TECHNICAL MEMORANDUM

To:	**Ian McAllister, Ashleigh Crompton, Mike Champion, Jackie Boruch and Ryan Schucroft (Woodfibre LNG)**	**Date: 31 Jan 2025**
From:	**Holly Pelletier and Patrick Mueller (Lorax)**	**Project #: A633-9**
Subject:	**PE-111578 Weekly Discharge and Compliance Report #48 for January 19 – 25**	

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 #48) was prepared by Lorax Environmental and summarizes WDA monitoring conducted for the period of January 19 – 25. 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 #48 has been prepared to meet the requirements specified in Condition 4.2 of PE-111578:

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

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

1. Current Conditions

1.1 Water Management Infrastructure

The Construction Phase of the Woodfibre LNG Export Facility commenced in October 2023. Early-stage civil works are ongoing, and these include site grading, levelling, overburden and bedrock excavation, pouring of concrete foundations and construction of contact water management facilities. Shoring works along the foreshore areas were initiated in December 2023, and in early 2024 construction of water management infrastructure commenced and has continued through the January 19 – 25, 2025 monitoring period. The East Wastewater Treatment Plant (WWTP), East Sedimentation Pond and West Sedimentation Pond are commissioned for operation.

Operation of the West WWTP was suspended September 25, 2024. The suspension was implemented for the temporary reconfiguration of the plant to conduct pilot-scale evaluation of alternative treatment processes for improving treatment outcomes. Any process modifications that may result from the pilot-scale evaluation will be submitted to BCER for approval prior to full-scale implementation. Site waters that require treatment will continue to be directed to the East WWTP while the operation of the West WWTP is suspended.

Non-contact water diversion ditches west of Mill Creek have been fully or partially upgraded and discharge 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 from the diversion ditches is also conveyed to Howe Sound via station OUT-01. East of Mill Creek, non-contact water is diverted around the East Catchment along pre-existing road ditches that flow to East Creek or Mill Creek. To facilitate the replacement of the East Creek discharge culvert at OUT-12, the lower reach of East Creek was temporarily diverted to an adjacent culvert, OUT-11, on September 17, 2024.

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

Flocculant-based TSS settling systems are used at the East and West Sedimentation Ponds to remove TSS from non-contaminated contact water at the time of discharge. Some of the clarified water may be recirculated back to the ponds. 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. A second TSS settling system (W500GPM) was added and commissioned for use on

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

Contaminated contact water from within the East and West Catchments, and non-contaminated contact water stored in the East Sedimentation Pond are directed to the East WWTP for treatment prior to discharge to Howe Sound. Direct discharge of East WWTP treated contact water to Howe Sound has been implemented since October 28, 2024.

The East and West Catchment permanent outfall structures have not been completed. Temporary discharge systems (*i.e.*, pumps, hosing and diffusors) are used to convey clarified or treated effluent to the discharge locations authorized for the East and West Catchments. In the East Catchment, treated WWTP effluent and clarified E500GPM effluent are combined in a tank prior to discharge at location SP-E-OUT since December 2, 2024. The West Catchment discharge location, SP-W-OUT receives the combined clarified effluents from the ESC and W500GPM TSS settling systems since November 28, 2024. Each of the authorized discharge locations has an initial dilution zone (IDZ) where discharged water mixes with Howe Sound surface waters. The IDZ is defined in PE-111578 and extends 150 m from each point of discharge into Howe Sound.

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

Cold, dry and sunny conditions prevailed during the monitoring period (January 19 – 25). 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
01-19-2025	0	7.0	-1.2	Sunny
01-20-2025	0	4.0	-1.4	Sunny
01-21-2025	0	5.4	-1.7	Sunny
01-22-2025	0	3.6	-1.6	Sunny
01-23-2025	0	3.5	-1.5	Sunny
01-24-2025	0	8.7	-1.5	Sunny
01-25-2025	0	6.5	-1.1	Sunny

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

During the January 19 – 25 monitoring period, the East Sedimentation Pond did not receive any contact water (Appendix A, Figure 2). Contact waters from Area 4100 sump and the Surge Pond were directed to the West Sedimentation Pond (Appendix A, Figure 3). The W500GPM and the ESC TSS settling system were not operational during the monitoring period. The West Catchment

did not discharge to Howe Sound January 19 – 25. Daily clarified effluent volumes from the TSS settling systems, and volumes discharged to Howe Sound from the West Catchment authorized discharge location (SP-W-OUT) are provided in Appendix C (Table C-2).

Routine operation of the East WWTP continued during the monitoring period except on January 19 through 22 when the system was not operational. Contact waters from the West Catchment wash bay and the concrete batch plant 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). The E500GPM TSS settling system was not operational during the monitoring period and East WWTP treated effluent was recirculated to the East Sedimentation Pond January 23, 24, and 25. The East Catchment did not discharge to Howe Sound January 19 – 25. Daily discharge volumes from East WWTP, East TSS settling system (E500GPM) and the authorized discharge location SP-E-OUT are provided in Appendix B, Table B-3.

2. Monitoring Summary

The locations of the 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.

Compliance and supplementary monitoring stations have been established:

- 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 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, SP-E-NE, SP-E-NW, E500GPM-IN, E500GPM-OUT, WWTP-E-IN, WWTP-E-OUT, SP-W-IN, SP-W-W, SP-W-E, 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 yet 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).

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

Water quality was monitored at stations SW-01, SW-02, SW-03, SW-04, SW-07, IDZ-E1, IDZ-E2, IDZ-W1, IDZ-W2, WWTP-E-IN, and WWTP-E-OUT during the monitoring period (January 19 – 25). Sampling dates and parameters tested are summarized in Table 2.

Overall, the PE-111578 monitoring requirements that were applicable during the monitoring period (January 19 – 25) were met.

Daily field parameters and a weekly analytical sample were not collected at influent stations SP-E-IN and SP-W-IN nor at effluent stations SP-E-OUT and SP-W-OUT (January 19 – 25) since there was no influent reporting to the East and West Sedimentation Ponds and no effluent discharged from the authorized discharge locations at the time of monitoring. Daily field parameters were not collected at the influent and effluent stations of the East WWTP (WWTP-E-IN and WWTP-E-OUT, respectively) on January 19 through 23 as the East WWTP was not operational at the time of monitoring. 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 the West WWTP was not operational during the monitoring period.

Table 2: Summary of PE-111578 Monitoring Samples Collected January 19 – 25.

Sampling Date	Sample	Description	Parameters Tested	Monitoring Frequency
January 23, 2025	IDZ-E1-0.5	Howe Sound IDZ station E1; 0.5 m below surface	Field and Physical Parameters.	W_3
	IDZ-E1-2m	Howe Sound IDZ station E1; 2 m below surface		
	IDZ-E1-SF	Howe Sound IDZ station E1; 2 m above the seafloor		
	IDZ-E2-0.5	Howe Sound IDZ station E2; 0.5 m below surface		
	IDZ-E2-2m	Howe Sound IDZ station E2; 2 m below surface		
	IDZ-E2-SF	Howe Sound IDZ station E2; 2 m above the seafloor		
	IDZ-W1-0.5	Howe Sound IDZ station W1; 0.5 m below surface		
	IDZ-W1-2m	Howe Sound IDZ station W1; 2 m below surface		
	IDZ-W1-SF	Howe Sound IDZ station W1; 2 m above the seafloor		
	IDZ-W2-0.5	Howe Sound IDZ station W2; 0.5 m below surface		
	IDZ-W2-2m	Howe Sound IDZ station W2; 2 m below surface		
	IDZ-W2-SF	Howe Sound IDZ station W2; 2 m above the seafloor		
January 24, 2025	WWTP-E-IN	East WWTP at the influent meter box	Field, Physical & General Parameters, VH & BTEX, EPHs & PAHs, Total, Dissolved and Speciated Metals, VOCs, Methylmercury, Dioxins & Furans.	D, W_1, W_2
	WWTP-E-OUT	East WWTP at the effluent meter box		
	SW-01	Lower Reach of Woodfibre Creek (near the mouth)	Field, Physical & General Parameters, VH & BTEX, EPHs & PAHs, Total, Dissolved and Speciated Metals, VOCs, Methylmercury, Dioxins & Furans.	M
	SW-02	Upper Reach of Mill Creek (upstream of third bridge)		
	SW-03	Lower Reach of Mill Creek (near the mouth, in the estuarine zone)		
January 25, 2025	WWTP-E-IN	East WWTP at the influent meter box	Field Parameters.	D
	WWTP-E-OUT	East WWTP at the effluent meter box		
	SW-04	Lower Reach of East Creek (near the outlet to the outfall culvert)	Field, Physical & General Parameters, VH & BTEX, EPHs & PAHs, Total, Dissolved and Speciated Metals, VOCs, Methylmercury, Dioxins & Furans.	M
	SW-07	Upstream Mill Creek (at the diversion inlet)		

