TECHNICAL MEMORANDUM

To:	**Ian McAllister, Ashleigh Crompton, Mike Champion, Mark Zan and Ryan Schucroft (Woodfibre LNG)**	**Date:**	**30 May 2025**
From:	**Holly Pelletier, Cheng Kuang and Patrick Mueller (Lorax)**	**Project #:**	**A633-9**
Subject:	**PE-111578 Weekly Discharge and Compliance Report #65 for May 18 - 24**		

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

This technical memorandum (Report #65) was prepared by Lorax Environmental and summarizes WDA monitoring conducted for the period of May 18 - 24. 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 #65 has been prepared to meet the requirements specified in Condition 4.2 of PE-111578:

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

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

1. Current Conditions

1.1 Water Management Infrastructure

The Construction Phase of the Woodfibre LNG Export Facility commenced in October 2023. Shoring works along the foreshore areas were initiated in December 2023, and in early 2024 construction of water management infrastructure commenced. 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. Discharge to Howe Sound from the East and West Sedimentation Ponds commenced April and October 2024, respectively.

The West WWTP was commissioned August and September 2024, but operation of the West WWTP was subsequently suspended September 25, 2024 for 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 approved treatment process is maintained. Lower than expected volumes of contaminated contact water have been encountered during construction, therefore the operation of the West WWTP remains suspended and west catchment waters that require treatment are directed to the East WWTP.

Non-contact water 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 diverted around the east catchment along pre-existing road ditches that flow to East Creek or Mill Creek. To facilitate the replacement of the East Creek discharge culvert at OUT-12 (station SW-04), the lower reach of East Creek was temporarily diverted to an adjacent culvert, OUT-11, on September 17, 2024.

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

Flocculant-based TSS settling systems are used at the East and West Sedimentation Ponds to remove TSS from pond effluent. The first West Sedimentation Pond TSS settling system (ESC) was commissioned for use on September 25, 2024, with an 820 m^3/day installed capacity.

Additional TSS settling systems (W500GPM) was commissioned for use on November 28 and provides an additional 2,725 m^3/day installed capacity for clarifying water. A third TSS settling system (E500GPM) was commissioned for use at the East Sedimentation Pond on December 4, 2024, also with 2,725 m^3/day installed capacity.

Discharge from the East and West Sedimentation Ponds is controlled using pumps. Water stored in the ponds is pumped to a TSS settling system prior to discharge through the authorized outfall structures adjacent to each pond. Some of the TSS clarified water may be recirculated back to the ponds or used for road dust suppression. Non-contaminated contact water stored in the East Sedimentation Pond is clarified through the E500GPM prior to re-use or discharge to Howe Sound at location SP-E-OUT. The west catchment discharge location, SP-W-OUT, receives the combined clarified effluents from the ESC and W500GPM TSS settling systems. Each of the authorized discharge locations (SP-E-OUT and SP-W-OUT) has an initial dilution zone (IDZ) where discharged water mixes with Howe Sound surface waters. The IDZ is defined in PE-111578 and extends in a 150 m radius from each point of discharge into Howe Sound.

Preparations underway for the next stages of construction will include further upgrades to water management in the east and west catchments and consolidate the three TSS settling systems currently on site into a single high capacity system located adjacent to the West Sedimentation Pond. Commissioning of the planned system is scheduled to commence August 2025. The planned modifications will result in most of the east and west catchments non-contaminated contact water being clarified through the high capacity TSS settling system and discharged at SP-W-OUT.

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

1.2 Weather and Water Management

Variable weather conditions were observed during the monitoring period (May 18 - 24), with precipitation recorded on May 19, 20, and 21. The total precipitation amount during the monitoring period was 31.6 mm with the majority occurring on May 19 (24.6 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
2025-05-18	0	14.9	7.6	Overcast
2025-05-19	24.6	12.1	6.6	Rain
2025-05-20	6.8	13.8	8.8	Scattered Showers
2025-05-21	0.2	17.0	8.4	Overcast
2025-05-22	0	18.8	7.7	Mix of Sun and Cloud
2025-05-23	0	16.9	9.2	Mix of Sun and Cloud
2025-05-24	0	20.8	9.7	Mix of Sun and Cloud

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

From May 18 - 24, the East Sedimentation Pond received non-contaminated contact water from Area 1100 North Collection Sump, Area 1100 Trench 10, and recirculated water from the East WWTP and E500GPM TSS settling system (Appendix A, Figure 2). Non-contaminated contact waters from Area 4100 Collection Sump were directed to the West Sedimentation Pond, as well as recirculated water from the W500GPM and ESC TSS settling systems (Appendix A, Figure 3). During the monitoring period (May 18 - 24), a total of 1,298 m^3 of water from the East Sedimentation Pond was transferred to the West Sedimentation Pond.

Routine operation of the East WWTP continued during the monitoring period (May 18 - 24). Concrete contact waters were periodically directed to the East WWTP for treatment, as well as water stored in the East Sedimentation Pond (Appendix A, Figure 2 and Figure 3). East WWTP treated effluent was discharged to the East Sedimentation Pond each day during the monitoring period (May 18 - 24). Pond effluent was clarified through the E500GPM TSS settling system and recirculated as influent to the East Sedimentation Pond on May 19 and 20. Effluent was not discharged to Howe Sound (station SP-E-OUT) during the monitoring period. Daily water volumes processed by the East WWTP and the East TSS settling system (E500GPM) are provided in Appendix B (Table B-6).

West Sedimentation Pond effluent was clarified through the W500GPM system and recirculated to the West Sedimentation Pond, discharged to Howe Sound, or used for road dust suppression each day during the monitoring period (May 18 - 24). The West ESC (150 GPM) TSS settling system was not operational. A total of 858 m^3 of West Sedimentation Pond effluent was clarified through the W500GPM system and directed to the authorized discharge location (SP-W-OUT) on May 19. From May 19 to 24, at total of 375 m^3 clarified effluent was reclaimed (*i.e.*, used for road dust suppression). Daily clarified effluent volumes from the TSS settling systems, volumes of reclaimed water, and volumes discharged to Howe Sound from the west catchment authorized discharge location (SP-W-OUT) are provided in Appendix C (Table C-6).

2. Monitoring Summary

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

The following compliance and supplementary monitoring stations are currently being monitored:

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

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

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

Two flocculant-based TSS settling systems are used at the West Sedimentation Pond (ESC and W500GPM) as described in Section 1.1. Influent and effluent are monitored for each system at stations ESC-W-IN, ESC-W-OUT, W500GPM-IN and W500GPM-OUT. One TSS settling system (E500GPM) is used at the East Sedimentation Pond (Section 1.1). Influent and effluent are monitored at stations E500GPM-IN and E500GPM-OUT, respectively. The TSS settling system stations are supplemental to the PE- 111578 monitoring requirements and are monitored at the discretion of field staff.

Water quality was monitored at stations OUT-01, OUT-02, IDZ-E1, IDZ-E2, IDZ-W1, IDZ-W2, WWTP-E-IN, WWTP-E-OUT, SP-E-IN, E500GPM-IN, E500GPM-OUT, SP-W-IN, SP-W-OUT, W500GPM-IN, and W500GPM-OUT during the monitoring period (May 18 - 24). Sampling dates and parameters tested are summarized in Table 2.

Overall, the PE-111578 monitoring requirements that were applicable during the monitoring period (May 18 - 24) were met.

Daily field parameters and a weekly analytical sample were not collected at the east catchment effluent station (SP-E-OUT) during the monitoring period (May 18 - 24) and daily field parameters were not collected at the west catchment effluent station (SP-W-OUT) on May 18 nor May 20 through 24 as there was no discharge to Howe Sound on those days. Daily field parameters and a weekly analytical sample were not collected at the influent and effluent stations of the West WWTP (WWTP-W-IN and WWTP-W-OUT, respectively) as it was not operational during the monitoring period.

Table 2: Summary of PE-111578 Monitoring Samples Collected May 18 - 24.

Sampling Date	Sample	Description	Parameters Tested	Monitoring Frequency
May 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
	W500GPM-IN	West 500 GPM TSS settling system at the influent meter box	Field Parameters.	P
	W500GPM-OUT	West 500 GPM TSS settling system at the effluent meter box		
May 19, 2025	SP-E-IN	East Sedimentation Pond 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		
	E500GPM-IN	East 500 GPM TSS settling system at the influent meter box	Field Parameters.	P
	E500GPM-OUT	East 500 GPM TSS settling system at the effluent meter box		
	SP-W-IN	West Sedimentation Pond influent monitored at cell 1 of the pond	Field, Physical & General Parameters, VH & BTEX, EPHs & PAHs, Total, Dissolved and Speciated Metals, VOCs, Methylmercury, Dioxins & Furans.	D, W_1, W_2
	SP-W-OUT	West Sedimentation Pond clarified effluent discharge to Howe Sound, collected at sampling port	Field, Physical & General Parameters, VH & BTEX, EPHs & PAHs, Total, Dissolved and Speciated Metals, VOCs, Methylmercury, Dioxins & Furans.	D, W_1, W_2
	W500GPM-IN	West 500 GPM TSS settling system at the influent meter box	Field Parameters.	P
	W500GPM-OUT	West 500 GPM TSS settling system at the effluent meter box		
	OUT-02	Non-contact water diversion ditch outlet	Field, Physical & General Parameters, Total and Dissolved Metals, and Methylmercury.	M
May 20, 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		
	E500GPM-IN	East 500 GPM TSS settling system at the influent meter box	Field Parameters.	P
	E500GPM-OUT	East 500 GPM TSS settling system at the effluent meter box	Field, Physical & General Parameters, VH & BTEX, EPHs & PAHs, Total, Dissolved and Speciated Metals, and VOCs.	P
	SP-W-IN	West Sedimentation Pond influent monitored at cell 1 of the pond	Field Parameters.	D
	W500GPM-IN	West 500 GPM TSS settling system at the influent meter box	Field Parameters.	P
	W500GPM-OUT	West 500 GPM TSS settling system at the effluent meter box		
	OUT-01	Non-contact water diversion ditch outlet	Field, Physical & General Parameters, Total and Dissolved Metals, and Methylmercury.	M
	IDZ-E1-0.5	Howe Sound IDZ station E1; 0.5 m below surface	Field and Physical Parameters.	W_3
	IDZ-E1-2m	Howe Sound IDZ station E1; 2 m below surface		
	IDZ-E1-SF	Howe Sound IDZ station E1; 2 m above the seafloor		
	IDZ-E2-0.5	Howe Sound IDZ station E2; 0.5 m below surface		
	IDZ-E2-2m	Howe Sound IDZ station E2; 2 m below surface		
	IDZ-E2-SF	Howe Sound IDZ station E2; 2 m above the seafloor		
	IDZ-W1-0.5	Howe Sound IDZ station W1; 0.5 m below surface		
	IDZ-W1-2m	Howe Sound IDZ station W1; 2 m below surface		
	IDZ-W1-SF	Howe Sound IDZ station W1; 2 m above the seafloor		
	IDZ-W2-0.5	Howe Sound IDZ station W2; 0.5 m below surface		
	IDZ-W2-2m	Howe Sound IDZ station W2; 2 m below surface		
	IDZ-W2-SF	Howe Sound IDZ station W2; 2 m above the seafloor		
May 21, 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
	W500GPM-IN	West 500 GPM TSS settling system at the influent meter box	Field Parameters.	P
	W500GPM-OUT	West 500 GPM TSS settling system at the effluent meter box		
May 22, 2025	SP-E-IN	East Sedimentation Pond influent monitored at cell 1 of the pond	Field, Physical & General Parameters, VH & BTEX, EPHs & PAHs, Total, Dissolved and Speciated Metals, VOCs, Methylmercury, Dioxins & Furans.	D, W_1, W_2
	WWTP-E-IN	East WWTP at the influent meter box	Field, Physical & General Parameters, VH & BTEX, EPHs & PAHs, Total, Dissolved and Speciated Metals, VOCs, Methylmercury, Dioxins & Furans.	D, W_1, W_2
	WWTP-E-OUT	East WWTP at the effluent meter box		
	SP-W-IN	West Sedimentation Pond influent monitored at cell 1 of the pond	Field Parameters.	D
	W500GPM-IN	West 500 GPM TSS settling system at the influent meter box	Field Parameters.	P
	W500GPM-OUT	West 500 GPM TSS settling system at the effluent meter box		
May 23, 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
	W500GPM-IN	West 500 GPM TSS settling system at the influent meter box	Field Parameters.	P
	W500GPM-OUT	West 500 GPM TSS settling system at the effluent meter box		
May 24, 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
	W500GPM-IN	West 500 GPM TSS settling system at the influent meter box	Field Parameters.	P
	W500GPM-OUT	West 500 GPM TSS settling system at the effluent meter box		

Notes:
Monitoring frequency requirements under PE-111578 are indicated as follows:
D – daily monitoring of field parameters at WWTP and sedimentation pond influent and effluent stations.
M – monthly monitoring for all parameters at WWTP, sedimentation pond and receiving environment stations.
M_5 – spring high frequency (5-in-30) sampling for receiving environment stations.
W_1 – initial high frequency monitoring for physical parameters at WWTP and sedimentation pond influent and effluent stations.
W_2 – initial high frequency monitoring for all parameters at WWTP and sedimentation pond influent and effluent stations.
W_3 – initial high frequency monitoring for field and physical parameters at IDZ stations.
P – periodic monitoring for targeted parameters that is supplementary to PE-111578 requirements.

3. Water Quality Results

3.1 Screening and Reporting Overview

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

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

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

3.2 Summary of Reported Results

Field measurements and analytical results included in this weekly report (Report #65) are listed below in Table 3. Testing for methylmercury, dioxins and furans typically requires up to four

weeks to complete. Analytical results not reported will be included in future weekly reports. Reporting of results is pending for the following samples and parameters:

- IDZ-E1, IDZ-E2, IDZ-W1, IDZ-W2, WQR1, WQR2 collected March 25 at 0.5 m below surface (chronic toxicity)
- IDZ-W1 and IDZ-W2 collected May 5 (dioxins and furans)
- IDZ-E1, IDZ-E2, WQR1, and WQR2 collected May 6 (methylmercury, dioxins and furans)
- IDZ-W1, IDZ-W2, and WQR2 collected May 7 (field and all analytical parameters)
- SP-W-IN and W500GPM-OUT collected May 9 (dioxins and furans)
- IDZ-E1, IDZ-E2 and WQR1 collected May 9 (field and all analytical parameters)
- SP-E-IN, WWTP-E-IN, and WWTP-E-OUT collected May 10 (dioxins and furans)
- SW-01 and SW-04 collected May 12 (methylmercury, dioxins and furans)
- SW-02, SW-03, and SW-07 collected May 13 (methylmercury, dioxins and furans)
- SP-E-IN, WWTP-E-IN, and WWTP-E-OUT collected May 14 (dioxins and furans)
- SP-W-IN and W500GPM-OUT collected May 15 (dioxins and furans)
- SP-W-IN and SP-W-OUT collected May 19 (dioxins and furans)
- OUT-02 collected May 19 (methylmercury)
- OUT-01 collected May 20 (field and all analytical parameters)
- IDZ-E1, IDZ-E2, IDZ-W1, and IDZ-W2 collected May 20 (field and all analytical parameters)
- SP-E-IN, WWTP-E-IN, and WWTP-E-OUT collected May 22 (methylmercury, dioxins and furans)

Table 3: Summary of Analytical Results Included in Weekly Discharge and Compliance Report #65.

