TECHNICAL MEMORANDUM

To:	**Ian McAllister, Ashleigh Crompton, Mike Champion, Mark Zan and Ryan Schucroft (Woodfibre LNG)**	**Date: 24 Oct 2025**
From:	**Holly Pelletier, Cheng Kuang, Patrick Mueller (Lorax)**	**Project #: A633-9**
Subject:	**PE-111578 Weekly Discharge and Compliance Report #86 for October 12 – 18**	

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 #86) was prepared by Lorax and summarizes WDA monitoring conducted for the period of October 12 – 18. 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 #86 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 F 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.

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 m^3/day of contact water and will consist of six parallel treatment trains, each with an installed capacity of 2450 m^3/day. Only one train will be operated during dry conditions or when contact water flows are below approximately 2450 m^3/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 preparations are underway to commission the remaining two treatment trains.

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 12 – 18 monitoring period, with precipitation recorded on October 12 (10.0 mm), October 17 (0.2 mm) and October 11 (32.8 mm). The total precipitation amount during the monitoring period was 43.0 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
2025-10-12	10.0	12.0	6.8	Rain
2025-10-13	0	15.8	5.1	Mix of sun and cloud
2025-10-14	0	15.6	4.1	Mix of sun and cloud
2025-10-15	0	14.4	5.2	Mix of sun and cloud
2025-10-16	0	12.3	4.9	Overcast
2025-10-17	0.2	15.7	7.4	Overcast
2025-10-18	32.8	8.7	6.5	Rain

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

From October 12 – 18, the East Sedimentation Pond received water from Area 1100 (Trench 7 and 6435 Sump), the Flare Anchor excavation area, the FST4 Sump, the M09 Sump, the MOF Sump, stormwater from the Oily Water Tank area 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 1,076 m^3 from the East Sedimentation Pond was transferred to the West Sedimentation Pond from October 12 – 18 (Appendix B, Table B-7).

Routine operation of the East WWTP continued during the monitoring period (October 12 – 18). Concrete contact water and water from the Hydrovac Pit and Wash Bay 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 12 – 18) except on October 15 when the East WWTP was not operated. Daily water volumes processed by the East WWTP are provided in Appendix B (Table B-7).

From October 12 – 18, 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 2700 GPM system on October 12, 15, 16 and 18, and recirculated back to the pond or intermittently discharged to Howe Sound. A total of 1,073 m^3 of clarified effluent was intermittently discharged to Howe Sound from station SP-W-OUT on October 15 (10:33 AM to 8:10 PM and 10:44 PM to 11:59 PM) and October 16 (11:53 AM to 5:01 PM). Clarified effluent was not reclaimed for construction use from October 12 – 18. 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-6).

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 and 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 SW-01, SW-02, SW-03, SW-04, SW-07, OUT-02, 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, 2700GPM-OUT, and W2700T1-OUT during the monitoring period (October 12 – 18). Sampling dates and parameters tested are summarized in Table 2.

Overall, the PE-111578 monitoring requirements that were applicable during the monitoring period (October 12 – 18) 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 12 – 18). Daily field parameters were not collected at the west catchment effluent compliance station (SP-W-OUT) from October 12 to 14 and October 17 to 18 as there was no discharge to Howe Sound on those days.

Daily field parameters were not collected at the influent and effluent stations of the East WWTP (WWTP-E-IN and WWTP-E-OUT, respectively) on October 15 as it was not operated that day. 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 12 – 18).

The PE-111578 monthly monitoring requirements applicable for the month of September were met. Monthly field parameters and an analytical sample was not collected from non-contact water diversion ditch outlet #06 (station OUT-06) as the station was dry each time monitoring was conducted throughout September. Daily field parameters and weekly analytical samples were not collected at the effluent compliance station (SP-E-OUT) as there was no discharge to Howe Sound from the East Sedimentation Pond during the month of September.

Table 2:
Summary of PE-111578 Monitoring Samples Collected October 12 – 18.

Sampling Date	Sample	Description	Parameters Tested	Monitoring Frequency
October 12, 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
	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)		
October 13, 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
October 14, 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
	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		
	OUT-02	Non-contact water diversion ditch	Field, Physical & General Parameters, Total, Dissolved Metals, and Methylmercury.	M
October 15, 2025	SP-E-IN	East Sedimentation Pond influent monitored at cell 1 of the pond	Field Parameters.	D
	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
	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
	W2700T1-OUT	2700GPM TSS settling system at the outlet of Train 1	Field Parameters.	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		
October 16, 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	Field Parameters.	P
	W2700T1-OUT	2700GPM TSS settling system at the outlet of Train 1	Field Parameters.	P

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.
M_2 – bi-monthly monitoring for physical parameters at WWTP and sedimentation pond stations.
M_5 – 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 12 – 18.

Sampling Date	Sample	Description	Parameters Tested	Monitoring Frequency
October 17, 2025	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 & General 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
	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)		
October 18, 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
	2700GPM-IN	2700GPM TSS settling system at the influent meter box	Field Parameters.	P
	2700GPM-OUT	2700GPM TSS settling system at the outlet of Train 4		
	W2700T1-OUT	2700GPM TSS settling system at the outlet of Train 1	Field Parameters.	P

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.
M_2 – bi-monthly monitoring for physical parameters at WWTP and sedimentation pond stations.
M_5 – 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 #86) are listed below in Table 3, with additional field measurements presented in Table B-6 (Appendix B) and Table C-5 (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);
- OUT-01 and OUT-02 collected September 29 (total mercury and methylmercury);
- 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 (field and all analytical parameters, 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 (field and all analytical parameters, chronic toxicity);
- SP-E-IN, WWTP-E-IN, COMB-WWTP-E-IN and WWTP-E-OUT collected October 11 (dioxins and furans);
- COMB-WWTP-E-IN collected October 11 (all analytical parameters);
- 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 (field and all analytical parameters);
- 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 (field and all analytical parameters).

Table 3:
Summary of Analytical Results and Associated Field Measurements Included in Weekly Discharge and Compliance Report #86.

Sample	Description	Sampling Date	Parameters Reported
SP-E-IN	East Sedimentation Pond influent monitored at cell 1 of the pond	September 20, 2025	Hexavalent Chromium and Methylmercury.
WWTP-E-IN	East WWTP at the influent meter box		
WWTP-E-OUT	East WWTP at the effluent meter box		
SP-E-IN	East Sedimentation Pond influent monitored at cell 1 of the pond	September 27, 2025	Dioxins and Furans.
WWTP-E-IN	East WWTP at the influent meter box		
WWTP-E-OUT	East WWTP at the effluent meter box		
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		
2700GPM-IN	2700GPM TSS settling system at the influent meter box		
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	September 29, 2025	Dioxins and Furans.
2700GPM-IN	2700GPM TSS settling system at the influent meter box		
OUT-01	Non-contact water diversion ditch outlet		Field, Physical and General Parameters, Total and Dissolved Metals.
OUT-02	Non-contact water diversion ditch outlet		
OUT-06	Non-contact water diversion ditch outlet	October 3, 2025	Field, Physical and General Parameters, Total and Dissolved Metals.
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 4, 2025	Field and Physical Parameters, Total and Dissolved Metals, and Hexavalent Chromium.
SW-01	Lower Reach of Woodfibre Creek (near the mouth)	October 5, 2025	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, VOCs, PAHs, Dioxins and Furans.
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)		
SP-W-IN	West Sedimentation Pond influent monitored at cell 1 of the pond	October 10, 2025	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, VOCs, PAHs, 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		
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 11, 2025	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, VOCs, PAHs, and Methylmercury.
WWTP-E-IN	East WWTP at the influent meter box		
WWTP-E-OUT	East WWTP at the effluent meter box		
SP-W-IN	West Sedimentation Pond influent monitored at cell 1 of the pond	October 15, 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 17, 2025	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, and Methylmercury.
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. 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, Section 3.6 and Section 3.7. Sediment samples are collected annually at stations IDZ-E-SED and IDZ-W-SED, and the sediment results are discussed in Section 3.7 when they are reported.

3.3 East Catchment

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

Field measurements and analytical results for East WWTP effluent (WWTP-E-OUT) collected October 11 (as discussed in Report #85) and October 17 met MDOs except for total copper (0.00474 mg/L) and total hexavalent chromium (0.00176 mg/L) on October 17 (Appendix B, Table B-1, Table B-4, and Table B-6). Metal parameters above MDOs are tracked in Table 4.

Previously pending analytical results for hexavalent chromium and mercury parameters for East Sedimentation Pond influent (SP-E-IN) and WWTP influent and effluent (WWTP-E-IN and WWTP-E-OUT, respectively) collected September 20 (as discussed in Report #82) are presented in Appendix B, Table B-3 (hexavalent chromium) and Table B-4 (mercury parameters). Hexavalent chromium met the MDO. The methylmercury concentration was 0.000545 µg/L in the WWTP-E-OUT sample collected September 20 (Appendix B, Table B-4), which is above the WQG (0.0001 µg/L). East WWTP effluent was directed to the East Sedimentation Pond and there was no discharge from the pond to Howe Sound on September 20. The total mercury concentration is also listed in Appendix B, Table B-4 and is above the MDO. A summary of mercury parameters is tracked in Table 4 of Report #85.

As discussed previously in Section 1.2, there were no discharges to Howe Sound from the SP-E-OUT authorized discharge location (Appendix B, Table B-7) during the monitoring period (October 12 – 18), therefore, water quality samples and field measurements were not collected at this station.

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, on October 15 and 16, a total of 1,073 m^3 of clarified sedimentation pond effluent from the 2700GPM TSS Settling System was intermittently discharged to Howe Sound from SP-W-OUT.

Field measurements of influent and effluent quality for the West Sedimentation Pond and the 2700GPM TSS settling system collected October 12 – 18 and analytical samples collected October 10 (stations SP-W-IN, SP-W-OUT and 2700GPM-IN as discussed in Report #85) and October 15 (stations SP-W-IN, SP-W-OUT and 2700GPM-IN) were available at the time of reporting. The PE-111578 discharge limits and WQGs were met at station SP-W-OUT (Table C-2, Table C-3 and Table C-5 of Appendix C).

