TECHNICAL MEMORANDUM

To:	**Ian McAllister, Ashleigh Crompton, Mike Champion, Mark Zan and Ryan Schucroft (Woodfibre LNG)**	**Date: 11 July 2025**
From:	**Holly Pelletier and Patrick Mueller (Lorax)**	**Project #: A633-9**
Subject:	**PE-111578 Weekly Discharge and Compliance Report #71 for June 29 – July 5**	

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 #71) was prepared by Lorax Environmental and summarizes WDA monitoring conducted for the period of June 29 – July 5. 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 #71 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 E for contact water and treated water samples.

1. Current Conditions

1.1 Water Management Infrastructure

The Construction Phase of the Woodfibre LNG Export Facility commenced in October 2023. Shoring works along the foreshore areas were initiated in December 2023, and in early 2024 construction of water management infrastructure commenced. Land-based construction occurs within two water management areas east and west of Mill Creek, referred to as the east and west catchments, respectively. Non-contact water is intercepted and diverted around the construction areas to Howe Sound and Mill Creek. Stormwater runoff collected within the east and west catchment areas (7.12 and 5.92 ha, respectively) is managed as site contact water and is conveyed to the East Wastewater Treatment Plant (WWTP) for treatment or to the East and West Sedimentation Ponds for settling of suspended particulate. Discharge to Howe Sound from the East and West Sedimentation Ponds commenced April and October 2024, respectively.

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 in 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 east and west catchments contact 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 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 prior to discharge 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.

Flocculant-based TSS settling systems were used at the East and West Sedimentation Ponds to remove TSS from pond effluent. The first West Sedimentation Pond TSS settling system (ESC) was commissioned for use on September 25, 2024, with an 820 m^3/day installed capacity. An additional TSS settling system (W500GPM) was commissioned for use at the West Sedimentation Pond on November 28, 2024, and provided an additional 2,725 m^3/day installed capacity for clarifying water. A third TSS settling system (E500GPM) was commissioned for use at the East Sedimentation Pond on December 4, 2024, also with 2,725 m^3/day installed capacity. The E500GPM and W500GPM TSS settling systems were decommissioned during the June 22 – June 28 monitoring period, and the ESC system was decommissioned July 4. These systems are currently being replaced by a single TSS settling system (2700GPM) at the West Sedimentation Pond that will clarify all non-contaminated construction contact water prior to discharge at SP-W-OUT.

The fully built 2700GPM TSS settling system will have the installed capacity to clarify 15,000 m^3/day of contact water, with the same settling process that was used in the systems that are currently being replaced. The 2700GPM system 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. Commissioning and pilot testing for the first and third train of the 2700GPM system continued during the monitoring period (June 29 – July 5).

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

Warm and sunny weather conditions were observed during the June 29 – July 5 monitoring period, with no precipitation. 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
2025-06-29	0	23.5	11.9	Sunny
2025-06-30	0	27.8	14.3	Sunny
2025-07-01	0	27.1	14.8	Sunny
2025-07-02	0	23.9	15.2	Mix of Sun and Cloud
2025-07-03	0	21.6	15.0	Mix of sun and cloud
2025-07-04	0	23.6	12.3	Mix of Sun and Cloud
2025-07-05	0	21.8	14.5	Mix of Sun and Cloud

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

From June 29 – July 5, the East Sedimentation Pond received non-contaminated contact water from Area 1100 North Collection Sump and recirculated effluent from the East WWTP (Appendix A, Figure 2). Non-contaminated contact waters from the Area 4100 Collection Sump were directed to the West Sedimentation Pond, as well as recirculated effluent from the 2700GPM TSS settling system (Appendix A, Figure 3). During the monitoring period (June 29 – July 5), a total of 800 m^3 of water from the East Sedimentation Pond was transferred to the West Sedimentation Pond (Appendix B, Table B-6). There was no discharge to Howe Sound from station SP-E-OUT during the monitoring period.

Routine operation of the East WWTP continued during the monitoring period (June 29 – July 5). Concrete contact waters, M11 Hydro Milling effluent and water from the construction water baker tank were periodically directed to the East WWTP for treatment, as well as water stored in the East Sedimentation Pond (Appendix A, Figure 2 and Figure 3). East WWTP treated effluent was discharged to the East Sedimentation Pond each day from June 29 – July 5. Daily water volumes processed by the East WWTP are provided in Appendix B (Table B-6).

Commissioning and pilot testing of the 2700GPM TSS settling system continued during the monitoring period (June 29 – July 5). West Sedimentation Pond effluent was clarified through the 2700GPM system each day and was recirculated back to the West Sedimentation Pond or reclaimed and used for construction purposes (*e.g.*, road dust suppression, fill compaction, or hydrovac truck operation). The West ESC (150 GPM) TSS settling system was not operational during the monitoring period. There was no discharge to Howe Sound from station SP-W-OUT during the monitoring period. From June 29 – July 5, a total of 127 m^3 of clarified effluent was reclaimed for construction use. Daily clarified effluent volumes from the TSS settling systems and volumes of reclaimed water are provided in Appendix C (Table C-6).

2. Monitoring Summary

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

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

- Non-contact diversion ditch outlet monitoring stations (OUT-01, OUT-02, OUT-06, and OUT-11). East Creek water was temporarily diverted to OUT-11 on September 17, 2024, and is monitored at the inlet to temporary diversion (station SW-04), therefore OUT-11 is not currently monitored.
- Creek water monitoring stations for Woodfibre, Mill and East Creek (SW-01, SW-02, SW-03, SW-04, SW-07).
- Contact water monitoring locations (SP-E-IN, E500GPM-IN, E500GPM-OUT, WWTP-E-IN, WWTP-E-OUT, SP-W-IN, 2700GPM-IN, 2700GPM-OUT, ESC-W-IN, ESC-W-OUT, W500GPM-IN and W500GPM-OUT).
- Effluent compliance stations (SP-E-OUT and SP-W-OUT).
- Howe Sound reference and IDZ monitoring stations (WQR1, WQR2, IDZ-E1, IDZ-E2, IDZ-W1, and IDZ-W2).

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

Two flocculant-based TSS settling systems are used at the West Sedimentation Pond (ESC and 2700GPM) as described in Section 1.1. The W500GPM TSS settling system was decommissioned during the monitoring period (June 29 – July 5) and the ESC system was decommissioned July 4. The replacement 2700GPM TSS settling system is currently being commissioned (Section 1.1). Influent and effluent are monitored for each system at stations ESC-W-IN, ESC-W-OUT, 2700GPM-IN and 2700GPM-OUT. The TSS settling system (E500GPM) was also decommissioned during the monitoring period (June 29 – July 5) (Section 1.1). Prior to decommissioning, influent and effluent for the W500GPM and E500GPM systems were monitored at stations E500GPM-IN, E500GPM-OUT, W500GPM-IN and W500GPM-OUT. The TSS settling system stations are supplemental to the PE-111578 monitoring requirements and are monitored at the discretion of field staff.

Water quality was monitored at stations SP-E-IN, WWTP-E-IN, WWTP-E-OUT, SP-W-IN, 2700GPM-IN, and 2700GPM-OUT during the monitoring period (June 29 – July 5). Sampling dates and parameters tested are summarized in Table 2.

Overall, the PE-111578 monitoring requirements that were applicable during the monitoring period (June 29 – July 5) 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. BCER has 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 and west catchment effluent stations (SP-E-OUT and SP-W-OUT, respectively) as there was no discharge to Howe Sound during the monitoring period (June 29 – July 5). 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 June 29 – July 5.