Sample	Description	Sampling Date	Parameters Reported
WQR1-0.5	Reference site 1; 0.5 m below surface	April 11, 2025	Dioxins and Furans.
WQR1-2m	Reference site 1; 2 m below surface		
WQR1-SF	Reference site 1; 2 m above the seafloor		
WQR2-0.5	Reference site 2; 0.5 m below surface		
WQR2-2m	Reference site 2; 2 m below surface		
WQR2-SF	Reference site 2; 2 m above the seafloor		
SW-02	Lower Reach of Mill Creek (upstream of the third bridge)	April 12, 2025	Dioxins and Furans.
SW-03	Mill Creek Estuary		
SW-07	Upstream Mill Creek (at the diversion inlet)		
SW-01	Lower Reach of Woodfibre Creek (near the mouth)	April 13, 2025	Dioxins and Furans.
SW-04	Lower Reach of East Creek (near the outlet to the outfall culvert)		
IDZ-W1-0.5	Howe Sound IDZ station W1; 0.5 m below surface		
IDZ-W1-2m	Howe Sound IDZ station W1; 2 m below surface		
IDZ-W1-SF	Howe Sound IDZ station W1; 2 m above the seafloor		
IDZ-W2-0.5	Howe Sound IDZ station W2; 0.5 m below surface		
IDZ-W2-2m	Howe Sound IDZ station W2; 2 m below surface		
IDZ-W2-SF	Howe Sound IDZ station W2; 2 m above the seafloor		
WQR2-0.5	Reference site 2; 0.5 m below surface		
WQR2-2m	Reference site 2; 2 m below surface		
WQR2-SF	Reference site 2; 2 m above the seafloor		
IDZ-E1-0.5	Howe Sound IDZ station E1; 0.5 m below surface	April 14, 2025	Dioxins and Furans.
IDZ-E1-2m	Howe Sound IDZ station E1; 2 m below surface		
IDZ-E1-SF	Howe Sound IDZ station E1; 2 m above the seafloor		
IDZ-E2-0.5	Howe Sound IDZ station E2; 0.5 m below surface		
IDZ-E2-2m	Howe Sound IDZ station E2; 2 m below surface		
IDZ-E2-SF	Howe Sound IDZ station E2; 2 m above the seafloor		
WQR1-0.5	Reference site 1; 0.5 m below surface		
WQR1-2m	Reference site 1; 2 m below surface		
WQR1-SF	Reference site 1; 2 m above the seafloor		
SP-E-IN	East Sedimentation Pond influent monitored at cell 1 of the pond	April 16, 2025	Dioxins and Furans.
SP-E-OUT	East Sedimentation Pond clarified effluent discharge to Howe Sound, collected at the manhole adjacent to the outfall		
SP-W-IN	West Sedimentation Pond influent monitored at cell 1 of the pond		
SP-W-OUT	West Sedimentation Pond clarified effluent discharge to Howe Sound, collected at sampling port		
WWTP-E-IN	East WWTP at the influent meter box	April 19, 2025	Dioxins and Furans.
WWTP-E-OUT	East WWTP at the effluent meter box		
SW-02	Lower Reach of Mill Creek (upstream of the third bridge)	April 20, 2025	Dioxins and Furans.
SW-03	Mill Creek Estuary		
SW-07	Upstream Mill Creek (at the diversion inlet)		
SP-W-IN	West Sedimentation Pond influent monitored at cell 1 of the pond	April 21, 2025	Dioxins and Furans.
SP-W-OUT	West Sedimentation Pond clarified effluent discharge to Howe Sound, collected at sampling port		
IDZ-W1-0.5	Howe Sound IDZ station W1; 0.5 m below surface		
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		
SW-01	Lower Reach of Woodfibre Creek (near the mouth)	April 22, 2025	Dioxins and Furans.
SW-04	Lower Reach of East Creek (near the outlet to the outfall culvert)		
IDZ-E1-0.5	Howe Sound IDZ station E1; 0.5 m below surface	April 23, 2025	Methylmercury, Dioxins and Furans.
IDZ-E1-2m	Howe Sound IDZ station E1; 2 m below surface		
IDZ-E1-SF	Howe Sound IDZ station E1; 2 m above the seafloor		
IDZ-E2-0.5	Howe Sound IDZ station E2; 0.5 m below surface		
IDZ-E2-2m	Howe Sound IDZ station E2; 2 m below surface		
IDZ-E2-SF	Howe Sound IDZ station E2; 2 m above the seafloor		
WQR1-0.5	Reference site 1; 0.5 m below surface		
WQR1-2m	Reference site 1; 2 m below surface		
WQR1-SF	Reference site 1; 2 m above the seafloor		
SP-E-IN	East Sedimentation Pond influent monitored at cell 1 of the pond	April 24, 2025	Dioxins and Furans.
SP-E-OUT	East Sedimentation Pond clarified effluent discharge to Howe Sound, collected at the manhole adjacent to the outfall		
WWTP-E-IN	East WWTP at the influent meter box		
WWTP-E-OUT	East WWTP at the effluent meter box		
SW-02	Lower Reach of Mill Creek (upstream of the third bridge)	April 28, 2025	Dioxins and Furans.
SW-03	Mill Creek Estuary		
SW-07	Upstream Mill Creek (at the diversion inlet)		
SW-01	Lower Reach of Woodfibre Creek (near the mouth)	April 29, 2025	Dioxins and Furans.
SW-04	Lower Reach of East Creek (near the outlet to the outfall culvert)		
SP-W-IN	West Sedimentation Pond influent monitored at cell 1 of the pond	May 2, 2025	Dioxins and Furans.
WWTP-E-IN	East WWTP at the influent meter box	May 3, 2025	Dioxins and Furans.
WWTP-E-OUT	East WWTP at the effluent meter box		
IDZ-W1-0.5	Howe Sound IDZ station W1; 0.5 m below surface	May 5, 2025	Methylmercury.
IDZ-W1-2m	Howe Sound IDZ station W1; 2 m below surface		
IDZ-W1-SF	Howe Sound IDZ station W1; 2 m above the seafloor		
IDZ-W2-0.5	Howe Sound IDZ station W2; 0.5 m below surface		
IDZ-W2-2m	Howe Sound IDZ station W2; 2 m below surface		
IDZ-W2-SF	Howe Sound IDZ station W2; 2 m above the seafloor		
SW-01	Lower Reach of Woodfibre Creek (near the mouth)	May 12, 2025	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, and VOCs.
SW-04	Lower Reach of East Creek (near the outlet to the outfall culvert)		
SW-02	Lower Reach of Mill Creek (upstream of the third bridge)	May 13, 2025	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, and VOCs.
SW-03	Mill Creek Estuary		
SW-07	Upstream Mill Creek (at the diversion inlet)		
SP-E-IN	East Sedimentation Pond influent monitored at cell 1 of the pond	May 14, 2025	Methylmercury.
WWTP-E-IN	East WWTP at the influent meter box		
WWTP-E-OUT	East WWTP at the effluent meter box		

Table 3 (continued): Summary of Analytical Results Included in Weekly Discharge and Compliance Report #65.

Sample	Description	Sampling Date	Parameters Reported
SP-W-IN	West Sedimentation Pond influent monitored at cell 1 of the pond	May 15, 2025	Methylmercury.
W500GPM-OUT	West 500 GPM TSS settling system at the effluent meter box		
IDZ-E1-0.5	Howe Sound IDZ station E1; 0.5 m below surface		Field and Physical Parameters.
IDZ-E1-2m	Howe Sound IDZ station E1; 2 m below surface		
IDZ-E1-SF	Howe Sound IDZ station E1; 2 m above the seafloor		
IDZ-E2-0.5	Howe Sound IDZ station E2; 0.5 m below surface		
IDZ-E2-2m	Howe Sound IDZ station E2; 2 m below surface		
IDZ-E2-SF	Howe Sound IDZ station E2; 2 m above the seafloor		
IDZ-W1-0.5	Howe Sound IDZ station W1; 0.5 m below surface		
IDZ-W1-2m	Howe Sound IDZ station W1; 2 m below surface		
IDZ-W1-SF	Howe Sound IDZ station W1; 2 m above the seafloor		
IDZ-W2-0.5	Howe Sound IDZ station W2; 0.5 m below surface		
IDZ-W2-2m	Howe Sound IDZ station W2; 2 m below surface		
IDZ-W2-SF	Howe Sound IDZ station W2; 2 m above the seafloor		
SP-W-IN	West Sedimentation Pond influent monitored at cell 1 of the pond	May 19, 2025	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, VOCs, and Methylmercury.
SP-W-OUT	West Sedimentation Pond clarified effluent discharge to Howe Sound, collected at sampling port		
OUT-02	Non-contact water diversion ditch outlet		Field, Physical and General Parameters, Total and Dissolved Metals.
E500GPM-OUT	East Sedimentation Pond 500 GPM TSS settling system at the effluent meter box	May 20, 2025	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, and VOCs.
SP-E-IN	East Sedimentation Pond influent monitored at cell 1 of the pond	May 22, 2025	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, and VOCs.
WWTP-E-IN	East WWTP at the influent meter box		
WWTP-E-OUT	East WWTP at the effluent meter box		

3.3 East Catchment

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

During the monitoring period (May 18 - 24), the TSS settling system (E500GPM) was operated on May 19 and 20 and produced clarified East Sedimentation Pond effluent that was recirculated to the pond. The east catchment did not discharge during the monitoring period. Daily clarified effluent volumes, East WWTP treated effluent volumes, and discharge volumes from the east catchment are listed in Appendix B, Table B-6.

Field measurements were collected May 18 - 24 at multiple influent and effluent locations, as outlined in Section 2, and are tabulated in Appendix B, Table B-5. Analytical samples collected on May 20 (station E500GPM-OUT) and May 22 (stations SP-E-IN, WWTP-E-IN and WWTP-E-OUT) were available at the time of reporting. Screening results for east catchment contact water quality are summarized in Table B-1 and Table B-2 of Appendix B.

Field measurements and analytical results for samples collected at E500GPM-OUT met discharge limits and WQGs (Appendix B; Table B-2, Table B-5).

Total mercury was above the MDO in East WWTP effluent (WWTP-E-OUT) collected May 22 (Appendix B, Table B-2). East WWTP treated effluent is directed to the East Sedimentation Pond and there was no discharge to Howe Sound on May 22. This item is tracked in Table 6.

Methylmercury results were available for East Sedimentation Pond influent (SP-E-IN) and East WWTP influent and effluent (WWTP-E-IN and WWTP-E-OUT, respectively) collected May 14 (as discussed in Report #64). Methylmercury and total mercury were above the MDO in East WWTP effluent (WWTP-E-OUT) collected May 14 (Appendix B, Table B-3). East WWTP treated effluent is directed to the East Sedimentation Pond and there was no discharge from the pond to Howe Sound on May 14. This item is tracked in Table 6.

Dioxin and furan results were reported for East Sedimentation Pond influent (station SP-E-IN) and effluent (station SP-E-OUT) collected April 16 and East WWTP influent and effluent

(WWTP-E-IN and WWTP-E-OUT, respectively) collected April 19 (as discussed in Report #60). Dioxin and furan results were also reported for East WWTP influent and effluent and East Sedimentation Pond influent and effluent collected April 24 (as discussed in Report #61), East Sedimentation Pond influent collected May 2, and East WWTP influent and effluent collected May 3 (as discussed in Report #62). The lower and upper bound PCDD/F TEQ concentrations in effluent discharged at SP-E-OUT on April 16 and 24 ranged from 0.000272 to 0.0342 pg/L and from 0.597 to 0.765 pg/L, respectively. Results are tabulated in Appendix B, Table B-4.

3.4 West Catchment

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

During the monitoring period (May 18 - 24), West Sedimentation Pond effluent was directed to the TSS settling system (W500GPM) each day and clarified effluent was either recirculated to the pond, used for road dust suppression, or discharged to Howe Sound at the authorized discharge location, SP-W-OUT, on May 19. The smaller TSS settling system (ESC) was not operational. Daily clarified effluent and discharge volumes from the west catchment are summarized in Appendix C, Table C-6.

Field measurements were collected May 18 - 24 at multiple influent and effluent locations, as outlined in Section 2, and are tabulated in Appendix C, Table C-5. Analytical samples collected May 19 (stations SP-W-IN and SP-W-OUT) were available at the time of reporting. Screening results for west catchment contact water quality are tabulated in Table C-1 and Table C-2 of Appendix C.

During the monitoring period (May 18 - 24), field measurements and analytical results for samples collected at station W500GPM-OUT met PE-111578 discharge limits and WQGs (Appendix C; Table C-3 and Table C-5).

Field measurements and analytical results collected at station SP-W-OUT met PE-111578 discharge limits and WQGs except methylmercury and total mercury in two replicate samples collected May 19 (Table 4).

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

Parameter	Units	WQG[1]	N	N >WQG	Commentary
Total Mercury	µg/L	0.0052-0.0055	2	2	Total mercury measured in two replicate samples at station SP-W-OUT on May 19 (0.00825 and 0.00821 µg/L) were 1.5 and 1.6 times greater than the calculated WQG.
Methylmercury	µg/L	0.0001	2	2	Methylmercury measured in two replicate samples at station SP-W-OUT on May 19 (0.000149 and 0.000158 µg/L) were 1.5 and 1.6 times greater than the WQG.

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

Methylmercury results were available for West Sedimentation Pond influent (SP-W-IN) and W500GPM effluent (W500GPM-OUT) collected May 15 (as discussed in Report #64) and for West Sedimentation Pond influent (SP-W-IN) collected May 19. Methylmercury met the WQG in the sample collected May 15 at W500GPM-OUT. Results are tabulated in Appendix C, Table C-3.

