

TECHNICAL MEMORANDUM

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Mark Zan and Ryan Schucroft (Woodfibre LNG) **Date:** 7 Nov 2025

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

Subject: PE-111578 Weekly Discharge and Compliance Report #88 for October 26 –
November 1

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

This technical memorandum (Report #88) was prepared by Lorax and summarizes WDA monitoring conducted for the period of October 26 – November 1. Monitoring data and pending results from prior monitoring periods available at the time of reporting are tabulated and included as appendices to this memorandum. Report #88 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 D 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. Shoring works along the foreshore areas were initiated in December 2023, and construction of water management infrastructure commenced in early 2024. Land-based construction occurs within two water management areas east and west of Mill Creek, referred to as the east and west catchments, respectively. Non-contact water is intercepted and diverted around the construction areas to Howe Sound and Mill Creek. Stormwater runoff collected within the east and west catchment areas (7.12 and 5.92 ha, respectively) is managed as site contact water and is conveyed to the East Wastewater Treatment Plant (WWTP) for treatment, or to the East and West Sedimentation Ponds for settling of suspended particulate. Intermittent discharge to Howe Sound from the East and West Sedimentation Ponds commenced April and October 2024, respectively.

Non-contact water from the slopes above and outside the Woodfibre LNG construction area is intercepted by diversion ditches and conveyed to Howe Sound or Mill Creek. Diversion ditches for the west catchment convey water 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 is also conveyed to Howe Sound via station OUT-01. East of Mill Creek, non-contact water is intercepted and diverted around the east catchment along pre-existing road ditches that flow to East Creek or Mill Creek. To facilitate the replacement of the East Creek discharge culvert at OUT-12 (station SW-04), the lower reach of East Creek was temporarily diverted to an adjacent culvert, OUT-11, on September 17, 2024. To facilitate the reconstruction of the culvert at station OUT-01, non-contact water at the inlet to the culvert at OUT-01 has been temporarily diverted by pumping to station OUT-02 starting on October 12, 2025.

The East WWTP was commissioned April 2024 and the West WWTP was commissioned August 2024. Operation of the West WWTP was subsequently suspended September 25, 2024, for a temporary reconfiguration to conduct pilot-scale evaluations of alternative treatment processes. The evaluations were completed April 2025 and did not yield improved treatment outcomes; therefore, the original treatment process has been maintained. Lower than expected volumes of contaminated contact water have been encountered during construction; therefore, operation of the West WWTP remains suspended and all site waters that require treatment are directed to the East WWTP, with treated effluent discharged to the East Sedimentation Pond.

The water 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 WWTP for treatment, or the East and West Sedimentation Ponds prior to re-use or discharge.

Discharge from the East and West Sedimentation Ponds is controlled using pumps. Prior to water management upgrades that commenced during the week of June 22 - 28, 2025, water stored in the ponds was pumped to a TSS settling system for clarification and then discharged through the authorized outfall structures associated with each pond. Some of the TSS-clarified water was recirculated back to the ponds or was re-used for construction (*e.g.*, dust suppression), and this will continue with the revised configuration. Each sedimentation pond has an associated authorized discharge location (stations SP-E-OUT and SP-W-OUT) with an initial dilution zone (IDZ) where discharged water mixes with Howe Sound surface waters. The IDZ is defined in PE-111578 and extends in a 150 m radius from each point of discharge into Howe Sound.

A flocculant-based TSS settling system (2700GPM) at the West Sedimentation Pond is used to clarify all non-contaminated contact water prior to re-use at site or discharge at SP-W-OUT. Water collected in the East Sediment Pond is periodically transferred to the West Sedimentation Pond to allow treatment by the 2700GPM system. The fully built 2700GPM TSS settling system will have the installed capacity to clarify 14,700 m³/day of contact water and will consist of six parallel treatment trains, each with an installed capacity of 2450 m³/day. Only one train will be operated during dry conditions or when contact water flows are below approximately 2450 m³/day, whereas at higher flows, additional trains will be activated as needed to match the influent volumes. Treatment trains 1, 2, 3 and 4 have been commissioned, and commissioning of treatment trains 5 and 6 is underway.

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

1.2 Weather and Water Management

Variable weather conditions were observed during the October 26 – November 1 monitoring period, with precipitation recorded each day. The total precipitation amount during the monitoring period was 162.0 mm. The daily weather conditions are summarized in Table 1.

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

Date	Precipitation (mm)	Max. Temp (°C)	Min. Temp (°C)	Weather Description
2025-10-26	37.0	10.7	6.2	Heavy Rain
2025-10-27	2.0	11.3	5.0	Overcast
2025-10-28	44.0	7.1	4.5	Heavy Rain
2025-10-29	2.6	13.9	6.3	Overcast
2025-10-30	0	14.8	6.2	Mix of sun and cloud
2025-10-31	50.2	9.8	6.0	Heavy Rain
2025-11-01	26.2	12.3	7.3	Heavy Rain

Note: Data retrieved from the Woodfibre on-site weather station operated by Stantec.

From October 26 – November 1, the East Sedimentation Pond received water from the Area 1100 Sump, Trench 7, the 6415 Sump, the MOF Sump and recirculated effluent from the East WWTP (Appendix A, Figure 2). There was no discharge to Howe Sound from station SP-E-OUT during the monitoring period. A total of 1,534 m³ from the East Sedimentation Pond was transferred to the West Sedimentation Pond from October 26 – November 1 (Appendix B, Table B-4).

Routine operation of the East WWTP continued during the monitoring period (October 26 – November 1). Concrete contact water and water from the Wash Bay and Hydrovac Pit was periodically directed to the East WWTP for treatment, as well as water stored in the East Sedimentation Pond (Appendix A, Figure 2 and Figure 3). East WWTP treated effluent was discharged to the East Sedimentation Pond each day during the monitoring period (October 26 – November 1). Daily water volumes processed by the East WWTP are provided in Appendix B (Table B-4).

From October 26 – November 1, the West Sedimentation Pond received water from the Area 4100 and Area 4200 Sumps, the East Sedimentation Pond as well as recirculated effluent from the 2700GPM TSS settling system (Appendix A, Figure 3). West Sedimentation Pond effluent was clarified through the 2700GPM system each day during the monitoring period (October 26 – November 1) and recirculated back to the pond or intermittently discharged to Howe Sound. A total of 16,710 m³ of clarified effluent was intermittently discharged to Howe Sound from station SP-W-OUT from October 26 – November 1. Clarified effluent was not reclaimed for construction use from October 26 – November 1. Daily clarified effluent volumes from the TSS settling system that were recirculated to the West Sedimentation Pond or discharged to Howe Sound, and volumes of water reclaimed for construction use are provided in Appendix C (Table C-5).

2. Monitoring Summary

The locations of PE-111578 monitoring stations are shown on Figure 1. Monitoring is conducted by the on-site Environmental Monitors (Roe Environmental). Analytical samples are submitted by Roe Environmental to ALS Environmental in Burnaby, BC for testing.

The following PE-111578 and supplementary monitoring stations are currently being monitored:

- Non-contact diversion ditch outlet monitoring stations (OUT-01, OUT-02). Non-contact diversion ditch water at OUT-01 has been temporarily redirected to OUT-02 since October 12, 2025, to facilitate the reconstruction of the outfall at OUT-01. Station OUT-01 is not routinely monitored while the diversion is in place except during significant rainfall events, when non-contact water intermittently flows through the outfall (*e.g.*, October 26, 2025).
- Non-contact diversion ditch outlet monitoring station OUT-06.
- East Creek water has been temporarily diverted to OUT-11 since September 17, 2024, to facilitate the replacement of the OUT-12 culvert through which East Creek previously discharged. East Creek is monitored at the inlet to the temporary diversion (freshwater receiving environment station SW-04); therefore, OUT-11 is not currently monitored while the diversion is in place.
- 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, WWTP-E-IN, COMB-WWTP-E-IN, WWTP-E-OUT, SP-W-IN, 2700GPM-IN, and 2700GPM-OUT).
- Supplementary contact water stations at the outlet of each sampling train. These samples are identified as W2700T#-OUT (with # equal to the train number).
- Effluent compliance stations (SP-E-OUT and SP-W-OUT). As described in Section 1.1, when there is surplus water, West Sedimentation Pond clarified effluent from the individual 2700GPM trains is directed to SP-W-OUT for discharge. As of September 26, 2025, a manifold is being implemented that combines effluent from the individual trains into a single discharge line configured with a new SP-W-OUT sampling port. Prior to September 26, 2025, the SP-W-OUT monitoring station was not safe to access and the SP-W-OUT station was monitored at the outlet of the individual 2700GPM TSS settling trains.
- Howe Sound reference and IDZ monitoring stations (WQR1, WQR2, IDZ-E1, IDZ-E2, IDZ-W1, and IDZ-W2).

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

A flocculant-based TSS settling system (2700GPM) is used at the West Sedimentation Pond as described in Section 1.1. Influent and effluent are monitored at stations 2700GPM-IN and 2700GPM-OUT, respectively. The 2700GPM-OUT station represents the combined discharge line from all six individual treatment trains when clarified effluent is directed to the West Sedimentation Pond and is approximately 10 m from the location of the SP-W-OUT station. At times when only one 2700GPM treatment train is operated, the 2700GPM-OUT sample has been

collected at the outlet of that train. Monitoring of the individual 2700GPM settling system treatment trains is supplemental to the PE-111578 monitoring requirements and is conducted at the discretion of field staff. As previously discussed, since September 26, 2025, a manifold is being implemented that combines effluent from the individual trains into a single discharge line configured with a new SP-W-OUT sampling port.

Water quality was monitored at stations OUT-01, SW-01, SW-02, SW-03, SW-04, SW-07, IDZ-E1, IDZ-E2, IDZ-W1, IDZ-W2, WQR1, WQR2, SP-E-IN, WWTP-E-IN, COMB-WWTP-E-IN, WWTP-E-OUT, SP-W-IN, SP-W-OUT, 2700GPM-IN, W2700T2-OUT, W2700T4-OUT, W2700T5-OUT and 2700GPM-OUT during the monitoring period (October 26 – November 1). Sampling dates and parameters tested are summarized in Table 2.

Overall, the PE-111578 monitoring requirements that were applicable during the monitoring period (October 26 – November 1) were met. The initial high frequency monitoring requirements outlined in effluent permit PE-111578 for the sedimentation ponds, WWTP and IDZ stations have been met. On June 25, 2025, BCER approved the implementation of low-frequency (*i.e.*, bi-monthly and monthly) monitoring requirements specified in PE-111578 for all parameters, except for metals, hexavalent chromium, and methylmercury, which continue to be monitored weekly at sedimentation pond and WWTP stations.

Daily field parameters and a weekly analytical sample were not collected at the east catchment effluent compliance station (SP-E-OUT) as there was no discharge to Howe Sound from the East Sedimentation Pond during the monitoring period (October 26 – November 1). Daily field parameters and a weekly analytical sample were not collected at the influent and effluent stations of the West WWTP (WWTP-W-IN and WWTP-W-OUT, respectively) as it was not operational during the monitoring period (October 26 – November 1).

Table 2:
Summary of PE-111578 Monitoring Samples Collected October 26 – November 1.