Sampling Date	Sample	Description	Parameters Tested	Monitoring Frequency
June 29, 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, Physical & General Parameters, VH & BTEX, EPHs & PAHs, Total, Dissolved and Speciated Metals, VOCs, Methylmercury, Dioxins & Furans.	P
	2700GPM-OUT	2700GPM TSS settling system at the effluent meter box		
June 30, 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		
	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		
July 1, 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		
	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		
July 2, 2025	SP-E-IN	East Sedimentation Pond monitored at cell 1 of the pond	Field Parameters, Total, Dissolved and Speciated Metals, Methylmercury.	D, W
	WWTP-E-IN	East WWTP at the influent meter box	Field Parameters, Total, Dissolved and Speciated Metals, Methylmercury.	D, W
	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, Total, Dissolved and Speciated Metals, Methylmercury.	D, W
	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		
July 3, 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
	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		
July 4, 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		
July 5, 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		

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 #71) 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-E1, IDZ-E2, IDZ-W1, IDZ-W2, WQR1, WQR2 collected March 25 at 0.5 m below surface (chronic toxicity)
- IDZ-E1, IDZ-E2, IDZ-W1, IDZ-W2, WQR1, and WQR2 collected May 27 at 0.5 m below surface (chronic toxicity)
- SP-E-IN, WWTP-E-IN, and WWTP-E-OUT collected June 9 (dioxins and furans)
- SP-W-IN and W500GPM-OUT collected June 12 (dioxins and furans)
- SW-02, SW-03 and SW-07 collected June 17 (dioxins and furans)
- IDZ-W1, IDZ-W2 and WQR2 collected June 17 (methylmercury, dioxins and furans)
- SP-E-IN, WWTP-E-IN, WWTP-E-OUT, E500GPM-OUT, SP-W-IN and W500GPM-OUT collected June 19 (dioxins and furans)
- E500GPM-OUT and W500GPM-OUT collected June 19 (acute toxicity)
- WWTP-E-IN, WWTP-E-OUT, 2700GPM-IN, and 2700GPM-OUT collected June 23 (dioxins and furans)
- 2700GPM-IN and 2700GPM-OUT collected June 29 (dioxins and furans)

Table 3: Summary of Analytical Results Included in Weekly Discharge and Compliance Report #71.

Sample	Description	Sampling Date	Parameters Reported
SP-E-IN	East Sedimentation Pond influent monitored at cell 1 of the pond	June 3, 2025	Dioxins and Furans.
WWTP-E-IN	East WWTP at the influent meter box		
WWTP-E-OUT	East WWTP at the effluent meter box		
SP-W-IN	West Sedimentation Pond influent monitored at cell 1 of the pond		
W500GPM-OUT	West 500 GPM TSS settling system at the effluent meter box		
SW-02	Lower Reach of Mill Creek (upstream of the third bridge)	June 17, 2025	Methylmercury.
SW-03	Mill Creek Estuary		
SW-07	Upstream Mill Creek (at the diversion inlet)		
WWTP-E-IN	East WWTP at the influent meter box	June 23, 2025	Methylmercury.
WWTP-E-OUT	East WWTP at the effluent meter box		
2700GPM-IN	2700 GPM TSS settling system at the influent meter box		
2700GPM-OUT	2700 GPM TSS settling system at the effluent meter box		
SP-E-IN	East Sedimentation Pond influent monitored at cell 1 of the pond	June 26, 2025	Field Parameters, Total and Dissolved Metals, Hexavalent Chromium, Methylmercury.
SP-W-IN	West Sedimentation Pond influent monitored at cell 1 of the pond		
2700GPM-IN	2700 GPM TSS settling system at the influent meter box	June 29, 2025	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, VOCs, and Methylmercury.
2700GPM-OUT	2700 GPM TSS settling system at the effluent meter box		
SP-E-IN	East Sedimentation Pond influent monitored at cell 1 of the pond	July 2, 2025	Field Parameters, Total and Dissolved Metals, Hexavalent Chromium, Methylmercury.
SP-W-IN	West Sedimentation Pond influent monitored at cell 1 of the pond		
2700GPM-IN	2700 GPM TSS settling system at the influent meter box		
2700GPM-OUT	2700 GPM TSS settling system at the effluent meter box		

3.3 East Catchment

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

The east catchment did not discharge during the monitoring period (June 29 – July 5). East WWTP treated effluent volumes and discharge volumes from the east catchment are listed in Appendix B, Table B-6.

Field measurements were collected June 29 – July 5 at multiple influent and effluent locations, as outlined in Section 2, and are tabulated in Appendix B, Table B-5. Analytical samples collected June 26 (station SP-E-IN) and July 2 (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 was below the lower limit of the MDO in East WWTP effluent (WWTP-E-OUT) collected June 29 – July 5 except on July 3 (Appendix B, Table B-5). 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 June 29 – July 5 monitoring period.

Methylmercury results were available for East Sedimentation Pond influent (SP-E-IN) collected June 26 (as discussed in Report #70) and July 2 as well as East WWTP influent and effluent (WWTP-E-IN and WWTP-E-OUT, respectively) collected June 23 (as discussed in Report #70) and July 2. Methylmercury concentrations were 0.000752 to 0.000505 µg/L in the WWTP-E-OUT samples collected June 23 and July 2, respectively (Appendix B, Table B-3), which are 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 June 23 nor on July 2. Total mercury concentrations are also listed in Appendix B, Table B-3 and are above the WQG. Mercury parameters are tracked in Table 4.

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 June 3 (as discussed in Report #67). The lower and upper bound PCDD/F TEQ concentrations in effluent discharged from the East WWTP (WWTP-E-OUT) on June 3 were 0.00395 pg/L and 0.620 pg/L, respectively. Results are tabulated in Appendix B, Table B-4.

3.4 West Catchment

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

During the monitoring period (June 29 – July 5), commissioning and pilot testing of the replacement TSS settling system (2700GPM) continued (Section 1.1 and Section 1.2). West Sedimentation Pond effluent was directed to the 2700GPM TSS settling system each day during the monitoring period, and clarified effluent was either recirculated to the pond or reclaimed and used for construction purposes (refer to Section 1.2). The smaller West ESC (150 GPM) TSS settling system was not operational and was decommissioned on July 4. There were no discharges to Howe Sound from the west catchment discharge location (SP-W-OUT) during the monitoring period. Daily clarified effluent and discharge volumes from the west catchment are summarized in Appendix C, Table C-6.

Field measurements were collected June 29 – July 5 at multiple influent and effluent locations, as outlined in Section 2, and are tabulated in Appendix C, Table C-5. Analytical samples collected June 26 (station SP-W-IN), June 29 (stations 2700GPM-IN and 2700GPM-OUT) and July 2 (station SP-W-IN) 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 (June 29 – July 5), field measurements and analytical results for samples collected at station 2700GPM-OUT met PE-111578 discharge limits and WQGs except for dissolved oxygen on July 4 and July 5. 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. Clarified effluent from the 2700GPM system was recirculated to the West Sedimentation Pond and there was no discharge to Howe Sound from the authorized discharge location (SP-W-OUT) during the June 29 – July 5 monitoring period.

Methylmercury results were available for West Sedimentation Pond influent (SP-W-IN) collected June 26 (as discussed in Report #70) and July 2 as well as 2700GPM TSS settling system influent and effluent (2700GPM-IN and 2700GPM-OUT, respectively) collected June 23 (as discussed in Report #70) and June 29. Methylmercury concentrations were 0.00115 and 0.000738 µg/L in the 2700GPM-OUT samples collected June 23 and June 29, respectively (Appendix C, Table C-3), which are above the WQG (0.0001 µg/L). Clarified effluent from the 2700GPM system was recirculated to the West Sedimentation Pond and there was no discharge from the pond to Howe Sound on June 23 nor on June 29. The total mercury concentrations are also listed in Appendix C, Table C-3 and are above the WQG. Mercury parameters are tracked in Table 4.

Dioxin and furan results were reported for West Sedimentation Pond influent (SP-W-IN) and for W500GPM TSS settling system effluent (W500GPM-OUT) collected June 3 (as discussed in Report #67). The lower and upper bound PCDD/F TEQ concentrations in the W500GPM-OUT sample collected June 3 were 0 pg/L and 0.765 pg/L, respectively. Results are tabulated in Appendix C, Table C-4.

3.5 Non-Contact Water Diversion Ditch Outlets

Non-contact water diversion ditch samples are screened against Canadian, Federal and BC WQGs for the protection of freshwater aquatic life.

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 are 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).