Dioxin and furan results were reported for West Sedimentation Pond influent (station SP-W-IN) and effluent discharged at SP-W-OUT on April 16 (as discussed in Report #60) and April 21 (as discussed in Report #61). Dioxin and furan results were also reported for West Sedimentation Pond influent (station SP-W-IN) collected May 2 (as discussed in Report #62). The lower and upper bound PCDD/F TEQ concentrations in effluent discharged at SP-W-OUT on April 16 and April 21 ranged from 0.000837 to 0.0295 pg/L and from 0.520 to 1.42 pg/L, respectively. Results are tabulated in Appendix C, Table C-4.

3.5 Non-Contact Water Diversion Ditch Outlets

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

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

Analytical results were available at the time of reporting for the May 19 non-contact water diversion ditch outlet sample collected at station OUT-02. Parameter concentrations met WQGs except total aluminum (0.266 mg/L) and dissolved copper (0.00050 mg/L). The total aluminum

and dissolved copper results are comparable to the baseline concentration ranges observed for diversion ditch water quality. The measured concentrations are considered to represent natural conditions for non-contact waters, therefore total aluminum and dissolved copper results above the WQGs are not flagged as project influenced exceedances.

3.6 Freshwater and Estuarine Water Receiving Environment

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

Analytical results were available at the time of reporting for freshwater and estuarine water samples collected near the mouth of Woodfibre Creek and East Creek (stations SW-01 and SW-04, respectively) on May 12 as well as at the lower freshwater reach of Mill Creek (SW-02), the Mill Creek estuary (SW-03) and upstream on Mill Creek (SW-07) on May 13 (as discussed in Report #64).

Parameter concentrations met WQGs except total aluminum, total chromium, and hexavalent chromium in one or more samples. Total aluminum was above the long-term WQG in all samples collected from Woodfibre Creek, Mill Creek, and East Creek (SW-01, SW-02, SW-04, and SW-07), with concentrations ranging from 0.0709 to 0.264 mg/L. Hexavalent chromium (0.00212 mg/L) was above the long-term WQG (0.001 mg/L) in the sample collected from East Creek (SW-04) on May 12.

The observed total aluminum concentrations at downstream stations (SW-01, SW-02, SW-04) are within ranges observed in the pre-construction baseline monitoring program for the freshwater and estuarine water receiving environment stations. The samples collected from upstream Mill Creek (station SW-07) represent background water quality in Mill Creek. The observed total aluminum concentrations are considered to represent background conditions in all samples and are not flagged as potential project-influenced exceedances of the WQGs.

The observed hexavalent chromium concentration in East Creek at station SW-04 was above the upper range observed in the pre-construction baseline monitoring program and is flagged as a potential project-influenced exceedance of the WQGs (Table 5). Potential sources will be reviewed and this item is tracked in Table 6.

Table 5:
Summary of Parameters Exceeding WQGs and Above Baseline Ranges for East Creek Station SW-04 for Field and Analytical Results Available at the Time of Reporting

Parameter	Units	WQG[1]	N	N >WQG	Commentary
Hexavalent Chromium	mg/L	0.001	5	1	Hexavalent chromium measured in East Creek (SW-04) on May 12 (0.00212 mg/L) was 2.1 times greater than the WQG. The hexavalent chromium concentration was 6.8 times greater than the maximum concentration observed in the pre-construction baseline monitoring program at East Creek (0.00031 mg/L).

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

Dioxin and furan results were available at the time of reporting for freshwater and estuarine water samples collected April 12 (SW-02, SW-03, and SW-07), April 13 (SW-01 and SW-04), April 20 (SW-02, SW-03, and SW-07), April 22 (SW-01 and SW-04), April 28 (SW-02, SW-03, and SW-07) and April 29 (SW-01 and SW-04) (as discussed in Reports #59, #60, #61, and #62). The lower and upper bound PCDD/F TEQ concentrations measured in these samples ranged from 0 to 0.0930 pg/L and from 0.609 to 2.20 pg/L, respectively. The lower and upper bound PCDD/F TEQ concentrations were within the concentration ranges observed in the baseline monitoring program. Results are tabulated in Appendix E, Table E-2 (freshwater) and Appendix F, Table F-2 (estuarine).

3.7 Marine Water Receiving Environment

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

Analytical results and field measurements were available at the time of reporting for marine water samples collected at 0.5 and 2 m below the water surface and 2 m above the seafloor on May 15 at IDZ-E1, IDZ-E2, IDZ-W1, and IDZ-W2.

Parameter concentrations met WQGs except field pH and dissolved oxygen in some samples (Appendix G; Tables G-1 and G-2). Field pH was below the lower range of the WQG (pH 7.0) in

the sample collected at 2 m below the surface at IDZ-W2 on May 15 (pH 6.95). In samples collected at 2 m above the seafloor at IDZ-W1 and IDZ-W2, dissolved oxygen (7.61 and 7.59 mg/L, respectively) was below the lower limit of the WQG (8 mg/L). Low concentrations of dissolved oxygen are indicative of influence from the deeper saline waters in the northern basin of Howe Sound and are a natural condition of marine water at the WDA monitoring stations. The observed field pH and dissolved oxygen concentrations observed at the IDZ monitoring stations are within concentrations that have been observed in the pre-construction baseline monitoring program or within background ranges observed at marine reference stations and are therefore not attributed to project influence.

Methylmercury analytical results were available at the time of reporting for marine samples collected from 0.5 and 2 m below the water surface and 2 m above the seafloor on April 23 at IDZ-E1, IDZ-E2 and marine reference station WQR1 (as discussed in Report #61), and on May 5 at IDZ-W1 and IDZ-W2 (as discussed in Report #63). For all samples, methylmercury concentrations ranged from <0.000020 to 0.000091 µg/L. Methylmercury results met the WQG and the corresponding total mercury results also met WQGs. Results are tabulated in Appendix G, Table G-3.

Dioxins and furans analytical results were available at the time of reporting for marine samples collected from 0.5 and 2 m below the water surface and 2 m above the seafloor at reference stations WQR1 and WQR2 on April 11 (as discussed in Report #59), at stations IDZ-W1, IDZ-W2 and reference station WQR2 on April 13, and at stations IDZ-E1, IDZ-E2 and reference station WQR1 on April 14 (as discussed in Report #60). Dioxins and furans results were also available at the time of reporting for marine samples collected from 0.5 and 2 m below the water surface and 2 m above the seafloor at IDZ-W1, IDZ-W2 and reference station WQR2 on April 21, and at stations IDZ-E1, IDZ-E2 and reference station WQR1 on April 23 (as discussed in Report #61). For all samples, the lower and upper bound PCDD/F TEQ concentrations ranged from 0 to 0.590 pg/L, and 0.673 to 1.71 pg/L, respectively. The lower and upper bound PCDD/F TEQ concentrations were within the concentration ranges observed in the baseline monitoring program or within background ranges observed at marine reference stations. Results are tabulated in Appendix G, Table G-4.

4. Quality Control

This section presents the results of the quality control (QC) evaluation for the PE-111578 weekly report (Table 6). The evaluation includes a review of field and lab QC, completeness of the weekly report (*e.g.*, pending data), completeness of the monitoring program, confirmation of recordkeeping, evaluation of compliance and review of water management activities. Items flagged for follow-up in Section 3 are also tracked in Table 6. Any items flagged for follow-up are carried forward to future reports until they are closed.

Table 6: Weekly Report QC Evaluations and Ongoing Items

QC Procedure	Observation	Investigation/Resolution
Reporting Period (May 18 - 24, Report #65)		
Authorized Works and Monitoring Program Evaluation	The authorized works and monitoring stations have not been established as described in PE-111578.	The PE-111578 authorized works for water management have been constructed, except for some of the conveyance ditches which require completion of site grading prior to installation. Sumps, pumps and hoses are used for temporary conveyance until the ditches are completed. The lower reach of East Creek has been temporarily diverted through OUT-11 outfall since September 17, 2024, to facilitate replacement of the East Creek outfall culvert (OUT-12). 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.
Discharge WQG Evaluation	Total mercury and methylmercury above WQG.	Total mercury (0.00821 and 0.00825 µg/L) and methylmercury (0.000149 and 0.000158 µg/L) measured in two replicate samples at station SP-W-OUT on May 19 were 1.5 to 1.6 times greater than the WQGs. Potential sources are being reviewed. This item remains open.
Potential Project Influence	Hexavalent chromium at East Creek above WQG and the baseline concentration range.	Hexavalent chromium concentration (0.00212 mg/L) observed at the East Creek station (SW-04) on May 12 was 2.1 times greater than the WQG and 6.8 times greater than the maximum concentration observed in the pre-construction baseline monitoring program (0.00031 mg/L). Potential influences to East Creek water quality at station SW-04 are being reviewed. This item remains open.
Pending Data	Analytical results not reported.	Analytical results and field parameters for diversion ditch outlet and receiving environment samples collected May 20 were not included with Report #65. Methylmercury results for the diversion ditch outlet sample collected May 19 and methylmercury, dioxins and furans results for contact water and treated water samples collected May 19 (dioxins and furans only) and May 22 were not included with Report #65. The pending results will be included in future weekly reports when available. This item remains open.
Ongoing Items from Previous Weekly Reports		
Report #57: Pending Data	Analytical results not reported.	Chronic toxicity results for marine receiving environment samples collected March 25 were not included with Report #65. The pending results will be included in future weekly reports when available. This item remains open.
Report #59: Pending Data	Analytical results not reported.	Dioxins and furans results for receiving environment samples collected April 11 and 12 are discussed in Sections 3.6 and 3.7 of Report #65. This item is closed.
Report #60: Pending Data	Analytical results not reported.	Dioxins and furans results for receiving environment, contact water, and treated water samples collected April 13, 14, 16, and 19 are discussed in Sections 3.3, 3.4, 3.6, and 3.7 of Report #65. This item is closed.
Report #62: WWTP Performance Evaluation	Field pH, total copper, total mercury, total zinc, and hexavalent Cr above the MDO.	This item was first noted in Report #46 (January 8 sample) and has been updated with January 14 results (Report #47), January 24 and January 28 results (Report #49), February 5 and 6 results (Report #50), February 10 results (Report #51), February 15 and 20 results (Report #52), February 24 results (Report #53), March 8 results (Report #55), March 17 results (Report #56), April 24 results (Reports #61 and #62), May 3 results (Report #63), May 10 results (Report #64), May 14 results (Report #64 and #65), and May 22 results (Report #65). The total copper concentrations were 0.00809, 0.00595, 0.00895, 0.00518, 0.00542, 0.00525, 0.00450, 0.00734, and 0.00464 mg/L in samples collected at WWTP-E-OUT on January 8, 14, 24, 28, February 24, March 8, 17, April 24, and May 10, respectively, and ranged from 0.00613 to 0.0108 mg/L in four replicate samples collected on February 15. The total mercury concentrations were 0.0355, 0.185, 0.223, 0.0882, 0.0101, 0.0269, 0.0524, 0.0404, and 0.0217 µg/L in samples collected on January 24, 30, February 20, 24, April 24, May 3, May 10, May 14, and May 22, respectively, and were 0.0615 and 0.0644 mg/L in two replicate samples collected February 15. The total zinc concentrations were 0.0137, 0.0152, and 0.0156 mg/L in the samples collected on January 24, February 20 and 24, and were 0.0223 and 0.0234 mg/L in two of four replicate samples collected February 15. Hexavalent chromium concentrations were 0.00197 and 0.00166 mg/L in samples collected January 24 and 28 at WWTP-E-OUT. Field pH was 9.1, 9.2, and 9.6 in samples collected at WWTP-E-OUT on February 5, 6 and 10, respectively. As of May 10, and since February/March, field pH and total metals have been consistently meeting MDOs except total copper (April/May) and total mercury (April/May). The WWTP is not designed to treat mercury, therefore possible contact water sources of mercury are being evaluated. Treatment performance for total copper continues to be monitored; the metal removal media was scheduled for replacement on May 29 and the fresh media is expected to improve copper removal. This item remains open.
Report #61: Pending Data	Analytical results not reported.	Methylmercury results for receiving environment samples collected April 21 and 23 are discussed in Section 3.7 of Report #65. Dioxins and furans results for receiving environment, contact water and treated water samples collected April 20, 21, 22, 23, and 24 are discussed in Sections 3.3, 3.4, 3.6, and 3.7 of Report #65. This item is closed.
Report #62: Discharge WQG Evaluation	Total mercury and methylmercury above WQG.	Total mercury and methylmercury measured at station SP-E-OUT on April 24 (0.00851 and 0.000264 µg/L, respectively) were 2.6 times greater than the calculated WQG. Potential sources are being reviewed. This item remains open.
Report #62: Pending Data	Analytical results not reported.	Dioxins and furans results for receiving environment samples collected April 28 and 29 and for contact water and treated water samples collected May 2 and 3 are discussed in Sections 3.3, 3.4, and 3.6 of Report #65. This item is closed.
Report #63: Pending Data	Analytical results not reported.	Methylmercury results for receiving environment samples collected May 5 are discussed in Section 3.7 of Report #65. Analytical results and field parameters for receiving environment samples collected May 7 and 9 were not included with Report #65. Methylmercury, dioxins and furans results for receiving environment samples collected May 6 and dioxins and furans results for contact water and treated water samples collected May 9 and 10 were not included with Report #65. The pending results will be included in future weekly reports when available. This item remains open.
Report #64: Pending Data	Analytical results not reported.	Analytical results and field parameters for receiving environment samples collected May 12 and 13 are discussed in Section 3.6 of Report #65. Methylmercury results for contact water and treated water samples collected May 14 and 15 are discussed in Sections 3.3 and 3.4 of Report #65. Methylmercury, dioxins and furans results for receiving environment samples collected May 12 and 13 and dioxins and furans results for contact water and treated water samples collected May 14 and 15 were not included with Report #65. The pending results will be included in future weekly reports when available. This item remains open.

Notes:

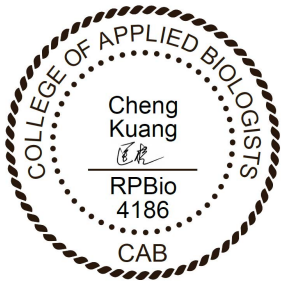
Result QA/QC screening includes the evaluation of field and lab QC results, comparison of total and dissolved metal results and review for modified detection limits.
Pending data are outstanding results from monitoring samples reported in the current or previous weekly reports.
Authorized works and monitoring program evaluation is an assessment of the completeness of the authorized works and monitoring program compared to PE-111578 specified or implied requirements.
WWTP performance evaluation is an assessment of WWTP effluent quality compared to operational MDOs.
Data QC indicates an evaluation of data trends or inter-parameter relationships that suggest a test result may not be representative of water quality at the time of monitoring.
Non-compliant discharge indicates exceedance of a discharge limit or a discharge that bypasses the sedimentation pond discharge location.
Potential project influence is an assessment that water quality at creek and Howe Sound baseline stations are above the baseline concentration range and may indicate project influence at these stations.