Sampling Date	Sample	Description	Parameters Tested	Monitoring Frequency
October 26, 2025	SP-E-IN	East Sedimentation Pond influent monitored at cell 1 of the pond	Field Parameters.	D
	WWTP-E-IN	East WWTP at the influent meter box	Field Parameters.	D
	WWTP-E-OUT	East WWTP at the effluent meter box		
	SP-W-IN	West Sedimentation Pond influent monitored at cell 1 of the pond	Field Parameters.	D
	SP-W-OUT	West Sedimentation Pond clarified effluent discharge to Howe Sound, collected at the manifold that combines effluent from the individual 2700GPM trains into a single discharge line configured with a new SP-W-OUT sampling port	Field Parameters.	D
	2700GPM-IN	2700GPM TSS settling system at the influent meter box	Field Parameters.	P
	2700GPM-OUT	2700GPM TSS settling system at the manifold that combines effluent from the individual 2700GPM trains into a single line that is directed to the West Sedimentation Pond		
	OUT-01	Non-contact water diversion ditch outlet, collected during significant rainfall event where non-contact water flowed through the outfall while still being reconstructed	Field, Physical & General Parameters, Total and Dissolved Metals, and Methylmercury.	M
	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, M ₅
	IDZ-E1-2m	Howe Sound IDZ station E1; 2 m below surface		
	IDZ-E1-SF	Howe Sound IDZ station E1; 2 m above the seafloor		
	IDZ-E2-0.5	Howe Sound IDZ station E2; 0.5 m below surface		
	IDZ-E2-2m	Howe Sound IDZ station E2; 2 m below surface		
	IDZ-E2-SF	Howe Sound IDZ station E2; 2 m above the seafloor		
	WQR1-0.5	Reference site 1; 0.5 m below surface		
	WQR1-2m	Reference site 1; 2 m below surface		
	WQR1-SF	Reference site 1; 2 m above the seafloor		
October 27, 2025	SP-E-IN	East Sedimentation Pond influent monitored at cell 1 of the pond	Field Parameters.	D
	WWTP-E-IN	East WWTP at the influent meter box	Field Parameters.	D
	WWTP-E-OUT	East WWTP at the effluent meter box		
	SP-W-IN	West Sedimentation Pond influent monitored at cell 1 of the pond	Field, Physical & General Parameters, Total, Dissolved and Speciated Metals, and Methylmercury.	D, M ₂ , W
	SP-W-OUT	West Sedimentation Pond clarified effluent discharge to Howe Sound, collected at the manifold that combines effluent from the individual 2700GPM trains into a single discharge line configured with a new SP-W-OUT sampling port	Field, Physical & General Parameters, VH & BTEX, EPHs & PAHs, Total, Dissolved and Speciated Metals, VOCs, Methylmercury, Dioxins & Furans.	D, M, M ₂ , W
October 28, 2025	2700GPM-IN	2700GPM TSS settling system at the influent meter box	Field, Physical & General Parameters, VH & BTEX, EPHs & PAHs, Total, Dissolved and Speciated Metals, VOCs, Methylmercury, Dioxins & Furans.	P
	SP-E-IN	East Sedimentation Pond influent monitored at cell 1 of the pond	Field Parameters.	D
	WWTP-E-IN	East WWTP at the influent meter box	Field Parameters.	D
	WWTP-E-OUT	East WWTP at the effluent meter box		
	SP-W-IN	West Sedimentation Pond influent monitored at cell 1 of the pond	Field Parameters.	D
	SP-W-OUT	West Sedimentation Pond clarified effluent discharge to Howe Sound, collected at the manifold that combines effluent from the individual 2700GPM trains into a single discharge line configured with a new SP-W-OUT sampling port	Field Parameters.	D
October 29, 2025	2700GPM-IN	2700GPM TSS settling system at the influent meter box	Field Parameters.	P
	SP-E-IN	East Sedimentation Pond influent monitored at cell 1 of the pond	Field Parameters.	D
	WWTP-E-IN	East WWTP at the influent meter box	Field Parameters.	D
	WWTP-E-OUT	East WWTP at the effluent meter box		
	SP-W-IN	West Sedimentation Pond influent monitored at cell 1 of the pond	Field Parameters.	D
	SP-W-OUT	West Sedimentation Pond clarified effluent discharge to Howe Sound, collected at the manifold that combines effluent from the individual 2700GPM trains into a single discharge line configured with a new SP-W-OUT sampling port	Field Parameters.	D
October 30, 2025	2700GPM-IN	2700GPM TSS settling system at the influent meter box	Field Parameters.	P
	SP-E-IN	East Sedimentation Pond influent monitored at cell 1 of the pond	Field, Physical & General Parameters, Total, Dissolved and Speciated Metals, and Methylmercury.	D, M ₂ , W
	WWTP-E-IN	East WWTP at the influent meter box	Field, Physical & General Parameters, Total, Dissolved and Speciated Metals, and Methylmercury.	D, M ₂ , W
	WWTP-E-OUT	East WWTP at the effluent meter box		
	COMB-WWTP-E-IN	Combined East WWTP influent from the concrete contact water treatment stream and the East Sedimentation Pond, collected from the heated frac tank	Field & Physical Parameters, Total, Dissolved and Speciated Metals, and Methylmercury.	P
	SP-W-IN	West Sedimentation Pond influent monitored at cell 1 of the pond	Field Parameters.	D
	SP-W-OUT	West Sedimentation Pond clarified effluent discharge to Howe Sound, collected at the manifold that combines effluent from the individual 2700GPM trains into a single discharge line configured with a new SP-W-OUT sampling port	Field Parameters.	D
	2700GPM-IN	2700GPM TSS settling system at the influent meter box	Field Parameters.	P
	SW-01	Lower Reach of Woodfibre Creek (near the mouth)	Field, Physical & General Parameters, VH & BTEX, EPHs & PAHs, Total, Dissolved and Speciated Metals, VOCs, Methylmercury, Dioxins & Furans.	M, M ₅
	SW-02	Lower Reach of Mill Creek (upstream of the third bridge)		
	SW-03	Mill Creek Estuary		
	SW-04	Lower Reach of East Creek (near the outlet to the outfall culvert)		
	SW-07	Upstream Mill Creek (at the diversion inlet)		

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. Monthly monitoring for General parameters, except ammonia, nitrate and nitrite (*i.e.*, nitrogen species) are monitored weekly during blasting season.
M₂ – bi-monthly monitoring for physical parameters at WWTP and sedimentation pond stations.
M₅ – fall high-frequency (5-in-30) sampling for receiving environment stations.
W – weekly monitoring for metals, chromium speciation and methylmercury at WWTP and sedimentation pond influent and effluent stations, effective June 25, 2025.
P – periodic monitoring for targeted parameters that is supplementary to PE-111578 requirements.

Table 2 (continued):
Summary of PE-111578 Monitoring Samples Collected October 26 – November 1.

Sampling Date	Sample	Description	Parameters Tested	Monitoring Frequency
October 31, 2025	SP-E-IN	East Sedimentation Pond influent monitored at cell 1 of the pond	Field Parameters.	D
	WWTP-E-IN	East WWTP at the influent meter box	Field Parameters.	D
	WWTP-E-OUT	East WWTP at the effluent meter box		
	SP-W-IN	West Sedimentation Pond influent monitored at cell 1 of the pond	Field Parameters.	D
	SP-W-OUT	West Sedimentation Pond clarified effluent discharge to Howe Sound, collected at the manifold that combines effluent from the individual 2700GPM trains into a single discharge line configured with a new SP-W-OUT sampling port	Field Parameters.	D
	2700GPM-IN	2700GPM TSS settling system at the influent meter box	Field Parameters.	P
	W2700T5-OUT	2700GPM TSS settling system at the outlet of Train 5	Field, Physical & General Parameters, Total, Dissolved and Speciated Metals, and Methylmercury.	P
November 1, 2025	SP-E-IN	East Sedimentation Pond influent monitored at cell 1 of the pond	Field Parameters.	D
	WWTP-E-IN	East WWTP at the influent meter box	Field Parameters.	D
	WWTP-E-OUT	East WWTP at the effluent meter box		
	SP-W-IN	West Sedimentation Pond influent monitored at cell 1 of the pond	Field Parameters.	D
	SP-W-OUT	West Sedimentation Pond clarified effluent discharge to Howe Sound, collected at the manifold that combines effluent from the individual 2700GPM trains into a single discharge line configured with a new SP-W-OUT sampling port	Field Parameters.	D
	2700GPM-IN	2700GPM TSS settling system at the influent meter box	Field Parameters.	P
	W2700T2-OUT	2700GPM TSS settling system at the outlet of Train 2	Field Parameters.	P
	W2700T3-OUT	2700GPM TSS settling system at the outlet of Train 3	Field Parameters.	P
	W2700T4-OUT	2700GPM TSS settling system at the outlet of Train 4	Field Parameters.	P
	W2700T5-OUT	2700GPM TSS settling system at the outlet of Train 5	Field & General Parameters, Total, Dissolved and Speciated Metals, and Methylmercury.	P
	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, M ₅
	IDZ-W1-2m	Howe Sound IDZ station W1; 2 m below surface		
	IDZ-W1-SF	Howe Sound IDZ station W1; 2 m above the seafloor		
	IDZ-W2-0.5	Howe Sound IDZ station W2; 0.5 m below surface		
	IDZ-W2-2m	Howe Sound IDZ station W2; 2 m below surface		
	IDZ-W2-SF	Howe Sound IDZ station W2; 2 m above the seafloor		
	WQR2-0.5	Reference site 2; 0.5 m below surface		
	WQR2-2m	Reference site 2; 2 m below surface		
	WQR2-SF	Reference site 2; 2 m above the seafloor		

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. Monthly monitoring for General parameters, except ammonia, nitrate and nitrite (*i.e.*, nitrogen species) are monitored weekly during blasting season.
M₂ – bi-monthly monitoring for physical parameters at WWTP and sedimentation pond stations.
M₅ – fall high-frequency (5-in-30) sampling for receiving environment stations.
W – weekly monitoring for metals, chromium speciation and methylmercury at WWTP and sedimentation pond influent and effluent stations, effective June 25, 2025.
P – periodic monitoring for targeted parameters that is supplementary to PE-111578 requirements.

