0 - 8.7	-	7.7	7.7	7.5	7.3	7.4	7.6
Specific Conductivity - Field	µS/cm	-	-	19308	25039	32883	11526	28326	29657
Temperature - Field	℃	-	-	7.6	8.5	9.5	5.9	8.2	8.3
Salinity - Field	ppt	Narrative [2]	-	17.73	22.90	30.17	10.63	26.54	27.79
Turbidity - Field	NTU	3.80-3.97 [2]	9.80-9.97 [2]	1.02	1.12	1.02	2.71	1.04	1.22
TSS	mg/L	7.0 [2]	27.0 [2]	<2.0	<2.0	4.4	4.1	<2.0	<2.0
Dissolved Oxygen - Field	mg/L	>=8	-	9.48	***7.98***	***3.96***	11.39	8.61	8.46
Anions and Nutrients									
Sulphate	mg/L	-	-	1130	1680	2300	491	2060	2140
Chloride	mg/L	-	-	8130	11900	16000	3760	15000	15600
Fluoride	mg/L	-	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia (N-NH_3)	mg/L	7.2-13 [3]	48-135 [3]	0.0079	0.0064	0.0059	0.0146	0.007	0.0052
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	-	-	0.0491	0.0376	0.0302	0.112	0.0222	0.0139
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	0.00064	0.00115	0.00148	0.00054	0.00165	0.00167
Barium, total (T-Ba)	mg/L	-	-	0.0088	0.0108	0.0115	0.008	0.0099	0.0096
Beryllium, total (T-Be)	mg/L	0.1	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron, total (T-B)	mg/L	1.2	-	***1.60***	***2.82***	***3.60***	0.84	***3.34***	***3.40***
Cadmium, total (T-Cd)	mg/L	0.00012	-	0.000047	0.000054	0.000073	0.000022	0.000074	0.000071
Chromium, total (T-Cr)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, total (T-Co)	mg/L	-	-	0.000099	0.000107	0.000121	0.000134	0.000098	0.000102
Copper, total (T-Cu)	mg/L	0.002	0.003	0.00071	0.0011	0.0007	0.00075	0.00057	<0.00050
Iron, total (T-Fe)	mg/L	-	-	0.037	0.05	0.029	0.125	0.033	0.018
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	-	-	0.00641	0.00663	0.00709	0.00986	0.00439	0.00363
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	-	-	0.00461	0.0061	0.00852	0.0024	0.00852	0.00924
Nickel, total (T-Ni)	mg/L	0.0083	-	<0.00050	0.00072	0.00065	<0.00050	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	<0.00050	<0.00050	<0.00050	<0.00050	0.00053	<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	-	-	0.00127	0.0018	0.00219	0.000659	0.00191	0.00214
Vanadium, total (T-V)	mg/L	0.005	-	0.00081	0.00115	0.00139	0.00072	0.00138	0.00142
Zinc, total (T-Zn)	mg/L	0.01	0.055	<0.0030	0.0034	<0.0030	0.0035	<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	-	-	0.000061	0.00007	0.000078	0.000026	0.000061	0.000073
Copper, dissolved (D-Cu)	mg/L	-	-	0.00087	0.00104	<0.00050	0.00052	0.00113	<0.00050
Iron, dissolved (D-Fe)	mg/L	-	-	0.02	0.01	<0.010	0.036	<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	-	-	0.00748	0.00534	0.00516	0.00856	0.0049	0.00291
Nickel, dissolved (D-Ni)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	3.56	4.36	5.83	1.3	4.89	6.22
Vanadium, dissolved (D-V)	mg/L	-	-	0.00108	0.00111	0.00137	0.00053	0.00112	0.00144
Zinc, dissolved (D-Zn)	mg/L	-	-	0.0026	0.0011	<0.0010	0.0014	0.0014	0.0011
Polycyclic Aromatic Hydrocarbons (PAHs)									
Acenaphthene	mg/L	0.006	-	0.000011	0.00001	<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	-	-	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Fluorene	mg/L	0.012	-	0.000012	0.00001	<0.000010	<0.000010	<0.000010	<0.000010
1-methylnaphthalene	mg/L	0.001	-	0.000011	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
2-methylnaphthalene	mg/L	0.001	-	0.000022	0.000015	<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 November 25 IDZ-W2 samples are the maximum measured in the November 19 WQR1 and WQR2 reference station samples at the 0.5 m depth (1.80 NTU and <2.0 mg/L TSS) (Report #43). Background values used to evaluate the December 15 IDZ-W1 samples are the maximum measured in the December 5 WQR1 and December 6 WQR2 reference station samples at the 0.5 m depth (1.97 NTU and <2.0 mg/L TSS) (Report #45).