5. Closure

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

Regards,

LORAX ENVIRONMENTAL SERVICES LTD.



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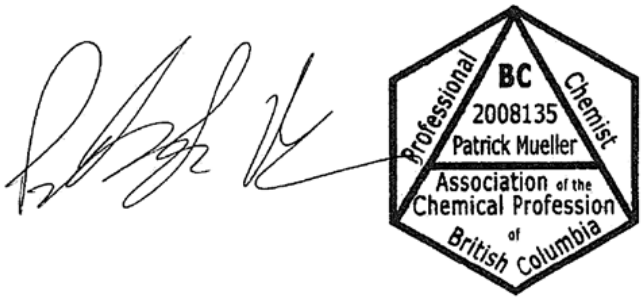

Patrick Mueller, B.Sc., P.Chem.
Environmental Chemist

Appendix A: Figures and Site Images

LEGEND

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

DATE SAVED:	May 29, 2025
DRAWN BY:	DM
REVIEWED:	PM
VERSION:	1

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

1:6,000

0 50 100 150 Metres

CLIENT: Woodfibre LNG

LORAX ENVIRONMENTAL

PROJECT:

Woodfibre LNG Project Construction Phase

TITLE: Water Management Facilities and Established PE-111578 Monitoring Stations (May 24, 2025)

PROJECT #: A633-7

FIGURE: 1

P:\@Drafting\Woodfibre\Drafting Figures\APRX\WLNG Construction Phase 2024\WLNG Construction Phase 2024 - Weekly Reporting.aprx Figure 1 Monitoring and Compliance Locations

Figure 2: East Catchment contact water management facilities (May 18 - 24).

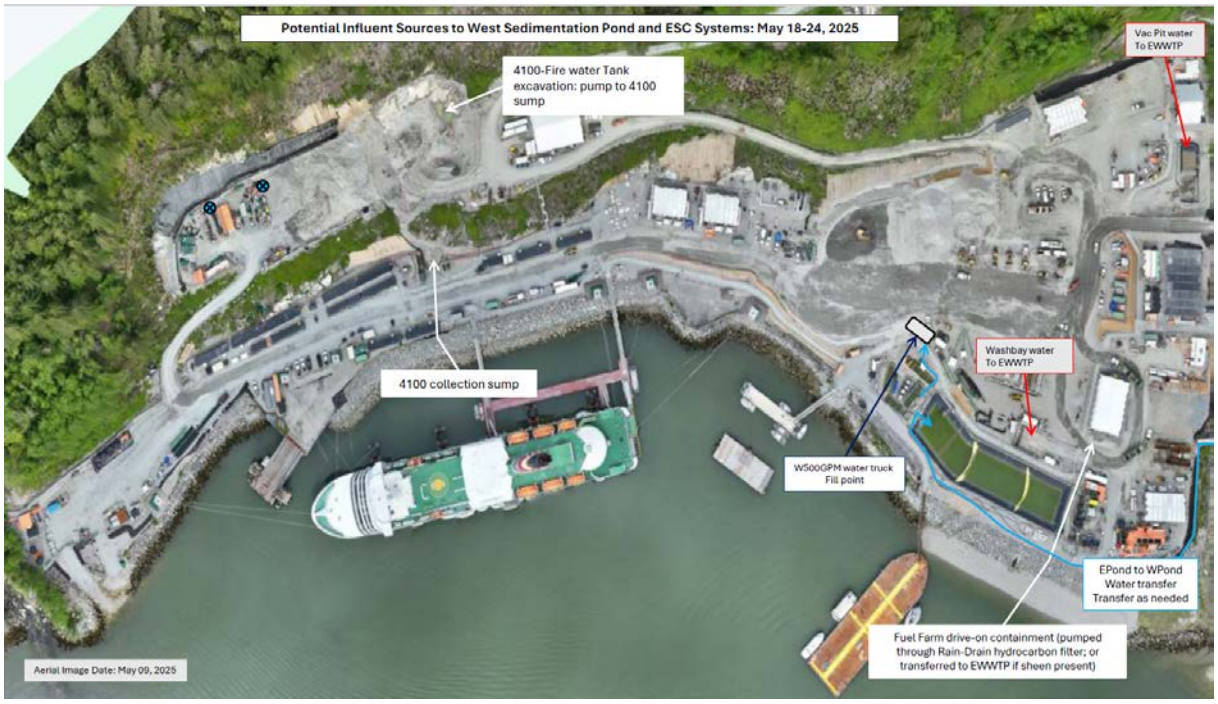

Figure 3: West Catchment contact water management facilities (May 18 - 24).

Figure 4: Aerial view of the East Sedimentation Pond (May 23, 2025). The East WWTP is located on the left side and the E500GPM TSS settling system is situated along the bottom edge of the pond.

Figure 5: Aerial view of the West Sedimentation Pond (May 23, 2025). The TSS settling systems are located to the left (W500GPM) and right (ESC) of the pond.

Appendix B: East Catchment Monitoring Results

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

Parameter	Unit	Lowest Applicable Guideline [1]		PE-111578 Discharge Limit	Station WWTP-E-IN	Station SP-E-IN
					Influent	Influent
					WWTP-E-IN	SP-E-IN
					VA25B1983-001	VA25B1983-003
		Long Term	Short Term		2025-05-22 9:30	2025-05-22 10:10
General Parameters						
pH - Field	pH units	- [2]	-	5.5 - 9.0	6.8	6.7
Specific Conductivity - Field	µS/cm	-	-	-	1714	1739
Temperature - Field	°C	-	-	-	15.4	15.6
Salinity - Field	ppt	-	-	-	0.87	0.89
Turbidity - Field	NTU	-	-	-	8.55	5.35
TSS	mg/L	-	-	25 or 75 [6]	6.6	13.0
Dissolved Oxygen - Field	mg/L	≥8	-	-	10.95	10.45
Anions and Nutrients						
Sulphate	mg/L	-	-	-	633	657
Chloride	mg/L	-	-	-	19.0	19.6
Fluoride	mg/L	-	1.5	-	0.294	0.335
Ammonia (N-NH_3)	mg/L	14 [3]	92 [3]	-	0.0142	0.0241
Nitrite (N-NO_2)	mg/L	-	-	-	<0.0100	<0.0100
Nitrate (N-NO_3)	mg/L	3.7	339	-	0.492	0.502
Total Metals						
Aluminum, total (T-Al)	mg/L	-	-	-	0.585	0.410
Antimony, total (T-Sb)	mg/L	-	0.27 [4]	-	0.00134	0.00136
Arsenic, total (T-As)	mg/L	0.0125	0.0125	-	0.00169	0.00159
Barium, total (T-Ba)	mg/L	-	-	-	0.0116	0.0087
Beryllium, total (T-Be)	mg/L	0.1	-	-	0.00002	<0.000020
Boron, total (T-B)	mg/L	1.2	-	-	0.134	0.117
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	<0.0000500	<0.0000450
Chromium, total (T-Cr)	mg/L	-	-	-	0.00145	0.00115
Cobalt, total (T-Co)	mg/L	-	-	-	0.00025	0.00019
Copper, total (T-Cu)	mg/L	- [2]	- [2]	0.0043	0.00393	0.00281
Iron, total (T-Fe)	mg/L	-	-	-	0.524	0.366
Lead, total (T-Pb)	mg/L	- [2]	- [2]	0.0035	0.000657	0.000398
Manganese, total (T-Mn)	mg/L	-	-	-	0.0333	0.0266
Mercury, total (T-Hg)	mg/L	0.000016 [5]	-	-	***0.0000652***	***0.0000651***
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.104	0.104
Nickel, total (T-Ni)	mg/L	0.0083	-	-	0.00181	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	-	0.00056	0.000447
Silver, total (T-Ag)	mg/L	0.0005	0.0037	-	<0.000010	<0.000010
Thallium, total (T-Tl)	mg/L	-	-	-	0.000022	0.000021
Uranium, total (T-U)	mg/L	-	-	-	0.0272	0.0338
Vanadium, total (T-V)	mg/L	- [2]	-	0.0081	0.0029	0.00273
Zinc, total (T-Zn)	mg/L	- [2]	- [2]	0.0133	0.047	0.0041
Hexavalent Chromium, total	mg/L	0.0015	-	-	<0.00050	<0.00050
Dissolved Metals						
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	<0.0000450	<0.0000450
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.00233	0.00193
Iron, dissolved (D-Fe)	mg/L	-	-	-	0.053	0.023
Lead, dissolved (D-Pb)	mg/L	-	-	-	0.000072	<0.000050
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.0222	0.0207
Nickel, dissolved (D-Ni)	mg/L	-	-	-	0.00076	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.187	0.181
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00200	0.00199
Zinc, dissolved (D-Zn)	mg/L	-	-	-	0.034	0.0023
Polycyclic Aromatic Hydrocarbons (PAHs)						
Acenaphthene	mg/L	0.006	-	-	<0.000010	<0.000010
Acridine	mg/L	-	-	-	<0.000010	<0.000010
Anthracene	mg/L	-	-	-	<0.000010	<0.000010
Benz(a)anthracene	mg/L	-	-	-	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	-	<0.0000050	<0.0000050
Chrysene	mg/L	0.0001	-	-	<0.000010	<0.000010
Fluoranthene	mg/L	-	-	-	<0.000010	<0.000010
Fluorene	mg/L	0.012	-	-	<0.000010	<0.000010
1-methylnaphthalene	mg/L	0.001	-	-	<0.000010	<0.000010
2-methylnaphthalene	mg/L	0.001	-	-	<0.000010	<0.000010
Naphthalene	mg/L	0.001	-	-	<0.000050	<0.000050
Phenanthrene	mg/L	-	-	-	<0.000020	<0.000020
Pyrene	mg/L	-	-	-	<0.000010	<0.000010
Quinoline	mg/L	-	-	-	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)						
Benzene	mg/L	0.11	-	-	<0.00050	<0.00050
Ethylbenzene	mg/L	0.25	-	-	<0.00050	<0.00050
Methyl-tert-butyl-ether	mg/L	5	0.44	-	<0.00050	<0.00050
Styrene	mg/L	-	-	-	<0.00050	<0.00050
Toluene	mg/L	0.215	-	-	<0.00040	<0.00040
Total Xylenes	mg/L	-	-	-	<0.00050	<0.00050
Chlorobenzene	mg/L	0.025	-	-	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	-	-	<0.00050	<0.00050

Notes: Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.
Results in orange text exceeded the PE-111578 East Sedimentation Pond Discharge Limit.
The East Catchment did not discharge during the monitoring period (May 18 - May 24).
[1] The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
[2] The WQG was not evaluated for parameters with discharge limits.
[3] The BC WQG for total ammonia is salinity, pH and temperature dependent; see Tables 27E and 27F in BC WQG guidance document.
[4] The working BC WQG for trivalent antimony [SB(III)] is 0.27 mg/L and is applied to total antimony results.
[5] When MeHg ≤0.5% of total Hg, the BC WQG = 0.00002 mg/L. The Canadian WQG = 0.000016 mg/L.
[6] The PE-111578 discharge limit for TSS is 25 mg/L under dry conditions and 75 mg/L for each day of Wet Conditions.

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

Parameter	Unit	Lowest Applicable Guideline [1]		PE-111578 Discharge Limit	Station WWTP-E-OUT	Station E500GPM-OUT
					Effluent	Effluent
					WWTP-E-OUT	E500GPM-OUT
					VA25B1983-002	VA25B1666-001
		Long Term	Short Term		2025-05-22 9:45	2025-05-20 13:15
General Parameters						
pH - Field	pH units	- [2]	-	5.5 - 9.0	6.3	7.6
Specific Conductivity - Field	µS/cm	-	-	-	1774	1836
Temperature - Field	°C	-	-	-	15.1	14.6
Salinity - Field	ppt	-	-	-	0.9	0.94
Turbidity - Field	NTU	-	-	-	1.08	6.89
TSS	mg/L	-	-	25 or 75 [6]	<3.0	3.2
Dissolved Oxygen - Field	mg/L	≥8	-	-	9.76	11.38
Anions and Nutrients						
Sulphate	mg/L	-	-	-	643	528
Chloride	mg/L	-	-	-	19.2	19.6
Fluoride	mg/L	-	1.5	-	0.271	0.28
Ammonia (N-NH_3)	mg/L	5-14 [3]	33-92 [3]	-	0.0406	0.0088
Nitrite (N-NO_2)	mg/L	-	-	-	<0.0100	<0.0100
Nitrate (N-NO_3)	mg/L	3.7	339	-	0.487	<0.0500
Total Metals						
Aluminum, total (T-Al)	mg/L	-	-	-	0.114	0.226
Antimony, total (T-Sb)	mg/L	-	0.27 [4]	-	0.00135	0.0011
Arsenic, total (T-As)	mg/L	0.0125	0.0125	-	0.00131	0.00156
Barium, total (T-Ba)	mg/L	-	-	-	0.0062	0.00513
Beryllium, total (T-Be)	mg/L	0.1	-	-	<0.000020	<0.000040
Boron, total (T-B)	mg/L	1.2	-	-	0.098	0.092
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	<0.0000450	<0.0000250
Chromium, total (T-Cr)	mg/L	-	-	-	0.00057	0.00133
Cobalt, total (T-Co)	mg/L	-	-	-	0.00011	<0.00020
Copper, total (T-Cu)	mg/L	- [2]	- [2]	0.0043	0.00413	0.00187
Iron, total (T-Fe)	mg/L	-	-	-	0.091	0.242
Lead, total (T-Pb)	mg/L	- [2]	- [2]	0.0035	0.000271	0.000283
Manganese, total (T-Mn)	mg/L	-	-	-	0.018	0.013
Mercury, total (T-Hg)	mg/L	0.000016 [5]	-	-	***0.0000217***	***0.0000335***
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.111	0.143
Nickel, total (T-Ni)	mg/L	0.0083	-	-	<0.00050	<0.00100
Selenium, total (T-Se)	mg/L	0.002	-	-	0.000475	0.000546
Silver, total (T-Ag)	mg/L	0.0005	0.0037	-	<0.000010	<0.000020
Thallium, total (T-Tl)	mg/L	-	-	-	0.000021	0.000033
Uranium, total (T-U)	mg/L	-	-	-	0.0232	0.0361
Vanadium, total (T-V)	mg/L	- [2]	-	0.0081	0.00218	0.00201
Zinc, total (T-Zn)	mg/L	- [2]	- [2]	0.0133	0.0064	<0.0060
Hexavalent Chromium, total	mg/L	0.0015	-	-	<0.00050	<0.00050
Dissolved Metals						
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	<0.0000400	<0.0000250
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.0027	0.0015
Iron, dissolved (D-Fe)	mg/L	-	-	-	0.05	0.05
Lead, dissolved (D-Pb)	mg/L	-	-	-	0.000124	<0.000100
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.0142	0.00755
Nickel, dissolved (D-Ni)	mg/L	-	-	-	<0.00050	<0.00100
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.162	0.141
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00202	0.00159
Zinc, dissolved (D-Zn)	mg/L	-	-	-	0.0051	<0.0020
Polycyclic Aromatic Hydrocarbons (PAHs)						
Acenaphthene	mg/L	0.006	-	-	<0.000010	<0.000010
Acridine	mg/L	-	-	-	<0.000010	<0.000010
Anthracene	mg/L	-	-	-	<0.000010	<0.000010
Benz(a)anthracene	mg/L	-	-	-	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	-	<0.0000050	<0.0000050
Chrysene	mg/L	0.0001	-	-	<0.000010	<0.000010
Fluoranthene	mg/L	-	-	-	<0.000010	<0.000010
Fluorene	mg/L	0.012	-	-	<0.000010	<0.000010
1-methylnaphthalene	mg/L	0.001	-	-	<0.000010	<0.000010
2-methylnaphthalene	mg/L	0.001	-	-	<0.000010	<0.000010
Naphthalene	mg/L	0.001	-	-	<0.000050	<0.000050
Phenanthrene	mg/L	-	-	-	<0.000020	<0.000020
Pyrene	mg/L	-	-	-	<0.000010	<0.000010
Quinoline	mg/L	-	-	-	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)						
Benzene	mg/L	0.11	-	-	<0.00050	<0.00050
Ethylbenzene	mg/L	0.25	-	-	<0.00050	<0.00050
Methyl-tert-butyl-ether	mg/L	5	0.44	-	<0.00050	<0.00050
Styrene	mg/L	-	-	-	<0.00050	<0.00050
Toluene	mg/L	0.215	-	-	<0.00040	<0.00040
Total Xylenes	mg/L	-	-	-	<0.00050	<0.00050
Chlorobenzene	mg/L	0.025	-	-	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	-	-	<0.00050	<0.00050