3. Water Quality Results

3.1 Summary of Reported Results

Analytical results and associated field measurements included in this weekly report (Report #88) are listed below in Table 3, with additional field measurements presented in Table B-3 (Appendix B) and Table C-4 (Appendix C). Testing for methylmercury, dioxins, furans and toxicity may require four weeks or longer to complete. Analytical results not reported will be included in future weekly reports. Reporting of results is pending for the following samples and parameters:

- SP-W-OUT collected September 29 (acute toxicity);
- IDZ-E1, IDZ-E2, IDZ-W1, IDZ-W2, WQR1 and WQR2 collected September 30 at 0.5 m below surface (chronic toxicity);
- OUT-06 collected October 3 (total mercury and methylmercury);
- SW-01, SW-02, SW-03, SW-04, and SW-07 collected October 5 (total mercury and methylmercury);
- IDZ-E1, IDZ-E2 and WQR1 collected October 9 (chronic toxicity);
- SP-W-IN, SP-W-OUT and 2700GPM-IN collected October 10 (dioxins and furans);
- IDZ-W1, IDZ-W2 and WQR2 collected October 10 at 0.5 m below surface (chronic toxicity);
- COMB-WWTP-E-IN collected October 11 (total mercury and methylmercury);
- SW-01, SW-02, SW-03, SW-04, and SW-07 collected October 12 (field and all analytical parameters);
- IDZ-E1, IDZ-E2 and WQR1 collected October 14 (field and all analytical parameters);
- OUT-02 collected October 14 (total mercury and methylmercury);
- 2700GPM-IN and SP-W-OUT collected October 15 (dioxins and furans);
- IDZ-W1, IDZ-W2 and WQR2 collected October 15 (field and all analytical parameters);
- SW-01, SW-02, SW-03, SW-04, and SW-07 collected October 17 (field and all analytical parameters);
- COMB-WWTP-E-IN collected October 17 (total mercury and methylmercury);
- 2700GPM-IN and SP-W-OUT collected October 20 (dioxins and furans);
- IDZ-E1, IDZ-E2 and WQR1 collected October 20 (total mercury, methylmercury, dioxins and furans);
- COMB-WWTP-E-IN collected October 22 (total mercury and methylmercury);

- IDZ-W1, IDZ-W2 and WQR2 collected October 24 (field and all analytical parameters);
- SW-01, SW-02, SW-03, SW-04 and SW-07 collected October 25 (field and all analytical parameters);
- OUT-01 collected October 26 (field and all analytical parameters);
- IDZ-E1, IDZ-E2 and WQR1 collected October 26 (field and all analytical parameters);
- 2700GPM-IN and SP-W-OUT collected October 27 (dioxins and furans);
- SP-E-IN, WWTP-E-IN and WWTP-E-OUT collected October 30 (total mercury and methylmercury);
- COMB-WWTP-E-IN collected October 30 (field and all analytical parameters);
- SW-01, SW-02, SW-03, SW-04, and SW-07 collected October 30 (field and all analytical parameters);
- W2700T5-OUT collected October 31 (field and all analytical parameters);
- W2700T5-OUT collected November 1 (field and all analytical parameters);
- IDZ-W1, IDZ-W2 and WQR2 collected November 1 (field and all analytical parameters).

Table 3:
Summary of Analytical Results and Associated Field Measurements Included in Weekly Discharge and Compliance Report #88.

Sample	Description	Sampling Date	Parameters Reported
IDZ-E1-0.5	Howe Sound IDZ station E1; 0.5 m below surface	October 20, 2025	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, VOCs, and PAHs.
IDZ-E1-2m	Howe Sound IDZ station E1; 2 m below surface		
IDZ-E1-SF	Howe Sound IDZ station E1; 2 m above the seafloor		
IDZ-E2-0.5	Howe Sound IDZ station E2; 0.5 m below surface		
IDZ-E2-2m	Howe Sound IDZ station E2; 2 m below surface		
IDZ-E2-SF	Howe Sound IDZ station E2; 2 m above the seafloor		
WQR1-0.5	Reference site 1; 0.5 m below surface		
WQR1-2m	Reference site 1; 2 m below surface		
WQR1-SF	Reference site 1; 2 m above the seafloor		
COMB-WWTP-E-IN	Combined East WWTP influent from the concrete contact water treatment stream and the East Sedimentation Pond, collected from the heated frac tank	October 22, 2025	Field Turbidity and Physical Parameters, Total and Dissolved Metals, Hexavalent Chromium.
SP-W-IN	West Sedimentation Pond influent monitored at cell 1 of the pond	October 27, 2025	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, and Methylmercury.
SP-W-OUT	West Sedimentation Pond clarified effluent discharge to Howe Sound, collected at the manifold that combines effluent from the individual 2700GPM trains into a single discharge line configured with a new SP-W-OUT sampling port		Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, VOCs, PAHs, and Methylmercury.
2700GPM-IN	2700GPM TSS settling system at the influent meter box		
SP-E-IN	East Sedimentation Pond influent monitored at cell 1 of the pond	October 30, 2025	Field, Physical and General Parameters, Total and Dissolved Metals, and Hexavalent Chromium.
WWTP-E-IN	East WWTP at the influent meter box		
WWTP-E-OUT	East WWTP at the effluent meter box		

3.2 Screening and Reporting Overview

Water quality and flow monitoring results are screened against operational minimum discharge objectives (MDOs) for the East WWTP, and PE-111578 discharge limits for sedimentation pond and 2700GPM TSS settling system stations. The MDOs were set equal to Canadian Council of Ministers of the Environment (CCME) water quality guidelines (WQGs) and the PE-111578 discharge limits. Contact and non-contact water monitoring results are also screened against Canadian (Canadian Council of Ministers of the Environment, CCME), Federal (Environment and Climate Change Canada, ECCC) 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.

It is expected that samples of contact water and 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. As well, for receiving environment samples, parameter concentrations above a WQG value but within the range of values observed in the baseline monitoring program are considered to represent the background conditions of the water.

The values used for screening are listed in the water quality tables provided in the appendices. Results above a screening value are highlighted in the tables. Samples collected from sedimentation pond effluent that is discharged to Howe Sound (monitored at stations SP-E-OUT and SP-W-OUT) are evaluated for non-compliance to PE-111578 discharge limits. Exceedances in contact water that remains on-site and is not discharged (e.g., WWTP influent and effluent, sedimentation pond influent, TSS settling system influent, and TSS settling system effluent that is recirculated) are screened for comparison purposes only, and exceedances in these samples do not represent non-compliance to the PE-111578 conditions.

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

calculated assuming a concentration equal to the detection limit for results reported as not detected. These two parameters span the range of possible TEQs if one or more of the PCDDs and PCDFs are reported as not detected.

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

A summary of reported and pending results is provided in Section 3.2. Results for effluents from East WWTP, 2700GPM TSS settling system, and East and West Sedimentation Ponds are discussed in Section 3.3 and Section 3.4. The water quality monitored at non-contact water diversion ditch outlets and in the receiving environment is described in Section 3.5 to Section 3.7. Sediment samples are collected annually at stations IDZ-E-SED and IDZ-W-SED and are discussed in Section 3.7 when they are reported. Sediment samples were last collected July 2025 and the analytical results were presented in Report #82.

3.3 East Catchment

The east catchment water quality and flow monitoring results for stations at the East WWTP, the East Sedimentation Pond, and the authorized discharge location (SP-E-OUT) are discussed in this section and are tabulated in Appendix B.

Results are presented for field measurements of influent quality for the East Sedimentation Pond and East WWTP influent and effluent quality collected October 26 – November 1 as well as analytical samples collected October 22 (station COMB-WWTP-E-IN as discussed in Report #87) and October 30 (stations SP-E-IN, WWTP-E-IN and WWTP-E-OUT). The East WWTP effluent sample (WWTP-E-OUT) collected October 30 met MDOs for field and analytical parameters. (Appendix B, Table B-1 and Table B-3).

East WWTP effluent was directed to the East Sedimentation Pond and there was no discharge from the pond to Howe Sound from the SP-E-OUT authorized discharge location from October 26 – November 1 (Section 1.2; Table B-4 of Appendix B). Therefore, water quality samples and field measurements were not collected at this station during the monitoring period.

3.4 West Catchment

The west catchment water quality monitoring results for stations at the West Sedimentation Pond, the 2700GPM TSS settling system, and the authorized discharge location (SP-W-OUT) are discussed in this section and are tabulated in Appendix C. Operation of the West WWTP is suspended (refer to Section 1.1) and monitoring results are therefore not available for the stations at this facility.

As discussed in Section 1.2, a total of 16,710 m³ of clarified sedimentation pond effluent from the 2700GPM TSS Settling System was intermittently discharged to Howe Sound from SP-W-OUT each day during the monitoring period (October 26 – November 1).

Field measurements of influent and effluent quality for the West Sedimentation Pond and the 2700GPM TSS settling system collected October 26 – November 1 and analytical samples collected October 27 (stations SP-W-IN, SP-W-OUT and 2700GPM-IN) were available at the time of reporting. The October 27 effluent sample collected at SP-W-OUT met PE-111578 discharge limits and WQGs (Appendix C, Table C-2, Table C-3 and Table C-4).

3.5 Non-Contact Water Diversion Ditch Outlets

Analytical results for non-contact water diversion ditch outlet stations were not available at the time of reporting.

3.6 Freshwater and Estuarine Water Receiving Environment

Analytical results for freshwater and estuarine water receiving environment stations were not available at the time of reporting.

3.7 Marine Water Receiving Environment

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 October 20 (stations IDZ-E1, IDZ-E2 and WQR1) (as discussed in Report #87). The analytical results, field parameters, and WQGs are summarized in Appendix D.

Parameter concentrations met WQGs except dissolved oxygen, total boron and total copper in some samples (Appendix D; Tables D-1 and Table D-2). In all samples collected at 2 m below the surface and at 2 m above the seafloor on October 20 (stations IDZ-E1, IDZ-E2 and WQR1), dissolved oxygen ranged from 5.27 to 7.37 mg/L and was below the lower limit of the WQG (8 mg/L). Total boron was also above the WQG (1.2 mg/L) in all samples collected October 20 and ranged from 1.43 to 3.72 mg/L. Total copper was above the long-term WQG (0.002 mg/L) in samples collected at IDZ-E2 at 0.5 and 2 m below the surface (0.00256 and 0.00224 mg/L, respectively).

Low concentrations of dissolved oxygen and elevated concentrations of total boron are indicative of influence from the deeper saline waters in the northern basin of Howe Sound and are a natural condition of marine water at the WDA monitoring stations. The dissolved oxygen, total boron and total copper 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.

3.8 Quality Control

This section presents the results of the quality control (QC) evaluation for the PE-111578 weekly report (Table 4). 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 4. Any items flagged for follow-up are carried forward to future reports until they are closed.