3.5 Non-Contact Water Diversion Ditch Outlets

Analytical results were available at the time of reporting for the non-contact water diversion ditch outlet samples collected at stations OUT-01 and OUT-02 on September 29 and at station OUT-06 on October 3. The analytical results, field parameters, and WQGs are summarized in Appendix D. Parameter concentrations met WQGs except field pH, total aluminum and dissolved copper in one or more samples. Field pH (pH 6.0) was below the lower limit of the WQG (pH 6.5) at OUT-01 and total aluminum was above the long-term WQG at OUT-01 (0.245 mg/L) and OUT-02 (0.249 mg/L) on September 29. Dissolved copper was above the long-term WQG at OUT-01, OUT-02 and OUT-06 (0.00122, 0.00072 and 0.00080 mg/L, respectively) and above the short-term WQG at OUT-01.

Field pH, total aluminum and dissolved copper results are within the range of values observed during the pre-construction baseline monitoring of diversion ditch water quality except for the dissolved copper concentration measured at OUT-01 on September 29 (0.00122 mg/L), which was above the maximum concentration from baseline monitoring (0.00095 mg/L). The September 29 OUT-01 sample was collected during significant rainfall from September 27 through September

29 (91 mm), after an extended period of dry summer conditions. Since it is the first sample collected during wet conditions, 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. This item is tracked in Table 4.

3.6 Freshwater and Estuarine Water Receiving Environment

Analytical results were available at the time of reporting for freshwater and estuarine water samples collected at the Mill Creek estuary, mid-stream and background stations (SW-03, SW-02 and SW-07, respectively) as well as near the mouth of Woodfibre Creek and East Creek (stations SW-01 and SW-04, respectively) on October 5 (as discussed in Report #85). The analytical results, field parameters, and WQGs are summarized in Appendix E (freshwater) and Appendix F (estuarine water).

Parameter concentrations met WQGs except field pH and total aluminum in some samples (Appendix E, Table E-1 and Appendix F, Table F-1). Field pH in the Mill Creek estuary (pH 6.2) was below the lower range of the WQG (pH 7.0 for estuarine water) on October 5. Total aluminum was above the long-term WQG in the sample collected from East Creek (0.0779 mg/L) on October 5.

The field pH values and the total aluminum concentrations observed at downstream stations (SW-01, SW-02, SW-03, and SW-04) are within ranges observed in the pre-construction baseline monitoring program for the freshwater and estuarine water receiving environment stations. The sample collected from upstream Mill Creek (station SW-07) represents background water quality in Mill Creek. The field pH and total aluminum concentrations measured in Mill Creek and East Creek, respectively, are considered to represent background conditions and are not attributed to project influence.

Dioxins and furans results were available at the time of reporting for freshwater and estuarine water samples collected at the Mill Creek estuary, mid-stream and background stations (SW-03, SW-02 and SW-07, respectively) as well as near the mouth of Woodfibre Creek and East Creek (stations SW-01 and SW-04, respectively) on October 5 (as discussed in Report #85). The lower and upper bound PCDD/F TEQ concentrations measured in these samples ranged from 0 to 0.00732 pg/L and from 1.05 to 1.70 pg/L, respectively. The lower and upper bound PCDD/F TEQ concentrations were within the concentration ranges observed in the pre-construction baseline monitoring program. Results are tabulated in Appendix E, Table E-2 and Appendix F, Table F-2.

3.7 Marine Water Receiving Environment

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

3.8 Quality Control

This section presents the results of the quality control (QC) evaluation for the PE-111578 weekly report (Table 5). 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 5. 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 12 – 18, Report #86)		
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). 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 #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 will be reviewed. 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. This item remains open.
Report #86: Pending Data	Analytical results not reported.	Field parameters and analytical results for non-contact water diversion ditch outlet, freshwater, estuarine water and marine water receiving environment samples collected October 12, 14, 15 and 17 were not included with Report #86. Dioxins and furans results for contact water and treated water samples collected October 15 were not included with Report #86. The pending results 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 T-Cu 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 previously collected on September 27 and October 4 met the MDO. The WWTP treatment performance for total copper continues to be reviewed. This item remains open.
Report #82: Pending Data	Analytical results not reported.	Hexavalent chromium and methylmercury results for contact water and treated water samples collected September 20 are presented in Appendix B and are discussed in Section 3.3 of Report #86. This item is closed.
Report #83: WWTP Performance Evaluation	Total lead and total zinc above the MDO.	The total lead and total zinc concentrations were 0.00429 and 0.0156 mg/L, respectively, in samples collected at WWTP-E-OUT on September 20 and were above the MDOs (0.0035 and 0.0133 mg/L, respectively). This appears to have been an isolated incident. This item is closed.
Report #83: Pending Data	Analytical results not reported.	Dioxins and furans results for contact water and treated water samples collected September 27 are discussed in Sections 3.3 and 3.4 of Report #86. This item is closed.
Report #84: Pending Data	Analytical results not reported.	Total mercury and methylmercury results for non-contact water diversion ditch outlet samples collected September 29 and October 3, acute toxicity results for West Sedimentation Pond (SP-W-OUT) effluent 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.	Field parameters and analytical results for marine receiving environment samples collected October 9 and 10, total mercury and methylmercury results for freshwater and estuarine water receiving environment samples collected October 5, and dioxins and furans results for contact water and treated water samples collected October 10 and 11 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

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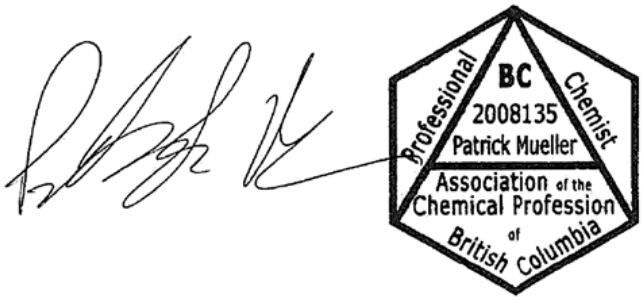
Environmental Scientist



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

Appendix A:
Figures and Site Images

World Imagery: District of Squamish. Additional imagery provided by McDermott International captured September 30st, 2025.

LEGEND

- Freshwater Monitoring Station
- Marine Water Monitoring Station
- Clean Water Diversion 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:	Oct 24, 2025
DRAWN BY:	DM
REVIEWED:	PM
VERSION:	1

Coordinate System: NAD 1983 UTM Zone 10N
Projection: Transverse Mercator
Datum: North American 1983
Units: Metre

1:6,000

0 100 200 Metres

CLIENT: Woodfibre LNG

LORAX ENVIRONMENTAL

PROJECT: **Woodfibre LNG Project Construction Phase**

TITLE: Site Layout and Water Quality Monitoring Stations for PE-111578 (October 18, 2025)

PROJECT #: A633-9

FIGURE: 1

P:\@202506\Woodfibre\Drafting Figures\APRX\WLNG Weekly Report Figure\WLNG Weekly Report.aprx Figure 1 - Monitoring and Compliance Locations

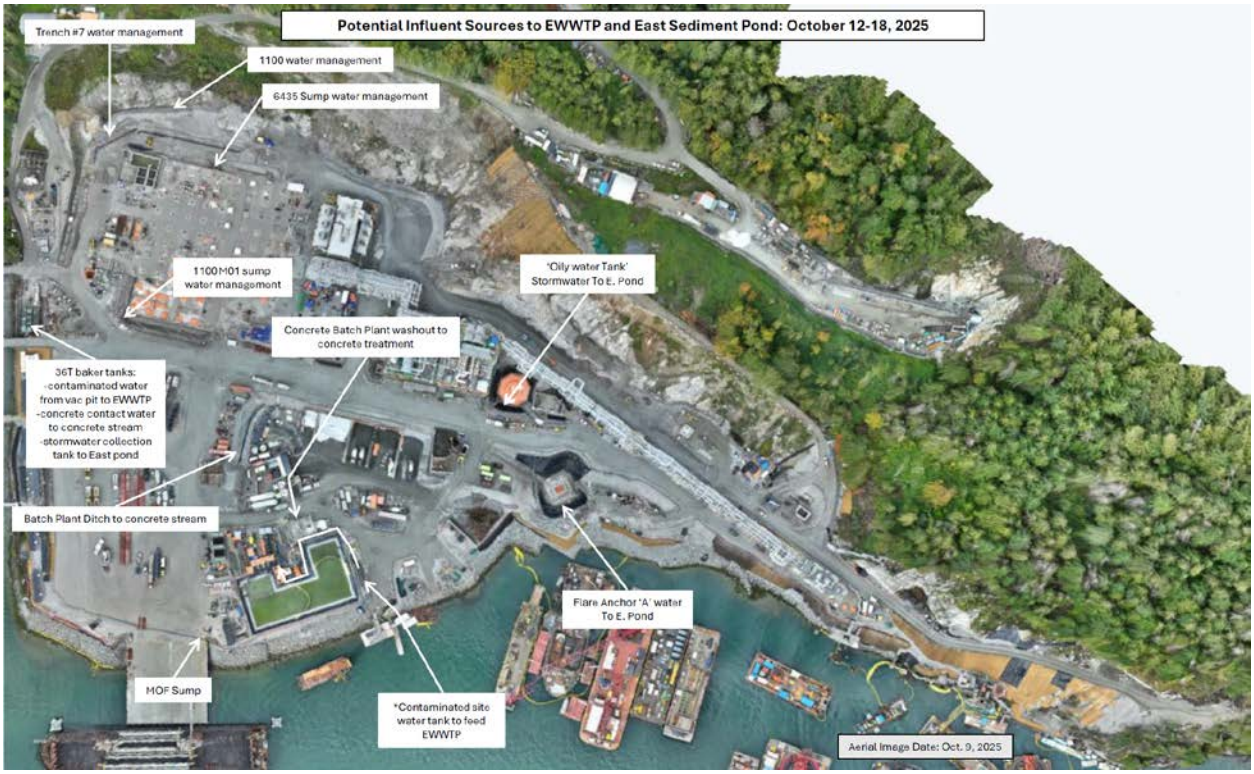


Figure 2: East Catchment contact water management facilities (October 12 – 18).

