Eagle Mountain - Woodfibre Gas Pipeline Project

Woodfibre Site Waste Discharge Approval Report

Report Period: January 22nd to January 28th, 2024

Contents

Preamble

This report is the initial report for the British Columbia Energy Regulator (BCER) Waste Discharge Approval (BCER number AE 111973) for the FortisBC Eagle Mountain – Woodfibre Gas Pipeline (EGP) Project for the BC Rail site. This report covers the reporting period from January 22nd to January 28th, 2024 and includes the results of water quality monitoring and sampling of the receiving environment (upstream and downstream) at the Woodfibre Site. During this timeframe, no discharge into the receiving environment at the Woodfibre Site occurred from the water treatment plant.

FortisBC has retained Triton Environmental Consultants Ltd. as the Qualified Professional to implement and oversee the monitoring and sampling program in the receiving environment. The data represented below, including laboratory reported exceedances, represent background conditions of the receiving environment, and are not related to EGP Project activities. The data collected and reported in this report represents background water quality conditions at the two receiving environment sampling sites as shown on the approved Waste Discharge Approval AE-111973.

Water Treatment Plant Update

Since the issuance of the Waste Discharge Approval (AE 111973) on December 8th, 2023, FortisBC's tunnel contractor Frontier-Kemper Michels Joint Venture (FKM) has commenced shipping the water treatment plant (WTP) components to the Woodfibre site. No water treatment plant has been set up on site to date.

Introduction

The results provided in this document are submitted to BC Energy Regulator (BCER) by FortisBC as per the requirements listed in the Waste Discharge Approval AE-111973 Section 4.2:

> The Approval Holder shall summarize the results of the discharge and receiving environment compliance sampling and monitoring program in a report that shall be submitted weekly over the term of this approval. The sampling and monitoring results shall be suitably tabulated and include comparison to the respective British Columbia Approved and Working Water Quality Guidelines for Freshwater & Marine Aquatic Life, as published by the Ministry of Environment & Climate Change Strategy. Any exceedance of regulatory guidelines shall be clearly highlighted, and any missed sampling events/missing date shall 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 approval, and also made publicly available on the FortisBC Eagle Mountain-Woodfibre Gas Pipeline Project | Talking Energy webpage.

FortisBC requests that the BCER confirm the receipt of this submittal and confirm that the submission meets the requirements of reporting. Future reports will use this format unless otherwise directed by BCER.

Sampling Methodology

The monitoring and sampling has been carried out in accordance with the procedures described in the most recent edition of the "British Columbia Field Sampling Manual" using field equipment and lab samples to meet daily and real time requirements for the Waste Discharge Approval.
At the receiving environment, real time daily field readings of pH, temperature, NTU, electrical conductivity, DO, ORP and salinity are being taken using an AquaTROLL 600 datalogger upstream and downstream in the watercourse at the Woodfibre site. Visible sheen will be monitored with visual inspections during times of discharge or sampling. Real time and daily readings are being monitored at the same time with one piece of equipment, allowing all the daily readings to be real time.
At the point of discharge from the WTP, the parameters are being monitored using field equipment (YSI ProDSS) and sondes/real time meters make and models to be confirmed by the contractor. Table 1 and Table 2 below show how each parameter is being monitored.

Table 1. Monitoring Process at Point of Discharge from Water Treatment System

Permit Frequency	Parameters	Details
Daily	Visible Sheen	In field inspection
Daily (or per batch)	DO	Monitoring using YSI ProDSS
	ORP	Monitoring using YSI ProDSS
	Salinity	Monitoring using YSI ProDSS
Real Time (or per batch)	pH	Monitoring using YSI ProDSS
	Temperature	Monitoring using YSI ProDSS
	NTU	Monitoring using YSI ProDSS
	Electrical Conductivity	Monitoring using YSI ProDSS
Weekly (or per batch) Lab Samples	List prescribed in permit	No Changes, still lab samples

Table 2. Receiving Environment (upstream and downstream) Monitoring Process

Permit Frequency	Parameters	Details
Daily	Visible Sheen	In field inspection
Daily	DO	Monitoring using Sonde- AquaTROLL 600 datalogger
	ORP	Monitoring using Sonde- AquaTROLL 600 datalogger
	Salinity	Monitoring using Sonde- AquaTROLL 600 datalogger
Real Time	pH	Monitoring using Sonde- AquaTROLL 600 datalogger
	Temperature	Monitoring using Sonde- AquaTROLL 600 datalogger
	NTU	Monitoring using Sonde- AquaTROLL 600 datalogger
	Electrical Conductivity	Monitoring using Sonde- AquaTROLL 600 datalogger
Weekly Lab Samples	List prescribed in permit	No changes, still lab samples

Receiving Environment equipment details: Sondes: Aqua-TROLL 600 made by In-Situ Inc. Sondes set up to log temperature, specific conductivity, salinity (in PSU), pH, ORP, DO (mg/L), and turbidity (NTU) at 10 minute intervals.
Point of Discharge from the water treatment system equipment details: YSI ProDSS with pH, conductivity, DO, ORP and turbidity probe that measure pH, temperature, NTU, electrical conductivity, ORP, DO and salinity.

Summary

Activities

- The real time water quality monitoring equipment (sondes) were deployed at the Woodfibre Site on December 18th, 2023.
- No discharges to the receiving environment have occurred from the water treatment plant within the reporting period. The water treatment plan has not yet been built and not tunneling is occurring.

Point of Discharge from Water Treatment System Summary

N/A - No discharge occurred during the reporting period.

Exceedance details

N/A - No discharge occurred during the reporting period.

Receiving Environment Summary

The receiving environment is being monitored as a permit requirement, currently, there are no discharges from the WTP to the receiving environment, so all recorded exceedances in the laboratory report are not project related and existing background quality.

Table 3: Upstream Monitoring Information

Date of Lab Sample	Real Time Monitored	Field Samples Taken	Results
2024-01-22	Yes	Yes-real time	Full set of lab sample results, photo and documentation are provided in Appendix B

Table 4: Downstream Monitoring Information

Date of Lab Sample	Real Time Monitored	Field Samples Taken	Results
2024-01-22	Yes	Yes-real time	Full set of lab sample results, photo and documentation are provided in Appendix B

Receiving Environment Monitoring Details

- Daily visible sheen checks have not been conducted in the receiving environment as there have not been any discharges from the WTP.
- All receiving environment lab results are in Appendix B.
- Recorded exceedances in the laboratory and field samples collected from the receiving environment (upstream and downstream) are indicative of the existing background water quality in the Squamish River, and are not related to the EGP Project activities.