Table 4:
Weekly Report QC Evaluations and Ongoing Items

QC Procedure	Observation	Investigation/Resolution
Reporting Period (October 26 – November 1, Report #88)		
Authorized Works and Monitoring Program Evaluation	The authorized works and monitoring stations have not been established as described in PE-111578.	The PE-111578 authorized works for water management have been constructed, except for some of the conveyance ditches, which require completion of site grading prior to installation. Sumps, pumps and hoses are used for temporary conveyance until the ditches are completed. The lower reach of East Creek has been temporarily diverted through the OUT- 11 outfall since September 17, 2024, to facilitate replacement of the East Creek outfall culvert (OUT-12). The culvert at OUT-01 is being replaced and diversion water flows to OUT-01 have been redirected to OUT-02. All monitoring stations have been established except at SP-E-IN-1, SP-E-IN-2, SP-W-IN-1 and SP-W-IN-2 where substitute stations are established in lieu of those listed in PE-111578 (refer to Section 2). This item remains open.
Report #88: Pending Data	Analytical results not reported.	Field parameters and analytical results for non-contact water diversion ditch outlet and receiving environment samples collected October 26, 30 and November 1, field parameters and analytical results for contact and treated water samples collected October 30, 31 and November 1, total mercury and methylmercury results for contact and treated water samples collected October 30 as well as dioxins and furans results for contact and treated water samples collected October 27 are pending and will be included in future weekly reports when available. This item remains open.
Ongoing Items from Previous Weekly Reports		
Report #62: WWTP Performance Evaluation	Total copper above the MDO.	The treatment effectiveness for total copper has been inconsistent from January to October. Several modifications to the treatment process have been implemented in 2025 to improve T-Cu removal. The HSMT metal removal media was replaced on June 5. A modification to how the treatment reagents are added was implemented late July. BCER has been notified that additional filtration will be implemented to remove fine particles at the outlet of the treatment plant. High-frequency monitoring at multiple treatment stages is on-going to the evaluate the effectiveness of these changes. The total copper concentration in the WWTP-E-OUT sample collected October 17 (0.00474 mg/L) was above the MDO. Samples collected on September 27, as well as October 4, 22 and 30 met the MDO for copper. The WWTP treatment performance for total copper continues to be monitored. This item remains open.
Report #84: Pending Data	Analytical results not reported.	Total mercury and methylmercury results for non-contact water diversion ditch outlet samples collected October 3, acute toxicity results for West Sedimentation Pond effluent (SP-W-OUT) collected September 29 and chronic toxicity results for marine receiving environment samples collected September 30 are pending and will be included in future weekly reports when available. This item remains open.
Report #85: Pending Data	Analytical results not reported.	Total mercury and methylmercury results for freshwater and estuarine water receiving environment samples collected October 5 and the contact water sample collected October 11, chronic toxicity results for marine water receiving environment samples collected October 9 and 10, and dioxins and furans results for contact water and treated water samples collected October 10 are pending and will be included in future weekly reports when available. This item remains open.
Report #86: WWTP Performance Evaluation	Hexavalent chromium above the MDO.	The total hexavalent chromium concentration was 0.00176 mg/L in the sample collected at WWTP-E-OUT on October 17 and was above the MDO (0.0015 mg/L). The WWTP treatment performance for total hexavalent chromium continues to be monitored. This item remains open.
Report #86: Potential Project Influence	Dissolved copper above the WQG and baseline ranges.	Dissolved copper measured in the non-contact water diversion ditch outlet (OUT-01) on September 29 (0.00122 mg/L) was 6.1 times greater than the long-term WQG, 2.5 times greater than the short-term WQG and 1.3 times greater than the maximum concentration observed in the pre-construction baseline monitoring of diversion ditch water quality (0.00095 mg/L). Further monitoring is required to characterize water quality in the non-contact water diversion ditch station OUT-01 and evaluate if there is a potential for project influenced exceedances of WQGs. Non-contact diversion ditch water at OUT-01 has been temporarily redirected to OUT-02 since October 12, 2025, to facilitate the reconstruction of the outfall at OUT- 01; therefore, samples collected at OUT-02 represents a mix of non-contact water from OUT-01 and OUT-02 while the diversion is in place. Dissolved copper measured at OUT-02 on October 14 (0.00050 mg/L) was within the range of values observed during the pre-construction baseline monitoring of diversion ditch water quality. This item remains open.
Report #86: Pending Data	Analytical results not reported.	Field parameters and analytical results for receiving environment samples collected October 12, 14, 15 and 17, total mercury and methylmercury results for non-contact water diversion ditch outlet and contact water samples collected October 14 and 17, respectively, and dioxins and furans results for contact water and treated water samples collected October 15 are pending and will be included in future weekly reports when available. This item remains open.
Report #87: Pending Data	Analytical results not reported.	Field parameters and analytical results for receiving environment samples collected October 24 and 25, total mercury and methylmercury results for marine receiving environment and contact water samples collected October 20 and 22, respectively, as well as dioxins and furans results for contact water, treated water and marine receiving environment samples collected October 20 are pending and 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.

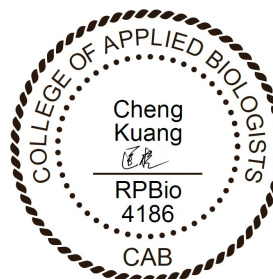
4. Closure

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.

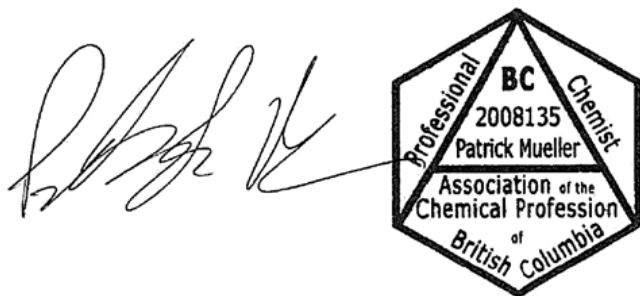
Regards,

LORAX ENVIRONMENTAL SERVICES LTD.

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



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



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

Appendix A: Figures and Site Images



World Imagery: District of Squamish. Additional imagery provided by McDermott International captured November 3rd, 2025.

LEGEND

- Freshwater Monitoring Station
- Marine Water Monitoring Station
- Clean Water Discharge Station
- Sedimentation Pond Monitoring Stations (Water Quality)
- Wastewater Treatment Plant (WWTP)
- Certified Project Area
- Watercourse
- East Creek Temporary Diversion
- Non-Contact Ditch
- Culvert / Outfall / Pipeline
- Bathymetry Contour (Major: 50m)
- Bathymetry Contour (Minor: 10m)

DATE SAVED: Nov 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
Scale: 1:6,000



PROJECT: Woodfibre LNG Project Construction Phase
TITLE: Site Layout and Water Quality Monitoring Stations for PE-111578 (November 1, 2025)
PROJECT #: A633-9
FIGURE: 1

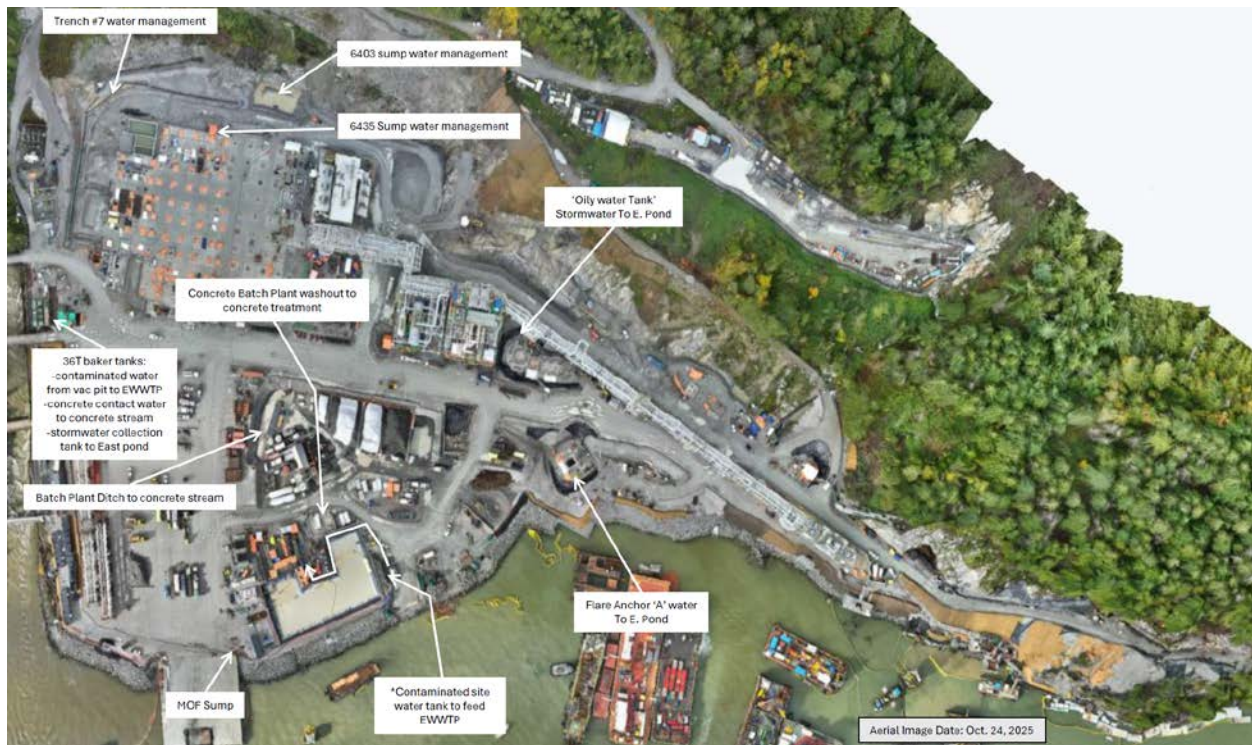


Figure 2: East Catchment contact water management facilities (October 26 – November 1).



Figure 3: West Catchment contact water management facilities (October 26 – November 1).



Figure 4: Aerial view of the East Sedimentation Pond (October 30, 2025). The East WWTP is located on the left side of the pond.



Figure 5: Aerial view of the West Sedimentation Pond (October 30, 2025).

Appendix B:
East Catchment Monitoring Results

Table B-1:
East WWTP Influent and Effluent Analytical Results Received at the Time of Reporting.