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

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

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

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

Parameter	Unit	Lowest Applicable Guideline [1]		Station IDZ-W2			Station IDZ-E1		
				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-W2-0.5	IDZ-W2-2m	IDZ-W2-SF	IDZ-E1-0.5	IDZ-E1-2m	IDZ-E1-SF
				VA24D3591-004	VA24D3591-005	VA24D3591-006	VA24D3642-001	VA24D3642-002	VA24D3642-003
		Long Term	Short Term	2024-12-15 15:11	2024-12-15 15:12	2024-12-15 15:15	2024-12-16 15:11	2024-12-16 15:12	2024-12-16 15:14
General Parameters									
pH - Field	pH units	7.0 - 8.7	-	7.5	7.5	7.6	7.6	7.6	7.6
Specific Conductivity - Field	µS/cm	-	-	8999	28394	29637	25935	27105	30123
Temperature - Field	℃	-	-	5.7	8.2	8.3	7.6	7.8	8.6
Salinity - Field	ppt	Narrative [2]	-	8.2	26.6	27.76	24.49	25.53	28.09
Turbidity - Field	NTU	3.97 [2]	9.97 [2]	2.96	1.1	0.9	0.99	1.18	0.92
TSS	mg/L	7.0 [2]	27.0 [2]	6.7	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Oxygen - Field	mg/L	>=8	-	11.74	8.54	8.48	9.30	8.81	***7.90***
Anions and Nutrients									
Sulphate	mg/L	-	-	1700	1920	2100	1780	1710	2070
Chloride	mg/L	-	-	12300	14100	15300	13000	12600	15200
Fluoride	mg/L	-	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia (N-NH_3)	mg/L	7.2-12 [3]	48-79 [3]	0.0084	<0.0050	0.0082	<0.0050	<0.0050	<0.0050
Nitrite (N-NO_2)	mg/L	-	-	<0.10	<0.10	0.16	0.11	<0.10	<0.10
Nitrate (N-NO_3)	mg/L	3.7	339	<0.50	<0.50	<0.50	<0.50	<0.50	0.55
Total Metals									
Aluminum, total (T-Al)	mg/L	-	-	0.0442	0.0173	0.0169	0.024	0.0266	0.0115
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	0.00138	0.00154	0.00162	0.00155	0.00152	0.0016
Barium, total (T-Ba)	mg/L	-	-	0.0099	0.0095	0.0096	0.0099	0.0099	0.0097
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	-	***2.98***	***3.34***	***3.50***	***3.23***	***3.12***	***3.55***
Cadmium, total (T-Cd)	mg/L	0.00012	-	0.000061	0.000059	0.00007	0.00008	0.00006	0.000066
Chromium, total (T-Cr)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, total (T-Co)	mg/L	-	-	0.000117	0.000098	0.000096	0.000105	0.000106	0.000099
Copper, total (T-Cu)	mg/L	0.002	0.003	0.00095	0.00078	<0.00050	0.00068	0.00069	<0.00050
Iron, total (T-Fe)	mg/L	-	-	0.063	0.028	0.024	0.045	0.047	0.016
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	-	-	0.00663	0.00446	0.00404	0.00558	0.00541	0.00374
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	-	-	0.00769	0.00836	0.00894	0.00812	0.00805	0.00917
Nickel, total (T-Ni)	mg/L	0.0083	-	<0.00050	<0.00050	<0.00050	0.00056	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00058
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	-	-	0.00179	0.00199	0.00213	0.00184	0.00188	0.00201
Vanadium, total (T-V)	mg/L	0.005	-	0.00134	0.0014	0.00145	0.0014	0.00131	0.0014
Zinc, total (T-Zn)	mg/L	0.01	0.055	<0.0030	<0.0030	<0.0030	0.003	<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	-	-	0.000032	0.000066	0.000075	0.000057	0.000065	0.000059
Copper, dissolved (D-Cu)	mg/L	-	-	0.00065	0.00118	<0.00050	0.00072	0.0006	<0.00050
Iron, dissolved (D-Fe)	mg/L	-	-	0.033	<0.010	<0.010	0.011	<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	-	-	0.00863	0.00437	0.00323	0.00514	0.00468	0.0031
Nickel, dissolved (D-Ni)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	2.15	5.08	5.97	5.05	5.25	5.99
Vanadium, dissolved (D-V)	mg/L	-	-	0.00069	0.00122	0.00135	0.0012	0.00128	0.00135
Zinc, dissolved (D-Zn)	mg/L	-	-	0.0014	0.0015	<0.0010	0.0026	0.0023	0.0011
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 are the maximum measured in the December 5 WQR1 and December 6 WQR2 reference station samples at the 0.5 m depth (1.97 NTU and <2.0 mg/L TSS) (Report #45).
[3] The approved total ammonia nitrogen BC WQG is salinity, pH and temperature dependent; see Tables 26E and 26F in BC WQG guidance document.
[4] The working BC WQG for trivalent antimony [SB(III)] is 0.27 mg/L and is applied to total antimony results.
[5] When MeHg ≤ 0.5% of total Hg, BC WQG = 0.00002 mg/L. The Canadian WQG = 0.000016 mg/L.