Methylmercury 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 June 17 (as discussed in Report #69). The methylmercury concentrations met the WQG (0.0001 µg/L) and were <0.000020 µg/L in all samples. The corresponding total mercury results also met WQGs. Results are tabulated in Appendix D, Table D-1 (freshwater) and Appendix E, Table E-1 (estuarine).

3.7 Marine Water Receiving Environment

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

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

4. Quality Control

This section presents the results of the quality control (QC) evaluation for the PE-111578 weekly report (Table 4). The evaluation includes a review of field and lab QC, completeness of the weekly report (*e.g.,* pending data), completeness of the monitoring program, confirmation of recordkeeping, evaluation of compliance and review of water management activities. Items flagged for follow-up in Section 3 are also tracked in Table 4. Any items flagged for follow-up are carried forward to future reports until they are closed.

Table 4: Weekly Report QC Evaluations and Ongoing Items

QC Procedure	Observation	Investigation/Resolution
Reporting Period (June 29 – July 5, Report #71)		
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.
Pending Data	Analytical results not reported.	Dioxins and furans results for contact water and treated water samples collected June 29 were not included with Report #71. The pending results will be included in future weekly reports when available. This item remains open.
Ongoing Items from Previous Weekly Reports		
Report #57: Pending Data	Analytical results not reported.	Chronic toxicity results for marine receiving environment samples collected March 25 were not included with Report #71. The pending results will be included in future weekly reports when available. This item remains open.
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. 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 and July 2 returned total copper concentrations of 0.00264,0.00263 and 0.00181 mg/L, respectively, and met the MDO. The WWTP treatment performance for total copper continues to be reviewed. This item remains open.
Report #66: Pending Data	Analytical results not reported.	Chronic toxicity results for receiving environment samples collected May 27 were not included with Report #71. The pending results will be included in future weekly reports when available. This item remains open.
Report #67: WQG Evaluation	Total mercury and methylmercury above WQG.	Report #62: methylmercury and total mercury measured at station SP-E-OUT on April 24 (0.000264 and 0.00851 µg/L, respectively) were 2.6 times greater than the calculated WQG. Report #65: methylmercury (0.000149 and 0.000158 µg/L) and total mercury (0.00821 and 0.00825 µg/L) measured in two replicate samples at station SP-W-OUT on May 19 were 1.5 to 1.6 times greater than the WQGs. Report#66: methylmercury results for marine receiving environment samples collected at 2 m below surface and at 2 m above the seafloor at IDZ-W1 on May 7 were retested by the laboratory and the original results (0.000101 and 0.000092 ug/L, respectively) were determined to be incorrect. Revised results are <0.000020 and 0.000030 ug/L, respectively, below the WQG (0.0001 µg/L). Report #67: Methylmercury and total mercury measured at non-contact water diversion ditch station OUT-02 on May 19 (0.000213 and 0.00319 µg/L, respectively) were above the WQGs and similar to or below maximum values (0.000156 and <0.010 µg/L, respectively) for diversion ditch samples, suggesting there may be background influence. The sample has been retested and the methylmercury concentration was confirmed. A review of site activities at the time of sampling indicates it is unlikely there was project influence along the ditch line. Report #71: Methylmercury ranged from 0.000505 to 0.00152 µg/L in samples collected June 23 to July 2 from contact water stations SP-E-IN, WWTP-E-IN, WWTP-OUT, SP-W-IN, 2700GPM-IN and 2700GPM-OUT, above the WQG (0.0001 µg/L). These waters are mostly recirculated within the sedimentation ponds, therefore similar concentrations at these stations are expected. In general, there has been an increased incidence of total mercury and methylmercury concentrations above the WQGs in site contact waters since late April. During this time the site conditions have been generally drier than through the winter months. Possible project related sources have been evaluated, and a point source of mercury has not been identified. There have been instances of the lab reporting falsely elevated receiving environment results (Report #66, May 7 marine water samples, see above entry) attributed to lab-based contamination. Baseline monitoring of diversion ditch water suggests there may be non-project influences on the concentration of mercury in diversion ditch waters. As of Weekly Report #71, receiving environment samples have met WQGs since May 19. However, contact water samples continue to show elevated concentrations of methylmercury. Recent upstream contact water monitoring data indicate methylmercury is elevated in the hydrovac sump with excess water from this sump directed to the East WWTP. Further investigation is underway. This item remains open.
Report #67: Pending Data	Analytical results not reported.	Dioxins and furans results for contact water and treated water samples collected June 3 are discussed in Sections 3.3 and 3.4 of Report #71. This item is closed.
Report #68: Pending Data	Analytical results not reported.	Dioxins and furans results for contact water and treated water samples collected June 9 and 12 were not included with Report #71. The pending results will be included in future weekly reports when available. This item remains open.
Report #69: Pending Data	Analytical results not reported.	Methylmercury results for freshwater receiving environment samples collected June 17 are discussed in Section 3.6 of Report #71. Methylmercury results for marine receiving environment samples collected June 18 and dioxin and furans results for receiving environment samples collected June 17 and 18 were not included with Report #71. Dioxins and furans results for contact water and treated water samples collected June 19 were not included with Report #71. Acute toxicity results for clarified effluent from the E500GPM and W500GPM TSS settling systems were not included with Report #71. Toxicity samples were collected from the E500GPM and W500GPM stations as proxies for the SP-E-OUT and SP-W-OUT stations, respectively, to meet the quarterly toxicity monitoring requirement for sedimentation pond effluent. The pending results will be included in future weekly reports when available. This item remains open.
Report #70: Pending Data	Analytical results not reported.	Analytical results for contact water samples collected June 26 and methylmercury results for contact water and treated water samples collected June 23 are discussed in Sections 3.3 and 3.4 of Report #71. Dioxins and furans results for treated water samples collected June 23 were not included with Report #71. The pending results will be included in future weekly reports when available. This item remains open.
Report #70: Data Quality	Lab reanalysis	Total copper was above the short- and long-term WQGs (0.002 and 0.003 mg/L, respectively) in the sample collected at 2 m below the surface at marine reference station WQR2 (0.00404 m/L) on June 17. Lab reanalysis confirmed the reported result. This item is closed.

Notes:

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

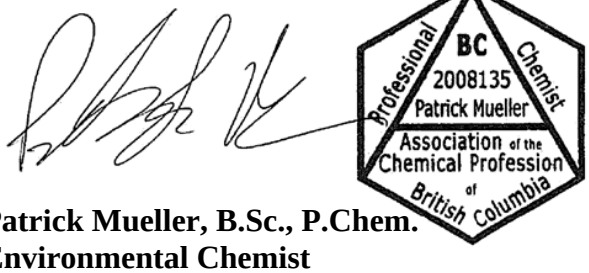
5. Closure

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

Regards,

LORAX ENVIRONMENTAL SERVICES LTD.

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



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

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

DATE SAVED:	Jul 08, 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: Water Management Facilities and Established PE-111578 Monitoring Stations (July 5, 2025)