Parameter	Unit	Lowest Applicable Guideline ¹		PE-111578 Discharge Limit	Station COMB-WWTP-E-IN	Station WWTP-E-IN	Station WWTP-E-OUT
					Influent	Influent	Effluent
					COMB-WWTP-E-IN	WWTP-E-IN	WWTP-E-OUT
					VA25C8169-003	VA25C9088-002	VA25C9088-003
		Long Term	Short Term		2025-10-22 11:15	2025-10-30 9:55	2025-10-30 16:08
General Parameters							
pH - Field	pH units	- ²	-	5.5 - 9.0	-	7.0	6.9
Specific Conductivity - Field	µS/cm	-	-	-	-	757	816
Temperature - Field	°C	-	-	-	-	9.8	10.6
Salinity - Field	ppt	-	-	-	-	0.37	0.40
Turbidity - Field	NTU	-	-	-	25.5	21.57	1.66
TSS	mg/L	-	-	25 or 75 ⁶	10.5	7.6	<3.0
Dissolved Oxygen - Field	mg/L	≥8	-	-	-	10.81	11.21
Total Hardness	mg/L	-	-	-	78.3	93.6	18.6
Dissolved Hardness	mg/L	-	-	-	81.4	91.9	18.5
Anions and Nutrients							
Sulphate	mg/L	-	-	-	-	243	262
Chloride	mg/L	-	-	-	-	10.4	11.8
Fluoride	mg/L	-	1.5	-	-	0.134	0.144
Ammonia (N-NH ₃)	mg/L	20-29 ³	131-191 ³	-	-	<0.0050	<0.0050
Nitrite (N-NO ₂)	mg/L	-	-	-	-	<0.0050	<0.0050
Nitrate (N-NO ₃)	mg/L	3.7	339	-	-	1.02	0.946
Total Organic Carbon (TOC)	mg/L	-	-	-	-	3.13	1.97
Dissolved Organic Carbon (DOC)	mg/L	-	-	-	-	2.75	2.02
Total Metals							
Aluminum, total (T-Al)	mg/L	-	-	-	0.823	1.47	0.0498
Antimony, total (T-Sb)	mg/L	-	0.27 ⁴	-	0.00104	0.00128	0.00123
Arsenic, total (T-As)	mg/L	0.0125	-	-	0.00072	0.00216	0.00094
Barium, total (T-Ba)	mg/L	-	-	-	0.024	0.0239	0.00133
Beryllium, total (T-Be)	mg/L	0.1	-	-	<0.000040	0.000021	<0.000020
Boron, total (T-B)	mg/L	1.2	-	-	0.042	0.058	0.041
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	<0.0000450	<0.0000300	<0.0000150
Chromium, total (T-Cr)	mg/L	-	-	-	0.0104	0.00141	0.00072
Cobalt, total (T-Co)	mg/L	-	-	-	0.00038	0.00041	<0.00010
Copper, total (T-Cu)	mg/L	- ²	- ²	0.0043	0.00353	0.00322	0.00268
Iron, total (T-Fe)	mg/L	-	-	-	2.11	1.03	<0.010
Lead, total (T-Pb)	mg/L	- ²	- ²	0.0035	0.000495	0.000796	0.000108
Manganese, total (T-Mn)	mg/L	-	-	-	0.0483	0.0404	0.00212
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.0627	0.0297	0.0288
Nickel, total (T-Ni)	mg/L	0.0083	-	-	0.00185	0.00073	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	-	0.000452	0.000134	0.000136
Silver, total (T-Ag)	mg/L	0.0005	0.0037	-	<0.000020	<0.000010	<0.000010
Thallium, total (T-Tl)	mg/L	-	-	-	<0.000020	<0.000010	<0.000010
Uranium, total (T-U)	mg/L	-	-	-	0.00404	0.0171	0.00545
Vanadium, total (T-V)	mg/L	- ²	-	0.0081	0.00375	0.00427	0.00206
Zinc, total (T-Zn)	mg/L	- ²	- ²	0.0133	0.0152	0.0078	0.0068
Hexavalent Chromium, total	mg/L	0.0015	-	-	0.00072	0.00084	0.00077
Dissolved Metals							
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	<0.0000450	<0.0000200	<0.0000100
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.00303	0.00192	0.00205
Iron, dissolved (D-Fe)	mg/L	-	-	-	1.51	0.014	<0.010
Lead, dissolved (D-Pb)	mg/L	-	-	-	0.000342	<0.000050	0.000062
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.0393	0.00975	0.00183
Nickel, dissolved (D-Ni)	mg/L	-	-	-	0.00163	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.265	0.156	0.0523
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00238	0.00266	0.00207
Zinc, dissolved (D-Zn)	mg/L	-	-	-	0.011	0.0032	0.0046
Polycyclic Aromatic Hydrocarbons (PAHs)							
Acenaphthene	mg/L	0.006	-	-	-	-	-
Acridine	mg/L	-	-	-	-	-	-
Anthracene	mg/L	-	-	-	-	-	-
Benz(a)anthracene	mg/L	-	-	-	-	-	-
Benzo(a)pyrene	mg/L	0.00001	-	-	-	-	-
Chrysene	mg/L	0.0001	-	-	-	-	-
Fluoranthene	mg/L	-	-	-	-	-	-
Fluorene	mg/L	0.012	-	-	-	-	-
1-methylnaphthalene	mg/L	0.001	-	-	-	-	-
2-methylnaphthalene	mg/L	0.001	-	-	-	-	-
Naphthalene	mg/L	0.001	-	-	-	-	-
Phenanthrene	mg/L	-	-	-	-	-	-
Pyrene	mg/L	-	-	-	-	-	-
Quinoline	mg/L	-	-	-	-	-	-
Volatile Organic Compounds (VOCs)							
Benzene	mg/L	0.11	-	-	-	-	-
Ethylbenzene	mg/L	0.25	-	-	-	-	-
Methyl-tert-butyl-ether	mg/L	5	0.44	-	-	-	-
Styrene	mg/L	-	-	-	-	-	-
Toluene	mg/L	0.215	-	-	-	-	-
Total Xylenes	mg/L	-	-	-	-	-	-
Chlorobenzene	mg/L	0.025	-	-	-	-	-
1,2-Dichlorobenzene	mg/L	0.042	-	-	-	-	-

Notes:
East catchment influents and East WWTP effluent were not discharged to Howe Sound. Results above screening values are only highlighted for comparative purposes.
Non-detect results are screened using the detection limit value.
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** exceed the PE-111578 East Sedimentation Pond Discharge Limit.
The East Catchment did not discharge during the monitoring period (October 26 – November 1).
¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs for marine waters.
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 and for one day following the end of Wet Conditions.

Table B-2:
East Sedimentation Pond Influent and Effluent Analytical Results Received at the Time of Reporting.

Parameter	Unit	Lowest Applicable Guideline ¹		PE-111578 Discharge Limit	Station SP-E-IN
					Influent
					SP-E-IN
					VA25C9088-001
					2025-10-30 9:39
General Parameters					
pH - Field	pH units	- ²	-	5.5 - 9.0	7.0
Specific Conductivity - Field	µS/cm	-	-	-	710
Temperature - Field	°C	-	-	-	9.4
Salinity - Field	ppt	-	-	-	0.35
Turbidity - Field	NTU	-	-	-	7.79
TSS	mg/L	-	-	25 or 75 ⁶	6.2
Dissolved Oxygen - Field	mg/L	≥8	-	-	11.38
Total Hardness	mg/L	-	-	-	53.8
Dissolved Hardness	mg/L	-	-	-	54.8
Anions and Nutrients					
Sulphate	mg/L	-	-	-	205
Chloride	mg/L	-	-	-	12.9
Fluoride	mg/L	-	1.5	-	0.113
Ammonia (N-NH ₃)	mg/L	29 ³	191 ³	-	<0.0050
Nitrite (N-NO ₂)	mg/L	-	-	-	0.0031
Nitrate (N-NO ₃)	mg/L	3.7	339	-	0.736
Total Organic Carbon (TOC)	mg/L	-	-	-	2.14
Dissolved Organic Carbon (DOC)	mg/L	-	-	-	1.86
Total Metals					
Aluminum, total (T-Al)	mg/L	-	-	-	0.631
Antimony, total (T-Sb)	mg/L	-	0.27 ⁴	-	0.00099
Arsenic, total (T-As)	mg/L	0.0125	-	-	0.00129
Barium, total (T-Ba)	mg/L	-	-	-	0.011
Beryllium, total (T-Be)	mg/L	0.1	-	-	<0.000020
Boron, total (T-B)	mg/L	1.2	-	-	0.05
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	0.000026
Chromium, total (T-Cr)	mg/L	-	-	-	0.00099
Cobalt, total (T-Co)	mg/L	-	-	-	0.00019
Copper, total (T-Cu)	mg/L	- ²	- ²	0.0043	0.00167
Iron, total (T-Fe)	mg/L	-	-	-	0.399
Lead, total (T-Pb)	mg/L	- ²	- ²	0.0035	0.000382
Manganese, total (T-Mn)	mg/L	-	-	-	0.0193
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.0235
Nickel, total (T-Ni)	mg/L	0.0083	-	-	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	-	0.00014
Silver, total (T-Ag)	mg/L	0.0005	0.0037	-	<0.000010
Thallium, total (T-Tl)	mg/L	-	-	-	<0.000010
Uranium, total (T-U)	mg/L	-	-	-	0.0108
Vanadium, total (T-V)	mg/L	- ²	-	0.0081	0.00236
Zinc, total (T-Zn)	mg/L	- ²	- ²	0.0133	0.0039
Hexavalent Chromium, total	mg/L	0.0015	-	-	0.00065
Dissolved Metals					
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	0.0000212
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.00101
Iron, dissolved (D-Fe)	mg/L	-	-	-	<0.010
Lead, dissolved (D-Pb)	mg/L	-	-	-	<0.000050
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.0089
Nickel, dissolved (D-Ni)	mg/L	-	-	-	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.0981
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00168
Zinc, dissolved (D-Zn)	mg/L	-	-	-	0.0014
Polycyclic Aromatic Hydrocarbons (PAHs)					
Acenaphthene	mg/L	0.006	-	-	-
Acridine	mg/L	-	-	-	-
Anthracene	mg/L	-	-	-	-
Benz(a)anthracene	mg/L	-	-	-	-
Benzo(a)pyrene	mg/L	0.00001	-	-	-
Chrysene	mg/L	0.0001	-	-	-
Fluoranthene	mg/L	-	-	-	-
Fluorene	mg/L	0.012	-	-	-
1-methylnaphthalene	mg/L	0.001	-	-	-
2-methylnaphthalene	mg/L	0.001	-	-	-
Naphthalene	mg/L	0.001	-	-	-
Phenanthrene	mg/L	-	-	-	-
Pyrene	mg/L	-	-	-	-
Quinoline	mg/L	-	-	-	-
Volatile Organic Compounds (VOCs)					
Benzene	mg/L	0.11	-	-	-
Ethylbenzene	mg/L	0.25	-	-	-
Methyl-tert-butyl-ether	mg/L	5	0.44	-	-
Styrene	mg/L	-	-	-	-
Toluene	mg/L	0.215	-	-	-
Total Xylenes	mg/L	-	-	-	-
Chlorobenzene	mg/L	0.025	-	-	-
1,2-Dichlorobenzene	mg/L	0.042	-	-	-

Notes:
East catchment influents and effluents were not discharged to Howe Sound. Results above screening values are only highlighted for comparative purposes.
Non-detect results are screened using the detection limit value.
Results **underlined in bold italics** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.
Results in **orange text** exceeded the PE-111578 East Sedimentation Pond Discharge Limit.
The East Catchment did not discharge during the monitoring period (October 26 – November 1).
¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs for marine waters.
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 and for one day following the end of Wet Conditions.

Table B-3:
East Catchment Field Measurements Collected During the Monitoring Period (October 26 – November 1).