Notes: Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.
Results in orange text exceeded the PE-111578 East Sedimentation Pond Discharge Limit.
The East Catchment did not discharge during the monitoring period (May 18 - May 24).
[1] The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
[2] The WQG was not evaluated for parameters with discharge limits.
[3] The BC WQG for total ammonia is salinity, pH and temperature dependent; see Tables 27E and 27F in BC WQG guidance document.
[4] The working BC WQG for trivalent antimony [SB(III)] is 0.27 mg/L and is applied to total antimony results.
[5] When MeHg ≤0.5% of total Hg, the BC WQG = 0.00002 mg/L. The Canadian WQG = 0.000016 mg/L.
[6] The PE-111578 discharge limit for TSS is 25 mg/L under dry conditions and 75 mg/L for each day of Wet Conditions.

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

Parameter					**Total Methylmercury**	**Total Mercury**
Unit					**µg/L**	**µg/L**
Lowest Applicable Guideline[1]					0.0001 [2]	0.012 – 0.014 [3,4]
Station	**Water Type**	**Sample ID**	**Lab ID**	**Sampling Date**		
Influent						
SP-E-IN	Influent	SP-E-IN	VA25B1187-001	2025-05-14	***0.000436***	***0.0621***
WWTP-E-IN	Influent	WWTP-E-IN	VA25B1187-002	2025-05-14	***0.000501***	***0.0599***
Effluent						
WWTP-E-OUT	Effluent	WWTP-E-OUT	VA25B1187-003	2025-05-14	***0.000325*** [5]	***0.0404*** [5]

Notes:
Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine aquatic life.
[1] The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
[2] From BC Ambient Water Quality Guidelines for Mercury Overview Report. The methylmercury concentration threshold of 0.0001 µg/L (0.1 ng/L) is indicated as a WQG for the protection of wildlife and is set at a concentration that protects fish from mercury bioaccumulation to a level that may harm wildlife that consume fish.
[3] CCME guideline for total mercury = 0.016 µg/L.
[4] When MeHg ≤ 0.5% of total Hg, BC WQG = 0.02 µg/L. When MeHg > 0.5% of total Hg, BC WQG = 0.0001/(MeHg/Total Hg). Detection limit values are used to calculate the WQG for result reported as not detected.
[5] East WWTP treated effluent is directed to the East Sedimentation Pond and there was no discharge from the pond to Howe Sound on May 14.
Non-detect results are screened using the detection limit value.

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

Parameter					**Lower Bound PCDD/F TEQ**	**Upper Bound PCDD/F TEQ**
Unit					**pg/L**	**pg/L**
Station	**Water Type**	**Sample ID**	**Lab ID**	**Sampling Date**		
Influent						
SP-E-IN	Influent	SP-E-IN	VA25A8534-001	2025-04-16	0.00406	0.693
SP-E-IN	Influent	SP-E-IN	VA25A9271-003	2025-04-24	0.0336	0.713
SP-E-IN	Influent	SP-E-IN	VA25B0099-001	2025-05-02	0.130	1.27
WWTP-E-IN	Influent	WWTP-E-IN	VA25A8766-001	2025-04-19	0.0622	1.55
WWTP-E-IN	Influent	WWTP-E-IN	VA25A9271-001	2025-04-24	0.0400	0.678
WWTP-E-IN	Influent	WWTP-E-IN	VA25B0142-001	2025-05-03	0.0171	0.847
Effluent						
SP-E-OUT	Effluent	SP-E-OUT	VA25A8534-002	2025-04-16	0.0342	0.765
SP-E-OUT	Effluent	SP-E-OUT-Dup	VA25A8534-003	2025-04-16	0.000272	0.597
SP-E-OUT	Effluent	SP-E-OUT	VA25A9271-004	2025-04-24	0.00154	0.729
WWTP-E-OUT	Effluent	WWTP-E-OUT	VA25A8766-002	2025-04-19	0.00111	1.37
WWTP-E-OUT	Effluent	WWTP-E-OUT	VA25A9271-002	2025-04-24	0.0146	0.571
WWTP-E-OUT	Effluent	WWTP-E-OUT	VA25B0142-002	2025-05-03	0.0119	1.07

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

Table B-5: East Catchment Field Measurements Collected During the Monitoring Period (May 18 - 24).

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	2025-05-18 13:46	15.4	10.15	1.11	13.84	13.3	6.9	2149	Yes
SP-E-IN	Influent	2025-05-19 14:34	13.9	10.66	0.90	62.86	49.9	6.9	1770	No
SP-E-IN	Influent	2025-05-20 10:27	13.7	10.43	0.78	62.64	49.7	6.7	1539	No
SP-E-IN	Influent	2025-05-21 11:34	14.7	10.37	0.86	15.27	14.4	6.9	1682	No
SP-E-IN	Influent	2025-05-22 10:10	15.6	10.45	0.89	5.35	7.0	6.7	1739	No
SP-E-IN	Influent	2025-05-23 14:42	18.2	10.84	0.91	5.11	6.8	6.8	1778	No
SP-E-IN	Influent	2025-05-24 13:49	19.3	11.24	0.90	2.95	5.2	6.9	1767	No
WWTP-E-IN	Influent	2025-05-18 13:30	15.9	10.52	1.12	16.22	15.1	7.2	2172	No
WWTP-E-IN	Influent	2025-05-19 14:23	13.8	10.64	0.88	129.05	99.2	7.1	1725	No
WWTP-E-IN	Influent	2025-05-20 10:12	13.3	10.05	0.84	65.38	51.8	7.3	1646	No
WWTP-E-IN	Influent	2025-05-21 11:19	14.9	10.93	0.84	15.54	14.6	7.0	1652	No
WWTP-E-IN	Influent	2025-05-22 9:30	15.4	10.95	0.87	8.55	9.4	6.8	1714	No
WWTP-E-IN	Influent	2025-05-23 14:32	19.1	12.46	0.91	6.98	8.2	7.2	1785	No
WWTP-E-IN	Influent	2025-05-24 13:41	20.0	13.58	0.90	2.47	4.8	7.1	1774	No
E500GPM-IN	Influent	2025-05-19 14:45	14.5	10.85	0.96	4.75	6.5	7.4	1881	No
E500GPM-IN	Influent	2025-05-20 13:35	14.5	10.65	0.92	31.00	26.1	7.3	1793	No
Effluent [5]										
WWTP-E-OUT	Effluent	2025-05-18 13:40	14.8	9.00	1.11	5.50	7.1	6.5	2159	No
WWTP-E-OUT	Effluent	2025-05-19 14:27	13.9	9.82	1.11	5.59	7.2	6.7	2150	No
WWTP-E-OUT	Effluent	2025-05-20 10:21	13.2	9.78	1.09	2.51	4.9	6.2	2112	No
WWTP-E-OUT	Effluent	2025-05-21 11:28	14.0	9.85	0.92	2.27	4.7	6.5	1800	No
WWTP-E-OUT	Effluent	2025-05-22 9:45	15.1	9.76	0.90	1.08	3.8	6.3	1774	No
WWTP-E-OUT	Effluent	2025-05-23 14:38	17.3	8.36	0.91	1.13	3.8	6.6	1782	No
WWTP-E-OUT	Effluent	2025-05-24 13:43	18.2	9.26	0.90	2.02	4.5	6.5	1776	No
E500GPM-OUT	Effluent	2025-05-19 14:42	14.1	11.60	0.97	6.08	7.5	7.6	1902	No
E500GPM-OUT	Effluent	2025-05-20 13:15	14.6	11.38	0.94	6.89	8.1	7.6	1836	No

Notes:
Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.
Results in orange text exceeded the PE-111578 East Sedimentation Pond Discharge Limit.
[1] The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
[2] The WQG was not evaluated for parameters with discharge limits.
[3] TSS concentration is estimated from field turbidity measurements using a site-specific relationship TSS = 0.7458 * [turbidity as NTU] + 3.
[4] Daily field measurements for station SP-E-IN were collected from cell 1 of the East Sedimentation Pond.
[5] There was no discharge at the authorized discharge location (SP-E-OUT) during the monitoring period (May 18 - May 24), therefore daily field measurements for SP-E-OUT were not collected on those days.
[6] The PE-111578 discharge limit for TSS is 25 mg/L under dry conditions and 75 mg/L for each day of Wet Conditions.

Table B-6: East Catchment Daily Discharge Volumes for the Monitoring Period (May 18 - 24).

	East Sedimentation Pond Effluent	East TSS Settling System (E500GPM) Clarified Effluent (Station E500GPM-OUT)	East WWTP Treated Effluent (Station WWTP-E-OUT)	Discharge to Howe Sound (Station SP-E-OUT)
Unit	**m^3**	**m^3**	**m^3**	**m^3**
PE-111578 Discharge Limit	- [1]	- [1]	1100	- [1]
Date				
2025-05-18	0	0	652 [3]	0
2025-05-19	0	490 [2]	696 [3]	0
2025-05-20	0	490 [2]	544 [3]	0
2025-05-21	0	0	776 [3]	0
2025-05-22	0	0	832 [3]	0
2025-05-23	0	0	813 [3]	0
2025-05-24	0	0	793 [3]	0

Notes:
Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.
Results in orange text exceeded the PE-111578 East Sedimentation Pond Discharge Limit.
[1] The annual average authorized discharge rate from the East Sedimentation Pond is 650 m^3/day. As noted in PE-111578 Condition 2.1.4, the actual discharge rate may deviate from the annual average rate due to annual variations in precipitation amounts within the catchment area. Therefore, the annual average authorized discharge rate is not evaluated as a discharge limit.
[2] E500GPM clarified effluent is discharged to Howe Sound or recirculated to the East Sedimentation Pond based on operational considerations. Therefore, the E500GPM clarified effluent volume is generally higher than the volume discharged to Howe Sound. The E500GPM was operational during the monitoring period (May 18 - May 24) on May 19 and 20.
[3] East WWTP treated effluent was recirculated to the East Sedimentation Pond.

Appendix C: West Catchment Monitoring Results

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

Parameter	Unit	Lowest Applicable Guideline [1]		PE-111578 Discharge Limit	Station SP-W-IN
					Influent
					SP-W-IN
					VA25B1590-006
		Long Term	Short Term		2025-05-19 9:05
General Parameters					
pH - Field	pH units	- [2]	-	5.5 - 9.0	8.1
Specific Conductivity - Field	µS/cm	-	-	-	1119
Temperature - Field	°C	-	-	-	14.9
Salinity - Field	ppt	-	-	-	0.56
Turbidity - Field	NTU	-	-	-	3.78
TSS	mg/L	-	-	25 or 75 [6]	3.6
Dissolved Oxygen - Field	mg/L	≥8	-	-	11.15
Anions and Nutrients					
Sulphate	mg/L	-	-	-	311
Chloride	mg/L	-	-	-	19.1
Fluoride	mg/L	-	1.5	-	0.257
Ammonia (N-NH_3)	mg/L	2 [3]	13 [3]	-	<0.0050
Nitrite (N-NO_2)	mg/L	-	-	-	<0.0050
Nitrate (N-NO_3)	mg/L	3.7	339	-	<0.0250
Total Metals					
Aluminum, total (T-Al)	mg/L	-	-	-	0.115
Antimony, total (T-Sb)	mg/L	-	0.27 [4]	-	0.00111
Arsenic, total (T-As)	mg/L	0.0125	0.0125	-	0.00192
Barium, total (T-Ba)	mg/L	-	-	-	0.00441
Beryllium, total (T-Be)	mg/L	0.1	-	-	<0.000020
Boron, total (T-B)	mg/L	1.2	-	-	0.015
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	<0.0000250
Chromium, total (T-Cr)	mg/L	-	-	-	0.00052
Cobalt, total (T-Co)	mg/L	-	-	-	<0.00010
Copper, total (T-Cu)	mg/L	- [2]	- [2]	0.0043	0.0012
Iron, total (T-Fe)	mg/L	-	-	-	0.082
Lead, total (T-Pb)	mg/L	- [2]	- [2]	0.0035	0.000485
Manganese, total (T-Mn)	mg/L	-	-	-	0.00892
Mercury, total (T-Hg)	mg/L	0.000016 [5]	-	-	0.00000901
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.0943
Nickel, total (T-Ni)	mg/L	0.0083	-	-	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	-	0.000348
Silver, total (T-Ag)	mg/L	0.0005	0.0037	-	<0.000010
Thallium, total (T-Tl)	mg/L	-	-	-	0.000039
Uranium, total (T-U)	mg/L	-	-	-	0.0206
Vanadium, total (T-V)	mg/L	- [2]	-	0.0081	0.00124
Zinc, total (T-Zn)	mg/L	- [2]	- [2]	0.0133	<0.0030
Hexavalent Chromium, total	mg/L	0.0015	-	-	<0.00050
Dissolved Metals					
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	<0.0000250
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.00109
Iron, dissolved (D-Fe)	mg/L	-	-	-	0.026
Lead, dissolved (D-Pb)	mg/L	-	-	-	0.000109
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.00461
Nickel, dissolved (D-Ni)	mg/L	-	-	-	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.13
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00114
Zinc, dissolved (D-Zn)	mg/L	-	-	-	0.0017
Polycyclic Aromatic Hydrocarbons (PAHs)					
Acenaphthene	mg/L	0.006	-	-	<0.000010
Acridine	mg/L	-	-	-	<0.000010
Anthracene	mg/L	-	-	-	<0.000010
Benz(a)anthracene	mg/L	-	-	-	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	-	<0.0000050
Chrysene	mg/L	0.0001	-	-	<0.000010
Fluoranthene	mg/L	-	-	-	<0.000010
Fluorene	mg/L	0.012	-	-	<0.000010
1-methylnaphthalene	mg/L	0.001	-	-	<0.000010
2-methylnaphthalene	mg/L	0.001	-	-	<0.000010
Naphthalene	mg/L	0.001	-	-	<0.000050
Phenanthrene	mg/L	-	-	-	<0.000020
Pyrene	mg/L	-	-	-	<0.000010
Quinoline	mg/L	-	-	-	<0.000050
Volatile Organic Compounds (VOCs)					
Benzene	mg/L	0.11	-	-	<0.00050
Ethylbenzene	mg/L	0.25	-	-	<0.00050
Methyl-tert-butyl-ether	mg/L	5	0.44	-	<0.00050
Styrene	mg/L	-	-	-	<0.00050
Toluene	mg/L	0.215	-	-	<0.00040
Total Xylenes	mg/L	-	-	-	<0.00050
Chlorobenzene	mg/L	0.025	-	-	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	-	-	<0.00050