Appendix A Point of Discharge from Water Treatment Plant Documentation

No discharge from the water treatment plant, nothing to report

Appendix A Point of Discharge from Water Treatment Plant Documentation

Appendix B Receiving Environment Documentation

Receiving Environment Sample Analysis

TRITON Environmental Consultants	Sample ID	Reviewed and signed off by:			Miranda Lewis PAg, MSc	WLNG US1 (Upstream)	WLNG DS 1 (Downstream)	Sample or value notes	BCWQ FAL - Short Term	BCWQ FAL - Long Term	BCWQ MAL - Short Term	BCWQ MAL - Long Term
	LAB ID					VA24A1174-002	VA24A1174-001					
	Date Sampled					22-Jan-2024	22-Jan-2024					
	Time Sampled					11:07	11:44					
Analyte	Units	BCAWWQG-FAL-LT [1,2]	BCAWWQG-FAL-ST [1,2]	BCAWWQG-MAL-ST [1]	BCAWWQG-MAL-LT [1,2]	Water	Water					
						N/A	N/A		Guideline notes			
In Situ Parameters												
pH (field)	pH units	6.5-9.0	6.5-9.0	7.0-8.7	7.0-8.7	7.02	7.32	LT guideline not applicable [3]	If natural pH < 6.5, no statistically significant decrease from background. No restriction in increase except in areas with unique flora or fauna. Unrestricted change permitted within range of 6.5 to 9.0. If natural pH > 9.0, no statistically significant increase from background. Refer to BC Water Quality Guidelines for more information.		Unrestricted change within this range (for protection of mollusc embryo development).	
Temperature (field)	°C	-	19, hourly rate of change <1°C	Max +/- from BKG 1°C, hourly rate of change <0.5°C	-	4.3	4.5		Guideline is species-dependent. Short-term daily temperature guideline is 19°C for streams with unknown fish distribution. Refer to BC Water Quality Guidelines for more information on incubation and spawning temperature guidelines, and for those with different fish distributions. Hourly rate of change not to exceed 1°C.		Guideline for marine waters are based on natural ambient conditions. Max and min. 1°C change from natural condition. Natural temperature cycle characteristic of the site should not be altered in amplitude or frequency by human activities. Max rate of any human-induced temperature change not to exceed 0.5°C hourly.	
Conductivity (field)	µS/cm	-	-	-	-	26	36					
Turbidity (field)	NTU	Varies with background, see note Lowest value for guideline is 3 NTU	Varies with background, see note Lowest value for guideline is 9 NTU	Varies with background, see note Lowest value for guideline is 9 NTU	Varies with background, see note Lowest value for guideline is 3 NTU	6.14	3.73	LT guideline not applicable [3]	Change from background of 8 NTU at any one time for a duration of 24 h in all waters during clear flows or in clear waters. Change from background of 5 NTU at any time when background is 8 - 50 NTU during high flows or in turbid waters. Change from background of 10% when background is > 50 NTU at any time during high flows or in turbid waters.	Change from background of 2 NTU at any one time for 30 days in clear flows.	Change from background of 8 NTU at any one time for a duration of 24 h in all waters during clear flows or in clear waters. Change from background of 5 NTU at any time when background is 8 - 50 NTU during high flows or in turbid waters. Change from background of 10% when background is > 50 NTU at any time during high flows or in turbid waters.	Change from background of 2 NTU at any one time for 30 days in clear flows.
Dissolved Oxygen (field)	mg/L	Varies with life stage, see note	Varies with life stage, see note	Varies with life stage, see note	Varies with life stage, see note	11.98	12.24	A 24-hour average dissolved oxygen concentration is shown here to represent the downstream DO. LT guideline not applicable [3]	Buried embryo/alevin minimum 9 mg/L, all other life stages 5 mg/L. Refer to BC Water Quality Guidelines for more information.	Buried embryo/alevin minimum 11 mg/L, all other life stages 8 mg/L. Refer to BC Water Quality Guidelines for more information.	Buried embryo/alevin minimum 9 mg/L, all other life stages 5 mg/L. Refer to BC Water Quality Guidelines for more information.	Buried embryo/alevin minimum 11 mg/L, all other life stages 8 mg/L. Refer to BC Water Quality Guidelines for more information.
General Parameters												
Hardness (as CaCO3) (total)	mg/L	-	-	-	-	6.84	14.6					
Total Dissolved Solids	mg/L	-	-	-	-	22	31					
Total Suspended Solids	mg/L	Varies with background, see note Lowest value for guideline is 6mg/L	Varies with background, see note Lowest value for guideline is 26mg/L	Varies with background, see note Lowest value for guideline is 26mg/L	Varies with background, see note Lowest value for guideline is 6mg/L	< 3.0	< 3.0	LT guideline not applicable [3]	Change from background of 25 mg/L at any one time for duration of 24 h in all waters during clear flows or in clear waters. Change from background of 10 mg/L at any one time when background 25-100 mg/L during high flows or turbid waters. Change from background of 10% when background is > 100 mg/L at any time during high flows or turbid waters.	Change from background of 5 mg/L @ one time for a druation of 30 days in clear flow.	Change from background of 25 mg/L at any one time for duration of 24 h in all waters during clear flows or in clear waters. Change from background of 10 mg/L at any one time when background 25-100 mg/L during high flows or turbid waters. Change from background of 10% when background is > 100 mg/L at any time during high flows or turbid waters.	Change from background of 5 mg/L @ one time for a druation of 30 days in clear flow.