Parameter			Temp.	Dissolved Oxygen (DO)	Salinity	Turbidity	Estimated TSS ³	pH	Specific Conductivity	Visibility of Sheen
Unit			°C	mg/L	ppt	NTU	mg/L	s.u.	µS/cm	
PE-111578 Discharge Limit			-	-	-	-	25 or 75 ⁶	5.5 - 9.0	-	-
Lowest Applicable Guideline ¹			-	≥8	-	-	- ²	- ²	-	-
Station ID	Water Type	Date								
Influent ⁴										
SP-E-IN	Influent	2025-10-26 13:39	8.9	11.55	0.29	585.9	440.0	7.2	427	No
SP-E-IN	Influent	2025-10-27 14:41	11.9	10.25	0.59	12.04	12.0	6.7	174	No
SP-E-IN	Influent	2025-10-28 10:42	9.4	10.89	0.74	33.24	27.8	9.4	1475	No
SP-E-IN	Influent	2025-10-28 13:30	10.3	9.34	0.42	425.36	320.2	8.7	854	No
SP-E-IN	Influent	2025-10-29 11:30	10.1	10.93	0.50	15.08	14.2	6.9	11	No
SP-E-IN	Influent	2025-10-30 9:39	9.4	11.38	0.35	7.79	8.8	7.0	710	No
SP-E-IN	Influent	2025-10-31 16:34	9.2	10.93	0.16	441.08	332.0	7.8	335	No
SP-E-IN	Influent	2025-11-01 11:06	9.8	10.91	0.32	377.24	284.3	6.5	646	No
WWTP-E-IN	Influent	2025-10-26 9:38	9.9	10.78	0.60	152.80	117.0	7.4	1190	No
WWTP-E-IN	Influent	2025-10-27 14:29	11.5	10.21	0.46	52.30	42.0	7.0	926	No
WWTP-E-IN	Influent	2025-10-28 10:48	9.2	10.76	0.64	35.81	29.7	7.7	1268	No
WWTP-E-IN	Influent	2025-10-29 15:30	10.6	11.16	0.39	63.79	50.6	6.8	785	No
WWTP-E-IN	Influent	2025-10-30 9:55	9.8	10.81	0.37	21.57	19.1	7.0	757	No
WWTP-E-IN	Influent	2025-10-31 16:19	8.9	11.57	0.24	744.54	558.3	7.3	490	No
WWTP-E-IN	Influent	2025-11-01 10:56	9.7	10.88	0.30	201.30	153.1	6.8	604	No
Effluent ⁵										
WWTP-E-OUT	Effluent	2025-10-26 9:48	10.1	10.4	1.15	2.25	4.7	6.1	2238	No
WWTP-E-OUT	Effluent	2025-10-27 14:37	10.2	11.5	1.10	2.59	4.9	6.4	2139	No
WWTP-E-OUT	Effluent	2025-10-28 10:53	9.2	11.27	0.86	3.40	5.5	6.6	1702	No
WWTP-E-OUT	Effluent	2025-10-29 15:26	9.5	11.76	0.81	1.17	3.9	6.9	1595	No
WWTP-E-OUT	Effluent	2025-10-30 16:08	10.6	11.21	0.40	1.66	4.2	6.9	816	No
WWTP-E-OUT	Effluent	2025-10-31 16:16	9.5	10.42	0.54	0.82	3.6	6.8	1074	No
WWTP-E-OUT	Effluent	2025-11-01 11:01	9.3	10.69	0.79	1.63	4.2	5.8	1552	No

Notes:

The east catchment did not discharge to Howe Sound during the monitoring period (October 26 – November 1). Results above screening values are highlighted for comparative purposes.

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** exceed the PE-111578 East Sedimentation Pond Discharge Limit.

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

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

³ TSS concentration is estimated from field turbidity measurements using a site-specific relationship TSS = 0.7458 * [turbidity as NTU] + 3.

⁴ Daily field measurements for station SP-E-IN were collected from cell 1 of the East Sedimentation Pond.

⁵ There was no discharge at the authorized discharge location (SP-E-OUT) during the monitoring period (October 26 – November 1), therefore daily field measurements for SP-E-OUT were not collected on those days.

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

Table B-4:
East Catchment Daily Discharge Volumes for the Monitoring Period (October 26 – November 1).

	East Sedimentation Pond Effluent	Transfer to West Sedimentation Pond	East WWTP Treated Effluent (Station WWTP-E-OUT) ²	Discharge to Howe Sound (Station SP-E-OUT)
Unit	m ³	m ³	m ³	m ³
PE-111578 Discharge Limit	-	-	1100	- ¹
Date				
2025-10-26	0	1,043	286	0
2025-10-27	0	0	271	0
2025-10-28	0	0	377	0
2025-10-29	0	0	374	0
2025-10-30	0	490	338	0
2025-10-31	0	0	153	0
2025-11-01	0	0	309	0

Notes:

Results in **orange text** exceed the PE-111578 East Sedimentation Pond Discharge Limit.

¹ As noted in PE-111578 Condition 2.1.4, the annual average authorized discharge rate from the East Sedimentation Pond to Howe Sound was set to 650 m³/day for the purpose of calculating discharge fees as required by the Permit and Approval Fees and Charges Regulation. Therefore, the annual average authorized discharge rate is not evaluated as a discharge limit.

² East WWTP treated effluent was recirculated to the East Sedimentation Pond.

Appendix C:
West Catchment Monitoring Results

Table C-1:
West 2700GPM TSS Settling System Influent and Effluent Analytical Results Received at the Time of Reporting.

Parameter	Unit	Lowest Applicable Guideline ¹		PE-111578 Discharge Limit	Station 2700GPM-IN
					Influent
					W2700-IN
		Long Term	Short Term		VA25C8641-002
					2025-10-27 10:31
General Parameters					
pH - Field	pH units	- ²	-	5.5 - 9.0	7.9
Specific Conductivity - Field	µS/cm	-	-	-	624
Temperature - Field	°C	-	-	-	9.9
Salinity - Field	ppt	-	-	-	0.3
Turbidity - Field	NTU	-	-	-	67.4
TSS	mg/L	-	-	25 or 75 ⁶	53.6
Dissolved Oxygen - Field	mg/L	≥8	-	-	11.09
Total Hardness	mg/L	-	-	-	95.7
Dissolved Hardness	mg/L	-	-	-	84.9
Anions and Nutrients					
Sulphate	mg/L	-	-	-	188
Chloride	mg/L	-	-	-	23
Fluoride	mg/L	-	1.5	-	0.072
Ammonia (N-NH ₃)	mg/L	4.7 ³	31 ³	-	<0.0050
Nitrite (N-NO ₂)	mg/L	-	-	-	0.004
Nitrate (N-NO ₃)	mg/L	3.7	339	-	1.17
Total Organic Carbon (TOC)	mg/L	-	-	-	4.86
Dissolved Organic Carbon (DOC)	mg/L	-	-	-	3.11
Total Metals					
Aluminum, total (T-Al)	mg/L	-	-	-	4.77
Antimony, total (T-Sb)	mg/L	-	0.27 ⁴	-	0.00095
Arsenic, total (T-As)	mg/L	0.0125	-	-	0.00175
Barium, total (T-Ba)	mg/L	-	-	-	0.0548
Beryllium, total (T-Be)	mg/L	0.1	-	-	0.000079
Boron, total (T-B)	mg/L	1.2	-	-	0.04
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	0.0000483
Chromium, total (T-Cr)	mg/L	-	-	-	0.00189
Cobalt, total (T-Co)	mg/L	-	-	-	0.00119
Copper, total (T-Cu)	mg/L	- ²	- ²	0.0043	0.00602
Iron, total (T-Fe)	mg/L	-	-	-	3.43
Lead, total (T-Pb)	mg/L	- ²	- ²	0.0035	0.00317
Manganese, total (T-Mn)	mg/L	-	-	-	0.125
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.0199
Nickel, total (T-Ni)	mg/L	0.0083	-	-	0.00116
Selenium, total (T-Se)	mg/L	0.002	-	-	0.000163
Silver, total (T-Ag)	mg/L	0.0005	0.0037	-	0.000013
Thallium, total (T-Tl)	mg/L	-	-	-	0.000026
Uranium, total (T-U)	mg/L	-	-	-	0.00974
Vanadium, total (T-V)	mg/L	- ²	-	0.0081	0.00724
Zinc, total (T-Zn)	mg/L	- ²	- ²	0.0133	0.020
Hexavalent Chromium, total	mg/L	0.0015	-	-	0.00051
Dissolved Metals					
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	<0.0000200
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.00139
Iron, dissolved (D-Fe)	mg/L	-	-	-	<0.010
Lead, dissolved (D-Pb)	mg/L	-	-	-	<0.000050
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.015
Nickel, dissolved (D-Ni)	mg/L	-	-	-	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.147
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00167
Zinc, dissolved (D-Zn)	mg/L	-	-	-	0.0012
Polycyclic Aromatic Hydrocarbons (PAHs)					
Acenaphthene	mg/L	0.006	-	-	<0.000010
Acridine	mg/L	-	-	-	<0.000010
Anthracene	mg/L	-	-	-	<0.000010
Benz(a)anthracene	mg/L	-	-	-	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	-	<0.0000050
Chrysene	mg/L	0.0001	-	-	<0.000010
Fluoranthene	mg/L	-	-	-	<0.000020
Fluorene	mg/L	0.012	-	-	<0.000010
1-methylnaphthalene	mg/L	0.001	-	-	<0.000010
2-methylnaphthalene	mg/L	0.001	-	-	<0.000010
Naphthalene	mg/L	0.001	-	-	<0.000050
Phenanthrene	mg/L	-	-	-	<0.000020
Pyrene	mg/L	-	-	-	0.000018
Quinoline	mg/L	-	-	-	<0.000050
Volatile Organic Compounds (VOCs)					
Benzene	mg/L	0.11	-	-	<0.00050
Ethylbenzene	mg/L	0.25	-	-	<0.00050
Methyl-tert-butyl-ether	mg/L	5	0.44	-	<0.00050
Styrene	mg/L	-	-	-	<0.00050
Toluene	mg/L	0.215	-	-	<0.00040
Total Xylenes	mg/L	-	-	-	<0.00050
Chlorobenzene	mg/L	0.025	-	-	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	-	-	<0.00050

Notes:
West catchment influents were not discharged to Howe Sound. Influent results above screening values are only highlighted for comparative purposes.
Non-detect results are screened using the detection limit value.
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** exceed the PE-111578 West Sedimentation Pond Discharge Limit.
The West Catchment intermittently discharged each day during the monitoring period (October 26 – November 1).
¹ The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs for marine waters.
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 and for one day following the end of Wet Conditions.

Table C-2:
West Sedimentation Pond Influent and Effluent Analytical Results Received at the Time of Reporting.