Notes:
Monitoring frequency requirements under PE-111578 are indicated as follows:
D – daily monitoring of field parameters at WWTP and sedimentation pond influent and effluent stations.
M – monthly monitoring for all parameters at WWTP, sedimentation pond and receiving environment stations.
W_1 – initial high frequency monitoring for physical parameters at WWTP and sedimentation pond influent and effluent stations.
W_2 – initial high frequency monitoring for all parameters at WWTP and sedimentation pond influent and effluent stations.
W_3 – initial high frequency monitoring for physical parameters at IDZ stations.
P – periodic monitoring for targeted parameters that is supplementary to PE-111578 requirements.
Monitoring samples were not collected January 19 through January 22 as the East and West Sediment Pond levels were low and the East WWTP and TSS settling systems were not operational. No discharges to Howe Sound occurred during the monitoring period.

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 chlorinated dibenzo-*p*-dioxins and chlorinated dibenzofurans. A sub-set of 17 polychlorinated dibenzo-*p*-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs) are typically evaluated for toxicity and the individual parameter concentrations are converted to toxic equivalent (TEQ) values that are summed and reported 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 sub-set of 17 individual 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 that may 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 available at the time of reporting for samples collected during the monitoring period (January 19 – 25) and for other samples that have not been previously reported are listed below in Table 3. Testing for methylmercury, dioxins and furans typically requires up to four weeks to complete. Analytical results not available at the time of reporting will be included in future weekly reports when testing is completed. Reporting of results is pending for the following samples and parameters:

- IDZ-E1, IDZ-E2, and WQR1 collected January 8 (dioxins and furans)
- IDZ-W1, IDZ-W2, and WQR2 collected January 9 (dioxins and furans)
- IDZ-E1, IDZ-E2, IDZ-W1, and IDZ-W2 collected January 23 (field parameters and all analytical parameters)
- WWTP-E-IN and WWTP-E-OUT collected January 24 (all analytical parameters)
- SW-01, SW-02, and SW-03 collected January 24 (field parameters and all analytical parameters)
- SW-04 and SW-07 collected January 25 (field parameters and all analytical parameters)

Table 3: Summary of Analytical Results Included in Weekly Discharge and Compliance Report #48.

Sample	Description	Sampling Date	Parameters Reported
IDZ-E1-0.5	Howe Sound IDZ station E1; 0.5 m below surface	January 8, 2025	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, VOCs, and Methylmercury.
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		
IDZ-W1-0.5	Howe Sound IDZ station W1; 0.5 m below surface	January 9, 2025	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, VOCs, and Methylmercury.
IDZ-W1-2m	Howe Sound IDZ station W1; 2 m below surface		
IDZ-W1-SF	Howe Sound IDZ station W1; 2 m above the seafloor		
IDZ-W2-0.5	Howe Sound IDZ station W2; 0.5 m below surface		
IDZ-W2-2m	Howe Sound IDZ station W2; 2 m below surface		
IDZ-W2-SF	Howe Sound IDZ station W2; 2 m above the seafloor		
WQR2-0.5	Reference site 2; 0.5 m below surface		
WQR2-2m	Reference site 2; 2 m below surface		
WQR2-SF	Reference site 2; 2 m above the seafloor		
WWTP-E-IN	East WWTP at the influent meter box	January 14, 2025	Methylmercury.
WWTP-E-OUT	East WWTP at the effluent meter box		
SP-W-IN	West Sedimentation Pond influent entering the pond and collected at cell 1		
SP-W-OUT	West Sedimentation Pond clarified effluent discharge to Howe Sound, collected at the sampling port		
IDZ-W1-0.5	Howe Sound IDZ station W1; 0.5 m below surface	January 15, 2025	Field and Physical Parameters.
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		
IDZ-E1-0.5	Howe Sound IDZ station E1; 0.5 m below surface	January 16, 2025	Field and Physical Parameters.
IDZ-E1-2m	Howe Sound IDZ station E1; 2 m below surface		
IDZ-E1-SF	Howe Sound IDZ station E1; 2 m above the seafloor		
IDZ-E2-0.5	Howe Sound IDZ station E2; 0.5 m below surface		
IDZ-E2-2m	Howe Sound IDZ station E2; 2 m below surface		
IDZ-E2-SF	Howe Sound IDZ station E2; 2 m above the seafloor		

3.3 East Catchment

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

During the monitoring period (January 19 – 25), the East Catchment did not discharge to Howe Sound. The ESC TSS settling system was not operational during the monitoring period and East WWTP treated effluent was recirculated to the East Sedimentation Pond January 23, 24, and 25. Daily discharge volumes from the East Catchment are summarized in Appendix B, Table B-3.

Field measurements were collected on January 24 and 25 at the East WWTP influent and effluent locations when treated effluent was recirculated to the sedimentation pond, and are tabulated in Appendix B, Table B-2. Analytical results for samples collected on January 24 (stations WWTP-E-IN and WWTP-E-OUT) were not available at the time of reporting.

Methylmercury analytical results were available at the time of reporting for WWTP influent and effluent (WWTP-E-IN and WWTP-E-OUT, respectively) collected January 14 (as discussed in Report #47) (Appendix B, Table B-1). Methylmercury was detected at 0.000022 µg/L in the WWTP-E-OUT sample and met the WQG. The East WWTP effluent was stored in the pre-discharge holding tank and did not discharge to Howe Sound on January 14.

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 currently suspended (refer to Section 1.1) and monitoring results are therefore not available.

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 (January 19 – 25), the West Catchment did not discharge to Howe Sound. The W500GPM and the smaller TSS settling system (ESC) were not operated during the monitoring period. Daily clarified effluent and discharge volumes from the West Catchment are summarized in Appendix C, Table C-2.

Methylmercury analytical results were available at the time of reporting for West Sedimentation Pond influent (station SP-W-IN) and effluent discharged at SP-W-OUT on January 14 (as discussed in Report #47). The methylmercury concentration was <0.000020 µg/L in effluent discharged at SP-W-OUT on January 14 and met the WQG for methylmercury (Appendix C, Table C-1).

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 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 diversion is in place.

There were no outstanding analytical results for non-contact water diversion ditch outlets 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.

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

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 D.