Total Organic Carbon (TOC)	mg/L	-	-	-	-	2.81	2.56			Long-term (30-day) median within 20% of background median [3]		
Dissolved Organic Carbon (DOC)	mg/L	-	-	-	-	2.84	2.72			Long-term (30-day) median within 20% of background median [3]		
Total Alkalinity ($CaCO_3$)	mg/L	Categorical	-	-	-	5.1	12.5	Upstream location is highly sensitive to acid inputs (i.e. low buffering capacity). The downstream location has a moderate sensitivity to acid inputs (i.e moderate buffering capacity). LT guideline not applicable [3]		Guideline is for alkalinity (as CaCO3) and categorizes the sensitivity of a water body to acid inputs.Alkalinity < 10 mg/L is considered highly sensitive to acid inputs; 10 - 20 mg/L is considered moderately sensitive to acid inputs; > 20 mg/L is considered low sensitivity		
Total Sulfide (as S)	mg/L	-	-	-	-	< 0.0015	< 0.0015					
Total Sulfide (un-ionized as H2S)	mg/L	0.002	-	-	-	< 0.0015	< 0.0015	LT guideline not applicable [3]		Working guideline		
Total Sulfide (as H2S)	mg/L	-	-	-	-	< 0.0016	< 0.0016					
Anions and Nutrients												
Ammonia	mg/L ammonia-N	pH and temperature dependent	pH and temperature dependent	pH, temperature, and salinity dependent	pH, temperature, and salinity dependent	0.008	< 0.0050	LT guideline not applicable [3]	Guideline for ammonia as N, pH and temperature dependent. Refer to BC Water Quality Guidelines for more information.	Guideline for ammonia as N, pH and temperature dependent. Refer to BC Water Quality Guidelines for more information.	Guideline for ammonia as N, pH, salinity, and temperature dependent. Refer to BC Water Quality Guidelines for more information. Guideline not applicable to freshwater EGP samples.	Guideline for ammonia as N, pH, salinity, and temperature dependent. Refer to BC Water Quality Guidelines for more information. Guideline not applicable to freshwater EGP samples.
Bromide	mg/L	-	-	-	-	< 0.050	< 0.050					
Chloride	mg/L	150	600	> 110% of background	< 90% of background	0.76	0.73	LT guideline not applicable [3]			Human activities should not cause the chloride of marine and estuarine waters to fluctuate by more than 10% of the natural chloride expected at that time and depth.	Human activities should not cause the chloride of marine and estuarine waters to fluctuate by more than 10% of the natural chloride expected at that time and depth.
Fluoride	mg/L	-	Varies with hardness	1.5	-	< 0.020	< 0.020		Guideline has interim status.			
Nitrate (as N)	mg/L	3	32.8	-	3.7	0.0475	0.0589	LT guideline not applicable [3]				
Nitrite (as N)	mg/L	Varies with chloride	0.06	-	-	< 0.0010	< 0.0010	LT guideline not applicable [3]				
Total Nitrogen	mg/L	-	-	-	-	0.15	0.182					
Total Phosphorous	mg/L	0.005 to 0.015	-	-	-	0.0505	0.0241	LT guideline not applicable [3]		Guideline is for lakes, refer to BCWQ guideline for nutrients and algae for more information. Guideline does not apply to site.		
Sulfate (as SO4)	mg/L	Varies with hardness	-	-	-	1.81	2.47	LT guideline not applicable [3]				
Total Metals												
Aluminum (Al)-Total	mg/L	Varies with pH, DOC, hardness	-	-	-	0.404	***0.238***	**Downstream location exceeds BCWQ FAL guidelines.** LT guideline not applicable [3]	Guideline varies with pH, hardness and Dissolved Organic Carbon (DOC). Refer to BC Water Quality Guidelines for more information.	Guideline varies with pH, hardness and Dissolved Organic Carbon (DOC). Refer to BC Water Quality Guidelines for more information.		
Antimony (Sb)-Total	mg/L	0.074	0.25	-	-	< 0.00010	< 0.00010	LT guideline not applicable [3]				
Arsenic (As)-Total	mg/L	0.005	-	-	0.0125	0.0002	0.00013	LT guideline not applicable [3]				interim guideline status
Barium (Ba)-Total	mg/L	1	-	-	-	0.00411	0.00466	LT guideline not applicable [3]		Working guideline status		
Beryllium (Be)-Total	mg/L	0.00013	-	-	0.100	< 0.000100	< 0.000100	LT guideline not applicable [3]		Working guideline status		Working guideline status
Bismuth (Bi)-Total	mg/L	-	-	-	-	< 0.000050	< 0.000050					
Boron (B)-Total	mg/L	1.2	-	-	1.2	< 0.010	< 0.010	LT guideline not applicable [3]				
Cadmium (Cd)-Total	mg/L	-	-	-	0.000172	0.0000172	0.0000104					Working guideline status
Calcium (Ca)-Total	mg/L	-	-	-	-	2.19	5.15					
Cesium (Cs)-Total	mg/L	-	-	-	-	< 0.000010	< 0.000010					
Chromium (Cr) - Total	mg/L	-	-	-	-	< 0.00050	< 0.00050					
Chromium (Cr(III))-Total	mg/L	0.0089	-	-	0.056	< 0.00050	< 0.00050			Working guideline status		Working guideline status
