TECHNICAL MEMORANDUM

To: **Ian McAllister, Ashleigh Crompton, Mike Champion, Jackie Boruch and Ryan Schucroft (Woodfibre LNG)** **Date: 16 Aug 2024**

From: **Cheng Kuang, Holly Pelletier and Patrick Mueller (Lorax)** **Project #: A633-7**

Subject: **PE-111578 Weekly Discharge and Compliance Report #26 for August 4 – 10**

Waste Discharge Authorization Effluent Permit PE-111578 was issued by the British Columbia Energy Regulator (BCER) to Woodfibre LNG on February 9, 2024. The permit specifies monitoring and reporting requirements that are required to be met by Woodfibre LNG during construction of the LNG Export Facility. Reporting is required on a weekly basis.

Discharge and compliance monitoring 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 for Woodfibre LNG.

This technical memorandum (Report #26) was prepared by Lorax Environmental and summarizes monitoring conducted the week of August 4 – 10 for contact waters directed to a WWTP or a sedimentation pond. Monitoring data and pending results from prior reporting periods available at the time of reporting are tabulated and included as appendices. Report #26 has been prepared to meet the requirements specified in Condition 4.2 of WDA Effluent Permit 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."

The site layout is shown in Figure 1 at the end of this memorandum. Sedimentation pond photographs are included in Appendix A, and monitoring results are tabulated in Appendix B through Appendix D for contact water and receiving environment samples.

1. Current Conditions

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, and construction of contact water management facilities. Shoring works along the shoreline and foreshore areas were initiated in December 2023, and in early 2024 construction of water management infrastructure was initiated and has continued through the August 4 – 10 monitoring period. The East WWTP and East Sedimentation Pond are commissioned for operation and discharge since April 15, 2024. The West WWTP and West Sedimentation Pond are constructed. The PE- 111578 water management facilities that are completed or were under construction during the reporting period are shown in Figure 1.

The East and West catchments contact water conveyance ditches described in PE-111578 were designed to transport non-contaminated contact water 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, non-contaminated contact waters are managed to remain on site or are directed by pumping to the East Sedimentation Pond or East WWTP. Contaminated contact waters are contained and directed to the East WWTP.

A revised schedule is being developed to complete the installation of the East Sedimentation Pond permanent outfall structure. Until the outfall is constructed, a temporary discharge system (*i.e.*, pump, hosing and diffusor) is used to convey East Sedimentation Pond effluent to the authorized discharge location when necessary for the discharge of excess water, and if the effluent water quality meets the requirements set out in PE-111578.

The West Sedimentation Pond is complete, except for the outfall structure, and has not been commissioned for discharge. However, the pond is used as needed to store contact water that is subsequently directed to the East WWTP for treatment. The schedule for completion of the pond outfall structure is being revised. Two silt curtains were installed in the West Sedimentation Pond and pilot trials for the West WWTP commenced during the monitoring period (August 4 – 10).

The completed non-contact water diversion ditch west of Mill Creek was commissioned for use on April 7 and discharges to Mill Creek at station OUT-06 (Figure 1). Monitoring stations OUT-01, OUT-02, and OUT-11 at pre-existing culvert outlets have been established noting that the outlets will be upgraded and extended later in the construction schedule.

Pilot testing of the East WWTP continued during the monitoring period (August 4 – 10). Contaminated and potentially contaminated contact waters from the 1100 excavation and small amounts of concrete wash water were directed to the East WWTP for treatment, as well as water recirculated from the East Sedimentation Pond. Contact water collection and dewatering locations are shown in Appendix A (Figure 2 and Figure 3). A total of 3,482 m^3 of treated WWTP effluent

was discharged to the East Sedimentation Pond during the reporting period (August 4 – 10). Daily WWTP effluent flows are provided in Appendix C (Table C-3. There were no discharges from the East and West Sedimentation Ponds during the reporting period. Photographs of the ponds are included in Appendix A (Figure 4 and Figure 5).

The weather was warm and sunny during the monitoring period (August 4 – 10). No precipitation was recorded at the Woodfibre site weather station. 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
08-04-2024	0.0	26.0	15.7	Sun
08-05-2024	0.0	25.1	16.0	Sun
08-06-2024	0.0	23.1	15.7	Sun
08-07-2024	0.0	25.5	14.4	Sun
08-08-2024	0.0	26.9	16.0	Sun
08-09-2024	0.0	27.2	16.7	Sun
08-10-2024	0.0	25.5	16.8	Sun

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

2. Monitoring Summary

The PE-111578 authorized works were under construction during the August 4 – 10 monitoring period. Compliance monitoring stations are progressively established as water management infrastructure is completed. 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 monitoring stations have been established (Figure 1):

- Creek water (SW-01, SW-02, SW-03, SW-04, SW-07).
- Howe Sound reference and IDZ locations (WQR1, WQR2, IDZ-E1 and IDZ-E2).
- Non-contact diversion ditch outlets (OUT-01, OUT-02, OUT-06, and OUT-11).
- Contact water monitoring locations (WWTP-E-IN, WWTP-E-OUT, SP-E-IN-2, SP-E-OUT, SP-E-NE, SP-E-NW, SP-W-W, and SP-W-E).

East Sedimentation Pond influent and effluent stations SP-E-NW and SP-E-NE, respectively, are in-pond stations that may be monitored in place of stations SP-E-IN-2 and SP-E-OUT when there is no influent to, or discharge from the East Sedimentation Pond. In-pond monitoring stations have been established for the West Sedimentation Pond at locations SP-W-W and SP-W-E (previously named SP-W-NW and SP-W-NE).

Stations IDZ-E1, IDZ-E2, WWTP-E-IN, WWTP-E-OUT, SP-E-NW, and SP-E-NE were monitored during the monitoring period (August 4 – 10). Sampling dates and parameters tested are summarized in Table 2. Overall, the PE-111578 monitoring requirements that were applicable during the monitoring period (August 4 – 10) were met. Daily field parameters and weekly analytical samples were not collected at the influent station SP-E-IN-2 and SP-E-OUT as the East Sedimentation Pond did not receive contact water inflows and did not discharge during the monitoring period. The weekly sampling requirements for WWTP-E-IN and WWTP-E-OUT were met except collection of a sub-sample for dioxins and furans testing. Daily field parameter requirements for WWTP-E-IN and WWTP-E-OUT were met except on August 8 when measurements did not include all parameters specified in PE-111578. Follow-up with the site environmental monitors for PE-111578 monitoring requirements will be conducted and tracked in Table 5.

Table 2: Summary of PE-111578 Monitoring Samples Collected August 4 – 10.