Figure 3: West Catchment contact water management facilities (October 12 – 18).

Figure 4: Aerial view of the East Sedimentation Pond (October 17, 2025). The East WWTP is located on the left side of the pond.

Figure 5: Aerial view of the West Sedimentation Pond (October 17, 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-IN	Station WWTP-E-OUT	Station WWTP-E-OUT
					Influent	Influent	Influent	Effluent	Effluent
					COMB-WWTP-E-IN	WWTP-E-IN	WWTP-E-IN	WWTP-E-OUT	WWTP-E-OUT
					VA25C6337-003	VA25C7090-002	VA25C7688-002	VA25C7090-003	VA25C7688-003
		Long Term	Short Term		2025-10-04 10:30	2025-10-11 11:15	2025-10-17 8:26	2025-10-11 17:15	2025-10-17 16:38
General Parameters									
pH - Field	pH units	- [2]	-	5.5 - 9.0	6.8	7.92	6.9	6.55	5.8
Specific Conductivity - Field	µS/cm	-	-	-	1383	955	1196	1680	1117
Temperature - Field	°C	-	-	-	14.6	13	11	13	12
Salinity - Field	ppt	-	-	-	0.7	0.47	0.6	0.86	0.56
Turbidity - Field	NTU	-	-	-	43.78	51.71	7.11	2.25	12.46
TSS	mg/L	-	-	25 or 75 [6]	42.0	27.4	3.3	<3.0	<3.0
Dissolved Oxygen - Field	mg/L	≥8	-	-	9.4	10.94	12.95	9.44	11.07
Total Hardness	mg/L	-	-	-	140	125	90	55.8	44.9
Dissolved Hardness	mg/L	-	-	-	138	120	86.4	55.3	43.3
Anions and Nutrients									
Sulphate	mg/L	-	-	-	-	298	402	495	365
Chloride	mg/L	-	-	-	-	26.2	29.8	33.1	29.5
Fluoride	mg/L	-	1.5	-	-	0.125	0.139	0.109	<0.100
Ammonia (N-NH_3)	mg/L	3.1-20 [3]	21-131 [3]	-	-	0.008	<0.0050	0.0268	0.0133
Nitrite (N-NO_2)	mg/L	-	-	-	-	0.033	0.0226	0.0264	0.0209
Nitrate (N-NO_3)	mg/L	3.7	339	-	-	2.0	1.28	1.22	1.3
Total Organic Carbon (TOC)	mg/L	-	-	-	-	3.42	2.4	1.47	1.71
Dissolved Organic Carbon (DOC)	mg/L	-	-	-	-	2.98	2.03	1.44	1.81
Total Metals									
Aluminum, total (T-Al)	mg/L	-	-	-	1.94	2.76	0.389	0.0173	0.0483
Antimony, total (T-Sb)	mg/L	-	0.27 [4]	-	0.00173	0.00164	0.00154	0.00154	0.00142
Arsenic, total (T-As)	mg/L	0.0125	-	-	0.00207	0.00147	0.00092	0.00051	0.00066
Barium, total (T-Ba)	mg/L	-	-	-	0.048	0.0394	0.0166	0.00285	0.00242
Beryllium, total (T-Be)	mg/L	0.1	-	-	0.000041	0.000046	<0.000020	<0.000020	<0.000020
Boron, total (T-B)	mg/L	1.2	-	-	0.079	0.076	0.062	0.026	0.051
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	0.0000504	<0.0000500	<0.0000300	<0.0000250	<0.0000250
Chromium, total (T-Cr)	mg/L	-	-	-	0.00333	0.00159	0.00281	0.0006	0.00173
Cobalt, total (T-Co)	mg/L	-	-	-	0.0012	0.00085	0.00015	<0.00010	<0.00010
Copper, total (T-Cu)	mg/L	- [2]	- [2]	0.0043	0.00841	0.00316	0.0025	0.00107	0.00474
Iron, total (T-Fe)	mg/L	-	-	-	2.6	2.08	0.194	<0.010	<0.010
Lead, total (T-Pb)	mg/L	- [2]	- [2]	0.0035	0.00238	0.000837	0.000251	0.000066	0.000315
Manganese, total (T-Mn)	mg/L	-	-	-	0.116	0.122	0.0196	0.00134	0.00164
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.0366	0.0436	0.0724	0.0966	0.0651
Nickel, total (T-Ni)	mg/L	0.0083	-	-	0.00241	0.001	0.00083	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	-	0.000229	0.000171	0.000319	0.000472	0.000317
Silver, total (T-Ag)	mg/L	0.0005	0.0037	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thallium, total (T-Tl)	mg/L	-	-	-	0.000015	0.00002	<0.000010	<0.000010	<0.000010
Uranium, total (T-U)	mg/L	-	-	-	0.0159	0.0192	0.0149	0.00194	0.00307
Vanadium, total (T-V)	mg/L	- [2]	-	0.0081	0.00556	0.00496	0.00207	0.00119	0.00126
Zinc, total (T-Zn)	mg/L	- [2]	- [2]	0.0133	0.0168	0.02	0.0072	0.006	0.0091
Hexavalent Chromium, total	mg/L	0.0015	-	-	<0.00150	0.00099	***0.00213***	0.00073	***0.00176***
Dissolved Metals									
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	0.0000369	<0.0000300	<0.0000350	<0.0000300	<0.0000250
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.00289	0.00158	0.00123	0.0009	0.00425
Iron, dissolved (D-Fe)	mg/L	-	-	-	0.058	<0.010	0.030	<0.010	<0.010
Lead, dissolved (D-Pb)	mg/L	-	-	-	<0.000050	<0.000050	<0.000050	0.000079	0.000217
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.0785	0.0327	0.0159	0.00236	0.00208
Nickel, dissolved (D-Ni)	mg/L	-	-	-	0.00158	0.00059	0.00083	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.254	0.22	0.19	0.169	0.124
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00134	0.00189	0.00169	0.00117	0.0011
Zinc, dissolved (D-Zn)	mg/L	-	-	-	0.0085	0.0052	0.0053	0.0054	0.0109
Polycyclic Aromatic Hydrocarbons (PAHs)									
Acenaphthene	mg/L	0.006	-	-	-	0.000054	-	<0.000010	-
Acridine	mg/L	-	-	-	-	<0.000010	-	<0.000010	-
Anthracene	mg/L	-	-	-	-	<0.000010	-	<0.000010	-
Benz(a)anthracene	mg/L	-	-	-	-	<0.000010	-	<0.000010	-
Benzo(a)pyrene	mg/L	0.00001	-	-	-	<0.0000050	-	<0.0000050	-
Chrysene	mg/L	0.0001	-	-	-	<0.000010	-	<0.000010	-
Fluoranthene	mg/L	-	-	-	-	<0.000010	-	<0.000010	-
Fluorene	mg/L	0.012	-	-	-	0.000022	-	<0.000010	-
1-methylnaphthalene	mg/L	0.001	-	-	-	0.000016	-	<0.000010	-
2-methylnaphthalene	mg/L	0.001	-	-	-	0.000014	-	<0.000010	-
Naphthalene	mg/L	0.001	-	-	-	0.000095	-	<0.000050	-
Phenanthrene	mg/L	-	-	-	-	<0.000020	-	<0.000020	-
Pyrene	mg/L	-	-	-	-	<0.000010	-	<0.000010	-
Quinoline	mg/L	-	-	-	-	<0.000050	-	<0.000050	-
Volatile Organic Compounds (VOCs)									
Benzene	mg/L	0.11	-	-	-	<0.00050	-	<0.00050	-
Ethylbenzene	mg/L	0.25	-	-	-	<0.00050	-	<0.00050	-
Methyl-tert-butyl-ether	mg/L	5	0.44	-	-	<0.00050	-	<0.00050	-
Styrene	mg/L	-	-	-	-	<0.00050	-	<0.00050	-
Toluene	mg/L	0.215	-	-	-	<0.00040	-	<0.00040	-
Total Xylenes	mg/L	-	-	-	-	<0.00050	-	<0.00050	-
Chlorobenzene	mg/L	0.025	-	-	-	<0.00050	-	<0.00050	-
1,2-Dichlorobenzene	mg/L	0.042	-	-	-	<0.00050	-	<0.00050	-

Notes:
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 12 – 18).
[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.