Chromium (Cr(VI))-Total	mg/L	0.001	-	-	0.0015	< 0.00050	< 0.00050			Working guideline status		Working guideline status
Cobalt (Co)-Total	mg/L	0.004	0.11	-	-	0.00011	< 0.00010	LT guideline not applicable [3]				
Copper (Cu)-Total	mg/L	-	-	0.003	0.002	0.00111	0.00089					
Iron (Fe)-Total	mg/L	-	1	-	-	0.241	0.155					
Lead (Pb)-Total	mg/L	Varies with hardness	Varies with hardness	0.14	0.002	0.000174	0.000115	LT guideline not applicable [3]	Guideline varies with hardness, refer to BC Water Quality Guidelines for more information. Guideline is 0.003 where hardness ≤8mg/L. Guideline uses equation $e^{(1.273*ln(hardness)-1.460)}$ where hardness is 8-360 mg/L. Lowest value for guideline is 0.003 mg/L.	Guideline varies with hardness, refer to BC Water Quality Guidelines for more information. Guideline equation $e^{(1.273*ln(hardness)+4.704)}$ applies to samples with hardness 8-360 mg/L.		
Lithium (Li)-Total	mg/L	-	-	-	-	< 0.0010	< 0.0010					
Magnesium (Mg)-Total	mg/L	-	-	-	-	0.334	0.418					
Manganese (Mn)-Total	mg/L	Varies with hardness	Varies with hardness	-	-	0.00935	0.00687	LT guideline not applicable [3]	Guideline varies with hardness, refer to BC Water Quality Guidelines for more information. Guideline uses equation 0.0110*hardness+0.54 and applies to samples with hardness 25-259 mg/L. Lowest value for guideline is 0.77 mg/L.	Guideline varies with hardness, refer to BC Water Quality Guidelines for more information. Guideline uses equation 0.0044*hardness+0.605 and applies to samples with hardness 37-450 mg/L. Lowest value for guideline is 0.81 mg/L.		
Mercury (Hg)-Total	mg/L	Varies with methyl mercury	-	-	-	< 0.0000050	< 0.0000050	LT guideline not applicable [3]		Guideline is calculated as follows: 0.1([MeHg]total/[MeHg]. When MeHg ≤ 0.5% of total Hg, guideline is equal to 0.02 mg/L.		
Molybdenum (Mo)-Total	mg/L	7.6	46	-	-	0.000362	0.000561	LT guideline not applicable [3]				
Nickel (Ni)-Total	mg/L	Varies with hardness	-	-	0.0083	< 0.00050	< 0.00050	LT guideline not applicable [3]		Working guideline status. Guideline varies with hardness. Guideline is 0.025 mg/L at water hardness ≤90mg/L, at hardness 60-180 use equation $e^{(0.76*ln(hardness)+1.06)}$, guideline at hardness ≥180 mg/L is 0.15 mg/L. Refer to BC Water Quality Guidelines for more information.		Working guideline status
Phosphorus (P)-Total	mg/L	0.005 to 0.015	-	-	-	< 0.050	< 0.050	LT guideline not applicable [3]		Guideline only applies to lakes with salmonid species being the dominant fish species. Guideline is for reference only and does not apply to site.		
Potassium (K)-Total	mg/L	-	-	-	-	0.285	0.264					
Rubidium (Rb)-Total	mg/L	-	-	-	-	0.00032	0.00032					
Selenium (Se)-Total	mg/L	0.002	-	-	0.002	< 0.000050	< 0.000050	LT guideline not applicable [3]		Guideline for freshwater aquatic life (water column). Alert concentration is 0.001 mg/L, with separate guidelines for sediment, invertebrate and fish tissue. Refer to BC Water Quality Guidelines for more information on guidelines and sampling guidance.		Guideline for marine aquatic life (water column). Alert concentration is 0.001 mg/L, with separate guidelines for sediment, invertebrate and fish tissue. Refer to BC Water Quality Guidelines for more information on guidelines and sampling guidance.
Silicon (Si)-Total	mg/L	-	-	-	-	3.36	3.23					
Silver (Ag)-Total	mg/L	Varies with hardness	Varies with hardness	0.003	0.0015	< 0.000010	< 0.000010	LT guideline not applicable [3]	Varies with hardness. Guideline is 0.0001 mg/L at hardness ≤100 mg/L, and 0.003 at Hardness > 100 mg/L.	Varies with hardness. Guideline is 0.00005 mg/L at hardness ≤100 mg/L, and 0.0015 at Hardness > 100 mg/L.		Guideline applies to open-coast and estuaries. Guideline is applicable to the EGP site.
Sodium (Na)-Total	mg/L	-	-	-	-	1.16	1.24					
Strontium (Sr)-Total	mg/L	-	-	-	-	0.01	0.0177					
Sulfur (S)-Total	mg/L	-	-	-	-	< 0.50	0.62					
Tellurium (Te)-Total	mg/L	-	-	-	-	< 0.00020	< 0.00020					
Thallium (Tl)-Total	mg/L	0.0008	-	-	-	< 0.000010	< 0.000010	LT guideline not applicable [3]		30-day average, site-specific objective for the lower Columbia River, BC. Guideline is for reference only and does not apply to trhe EGP site.		
Thorium (Th)-Total	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Tin (Sn)-Total	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Titanium (Ti)-Total	mg/L	-	-	-	-	0.00804	0.00415					
Tungsten (W)-Total	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Uranium (U)-Total	mg/L	0.0085	-	-	-	0.000127	0.000139	LT guideline not applicable [3]		Working guideline status		
Vanadium (V)-Total	mg/L	-	-	-	0.050	0.0006	< 0.00050					Working guideline status
Zinc (Zn)-Total	mg/L	-	-	0.056	0.010	< 0.0030	0.0033					
Zirconium (Zr)-Total	mg/L	-	-	-	-	< 0.00020	< 0.00020					
Dissolved Metals												
Aluminum (Al)-Dissolved	mg/L	-	-	-	-	0.116	0.0969					
Antimony (Sb)-Dissolved	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Arsenic (As)-Dissolved	mg/L	-	-	-	-	0.00019	0.0001					