PROJECT #: A633-7

FIGURE: 1

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

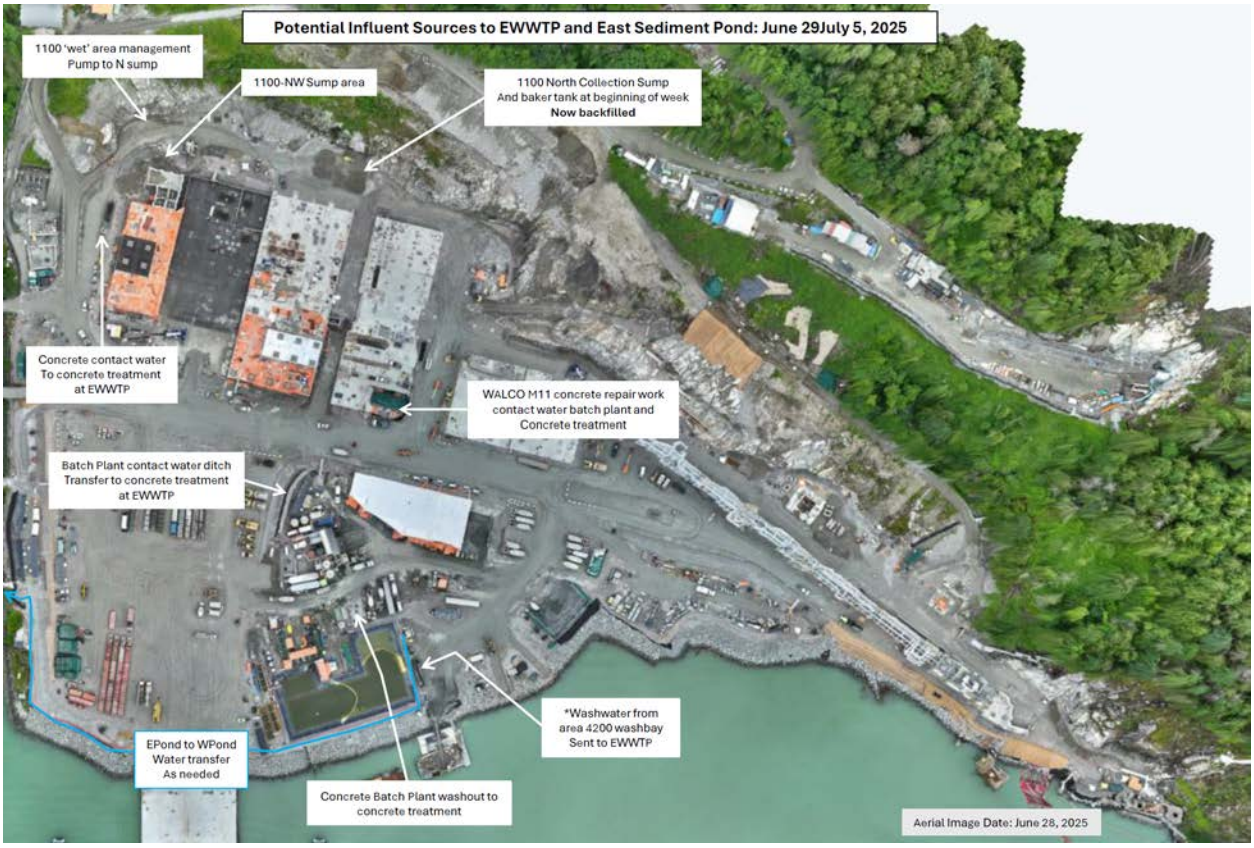


Figure 2: East Catchment contact water management facilities (June 29 – July 5).

Figure 3: West Catchment contact water management facilities (June 29 – July 5).

Figure 4: Aerial view of the East Sedimentation Pond (July 4, 2025). The East WWTP is located on the left side and the E500GPM TSS settling system is situated along the bottom edge of the pond. Algal mats are visible in the central cell of the pond.

Figure 5: Aerial view of the West Sedimentation Pond (July 4, 2025). The TSS settling systems are located to the left (W500GPM) and right (ESC) of the pond. Algal mats are visible in the centre and final cells of the pond.

Appendix B: East Catchment Monitoring Results

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

Parameter	Unit	Lowest Applicable Guideline [1]		PE-111578 Discharge Limit	Station SP-E-IN	Station SP-E-IN	Station WWTP-E-IN
					Influent	Influent	Influent
					SP-E-IN	SP-E-IN	WWTP-E-IN
					VA25B5566-002	VA25B6041-003	VA25B6041-001
		Long Term	Short Term		2025-06-26 13:15	2025-07-02 13:24	2025-07-02 13:00
General Parameters							
pH - Field	pH units	- [2]	-	5.5 - 9.0	6.9	6.7	7.0
Specific Conductivity - Field	µS/cm	-	-	-	1797	2499	1986
Temperature - Field	℃	-	-	-	20.3	25.3	23.9
Salinity - Field	ppt	-	-	-	0.91	1.28	1.01
Turbidity - Field	NTU	-	-	-	3.5	1.82	2.5
TSS	mg/L	-	-	25 or 75 [6]	-		-
Dissolved Oxygen - Field	mg/L	≥8	-	-	9.14	8.08	***7.34***
Anions and Nutrients							
Sulphate	mg/L	-	-	-	-	-	-
Chloride	mg/L	-	-	-	-	-	-
Fluoride	mg/L	-	1.5	-	-	-	-
Ammonia (N-NH_3)	mg/L	9.4 [3]	62 [3]	-	-	-	-
Nitrite (N-NO_2)	mg/L	-	-	-	-	-	-
Nitrate (N-NO_3)	mg/L	3.7	339	-	-	-	-
Total Metals							
Aluminum, total (T-Al)	mg/L	-	-	-	0.0603	0.0769	0.125
Antimony, total (T-Sb)	mg/L	-	0.27 [4]	-	0.00135	0.00168	0.00203
Arsenic, total (T-As)	mg/L	0.0125	0.0125	-	0.00216	0.00165	0.00251
Barium, total (T-Ba)	mg/L	-	-	-	0.0206	0.0197	0.0258
Beryllium, total (T-Be)	mg/L	0.1	-	-	<0.000020	<0.000040	<0.000040
Boron, total (T-B)	mg/L	1.2	-	-	0.213	0.264	0.353
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	<0.0000600	<0.0000600	<0.0000550
Chromium, total (T-Cr)	mg/L	-	-	-	0.00110	<0.00100	<0.00100
Cobalt, total (T-Co)	mg/L	-	-	-	<0.00010	<0.00020	<0.00020
Copper, total (T-Cu)	mg/L	- [2]	- [2]	0.0043	0.00178	0.00118	0.00496
Iron, total (T-Fe)	mg/L	-	-	-	0.024	0.048	0.12
Lead, total (T-Pb)	mg/L	- [2]	- [2]	0.0035	<0.000050	<0.000100	0.000342
Manganese, total (T-Mn)	mg/L	-	-	-	0.0163	0.0171	0.0472
Mercury, total (T-Hg)	mg/L	0.000016 [5]	-	-	***0.0000788***	0.0000132	0.0000123
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.170	0.206	0.173
Nickel, total (T-Ni)	mg/L	0.0083	-	-	<0.00050	<0.00100	0.00135
Selenium, total (T-Se)	mg/L	0.002	-	-	0.000783	0.00102	0.000921
Silver, total (T-Ag)	mg/L	0.0005	0.0037	-	<0.000010	<0.000020	<0.000020
Thallium, total (T-Tl)	mg/L	-	-	-	0.000041	0.000068	0.000042
Uranium, total (T-U)	mg/L	-	-	-	0.0309	0.0206	0.0429
Vanadium, total (T-V)	mg/L	- [2]	-	0.0081	0.00376	0.00213	0.00386
Zinc, total (T-Zn)	mg/L	- [2]	- [2]	0.0133	0.0030	<0.0060	0.0212
Hexavalent Chromium, total	mg/L	0.0015	-	-	0.0011	<0.00050	<0.00050
Dissolved Metals							
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	<0.0000600	<0.0000500	<0.0000550
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.00165	0.00100	0.00117
Iron, dissolved (D-Fe)	mg/L	-	-	-	0.022	<0.020	0.037
Lead, dissolved (D-Pb)	mg/L	-	-	-	<0.000050	<0.000100	<0.000100
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.0156	0.0158	0.0426
Nickel, dissolved (D-Ni)	mg/L	-	-	-	<0.00050	<0.00100	<0.00100
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.371	0.520	0.454
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00360	0.00199	0.00351
Zinc, dissolved (D-Zn)	mg/L	-	-	-	0.0025	<0.0020	0.0153
Polycyclic Aromatic Hydrocarbons (PAHs)							
Acenaphthene	mg/L	0.006	-	-	-	-	-
Acridine	mg/L	-	-	-	-	-	-
Anthracene	mg/L	-	-	-	-	-	-
Benz(a)anthracene	mg/L	-	-	-	-	-	-
Benzo(a)pyrene	mg/L	0.00001	-	-	-	-	-
Chrysene	mg/L	0.0001	-	-	-	-	-
Fluoranthene	mg/L	-	-	-	-	-	-
Fluorene	mg/L	0.012	-	-	-	-	-
1-methylnaphthalene	mg/L	0.001	-	-	-	-	-
2-methylnaphthalene	mg/L	0.001	-	-	-	-	-
Naphthalene	mg/L	0.001	-	-	-	-	-
Phenanthrene	mg/L	-	-	-	-	-	-
Pyrene	mg/L	-	-	-	-	-	-
Quinoline	mg/L	-	-	-	-	-	-
Volatile Organic Compounds (VOCs)							
Benzene	mg/L	0.11	-	-	-	-	-
Ethylbenzene	mg/L	0.25	-	-	-	-	-
Methyl-tert-butyl-ether	mg/L	5	0.44	-	-	-	-
Styrene	mg/L	-	-	-	-	-	-
Toluene	mg/L	0.215	-	-	-	-	-
Total Xylenes	mg/L	-	-	-	-	-	-
Chlorobenzene	mg/L	0.025	-	-	-	-	-
1,2-Dichlorobenzene	mg/L	0.042	-	-	-	-	-