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 VA25C7090-001 2025-10-11 11:00	Station SP-E-IN Influent SP-E-IN VA25C7688-001 2025-10-17 17:00
		Long Term	Short Term			
General Parameters						
pH - Field	pH units	- [2]	-	5.5 - 9.0	7.15	6.1
Specific Conductivity - Field	µS/cm	-	-	-	1077	1088
Temperature - Field	°C	-	-	-	12.0	12.1
Salinity - Field	ppt	-	-	-	0.54	0.54
Turbidity - Field	NTU	-	-	-	84.28	3.31
TSS	mg/L	-	-	25 or 75 [6]	51.2	7.7
Dissolved Oxygen - Field	mg/L	≥8	-	-	10.22	11.7
Total Hardness	mg/L	-	-	-	68.5	51.4
Dissolved Hardness	mg/L	-	-	-	64.4	49.6
Anions and Nutrients						
Sulphate	mg/L	-	-	-	372	342
Chloride	mg/L	-	-	-	17.6	29.9
Fluoride	mg/L	-	1.5	-	<0.100	0.117
Ammonia ($N\text{-}NH_3$)	mg/L	20 [3]	131 [3]	-	0.0404	0.0111
Nitrite ($N\text{-}NO_2$)	mg/L	-	-	-	0.0716	0.0209
Nitrate ($N\text{-}NO_3$)	mg/L	3.7	339	-	1.97	1.26
Total Organic Carbon (TOC)	mg/L	-	-	-	2.64	1.64
Dissolved Organic Carbon (DOC)	mg/L	-	-	-	2.2	1.59
Total Metals						
Aluminum, total (T-Al)	mg/L	-	-	-	4.78	0.206
Antimony, total (T-Sb)	mg/L	-	0.27 [4]	-	0.00137	0.00138
Arsenic, total (T-As)	mg/L	0.0125	-	-	0.00123	0.00083
Barium, total (T-Ba)	mg/L	-	-	-	0.0453	0.00492
Beryllium, total (T-Be)	mg/L	0.1	-	-	0.00008	<0.000020
Boron, total (T-B)	mg/L	1.2	-	-	0.059	0.05
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	<0.0000475	<0.0000250
Chromium, total (T-Cr)	mg/L	-	-	-	0.00381	0.002
Cobalt, total (T-Co)	mg/L	-	-	-	0.00144	0.0001
Copper, total (T-Cu)	mg/L	- [2]	- [2]	0.0043	0.00362	0.00089
Iron, total (T-Fe)	mg/L	-	-	-	4.09	0.103
Lead, total (T-Pb)	mg/L	- [2]	- [2]	0.0035	0.00102	0.000098
Manganese, total (T-Mn)	mg/L	-	-	-	0.179	0.0112
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.0932	0.0614
Nickel, total (T-Ni)	mg/L	0.0083	-	-	0.001	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	-	0.00051	0.000301
Silver, total (T-Ag)	mg/L	0.0005	0.0037	-	<0.000010	<0.000010
Thallium, total (T-Tl)	mg/L	-	-	-	0.000015	<0.000010
Uranium, total (T-U)	mg/L	-	-	-	0.0058	0.0123
Vanadium, total (T-V)	mg/L	- [2]	-	0.0081	0.00775	0.00165
Zinc, total (T-Zn)	mg/L	- [2]	- [2]	0.0133	0.0216	0.0035
Hexavalent Chromium, total	mg/L	0.0015	-	-	***0.00260***	***0.00174***
Dissolved Metals						
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	<0.0000250	<0.0000200
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.00082	0.00068
Iron, dissolved (D-Fe)	mg/L	-	-	-	<0.010	<0.010
Lead, dissolved (D-Pb)	mg/L	-	-	-	<0.000050	<0.000050
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.0241	0.0064
Nickel, dissolved (D-Ni)	mg/L	-	-	-	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.129	0.129
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00179	0.00141
Zinc, dissolved (D-Zn)	mg/L	-	-	-	<0.0010	0.0024
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:
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 12 – 18).
[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.

Table B-3:
East Catchment Hexavalent Chromium Results Received at the Time of Reporting.

Parameter					**Total Hexavalent Chromium**
Unit					**mg/L**
Lowest Applicable Guideline[1]					0.0015
Station	**Water Type**	**Sample ID**	**Lab ID**	**Sampling Date**	
Influent					
SP-E-IN	Influent	SP-E-IN	VA25C4933-001	2025-09-20	0.00059
WWTP-E-IN	Influent	WWTP-E-IN	VA25C4933-002	2025-09-20	0.00071
Effluent					
WWTP-E-OUT	Effluent	WWTP-E-OUT	VA25C4933-011	2025-09-20	0.00070

Notes:
East catchment influents and 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.
Hexavalent chromium results for samples collected September 20 were pending at the time of Report #83 preparation and are included in this report (Report #86).
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.

Table B-4:
East Catchment Methylmercury and Corresponding Total Mercury Results Received at the Time of Reporting.

Parameter					**Total Methylmercury**	**Total Mercury**
Unit					**µg/L**	**µg/L**
Lowest Applicable Guideline[1]					0.0001 [2]	0.0031-0.016 [3,4]
Station	**Water Type**	**Sample ID**	**Lab ID**	**Sampling Date**		
Influent						
SP-E-IN	Influent	SP-E-IN	VA25C4933-001	2025-09-20	***0.000992***	***0.120***
SP-E-IN	Influent	SP-E-IN	VA25C7090-001	2025-10-11	0.000084	0.00740
SP-E-IN	Influent	SP-E-IN	VA25C7688-001	2025-10-17	0.000051	0.00504
WWTP-E-IN	Influent	WWTP-E-IN	VA25C4933-002	2025-09-20	***0.000704***	***0.0680***
WWTP-E-IN	Influent	WWTP-E-IN	VA25C7090-002	2025-10-11	***0.000106***	***0.00400***
WWTP-E-IN	Influent	WWTP-E-IN	VA25C7688-002	2025-10-17	0.000046	0.00324
Effluent						
WWTP-E-OUT	Effluent	WWTP-E-OUT	VA25C4933-011	2025-09-20	***0.000545*** [5]	***0.0654*** [5]
WWTP-E-OUT	Effluent	WWTP-E-OUT	VA25C7090-003	2025-10-11	0.000029	0.00124
WWTP-E-OUT	Effluent	WWTP-E-OUT	VA25C7688-003	2025-10-17	0.000036	0.00113

Notes:
East catchment influents and 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 aquatic life.
[1] The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
[2] From BC Ambient Water Quality Guidelines for Mercury Overview Report. The methylmercury concentration threshold of 0.0001 µg/L (0.1 ng/L) is indicated as a WQG for the protection of wildlife and is set at a concentration that protects fish from mercury bioaccumulation to a level that may harm wildlife that consume fish.
[3] CCME guideline for total mercury = 0.016 µg/L.
[4] When MeHg ≤ 0.5% of total Hg, BC WQG = 0.02 µg/L. When MeHg > 0.5% of total Hg, BC WQG = 0.0001/(MeHg/Total Hg). Detection limit values are used to calculate the WQG for result reported as not detected.
[5] East WWTP effluent was directed to the East Sedimentation Pond and there was no discharge from the pond to Howe Sound on September 20.

Table B-5:
East Catchment Dioxin and Furan Toxicity Equivalency Quantity (TEQ) Results Received at the Time of Reporting.

Parameter					**Lower Bound PCDD/F TEQ**	**Upper Bound PCDD/F TEQ**
Unit					**pg/L**	**pg/L**
Station	**Water Type**	**Sample ID**	**Lab ID**	**Sampling Date**		
Influent						
SP-E-IN	Influent	SP-E-IN	VA25C5671-001	2025-09-27	0.0309	1.26
WWTP-E-IN	Influent	WWTP-E-IN	VA25C5671-002	2025-09-27	0.000199	1.10
Effluent						
WWTP-E-OUT	Effluent	WWTP-E-OUT	VA25C5671-003	2025-09-27	0.000469	0.880

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

Table B-6:
East Catchment Field Measurements Collected During the Monitoring Period (October 12 – 18).

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	2025-10-12 9:11	12.4	9.92	0.54	342.1	258.1	7.3	1075	No
SP-E-IN	Influent	2025-10-13 11:47	11.0	11.25	0.63	18.88	17.1	7.3	1250	No
SP-E-IN	Influent	2025-10-14 11:10	10.5	11.58	0.57	17.39	16.0	6.8	1149	No
SP-E-IN	Influent	2025-10-15 15:34	12.5	12.40	0.60	10.8	11.1	7.5	1092	No
SP-E-IN	Influent	2025-10-16 11:53	9.9	11.63	0.65	3.91	5.9	6.1	1292	No
SP-E-IN	Influent	2025-10-17 17:00	12.1	11.70	0.54	3.31	5.5	6.1	1088	No
SP-E-IN	Influent	2025-10-18 13:23	11.2	12.53	0.63	48.59	39.2	6.7	1257	No
SP-E-IN	Influent	2025-10-18 13:24	11.2	13.81	0.63	84.96	66.4	6.7	1254	No
WWTP-E-IN	Influent	2025-10-12 9:20	12.7	10.09	0.56	33.2	27.8	7.6	1122	No
WWTP-E-IN	Influent	2025-10-13 11:56	10.7	10.70	0.49	40.11	32.9	7.6	989	No
WWTP-E-IN	Influent	2025-10-14 14:08	11.2	12.06	0.58	17.19	15.8	6.7	1153	No
WWTP-E-IN	Influent	2025-10-16 11:40	10.4	11.50	0.42	14.36	13.7	7.4	843	No
WWTP-E-IN	Influent	2025-10-17 8:26	11.0	12.95	0.60	7.11	8.3	6.9	1196	No
WWTP-E-IN	Influent	2025-10-18 12:19	10.8	12.53	0.60	4.44	6.3	6.7	1196	No
Effluent [5]										
WWTP-E-OUT	Effluent	2025-10-12 9:17	12.8	8.86	0.91	0.33	3.2	6.4	1368	No
WWTP-E-OUT	Effluent	2025-10-13 11:52	10.9	10.88	0.80	1.88	4.4	8.8	1579	No
WWTP-E-OUT	Effluent	2025-10-13 12:04	11.1	10.44	0.85	1.97	4.5	6.1	1675	No
WWTP-E-OUT	Effluent	2025-10-14 14:11	10.6	11.39	0.68	1.89	4.4	6.4	1345	No
WWTP-E-OUT	Effluent	2025-10-16 11:48	9.9	10.94	0.67	4.13	6.1	5.9	1333	No
WWTP-E-OUT	Effluent	2025-10-17 16:38	12.0	11.07	0.56	12.46	12.3	5.8	1117	No
WWTP-E-OUT	Effluent	2025-10-17 17:44	12.3	11.40	0.58	2.11	4.6	5.7	1161	No
WWTP-E-OUT	Effluent	2025-10-18 12:21	11.1	12.17	0.64	1.40	4.0	6.8	1273	No

Notes:
The east catchment did not discharge to Howe Sound during the monitoring period (October 5 – 11). 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. Daily field measurements for station WWTP-E-IN were not collected on October 15 as the East WWTP was not operational at the time of monitoring that day.
[5] There was no discharge at the authorized discharge location (SP-E-OUT) during the monitoring period (October 12 – 18), therefore daily field measurements for SP-E-OUT were not collected on those days. Daily field measurements for station WWTP-E-OUT were not collected on October 15 as the East WWTP was not operational on that day.
[6] The PE-111578 discharge limit for TSS is 25 mg/L under dry conditions and 75 mg/L for each day of Wet Conditions.

Table B-7:
East Catchment Daily Discharge Volumes for the Monitoring Period (October 12 – 18).