Barium (Ba)-Dissolved	mg/L	-	-	-	-	0.0023	0.00388					
Beryllium (Be)-Dissolved	mg/L	-	-	-	-	< 0.000100	< 0.000100					
Bismuth (Bi)-Dissolved	mg/L	-	-	-	-	< 0.000050	< 0.000050					
Boron (B)-Dissolved	mg/L	-	-	-	-	< 0.010	< 0.010					
Cadmium (Cd)-Dissolved	mg/L	Varies with hardness	Varies with hardness	-	-	0.000007	0.0000084	LT guideline not applicable [3]	Guideline is hardness dependent, refer to BC Water Quality Guidelines for more information. Guideline is applicable to water hardness between 7.0 and 455 mg/L. Guideline uses equation $e^{(1.037*ln(hardness)-4.370)}$. Lowest value for guideline is 0.000018 mg/L.	Guideline is hardness dependent, refer to BC Water Quality Guidelines for more information. Guideline is applicable to hardness between 3.4 and 285 mg/L. Guideline uses equation $e^{(0.736*ln(hardness)-4.943)}$. Lowest value for guideline is 0.00004.		
Calcium (Ca)-Dissolved	mg/L	Categorical	-	-	-	1.93	4.69	Both locations have high sensitivity to acid inputs (i.e. low buffering capacity). LT guideline not applicable [3]		Guideline categorizes the sensitivity of a water body to acid inputs (i.e. buffering capacity). Standard is 4 mg/L dissolved Ca for the most sensitive waterbodies.5 - 8 mg/L for waterbodies with moderate sensitivity to acid inputs. Waterbodies with dissolved calcium > 8mg/L are considered to have low sensitivity to acid inputs.		
Cesium (Cs)-Dissolved	mg/L	-	-	-	-	< 0.000010	< 0.000010					
Chromium (Cr)-Dissolved	mg/L	-	-	-	-	< 0.00050	< 0.00050					
Chromium (Cr(III))-Dissolved	mg/L	-	-	-	-	< 0.00050	< 0.00050					
Chromium (Cr(VI))-Dissolved	mg/L	-	-	-	-	< 0.00050	< 0.00050					
Cobalt (Co)-Dissolved	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Copper (Cu)-Dissolved	mg/L	Varies with pH, DOC, hardness	Varies with pH, DOC, hardness	-	-	***0.00082***	***0.0007***	**Upstream and downstream locations exceed the long term BCWQ for FAL.** LT guideline not applicable [3]	Guideline varies with pH, hardness and Dissolved Organic Carbon (DOC). Refer to BC Water Quality Guidelines for more information. Guideline uses lookup table incorporating sample pH, hardness and DOC.	Guideline varies with pH, hardness and Dissolved Organic Carbon (DOC). Refer to BC Water Quality Guidelines for more information. Guideline uses lookup table incorporating sample pH, hardness and DOC.		
Iron (Fe)-Dissolved	mg/L	-	0.35	-	-	0.022	0.019					
Lead (Pb)-Dissolved	mg/L	-	-	-	-	< 0.000050	< 0.000050					
Lithium (Li)-Dissolved	mg/L	-	-	-	-	< 0.0010	< 0.0010					
Magnesium (Mg)-Dissolved	mg/L	-	-	-	-	0.295	0.392					
Manganese (Mn)-Dissolved	mg/L	-	-	-	-	0.00145	0.00246					
Mercury (Hg)-Dissolved	mg/L	-	-	-	-	< 0.0000050	< 0.0000050					
Molybdenum (Mo)-Dissolved	mg/L	-	-	-	-	0.000354	0.000512					
Nickel (Ni)-Dissolved	mg/L	-	-	-	-	< 0.00050	< 0.00050					
Phosphorus (P)-Dissolved	mg/L	-	-	-	-	< 0.050	< 0.050					
Potassium (K)-Dissolved	mg/L	-	-	-	-	0.25	0.254					
Rubidium (Rb)-Dissolved	mg/L	-	-	-	-	0.00023	0.00032					
Selenium (Se)-Dissolved	mg/L	-	-	-	-	< 0.000050	< 0.000050					
Silicon (Si)-Dissolved	mg/L	-	-	-	-	2.8	2.89					
Silver (Ag)-Dissolved	mg/L	-	-	-	-	< 0.000010	< 0.000010					
Sodium (Na)-Dissolved	mg/L	-	-	-	-	1.11	1.23					
Strontium (Sr)-Dissolved	mg/L	-	-	-	-	0.00937	0.0167					
Sulfur (S)-Dissolved	mg/L	-	-	-	-	0.7	1.11					
Tellurium (Te)-Dissolved	mg/L	-	-	-	-	< 0.00020	< 0.00020					
Thallium (Tl)-Dissolved	mg/L	-	-	-	-	< 0.000010	< 0.000010					
Thorium (Th)-Dissolved	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Tin (Sn)-Dissolved	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Titanium (Ti)-Dissolved	mg/L	-	-	-	-	0.00058	0.00042					
Tungsten (W)-Dissolved	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Uranium (U)-Dissolved	mg/L	-	-	-	-	0.000108	0.000117					
Vanadium (V)-Dissolved	mg/L	-	-	-	-	< 0.00050	< 0.00050					
Zinc (Zn)-Dissolved	mg/L	Varies with pH, DOC, hardness	Varies with DOC and hardness	-	-	0.0014	0.0021	LT guideline not applicable [3]	Guideline varies with pH, hardness and Dissolved Organic Carbon (DOC). Refer to BC Water Quality Guidelines for more information.	Guideline varies with pH, hardness and Dissolved Organic Carbon (DOC). Refer to BC Water Quality Guidelines for more information.		
Zirconium (Zr)-Dissolved	mg/L	-	-	-	-	< 0.00020	< 0.00020					
Applied Guideline:		**British Columbia Approved and Working Water Quality Guidelines (NOV 2023) - BCAWWQG - Freshwater Aquatic Life** **British Columbia Approved and Working Water Quality Guidelines (NOV 2023) - BCAWWQG - Marine Aquatic Life**										
Color Key:	**Exceeds BCAWWQG Short and Long-Term Guideline**	***Exceeds BCAWWQG Long term Guideline***	**Exceeds BCAWWQG Short term Guideline**	**Exceeds BCAWWQG MAL Short term Guideline**	***Exceeds BCAWWQG MAL Long term Guideline***							
Color Key:				**Exceeds BCAWWQG MAL Short and Long-term Guidelines**	**Exceeds both BCAWWQG FAL and MAL Guidelines**							