Analytical results and field measurements were available at the time of reporting for marine water samples collected at 0.5 and 2 m below the water surface and 2 m above the seafloor on January 8 at IDZ-E1, IDZ-E2, and marine reference station WQR1 and on January 9 at IDZ-W1, IDZ-W2, and marine reference station WQR2 (as discussed in Report #46). Analytical results and field measurements were also available for marine water samples collected at IDZ-W1 and IDZ-W2 on January 15 and at IDZ-E1 and IDZ-E2 on January 16 at 0.5 and 2 m below the water surface and 2 m above the seafloor (as discussed in Report #47). Only field and physical parameters were collected on January 15 and 16. Parameter concentrations met WQGs except field turbidity, dissolved oxygen, and total boron in some samples (Appendix D; Tables D-1 to D-5).

Field turbidity measured in the sample collected at IDZ-W1 at 0.5 m below the water surface on January 15 (4.35 NTU) was slightly above the long-term WQG derived from background conditions (3.39 NTU) (Appendix D; Table D-4).

In all of the marine samples collected 2 m above the seafloor on January 8, 9, 15, and 16, except for the IDZ-E1 sample collected January 16, dissolved oxygen was below the lower limit of the WQG (<8 mg/L) and ranged from 6.31 to 7.48 mg/L. Total boron was above the WQG (1.2 mg/L) in all marine water samples collected January 8 and 9 and ranged from 1.94 to 3.12 mg/L. Low concentrations of dissolved oxygen and elevated concentrations of total boron are indicative of influence from the deeper saline waters in the northern basin of Howe Sound and are a natural condition of the marine water at the WDA monitoring stations. The dissolved oxygen and total boron concentrations observed at the IDZ monitoring stations are within concentrations that have been observed in the pre-construction baseline monitoring program or within background ranges observed at marine reference stations and are therefore not attributed to project influence.

Methylmercury analytical results were available at the time of reporting for the marine water receiving environment samples collected from stations IDZ-E1, IDZ-E2, and marine reference station WQR1 on January 8 and from stations IDZ-W1, IDZ-W2, and marine reference station WQR2 on January 9 (as discussed in Weekly Report #46) at 0.5 m and 2 m below the water surface and 2 m above the seafloor. For all samples, methylmercury concentrations ranged from <0.000020 to 0.000045 ug/L and were below the WQG indicated in Section 3.1 (0.0001 µg/L). The associated total mercury concentrations also met the WQG (Appendix D; Tables D-6).

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 (January 19 – 25, Report #48)		
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 were under construction during the reporting period. The East and West Sedimentation Ponds and WWTPs have been constructed. The sedimentation pond conveyance ditches have not been constructed and influent culverts have not been activated, and the associated influent monitoring stations have not been established. Temporary outfalls are used for the East and West authorized discharge locations until the permanent structures are completed. Operation of the West WWTP has been suspended since September 25, 2024, and the plant has been repurposed to evaluate alternative treatment processes. 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). East Creek is monitored at SW-04 therefore monitoring at OUT-11 has been suspended. As communicated to BCER, the East Catchment discharge pathway for authorized discharge location SP-E-OUT was reconfigured on October 28, 2024, to direct sedimentation pond water to the East WWTP and to discharge East WWTP treated effluent. On November 28 and December 4, 2024, TSS settling systems were commissioned for use at the West and East Sedimentation Ponds, respectively, and are configured to discharge the clarified sediment pond water to Howe Sound. This item remains open.
Pending Data	Analytical results not reported.	Analytical results for samples collected January 23, 24, and 25 were not complete at the time of Report #48 preparation. The pending results will be included in future weekly reports when available. This item remains open.
Ongoing Items from Previous Weekly Reports		
Report #45: Pending Data	Analytical results not reported.	Dioxins and furans results for samples collected December 22, January 1 and 3 were not complete at the time of Report #48 preparation. The pending results will be included in future weekly reports when available. This item remains open.
Report #46: Pending Data	Analytical results not reported.	Analytical results for marine receiving environment samples collected January 8 and 9 are discussed in Section 3.7 of Report #48. Dioxins and furans results for samples collected January 8 and 9 were not complete at the time of Report #48 preparation. The pending results will be included in future weekly reports when available. This item remains open.
Report #47: Non-Compliant Effluent	Non-compliant discharge from the East Catchment on January 16.	Total copper and total zinc concentrations measured at station SP-E-OUT on January 16 were, respectively, 3.8 and 1.3 times above the PE-111578 discharge limits. BCER was notified on January 23. Review of the non-compliance is underway, and outcomes will be communicated to BCER. This item remains open.
Report #47: WWTP Performance Evaluation	T-Cu above the MDO	This item was first noted in Report #46 (January 8 sample) and has been updated with January 14 results (Report #47). The T-Cu concentration was 0.00809 and 0.00595 mg/L in samples collected at WWTP-E-OUT on January 8 and January 14, respectively. Review of possible causes is ongoing. The effluent discharged to Howe Sound at SP-E-OUT met the discharge limits on January 8. East WWTP effluent was routed to the pre-discharge holding tank and did not discharge to Howe Sound on January 14. This item remains open.
Report #47: Pending Data	Analytical results not reported.	Analytical results for marine receiving environment samples collected January 15 and 16 are discussed in Section 3.7 of Report #48. Methylmercury results for samples collected January 14 are discussed in Sections 3.3 and 3.4 of Report #48. Dioxins and furans results for samples collected January 14 and 16 were not complete at the time of Report #48 preparation. 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.