Sampling Date	Sample	Description	Parameters Tested	Monitoring Frequency
August 4, 2024	SP-E-NE [1]	East Sedimentation Pond, in-pond sample, represents effluent quality	Field Parameters.	P
	WWTP-E-OUT	East WWTP effluent	Field Parameters.	D
	WWTP-E-IN	East WWTP influent		
August 5, 2024	SP-E-NE [1]	East Sedimentation Pond, in-pond sample, represents effluent quality	Field Parameters.	P
	WWTP-E-OUT	East WWTP effluent	Field Parameters.	D
	WWTP-E-IN	East WWTP influent		
August 6, 2024	SP-E-NE [1]	East Sedimentation Pond, in-pond sample, represents effluent quality	Field Parameters.	P
	WWTP-E-OUT	East WWTP effluent	Field Parameters.	D
	WWTP-E-IN	East WWTP influent		
August 7, 2024	SP-E-NE [1]	East Sedimentation Pond, in-pond sample, represents effluent quality	Field Parameters.	P
	WWTP-E-OUT	East WWTP effluent	Field Parameters.	D
	WWTP-E-IN	East WWTP influent		
August 8, 2024	SP-E-NE [1]	East Sedimentation Pond, in-pond sample, represents effluent quality	Field Parameters.	P
	WWTP-E-OUT	East WWTP effluent	Field Parameters.	D
	WWTP-E-IN	East WWTP influent		
August 9, 2024	SP-E-NE [1]	East Sedimentation Pond, in-pond sample, represents effluent quality	Field Parameters.	P
	WWTP-E-OUT	East WWTP effluent	Field, Physical & General Parameters, VH & BTEX, EPHs & PAHs, Total, Dissolved and Speciated Metals, VOCs, Methylmercury, Glycols, Oil and Grease.	D, W_1, P
	WWTP-E-IN	East WWTP influent		
	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		
August 10, 2024	SP-E-NE [1]	East Sedimentation Pond, in-pond sample, represents effluent quality	Field Parameters.	P
	WWTP-E-OUT	East WWTP effluent	Field Parameters.	D
	WWTP-E-IN	East WWTP influent		

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 (weekly for the first 6 months of monitoring).
W_2 - initial high frequency monitoring for all parameters at WWTP and sedimentation pond influent and effluent stations (weekly for the first 5 weeks of monitoring).
W_3 – initial high frequency monitoring for physical parameters at IDZ stations (weekly for the first 5 weeks of monitoring).
P - periodic monitoring for targeted parameters that is supplementary to PE-111578 requirements.
[1] In-Pond stations SP-E-NW and SP-E-NE may be monitored in place of stations SP-E-IN-2 and SP-E-OUT, respectively, when there is no influent to, or discharge from the East Sedimentation Pond at the time of monitoring. The monitoring of in-pond stations is not a PE-111578 requirement and is conducted at the discretion of field staff.

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, PE-111578 discharge limits as well as Canadian, Federal and BC water quality guidelines (WQGs). The screening results are discussed in the following sections and items outside the screening criteria are also summarized in the Section 4 tracking table (Table 5). All water quality results are stored 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 characterization.

Canadian, Federal and BC WQGs are not specified for dioxins and furans. The general term "dioxins and furans" refers to a grouping of hundreds of individual compounds with similar chemical composition and properties. To simplify result presentation and interpretation, the results of individual compounds are converted to a total toxic equivalent (TEQ) value and are summed to produce single TEQ values for each sample by the laboratory. Consistent with the pre-construction baseline monitoring program, a lower-bound TEQ value is reported. The lower-bound TEQ is calculated assuming a concentration of zero for results reported as not detected, therefore, if individual compounds are not detected the TEQ will equal zero.

3.2 Summary of Reported Results

Field measurements and analytical results available at the time of reporting for samples collected during the monitoring period (August 4 – 10) and for other samples that have not been previously reported are listed below in Table 3. Analytical results not available at the time of reporting will be included in future weekly reports when testing is completed. Testing for methylmercury, dioxins and furans typically requires approximately four weeks to complete. Results are pending for the following samples and parameters:

- IDZ-E1 and IDZ-E2 samples collected August 9 (physical parameters)
- WWTP-E-IN and WWTP-E-OUT collected August 9 (methylmercury)
- IDZ-E1 and IDZ-E2 collected July 19 (methylmercury, dioxins and furans)
- WQR1 and WQR2 collected July 20 (methylmercury, dioxins and furans)

Table 3: Summary of Analytical Results Included in Weekly Discharge and Compliance Report #26.

Sample	Description	Sampling Date	Parameters Reported
IDZ-E1-0.5	Howe Sound IDZ station E1; 0.5 m below surface	July 19, 2024	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, and VOCs.
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.	July 20, 2024	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, and VOCs.
WQR1-2m	Reference site 1; 2 m below surface.		
WQR1-SF	Reference site 1; 2 m above the seafloor.		
WQR2-0.5	Reference site 2; 0.5 m below surface.		
WQR2-2m	Reference site 2; 2 m below surface.		
WQR2-SF	Reference site 2; 2 m above the seafloor.		
SP-E-OUT	East Sedimentation Pond effluent (compliance point)	July 24, 2024	Methylmercury.
WWTP-E-IN	East WWTP influent		
WWTP-E-OUT	East WWTP effluent		
WWTP-E-IN	East WWTP influent	August 2, 2024	Methylmercury.
WWTP-E-OUT	East WWTP effluent		
SP-E-NE	East Sedimentation Pond, in-pond sample, represents effluent quality	August 3, 2024	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, VOCs, and Methylmercury.
SP-E-NW	East Sedimentation Pond, in-pond sample, represents influent quality		
WWTP-E-IN	East WWTP influent		
WWTP-E-OUT	East WWTP effluent		
WWTP-E-IN	East WWTP influent	August 9, 2024	Field, Physical and General Parameters, Total and Dissolved Metals, Hexavalent Chromium, PAHs, and VOCs.
WWTP-E-OUT	East WWTP effluent		

3.3 East Sedimentation Pond

The East Sedimentation Pond influent and effluent results 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. Influent water is not discharged from site, therefore only effluent water quality is assessed for exceedances. The analytical results, daily field parameters, discharge limits and WQGs are summarized in Table B-1 and Table B-2 (analytical results) and Table B-3 (field measurements) of Appendix B.

During the monitoring period (August 4 – 10), the East Sedimentation Pond received East WWTP treated effluent each day. The sedimentation pond did not receive contact water during the monitoring period; therefore, field measurements and analytical samples at station SP-E-IN-2 were not collected. Field measurements were taken daily at the in-pond effluent quality station (SP-E-NE) during the monitoring period. Analytical samples collected at station SP-E-NE and at the in-pond influent quality station (SP-E-NW) on August 3 were available at the time of reporting.

Field measurements and analytical results for the in-pond samples met PE-111578 discharge limits except for TSS and total zinc. The concentrations of TSS (35.1 mg/L) and total zinc (0.0177 mg/L) measured in the August 3 SP-E-NW sample were above the discharge limits of 25 mg/L and 0.0133 mg/L, respectively. Total zinc was also above the PE-111578 discharge limit in the August 3 sample collected from the in-pond station SP-E-NE. However, the pond did not discharge on August 3, and therefore non-compliant effluent was not discharged to Howe Sound. The reported TSS value in the SP-E-NW sample is inconsistent with the reported turbidity value (*i.e.*, the measured turbidity value suggests the TSS concentration should be lower) therefore follow-up investigation with the lab is underway and is being tracked in Table 5.

Field measurements of dissolved oxygen collected at station SP-E-NE on August 4 and August 6 were lower than the WQG (≥8 mg/L). Low dissolved oxygen has been observed in sedimentation pond effluent and investigation for root cause and evaluation if mitigation options are required for low dissolved oxygen in sedimentation pond water is ongoing (Table 5).

Methylmercury analytical results were available at the time of reporting for the SP-E-OUT sample collected July 24 (Weekly Report #24) and samples collected on August 3 at SP-E-NE and SP-E-NW (Weekly Report #25). The methylmercury concentration of the July 24 SP-E-OUT sample was 0.000068 µg/L. Methylmercury concentrations of the in-pond samples collected on August 3 were 0.000110 µg/L at SP-E-NE and 0.000258 µg/L at SP-E-NW.

3.4 East Wastewater Treatment Plant

The East WWTP influent and effluent results are screened against the minimum discharge objectives (MDOs) which the WWTP was designed to meet. Contaminated contact water is

directed to the WWTP influent, and it is expected that influent water is unlikely to meet the design MDOs. The analytical results, daily field measurements, and the design MDOs are summarized in Table C-1 and Table C-2 (analytical results) and Table C-3 (field measurements) of Appendix C. Screening results are summarized in Table 4 for parameter concentrations that do not meet the design MDOs.

