TECHNICAL MEMORANDUM

To:	**Ian McAllister, Ashleigh Crompton, Mike Champion, Mark Zan and Ryan Schucroft (Woodfibre LNG)**	**Date:**	**22 Aug 2025**
From:	**Holly Pelletier, Cheng Kuang and Patrick Mueller (Lorax)**	**Project #:**	**A633-9**
Subject:	**PE-111578 Weekly Discharge and Compliance Report #77 for August 10 – 16**		

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 #77) was prepared by Lorax Environmental and summarizes WDA monitoring conducted for the period of August 10 – 16. 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 #77 has been prepared to meet the requirements specified in Condition 4.2 of PE-111578:

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

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

1. Current Conditions

1.1 Water Management Infrastructure

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

Non-contact water from the slopes above and outside the Woodfibre LNG construction area is intercepted by diversion ditches and conveyed to Howe Sound or Mill Creek. Diversion ditches for the west catchment convey water to Mill Creek at station OUT-06, or to Howe Sound at station OUT-02 (Appendix A, Figure 1). During heavy precipitation non-contact water is also conveyed to Howe Sound via station OUT-01. East of Mill Creek, non-contact water is intercepted and diverted around the east catchment along pre-existing road ditches that flow to East Creek or Mill Creek. To facilitate the replacement of the East Creek discharge culvert at OUT-12 (station SW-04), the lower reach of East Creek was temporarily diverted to an adjacent culvert, OUT-11, on September 17, 2024.

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

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

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

A flocculant-based TSS settling system (2700GPM) is being implemented at West Sedimentation Pond to clarify all non-contaminated construction contact water prior to re-use at site or discharge at SP-W-OUT. The fully built 2700GPM TSS settling system will have the installed capacity to clarify 14,700 m^3/day of contact water and will consist of six parallel treatment trains, each with an installed capacity of 2,450 m^3/day. The number of active trains will be matched to contact water flows. Only one train will be operated during dry conditions or when contact water flows are below approximately 2450 m^3/day, whereas at higher flows additional trains will be activated as needed to match the influent volumes. The individual treatment trains are being commissioned in stages. The first, third and fourth trains have been commissioned, and preparations are underway to commission the remaining three treatment trains.

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

1.2 Weather and Water Management

Variable weather conditions were observed during the August 10 – 16 monitoring period, with precipitation recorded on August 14 (1.2 mm), August 15 (58.6 mm), and August 16 (3.4 mm). The daily weather conditions are summarized in Table 1.

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

Date	Precipitation (mm)	Max. Temp (°C)	Min. Temp (°C)	Weather Description
2025-08-10	0	28.1	15.8	Sunny
2025-08-11	0	28.1	17.5	Sunny
2025-08-12	0	29.3	17.3	Sunny
2025-08-13	0	25.6	17.3	Mix of Sun and Cloud
2025-08-14	1.2	22.8	15.3	Overcast
2025-08-15	58.6	19.0	14.7	Rain
2025-08-16	3.4	19.8	15.5	Scattered Showers

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

From August 10 – 16, the East Sedimentation Pond received water from Woodfibre Creek to support treatment of concrete contact water at the East WWTP. Recirculated effluent from the East WWTP as well as recirculated effluent from the 2700GPM TSS settling system while the West Sedimentation Pond was off-line for maintenance were also directed to the East Sedimentation Pond (Appendix A, Figure 2). There was no discharge to Howe Sound from station SP-E-OUT during the monitoring period. A total of 572 m^3 of water from the East Sedimentation Pond was transferred to the West Sedimentation Pond on August 15 (Appendix B, Table B-6).

Routine operation of the East WWTP continued during the monitoring period (August 10 – 16). Concrete contact water was periodically directed to the East WWTP for treatment, as well as water stored in the East Sedimentation Pond (Appendix A, Figure 2 and Figure 3). East WWTP treated effluent was discharged to the East Sedimentation Pond each day during the monitoring period (August 10 – 16). Daily water volumes processed by the East WWTP are provided in Appendix B (Table B-6).

From July 30 to August 14, the West Sedimentation Pond did not receive any influent as it was drained to allow for pond maintenance and installation of the permanent outfall pipe (Appendix A, Figure 3). The 2700GPM system was configured to clarify East Sedimentation Pond effluent from July 30 to August 10, and was subsequently returned to the original configuration for clarifying West Sedimentation Pond effluent. A total of 1,977 m^3 of clarified effluent from the West Sedimenation Pond was discharged to Howe Sound from station SP-W-OUT on August 15 and 16. A total of 27 m^3 of clarified effluent was reclaimed for construction use. Daily clarified effluent volumes from the 2700GPM TSS settling system, volumes of reclaimed water and discharge volumes from the west catchment are provided in Appendix C (Table C-5).

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, WWTP-E-IN, WWTP-E-OUT, SP-W-IN, 2700GPM-IN, and 2700GPM-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.

A flocculant-based TSS settling system (2700GPM) is used at the West Sedimentation Pond as described in Section 1.1. Influent and effluent are monitored at stations 2700GPM-IN and 2700GPM-OUT, respectively. The 2700GPM settling system stations are supplemental to the PE-111578 monitoring requirements and are monitored at the discretion of field staff.

Water quality was monitored at stations IDZ-E1, IDZ-E2, IDZ-W1, IDZ-W2, WQR1, SP-E-IN, WWTP-E-IN, WWTP-E-OUT, SP-W-IN, SP-W-OUT, 2700GPM-IN, and 2700GPM-OUT during the monitoring period (August 10 – 16). Sampling dates and parameters tested are summarized in Table 2.

Overall, the PE-111578 monitoring requirements that were applicable during the monitoring period (August 10 – 16) were met. The initial high frequency monitoring requirements outlined in effluent permit PE-111578 for the sedimentation pond, WWTP and IDZ stations have been met. On June 25, 2025, BCER approved the implementation of low-frequency (*i.e.*, bi-monthly and monthly) monitoring requirements specified in PE-111578 for all parameters, except for metals, hexavalent chromium and methylmercury which will continue to be monitored weekly at sedimentation pond and WWTP stations.

Daily field parameters and a weekly analytical sample were not collected at the east catchment effluent station (SP-E-OUT) as there was no discharge to Howe Sound from the east catchment during the monitoring period (August 10 – 16). Daily field parameters were not collected from the west catchment influent station (SP-W-IN) on August 10 through August 14 as the West Sedimentation Pond has been drained since July 30 to allow for pond maintenance and installation of the permanent outfall pipe. On August 15 and 16 SP-W-OUT effluent monitoring was conducted at the 2700GPM-OUT station; The August 15 and 16 samples were identified as SP-W-OUT, and 2700GPM-OUT, respectively. 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 August 10 – 16.

Sampling Date	Sample	Description	Parameters Tested	Monitoring Frequency
August 10, 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		
	2700GPM-IN	2700GPM TSS settling system at the influent meter box	Field Parameters.	P
	2700GPM-OUT	2700GPM TSS settling system at the effluent meter box		
August 11, 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		
	IDZ-E1-0.5	Howe Sound IDZ station E1; 0.5 m below surface	Field, Physical & General Parameters, VH & BTEX, EPHs & PAHs, Total, Dissolved and Speciated Metals, VOCs, Methylmercury, Dioxins & Furans.	M
	IDZ-E1-2m	Howe Sound IDZ station E1; 2 m below surface		
	IDZ-E1-SF	Howe Sound IDZ station E1; 2 m above the seafloor		
	IDZ-E2-0.5	Howe Sound IDZ station E2; 0.5 m below surface		
	IDZ-E2-2m	Howe Sound IDZ station E2; 2 m below surface		
	IDZ-E2-SF	Howe Sound IDZ station E2; 2 m above the seafloor		
	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		
August 12, 2025	SP-E-IN	East Sedimentation Pond influent monitored at cell 1 of the pond	Field Parameters.	D
	WWTP-E-IN	East WWTP at the influent meter box	Field Parameters.	D
	WWTP-E-OUT	East WWTP at the effluent meter box		
August 13, 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		
August 14, 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, M, M_2, W
	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, M, M_2, W
	WWTP-E-OUT	East WWTP at the effluent meter box		
August 15, 2025	SP-E-IN	East Sedimentation Pond influent monitored at cell 1 of the pond	Field Parameters.	D
	WWTP-E-IN	East WWTP at the influent meter box	Field Parameters.	D
	WWTP-E-OUT	East WWTP at the effluent meter box		
	SP-W-IN	West Sedimentation Pond influent monitored at cell 1 of the pond	Field, Physical & General Parameters, VH & BTEX, EPHs & PAHs, Total, Dissolved and Speciated Metals, VOCs, Methylmercury, Dioxins & Furans.	D, M, M_2, W
	SP-W-OUT	West Sedimentation Pond clarified effluent discharge to Howe Sound, collected at the 2700GPM Train 4 effluent meter box.	Field, Physical & General Parameters, VH & BTEX, EPHs & PAHs, Total, Dissolved and Speciated Metals, VOCs, Methylmercury, Dioxins & Furans.	D, M, M_2, W
	2700GPM-IN	2700GPM TSS settling system at the influent meter box	Field, Physical & General Parameters, VH & BTEX, EPHs & PAHs, Total, Dissolved and Speciated Metals, VOCs, Methylmercury, Dioxins & Furans.	P
August 16, 2025	SP-E-IN	East Sedimentation Pond influent monitored at cell 1 of the pond	Field Parameters.	D
	WWTP-E-IN	East WWTP at the influent meter box	Field Parameters.	D
	WWTP-E-OUT	East WWTP at the effluent meter box		
	SP-W-IN	West Sedimentation Pond influent monitored at cell 1 of the pond	Field Parameters.	D
	2700GPM-IN	2700GPM TSS settling system at the influent meter box	Field Parameters.	P
	2700GPM-OUT	2700GPM TSS settling system at the effluent meter box	Field, Physical & General Parameters, VH & BTEX, EPHs & PAHs, Total, Dissolved and Speciated Metals, VOCs, Methylmercury, Dioxins & Furans.	P
	IDZ-W1-0.5	Howe Sound IDZ station W1; 0.5 m below surface	Field, Physical & General Parameters, VH & BTEX, EPHs & PAHs, Total, Dissolved and Speciated Metals, VOCs, Methylmercury, Dioxins & Furans.	M
	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		

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_2 – bi-monthly monitoring for physical parameters at WWTP and sedimentation pond stations.
W – high frequency monitoring for metals, chromium speciation and methylmercury at WWTP and sedimentation pond influent and effluent stations, effective June 25, 2025.
P – periodic monitoring for targeted parameters that is supplementary to PE-111578 requirements.