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

Parameter	Unit	Lowest Applicable Guideline [1]		Station IDZ-E2		
				0.5 m Below Surface	0.5 m Below Surface	0.5 m Below Surface
				IDZ-E2-0.5	IDZ-E2-0.5	IDZ-E2-0.5
				VA24D3642-004	VA24D3642-005	VA24D3642-006
		Long Term	Short Term	2024-12-16 15:48	2024-12-16 15:48	2024-12-16 15:53
General Parameters						
pH - Field	pH units	7.0 - 8.7	-	7.6	7.6	7.4
Specific Conductivity - Field	µS/cm	-	-	25973	26991	34089
Temperature - Field	℃	-	-	7.7	7.8	9.6
Salinity - Field	ppt	Narrative [2]	-	24.45	25.42	31.24
Turbidity - Field	NTU	3.97 [2]	9.97 [2]	1.14	1.05	0.84
TSS	mg/L	7.0 [2]	27.0 [2]	<2.3	<2.0	<2.0
Dissolved Oxygen - Field	mg/L	>=8	-	8.92	8.79	***4.98***
Anions and Nutrients						
Sulphate	mg/L	-	-	1810	1980	2310
Chloride	mg/L	-	-	13300	14400	16900
Fluoride	mg/L	-	1.5	<1.0	<1.0	<1.0
Ammonia ($N\text{-}NH_3$)	mg/L	7.2-13 [3]	48-85 [3]	<0.0050	<0.0050	<0.0050
Nitrite ($N\text{-}NO_2$)	mg/L	-	-	<0.10	<0.10	<0.10
Nitrate ($N\text{-}NO_3$)	mg/L	3.7	339	<0.50	<0.50	<0.50
Total Metals						
Aluminum, total (T-Al)	mg/L	-	-	0.0256	0.0194	0.0137
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	0.0014	0.00158	0.00169
Barium, total (T-Ba)	mg/L	-	-	0.0102	0.0098	0.0098
Beryllium, total (T-Be)	mg/L	0.1	-	<0.00050	<0.00050	<0.00050
Boron, total (T-B)	mg/L	1.2	-	***3.16***	***3.43***	***3.82***
Cadmium, total (T-Cd)	mg/L	0.00012	-	0.000062	0.000073	0.00008
Chromium, total (T-Cr)	mg/L	-	-	<0.00050	<0.00050	<0.00050
Cobalt, total (T-Co)	mg/L	-	-	0.000107	0.000104	0.000104
Copper, total (T-Cu)	mg/L	0.002	0.003	0.00079	0.00053	<0.00050
Iron, total (T-Fe)	mg/L	-	-	0.046	0.031	0.021
Lead, total (T-Pb)	mg/L	0.002	0.14	<0.00010	<0.00010	<0.00010
Manganese, total (T-Mn)	mg/L	-	-	0.00579	0.0043	0.00425
Mercury, total (T-Hg)	mg/L	0.000016 [5]	-	<0.0000050	<0.0000050	<0.0000050
Molybdenum, total (T-Mo)	mg/L	-	-	0.00791	0.00845	0.00947
Nickel, total (T-Ni)	mg/L	0.0083	-	<0.00050	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	0.00053	0.00057	0.00083
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	-	-	0.0019	0.00195	0.0022
Vanadium, total (T-V)	mg/L	0.005	-	0.00129	0.0014	0.00161
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	-	-	0.000068	0.000064	0.000071
Copper, dissolved (D-Cu)	mg/L	-	-	0.00053	0.0009	<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	-	-	0.00483	0.00461	0.00317
Nickel, dissolved (D-Ni)	mg/L	-	-	<0.00050	<0.00050	0.00082
Strontium, dissolved (D-Sr)	mg/L	-	-	5.4	5.63	6.51
Vanadium, dissolved (D-V)	mg/L	-	-	0.00122	0.00128	0.00142
Zinc, dissolved (D-Zn)	mg/L	-	-	0.0025	0.003	0.001
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 when the site was discharging, therefore the turbidity and TSS WQGs were evaluated. Background values are the maximum measured in the December 5 WQR1 and December 6 WQR2 reference station samples at the 0.5 m depth (1.97 NTU and <2.0 mg/L TSS) (Report #45).
[3] The approved total ammonia nitrogen BC WQG is salinity, pH and temperature dependent; see Tables 26E and 26F in BC WQG guidance document.
[4] The working BC WQG for trivalent antimony [SB(III)] is 0.27 mg/L and is applied to total antimony results.
[5] When MeHg ⩽ 0.5% of total Hg, BC WQG = 0.00002 mg/L. The Canadian WQG = 0.000016 mg/L.