Notes:
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 (June 29 – July 5).
[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
					VA25B6041-002
		Long Term	Short Term		2025-07-02 13:14
General Parameters					
pH - Field	pH units	- [2]	-	5.5 - 9.0	6.4
Specific Conductivity - Field	µS/cm	-	-	-	2402
Temperature - Field	°C	-	-	-	23.9
Salinity - Field	ppt	-	-	-	1.23
Turbidity - Field	NTU	-	-	-	1.69
TSS	mg/L	-	-	25 or 75 [6]	-
Dissolved Oxygen - Field	mg/L	≥8	-	-	***5.39***
Anions and Nutrients					
Sulphate	mg/L	-	-	-	-
Chloride	mg/L	-	-	-	-
Fluoride	mg/L	-	1.5	-	-
Ammonia ($N\text{-}NH_3$)	mg/L	14 [3]	92 [3]	-	-
Nitrite ($N\text{-}NO_2$)	mg/L	-	-	-	-
Nitrate ($N\text{-}NO_3$)	mg/L	3.7	339	-	-
Total Metals					
Aluminum, total (T-Al)	mg/L	-	-	-	0.0546
Antimony, total (T-Sb)	mg/L	-	0.27 [4]	-	0.0017
Arsenic, total (T-As)	mg/L	0.0125	0.0125	-	0.00176
Barium, total (T-Ba)	mg/L	-	-	-	0.0184
Beryllium, total (T-Be)	mg/L	0.1	-	-	<0.000040
Boron, total (T-B)	mg/L	1.2	-	-	0.258
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	<0.0000500
Chromium, total (T-Cr)	mg/L	-	-	-	<0.00100
Cobalt, total (T-Co)	mg/L	-	-	-	<0.00020
Copper, total (T-Cu)	mg/L	- [2]	- [2]	0.0043	0.00181
Iron, total (T-Fe)	mg/L	-	-	-	0.024
Lead, total (T-Pb)	mg/L	- [2]	- [2]	0.0035	0.000175
Manganese, total (T-Mn)	mg/L	-	-	-	0.0154
Mercury, total (T-Hg)	mg/L	0.000016 [5]	-	-	0.0000107
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.209
Nickel, total (T-Ni)	mg/L	0.0083	-	-	<0.00100
Selenium, total (T-Se)	mg/L	0.002	-	-	0.00122
Silver, total (T-Ag)	mg/L	0.0005	0.0037	-	<0.000020
Thallium, total (T-Tl)	mg/L	-	-	-	0.000072
Uranium, total (T-U)	mg/L	-	-	-	0.0196
Vanadium, total (T-V)	mg/L	- [2]	-	0.0081	0.0021
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	-	-	-	<0.0000550
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.00186
Iron, dissolved (D-Fe)	mg/L	-	-	-	<0.020
Lead, dissolved (D-Pb)	mg/L	-	-	-	0.000303
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.0153
Nickel, dissolved (D-Ni)	mg/L	-	-	-	<0.00100
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.501
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00202
Zinc, dissolved (D-Zn)	mg/L	-	-	-	0.0047
Polycyclic Aromatic Hydrocarbons (PAHs)					
Acenaphthene	mg/L	0.006	-	-	-
Acridine	mg/L	-	-	-	-
Anthracene	mg/L	-	-	-	-
Benz(a)anthracene	mg/L	-	-	-	-
Benzo(a)pyrene	mg/L	0.00001	-	-	-
Chrysene	mg/L	0.0001	-	-	-
Fluoranthene	mg/L	-	-	-	-
Fluorene	mg/L	0.012	-	-	-
1-methylnaphthalene	mg/L	0.001	-	-	-
2-methylnaphthalene	mg/L	0.001	-	-	-
Naphthalene	mg/L	0.001	-	-	-
Phenanthrene	mg/L	-	-	-	-
Pyrene	mg/L	-	-	-	-
Quinoline	mg/L	-	-	-	-
Volatile Organic Compounds (VOCs)					
Benzene	mg/L	0.11	-	-	-
Ethylbenzene	mg/L	0.25	-	-	-
Methyl-tert-butyl-ether	mg/L	5	0.44	-	-
Styrene	mg/L	-	-	-	-
Toluene	mg/L	0.215	-	-	-
Total Xylenes	mg/L	-	-	-	-
Chlorobenzene	mg/L	0.025	-	-	-
1,2-Dichlorobenzene	mg/L	0.042	-	-	-

Notes:
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 (June 29 – July 5).
[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]	0.00081 – 0.0091 [3,4]
Station	**Water Type**	**Sample ID**	**Lab ID**	**Sampling Date**		
Influent						
SP-E-IN	Influent	SP-E-IN	VA25B5566-002	2025-06-26	***0.000863***	***0.0788***
SP-E-IN	Influent	SP-E-IN	VA25B6041-003	2025-07-02	***0.000600***	***0.0132***
WWTP-E-IN	Influent	WWTP-E-IN	VA25B5143-003	2025-06-23	***0.00117***	***0.0761***
WWTP-E-IN	Influent	WWTP-E-IN	VA25B6041-001	2025-07-02	***0.00152***	***0.0123***
Effluent						
WWTP-E-OUT	Effluent	WWTP-E-OUT	VA25B5143-004	2025-06-23	***0.000752*** [5]	***0.0576*** [5]
WWTP-E-OUT	Effluent	WWTP-E-OUT	VA25B6041-002	2025-07-02	***0.000505*** [5]	***0.0107*** [5]

Notes:
Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine aquatic life.
[1] The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
[2] From BC Ambient Water Quality Guidelines for Mercury Overview Report. The methylmercury concentration threshold of 0.0001 µg/L (0.1 ng/L) is indicated as a WQG for the protection of wildlife and is set at a concentration that protects fish from mercury bioaccumulation to a level that may harm wildlife that consume fish.
[3] CCME guideline for total mercury = 0.016 µg/L.
[4] When MeHg ≤ 0.5% of total Hg, BC WQG = 0.02 µg/L. When MeHg > 0.5% of total Hg, BC WQG = 0.0001/(MeHg/Total Hg). Detection limit values are used to calculate the WQG for result reported as not detected.
[5] East WWTP effluent is directed to the East Sedimentation Pond and there was no discharge from the pond to Howe Sound on June 23 nor on July 2.
Non-detect results are screened using the detection limit value.

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

Parameter					**Lower Bound PCDD/F TEQ**	**Upper Bound PCDD/F TEQ**
Unit					**pg/L**	**pg/L**
Station	**Water Type**	**Sample ID**	**Lab ID**	**Sampling Date**		
Influent						
SP-E-IN	Influent	SP-E-IN	VA25B3036-007	2025-06-03	0.0264	0.843
WWTP-E-IN	Influent	WWTP-E-IN	VA25B3036-005	2025-06-03	0.0457	0.697
Effluent						
WWTP-E-OUT	Effluent	WWTP-E-OUT	VA25B3036-006	2025-06-03	0.00395	0.620

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 (June 29 – July 5).