The East WWTP received contact water and recirculated East Sedimentation Pond water each day August 4 – 10 (Section 2). The influent waters were treated by the East WWTP and discharged to the East Sedimentation Pond. Field measurements were collected each day at the influent and effluent stations, WWTP-E-IN and WWTP-E-OUT, respectively. Field pH ranged from 6.1 to 8.5 at WWTP-E-IN during the monitoring period (August 4 – 10), while dissolved oxygen ranged from 3.66 to 7.01 mg/L, and turbidity ranged from 4.01 to 15.8 NTU (Appendix C, Table C-3). Field pH, dissolved oxygen, and turbidity in the East WWTP effluent (WWTP-E-OUT) ranged from pH 6.1 to 8.4, 2.04 to 8.63 mg/L, and 3.28 to 10.99 NTU, respectively.

Field measurements for pH did not meet the design MDOs in the August 4 and August 5 WWTP-E-OUT samples collected during the monitoring period. However, all pH measurements met the PE-111578 discharge limits. Pilot testing of the East WWTP is underway and the deviations in pH are attributed to WWTP process adjustments during the monitoring period. A design MDO for dissolved oxygen was not specified in the WWTP design report; however, due to the frequency of low dissolved oxygen values an investigation is underway to identify root cause and if potential mitigations for low oxygen concentrations are required (Table 5).

Analytical samples were collected from East WWTP influent and effluent stations on August 9. Analytical samples collected August 3 and discussed in Weekly Report #25 were also available at the time of reporting. Effluent quality monitored at WWTP-E-OUT achieved design MDOs for all parameters except for total copper (0.00203 mg/L) and total vanadium (0.00539 mg/L) in the August 9 sample as well as nitrate in the August 3 and August 9 samples (6.33 and 5.32 mg/L) (Table 4).

Methylmercury analytical results were available at the time of reporting for the East WWTP samples collected July 24 (Weekly Report #24) and August 2 and 3 (Weekly Report #25). Methylmercury concentrations ranged from 0.000070 – 0.000133 µg/L at WWTP-E-IN, and from 0.000075 – 0.000145 µg/L at WWTP-E-OUT.

Table 4:
Summary of Parameters Outside Design Minimum Discharge Objectives (MDOs) at East WWTP Effluent Station WWTP-E-OUT.

Parameter	Units	MDO	N	N >MDO	Commentary
Field pH	s.u.	7.0-8.7	7	2	Field pH was pH 6.1 and 6.7, below the lower design MDO, in effluent samples collected August 4 and 5. Process adjustments are underway and occasional deviations from the design MDOs may occur during the pilot period.
Total Copper	mg/L	0.002	2	1	The total copper concentration in the August 9 sample (0.00203 mg/L) was 1.01 times above the design MDO.
Total Vanadium	mg/L	0.005	2	1	The total vanadium concentration in the August 9 sample (0.00539 mg/L) was 1.07 times above the design MDO.
Nitrate	mg N/L	3.7	2	2	The nitrate concentration in the August 3 and 9 samples (6.33 and 5.32 mg/L, respectively) were 1.7 and 1.4 times above the design MDO, respectively.

MDO = Minimum discharge objective which the East WWTP was designed to meet.
N = number of samples.
Non-detect results are screened using the detection limit value.

3.5 Non-Contact Water Diversion Ditch Outlets

There were no water quality results available for the non-contact water diversion ditch outlets at the time of reporting.

3.6 Freshwater and Estuarine Water Receiving Environment

There were no water quality results available for the freshwater and estuarine water receiving environment stations 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 are considered to represent the natural condition of the water and are not flagged as exceedances. The analytical results, field parameters and WQGs are summarized in Appendix D.

Analytical results were available for the July 19 marine receiving environment samples collected at stations IDZ-E1 and IDZ-E2 at 0.5 and 2 m below the water surface and 2 m above the seafloor. Analytical results were also available for the July 20 marine receiving environment samples collected at reference stations WQR1 and WQR2 at 0.5 and 2 m below the water surface and 2 m above the seafloor. Parameter concentrations met WQGs except for dissolved oxygen, total boron and total copper. Dissolved oxygen was below the lower limit of the WQG (8 mg/L) in one sample from the reference station WQR1 at 2 m above the seafloor on July 20 (7.04 mg/L). Total boron met WQGs except in samples collected at 2 m above the seafloor at both IDZ stations on July 19,

as well as at 2 m above the seafloor at both reference stations on July 20. Total boron concentrations varied from 0.30 to 2.65 mg/L in the July 19 marine samples and from <0.3 to 3.28 mg/L in the July 20 samples. Total copper concentrations were above the WQG (0.002 mg/L) in one sample from IDZ-E1 at 2 m below surface (0.00240 mg/L) and in one sample from IDZ-E2 at 0.5 m below surface (0.00201 mg/L). Dissolved oxygen, total boron and total copper were within the concentration ranges observed in the pre-construction baseline monitoring program and are therefore not considered to be exceedances.

