Eagle Mountain - Woodfibre Gas Pipeline Project

BCER Waste Discharge Permit Weekly Report

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Preamble

This weekly report for the British Columbia Energy Regulator (BCER) Waste Discharge Permit (BCER number PE-110163) for the FortisBC Eagle Mountain – Woodfibre Gas Pipeline (EGP) Project includes the results of water quality monitoring and sampling of the receiving environments (upstream and downstream) and points of discharge.

FortisBC has retained Triton Environmental Consultants Ltd. as the Qualified Professional to implement and oversee the monitoring and sampling program in the receiving environments. The data represented below, including laboratory reported exceedances, represent background conditions from the receiving environment sampling as shown on the Waste Discharge Permit.

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 Permit PE-110163 Section 4.2:

> The Permittee 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 permit. 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 data 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 the subject permit, and also made publicly available on the FortisBC Eagle Mountain-Woodfibre Gas Pipeline Project | Talking Energy webpage.

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 Permit.

At the receiving environments, real time and daily readings are being monitored at the same time with one piece of equipment, allowing all the daily readings real time. Visible sheen will be monitored with visual inspections during times of discharge or sampling.
At the point of discharge from the WTP, the parameters are being monitored using field equipment and sondes/real time meters. Table 1 and Table 2 below show how each parameter is being monitored.

Table 1. Monitor Details for the Point of Discharge from the Water Treatment System-BC Rail and Woodfibre

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 GF Dryloc pH Series NPT
	Temperature	Monitoring using LevelPro PT100 Temperature and Signet 2350 Temp sensor
	NTU	Monitoring using Observator NEP9504GPI
	Electrical Conductivity	Monitoring using ProCon C450
Weekly (or per batch) Lab Samples	List prescribed in permit	Lab samples

Table 2. Monitor Details for the Receiving Environment (upstream and downstream)-BC Rail and Woodfibre

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	Lab samples

*Note that Woodfibre receiving environment downstream sonde is not in place due to dry conditions

Summary-BC Rail Site

Site Activities

- Weekly upstream and downstream taken by Triton.
- Water produced by the water treatment plant is being recirculated for tunneling and to create grout for tunneling.

Point of Discharge from Water Treatment System Monitoring

Table 3 below includes information on water quality and lab sampling during discharges. Appendix A includes a full set of lab results with real time/field samples from discharges.

Table 3: Discharge from Water Treatment System Information

Location	Date of Discharge	Date of Lab Sample (for the discharge)	Real Time Monitored	Field Samples Taken	Discharge Rate (batch)	Discharge Volume (batch)	Results
BC Rail- No discharges during this time period							

*Max discharge is 515 m3/day

Exceedances

No exceedances this reporting period.

Receiving Environment Monitoring

The receiving environment is being monitored as outlined in the permit.

Table 4: Upstream Monitoring Information

Location	Date of Lab Sample	Real Time Monitored	Results
Squamish River Upstream	2025-01-13	Yes *	Full set of lab sample results, photo and documentation are provided in Appendix B.

Table 5: Downstream Monitoring Information

	Date of Lab Sample	Real Time Monitored	Results
Squamish River Downstream	2025-01-13	Yes *	Full set of lab sample results, photo and documentation are provided in Appendix B.

***** Sondes set up to log temperature, specific conductivity, salinity (in PSU), pH, ORP, DO (mg/L), and turbidity (NTU) at 15-minute intervals.

Receiving Environment Monitoring Details

- All receiving environment lab results are in Appendix B.
- Any 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.

Summary-Woodfibre

Site Activities

- Weekly upstream, downstream and end of pipe taken by Triton.
- Ongoing mining at WLNG.

Point of Discharge from Water Treatment System Monitoring

Table 3 below includes information on the discharge water. Appendix C includes real time/field samples from the discharge.

Table 3: Discharges from Water Treatment System

Location	Date of Discharge	Real Time Monitored and Daily Monitoring	Discharge Volume
Woodfibre	2025-01-13	Yes-Appendix C	411m^3
Woodfibre	2025-01-14	Yes-Appendix C*lab sample day	444m^3
Woodfibre	2025-01-15	Yes-Appendix C	498m^3
Woodfibre	2025-01-16	Yes-Appendix C	487m^3
Woodfibre	2025-01-17	Yes-Appendix C	467m^3
Woodfibre	2025-01-18	Yes-Appendix C	411m^3
Woodfibre	2025-01-19	Yes-Appendix C	421m^3

*Max discharge is 1500m^3/day

Exceedances

Total Copper Exceedance on January 14th.

Receiving Environment Monitoring

The receiving environment is being monitored as outlined in the permit with additional oversight by the QP.

Table 4: Upstream Monitoring Information

Location	Date of Lab Sample	Real Time Monitored	Results
Woodfibre Upstream	2025-01-14	Yes *	Full set of lab sample results, photo and documentation are provided in Appendix D.

Table 5: Downstream Monitoring Information

	Date of Lab Sample	Real Time Monitored	Results
Woodfibre Downstream	2025-01-14	Yes *	Full set of lab sample results, photo and documentation are provided in Appendix D.

***** Sondes set up to log temperature, specific conductivity, salinity (in PSU), pH, ORP, DO (mg/L), and turbidity (NTU) at 15-minute intervals.

Receiving Environment Monitoring Details

- Visual sheen checks are conducted during discharges.
- Recorded exceedances in the laboratory and field samples collected from the receiving environment (upstream and downstream) may be indicative of the existing background water quality in the East Creek and are not related to the EGP Project activities.

Appendix A: BCR Site Point of Discharge from Water Treatment Plant Documentation

BCR Site Batch Sample Analysis

No Discharges

BCR Site Batch Sample Lab Documentation

No Discharges

BCR Site WTP Discharge Field Notes and Logs
No Discharges

Appendix B: BCR Site Receiving Environment Documentation

BCR Site Receiving Environment Sample Analysis

TRITON	Sample ID	Reviewed and signed off by:	College of Applied Biologists Farshad Shafiei RPBio 3781 CAB		Farshad Shafiei Ph.D., R.P.Bio.	SQU US1 (Upstream)	SQU DS1 (Downstream)	Sample or value notes	BCWQ FAL - Short Term	BCWQ FAL - Long Term	BCWQ MAL - Short Term	BCWQ MAL - Long Term
	LAB ID					VA25A0704-001	VA25A0704-002					
	Date Sampled					13-Jan-2025	13-Jan-2025					
	Time Sampled					11:05	12:24					
Analyte	Units	FAL-ST [1,2]	FAL-LT [1,2]	MAL-ST [1]	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	7.2	7.15		If natural pH < 6.5, no statisticaly 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	Max +/- from BKG 1°C [4]	-	Max +/- from BKG 1°C [4]	-	4.5	4.4		Guideline is species-dependent. Short-term daily temperature guideline is 19°C for streams with unknown fish distribution. Refer to footnote 4 for background temperature range for the Squamish River. Refer to BC Water Quality Guidelines for more information Hourly rate of change not to exceed 1°C. Calculation: US value +/- 1 = guideline range		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. treams with unknown fish distribution. Refer to footnote 4 for background temperature range for the	
Conductivity (field)	µS/cm	-	-	-	-	111	79					
Turbidity (field)	NTU	Varies with background, see note Guideline = 9.19	Varies with background, see note Guideline = 4.08 5-week discrete sampling average = 1.8 (DS)	Varies with background, see note Guideline = 9.19	Varies with background, see note Guideline = 4.08 5-week discrete sampling average = 1.8 (DS)	1.19	1.73		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. Calculation: US value + 8 = DS guideline Change from background of 5 NTU at any time when background is 8 - 50 NTU during high flows or in turbid waters. Calculation: US value + 5 = DS guideline Change from background of 10% when background is > 50 NTU at any time during high flows or in turbid waters. Calculation: US value + (US value*0.1) = DS guideline	Change from background of 2 NTU at any one time for 30 days in clear flows. Note that a rolling average of US values over a 30-day period is required to properly calculate this guideline. Guideline calculated in this spreadsheet using US concentration at the time of sampling.	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. Calculation: US value + 8 = DS guideline Change from background of 5 NTU at any time when background is 8 - 50 NTU during high flows or in turbid waters. Calculation: US value + 5 = DS guideline Change from background of 10% when background is > 50 NTU at any time during high flows or in turbid waters. Calculation: US value + (US value*0.1) = DS guideline	Change from background of 2 NTU at any one time for 30 days in clear flows. Note that a rolling average of US values over a 30-day period is required to properly calculate this guideline. Guideline calculated in this spreadsheet using US concentration at the time of sampling.
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	13.13	11.85		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 $CaCO_3$) (total)	mg/L	-	-	-	-	23.3	22.4					
Total Dissolved Solids	mg/L	-	-	-	-	52	50					
Total Suspended Solids	mg/L	Varies with background, see note Guideline = 28	Varies with background, see note Guideline = 8.0 5-week discrete sampling average = 3.42 (DS)	Varies with background, see note Guideline = 28	Varies with background, see note Guideline = 8.0 5-week discrete sampling average = 3.42 (DS)	< 3.0	< 3.0		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. Calculation: US value + 25 = DS guideline Change from background of 10 mg/L at any one time when background 25-100 mg/L during high flows or turbid waters. Calculation: US value + 10 = DS guideline Change from background of 10% when background is > 100 mg/L at any time during high flows or turbid waters. Calculation: US value + (US value*0.1) = DS guideline	Change from background of 5 mg/L @ one time for a druation of 30 days in clear flow. Note that a rolling average of US values over a 30-day period is required to properly calculate this guideline. Guideline calculated in this spreadsheet using US concentration at the time of sampling.	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. Calculation: US value + 25 = DS guideline Change from background of 10 mg/L at any one time when background 25-100 mg/L during high flows or turbid waters. Calculation: US value + 10 = DS guideline Change from background of 10% when background is > 100 mg/L at any time during high flows or turbid waters. Calculation: US value + (US value*0.1) = DS guideline	Change from background of 5 mg/L @ one time for a druation of 30 days in clear flow. Note that a rolling average of US values over a 30-day period is required to properly calculate this guideline. Guideline calculated in this spreadsheet using US concentration at the time of sampling.
Dissolved Organic Carbon (DOC)	mg/L	-	-	-	-	1.35	1.21			Long-term (30-day) median within 20% of background median [3]		
Total Alkalinity ($CaCO_3$)	mg/L	-	Categorical	-	-	19.9	18.9			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 H_2S)	mg/L	-	0.002	-	-	< 0.0015	< 0.0015			Working guideline		
Total Sulfide (as H_2S)	mg/L	-	-	-	-	< 0.0016	< 0.0016					
Anions and Nutrients												
Ammonia	mg/L ammonia-N	Varies with pH and temperature. See note. Guideline = 18.7	Varies with pH and temperature. See note. Guideline = 1.97	Varies with pH and temperature. See note. Guideline = 121	Varies with pH, temperature and salinity. See note. Guideline = 29	0.103	0.0575		Guideline for ammonia as N and is pH and temperature dependent. Refer to Table 27D in BC WQG for guideline values.	Guideline for ammonia as N and is pH and temperature dependent. Refer to Table 27C in BC WQG for guideline values.	Guideline for ammonia as N. Guideline is pH, temperature and salinity dependent. Refer to Table 27F in BC WQG for guideline values.	Guideline for ammonia as N. Guideline is pH, temperature and salinity dependent. Refer to Table 27E in BC WQG for guideline values.
Bromide	mg/L	-	-	-	-	< 0.050	< 0.050					
Chloride	mg/L	600	150	+/- 10% from BKG	+/- 10% from BKG	6.12	4.98				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 Guideline = 0.748	-	1.5	-	0.03	0.029		Guideline has interim status. Guideline is calculated with the following equation: Guideline = [-51.73 + 92.57 log10 (hardness)] * 0.01			
Nitrate (as N)	mg/L	32.8	3	-	3.7	0.148	0.0877					
Nitrite (as N)	mg/L	Varies with chloride. See note. Guideline = 0.24	Varies with chloride. See note. Guideline = 0.08	-	-	0.0232	0.0062		Varies with chloride. Refer to Table 27B in BC WQG for guideline values.	Varies with chloride. Refer to Table 27B in BC WQG for guideline values.		
Total Nitrogen	mg/L	-	-	-	-	0.274	0.178					
Total Phosphorous	mg/L	-	0.005 to 0.015	-	-	0.0437	0.0251			Guideline is for lakes, refer to BCWQ guideline for nutrients and algae for more information. Guideline does not apply to site.		
Sulfate (as SO_4)	mg/L	-	Varies with hardness. See note. Guideline = 128	-	-	7.46	7.06			Guidelines for hardness ranges below: Hardness 0 - 30: 128 Hardness 31 - 75: 218 Hardness 76 - 180: 309 Hardness 181 - 250: 429		
Total Metals												
Aluminum (Al)-Total	mg/L	-	Varies with pH, DOC, hardness Guideline = 0.077 5-week field average = 0.11 (US), 0.12 (DS)	-	-	0.0458	0.0547			Guideline varies with pH, hardness and Dissolved Organic Carbon (DOC). Guideline is calculated with the following equation: Guideline = (EXP((0.645 * LN(DOC)) + (2.255 * LN(hardness)) + (1.995 * pH) + (-0.284 * (LN(hardness) * pH))-9.898)/3/1000) If hardness or DOC is below the hardness or DOC range, the minimum hardness or DOC will be applied in the calculation.		
Antimony (Sb)-Total	mg/L	0.25	0.074	-	-	< 0.00010	< 0.00010					
Arsenic (As)-Total	mg/L	-	0.005	-	0.0125	0.00016	0.00018					Interim guideline status
Barium (Ba)-Total	mg/L	-	1	-	-	0.0103	0.0106			Working guideline status		
Beryllium (Be)-Total	mg/L	-	0.00013	-	0.100	< 0.000100	< 0.000100			Working guideline status		Working guideline status
Bismuth (Bi)-Total	mg/L	-	-	-	-	< 0.000050	< 0.000050					
Boron (B)-Total	mg/L	-	1.2	-	1.2	0.016	0.014					
Cadmium (Cd)-Total	mg/L	-	-	-	0.00012	0.0000064	0.0000058					Working guideline status
Calcium (Ca)-Total	mg/L	-	-	-	-	7.54	7.31					
Cesium (Cs)-Total	mg/L	-	-	-	-	0.000029	0.000029					
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	-	0.0025	-	0.0015	< 0.00050	< 0.00050			Working guideline status		Working guideline status
Cobalt (Co)-Total	mg/L	0.11	0.004	-	-	0.00014	0.00013					
Copper (Cu)-Total	mg/L	-	-	0.003	0.0014 5-week field average = 0.00089 (US), 0.00092 (DS)	0.00069	0.0007					
Iron (Fe)-Total	mg/L	1	-	-	-	0.305	0.31					
Lead (Pb)-Total	mg/L	-	-	0.14	0.002 5-week field average = 0.00005 (US), 0.00006 (DS)	< 0.000050	< 0.000050					
Lithium (Li)-Total	mg/L	-	-	-	-	0.0018	0.0019					
Magnesium (Mg)-Total	mg/L	-	-	-	-	1.09	1					
Manganese (Mn)-Total	mg/L	Varies with hardness Guideline = 0.715	Varies with hardness Guideline = 0.768	-	-	0.0191	0.0193		Guideline varies with hardness. The guideline is calculated using the following equation: Guideline = (0.0044 * hardness + 0.605) Guideline applies to samples with hardness 25-259 mg/L. Lowest value for guideline is 0.77 mg/L. If hardness is below the hardness range, the minimum hardness will be applied in the calculation.	Guideline varies with hardness, refer to BC Water Quality Guidelines for more information. The guideline is calculated using the following formula: Guideline = (0.01102 * hardness + 0.54) Guideline applies to samples with hardness 37-450 mg/L. Lowest value for guideline is 0.81 mg/L. If hardness is below the hardness range, the minimum hardness will be applied in the calculation.		
Mercury (Hg)-Total	mg/L	-	Varies with methyl mercury Guideline = N/A	-	-	< 0.0000050	< 0.0000050			When MeHg ≤ 0.5% of total Hg, guideline is equal to 0.02 mg/L Guideline = 0.1/[MeHg/totalHg]. When MeHg ≤ 0.5% of total Hg, guideline is equal to 0.02 mg/L		
Molybdenum (Mo)-Total	mg/L	46	7.6	-	-	0.000582	0.000565					
Nickel (Ni)-Total	mg/L	-	-	-	0.0083	< 0.00050	< 0.00050					Working guideline status
Phosphorus (P)-Total	mg/L	-	0.005 to 0.015	-	-	0.069	< 0.050			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	-	-	-	-	1.09	0.913					
Rubidium (Rb)-Total	mg/L	-	-	-	-	0.00157	0.00148					
Selenium (Se)-Total	mg/L	-	0.002	-	0.002	< 0.00005	< 0.000050			Guideline for freshwater aquatic life (water column). Alert concentration is 0.001 mg/L, with separate guideliens for sediment, invertebrate and fish tissue. Refer to BC Water Quality Guidelines for more information on guideliens and sampling guidance.		Guideline for marine aquatic life (water column). Alert concentration is 0.001 mg/L, with separate guideliens for sediment, invertebrate and fish tissue. Refer to BC Water Quality Guidelines for
Silicon (Si)-Total	mg/L	-	-	-	-	6.19	5.83					
Silver (Ag)-Total	mg/L	Varies with hardness, see note Guideline = 0.0001	Varies with hardness, see note Guideline = 0.00005 5-week field average = < 0.00001 (US), 0.0000136 (DS)	0.003	0.0015	< 0.000010	< 0.000010		Varies with hardness Guideline ranges: Hardness ≤ 100: 0.0001 Hardness > 100: 0.003	Varies with hardness Guideline ranges: Hardness ≤ 100: 0.00005 Hardness > 100: 0.0015		Guideline applies to open coast and estuaries. Guideline is applicable to the EGP site.
Sodium (Na)-Total	mg/L	-	-	-	-	5.05	4.19					
Strontium (Sr)-Total	mg/L	-	-	-	-	0.0494	0.0512					
Sulfur (S)-Total	mg/L	-	-	-	-	2.16	2.05					
Tellurium (Te)-Total	mg/L	-	-	-	-	< 0.00020	< 0.00020					
Thallium (Tl)-Total	mg/L	-	0.00003	-	-	< 0.000010	< 0.000010			30-day average, site-specific objective for the lower Columbia River, BC. Guideline is for reference only and does not apply to tnhe 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	-	-	-	-	0.00094	0.00148					
Tungsten (W)-Total	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Uranium (U)-Total	mg/L	0.0165	0.0075	-	-	0.000036	0.000038			Working guideline status		
Vanadium (V)-Total	mg/L	-	0.06	-	0.005 5-week field average = 0.00123 (US), 0.00113 (DS)	0.00125	0.00116					Working guideline status
Zinc (Zn)-Total	mg/L	-	-	0.055	Guideline = 0.010 5-week field average = < 0.0055 (US), 0.780 (DS)	< 0.0030	0.0032					
Zirconium (Zr)-Total	mg/L	-	-	-	-	< 0.00020	< 0.00020					
Dissolved Metals												
Aluminum (Al)-Dissolved	mg/L	-	-	-	-	0.0197	0.0214					
Antimony (Sb)-Dissolved	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Arsenic (As)-Dissolved	mg/L	-	-	-	-	0.00015	0.00014					
Barium (Ba)-Dissolved	mg/L	-	-	-	-	0.00982	0.0101					
Beryllium (Be)-Dissolved	mg/L	-	-	-	-	< 0.000100	< 0.000100					
Bismuth (Bi)-Dissolved	mg/L	-	-	-	-	< 0.000050	< 0.000050					
Boron (B)-Dissolved	mg/L	-	-	-	-	0.014	0.012					
Cadmium (Cd)-Dissolved	mg/L	Varies with hardness, see note Guideline = 0.000131	Varies with hardness, see note Guideline = 0.000063	-	-	0.0000074	0.0000055		Guideline is hardness dependent. Guideline is appilcable to water hardness between 7.0 and 455 mg/L. Guideline is calculated with the following formula: Guideline = (EXP(1.03 * (LN(hardness)) - 5.274)/1000) Lowest value for guideline is 0.000018 mg/L. If hardness is below the hardness range, the minimum hardness will be applied in the calculation.	Guideline is hardness dependent. Guideline is applicable to hardness between 3.4 and 285 mg/L. Guideline is calculated with the following formula: Guideline = (EXP(0.736 * (LN(hardness)) - 4.943)/1000) Lowest value for guiedeline is 0.00004. If hardness is below the hardness range, the minimum hardness will be applied in the calculation.		
Calcium (Ca)-Dissolved	mg/L	-	Categorical, see note	-	-	7.16	7.01			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	-	-	-	-	0.000026	0.000027					
Chromium (Cr)-Dissolved	mg/L	-	-	-	-	< 0.00050	< 0.00050					
Cobalt (Co)-Dissolved	mg/L	-	-	-	-	0.00012	0.00011					
Copper (Cu)-Dissolved	mg/L	Guideline varies with other parameters, see note Guideline = 0.0016	Guideline varies with other parameters, see note Guideline = 0.0003 5-week field average = 0.00074 (US), 0.0007 (DS)	-	-	0.00056	0.00051		Guideline varies with other parameters and is calculated using BC BLM software. Simplified model: Temperature, pH, DOC and hardness Detailed model: Temperature, pH, DOC, humic acid content, total calcium, total magnesium, total sodium, total potassium, sulphate, chloride, and alkalinity Guideline calculated using values for parameters above taken at the specific site on each sampling date	Guideline varies with other parameters and is calculated using BC BLM software. Simplified model: Temperature, pH, DOC and hardness Detailed model: Temperature, pH, DOC, humic acid content, total calcium, total magnesium, total sodium, total potassium, sulphate, chloride, and alkalinity Guideline calculated using values for parameters above taken at the specific site on each sampling date		
Iron (Fe)-Dissolved	mg/L	0.35	-	-	-	0.208	0.211					
Lead (Pb)-Dissolved	mg/L	-	Guideline varies with DOC and hardness Guideline = 0.00206 5-week field average = <0.00005 (US), <0.00005 (DS)	-	-	< 0.000050	< 0.000050			Guideline varies with DOC and hardness, refer to BC Water Quality Guidelines for more information. Guideline uses equation (EXP((0.514*LN(DOC))+(0.214*(LN(Hardness)))+0.4354))/2/1000 where DOC range is 0.5-31.5 mg/L and hardness range is 4.7-511 mg/L.		
Lithium (Li)-Dissolved	mg/L	-	-	-	-	0.0018	0.0019					
Magnesium (Mg)-Dissolved	mg/L	-	-	-	-	1.08	1.03					
Manganese (Mn)-Dissolved	mg/L	-	-	-	-	0.0189	0.0181					
Mercury (Hg)-Dissolved	mg/L	-	-	-	-	< 0.0000050	< 0.0000050					
Molybdenum (Mo)-Dissolved	mg/L	-	-	-	-	0.000548	0.000557					
Nickel (Ni)-Dissolved	mg/L	Guideline varies with other parameters, see note Guideline = 0.0164	Guideline varies with other parameters, see note Guideline = 0.001079 5-week field average = < 0.0005 (US), < 0.0005 (DS)	-	-	< 0.00050	< 0.00050		Guideline varies with other parameters and is calculated using BC BLM software. Simplified model: Temperature, pH, DOC and hardness Detailed model: Temperature, pH, DOC, humic acid content, total calcium, total magnesium, total sodium, total potassium, sulphate, chloride, and alkalinity Guideline calculated using values for parameters above taken at the specific site on each sampling date	Guideline varies with other parameters and is calculated using BC BLM software. Simplified model: Temperature, pH, DOC and hardness Detailed model: Temperature, pH, DOC, humic acid content, total calcium, total magnesium, total sodium, total potassium, sulphate, chloride, and alkalinity Guideline calculated using values for parameters above taken at the specific site on each sampling date		
Phosphorus (P)-Dissolved	mg/L	-	-	-	-	< 0.050	< 0.050					
Potassium (K)-Dissolved	mg/L	-	-	-	-	1.05	0.948					
Rubidium (Rb)-Dissolved	mg/L	-	-	-	-	0.00138	0.0014					
Selenium (Se)-Dissolved	mg/L	-	-	-	-	< 0.000050	< 0.000050					
Silicon (Si)-Dissolved	mg/L	-	-	-	-	6.1	5.84					
Silver (Ag)-Dissolved	mg/L	-	-	-	-	< 0.000010	< 0.000010					
Sodium (Na)-Dissolved	mg/L	-	-	-	-	4.71	4.22					
Strontium (Sr)-Dissolved	mg/L	-	-	-	-	0.0488	0.0506					
Sulfur (S)-Dissolved	mg/L	-	-	-	-	1.84	2.06					
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	-	-	-	-	< 0.00030	< 0.00030					
Tungsten (W)-Dissolved	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Uranium (U)-Dissolved	mg/L	-	-	-	-	0.000033	0.000032					
Vanadium (V)-Dissolved	mg/L	-	-	-	-	0.00112	0.001					
Zinc (Zn)-Dissolved	mg/L	Varies with DOC and hardness Guideline = 0.013	Varies with pH, DOC, hardness Guideline = 0.0039 5-week field average = 0.0042 (US), 0.714 (DS)	-	-	0.0022	0.0019		Guideline varies with DOC and hardness. Guideline is calculated using the following formula: Guideline = (EXP((0.833 * (LN(hardness))) + (0.24 * (LN(DOC))) + 0.526)/2/1000) If hardness or DOC is below the hardness or DOC range, the minimum hardness or DOC will be applied in the calculation.	Guideline varies with pH, hardness and Dissolved Organic Carbon (DOC). Guideline is calculated using the following formula: Guideline = (EXP((0.974 * (LN(hardness))) - (0.815 * pH) + (0.398 * (LN(DOC))) + 4.625)/2/1000) Guideline only applies to water with pH between 6.5 and 8.13, DOC between 0.3 and 22.9 mg/L, anmd hardness between 23.4 and 399 mg/L. If hardness or DOC is below the hardness or DOC range, the minimum hardness or DOC will be applied in the calculation.		
Zirconium (Zr)-Dissolved	mg/L	-	-	-	-	< 0.00020	< 0.00020					
Applied Guideline:		**British Columbia Approved and Working Water Quality Guidelines (NOV 2023) for Freshwater Aquatic Life (FAL) & Marine Aquatic Life (MAL) Short-Term (ST) & Long-Term (LT)**										

[1]BC MOECCS. 2023. BC Water Qualtiy Guidelines for the Protection of Aquatic Life, Wildlife & Agriculture. Accessed from: wqg_summary_aquaticlife_wildlife_agri.pdf (gov.bc.ca)
[2]BC MOECCS. 2021. BC Working Water Qualtiy Guidelines for the Protection of Aquatic Life, Widlife & 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.
[4]Background temperature ranges: Dec-Feb: 2.0-4.0C; Mar-Apr: 4.0-6.0C; May-June: 6.0-12.0C; Jul-Sept: 9.0-12.0C; Oct-Nov: 3.0-5.0
Reference: Triton Environmental Consulants Ltd. 2023. Memo - Background water quality values for the BC Rail Discharge to Squamish River
For guidelines dependent on other parameters, when hardness, pH or DOC are below the range stated in the guideline, the lowest value in the range is used to calculate the guideline.