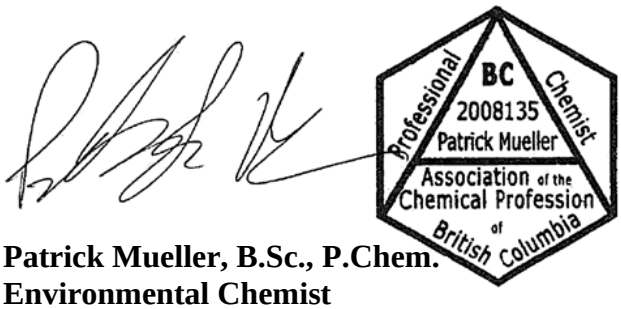
5. Closure

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,

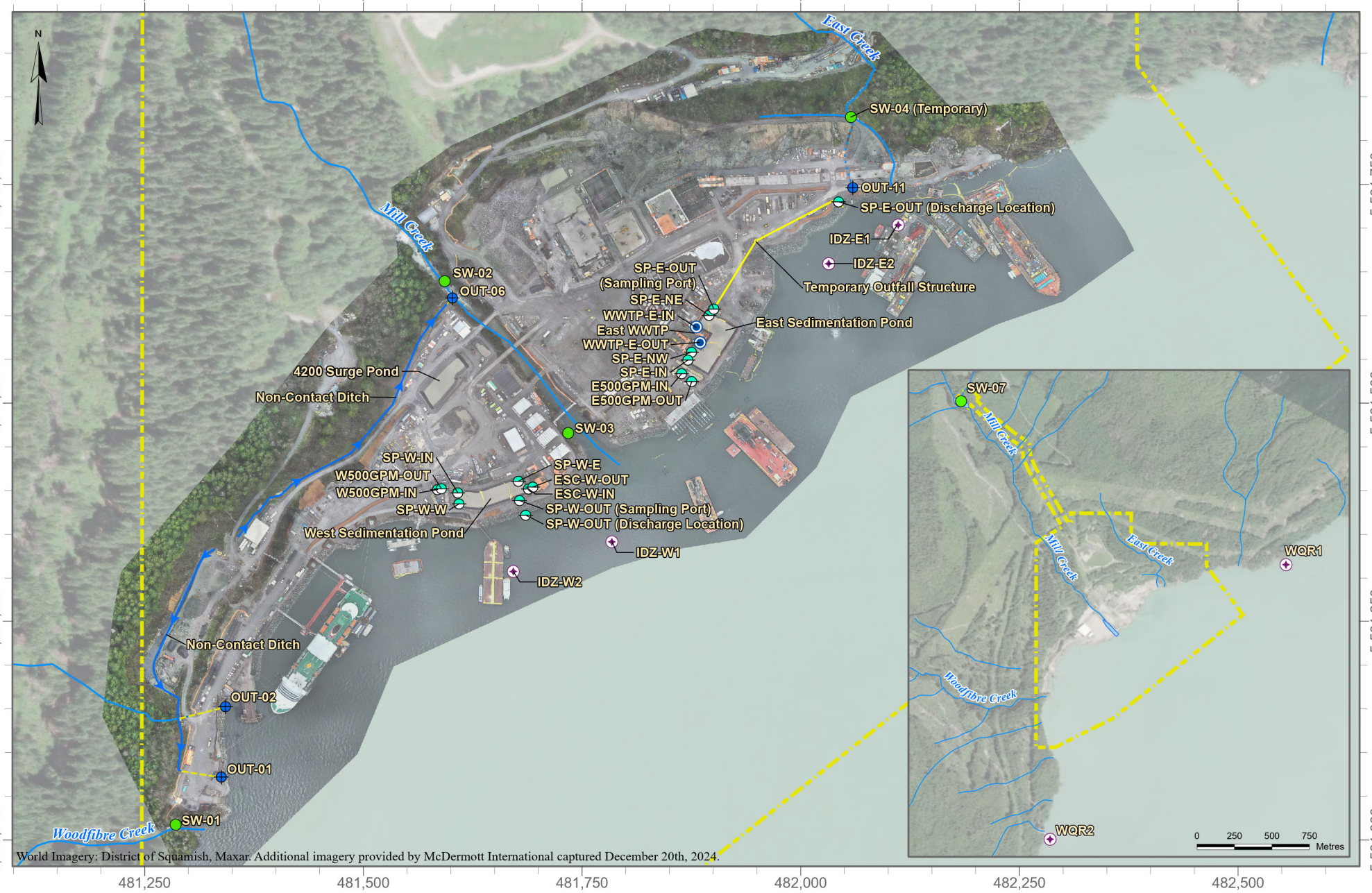
LORAX ENVIRONMENTAL SERVICES LTD.

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



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

Appendix A: Figures and Site Images



World Imagery: District of Squamish, Maxar. Additional imagery provided by McDermott International captured December 20th, 2024.

LEGEND

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

DATE SAVED:	Jan 31, 2025
DRAWN BY:	DM
REVIEWED:	PM
VERSION:	1

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

1:6,000

0 50 100 150 Metres

CLIENT: Woodfibre LNG

LORAX ENVIRONMENTAL

PROJECT:

Woodfibre LNG Project Construction Phase

TITLE:
Completed or Under Construction Water Management Facilities and Established PE-111578 Monitoring Stations (January 25, 2025)

PROJECT #: A633-7 FIGURE: 1

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

Figure 2: East Catchment contact water management facilities (January 19 – 25).

Figure 3: West Catchment contact water management facilities (January 19 – 25).

Figure 4: Aerial view of the East Sedimentation Pond (January 24, 2024). The East WWTP is located on the left side and the E500GPM TSS settling system is situated along the bottom edge of the pond.

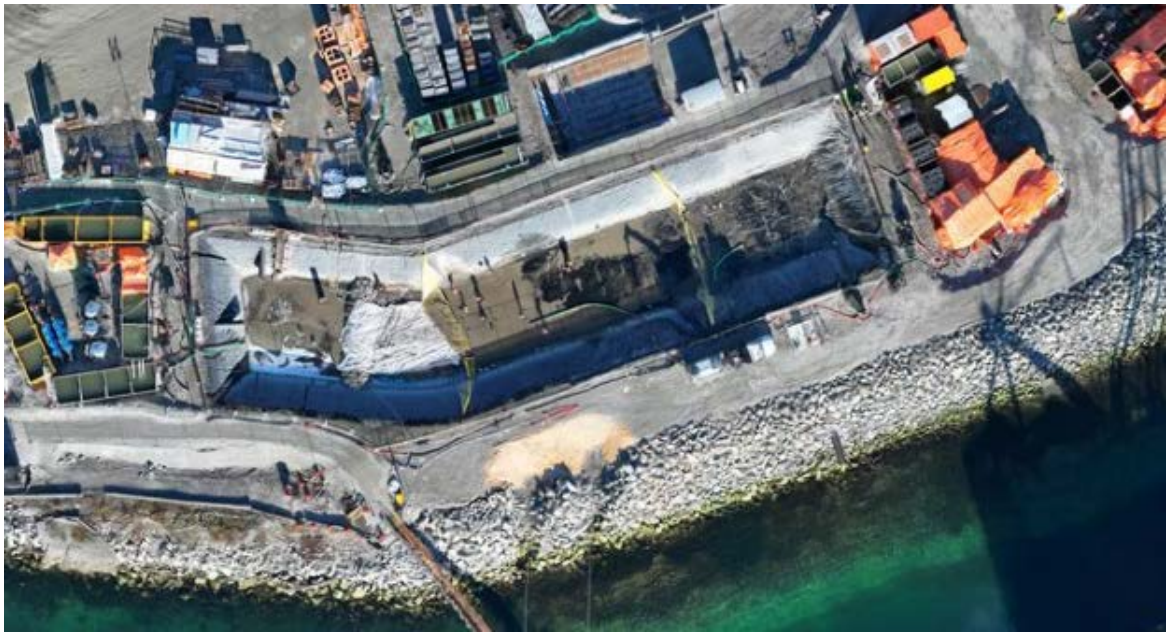


Figure 5: Aerial view of the West Sedimentation Pond (January 24, 2024). The TSS settling systems are located to the left (W500GPM) and right (ESC) of the pond. The photo shows the West Sedimentation Pond undergoing sediment removal.

Appendix B: East Catchment Monitoring Results

Table B-1: 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]	0.0099 – 0.017 [3,4]
Station	**Water Type**	**Sample ID**	**Lab ID**	**Sampling Date**		
Influent						
WWTP-E-IN	Influent	WWTP-E-IN	VA25A0958-001	2025-01-14	0.000051	0.00850
Effluent						
WWTP-E-OUT	Effluent	WWTP-E-OUT	VA25A0958-002	2025-01-14	0.000022	0.00217

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

Table B-2: East Catchment Field Measurements Collected During the Monitoring Period (January 19 – 25).

Parameter			Temp.	Dissolved Oxygen (DO)	Salinity	Turbidity	Estimated TSS [3]	pH	Conductivity	Visibility of Sheen
Unit			**°C**	**mg/L**	**ppt**	**NTU**	**mg/L**	**s.u.**	**µS/cm**	
PE-111578 Discharge Limit			-	-	-	-	25 [6]	5.5 - 9.0	-	-
Lowest Applicable Guideline [1]			-	≥8	-	-	- [2]	- [2]	-	-
Station ID	**Water Type**	**Date**								
Influent [4]										
WWTP-E-IN	Influent	2025-01-24 9:59	4.1	10.48	0.53	18.38	16.7	7.1	648	No
WWTP-E-IN	Influent	2025-01-24 15:09	4.6	11.11	0.54	14.57	13.9	7.1	661	No
WWTP-E-IN	Influent	2025-01-25 14:56	4.9	12.42	1.62	7.66	8.7	6.7	772	No
Effluent [5]										
WWTP-E-OUT	Effluent	2025-01-24 9:17	6.8	11.41	0.53	3.61	5.7	6.6	702	No
WWTP-E-OUT	Effluent	2025-01-24 15:49	5.5	12.08	0.62	5.65	7.3	6.2	775	No
WWTP-E-OUT	Effluent	2025-01-25 14:51	5.7	12.97	0.76	2.43	4.8	6.7	950	No

Notes:
Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.
Results in orange text exceeded the PE-111578 East Sedimentation Pond Discharge Limit.
[1] The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
[2] The WQG was not evaluated for parameters with discharge limits.
[3] TSS concentration is estimated from field turbidity measurements using a site-specific relationship TSS = 0.7458 * [turbidity as NTU] + 3.
[4] Site staff noted there was no active input of influent to the pond at the time of monitoring on January 19 through January 25 and the pond water level was too low to access cell 1 of the pond, therefore daily measurements for station SP-E-IN were not collected.
[5] There was no discharge during the monitoring period, therefore daily field measurements for SP-E-OUT were not collected.
[6] The PE-111578 discharge limit for TSS is 25 mg/L under dry conditions and 75 mg/L for Wet Conditions. Wet Conditions did not apply during the monitoring period.