4. Quality Control

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

Table 5: Weekly Report QC Evaluations and Ongoing Items

QC Procedure	Observation	Investigation/Resolution
Reporting Period (August 4 – 10, Report #26)		
Monitoring Program Evaluation	PE-111578 contact water, non-contact water and initial dilution zone monitoring stations have not been fully established.	The PE-111578 authorized works were under construction during the reporting period. Monitoring stations are progressively established as water management infrastructure is completed. The East Sedimentation Pond and East WWTP are completed, and pilot testing of the East WWTP is ongoing. The East Sedimentation Pond was commissioned for discharge on April 15. The West Sedimentation Pond is complete, except the outfall structure and West WWTP is undergoing pilot testing. The West Sedimentation Pond is not commissioned for discharge. The non-contact water diversion ditch that discharges at station OUT-06 has been commissioned, and stations for pre-existing outfalls OUT-01, OUT-02, and OUT-11 have also been established.
Pending Data	Analytical results for samples collected August 9 at IDZ-E1, IDZ-E2 WWTP-E-IN and WWTP-E-OUT were not reported.	Analytical results for IDZ-E1, IDZ-E2 samples collected August 9, and methylmercury results for WWTP-E-IN and WWTP-E-OUT samples collected August 9, were not complete at the time of Report #26 preparation. The pending results will be included in future weekly reports when available. This item remains open.
Data Review	Elevated TSS at SP-E-NW in the August 3 sample	This item was initiated in Report #25. TSS was elevated (68.9 mg/L) in the July 28 SP-E-NE sample and is suspected to be erroneous given the low field turbidity (6.38 NTU) measured in the sample, and low level of TSS (< 3 mg/L) measured at the other in-pond station (SP-E-NW). This item remains open. As noted in Report #26, TSS was elevated (35.1 mg/L) in the August 3 SP-E-NW sample and is suspected to be erroneous given the low field turbidity (8.08 NTU) measured in the sample. Investigation (*i.e.* reanalysis) with the laboratory is ongoing. This item remains open.
Monitoring Program Evaluation	Incomplete monitoring at East WWTP Stations	This item was initiated in Report #25. Weekly analytical samples collected for the July 7 – 13, July 28 – August 3 and August 4 – August 10 monitoring periods at WWTP-E-IN and WWTP-E-OUT did not include sub-samples for all parameters specified in PE-111578 (*i.e.*, dioxins and furans). Follow-up with the site QEP for water quality was conducted August 9. This item is closed.
Ongoing Items from Previous Weekly Reports		
Report #13: WWTP Performance Evaluation	The May 6 monitoring results for East WWTP indicate dissolved vanadium was not being removed by the treatment process.	Sampling conducted since May 6 indicates vanadium in treated WWTP effluent is almost entirely in soluble form, suggesting this form of vanadium is only partially treated, resulting in residual vanadium concentrations in the treated effluent that are generally below, but often in the vicinity of the Federal WQG (0.005 mg/L) but generally below the PE-111578 discharge limit for total vanadium (0.0081 mg/L). As of August 10, WWTP process adjustments to improve vanadium removal have been optimized to the maximum extent possible. This item is closed.
Report #21: WWTP Performance Evaluation	Dissolved oxygen is frequently outside the treatment MDO	Previous weekly reports have indicated there was a design MDO for dissolved oxygen, this was incorrect, rather the marine WQG for dissolved oxygen water was evaluated as an MDO. This has been clarified in Appendix C, Table C-1 beginning with Report #24. However, low dissolved oxygen has been observed in sedimentation pond effluent and investigation for root cause is ongoing. As of August 10, a field investigation is planned to be conducted during the next discharge event to confirm that East Sedimentation Pond effluent with low dissolved oxygen concentrations will mix with Howe Sound at the top of the water column and meet the WQG for dissolved oxygen within the initial dilution zone defined in PE-111578. This item remains open.
Report #22: Pending Data	Analytical results for samples collected July 9 and July 13 were not reported.	Available analytical results for marine receiving environment samples collected July 9 and 13 are discussed in Section 3.7 of Report #24. Dioxin and furans results for samples collected July 13 were not complete at the time of Report #26 preparation. Testing of these parameters typically requires up to 4 weeks to complete. The pending results will be included in future weekly reports when available. This item remains open.
Report #22: Monitoring Program Evaluation	Site temperature and precipitation data are not available since July 12 due to malfunction of the Woodfibre Weather Station	Interim weather data was obtained from the Main Street Squamish Station July 12 to August 3 due to the Woodfibre Weather Station outage. From August 4 onwards, weather records are obtained from the Stantec operated weather station located on the Woodfibre site. This item is closed.
Report #23: Pending Data	Analytical results for samples collected July 17, 19, and 20 were not reported.	Available analytical results for marine receiving environment samples collected July 17 are discussed in Section 3.7 of Report #24. Analytical results for samples collected July 19 and 20 are discussed in Section 3.7 of Report #26. Methylmercury, dioxin and furans results were not complete at the time of Report #26 preparation. Testing of these parameters typically requires up to 4 weeks to complete. The pending results will be included in future weekly reports when available. This item remains open.
Report #23: Pending Data	Methyl mercury, dioxin and furan results for samples collected July 16 and July 18 were not reported.	The methylmercury result for July 18 SP-E-OUT sample is discussed in Section 3.3 of Report #24. Dioxins and furans results for samples collected July 16 and July 18 were not complete at the time of Report #26 preparation. Testing of these parameters typically requires up to 4 weeks to complete. The pending results will be included in future weekly reports when available. This item remains open.
Report #24: Pending Data	Methyl mercury, dioxin and furan results for samples collected July 24, 26, and 27 were not reported.	Methylmercury results for samples collected July 26 and 27 are discussed in Section 3.4 of Report #25. Methylmercury results for samples collected July 24 are discussed in Sections 3.3 and 3.4 of Report #26. Dioxin and furan results for samples collected July 24, 26, and 27 were not complete at the time of Report #26 preparation. Testing of these parameters typically requires up to 4 weeks to complete. The pending results will be included in future weekly reports when available. This item remains open.
Report #25: Pending Data	Analytical results for samples collected August 2 and 3 were not reported.	Analytical results for IDZ-E1 and IDZ-E2 samples collected August 2 and samples collected on August 3 were not complete at the time of Report #26 preparation. The pending results will be included in future weekly reports when available. This item remains open.
Report #25: Pending Data	Methyl mercury, dioxin and furan results for samples collected July 31 and August 2 were not reported.	Methylmercury results for samples collected August 2 are discussed in Section 3.4 of Report #25. Dioxin and furan results for samples collected July 31 were not complete at the time of reporting. Testing of these parameters typically requires up to 4 weeks to complete. The pending results will be included in future weekly reports when available. This item remains open.
Report #25: Data Review	Chronic toxicity at IDZ-E1 in the May 8 sample	Chronic toxicity test results show a decrease in echinoderm fertilization rate in the May 8 IDZ-E1 sample collected at 0.5 m below the surface compared to control samples, whereas the May 8 sample collected at station IDZ-E2 showed no chronic effect. Water quality results (as presented in Weekly Report #14) indicate parameter concentrations in the IDZ-E1 and IDZ-E2 samples are similar and do not explain the chronic toxicity effect observed in the IDZ-E1 sample. Enhanced sampling (*i.e.*, monthly for three months) for chronic toxicity testing is scheduled for September, October and November for stations IDZ-E1 and IDZ-E2, and reference station WQR1 to assess if there is natural variation of echinoderm chronic toxicity in the Howe Sound marine receiving environment. This item is closed.

Notes:

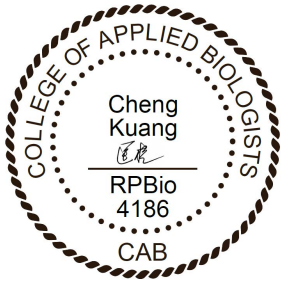
Result QA/QC screening includes the evaluation of field and lab QC results, comparison of total and dissolved metal results and review for modified detection limits.
Pending data are outstanding results from monitoring samples reported in the current or previous weekly reports.
Monitoring program evaluation is an assessment of the completeness of the monitoring program compared to PE-111578 specified or implied requirements.
WWTP performance evaluation is an assessment of WWTP effluent quality compared to design MDO's and WQG (for dissolved oxygen and total vanadium only).
Data review under QC Procedure 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.

5. Closure

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

Regards,

LORAX ENVIRONMENTAL SERVICES LTD.



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LEGEND

- Freshwater Monitoring Station
- Marine Water Monitoring Station
- Certified Project Area
- Watercourse
- Non-Contact Diversion Ditch
- Outfall
- Culvert Pipe
- Clean Water Diversion Discharge Station
- Sediment Pond Monitoring Stations (Water Quality)
- Wastewater Treatment Plant (WWTP)

DATE SAVED:	Aug 16, 2024
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 (August 10, 2024)