3. Water Quality Results

3.1 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 #77) are listed below in Table 3. Testing for methylmercury, dioxins, furans and toxicity may require four weeks or longer to complete. Analytical results not reported will be included in future weekly reports. Reporting of results is pending for the following samples and parameters:

- IDZ-W1, IDZ-W2 and WQR2 collected July 22 (dioxins and furans)
- 2700GPM-IN and 2700GPM-OUT collected July 29 (dioxins and furans)
- SW-02, SW-03 and SW-07 collected August 4 (methylmercury, dioxins and furans)
- SW-01 and SW-04 collected August 5 (methylmercury, dioxins and furans)
- 2700GPM-IN and 2700GPM-OUT collected August 7 (dioxins and furans)
- IDZ-E1, IDZ-E2 and WQR1 collected August 11 (field and all analytical parameters)
- SP-E-IN, WWTP-E-IN and WWTP-E-OUT collected August 14 (methylmercury, dioxins and furans)
- SP-W-IN, SP-W-OUT and 2700GPM-IN collected August 15 (methylmercury, dioxins and furans)
- 2700GPM-OUT collected August 16 (methylmercury, dioxins and furans)
- IDZ-W1 and IDZ-W2 collected August 16 (field and all analytical parameters)

Table 3: Summary of Analytical Results Included in Weekly Discharge and Compliance Report #77.

Sample	Description	Sampling Date	Parameters Reported
SP-E-IN	East Sedimentation Pond influent monitored at cell 1 of the pond	July 10, 2025	Dioxins and Furans.
WWTP-E-IN	East WWTP at the influent meter box		
WWTP-E-OUT	East WWTP at the effluent meter box		
IDZ-E1-0.5	Howe Sound IDZ station E1; 0.5 m below surface	July 12, 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		
2700GPM-IN	2700 GPM TSS settling system at the influent meter box	July 14, 2025	Dioxins and Furans.
2700GPM-OUT	2700 GPM TSS settling system at the effluent meter box		
2700GPM-IN	2700 GPM TSS settling system at the influent meter box	July 25, 2025	Dioxins and Furans.
2700GPM-OUT	2700 GPM TSS settling system at the effluent meter box		
SW-02	Lower Reach of Mill Creek (upstream of the third bridge)	August 4, 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)		
SW-01	Lower Reach of Woodfibre Creek (near the mouth)	August 5, 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)		
SP-E-IN	East Sedimentation Pond influent monitored at cell 1 of the pond	August 8, 2025	Methylmercury.
WWTP-E-IN	East WWTP at the influent meter box		
WWTP-E-OUT	East WWTP at the effluent meter box		
2700GPM-OUT	2700 GPM TSS settling system at the effluent meter box		Field and Physical Parameters, and PAHs.
SP-E-IN	East Sedimentation Pond influent monitored at cell 1 of the pond	August 14, 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		
SP-W-IN	West Sedimentation Pond influent monitored at cell 1 of the pond	August 15, 2025	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, and VOCs.
SP-W-OUT	West Sedimentation Pond clarified effluent discharge to Howe Sound, collected at sampling port		
2700GPM-IN	2700 GPM TSS settling system at the influent meter box		
2700GPM-OUT	2700 GPM TSS settling system at the effluent meter box	August 16, 2025	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, and VOCs.

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.

There were no discharges from the SP-E-OUT authorized discharge location during the monitoring period (August 10 – 16). East WWTP treated effluent volumes and discharge volumes from SP-E-OUT are listed in Appendix B, Table B-6.

Field measurements were collected August 10 – 16 at multiple influent and effluent locations, as outlined in Section 2, and are tabulated in Appendix B, Table B-5. Analytical samples collected August 14 (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.

Dissolved oxygen (5.65 – 7.59 mg/L) was below the lower limit of the MDO (≥8 mg/L) in East WWTP effluent (WWTP-E-OUT) in field measurements collected from August 10 to 15 (Appendix B, Table B-3), and the total mercury concentration (0.0000506 mg/L) was above the MDO (0.000016 mg/L) in East WWTP effluent collected August 14 (Appendix B, Table B-2). The depletion of dissolved oxygen was also observed in contact water during dry conditions in 2024 and is speculated to be induced by warm temperatures and limited freshwater inputs (*i.e.*, from rain) to the contact water management system during dry conditions. East WWTP treated effluent was directed to the East Sedimentation Pond and there was no discharge to Howe Sound from the authorized discharge location (SP-E-OUT) during the August 10 – 16 monitoring period. Mercury parameters are tracked in Table 5.

The methylmercury concentration was 0.000584 µg/L in the WWTP-E-OUT sample collected August 8 (Appendix B, Table B-3), which is above the WQG (0.0001 µg/L). East WWTP effluent was directed to the East Sedimentation Pond and there was no discharge from the pond to Howe Sound on August 8. The total mercury concentration is also listed in Appendix B, Table B-3 and is above the MDO (as discussed in Report #76). Mercury parameters are tracked in Table 5.

Dioxin and furan results were reported for East Sedimentation Pond influent (SP-E-IN) and East WWTP influent and effluent (WWTP-E-IN and WWTP-E-OUT, respectively) collected July 10 (as discussed in Report #72). The lower and upper bound PCDD/F TEQ concentrations in the effluent discharged from the East WWTP (WWTP-E-OUT) on July 10 were 0.00201 pg/L and 0.946 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 2700GPM TSS settling system, the 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 (August 10 – 16), implementation of the 2700GPM TSS settling system continued (Section 1.1 and Section 1.2). From July 30 to August 10, the 2700GPM system was temporarily configured to clarify and recirculate East Sedimentation Pond effluent (Section 1.2). On August 15 and 16, the 2700GPM system had been returned to the original configuration to clarify West Sedimentation Pond effluent (Section 1.2). A total of 1,977 m^3 of clarified effluent from the West Sedimentation Pond was discharged to Howe Sound from the west catchment discharge location (SP-W-OUT) on August 15 and 16. Daily clarified effluent and discharge volumes from the west catchment are summarized in Appendix C, Table C-5.

Field measurements were collected August 10 – 16 at multiple influent and effluent locations, as outlined in Section 2, and are tabulated in Appendix C, Table C-4. Analytical samples collected August 8 (station 2700GPM-OUT), August 15 (stations SP-W-IN, SP-W-OUT, and 2700GPM-IN) and August 16 (station 2700GPM-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 (August 10 – 16), field measurements and analytical results for the August 10 sample collected at station 2700GPM-OUT met PE-111578 discharge limits and WQGs except for dissolved oxygen (7.60 mg/L), which was below the lower limit of the WQG (≥8 mg/L). Clarified effluent from the 2700GPM system was recirculated to the East Sedimentation Pond on August 10.

Field measurements and analytical results for clarified effluent discharged to Howe Sound at station SP-W-OUT on August 15 (sample SP-W-OUT) and August 16 (sample 2700GPM-OUT) met PE-111578 discharge limits and WQGs except for dissolved oxygen which ranged from 1.61 to 7.59 mg/L, below the lower limit of the WQG (≥8 mg/L). The depletion of dissolved oxygen was also observed in contact water during dry conditions in 2024 and is speculated to be induced by warm temperatures and limited freshwater inputs (*i.e.*, from rain) to the contact water management system during dry conditions. Field measurements collected in September 2024, following the discharge of oxygen depleted effluent from SP-E-OUT, found no discernable influence in Howe Sound dissolved oxygen concentrations along a transect between the IDZ-E1 and IDZ-E2 sampling stations.

Dioxin and furan results were reported for 2700GPM TSS settling system influent and effluent (2700GPM-IN and 2700GPM-OUT, respectively) collected July 14 and July 25 (as discussed in Reports #73 and #74). The lower and upper bound PCDD/F TEQ concentrations in the 2700GPM-OUT samples ranged from 0 to 0.000611 pg/L and from 2.09 to 2.10 pg/L, respectively. Results are tabulated in Appendix C, Table C-3.

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.

East Creek was temporarily diverted to OUT-11 on September 17, 2024, 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.

There were no outstanding analytical results for non-contact diversion ditch outlet stations at the time of reporting.

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 D (freshwater) and Appendix E (estuarine).

Analytical results were available at the time of reporting for freshwater and estuarine water samples collected at the lower freshwater reach of Mill Creek (station SW-02), the Mill Creek estuary (SW-03) and upstream on Mill Creek (SW-07) on August 4 as well as near the mouth of

Woodfibre Creek and East Creek (stations SW-01 and SW-04, respectively) on August 5 (as discussed in Report #76).

Parameter concentrations met WQGs except field pH, total aluminum, total copper and dissolved copper in some samples (Appendix D, Table D-1 and Appendix E, Table E-1). Field pH at station SW-01 (pH 6.1) was below the lower range of the WQG (pH 6.5 for freshwater) on August 5. Total aluminum was above the long-term WQG in the samples collected from Woodfibre Creek (0.112 mg/L), East Creek (1.10 mg/L), and Mill Creek station SW-07 (0.0286 mg/L). Total copper was above the long-term WQG in the sample collected in the Mill Creek Estuary (0.00228 mg/L) and dissolved copper was above the short-term and long-term WQG in the sample collected from Woodfibre Creek (0.00023 mg/L).

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

The total aluminum concentration (1.10 mg/l) measured in East Creek at station SW-04 was above the upper range observed in the pre-construction baseline monitoring program (0.264 mg/L) and is flagged as a potential project-influenced exceedance of the WQGs (Table 4). The total aluminum concentration in East Creek (1.10 mg/L) is predominantly in the dissolved form of the metal (1.08 mg/L). Potential sources to East Creek will be reviewed and values will be confirmed with the laboratory. This item is tracked in Table 5.

The total copper concentration (0.00228 mg/L) measured on August 4 in the Mill Creek Estuary sample collected from station SW-03 is above the upper range observed in the pre-construction baseline monitoring program and is attributed to background sources based on the following observations (Table 4). The total copper concentration is approximately 10 times greater than the dissolved copper concentration indicating most of the total copper is particulate-bound and is therefore associated with TSS. Field turbidity, which is an indirect measurement of TSS, and the concentration of TSS were elevated (18 NTU and 17.3 mg/L, respectively) at station SW-03 compared to the lower reach of Mill Creek at station SW-02 (0.7 NTU and <3.0 mg TSS/L). Field observations by the Environmental Monitor indicate the elevated turbidity measured at SW-03 is due to influence from turbid Howe Sound surface waters as shown in Figure 6. The elevated turbidity in the upper basin of Howe Sound originates from the Squamish River which is strongly influenced by silt from glacial meltwaters at this time of year. The Howe Sound pre-construction

baseline surface water total copper concentrations range from 0.0002 to 0.0070 mg/L, bracketing the concentration (0.00228 mg/L) observed in the estuary. Although these empirical observations indicate the total copper concentration in the Mill Creek estuary is likely due to background conditions and is not indicative of project influence, the total copper value measured at station SW-03 will be confirmed with the laboratory (tracked in Table 5).