Table B-3: East Catchment Daily Discharge Volumes for the Monitoring Period (January 19 – 25).

	East Sedimentation Pond Effluent	East TSS Settling System (E500GPM) Clarified Effluent (Station E500GPM-OUT)	East WWTP Treated Effluent (Station WWTP-E-OUT)	Discharge to Howe Sound (Station SP-E-OUT)
Unit	**m^3**	**m^3**	**m^3**	**m^3**
PE-111578 Discharge Limit	- [1]	- [1]	1100	- [1]
Date				
2025-01-19	0	0	0	0
2025-01-20	0	0	0	0
2025-01-21	0	0	0	0
2025-01-22	0	0	0	0
2025-01-23	0	0	0	0
2025-01-24	0	0	0	0
2025-01-25	0	0	0	0

Notes:
Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.
Results in orange text exceeded the PE-111578 East Sedimentation Pond Discharge Limit.
[1] The annual average authorized discharge rate from the East Sedimentation Pond is 650 m^3/day. As noted in PE-111578 Condition 2.1.4, the actual discharge rate may deviate from the annual average rate due to annual variations in precipitation amounts within the catchment area. Therefore, the annual average authorized discharge rate is not evaluated as a discharge limit.

Appendix C: West Catchment Monitoring Results

Table C-1: 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]	0.00089 – 0.0087 [3,4]
Station	**Water Type**	**Sample ID**	**Lab ID**	**Sampling Date**		
Influent						
SP-W-IN	Influent	SP-W-IN	VA25A0958-003	2025-01-14	***0.000187***	***0.00166***
Effluent						
SP-W-OUT	Effluent	SP-W-OUT	VA25A0958-004	2025-01-14	<0.000020	0.00173

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.

Table C-2: West Catchment Daily Discharge Volumes for the Monitoring Period (January 19 – 25).

	West Sedimentation Pond Effluent	**West TSS Settling System (W500GPM) Clarified Effluent (Station W500GPM-OUT)**	**West TSS Settling System (ESC) Clarified Effluent (Station ESC-W-OUT)**	**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	- [2]	- [2]	- [2]	120	- [2]
Date					
2025-01-19	0	0	0	0	0
2025-01-20	0	0	0	0	0
2025-01-21	0	0	0	0	0
2025-01-22	0	0	0	0	0
2025-01-23	0	0	0	0	0
2025-01-24	0	0	0	0	0
2025-01-25	0	0	0	0	0

Notes:
Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.
Results in orange text exceeded the PE-111578 West Sedimentation Pond Discharge Limit.
[1] The West WWTP is not being operated, therefore discharges are not expected from this facility.
[2] The annual average authorized discharge rate from the West Sedimentation Pond is 310 m^3/day. As noted in PE-111578 Condition 2.1.4, the actual discharge rate may deviate from the annual average rate due to annual variations in precipitation amounts within the catchment area. Therefore, the annual average authorized discharge rate is not evaluated as a discharge limit.

Appendix D: Marine Water Receiving Environment Results

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

Parameter	Unit	Lowest Applicable Guideline [1]		Station IDZ-E1			Station IDZ-E2		
				0.5 m Below Surface	0.5 m Below Surface	0.5 m Below Surface	0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor
				IDZ-E1-0.5	IDZ-E1-0.5	IDZ-E1-0.5	IDZ-E2-0.5	IDZ-E2-0.5	IDZ-E2-0.5
				VA25A0392-001	VA25A0392-002	VA25A0392-003	VA25A0392-004	VA25A0392-005	VA25A0392-006
		Long Term	Short Term	2025-01-08 13:10	2025-01-08 13:25	2025-01-08 13:40	2025-01-08 12:50	2025-01-08 14:00	2025-01-08 14:15
General Parameters									
pH - Field	pH units	7.0 - 8.7	-	7.5	7.5	7.5	7.5	7.5	7.5
Specific Conductivity - Field	µS/cm	-	-	20669	23459	32271	20263	24133	31931
Temperature - Field	°C	-	-	6.5	6.9	8.9	6.4	7.1	8.7
Salinity - Field	ppt	Narrative[2]	-	19.72	22.28	30.06	19.36	22.94	29.82
Turbidity - Field	NTU	3.39 [2]	9.39 [2]	1.48	1.25	1.04	1.38	1.18	0.95
TSS	mg/L	7.0 [2]	27.0 [2]	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Oxygen - Field	mg/L	≥8	-	10.25	9.57	***6.95***	10.34	9.49	***7.22***
Anions and Nutrients									
Sulphate	mg/L	-	-	1250	1440	2020	1480	1460	2040
Chloride	mg/L	-	-	8840	10200	14300	10600	10400	14500
Fluoride	mg/L	-	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia (N-NH_3)	mg/L	12-13 [3]	77.7-85 [3]	0.013	0.0108	<0.0050	0.0209	0.0137	0.0081
Nitrite (N-NO_2)	mg/L	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrate (N-NO_3)	mg/L	3.7	339	<0.50	<0.50	0.54	<0.50	<0.50	<0.50
Total Metals									
Aluminum, total (T-Al)	mg/L	-	-	0.0295	0.0263	0.0114	0.0228	0.0245	0.017
Antimony, total (T-Sb)	mg/L	-	0.27 [4]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Arsenic, total (T-As)	mg/L	0.0125	0.0125	0.00097	0.00106	0.00148	0.00095	0.00106	0.00135
Barium, total (T-Ba)	mg/L	-	-	0.0095	0.0097	0.009	0.0104	0.0106	0.0098
Beryllium, total (T-Be)	mg/L	0.1	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron, total (T-B)	mg/L	1.2	-	***1.97***	***1.95***	***2.98***	***2.07***	***2.09***	***2.62***
Cadmium, total (T-Cd)	mg/L	0.00012	-	0.000058	0.000057	0.000076	0.00005	0.000045	0.000065
Chromium, total (T-Cr)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, total (T-Co)	mg/L	-	-	0.000097	0.000091	0.00008	0.000112	0.000107	0.000084
Copper, total (T-Cu)	mg/L	0.002	0.003	0.00076	0.00076	<0.00050	0.00066	0.00075	0.00052
Iron, total (T-Fe)	mg/L	-	-	0.11	0.093	0.018	0.125	0.115	0.052
Lead, total (T-Pb)	mg/L	0.002	0.14	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Manganese, total (T-Mn)	mg/L	-	-	0.0101	0.00881	0.00301	0.0112	0.011	0.00573
Mercury, total (T-Hg)	mg/L	0.000016 [5]	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, total (T-Mo)	mg/L	-	-	0.00677	0.00735	0.00869	0.00617	0.00683	0.00807
Nickel, total (T-Ni)	mg/L	0.0083	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Silver, total (T-Ag)	mg/L	0.0015	0.003	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Thallium, total (T-Tl)	mg/L	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Uranium, total (T-U)	mg/L	-	-	0.0016	0.00171	0.00218	0.00151	0.00172	0.00197
Vanadium, total (T-V)	mg/L	0.005	-	0.00111	0.00119	0.00152	0.00125	0.00126	0.00139
Zinc, total (T-Zn)	mg/L	0.01	0.055	0.0044	<0.0030	<0.0030	0.005	<0.0030	<0.0030
Hexavalent Chromium, total	mg/L	0.0015	-	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150
Dissolved Metals									
Cadmium, dissolved (D-Cd)	mg/L	-	-	0.000059	0.000062	0.000079	0.000056	0.000051	0.00007
Copper, dissolved (D-Cu)	mg/L	-	-	0.00061	0.00056	<0.00050	0.00054	0.00067	<0.00050
Iron, dissolved (D-Fe)	mg/L	-	-	0.01	<0.010	<0.010	0.01	<0.010	<0.010
Lead, dissolved (D-Pb)	mg/L	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Manganese, dissolved (D-Mn)	mg/L	-	-	0.0102	0.00798	0.00222	0.0104	0.00903	0.00225
Nickel, dissolved (D-Ni)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	4.34	4.78	6.16	4.20	4.42	5.84
Vanadium, dissolved (D-V)	mg/L	-	-	0.00111	0.00119	0.00149	0.00113	0.00111	0.00144
Zinc, dissolved (D-Zn)	mg/L	-	-	0.006	0.0034	0.001	0.0012	0.0018	<0.0010
Polycyclic Aromatic Hydrocarbons (PAHs)									
Acenaphthene	mg/L	0.006	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Acridine	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Anthracene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Benz(a)anthracene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Chrysene	mg/L	0.0001	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Fluoranthene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Fluorene	mg/L	0.012	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
1-methylnaphthalene	mg/L	0.001	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
2-methylnaphthalene	mg/L	0.001	-	<0.000010	0.000014	<0.000010	<0.000010	<0.000010	<0.000010
Naphthalene	mg/L	0.001	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Phenanthrene	mg/L	-	-	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Pyrene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Quinoline	mg/L	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)									
Benzene	mg/L	0.11	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Ethylbenzene	mg/L	0.25	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Methyl-tert-butyl-ether	mg/L	5	0.44	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Styrene	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Toluene	mg/L	0.215	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Total Xylenes	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chlorobenzene	mg/L	0.025	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050