Parameters Used to Calculate Guidelines

Analyte	Units	Method of Measurements	Values	
			SQU US1 (Upstream)	SQU DS1 (Downstream)
pH (field)	pH units	Field pH taken using handheld meters during sampling used in calculations	7.2	7.15
Temperature (field)	°C	Field temperature taken using handheld meters during sampling used in calculations	4.5	4.4
Turbidity (field)	NTU	Field turbidity taken using handheld meters during sampling used in calculations	1.19	1.73
Hardness (as CaCO3) (total)	mg/L	Laboratory tested total hardness taken at each respective sample site on the day of sampling used in guideline calculations	23.3	22.4
Dissolved Organic Carbon (DOC)	mg/L	Laboratory tested dissolved organic carbon tested at the lab used in guideline calculations	1.35	1.21
Total Alkalinity ($CaCO_3$)	mg/L	Laboratory tested total alkalinity used in calculations	19.9	18.9
Chloride	mg/L	Laboratory tested chloride taken at each respective sample site on the day of sampling used in guideline calculations	6.12	4.98

BCR Site Receiving Environment Lab Documentation

CERTIFICATE OF ANALYSIS

Work Order	: **VA25A0704**		
Client	: **Triton Environmental Consultants Ltd.**	Laboratory	: ALS Environmental - Vancouver
Contact	:	Account Manager	
Address	:	Address	
Telephone	: ----	Telephone	
Project	: 11964	Date Samples Received	: 13-Jan-2025 16:25
PO	: 11964 - Task 20 - Phase 3C-4C	Date Analysis Commenced	: 14-Jan-2025
C-O-C number	: ----	Issue Date	: 20-Jan-2025 12:20
Sampler	: ----		
Site	: Water Analysis		
Quote number	: VA25-TRIT100-001		
No. of samples received	: 3		
No. of samples analysed	: 3		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
		Metals, Burnaby, British Columbia
		Inorganics, Burnaby, British Columbia
		Metals, Burnaby, British Columbia
		Inorganics, Burnaby, British Columbia
		Metals, Burnaby, British Columbia
		Administration, Burnaby, British Columbia

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key: CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.
LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
°C	degrees celsius
mg/L	milligrams per litre
pH units	pH units
µS/cm	microsiemens per centimetre

<: less than.
>: greater than.
Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical Results

Sub-Matrix: Water (Matrix: Water)				Client sample ID	SQU US 1	SQU DS 1	Field Blank	----	----
				Client sampling date / time	13-Jan-2025 11:05	13-Jan-2025 12:24	13-Jan-2025 10:15	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0704-001	VA25A0704-002	VA25A0704-003	----	----
					Result	Result	Result	----	----
Field Tests									
Conductivity, field	----	EF001/VA	0.10	µS/cm	111.00	79.000	----	----	----
pH, field	----	EF001/VA	0.10	pH units	7.20	7.20	----	----	----
Temperature, field	----	EF001/VA	0.10	°C	4.50	4.40	----	----	----
Physical Tests									
Hardness (as CaCO3), dissolved	----	EC100/VA	0.60	mg/L	22.3	21.7	<0.60	----	----
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L	23.3	22.4	<0.60	----	----
Solids, total dissolved [TDS]	----	E162/VA	10	mg/L	52	50	<10	----	----
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L	<3.0	<3.0	<3.0	----	----
Alkalinity, total (as CaCO3)	----	E290/VA	2.0	mg/L	19.9	18.9	<2.0	----	----
Anions and Nutrients									
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L	0.103	0.0575	<0.0050	----	----
Bromide	24959-67-9	E235.Br-L/VA	0.050	mg/L	<0.050	<0.050	<0.050	----	----
Chloride	16887-00-6	E235.Cl/VA	0.50	mg/L	6.12	4.98	<0.50	----	----
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L	0.030	0.029	<0.020	----	----
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L	0.148	0.0877	<0.0050	----	----
Nitrite (as N)	14797-65-0	E235.NO2-L/VA	0.0010	mg/L	0.0232	0.0062	<0.0010	----	----
Nitrogen, total	7727-37-9	E366/VA	0.030	mg/L	0.274	0.178	<0.030	----	----
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L	0.0437	0.0251	<0.0020	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L	7.46	7.06	<0.30	----	----
Organic / Inorganic Carbon									
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L	1.35	1.21	<0.50	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SQU US 1	SQU DS 1	Field Blank	----	----
					Client sampling date / time	13-Jan-2025 11:05	13-Jan-2025 12:24	13-Jan-2025 10:15	----	----
						VA25A0704-001	VA25A0704-002	VA25A0704-003	----	----
						Result	Result	Result	----	----
Total Sulfides										
Sulfide, total (as S)	18496-25-8	E395/VA	0.0015	mg/L		<0.0015	<0.0015	<0.0015	----	----
Sulfide, un-ionized (as H2S), from total	7783-06-4	EC395/VA	0.0015	mg/L		<0.0015	<0.0015	----	----	----
Sulfide, total (as H2S)	7783-06-4	E395/VA	0.0016	mg/L		<0.0016	<0.0016	<0.0016	----	----
Total Metals										
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L		0.0458	0.0547	<0.0030	----	----
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L		0.00016	0.00018	<0.00010	----	----
Barium, total	7440-39-3	E420/VA	0.00010	mg/L		0.0103	0.0106	<0.00010	----	----
Beryllium, total	7440-41-7	E420/VA	0.000100	mg/L		<0.000100	<0.000100	<0.000100	----	----
Bismuth, total	7440-69-9	E420/VA	0.000050	mg/L		<0.000050	<0.000050	<0.000050	----	----
Boron, total	7440-42-8	E420/VA	0.010	mg/L		0.016	0.014	<0.010	----	----
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L		0.0000064	0.0000058	<0.0000050	----	----
Calcium, total	7440-70-2	E420/VA	0.050	mg/L		7.54	7.31	<0.050	----	----
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L		0.000029	0.000029	<0.000010	----	----
Chromium, total	7440-47-3	E420/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	----	----
Cobalt, total	7440-48-4	E420/VA	0.00010	mg/L		0.00014	0.00013	<0.00010	----	----
Copper, total	7440-50-8	E420/VA	0.00050	mg/L		0.00069	0.00070	<0.00050	----	----
Iron, total	7439-89-6	E420/VA	0.010	mg/L		0.305	0.310	<0.010	----	----
Lead, total	7439-92-1	E420/VA	0.000050	mg/L		<0.000050	<0.000050	<0.000050	----	----
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L		0.0018	0.0019	<0.0010	----	----
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L		1.09	1.00	<0.0050	----	----

Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	SQU US 1	SQU DS 1	Field Blank	----	----
					Client sampling date / time	13-Jan-2025 11:05	13-Jan-2025 12:24	13-Jan-2025 10:15	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A0704-001	VA25A0704-002	VA25A0704-003	----	----
						Result	Result	Result	----	----
Total Metals										
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L		0.0191	0.0193	<0.00010	----	----
Mercury, total	7439-97-6	E508/VA	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	----	----
Molybdenum, total	7439-98-7	E420/VA	0.000050	mg/L		0.000582	0.000565	<0.000050	----	----
Nickel, total	7440-02-0	E420/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	----	----
Phosphorus, total	7723-14-0	E420/VA	0.050	mg/L		0.069	<0.050	<0.050	----	----
Potassium, total	7440-09-7	E420/VA	0.050	mg/L		1.09	0.913	<0.050	----	----
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L		0.00157	0.00148	<0.00020	----	----
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L		<0.000050	<0.000050	<0.000050	----	----
Silicon, total	7440-21-3	E420/VA	0.10	mg/L		6.19	5.83	<0.10	----	----
Silver, total	7440-22-4	E420/VA	0.000010	mg/L		<0.000010	<0.000010	<0.000010	----	----
Sodium, total	7440-23-5	E420/VA	0.050	mg/L		5.05	4.19	<0.050	----	----
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L		0.0494	0.0512	<0.00020	----	----
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L		2.16	2.05	<0.50	----	----
Tellurium, total	13494-80-9	E420/VA	0.00020	mg/L		<0.00020	<0.00020	<0.00020	----	----
Thallium, total	7440-28-0	E420/VA	0.000010	mg/L		<0.000010	<0.000010	<0.000010	----	----
Thorium, total	7440-29-1	E420/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Tin, total	7440-31-5	E420/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Titanium, total	7440-32-6	E420/VA	0.00030	mg/L		0.00094	0.00148	<0.00030	----	----
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L		0.000036	0.000038	<0.000010	----	----
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L		0.00125	0.00116	<0.00050	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SQU US 1	SQU DS 1	Field Blank	----	----
					Client sampling date / time	13-Jan-2025 11:05	13-Jan-2025 12:24	13-Jan-2025 10:15	----	----
						VA25A0704-001	VA25A0704-002	VA25A0704-003	----	----
						Result	Result	Result	----	----
Total Metals										
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L		<0.0030	0.0032	<0.0030	----	----
Zirconium, total	7440-67-7	E420/VA	0.00020	mg/L		<0.00020	<0.00020	<0.00020	----	----
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/VA	0.0010	mg/L		0.0197	0.0214	<0.0010	----	----
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L		0.00015	0.00014	<0.00010	----	----
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L		0.00982	0.0101	<0.00010	----	----
Beryllium, dissolved	7440-41-7	E421/VA	0.000100	mg/L		<0.000100	<0.000100	<0.000100	----	----
Bismuth, dissolved	7440-69-9	E421/VA	0.000050	mg/L		<0.000050	<0.000050	<0.000050	----	----
Boron, dissolved	7440-42-8	E421/VA	0.010	mg/L		0.014	0.012	<0.010	----	----
Cadmium, dissolved	7440-43-9	E421/VA	0.0000050	mg/L		0.0000074	0.0000055	<0.0000050	----	----
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L		7.16	7.01	<0.050	----	----
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L		0.000026	0.000027	<0.000010	----	----
Chromium, dissolved	7440-47-3	E421/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	----	----
Cobalt, dissolved	7440-48-4	E421/VA	0.00010	mg/L		0.00012	0.00011	<0.00010	----	----
Copper, dissolved	7440-50-8	E421/VA	0.00020	mg/L		0.00056	0.00051	<0.00020	----	----
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L		0.208	0.211	<0.010	----	----
Lead, dissolved	7439-92-1	E421/VA	0.000050	mg/L		<0.000050	<0.000050	<0.000050	----	----
Lithium, dissolved	7439-93-2	E421/VA	0.0010	mg/L		0.0018	0.0019	<0.0010	----	----
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L		1.08	1.03	<0.0050	----	----
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L		0.0189	0.0181	<0.00010	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SQU US 1	SQU DS 1	Field Blank	----	----
					Client sampling date / time	13-Jan-2025 11:05	13-Jan-2025 12:24	13-Jan-2025 10:15	----	----
						VA25A0704-001	VA25A0704-002	VA25A0704-003	----	----
						Result	Result	Result	----	----
Dissolved Metals										
Mercury, dissolved	7439-97-6	E509/VA	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	----	----
Molybdenum, dissolved	7439-98-7	E421/VA	0.000050	mg/L		0.000548	0.000557	<0.000050	----	----
Nickel, dissolved	7440-02-0	E421/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	----	----
Phosphorus, dissolved	7723-14-0	E421/VA	0.050	mg/L		<0.050	<0.050	<0.050	----	----
Potassium, dissolved	7440-09-7	E421/VA	0.050	mg/L		1.05	0.948	<0.050	----	----
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L		0.00138	0.00140	<0.00020	----	----
Selenium, dissolved	7782-49-2	E421/VA	0.000050	mg/L		<0.000050	<0.000050	<0.000050	----	----
Silicon, dissolved	7440-21-3	E421/VA	0.050	mg/L		6.10	5.84	<0.050	----	----
Silver, dissolved	7440-22-4	E421/VA	0.000010	mg/L		<0.000010	<0.000010	<0.000010	----	----
Sodium, dissolved	7440-23-5	E421/VA	0.050	mg/L		4.71	4.22	<0.050	----	----
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L		0.0488	0.0506	<0.00020	----	----
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L		1.84	2.06	<0.50	----	----
Tellurium, dissolved	13494-80-9	E421/VA	0.00020	mg/L		<0.00020	<0.00020	<0.00020	----	----
Thallium, dissolved	7440-28-0	E421/VA	0.000010	mg/L		<0.000010	<0.000010	<0.000010	----	----
Thorium, dissolved	7440-29-1	E421/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Tin, dissolved	7440-31-5	E421/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Titanium, dissolved	7440-32-6	E421/VA	0.00030	mg/L		<0.00030	<0.00030	<0.00030	----	----
Tungsten, dissolved	7440-33-7	E421/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L		0.000033	0.000032	<0.000010	----	----
Vanadium, dissolved	7440-62-2	E421/VA	0.00050	mg/L		0.00112	0.00100	<0.00050	----	----
Zinc, dissolved	7440-66-6	E421/VA	0.0010	mg/L		0.0022	0.0019	<0.0010	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SQU US 1	SQU DS 1	Field Blank	----	----
					Client sampling date / time	13-Jan-2025 11:05	13-Jan-2025 12:24	13-Jan-2025 10:15	----	----
						VA25A0704-001	VA25A0704-002	VA25A0704-003	----	----
						Result	Result	Result	----	----
Dissolved Metals										
Zirconium, dissolved	7440-67-7	E421/VA	0.00020	mg/L		<0.00020	<0.00020	<0.00020	----	----
Dissolved mercury filtration location	----	EP509/VA	-	-		Field	Field	Field	----	----
Dissolved metals filtration location	----	EP421/VA	-	-		Field	Field	Field	----	----
Speciated Metals										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	----	----
Chromium, trivalent [Cr III], total	16065-83-1	EC535/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	----	----

Please refer to the General Comments section for an explanation of any result qualifiers detected.

ALS Canada Ltd.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **VA25A0704**	Page	: 1 of 17
Client	: **Triton Environmental Consultants Ltd.**	Laboratory	: ALS Environmental - Vancouver
Contact		Account Manager	
Address		Address	
Telephone	: ----	Telephone	
Project	: 11964	Date Samples Received	: 13-Jan-2025 16:25
PO	: 11964 - Task 20 - Phase 3C-4C	Issue Date	: 20-Jan-2025 12:20
C-O-C number	: ----		
Sampler	: ----		
Site	: Water Analysis		
Quote number	: VA25-TRIT100-001		
No. of samples received	: 3		
No. of samples analysed	: 3		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO: Data Quality Objective.
LOR: Limit of Reporting (detection limit).
RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- Matrix Spike outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Matrix Spike (MS) Recoveries								
Total Metals	Anonymous	Anonymous	Thorium, total	7440-29-1	E420	139 % MES	70.0-130%	Recovery greater than upper data quality objective

Result Qualifiers

Qualifier	*Description*
MES	*Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).*

Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid)										
Field Blank	E298	13-Jan-2025	16-Jan-2025	28 days	3 days	✓	16-Jan-2025	28 days	3 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid)										
SQU DS 1	E298	13-Jan-2025	16-Jan-2025	28 days	3 days	✓	16-Jan-2025	28 days	3 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid)										
SQU US 1	E298	13-Jan-2025	16-Jan-2025	28 days	3 days	✓	16-Jan-2025	28 days	3 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE										
Field Blank	E235.Br-L	13-Jan-2025	15-Jan-2025	28 days	2 days	✓	15-Jan-2025	28 days	2 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE										
SQU DS 1	E235.Br-L	13-Jan-2025	15-Jan-2025	28 days	2 days	✓	15-Jan-2025	28 days	2 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE										
SQU US 1	E235.Br-L	13-Jan-2025	15-Jan-2025	28 days	2 days	✓	15-Jan-2025	28 days	2 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
Field Blank	E235.Cl	13-Jan-2025	15-Jan-2025	28 days	2 days	✓	15-Jan-2025	28 days	2 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Chloride in Water by IC										
HDPE										
SQU DS 1	E235.Cl	13-Jan-2025	15-Jan-2025	28 days	2 days	✓	15-Jan-2025	28 days	2 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
SQU US 1	E235.Cl	13-Jan-2025	15-Jan-2025	28 days	2 days	✓	15-Jan-2025	28 days	2 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
Field Blank	E235.F	13-Jan-2025	15-Jan-2025	28 days	2 days	✓	15-Jan-2025	28 days	2 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
SQU DS 1	E235.F	13-Jan-2025	15-Jan-2025	28 days	2 days	✓	15-Jan-2025	28 days	2 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
SQU US 1	E235.F	13-Jan-2025	15-Jan-2025	28 days	2 days	✓	15-Jan-2025	28 days	2 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE										
Field Blank	E235.NO3-L	13-Jan-2025	15-Jan-2025	3 days	2 days	✓	15-Jan-2025	3 days	2 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE										
SQU DS 1	E235.NO3-L	13-Jan-2025	15-Jan-2025	3 days	2 days	✓	15-Jan-2025	3 days	2 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE										
SQU US 1	E235.NO3-L	13-Jan-2025	15-Jan-2025	3 days	2 days	✓	15-Jan-2025	3 days	2 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
Field Blank	E235.NO2-L	13-Jan-2025	15-Jan-2025	3 days	2 days	✓	15-Jan-2025	3 days	2 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE SQU DS 1	E235.NO2-L	13-Jan-2025	15-Jan-2025	3 days	2 days	✓	15-Jan-2025	3 days	2 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE SQU US 1	E235.NO2-L	13-Jan-2025	15-Jan-2025	3 days	2 days	✓	15-Jan-2025	3 days	2 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE Field Blank	E235.SO4	13-Jan-2025	15-Jan-2025	28 days	2 days	✓	15-Jan-2025	28 days	2 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE SQU DS 1	E235.SO4	13-Jan-2025	15-Jan-2025	28 days	2 days	✓	15-Jan-2025	28 days	2 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE SQU US 1	E235.SO4	13-Jan-2025	15-Jan-2025	28 days	2 days	✓	15-Jan-2025	28 days	2 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) Field Blank	E366	13-Jan-2025	16-Jan-2025	28 days	3 days	✓	17-Jan-2025	28 days	4 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) SQU DS 1	E366	13-Jan-2025	16-Jan-2025	28 days	3 days	✓	17-Jan-2025	28 days	4 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) SQU US 1	E366	13-Jan-2025	16-Jan-2025	28 days	3 days	✓	17-Jan-2025	28 days	4 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) Field Blank	E372-U	13-Jan-2025	16-Jan-2025	28 days	3 days	✓	18-Jan-2025	28 days	5 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
SQU DS 1	E372-U	13-Jan-2025	16-Jan-2025	28 days	3 days	✓	18-Jan-2025	28 days	5 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
SQU US 1	E372-U	13-Jan-2025	16-Jan-2025	28 days	3 days	✓	18-Jan-2025	28 days	5 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
Field Blank	E509	13-Jan-2025	17-Jan-2025	28 days	4 days	✓	17-Jan-2025	28 days	4 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
SQU DS 1	E509	13-Jan-2025	17-Jan-2025	28 days	4 days	✓	17-Jan-2025	28 days	4 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
SQU US 1	E509	13-Jan-2025	17-Jan-2025	28 days	4 days	✓	17-Jan-2025	28 days	4 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
Field Blank	E421	13-Jan-2025	14-Jan-2025	180 days	1 days	✓	15-Jan-2025	180 days	2 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
SQU DS 1	E421	13-Jan-2025	14-Jan-2025	180 days	1 days	✓	15-Jan-2025	180 days	2 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
SQU US 1	E421	13-Jan-2025	14-Jan-2025	180 days	1 days	✓	15-Jan-2025	180 days	2 days	✓
Field Tests : Field pH,EC,Salinity, TDS, Cl2,ClO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine										
Glass vial total (hydrochloric acid)										
SQU DS 1	EF001	13-Jan-2025	----	----	----		15-Jan-2025	----	2 days	

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Field Tests : Field pH,EC,Salinity, TDS, Cl2,ClO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine										
Glass vial total (hydrochloric acid)										
SQU US 1	EF001	13-Jan-2025	----	----	----		15-Jan-2025	----	2 days	
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid)										
Field Blank	E358-L	13-Jan-2025	16-Jan-2025	28 days	3 days	✓	16-Jan-2025	28 days	3 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid)										
SQU DS 1	E358-L	13-Jan-2025	16-Jan-2025	28 days	3 days	✓	16-Jan-2025	28 days	3 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid)										
SQU US 1	E358-L	13-Jan-2025	16-Jan-2025	28 days	3 days	✓	16-Jan-2025	28 days	3 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
Field Blank	E290	13-Jan-2025	15-Jan-2025	14 days	2 days	✓	15-Jan-2025	14 days	2 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
SQU DS 1	E290	13-Jan-2025	15-Jan-2025	14 days	2 days	✓	15-Jan-2025	14 days	2 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
SQU US 1	E290	13-Jan-2025	15-Jan-2025	14 days	2 days	✓	15-Jan-2025	14 days	2 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
Field Blank	E162	13-Jan-2025	----	----	----		20-Jan-2025	7 days	7 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
SQU DS 1	E162	13-Jan-2025	----	----	----		20-Jan-2025	7 days	7 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : TDS by Gravimetry										
HDPE										
SQU US 1	E162	13-Jan-2025	----	----	----		20-Jan-2025	7 days	7 days	✓
Physical Tests : TSS by Gravimetry										
HDPE										
Field Blank	E160	13-Jan-2025	----	----	----		19-Jan-2025	7 days	6 days	✓
Physical Tests : TSS by Gravimetry										
HDPE										
SQU DS 1	E160	13-Jan-2025	----	----	----		19-Jan-2025	7 days	6 days	✓
Physical Tests : TSS by Gravimetry										
HDPE										
SQU US 1	E160	13-Jan-2025	----	----	----		19-Jan-2025	7 days	6 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide)										
Field Blank	E532	13-Jan-2025	----	----	----		15-Jan-2025	28 days	2 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide)										
SQU DS 1	E532	13-Jan-2025	----	----	----		15-Jan-2025	28 days	2 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide)										
SQU US 1	E532	13-Jan-2025	----	----	----		15-Jan-2025	28 days	2 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid)										
Field Blank	E508	13-Jan-2025	16-Jan-2025	28 days	3 days	✓	16-Jan-2025	28 days	3 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid)										
SQU DS 1	E508	13-Jan-2025	16-Jan-2025	28 days	3 days	✓	16-Jan-2025	28 days	3 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	*Method*	*Sampling Date*	*Extraction / Preparation*				*Analysis*			
			Preparation Date	*Holding Times* Rec	*Holding Times* Actual	*Eval*	*Analysis Date*	*Holding Times* Rec	*Holding Times* Actual	*Eval*
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) SQU US 1	E508	13-Jan-2025	16-Jan-2025	28 days	3 days	✓	16-Jan-2025	28 days	3 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid) Field Blank	E420	13-Jan-2025	15-Jan-2025	180 days	2 days	✓	16-Jan-2025	180 days	3 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid) SQU DS 1	E420	13-Jan-2025	15-Jan-2025	180 days	2 days	✓	16-Jan-2025	180 days	3 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid) SQU US 1	E420	13-Jan-2025	15-Jan-2025	180 days	2 days	✓	16-Jan-2025	180 days	3 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide) Field Blank	E395	13-Jan-2025	----	----	----		14-Jan-2025	7 days	1 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide) SQU DS 1	E395	13-Jan-2025	----	----	----		14-Jan-2025	7 days	1 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide) SQU US 1	E395	13-Jan-2025	----	----	----		14-Jan-2025	7 days	1 days	✓

Legend & Qualifier Definitions

Rec. HT: ALS recommended hold time (see units).

Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water**

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Alkalinity Species by Titration	E290	1839423	1	18	5.5	5.0	✓
Ammonia by Fluorescence	E298	1841493	1	18	5.5	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1839428	1	14	7.1	5.0	✓
Chloride in Water by IC	E235.Cl	1839427	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1842513	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1839363	1	7	14.2	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1841489	1	9	11.1	5.0	✓
Fluoride in Water by IC	E235.F	1839426	1	17	5.8	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1839429	1	16	6.2	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1839430	1	18	5.5	5.0	✓
Sulfate in Water by IC	E235.SO4	1839431	1	18	5.5	5.0	✓
TDS by Gravimetry	E162	1844437	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1840798	1	16	6.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1842274	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1839245	1	16	6.2	5.0	✓
Total Nitrogen by Colourimetry	E366	1841495	1	7	14.2	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1841491	1	16	6.2	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1839214	1	3	33.3	5.0	✓
TSS by Gravimetry	E160	1844434	1	20	5.0	5.0	✓
Laboratory Control Samples (LCS)							
Alkalinity Species by Titration	E290	1839423	1	18	5.5	5.0	✓
Ammonia by Fluorescence	E298	1841493	1	18	5.5	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1839428	1	14	7.1	5.0	✓
Chloride in Water by IC	E235.Cl	1839427	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1842513	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1839363	1	7	14.2	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1841489	1	9	11.1	5.0	✓
Fluoride in Water by IC	E235.F	1839426	1	17	5.8	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1839429	1	16	6.2	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1839430	1	18	5.5	5.0	✓
Sulfate in Water by IC	E235.SO4	1839431	1	18	5.5	5.0	✓
TDS by Gravimetry	E162	1844437	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1840798	1	16	6.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1842274	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1839245	1	16	6.2	5.0	✓
Total Nitrogen by Colourimetry	E366	1841495	1	7	14.2	5.0	✓

Matrix: **Water**

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Control Samples (LCS) - Continued							
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1841491	1	16	6.2	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1839214	1	3	33.3	5.0	✓
TSS by Gravimetry	E160	1844434	1	20	5.0	5.0	✓
Method Blanks (MB)							
Alkalinity Species by Titration	E290	1839423	1	18	5.5	5.0	✓
Ammonia by Fluorescence	E298	1841493	1	18	5.5	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1839428	1	14	7.1	5.0	✓
Chloride in Water by IC	E235.Cl	1839427	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1842513	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1839363	1	7	14.2	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1841489	1	9	11.1	5.0	✓
Fluoride in Water by IC	E235.F	1839426	1	17	5.8	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1839429	1	16	6.2	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1839430	1	18	5.5	5.0	✓
Sulfate in Water by IC	E235.SO4	1839431	1	18	5.5	5.0	✓
TDS by Gravimetry	E162	1844437	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1840798	1	16	6.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1842274	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1839245	1	16	6.2	5.0	✓
Total Nitrogen by Colourimetry	E366	1841495	1	7	14.2	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1841491	1	16	6.2	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1839214	1	3	33.3	5.0	✓
TSS by Gravimetry	E160	1844434	1	20	5.0	5.0	✓
Matrix Spikes (MS)							
Ammonia by Fluorescence	E298	1841493	1	18	5.5	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1839428	1	14	7.1	5.0	✓
Chloride in Water by IC	E235.Cl	1839427	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1842513	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1839363	1	7	14.2	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1841489	1	9	11.1	5.0	✓
Fluoride in Water by IC	E235.F	1839426	1	17	5.8	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1839429	1	16	6.2	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1839430	1	18	5.5	5.0	✓
Sulfate in Water by IC	E235.SO4	1839431	1	18	5.5	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1840798	1	16	6.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1842274	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1839245	1	16	6.2	5.0	✓
Total Nitrogen by Colourimetry	E366	1841495	1	7	14.2	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1841491	1	16	6.2	5.0	✓

Matrix: **Water**

Evaluation: × = *QC frequency outside specification*; ✓ = *QC frequency within specification.*

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Matrix Spikes (MS) - Continued							
Total Sulfide by Colourimetry (Automated Flow)	E395	1839214	1	3	33.3	5.0	✓

Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
TSS by Gravimetry	E160 ALS Environmental - Vancouver	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at 104 ± 1°C, with gravimetric measurement of the filtered solids. Samples containing very high dissolved solid content (i.e. seawaters, brackish waters) may produce a positive bias by this method. Alternate analysis methods are available for these types of samples.
TDS by Gravimetry	E162 ALS Environmental - Vancouver	Water	APHA 2540 C (mod)	Total Dissolved Solids (TDS) are determined by filtering a sample through a glass fibre filter, with evaporation of the filtrate at 180 ± 2°C for 16 hours or to constant weight, with gravimetric measurement of the residue.
Bromide in Water by IC (Low Level)	E235.Br-L ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Chloride in Water by IC	E235.Cl ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Fluoride in Water by IC	E235.F ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrite in Water by IC (Low Level)	E235.NO2-L ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrate in Water by IC (Low Level)	E235.NO3-L ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Sulfate in Water by IC	E235.SO4 ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Alkalinity Species by Titration	E290 ALS Environmental - Vancouver	Water	APHA 2320 B (mod)	Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Ammonia by Fluorescence	E298 ALS Environmental - Vancouver	Water	Method Fialab 100, 2018	Ammonia in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021)
Dissolved Organic Carbon by Combustion (Low Level)	E358-L ALS Environmental - Vancouver	Water	APHA 5310 B (mod)	Dissolved Organic Carbon (Non-Purgeable), also known as NPOC (dissolved), is a direct measurement of DOC after a filtered (0.45 micron) sample has been acidified and purged to remove inorganic carbon (IC). Analysis is by high temperature combustion with infrared detection of CO2. NPOC does not include volatile organic species that are purged off with IC. For samples where the majority of DC (dissolved carbon) is comprised of IC (which is common), this method is more accurate and more reliable than the DOC by subtraction method (i.e. DC minus DIC).
Total Nitrogen by Colourimetry	E366 ALS Environmental - Vancouver	Water	Chinchilla Scientific Nitrate Method, 2011	Following digestion, total nitrogen is is determined colourimetrically using a discrete analyzer utilizing the vanadium chloride reduction method. This method of analysis is approved under US EPA 40 CFR Part 136 (May 2021).
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U ALS Environmental - Vancouver	Water	APHA 4500-P E (mod).	Total Phosphorus is determined colourimetrically using a discrete analyzer after heated persulfate digestion of the sample.
Total Sulfide by Colourimetry (Automated Flow)	E395 ALS Environmental - Vancouver	Water	APHA 4500 -S E-Auto-Colorimetry	Sulfide is determined using the gas dialysis automated methlyene blue colourimetric method. Results expressed "as H2S" if reported represent the maximum possible H2S concentration based on the total sulfide concentration in the sample. The H2S calculation converts Total Sulphide as (S2-) and reports it as Total Sulphide as (H2S)
Total Metals in Water by CRC ICPMS	E420 ALS Environmental - Vancouver	Water	EPA 200.2/6020B (mod)	Water samples are digested with nitric and hydrochloric acids, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Dissolved Metals in Water by CRC ICPMS	E421 ALS Environmental - Vancouver	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Total Mercury in Water by CVAAS	E508 ALS Environmental - Vancouver	Water	EPA 1631E (mod)	Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS
Dissolved Mercury in Water by CVAAS	E509 ALS Environmental - Vancouver	Water	APHA 3030B/EPA 1631E (mod)	Water samples are filtered (0.45 um), preserved with HCl, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Total Hexavalent Chromium (Cr VI) by IC	E532 ALS Environmental - Vancouver	Water	APHA 3500-Cr C (Ion Chromatography)	Hexavalent Chromium is measured by Ion chromatography-Post column reaction and UV detection. Results are based on an un-filtered, field-preserved sample.
Dissolved Hardness (Calculated)	EC100 ALS Environmental - Vancouver	Water	APHA 2340B	"Hardness (as CaCO3), dissolved" is calculated from the sum of dissolved Calcium and Magnesium concentrations, expressed in CaCO3 equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations.
Hardness (Calculated) from Total Ca/Mg	EC100A ALS Environmental - Vancouver	Water	APHA 2340B	"Hardness (as CaCO3), from total Ca/Mg" is calculated from the sum of total Calcium and Magnesium concentrations, expressed in CaCO3 equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations. Hardness from total Ca/Mg is normally comparable to Dissolved Hardness in non-turbid waters.
Un-ionized Total Hydrogen Sulfide (calculated)	EC395 ALS Environmental - Vancouver	Water	APHA 4500 -S H	Un-ionized sulfide is calculated using results from total sulfide analysis, pH, temperature, and ionic strength of the sample. Calculation of un-ionized sulfide using total sulfide concentrations may be biased high due to particulate forms of sulfide measured during total sulfide testing.
Total Trivalent Chromium (Cr III) by Calculation	EC535 ALS Environmental - Vancouver	Water	APHA 3030B/6020A/EPA 7196A (mod)	Chromium (III)-Total is calculated as the difference between the total chromium and the total hexavalent chromium (Cr(VI)) results.The Limit of Reporting for Chromium (III) varies as a function of the test results.
Field pH,EC,Salinity, TDS, Cl2,ClO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine	EF001 ALS Environmental - Vancouver	Water	Field Measurement (Client Supplied)	Field pH,EC,Salinity, TDS, Cl2,ClO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3 or Chloramine measurements provided by client and recorded on ALS report may affect the validity of results.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Ammonia	EP298 ALS Environmental - Vancouver	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Preparation for Dissolved Organic Carbon for Combustion	EP358 ALS Environmental - Vancouver	Water	APHA 5310 B (mod)	Preparation for Dissolved Organic Carbon
Digestion for Total Nitrogen in water	EP366 ALS Environmental - Vancouver	Water	APHA 4500-P J (mod)	Samples for total nitrogen analysis are digested using a heated persulfate digestion. Nitrogen compounds are converted to nitrate in this digestion.
Digestion for Total Phosphorus in water	EP372 ALS Environmental - Vancouver	Water	APHA 4500-P E (mod).	Samples are heated with a persulfate digestion reagent.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Dissolved Metals Water Filtration	EP421 ALS Environmental - Vancouver	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO3.
Dissolved Mercury Water Filtration	EP509 ALS Environmental - Vancouver	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HCl.

ALS Canada Ltd.

QUALITY CONTROL REPORT

Work Order	: **VA25A0704**	Page	: 1 of 17
Client	: Triton Environmental Consultants Ltd.	Laboratory	: ALS Environmental - Vancouver
Contact		Account Manager	
Address		Address	
Telephone	: ----	Telephone	
Project	: 11964	Date Samples Received	: 13-Jan-2025 16:25
PO	: 11964 - Task 20 - Phase 3C-4C	Date Analysis Commenced	: 14-Jan-2025
C-O-C number	: ----	Issue Date	: 20-Jan-2025 12:20
Sampler	: ----		
Site	: Water Analysis		
Quote number	: VA25-TRIT100-001		
No. of samples received	: 3		
No. of samples analysed	: 3		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
		Vancouver Metals, Burnaby, British Columbia
		Vancouver Inorganics, Burnaby, British Columbia
		Vancouver Metals, Burnaby, British Columbia
		Vancouver Inorganics, Burnaby, British Columbia
		Vancouver Metals, Burnaby, British Columbia
		Vancouver Administration, Burnaby, British Columbia

General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO = Data Quality Objective.
LOR = Limit of Reporting (detection limit).
RPD = Relative Percent Difference
# = Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Physical Tests (QC Lot: 1839423)											
VA25A0840-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	117	119	1.36%	20%	----
Physical Tests (QC Lot: 1844434)											
FJ2500137-001	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	4.7	<3.0	1.7	Diff <2x LOR	----
Physical Tests (QC Lot: 1844437)											
FJ2500137-001	Anonymous	Solids, total dissolved [TDS]	----	E162	20	mg/L	944	930	1.49%	20%	----
Anions and Nutrients (QC Lot: 1839426)											
FJ2500121-001	Anonymous	Fluoride	16984-48-8	E235.F	0.100	mg/L	0.262	0.263	0.001	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1839427)											
FJ2500121-001	Anonymous	Chloride	16887-00-6	E235.Cl	2.50	mg/L	<2.50	<2.50	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1839428)											
FJ2500121-001	Anonymous	Bromide	24959-67-9	E235.Br-L	0.250	mg/L	<0.250	<0.250	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1839429)											
FJ2500121-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0250	mg/L	<0.0250	<0.0250	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1839430)											
FJ2500121-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1839431)											
FJ2500121-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	1.50	mg/L	699	701	0.287%	20%	----
Anions and Nutrients (QC Lot: 1841491)											
KS2500065-005	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0400	mg/L	2.55	2.55	0.0601%	20%	----
Anions and Nutrients (QC Lot: 1841493)											
KS2500065-005	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0250	mg/L	2.26	2.27	0.396%	20%	----
Anions and Nutrients (QC Lot: 1841495)											
VA25A0650-014	Anonymous	Nitrogen, total	7727-37-9	E366	0.030	mg/L	0.070	0.086	0.016	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 1841489)											
VA25A0650-014	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	1.00	1.19	0.18	Diff <2x LOR	----
Total Sulfides (QC Lot: 1839214)											
VA25A0704-001	SQU US 1	Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	<0.0015	0	Diff <2x LOR	----
Total Metals (QC Lot: 1839245)											
KS2500112-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0100	mg/L	<0.0100	<0.0100	0	Diff <2x LOR	----
		Antimony, total	7440-36-0	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Total Metals (QC Lot: 1839245) - continued											
KS2500112-001	Anonymous	Arsenic, total	7440-38-2	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Barium, total	7440-39-3	E420	0.0200	mg/L	<0.0200	<0.0200	0	Diff <2x LOR	----
		Beryllium, total	7440-41-7	E420	0.000040	mg/L	<0.000040	<0.000040	0	Diff <2x LOR	----
		Bismuth, total	7440-69-9	E420	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Boron, total	7440-42-8	E420	0.100	mg/L	<0.100	<0.100	0	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.000200	mg/L	<0.000200	<0.000200	0	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.100	mg/L	216	212	1.76%	20%	----
		Cesium, total	7440-46-2	E420	0.000020	mg/L	0.000138	0.000142	0.000004	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420	0.00200	mg/L	<0.00200	<0.00200	0	Diff <2x LOR	----
		Cobalt, total	7440-48-4	E420	0.00020	mg/L	0.00067	0.00066	0.00001	Diff <2x LOR	----
		Copper, total	7440-50-8	E420	0.00100	mg/L	0.00226	0.00217	0.00009	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.030	mg/L	0.092	0.091	0.001	Diff <2x LOR	----
		Lead, total	7439-92-1	E420	0.000500	mg/L	<0.000500	<0.000500	0	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0020	mg/L	0.0755	0.0770	2.04%	20%	----
		Magnesium, total	7439-95-4	E420	0.100	mg/L	470	462	1.79%	20%	----
		Manganese, total	7439-96-5	E420	0.00200	mg/L	0.375	0.372	0.715%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000100	mg/L	0.00252	0.00262	3.82%	20%	----
		Nickel, total	7440-02-0	E420	0.00100	mg/L	0.00290	0.00290	0.000005	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E420	0.100	mg/L	<0.100	<0.100	0	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.100	mg/L	29.4	28.9	1.57%	20%	----
		Rubidium, total	7440-17-7	E420	0.00040	mg/L	0.00447	0.00447	0.0422%	20%	----
		Selenium, total	7782-49-2	E420	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
		Silicon, total	7440-21-3	E420	0.20	mg/L	15.2	14.7	2.83%	20%	----
		Silver, total	7440-22-4	E420	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Sodium, total	7440-23-5	E420	2.00	mg/L	195	195	0.132%	20%	----
		Strontium, total	7440-24-6	E420	0.00040	mg/L	7.91	7.72	2.41%	20%	----
		Sulfur, total	7704-34-9	E420	1.00	mg/L	839	833	0.733%	20%	----
		Tellurium, total	13494-80-9	E420	0.00040	mg/L	0.00107	0.00114	0.00007	Diff <2x LOR	----
		Thallium, total	7440-28-0	E420	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Thorium, total	7440-29-1	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.00060	mg/L	<0.00060	<0.00060	0	Diff <2x LOR	----
		Tungsten, total	7440-33-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Uranium, total	7440-61-1	E420	0.000100	mg/L	0.0122	0.0119	2.47%	20%	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Total Metals (QC Lot: 1839245) - continued											
KS2500112-001	Anonymous	Vanadium, total	7440-62-2	E420	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0500	mg/L	<0.0500	<0.0500	0	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00040	mg/L	<0.00040	<0.00040	0	Diff <2x LOR	----
Total Metals (QC Lot: 1842274)											
VA25A0688-003	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1839363)											
FJ2500119-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0898	0.0849	5.57%	20%	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	0.00055	0.00056	0.00001	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00033	0.00030	0.00003	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.111	0.107	3.86%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	0.092	0.092	0.0001	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.000130	0.000134	3.14%	20%	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	46.1	46.8	1.54%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	0.00503	0.00494	1.78%	20%	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00066	0.00064	0.00002	Diff <2x LOR	----
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0387	0.0390	0.716%	20%	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	21.0	20.2	4.15%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.321	0.316	1.56%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.00370	0.00367	0.638%	20%	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.0160	0.0154	3.45%	20%	----
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.050	mg/L	2.45	2.37	3.24%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00202	0.00204	0.942%	20%	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000554	0.000551	0.501%	20%	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	2.23	2.28	2.13%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.050	mg/L	138	135	1.71%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.253	0.250	1.29%	20%	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Dissolved Metals (QC Lot: 1839363) - continued											
FJ2500119-001	Anonymous	Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	96.5	98.6	2.16%	20%	----
		Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	0.000015	0.000016	0.0000007	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	0.00020	0.00021	0.000008	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.00243	0.00242	0.364%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0057	0.0058	0.0001	Diff <2x LOR	----
		Zirconium, dissolved	7440-67-7	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1842513)											
VA25A0704-001	SQU US 1	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Speciated Metals (QC Lot: 1840798)											
VA25A0597-021	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----

Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1839423)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 1844434)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Physical Tests (QCLot: 1844437)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Anions and Nutrients (QCLot: 1839426)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 1839427)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 1839428)						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 1839429)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1839430)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 1839431)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 1841491)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 1841493)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1841495)						
Nitrogen, total	7727-37-9	E366	0.03	mg/L	<0.030	----
Organic / Inorganic Carbon (QCLot: 1841489)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Total Sulfides (QCLot: 1839214)						
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	----
Total Metals (QCLot: 1839245)						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
Barium, total	7440-39-3	E420	0.0001	mg/L	<0.00010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1839245) - continued						
Beryllium, total	7440-41-7	E420	0.00002	mg/L	<0.000020	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	<0.000050	----
Boron, total	7440-42-8	E420	0.01	mg/L	<0.010	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
Calcium, total	7440-70-2	E420	0.05	mg/L	<0.050	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	<0.000010	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
Copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----
Iron, total	7439-89-6	E420	0.01	mg/L	<0.010	----
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----
Lithium, total	7439-93-2	E420	0.001	mg/L	<0.0010	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	<0.0050	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	<0.00010	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	<0.050	----
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	<0.00020	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silicon, total	7440-21-3	E420	0.1	mg/L	<0.10	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	<0.00020	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	<0.00010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	<0.00010	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1842274)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Dissolved Metals (QCLot: 1839363)						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 1839363) - continued						
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 1842513)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Speciated Metals (QCLot: 1840798)						
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	<0.00050	----

Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1839423)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	104	85.0	115	----
Physical Tests (QCLot: 1844434)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	97.8	85.0	115	----
Physical Tests (QCLot: 1844437)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	97.7	85.0	115	----
Anions and Nutrients (QCLot: 1839426)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	103	90.0	110	----
Anions and Nutrients (QCLot: 1839427)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	105	90.0	110	----
Anions and Nutrients (QCLot: 1839428)									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	99.0	85.0	115	----
Anions and Nutrients (QCLot: 1839429)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 1839430)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 1839431)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	105	90.0	110	----
Anions and Nutrients (QCLot: 1841491)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	88.5	80.0	120	----
Anions and Nutrients (QCLot: 1841493)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	102	85.0	115	----
Anions and Nutrients (QCLot: 1841495)									
Nitrogen, total	7727-37-9	E366	0.03	mg/L	0.5 mg/L	100	75.0	125	----
Organic / Inorganic Carbon (QCLot: 1841489)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	105	80.0	120	----
Total Sulfides (QCLot: 1839214)									
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.08 mg/L	95.5	80.0	120	----
Total Metals (QCLot: 1839245)									

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 1839245) - continued									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	99.9	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	104	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	104	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	103	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	97.7	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	103	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	110	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	102	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	99.0	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	105	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	104	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	102	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	101	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	95.6	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	104	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	92.3	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	102	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	98.8	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	99.4	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	101	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	109	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	99.5	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	106	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	95.4	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	101	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	95.1	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	100	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	97.8	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	89.7	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	93.2	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	103	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	102	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	97.0	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	95.3	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	106	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	104	80.0	120	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 1839245) - continued									
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	103	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	105	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	97.0	80.0	120	----
Total Metals (QCLot: 1842274)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	106	80.0	120	----
Dissolved Metals (QCLot: 1839363)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	103	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	99.1	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	1 mg/L	104	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	100	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	101	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	104	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	88.3	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	98.3	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	94.6	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	95.8	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	101	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	99.8	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	99.0	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	98.5	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.5 mg/L	103	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.25 mg/L	94.0	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	105	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	102	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	99.3	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	99.0	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	105	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	102	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	102	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	102	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	109	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	93.0	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	108	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.25 mg/L	104	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	98.5	80.0	120	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 1839363) - continued									
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	95.9	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	99.6	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	104	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	96.8	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	97.7	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	102	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	103	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.5 mg/L	101	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	99.9	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	95.4	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	102	80.0	120	----
Speciated Metals (QCLot: 1840798)									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.25 mg/L	100	80.0	120	----

Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 1839426)										
FJ2500122-005	Anonymous	Fluoride	16984-48-8	E235.F	4.98 mg/L	5 mg/L	99.6	75.0	125	----
Anions and Nutrients (QCLot: 1839427)										
FJ2500122-005	Anonymous	Chloride	16887-00-6	E235.Cl	501 mg/L	500 mg/L	100	75.0	125	----
Anions and Nutrients (QCLot: 1839428)										
FJ2500122-005	Anonymous	Bromide	24959-67-9	E235.Br-L	2.44 mg/L	2.5 mg/L	97.7	75.0	125	----
Anions and Nutrients (QCLot: 1839429)										
FJ2500122-005	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	12.0 mg/L	12.5 mg/L	96.4	75.0	125	----
Anions and Nutrients (QCLot: 1839430)										
FJ2500122-005	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	2.38 mg/L	2.5 mg/L	95.2	75.0	125	----
Anions and Nutrients (QCLot: 1839431)										
FJ2500122-005	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	492 mg/L	500 mg/L	98.5	75.0	125	----
Anions and Nutrients (QCLot: 1841491)										
VA25A0650-014	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0442 mg/L	0.05 mg/L	88.5	70.0	130	----
Anions and Nutrients (QCLot: 1841493)										
VA25A0650-014	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.106 mg/L	0.1 mg/L	106	75.0	125	----
Anions and Nutrients (QCLot: 1841495)										
VA25A0656-001	Anonymous	Nitrogen, total	7727-37-9	E366	ND mg/L	----	ND	70.0	130	----
Organic / Inorganic Carbon (QCLot: 1841489)										
VA25A0656-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	ND mg/L	----	ND	70.0	130	----
Total Sulfides (QCLot: 1839214)										
VA25A0704-002	SQU DS 1	Sulfide, total (as S)	18496-25-8	E395	0.166 mg/L	0.2 mg/L	83.1	75.0	125	----
Total Metals (QCLot: 1839245)										
KS2500116-001	Anonymous	Aluminum, total	7429-90-5	E420	0.185 mg/L	0.2 mg/L	92.6	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0188 mg/L	0.02 mg/L	94.2	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0198 mg/L	0.02 mg/L	98.9	70.0	130	----
		Barium, total	7440-39-3	E420	0.0200 mg/L	0.02 mg/L	100	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0377 mg/L	0.04 mg/L	94.2	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.00958 mg/L	0.01 mg/L	95.8	70.0	130	----
		Boron, total	7440-42-8	E420	ND mg/L	----	ND	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00389 mg/L	0.004 mg/L	97.2	70.0	130	----
		Calcium, total	7440-70-2	E420	ND mg/L	----	ND	70.0	130	----
		Cesium, total	7440-46-2	E420	0.00989 mg/L	0.01 mg/L	98.9	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0395 mg/L	0.04 mg/L	98.8	70.0	130	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Total Metals (QCLot: 1839245) - continued										
KS2500116-001	Anonymous	Cobalt, total	7440-48-4	E420	0.0196 mg/L	0.02 mg/L	97.9	70.0	130	----
		Copper, total	7440-50-8	E420	ND mg/L	----	ND	70.0	130	----
		Iron, total	7439-89-6	E420	1.92 mg/L	2 mg/L	96.1	70.0	130	----
		Lead, total	7439-92-1	E420	0.0190 mg/L	0.02 mg/L	95.2	70.0	130	----
		Lithium, total	7439-93-2	E420	ND mg/L	----	ND	70.0	130	----
		Magnesium, total	7439-95-4	E420	ND mg/L	----	ND	70.0	130	----
		Manganese, total	7439-96-5	E420	0.0192 mg/L	0.02 mg/L	95.9	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0190 mg/L	0.02 mg/L	95.3	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0392 mg/L	0.04 mg/L	98.0	70.0	130	----
		Phosphorus, total	7723-14-0	E420	9.93 mg/L	10 mg/L	99.3	70.0	130	----
		Potassium, total	7440-09-7	E420	3.73 mg/L	4 mg/L	93.2	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0197 mg/L	0.02 mg/L	98.5	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0396 mg/L	0.04 mg/L	99.1	70.0	130	----
		Silicon, total	7440-21-3	E420	9.21 mg/L	10 mg/L	92.1	70.0	130	----
		Silver, total	7440-22-4	E420	0.00387 mg/L	0.004 mg/L	96.7	70.0	130	----
		Sodium, total	7440-23-5	E420	ND mg/L	----	ND	70.0	130	----
		Strontium, total	7440-24-6	E420	ND mg/L	----	ND	70.0	130	----
		Sulfur, total	7704-34-9	E420	19.4 mg/L	20 mg/L	97.1	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0369 mg/L	0.04 mg/L	92.2	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00370 mg/L	0.004 mg/L	92.6	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0278 mg/L	0.02 mg/L	139	70.0	130	MES
		Tin, total	7440-31-5	E420	0.0184 mg/L	0.02 mg/L	91.8	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0376 mg/L	0.04 mg/L	94.0	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0200 mg/L	0.02 mg/L	100	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00398 mg/L	0.004 mg/L	99.4	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.0975 mg/L	0.1 mg/L	97.5	70.0	130	----
		Zinc, total	7440-66-6	E420	0.396 mg/L	0.4 mg/L	99.0	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0372 mg/L	0.04 mg/L	92.9	70.0	130	----
Total Metals (QCLot: 1842274)										
VA25A0691-001	Anonymous	Mercury, total	7439-97-6	E508	0.000103 mg/L	0 mg/L	103	70.0	130	----
Dissolved Metals (QCLot: 1839363)										
FJ2500119-002	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.197 mg/L	0.2 mg/L	98.6	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0191 mg/L	0.02 mg/L	95.3	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0206 mg/L	0.02 mg/L	103	70.0	130	----
		Barium, dissolved	7440-39-3	E421	ND mg/L	----	ND	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.0381 mg/L	0.04 mg/L	95.2	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.00926 mg/L	0.01 mg/L	92.6	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.082 mg/L	0.1 mg/L	81.6	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00382 mg/L	0.004 mg/L	95.5	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.00902 mg/L	0.01 mg/L	90.2	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0384 mg/L	0.04 mg/L	96.1	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0188 mg/L	0.02 mg/L	94.1	70.0	130	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 1839363) - continued										
FJ2500119-002	Anonymous	Copper, dissolved	7440-50-8	E421	0.0184 mg/L	0.02 mg/L	92.3	70.0	130	----
		Iron, dissolved	7439-89-6	E421	1.94 mg/L	2 mg/L	96.9	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0187 mg/L	0.02 mg/L	93.7	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.0858 mg/L	0.1 mg/L	85.8	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	ND mg/L	----	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	ND mg/L	----	ND	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.0190 mg/L	0.02 mg/L	95.2	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0368 mg/L	0.04 mg/L	92.1	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	10.2 mg/L	10 mg/L	102	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	3.76 mg/L	4 mg/L	94.1	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.0192 mg/L	0.02 mg/L	96.0	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0424 mg/L	0.04 mg/L	106	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	10.1 mg/L	10 mg/L	101	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00327 mg/L	0.004 mg/L	81.7	70.0	130	----
		Sodium, dissolved	7440-23-5	E421	ND mg/L	----	ND	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	ND mg/L	----	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	ND mg/L	----	ND	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.0391 mg/L	0.04 mg/L	97.8	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.00356 mg/L	0.004 mg/L	89.1	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0209 mg/L	0.02 mg/L	105	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0190 mg/L	0.02 mg/L	95.1	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0375 mg/L	0.04 mg/L	93.7	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0192 mg/L	0.02 mg/L	95.8	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	0.00383 mg/L	0.004 mg/L	95.7	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.0985 mg/L	0.1 mg/L	98.5	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.386 mg/L	0.4 mg/L	96.4	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0396 mg/L	0.04 mg/L	99.1	70.0	130	----
Dissolved Metals (QCLot: 1842513)										
VA25A0704-002	SQU DS 1	Mercury, dissolved	7439-97-6	E509	0.000101 mg/L	0 mg/L	101	70.0	130	----
Speciated Metals (QCLot: 1840798)										
VA25A0597-022	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.256 mg/L	0.25 mg/L	102	70.0	130	----