Table 4:
Summary of Parameters Exceeding WQGs and Above Baseline Ranges for East Creek Station SW-04 and Mill Creek Estuary Station SW-03 for Field and Analytical Results Available at the Time of Reporting

Parameter	Units	WQG[1]	N	N >WQG	Commentary
Total Aluminum	mg/L	0.35	5	1	Total aluminum measured in East Creek (SW-04) on August 5 (1.10 mg/L) was 3.1 times greater than the WQG. The total aluminum concentration was 4.2 times greater than the maximum concentration observed in the pre-construction baseline monitoring program at East Creek (0.264 mg/L).
Total Copper	mg/L	0.002	5	1	Total copper measured in the Mill Creek Estuary (SW-03) on August 4 (0.00228 mg/L) was 1.1 times greater than the WQG and 1.5 times greater than the maximum concentration observed in the pre-construction baseline (0.0015 mg/L). The total copper WQG exceedance at SW-03 is attributed to background influence from turbid Howe Sound water that was present in the estuary at the time of sampling (Figure 6).

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

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 F.

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 stations IDZ-E1, IDZ-E2 and reference station WQR1 on July 12 (as discussed in Report #72). For all samples, the

lower bound PCDD/F TEQ concentrations were 0 pg/L and the upper bound PCDD/F TEQ concentrations ranged from 1.47 to 4.60 pg/L. 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 F, Table F-1.

4. Quality Control

This section presents the results of the quality control (QC) evaluation for the PE-111578 weekly report (Table 5). The evaluation includes a review of field and lab QC, completeness of the weekly report (*e.g.*, pending data), completeness of the monitoring program, confirmation of recordkeeping, evaluation of compliance and review of water management activities. Items flagged for follow-up in Section 3 are also tracked in Table 5. Any items flagged for follow-up are carried forward to future reports until they are closed.

Table 5: Weekly Report QC Evaluations and Ongoing Items

QC Procedure	Observation	Investigation/Resolution
Reporting Period (August 10 – 16, Report #77)		
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.
Potential Project Influence	Total aluminum at East Creek and total copper at the Mill Creek Estuary above WQG and the baseline concentration range.	Total aluminum concentration (1.10 mg/L) observed at the East Creek station (SW-04) on August 5 was 3.1 times greater than the WQG and 4.2 times greater than the maximum concentration observed in the pre-construction baseline monitoring program (0.264 mg/L). Total copper concentration (0.00228 mg/L) observed at the Mill Creek Estuary station (SW-03) on August 4 was 1.1 times greater than the WQG and 1.5 times greater than the maximum concentration observed in the pre- construction baseline monitoring program (0.0015 mg/L). Review of the total copper WQG exceedance at SW-03 has been completed (refer to Section 3.6) and is attributed to background influence from turbid Howe Sound water that was present in the estuary at the time of sampling. The total aluminum and total copper values are being confirmed by the laboratory. Potential influences to East Creek water quality at station SW-04 are being reviewed with site staff. This item remains open.
Pending Data	Analytical results not reported.	Field parameters and analytical results for marine receiving environment samples collected August 11 and 16 were not included with Report #77. Methylmercury, dioxins and furans results for contact water and treated water samples collected August 14, 15, and 16 were not included with Report #77. The pending results will be included in future weekly reports when available. This item remains open.
Ongoing Items from Previous Weekly Reports		
Report #62: WWTP Performance Evaluation	Total copper above the MDO.	This item was first noted in Report #46 (January 8 sample). From January 8 onwards the WWTP-E-OUT total copper concentrations were 0.00809, 0.00595, 0.00895, 0.00518, 0.00542, 0.00525, 0.00450, 0.00734, 0.00464, 0.00462, and 0.00573 mg/L in samples collected at WWTP-E-OUT on January 8, 14, 24, 28, February 24, March 8, 17, April 24, May 10, June 3, and June 9, respectively, and ranged from 0.00613 to 0.0108 mg/L in four replicate samples collected on February 15 which are above the MDO. The HSMT metal removal media was replaced on June 5 and the fresh media was expected to improve copper removal; however, the total copper result for WWTP-E-OUT collected June 9 (0.00573 mg/L) following the media replacement was above the MDO. Follow-up samples collected June 19, 23, July 2, 10, 13 and 21 returned total copper concentrations of 0.00264, 0.00263, 0.00181, 0.00185, 0.00215 and 0.00174 mg/L, respectively, and met the MDO. A detailed process evaluation was conducted on July 13 and a modification to how the treatment reagents are added was developed to improve copper removal. BCER was notified of the planned modification on July 21, and it was subsequently implemented. A sample collected July 28 returned a total copper concentration of 0.00797 mg/L and was above the MDO while samples collected August 8 and 14 returned total copper concentrations of 0.00206 and 0.00298 mg/L, respectively, and were below the MDO. The WWTP treatment performance for total copper continues to be reviewed. This item remains open.
Report #67: WQG Evaluation	Total mercury and methylmercury above WQG.	In general, there has been an increased incidence of total mercury and methylmercury concentrations above the WQGs in site contact waters since late April. In contrast, as of Weekly Report #75, receiving environment samples have met WQGs since May 19. Since late April, site conditions have been drier than through the winter months. Total methylmercury results in contact water from SP-E-OUT, SP-W-OUT, WWTP-E-OUT and 2700GPM-OUT from May 3 to August 7 have been generally above the WQG (0.0001 µg/L) ranging from 0.000089 to 0.00194 µg/L with the highest value observed at WWTP-E-OUT on July 13 (0.00194 µg/L). Possible project related sources have been evaluated, and upstream contact water monitoring data indicate methylmercury is elevated in the hydrovac sump. Excess water from this sump is directed to the East WWTP. Further data evaluation will be conducted after additional data are collected. This item remains open.
Report #72: Pending Data	Analytical results not reported.	Dioxins and furans results for contact water and treated water samples collected July 10 and for marine water receiving environment samples collected July 12 are discussed in Sections 3.3 and 3.7, respectively, of Report #77. This item is closed.
Report #73: Pending Data	Analytical results not reported.	Dioxins and furans results for contact water and treated water samples collected July 14 are discussed in Section 3.4 of Report #77. This item is closed.
Report #74: Pending Data	Analytical results not reported.	Dioxins and furans results for contact water and treated water samples collected July 25 are discussed in Section 3.4 of Report #77. Dioxins and furans results for marine water receiving environment samples collected July 22 were not included with Report #77. The pending results will be included in future weekly reports when available. This item remains open.
Report #75: Non-Compliance - Effluent Bypass	Bypass of the SP-E-OUT discharge location.	On July 31, following the temporary reconfiguration of water transfer lines to recirculate East Sedimenation Pond water through the 2700GPM system and the subsequent commencement of recirculation, an estimated 2.84 m^3 of clarified effluent from the 2700GPM system leaked from the water return line and flowed onto the Marine Offloading Facility (MOF). The leak was detected and repaired shortly after pumping was initiated. Before the leak was fully contained, a portion of the 2.84 m^3 2700GPM clarified effluent had flowed off the MOF into Howe Sound, bypassing the SP-E-OUT authorized discharge location. BCER has been notified and a report summarizing the non-compliance was submitted to BCER on August 19. This item is closed.
Report #75: Pending Data	Analytical results not reported.	Dioxins and furans results for contact water and treated water samples collected July 29 were not included with Report #77. The pending results will be included in future weekly reports when available. This item remains open.
Report #76: Pending Data	Analytical results not reported.	Analytical results for the sample collected at 2700GPM-OUT and methylmercury results for contact water and treated water samples collected August 8 are discussed in Sections 3.4 and 3.3, respectively, of Report #77. Field parameters and analytical results for freshwater and estuarine receiving environment samples collected August 4 and 5 were not included with Report #76. Dioxins and furans results for contact water and treated water samples collected August 7 were not included with Report #77. 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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Appendix A: Figures and Site Images

LEGEND

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

DATE SAVED:	Aug 21, 2025
DRAWN BY:	DM
REVIEWED:	PM
VERSION:	1

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

1:6,000

0 100 200 Metres

CLIENT: Woodfibre LNG

LORAX ENVIRONMENTAL

PROJECT: **Woodfibre LNG Project Construction Phase**

TITLE: Site Layout and Water Quality Monitoring Stations for PE-111578 (August 16, 2025)

PROJECT #: A633-9

FIGURE: 1

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

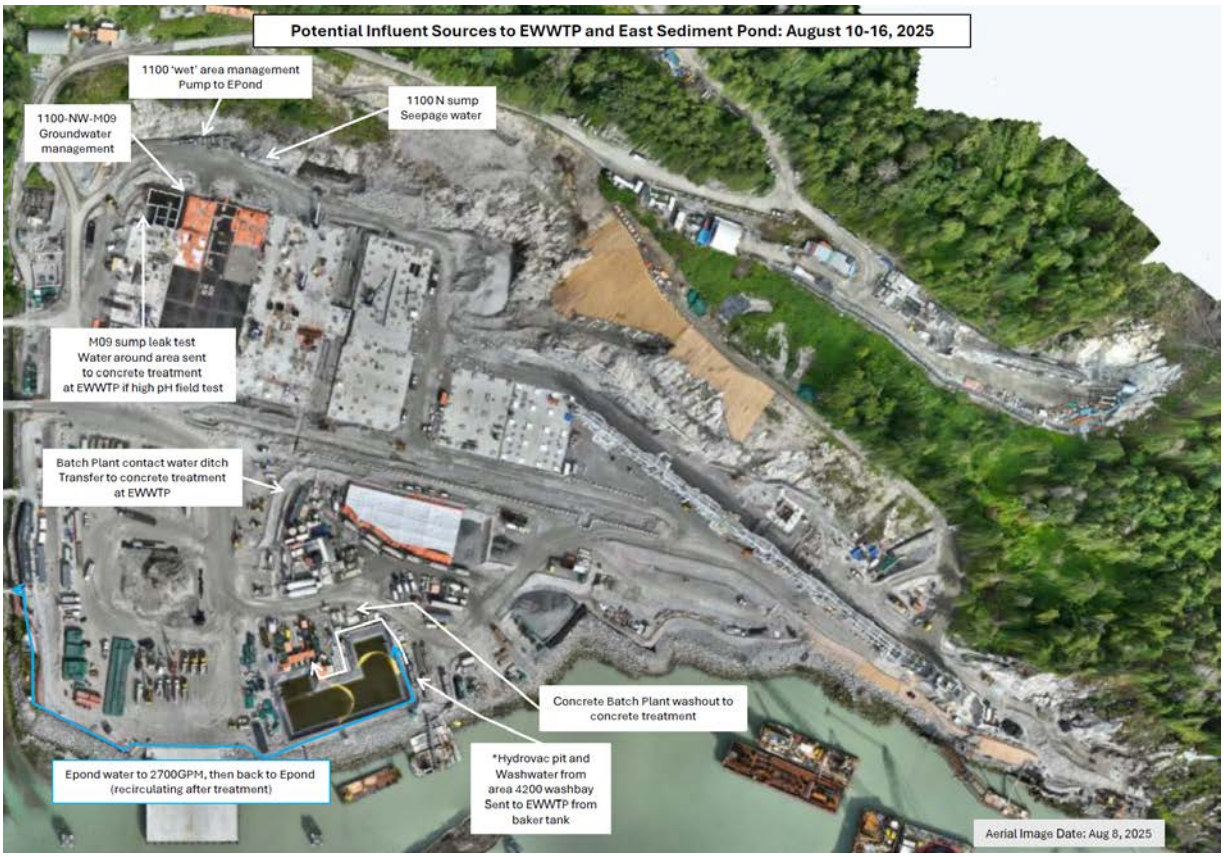

Figure 2: East Catchment contact water management facilities (August 10 – 16).