Notes:

Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.

Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.

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

[2] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. Salinity WQG was not evaluated. The water quality data presented in the table were collected when the site was discharging, therefore the turbidity and TSS WQGs were evaluated. Background values are the maximum measured in the January 8 WQR1 and January 9 WQR2 reference station samples at the 0.5 m depth (1.39 NTU and <2.0 mg/L TSS) (Report #48).

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

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

[5] When MeHg ⩽ 0.5% of total Hg, BC WQG = 0.00002 mg/L. The Canadian WQG = 0.000016 mg/L.

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

Parameter	Unit	Lowest Applicable Guideline [1]		Station IDZ-W1			Station IDZ-W2		
				0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor	0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor
				IDZ-W1-0.5	IDZ-W1-2m	IDZ-W1-SF	IDZ-W2-0.5	IDZ-W2-2m	IDZ-W2-SF
				VA25A0510-001	VA25A0510-002	VA25A0510-003	VA25A0510-004	VA25A0510-005	VA25A0510-006
		Long Term	Short Term	2025-01-09 13:50	2025-01-09 13:40	2025-01-09 13:10	2025-01-09 12:50	2025-01-09 12:30	2025-01-09 12:15
General Parameters									
pH - Field	pH units	7.0 - 8.7	-	7.6	7.6	7.5	7.6	7.6	7.5
Specific Conductivity - Field	µS/cm	-	-	25582	26996	32900	23946	27024	33004
Temperature - Field	℃	-	-	7.3	7.3	9.1	7.0	7.4	9.1
Salinity - Field	ppt	Narrative[2]	-	24.35	25.78	30.52	22.8	25.8	30.57
Turbidity - Field	NTU	3.39 [2]	9.39 [2]	0.99	1.04	0.96	1.01	1.11	0.72
TSS	mg/L	7.0 [2]	27.0 [2]	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Oxygen - Field	mg/L	≥8	-	9.44	9.23	***6.55***	9.81	9.23	***6.31***
Anions and Nutrients									
Sulphate	mg/L	-	-	1260	2040	2220	1850	2100	2410
Chloride	mg/L	-	-	9190	14600	16200	13400	15100	17600
Fluoride	mg/L	-	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia (N-NH_3)	mg/L	7.2-13 [3]	48-85 [3]	0.0075	0.0050	<0.0050	0.0092	0.0063	<0.0050
Nitrite (N-NO_2)	mg/L	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrate (N-NO_3)	mg/L	3.7	339	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Total Metals									
Aluminum, total (T-Al)	mg/L	-	-	0.0342	0.0156	0.0151	0.02	0.0174	0.0462
Antimony, total (T-Sb)	mg/L	-	0.27 [4]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Arsenic, total (T-As)	mg/L	0.0125	0.0125	0.00077	0.00127	0.0014	0.00119	0.00122	0.00142
Barium, total (T-Ba)	mg/L	-	-	0.0085	0.0096	0.0091	0.0098	0.0096	0.0094
Beryllium, total (T-Be)	mg/L	0.1	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron, total (T-B)	mg/L	1.2	-	***1.94***	***2.51***	***3.12***	***2.53***	***2.60***	***2.99***
Cadmium, total (T-Cd)	mg/L	0.00012	-	0.000053	0.000065	0.000085	0.000066	0.000072	0.000078
Chromium, total (T-Cr)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, total (T-Co)	mg/L	-	-	0.000082	0.000079	0.000075	0.000088	0.000092	0.000085
Copper, total (T-Cu)	mg/L	0.002	0.003	0.00063	0.00057	<0.00050	0.00075	0.00068	<0.00050
Iron, total (T-Fe)	mg/L	-	-	0.042	0.066	0.021	0.055	0.056	0.034
Lead, total (T-Pb)	mg/L	0.002	0.14	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Manganese, total (T-Mn)	mg/L	-	-	0.00511	0.00581	0.00315	0.00644	0.00623	0.00343
Mercury, total (T-Hg)	mg/L	0.000016 [5]	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, total (T-Mo)	mg/L	-	-	0.00553	0.00769	0.00913	0.00724	0.00777	0.00937
Nickel, total (T-Ni)	mg/L	0.0083	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	0.002	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Silver, total (T-Ag)	mg/L	0.0015	0.003	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Thallium, total (T-Tl)	mg/L	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Uranium, total (T-U)	mg/L	-	-	0.00149	0.00178	0.00228	0.00185	0.0019	0.00225
Vanadium, total (T-V)	mg/L	0.005	-	0.00099	0.00139	0.00156	0.00132	0.00142	0.00159
Zinc, total (T-Zn)	mg/L	0.01	0.055	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Hexavalent Chromium, total	mg/L	0.0015	-	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150
Dissolved Metals									
Cadmium, dissolved (D-Cd)	mg/L	-	-	0.000056	0.000052	0.000073	0.000059	0.000064	0.000077
Copper, dissolved (D-Cu)	mg/L	-	-	0.00054	0.0005	<0.00050	0.00058	0.0005	<0.00050
Iron, dissolved (D-Fe)	mg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Lead, dissolved (D-Pb)	mg/L	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Manganese, dissolved (D-Mn)	mg/L	-	-	0.0054	0.00491	0.00195	0.00584	0.00407	0.00179
Nickel, dissolved (D-Ni)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	5.05	4.03	5.78	4.85	5.29	6.12
Vanadium, dissolved (D-V)	mg/L	-	-	0.00121	0.00102	0.00137	0.0012	0.00131	0.00148
Zinc, dissolved (D-Zn)	mg/L	-	-	0.0012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Polycyclic Aromatic Hydrocarbons (PAHs)									
Acenaphthene	mg/L	0.006	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Acridine	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Anthracene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Benz(a)anthracene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Chrysene	mg/L	0.0001	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Fluoranthene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Fluorene	mg/L	0.012	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
1-methylnaphthalene	mg/L	0.001	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
2-methylnaphthalene	mg/L	0.001	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Naphthalene	mg/L	0.001	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Phenanthrene	mg/L	-	-	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Pyrene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Quinoline	mg/L	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)									
Benzene	mg/L	0.11	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Ethylbenzene	mg/L	0.25	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Methyl-tert-butyl-ether	mg/L	5	0.44	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Styrene	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Toluene	mg/L	0.215	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Total Xylenes	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chlorobenzene	mg/L	0.025	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050