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

Appendix A: East and West Catchment Photographs

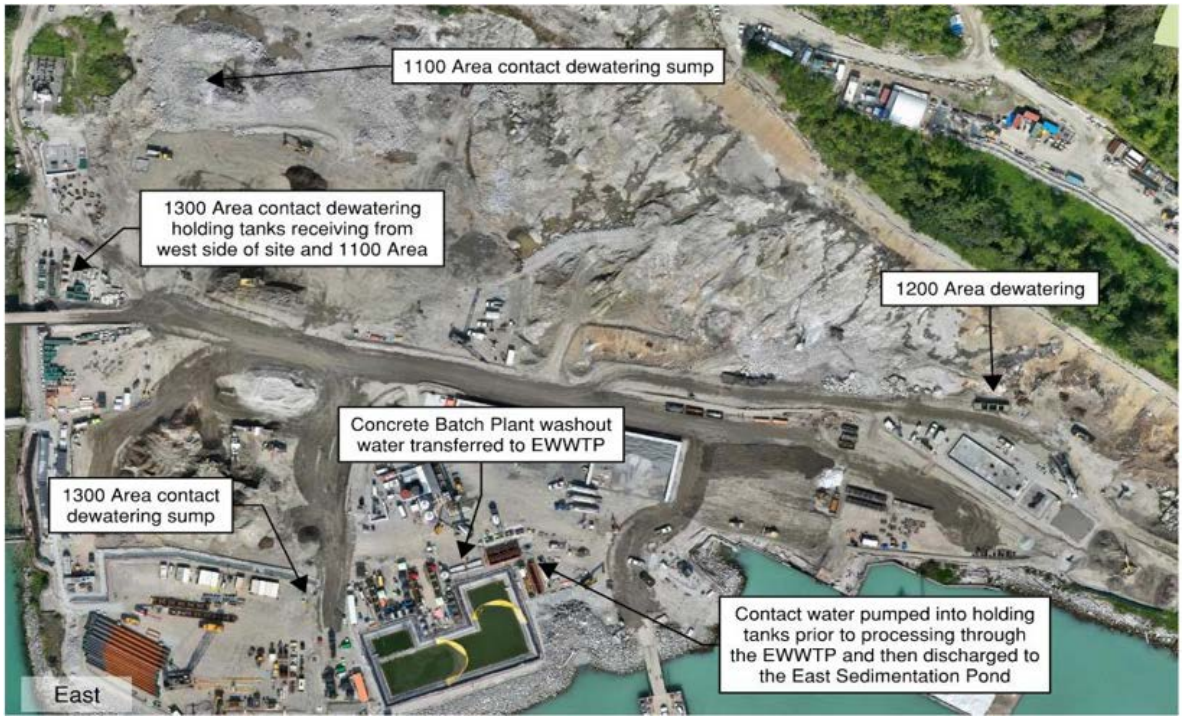

Figure 2: East Catchment dewatering areas. Potentially contaminated contact waters from the 1100 excavation and small amounts of concrete wash water were directed to the East WWTP for the August 4 – 10, 2024 monitoring period.

Figure 3: West Catchment dewatering areas. Dewatering of the West Catchment did not occur during the August 4 – 10, 2024 monitoring period.

Figure 4: Aerial view of the East Sedimentation Pond showing the placement of two sediment curtains (August 9, 2024). The East WWTP is located on the left side of the pond.

Figure 5: Aerial view of the West Sedimentation Pond showing the placement of two sediment curtains (August 9, 2024). The West WWTP is located on the right side of the pond.

Appendix B: East Sedimentation Pond Results

Table B-1: Summary of East Sedimentation Pond Water Quality Results Received at the Time of Reporting.

Parameter	Unit	Lowest Applicable Guideline [1]		PE-111578 Discharge Limit	East Sedimentation Pond	
					In-Pond at Effluent Location	In-Pond at Influent Location
					SP-E-NE	SP-E-NW
					VA24B9359-003	VA24B9359-004
		Long Term	Short Term		8/3/2024 16:45	8/3/2024 17:00
General Parameters						
pH - Field	pH units	- [2]	-	5.5 - 9.0	6.7	6.7
Conductivity - Field	µS/cm	-	-	-	-	-
Temperature - Field	°C	-	-	-	28.8	28.6
Salinity - Field	ppt	-	-	-	-	-
Turbidity - Field	NTU	-	-	-	9.57	8.08
TSS	mg/L	-	-	25	6.3	35.1
Dissolved Oxygen - Field	mg/L	>=8	-	-	-	-
Anions and Nutrients						
Sulphate	mg/L	-	-	-	76.8	61.8
Chloride	mg/L	-	-	-	118	119
Fluoride	mg/L	-	1.5	-	0.309	0.318
Ammonia ($N\text{-}NH_3$)	mg/L	Variable [3]	Variable [3]	-	0.203	0.0864
Nitrite ($N\text{-}NO_2$)	mg/L	-	-	-	2.77	1.89
Nitrate ($N\text{-}NO_3$)	mg/L	3.7	339	-	***4.95***	***6.22***
Total Metals						
Aluminum, total (T-Al)	mg/L	-	-	-	0.120	1.13
Antimony, total (T-Sb)	mg/L	-	0.27 [4]	-	0.00146	0.00144
Arsenic, total (T-As)	mg/L	0.0125	0.0125	-	0.00195	0.00236
Barium, total (T-Ba)	mg/L	-	-	-	0.0136	0.0183
Beryllium, total (T-Be)	mg/L	0.1	-	-	<0.0001	<0.0001
Boron, total (T-B)	mg/L	1.2	-	-	0.324	0.315
Cadmium, total (T-Cd)	mg/L	0.00012	-	-	<0.000035	<0.000055
Chromium, total (T-Cr)	mg/L	-	-	-	<0.0005	0.00142
Cobalt, total (T-Co)	mg/L	-	-	-	0.00011	0.00044
Copper, total (T-Cu)	mg/L	- [2]	- [2]	0.0043	0.00164	0.0036
Iron, total (T-Fe)	mg/L	-	-	-	0.090	0.93
Lead, total (T-Pb)	mg/L	- [2]	- [2]	0.0035	0.000408	0.00281
Manganese, total (T-Mn)	mg/L	-	-	-	0.0202	0.0336
Mercury, total (T-Hg)	mg/L	0.000016 [5]	-	-	<0.000005	0.0000135
Molybdenum, total (T-Mo)	mg/L	-	-	-	0.0792	0.0758
Nickel, total (T-Ni)	mg/L	0.0083	-	-	<0.0005	0.00108
Selenium, total (T-Se)	mg/L	0.002	-	-	0.000186	0.000157
Silver, total (T-Ag)	mg/L	0.0015	0.003	-	<0.00001	0.000012
Thallium, total (T-Tl)	mg/L	-	-	-	0.000035	0.000043
Uranium, total (T-U)	mg/L	-	-	-	0.0309	0.0334
Vanadium, total (T-V)	mg/L	- [2]	-	0.0081	0.00313	0.00522
Zinc, total (T-Zn)	mg/L	- [2]	- [2]	0.0133	0.0148	0.0177
Hexavalent Chromium, total	mg/L	0.0015	-	-	<0.0005	<0.0005
Dissolved Metals						
Cadmium, dissolved (D-Cd)	mg/L	-	-	-	<0.00003	<0.000025
Copper, dissolved (D-Cu)	mg/L	-	-	-	0.00126	0.00107
Iron, dissolved (D-Fe)	mg/L	-	-	-	<0.01	<0.01
Lead, dissolved (D-Pb)	mg/L	-	-	-	0.00006	<0.00005
Manganese, dissolved (D-Mn)	mg/L	-	-	-	0.0161	0.00856
Nickel, dissolved (D-Ni)	mg/L	-	-	-	<0.0005	<0.0005
Strontium, dissolved (D-Sr)	mg/L	-	-	-	0.255	0.254
Vanadium, dissolved (D-V)	mg/L	-	-	-	0.00204	0.00214
Zinc, dissolved (D-Zn)	mg/L	-	-	-	0.0126	0.0057
Polycyclic Aromatic Hydrocarbons (PAHs)						
Acenaphthene	mg/L	0.006	-	-	<0.00001	<0.00001
Acridine	mg/L	-	-	-	<0.00001	<0.00001
Anthracene	mg/L	-	-	-	<0.00001	<0.00001
Benz(a)anthracene	mg/L	-	-	-	<0.00001	<0.00001
Benzo(a)pyrene	mg/L	0.00001	-	-	<0.000005	***0.0000112***
Chrysene	mg/L	0.0001	-	-	<0.00001	<0.00001
Fluoranthene	mg/L	-	-	-	<0.00001	0.000020
Fluorene	mg/L	0.012	-	-	<0.00001	<0.00001
1-methylnaphthalene	mg/L	0.001	-	-	<0.00001	<0.00001
2-methylnaphthalene	mg/L	0.001	-	-	<0.00001	<0.00001
Naphthalene	mg/L	0.001	-	-	<0.00005	<0.00005
Phenanthrene	mg/L	-	-	-	<0.00002	<0.00002
Pyrene	mg/L	-	-	-	<0.00001	0.000021
Quinoline	mg/L	-	-	-	<0.00005	<0.00005
Volatile Organic Compounds (VOCs)						
Benzene	mg/L	0.11	-	-	<0.0005	<0.0005
Ethylbenzene	mg/L	0.25	-	-	<0.0005	<0.0005
Methyl-tert-butyl-ether	mg/L	5	0.44	-	<0.0005	<0.0005
Styrene	mg/L	-	-	-	<0.0005	<0.0005
Toluene	mg/L	0.215	-	-	<0.0004	<0.0004
Total Xylenes	mg/L	-	-	-	<0.0005	<0.0005
Chlorobenzene	mg/L	0.025	-	-	<0.0005	<0.0005
1,2-Dichlorobenzene	mg/L	0.042	-	-	<0.0005	<0.0005

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-11578 East Sedimentation Pond Discharge Limit.
All SP-E-OUT samples collected from May 27 to the time of writing were taken from the sample port which is located near the inlet end of the temporary discharge hose.
The East Sedimentation Pond did not discharge during the monitoring period (August 4 – 10).
[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 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, the BC WQG = 0.00002 mg/L. The Canadian WQG = 0.000016 mg/L.