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

Parameter	Unit	Lowest Applicable Guideline [1]		Station IDZ-W1			Station IDZ-W2		
				0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor	0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor
				IDZ-W1-0.5	IDZ-W1-2m	IDZ-W1-SF	IDZ-W2-0.5	IDZ-W2-2m	IDZ-W2-SF
				VA24D3361-001	VA24D3361-002	VA24D3361-003	VA24D3361-004	VA24D3361-005	VA24D3361-006
		Long Term	Short Term	2024-12-11 10:20	2024-12-11 10:25	2024-12-11 10:30	2024-12-11 13:25	2024-12-11 13:30	2024-12-11 13:35
General Parameters									
pH - Field	pH units	7.0 - 8.7	-	7.5	7.5	7.3	7.5	7.4	7.3
Specific Conductivity - Field	µS/cm	-	-	18576	20026	34061	18226	28778	33941
Temperature - Field	°C	-	-	6.2	6.5	9.7	6.5	8.8	9.7
Salinity - Field	ppt	Narrative[2]	-	17.69	19.06	31.19	17.21	26.58	31.06
Turbidity - Field	NTU	Narrative[2]	Narrative[2]	1.35	1.41	1.07	1.31	0.69	1.04
TSS	mg/L	Narrative[2]	Narrative[2]	2.7	6.2	2.2	3.7	2.8	<2.0
Dissolved Oxygen - Field	mg/L	>=8	-	10.63	10.00	***4.96***	10.40	8.31	***4.96***

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 not discharging, therefore the turbidity and TSS WQGs were not evaluated.

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

Parameter	Unit	Lowest Applicable Guideline [1]		Station IDZ-E1			Station IDZ-E2		
				0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor	0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor
				IDZ-E1-0.5	IDZ-E1-2m	IDZ-E1-SF	IDZ-E2-0.5	IDZ-E2-2m	IDZ-E2-SF
				VA24D4315-001	VA24D4315-002	VA24D4315-003	VA24D4315-004	VA24D4315-005	VA24D4315-006
		Long Term	Short Term	2024-12-23 15:14	2024-12-23 15:15	2024-12-23 15:17	2024-12-23 14:59	2024-12-23 15:00	2024-12-23 15:05
General Parameters									
pH - Field	pH units	7.0 - 8.7	-	7.5	7.5	7.5	7.4	7.5	7.4
Specific Conductivity - Field	µS/cm	-	-	9368	13182	31831	6652	16436	34135
Temperature - Field	°C	-	-	6.5	6.6	9.1	6.0	6.9	9.6
Salinity - Field	ppt	Narrative[2]	-	8.36	12.04	29.44	5.87	15.17	31.32
Turbidity - Field	NTU	Narrative[2]	Narrative[2]	1.73	1.70	1.86	1.91	1.72	0.92
TSS	mg/L	Narrative[2]	Narrative[2]	<2.0	<2.0	<2.0	<2.0	2.2	<2.0
Dissolved Oxygen - Field	mg/L	>=8	-	11.47	10.65	***6.89***	11.92	10.19	***5.08***

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 not discharging, therefore the turbidity and TSS WQGs were not evaluated.