Parameter	Unit	Lowest Applicable Guideline ¹		PE-111578 Discharge Limit	Station SP-W-IN	Station SP-W-OUT
					Influent	Effluent
					SP-W-IN	SP-W-OUT
		VA25C8641-001	VA25C8641-003			
		Long Term	Short Term		2025-10-27 9:13	2025-10-27 11:46
General Parameters						
pH - Field	pH units	- ²	-	5.5 - 9.0	7.2	7.7
Specific Conductivity - Field	µS/cm	-	-	-	724	619
Temperature - Field	°C	-	-	-	9.7	10.6
Salinity - Field	ppt	-	-	-	0.36	0.3
Turbidity - Field	NTU	-	-	-	64.13	2.15
TSS	mg/L	-	-	25 or 75 ⁶	47.4	<3.0
Dissolved Oxygen - Field	mg/L	≥8	-	-	10.54	11.14
Total Hardness	mg/L	-	-	-	105	85.1
Dissolved Hardness	mg/L	-	-	-	93.2	85.9
Anions and Nutrients						
Sulphate	mg/L	-	-	-	230	182
Chloride	mg/L	-	-	-	22.7	24.2
Fluoride	mg/L	-	1.5	-	<0.100	0.067
Ammonia (N-NH ₃)	mg/L	5-18 ³	33-121 ³	-	<0.0050	<0.0050
Nitrite (N-NO ₂)	mg/L	-	-	-	0.0072	0.0044
Nitrate (N-NO ₃)	mg/L	3.7	339	-	1.37	1.06
Total Organic Carbon (TOC)	mg/L	-	-	-	4.23	2.96
Dissolved Organic Carbon (DOC)	mg/L	-	-	-	3.20	3.19
Total Metals						
Aluminum, total (T-Al)	mg/L	-	-	-	3.75	0.0909
Antimony, total (T-Sb)	mg/L	-	0.27 ⁴	-	0.00105	0.00089
Arsenic, total (T-As)	mg/L	0.0125	-	-	0.00185	0.00097
Barium, total (T-Ba)	mg/L	-	-	-	0.0468	0.00448
Beryllium, total (T-Be)	mg/L	0.1	-	-	0.000061	<0.000020
Boron, total (T-B)	mg/L	1.2	-	-	0.049	0.019
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	0.0000447	<0.0000100
Chromium, total (T-Cr)	mg/L	-	-	-	0.00186	<0.00050
Cobalt, total (T-Co)	mg/L	-	-	-	0.00106	<0.00010
Copper, total (T-Cu)	mg/L	- ²	- ²	0.0043	0.00478	0.00199
Iron, total (T-Fe)	mg/L	-	-	-	2.93	0.034
Lead, total (T-Pb)	mg/L	- ²	- ²	0.0035	0.0024	0.000069
Manganese, total (T-Mn)	mg/L	-	-	-	0.111	0.00232
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.0246	0.018
Nickel, total (T-Ni)	mg/L	0.0083	-	-	0.00111	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	-	0.000156	0.000108
Silver, total (T-Ag)	mg/L	0.0005	0.0037	-	0.000011	<0.000010
Thallium, total (T-Tl)	mg/L	-	-	-	0.000022	0.000015
Uranium, total (T-U)	mg/L	-	-	-	0.0141	0.0068
Vanadium, total (T-V)	mg/L	- ²	-	0.0081	0.00663	0.00106
Zinc, total (T-Zn)	mg/L	- ²	- ²	0.0133	0.0164	<0.0030
Hexavalent Chromium, total	mg/L	0.0015	-	-	0.00063	<0.00050
Dissolved Metals						
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	<0.0000200	<0.0000100
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.00156	0.00102
Iron, dissolved (D-Fe)	mg/L	-	-	-	<0.010	0.014
Lead, dissolved (D-Pb)	mg/L	-	-	-	<0.000050	<0.000050
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.0142	0.00142
Nickel, dissolved (D-Ni)	mg/L	-	-	-	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.172	0.135
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00203	0.00115
Zinc, dissolved (D-Zn)	mg/L	-	-	-	0.0012	<0.0010
Polycyclic Aromatic Hydrocarbons (PAHs)						
Acenaphthene	mg/L	0.006	-	-	-	<0.000010
Acridine	mg/L	-	-	-	-	<0.000010
Anthracene	mg/L	-	-	-	-	<0.000010
Benz(a)anthracene	mg/L	-	-	-	-	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	-	-	<0.0000050
Chrysene	mg/L	0.0001	-	-	-	<0.000010
Fluoranthene	mg/L	-	-	-	-	<0.000010
Fluorene	mg/L	0.012	-	-	-	<0.000010
1-methylnaphthalene	mg/L	0.001	-	-	-	<0.000010
2-methylnaphthalene	mg/L	0.001	-	-	-	<0.000010
Naphthalene	mg/L	0.001	-	-	-	<0.000050
Phenanthrene	mg/L	-	-	-	-	<0.000020
Pyrene	mg/L	-	-	-	-	<0.000010
Quinoline	mg/L	-	-	-	-	<0.000050
Volatile Organic Compounds (VOCs)						
Benzene	mg/L	0.11	-	-	-	<0.00050
Ethylbenzene	mg/L	0.25	-	-	-	<0.00050
Methyl-tert-butyl-ether	mg/L	5	0.44	-	-	<0.00050
Styrene	mg/L	-	-	-	-	<0.00050
Toluene	mg/L	0.215	-	-	-	<0.00040
Total Xylenes	mg/L	-	-	-	-	<0.00050
Chlorobenzene	mg/L	0.025	-	-	-	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	-	-	-	<0.00050

Notes:

West catchment influents were not discharged to Howe Sound. Influent results above screening values are only highlighted for comparative purposes.
Non-detect results are screened using the detection limit value.

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** exceed the PE-111578 West Sedimentation Pond Discharge Limit.

The West Catchment intermittently discharged each day during the monitoring period (October 26 – November 1).

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

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 and for one day following the end of Wet Conditions.

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

Parameter					Total Methylmercury	Total Mercury
Unit					µg/L	µg/L
Lowest Applicable Guideline ¹					0.0001 ²	0.0026-0.0087 ^{3,4}
Station	Water Type	Sample ID	Lab ID	Sampling Date		
Influent						
SP-W-IN	Influent	SP-W-IN	VA25C8641-001	2025-10-27	<u>0.000110</u>	<u>0.00737</u>
2700GPM-IN	Influent	W2700-IN	VA25C8641-002	2025-10-27	<u>0.000105</u>	<u>0.00910</u>
Effluent						
SP-W-OUT	Effluent	SP-W-OUT	VA25C8641-003	2025-10-27	0.000032	0.00092

Notes:
West catchment influents were not discharged to Howe Sound. Results above screening values are only highlighted for comparative purposes.
Non-detect results are screened using the detection limit value.

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.

Table C-4:
West Catchment Field Measurements Collected During the Monitoring Period (October 26 – November 1).

Parameter			Temperature	Dissolved Oxygen (DO)	Salinity	Turbidity	Estimated TSS ³	pH	Specific Conductivity	Visibility of Sheen
Unit			°C	mg/L	ppt	NTU	mg/L	s.u.	µS/cm	
PE-111578 Discharge Limit			-	-	-	-	25 or 75 ⁶	5.5 - 9.0	-	-
Lowest Applicable Guideline ¹			-	≥8	-	-	- ²	- ²	-	-
Station ID	Water Type	Date								
Influent ⁴										
SP-W-IN	Influent	2025-10-26 9:08	9.9	10.78	0.16	66.68	52.7	7.8	337	No
SP-W-IN	Influent	2025-10-27 9:13	9.7	10.54	0.36	64.13	50.8	7.2	724	No
SP-W-IN	Influent	2025-10-28 10:23	9.3	11.02	0.41	17.35	15.9	7.5	835	No
SP-W-IN	Influent	2025-10-29 12:03	9.8	11.25	0.18	79.97	62.6	6.7	365	No
SP-W-IN	Influent	2025-10-30 9:10	9.2	11.06	0.19	32.02	26.9	7.1	385	No
SP-W-IN	Influent	2025-10-31 12:01	9.2	10.85	0.15	363.20	273.9	8.2	321	No
SP-W-IN	Influent	2025-11-01 7:50	11.1	10.79	0.13	188.79	143.8	7.1	271	No
2700GPM-IN	Influent	2025-10-26 8:44	9.5	11.16	0.28	86.77	67.7	7.7	577	No
2700GPM-IN	Influent	2025-10-27 10:31	9.9	11.09	0.30	67.40	53.3	7.9	624	No
2700GPM-IN	Influent	2025-10-28 10:08	9.2	11.39	0.27	7.17	8.3	7.6	655	No
2700GPM-IN	Influent	2025-10-29 11:13	9.4	11.51	0.20	123.86	95.4	7.6	407	No
2700GPM-IN	Influent	2025-10-30 9:13	9.4	11.41	0.13	56.55	45.2	7.3	277	No
2700GPM-IN	Influent	2025-10-31 11:52	9.1	11.18	0.19	32.44	27.2	8.3	403	No
2700GPM-IN	Influent	2025-11-01 7:53	9.9	11.08	0.16	206.23	156.8	7.6	326	No
Effluent ⁵										
SP-W-OUT	Effluent	2025-10-26 9:18	9.5	10.66	0.29	3.72	5.8	7.6	603	No
SP-W-OUT	Effluent	2025-10-27 11:46	10.6	11.14	0.30	2.15	4.6	7.7	619	No
SP-W-OUT	Effluent	2025-10-27 11:47	10.2	11.17	0.30	2.40	4.8	7.8	619	No
SP-W-OUT	Effluent	2025-10-28 0:00	9.2	11.93	0.28	3.88	5.9	7.4	580	No
SP-W-OUT	Effluent	2025-10-28 11:40	9.2	11.46	0.28	2.31	4.7	7.4	576	No
SP-W-OUT	Effluent	2025-10-29 10:50	9.2	11.18	0.21	1.96	4.5	7.7	440	No
SP-W-OUT	Effluent	2025-10-30 9:19	9.6	11.44	0.16	2.70	5.0	7.5	323	No
SP-W-OUT	Effluent	2025-10-31 11:56	9.2	10.92	0.19	4.83	6.6	8.4	401	No
SP-W-OUT	Effluent	2025-10-31 17:04	9.3	10.00	0.17	6.46	7.8	5.9	360	No
SP-W-OUT	Effluent	2025-11-01 8:33	9.4	10.88	0.15	6.91	8.2	8.0	311	No
2700GPM-OUT	Effluent	2025-10-26 15:16	9.9	11.94	0.24	4.89	6.6	7.9	503	No
W2700T2-OUT	Effluent	2025-11-01 8:01	9.4	11.71	0.16	8.65	9.5	7.7	339	No
W2700T3-OUT	Effluent	2025-11-01 8:25	9.2	12.13	0.18	10.27	10.7	7.5	373	No
W2700T4-OUT	Effluent	2025-11-01 8:03	9.6	10.72	0.16	2.53	4.9	7.9	334	No
W2700T5-OUT	Effluent	2025-11-01 8:07	9.2	10.80	0.16	5.07	6.8	8.4	338	No

Notes:
West catchment influents for October 26 – November 1 were not discharged to Howe Sound. Results above screening values are only highlighted for comparative purposes.
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 exceed the PE-111578 West Sedimentation Pond Discharge Limit.

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

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

³ TSS concentration is estimated from field turbidity measurements using a site-specific relationship TSS = 0.7458 * [turbidity as NTU] + 3.

⁴ Daily field measurements for station SP-W-IN were collected from cell 1 of the West Sedimentation Pond.

⁵ As described in Section 1.1, when there is surplus water, West Sedimentation Pond clarified effluent from the individual 2700GPM trains is directed to SP-W-OUT for discharge. 2700GPM clarified effluent from Trains 1, 2, 3, 4 and 5 was intermittently discharged to Howe Sound at the authorized discharge location (SP-W-OUT) each day during the monitoring period (October 26 – November 1). On November 1, high flows into the combined discharge line at the SP-W-OUT sampling port caused unreliable field measurements at the time of monitoring; therefore, field measurements were collected at a temporary manifold that combined clarified effluent from Trains 4 and 5 prior to the SP-W-OUT sampling port. Trains 2, 3, 4, and 5 were directed to SP-W-OUT for discharge on November 1; therefore, additional field measurements collected at the outlet of each individual treatment train during the discharge period on November 1 are also included in Table C-4.

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 and for one day following the end of Wet Conditions.

Table C-5:
West Catchment Daily Discharge Volumes for the Monitoring Period (October 26 – November 1).