Table B-2: Summary of East Sedimentation Pond Water Quality Results for Methylmercury Received at the Time of Reporting.

Parameter	Unit	East Sedimentation Pond		
		Effluent	**In-Pond Location**	**In-Pond Location**
		SP-E-OUT	**SP-E-NE**	**SP-E-NW**
		VA24B8166-006	**VA24B9359-003**	**VA24B9359-004**
		7/24/2024 12:20	**8/3/2024 16:45**	**8/3/2024 17:00**
Methylmercury	**µg/L**	0.000068	0.000110	0.000258

Table B-3: Summary of East Sedimentation Pond Daily Field Parameters August 4 – 10.

Parameter		Temperature	Dissolved Oxygen (DO)	Salinity	Turbidity	pH	Conductivity	Visibility of Sheen	Total Daily Discharge from the East Sedimentation Pond to Howe Sound
Unit		**°C**	**mg/L**	**ppt**	**NTU**	**s.u.**	**µS/cm**		**m^3**
PE-111578 Discharge Limit		-	-	-	-	5.5 - 9.0	-	-	-[3]
Lowest Applicable Guideline [1]		-	>=8	-	-	-[2]	-	-	-
Station ID [4]	**Date**								
SP-E-NE	8/4/2024 16:03	27.3	***6.32***	0.02	8.21	7.0	20 [6]	No	0
SP-E-NE	8/5/2024 14:01	26.7	9.51	0.74	7.43	7.0	1519	No	0
SP-E-NE	8/6/2024 15:28	25.9	***4.41***	0.74	6.37	7.5	1498	No	0
SP-E-NE	8/7/2024 16:26	26.6	12.07	0.72	10.78	8.0	1489	No	0
SP-E-NE	8/8/2024 20:41	-[5]	-[5]	-[5]	26.6	8.5	-[5]	No	0
SP-E-NE	8/9/2024 15:58	27.5	10.48	0.68	16.4	8.6	1427	No	0
SP-E-NE	8/10/2024 17:30	25.9	10.81	0.69	9.42	7.7	1391	No	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-11578 East Sedimentation Pond Discharge Limit.
All SP-E-OUT samples collected from May 27 to the time of writing were taken from the sample port which is located near the inlet end of the temporary discharge hose.
The East Sedimentation Pond did not discharge during the monitoring period (August 4 – 10).
[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 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.
[4] The sedimentation pond did not receive non-contaminated contact water influent July 28 – August 3, therefore daily measurements for station SP-E-IN-2 were not collected. The East Sedimentation Pond did not discharge July 28 – August 3, therefore daily measurements for station SP-E-OUT were not collected. In-Pond stations SP-E-NW and SP-E-NE may be monitored in place of stations SP-E-IN-2 and SP-E-OUT, respectively when there is no influent to, or discharge from the East Sedimentation Pond at the time of monitoring.
[5] Measurements for temperature, dissolved oxygen (DO), salinity and conductivity were not collected from the in-pond stations on August 8.
[6] Suspected data transcription error, follow-up in progress.

Appendix C: East Wastewater Treatment Plant Results

Table C-1: Summary of East Wastewater Treatment Plant Water Quality Results Received at the Time of Reporting.