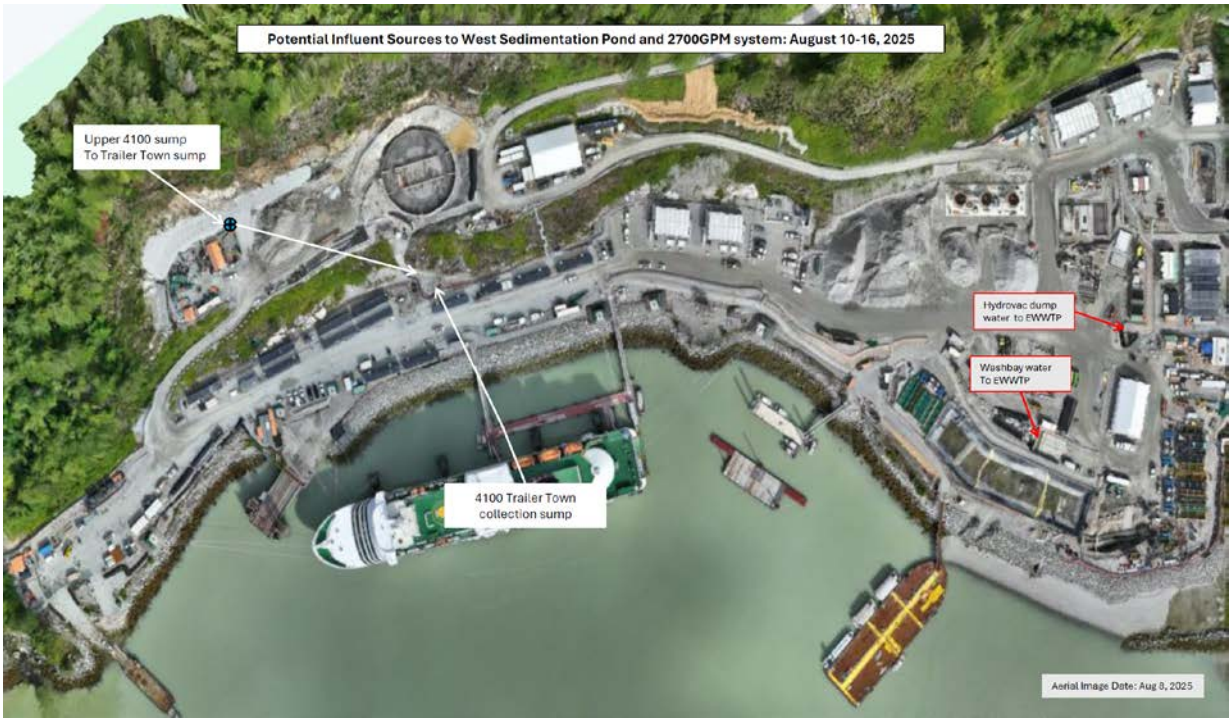

Figure 3: West Catchment contact water management facilities (August 10 – 16).

Figure 4: Aerial view of the East Sedimentation Pond (August 13, 2025). The East WWTP is located on the left side of the pond.

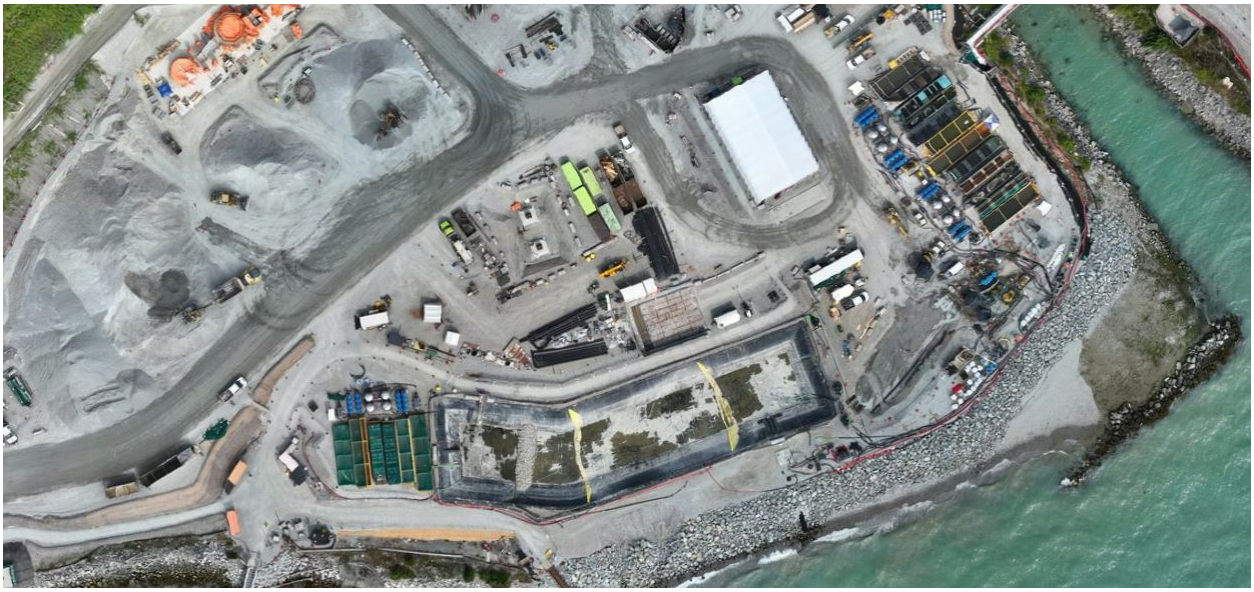

Figure 5: Aerial view of the West Sedimentation Pond (August 13, 2025). The West Sedimentation Pond was drained from July 30 to August 14 for cleaning and outfall pipe installation.

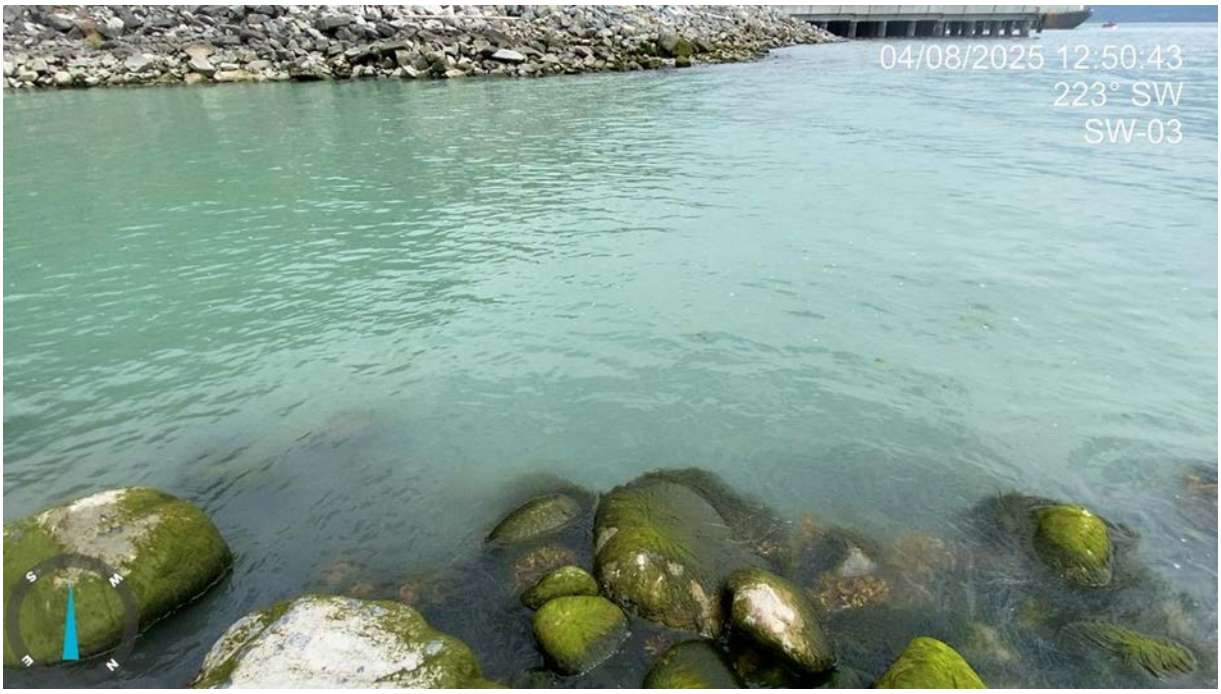

Figure 6: Mill Creek estuary (station SW-03) showing tidal influence from turbid Howe Sound waters just after water quality monitoring on August 4, 2025.