Notes:
Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.
[1] The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
[2] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. Salinity WQG was not evaluated. The water quality data presented in the table were collected when the site was discharging, therefore the turbidity and TSS WQGs were evaluated. Background values are the maximum measured in the January 8 WQR1 and January 9 WQR2 reference station samples at the 0.5 m depth (1.39 NTU and <2.0 mg/L TSS) (Report #48).
[3] The approved total ammonia nitrogen BC WQG is salinity, pH and temperature dependent; see Tables 26E and 26F in BC WQG guidance document.
[4] The working BC WQG for trivalent antimony [SB(III)] is 0.27 mg/L and is applied to total antimony results.
[5] When MeHg ≤ 0.5% of total Hg, BC WQG = 0.00002 mg/L. The Canadian WQG = 0.000016 mg/L.

Table D-3: Summary of Marine Water Quality Results Received at the Time of Reporting

Parameter	Unit	Lowest Applicable Guideline [1]		Reference Station WQR-1			Reference Station WQR-2		
				0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor	0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor
				WQR1-0.5	WQR1-2m	WQR1-SF	WQR2-0.5	WQR2-2m	WQR2-SF
				VA25A0392-007	VA25A0392-008	VA25A0392-009	VA25A0510-007	VA25A0510-008	VA25A0510-009
		Long Term	Short Term	2025-01-08 14:55	2025-01-08 15:20	2025-01-08 15:40	2025-01-09 11:50	2025-01-09 11:35	2025-01-09 11:20
General Parameters									
pH - Field	pH units	7.0 - 8.7	-	7.5	7.5	7.5	7.6	7.6	7.5
Specific Conductivity - Field	µS/cm	-	-	20807	28260	32514	24475	27135	31879
Temperature - Field	℃	-	-	6.6	7.6	9.0	7.0	7.4	8.7
Salinity - Field	ppt	Narrative[2]	-	19.82	26.9	30.22	23.37	25.89	29.8
Turbidity - Field	NTU	Narrative[2]	Narrative[2]	1.39	1.04	0.93	1.26	1.14	1.11
TSS	mg/L	Narrative[2]	Narrative[2]	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Oxygen - Field	mg/L	≥8	-	10.08	8.93	***6.69***	9.73	9.10	***7.48***
Anions and Nutrients									
Sulphate	mg/L	-	-	1490	1360	2350	1790	2040	2220
Chloride	mg/L	-	-	10600	9800	16600	13000	14700	16100
Fluoride	mg/L	-	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia (N-NH_3)	mg/L	7.2-13 [3]	48-85 [3]	0.0144	0.0168	<0.0050	0.0182	0.0202	<0.0050
Nitrite (N-NO_2)	mg/L	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrate (N-NO_3)	mg/L	3.7	339	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Total Metals									
Aluminum, total (T-Al)	mg/L	-	-	0.0224	0.0222	0.012	0.0192	0.0159	0.0181
Antimony, total (T-Sb)	mg/L	-	0.27 [4]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Arsenic, total (T-As)	mg/L	0.0125	0.0125	0.00108	0.00095	0.00176	0.00108	0.00132	0.0014
Barium, total (T-Ba)	mg/L	-	-	0.011	0.0105	0.009	0.0103	0.0099	0.0094
Beryllium, total (T-Be)	mg/L	0.1	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Boron, total (T-B)	mg/L	1.2	-	***2.16***	***1.96***	***2.86***	***2.49***	***2.50***	***2.86***
Cadmium, total (T-Cd)	mg/L	0.00012	-	0.000059	0.000058	0.000081	0.000064	0.000074	0.000082
Chromium, total (T-Cr)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.0007
Cobalt, total (T-Co)	mg/L	-	-	0.00011	0.000108	0.000071	0.000095	0.00009	0.000081
Copper, total (T-Cu)	mg/L	0.002	0.003	0.00058	0.00057	<0.00050	0.00061	0.00066	<0.00050
Iron, total (T-Fe)	mg/L	-	-	0.128	0.132	0.02	0.073	0.06	0.028
Lead, total (T-Pb)	mg/L	0.002	0.14	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Manganese, total (T-Mn)	mg/L	-	-	0.0114	0.0114	0.00297	0.00819	0.00662	0.00306
Mercury, total (T-Hg)	mg/L	0.000016 [5]	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, total (T-Mo)	mg/L	-	-	0.00623	0.00584	0.00859	0.00757	0.00766	0.00921
Nickel, total (T-Ni)	mg/L	0.0083	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00051
Selenium, total (T-Se)	mg/L	0.002	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Silver, total (T-Ag)	mg/L	0.0015	0.003	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Thallium, total (T-Tl)	mg/L	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Uranium, total (T-U)	mg/L	-	-	0.00144	0.00132	0.00204	0.00185	0.00193	0.00224
Vanadium, total (T-V)	mg/L	0.005	-	0.00129	0.00124	0.0015	0.00139	0.00141	0.00158
Zinc, total (T-Zn)	mg/L	0.01	0.055	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Hexavalent Chromium, total	mg/L	0.0015	-	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150
Dissolved Metals									
Cadmium, dissolved (D-Cd)	mg/L	-	-	0.000058	0.000068	0.000067	0.000067	0.000069	0.000067
Copper, dissolved (D-Cu)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Iron, dissolved (D-Fe)	mg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Lead, dissolved (D-Pb)	mg/L	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Manganese, dissolved (D-Mn)	mg/L	-	-	0.0105	0.00698	0.00222	0.00627	0.00503	0.00243
Nickel, dissolved (D-Ni)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	4.15	4.96	6.25	4.86	5.07	5.76
Vanadium, dissolved (D-V)	mg/L	-	-	0.00106	0.00121	0.0015	0.00121	0.00122	0.00142
Zinc, dissolved (D-Zn)	mg/L	-	-	<0.0010	0.0014	<0.0010	<0.0010	0.001	<0.0010
Polycyclic Aromatic Hydrocarbons (PAHs)									
Acenaphthene	mg/L	0.006	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Acridine	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Anthracene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Benz(a)anthracene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	0.00001	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Chrysene	mg/L	0.0001	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Fluoranthene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Fluorene	mg/L	0.012	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
1-methylnaphthalene	mg/L	0.001	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
2-methylnaphthalene	mg/L	0.001	-	<0.000010	<0.000010	<0.000010	0.000015	<0.000010	<0.000010
Naphthalene	mg/L	0.001	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Phenanthrene	mg/L	-	-	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Pyrene	mg/L	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Quinoline	mg/L	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)									
Benzene	mg/L	0.11	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Ethylbenzene	mg/L	0.25	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Methyl-tert-butyl-ether	mg/L	5	0.44	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Styrene	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Toluene	mg/L	0.215	-	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Total Xylenes	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Chlorobenzene	mg/L	0.025	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050

Notes:
Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.
[1] The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
[2] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. The water quality data presented in the table were collected from reference stations and reflect background conditions.
[3] The approved total ammonia nitrogen BC WQG is salinity, pH and temperature dependent; see Tables 26E and 26F in BC WQG guidance document.
[4] The working BC WQG for trivalent antimony [SB(III)] is 0.27 mg/L and is applied to total antimony results.
[5] When MeHg ⩽ 0.5% of total Hg, BC WQG = 0.00002 mg/L. The Canadian WQG = 0.000016 mg/L.