Parameter	Unit	Minimum Discharge Objective [1]	East WWTP			
			Influent	Effluent	Influent	Effluent
			WWTP-E-IN	WWTP-E-OUT	WWTP-E-IN	WWTP-E-OUT
			VA24B9359-001	VA24B9359-002	VA24C0038-002	VA24C0038-001
			8/3/2024 16:00	8/3/2024 16:30	8/9/2024 15:45	8/9/2024 15:15
General Parameters						
pH - Field	pH units	7.0 - 8.7	7.0	7.0	8.5	7.9
Conductivity - Field	µS/cm	-	-	-	1419	1408
Temperature - Field	℃	-	29.0	27.6		
Salinity - Field	ppt	-	-	-	0.68	0.68
Turbidity - Field	NTU	-	3.61	2.84	9.52	5.67
TSS	mg/L	-	4.3	<3.0	11.2	8.8
Dissolved Oxygen - Field	mg/L	>=8 [2]	-	-	***6.91***	***4.66***
Anions and Nutrients						
Sulphate	mg/L	-	76.1	60	67.8	66.7
Chloride	mg/L	-	118	118	117	117
Fluoride	mg/L	-	0.31	0.319	0.278	0.282
Ammonia (N-NH_3)	mg/L	Variable	0.212	0.104	0.0172	0.0145
Nitrite (N-NO_2)	mg/L	-	2.8	1.79	0.0248	<0.0050
Nitrate (N-NO_3)	mg/L	3.7	***4.91***	***6.33***	***5.08***	***5.32***
Total Metals						
Aluminum, total (T-Al)	mg/L	-	0.069	0.0185	0.324	0.19
Antimony, total (T-Sb)	mg/L	-	0.00143	0.00141	0.00169	0.00171
Arsenic, total (T-As)	mg/L	0.0125	0.00189	0.00192	0.0022	0.00224
Barium, total (T-Ba)	mg/L	-	0.0134	0.0109	0.00858	0.00706
Beryllium, total (T-Be)	mg/L	0.1	<0.000100	<0.000100	<0.000100	<0.000100
Boron, total (T-B)	mg/L	1.2	0.321	0.327	0.3	0.308
Cadmium, total (T-Cd)	mg/L	0.00012	<0.0000400	<0.0000250	<0.0000250	<0.0000250
Chromium, total (T-Cr)	mg/L	-	<0.00050	0.00094	0.0005	<0.00050
Cobalt, total (T-Co)	mg/L	-	<0.00010	<0.00010	<0.00010	<0.00010
Copper, total (T-Cu)	mg/L	0.002	0.00188	0.00146	***0.00316***	***0.00203***
Iron, total (T-Fe)	mg/L	-	0.053	0.155	0.086	0.022
Lead, total (T-Pb)	mg/L	0.002	0.000248	0.000055	0.000455	0.000079
Manganese, total (T-Mn)	mg/L	-	0.0149	0.00808	0.00258	0.00114
Mercury, total (T-Hg)	mg/L	0.000016	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum, total (T-Mo)	mg/L	-	0.0778	0.0798	0.09	0.0875
Nickel, total (T-Ni)	mg/L	0.0083	<0.00050	0.00062	<0.00050	<0.00050
Selenium, total (T-Se)	mg/L	0.002	0.00016	0.000189	0.000171	0.000196
Silver, total (T-Ag)	mg/L	0.0015	<0.000010	<0.000010	<0.000010	<0.000010
Thallium, total (T-Tl)	mg/L	-	0.000036	0.000036	0.000024	0.000022
Uranium, total (T-U)	mg/L	-	0.0301	0.031	0.053	0.0525
Vanadium, total (T-V)	mg/L	0.005	0.00295	0.00305	***0.00544***	***0.00539***
Zinc, total (T-Zn)	mg/L	0.01	***0.0152***	0.0071	0.0088	0.0056
Hexavalent Chromium, total	mg/L	0.0015	<0.00050	<0.00050	<0.00050	<0.00050
Dissolved Metals						
Cadmium, dissolved (D-Cd)	mg/L	-	<0.0000350	<0.0000200	<0.0000200	<0.0000200
Copper, dissolved (D-Cu)	mg/L	-	0.00154	0.00125	0.00196	0.00154
Iron, dissolved (D-Fe)	mg/L	-	<0.010	<0.010	<0.010	<0.010
Lead, dissolved (D-Pb)	mg/L	-	0.000074	<0.000050	0.000056	<0.000050
Manganese, dissolved (D-Mn)	mg/L	-	0.0142	0.0074	0.00073	0.00051
Nickel, dissolved (D-Ni)	mg/L	-	<0.0005	<0.0005	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	0.254	0.241	0.169	0.162
Vanadium, dissolved (D-V)	mg/L	-	0.00206	0.00221	0.0016	0.00157
Zinc, dissolved (D-Zn)	mg/L	-	0.0147	0.005	0.0014	0.0014
Polycyclic Aromatic Hydrocarbons (PAHs)						
Acenaphthene	mg/L	0.006	<0.000010	<0.000010	<0.000010	<0.000010
Acridine	mg/L	-	<0.000010	<0.000010	<0.000010	<0.000010
Anthracene	mg/L	-	<0.000010	<0.000010	<0.000010	<0.000010
Benz(a)anthracene	mg/L	-	<0.000010	<0.000010	<0.000010	<0.000010
Benzo(a)pyrene	mg/L	0.00001	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Chrysene	mg/L	0.0001	<0.000010	<0.000010	<0.000010	<0.000010
Fluoranthene	mg/L	-	<0.000010	<0.000010	<0.000010	<0.000010
Fluorene	mg/L	0.012	<0.000010	<0.000010	<0.000010	<0.000010
1-methylnaphthalene	mg/L	0.001	<0.000010	<0.000010	<0.000010	<0.000010
2-methylnaphthalene	mg/L	0.001	<0.000010	<0.000010	<0.000010	<0.000010
Naphthalene	mg/L	0.001	<0.000050	<0.000050	<0.000050	<0.000050
Phenanthrene	mg/L	-	<0.000020	<0.000020	<0.000020	<0.000020
Pyrene	mg/L	-	<0.000010	<0.000010	<0.000010	<0.000010
Quinoline	mg/L	-	<0.000050	<0.000050	<0.000050	<0.000050
Volatile Organic Compounds (VOCs)						
Benzene	mg/L	0.11	<0.00050	<0.00050	<0.00050	<0.00050
Ethylbenzene	mg/L	0.25	<0.00050	<0.00050	<0.00050	<0.00050
Methyl-tert-butyl-ether	mg/L	5	<0.00050	<0.00050	<0.00050	<0.00050
Styrene	mg/L	-	<0.00050	<0.00050	<0.00050	<0.00050
Toluene	mg/L	0.215	<0.00040	<0.00040	<0.00040	<0.00040
Total Xylenes	mg/L	-	<0.00050	<0.00050	<0.00050	<0.00050
Chlorobenzene	mg/L	0.025	<0.00050	<0.00050	<0.00050	<0.00050
1,2-Dichlorobenzene	mg/L	0.042	<0.00050	<0.00050	<0.00050	<0.00050

Notes:
[1] Design minimum discharge objectives (MDOs) for WWTP effluent that are listed in the WWTP design report.
[2] A design MDO for dissolved oxygen was not specified in the WWTP design report. The water quality guideline is provided in place of an MDO for reference purposes only.
Results ***underlined in bold italics*** exceed the applicable minimum discharge objective.

Table C-2: Summary of East Wastewater Treatment Plant Water Quality Results for Methylmercury Received at the Time of Reporting.

Parameter	Unit	East WWTP					
		Influent	Effluent	Influent	Effluent	Influent	Effluent
		WWTP-E-IN	WWTP-E-OUT	WWTP-E-IN	WWTP-E-OUT	WWTP-E-IN	WWTP-E-OUT
		VA24B8166-001	VA24B8166-002	VA24B9290-001	VA24B9290-002	VA24B9359-001	VA24B9359-002
		7/24/2024 14:00	7/24/2024 15:15	8/2/2024 17:15	8/2/2024 16;40	8/3/2024 16:00	8/3/2024 16:30
Methylmercury	**µg/L**	0.000070	0.000075	0.000094	0.000121	0.000133	0.000145

Table C-3: Summary of East Wastewater Treatment Plant Daily Field Parameters August 4 – 10.

Parameter		**Temperature**	**Dissolved Oxygen (DO)**	**Salinity**	**Turbidity**	**pH**	**Conductivity**	**Visibility of Sheen**	**Total Daily Discharge from the East WWTP**
Unit		**°C**	**mg/L**	**ppt**	**NTU**	**s.u.**	**µS/cm**		**m^3**
PE-111578 Discharge Limit [1]		-	-	-	-	-	-	-	1,100
Minimum Discharge Objective [2]		-	>=8 [3]	-	-	7.0 - 8.7	-	-	-
Station ID	**Date**								
WWTP-E-IN	8/4/2024 16:06	28.1	***6.75***	0.38	4.74	7.3	834	No	-
WWTP-E-OUT	8/4/2024 16:28	27.0	***2.04***	0.85	3.51	***6.1***	1755	No	542
WWTP-E-IN	8/5/2024 14:05	27.0	***7.01***	0.73	6.60	7.4	1523	No	-
WWTP-E-OUT	8/5/2024 14:10	26.8	***3.87***	0.73	3.28	***6.7***	1508	No	548
WWTP-E-IN	8/6/2024 15:42	28.1	***6.63***	0.8	7.68	8	1785	No	-
WWTP-E-OUT	8/6/2024 15:40	28.3	***7.96***	0.84	10.86	7.8	1771	No	535
WWTP-E-IN	8/7/2024 16:48	26.4	***4.13***	0.68	4.01	8	1395	No	-
WWTP-E-OUT	8/7/2024 16:45	27.7	8.63	0.71	9.02	8.4	1500	No	513
WWTP-E-IN	8/8/2024 20:32	-[4]	-[4]	-[4]	15.8	8.3	-[4]	No	-
WWTP-E-OUT	8/8/2024 20:35	-[4]	-[4]	-[4]	10.7	8.1	-[4]	No	446
WWTP-E-IN	8/9/2024 15:45	27.4	***6.91***	0.68	9.52	8.5	1419	No	-
WWTP-E-OUT	8/9/2024 15:15	26.8	***4.66***	0.68	5.67	7.9	1408	No	602
WWTP-E-IN	8/10/2024 17:37	27.0	***3.66***	0.67	5.9	***6.1***	1387	No	-
WWTP-E-OUT	8/10/2024 17:47	27.4	***7.62***	0.68	10.99	8.4	1358	No	295

Notes:
[1] PE-111578 East WWTP Discharge Limit is applied to effluent compliance station WWTP-E-OUT.
[2] Design minimum discharge objectives (MDOs) for WWTP effluent that are listed in the WWTP design report.
[3] A design MDO for dissolved oxygen was not specified in the WWTP design report. The water quality guideline is provided in place of an MDO for reference purposes only.
[4] Measurements for temperature, DO, salinity and conductivity were not collected for the WWTP influent and effluent stations.
Results ***underlined in bold italics*** do not meet the applicable minimum discharge objective (except DO).