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	2025-06-29 12:19	21.6	8.32	1.12	12.17	12.1	6.4	2185	No
SP-E-IN	Influent	2025-06-30 15:25	24.8	***7.92***	1.26	2.00	4.5	7.3	2446	No
SP-E-IN	Influent	2025-07-01 12:33	25.4	***7.61***	1.27	6.72	8.0	6.5	2477	No
SP-E-IN	Influent	2025-07-02 13:24	25.3	8.08	1.28	1.82	4.4	6.7	2499	No
SP-E-IN	Influent	2025-07-03 11:57	23.8	8.54	1.26	0.89	3.7	6.7	2440	No
SP-E-IN	Influent	2025-07-04 14:48	23.3	9.21	1.24	0.96	3.7	6.6	2402	No
SP-E-IN	Influent	2025-07-05 13:53	23.3	8.9	1.23	1.46	4.1	6.7	2388	No
WWTP-E-IN	Influent	2025-06-29 12:35	22.1	8.46	1.12	5.04	6.8	6.7	2185	No
WWTP-E-IN	Influent	2025-06-30 15:20	26	8.43	1.25	1.94	4.4	6.9	2444	No
WWTP-E-IN	Influent	2025-07-01 12:20	25.4	***7.85***	1.26	8.62	9.4	7	2449	No
WWTP-E-IN	Influent	2025-07-02 13:00	23.9	***7.34***	1.01	2.5	4.9	7	1986	No
WWTP-E-IN	Influent	2025-07-03 11:51	23.6	8.41	1.23	1.04	3.8	7.1	2398	No
WWTP-E-IN	Influent	2025-07-04 14:07	24.6	9.26	1.25	2.69	5.0	6.8	2424	No
WWTP-E-IN	Influent	2025-07-05 13:39	23.3	9.35	1.21	1.15	3.9	6.9	2363	No
Effluent [5]										
WWTP-E-OUT	Effluent	2025-06-29 12:24	20.8	***5.63*** [7]	1.13	3.29	5.5	5.7	2193	No
WWTP-E-OUT	Effluent	2025-06-30 15:23	23.5	***6.05*** [7]	1.25	1.59	4.2	7.5	2424	No
WWTP-E-OUT	Effluent	2025-07-01 12:22	24.5	***6.15*** [7]	1.28	1.67	4.2	6	2482	No
WWTP-E-OUT	Effluent	2025-07-02 13:14	23.9	***5.39*** [7]	1.23	1.69	4.3	6.4	2402	No
WWTP-E-OUT	Effluent	2025-07-03 11:51	23.6	8.41	1.23	1.04	3.8	7.1	2398	No
WWTP-E-OUT	Effluent	2025-07-04 14:04	22.3	***7.86*** [7]	1.22	2.22	4.7	6.4	2363	No
WWTP-E-OUT	Effluent	2025-07-05 13:43	22.6	***6.51*** [7]	1.20	1.06	3.8	6.4	2340	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 (June 29 – July 5), 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 (June 29 – July 5).

Table B-6: East Catchment Daily Discharge Volumes for the Monitoring Period (June 29 – July 5).

	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				
2025-06-29	0	800	400	0
2025-06-30	0	0	554	0
2025-07-01	0	0	431	0
2025-07-02	0	0	605	0
2025-07-03	0	0	651	0
2025-07-04	0	0	666	0
2025-07-05	0	0	695	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 VA25B5566-001 2025-06-26 12:30	Station 2700GPM-IN Influent 2700GPM-IN VA25B5853-001 2025-06-29 15:09
		Long Term	Short Term			
General Parameters						
pH - Field	pH units	- [2]	-	5.5 - 9.0	8.0	8.0
Specific Conductivity - Field	µS/cm	-	-	-	1377	1643
Temperature - Field	°C	-	-	-	20.6	23.0
Salinity - Field	ppt	-	-	-	0.69	0.83
Turbidity - Field	NTU	-	-	-	7.81	7.46
TSS	mg/L	-	-	25 or 75 [6]	-	7.3
Dissolved Oxygen - Field	mg/L	≥8	-	-	8.80	9.13
Anions and Nutrients						
Sulphate	mg/L	-	-	-	-	566
Chloride	mg/L	-	-	-	-	19.1
Fluoride	mg/L	-	1.5	-	-	0.228
Ammonia (N-NH_3)	mg/L	0.97 [3]	6.4 [3]	-	-	<0.0050
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	-	-	-	0.0487	0.25
Antimony, total (T-Sb)	mg/L	-	0.27 [4]	-	0.00109	0.00128
Arsenic, total (T-As)	mg/L	0.0125	0.0125	-	0.00307	0.00345
Barium, total (T-Ba)	mg/L	-	-	-	0.00661	0.0126
Beryllium, total (T-Be)	mg/L	0.1	-	-	<0.000020	<0.000020
Boron, total (T-B)	mg/L	1.2	-	-	0.012	0.072
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	<0.0000200	<0.0000350
Chromium, total (T-Cr)	mg/L	-	-	-	<0.00050	0.001
Cobalt, total (T-Co)	mg/L	-	-	-	<0.00010	0.0001
Copper, total (T-Cu)	mg/L	- [2]	- [2]	0.0043	0.00053	0.00178
Iron, total (T-Fe)	mg/L	-	-	-	0.046	0.213
Lead, total (T-Pb)	mg/L	- [2]	- [2]	0.0035	0.000187	0.0007
Manganese, total (T-Mn)	mg/L	-	-	-	0.0105	0.0159
Mercury, total (T-Hg)	mg/L	0.000016 [5]	-	-	0.0000122	0.0000141
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.0902	0.116
Nickel, total (T-Ni)	mg/L	0.0083	-	-	<0.00050	0.00055
Selenium, total (T-Se)	mg/L	0.002	-	-	0.000327	0.000524
Silver, total (T-Ag)	mg/L	0.0005	0.0037	-	<0.000010	<0.000010
Thallium, total (T-Tl)	mg/L	-	-	-	0.000030	0.000039
Uranium, total (T-U)	mg/L	-	-	-	0.00580	0.012
Vanadium, total (T-V)	mg/L	- [2]	-	0.0081	0.00182	0.00327
Zinc, total (T-Zn)	mg/L	- [2]	- [2]	0.0133	<0.0030	0.0076
Hexavalent Chromium, total	mg/L	0.0015	-	-	<0.00050	<0.00050
Dissolved Metals						
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	<0.0000200	<0.0000250
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.00050	0.00107
Iron, dissolved (D-Fe)	mg/L	-	-	-	0.042	0.035
Lead, dissolved (D-Pb)	mg/L	-	-	-	0.000187	0.000141
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.0103	0.00592
Nickel, dissolved (D-Ni)	mg/L	-	-	-	<0.00050	0.00065
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.187	0.245
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00172	0.0026
Zinc, dissolved (D-Zn)	mg/L	-	-	-	<0.0010	0.0016
Polycyclic Aromatic Hydrocarbons (PAHs)						
Acenaphthene	mg/L	0.006	-	-	-	<0.000010
Acridine	mg/L	-	-	-	-	<0.000010
Anthracene	mg/L	-	-	-	-	<0.000010
Benz(a)anthracene	mg/L	-	-	-	-	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	-	-	<0.0000050
Chrysene	mg/L	0.0001	-	-	-	<0.000010
Fluoranthene	mg/L	-	-	-	-	<0.000010
Fluorene	mg/L	0.012	-	-	-	<0.000010
1-methylnaphthalene	mg/L	0.001	-	-	-	<0.000010
2-methylnaphthalene	mg/L	0.001	-	-	-	<0.000010
Naphthalene	mg/L	0.001	-	-	-	<0.000050
Phenanthrene	mg/L	-	-	-	-	<0.000020
Pyrene	mg/L	-	-	-	-	<0.000010
Quinoline	mg/L	-	-	-	-	<0.000050
Volatile Organic Compounds (VOCs)						
Benzene	mg/L	0.11	-	-	-	<0.00050
Ethylbenzene	mg/L	0.25	-	-	-	<0.00050
Methyl-tert-butyl-ether	mg/L	5	0.44	-	-	<0.00050
Styrene	mg/L	-	-	-	-	<0.00050
Toluene	mg/L	0.215	-	-	-	<0.00040
Total Xylenes	mg/L	-	-	-	-	<0.00050
Chlorobenzene	mg/L	0.025	-	-	-	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	-	-	-	<0.00050