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 SP-E-IN Influent SP-E-IN VA25C0432-001 2025-08-14 15:40	Station WWTP-E-IN Influent WWTP-E-IN VA25C0432-002 2025-08-14 9:20
		Long Term	Short Term			
General Parameters						
pH - Field	pH units	- [2]	-	5.5 - 9.0	7.3	7.2
Specific Conductivity - Field	µS/cm	-	-	-	2157	2022
Temperature - Field	°C	-	-	-	23.7	23.3
Salinity - Field	ppt	-	-	-	1.10	1.03
Turbidity - Field	NTU	-	-	-	3.37	1.70
TSS	mg/L	-	-	25 or 75 [6]	<3.0	<3.0
Dissolved Oxygen - Field	mg/L	≥8	-	-	8.12	***7.77***
Anions and Nutrients						
Sulphate	mg/L	-	-	-	654	638
Chloride	mg/L	-	-	-	17.1	16.8
Fluoride	mg/L	-	1.5	-	<0.200	<0.200
Ammonia (N-NH_3)	mg/L	5.9 [3]	40 [3]	-	0.0128	0.0179
Nitrite (N-NO_2)	mg/L	-	-	-	<0.0100	<0.0100
Nitrate (N-NO_3)	mg/L	3.7	339	-	<0.0500	<0.0500
Total Metals						
Aluminum, total (T-Al)	mg/L	-	-	-	0.334	0.154
Antimony, total (T-Sb)	mg/L	-	0.27 [4]	-	0.00112	0.00109
Arsenic, total (T-As)	mg/L	0.0125	0.0125	-	0.00246	0.00229
Barium, total (T-Ba)	mg/L	-	-	-	0.0035	0.00362
Beryllium, total (T-Be)	mg/L	0.1	-	-	<0.000040	<0.000040
Boron, total (T-B)	mg/L	1.2	-	-	0.027	0.034
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	<0.0000200	<0.0000300
Chromium, total (T-Cr)	mg/L	-	-	-	0.00298	0.00236
Cobalt, total (T-Co)	mg/L	-	-	-	<0.00020	<0.00020
Copper, total (T-Cu)	mg/L	- [2]	- [2]	0.0043	0.00254	0.00198
Iron, total (T-Fe)	mg/L	-	-	-	0.275	0.19
Lead, total (T-Pb)	mg/L	- [2]	- [2]	0.0035	0.000332	0.000297
Manganese, total (T-Mn)	mg/L	-	-	-	0.0109	0.0099
Mercury, total (T-Hg)	mg/L	0.000016 [5]	-	-	***0.0000385***	***0.0000315***
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.0887	0.0878
Nickel, total (T-Ni)	mg/L	0.0083	-	-	<0.00100	<0.00100
Selenium, total (T-Se)	mg/L	0.002	-	-	0.000366	0.000373
Silver, total (T-Ag)	mg/L	0.0005	0.0037	-	<0.000030	<0.000020
Thallium, total (T-Tl)	mg/L	-	-	-	0.000047	0.00005
Uranium, total (T-U)	mg/L	-	-	-	0.0104	0.00787
Vanadium, total (T-V)	mg/L	- [2]	-	0.0081	0.0033	0.00309
Zinc, total (T-Zn)	mg/L	- [2]	- [2]	0.0133	<0.0060	0.0121
Hexavalent Chromium, total	mg/L	0.0015	-	-	<0.00050	<0.00050
Dissolved Metals						
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	<0.0000250	<0.0000250
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.00142	0.00155
Iron, dissolved (D-Fe)	mg/L	-	-	-	0.132	0.14
Lead, dissolved (D-Pb)	mg/L	-	-	-	0.000167	0.000218
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.0124	0.00922
Nickel, dissolved (D-Ni)	mg/L	-	-	-	<0.00100	<0.00100
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.0724	0.0727
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00297	0.00279
Zinc, dissolved (D-Zn)	mg/L	-	-	-	<0.0020	0.0105
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:
Non-detect results are screened using the detection limit value.
Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.
Results in orange text exceed the PE-111578 East Sedimentation Pond Discharge Limit.
The East Catchment did not discharge during the monitoring period (August 10 – 16).
[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
					Effluent
					WWTP-E-OUT
					VA25C0432-006
		Long Term	Short Term		2025-08-14 15:15
General Parameters					
pH - Field	pH units	- [2]	-	5.5 - 9.0	7.9
Specific Conductivity - Field	µS/cm	-	-	-	2184
Temperature - Field	°C	-	-	-	23.3
Salinity - Field	ppt	-	-	-	1.12
Turbidity - Field	NTU	-	-	-	2.93
TSS	mg/L	-	-	25 or 75 [6]	<3.0
Dissolved Oxygen - Field	mg/L	≥8	-	-	***6.22***
Anions and Nutrients					
Sulphate	mg/L	-	-	-	671
Chloride	mg/L	-	-	-	16.9
Fluoride	mg/L	-	1.5	-	<0.200
Ammonia (N-NH_3)	mg/L	1.5 [3]	10 [3]	-	0.0422
Nitrite (N-NO_2)	mg/L	-	-	-	<0.0100
Nitrate (N-NO_3)	mg/L	3.7	339	-	<0.0500
Total Metals					
Aluminum, total (T-Al)	mg/L	-	-	-	0.723
Antimony, total (T-Sb)	mg/L	-	0.27 [4]	-	0.0011
Arsenic, total (T-As)	mg/L	0.0125	0.0125	-	0.00256
Barium, total (T-Ba)	mg/L	-	-	-	0.00164
Beryllium, total (T-Be)	mg/L	0.1	-	-	<0.000040
Boron, total (T-B)	mg/L	1.2	-	-	0.02
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	<0.0000250
Chromium, total (T-Cr)	mg/L	-	-	-	0.00464
Cobalt, total (T-Co)	mg/L	-	-	-	<0.00020
Copper, total (T-Cu)	mg/L	- [2]	- [2]	0.0043	0.00298
Iron, total (T-Fe)	mg/L	-	-	-	0.243
Lead, total (T-Pb)	mg/L	- [2]	- [2]	0.0035	0.000474
Manganese, total (T-Mn)	mg/L	-	-	-	0.00529
Mercury, total (T-Hg)	mg/L	0.000016 [5]	-	-	***0.0000506***
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.0981
Nickel, total (T-Ni)	mg/L	0.0083	-	-	<0.00100
Selenium, total (T-Se)	mg/L	0.002	-	-	0.000439
Silver, total (T-Ag)	mg/L	0.0005	0.0037	-	<0.000020
Thallium, total (T-Tl)	mg/L	-	-	-	0.000041
Uranium, total (T-U)	mg/L	-	-	-	0.0197
Vanadium, total (T-V)	mg/L	- [2]	-	0.0081	0.00335
Zinc, total (T-Zn)	mg/L	- [2]	- [2]	0.0133	<0.0060
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	-	-	-	0.00192
Iron, dissolved (D-Fe)	mg/L	-	-	-	0.166
Lead, dissolved (D-Pb)	mg/L	-	-	-	0.000266
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.00568
Nickel, dissolved (D-Ni)	mg/L	-	-	-	<0.00100
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.0593
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00311
Zinc, dissolved (D-Zn)	mg/L	-	-	-	0.002
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:
Non-detect results are screened using the detection limit value.
Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.
Results in orange text exceeded the PE-111578 East Sedimentation Pond Discharge Limit.
The East Catchment did not discharge during the monitoring period (August 10 – 16).
[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]	0.0030-0.012 [3,4]
Station	**Water Type**	**Sample ID**	**Lab ID**	**Sampling Date**		
Influent						
SP-E-IN	Influent	SP-E-IN	VA25B9766-006	2025-08-08	***0.00118***	***0.0359***
WWTP-E-IN	Influent	WWTP-E-IN	VA25B9766-004	2025-08-08	***0.000708***	***0.0284***
Effluent						
WWTP-E-OUT	Effluent	WWTP-E-OUT	VA25B9766-005	2025-08-08	***0.000584*** [5]	***0.0695*** [5]

Notes:
Non-detect results are screened using the detection limit value.
Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine aquatic life.
[1] The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
[2] From BC Ambient Water Quality Guidelines for Mercury Overview Report. The methylmercury concentration threshold of 0.0001 µg/L (0.1 ng/L) is indicated as a WQG for the protection of wildlife and is set at a concentration that protects fish from mercury bioaccumulation to a level that may harm wildlife that consume fish.
[3] CCME guideline for total mercury = 0.016 µg/L.
[4] When MeHg ≤ 0.5% of total Hg, BC WQG = 0.02 µg/L. When MeHg > 0.5% of total Hg, BC WQG = 0.0001/(MeHg/Total Hg). Detection limit values are used to calculate the WQG for result reported as not detected.
[5] East WWTP effluent was directed to the East Sedimentation Pond and there was no discharge from the pond to Howe Sound on August 8.

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	VA25B6909-003	2025-07-10	0.00645	1.01
WWTP-E-IN	Influent	WWTP-E-IN	VA25B6909-001	2025-07-10	0	1.62
Effluent						
WWTP-E-OUT	Effluent	WWTP-E-OUT	VA25B6909-002	2025-07-10	0.00201	0.946

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 (August 10 – 16).

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	2025-08-10 13:49	25.7	***7.97***	1.62	1.30	4.0	7.1	3106	No
SP-E-IN	Influent	2025-08-11 11:43	25.6	***7.93***	1.47	3.47	5.6	7.2	2835	No
SP-E-IN	Influent	2025-08-12 11:53	23.6	***7.75***	1.00	3.48	5.6	6.9	1974	No
SP-E-IN	Influent	2025-08-13 9:33	23.7	***7.59***	1.11	4.78	6.6	6.8	2164	No
SP-E-IN	Influent	2025-08-14 15:38	23.7	8.12	1.10	3.37	5.5	7.3	2157	No
SP-E-IN	Influent	2025-08-15 13:00	21.5	8.12	0.95	421.11	317.1	7.0	1860	No
SP-E-IN	Influent	2025-08-16 14:35	19.7	8.86	1.32	21.56	19.1	7.1	2540	No
WWTP-E-IN	Influent	2025-08-10 13:36	25.3	***6.37***	1.36	20.28	18.1	7.3	2630	No
WWTP-E-IN	Influent	2025-08-11 11:49	26.6	***7.42***	1.59	2.22	4.7	7.4	3065	No
WWTP-E-IN	Influent	2025-08-12 12:02	23.8	8.42	0.98	2.51	4.9	7.2	1935	No
WWTP-E-IN	Influent	2025-08-13 9:22	23.6	***7.94***	0.98	2.06	4.5	7.9	1936	No
WWTP-E-IN	Influent	2025-08-14 9:16	23.3	***7.77***	1.03	1.70	4.3	7.2	2022	No
WWTP-E-IN	Influent	2025-08-15 12:55	21.8	***7.89***	1.04	2.98	5.2	7.3	2034	No
WWTP-E-IN	Influent	2025-08-16 14:45	19.7	8.50	0.99	119.02	91.8	7.1	1941	No
Effluent [5]										
WWTP-E-OUT	Effluent	2025-08-10 13:40	24.6	***5.91*** [7]	1.66	4.99	6.7	6.6	3181	No
WWTP-E-OUT	Effluent	2025-08-11 11:48	25.8	***5.67*** [7]	1.67	2.11	4.6	6.7	3202	No
WWTP-E-OUT	Effluent	2025-08-12 12:00	24.2	***5.65*** [7]	1.16	3.19	5.4	6.5	2272	No
WWTP-E-OUT	Effluent	2025-08-13 9:26	23.7	***6.63*** [7]	1.19	4.35	6.2	6.4	2315	No
WWTP-E-OUT	Effluent	2025-08-14 10:33	23.6	***6.56*** [7]	1.10	3.18	5.4	6.6	2159	No
WWTP-E-OUT	Effluent	2025-08-14 15:18	23.3	***6.22*** [7]	1.12	2.93	5.2	7.9	2184	No
WWTP-E-OUT	Effluent	2025-08-15 12:56	22.0	***7.59*** [7]	1.13	1.99	4.5	6.6	2200	No
WWTP-E-OUT	Effluent	2025-08-16 14:39	19.4	8.64	1.32	6.47	7.8	6.5	2548	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 exceed the PE-111578 East Sedimentation Pond Discharge Limit.
[1] The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
[2] The WQG was not evaluated for parameters with discharge limits.
[3] TSS concentration is estimated from field turbidity measurements using a site-specific relationship TSS = 0.7458 * [turbidity as NTU] + 3.
[4] Daily field measurements for station SP-E-IN were collected from cell 1 of the East Sedimentation Pond.
[5] There was no discharge at the authorized discharge location (SP-E-OUT) during the monitoring period (August 10 – 16), 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.
[7] East WWTP treated effluent is directed to the East Sedimentation Pond and there was no discharge from the pond to Howe Sound during the monitoring period (August 10 – 16).