	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				
2025-10-12	0	457	363	0
2025-10-13	0	0	387	0
2025-10-14	0	619	128	0
2025-10-15	0	0	0	0
2025-10-16	0	0	190	0
2025-10-17	0	0	409	0
2025-10-18	0	0	316	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 m^3/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 VA25C7022-002 2025-10-10 17:30	Station 2700GPM-IN Influent W2700-IN VA25C7369-002 2025-10-15 11:36
		Long Term	Short Term			
General Parameters						
pH - Field	pH units	- [2]	-	5.5 - 9.0	7.25	7.8
Specific Conductivity - Field	µS/cm	-	-	-	655	881
Temperature - Field	°C	-	-	-	13.2	10.1
Salinity - Field	ppt	-	-	-	0.32	0.44
Turbidity - Field	NTU	-	-	-	6.36	13.54
TSS	mg/L	-	-	25 or 75 [6]	4.1	9.9
Dissolved Oxygen - Field	mg/L	≥8	-	-	10.67	11.75
Total Hardness	mg/L	-	-	-	129	102
Dissolved Hardness	mg/L	-	-	-	125	106
Anions and Nutrients						
Sulphate	mg/L	-	-	-	199	304
Chloride	mg/L	-	-	-	10.8	20.8
Fluoride	mg/L	-	1.5	-	0.083	0.101
Ammonia (N-NH_3)	mg/L	3.1-12 [3]	21-83 [3]	-	0.0318	0.0061
Nitrite (N-NO_2)	mg/L	-	-	-	0.0436	0.0308
Nitrate (N-NO_3)	mg/L	3.7	339	-	2.26	1.48
Total Organic Carbon (TOC)	mg/L	-	-	-	3.2	3.11
Dissolved Organic Carbon (DOC)	mg/L	-	-	-	3.11	2.84
Total Metals						
Aluminum, total (T-Al)	mg/L	-	-	-	0.317	0.716
Antimony, total (T-Sb)	mg/L	-	0.27 [4]	-	0.00137	0.00144
Arsenic, total (T-As)	mg/L	0.0125	-	-	0.0013	0.00122
Barium, total (T-Ba)	mg/L	-	-	-	0.0151	0.0206
Beryllium, total (T-Be)	mg/L	0.1	-	-	<0.000020	<0.000020
Boron, total (T-B)	mg/L	1.2	-	-	0.056	0.053
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	0.0000481	<0.0000250
Chromium, total (T-Cr)	mg/L	-	-	-	0.0007	0.00142
Cobalt, total (T-Co)	mg/L	-	-	-	0.00015	0.00023
Copper, total (T-Cu)	mg/L	- [2]	- [2]	0.0043	0.0018	0.00309
Iron, total (T-Fe)	mg/L	-	-	-	0.168	0.44
Lead, total (T-Pb)	mg/L	- [2]	- [2]	0.0035	0.000331	0.00058
Manganese, total (T-Mn)	mg/L	-	-	-	0.0212	0.0333
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.0322	0.0488
Nickel, total (T-Ni)	mg/L	0.0083	-	-	<0.00050	0.00068
Selenium, total (T-Se)	mg/L	0.002	-	-	0.000178	0.000247
Silver, total (T-Ag)	mg/L	0.0005	0.0037	-	<0.000010	<0.000010
Thallium, total (T-Tl)	mg/L	-	-	-	0.000016	0.000014
Uranium, total (T-U)	mg/L	-	-	-	0.0121	0.0134
Vanadium, total (T-V)	mg/L	- [2]	-	0.0081	0.00217	0.00233
Zinc, total (T-Zn)	mg/L	- [2]	- [2]	0.0133	0.0051	0.0091
Hexavalent Chromium, total	mg/L	0.0015	-	-	0.00067	0.00098
Dissolved Metals						
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	<0.0000150	<0.0000200
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.00133	0.00148
Iron, dissolved (D-Fe)	mg/L	-	-	-	<0.010	0.04
Lead, dissolved (D-Pb)	mg/L	-	-	-	<0.000050	0.000081
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.0148	0.0182
Nickel, dissolved (D-Ni)	mg/L	-	-	-	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.183	0.177
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00181	0.00161
Zinc, dissolved (D-Zn)	mg/L	-	-	-	0.0035	0.0048
Polycyclic Aromatic Hydrocarbons (PAHs)						
Acenaphthene	mg/L	0.006	-	-	<0.000010	0.00001
Acridine	mg/L	-	-	-	<0.000010	<0.000010
Anthracene	mg/L	-	-	-	<0.000010	<0.000010
Benz(a)anthracene	mg/L	-	-	-	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	-	<0.0000050	<0.0000050
Chrysene	mg/L	0.0001	-	-	<0.000010	<0.000010
Fluoranthene	mg/L	-	-	-	<0.000010	<0.000010
Fluorene	mg/L	0.012	-	-	<0.000010	<0.000010
1-methylnaphthalene	mg/L	0.001	-	-	<0.000010	<0.000010
2-methylnaphthalene	mg/L	0.001	-	-	<0.000010	<0.000010
Naphthalene	mg/L	0.001	-	-	<0.000050	<0.000050
Phenanthrene	mg/L	-	-	-	<0.000020	<0.000020
Pyrene	mg/L	-	-	-	<0.000010	<0.000010
Quinoline	mg/L	-	-	-	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)						
Benzene	mg/L	0.11	-	-	<0.00050	<0.00050
Ethylbenzene	mg/L	0.25	-	-	<0.00050	<0.00050
Methyl-tert-butyl-ether	mg/L	5	0.44	-	<0.00050	<0.00050
Styrene	mg/L	-	-	-	<0.00050	<0.00050
Toluene	mg/L	0.215	-	-	<0.00040	<0.00040
Total Xylenes	mg/L	-	-	-	<0.00050	<0.00050
Chlorobenzene	mg/L	0.025	-	-	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	-	-	<0.00050	<0.00050

Notes:
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 during the monitoring period (October 12 – 18) on October 15 and 16.
[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.

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 Influent SP-W-IN VA25C7022-001 2025-10-10 17:40	Station SP-W-IN Influent SP-W-IN VA25C7369-001 2025-10-15 13:34	Station SP-W-OUT Effluent SP-W-OUT VA25C7022-003 2025-10-10 16:40	Station SP-W-OUT Effluent SP-W-OUT-DUP VA25C7022-004 2025-10-10 16:40	Station SP-W-OUT Effluent SP-W-OUT VA25C7369-003 2025-10-15 10:33
		Long Term	Short Term						
General Parameters									
pH - Field	pH units	- [2]	-	5.5 - 9.0	7.88	7.5	7.87	-	7.6
Specific Conductivity - Field	µS/cm	-	-	-	887	897	758	-	689
Temperature - Field	°C	-	-	-	12.8	13.4	13	-	10.2
Salinity - Field	ppt	-	-	-	0.44	0.44	0.37	-	0.34
Turbidity - Field	NTU	-	-	-	7.97	13.58	2.06	-	2.17
TSS	mg/L	-	-	25 or 75 [6]	9.5	10.1	<3.0	<3.0	<3.0
Dissolved Oxygen - Field	mg/L	≥8	-	-	10.21	11.24	12.09	-	11.56
Total Hardness	mg/L	-	-	-	126	110	115	115	123
Dissolved Hardness	mg/L	-	-	-	130	103	117	119	122
Anions and Nutrients									
Sulphate	mg/L	-	-	-	309	316	202	202	227
Chloride	mg/L	-	-	-	31.2	22.2	10.4	10.5	16.2
Fluoride	mg/L	-	1.5	-	0.117	0.106	0.086	0.088	<0.100
Ammonia (N-NH_3)	mg/L	3.1-7.8 [3]	21-52 [3]	-	0.0168	0.0097	0.0192	0.0299	0.0443
Nitrite (N-NO_2)	mg/L	-	-	-	0.0434	0.0329	0.0375	0.038	0.0633
Nitrate (N-NO_3)	mg/L	3.7	339	-	2.12	1.54	2.37	2.39	2.2
Total Organic Carbon (TOC)	mg/L	-	-	-	4.46	2.84	2.56	2.6	2.8
Dissolved Organic Carbon (DOC)	mg/L	-	-	-	4.01	2.73	2.57	2.47	2.69
Total Metals									
Aluminum, total (T-Al)	mg/L	-	-	-	0.58	0.623	0.0276	0.0276	0.0414
Antimony, total (T-Sb)	mg/L	-	0.27 [4]	-	0.00187	0.00146	0.00149	0.0015	0.00146
Arsenic, total (T-As)	mg/L	0.0125	-	-	0.00132	0.00119	0.00123	0.00126	0.00099
Barium, total (T-Ba)	mg/L	-	-	-	0.0197	0.0194	0.0032	0.00322	0.00313
Beryllium, total (T-Be)	mg/L	0.1	-	-	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Boron, total (T-B)	mg/L	1.2	-	-	0.068	0.055	0.028	0.028	0.025
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	<0.0000350	<0.0000300	<0.0000125	<0.0000100	<0.0000150
Chromium, total (T-Cr)	mg/L	-	-	-	0.00109	0.00181	<0.00050	0.00084	<0.00050
Cobalt, total (T-Co)	mg/L	-	-	-	0.0003	0.00021	<0.00010	<0.00010	<0.00010
Copper, total (T-Cu)	mg/L	- [2]	- [2]	0.0043	0.00209	0.00178	0.00126	0.00122	0.00125
Iron, total (T-Fe)	mg/L	-	-	-	0.429	0.416	0.014	0.016	0.043
Lead, total (T-Pb)	mg/L	- [2]	- [2]	0.0035	0.000868	0.000404	<0.000050	<0.000050	0.000088
Manganese, total (T-Mn)	mg/L	-	-	-	0.0568	0.0363	0.0201	0.0197	0.0276
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.0438	0.053	0.0343	0.0344	0.0323
Nickel, total (T-Ni)	mg/L	0.0083	-	-	0.00068	0.00093	<0.00050	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	-	0.000145	0.000302	0.000166	0.000134	0.000199
Silver, total (T-Ag)	mg/L	0.0005	0.0037	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thallium, total (T-Tl)	mg/L	-	-	-	0.000021	0.000014	0.000027	0.000027	0.000031
Uranium, total (T-U)	mg/L	-	-	-	0.0162	0.0135	0.0109	0.0106	0.00941
Vanadium, total (T-V)	mg/L	- [2]	-	0.0081	0.00262	0.00228	0.00147	0.0015	0.00125
Zinc, total (T-Zn)	mg/L	- [2]	- [2]	0.0133	0.0103	0.0054	<0.0030	<0.0030	0.0034
Hexavalent Chromium, total	mg/L	0.0015	-	-	0.00075	0.00118	0.00054	0.00056	<0.00050
Dissolved Metals									
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	<0.0000150	0.0000202	<0.0000100	<0.0000100	<0.0000100
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.00092	0.00121	0.00116	0.00117	0.00086
Iron, dissolved (D-Fe)	mg/L	-	-	-	0.016	<0.010	0.014	0.013	0.017
Lead, dissolved (D-Pb)	mg/L	-	-	-	0.000053	<0.000050	<0.000050	<0.000050	<0.000050
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.0419	0.0212	0.0192	0.0192	0.025
Nickel, dissolved (D-Ni)	mg/L	-	-	-	0.00058	<0.00050	<0.00050	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.217	0.176	0.159	0.16	0.161
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00176	0.00148	0.00136	0.00144	0.0011
Zinc, dissolved (D-Zn)	mg/L	-	-	-	0.0044	0.0025	0.0014	0.0014	0.0011
Polycyclic Aromatic Hydrocarbons (PAHs)									
Acenaphthene	mg/L	0.006	-	-	0.000069	-	<0.000010	<0.000010	<0.000010
Acridine	mg/L	-	-	-	<0.000010	-	<0.000010	<0.000010	<0.000010
Anthracene	mg/L	-	-	-	<0.000010	-	<0.000010	<0.000010	<0.000010
Benz(a)anthracene	mg/L	-	-	-	<0.000010	-	<0.000010	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	-	<0.0000050	-	<0.0000050	<0.0000050	<0.0000050
Chrysene	mg/L	0.0001	-	-	<0.000010	-	<0.000010	<0.000010	<0.000010
Fluoranthene	mg/L	-	-	-	<0.000010	-	<0.000010	<0.000010	<0.000010
Fluorene	mg/L	0.012	-	-	0.000027	-	<0.000010	<0.000010	<0.000010
1-methylnaphthalene	mg/L	0.001	-	-	0.000019	-	<0.000010	<0.000010	<0.000010
2-methylnaphthalene	mg/L	0.001	-	-	0.000016	-	<0.000010	<0.000010	<0.000010
Naphthalene	mg/L	0.001	-	-	0.000101	-	<0.000050	<0.000050	<0.000050
Phenanthrene	mg/L	-	-	-	<0.000020	-	<0.000020	<0.000020	<0.000020
Pyrene	mg/L	-	-	-	<0.000010	-	<0.000010	<0.000010	<0.000010
Quinoline	mg/L	-	-	-	<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
Ethylbenzene	mg/L	0.25	-	-	<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
Styrene	mg/L	-	-	-	<0.00050	-	<0.00050	<0.00050	<0.00050
Toluene	mg/L	0.215	-	-	<0.00040	-	<0.00040	<0.00040	<0.00040
Total Xylenes	mg/L	-	-	-	<0.00050	-	<0.00050	<0.00050	<0.00050
Chlorobenzene	mg/L	0.025	-	-	<0.00050	-	<0.00050	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	-	-	<0.00050	-	<0.00050	<0.00050	<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 during the monitoring period (October 12 – 18) on October 15 and 16.
[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.