[1]BC MOECCS. 2023. BC Water Quality Guidelines for the Protection of Aquatic Life, Wildlife & Agriculture. Accessed from: wqg_summary_aquatic(life_wildlife_agri).pdf (gov.bc.ca)

[2]BC MOECCS. 2021. BC Working Water Quality Guidelines for the Protection of Aquatic Life, Wildlife & Agriculture. Accessed from: bc_env_working_water_quality_guidelines.pdf (gov.bc.ca)

[3]Note that long-term guidelines apply to averaged data to account for chronic impacts to aquatic life. Ideally, five samples collected at evenly spaced intervals over 30 days is considered to be the minimum number needed to calculate the long-term average of any parameter, though this may vary by parameter and site conditions. Long-term guidelines applied here are for reference only and may not indicate chronic impacts to aquatic life if exceedances occur in the short term.

Receiving Environment Lab Documentation

ALS Canada Ltd.

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order	: **VA24A1174**		
Client	: **Triton Environmental Consultants Ltd.**	Laboratory	: ALS Environmental - Vancouver
Contact	: Miranda Lewis	Contact	: Can Dang
Address	: Suite 1730, 1111 West Georgia St Vancouver, BC Canada V6E 4M3	Address	: 8081 Lougheed Highway Burnaby, British Columbia Canada V5A 1W9
E-mail	: mlewis@triton-env.com	E-mail	: Can.Dang@ALSGlobal.com
Telephone	: 604 631 2213	Telephone	: +1 604 253 4188
Facsimile	: ----	Facsimile	: +1 604 253 6700
Project	: 11964	Page	: 1 of 6
Purchase order number	: 11964 - Task 20 - Phase 3C-4C	Quote number	: VA2023TRIT1000012 (VA23-TRIT100-012)
C-O-C number	: ----	QC Level	: ALS Canada Standard Quality Control
Site	: Water Analysis		
Sampler	: Aegeon, Sam		

Dates

Date Samples Received	: 22-Jan-2024 17:30	Issue Date	: 22-Jan-2024
Client Requested Due Date	: 29-Jan-2024	Scheduled Reporting Date	: 29-Jan-2024

Delivery Details

Mode of Delivery	: Undefined	Security Seal	: Not Available
No. of coolers/boxes	: ----	Temperature	: 8
Receipt Detail	:	No. of samples received / analyzed	: 2 / 2

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances (if any)
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- *Where possible, ALS will store samples for the following durations, measured from date of sample submission: 30 days for Soil and Water samples; 6 months for Tissue/Biota samples; 14 days for air samples collected on re-usable media; and 3 days for water samples submitted for microbiological testing. Longer storage times are available upon request.*
- **Temperature is recorded in °C unless otherwise noted.**

Sample Container(s)/Preservation Non-Compliances (if any)

All comparisons are made against pretreatment/preservation practices published by CCME, BC ENV, Ontario MOE, Environment Canada, Health Canada, US EPA, APHA Standard Methods, ASTM, or ISO, and comply with provincial requirements for the laboratory location.

- **No sample container/preservation non-compliance exists.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component.

Matrix: **Water**

Laboratory sample ID	Client sampling date / time	Client sample ID	Water - BC10 Dissolved Metals/Hg+Hardness -	Water - BC11 Total Metals/Hg+Hardness -	Water - E160 TSS by Gravimetry (3mg/L)	Water - E162 TDS by Gravimetry (10mg/L)	Water - E290 Total Alkalinity in Water by Titration (2 mg/L), as	Water - E298 Ammonia by Fluorescence	Water - E355-L Total Organic Carbon (Non-Purgeable) by	Water - E358-L Dissolved Organic Carbon by Combustion (0.5	Water - E366 Total Nitrogen by Colourimetry (0.03 mg/L)	Water - E372-U Total Phosphorus by Colourimetry (0.002 mg/L)	Water - E395 Total Sulfide by Colourimetry (Automated Flow)	Water - E532 Total Hexavalent Chromium (Cr VI) by IC	Water - E532A Dissolved Hexavalent Chromium (Cr VI) by IC	Water - EC395 Un-ionized Total Hydrogen Sulfide	Water - EC535 Total Trivalent Chromium (Cr III) by Calculation	Water - EC535A Dissolved Trivalent Chromium (Cr III) by	Water - EF001 Field Data	Water - S235 Anions in Water by IC
VA24A1174-001	22-Jan-2024 11:44	WLNG DS 1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
VA24A1174-002	22-Jan-2024 11:07	WLNG US 1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Proactive Holding Time Report

All sample(s) for this submission were received within the recommended holding times for the requested tests.

Requested Deliverables

Account Payable - Triton		
Tax Invoice (INVOICE (CAN))	Email	accountspayable@triton-env.com
Esdat		
Canada default ESdat format. (ESDAT_CAN)	Email	ESdat_CA+tritonenv@ESdatLabSync.net
K Shah		
ALS Excel Report (ALS_MTABXL_CAN)	Email	kshah@triton-env.com
Certificate of Analysis (Crosstab) (COA - CrossTab (CAN))	Email	kshah@triton-env.com
Certificate of Analysis Guideline (Standard) (COA - Guideline (CAN))	Email	kshah@triton-env.com
Interpretive Quality Control Report (QCI (CAN))	Email	kshah@triton-env.com
Quality Control (QC (CAN))	Email	kshah@triton-env.com
Sample Receipt Notification (standard format) (SRN - Short (CAN))	Email	kshah@triton-env.com
Keesha Prasad		
ALS Excel Report (ALS_MTABXL_CAN)	Email	keesha.prasad@triton-env.com
Certificate of Analysis (Crosstab) (COA - CrossTab (CAN))	Email	keesha.prasad@triton-env.com
Certificate of Analysis Guideline (Standard) (COA - Guideline (CAN))	Email	keesha.prasad@triton-env.com
Interpretive Quality Control Report (QCI (CAN))	Email	keesha.prasad@triton-env.com
Quality Control (QC (CAN))	Email	keesha.prasad@triton-env.com
Sample Receipt Notification (standard format) (SRN - Short (CAN))	Email	keesha.prasad@triton-env.com
Miranda Lewis		
ALS Excel Report (ALS_MTABXL_CAN)	Email	mlewis@triton-env.com
Certificate of Analysis (Crosstab) (COA - CrossTab (CAN))	Email	mlewis@triton-env.com
Certificate of Analysis Guideline (Standard) (COA - Guideline (CAN))	Email	mlewis@triton-env.com
Interpretive Quality Control Report (QCI (CAN))	Email	mlewis@triton-env.com
Quality Control (QC (CAN))	Email	mlewis@triton-env.com
Sample Receipt Notification (standard format) (SRN - Short (CAN))	Email	mlewis@triton-env.com
Tax Invoice (INVOICE (CAN))	Email	mlewis@triton-env.com
Sam Blanchard		
ALS Excel Report (ALS_MTABXL_CAN)	Email	sBlanchard@triton-env.com
Certificate of Analysis (Crosstab) (COA - CrossTab (CAN))	Email	sBlanchard@triton-env.com
Certificate of Analysis Guideline (Standard) (COA - Guideline (CAN))	Email	sBlanchard@triton-env.com
Interpretive Quality Control Report (QCI (CAN))	Email	sBlanchard@triton-env.com
Quality Control (QC (CAN))	Email	sBlanchard@triton-env.com
Sample Receipt Notification (standard format) (SRN - Short (CAN))	Email	sBlanchard@triton-env.com