Table B-6: East Catchment Daily Discharge Volumes for the Monitoring Period (August 10 – 16).

	East Sedimentation Pond Effluent	Transfer to West Sedimentation Pond	East WWTP Treated Effluent (Station WWTP-E-OUT)[2]	Discharge to Howe Sound (Station SP-E-OUT)
Unit	**m^3**	**m^3**	**m^3**	**m^3**
PE-111578 Discharge Limit	-	-	1100	- [1]
Date				
2025-08-10	0	0	577	0
2025-08-11	0	0	737	0
2025-08-12	0	0	732	0
2025-08-13	0	0	662	0
2025-08-14	0	0	629	0
2025-08-15	0	572	626	0
2025-08-16	0	0	668	0

Notes:
Results in orange text exceed the PE-111578 East Sedimentation Pond Discharge Limit.
[1] As noted in PE-111578 Condition 2.1.4, the annual average authorized discharge rate from the East Sedimentation Pond to Howe Sound was set to 650 m^3/day for the purpose of calculating discharge fees as required by the Permit and Approval Fees and Charges Regulation. Therefore, the annual average authorized discharge rate is not evaluated as a discharge limit.
[2] East WWTP treated effluent was recirculated to the East Sedimentation Pond.

Appendix C: West Catchment Monitoring Results

Table C-1: West 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 VA25C0644-001 2025-08-15 17:15	Station 2700GPM-IN Influent 2700GPM-IN VA25C0644-002 2025-08-15 17:45
		Long Term	Short Term			
General Parameters						
pH - Field	pH units	- [2]	-	5.5 - 9.0	7.4	7.4
Specific Conductivity - Field	µS/cm	-	-	-	1711	1707
Temperature - Field	°C	-	-	-	20.9	20.7
Salinity - Field	ppt	-	-	-	0.87	0.87
Turbidity - Field	NTU	-	-	-	244.78	186.21
TSS	mg/L	-	-	25 or 75 [6]	216	177
Dissolved Oxygen - Field	mg/L	≥8	-	-	***7.67***	***7.51***
Anions and Nutrients						
Sulphate	mg/L	-	-	-	528	538
Chloride	mg/L	-	-	-	14.2	14.8
Fluoride	mg/L	-	1.5	-	<0.200	<0.200
Ammonia (N-NH_3)	mg/L	3.7 [3]	25 [3]	-	0.0496	0.0741
Nitrite (N-NO_2)	mg/L	-	-	-	<0.0100	<0.0100
Nitrate (N-NO_3)	mg/L	3.7	339	-	0.259	0.226
Total Metals						
Aluminum, total (T-Al)	mg/L	-	-	-	11.2	10.2
Antimony, total (T-Sb)	mg/L	-	0.27 [4]	-	0.00117	0.00107
Arsenic, total (T-As)	mg/L	0.0125	0.0125	-	0.00339	0.00326
Barium, total (T-Ba)	mg/L	-	-	-	0.0938	0.0885
Beryllium, total (T-Be)	mg/L	0.1	-	-	0.000183	0.000157
Boron, total (T-B)	mg/L	1.2	-	-	0.041	0.049
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	0.0000993	0.0000983
Chromium, total (T-Cr)	mg/L	-	-	-	0.00545	0.00472
Cobalt, total (T-Co)	mg/L	-	-	-	0.0035	0.00322
Copper, total (T-Cu)	mg/L	- [2]	- [2]	0.0043	0.0104	0.0108
Iron, total (T-Fe)	mg/L	-	-	-	10.1	9.4
Lead, total (T-Pb)	mg/L	- [2]	- [2]	0.0035	0.00561	0.00514
Manganese, total (T-Mn)	mg/L	-	-	-	0.396	0.372
Mercury, total (T-Hg)	mg/L	0.000016 [5]	-	-	***0.0000478***	***0.0000308***
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.0673	0.0666
Nickel, total (T-Ni)	mg/L	0.0083	-	-	0.00252	0.00224
Selenium, total (T-Se)	mg/L	0.002	-	-	0.000435	0.000339
Silver, total (T-Ag)	mg/L	0.0005	0.0037	-	0.000028	<0.000020
Thallium, total (T-Tl)	mg/L	-	-	-	0.000077	0.000064
Uranium, total (T-U)	mg/L	-	-	-	0.00798	0.00752
Vanadium, total (T-V)	mg/L	- [2]	-	0.0081	0.0179	0.0173
Zinc, total (T-Zn)	mg/L	- [2]	- [2]	0.0133	0.0514	0.0539
Hexavalent Chromium, total	mg/L	0.0015	-	-	<0.00050	<0.00050
Dissolved Metals						
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	<0.0000250	<0.0000175
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.00133	0.00155
Iron, dissolved (D-Fe)	mg/L	-	-	-	0.081	0.058
Lead, dissolved (D-Pb)	mg/L	-	-	-	0.000102	0.000122
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.0272	0.0338
Nickel, dissolved (D-Ni)	mg/L	-	-	-	<0.00100	<0.00100
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.0911	0.0982
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00282	0.00289
Zinc, dissolved (D-Zn)	mg/L	-	-	-	<0.0020	0.0022
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	-	-	-	0.000016	0.000012
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	-	-	-	0.000021	0.000017
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:
Non-detect results are screened using the detection limit value.
Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.
Results in orange text exceed the PE-111578 West Sedimentation Pond Discharge Limit.
The West Catchment did not discharge during the monitoring period (August 10 – 16).
[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 VA25C0644-003 2025-08-15 18:45	Station SP-W-OUT Effluent SP-W-OUT-DUP VA25C0644-004 2025-08-15 18:45	Station 2700GPM-OUT Effluent 2700GPM-OUT VA25B9769-001 2025-08-08 10:47	Station 2700GPM-OUT Effluent 2700GPM-OUT VA25C0644-007 2025-08-16 9:00
		Long Term	Short Term					
General Parameters								
pH - Field	pH units	- [2]	-	5.5 - 9.0	7.4	7.4	7.7	7.8
Specific Conductivity - Field	µS/cm	-	-	-	1920	1920	2834	1655
Temperature - Field	°C	-	-	-	18.9	18.9	22.1	19.9
Salinity - Field	ppt	-	-	-	0.98	0.98	1.47	0.84
Turbidity - Field	NTU	-	-	-	3.44	3.44	1.43	5.44
TSS	mg/L	-	-	25 or 75 [6]	6.5	6.1	<3.0	4.5
Dissolved Oxygen - Field	mg/L	≥8	-	-	***1.63***	***1.63***	8.79	***7.59***
Anions and Nutrients								
Sulphate	mg/L	-	-	-	670	672	-	511
Chloride	mg/L	-	-	-	29.1	29.2	-	13.8
Fluoride	mg/L	-	1.5	-	0.259	0.256	-	<0.200
Ammonia (N-NH_3)	mg/L	2.2-5.3 [3]	15-35 [3]	-	0.535	0.539	-	0.019
Nitrite (N-NO_2)	mg/L	-	-	-	<0.0100	<0.0100	-	<0.0100
Nitrate (N-NO_3)	mg/L	3.7	339	-	0.0704	0.074	-	0.221
Total Metals								
Aluminum, total (T-Al)	mg/L	-	-	-	0.0262	0.0252	-	0.226
Antimony, total (T-Sb)	mg/L	-	0.27 [4]	-	0.00081	0.00084	-	0.00099
Arsenic, total (T-As)	mg/L	0.0125	0.0125	-	0.00579	0.00587	-	0.00219
Barium, total (T-Ba)	mg/L	-	-	-	0.00732	0.00768	-	0.00472
Beryllium, total (T-Be)	mg/L	0.1	-	-	<0.000040	<0.000040	-	<0.000040
Boron, total (T-B)	mg/L	1.2	-	-	0.025	0.026	-	0.032
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	<0.0000325	<0.0000275	-	<0.0000250
Chromium, total (T-Cr)	mg/L	-	-	-	<0.00100	<0.00100	-	<0.00100
Cobalt, total (T-Co)	mg/L	-	-	-	<0.00020	<0.00020	-	<0.00020
Copper, total (T-Cu)	mg/L	- [2]	- [2]	0.0043	<0.00100	<0.00100	-	0.00161
Iron, total (T-Fe)	mg/L	-	-	-	0.743	0.773	-	0.143
Lead, total (T-Pb)	mg/L	- [2]	- [2]	0.0035	0.000149	0.000140	-	0.000203
Manganese, total (T-Mn)	mg/L	-	-	-	0.065	0.0662	-	0.00666
Mercury, total (T-Hg)	mg/L	0.000016 [5]	-	-	0.00000133	0.00000112	-	0.00000507
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.0771	0.083	-	0.0655
Nickel, total (T-Ni)	mg/L	0.0083	-	-	<0.00100	<0.00100	-	0.00104
Selenium, total (T-Se)	mg/L	0.002	-	-	0.000388	0.000367	-	0.000342
Silver, total (T-Ag)	mg/L	0.0005	0.0037	-	<0.000020	<0.000020	-	<0.000020
Thallium, total (T-Tl)	mg/L	-	-	-	0.000026	0.00002	-	0.000043
Uranium, total (T-U)	mg/L	-	-	-	0.00256	0.00258	-	0.00695
Vanadium, total (T-V)	mg/L	- [2]	-	0.0081	<0.00100	<0.00100	-	0.00258
Zinc, total (T-Zn)	mg/L	- [2]	- [2]	0.0133	0.0061	0.0061	-	<0.0060
Hexavalent Chromium, total	mg/L	0.0015	-	-	<0.00050	<0.00050	-	<0.00050
Dissolved Metals								
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	<0.0000250	<0.0000300	-	<0.0000150
Copper, dissolved (D-Cu)	mg/L	-	-	-	<0.00040	0.00040	-	0.00091
Iron, dissolved (D-Fe)	mg/L	-	-	-	0.233	0.216	-	0.034
Lead, dissolved (D-Pb)	mg/L	-	-	-	<0.000100	<0.000100	-	<0.000100
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.0432	0.0452	-	0.00602
Nickel, dissolved (D-Ni)	mg/L	-	-	-	<0.00100	<0.00100	-	<0.00100
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.284	0.283	-	0.12
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00157	0.00155	-	0.0019
Zinc, dissolved (D-Zn)	mg/L	-	-	-	<0.0020	<0.0020	-	<0.0020
Polycyclic Aromatic Hydrocarbons (PAHs)								
Acenaphthene	mg/L	0.006	-	-	<0.000010	<0.000010	<0.000010	<0.000010
Acridine	mg/L	-	-	-	<0.000010	<0.000010	<0.000010	<0.000010
Anthracene	mg/L	-	-	-	<0.000010	<0.000010	<0.000010	<0.000010
Benz(a)anthracene	mg/L	-	-	-	<0.000010	<0.000010	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Chrysene	mg/L	0.0001	-	-	<0.000010	<0.000010	<0.000010	<0.000010
Fluoranthene	mg/L	-	-	-	<0.000010	<0.000010	<0.000010	<0.000010
Fluorene	mg/L	0.012	-	-	<0.000010	<0.000010	<0.000010	<0.000010
1-methylnaphthalene	mg/L	0.001	-	-	<0.000010	<0.000010	<0.000010	<0.000010
2-methylnaphthalene	mg/L	0.001	-	-	<0.000010	<0.000010	<0.000010	<0.000010
Naphthalene	mg/L	0.001	-	-	<0.000050	<0.000050	<0.000050	<0.000050
Phenanthrene	mg/L	-	-	-	<0.000020	<0.000020	<0.000020	<0.000020
Pyrene	mg/L	-	-	-	<0.000010	<0.000010	<0.000010	<0.000010
Quinoline	mg/L	-	-	-	<0.000050	<0.000050	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)								
Benzene	mg/L	0.11	-	-	<0.00050	<0.00050	-	<0.00050
Ethylbenzene	mg/L	0.25	-	-	<0.00050	<0.00050	-	<0.00050
Methyl-tert-butyl-ether	mg/L	5	0.44	-	<0.00050	<0.00050	-	<0.00050
Styrene	mg/L	-	-	-	<0.00050	<0.00050	-	<0.00050
Toluene	mg/L	0.215	-	-	0.00062	0.00059	-	<0.00040
Total Xylenes	mg/L	-	-	-	<0.00050	<0.00050	-	<0.00050
Chlorobenzene	mg/L	0.025	-	-	<0.00050	<0.00050	-	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	-	-	<0.00050	<0.00050	-	<0.00050