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]	0.0013-0.016 [3,4]
Station	**Water Type**	**Sample ID**	**Lab ID**	**Sampling Date**		
Influent						
SP-W-IN	Influent	SP-W-IN	VA25C7022-001	2025-10-10	***0.000178***	***0.00385***
SP-W-IN	Influent	SP-W-IN	VA25C7369-001	2025-10-15	0.000037	0.00213
2700GPM-IN	Influent	W2700-IN	VA25C7022-002	2025-10-10	0.000064	0.00214
2700GPM-IN	Influent	W2700-IN	VA25C7369-002	2025-10-15	0.000043	0.00203
Effluent						
SP-W-OUT	Effluent	SP-W-OUT	VA25C7022-003	2025-10-10	0.000026	0.00066
SP-W-OUT	Effluent	SP-W-OUT-DUP	VA25C7022-004	2025-10-10	0.000029	0.00064
SP-W-OUT	Effluent	SP-W-OUT	VA25C7369-003	2025-10-15	0.000047	0.00061

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 Dioxin and Furan Toxicity Equivalency Quantity (TEQ) Results Received at the Time of Reporting.

Parameter					**Lower Bound PCDD/F TEQ**	**Upper Bound PCDD/F TEQ**
Unit					**pg/L**	**pg/L**
Station	**Water Type**	**Sample ID**	**Lab ID**	**Sampling Date**		
Influent						
2700GPM-IN	Influent	W2700-IN	VA25C5673-002	2025-09-27	0.000249	1.11
2700GPM-IN	Influent	W2700-IN	VA25C5782-001	2025-09-29	0.245	1.18
Effluent						
SP-W-OUT	Effluent	SP-W-OUT	VA25C5673-003	2025-09-27	0.000447	1.20
SP-W-OUT	Effluent	SP-W-OUT-DUP	VA25C5673-004	2025-09-27	0.000778	1.15
SP-W-OUT	Effluent	SP-W-OUT	VA25C5782-002	2025-09-29	0.0466	0.871

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

Table C-5:
West Catchment Field Measurements Collected During the Monitoring Period (October 12 – 18).

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	2025-10-12 14:40	12.6	9.47	0.56	54.67	43.8	8.0	1125	No
SP-W-IN	Influent	2025-10-13 11:28	10.7	10.21	0.47	50.83	40.9	7.6	940	No
SP-W-IN	Influent	2025-10-14 10:54	10.6	10.87	0.52	24.84	21.5	7.5	1044	No
SP-W-IN	Influent	2025-10-15 13:34	13.4	11.24	0.44	13.58	13.1	7.5	897	Yes
SP-W-IN	Influent	2025-10-16 10:48	9.7	11.44	0.45	7.28	8.4	7.5	913	No
SP-W-IN	Influent	2025-10-17 17:17	12.9	11.95	0.47	24.54	21.3	7.6	937	No
SP-W-IN	Influent	2025-10-18 17:18	9.9	10.76	0.41	206.17	156.8	8.1	829	No
2700GPM-IN	Influent	2025-10-12 14:29	12.9	10.16	0.46	25.42	22.0	8.1	924	No
2700GPM-IN	Influent	2025-10-15 11:36	10.1	11.75	0.44	13.54	13.1	7.8	881	No
2700GPM-IN	Influent	2025-10-16 11:04	9.9	11.91	0.45	8.81	9.6	7.7	906	No
2700GPM-IN	Influent	2025-10-18 17:15	10.2	12.99	0.47	3.56	5.7	8.3	946	No
Effluent [5]										
SP-W-OUT	Effluent	2025-10-15 10:33	10.2	11.56	0.34	2.17	4.6	7.6	689	No
SP-W-OUT	Effluent	2025-10-16 12:05	10.0	11.22	0.45	1.86	4.4	7.1	901	No
SP-W-OUT	Effluent	2025-10-16 15:51	10.5	11.22	0.45	0.73	3.5	7.8	913	No
2700GPM-OUT	Effluent	2025-10-16 11:10	9.8	11.67	0.45	1.66	4.2	7.8	900	No
2700GPM-OUT	Effluent	2025-10-18 17:11	9.8	10.94	0.49	1.46	4.1	8.0	984	No
2700GPMT1-OUT	Effluent	2025-10-15 10:22	10.2	11.41	0.33	1.73	4.3	7.6	682	No
2700GPMT1-OUT	Effluent	2025-10-16 10:59	10.2	11.59	0.44	2.47	4.8	7.8	893	No
2700GPMT1-OUT	Effluent	2025-10-18 16:20	10.4	9.97	0.48	2.29	4.7	7.7	978	No
2700GPMT4-OUT	Effluent	2025-10-12 14:24	12.6	8.38	0.58	2.54	4.9	7.7	1163	No

Notes:
West catchment influents for October 5 – 11, and effluents from October 11 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 Train 1 was intermittently discharged to Howe Sound at the authorized discharge location (SP-W-OUT) on October 15 and 16. There was no discharge at the authorized discharge location (SP-W-OUT) on October 12 – 14 nor on October 17 – 18; therefore, daily field measurements for SP-W-OUT were not collected on those days.
[6] The PE-111578 discharge limit for TSS is 25 mg/L under dry conditions and 75 mg/L for each day of Wet Conditions.

Table C-6:
West Catchment Daily Discharge Volumes for the Monitoring Period (October 12 – 18).