Qualifiers

Qualifier	Description
MES	*Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).*

Chain of Custody (COC) / Analytical Request Form

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COC Number: 17 -

Page 1 of

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Company:	Triton Environmental
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Street:	
City/Province:	
Postal Code:	
Invoice To	Same as Report To ☐ YES ☑ NO
	Copy of Invoice with Report ☐ YES ☑ NO
Company:	
Contact:	

Report Format / Distribution

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Project Information

ALS Account # / Quote #:	VA23-TRIT100-012
Job #:	11964
PO / AFE:	11964 - Task 20 - Phase 3C-4C
LSD:	
ALS Lab Work Order # (lab use only):	A0704

Oil	
AFE/Cost Center:	
Major/Minor Code:	
Requisitioner:	
Location:	
ALS Contact:	

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 + mercury	Dissolved metals + mercury	Total hexavalent chromium	Total trivalent chromium	TSS	TDS	Nutrients (ammonia, ammonium, total nitrogen, total phosphorus)	Total sulfide (low) (as H2S), Unionized Sulfide (low)	Anions scan (Br, Cl, F, NO2, NO3, SO4)	General parameters (alkalinity)	DOC				SAMPLES ON HOLD	Sample is hazardous (please provide further details	NUMBER OF CONTAINERS
						F					P	P			F/P						
	SQU US 1	Jan 13/25	11:05	Water	R	R	R	R	R	R	R	R	R	R	R					N	9
	pH: 7.2 cond: 111 temp: 4.5																				
	SQU DS 1	Jan 13/25	12:24	Water	R	R	R	R	R	R	R	R	R	R	R					N	9
	pH: 7.2 cond: 79 temp: 4.4																				
	Field Blank	Jan 13/25	10:15	Water	R	R	R	R	R	R	R	R	R	R	R					N	9

Environmental Division
Vancouver
Work Order Reference
VA25A0704

Telephone : +1 604 253 4188

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System? ☐ ☑ NO

Are samples for human consumption/ use? ☐ ☑ NO

Special Instructions / Specify Criteria to (ele

Triton Project # 11964

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			
				3	5		

SHIPMENT RELEASE (client use)

Time: 16:30

INITIAL SHIPMENT RECEPTION (lab use only)

Received by: | Date: | Time:

FINAL SHIPMENT RECEPTION (lab use only)

Received by: RJ | Date: Jan 13 | Time: 4:25 pm

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.

BCR Site Receiving Environment Field Notes and Logs

FortisBC Eagle Mountain-Woodfibre Gas Pipeline

Water Discharge Authorization Water Quality Monitoring

2025-1-13-Renkers-7A31E

Project Component:	Tunnel	**Site Name:**	Receiving Environment - Downstream of Discharge
Inspection Date:	01/13/2025	**Location:**	BC Rail Site
Triton QP:	Stephanie Renkers	**Latitude/Longitude:**	49.725483 -123.165056
Temperature(c):	Low -1 High 3	**Permit:**	AE 111824
Weather Conditions:	Overcast	**Ground Conditions:**	Dry

Observations

Time: 12:24:18 **Flow Volume (visual):** low

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	**Total Trivalent Chromium**	Yes	**QA Samples:**	No
Nutrients	Yes	**VOC/VPH**	No		
DOC	Yes	**EPH, PAH, LEPH/HEPH**	No		
		Trout LC50	No		

Logger Maintenance

Logger Maintenance Performed?	Yes	**Photo of COC with Lab Signature?**	Yes

Describe Logger Maintenance

Calibration, cleaning

Photos

Photo: 1

Location: DS1

Description: Downstream

Photo: 2

Location: DS1

Description: Across

Photos

Photo: 3
Location: DS1
Description: Upstream

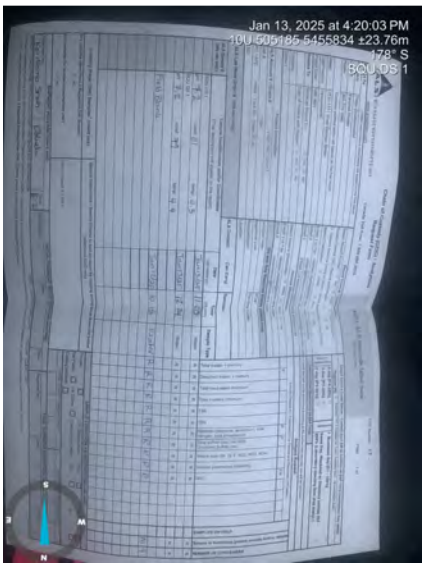


Photo: 4
Location: DS1
Description: Lab COC

Sign Off

Report Prepared By:	Stephanie Renkers	**Report Reviewed:**	Yes
Report Reviewer:		**Professional(s) of Record:**	
Name:			
Designation:			
Designation Number:			

FortisBC Eagle Mountain-Woodfibre Gas Pipeline

Water Discharge Authorization Water Quality Monitoring

2025-1-13-Renkers-B3AEB

Project Component:	Tunnel	**Site Name:**	Receiving Environment - Upstream of Discharge
Inspection Date:	01/13/2025	**Location:**	BC Rail Site
Triton QP:	Stephanie Renkers	**Latitude/Longitude:**	49.726866 -123.163912
Temperature(c):	Low 3 High -1	**Permit:**	AE 111824
Weather Conditions:	Overcast	**Ground Conditions:**	Damp

Observations

Time: 11:05:11 **Flow Volume (visual):** moderate

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	**Total Trivalent Chromium**	Yes	**QA Samples:**	Yes
Nutrients	Yes	**VOC/VPH**	No		
DOC		**EPH, PAH, LEPH/HEPH**	No		
		Trout LC50	No		

Logger Maintenance

Logger Maintenance Performed?	Yes	**Photo of COC with Lab Signature?**	Yes

Describe Logger Maintenance

Calibration, washed and clean, checked telemetry sonde cable connections.

Photos

Photo: 1

Location: US1

Description: Upstream

Photo: 2

Location: US1

Description: Across

Photos

Photo: 3

Location: US1

Description: Downstream

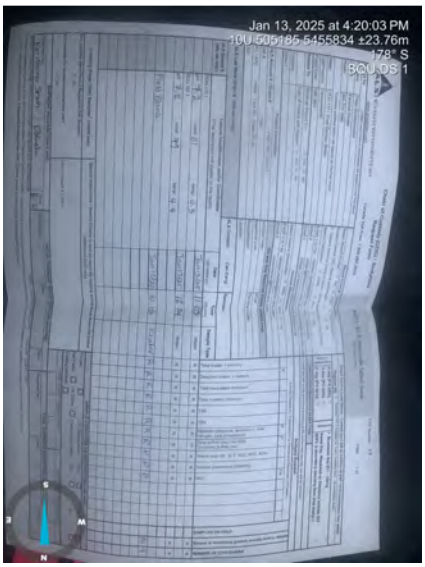


Photo: 4

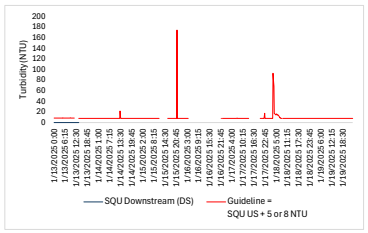
Location: US1

Description: Lab COC

Sign Off

Report Prepared By:	Stephanie Renkers	**Report Reviewed:**	Yes
Report Reviewer:		**Professional(s) of Record:**	
Name:			
Designation:			
Designation Number:			

BCR Plant Site	SQU Downstream (DS)							SQU Upstream (US)						
Date	Temperature (c)	Specific Conductivity (µS/cm)	Salinity PSU	pH	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Date	Temperature (c)	Specific Conductivity (µS/cm)	Salinity PSU	pH	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Guideline = SQU US + 5 or 8 NTU
1/13/2025 0:00	3.3	54.7	0.0	6.9	11.6	0.0	1/13/2025 0:00	1.6	5.0	0.0	6.7	14.1	0.4	8.4
1/13/2025 0:15	3.2	54.4	0.0	6.9	11.7	0.0	1/13/2025 0:15	1.5	5.0	0.0	6.7	14.2	0.5	8.5
1/13/2025 0:30	3.2	54.6	0.0	6.9	11.7	0.0	1/13/2025 0:30	1.4	5.0	0.0	6.7	14.2	0.5	8.5
1/13/2025 0:45	3.2	54.6	0.0	6.9	11.6	0.0	1/13/2025 0:45	1.4	5.0	0.0	6.7	14.2	0.4	8.4
1/13/2025 1:00	3.2	54.6	0.0	6.9	11.7	0.0	1/13/2025 1:00	1.4	5.0	0.0	6.7	14.2	0.5	8.5
1/13/2025 1:15	3.2	54.7	0.0	6.9	11.7	0.0	1/13/2025 1:15	1.4	5.0	0.0	6.7	14.2	0.5	8.5
1/13/2025 1:30	3.1	54.1	0.0	6.9	11.8	0.0	1/13/2025 1:30	1.3	5.0	0.0	6.7	14.3	0.5	8.5
1/13/2025 1:45	3.2	54.5	0.0	6.9	11.8	0.0	1/13/2025 1:45	1.3	4.9	0.0	6.7	14.2	0.4	8.4
1/13/2025 2:00	3.2	54.5	0.0	6.9	11.7	0.0	1/13/2025 2:00	1.3	5.1	0.0	6.7	14.2	0.4	8.4
1/13/2025 2:15	3.1	54.3	0.0	6.9	11.8	0.0	1/13/2025 2:15	1.3	5.1	0.0	6.7	14.3	0.5	8.5
1/13/2025 2:30	3.1	54.0	0.0	6.9	11.8	0.0	1/13/2025 2:30	1.3	5.0	0.0	6.7	14.3	0.5	8.5
1/13/2025 2:45	3.1	54.3	0.0	6.9	11.8	0.0	1/13/2025 2:45	1.2	5.0	0.0	6.7	14.3	0.4	8.4
1/13/2025 3:00	3.1	54.4	0.0	6.9	11.8	0.0	1/13/2025 3:00	1.2	5.0	0.0	6.7	14.3	0.4	8.4
1/13/2025 3:15	3.1	53.9	0.0	6.9	11.8	0.0	1/13/2025 3:15	1.2	5.0	0.0	6.7	14.3	0.5	8.5
1/13/2025 3:30	3.0	53.8	0.0	6.9	11.8	0.0	1/13/2025 3:30	1.3	5.0	0.0	6.7	14.3	0.6	8.6
1/13/2025 3:45	3.1	53.9	0.0	6.9	11.8	0.0	1/13/2025 3:45	1.3	4.9	0.0	6.8	14.3	0.3	8.3
1/13/2025 4:00	3.1	53.9	0.0	6.9	11.8	0.0	1/13/2025 4:00	1.4	5.0	0.0	6.8	14.2	0.4	8.4
1/13/2025 4:15	3.0	53.7	0.0	6.9	11.8	0.0	1/13/2025 4:15	1.4	5.0	0.0	6.7	14.2	0.4	8.4
1/13/2025 4:30	3.1	53.8	0.0	6.9	11.8	0.0	1/13/2025 4:30	1.3	5.0	0.0	6.7	14.2	0.5	8.5
1/13/2025 4:45	3.0	53.1	0.0	6.9	11.8	0.0	1/13/2025 4:45	1.3	9.6	0.0	6.5	14.9	1.0	9.0
1/13/2025 5:00	3.0	52.9	0.0	7.0	12.0	0.0	1/13/2025 5:00	3.8	78.0	0.0	6.6	12.6	0.5	8.5
1/13/2025 5:15	3.0	52.5	0.0	7.0	12.0	0.0	1/13/2025 5:15	3.9	76.0	0.0	6.6	12.6	0.6	8.6
1/13/2025 5:30	2.9	51.9	0.0	7.0	12.0	0.0	1/13/2025 5:30	3.9	75.3	0.0	6.6	12.6	0.4	8.4
1/13/2025 5:45	2.9	51.4	0.0	7.0	12.1	0.0	1/13/2025 5:45	3.9	76.2	0.0	6.7	12.6	0.4	8.4
1/13/2025 6:00	2.9	51.6	0.0	7.1	12.1	0.0	1/13/2025 6:00	3.9	75.9	0.0	6.7	12.6	0.4	8.4
1/13/2025 6:15	2.9	51.5	0.0	7.0	12.1	0.0	1/13/2025 6:15	3.9	77.9	0.0	6.6	12.5	0.6	8.6
1/13/2025 6:30	2.9	51.8	0.0	7.1	12.1	0.0	1/13/2025 6:30	3.9	77.6	0.0	6.6	12.5	0.4	8.4
1/13/2025 6:45	2.9	53.4	0.0	7.1	12.0	0.0	1/13/2025 6:45	3.9	77.5	0.0	6.6	12.5	0.6	8.6
1/13/2025 7:00	2.9	53.2	0.0	7.0	12.0	0.0	1/13/2025 7:00	3.9	75.6	0.0	6.7	12.6	0.4	8.4
1/13/2025 7:15	2.9	51.7	0.0	7.1	12.1	0.0	1/13/2025 7:15	3.9	75.9	0.0	6.7	12.6	0.4	8.4
1/13/2025 7:30	2.9	52.0	0.0	7.0	12.1	0.0	1/13/2025 7:30	3.9	78.0	0.0	6.6	12.5	0.4	8.4
1/13/2025 7:45	2.9	52.1	0.0	7.0	12.1	0.0	1/13/2025 7:45	3.9	78.9	0.0	6.6	12.5	0.4	8.4
1/13/2025 8:00	2.9	52.4	0.0	7.0	12.1	0.0	1/13/2025 8:00	3.9	80.3	0.0	6.6	12.5	0.4	8.4
1/13/2025 8:15	2.9	53.3	0.0	7.1	12.0	0.0	1/13/2025 8:15	3.9	79.9	0.0	6.6	12.5	0.5	8.5
1/13/2025 8:30	2.9	53.6	0.0	7.0	12.0	0.0	1/13/2025 8:30	3.9	80.5	0.0	6.6	12.5	0.5	8.5
1/13/2025 8:45	2.9	53.3	0.0	7.1	12.1	0.0	1/13/2025 8:45	3.9	81.0	0.0	6.6	12.6	0.4	8.4
1/13/2025 9:00	2.9	53.1	0.0	7.1	12.1	0.0	1/13/2025 9:00	3.9	83.9	0.0	6.6	12.5	0.9	8.9
1/13/2025 9:15	2.9	54.7	0.0	7.1	12.1	0.0	1/13/2025 9:15	3.9	83.6	0.0	6.6	12.5	0.5	8.5
1/13/2025 9:30	2.9	55.2	0.0	7.0	12.0	0.0	1/13/2025 9:30	3.9	80.3	0.0	6.6	12.6	0.5	8.5
1/13/2025 9:45	2.9	53.7	0.0	7.1	12.1	0.0	1/13/2025 9:45	3.9	82.6	0.0	6.6	12.5	0.4	8.4
1/13/2025 10:00	2.9	54.4	0.0	7.1	12.1	0.0	1/13/2025 10:00	4.0	86.2	0.0	6.6	12.4	0.4	8.4
1/13/2025 10:15	2.9	56.3	0.0	7.1	12.0	0.0	1/13/2025 10:15	4.0	83.6	0.0	6.6	12.5	0.4	8.4
1/13/2025 10:30	2.9	55.7	0.0	7.0	12.0	0.0	1/13/2025 10:30	4.0	82.3	0.0	6.6	12.5	0.6	8.6
1/13/2025 10:45	2.9	54.8	0.0	7.0	12.1	0.0	1/13/2025 10:45	4.0	84.8	0.0	6.6	12.5	0.5	8.5
1/13/2025 11:00	3.0	56.0	0.0	7.0	12.0	0.0	1/13/2025 11:00	4.0	84.3	0.0	6.6	12.5	0.5	8.5
1/13/2025 11:15	3.0	56.0	0.0	7.0	12.0	0.0	1/13/2025 11:15	4.0	83.0	0.0	6.6	12.5	0.5	8.5
1/13/2025 11:30	3.0	55.1	0.0	7.0	12.0	0.0	1/13/2025 11:30	4.1	84.1	0.0	6.6	12.5	0.4	
1/13/2025 11:45	3.0	56.4	0.0	7.0	12.0	0.0	1/13/2025 11:45							
1/13/2025 12:00	3.0	56.1	0.0	7.0	12.0	0.0	1/13/2025 12:00							
1/13/2025 12:15	3.0	57.1	0.0	7.0	12.0	0.0	1/13/2025 12:15	There are several short gaps in data due data logger malfunction						
1/13/2025 12:30	3.0	55.4	0.0	7.0	12.0	0.0	1/13/2025 12:30							
1/13/2025 12:45	3.0	54.5	0.0	7.0	12.0	0.0	1/13/2025 12:45							
1/13/2025 13:00	3.0	54.4	0.0	7.0	12.1	0.0	1/13/2025 13:00							
1/13/2025 13:15	3.1	54.6	0.0	7.0	12.1	0.0	1/13/2025 13:15							
1/13/2025 13:30	3.1	54.3	0.0	7.0	12.1	0.0	1/13/2025 13:30							
1/13/2025 13:45	2.7	0.1	0.0	7.6	12.9	0.0	1/13/2025 13:45	4.2	77.8	0.0	6.3	12.7	0.0	8.0
1/13/2025 14:00							1/13/2025 14:00	4.2	77.9	0.0	6.3	12.7	0.0	8.0
1/13/2025 14:15							1/13/2025 14:15	4.2	76.8	0.0	6.4	12.7	0.0	8.0
1/13/2025 14:30							1/13/2025 14:30	4.2	77.1	0.0	6.4	12.7	0.0	8.0
1/13/2025 14:45							1/13/2025 14:45	4.2	77.5	0.0	6.5	12.7	0.0	8.0
1/13/2025 15:00	3.4	73.6	0.0		12.2		1/13/2025 15:00	4.2	76.1	0.0	6.5	12.8	0.0	8.0
1/13/2025 15:15	3.3	70.4	0.0		12.1		1/13/2025 15:15	4.3	76.0	0.0	6.5	12.8	0.0	8.0
1/13/2025 15:30	3.2	70.1	0.0		12.2		1/13/2025 15:30	4.3	77.2	0.0	6.6	12.7	0.0	8.0
1/13/2025 15:45	3.3	70.3	0.0		12.2		1/13/2025 15:45	4.3	77.1	0.0	6.6	12.7	0.0	8.0
1/13/2025 16:00	3.3	70.8	0.0		12.2		1/13/2025 16:00	4.3	76.7	0.0	6.6	12.7	0.0	8.0
1/13/2025 16:15	3.3	70.4	0.0		12.2		1/13/2025 16:15	4.3	76.8	0.0	6.6	12.7	0.0	8.0
1/13/2025 16:30	3.3	70.4	0.0		12.2		1/13/2025 16:30	4.3	76.6	0.0	6.6	12.7	0.0	8.0
1/13/2025 16:45	3.3	70.8	0.0		12.2		1/13/2025 16:45	4.3	77.6	0.0	6.6	12.7	0.0	8.0
1/13/2025 17:00	3.3	70.7	0.0		12.2		1/13/2025 17:00	4.3	78.2	0.0	6.7	12.7	0.0	8.0
1/13/2025 17:15	3.3	70.9	0.0		12.2		1/13/2025 17:15	4.3	78.8	0.0	6.6	12.7	0.0	8.0
1/13/2025 17:30	3.3	71.8	0.0		12.2		1/13/2025 17:30	4.4	82.3	0.0	6.6	12.6	0.0	8.0
1/13/2025 17:45	3.3	72.9	0.0		12.2		1/13/2025 17:45	4.4	84.0	0.0	6.6	12.5	0.0	8.0
1/13/2025 18:00	3.3	74.7	0.0		12.1		1/13/2025 18:00	4.3	81.8	0.0	6.6	12.6	0.0	8.0
1/13/2025 18:15	3.3	74.4	0.0		12.1		1/13/2025 18:15	4.4	84.1	0.0	6.6	12.5	0.0	8.0
1/13/2025 18:30	3.3	75.3	0.0		12.1		1/13/2025 18:30	4.4	85.9	0.0	6.6	12.4	0.0	8.0
1/13/2025 18:45	3.3	77.2	0.0		12.0		1/13/2025 18:45	4.5	96.9	0.0	6.5	12.1	0.0	8.0
1/13/2025 19:00	3.4	84.0	0.0		11.8		1/13/2025 19:00	4.5	98.7	0.0	6.5	12.1	0.0	8.0
1/13/2025 19:15	3.4	0.1	0.0		12.6		1/13/2025 19:15	4.3	4.0	0.0	6.6	13.1	0.0	8.0
1/13/2025 19:30	3.0	0.1	0.0		12.7		1/13/2025 19:30	3.8	4.3	0.0	6.5	13.2	0.0	8.0
1/13/2025 19:45	2.6	0.1	0.0		12.8		1/13/2025 19:45	3.4	4.4	0.0	6.5	13.4	0.0	8.0
1/13/2025 20:00	2.3	0.1	0.0		12.9		1/13/2025 20:00	3.1	4.5	0.0	6.4	13.5	0.0	8.0
1/13/2025 20:15	2.0	0.1	0.0		13.1		1/13/2025 20:15	2.9	4.5	0.0	6.4	13.6	0.0	8.0
1/13/2025 20:30	1.9	0.1	0.0		13.1		1/13/2025 20:30	2.8	4.6	0.0	6.4	13.6	0.0	8.0
1/13/2025 20:45	1.7	0.1	0.0		13.2		1/13/2025 20:45	2.6	4.6	0.0	6.4	13.7	0.0	8.0
1/13/2025 21:00	1.5	0.1	0.0		13.3		1/13/2025 21:00	2.4	4.2	0.0	6.4	13.8	0.0	8.0
1/13/2025 21:15	1.5	0.1	0.0		13.3		1/13/2025 21:15	2.3	4.6	0.0	6.4	13.8	0.0	8.0
1/13/2025 21:30	1.4	0.1	0.0		13.3		1/13/2025 21:30	2.2	4.7	0.0	6.4	13.8	0.0	8.0
1/13/2025 21:45	1.3	0.1	0.0		13.3		1/13/2025 21:45	2.2	4.7	0.0	6.4	13.9	0.0	8.0
1/13/2025 22:00	1.2	0.1	0.0		13.4		1/13/2025 22:00	2.1	5.0	0.0	6.3	13.9	0.0	8.0
1/13/2025 22:15	1.2	0.1	0.0		13.4		1/13/2025 22:15	2.1	4.8	0.0	6.3	13.9	0.0	8.0
1/13/2025 22:30	1.3	0.1	0.0		13.3		1/13/2025 22:30	2.1	4.8	0.0	6.3	13.9	0.0	8.0
1/13/2025 22:45	1.3	0.1	0.0		13.3		1/13/2025 22:45	2.1	4.7	0.0	6.3	13.9	0.0	8.0
1/13/2025 23:00	1.3	0.1	0.0		13.4		1/13/2025 23:00	2.1	4.6	0.0	6.3	13.9	0.0	8.0
1/13/2025 23:15	1.3	0.1	0.0		13.3		1/13/2025 23:15	2.1	4.6	0.0	6.3	13.9	0.0	8.0
1/13/2025 23:30	1.3	0.1	0.0		13.3		1/13/2025 23:30	2.1	4.5	0.0	6.3	13.9	0.0	8.0
1/13/2025 23:45	1.3	0.1	0.0		13.4		1/13/2025 23:45	2.1	4.5	0.0	6.3	13.9	0.0	8.0
1/14/2025 0:00	1.2	0.1	0.0		13.4		1/14/2025 0:00	2.1	4.8	0.0	6.2	13.9	0.0	8.0
1/14/2025 0:15	1.2	0.1	0.0		13.4		1/14/2025 0:15	2.1	4.6	0.0	6.1	13.9	0.0	8.0
1/14/2025 0:30	1.2	0.1	0.0		13.4		1/14/2025 0:30	2.0	4.5	0.0	6.2	14.0	0.0	8.0
1/14/2025 0:45	1.2	0.1	0.0		13.4		1/14/2025 0:45	2.0	4.6	0.0	6.2	14.0	0.0	8.0
1/14/2025 1:00	1.1	0.1	0.0		13.4		1/14/2025 1:00	1.9	4.3	0.0	6.2	14.0	0.0	8.0
1/14/2025 1:15	1.2	0.1	0.0		13.4		1/14/2025 1:15	1.9	4.6	0.0	6.2	14.0	0.0	8.0
1/14/2025 1:30	1.2	0.1	0.0		13.4		1/14/2025 1:30	1.9	4.5	0.0	6.2	14.0	0.0	8.0
1/14/2025 1:45	1.3	0.1	0.0		13.4		1/14/2025 1:45	2.0	4.4	0.0	6.2	14.0	0.0	8.0
1/14/2025 2:00	1.3	0.1	0.0		13.3		1/14/2025 2:00	2.0	4.5	0.0	6.1	14.0	0.0	8.0
1/14/2025 2:15	1.4	0.1	0.0		13.3		1/14/2025 2:15	2.1	4.4	0.0	6.1	13.9	0.0	8.0
1/14/2025 2:30	1.4	0.1	0.0		13.3		1/14/2025 2:30	2.1	4.4	0.0	6.1	13.9	0.0	8.0
1/14/2025 2:45	1.4	0.1	0.0		13.3		1/14/2025 2:45	2.1	4.5	0.0	6.1	13.9	0.0	8.0
1/14/2025 3:00	1.4	0.1	0.0		13.3		1/14/2025 3:00	2.1	4.5	0.0	6.1	13.9	0.0	8.0
1/14/2025 3:15	1.4	0.1	0.0		13.3		1/14/2025 3:15	2.0	4.5	0.0	6.1	13.9	0.0	8.0
1/14/2025 3:30	1.3	0.1	0.0		13.3		1/14/2025 3:30	2.0	4.5	0.0	6.1	14.0	0.0	8.0
1/14/2025 3:45	1.2	0.1	0.0		13.4		1/14/2025 3:45	2.0	4.5	0.0	6.1	14.0	0.0	8.0
1/14/2025 4:00	1.2	0.1	0.0		13.4		1/14/2025 4:00	1.9	4.7	0.0	6.1	14.0	0.0	8.0
1/14/2025 4:15	1.2	0.1	0.0		13.4		1/14/2025 4:15	1.8	4.5	0.0	6.1	14.0	0.0	8.0
1/14/2025 4:30	1.1	0.1	0.0		13.4		1/14/2025 4:30	1.8	4.6	0.0	6.1	14.0	0.0	8.0
1/14/2025 4:45	1.0	0.1	0.0		13.5		1/14/2025 4:45	1.8	4.6	0.0	6.1	14.0	0.0	8.0
1/14/2025 5:00	1.0	0.1	0.0		13.5		1/14/2025 5:00	1.7	4.7	0.0	6.1	14.1	0.0	8.0
1/14/2025 5:15	1.0	0.1	0.0		13.5		1/14/2025 5:15	1.7	4.6	0.0	6.1	14.1	0.0	8.0
1/14/2025 5:30	2.6	74.1	0.0		12.2		1/14/2025 5:30	3.5	80.7	0.0	6.2	12.7	0.0	8.0
1/14/2025 5:45	2.9	73.5	0.0		12.1		1/14/2025 5:45	3.8	79.5	0.0	6.4	12.6	0.0	8.0
1/14/2025 6:00	2.9	73.5	0.0		12.1		1/14/2025 6:00	3.9	77.6	0.0	6.5	12.6	0.0	8.0
1/14/2025 6:15	2.9	72.9	0.0		12.1		1/14/2025 6:15	3.9	77.1	0.0	6.5	12.6	0.0	8.0
1/14/2025 6:30	2.9	72.9	0.0		12.1		1/14/2025 6:30	3.9	76.9	0.0	6.5	12.6	0.0	8.0
1/14/2025 6:45	2.9	72.3	0.0		12.1		1/14/2025 6:45	3.9	77.3	0.0	6.6	12.6	0.0	8.0
1/14/2025 7:00	2.9	71.4	0.0		12.1		1/14/2025 7:00	3.9	78.5	0.0	6.6	12.6	0.0	8.0
1/14/2025 7:15	2.9	71.6	0.0		12.1		1/14/2025 7:15	3.9	79.9	0.0	6.6	12.6	0.0	8.0
1/14/2025 7:30	2.9	72.3	0.0		12.1		1/14/2025 7:30	4.0	80.0	0.0	6.6	12.5	0.0	8.0
1/14/2025 7:45	2.9	73.0	0.0		12.1		1/14/2025 7:45	4.0	78.8	0.0	6.6	12.5	0.0	8.0
1/14/2025 8:00	2.9	72.9	0.0		12.1		1/14/2025 8:00	4.0	78.8	0.0	6.6	12.6	0.0	8.0
1/14/2025 8:15	2.9	72.1	0.0		12.1		1/14/2025 8:15	3.9	77.6	0.0	6.6	12.6	0.0	8.0
1/14/2025 8:30	2.9	71.5	0.0		12.1		1/14/2025 8:30	4.0	78.3	0.0	6.6	12.6	0.0	8.0
1/14/2025 8:45	2.9	71.2	0.0		12.1		1/14/2025 8:45	4.0	82.4	0.0	6.6	12.5	0.0	8.0
1/14/2025 9:00	3.0	72.9	0.0		12.1		1/14/2025 9:00	4.1	85.3	0.0	6.6	12.4	0.0	8.0
1/14/2025 9:15	3.0	75.9	0.0		12.0		1/14/2025 9:15	4.0	80.9	0.0	6.6	12.5	0.0	8.0