Notes:
Non-detect results are screened using the detection limit value.
Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.
Results in orange text exceed the PE-111578 West Sedimentation Pond Discharge Limit.
The West Catchment did not discharge during the monitoring period (August 10 – 16).
[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 Dioxin and Furan Toxicity Equivalency Quantity (TEQ) Results Received at the Time of Reporting.

Parameter					**Lower Bound PCDD/F TEQ**	**Upper Bound PCDD/F TEQ**
Unit					**pg/L**	**pg/L**
Station	**Water Type**	**Sample ID**	**Lab ID**	**Sampling Date**		
Influent						
2700GPM-IN	Influent	2700GPM-IN	VA25B7146-001	2025-07-14	0	1.87
2700GPM-IN	Influent	2700GPM-IN	VA25B8395-001	2025-07-25	0.00166	1.73
Effluent						
2700GPM-OUT	Effluent	2700GPM-OUT	VA25B7146-002	2025-07-14	0	2.10
2700GPM-OUT	Effluent	2700GPM-OUT	VA25B8395-002	2025-07-25	0.000611	2.09

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-4: West Catchment Field Measurements Collected During the Monitoring Period (August 10 – 16).

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	2025-08-15 12:33	19.4	8.19	0.17	911.19	682.6	8.0	363	No
SP-W-IN	Influent	2025-08-15 17:08	20.9	***7.67***	0.87	244.78	185.6	7.4	1711	No
SP-W-IN	Influent	2025-08-16 9:33	19.9	***6.95***	0.86	27.91	23.8	7.6	1694	No
2700GPM-IN	Influent	2025-08-10 13:29	25.9	8.31	1.59	1.51	4.1	7.6	3056	No
2700GPM-IN	Influent	2025-08-15 17:38	20.7	***7.51***	0.87	186.21	141.9	7.4	1707	No
Effluent [5]										
SP-W-OUT	Effluent	2025-08-15 17:57	21.2	***1.61***	1.15	3.05	5.3	7.3	2230	No
SP-W-OUT	Effluent	2025-08-15 18:24	18.9	***1.63***	0.98	3.44	5.6	7.4	1920	No
2700GPM-OUT	Effluent	2025-08-10 14:54	26.2	***7.60*** [7]	1.60	2.26	4.7	7.6	3077	No
2700GPM-OUT	Effluent	2025-08-16 8:54	19.9	***7.59*** [7]	0.84	5.44	7.1	7.8	1655	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 exceed the PE-111578 West Sedimentation Pond Discharge Limit.
[1] The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
[2] The WQG was not evaluated for parameters with discharge limits.
[3] TSS concentration is estimated from field turbidity measurements using a site-specific relationship TSS = 0.7458 * [turbidity as NTU] + 3.
[4] Daily field parameters were not collected at station SP-W-IN from August 10 to August 14 as the West Sedimentation Pond has been drained since July 30 to allow for pond maintenance and installation of the permanent outfall pipe.
[5] 2700GPM clarified effluent was directed to the East Sedimentation Pond on August 10 and was directed to the West Sedimentation Pond on August 15 and 16. There was no discharge at the authorized discharge location (SP-W-OUT) on August 10 through August 14 nor at the time of monitoring on August 16, 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.
[7] Clarified effluent was directed to the East Sedimentation Pond on August 10 and was directed to the West Sedimentation Pond on August 16. There was no discharge from the pond to Howe Sound at the time of monitoring on August 10 and August 16.

Table C-5: West Catchment Daily Discharge Volumes for the Monitoring Period (August 10 – 16).

	West Sedimentation Pond Effluent	West TSS Settling System (2700GPM) Clarified Effluent (Station 2700GPM-OUT)[3]	Water Reclaimed for Construction Purposes (Station 2700GPM-OUT)	West WWTP Treated Effluent [1] (Station WWTP-W-OUT)	Discharge to Howe Sound (Station SP-W-OUT)
Unit	**m^3**		**m^3**	**m^3**	**m^3**
PE-111578 Discharge Limit	-		-	120	- [2]
Date					
2025-08-10	0	844	26	0	0
2025-08-11	0	0	0	0	0
2025-08-12	0	0	0	0	0
2025-08-13	0	0	0	0	0
2025-08-14	0	0	0	0	0
2025-08-15	0	1,309	0	0	598
2025-08-16	0	3,822	0.7	0	1,380

Notes:
Results in orange text exceed the PE-111578 West Sedimentation Pond Discharge Limit.
[1] The West WWTP is not being operated, therefore discharges are not expected from this facility.
[2] As noted in PE-111578 Condition 2.2.4, the annual average authorized discharge rate from the West Sedimentation Pond to Howe Sound was set to 310 m^3/day for the purpose of calculating discharge fees as required by the Permit and Approval Fees and Charges Regulation. Therefore, the annual average authorized discharge rate is not evaluated as a discharge limit.
[3] Commissioning and pilot testing of a larger TSS settling system (2700GPM) continued during the monitoring period (August 10 – 16). On August 10, clarified effluent from the 2700GPM TSS settling system was temporarily directed to the East Sedimentation Pond while the West Sedimentation Pond was drained to allow for pond maintenance and installation of the permanent outfall pipe. On August 15 and 16, clarified effluent from the 2700GPM TSS settling system was either discharged to Howe Sound or directed to the West Sedimentation Pond. Clarified effluent from the 2700GPM TSS settling system was discharged to Howe Sound, recirculated to the East and West Sedimentation Ponds or reclaimed for construction purposes based on operational considerations.