Notes: Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.
Results in orange text exceeded the PE-111578 West Sedimentation Pond Discharge Limit.
The West Catchment discharged during the monitoring period (May 18 - May 24) on May 19.
[1] The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
[2] The WQG was not evaluated for parameters with discharge limits.
[3] The BC WQG for total ammonia is salinity, pH and temperature dependent; see Tables 27E and 27F in BC WQG guidance document.
[4] The working BC WQG for trivalent antimony [SB(III)] is 0.27 mg/L and is applied to total antimony results.
[5] When MeHg ≤0.5% of total Hg, the BC WQG = 0.00002 mg/L. The Canadian WQG = 0.000016 mg/L.
[6] The PE-111578 discharge limit for TSS is 25 mg/L under dry conditions and 75 mg/L for each day of Wet Conditions.

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

Parameter	Unit	Lowest Applicable Guideline [1]		PE-111578 Discharge Limit	Station SP-W-OUT Effluent SP-W-OUT VA25B1590-002 2025-05-19 9:45	Station SP-W-OUT Effluent SP-W-OUT-DUP VA25B1590-003 2025-05-19 9:45
		Long Term	Short Term			
General Parameters						
pH - Field	pH units	- [2]	-	5.5 - 9.0	8.1	8.1
Specific Conductivity - Field	µS/cm	-	-	-	1125	1125
Temperature - Field	°C	-	-	-	14.6	14.6
Salinity - Field	ppt	-	-	-	0.56	0.56
Turbidity - Field	NTU	-	-	-	4.89	4.89
TSS	mg/L	-	-	25 or 75 [6]	<3.0	<3.0
Dissolved Oxygen - Field	mg/L	≥8	-	-	10.83	10.83
Anions and Nutrients						
Sulphate	mg/L	-	-	-	308	309
Chloride	mg/L	-	-	-	18.6	18.5
Fluoride	mg/L	-	1.5	-	0.268	0.263
Ammonia (N-NH_3)	mg/L	2 [3]	13 [3]	-	<0.0050	<0.0050
Nitrite (N-NO_2)	mg/L	-	-	-	<0.0050	<0.0050
Nitrate (N-NO_3)	mg/L	3.7	339	-	<0.0250	<0.0250
Total Metals						
Aluminum, total (T-Al)	mg/L	-	-	-	0.0949	0.0947
Antimony, total (T-Sb)	mg/L	-	0.27 [4]	-	0.00112	0.00112
Arsenic, total (T-As)	mg/L	0.0125	0.0125	-	0.00201	0.00201
Barium, total (T-Ba)	mg/L	-	-	-	0.00378	0.00378
Beryllium, total (T-Be)	mg/L	0.1	-	-	<0.000020	<0.000020
Boron, total (T-B)	mg/L	1.2	-	-	0.014	0.015
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	<0.0000250	<0.0000250
Chromium, total (T-Cr)	mg/L	-	-	-	0.00056	0.00053
Cobalt, total (T-Co)	mg/L	-	-	-	<0.00010	<0.00010
Copper, total (T-Cu)	mg/L	- [2]	- [2]	0.0043	0.00134	0.00135
Iron, total (T-Fe)	mg/L	-	-	-	0.078	0.081
Lead, total (T-Pb)	mg/L	- [2]	- [2]	0.0035	0.000437	0.00046
Manganese, total (T-Mn)	mg/L	-	-	-	0.00761	0.00766
Mercury, total (T-Hg)	mg/L	0.000016 [5]	-	-	0.00000825	0.00000821
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.096	0.094
Nickel, total (T-Ni)	mg/L	0.0083	-	-	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	-	0.000277	0.000355
Silver, total (T-Ag)	mg/L	0.0005	0.0037	-	<0.000010	<0.000010
Thallium, total (T-Tl)	mg/L	-	-	-	0.000038	0.000041
Uranium, total (T-U)	mg/L	-	-	-	0.0199	0.0211
Vanadium, total (T-V)	mg/L	- [2]	-	0.0081	0.00118	0.00114
Zinc, total (T-Zn)	mg/L	- [2]	- [2]	0.0133	0.0033	0.0038
Hexavalent Chromium, total	mg/L	0.0015	-	-	<0.00050	<0.00050
Dissolved Metals						
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	<0.0000200	<0.0000200
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.00074	0.00073
Iron, dissolved (D-Fe)	mg/L	-	-	-	0.044	0.045
Lead, dissolved (D-Pb)	mg/L	-	-	-	0.00012	0.000128
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.0051	0.00498
Nickel, dissolved (D-Ni)	mg/L	-	-	-	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.122	0.121
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00104	0.00099
Zinc, dissolved (D-Zn)	mg/L	-	-	-	0.0025	0.0029
Polycyclic Aromatic Hydrocarbons (PAHs)						
Acenaphthene	mg/L	0.006	-	-	<0.000010	<0.000010
Acridine	mg/L	-	-	-	<0.000010	<0.000010
Anthracene	mg/L	-	-	-	<0.000010	<0.000010
Benz(a)anthracene	mg/L	-	-	-	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	-	<0.0000050	<0.0000050
Chrysene	mg/L	0.0001	-	-	<0.000010	<0.000010
Fluoranthene	mg/L	-	-	-	<0.000010	<0.000010
Fluorene	mg/L	0.012	-	-	<0.000010	<0.000010
1-methylnaphthalene	mg/L	0.001	-	-	<0.000010	<0.000010
2-methylnaphthalene	mg/L	0.001	-	-	<0.000010	<0.000010
Naphthalene	mg/L	0.001	-	-	<0.000050	<0.000050
Phenanthrene	mg/L	-	-	-	<0.000020	<0.000020
Pyrene	mg/L	-	-	-	<0.000010	<0.000010
Quinoline	mg/L	-	-	-	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)						
Benzene	mg/L	0.11	-	-	<0.00050	<0.00050
Ethylbenzene	mg/L	0.25	-	-	<0.00050	<0.00050
Methyl-tert-butyl-ether	mg/L	5	0.44	-	<0.00050	<0.00050
Styrene	mg/L	-	-	-	<0.00050	<0.00050
Toluene	mg/L	0.215	-	-	<0.00040	<0.00040
Total Xylenes	mg/L	-	-	-	<0.00050	<0.00050
Chlorobenzene	mg/L	0.025	-	-	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	-	-	<0.00050	<0.00050

Notes: Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.
Results in orange text exceeded the PE-111578 West Sedimentation Pond Discharge Limit.
The West Catchment discharged during the monitoring period (May 18 - May 24) on May 19.
[1] The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
[2] The WQG was not evaluated for parameters with discharge limits.
[3] The BC WQG for total ammonia is salinity, pH and temperature dependent; see Tables 27E and 27F in BC WQG guidance document.
[4] The working BC WQG for trivalent antimony [SB(III)] is 0.27 mg/L and is applied to total antimony results.
[5] When MeHg ≤0.5% of total Hg, the BC WQG = 0.00002 mg/L. The Canadian WQG = 0.000016 mg/L.
[6] The PE-111578 discharge limit for TSS is 25 mg/L under dry conditions and 75 mg/L for each day of Wet Conditions.

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

Parameter					**Total Methylmercury**	**Total Mercury**
Unit					**µg/L**	**µg/L**
Lowest Applicable Guideline[1]					0.0001 [2]	0.0028 – 0.0066 [3,4]
Station	**Water Type**	**Sample ID**	**Lab ID**	**Sampling Date**		
Influent						
SP-W-IN	Influent	SP-W-IN	VA25B1379-001	2025-05-15	***0.000124***	***0.00451***
SP-W-IN	Influent	SP-W-IN	VA25B1590-006	2025-05-19	***0.000137***	***0.00901***
Effluent						
SP-W-OUT	Effluent	SP-W-OUT	VA25B1590-002	2025-05-19	***0.000149***	***0.00825***
SP-W-OUT	Effluent	SP-W-OUT-Dup	VA25B1590-003	2025-05-19	***0.000158***	***0.00821***
W500GPM-OUT	Effluent	W500GPM-OUT	VA25B1379-002	2025-05-15	0.000096	0.00273

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

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

Parameter					**Lower Bound PCDD/F TEQ**	**Upper Bound PCDD/F TEQ**
Unit					**pg/L**	**pg/L**
Station	**Water Type**	**Sample ID**	**Lab ID**	**Sampling Date**		
Influent						
SP-W-IN	Influent	SP-W-IN	VA25A8534-005	2025-04-16	0.00515	0.551
SP-W-IN	Influent	SP-W-IN	VA25A8856-001	2025-04-21	0.00859	1.36
SP-W-IN	Influent	SP-W-IN	VA25B0099-002	2025-05-02	0.00441	0.801
Effluent						
SP-W-OUT	Effluent	SP-W-OUT	VA25A8534-006	2025-04-16	0.000837	0.520
SP-W-OUT	Effluent	SP-W-OUT	VA25A8856-002	2025-04-21	0.0295	1.42

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 (May 18 - 24).

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	2025-05-18 14:08	16.6	11.22	0.60	20.94	18.6	7.8	1203	No
SP-W-IN	Influent	2025-05-19 9:05	14.9	11.15	0.56	3.78	5.8	8.1	1119	No
SP-W-IN	Influent	2025-05-20 9:45	14.0	10.54	0.48	28.93	24.6	8.3	966	No
SP-W-IN	Influent	2025-05-21 12:33	17.1	10.98	0.57	17.34	15.9	7.9	1134	No
SP-W-IN	Influent	2025-05-22 15:25	18.7	12.17	0.63	7.54	8.6	8.3	1255	No
SP-W-IN	Influent	2025-05-23 15:06	19.5	11.53	0.62	11.93	11.9	8.5	1235	No
SP-W-IN	Influent	2025-05-24 14:06	20.4	11.64	0.60	9.22	9.9	8.2	1199	No
W500GPM-IN	Influent	2025-05-18 14:18	16.5	11.17	0.42	10.59	10.9	8.3	859	No
W500GPM-IN	Influent	2025-05-19 8:44	15.3	10.62	0.56	6.65	8.0	7.9	1127	No
W500GPM-IN	Influent	2025-05-20 14:10	15.5	11.79	0.48	25.30	21.9	8.3	957	No
W500GPM-IN	Influent	2025-05-21 12:40	16.3	11.88	0.58	10.86	11.1	8.1	1181	No
W500GPM-IN	Influent	2025-05-22 15:18	17.5	13.68	0.62	10.08	10.5	8.3	1242	No
W500GPM-IN	Influent	2025-05-23 15:11	18.9	13.31	0.62	8.42	9.3	8.7	1237	No
W500GPM-IN	Influent	2025-05-24 14:11	19.9	11.79	0.60	4.95	6.7	8.4	1203	No
Effluent [5]										
SP-W-OUT	Effluent	2025-05-19 9:45	14.6	10.83	0.56	4.89	6.6	8.1	1125	No
W500GPM-OUT	Effluent	2025-05-18 14:14	16.2	12.31	0.42	6.82	8.1	8.0	851	No
W500GPM-OUT	Effluent	2025-05-19 8:51	14.4	11.22	0.56	3.60	5.7	8.0	1126	No
W500GPM-OUT	Effluent	2025-05-20 14:12	15.7	11.98	0.48	6.93	8.2	8.2	962	No
W500GPM-OUT	Effluent	2025-05-21 12:44	17.0	11.25	0.58	6.61	7.9	8.0	1155	No
W500GPM-OUT	Effluent	2025-05-22 15:22	18.2	11.65	0.63	7.46	8.6	8.1	1253	No
W500GPM-OUT	Effluent	2025-05-23 15:15	19.2	11.32	0.62	3.32	5.5	8.4	1237	No
W500GPM-OUT	Effluent	2025-05-24 14:15	20.5	10.20	0.60	1.90	4.4	7.8	1204	No

Notes: Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.
Results in orange text exceeded the PE-111578 West Sedimentation Pond Discharge Limit.
[1] The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
[2] The WQG was not evaluated for parameters with discharge limits.
[3] TSS concentration is estimated from field turbidity measurements using a site-specific relationship TSS = 0.7458 * [turbidity as NTU] + 3.
[4] Daily field measurements for station SP-W-IN were collected from cell 1 of the West Sedimentation Pond.
[5] There was no discharge at the authorized discharge location (SP-W-OUT) on May 18 nor on May 20 – May 24, 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 (May 18 - 24).