Notes:
Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.
Results in orange text exceed the PE-111578 West Sedimentation Pond Discharge Limit.
The West Catchment did not discharge during the monitoring period (June 29 – July 5).
[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 2700GPM-OUT Effluent 2700GPM-OUT VA25B5853-002 2025-06-29 14:09
		Long Term	Short Term		
General Parameters					
pH - Field	pH units	- [2]	-	5.5 - 9.0	7.6
Specific Conductivity - Field	µS/cm	-	-	-	1460
Temperature - Field	°C	-	-	-	22.1
Salinity - Field	ppt	-	-	-	0.73
Turbidity - Field	NTU	-	-	-	3.91
TSS	mg/L	-	-	25 or 75 [6]	3.9
Dissolved Oxygen - Field	mg/L	≥8	-	-	9.31
Anions and Nutrients					
Sulphate	mg/L	-	-	-	515
Chloride	mg/L	-	-	-	18.8
Fluoride	mg/L	-	1.5	-	0.236
Ammonia ($N\text{-}NH_3$)	mg/L	2.4 [3]	16 [3]	-	<0.0050
Nitrite ($N\text{-}NO_2$)	mg/L	-	-	-	<0.0050
Nitrate ($N\text{-}NO_3$)	mg/L	3.7	339	-	<0.0250
Total Metals					
Aluminum, total (T-Al)	mg/L	-	-	-	0.0954
Antimony, total (T-Sb)	mg/L	-	0.27 [4]	-	0.00118
Arsenic, total (T-As)	mg/L	0.0125	0.0125	-	0.00331
Barium, total (T-Ba)	mg/L	-	-	-	0.0055
Beryllium, total (T-Be)	mg/L	0.1	-	-	<0.000020
Boron, total (T-B)	mg/L	1.2	-	-	0.017
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	<0.0000250
Chromium, total (T-Cr)	mg/L	-	-	-	<0.00050
Cobalt, total (T-Co)	mg/L	-	-	-	<0.00010
Copper, total (T-Cu)	mg/L	- [2]	- [2]	0.0043	0.00095
Iron, total (T-Fe)	mg/L	-	-	-	0.096
Lead, total (T-Pb)	mg/L	- [2]	- [2]	0.0035	0.000384
Manganese, total (T-Mn)	mg/L	-	-	-	0.0082
Mercury, total (T-Hg)	mg/L	0.000016 [5]	-	-	0.00000704
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.102
Nickel, total (T-Ni)	mg/L	0.0083	-	-	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	-	0.000389
Silver, total (T-Ag)	mg/L	0.0005	0.0037	-	<0.000010
Thallium, total (T-Tl)	mg/L	-	-	-	0.000046
Uranium, total (T-U)	mg/L	-	-	-	0.00876
Vanadium, total (T-V)	mg/L	- [2]	-	0.0081	0.00221
Zinc, total (T-Zn)	mg/L	- [2]	- [2]	0.0133	<0.0030
Hexavalent Chromium, total	mg/L	0.0015	-	-	<0.00050
Dissolved Metals					
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	<0.0000250
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.00069
Iron, dissolved (D-Fe)	mg/L	-	-	-	0.028
Lead, dissolved (D-Pb)	mg/L	-	-	-	0.000099
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.00315
Nickel, dissolved (D-Ni)	mg/L	-	-	-	0.0007
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.214
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00188
Zinc, dissolved (D-Zn)	mg/L	-	-	-	<0.0010
Polycyclic Aromatic Hydrocarbons (PAHs)					
Acenaphthene	mg/L	0.006	-	-	<0.000010
Acridine	mg/L	-	-	-	<0.000010
Anthracene	mg/L	-	-	-	<0.000010
Benz(a)anthracene	mg/L	-	-	-	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	-	<0.0000050
Chrysene	mg/L	0.0001	-	-	<0.000010
Fluoranthene	mg/L	-	-	-	<0.000010
Fluorene	mg/L	0.012	-	-	<0.000010
1-methylnaphthalene	mg/L	0.001	-	-	<0.000010
2-methylnaphthalene	mg/L	0.001	-	-	<0.000010
Naphthalene	mg/L	0.001	-	-	<0.000050
Phenanthrene	mg/L	-	-	-	<0.000020
Pyrene	mg/L	-	-	-	<0.000010
Quinoline	mg/L	-	-	-	<0.000050
Volatile Organic Compounds (VOCs)					
Benzene	mg/L	0.11	-	-	<0.00050
Ethylbenzene	mg/L	0.25	-	-	<0.00050
Methyl-tert-butyl-ether	mg/L	5	0.44	-	<0.00050
Styrene	mg/L	-	-	-	<0.00050
Toluene	mg/L	0.215	-	-	<0.00040
Total Xylenes	mg/L	-	-	-	<0.00050
Chlorobenzene	mg/L	0.025	-	-	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	-	-	<0.00050

Notes:
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 (June 29 – July 5).
[1] The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
[2] The WQG was not evaluated for parameters with discharge limits.
[3] The BC WQG for total ammonia is salinity, pH and temperature dependent; see Tables 27E and 27F in BC WQG guidance document.
[4] The working BC WQG for trivalent antimony [SB(III)] is 0.27 mg/L and is applied to total antimony results.
[5] When MeHg ≤0.5% of total Hg, the BC WQG = 0.00002 mg/L. The Canadian WQG = 0.000016 mg/L.
[6] The PE-111578 discharge limit for TSS is 25 mg/L under dry conditions and 75 mg/L for each day of Wet Conditions.

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

Parameter					**Total Methylmercury**	**Total Mercury**
Unit					**µg/L**	**µg/L**
Lowest Applicable Guideline[1]					0.0001 [2]	0.00094-0.0012 [3,4]
Station	**Water Type**	**Sample ID**	**Lab ID**	**Sampling Date**		
Influent						
SP-W-IN	Influent	SP-W-IN	VA25B5566-001	2025-06-26	***0.00130***	***0.0122***
SP-W-IN	Influent	SP-W-IN	VA25B6041-004	2025-07-02	***0.000567***	***0.00618***
2700GPM-IN	Influent	2700GPM-IN	VA25B5146-001	2025-06-23	***0.00137***	***0.0158***
2700GPM-IN	Influent	2700GPM-IN	VA25B5853-001	2025-06-29	***0.00137***	***0.0141***
Effluent						
2700GPM-OUT	Effluent	2700GPM-OUT	VA25B5146-002	2025-06-23	***0.00115*** [5]	***0.0136*** [5]
2700GPM-OUT	Effluent	2700GPM-OUT	VA25B5853-002	2025-06-29	***0.000738*** [5]	***0.00704*** [5]

Notes:
Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine aquatic life.
[1] The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
[2] From BC Ambient Water Quality Guidelines for Mercury Overview Report. The methylmercury concentration threshold of 0.0001 µg/L (0.1 ng/L) is indicated as a WQG for the protection of wildlife and is set at a concentration that protects fish from mercury bioaccumulation to a level that may harm wildlife that consume fish.
[3] CCME guideline for total mercury = 0.016 µg/L.
[4] When MeHg ≤ 0.5% of total Hg, BC WQG = 0.02 µg/L. When MeHg > 0.5% of total Hg, BC WQG = 0.0001/(MeHg/Total Hg). Detection limit values are used to calculate the WQG for result reported as not detected.
[5] 2700GPM clarified effluent was directed to the West Sedimentation Pond and there was no discharge from the pond to Howe Sound on June 23 nor on June 29.
Non-detect results are screened using the detection limit value.