Table D-4: Summary of Marine Water Quality Results Received at the Time of Reporting

Parameter	Unit	Lowest Applicable Guideline [1]		Station IDZ-W1			Station IDZ-W2		
				0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor	0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor
				IDZ-W1-0.5	IDZ-W1-2m	IDZ-W1-SF	IDZ-W2-0.5	IDZ-W2-2m	IDZ-W2-SF
				VA25A1112-007	VA25A1112-008	VA25A1112-009	VA25A1112-010	VA25A1112-011	VA25A1112-012
		Long Term	Short Term	2025-01-15 10:45	2025-01-15 10:50	2025-01-15 10:55	2025-01-15 10:25	2025-01-15 10:30	2025-01-15 11:00
General Parameters									
pH - Field	pH units	7.0 - 8.7	-	7.7	7.6	7.5	7.7	7.6	7.5
Specific Conductivity - Field	µS/cm	-	-	20911	25915	30725	21267	25306	30704
Temperature - Field	℃	-	-	6.1	7.4	9.0	6.2	7.3	9.0
Salinity - Field	ppt	Narrative [2]	-	20.18	24.48	28.33	20.54	24.02	28.32
Turbidity - Field	NTU	3.39 [2]	9.39 [2]	***4.35***	1.93	1.25	2.19	1.56	1.21
TSS	mg/L	7.0 [2]	27.0 [2]	<2.0	3.5	5.0	<2.0	<2.0	2.1
Dissolved Oxygen - Field	mg/L	≥8	-	10.07	9.31	***6.90***	10.69	9.33	***6.90***

Notes:
Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.
[1] The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
[2] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. Salinity WQG was not evaluated. The water quality data presented in the table were collected when the site was discharging, therefore the turbidity and TSS WQGs were evaluated. Background values are the maximum measured in the January 8 WQR1 and January 9 WQR2 reference station samples at the 0.5 m depth (1.39 NTU and <2.0 mg/L TSS) (Report #48).

Table D-5: Summary of Marine Water Quality Results Received at the Time of Reporting

Parameter	Unit	Lowest Applicable Guideline [1]		Station IDZ-E1			Station IDZ-E2		
				0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor	0.5 m Below Surface	2 m Below Surface	2 m Above Seafloor
				IDZ-E1-0.5	IDZ-E1-2m	IDZ-E1-SF	IDZ-E2-0.5	IDZ-E2-2m	IDZ-E2-SF
				VA25A1112-001	VA25A1112-002	VA25A1112-003	VA25A1112-004	VA25A1112-005	VA25A1112-006
		Long Term	Short Term	2025-01-16 12:50	2025-01-16 12:48	2025-01-16 12:46	2025-01-16 13:10	2025-01-16 13:12	2025-01-16 13:14
General Parameters									
pH - Field	pH units	7.0 - 8.7	-	7.6	7.6	7.6	7.6	7.6	7.5
Specific Conductivity - Field	µS/cm	-	-	26767	27845	28603	27416	27525	30133
Temperature - Field	℃	-	-	7.8	7.9	8.2	7.9	7.9	8.8
Salinity - Field	ppt	Narrative [2]	-	25.21	26.24	26.81	25.84	25.93	27.90
Turbidity - Field	NTU	3.39 [2]	9.39 [2]	1.55	1.44	1.29	1.35	1.36	1.28
TSS	mg/L	7.0 [2]	27.0 [2]	3.8	2.7	<2.0	2.2	2.4	<2.0
Dissolved Oxygen - Field	mg/L	≥8	-	9.54	8.76	8.51	9.65	8.80	***7.20***

Notes:
Results ***underlined in bold italics*** exceed the applicable long-term water quality guideline for the protection of marine water aquatic life.
Shaded results exceed the applicable short-term water quality guideline for the protection of marine water aquatic life.
[1] The lowest applicable guidelines from approved or working BC WQGs, Canadian (CCME) WQGs and Federal WQGs.
[2] Narrative guideline for the evaluation of change from background conditions arising from discharges to the aquatic environment. Salinity WQG was not evaluated. The water quality data presented in the table were collected when the site was discharging, therefore the turbidity and TSS WQGs were evaluated. Background values are the maximum measured in the January 8 WQR1 and January 9 WQR2 reference station samples at the 0.5 m depth (1.39 NTU and <2.0 mg/L TSS) (Report #48).

Table D-6: Marine Water Methylmercury and Corresponding Total Mercury Results Received at the Time of Reporting.

Parameter					**Total Methylmercury**	**Total Mercury**
Unit					**µg/L**	**µg/L**
Lowest Applicable Guideline[1]					0.0001 [2]	0.011 – 0.020 [3,4]
Station	**Water Type**	**Sample ID**	**Lab ID**	**Sampling Date**		
Station IDZ-E1						
IDZ-E1	0.5 m Below Surface	IDZ-E1-0.5	VA25A0392-001	2025-01-08	<0.000020	<0.0050
IDZ-E1	2 m Below Surface	IDZ-E1-2m	VA25A0392-002	2025-01-08	<0.000020	<0.0050
IDZ-E1	2 m Above Seafloor	IDZ-E1-SF	VA25A0392-003	2025-01-08	0.000045	<0.0050
Station IDZ-E2						
IDZ-E2	0.5 m Below Surface	IDZ-E2-0.5	VA25A0392-004	2025-01-08	<0.000020	<0.0050
IDZ-E2	2 m Below Surface	IDZ-E2-2m	VA25A0392-005	2025-01-08	<0.000020	<0.0050
IDZ-E2	2 m Above Seafloor	IDZ-E2-SF	VA25A0392-006	2025-01-08	0.000022	<0.0050
Station IDZ-W1						
IDZ-W1	0.5 m Below Surface	IDZ-W1-0.5	VA25A0510-001	2025-01-09	<0.000020	<0.0050
IDZ-W1	2 m Below Surface	IDZ-W1-2m	VA25A0510-002	2025-01-09	<0.000020	<0.0050
IDZ-W1	2 m Above Seafloor	IDZ-W1-SF	VA25A0510-003	2025-01-09	<0.000020	<0.0050
Station IDZ-W2						
IDZ-W2	0.5 m Below Surface	IDZ-W2-0.5	VA25A0510-004	2025-01-09	<0.000020	<0.0050
IDZ-W2	2 m Below Surface	IDZ-W2-2m	VA25A0510-005	2025-01-09	<0.000020	<0.0050
IDZ-W2	2 m Above Seafloor	IDZ-W2-SF	VA25A0510-006	2025-01-09	<0.000020	<0.0050
Reference Station WQR1						
WQR1	0.5 m Below Surface	WQR1-0.5	VA25A0392-007	2025-01-08	<0.000020	<0.0050
WQR1	2 m Below Surface	WQR1-2m	VA25A0392-008	2025-01-08	<0.000020	<0.0050
WQR1	2 m Above Seafloor	WQR1-SF	VA25A0392-009	2025-01-08	<0.000020	<0.0050
Reference Station WQR2						
WQR2	0.5 m Below Surface	WQR2-0.5	VA25A0510-007	2025-01-09	<0.000020	<0.0050
WQR2	2 m Below Surface	WQR2-2m	VA25A0510-008	2025-01-09	<0.000020	<0.0050
WQR2	2 m Above Seafloor	WQR2-SF	VA25A0510-009	2025-01-09	0.000021	<0.0050

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