	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					
2025-10-12	0	158	0	0	0
2025-10-13	0	0	0	0	0
2025-10-14	0	0	0	0	0
2025-10-15	0	695	0	0	663
2025-10-16	0	631	0	0	410
2025-10-17	0	0	0	0	0
2025-10-18	0	1,006	0	0	0

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 m^3/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:
Non-Contact Water Diversion Ditch Outlets Monitoring Results

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

Parameter	Unit	Lowest Applicable Guideline [1, 2]		Station OUT-01	Station OUT-02	Station OUT-06
				Non-Contact Water Diversion Ditch Outlet	Non-Contact Water Diversion Ditch Outlet	Non-Contact Water Diversion Ditch Outlet
				OUT-01	OUT-02	OUT-06
				VA25C5809-001	VA25C5809-002	VA25C6247-001
		Long Term	Short Term	2025-09-29 10:30	2025-09-29 10:00	2025-10-03 13:40
General Parameters						
pH - Field	pH units	6.5 - 9.0	-	***6.0***	6.6	6.5
Specific Conductivity - Field	µS/cm	-	-	31	45	216
Temperature - Field	°C	-	-	14.4	14.2	11.6
Salinity - Field	ppt	-	-	0.01	0.02	0.1
Turbidity - Field	NTU	-	-	2.01	3.05	1.12
TSS	mg/L	-	-	<3.0	<3.0	<3.0
Dissolved Oxygen - Field	mg/L	>=8	>=5	9.29	9.42	10.37
Total Hardness	mg/L	-	-	11.4	7.15	107
Dissolved Hardness	mg/L	-	-	10.7	7.27	100
Anions and Nutrients						
Sulphate [2]	mg/L	128-309	-	2.53	1.41	11.7
Chloride	mg/L	120	600	0.85	0.86	1.13
Fluoride [2]	mg/L	-	0.400-1.36	<0.020	<0.020	<0.020
Ammonia ($N\text{-}NH_3$) [2]	mg/L	1.78-32.4	23.9-25.2	<0.0050	<0.0050	0.0079
Nitrite ($N\text{-}NO_2$) [2]	mg/L	0.02	0.06	<0.0010	<0.0010	<0.0010
Nitrate ($N\text{-}NO_3$)	mg/L	3	32.8	0.814	0.841	1.11
Total Organic Carbon (TOC)	mg/L	-	-	6.37	7.38	2.46
Total Inorganic Carbon (DOC)	mg/L	-	-	6.15	7.07	2.62
Total Metals						
Aluminum, total (T-Al) [2]	mg/L	0.0327-0.270	-	***0.245***	***0.249***	0.0342
Antimony, total (T-Sb)	mg/L	0.074	-	<0.00010	<0.00010	0.00061
Arsenic, total (T-As)	mg/L	0.005	-	0.0002	<0.00010	0.00027
Barium, total (T-Ba)	mg/L	1	-	0.0072	0.00557	0.0278
Beryllium, total (T-Be)	mg/L	0.00013	-	<0.000020	<0.000020	<0.000020
Boron, total (T-B)	mg/L	1.2	29	<0.010	<0.010	0.028
Cadmium, total (T-Cd) [2]	mg/L	0.000036-0.00017	0.00014-0.0022	0.0000165	0.0000115	0.0000225
Chromium, total (T-Cr) [3]	mg/L	0.001	-	<0.00050	<0.00050	<0.00050
Cobalt, total (T-Co) [2]	mg/L	0.00078-0.0011	-	0.00010	0.00010	<0.00010
Copper, total (T-Cu)	mg/L	-	-	0.00149	0.00083	0.00086
Iron, total (T-Fe)	mg/L	0.3	1	0.062	0.050	0.015
Lead, total (T-Pb)	mg/L	-	-	0.000204	0.000063	0.00006
Manganese, total (T-Mn) [2]	mg/L	0.768-1.08	0.816-1.72	0.00447	0.00511	0.00267
Molybdenum, total (T-Mo)	mg/L	0.073	46	0.000429	0.000264	0.00203
Nickel, total (T-Ni) [2]	mg/L	0.0250-0.0780	-	<0.00050	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	0.001	-	<0.000050	0.000056	0.000054
Silver, total (T-Ag)	mg/L	0.00012	-	<0.000010	<0.000010	<0.000010
Thallium, total (T-Tl)	mg/L	0.0008	-	<0.000010	<0.000010	<0.000010
Uranium, total (T-U)	mg/L	0.0085	0.033	0.000087	0.000054	0.000632
Vanadium, total (T-V)	mg/L	0.12	-	0.00052	<0.00050	0.00054
Zinc, total (T-Zn)	mg/L	-	-	<0.0030	<0.0030	0.0041
Hexavalent Chromium, total	mg/L	0.001	-	-	-	-
Dissolved Metals						
Cadmium, dissolved (D-Cd) [2]	mg/L	0.000039-0.00063	0.000030-0.00022	0.0000059	0.0000071	0.0000177
Copper, dissolved (D-Cu) [2]	mg/L	0.000200-0.00087	0.00047-0.0021	***0.00122***	***0.00072***	***0.00080***
Iron, dissolved (D-Fe)	mg/L	-	0.35	0.029	0.037	<0.010
Lead, dissolved (D-Pb) [2]	mg/L	0.0063-0.0068	-	0.000129	<0.000050	<0.000050
Manganese, dissolved (D-Mn) [2]	mg/L	0.29-0.64	1.97-7.06	0.00394	0.00424	0.00228
Nickel, dissolved (D-Ni) [2]	mg/L	0.000800-0.0019	0.0109-0.0164	<0.00050	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	2.5	-	0.0167	0.0121	0.132
Vanadium, dissolved (D-V)	mg/L	-	-	<0.00050	<0.00050	0.00055
Zinc, dissolved (D-Zn) [2]	mg/L	0.010-0.031	0.012-0.052	0.0017	0.0018	0.0016
Polycyclic Aromatic Hydrocarbons (PAHs)						
Acenaphthene	mg/L	0.0058	-	-	-	-
Acridine	mg/L	0.003	-	-	-	-
Anthracene	mg/L	0.000012	-	-	-	-
Benz(a)anthracene	mg/L	0.000018	-	-	-	-
Benzo(a)pyrene	mg/L	0.00001	-	-	-	-
Chrysene	mg/L	-	-	-	-	-
Fluoranthene	mg/L	0.00004	-	-	-	-
Fluorene	mg/L	0.003	-	-	-	-
1-methylnaphthalene	mg/L	-	-	-	-	-
2-methylnaphthalene	mg/L	-	-	-	-	-
Naphthalene	mg/L	0.001	0.001	-	-	-
Phenanthrene	mg/L	0.0003	-	-	-	-
Pyrene	mg/L	0.00002	-	-	-	-
Quinoline	mg/L	0.0034	-	-	-	-
Volatile Organic Compounds (VOCs)						
Benzene	mg/L	0.04	-	-	-	-
Ethylbenzene	mg/L	0.09	-	-	-	-
Methyl-tert-butyl-ether	mg/L	10	3.4	-	-	-
Styrene	mg/L	0.072	-	-	-	-
Toluene	mg/L	0.0005	-	-	-	-
Total Xylenes	mg/L	0.03	-	-	-	-
Chlorobenzene	mg/L	-	-	-	-	-
1,2-Dichlorobenzene	mg/L	-	-	-	-	-

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

Appendix E:
Freshwater Receiving Environment Results

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

Parameter	Unit	Lowest Applicable Guideline [1, 2]		Station SW-01	Station SW-02	Station SW-07	Station SW-04
				Woodfibre Creek Lower Reach	Mill Creek Lower Reach	Upstream Mill Creek	East Creek Lower Reach
				SW-01	SW-02	SW-07	SW-04
				VA25C6424-001	VA25C6424-002	VA25C6424-005	VA25C6424-004
		Long Term	Short Term	2025-10-05 9:00	2025-10-05 10:10	2025-10-05 13:30	2025-10-05 10:30
General Parameters							
pH - Field	pH units	6.5 - 9.0	-	7.7	7.4	7.7	7.0
Specific Conductivity - Field	µS/cm	-	-	11	20	18	155
Temperature - Field	°C	-	-	9.9	10	11.2	11.5
Salinity - Field	ppt	-	-	0	0.01	0.01	0.07
Turbidity - Field	NTU	-	-	1.52	0.89	1.15	1.75
TSS	mg/L	-	-	<3.0	<3.0	<3.0	<3.0
Dissolved Oxygen - Field	mg/L	>=8	>=5	11.6	11.68	11.11	11.11
Total Hardness	mg/L	-	-	2.91	5.05	4.57	52.4
Dissolved Hardness	mg/L	-	-	2.97	5.2	4.67	56.8
Anions and Nutrients							
Sulphate [2]	mg/L	128-218	-	0.45	2.56	2.67	12
Chloride	mg/L	120	600	0.64	0.92	0.95	14.3
Fluoride [2]	mg/L	-	0.400-1.17	<0.020	<0.020	<0.020	0.181
Ammonia ($N\text{-}NH_3$) [2]	mg/L	0.239-32.4	5.68-25.2	<0.0050	<0.0050	<0.0050	0.0059
Nitrite ($N\text{-}NO_2$) [2]	mg/L	0.0200-0.100	0.06-0.3	<0.0010	<0.0010	<0.0010	<0.0010
Nitrate ($N\text{-}NO_3$)	mg/L	3	32.8	0.0491	0.117	0.119	0.0141
Total Organic Carbon (TOC)	mg/L	-	-	3.03	1.43	1.22	0.84
Total Inorganic Carbon (DOC)	mg/L	-	-	2.66	1.28	1.26	0.76
Total Metals							
Aluminum, total (T-Al) [2]	mg/L	0.0469-0.519	-	0.136	0.0656	0.0583	***0.0779***
Antimony, total (T-Sb)	mg/L	0.074	-	<0.00010	<0.00010	<0.00010	0.00026
Arsenic, total (T-As)	mg/L	0.005	-	0.00017	0.00011	0.00011	0.00108
Barium, total (T-Ba)	mg/L	1	-	0.00208	0.00326	0.00279	0.00904
Beryllium, total (T-Be)	mg/L	0.00013	-	<0.000020	<0.000020	<0.000020	<0.000020
Boron, total (T-B)	mg/L	1.2	29	<0.010	0.01	0.011	0.012
Cadmium, total (T-Cd) [2]	mg/L	0.000036-0.000093	0.00011-0.0011	<0.0000050	0.0000066	0.0000063	<0.0000150
Chromium, total (T-Cr) [3]	mg/L	0.001	-	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, total (T-Co) [2]	mg/L	0.000389-0.000780	-	<0.00010	<0.00010	<0.00010	<0.00010
Copper, total (T-Cu)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050
Iron, total (T-Fe)	mg/L	0.3	1	0.041	0.014	<0.010	0.047
Lead, total (T-Pb)	mg/L	-	-	0.000064	<0.000050	<0.000050	<0.000050
Manganese, total (T-Mn) [2]	mg/L	0.768-0.836	0.816-1.12	0.00114	0.00065	0.00062	0.0292
Molybdenum, total (T-Mo)	mg/L	0.073	46	0.00031	0.000535	0.000486	0.0208
Nickel, total (T-Ni) [2]	mg/L	0.0250	-	<0.00050	<0.00050	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	0.001	-	<0.000050	<0.000050	<0.000050	<0.000050
Silver, total (T-Ag)	mg/L	0.00012	-	<0.000010	<0.000010	<0.000010	<0.000010
Thallium, total (T-Tl)	mg/L	0.0008	-	<0.000010	<0.000010	<0.000010	0.00001
Uranium, total (T-U)	mg/L	0.0085	0.033	0.00064	0.000158	0.000132	0.000232
Vanadium, total (T-V)	mg/L	0.12	-	<0.00050	<0.00050	<0.00050	<0.00050
Zinc, total (T-Zn)	mg/L	-	-	<0.0030	<0.0030	<0.0030	<0.0030
Hexavalent Chromium, total	mg/L	0.001	-	<0.00050	<0.00050	<0.00050	<0.00050
Dissolved Metals							
Cadmium, dissolved (D-Cd) [2]	mg/L	0.0000178-0.00013	0.000038-0.00030	<0.0000050	0.0000072	0.0000079	<0.0000200
Copper, dissolved (D-Cu) [2]	mg/L	0.000200-0.00150	0.00104-0.00402	0.00025	0.00030	0.00030	<0.00020
Iron, dissolved (D-Fe)	mg/L	-	0.35	0.028	<0.010	<0.010	<0.010
Lead, dissolved (D-Pb) [2]	mg/L	0.00178-0.00349	-	0.000052	<0.000050	<0.000050	<0.000050
Manganese, dissolved (D-Mn) [2]	mg/L	0.320-0.500	1.97-3.77	0.00161	0.0019	0.00089	0.025
Nickel, dissolved (D-Ni) [2]	mg/L	0.000600-0.00100	0.00910-0.0132	<0.00050	<0.00050	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	2.5	-	0.00399	0.00802	0.0077	0.045
Vanadium, dissolved (D-V)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050
Zinc, dissolved (D-Zn) [2]	mg/L	0.00208-0.0129	0.00796-0.0429	<0.0010	<0.0010	<0.0010	0.0019
Polycyclic Aromatic Hydrocarbons (PAHs)							
Acenaphthene	mg/L	0.0058	-	<0.000010	<0.000010	<0.000010	<0.000010
Acridine	mg/L	0.003	-	<0.000010	<0.000010	<0.000010	<0.000010
Anthracene	mg/L	0.000012	-	<0.000010	<0.000010	<0.000010	<0.000010
Benz(a)anthracene	mg/L	0.000018	-	<0.000010	<0.000010	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Chrysene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010
Fluoranthene	mg/L	0.00004	-	<0.000010	<0.000010	<0.000010	<0.000010
Fluorene	mg/L	0.003	-	<0.000010	<0.000010	<0.000010	<0.000010
1-methylnaphthalene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010
2-methylnaphthalene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010
Naphthalene	mg/L	0.001	0.001	<0.000050	<0.000050	<0.000050	<0.000050
Phenanthrene	mg/L	0.0003	-	<0.000020	<0.000020	<0.000020	<0.000020
Pyrene	mg/L	0.00002	-	<0.000010	<0.000010	<0.000010	<0.000010
Quinoline	mg/L	0.0034	-	<0.000050	<0.000050	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)							
Benzene	mg/L	0.04	-	<0.00050	<0.00050	<0.00050	<0.00050
Ethylbenzene	mg/L	0.09	-	<0.00050	<0.00050	<0.00050	<0.00050
Methyl-tert-butyl-ether	mg/L	10	3.4	<0.00050	<0.00050	<0.00050	<0.00050
Styrene	mg/L	0.072	-	<0.00050	<0.00050	<0.00050	<0.00050
Toluene	mg/L	0.0005	-	<0.00040	<0.00040	<0.00040	<0.00040
Total Xylenes	mg/L	0.03	-	<0.00050	<0.00050	<0.00050	<0.00050
Chlorobenzene	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050