Appendix D: Freshwater Receiving Environment Results

Table D-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
				VA25B9315-001	VA25B9328-001	VA25B9328-003	VA25B9315-002
		Long Term	Short Term	2025-08-05 10:30	2025-08-04 13:00	2025-08-04 11:30	2025-08-05 11:15
General Parameters							
pH - Field	pH units	6.5 - 9.0	-	***6.1***	8.0	6.7	7.4
Specific Conductivity - Field	µS/cm	-	-	9	28	28	151
Temperature - Field	°C	-	-	11.4	15.9	14.6	12.5
Salinity - Field	ppt	-	-	0	0.01	0.01	0.07
Turbidity - Field	NTU	-	-	1.05	0.87	1.11	2.39
TSS	mg/L	-	-	<3.0	<3.0	<3.0	5.1
Dissolved Oxygen - Field	mg/L	>=8	>=5	11.09	10.24	9.95	10.74
Anions and Nutrients							
Sulphate [2]	mg/L	128-218	-	0.38	3.69	3.52	10.8
Chloride	mg/L	120	600	0.68	2.51	2.54	8.5
Fluoride [2]	mg/L	-	0.400-1.17	<0.020	<0.020	<0.020	0.26
Ammonia ($N\text{-}NH_3$) [2]	mg/L	0.239-32.4	5.68-25.2	<0.0050	<0.0050	0.0066	<0.0050
Nitrite ($N\text{-}NO_2$) [2]	mg/L	0.0200-0.100	0.06-0.3	<0.0010	<0.0010	<0.0010	<0.0010
Nitrate ($N\text{-}NO_3$)	mg/L	3	32.8	0.0385	0.128	0.115	<0.0050
Total Metals							
Aluminum, total (T-Al) [2]	mg/L	0.0189-1.04	-	***0.112***	0.0252	***0.0286***	***1.10***
Antimony, total (T-Sb)	mg/L	0.074	-	<0.00010	<0.00010	<0.00010	0.00021
Arsenic, total (T-As)	mg/L	0.005	-	<0.00010	<0.00010	<0.00010	0.00212
Barium, total (T-Ba)	mg/L	1	-	0.00169	0.00422	0.00393	0.0106
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	0.033	0.034	0.014
Cadmium, total (T-Cd) [2]	mg/L	0.000036-0.00011	0.00011-0.0014	<0.0000050	0.0000068	0.000007	0.0000266
Chromium, total (T-Cr) [4]	mg/L	0.001	-	<0.00050	<0.00050	<0.00050	0.00081
Cobalt, total (T-Co)	mg/L	0.000389-0.000861	-	<0.00010	<0.00010	<0.00010	<0.00010
Copper, total (T-Cu)	mg/L	-	-	<0.00050	<0.00050	<0.00050	0.00129
Iron, total (T-Fe)	mg/L	0.3	1	0.032	<0.010	<0.010	0.099
Lead, total (T-Pb)	mg/L	-	-	0.000056	<0.000050	<0.000050	<0.000050
Manganese, total (T-Mn) [2]	mg/L	0.290-0.898	0.816-1.27	0.001	0.00038	0.0004	0.0281
Mercury, total (T-Hg) [3]	mg/L	0.00002	-	0.00000184	0.00000052	<0.00000050	0.00000056
Molybdenum, total (T-Mo)	mg/L	0.073	46	0.000286	0.000795	0.000593	0.0221
Nickel, total (T-Ni) [2]	mg/L	0.0250-0.0544	-	<0.00050	<0.00050	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	0.001	-	<0.000050	<0.000050	<0.000050	0.000087
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	0.000518	0.000104	0.000081	0.00278
Vanadium, total (T-V)	mg/L	0.12	-	<0.00050	<0.00050	<0.00050	0.00106
Zinc, total (T-Zn)	mg/L	-	-	<0.0030	<0.0030	<0.0030	0.004
Hexavalent Chromium, total	mg/L	0.001	-	<0.00050	<0.00050	<0.00050	<0.00050
Dissolved Metals							
Cadmium, dissolved (D-Cd) [2]	mg/L	0.000018-0.00016	0.000038-0.00039	<0.0000050	0.0000069	0.0000096	0.0000219
Copper, dissolved (D-Cu) [2]	mg/L	0.000200-0.00628	0.000200-0.0161	***0.00023***	<0.00020	<0.00020	0.00075
Iron, dissolved (D-Fe)	mg/L	-	0.35	0.018	<0.010	<0.010	0.04
Lead, dissolved (D-Pb) [2]	mg/L	0.00168-0.0117	-	<0.000050	<0.000050	<0.000050	<0.000050
Manganese, dissolved (D-Mn) [2]	mg/L	0.270-0.490	1.97-4.65	0.00061	0.00028	0.00139	0.0254
Nickel, dissolved (D-Ni) [2]	mg/L	0.000600-0.00290	0.00840-0.0302	<0.00050	<0.00050	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	2.5	-	0.00341	0.0118	0.0115	0.0829
Vanadium, dissolved (D-V)	mg/L	-	-	<0.00050	<0.00050	<0.00050	0.00096
Zinc, dissolved (D-Zn) [2]	mg/L	0.00132-0.0318	0.00701-0.0955	<0.0010	<0.0010	<0.0010	0.0024
Polycyclic Aromatic Hydrocarbons (PAHs)							
Acenaphthene	mg/L	0.0058	-	<0.000010	<0.000010	<0.000010	<0.000010
Acridine	mg/L	0.003	-	<0.000010	<0.000010	<0.000010	<0.000010
Anthracene	mg/L	0.000012	-	<0.000010	<0.000010	<0.000010	<0.000010
Benz(a)anthracene	mg/L	0.000018	-	<0.000010	<0.000010	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Chrysene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010
Fluoranthene	mg/L	0.00004	-	<0.000010	<0.000010	<0.000010	<0.000010
Fluorene	mg/L	0.003	-	<0.000010	<0.000010	<0.000010	<0.000010
1-methylnaphthalene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010
2-methylnaphthalene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010
Naphthalene	mg/L	0.001	0.001	<0.000050	<0.000050	<0.000050	<0.000050
Phenanthrene	mg/L	0.0003	-	<0.000020	<0.000020	<0.000020	<0.000020
Pyrene	mg/L	0.00002	-	<0.000010	<0.000010	<0.000010	<0.000010
Quinoline	mg/L	0.0034	-	<0.000050	<0.000050	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)							
Benzene	mg/L	0.04	-	<0.00050	<0.00050	<0.00050	<0.00050
Ethylbenzene	mg/L	0.09	-	<0.00050	<0.00050	<0.00050	<0.00050
Methyl-tert-butyl-ether	mg/L	10	3.4	<0.00050	<0.00050	<0.00050	<0.00050
Styrene	mg/L	0.072	-	<0.00050	<0.00050	<0.00050	<0.00050
Toluene	mg/L	0.0005	-	<0.00040	<0.00040	<0.00040	<0.00040
Total Xylenes	mg/L	0.03	-	<0.00050	<0.00050	<0.00050	<0.00050
Chlorobenzene	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050

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

Appendix E: Estuarine Water Receiving Environment Results

Table E-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 VA25B9328-002
		Long Term	Short Term	2025-08-04 12:30
General Parameters				
pH - Field	pH units	7.0 - 8.7	-	8.3
Specific Conductivity - Field	µS/cm	-	-	509
Temperature - Field	°C	-	-	17.6
Salinity - Field	ppt	-	-	0.3
Turbidity - Field	NTU	-	-	18.04
TSS	mg/L	-	-	17.3
Dissolved Oxygen - Field	mg/L	-	-	11.22
Anions and Nutrients				
Sulphate	mg/L	-	-	14.8
Chloride	mg/L	-	-	85.3
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	-	-	0.0278
Total Metals				
Aluminum, total (T-Al)	mg/L	-	-	1.07
Antimony, total (T-Sb)	mg/L	-	-	<0.00010
Arsenic, total (T-As)	mg/L	-	-	0.0003
Barium, total (T-Ba)	mg/L	-	-	0.0136
Beryllium, total (T-Be)	mg/L	-	-	<0.000020
Boron, total (T-B)	mg/L	-	-	0.05
Cadmium, total (T-Cd)	mg/L	-	-	0.0000067
Chromium, total (T-Cr)	mg/L	-	-	0.0005
Cobalt, total (T-Co)	mg/L	-	-	0.00058
Copper, total (T-Cu)	mg/L	0.002	0.003	***0.00228***
Iron, total (T-Fe)	mg/L	-	-	0.875
Lead, total (T-Pb)	mg/L	0.002	0.14	0.000408
Manganese, total (T-Mn)	mg/L	-	-	0.058
Mercury, total (T-Hg) [2]	mg/L	0.00002	-	0.00000094
Molybdenum, total (T-Mo)	mg/L	-	-	0.000794
Nickel, total (T-Ni)	mg/L	-	-	0.00054
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	-	-	0.000207
Vanadium, total (T-V)	mg/L	-	-	0.0023
Zinc, total (T-Zn)	mg/L	-	-	0.0042
Hexavalent Chromium, total	mg/L	-	-	<0.00050
Dissolved Metals				
Cadmium, dissolved (D-Cd)	mg/L	-	-	<0.0000050
Copper, dissolved (D-Cu)	mg/L	-	-	0.00024
Iron, dissolved (D-Fe)	mg/L	-	-	<0.010
Lead, dissolved (D-Pb)	mg/L	-	-	<0.000050
Manganese, dissolved (D-Mn)	mg/L	-	-	0.00283
Nickel, dissolved (D-Ni)	mg/L	-	-	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	0.0354
Vanadium, dissolved (D-V)	mg/L	-	-	<0.00050
Zinc, dissolved (D-Zn)	mg/L	-	-	<0.0010
Polycyclic Aromatic Hydrocarbons (PAHs)				
Acenaphthene	mg/L	-	-	<0.000010
Acridine	mg/L	-	-	<0.000010
Anthracene	mg/L	-	-	<0.000010
Benz(a)anthracene	mg/L	-	-	<0.000010
Benzo(a)pyrene	mg/L	-	-	<0.0000050
Chrysene	mg/L	-	-	<0.000010
Fluoranthene	mg/L	-	-	<0.000010
Fluorene	mg/L	-	-	<0.000010
1-methylnaphthalene	mg/L	-	-	<0.000010
2-methylnaphthalene	mg/L	-	-	<0.000010
Naphthalene	mg/L	-	-	<0.000050
Phenanthrene	mg/L	-	-	<0.000020
Pyrene	mg/L	-	-	<0.000010
Quinoline	mg/L	-	-	<0.000050
Volatile Organic Compounds (VOCs)				
Benzene	mg/L	-	-	<0.00050
Ethylbenzene	mg/L	-	-	<0.00050
Methyl-tert-butyl-ether	mg/L	-	-	<0.00050
Styrene	mg/L	-	-	<0.00050
Toluene	mg/L	-	-	<0.00040
Total Xylenes	mg/L	-	-	<0.00050
Chlorobenzene	mg/L	-	-	<0.00050
1,2-Dichlorobenzene	mg/L	-	-	<0.00050

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

Appendix F: Marine Water Receiving Environment Results

Table F-1: 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	VA25B7101-001	2025-07-12	0	2.54
IDZ-E1	2 m Below Surface	IDZ-E1-2m	VA25B7101-002	2025-07-12	0	4.60
IDZ-E1	2 m Above Seafloor	IDZ-E1-SF	VA25B7101-003	2025-07-12	0	2.71
Station IDZ-E2						
IDZ-E2	0.5 m Below Surface	IDZ-E2-0.5	VA25B7101-004	2025-07-12	0	3.56
IDZ-E2	2 m Below Surface	IDZ-E2-2m	VA25B7101-005	2025-07-12	0	1.75
IDZ-E2	2 m Above Seafloor	IDZ-E2-SF	VA25B7101-006	2025-07-12	0	1.94
Reference Station WQR1						
WQR1	0.5 m Below Surface	WQR1-0.5	VA25B7101-007	2025-07-12	0	2.79
WQR1	2 m Below Surface	WQR1-2m	VA25B7101-008	2025-07-12	0	1.47
WQR1	2 m Above Seafloor	WQR1-SF	VA25B7101-009	2025-07-12	0	2.98

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.