1/14/2025 9:30	3.0	74.1	0.0	12.1
1/14/2025 9:45	3.0	72.7	0.0	12.1
1/14/2025 10:00	3.0	75.1	0.0	12.1
1/14/2025 10:15	3.0	76.5	0.0	12.0
1/14/2025 10:30	3.0	75.5	0.0	12.1
1/14/2025 10:45	3.0	73.5	0.0	12.1
1/14/2025 11:00	3.0	75.7	0.0	12.1
1/14/2025 11:15	3.0	76.9	0.0	12.1
1/14/2025 11:30	3.1	77.1	0.0	12.1
1/14/2025 11:45	3.1	77.6	0.0	12.1
1/14/2025 12:00	3.1	78.6	0.0	12.0
1/14/2025 12:15	3.2	78.8	0.0	12.0
1/14/2025 12:30	3.2	77.8	0.0	12.0
1/14/2025 12:45	3.3	77.4	0.0	12.0
1/14/2025 13:00	3.4	77.5	0.0	11.9
1/14/2025 13:15	3.6	51.1	0.0	12.5
1/14/2025 13:30	3.8	0.1	0.0	12.5
1/14/2025 13:45	3.9	10.0	0.0	12.4
1/14/2025 14:00	3.6	76.2	0.0	11.9
1/14/2025 14:15	3.4	74.9	0.0	12.0
1/14/2025 14:30	3.5	74.5	0.0	12.0
1/14/2025 14:45	3.4	74.1	0.0	12.1
1/14/2025 15:00	3.4	73.8	0.0	12.1
1/14/2025 15:15	3.4	73.5	0.0	12.1
1/14/2025 15:30	3.4	72.7	0.0	12.1
1/14/2025 15:45	3.5	72.1	0.0	12.1
1/14/2025 16:00	3.5	72.2	0.0	12.1
1/14/2025 16:15	3.5	0.1	0.0	12.5
1/14/2025 16:30	3.5	72.0	0.0	12.2
1/14/2025 16:45	3.5	71.7	0.0	12.2
1/14/2025 17:00	3.5	71.7	0.0	12.2
1/14/2025 17:15	3.5	71.8	0.0	12.2
1/14/2025 17:30	3.4	71.9	0.0	12.2
1/14/2025 17:45	3.4	71.8	0.0	12.2
1/14/2025 18:00	3.4	72.0	0.0	12.1
1/14/2025 18:15	3.4	72.1	0.0	12.1
1/14/2025 18:30	3.4	72.2	0.0	12.1
1/14/2025 18:45	3.4	73.3	0.0	12.1
1/14/2025 19:00	3.4	74.1	0.0	12.0
1/14/2025 19:15	3.5	77.1	0.0	11.9
1/14/2025 19:30	3.5	80.4	0.0	11.9
1/14/2025 19:45	3.6	86.3	0.0	11.6
1/14/2025 20:00	3.9	0.1	0.0	12.4
1/14/2025 20:15	3.7	0.1	0.0	12.5
1/14/2025 20:30	3.5	0.1	0.0	12.5
1/14/2025 20:45	3.4	0.1	0.0	12.6
1/14/2025 21:00	3.4	0.1	0.0	12.6
1/14/2025 21:15	3.3	0.1	0.0	12.6
1/14/2025 21:30	3.2	0.1	0.0	12.6
1/14/2025 21:45	3.2	0.1	0.0	12.6
1/14/2025 22:00	3.3	0.1	0.0	12.6
1/14/2025 22:15	3.2	0.1	0.0	12.6
1/14/2025 22:30	3.2	0.1	0.0	12.6
1/14/2025 22:45	3.2	0.1	0.0	12.6
1/14/2025 23:00	3.1	0.1	0.0	12.6
1/14/2025 23:15	3.0	0.1	0.0	12.7
1/14/2025 23:30	2.9	0.1	0.0	12.7
1/14/2025 23:45	2.8	0.1	0.0	12.8
1/15/2025 0:00	2.7	0.1	0.0	12.8
1/15/2025 0:15	2.7	0.1	0.0	12.8
1/15/2025 0:30	2.5	0.1	0.0	12.9
1/15/2025 0:45	2.4	0.1	0.0	12.9
1/15/2025 1:00	2.3	0.1	0.0	12.9
1/15/2025 1:15	2.3	0.1	0.0	12.9
1/15/2025 1:30	2.2	0.1	0.0	13.0
1/15/2025 1:45	2.1	0.1	0.0	13.0
1/15/2025 2:00	2.1	0.1	0.0	13.0
1/15/2025 2:15	2.0	0.1	0.0	13.1
1/15/2025 2:30	1.9	0.1	0.0	13.1
1/15/2025 2:45	1.9	0.1	0.0	13.1
1/15/2025 3:00	1.8	0.1	0.0	13.1
1/15/2025 3:15	1.8	0.1	0.0	13.1
1/15/2025 3:30	1.7	0.1	0.0	13.1
1/15/2025 3:45	1.7	0.1	0.0	13.2
1/15/2025 4:00	1.6	0.1	0.0	13.2
1/15/2025 4:15	1.5	0.1	0.0	13.2
1/15/2025 4:30	1.5	0.1	0.0	13.2
1/15/2025 4:45	1.4	0.1	0.0	13.3
1/15/2025 5:00	1.3	0.1	0.0	13.3
1/15/2025 5:15	1.3	0.1	0.0	13.3
1/15/2025 5:30	1.3	0.1	0.0	13.3
1/15/2025 5:45	1.3	0.1	0.0	13.3
1/15/2025 6:00	1.8	12.4	0.0	13.3
1/15/2025 6:15	3.1	74.6	0.0	12.0
1/15/2025 6:30	3.1	73.9	0.0	12.0
1/15/2025 6:45	3.1	73.4	0.0	12.0
1/15/2025 7:00	3.1	72.9	0.0	12.0
1/15/2025 7:15	3.1	72.7	0.0	12.0
1/15/2025 7:30	3.1	72.7	0.0	12.0
1/15/2025 7:45	3.1	72.5	0.0	12.0
1/15/2025 8:00	3.1	74.3	0.0	12.0
1/15/2025 8:15	3.1	75.1	0.0	12.0
1/15/2025 8:30	3.1	74.8	0.0	12.0
1/15/2025 8:45	3.1	73.7	0.0	12.0
1/15/2025 9:00	3.0	72.2	0.0	12.0
1/15/2025 9:15	3.0	72.1	0.0	12.0
1/15/2025 9:30	3.0	72.4	0.0	12.0
1/15/2025 9:45	3.0	74.2	0.0	12.0
1/15/2025 10:00	3.0	75.6	0.0	12.0
1/15/2025 10:15	3.0	75.6	0.0	12.0
1/15/2025 10:30	3.0	76.5	0.0	12.0
1/15/2025 10:45	3.1	78.5	0.0	12.0
1/15/2025 11:00	3.1	78.1	0.0	12.0
1/15/2025 11:15	3.1	80.6	0.0	12.0
1/15/2025 11:30	3.2	82.4	0.0	11.9
1/15/2025 11:45	3.2	81.5	0.0	12.0
1/15/2025 12:00	3.2	79.9	0.0	12.0
1/15/2025 12:15	3.2	81.0	0.0	12.0
1/15/2025 12:30	3.3	82.4	0.0	11.9
1/15/2025 12:45	3.4	81.9	0.0	11.9
1/15/2025 13:00	3.5	0.1	0.0	12.5
1/15/2025 13:15	3.5	0.1	0.0	12.5
1/15/2025 13:30	3.7	0.1	0.0	12.4
1/15/2025 13:45	3.8	0.1	0.0	12.4
1/15/2025 14:00	3.9	0.1	0.0	12.3
1/15/2025 14:15	4.1	0.1	0.0	12.3
1/15/2025 14:30	4.1	0.1	0.0	12.2
1/15/2025 14:45	4.2	0.1	0.0	12.2
1/15/2025 15:00	4.3	0.1	0.0	12.2
1/15/2025 15:15	4.5	0.1	0.0	12.1
1/15/2025 15:30	4.6	0.1	0.0	12.1
1/15/2025 15:45	3.9	75.2	0.0	11.8
1/15/2025 16:00	3.8	75.4	0.0	11.9
1/15/2025 16:15	3.8	74.7	0.0	12.0
1/15/2025 16:30	3.7	74.4	0.0	12.0
1/15/2025 16:45	3.7	73.8	0.0	12.0
1/15/2025 17:00	3.6	73.1	0.0	12.0
1/15/2025 17:15	3.6	72.9	0.0	12.0
1/15/2025 17:30	3.6	72.9	0.0	12.0
1/15/2025 17:45	3.5	72.6	0.0	12.0
1/15/2025 18:00	3.5	72.5	0.0	12.0
1/15/2025 18:15	3.4	72.6	0.0	12.0
1/15/2025 18:30	3.4	73.2	0.0	12.0
1/15/2025 18:45	3.4	73.2	0.0	12.0
1/15/2025 19:00	3.4	73.7	0.0	12.0
1/15/2025 19:15	3.4	74.4	0.0	11.9
1/15/2025 19:30	3.4	75.8	0.0	11.9
1/15/2025 19:45	3.3	75.7	0.0	11.9

1/14/2025 9:30	4.0	79.5	0.0	6.6	12.6	0.0	8.0
1/14/2025 9:45	4.1	87.3	0.0	6.6	12.5	0.0	8.0
1/14/2025 10:00	4.1	86.1	0.0	6.6	12.4	0.0	8.0
1/14/2025 10:15	4.1	82.4	0.0	6.6	12.5	0.0	8.0
1/14/2025 10:30	4.0	80.7	0.0	6.6	12.6	0.0	8.0
1/14/2025 10:45	4.1	85.2	0.0	6.6	12.5	0.0	8.0
1/14/2025 11:00	4.1	86.1	0.0	6.6	12.5	0.0	8.0
1/14/2025 11:15	4.1	85.8	0.0	6.6	12.5	0.0	8.0
1/14/2025 11:30	4.2	86.9	0.0	6.6	12.5	0.0	8.0
1/14/2025 11:45	4.2	88.1	0.0	6.6	12.4	0.0	8.0
1/14/2025 12:00	4.3	87.9	0.0	6.6	12.4	0.0	8.0
1/14/2025 12:15	4.3	86.9	0.0	6.6	12.4	0.0	8.0
1/14/2025 12:30	4.4	81.8	0.0	6.6	12.7	0.0	8.0
1/14/2025 12:45	4.4	3.8	0.0	6.5	13.1	0.0	8.0
1/14/2025 13:00	4.4	3.2	0.0	6.6	13.1	16.6	21.6
1/14/2025 13:15	4.5	4.3	0.0	6.6	13.1	0.0	8.0
1/14/2025 13:30	4.5	4.3	0.0	6.6	13.0	0.0	8.0
1/14/2025 13:45	4.6	4.3	0.0	6.6	13.0	0.0	8.0
1/14/2025 14:00	4.7	4.1	0.0	6.6	13.0	0.0	8.0
1/14/2025 14:15	4.7	45.2	0.0	6.5	13.0	0.0	8.0
1/14/2025 14:30	4.7	46.1	0.0	6.5	13.0	0.0	8.0
1/14/2025 14:45	4.6	80.4	0.0	6.4	12.5	0.0	8.0
1/14/2025 15:00	4.5	79.6	0.0	6.5	12.6	0.0	8.0
1/14/2025 15:15	4.5	78.3	0.0	6.5	12.6	0.0	8.0
1/14/2025 15:30	4.5	77.4	0.0	6.6	12.6	0.0	8.0
1/14/2025 15:45	4.5	78.2	0.0	6.6	12.6	0.0	8.0
1/14/2025 16:00	4.5	77.8	0.0	6.6	12.7	0.0	8.0
1/14/2025 16:15	4.5	77.7	0.0	6.6	12.7	0.0	8.0
1/14/2025 16:30	4.5	77.2	0.0	6.7	12.7	0.0	8.0
1/14/2025 16:45	4.5	77.2	0.0	6.7	12.7	0.0	8.0
1/14/2025 17:00	4.5	77.7	0.0	6.7	12.7	0.0	8.0
1/14/2025 17:15	4.5	77.8	0.0	6.7	12.7	0.0	8.0
1/14/2025 17:30	4.5	77.6	0.0	6.7	12.7	0.0	8.0
1/14/2025 17:45	4.5	78.4	0.0	6.7	12.6	0.0	8.0
1/14/2025 18:00	4.4	78.2	0.0	6.7	12.6	0.0	8.0
1/14/2025 18:15	4.4	78.2	0.0	6.7	12.6	0.0	8.0
1/14/2025 18:30	4.5	80.5	0.0	6.7	12.5	0.0	8.0
1/14/2025 18:45	4.4	80.5	0.0	6.6	12.5	0.0	8.0
1/14/2025 19:00	4.5	85.7	0.0	6.6	12.4	0.0	8.0
1/14/2025 19:15	4.6	88.9	0.0	6.6	12.3	0.0	8.0
1/14/2025 19:30	4.7	100.5	0.0	6.5	12.1	0.0	8.0
1/14/2025 19:45	4.8	103.0	0.0	6.5	12.0	0.0	8.0
1/14/2025 20:00	4.7	3.5	0.0	6.4	13.0	0.0	8.0
1/14/2025 20:15	4.4	4.2	0.0	6.6	13.1	0.0	8.0
1/14/2025 20:30	4.1	3.8	0.0	6.7	13.2	0.0	8.0
1/14/2025 20:45	3.9	4.2	0.0	6.6	13.3	0.0	8.0
1/14/2025 21:00	3.7	4.3	0.0	6.6	13.3	0.0	8.0
1/14/2025 21:15	3.5	4.4	0.0	6.6	13.4	0.0	8.0
1/14/2025 21:30	3.5	4.3	0.0	6.7	13.4	0.0	8.0
1/14/2025 21:45	3.3	4.4	0.0	6.6	13.4	0.0	8.0
1/14/2025 22:00	3.3	4.4	0.0	6.6	13.4	0.0	8.0
1/14/2025 22:15	3.3	4.6	0.0	6.6	13.4	0.0	8.0
1/14/2025 22:30	3.3	3.8	0.0	6.7	13.5	0.0	8.0
1/14/2025 22:45	3.3	4.3	0.0	6.6	13.5	0.0	8.0
1/14/2025 23:00	3.3	4.3	0.0	6.6	13.5	0.0	8.0
1/14/2025 23:15	3.2	4.4	0.0	6.6	13.5	0.0	8.0
1/14/2025 23:30	3.0	4.3	0.0	6.7	13.6	0.0	8.0
1/14/2025 23:45	2.9	4.4	0.0	6.7	13.6	0.0	8.0
1/15/2025 0:00	2.8	4.5	0.0	6.7	13.6	0.0	8.0
1/15/2025 0:15	2.7	4.6	0.0	6.6	13.6	0.0	8.0
1/15/2025 0:30	2.6	4.0	0.0	6.7	13.7	0.0	8.0
1/15/2025 0:45	2.5	4.3	0.0	6.6	13.7	0.0	8.0
1/15/2025 1:00	2.4	4.4	0.0	6.7	13.8	0.0	8.0
1/15/2025 1:15	2.3	4.5	0.0	6.6	13.8	0.0	8.0
1/15/2025 1:30	2.2	4.4	0.0	6.7	13.8	0.0	8.0
1/15/2025 1:45	2.2	4.5	0.0	6.7	13.9	0.0	8.0
1/15/2025 2:00	2.1	4.6	0.0	6.7	13.9	0.0	8.0
1/15/2025 2:15	2.0	4.6	0.0	6.7	13.9	0.0	8.0
1/15/2025 2:30	2.0	4.2	0.0	6.7	13.9	0.0	8.0
1/15/2025 2:45	1.9	4.5	0.0	6.7	13.9	0.0	8.0
1/15/2025 3:00	1.9	4.5	0.0	6.7	14.0	0.0	8.0
1/15/2025 3:15	1.8	4.5	0.0	6.7	14.0	0.0	8.0
1/15/2025 3:30	1.8	4.7	0.0	6.7	14.0	0.0	8.0
1/15/2025 3:45	1.8	4.5	0.0	6.7	14.0	0.0	8.0
1/15/2025 4:00	1.7	4.5	0.0	6.6	14.0	0.0	8.0
1/15/2025 4:15	1.6	4.6	0.0	6.6	14.1	0.0	8.0
1/15/2025 4:30	1.6	3.8	0.0	6.7	14.1	0.0	8.0
1/15/2025 4:45	1.6	4.2	0.0	6.6	14.1	0.0	8.0
1/15/2025 5:00	1.5	4.3	0.0	6.6	14.1	0.0	8.0
1/15/2025 5:15	1.4	4.3	0.0	6.6	14.1	0.0	8.0
1/15/2025 5:30	1.5	4.3	0.0	6.7	14.1	0.0	8.0
1/15/2025 5:45	1.5	4.3	0.0	6.7	14.1	0.0	8.0
1/15/2025 6:00	3.2	82.7	0.0	6.6	13.1	0.0	8.0
1/15/2025 6:15	4.0	80.0	0.0	6.6	12.5	0.0	8.0
1/15/2025 6:30	4.0	79.0	0.0	6.6	12.5	0.0	8.0
1/15/2025 6:45	4.0	78.3	0.0	6.6	12.5	0.0	8.0
1/15/2025 7:00	4.0	77.9	0.0	6.6	12.5	0.0	8.0
1/15/2025 7:15	4.0	77.7	0.0	6.6	12.5	0.0	8.0
1/15/2025 7:30	4.1	79.9	0.0	6.6	12.5	0.0	8.0
1/15/2025 7:45	4.1	84.0	0.0	6.6	12.4	0.0	8.0
1/15/2025 8:00	4.1	82.5	0.0	6.6	12.4	0.0	8.0
1/15/2025 8:15	4.1	80.1	0.0	6.6	12.5	0.0	8.0
1/15/2025 8:30	4.1	78.9	0.0	6.6	12.5	0.0	8.0
1/15/2025 8:45	4.0	78.3	0.0	6.6	12.5	0.0	8.0
1/15/2025 9:00	4.0	78.2	0.0	6.6	12.5	0.0	8.0
1/15/2025 9:15	4.0	81.1	0.0	6.6	12.5	0.0	8.0
1/15/2025 9:30	4.1	84.5	0.0	6.6	12.4	0.0	8.0
1/15/2025 9:45	4.1	84.3	0.0	6.6	12.4	0.0	8.0
1/15/2025 10:00	4.0	83.8	0.0	6.6	12.5	0.0	8.0
1/15/2025 10:15	4.1	87.1	0.0	6.6	12.4	0.0	8.0
1/15/2025 10:30	4.1	89.4	0.0	6.6	12.4	0.0	8.0
1/15/2025 10:45	4.1	87.1	0.0	6.6	12.5	0.0	8.0
1/15/2025 11:00	4.3		0.0		12.3		8.0
1/15/2025 11:15							
1/15/2025 11:30							
1/15/2025 11:45							
1/15/2025 12:00							
1/15/2025 12:15							
1/15/2025 12:30							
1/15/2025 12:45	4.5	85.9	0.0	6.8	12.3		8.0
1/15/2025 13:00							
1/15/2025 13:15							
1/15/2025 13:30							
1/15/2025 13:45							
1/15/2025 14:00							
1/15/2025 14:15							
1/15/2025 14:30							
1/15/2025 14:45							
1/15/2025 15:00							
1/15/2025 15:15							
1/15/2025 15:30							
1/15/2025 15:45	4.8	81.6	0.0	6.6	12.4	0.0	8.0
1/15/2025 16:00	4.8	81.5	0.0	6.6	12.5	0.0	8.0
1/15/2025 16:15	4.8	80.4	0.0	6.7	12.5	0.0	8.0
1/15/2025 16:30	4.7	79.5	0.0	6.7	12.5	0.0	8.0
1/15/2025 16:45	4.7	78.9	0.0	6.7	12.5	0.0	8.0
1/15/2025 17:00	4.6	78.4	0.0	6.7	12.5	0.0	8.0
1/15/2025 17:15	4.6	78.4	0.0	6.7	12.5	0.0	8.0
1/15/2025 17:30	4.5	78.1	0.0	6.7	12.5	0.0	8.0
1/15/2025 17:45	4.5	77.9	0.0	6.7	12.5	0.0	8.0
1/15/2025 18:00	4.4	78.5	0.0	6.7	12.5	0.0	8.0
1/15/2025 18:15	4.4	79.6	0.0	6.7	12.5	0.0	8.0
1/15/2025 18:30	4.4	79.1	0.0	6.7	12.5	0.0	8.0
1/15/2025 18:45	4.4	80.1	0.0	6.7	12.5	0.0	8.0
1/15/2025 19:00	4.4	81.4	0.0	6.7	12.4	0.0	8.0
1/15/2025 19:15	4.4	84.2	0.0	6.7	12.3	0.0	8.0
1/15/2025 19:30	4.4	83.3	0.0	6.7	12.3	0.0	8.0
1/15/2025 19:45	4.3	83.8	0.0	6.7	12.3	0.0	8.0