	West Sedimentation Pond Effluent	West TSS Settling System (W500GPM) Clarified Effluent (Station W500GPM-OUT)	West TSS Settling System (ESC) Clarified Effluent (Station ESC-W-OUT)	Water Reclaimed for Dust Suppression (Station W500GPM-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**	**m^3**
PE-111578 Discharge Limit	- [2]	- [2]	- [2]	- [2]	120	- [2]
Date						
2025-05-18	0	1,717 [3]	0	0	0	0
2025-05-19	0	2,045 [3]	0	6	0	858
2025-05-20	0	1,564 [3]	0	0	0	0
2025-05-21	0	1,985 [3]	0	25	0	0
2025-05-22	0	2,180 [3]	0	97	0	0
2025-05-23	0	2,259 [3]	0	110	0	0
2025-05-24	0	2,057 [3]	0	138	0	0

Notes:
Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.
Results in orange text exceeded the PE-111578 West Sedimentation Pond Discharge Limit.
[1] The West WWTP is not being operated, therefore discharges are not expected from this facility.
[2] The annual average authorized discharge rate from the West Sedimentation Pond is 310 m^3/day. As noted in PE-111578 Condition 2.1.4, the actual discharge rate may deviate from the annual average rate due to annual variations in precipitation amounts within the catchment area. Therefore, the annual average authorized discharge rate is not evaluated as a discharge limit.
[3] W500GPM clarified effluent is discharged to Howe Sound, recirculated to the West Sedimentation Pond or is reclaimed for road dust suppression based on operational considerations. Therefore, the W500GPM clarified effluent volume may be higher than the volume discharged to Howe Sound at station SP-W-OUT. The W500GPM operated each day during the monitoring period (May 18 - 24).
[4] The ESC system was not operational during the monitoring period (May 18 - May 24).

Appendix D: Non-Contact Water Diversion Ditch Outlets Results

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

Parameter	Unit	Lowest Applicable Guideline [1, 2]		Station OUT-02 Non-Contact Water Diversion Ditch Outlet OUT-02 VA25B1591-001
		Long Term	Short Term	2025-05-19 11:00
General Parameters				
pH - Field	pH units	6.5 - 9.0	-	6.6
Specific Conductivity - Field	µS/cm	-	-	24
Temperature - Field	°C	-	-	9.5
Salinity - Field	ppt	-	-	0.01
Turbidity - Field	NTU	-	-	1.59
TSS	mg/L	-	-	6.6
Dissolved Oxygen - Field	mg/L	>=8	>=5	12.3
Anions and Nutrients				
Sulphate [2]	mg/L	128	-	2.12
Chloride	mg/L	120	600	0.76
Fluoride [2]	mg/L	-	0.40	0.032
Ammonia ($N\text{-}NH_3$) [2]	mg/L	1.86	25	0.0076
Nitrite ($N\text{-}NO_2$) [2]	mg/L	0.02	0.06	<0.0010
Nitrate ($N\text{-}NO_3$)	mg/L	3	32.8	0.23
Total Metals				
Aluminum, total (T-Al) [2]	mg/L	0.048	-	***0.266***
Antimony, total (T-Sb)	mg/L	0.074	-	<0.00010
Arsenic, total (T-As)	mg/L	0.005	-	0.0002
Barium, total (T-Ba)	mg/L	1	-	0.00462
Beryllium, total (T-Be)	mg/L	0.00013	-	<0.000020
Boron, total (T-B)	mg/L	1.2	29	<0.010
Cadmium, total (T-Cd) [2]	mg/L	0.000036	0.00018	0.0000126
Chromium, total (T-Cr) [4]	mg/L	0.001	-	<0.00050
Cobalt, total (T-Co)	mg/L	0.001	0.11	0.00018
Copper, total (T-Cu)	mg/L	-	-	0.00088
Iron, total (T-Fe)	mg/L	0.3	1	0.11
Lead, total (T-Pb)	mg/L	-	-	0.00031
Manganese, total (T-Mn) [2]	mg/L	0.768	0.816	0.01
Mercury, total (T-Hg) [3]	mg/L	0.00002	-	0.00000319
Molybdenum, total (T-Mo)	mg/L	0.073	46	0.00169
Nickel, total (T-Ni) [2]	mg/L	0.025	-	<0.00050
Selenium, total (T-Se)	mg/L	0.001	-	0.000059
Silver, total (T-Ag)	mg/L	0.00012	-	<0.000010
Thallium, total (T-Tl)	mg/L	0.0008	-	<0.000010
Uranium, total (T-U)	mg/L	0.0085	0.033	0.000672
Vanadium, total (T-V)	mg/L	0.12	-	<0.00050
Zinc, total (T-Zn)	mg/L	-	-	<0.0030
Hexavalent Chromium, total	mg/L	0.001	-	-
Dissolved Metals				
Cadmium, dissolved (D-Cd) [2]	mg/L	0.000036	0.000049	0.0000069
Copper, dissolved (D-Cu) [2]	mg/L	0.00020	0.0012	***0.00050***
Iron, dissolved (D-Fe)	mg/L	-	0.35	0.012
Lead, dissolved (D-Pb) [2]	mg/L	0.0024	-	<0.000050
Manganese, dissolved (D-Mn) [2]	mg/L	0.33	1.97	0.0015
Nickel, dissolved (D-Ni) [2]	mg/L	0.00080	0.013	<0.00050
Strontium, dissolved (D-Sr)	mg/L	2.5	-	0.0117
Vanadium, dissolved (D-V)	mg/L	-	-	<0.00050
Zinc, dissolved (D-Zn) [2]	mg/L	0.0078	0.010	0.0013
Polycyclic Aromatic Hydrocarbons (PAHs)				
Acenaphthene	mg/L	0.0058	-	-
Acridine	mg/L	0.003	-	-
Anthracene	mg/L	0.000012	-	-
Benz(a)anthracene	mg/L	0.000018	-	-
Benzo(a)pyrene	mg/L	0.00001	-	-
Chrysene	mg/L	-	-	-
Fluoranthene	mg/L	0.00004	-	-
Fluorene	mg/L	0.003	-	-
1-methylnaphthalene	mg/L	-	-	-
2-methylnaphthalene	mg/L	-	-	-
Naphthalene	mg/L	0.001	0.001	-
Phenanthrene	mg/L	0.0003	-	-
Pyrene	mg/L	0.00002	-	-
Quinoline	mg/L	0.0034	-	-
Volatile Organic Compounds (VOCs)				
Benzene	mg/L	0.04	-	-
Ethylbenzene	mg/L	0.09	-	-
Methyl-tert-butyl-ether	mg/L	10	3.4	-
Styrene	mg/L	0.072	-	-
Toluene	mg/L	0.0005	-	-
Total Xylenes	mg/L	0.03	-	-
Chlorobenzene	mg/L	-	-	-
1,2-Dichlorobenzene	mg/L	-	-	-

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

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
				VA25B0930-001	VA25B1050-001	VA25B1050-003	VA25B0930-002
		Long Term	Short Term	2025-05-12 11:35	2025-05-13 15:20	2025-05-13 14:45	2025-05-12 10:10
General Parameters							
pH - Field	pH units	6.5 - 9.0	-	7.2	6.9	6.7	7.8
Specific Conductivity - Field	µS/cm	-	-	4.4	6.2	6.3	80.6
Temperature - Field	°C	-	-	6.2	8.2	7.5	10.1
Salinity - Field	ppt	-	-	0	0	0	0.05
Turbidity - Field	NTU	-	-	0.11	0.54	0.63	1.84
TSS	mg/L	-	-	<3.0	<3.0	<3.0	<3.0
Dissolved Oxygen - Field	mg/L	>=8	>=5	13.52	12.33	13.09	12.15
Anions and Nutrients							
Sulphate [2]	mg/L	128-218	-	0.32	1.23	1.22	6.55
Chloride	mg/L	120	600	<0.50	<0.50	0.78	5.72
Fluoride [2]	mg/L	-	0.40-1.0	<0.020	<0.020	<0.020	0.133
Ammonia ($N\text{-}NH_3$) [2]	mg/L	1.59-1.92	8.25-24.6	<0.0050	<0.0050	<0.0050	<0.0050
Nitrite ($N\text{-}NO_2$) [2]	mg/L	0.020-0.060	0.060-0.18	<0.0010	<0.0010	<0.0010	<0.0010
Nitrate ($N\text{-}NO_3$)	mg/L	3	32.8	0.0161	0.0212	0.0195	<0.0050
Total Metals							
Aluminum, total (T-Al) [2]	mg/L	0.031-0.16	-	***0.136***	***0.0709***	***0.0875***	***0.264***
Antimony, total (T-Sb)	mg/L	0.074	-	<0.00010	<0.00010	<0.00010	0.00013
Arsenic, total (T-As)	mg/L	0.005	-	0.00011	<0.00010	<0.00010	0.00293
Barium, total (T-Ba)	mg/L	1	-	0.00138	0.00163	0.00167	0.00712
Beryllium, total (T-Be)	mg/L	0.00013	-	<0.000020	<0.000020	<0.000020	<0.000020
Boron, total (T-B)	mg/L	1.2	29	<0.010	<0.010	<0.010	0.012
Cadmium, total (T-Cd) [2]	mg/L	0.000036-0.000095	0.00011-0.0011	<0.0000050	<0.0000050	<0.0000050	<0.0000150
Chromium, total (T-Cr) [4]	mg/L	0.001	-	<0.00050	<0.00050	<0.00050	***0.00228***
Cobalt, total (T-Co)	mg/L	0.001	0.11	<0.00010	<0.00010	<0.00010	<0.00010
Copper, total (T-Cu)	mg/L	-	-	0.0007	<0.00050	<0.00050	0.00053
Iron, total (T-Fe)	mg/L	0.3	1	0.027	0.012	0.021	0.043
Lead, total (T-Pb)	mg/L	-	-	0.000051	<0.000050	<0.000050	<0.000050
Manganese, total (T-Mn) [2]	mg/L	0.768-0.843	0.816-1.14	0.00086	0.00047	0.00096	0.00932
Mercury, total (T-Hg) [3]	mg/L	0.00002	-	0.00000182	0.00000068	0.00000097	0.0000009
Molybdenum, total (T-Mo)	mg/L	0.073	46	0.000204	0.000369	0.000337	0.0156
Nickel, total (T-Ni) [2]	mg/L	0.025	-	<0.00050	<0.00050	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	0.001	-	<0.000050	<0.000050	<0.000050	0.00006
Silver, total (T-Ag)	mg/L	0.00012	-	<0.000010	<0.000010	<0.000010	<0.000010
Thallium, total (T-Tl)	mg/L	0.0008	-	<0.000010	<0.000010	<0.000010	<0.000010
Uranium, total (T-U)	mg/L	0.0085	0.033	0.000579	0.000161	0.000152	0.00202
Vanadium, total (T-V)	mg/L	0.12	-	<0.00050	<0.00050	<0.00050	0.00129
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	***0.00212***
Dissolved Metals							
Cadmium, dissolved (D-Cd) [2]	mg/L	0.000018-0.00014	0.000038-0.00031	<0.0000050	<0.0000050	<0.0000050	0.0000123
Copper, dissolved (D-Cu) [2]	mg/L	0.00020-0.00060	0.00076-0.0036	<0.00020	<0.00020	<0.00020	0.00033
Iron, dissolved (D-Fe)	mg/L	-	0.35	0.019	<0.010	<0.010	0.011
Lead, dissolved (D-Pb) [2]	mg/L	0.0012-0.0024	-	<0.000050	<0.000050	<0.000050	<0.000050
Manganese, dissolved (D-Mn) [2]	mg/L	0.35-0.39	1.97-3.89	0.00048	0.00059	0.00038	0.00728
Nickel, dissolved (D-Ni) [2]	mg/L	0.00060-0.0011	0.0094-0.012	<0.00050	<0.00050	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	2.5	-	0.00265	0.00422	0.00531	0.0446
Vanadium, dissolved (D-V)	mg/L	-	-	<0.00050	<0.00050	<0.00050	0.00104
Zinc, dissolved (D-Zn) [2]	mg/L	0.0039-0.0051	0.0078-0.027	<0.0010	0.0011	0.0010	0.0010
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:
Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of freshwater aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of freshwater aquatic life.
[1] The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
[2] BC WQG or CWQG indicated to be variable are calculated from sample-specific measurements for temperature, field pH, total hardness and dissolved organic carbon (DOC) content.
[3] When MeHg $\leqslant$ 0.5% of total Hg, BC WQG = 0.00002 mg/L.
[4] The approved BC WQG for hexavalent chromium [Cr(VI)] is 0.001 mg/L and 0.0089 mg/L for trivalent chromium [Cr(III)]. The more conservative criteria for Cr(VI) is applied to total chromium results.
The lowest applicable guidelines are shown in the table; however, water quality data was screened to all applicable guidelines.