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

Parameter					**Lower Bound PCDD/F TEQ**	**Upper Bound PCDD/F TEQ**
Unit					**pg/L**	**pg/L**
Station	**Water Type**	**Sample ID**	**Lab ID**	**Sampling Date**		
Influent						
SP-W-IN	Influent	SP-W-IN	VA25B3036-001	2025-06-03	0	1.95
Effluent						
W500GPM-OUT	Effluent	W500GPM-OUT	VA25B3036-002	2025-06-03	0	0.765

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

Table C-5: West Catchment Field Measurements Collected During the Monitoring Period (June 29 – July 5).

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	2025-06-29 13:59	22.2	8.89	0.90	7.03	8.2	7.5	1768	No
SP-W-IN	Influent	2025-06-30 15:47	25.4	8.59	0.94	4.85	6.6	7.5	1852	No
SP-W-IN	Influent	2025-07-01 13:28	25.5	0.94	0.94	5.77	7.3	7.8	1852	No
SP-W-IN	Influent	2025-07-02 14:11	26.0	8.96	0.94	9.52	10.1	7.9	1864	No
SP-W-IN	Influent	2025-07-03 12:39	24.5	8.34	0.95	3.40	5.5	7.9	1865	No
SP-W-IN	Influent	2025-07-04 15:43	25.5	7.67	0.97	2.04	4.5	7.9	1921	No
SP-W-IN	Influent	2025-07-05 13:53	23.3	8.90	1.23	1.46	4.1	6.7	2388	No
2700GPM-IN	Influent	2025-06-29 15:09	23.0	9.13	0.83	7.46	8.6	8.0	1643	No
2700GPM-IN	Influent	2025-06-30 15:38	24.7	8.77	0.94	3.68	5.7	7.6	1850	No
2700GPM-IN	Influent	2025-07-01 14:47	26.5	9.02	0.87	4.17	6.1	8.4	1728	No
2700GPM-IN	Influent	2025-07-02 8:16	23.8	8.25	0.92	2.47	4.8	7.8	1816	No
2700GPM-IN	Influent	2025-07-03 10:21	23.0	8.32	0.87	1.93	4.4	8.0	1718	No
2700GPM-IN	Influent	2025-07-04 14:58	24.7	8.71	0.95	2.10	4.6	8.0	1883	No
2700GPM-IN	Influent	2025-07-05 14:09	24.3	8.75	0.95	1.91	4.4	8.2	1879	No
Effluent [5]										
2700GPM-OUT	Effluent	2025-06-29 14:09	22.1	9.31	0.73	3.91	5.9	7.6	1460	No
2700GPM-OUT	Effluent	2025-06-30 15:42	24.6	8.23	0.94	4.83	6.6	7.4	1849	No
2700GPM-OUT	Effluent	2025-07-01 14:53	25.9	8.75	0.87	2.05	4.5	8.1	1729	No
2700GPM-OUT	Effluent	2025-07-02 8:20	24.2	8.61	0.94	2.06	4.5	7.8	1847	No
2700GPM-OUT	Effluent	2025-07-03 10:26	23.1	8.34	0.86	1.90	4.4	7.8	1704	No
2700GPM-OUT	Effluent	2025-07-04 15:24	25.1	***7.65*** [7]	0.97	1.74	4.3	7.9	1913	No
2700GPM-OUT	Effluent	2025-07-05 14:14	24.0	***7.93*** [7]	0.94	1.97	4.5	8.1	1816	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 measurements for station SP-W-IN were collected from cell 1 of the West Sedimentation Pond.
[5] There was no discharge at the authorized discharge location (SP-W-OUT) during the monitoring period (June 29 – July 5), 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] 2700GPM clarified effluent is directed to the West Sedimentation Pond and there was no discharge from the pond to Howe Sound during the monitoring period (June 29 – July 5).

Table C-6: West Catchment Daily Discharge Volumes for the Monitoring Period (June 29 – July 5).

	West Sedimentation Pond Effluent	West TSS Settling System (ESC) Clarified Effluent (Station ESC-W-OUT)[3]	West TSS Settling System (2700GPM) Clarified Effluent (Station 2700GPM-OUT)[4]	Water Reclaimed for Construction Purposes (Station 2700GPM-OUT)	West WWTP Treated Effluent [1] (Station WWTP-W-OUT)	Discharge to Howe Sound (Station SP-W-OUT)
Unit	**m^3**	**m^3**		**m^3**	**m^3**	**m^3**
PE-111578 Discharge Limit	-	-		-	120	- [2]
Date						
2025-06-29	0	0	1,381	0	0	0
2025-06-30	0	0	1,931	0	0	0
2025-07-01	0	0	890	0	0	0
2025-07-02	0	0	1,133	0	0	0
2025-07-03	0	0	2,520	127	0	0
2025-07-04	0	0	2,638	0	0	0
2025-07-05	0	0	2,338	0	0	0

Notes:
Results in orange text exceed the PE-111578 West Sedimentation Pond Discharge Limit.
[1] The West WWTP is not being operated, therefore discharges are not expected from this facility.
[2] As noted in PE-111578 Condition 2.2.4, the annual average authorized discharge rate from the West Sedimentation Pond to Howe Sound was set to 310 m^3/day for the purpose of calculating discharge fees as required by the Permit and Approval Fees and Charges Regulation. Therefore, the annual average authorized discharge rate is not evaluated as a discharge limit.
[3] The ESC system was not operational during the monitoring period (June 29 – July 5).
[4] Commissioning and pilot testing of a larger TSS settling system (2700GPM) continued during the monitoring period (June 29 – July 5). Clarified effluent from the 2700GPM TSS settling system is recirculated to the West Sedimentation Pond or reclaimed for construction purposes based on operational considerations.

Appendix D: Freshwater Receiving Environment Results

Table D-1: Freshwater 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]	0.0025-0.0035 [3,4]
Station	**Water Type**	**Sample ID**	**Lab ID**	**Sampling Date**		
SW-02	Lower Freshwater Reach of Mill Creek (upstream of the third bridge)	SW-02	VA25B4483-002	2025-06-17	<0.000020	0.00060
SW-07	Upstream Mill Creek (at the diversion inlet)	SW-07	VA25B4483-001	2025-06-17	<0.000020	0.00050

Notes:
Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of freshwater aquatic life.
[1] The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
[2] From BC Ambient Water Quality Guidelines for Mercury Overview Report. The methylmercury concentration threshold of 0.0001 µg/L (0.1 ng/L) is indicated as a WQG for the protection of wildlife and is set at a concentration that protects fish from mercury bioaccumulation to a level that may harm wildlife that consume fish.
[3] CCME guideline for total mercury = 0.026 µg/L.
[4] When MeHg ≤ 0.5% of total Hg, BC WQG = 0.02 µg/L. When MeHg > 0.5% of total Hg, BC WQG = 0.0001/(MeHg/Total Hg). Detection limit values are used to calculate the WQG for result reported as not detected.
Non-detect results are screened using the detection limit value.

Appendix E: Estuarine Water Receiving Environment Results

Table E-1: Estuarine Water Methylmercury and Corresponding Total Mercury Results Received at the Time of Reporting.

Parameter					**Total Methylmercury**	**Total Mercury**
Unit					**µg/L**	**µg/L**
Lowest Applicable Guideline[1]					0.0001 [2]	0.0043 [3,4]
Station	**Water Type**	**Sample ID**	**Lab ID**	**Sampling Date**		
SW-03	Mill Creek Estuary	SW-03	VA25B4483-003	2025-06-17	<0.000020	0.00086

Notes:
Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of freshwater aquatic life.
[1] The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
[2] From BC Ambient Water Quality Guidelines for Mercury Overview Report. The methylmercury concentration threshold of 0.0001 µg/L (0.1 ng/L) is indicated as a WQG for the protection of wildlife and is set at a concentration that protects fish from mercury bioaccumulation to a level that may harm wildlife that consume fish.
[3] CCME guideline for total mercury = 0.026 µg/L.
[4] When MeHg ≤ 0.5% of total Hg, BC WQG = 0.02 µg/L. When MeHg > 0.5% of total Hg, BC WQG = 0.0001/(MeHg/Total Hg). Detection limit values are used to calculate the WQG for result reported as not detected.
Non-detect results are screened using the detection limit value