There are several short gaps in data due data logger malfunction

1/15/2025 20:00	3.3	76.7	0.0	11.9	1/15/2025 20:00	4.4	93.0	0.0	6.6	12.2	0.0	8.0
1/15/2025 20:15	3.4	83.2	0.0	11.7	1/15/2025 20:15	4.6	102.5	0.0	6.6	12.0	0.0	8.0
1/15/2025 20:30	3.5	88.9	0.0	11.6	1/15/2025 20:30	4.6	103.5	0.0	6.5	11.9	0.0	8.0
1/15/2025 20:45	3.6	0.1	0.0	12.4	1/15/2025 20:45	4.6	102.0	0.0	6.5	11.9	0.0	8.0
1/15/2025 21:00	3.4	0.1	0.0	12.4	1/15/2025 21:00	4.7	55.3	0.0	6.4	12.8	169.1	174.1
1/15/2025 21:15	3.3	0.1	0.0	12.5	1/15/2025 21:15	4.5	3.9	0.0	6.5	12.9	0.0	8.0
1/15/2025 21:30	3.2	0.1	0.0	12.5	1/15/2025 21:30	4.1	4.1	0.0	6.5	13.0	0.0	8.0
1/15/2025 21:45	3.1	0.1	0.0	12.5	1/15/2025 21:45	4.0	4.1	0.0	6.6	13.1	0.0	8.0
1/15/2025 22:00	3.1	0.1	0.0	12.5	1/15/2025 22:00	3.8	4.2	0.0	6.6	13.1	0.0	8.0
1/15/2025 22:15	3.1	0.1	0.0	12.5	1/15/2025 22:15	3.7	4.2	0.0	6.6	13.2	0.0	8.0
1/15/2025 22:30	3.0	0.1	0.0	12.6	1/15/2025 22:30	3.7	4.3	0.0	6.6	13.2	0.0	8.0
1/15/2025 22:45	3.0	0.1	0.0	12.6	1/15/2025 22:45	3.5	4.0	0.0	6.6	13.2	0.0	8.0
1/15/2025 23:00	3.0	0.1	0.0	12.6	1/15/2025 23:00	3.5	4.2	0.0	6.6	13.2	0.0	8.0
1/15/2025 23:15	2.9	0.1	0.0	12.6	1/15/2025 23:15	3.5	4.2	0.0	6.6	13.2	0.0	8.0
1/15/2025 23:30	2.9	0.1	0.0	12.6	1/15/2025 23:30	3.4	4.3	0.0	6.6	13.3	0.0	8.0
1/15/2025 23:45	2.9	0.1	0.0	12.6	1/15/2025 23:45	3.4	4.2	0.0	6.7	13.3	0.0	8.0
1/16/2025 0:00	2.9	0.1	0.0	12.6	1/16/2025 0:00	3.4	4.3	0.0	6.7	13.3	0.0	8.0
1/16/2025 0:15	2.9	0.1	0.0	12.6	1/16/2025 0:15	3.4	4.3	0.0	6.6	13.3	0.0	8.0
1/16/2025 0:30	2.9	0.1	0.0	12.6	1/16/2025 0:30	3.4	4.4	0.0	6.6	13.3	0.0	8.0
1/16/2025 0:45	2.9	0.1	0.0	12.6	1/16/2025 0:45	3.4	4.2	0.0	6.6	13.3	0.0	8.0
1/16/2025 1:00	2.9	0.1	0.0	12.6	1/16/2025 1:00	3.3	4.3	0.0	6.7	13.3	0.0	8.0
1/16/2025 1:15	2.9	0.1	0.0	12.6	1/16/2025 1:15	3.3	4.3	0.0	6.7	13.3	0.0	8.0
1/16/2025 1:30	2.8	0.1	0.0	12.6	1/16/2025 1:30	3.3	4.3	0.0	6.7	13.3	0.0	8.0
1/16/2025 1:45	2.8	0.1	0.0	12.6	1/16/2025 1:45	3.2	4.2	0.0	6.7	13.3	0.0	8.0
1/16/2025 2:00		0.1	0.0	12.6	1/16/2025 2:00	3.2	4.3	0.0	6.6	13.3	0.0	8.0
1/16/2025 2:15	2.7	0.1	0.0	12.7	1/16/2025 2:15	3.2	4.4	0.0	6.6	13.3	0.0	8.0
1/16/2025 2:30	2.6	0.1	0.0	12.7	1/16/2025 2:30	3.1	4.4	0.0	6.6	13.3	0.0	8.0
1/16/2025 2:45	2.6	0.1	0.0	12.7	1/16/2025 2:45	3.0	4.1	0.0	6.7	13.4	0.0	8.0
1/16/2025 3:00	2.5	0.1	0.0	12.7	1/16/2025 3:00	2.9	4.3	0.0	6.6	13.4	0.0	8.0
1/16/2025 3:15	2.4	0.1	0.0	12.8	1/16/2025 3:15	2.9	4.3	0.0	6.6	13.4	0.0	8.0
1/16/2025 3:30	2.5	0.1	0.0	12.7	1/16/2025 3:30	3.0	4.3	0.0	6.6	13.4	0.0	
1/16/2025 3:45	2.6	0.1	0.0	12.7	1/16/2025 3:45	3.1	4.3	0.0	6.7	13.3	0.0	
1/16/2025 4:00	2.8	0.1	0.0	12.6	1/16/2025 4:00	3.3	4.3	0.0	6.7	13.3	0.0	
1/16/2025 4:15	3.1	0.1	0.0	12.5	1/16/2025 4:15	3.7	4.3	0.0	6.6	13.2	0.0	
1/16/2025 4:30	3.4	0.1	0.0	12.4	1/16/2025 4:30	3.9	4.3	0.0	6.6	13.1	0.0	
1/16/2025 4:45	3.5	0.1	0.0	12.4	1/16/2025 4:45	4.0	4.0	0.0	6.7	13.0	0.0	
1/16/2025 5:00	3.7	0.1	0.0	12.3	1/16/2025 5:00	4.2	4.1	0.0	6.7	13.0	0.0	
1/16/2025 5:15	3.9	0.1	0.0	12.2	1/16/2025 5:15	4.4	4.2	0.0	6.6	12.9	0.0	
1/16/2025 5:30	4.1	0.1	0.0	12.2	1/16/2025 5:30	4.5	4.2	0.0	6.6	12.9	0.0	
1/16/2025 5:45	4.2	0.1	0.0	12.1	1/16/2025 5:45	4.6	4.1	0.0	6.6	12.8	0.0	
1/16/2025 6:00	4.3	0.1	0.0	12.1	1/16/2025 6:00	4.7	4.2	0.0	6.6	12.8	0.0	
1/16/2025 6:15	4.3	0.1	0.0	12.1	1/16/2025 6:15	4.4	81.5	0.0	6.5	12.2	0.0	
1/16/2025 6:30	3.4	75.4	0.0	11.8	1/16/2025 6:30	4.3	80.8	0.0	6.6	12.3	0.0	
1/16/2025 6:45	3.3	74.7	0.0	11.8	1/16/2025 6:45	4.3	79.6	0.0	6.6	12.3	0.0	
1/16/2025 7:00	3.3	74.1	0.0	11.8	1/16/2025 7:00	4.3	79.1	0.0	6.6	12.3	0.0	
1/16/2025 7:15	3.3	73.8	0.0	11.8	1/16/2025 7:15	4.3	78.9	0.0	6.6	12.3	0.0	
1/16/2025 7:30	3.3	73.6	0.0	11.8	1/16/2025 7:30	4.3	78.8	0.0	6.7	12.3	0.0	
1/16/2025 7:45	3.3	73.4	0.0	11.9	1/16/2025 7:45	4.3	81.8	0.0	6.6	12.3	0.0	
1/16/2025 8:00	3.3	73.4	0.0	11.8	1/16/2025 8:00	4.4	84.4	0.0	6.6	12.2	0.0	
1/16/2025 8:15	3.3	75.4	0.0	11.8	1/16/2025 8:15							
1/16/2025 8:30	3.4	76.3	0.0	11.8	1/16/2025 8:30							
1/16/2025 8:45	3.4	74.7	0.0	11.8	1/16/2025 8:45							
1/16/2025 9:00	3.3	73.0	0.0	11.8	1/16/2025 9:00							
1/16/2025 9:15	3.3	72.5	0.0	11.8	1/16/2025 9:15							
1/16/2025 9:30	3.4	72.3	0.0	11.8	1/16/2025 9:30							
1/16/2025 9:45	3.4	72.6	0.0	11.8	1/16/2025 9:45	4.5						
1/16/2025 10:00	3.4	73.8	0.0	11.8	1/16/2025 10:00							
1/16/2025 10:15	3.4	74.8	0.0	11.8	1/16/2025 10:15							
1/16/2025 10:30	3.5	75.4	0.0	11.8	1/16/2025 10:30							
1/16/2025 10:45	3.5	76.5	0.0	11.8	1/16/2025 10:45							
1/16/2025 11:00	3.5	76.4	0.0	11.8	1/16/2025 11:00							
1/16/2025 11:15	3.5	77.2	0.0	11.8	1/16/2025 11:15							
1/16/2025 11:30	3.6	78.3	0.0	11.7	1/16/2025 11:30							
1/16/2025 11:45	3.7	78.4	0.0	11.7	1/16/2025 11:45							
1/16/2025 12:00	3.7	81.1	0.0	11.7	1/16/2025 12:00							
1/16/2025 12:15	3.8	83.9	0.0	11.7	1/16/2025 12:15							
1/16/2025 12:30	3.8	80.6	0.0	11.7	1/16/2025 12:30							
1/16/2025 12:45	3.9	79.8	0.0	11.7	1/16/2025 12:45							
1/16/2025 13:00	4.0	79.5	0.0	11.7	1/16/2025 13:00							
1/16/2025 13:15	4.1	80.9	0.0	11.7	1/16/2025 13:15							
1/16/2025 13:30	4.1	81.0	0.0	11.6	1/16/2025 13:30							
1/16/2025 13:45	4.4	0.1	0.0	12.1	1/16/2025 13:45							
1/16/2025 14:00	4.7	0.1	0.0	12.0	1/16/2025 14:00							
1/16/2025 14:15	5.0	0.1	0.0	11.9	1/16/2025 14:15							
1/16/2025 14:30	5.2	0.1	0.0	11.8	1/16/2025 14:30							
1/16/2025 14:45	5.3	0.1	0.0	11.8	1/16/2025 14:45							
1/16/2025 15:00	5.4	0.1	0.0	11.8	1/16/2025 15:00							
1/16/2025 15:15	5.4	0.1	0.0	11.8	1/16/2025 15:15							
1/16/2025 15:30	5.4	0.1	0.0	11.7	1/16/2025 15:30							
1/16/2025 15:45	5.4	0.1	0.0	11.8	1/16/2025 15:45							
1/16/2025 16:00	5.5	0.1	0.0	11.7	1/16/2025 16:00							
1/16/2025 16:15	5.7	0.1	0.0	11.7	1/16/2025 16:15							
1/16/2025 16:30	5.4	0.1	0.0	11.8	1/16/2025 16:30							
1/16/2025 16:45	5.1	0.1	0.0	11.8	1/16/2025 16:45							
1/16/2025 17:00	4.2	75.2	0.0	11.7	1/16/2025 17:00							
1/16/2025 17:15	4.1	75.0	0.0	11.8	1/16/2025 17:15							
1/16/2025 17:30	4.0	74.8	0.0	11.7	1/16/2025 17:30							
1/16/2025 17:45	3.9	74.5	0.0	11.8	1/16/2025 17:45	4.9	79.7	0.0	6.7	12.3	0.0	
1/16/2025 18:00	3.9	74.3	0.0	11.8	1/16/2025 18:00	4.9	79.1	0.0	6.7	12.3	0.0	
1/16/2025 18:15	3.9	73.9	0.0	11.8	1/16/2025 18:15	4.8	78.8	0.0	6.7	12.3	0.0	
1/16/2025 18:30	3.8	73.5	0.0	11.8	1/16/2025 18:30	4.8	78.4	0.0	6.7	12.3	0.0	
1/16/2025 18:45	3.8	73.2	0.0	11.8	1/16/2025 18:45	4.7	78.5	0.0	6.7	12.3	0.0	
1/16/2025 19:00	3.7	73.0	0.0	11.8	1/16/2025 19:00	4.7	78.6	0.0	6.7	12.3	0.0	
1/16/2025 19:15	3.7	73.1	0.0	11.8	1/16/2025 19:15	4.7	78.9	0.0	6.7	12.3	0.0	
1/16/2025 19:30	3.7	73.2	0.0	11.8	1/16/2025 19:30	4.7	79.4	0.0	6.7	12.3	0.0	
1/16/2025 19:45	3.7	73.3	0.0	11.8	1/16/2025 19:45	4.7	80.4	0.0	6.7	12.2	0.0	
1/16/2025 20:00	3.6	73.9	0.0	11.8	1/16/2025 20:00	4.6	81.3	0.0	6.7	12.2	0.0	
1/16/2025 20:15	3.6	74.7	0.0	11.7	1/16/2025 20:15	4.6	82.7	0.0	6.7	12.1	0.0	
1/16/2025 20:30	3.6	75.9	0.0	11.7	1/16/2025 20:30	4.7	89.8	0.0	6.6	12.0	0.0	
1/16/2025 20:45	3.7	80.0	0.0	11.6	1/16/2025 20:45	4.8	95.8	0.0	6.6	11.9	0.0	
1/16/2025 21:00	3.7	83.4	0.0	11.5	1/16/2025 21:00	4.8	97.3	0.0	6.6	11.8	0.0	
1/16/2025 21:15	3.7	19.3	0.0	11.5	1/16/2025 21:15	4.9	95.2	0.0	6.5	11.7	0.0	
1/16/2025 21:30	2.9	0.1	0.0	12.6	1/16/2025 21:30	4.8	92.8	0.0	6.3	11.7	134.5	
1/16/2025 21:45	2.3	0.1	0.0	12.9	1/16/2025 21:45	4.4	3.5	0.0	6.6	12.9	0.0	8.0
1/16/2025 22:00	1.9	0.1	0.0	13.0	1/16/2025 22:00	3.5	4.2	0.0	6.6	13.2	0.0	8.0
1/16/2025 22:15	1.7	0.1	0.0	13.1	1/16/2025 22:15	3.0	4.3	0.0	6.6	13.4	0.0	
1/16/2025 22:30	1.6	0.1	0.0	13.1	1/16/2025 22:30	2.7	4.4	0.0	6.6	13.5	0.0	8.0
1/16/2025 22:45	1.4	0.1	0.0	13.2	1/16/2025 22:45	2.5	4.2	0.0	6.6	13.6	0.0	8.0
1/16/2025 23:00	1.3	0.1	0.0	13.2	1/16/2025 23:00	2.3	4.4	0.0	6.6	13.7	0.0	8.0
1/16/2025 23:15	1.2	0.1	0.0	13.3	1/16/2025 23:15	2.1	4.4	0.0	6.6	13.8	0.0	8.0
1/16/2025 23:30	1.1	0.1	0.0	13.3	1/16/2025 23:30	2.1	4.4	0.0	6.6	13.8	0.0	8.0
1/16/2025 23:45	1.1	0.1	0.0	13.3	1/16/2025 23:45	2.0	4.5	0.0	6.6	13.8	0.0	8.0
1/17/2025 0:00	0.9	0.1	0.0	13.4	1/17/2025 0:00	1.9	4.5	0.0	6.6	13.9	0.0	8.0
1/17/2025 0:15	0.9	0.1	0.0	13.4	1/17/2025 0:15	1.8	4.6	0.0	6.6	13.9	0.0	8.0
1/17/2025 0:30	0.8	0.1	0.0	13.4	1/17/2025 0:30	1.8	4.6	0.0	6.6	13.9	0.0	8.0
1/17/2025 0:45	0.9	0.1	0.0	13.4	1/17/2025 0:45	1.7	4.4	0.0	6.6	13.9	0.0	8.0
1/17/2025 1:00	0.9	0.1	0.0	13.4	1/17/2025 1:00	1.7	4.5	0.0	6.6	14.0	0.0	8.0
1/17/2025 1:15	0.8	0.1	0.0	13.4	1/17/2025 1:15	1.7	4.6	0.0	6.6	14.0	0.0	8.0
1/17/2025 1:30	0.8	0.1	0.0	13.5	1/17/2025 1:30	1.6	4.6	0.0	6.6	14.0	0.0	8.0
1/17/2025 1:45	0.7	0.1	0.0	13.5	1/17/2025 1:45	1.6	4.4	0.0	6.6	14.0	0.0	8.0
1/17/2025 2:00	0.7	0.1	0.0	13.5	1/17/2025 2:00	1.5	4.6	0.0	6.6	14.0	0.0	8.0
1/17/2025 2:15	0.6	0.1	0.0	13.5	1/17/2025 2:15	1.4	4.6	0.0	6.6	14.1	0.0	8.0
1/17/2025 2:30	0.5	0.1	0.0	13.6	1/17/2025 2:30	1.4	4.7	0.0	6.6	14.1	0.0	8.0
1/17/2025 2:45	0.5	0.1	0.0	13.6	1/17/2025 2:45	1.3	4.4	0.0	6.7	14.1	0.0	8.0
1/17/2025 3:00	0.4	0.1	0.0	13.6	1/17/2025 3:00	1.3	4.6	0.0	6.7	14.1	0.0	8.0
1/17/2025 3:15	0.4	0.1	0.0	13.6	1/17/2025 3:15	1.2	4.6	0.0	6.6	14.1	0.0	8.0
1/17/2025 3:30	0.4	0.1	0.0	13.6	1/17/2025 3:30	1.3	4.7	0.0	6.6	14.1	0.0	8.0
1/17/2025 3:45	0.3	0.1	0.0	13.6	1/17/2025 3:45	1.2	4.6	0.0	6.7	14.2	0.0	8.0
1/17/2025 4:00	0.3	0.1	0.0	13.7	1/17/2025 4:00	1.2	4.7	0.0	6.7	14.2	0.0	8.0
1/17/2025 4:15	0.3	0.1	0.0	13.7	1/17/2025 4:15	1.2	4.7	0.0	6.6	14.2	0.0	8.0
1/17/2025 4:30	0.2	0.1	0.0	13.7	1/17/2025 4:30	1.2	4.8	0.0	6.7	14.2	0.0	8.0
1/17/2025 4:45	0.2	0.1	0.0	13.7	1/17/2025 4:45	1.1	4.4	0.0	6.7	14.2	0.0	8.0
1/17/2025 5:00	0.1	0.1	0.0	13.7	1/17/2025 5:00	1.0	4.6	0.0	6.6	14.2	0.0	8.0
1/17/2025 5:15	0.0	0.1	0.0	13.8	1/17/2025 5:15	1.0	4.7	0.0	6.6	14.3	0.0	8.0
1/17/2025 5:30	0.0	0.1	0.0	13.8	1/17/2025 5:30	0.9	4.7	0.0	6.6	14.3	0.0	8.0
1/17/2025 5:45	0.0	0.1	0.0	13.8	1/17/2025 5:45	0.9	4.6	0.0	6.6	14.3	0.0	8.0
1/17/2025 6:00	-0.1	0.1	0.0	13.8	1/17/2025 6:00	0.8	4.8	0.0	6.7	14.3	0.0	8.0
1/17/2025 6:15	-0.1	0.1	0.0	13.8	1/17/2025 6:15	0.8	4.8	0.0	6.6	14.3	0.0	8.0