	West Sedimentation Pond Effluent	West TSS Settling System (2700GPM) Clarified Effluent (Station 2700GPM-OUT) ³	Water Reclaimed for Construction Purposes (Station 2700GPM-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	-	-	-	120	- ²
Date					
2025-10-26	0	4,734	0	0	3,454
2025-10-27	0	3,526	0	0	3,277
2025-10-28	0	2,649	0	0	1,611
2025-10-29	0	2,540	0	0	2,096
2025-10-30	0	1,321	0	0	736
2025-10-31	0	3,031	0	0	2,151
2025-11-01	0	3,877	0	0	3,386

Notes:

Results in orange text exceed 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 As noted in PE-111578 Condition 2.2.4, the annual average authorized discharge rate from the West Sedimentation Pond to Howe Sound was set to 310 m³/day for the purpose of calculating discharge fees as required by the Permit and Approval Fees and Charges Regulation. Therefore, the annual average authorized discharge rate is not evaluated as a discharge limit.

³ Clarified effluent from the 2700GPM TSS settling system is recirculated to the West Sedimentation Pond, discharged to Howe Sound or reclaimed for construction purposes based on operational considerations. Daily discharge volumes from station 2700GPM-OUT are a sum of all active treatment trains.

***Appendix D:
Marine Water Receiving Environment Results***

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

Parameter	Unit	Lowest Applicable Guideline ¹		Station IDZ-E1	Station IDZ-E1	Station IDZ-E1	Station IDZ-E2	Station IDZ-E2	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
		Long Term	Short Term	VA25C7850-001	VA25C7850-002	VA25C7850-003	VA25C7850-004	VA25C7850-005	VA25C7850-006
				2025-10-20 14:00	2025-10-20 13:45	2025-10-20 13:25	2025-10-20 10:40	2025-10-20 12:30	2025-10-20 12:10
General Parameters									
pH - Field	pH units	7.0 - 8.7	-	7.63	7.58	7.43	7.60	7.57	7.51
Specific Conductivity - Field	µS/cm	-	-	23762	41150	45115	26808	39658	43390
Temperature - Field	°C	-	-	9.2	10.5	10.3	9.5	10.4	10.7
Salinity - Field	ppt	Narrative ²	-	14.36	26.25	29.05	16.39	25.2	27.85
Turbidity - Field	NTU	Narrative ²	Narrative ²	1.98	1.30	1.16	2.23	1.49	1.07
TSS	mg/L	Narrative ²	Narrative ²	<2.0	2.8	<2.0	2.7	<2.0	<2.0
Dissolved Oxygen - Field	mg/L	>=8	-	9.02	<u>6.85</u>	<u>5.48</u>	8.79	<u>7.37</u>	<u>6.86</u>
Total Hardness	mg/L	-	-	2630	3370	5950	2450	4110	5670
Dissolved Hardness	mg/L	-	-	2390	3770	5540	2420	4520	5370
Anions and Nutrients									
Sulphate	mg/L	-	-	984	1200	2210	969	1470	2170
Chloride	mg/L	-	-	7170	8700	15900	7110	10600	15600
Fluoride	mg/L	-	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia (N-NH ₃)	mg/L	7.2-8.7 ³	48-58 ³	0.0082	0.0093	<0.0050	0.0088	0.0068	<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 Organic Carbon (TOC)	mg/L	-	-	1.63	1.57	1.11	1.92	1.4	1.02
Dissolved Organic Carbon (DOC)	mg/L	-	-	1.66	1.54	1.09	1.81	1.43	1.23
Total Metals									
Aluminum, total (T-Al)	mg/L	-	-	0.0800	0.0589	0.018	0.100	0.0458	0.0077
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	0.00084	0.00097	0.00168	0.00084	0.00122	0.0016
Barium, total (T-Ba)	mg/L	-	-	0.0112	0.011	0.0103	0.0106	0.0119	0.0107
Beryllium, total (T-Be)	mg/L	0.1	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron, total (T-B)	mg/L	1.2	-	<u>1.79</u>	<u>2.21</u>	<u>3.52</u>	<u>1.62</u>	<u>2.58</u>	<u>3.55</u>
Cadmium, total (T-Cd)	mg/L	0.00012	-	0.000036	0.000041	0.000082	0.000052	0.000056	0.00009
Chromium, total (T-Cr)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, total (T-Co)	mg/L	-	-	0.000103	0.000093	0.000086	0.000093	0.000087	0.000076
Copper, total (T-Cu)	mg/L	0.002	0.003	0.00137	0.00127	<0.00050	<u>0.00256</u>	<u>0.00224</u>	0.00073
Iron, total (T-Fe)	mg/L	-	-	0.112	0.078	0.026	0.117	0.061	0.012
Lead, total (T-Pb)	mg/L	0.002	0.14	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Manganese, total (T-Mn)	mg/L	-	-	0.0128	0.0108	0.00441	0.0128	0.00894	0.00427
Molybdenum, total (T-Mo)	mg/L	-	-	0.00455	0.00574	0.00906	0.00544	0.0068	0.00874
Nickel, total (T-Ni)	mg/L	0.0083	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Silver, total (T-Ag)	mg/L	0.0005	0.0037	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Thallium, total (T-Tl)	mg/L	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Uranium, total (T-U)	mg/L	-	-	0.00123	0.00164	0.00248	0.00115	0.00181	0.00248
Vanadium, total (T-V)	mg/L	0.005	-	0.00102	0.00112	0.00145	0.00091	0.0012	0.0014
Zinc, total (T-Zn)	mg/L	0.01	0.055	<0.0030	0.0041	<0.0030	0.0031	0.0035	<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	-	-	0.000048	0.00006	0.000074	0.00003	0.000071	0.000083
Copper, dissolved (D-Cu)	mg/L	-	-	0.00106	0.0009	<0.00050	0.00213	0.00117	0.00079
Iron, dissolved (D-Fe)	mg/L	-	-	0.012	<0.010	<0.010	0.016	<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	-	-	0.0125	0.00755	0.00533	0.0121	0.00631	0.00439
Nickel, dissolved (D-Ni)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	2.79	4.4	5.95	2.74	5.11	5.9
Vanadium, dissolved (D-V)	mg/L	-	-	0.00081	0.00115	0.00145	0.00084	0.00124	0.00147
Zinc, dissolved (D-Zn)	mg/L	-	-	0.0027	0.003	0.0011	0.0027	0.0053	0.0022
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 Induced guidelines for 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 intermittently for >24 hours, therefore the turbidity and TSS short-term and long-term WQGs were evaluated. Background conditions at each depth (0.5 and 2 m below surface and 2 m above the seafloor) were established using reference station WQR1 collected October 20 (Table D-2).

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.

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

Parameter	Unit	Lowest Applicable Guideline ¹		Reference Station WQR1	Reference Station WQR1	Reference Station WQR1
				0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor
				WQR1-0.5	WQR1-2m	WQR1-SF
		VA25C7850-007	VA25C7850-008	VA25C7850-009		
Long Term	Short Term	2025-10-20 10:45	2025-10-20 10:30	2025-10-20 10:15		
General Parameters						
pH - Field	pH units	7.0 - 8.7	-	7.69	7.60	7.42
Specific Conductivity - Field	µS/cm	-	-	18459	41702	45555
Temperature - Field	°C	-	-	8.4	10.5	9.9
Salinity - Field	ppt	Narrative ²	-	10.91	26.64	29.33
Turbidity - Field	NTU	Narrative ²	Narrative ²	3.87	2.19	2.06
TSS	mg/L	Narrative ²	Narrative ²	2.2	2.2	4.0
Dissolved Oxygen - Field	mg/L	>=8	-	9.62	<u>7.09</u>	<u>5.27</u>
Total Hardness	mg/L	-	-	2200	2230	6000
Dissolved Hardness	mg/L	-	-	1930	4730	5530
Anions and Nutrients						
Sulphate	mg/L	-	-	852	802	1960
Chloride	mg/L	-	-	6260	5920	14200
Fluoride	mg/L	-	1.5	<1.0	<1.0	<1.0
Ammonia (N-NH ₃)	mg/L	5.0-13 ³	33-85 ³	0.0116	0.0124	<0.0050
Nitrite (N-NO ₂)	mg/L	-	-	<0.10	<0.10	<0.10
Nitrate (N-NO ₃)	mg/L	3.7	339	<0.50	<0.50	<0.50
Total Organic Carbon (TOC)	mg/L	-	-	1.45	1.54	1.16
Dissolved Organic Carbon (DOC)	mg/L	-	-	1.57	1.5	1.0
Total Metals						
Aluminum, total (T-Al)	mg/L	-	-	0.0879	0.113	0.0161
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	0.0007	0.00064	0.0015
Barium, total (T-Ba)	mg/L	-	-	0.0115	0.0112	0.0117
Beryllium, total (T-Be)	mg/L	0.1	-	<0.00050	<0.00050	<0.00050
Boron, total (T-B)	mg/L	1.2	-	<u>1.50</u>	<u>1.43</u>	<u>3.72</u>
Cadmium, total (T-Cd)	mg/L	0.00012	-	0.000037	0.000035	0.000088
Chromium, total (T-Cr)	mg/L	-	-	<0.00050	<0.00050	<0.00050
Cobalt, total (T-Co)	mg/L	-	-	0.000115	0.000122	0.000105
Copper, total (T-Cu)	mg/L	0.002	0.003	0.00136	0.00077	0.0007
Iron, total (T-Fe)	mg/L	-	-	0.132	0.141	0.021
Lead, total (T-Pb)	mg/L	0.002	0.14	<0.00010	<0.00010	<0.00010
Manganese, total (T-Mn)	mg/L	-	-	0.0151	0.0155	0.00856
Molybdenum, total (T-Mo)	mg/L	-	-	0.0038	0.00379	0.00906
Nickel, total (T-Ni)	mg/L	0.0083	-	0.00077	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	<0.00050	<0.00050	<0.00050
Silver, total (T-Ag)	mg/L	0.0005	0.0037	<0.00010	<0.00010	<0.00010
Thallium, total (T-Tl)	mg/L	-	-	<0.000050	<0.000050	<0.000050
Uranium, total (T-U)	mg/L	-	-	0.00098	0.00105	0.00258
Vanadium, total (T-V)	mg/L	0.005	-	0.00107	0.00109	0.0013
Zinc, total (T-Zn)	mg/L	0.01	0.055	<0.0030	<0.0030	0.0093
Hexavalent Chromium, total	mg/L	0.0015	-	<0.00150	<0.00150	<0.00150
Dissolved Metals						
Cadmium, dissolved (D-Cd)	mg/L	-	-	0.000029	0.000057	0.000092
Copper, dissolved (D-Cu)	mg/L	-	-	0.00065	0.0006	0.00082
Iron, dissolved (D-Fe)	mg/L	-	-	0.018	<0.010	<0.010
Lead, dissolved (D-Pb)	mg/L	-	-	<0.00010	<0.00010	<0.00010
Manganese, dissolved (D-Mn)	mg/L	-	-	0.0136	0.00644	0.00779
Nickel, dissolved (D-Ni)	mg/L	-	-	<0.00050	0.00131	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	2.23	5.43	6.34
Vanadium, dissolved (D-V)	mg/L	-	-	0.00081	0.00131	0.00152
Zinc, dissolved (D-Zn)	mg/L	-	-	0.0011	0.003	0.0025
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 Induced guidelines for change from background conditions arising from discharges to the aquatic environment. Salinity WQG was not evaluated. The water quality data presented in the table are marine reference stations and represent background conditions, therefore the turbidity and TSS WQGs were not evaluated.

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

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