Table G-7: 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
				VA24D4315-007	VA24D4315-008	VA24D4315-009	VA24D4315-010	VA24D4315-011	VA24D4315-012
		Long Term	Short Term	2024-12-23 12:49	2024-12-23 12:49	2024-12-23 12:55	2024-12-23 12:35	2024-12-23 12:36	2024-12-23 12:45
General Parameters									
pH - Field	pH units	7.0 - 8.7	-	7.6	7.5	7.5	7.4	7.5	7.5
Specific Conductivity - Field	µS/cm	-	-	11147	17291	34234	10391	18911	34246
Temperature - Field	°C	-	-	6.3	6.9	9.6	6.3	7.1	9.6
Salinity - Field	ppt	Narrative[2]	-	10.14	16.05	31.41	9.41	17.57	31.42
Turbidity - Field	NTU	Narrative[2]	Narrative[2]	1.63	1.97	0.93	1.72	1.59	1.23
TSS	mg/L	Narrative[2]	Narrative[2]	<2.0	<2.0	<2.0	2.2	2.8	<2.0
Dissolved Oxygen - Field	mg/L	>=8	-	10.92	9.87	***4.98***	11.04	9.65	***4.98***

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 not discharging, therefore the turbidity and TSS WQGs were not evaluated.

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

Parameter	Unit	Lowest Applicable Guideline [1]		Station IDZ-E1			Station IDZ-E2		
				0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor	0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor
				IDZ-E1-0.5	IDZ-E1-2m	IDZ-E1-SF	IDZ-E2-0.5	IDZ-E2-2m	IDZ-E2-SF
				VA25A0089-001	VA25A0089-002	VA25A0089-003	VA25A0089-004	VA25A0089-005	VA25A0089-006
		Long Term	Short Term	2025-01-01 14:18	2025-01-01 14:18	2025-01-01 14:19	2025-01-01 14:09	2025-01-01 14:09	2025-01-01 14:12
General Parameters									
pH - Field	pH units	7.0 - 8.7	-	7.7	7.7	7.6	7.7	7.7	7.5
Specific Conductivity - Field	µS/cm	-	-	23509	25329	32989	22892	25040	33567
Temperature - Field	°C	-	-	7.2	7.6	9.3	7.1	7.5	9.5
Salinity - Field	ppt	Narrative[2]	-	22.22	22.88	30.4	21.65	23.65	30.87
Turbidity - Field	NTU	Narrative[2]	Narrative[2]	1.05	1.09	0.96	1.13	1.07	0.98
TSS	mg/L	Narrative[2]	Narrative[2]	<2.0	<2.0	2.5	<2.0	<2.0	<2.0
Dissolved Oxygen - Field	mg/L	>=8	-	9.47	9.22	***6.23***	9.58	9.29	***5.47***

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 not discharging, therefore the turbidity and TSS WQGs were not evaluated.

Table G-9: 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
				VA25A0089-007	VA25A0089-008	VA25A0089-009	VA25A0089-010	VA25A0089-011	VA25A0089-012
		Long Term	Short Term	2025-01-01 13:53	2025-01-01 13:54	2025-01-01 13:56	2025-01-01 13:43	2025-01-01 13:44	2025-01-01 13:47
General Parameters									
pH - Field	pH units	7.0 - 8.7	-	7.7	7.7	7.5	7.7	7.7	7.5
Specific Conductivity - Field	µS/cm	-	-	22316	23996	33731	21627	24655	33942
Temperature - Field	°C	-	-	7.0	7.3	9.5	6.9	7.4	9.5
Salinity - Field	ppt	Narrative[2]	-	21.1	22.69	31	20.48	23.3	31.17
Turbidity - Field	NTU	Narrative[2]	Narrative[2]	1.28	1.14	0.93	1.25	1.09	1.02
TSS	mg/L	Narrative[2]	Narrative[2]	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Oxygen - Field	mg/L	>=8	-	10.05	9.44	***5.37***	10.15	9.30	***5.21***

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 not discharging, therefore the turbidity and TSS WQGs were not evaluated.

Table G-10: Summary of Marine Water Quality Results for Methylmercury Received at the Time of Reporting.