There are several short gaps in data due data logger malfunction

1/17/2025 6:30	-0.3	0.1	0.0	13.9	1/17/2025 6:30	0.8	4.8	0.0	6.7	14.4	0.0	8.0
1/17/2025 6:45	-0.3	0.1	0.0	13.9	1/17/2025 6:45	2.7	47.5	0.0	6.7	13.3	0.4	8.4
1/17/2025 7:00	2.7	74.8	0.0	12.0	1/17/2025 7:00	3.9	81.4	0.0	6.6	12.4	0.0	8.0
1/17/2025 7:15	2.9	74.6	0.0	11.9	1/17/2025 7:15	3.9	80.1	0.0	6.6	12.4	0.0	8.0
1/17/2025 7:30	2.9	74.3	0.0	11.9	1/17/2025 7:30	3.9	79.0	0.0	6.6	12.5	0.0	8.0
1/17/2025 7:45	2.9	73.7	0.0	12.0	1/17/2025 7:45	3.9	78.5	0.0	6.7	12.5	0.0	8.0
1/17/2025 8:00	2.9	73.2	0.0	12.0	1/17/2025 8:00	3.9	78.4	0.0	6.7	12.5	0.0	8.0
1/17/2025 8:15	2.9	73.0	0.0	12.0	1/17/2025 8:15	3.9	79.6	0.0	6.7	12.5	0.0	8.0
1/17/2025 8:30	2.9	72.7	0.0	12.0	1/17/2025 8:30	4.0	87.3	0.0	6.6	12.3	0.0	8.0
1/17/2025 8:45	2.9	73.6	0.0	12.0	1/17/2025 8:45	4.0	87.7	0.0	6.6	12.2	0.0	8.0
1/17/2025 9:00	2.9	75.0	0.0	11.9	1/17/2025 9:00	3.9	83.3	0.0	6.6	12.3	0.0	8.0
1/17/2025 9:15	2.9	77.2	0.0	11.9	1/17/2025 9:15	3.8	79.4	0.0	6.6	12.4	0.0	8.0
1/17/2025 9:30	2.9	75.7	0.0	11.9	1/17/2025 9:30	3.8	77.8	0.0	6.7	12.5	0.0	8.0
1/17/2025 9:45	2.8	72.9	0.0	12.0	1/17/2025 9:45	3.8	77.5	0.0	6.7	12.5	0.0	8.0
1/17/2025 10:00	2.8	71.8	0.0	12.0	1/17/2025 10:00	3.8	81.4	0.0	6.7	12.5	0.0	8.0
1/17/2025 10:15	2.8	72.7	0.0	12.0	1/17/2025 10:15	3.8	80.5	0.0	6.7	12.5	0.0	8.0
1/17/2025 10:30	2.8	73.3	0.0	12.0	1/17/2025 10:30	3.8	82.0	0.0	6.7	12.5	0.0	8.0
1/17/2025 10:45	2.8	73.4	0.0	12.0	1/17/2025 10:45	3.8	89.4	0.0	6.6	12.4	0.0	8.0
1/17/2025 11:00	2.8	74.3	0.0	12.0	1/17/2025 11:00	3.9	91.8	0.0	6.6	12.4	0.0	8.0
1/17/2025 11:15	2.8	79.4	0.0	12.0	1/17/2025 11:15	3.9	88.5	0.0	6.6	12.5	0.0	8.0
1/17/2025 11:30	2.8	79.7	0.0	12.0	1/17/2025 11:30	3.9	89.6	0.0	6.6	12.5	0.0	8.0
1/17/2025 11:45	2.8	79.3	0.0	12.0	1/17/2025 11:45	3.9	92.2	0.0	6.6	12.5	0.0	8.0
1/17/2025 12:00	2.9	80.7	0.0	12.1	1/17/2025 12:00	4.0	93.3	0.0	6.6	12.5	0.0	8.0
1/17/2025 12:15	2.9	81.7	0.0	12.0	1/17/2025 12:15	4.0	90.7	0.0	6.6	12.5	0.0	8.0
1/17/2025 12:30	3.0	80.7	0.0	12.1	1/17/2025 12:30	4.1	91.9	0.0	6.6	12.5	0.0	8.0
1/17/2025 12:45	3.0	81.1	0.0	12.1	1/17/2025 12:45	4.1	91.4	0.0	6.6	12.5	0.0	8.0
1/17/2025 13:00	3.0	81.1	0.0	12.0	1/17/2025 13:00	4.2	93.1	0.0	6.6	12.4	0.0	8.0
1/17/2025 13:15	3.1	66.2	0.0	12.0	1/17/2025 13:15					12.4		8.0
1/17/2025 13:30	2.7	0.1	0.0	12.8	1/17/2025 13:30							
1/17/2025 13:45	3.0	80.8	0.0	12.2	1/17/2025 13:45	4.4						8.0
1/17/2025 14:00	3.2	78.9	0.0	12.0	1/17/2025 14:00							
1/17/2025 14:15	3.2	76.6	0.0	12.0	1/17/2025 14:15							
1/17/2025 14:30	3.2	76.4	0.0	12.0	1/17/2025 14:30							
1/17/2025 14:45	3.3	76.2	0.0	12.0	1/17/2025 14:45							
1/17/2025 15:00	3.3	75.9	0.0	12.0	1/17/2025 15:00							
1/17/2025 15:15	3.3	75.9	0.0	12.0	1/17/2025 15:15							
1/17/2025 15:30	3.3	75.8	0.0	12.1	1/17/2025 15:30							
1/17/2025 15:45	3.3	75.8	0.0	12.1	1/17/2025 15:45							
1/17/2025 16:00	3.4	75.9	0.0	12.1	1/17/2025 16:00							
1/17/2025 16:15	3.3	76.0	0.0	12.1	1/17/2025 16:15							
1/17/2025 16:30	3.3	76.1	0.0	12.0	1/17/2025 16:30							
1/17/2025 16:45	3.3	76.1	0.0	12.0	1/17/2025 16:45							
1/17/2025 17:00	3.2	76.2	0.0	12.1	1/17/2025 17:00							
1/17/2025 17:15	3.2	76.3	0.0	12.1	1/17/2025 17:15							
1/17/2025 17:30	3.1	76.2	0.0	12.1	1/17/2025 17:30							
1/17/2025 17:45	3.1	76.2	0.0	12.1	1/17/2025 17:45							
1/17/2025 18:00	3.0	76.1	0.0	12.1	1/17/2025 18:00							
1/17/2025 18:15	3.0	76.1	0.0	12.1	1/17/2025 18:15							
1/17/2025 18:30	2.9	76.1	0.0	12.1	1/17/2025 18:30							
1/17/2025 18:45	2.9	76.0	0.0	12.1	1/17/2025 18:45							
1/17/2025 19:00	2.8	75.9	0.0	12.1	1/17/2025 19:00							
1/17/2025 19:15	2.8	75.7	0.0	12.1	1/17/2025 19:15							
1/17/2025 19:30	2.8	75.7	0.0	12.1	1/17/2025 19:30							
1/17/2025 19:45	2.7	75.8	0.0	12.1	1/17/2025 19:45	3.7	82.7	0.0	6.6	12.5	0.0	8.0
1/17/2025 20:00	2.7	75.6	0.0	12.1	1/17/2025 20:00	3.7	82.6	0.0	6.6	12.5	0.0	8.0
1/17/2025 20:15	2.7	75.6	0.0	12.1	1/17/2025 20:15	3.7	82.1	0.0	6.6	12.6	0.0	8.0
1/17/2025 20:30	2.7	75.5	0.0	12.1	1/17/2025 20:30	3.7	84.5	0.0	6.6	12.5	0.0	8.0
1/17/2025 20:45	2.7	76.6	0.0	12.1	1/17/2025 20:45	3.7	87.0	0.0	6.6	12.4	0.0	8.0
1/17/2025 21:00	2.7	78.1	0.0	12.0	1/17/2025 21:00	3.7	86.3	0.0	6.6	12.4	0.0	8.0
1/17/2025 21:15	2.7	77.9	0.0	12.0	1/17/2025 21:15	3.7	84.8	0.0	6.6	12.5	0.0	8.0
1/17/2025 21:30	2.6	77.6	0.0	12.0	1/17/2025 21:30	3.8	89.0	0.0	6.4	12.2	0.0	8.0
1/17/2025 21:45	2.7	79.4	0.0	12.0	1/17/2025 21:45	3.8	89.1	0.0	6.4	12.2	0.0	8.0
1/17/2025 22:00	2.7	80.0	0.0	12.0	1/17/2025 22:00	3.8	87.8	0.0	6.4	12.2	0.0	8.0
1/17/2025 22:15	2.6	79.4	0.0	12.0	1/17/2025 22:15	3.8	86.7	0.0	6.3	12.2	12.2	17.2
1/17/2025 22:30	2.6	78.8	0.0	12.0	1/17/2025 22:30	3.6	3.2	0.0	6.5	13.4	0.0	8.0
1/17/2025 22:45	2.6	78.6	0.0	12.0	1/17/2025 22:45	2.8	4.2	0.0	6.6	13.6	0.0	8.0
1/17/2025 23:00	2.6	78.2	0.0	12.0	1/17/2025 23:00	2.3	4.3	0.0	6.6	13.8	0.0	8.0
1/17/2025 23:15	2.5	78.1	0.0	12.1	1/17/2025 23:15	2.1	4.3	0.0	6.6	13.9	0.0	8.0
1/17/2025 23:30	2.5	77.9	0.0	12.1	1/17/2025 23:30	1.8	4.4	0.0	6.5	14.0	0.0	8.0
1/17/2025 23:45	2.5	77.8	0.0	12.1	1/17/2025 23:45	1.5	4.3	0.0	6.7	14.1	0.0	8.0
1/18/2025 0:00	2.5	77.8	0.0	12.1	1/18/2025 0:00	1.3	4.4	0.0	6.6	14.2	0.0	8.0
1/18/2025 0:15	2.5	77.7	0.0	12.1	1/18/2025 0:15	1.1	4.5	0.0	6.6	14.3	0.0	8.0
1/18/2025 0:30	2.4	77.9	0.0	12.1	1/18/2025 0:30	1.0	4.5	0.0	6.6	14.4	0.0	8.0
1/18/2025 0:45	2.4	77.5	0.0	12.1	1/18/2025 0:45	0.9	4.5	0.0	6.7	14.4	0.0	8.0
1/18/2025 1:00	2.4	77.6	0.0	12.1	1/18/2025 1:00	0.9	4.6	0.0	6.7	14.4	0.0	8.0
1/18/2025 1:15	2.4	77.6	0.0	12.1	1/18/2025 1:15	0.9	4.6	0.0	6.6	14.4	0.0	8.0
1/18/2025 1:30	2.4	77.5	0.0	12.1	1/18/2025 1:30	1.0	4.6	0.0	6.6	14.4	0.0	8.0
1/18/2025 1:45	2.4	77.6	0.0	12.1	1/18/2025 1:45	1.0	4.5	0.0	6.7	14.4	0.0	8.0
1/18/2025 2:00	2.3	77.5	0.0	12.1	1/18/2025 2:00	1.0	4.5	0.0	6.7	14.4	0.0	8.0
1/18/2025 2:15	2.3	77.1	0.0	12.1	1/18/2025 2:15	1.0	4.5	0.0	6.7	14.4	0.0	8.0
1/18/2025 2:30	2.3	77.3	0.0	12.1	1/18/2025 2:30	1.0	4.6	0.0	6.6	14.4	0.0	8.0
1/18/2025 2:45	2.3	76.9	0.0	12.2	1/18/2025 2:45	1.0	4.6	0.0	6.7	14.4	0.0	8.0
1/18/2025 3:00	2.3	77.1	0.0	12.2	1/18/2025 3:00	1.0	4.6	0.0	6.6	14.4	87.7	92.7
1/18/2025 3:15	2.3	77.1	0.0	12.2	1/18/2025 3:15	1.0	4.6	0.0	6.6	14.4	69.9	74.9
1/18/2025 3:30	2.3	76.9	0.0	12.2	1/18/2025 3:30	1.0	4.6	0.0	6.5	14.4	63.1	68.1
1/18/2025 3:45	2.2	76.9	0.0	12.2	1/18/2025 3:45	1.0	4.1	0.0	6.5	14.4	11.9	16.9
1/18/2025 4:00	2.2	76.7	0.0	12.2	1/18/2025 4:00	1.0	4.2	0.0	6.4	14.4	10.9	15.9
1/18/2025 4:15	2.2	76.5	0.0	12.2	1/18/2025 4:15	1.0	4.2	0.0	6.3	14.4	10.6	15.6
1/18/2025 4:30	2.2	76.6	0.0	12.2	1/18/2025 4:30	0.9	5.1	0.0	6.1	14.4	9.3	14.3
1/18/2025 4:45	2.2	76.7	0.0	12.2	1/18/2025 4:45	0.9	7.4	0.0	6.2	14.5	9.4	14.4
1/18/2025 5:00	2.2	76.6	0.0	12.2	1/18/2025 5:00	0.8	9.6	0.0	6.0	14.6	7.9	15.9
1/18/2025 5:15	2.2	76.7	0.0	12.2	1/18/2025 5:15	0.7	9.2	0.0	5.9	14.5	6.8	14.8
1/18/2025 5:30	2.2	76.7	0.0	12.2	1/18/2025 5:30	0.7	9.4	0.0	5.9	14.5	5.6	13.6
1/18/2025 5:45	2.2	76.7	0.0	12.2	1/18/2025 5:45	0.7	9.4	0.0	6.0	14.6	6.5	14.5
1/18/2025 6:00	2.1	76.6	0.0	12.2	1/18/2025 6:00	0.6	9.8	0.0	5.3	14.6	5.4	13.4
1/18/2025 6:15	2.1	76.6	0.0	12.2	1/18/2025 6:15	0.6	10.4	0.0	4.7	14.6	4.3	12.3
1/18/2025 6:30	2.1	76.8	0.0	12.2	1/18/2025 6:30	0.5	11.0	0.0	4.2	14.6	2.6	10.6
1/18/2025 6:45	2.1	76.7	0.0	12.2	1/18/2025 6:45	0.5	11.6	0.0	5.5	14.6	1.1	9.1
1/18/2025 7:00	2.1	76.6	0.0	12.2	1/18/2025 7:00	0.6	11.1	0.0	5.0	14.6	1.8	9.8
1/18/2025 7:15	2.1	76.5	0.0	12.2	1/18/2025 7:15	2.8	84.6	0.0	6.5	12.7	0.0	8.0
1/18/2025 7:30	2.1	76.5	0.0	12.2	1/18/2025 7:30	2.9	83.3	0.0	6.6	12.8	0.0	8.0
1/18/2025 7:45	2.1	75.9	0.0	12.2	1/18/2025 7:45	3.0	82.4	0.0	6.6	12.8	0.0	8.0
1/18/2025 8:00	2.1	75.4	0.0	12.3	1/18/2025 8:00	3.0						8.0
1/18/2025 8:15	2.1	74.9	0.0	12.3	1/18/2025 8:15							
1/18/2025 8:30	2.1	74.7	0.0	12.3	1/18/2025 8:30	3.0	82.6	0.0	6.7	12.8	0.0	8.0
1/18/2025 8:45	2.1	74.4	0.0	12.3	1/18/2025 8:45	3.0	80.7	0.0	6.7	12.8	0.0	8.0
1/18/2025 9:00	2.1	74.3	0.0	12.3	1/18/2025 9:00	3.0	80.6	0.0	6.7	12.8	0.0	8.0
1/18/2025 9:15	2.0	74.2	0.0	12.3	1/18/2025 9:15	3.1	87.1	0.0	6.6	12.7	0.0	8.0
1/18/2025 9:30	2.1	77.3	0.0	12.3	1/18/2025 9:30	3.1	88.4	0.0	6.6	12.6	0.0	8.0
1/18/2025 9:45	2.1	79.1	0.0	12.2	1/18/2025 9:45	3.1	84.1	0.0	6.6	12.7	0.0	8.0
1/18/2025 10:00	2.1	77.8	0.0	12.2	1/18/2025 10:00	3.0	81.4	0.0	6.6	12.8	0.0	8.0
1/18/2025 10:15	2.1	75.8	0.0	12.3	1/18/2025 10:15	3.0	80.3	0.0	6.6	12.8	0.0	8.0
1/18/2025 10:30	2.0	73.9	0.0	12.3	1/18/2025 10:30	3.0	80.7	0.0	6.6	12.8	0.0	8.0
1/18/2025 10:45	2.0	73.7	0.0	12.4	1/18/2025 10:45	3.0	85.8	0.0	6.6	12.8	0.0	8.0
1/18/2025 11:00	2.0	76.0	0.0	12.4	1/18/2025 11:00	3.1	88.7	0.0	6.6	12.8	0.0	8.0
1/18/2025 11:15	2.0	78.6	0.0	12.3	1/18/2025 11:15	3.1	91.0	0.0	6.6	12.7	0.0	8.0
1/18/2025 11:30	2.1	80.5	0.0	12.3	1/18/2025 11:30	3.1	92.4	0.0	6.6	12.7	0.0	8.0
1/18/2025 11:45	2.1	81.3	0.0	12.3	1/18/2025 11:45	3.2	92.1	0.0	6.6	12.7	0.0	8.0
1/18/2025 12:00	2.1	81.4	0.0	12.3	1/18/2025 12:00	3.3	95.2	0.0	6.6	12.7	0.0	8.0
1/18/2025 12:15	2.2	82.6	0.0	12.3	1/18/2025 12:15	3.3	93.1	0.0	6.6	12.8	0.0	8.0
1/18/2025 12:30	2.2	82.6	0.0	12.3	1/18/2025 12:30	3.4	92.7	0.0	6.6	12.8	0.0	8.0
1/18/2025 12:45	2.3	82.4	0.0	12.4	1/18/2025 12:45	3.4	93.0	0.0	6.6	12.8	0.0	8.0
1/18/2025 13:00	2.4	83.5	0.0	12.3	1/18/2025 13:00	3.6	98.5	0.0	6.6	12.7	0.0	8.0
1/18/2025 13:15	2.5	86.0	0.0	12.3	1/18/2025 13:15	3.7	101.9	0.0	6.5	12.6	0.0	8.0
1/18/2025 13:30	2.5	87.8	0.0	12.2	1/18/2025 13:30	3.7	97.3	0.0	6.5	12.6	0.0	8.0
1/18/2025 13:45	2.6	85.7	0.0	12.2	1/18/2025 13:45	3.7	91.2	0.0	6.5	12.7	0.0	8.0
1/18/2025 14:00	2.6	83.7	0.0	12.2	1/18/2025 14:00	3.7	87.9	0.0	6.5	12.7	0.0	8.0
1/18/2025 14:15	2.6	81.0	0.0	12.3	1/18/2025 14:15	3.8	3.3	0.0	6.6	13.2	0.0	8.0
1/18/2025 14:30	2.6	80.5	0.0	12.3	1/18/2025 14:30	3.7	4.0	0.0	6.6	13.3	0.0	8.0
1/18/2025 14:45	2.7	79.3	0.0	12.3	1/18/2025 14:45	3.7	4.1	0.0	6.7	13.3	0.0	8.0
1/18/2025 15:00	2.7	79.1	0.0	12.3	1/18/2025 15:00	3.6	4.1	0.0	6.6	13.4	0.0	8.0
1/18/2025 15:15	2.7	78.7	0.0	12.3	1/18/2025 15:15	3.5	4.2	0.0	6.6	13.4	0.0	8.0
1/18/2025 15:30	2.7	78.5	0.0	12.3	1/18/2025 15:30	3.5	4.2	0.0	6.6	13.4	0.0	8.0
1/18/2025 15:45	2.7	78.7	0.0	12.3	1/18/2025 15:45	3.5	4.2	0.0	6.7	13.4	0.0	8.0
1/18/2025 16:00	2.7	78.7	0.0	12.3	1/18/2025 16:00	3.5	4.2	0.0	6.6	13.4	0.0	8.0
1/18/2025 16:15	2.8	79.0	0.0	12.3	1/18/2025 16:15	3.4	4.3	0.0	6.6	13.4	0.0	8.0
1/18/2025 16:30	2.7	79.0	0.0	12.3	1/18/2025 16:30	3.4	4.2	0.0	6.6	13.4	0.0	8.0
1/18/2025 16:45	2.7	79.0	0.0	12.3	1/18/2025 16:45	3.4	4.2	0.0	6.7	13.4	0.0	8.0

There are several short gaps in data due data logger malfunction

1/18/2025 17:00	2.7	79.5	0.0	12.3	1/18/2025 17:00	3.3	4.2	0.0	6.7	13.5	0.0	8.0
1/18/2025 17:15	2.7	79.4	0.0	12.3	1/18/2025 17:15	3.3	4.2	0.0	6.6	13.5	0.0	8.0
1/18/2025 17:30	2.7	79.1	0.0	12.3	1/18/2025 17:30	3.2	4.3	0.0	6.6	13.5	0.0	8.0
1/18/2025 17:45	2.7	79.3	0.0	12.3	1/18/2025 17:45	3.0	4.2	0.0	6.7	13.5	0.0	8.0
1/18/2025 18:00	2.6	79.2	0.0	12.3	1/18/2025 18:00	2.9	4.2	0.0	6.7	13.6	0.0	8.0
1/18/2025 18:15	2.6	79.6	0.0	12.2	1/18/2025 18:15	2.8	4.3	0.0	6.7	13.6	0.0	8.0
1/18/2025 18:30	2.6	79.3	0.0	12.2	1/18/2025 18:30	2.7	4.3	0.0	6.7	13.7	0.0	8.0
1/18/2025 18:45	2.6	79.4	0.0	12.2	1/18/2025 18:45	2.5	4.3	0.0	6.7	13.7	0.0	8.0
1/18/2025 19:00	2.6	79.4	0.0	12.2	1/18/2025 19:00	2.4	4.3	0.0	6.7	13.8	0.0	8.0
1/18/2025 19:15	2.5	79.6	0.0	12.2	1/18/2025 19:15	2.4	4.4	0.0	6.6	13.8	0.0	8.0
1/18/2025 19:30	2.5	79.5	0.0	12.2	1/18/2025 19:30	2.3	4.3	0.0	6.7	13.8	0.0	8.0
1/18/2025 19:45	2.5	79.5	0.0	12.2	1/18/2025 19:45	2.7	4.3	0.0	6.8	13.7	0.0	8.0
1/18/2025 20:00	2.5	79.6	0.0	12.2	1/18/2025 20:00	3.5	74.4	0.0	6.5	12.8	0.0	8.0
1/18/2025 20:15	2.5	79.6	0.0	12.2	1/18/2025 20:15	3.6	86.8	0.0	6.5	12.5	0.0	8.0
1/18/2025 20:30	2.5	79.9	0.0	12.2	1/18/2025 20:30	3.6	87.2	0.0	6.5	12.6	0.0	8.0
1/18/2025 20:45	2.5	79.9	0.0	12.2	1/18/2025 20:45	3.6	87.1	0.0	6.4	12.5	0.0	8.0
1/18/2025 21:00	2.5	79.9	0.0	12.2	1/18/2025 21:00	3.6	87.1	0.0	6.4	12.5	0.0	8.0
1/18/2025 21:15	2.5	79.7	0.0	12.2	1/18/2025 21:15	3.6	87.2	0.0	6.4	12.5	0.0	8.0
1/18/2025 21:30	2.5	80.1	0.0	12.2	1/18/2025 21:30	3.6	87.6	0.0	6.4	12.5	0.0	8.0
1/18/2025 21:45	2.5	80.4	0.0	12.2	1/18/2025 21:45	3.6	88.1	0.0	6.4	12.5	0.0	8.0
1/18/2025 22:00	2.5	80.6	0.0	12.2	1/18/2025 22:00	3.6	88.0	0.0	6.4	12.4	0.0	8.0
1/18/2025 22:15	2.4	80.7	0.0	12.2	1/18/2025 22:15	3.6	88.2	0.0	6.3	12.2	0.0	8.0
1/18/2025 22:30	2.4	80.8	0.0	12.1	1/18/2025 22:30	3.6	79.4	0.0	6.4	12.4	0.0	8.0
1/18/2025 22:45	2.4	81.1	0.0	12.1	1/18/2025 22:45	3.5	4.1	0.0	6.6	13.4	0.0	8.0
1/18/2025 23:00	2.4	80.7	0.0	12.1	1/18/2025 23:00	2.8	4.3	0.0	6.6	13.6	0.0	8.0
1/18/2025 23:15	2.4	80.8	0.0	12.1	1/18/2025 23:15	2.2	4.4	0.0	6.6	13.8	0.0	8.0
1/18/2025 23:30	2.4	80.6	0.0	12.2	1/18/2025 23:30	1.8	4.5	0.0	6.5	14.0	0.0	8.0
1/18/2025 23:45	2.4	80.7	0.0	12.2	1/18/2025 23:45	1.5	4.6	0.0	6.6	14.1	0.0	8.0
1/19/2025 0:00	2.3	80.4	0.0	12.1	1/19/2025 0:00	1.4	4.7	0.0	6.6	14.2	0.0	8.0
1/19/2025 0:15	2.3	80.5	0.0	12.2	1/19/2025 0:15	1.2	4.8	0.0	6.6	14.2	0.0	8.0
1/19/2025 0:30	2.3	80.3	0.0	12.2	1/19/2025 0:30	1.1	4.6	0.0	6.6	14.3	0.0	8.0
1/19/2025 0:45	2.3	80.2	0.0	12.2	1/19/2025 0:45	1.0	4.5	0.0	6.6	14.3	0.0	8.0
1/19/2025 1:00	2.3	80.0	0.0	12.2	1/19/2025 1:00	0.9	4.5	0.0	6.6	14.4	0.0	8.0
1/19/2025 1:15	2.2	80.1	0.0	12.2	1/19/2025 1:15	0.8	4.6	0.0	6.6	14.4	0.0	8.0
1/19/2025 1:30	2.2	79.9	0.0	12.2	1/19/2025 1:30	1.0	4.5	0.0	6.6	14.3	0.0	8.0
1/19/2025 1:45	2.2	80.1	0.0	12.2	1/19/2025 1:45	1.0	4.4	0.0	6.6	14.3	0.0	8.0
1/19/2025 2:00	2.2	80.0	0.0	12.2	1/19/2025 2:00	1.0	4.4	0.0	6.6	14.3	0.0	8.0
1/19/2025 2:15	2.2	79.9	0.0	12.2	1/19/2025 2:15	1.0	4.3	0.0	6.5	14.3	0.0	8.0
1/19/2025 2:30	2.2	79.7	0.0	12.2	1/19/2025 2:30	1.0	4.2	0.0	6.3	14.3	0.0	8.0
1/19/2025 2:45	2.2	79.6	0.0	12.2	1/19/2025 2:45	1.0	4.0	0.0	6.4	14.6	0.0	8.0
1/19/2025 3:00	2.2	79.8	0.0	12.2	1/19/2025 3:00	1.0	4.3	0.0	6.2	14.8	0.0	8.0
1/19/2025 3:15	2.1	79.2	0.0	12.2	1/19/2025 3:15	1.0	5.6	0.0	6.2	14.6	0.0	8.0
1/19/2025 3:30	2.1	79.4	0.0	12.2	1/19/2025 3:30	1.0	6.8	0.0	6.2	14.6	0.0	8.0
1/19/2025 3:45	2.1	79.5	0.0	12.2	1/19/2025 3:45	0.9	7.6	0.0	6.4	14.5	0.0	8.0
1/19/2025 4:00	2.1	79.1	0.0	12.2	1/19/2025 4:00	0.8	9.4	0.0	6.1	14.5	0.0	8.0
1/19/2025 4:15	2.1	79.2	0.0	12.2	1/19/2025 4:15	0.7	9.4	0.0	5.9	14.5	0.0	8.0
1/19/2025 4:30	2.1	79.0	0.0	12.2	1/19/2025 4:30	0.6	9.9	0.0	5.9	14.5	0.0	8.0
1/19/2025 4:45	2.1	78.7	0.0	12.2	1/19/2025 4:45	0.6	10.0	0.0	5.2	14.6	0.0	8.0
1/19/2025 5:00	2.1	78.9	0.0	12.2	1/19/2025 5:00	0.5	10.8	0.0	5.4	14.5	0.0	8.0
1/19/2025 5:15	2.1	79.2	0.0	12.2	1/19/2025 5:15	0.5	11.3	0.0	5.4	14.6	0.0	8.0
1/19/2025 5:30	2.0	78.7	0.0	12.2	1/19/2025 5:30	0.5	12.0	0.0	5.4	14.6	0.0	8.0
1/19/2025 5:45	2.0	78.7	0.0	12.3	1/19/2025 5:45	0.4	12.6	0.0	5.1	14.6	0.0	8.0
1/19/2025 6:00	2.0	78.9	0.0	12.3	1/19/2025 6:00	0.3	13.2	0.0	5.0	14.6	0.0	8.0
1/19/2025 6:15	2.0	78.9	0.0	12.2	1/19/2025 6:15	0.2	14.2	0.0	4.9	14.6	0.0	8.0
1/19/2025 6:30	2.0	78.6	0.0	12.2	1/19/2025 6:30	0.1	15.4	0.0	4.8	14.6	0.0	8.0
1/19/2025 6:45	2.0	78.5	0.0	12.3	1/19/2025 6:45	0.1	16.1	0.0	4.8	14.7	0.0	8.0
1/19/2025 7:00	2.0	78.5	0.0	12.3	1/19/2025 7:00	0.0	16.6	0.0	4.6	14.7	0.0	8.0
1/19/2025 7:15	2.0	78.4	0.0	12.3	1/19/2025 7:15	0.0	17.1	0.0	4.6	14.7	0.0	8.0
1/19/2025 7:30	2.0	78.4	0.0	12.3	1/19/2025 7:30	2.6	85.6	0.0	3.3	12.8	0.0	8.0
1/19/2025 7:45	2.0	78.2	0.0	12.3	1/19/2025 7:45	2.7	85.3	0.0	6.6	12.8	0.0	8.0
1/19/2025 8:00	1.9	77.9	0.0	12.3	1/19/2025 8:00	2.8	84.3	0.0	6.6	12.8	0.0	8.0
1/19/2025 8:15	1.9	77.4	0.0	12.3	1/19/2025 8:15	2.9	83.7	0.0	6.6	12.8	0.0	8.0
1/19/2025 8:30	1.9	77.1	0.0	12.3	1/19/2025 8:30	2.9	82.9	0.0	6.7	12.8	0.0	8.0
1/19/2025 8:45	1.9	76.9	0.0	12.3	1/19/2025 8:45	2.8	82.3	0.0	6.7	12.9	0.0	8.0
1/19/2025 9:00	1.9	76.3	0.0	12.4	1/19/2025 9:00	2.8	82.1	0.0	6.7	12.8	0.0	8.0
1/19/2025 9:15	1.9	76.1	0.0	12.3	1/19/2025 9:15	2.8	81.9	0.0	6.7	12.9	0.0	8.0
1/19/2025 9:30	1.9	75.9	0.0	12.4	1/19/2025 9:30	2.8	82.5	0.0	6.6	12.9	0.0	8.0
1/19/2025 9:45	1.9	75.9	0.0	12.3	1/19/2025 9:45	2.9	86.2	0.0	6.6	12.8	0.0	8.0
1/19/2025 10:00	1.9	77.6	0.0	12.3	1/19/2025 10:00	2.9	88.6	0.0	6.6	12.7	0.0	8.0
1/19/2025 10:15	1.9	78.9	0.0	12.3	1/19/2025 10:15	2.9	87.1	0.0	6.6	12.7	0.0	8.0
1/19/2025 10:30	1.9	79.2	0.0	12.3	1/19/2025 10:30	2.9	83.8	0.0	6.6	12.8	0.0	8.0
1/19/2025 10:45	1.8	77.3	0.0	12.3	1/19/2025 10:45	2.9	84.4	0.0	6.6	12.8	0.0	8.0
1/19/2025 11:00	1.8	76.9	0.0	12.4	1/19/2025 11:00	2.9	84.5	0.0	6.6	12.8	0.0	8.0
1/19/2025 11:15	1.8	76.9	0.0	12.4	1/19/2025 11:15	2.9	83.7	0.0	6.6	12.9	0.0	8.0
1/19/2025 11:30	1.8	76.9	0.0	12.4	1/19/2025 11:30	3.0	90.7	0.0	6.6	12.8	0.0	8.0
1/19/2025 11:45	1.9	79.4	0.0	12.4	1/19/2025 11:45	3.1	96.7	0.0	6.5	12.7	0.0	8.0
1/19/2025 12:00	2.0	83.6	0.0	12.4	1/19/2025 12:00	3.2	97.8	0.0	6.5	12.7	0.0	8.0
1/19/2025 12:15	2.1	85.6	0.0	12.3	1/19/2025 12:15	3.1	92.6	0.0	6.5	12.8	0.0	8.0
1/19/2025 12:30	2.1	82.2	0.0	12.4	1/19/2025 12:30	3.2	93.1	0.0	6.5	12.8	0.0	8.0
1/19/2025 12:45	2.1	82.9	0.0	12.4	1/19/2025 12:45	3.2	93.3	0.0	6.5	12.8	0.0	8.0
1/19/2025 13:00	2.2	83.2	0.0	12.4	1/19/2025 13:00	3.3	95.5	0.0	6.5	12.8	0.0	8.0
1/19/2025 13:15	2.3	84.9	0.0	12.4	1/19/2025 13:15	3.4	95.0	0.0	6.5	12.8	0.0	8.0
1/19/2025 13:30	2.3	85.1	0.0	12.3	1/19/2025 13:30	3.5	99.8	0.0	6.5	12.7	0.0	8.0
1/19/2025 13:45	2.4	87.5	0.0	12.3	1/19/2025 13:45	3.6	100.3	0.0	6.5	12.6	0.0	8.0
1/19/2025 14:00	2.5	88.1	0.0	12.2	1/19/2025 14:00	3.6	93.6	0.0	6.5	12.7	0.0	8.0
1/19/2025 14:15	2.4	83.7	0.0	12.3	1/19/2025 14:15	3.6	88.1	0.0	6.4	12.7	0.0	8.0
1/19/2025 14:30	2.5	82.1	0.0	12.3	1/19/2025 14:30	3.6	3.9	0.0	6.6	13.4	0.0	8.0
1/19/2025 14:45	2.5	80.6	0.0	12.3	1/19/2025 14:45	3.3	4.1	0.0	6.6	13.5	0.0	8.0
1/19/2025 15:00	2.5	80.0	0.0	12.3	1/19/2025 15:00	3.3	4.2	0.0	6.6	13.5	0.0	8.0
1/19/2025 15:15	2.5	79.8	0.0	12.3	1/19/2025 15:15	3.2	4.2	0.0	6.6	13.5	0.0	8.0
1/19/2025 15:30	2.6	79.7	0.0	12.3	1/19/2025 15:30	3.2	4.2	0.0	6.6	13.5	0.0	8.0
1/19/2025 15:45	2.6	79.6	0.0	12.3	1/19/2025 15:45	3.2	4.2	0.0	6.8	13.5	0.0	8.0
1/19/2025 16:00	2.6	79.8	0.0	12.3	1/19/2025 16:00	3.3	4.2	0.0	6.7	13.5	0.0	8.0
1/19/2025 16:15	2.6	79.6	0.0	12.3	1/19/2025 16:15	3.5	4.2	0.0	6.7	13.4	0.0	8.0
1/19/2025 16:30	2.6	79.6	0.0	12.3	1/19/2025 16:30	3.6	4.2	0.0	6.7	13.4	0.0	8.0
1/19/2025 16:45	2.6	79.7	0.0	12.3	1/19/2025 16:45	3.4	4.2	0.0	6.6	13.4	0.0	8.0
1/19/2025 17:00	2.5	79.4	0.0	12.3	1/19/2025 17:00	3.2	4.2	0.0	6.6	13.5	0.0	8.0
1/19/2025 17:15	2.5	79.5	0.0	12.3	1/19/2025 17:15	3.0	4.3	0.0	6.6	13.6	0.0	8.0
1/19/2025 17:30	2.4	79.7	0.0	12.3	1/19/2025 17:30	2.8	4.3	0.0	6.6	13.6	0.0	8.0
1/19/2025 17:45	2.4	79.7	0.0	12.3	1/19/2025 17:45	2.6	4.3	0.0	6.8	13.7	0.0	8.0
1/19/2025 18:00	2.3	79.8	0.0	12.3	1/19/2025 18:00	2.4	4.3	0.0	6.8	13.8	0.0	8.0
1/19/2025 18:15	2.3	79.8	0.0	12.3	1/19/2025 18:15	2.2	4.4	0.0	6.7	13.8	0.0	8.0
1/19/2025 18:30	2.2	79.9	0.0	12.3	1/19/2025 18:30	2.1	4.4	0.0	6.7	13.9	0.0	8.0
1/19/2025 18:45	2.2	79.9	0.0	12.3	1/19/2025 18:45	1.9	4.4	0.0	6.8	14.0	0.0	8.0
1/19/2025 19:00	2.2	80.1	0.0	12.3	1/19/2025 19:00	1.8	4.4	0.0	6.7	14.1	0.0	8.0
1/19/2025 19:15	2.1	80.0	0.0	12.3	1/19/2025 19:15	1.6	4.4	0.0	6.7	14.1	0.0	8.0
1/19/2025 19:30	2.1	80.1	0.0	12.3	1/19/2025 19:30	1.4	4.4	0.0	6.6	14.2	0.0	8.0
1/19/2025 19:45	2.1	80.4	0.0	12.3	1/19/2025 19:45	1.2	4.4	0.0	6.8	14.3	0.0	8.0
1/19/2025 20:00	2.1	80.3	0.0	12.3	1/19/2025 20:00	1.1	4.4	0.0	6.7	14.3	0.0	8.0
1/19/2025 20:15	2.1	80.5	0.0	12.3	1/19/2025 20:15	1.0	4.4	0.0	6.7	14.3	0.0	8.0
1/19/2025 20:30	2.0	80.6	0.0	12.3	1/19/2025 20:30	0.9	4.4	0.0	6.7	14.4	0.0	8.0
1/19/2025 20:45	2.0	80.8	0.0	12.3	1/19/2025 20:45	0.8	4.5	0.0	6.6	14.4	0.0	8.0
1/19/2025 21:00	2.0	80.8	0.0	12.3	1/19/2025 21:00	0.8	4.5	0.0	6.6	14.5	0.0	8.0
1/19/2025 21:15	2.0	81.1	0.0	12.3	1/19/2025 21:15	0.7	4.5	0.0	6.6	14.5	0.0	8.0
1/19/2025 21:30	2.0	81.1	0.0	12.3	1/19/2025 21:30	0.6	4.5	0.0	6.6	14.5	0.0	8.0
1/19/2025 21:45	2.0	81.0	0.0	12.3	1/19/2025 21:45	0.6	4.4	0.0	6.7	14.5	0.0	8.0
1/19/2025 22:00	2.0	81.2	0.0	12.3	1/19/2025 22:00	0.6	4.4	0.0	6.7	14.5	0.0	8.0
1/19/2025 22:15	2.0	81.2	0.0	12.3	1/19/2025 22:15	0.6	4.4	0.0	6.7	14.6	0.0	8.0
1/19/2025 22:30	1.9	81.1	0.0	12.3	1/19/2025 22:30	0.6	4.5	0.0	6.7	14.6	0.0	8.0
1/19/2025 22:45	1.9	81.3	0.0	12.3	1/19/2025 22:45	0.9	4.4	0.0	6.8	14.5	0.0	8.0
1/19/2025 23:00	1.9	81.1	0.0	12.3	1/19/2025 23:00	0.8	4.4	0.0	6.7	14.5	0.0	8.0
1/19/2025 23:15	1.9	81.3	0.0	12.3	1/19/2025 23:15	0.8	4.4	0.0	6.7	14.5	0.0	8.0
1/19/2025 23:30	1.9	81.3	0.0	12.3	1/19/2025 23:30	1.0	4.4	0.0	6.7	14.4	0.0	8.0
1/19/2025 23:45	1.9	81.2	0.0	12.3	1/19/2025 23:45	1.0	4.4	0.0	6.8	14.4	0.0	8.0