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	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
				VA24B7685-001	VA24B7685-002	VA24B7685-003	VA24B7685-004	VA24B7685-005	VA24B7685-006
		Long Term	Short Term	7/19/2024	7/19/2024	7/19/2024	7/19/2024	7/19/2024	7/19/2024
General Parameters									
pH - Field	pH units	7.0 - 8.7	-	7.7	7.8	7.8	7.9	7.7	7.9
Specific Conductivity - Field	µS/cm	-	-	8396	10344	31042	4898	5039	30770
Temperature - Field	℃	-	-	16.9	17.1	13.5	17	17	13.7
Salinity - Field	ppt	Narrative[2]	-	5.62	7.01	25.37	3.15	3.25	25.98
Turbidity - Field	NTU	Narrative[2]	Narrative[2]	9.37	7.9	1.01	16.48	15.16	1.24
TSS	mg/L	Narrative[2]	Narrative[2]	11.1	12	10.8	17.5	22.7	3.1
Dissolved Oxygen - Field	mg/L	>=8	-	10.33	10.27	10.32	9.90	10.36	10.19
Anions and Nutrients									
Sulphate	mg/L	-	-	454	423	927	237	216	1630
Chloride	mg/L	-	-	3300	3100	6620	1740	1590	11600
Fluoride	mg/L	-	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia (N-NH_3)	mg/L	Variable [3]	Variable [3]	<0.0050	<0.0050	0.0121	<0.0050	<0.0050	0.019
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	-	-	0.353	0.428	0.361	0.85	0.879	0.0946
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	0.00167	0.00113	0.0021	0.0008	0.00065	0.00349
Barium, total (T-Ba)	mg/L	-	-	0.0157	0.0163	0.0148	0.0198	0.021	0.0117
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	-	0.82	0.63	***1.35***	0.36	0.30	***2.65***
Cadmium, total (T-Cd)	mg/L	0.00012	-	0.00002	<0.000020	0.000027	<0.000020	<0.000020	0.000064
Chromium, total (T-Cr)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, total (T-Co)	mg/L	-	-	0.000163	0.000198	0.000174	0.0003	0.000315	0.000092
Copper, total (T-Cu)	mg/L	0.002	0.003	0.00110	***0.00240***	0.00144	***0.00201***	0.00172	0.00132
Iron, total (T-Fe)	mg/L	-	-	0.297	0.346	0.303	0.599	0.645	0.082
Lead, total (T-Pb)	mg/L	0.002	0.14	0.00012	<0.00010	0.00012	0.0002	0.00015	<0.00010
Manganese, total (T-Mn)	mg/L	-	-	0.0114	0.0129	0.0111	0.0189	0.02	0.00418
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	-	-	0.00192	0.00183	0.00355	0.00111	0.00104	0.00703
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	-	-	0.000669	0.000526	0.00114	0.000344	0.000373	0.00221
Vanadium, total (T-V)	mg/L	0.005	-	0.00117	0.00128	0.0014	0.00178	0.00193	0.00118
Zinc, total (T-Zn)	mg/L	0.01	0.055	<0.0030	<0.0030	<0.0030	0.003	<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	-	-	<0.000020	<0.000020	0.000026	<0.000020	<0.000020	0.000052
Copper, dissolved (D-Cu)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00057
Iron, dissolved (D-Fe)	mg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Lead, dissolved (D-Pb)	mg/L	-	-	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Manganese, dissolved (D-Mn)	mg/L	-	-	0.00475	0.00486	0.00376	0.00509	0.00538	0.00148
Nickel, dissolved (D-Ni)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	1.06	0.949	2.45	0.54	0.473	4.33
Vanadium, dissolved (D-V)	mg/L	-	-	<0.00050	0.00051	0.0007	<0.00050	<0.00050	0.0009
Zinc, dissolved (D-Zn)	mg/L	-	-	<0.0010	0.0027	<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	-	0.000012	<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. The water quality data presented in the table were collected when the site was discharging, therefore the guidelines were evaluated.
[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]		Reference Station WQR1			Reference Station WQR2		
				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
				VA24B7867-001	VA24B7867-002	VA24B7867-003	VA24B7867-004	VA24B7867-005	VA24B7867-006
		Long Term	Short Term	7/20/2024	7/20/2024	7/20/2024	7/20/2024	7/20/2024	7/20/2024
General Parameters									
pH - Field	pH units	7.0 - 8.7	-	8.0	7.8	7.6	7.3	7.7	7.7
Specific Conductivity - Field	µS/cm	-	-	2904	9745	31953	3037	16466	31899
Temperature - Field	℃	-	-	15.3	15.5	10.1	15.4	15.6	11.9
Salinity - Field	ppt	Narrative[2]	-	1.89	6.83	28.73	1.97	12.47	27.27
Turbidity - Field	NTU	Narrative[2]	Narrative[2]	15.41	14.30	0.21	14.97	12.68	0.18
TSS	mg/L	Narrative[2]	Narrative[2]	14.1	14.1	2.1	13.3	17.1	4.7
Dissolved Oxygen - Field	mg/L	>=8	-	10.36	10.23	***7.04***	10.33	10.24	9.25
Anions and Nutrients									
Sulphate	mg/L	-	-	233	494	2080	128	123	1260
Chloride	mg/L	-	-	1810	3820	15100	1080	1010	9210
Fluoride	mg/L	-	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia (N-NH_3)	mg/L	Variable [3]	Variable [3]	0.0054	0.0071	<0.0050	<0.0050	<0.0050	0.0078
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	-	-	0.381	0.531	0.0556	0.547	0.570	0.0392
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	0.00046	0.00087	0.00323	<0.00040	0.0005	0.00359
Barium, total (T-Ba)	mg/L	-	-	0.0172	0.018	0.0136	0.0175	0.0178	0.0122
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	-	0.38	0.80	***3.15***	<0.30	<0.30	***3.28***
Cadmium, total (T-Cd)	mg/L	0.00012	-	<0.000020	<0.000020	0.000076	<0.000020	<0.000020	0.000066
Chromium, total (T-Cr)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, total (T-Co)	mg/L	-	-	0.000173	0.000243	0.00007	0.000218	0.000223	0.000061
Copper, total (T-Cu)	mg/L	0.002	0.003	0.00088	0.00128	0.0006	0.00132	0.00143	0.00071
Iron, total (T-Fe)	mg/L	-	-	0.279	0.454	0.049	0.399	0.427	0.035
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	-	-	0.0118	0.0153	0.00357	0.0153	0.0159	0.00228
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	-	-	0.00122	0.00206	0.00825	0.00069	0.00076	0.00829
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	-	-	0.000294	0.000639	0.0027	0.000205	0.000187	0.00262
Vanadium, total (T-V)	mg/L	0.005	-	0.00114	0.00164	0.00122	0.00136	0.00143	0.00121
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	-	-	<0.000020	<0.000020	0.000074	<0.000020	<0.000020	0.000058
Copper, dissolved (D-Cu)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00057
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	-	-	0.00544	0.00474	0.00189	0.00573	0.00564	0.00093
Nickel, dissolved (D-Ni)	mg/L	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Strontium, dissolved (D-Sr)	mg/L	-	-	0.66	1.41	5.37	0.377	0.337	5.04
Vanadium, dissolved (D-V)	mg/L	-	-	<0.00050	0.00062	0.00109	<0.00050	<0.00050	0.00102
Zinc, dissolved (D-Zn)	mg/L	-	-	<0.0010	<0.0010	<0.0010	0.001	<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	-	0.000012	<0.000010	<0.000010	0.000017	<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 when the site was discharging, therefore the guidelines were evaluated.
[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.