Parameter	Unit	Lowest Applicable Guideline[1]	Station IDZ-E1	Station IDZ-E2	Station IDZ-W1	Station IDZ-W2	Reference Station WQR1	Reference Station WQR2
			0.5 m Below Surface	0.5 m Below Surface	0.5 m Below Surface	0.5 m Below Surface	0.5 m Below Surface	0.5 m Below Surface
			IDZ-E1-0.5	IDZ-E2-0.5	IDZ-W1-0.5	IDZ-W2-0.5	WQR1-0.5	WQR2-0.5
			VA24D1567-001	VA24D1567-002	VA24D1567-003	VA24D1567-004	VA24D1567-005	VA24D1567-006
			2024-11-19	2024-11-19	2024-11-19	2024-11-19	2024-11-19	2024-11-19
Total Methylmercury	**µg/L**	0.0001 [2]	0.000020	<0.000020	<0.000020	0.000021	<0.000020	0.000022
Total Mercury	**µg/L**	0.016-0.02 [3,4]	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<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.

Table G-11: Summary of Marine Water Quality Results for Methylmercury Received at the Time of Reporting.

Parameter	Unit	Lowest Applicable Guideline[1]	Station IDZ-W2		
			0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor
			IDZ-W2-0.5	IDZ-W2-2m	IDZ-W2-SF
			VA24D1917-001	VA24D1917-002	VA24D1917-003
			2024-11-25	2024-11-25	2024-11-25
Total Methylmercury	**µg/L**	0.0001 [2]	<0.000020	<0.000020	<0.000020
Total Mercury	**µg/L**	0.016-0.02 [3,4]	<0.0050	<0.0050	<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.

Table G-12: Summary of Marine Water Quality Results for Methylmercury Received at the Time of Reporting.

Parameter	Unit	Lowest Applicable Guideline[1]	Reference Station WQR1			Reference Station WQR2		
			0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor	0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor
			WQR1-0.5	WQR1-2m	WQR1-SF	WQR2-0.5	WQR2-2m	WQR2-SF
			VA24D2842-001	VA24D2842-002	VA24D2842-003	VA24D3008-001	VA24D3008-002	VA24D3008-003
			2024-12-05	2024-12-05	2024-12-05	2024-12-06	2024-12-06	2024-12-06
Total Methylmercury	**µg/L**	0.0001 [2]	0.000057	<0.000020	<0.000020	<0.000020	0.000021	0.000023
Total Mercury	**µg/L**	0.0088-0.02 [3,4]	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<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.

Table G-13: Summary of Marine Water Quality Results for Methylmercury 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
			VA24D3591-001	VA24D3591-002	VA24D3591-003	VA24D3591-004	VA24D3591-005	VA24D3591-006
			2024-12-15	2024-12-15	2024-12-15	2024-12-15	2024-12-15	2024-12-15
Total Methylmercury	**µg/L**	0.0001 [2]	0.000021	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Total Mercury	**µg/L**	0.016-0.02 [3,4]	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<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.

Table G-14: Summary of Marine Water Quality Results for Methylmercury Received at the Time of Reporting.

Parameter	Unit	Lowest Applicable Guideline[1]	Station IDZ-E1			Station IDZ-E2		
			0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor	0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor
			IDZ-E1-0.5	IDZ-E1-2m	IDZ-E1-SF	IDZ-E2-0.5	IDZ-E2-2m	IDZ-E2-SF
			VA24D3642-001	VA24D3642-002	VA24D3642-003	VA24D3642-004	VA24D3642-005	VA24D3642-006
			2024-12-16	2024-12-16	2024-12-16	2024-12-16	2024-12-16	2024-12-16
Total Methylmercury	**µg/L**	0.0001 [2]	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Total Mercury	**µg/L**	0.016-0.02 [3,4]	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<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.

Table G-15: Summary of Marine Water Quality Results for Dioxins and Furans Received at the Time of Reporting.

Parameter	Unit	Station IDZ-E1	Station IDZ-E2	Station IDZ-W1	Station IDZ-W2	Reference Station WQR1	Reference Station WQR2
		0.5 m Below Surface	0.5 m Below Surface	0.5 m Below Surface	0.5 m Below Surface	0.5 m Below Surface	0.5 m Below Surface
		IDZ-E1-0.5	IDZ-E2-0.5	IDZ-W1-0.5	IDZ-W2-0.5	WQR1-0.5	WQR2-0.5
		L2758142-1	L2758142-2	L2758142-3	L2758142-4	L2758142-5	L2758142-6
		2024-11-14	2024-11-14	2024-11-14	2024-11-14	2024-11-14	2024-11-14
Lower Bound PCDD/F TEQ	**pg/L**	0.00717	0	0.0185	0.00228	0.00687	0.0488
Upper Bound PCDD/F TEQ	**pg/L**	1.01	1.01	0.910	0.828	1.07	0.812

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.