Table E-2: Freshwater 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	VA25A8193-004	2025-04-13	0	1.65
SW-02	Lower Reach of Mill Creek (upstream of the third bridge)	SW-02	VA25A8193-001	2025-04-12	0	1.28
SW-07	Upstream Mill Creek (at the diversion inlet)	SW-07	VA25A8193-003	2025-04-12	0.000298	1.19
SW-04	Lower Reach of East Creek (near the outlet to the outfall culvert)	SW-04	VA25A8193-005	2025-04-13	0.00601	1.27
SW-02	Lower Reach of Mill Creek (upstream of the third bridge)	SW-02	VA25A8841-001	2025-04-20	0.00171	1.85
SW-07	Upstream Mill Creek (at the diversion inlet)	SW-07	VA25A8841-003	2025-04-20	0.000903	1.91
SW-01	Lower Reach of Woodfibre Creek (near the mouth)	SW-01	VA25A8977-002	2025-04-22	0	1.70
SW-04	Lower Reach of East Creek (near the outlet to the outfall culvert)	SW-04	VA25A8977-001	2025-04-22	0.0930	1.68
SW-02	Lower Reach of Mill Creek (upstream of the third bridge)	SW-02	VA25A9554-002	2025-04-28	0.000657	0.691
SW-07	Upstream Mill Creek (at the diversion inlet)	SW-07	VA25A9554-003	2025-04-28	0.000408	0.609
SW-01	Lower Reach of Woodfibre Creek (near the mouth)	SW-01	VA25A9710-002	2025-04-29	0	0.75
SW-04	Lower Reach of East Creek (near the outlet to the outfall culvert)	SW-04	VA25A9710-001	2025-04-29	0.0182	0.793

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 VA25B1050-002 2025-05-13 14:30
		Long Term	Short Term	
General Parameters				
pH - Field	pH units	7.0 - 8.7	-	7.9
Specific Conductivity - Field	µS/cm	-	-	93.8
Temperature - Field	℃	-	-	8.4
Salinity - Field	ppt	-	-	0.1
Turbidity - Field	NTU	-	-	0.48
TSS	mg/L	-	-	<3.0
Dissolved Oxygen - Field	mg/L	-	-	12.06
Anions and Nutrients				
Sulphate	mg/L	-	-	4.84
Chloride	mg/L	-	-	25
Fluoride	mg/L	-	-	<0.020
Ammonia ($N\text{-}NH_3$)	mg/L	-	-	<0.0050
Nitrite ($N\text{-}NO_2$)	mg/L	-	-	<0.0010
Nitrate ($N\text{-}NO_3$)	mg/L	-	-	0.0199
Total Metals				
Aluminum, total (T-Al)	mg/L	-	-	0.0701
Antimony, total (T-Sb)	mg/L	-	-	<0.00010
Arsenic, total (T-As)	mg/L	-	-	<0.00010
Barium, total (T-Ba)	mg/L	-	-	0.0016
Beryllium, total (T-Be)	mg/L	-	-	<0.000020
Boron, total (T-B)	mg/L	-	-	0.013
Cadmium, total (T-Cd)	mg/L	-	-	<0.0000050
Chromium, total (T-Cr)	mg/L	-	-	<0.00050
Cobalt, total (T-Co)	mg/L	-	-	<0.00010
Copper, total (T-Cu)	mg/L	0.002	0.003	<0.00050
Iron, total (T-Fe)	mg/L	-	-	0.016
Lead, total (T-Pb)	mg/L	0.002	0.14	<0.000050
Manganese, total (T-Mn)	mg/L	-	-	0.001
Mercury, total (T-Hg) [2]	mg/L	0.00002	-	0.00000087
Molybdenum, total (T-Mo)	mg/L	-	-	0.000398
Nickel, total (T-Ni)	mg/L	-	-	<0.00050
Selenium, total (T-Se)	mg/L	-	-	<0.000050
Silver, total (T-Ag)	mg/L	-	-	<0.000010
Thallium, total (T-Tl)	mg/L	-	-	<0.000010
Uranium, total (T-U)	mg/L	-	-	0.000161
Vanadium, total (T-V)	mg/L	-	-	<0.00050
Zinc, total (T-Zn)	mg/L	-	-	<0.0030
Hexavalent Chromium, total	mg/L	-	-	<0.00050
Dissolved Metals				
Cadmium, dissolved (D-Cd)	mg/L	-	-	<0.0000050
Copper, dissolved (D-Cu)	mg/L	-	-	<0.00020
Iron, dissolved (D-Fe)	mg/L	-	-	<0.010
Lead, dissolved (D-Pb)	mg/L	-	-	<0.000050
Manganese, dissolved (D-Mn)	mg/L	-	-	0.00053
Nickel, dissolved (D-Ni)	mg/L	-	-	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	0.0127
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:
Results in ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of estuarine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of estuarine water aquatic life.
[1] The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
[2] When MeHg ⩽ 0.5% of total Hg, BC WQG = 0.00002 mg/L.

Table F-2: Estuarine Water 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	VA25A8193-002	2025-04-12	0.0664	1.51
SW-03	Mill Creek Estuary	SW-03	VA25A8841-002	2025-04-20	0	2.20
SW-03	Mill Creek Estuary	SW-03	VA25A9554-001	2025-04-28	0.00517	0.63

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

Appendix G: Marine Water Receiving Environment Results

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

Parameter	Unit	Lowest Applicable Guideline [1]		Station IDZ-E1			Station IDZ-E2		
				0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor	0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor
				IDZ-E1-0.5	IDZ-E1-2m	IDZ-E1-SF	IDZ-E2-0.5	IDZ-E2-2m	IDZ-E2-SF
				VA25B1416-001	VA25B1416-002	VA25B1416-003	VA25B1416-004	VA25B1416-005	VA25B1416-006
		Long Term	Short Term	2025-05-15 9:05	2025-05-15 9:10	2025-05-15 9:15	2025-05-15 9:25	2025-05-15 9:30	2025-05-15 9:35
General Parameters									
pH - Field	pH units	7.0 - 8.7	-	7.58	7.48	7.85	7.85	7.39	7.72
Specific Conductivity - Field	µS/cm	-	-	3558	14178	42050	3722	7874	43159
Temperature - Field	°C	-	-	10.4	12.0	10.8	10.3	12.0	10.2
Salinity - Field	ppt	Narrative [2]	-	1.88	8.24	26.90	1.97	4.44	27.66
Turbidity - Field	NTU	Narrative [2]	Narrative [2]	3.70	2.99	0.28	3.55	3.41	0.29
TSS	mg/L	Narrative [2]	Narrative [2]	3.0	2.7	<2.0	2.0	4.4	3.3
Dissolved Oxygen - Field	mg/L	>=8	-	11.28	10.88	11.06	11.29	11.10	10.59

Notes:
Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.
[1] The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
[2] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. Salinity WQG was not evaluated. The water quality data presented in the table were collected when the site was not discharging, therefore the turbidity and TSS WQGs were not evaluated.

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

Parameter	Unit	Lowest Applicable Guideline [1]		Station IDZ-W1			Station IDZ-W2		
				0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor	0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor
				IDZ-W1-0.5	IDZ-W1-2m	IDZ-W1-SF	IDZ-W2-0.5	IDZ-W2-2m	IDZ-W2-SF
				VA25B1416-007	VA25B1416-008	VA25B1416-009	VA25B1416-010	VA25B1416-011	VA25B1416-012
		Long Term	Short Term	2025-05-15 9:45	2025-05-15 9:45	2025-05-15 9:50	2025-05-15 8:45	2025-05-15 8:50	2025-05-15 8:55
General Parameters									
pH - Field	pH units	7.0 - 8.7	-	7.86	7.39	7.44	***6.95***	7.52	7.17
Specific Conductivity - Field	µS/cm	-	-	3688	13154	45677	3812	21390	45511
Temperature - Field	°C	-	-	9.6	12.7	8.8	9.9	13.3	8.8
Salinity - Field	ppt	Narrative [2]	-	1.95	7.27	29.35	2.02	12.87	29.23
Turbidity - Field	NTU	Narrative [2]	Narrative [2]	2.71	2.62	0.46	3.27	0.87	0.42
TSS	mg/L	Narrative [2]	Narrative [2]	2.0	2.9	7.4	2.9	3.9	5.6
Dissolved Oxygen - Field	mg/L	>=8	-	11.34	10.84	***7.61***	11.50	10.69	***7.59***

Notes:
Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.
[1] The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
[2] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. Salinity WQG was not evaluated. The water quality data presented in the table were collected when the site was not discharging, therefore the turbidity and TSS WQGs were not evaluated.

Table G-3: Marine Water Methylmercury and Corresponding Total Mercury Results Received at the Time of Reporting.

Parameter					Total Methylmercury	Total Mercury
Unit					µg/L	µg/L
Lowest Applicable Guideline[1]					0.0001 [2]	0.0055-0.020 [3,4]
Station	**Position in Water Column**	**Sample ID**	**Lab ID**	**Sampling Date**		
Station IDZ-E1						
IDZ-E1	0.5 m Below Surface	IDZ-E1-0.5	VA25A9123-001	2025-04-23	<0.000020	<0.0050
IDZ-E1	2 m Below Surface	IDZ-E1-2m	VA25A9123-002	2025-04-23	0.000091	<0.0050
IDZ-E1	2 m Above Seafloor	IDZ-E1-SF	VA25A9123-004	2025-04-23	<0.000020	<0.0050
Station IDZ-E2						
IDZ-E2	0.5 m Below Surface	IDZ-E2-0.5	VA25A9123-005	2025-04-23	<0.000020	<0.0050
IDZ-E2	2 m Below Surface	IDZ-E2-2m	VA25A9123-006	2025-04-23	<0.000020	<0.0050
IDZ-E2	2 m Above Seafloor	IDZ-E2-SF	VA25A9123-007	2025-04-23	<0.000020	<0.0050
Station IDZ-W1						
IDZ-W1	0.5 m Below Surface	IDZ-W1-0.5	VA25B0262-001	2025-05-05	<0.000020	<0.0050
IDZ-W1	2 m Below Surface	IDZ-W1-2m	VA25B0262-002	2025-05-05	0.000026	<0.0050
IDZ-W1	2 m Above Seafloor	IDZ-W1-SF	VA25B0262-003	2025-05-05	0.000022	<0.0050
Station IDZ-W2						
IDZ-W2	0.5 m Below Surface	IDZ-W2-0.5	VA25B0262-004	2025-05-05	<0.000020	<0.0050
IDZ-W2	2 m Below Surface	IDZ-W2-2m	VA25B0262-005	2025-05-05	<0.000020	<0.0050
IDZ-W2	2 m Above Seafloor	IDZ-W2-SF	VA25B0262-006	2025-05-05	0.000027	<0.0050
Reference Station WQR1						
WQR1	0.5 m Below Surface	WQR1-0.5	VA25A9123-008	2025-04-23	<0.000020	<0.0050
WQR1	2 m Below Surface	WQR1-2m	VA25A9123-009	2025-04-23	<0.000020	<0.0050
WQR1	2 m Above Seafloor	WQR1-SF	VA25A9123-010	2025-04-23	<0.000020	<0.0050

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

Table G-4: Marine 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	**Position in Water Column**	**Sample ID**	**Lab ID**	**Sampling Date**		
Station IDZ-E1						
IDZ-E1	0.5 m Below Surface	IDZ-E1-0.5	VA25A8283-001	2025-04-14	0.00756	0.780
IDZ-E1	0.5 m Below Surface	IDZ-E1-0.5	VA25A9125-001	2025-04-23	0	0.994
IDZ-E1	2 m Below Surface	IDZ-E1-2m	VA25A8283-002	2025-04-14	0.00158	0.753
IDZ-E1	2 m Below Surface	IDZ-E1-2m	VA25A9125-002	2025-04-23	0.000375	0.821
IDZ-E1	2 m Above Seafloor	IDZ-E1-SF	VA25A8283-003	2025-04-14	0.00718	1.06
IDZ-E1	2 m Above Seafloor	IDZ-E1-SF	VA25A9125-004	2025-04-23	0.000312	1.10
Station IDZ-E2						
IDZ-E2	0.5 m Below Surface	IDZ-E2-0.5	VA25A8283-004	2025-04-14	0.00491	0.792
IDZ-E2	0.5 m Below Surface	IDZ-E2-0.5	VA25A9125-005	2025-04-23	0.000729	0.745
IDZ-E2	2 m Below Surface	IDZ-E2-2m	VA25A8283-005	2025-04-14	0.00674	0.958
IDZ-E2	2 m Below Surface	IDZ-E2-2m	VA25A9125-006	2025-04-23	0.00571	0.759
IDZ-E2	2 m Above Seafloor	IDZ-E2-SF	VA25A8283-006	2025-04-14	0	0.673
IDZ-E2	2 m Above Seafloor	IDZ-E2-SF	VA25A9125-007	2025-04-23	0.0248	0.804
Station IDZ-W1						
IDZ-W1	0.5 m Below Surface	IDZ-W1-0.5	VA25A8282-001	2025-04-13	0.0144	1.19
IDZ-W1	0.5 m Below Surface	IDZ-W1-0.5	VA25A8855-001	2025-04-21	0.00800	1.51
IDZ-W1	2 m Below Surface	IDZ-W1-2m	VA25A8282-002	2025-04-13	0.00683	1.17
IDZ-W1	2 m Below Surface	IDZ-W1-2m	VA25A8855-002	2025-04-21	0.00105	1.68
IDZ-W1	2 m Above Seafloor	IDZ-W1-SF	VA25A8282-003	2025-04-13	0	1.12
IDZ-W1	2 m Above Seafloor	IDZ-W1-SF	VA25A8855-003	2025-04-21	0.0462	1.52
Station IDZ-W2						
IDZ-W2	0.5 m Below Surface	IDZ-W2-0.5	VA25A8282-004	2025-04-13	0.000528	1.210
IDZ-W2	0.5 m Below Surface	IDZ-W2-0.5	VA25A8855-004	2025-04-21	0.00108	1.33
IDZ-W2	2 m Below Surface	IDZ-W2-2m	VA25A8282-005	2025-04-13	0.0411	1.24
IDZ-W2	2 m Below Surface	IDZ-W2-2m	VA25A8855-006	2025-04-21	0.000684	1.32
IDZ-W2	2 m Above Seafloor	IDZ-W2-SF	VA25A8282-006	2025-04-13	0.00322	0.911
IDZ-W2	2 m Above Seafloor	IDZ-W2-SF	VA25A8855-005	2025-04-21	0.273	1.71
Reference Station WQR1						
WQR1	0.5 m Below Surface	WQR1-0.5	VA25A8148-001	2025-04-11	0.590	1.71
WQR1	0.5 m Below Surface	WQR1-0.5	VA25A8283-007	2025-04-14	0.00797	0.750
WQR1	0.5 m Below Surface	WQR1-0.5	VA25A9125-008	2025-04-23	0	1.08
WQR1	2 m Below Surface	WQR1-2m	VA25A8148-002	2025-04-11	0.00702	1.20
WQR1	2 m Below Surface	WQR1-2m	VA25A8283-008	2025-04-14	0	0.812
WQR1	2 m Below Surface	WQR1-2m	VA25A9125-009	2025-04-23	0	0.862
WQR1	2 m Above Seafloor	WQR1-SF	VA25A8148-003	2025-04-11	0.000369	1.33
WQR1	2 m Above Seafloor	WQR1-SF	VA25A8283-009	2025-04-14	0.000645	0.720
WQR1	2 m Above Seafloor	WQR1-SF	VA25A9125-010	2025-04-23	0	0.885
Reference Station WQR2						
WQR2	0.5 m Below Surface	WQR2-0.5	VA25A8148-004	2025-04-11	0.0113	1.39
WQR2	0.5 m Below Surface	WQR2-0.5	VA25A8282-007	2025-04-13	0.00199	0.877
WQR2	0.5 m Below Surface	WQR2-0.5	VA25A8855-007	2025-04-21	0.00067	1.36
WQR2	2 m Below Surface	WQR2-2m	VA25A8148-005	2025-04-11	0.000534	1.27
WQR2	2 m Below Surface	WQR2-2m	VA25A8282-008	2025-04-13	0.00219	0.986
WQR2	2 m Below Surface	WQR2-2m	VA25A8855-008	2025-04-21	0	1.35
WQR2	2 m Above Seafloor	WQR2-SF	VA25A8148-006	2025-04-11	0.335	1.50
WQR2	2 m Above Seafloor	WQR2-SF	VA25A8282-009	2025-04-13	0.00240	0.860
WQR2	2 m Above Seafloor	WQR2-SF	VA25A8855-009	2025-04-21	0	1.32

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