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

Table E-2:
Freshwater Dioxin and Furan Toxicity Equivalency Quantity (TEQ) Results Received at the Time of Reporting.

Parameter					**Lower Bound PCDD/F TEQ**	**Upper Bound PCDD/F TEQ**
Unit					**pg/L**	**pg/L**
Station	**Water Type**	**Sample ID**	**Lab ID**	**Sampling Date**		
SW-01	Lower Reach of Woodfibre Creek (near the mouth)	SW-01	VA25C6426-001	2025-10-05	0.00732	1.70
SW-04	Lower Reach of East Creek (near the outlet to the outfall culvert)	SW-04	VA25C6426-004	2025-10-05	0.00136	1.47
SW-02	Lower Freshwater Reach of Mill Creek (upstream of the third bridge)	SW-02	VA25C6426-002	2025-10-05	0.00137	1.52
SW-07	Upstream Mill Creek (at the diversion inlet)	SW-07	VA25C6426-005	2025-10-05	0	1.30

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

Appendix F:
Estuarine Water Receiving Environment Results

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

Parameter	Unit	Lowest Applicable Guideline [1]		Station SW-03 Mill Creek Estuary SW-03 VA25C6424-003 2025-10-05 9:40
		Long Term	Short Term	
General Parameters				
pH - Field	pH units	7.0 - 8.7	-	***6.2***
Specific Conductivity - Field	µS/cm	-	-	2629
Temperature - Field	°C	-	-	10.5
Salinity - Field	ppt	-	-	1.4
Turbidity - Field	NTU	-	-	3.88
TSS	mg/L	-	-	<6.2
Dissolved Oxygen - Field	mg/L	-	-	11.04
Total Hardness	mg/L	-	-	130.00
Dissolved Hardness	mg/L	-	-	118.00
Anions and Nutrients				
Sulphate	mg/L	-	-	70.2
Chloride	mg/L	-	-	464
Fluoride	mg/L	-	-	<0.200
Ammonia ($N\text{-}NH_3$)	mg/L	-	-	<0.0050
Nitrite ($N\text{-}NO_2$)	mg/L	-	-	<0.0100
Nitrate ($N\text{-}NO_3$)	mg/L	-	-	0.14
Total Organic Carbon (TOC)	mg/L	-	-	1.4
Total Inorganic Carbon (DOC)	mg/L	-	-	1.34
Total Metals				
Aluminum, total (T-Al)	mg/L	-	-	0.248
Antimony, total (T-Sb)	mg/L	-	-	<0.00010
Arsenic, total (T-As)	mg/L	-	-	0.00019
Barium, total (T-Ba)	mg/L	-	-	0.00616
Beryllium, total (T-Be)	mg/L	-	-	<0.000020
Boron, total (T-B)	mg/L	-	-	0.108
Cadmium, total (T-Cd)	mg/L	-	-	0.0000115
Chromium, total (T-Cr)	mg/L	-	-	<0.00050
Cobalt, total (T-Co)	mg/L	-	-	0.00011
Copper, total (T-Cu)	mg/L	0.002	0.003	0.00063
Iron, total (T-Fe)	mg/L	-	-	0.149
Lead, total (T-Pb)	mg/L	0.002	0.14	0.000068
Manganese, total (T-Mn)	mg/L	-	-	0.00469
Molybdenum, total (T-Mo)	mg/L	-	-	0.000994
Nickel, total (T-Ni)	mg/L	-	-	<0.00050
Selenium, total (T-Se)	mg/L	-	-	<0.000050
Silver, total (T-Ag)	mg/L	-	-	<0.000010
Thallium, total (T-Tl)	mg/L	-	-	<0.000010
Uranium, total (T-U)	mg/L	-	-	0.00029
Vanadium, total (T-V)	mg/L	-	-	0.00065
Zinc, total (T-Zn)	mg/L	-	-	<0.0030
Hexavalent Chromium, total	mg/L	-	-	<0.00050
Dissolved Metals				
Cadmium, dissolved (D-Cd)	mg/L	-	-	0.0000099
Copper, dissolved (D-Cu)	mg/L	-	-	0.00032
Iron, dissolved (D-Fe)	mg/L	-	-	<0.010
Lead, dissolved (D-Pb)	mg/L	-	-	<0.000050
Manganese, dissolved (D-Mn)	mg/L	-	-	0.00104
Nickel, dissolved (D-Ni)	mg/L	-	-	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	0.138
Vanadium, dissolved (D-V)	mg/L	-	-	<0.00050
Zinc, dissolved (D-Zn)	mg/L	-	-	<0.0010
Polycyclic Aromatic Hydrocarbons (PAHs)				
Acenaphthene	mg/L	-	-	<0.000010
Acridine	mg/L	-	-	<0.000010
Anthracene	mg/L	-	-	<0.000010
Benz(a)anthracene	mg/L	-	-	<0.000010
Benzo(a)pyrene	mg/L	-	-	<0.0000050
Chrysene	mg/L	-	-	<0.000010
Fluoranthene	mg/L	-	-	<0.000010
Fluorene	mg/L	-	-	<0.000010
1-methylnaphthalene	mg/L	-	-	<0.000010
2-methylnaphthalene	mg/L	-	-	<0.000010
Naphthalene	mg/L	-	-	<0.000050
Phenanthrene	mg/L	-	-	<0.000020
Pyrene	mg/L	-	-	<0.000010
Quinoline	mg/L	-	-	<0.000050
Volatile Organic Compounds (VOCs)				
Benzene	mg/L	-	-	<0.00050
Ethylbenzene	mg/L	-	-	<0.00050
Methyl-tert-butyl-ether	mg/L	-	-	<0.00050
Styrene	mg/L	-	-	<0.00050
Toluene	mg/L	-	-	<0.00040
Total Xylenes	mg/L	-	-	<0.00050
Chlorobenzene	mg/L	-	-	<0.00050
1,2-Dichlorobenzene	mg/L	-	-	<0.00050

Notes:
Non-detect results are screened using the detection limit value.
Results in ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of estuarine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of estuarine water aquatic life.
[1] The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.

Table F-2:
Estuarine Water Dioxin and Furan Toxicity Equivalency Quantity (TEQ) Results Received at the Time of Reporting.

Parameter					**Lower Bound PCDD/F TEQ**	**Upper Bound PCDD/F TEQ**
Unit					**pg/L**	**pg/L**
Station	**Water Type**	**Sample ID**	**Lab ID**	**Sampling Date**		
SW-03	Mill Creek Estuary	SW-03	VA25C6426-003	2025-10-05	0.000525	1.05

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