Sophie Vidal

Tax Invoice (INVOICE (CAN)) Email svidal@triton-env.com

Methods with Laboratory

Sale item

Method	Laboratory	Address	City	Province	Country
Ammonia by Fluorescence					
E298	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Anions in Water by IC					
E235.Br-L	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
E235.Cl	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
E235.F	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
E235.NO2-L	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
E235.NO3-L	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
E235.SO4	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Dissolved Hexavalent Chromium (Cr VI) by IC					
E532A	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Dissolved Mercury Water Filtration					
EP509	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Dissolved Metals Water Filtration					
EP421	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Dissolved Metals/Hg+Hardness - CSR,CCME,BCAWQG,CDW					
E421	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
E509	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
EC100	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Dissolved Organic Carbon by Combustion (0.5 mg/L) in Water					
E358-L	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Dissolved Trivalent Chromium (Cr III) by Calculation					
EC535A	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Field Data					
EF001	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
TDS by Gravimetry (10mg/L)					
E162	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Total Alkalinity in Water by Titration (2 mg/L), as CaCO3					
E290	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Total Hexavalent Chromium (Cr VI) by IC					
E532	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Total Metals/Hg+Hardness - CSR,CCME,BCAWQG,CDW					
E420	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada

E508	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
EC100A	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Total Nitrogen by Colourimetry (0.03 mg/L)					
E366	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Total Organic Carbon (Non-Purgeable) by Combustion (0.5 mg/L) in Water					
E355-L	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Total Phosphorus by Colourimetry (0.002 mg/L)					
E372-U	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Total Sulfide by Colourimetry (Automated Flow) (0.0015 mg/L)					
E395	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Total Trivalent Chromium (Cr III) by Calculation					
EC535	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
TSS by Gravimetry (3mg/L)					
E160	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada
Un-ionized Total Hydrogen Sulfide					
EC395	Vancouver	8081 Lougheed Highway	Burnaby	British Columbia	Canada

Chain of Custody (COC) / Analytical Request Form

ALS Environmental
www.alsglobal.com

Canada Toll Free: 1 800 668 9878

Affix ALS barcode label here (lab use only)

COC Number: 17 -

Page 1 of 1

Report To	Contact and company name below will appear on the final report
Company:	Triton Environmental
Contact:	Miranda Lewis
Phone:	604-356-9218
	Company address below will appear on the final report
Street:	1730-1111 West Georgia Street
City/Province:	Vancouver/BC
Postal Code:	V6E 4M3
Invoice To	Same as Report To ☐ YES ☑ NO
	Copy of Invoice with Report ☐ YES ☑ NO
Company:	
Contact:	

Report Format / Distribution	
Select Report Format:	☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)
Quality Control (QC) Report with Report	☑ YES ☐ NO
☑ Compare Results to Criteria on Report - provide details below if box checked	
Select Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	mlewis@triton-env.com
Email 2	kshah@triton-env.com; sblanchard@triton-env.com
Email 3	ESdat_CA+tritonenv@ESdatLabSync.net

Invoice Distribution	
Select Invoice Distribution:	☑ EMAIL ☑ MAIL ☑ FAX
Email 1 or Fax	accountspayable@triton-env.com
Email 2	svidal@triton-env.com; mlewis@triton-env.com

Project Information	
ALS Account # / Quote #:	VA23-TRIT100-012
Job #:	11964
PO / AFE:	11964 - Task 20 - Phase 3C-4C
LSD:	

Oil and Gas Required Fields (client use)	
AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Lab Work Order # (lab use only): VA24A1174

ALS Contact: Can Dang

Sampler: Aaron Chan

Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)

Regular [R] ☑ Standard TAT if received by 3 pm - business days - no surcharges apply

PRIORITY (Business Days): 4 day [P4-20%] ☐ | 3 day [P3-25%] ☐ | 2 day [P2-50%] ☐

EMERGENCY: 1 Business day [E1 - 100%] ☐ | Same Day, Weekend or Statutory holiday [E2 - 200% (Laboratory opening fees may apply)] ☐

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm

For tests that can not be performed according to the service level selected, you will be contacted.

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	Total metals	Total mercury	Dissolved metals	Dissolved mercury	TSS	TDS	Nutrients (ammonia, ammonium, total nitrogen, total phosphorus, TOC)	Total sulfide (as H2S), Unionized Sulfide	Anions scan (Br, Cl, F, NO2, NO3, SO4)	General parameters (alkalinity)	DOC	Total Cr6+ Cr3	Dissolved Cr6+ Cr3			SAMPLES ON HOLD	Sample is hazardous (please provide further details)	NUMBER OF CONTAINERS
							F	F			P	P			F/P	P	F/P					
	WLNG DS 1	22-Jan-24	11:44	Water	R	R	R	R	R	R	R	R	R	R	R	R	R				N	8
	pH: 7.32 cond: 36µS/cm temp: 4.5°C																					
	WLNG US 1			Water	R	R	R	R	R	R	R	R	R	R	R	R	R				N	8
	pH: 7.02 cond: 26µS/cm temp: 4.3°C	22-Jan-24	11:07																			
	~~Duplicate~~			~~Water~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~							N	8
	~~Field Blank~~			~~Water~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~							N	8
	Trip Blank			~~Water~~	~~R~~	~~R~~			R	R	R	R	R	R								N	5

Environmental Division
Vancouver
Work Order Reference
VA24A1174

Telephone : +1 604 253 4188

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Spec
Are samples taken from a Regulated DW System? ☐ YES ☑ NO	
Are samples for human consumption/ use? ☐ YES ☑ NO	Triton project # 11964

-down list below

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen ☐ SIF Observations Yes ☐ No ☐

Ice Packs ☒ Ice Cubes ☐ Custody seal intact Yes ☐ No ☐

Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
							8

SHIPMENT RELEASE (client use)		
Released by: Aaron Chan		Time: 14:00

INITIAL SHIPMENT RECEPTION (lab use only)		
Received by:	Date:	Time:

FINAL SHIPMENT RECEPTION (lab use only)		
Received by: HN	Date: 1/22	Time: 3:30

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

SEPT 2017 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form.**

Receiving Environment Field Notes and Logs

FortisBC Eagle Mountain-Woodfibre Gas Pipeline

Water Discharge Authorization Water Quality Monitoring

2024-1-22-Chan-7B147

Project Component:	Tunnel	**Site Name:**	Receiving Environment - Downstream of Discharge
Inspection Date:	01/22/2024	**Location:**	WLNG
Triton QP:	Aegean Chan	**Latitude/Longitude:**	49.6683 -123.247958
Temperature(c):	Low 3 High 6	**Permit:**	PE 110136
Weather Conditions:	Light Rain	**Ground Conditions:**	Wet

Observations

Time: 11:44:00 **Flow Volume (visual):** high

Notes:

Odour Detected?:	No	**Notes:**	
Unusual Colour?	No	**Notes:**	
Unusual Observations?	No	**Notes:**	
Sheen on Water?	No	**Notes:**	

Samples Collected - Parameters

Total Metals + Mercury	Yes	**General Parameters (Alkalinity)**	Yes	**Other Sample:**	
Dissolved Metals + Mercury	Yes	**Total Sulfide, Unionized Sulfide**	Yes		
TSS	Yes	**Anions**	Yes		
TDS	Yes	**VOC/VPH**	No	**QA Samples:**	No
Nutrients	Yes	**EPH, PAH, LEPH/HEPH**	No		
DOC	Yes	**Trout LC50**	No		

Logger Maintenance

Logger Maintenance Performed?	No	**Photo of COC with Lab Signature?**	Yes

Describe Logger Maintenance

2024-1-22-Chan-7B147

Photos

Photo: 1

Location: Downstream

Description: Downstream location - US View

Photo: 2

Location: Downstream

Description: Downstream location - DS View

Photos

Photo: 3

Location: Downstream

Description: Downstream location- Across View

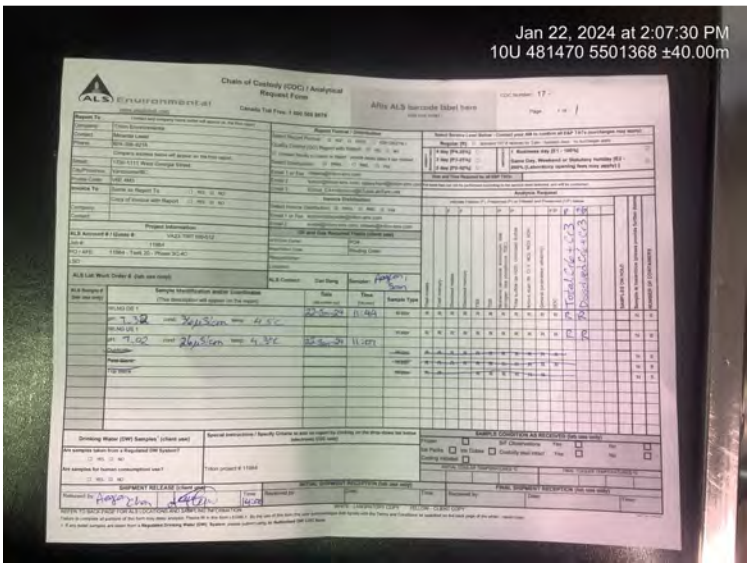

Photo: 4

Location: Lab COC

Description: Lab COC

2024-1-22-Chan-7B147

Sign Off

Report Prepared By: Aegean Chan

Report Reviewer: Miranda Lewis

Name:

Designation:

Designation Number:

Report Reviewed: Yes

Professional(s) of Record: N/A

FortisBC Eagle Mountain-Woodfibre Gas Pipeline

Water Discharge Authorization Water Quality Monitoring

2024-1-22-Chan-F8099

Project Component:	Tunnel	**Site Name:**	Receiving Environment - Upstream of Discharge
Inspection Date:	01/22/2024	**Location:**	WLNG
Triton QP:	Aegean Chan	**Latitude/Longitude:**	49.669455 -123.25087
Temperature(c):	Low 3 High 6	**Permit:**	PE 110136
Weather Conditions:	Light Rain	**Ground Conditions:**	Wet

Observations

Time: 11:07:00 **Flow Volume (visual):** high

Notes:

Odour Detected?:	No	**Notes:**	
Unusual Colour?	No	**Notes:**	
Unusual Observations?	No	**Notes:**	
Sheen on Water?	No	**Notes:**	

Samples Collected - Parameters

Total Metals + Mercury	Yes	**General Parameters (Alkalinity)**	Yes	**Other Sample:**	
Dissolved Metals + Mercury	Yes	**Total Sulfide, Unionized Sulfide**	Yes		
TSS	Yes	**Anions**	Yes		
TDS	Yes	**VOC/VPH**	No	**QA Samples:**	No
Nutrients	Yes	**EPH, PAH, LEPH/HEPH**	No		
DOC	Yes	**Trout LC50**	No		

Logger Maintenance

Logger Maintenance Performed?	No	**Photo of COC with Lab Signature?**	Yes

Describe Logger Maintenance

Photos

Photo: 1

Location: Upstream

Description: Upstream location - US View

Photo: 2

Location: Upstream

Description: Upstream location- DS View

Photos

Photo: 3

Location: Upstream

Description: Upstream location - Across View

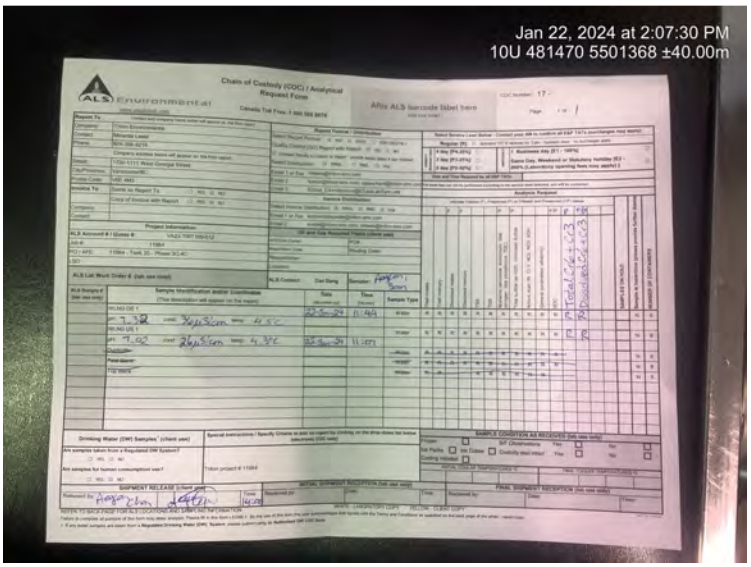

Photo: 4

Location: Lab COC

Description: Lab COC

Sign Off

Report Prepared By: Aegean Chan

Report Reviewer: Miranda Lewis

Name:

Designation:

Designation Number:

Report Reviewed: Yes

Professional(s) of Record: N/A