Appendix C: Woodfibre Site Point of Discharge from Water Treatment Plant Documentation

Woodfibre Site Sample Analysis

Analyte	Units	FAL-ST [1,2]	MAL-ST [1]	WLNG EOP	Sample or value notes	BCWQ FAL - Short Term	BCWQ MAL - Short Term
TRITON	Sample ID	Reviewed and signed off by: Farshad Shafiei Ph.D., R.P.Bio.		WLNG EOP			
	LAB ID			VA25A0826-001			
	Date Sampled			14-Jan-2025			
	Time Sampled			10:15			
				Water			
				N/A		Guideline notes	
In Situ Parameters							
pH (field)	pH units	6.5-9.0	7.0-8.7	8.02		If natural pH < 6.5, no statisticaly 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	Multiple guidelines dependent on water use and species, see notes: Short-term daily temperature = 15°C, or Max +/- 1°C from optimum temperature range for most sensitive salmonid species present, or Short-term daily temperature is 19°C, or Max +/- from BKG 1°C	Max +/- from BKG 1°C	9.6		Guideline is species-dependent. Short-term daily temperature is 15°C for streams with Bull Trout &/or Dolly Varden, Max +/- 1°C from the optimum range as shown in Table 43B of the BCWG for aquatic life for each life history phase of the most sensitive salmoind species present, Mean Weekly Max Temperature guideline is18°C, Short-term daily temperature guideline is 19°C for streams with unknown fish distribution, or Max +/- 1°C from background. Refer to footnote 4 for background temperature range for East Creek.	Guideline for marine waters are based on natural ambient conditions. Refer to footnote 4 for background temperature range for East Creek. Calculation: US value +/- 1 = guideline range
Conductivity (field)	µS/cm	-	-	136			
Turbidity (field)	NTU	Varies with background, see note Guideline = 18.5	Varies with background, see note Guideline = 18.5	10.47		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. Calculation: US value + 8 = DS guideline Change from background of 5 NTU at any time when background is 8 - 50 NTU during high flows or in turbid waters. Calculation: US value + 5 = DS guideline Change from background of 10% when background is > 50 NTU at any time during high flows or in turbid waters. Calculation: US value + (US value*0.1) = DS guideline	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. Calculation: US value + 8 = DS guideline Change from background of 5 NTU at any time when background is 8 - 50 NTU during high flows or in turbid waters. Calculation: US value + 5 = DS guideline Change from background of 10% when background is > 50 NTU at any time during high flows or in turbid waters. Calculation: US value + (US value*0.1) = DS guideline
Dissolved Oxygen (field)	mg/L	Varies with life stage, see note	Varies with life stage, see note	-		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 9 mg/L, all other life stages 5 mg/L. Refer to BC Water Quality Guidelines for more information.
General Parameters							
Hardness (as $CaCO_3$) (total)	mg/L	-	-	49.4			
Total Dissolved Solids	mg/L	-	-	82			
Total Suspended Solids	mg/L	Varies with background, see note Guideline = 30	Varies with background, see note Guideline = 30	5.0		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. Calculation: US value + 25 = DS guideline Change from background of 10 mg/L at any one time when background 25-100 mg/L during high flows or turbid waters. Calculation: US value + 10 = DS guideline Change from background of 10% when background is > 100 mg/L at any time during high flows or turbid waters. Calculation: US value + (US value*0.1) = DS guideline	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. Calculation: US value + 25 = DS guideline Change from background of 10 mg/L at any one time when background 25-100 mg/L during high flows or turbid waters. Calculation: US value + 10 = DS guideline Change from background of 10% when background is > 100 mg/L at any time during high flows or turbid waters. Calculation: US value + (US value*0.1) = DS guideline
Dissolved Organic Carbon (DOC)	mg/L	-	-	0.51			
Total Phenols	mg/L	0.05	-	< 0.0010		Interim guideline	Interim guideline
Total Alkalinity ($CaCO_3$)	mg/L	-	-	55.2			
Total Sulfide (as S)	mg/L	-	-	< 0.0015			
Total Sulfide (un-ionized as H_2S)	mg/L	-	-	< 0.0015			
Total Sulfide (as H_2S)	mg/L	-	-	< 0.0016			
Anions and Nutrients							
Ammonia	mg/L ammonia-N	Varies with pH and temperature. See note. Guideline = 5.86	Varies with pH and temperature. See note. Guideline = 13	0.0122		Guideline for ammonia as N and is pH and temperature dependent. Refer to Table 27D in BC WQG for guideline values.	Guideline for ammonia as N. Guideline is pH, temperature and salinity dependent. Refer to Table 27F in BC WQG for guideline values.
Bromide	mg/L	-	-	< 0.050			
Chloride	mg/L	600	+/- 10% from BKG	6.17			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 Guideline = 1.051	1.5	0.241		Guideline has interim status. Guideline is calculated with the following equation: Guideline = [-51.73 + 92.57 log10 (hardness)] * 0.01	
Nitrate (as N)	mg/L	32.8	-	0.0188			
Nitrite (as N)	mg/L	Varies with chloride. Table 27B, see note. Guideline = 0.06	-	< 0.0010		Varies with chloride. Refer to Table 27B in BC WQG for guideline values.	
Total Nitrogen	mg/L	-	-	0.15			
Total Phosphorous	mg/L	-	-	0.0032			
Sulfate (as SO_4)	mg/L	-	-	6.34			
Total Metals							
Aluminum (Al)-Total	mg/L	-	-	0.113			
Antimony (Sb)-Total	mg/L	0.25	-	0.0007			
Arsenic (As)-Total	mg/L	-	-	0.00094			
Barium (Ba)-Total	mg/L	-	-	0.00492			
Beryllium (Be)-Total	mg/L	-	-	< 0.000100			
Bismuth (Bi)-Total	mg/L	-	-	< 0.000050			
Boron (B)-Total	mg/L	-	-	0.015			
Cadmium (Cd)-Total	mg/L	-	-	0.0000152			
Calcium (Ca)-Total	mg/L	-	-	18.2			
Cesium (Cs)-Total	mg/L	-	-	0.000035			
Chromium (Cr) - Total	mg/L	-	-	< 0.00050			
Chromium (Cr(III))-Total	mg/L	-	-	< 0.00050			
Chromium (Cr(VI))-Total	mg/L	-	-	< 0.00050			
Cobalt (Co)-Total	mg/L	0.11	-	< 0.00010			
Copper (Cu)-Total	mg/L	-	0.003	0.0106	Total Cu exceeds the short-term BCWQG for MAL.		
Iron (Fe)-Total	mg/L	1	-	0.081			
Lead (Pb)-Total	mg/L		0.14	0.00575			
Lithium (Li)-Total	mg/L	-	-	0.006			
Magnesium (Mg)-Total	mg/L	-	-	0.971			
Manganese (Mn)-Total	mg/L	Varies with hardness Guideline = 1.084	-	0.0127		Guideline varies with hardness. The guideline is calculated using the following equation: Guideline = (0.0044 * hardness + 0.605) Guideline applies to samples with hardness 25-259 mg/L. Lowest value for guideline is 0.77 mg/L. If hardness is below the hardness range, the minimum hardness will be applied in the calculation.	
Mercury (Hg)-Total	mg/L	-	-	< 0.0000050			
Molybdenum (Mo)-Total	mg/L	46	-	0.0195			
Nickel (Ni)-Total	mg/L	-	-	<0.00050			
Phosphorus (P)-Total	mg/L	-	-	< 0.050			
Potassium (K)-Total	mg/L	-	-	2.76			
Rubidium (Rb)-Total	mg/L	-	-	0.00434			
Selenium (Se)-Total	mg/L	-	-	< 0.000050			
Silicon (Si)-Total	mg/L	-	-	5.41			
Silver (Ag)-Total	mg/L	Varies with hardness, see note Guideline = 0.0001	0.003	< 0.000010		Varies with hardness Guideline ranges: Hardness ≤ 100: 0.0001 Hardness > 100: 0.003	
Sodium (Na)-Total	mg/L	-	-	5.48			
Strontium (Sr)-Total	mg/L	-	-	0.0414			
Sulfur (S)-Total	mg/L	-	-	1.73			
Tellurium (Te)-Total	mg/L	-	-	< 0.00020			
Thallium (Tl)-Total	mg/L	-	-	0.000016			
Thorium (Th)-Total	mg/L	-	-	< 0.00010			
Tin (Sn)-Total	mg/L	-	-	< 0.00010			
Titanium (Ti)-Total	mg/L	-	-	0.00352			
Tungsten (W)-Total	mg/L	-	-	0.00079			
Uranium (U)-Total	mg/L	0.0165	-	0.00323			
Vanadium (V)-Total	mg/L	-	-	< 0.00050			
Zinc (Zn)-Total	mg/L	-	0.055	0.0101			
Zirconium (Zr)-Total	mg/L	-	-	< 0.00020			
Dissolved Metals							
Aluminum (Al)-Dissolved	mg/L	-	-	0.0325			
Antimony (Sb)-Dissolved	mg/L	-	-	0.00055			
Arsenic (As)-Dissolved	mg/L	-	-	0.00079			
Barium (Ba)-Dissolved	mg/L	-	-	0.0041			
Beryllium (Be)-Dissolved	mg/L	-	-	< 0.000100			
Bismuth (Bi)-Dissolved	mg/L	-	-	< 0.000050			
Boron (B)-Dissolved	mg/L	-	-	0.015			
Cadmium (Cd)-Dissolved	mg/L	Varies with hardness, see note Guideline = 0.000284	-	< 0.0000150		Guideline is hardness dependent. Guideline is appilcable to water hardness between 7.0 and 455 mg/L. Guideline is calculated with the following formula: Guideline = (EXP(1.03 * (LN(hardness)) - 5.274)/1000) Lowest value for guideline is 0.000018 mg/L. If hardness is below the hardness range, the minimum hardness will be applied in the calculation.	
Calcium (Ca)-Dissolved	mg/L	-	-	18			
Cesium (Cs)-Dissolved	mg/L	-	-	0.000022			
Chromium (Cr)-Dissolved	mg/L	-	-	< 0.00050			
Chromium (Cr(III))-Dissolved	mg/L	-	-	< 0.00050			
Chromium (Cr(VI))-Dissolved	mg/L	-	-	< 0.00050			
Cobalt (Co)-Dissolved	mg/L	-	-	< 0.00010			
Copper (Cu)-Dissolved	mg/L	Guideline varies with other parameters, see note Guideline = 0.0015	-	0.00089		Guideline varies with other parameters and is calculated using BC BLM software. Simplified model: Temperature, pH, DOC and hardness Detailed model: Temperature, pH, DOC, humic acid content, total calcium, total magnesium, total sodium, total potassium, sulphate, chloride, and alkalinity Guideline calculated using values for parameters above taken at the specific site on each sampling date	
Iron (Fe)-Dissolved	mg/L	0.35	-	< 0.010			
Lead (Pb)-Dissolved	mg/L	-	-	0.000217			
Lithium (Li)-Dissolved	mg/L	-	-	0.0053			
Magnesium (Mg)-Dissolved	mg/L	-	-	0.961			
Manganese (Mn)-Dissolved	mg/L	-	-	0.0114			
Mercury (Hg)-Dissolved	mg/L	-	-	< 0.000005			
Molybdenum (Mo)-Dissolved	mg/L	-	-	0.0187			
Nickel (Ni)-Dissolved	mg/L	Guideline varies with pH, temperature, DOC, and hardness Guideline: 0.0252	-	< 0.00050		Guideline varies with other parameters and is calculated using BC BLM software. Simplified model: Temperature, pH, DOC and hardness Detailed model: Temperature, pH, DOC, humic acid content, total calcium, total magnesium, total sodium, total potassium, sulphate, chloride, and alkalinity Guideline calculated using values for parameters above taken at the specific site on each sampling date	
Phosphorus (P)-Dissolved	mg/L	-	-	< 0.050			
Potassium (K)-Dissolved	mg/L	-	-	2.51			
Rubidium (Rb)-Dissolved	mg/L	-	-	0.00394			
Selenium (Se)-Dissolved	mg/L	-	-	0.000065			
Silicon (Si)-Dissolved	mg/L	-	-	5.66			
Silver (Ag)-Dissolved	mg/L	-	-	< 0.000010			
Sodium (Na)-Dissolved	mg/L	-	-	5.26			
Strontium (Sr)-Dissolved	mg/L	-	-	0.0393			
Sulfur (S)-Dissolved	mg/L	-	-	1.45			
Tellurium (Te)-Dissolved	mg/L	-	-	< 0.00020			
Thallium (Tl)-Dissolved	mg/L	-	-	0.000011			
Thorium (Th)-Dissolved	mg/L	-	-	< 0.00010			
Tin (Sn)-Dissolved	mg/L	-	-	< 0.00010			
Titanium (Ti)-Dissolved	mg/L	-	-	< 0.00030			
Tungsten (W)-Dissolved	mg/L	-	-	0.00073			
Uranium (U)-Dissolved	mg/L	-	-	0.00288			
Vanadium (V)-Dissolved	mg/L	-	-	< 0.00050			
Zinc (Zn)-Dissolved	mg/L	Varies with DOC and hardness Guideline = 0.019	-	0.008		Guideline varies with DOC and hardness. Guideline is calculated using the following formula: Guideline = (EXP((0.833 * (LN(hardness))) + (0.24 * (LN(DOC))) + 0.526)/2/1000) If hardness or DOC is below the hardness or DOC range, the minimum hardness or DOC will be applied in the calculation.	
Zirconium (Zr)-Dissolved	mg/L	-	-	< 0.00020			
Volatile Organic Compounds							
Chlorobenzene	µg/L	-	-	< 0.50			
Chloromethane	µg/L	-	-	< 5.0			
Dichlorobenzene, 1,2-	µg/L	-	-	< 0.50			
Dichlorobenzene, 1,3-	µg/L	-	-	< 0.50			
Dichlorobenzene, 1,4-	µg/L	-	-	< 0.50			
Dichloropropane, 1,2-	µg/L	-	-	< 0.50			
Dichloropropylene, cis+trans-1,3-	µg/L	-	-	< 0.75			
Dichloropropylene, cis-1,3-	µg/L	-	-	< 0.50			
Tetrachloroethane, 1,1,1,2-	µg/L	-	-	< 0.50			
Tetrachloroethane, 1,1,2,2-	µg/L	-	-	< 0.20			
Trichloroethane, 1,1,2-	µg/L	-	-	< 0.50			
Trichlorofluoromethane	µg/L	-	-	< 0.50			
Carbon tetrachloride	µg/L	-	-	< 0.50			
Chloroethane	µg/L	-	-	< 0.50			
Dichloroethane, 1,1-	µg/L	-	-	< 0.50			
Dichloroethane, 1,2-	µg/L	-	-	< 0.50			
Dichloroethylene, 1,1-	µg/L	-	-	< 0.50			
Dichloroethylene, cis-1,2-	µg/L	-	-	< 0.50			
Dichloroethylene, trans-1,2-	µg/L	-	-	< 0.50			
Dichloromethane	µg/L	-	-	< 1.0			
Dichloropropylene, trans-1,3-	µg/L	-	-	< 0.50			
Tetrachloroethylene	µg/L	-	-	< 0.50			
Trichloroethane, 1,1,1-	µg/L	-	-	< 0.50			
Trichloroethylene	µg/L	-	-	< 0.50			
Vinyl chloride	µg/L	-	-	< 0.40			
Benzene	µg/L	-	-	< 0.50			
Ethylbenzene	µg/L	-	-	< 0.50			
Methyl-tert-butyl ether [MTBE]	µg/L	3400	440	< 0.50			
Styrene	µg/L	-	-	< 0.50			
Toluene	µg/L	-	-	< 0.40			
Xylene, m+p-	µg/L	-	-	< 0.40			
Xylene, o-	µg/L	-	-	< 0.30			
Xylenes, total	µg/L	-	-	< 0.50			
Bromodichloromethane	µg/L	-	-	< 0.50			
Bromoform	µg/L	-	-	< 0.50			
Chloroform	µg/L	-	-	< 0.50			
Dibromochloromethane	µg/L	-	-	< 0.50			
Hydrocarbons							
EPH (C10-C19)	µg/L	-	-	< 250			
EPH (C19-C32)	µg/L	-	-	< 250			
VHw (C6-C10)	µg/L	-	-	< 100			
VPHw	µg/L	-	-	< 100			
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	µg/L	-	-	< 0.010			
Acenaphthylene	µg/L	-	-	< 0.010			
Acridine	µg/L	-	-	< 0.010			
Anthracene	µg/L	0.1	-	< 0.010			
Benz(a)anthracene	µg/L	0.1	-	< 0.010			
Benzo(a)pyrene	µg/L	-	-	< 0.0050			
Benzo(b+j)fluoranthene	µg/L	-	-	< 0.010			
Benzo(b+j+k)fluoranthene	µg/L	-	-	< 0.015			
Benzo(g,h,i)perylene	µg/L	-	-	< 0.010			
Benzo(k)fluoranthene	µg/L	-	-	< 0.010			
Chrysene	µg/L	-	-	< 0.010			
Dibenz(a,h)anthracene	µg/L	-	-	< 0.0050			
Fluoranthene	µg/L	0.2	-	< 0.010		Guideline is for phototoxic effects	
Fluorene	µg/L	-	-	< 0.010			
Indeno(1,2,3-c,d)pyrene	µg/L	-	-	< 0.010			
Methylnaphthalene, 1-	µg/L	-	-	0.022			
Methylnaphthalene, 2-	µg/L	-	-	0.02			
Naphthalene	µg/L	-	-	< 0.050			
Phenanthrene	µg/L	-	-	< 0.020			
Pyrene	µg/L	0.02	-	< 0.010			
Quinoline	µg/L	-	-	< 0.050		Working guideline status	
Glycols							
Ethylene glycol	mg/L	-	-	< 5.0			
Propylene glycol, 1,2-	mg/L	-	-	< 5.0			
Applied Guideline:		**British Columbia Approved and Working Water Quality Guidelines (NOV 2023) for Freshwater Aquatic Life (FAL) & Marine Aquatic Life (MAL) Short-Term (ST) & Long-Term (LT)**					

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

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

[3] Note that long-term (**LT**) 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 (**ST**).

[4] Background temperature ranges: Dec-Feb: 0.3-8.0C; Mar-Apr: 3.0-10.2C; May-June: 6.8-15.1C; Jul-present: 12.9-18.2C

Reference: AquaTROLL In-Situ Data Logger - Background water quality readings collected from Dec.-present.

For guidelines dependent on other parameters, when hardness, pH or DOC are below the range stated in the guideline, the lowest value in the range is used to calculate the guideline.

Parameters Used to Calculate Guidelines

Analyte	Units	Measurement method	Values WLNG EOP	WLNG EOP
pH (field)	pH units	Field pH taken using handheld meters during sampling used in calculations	8.02	8.02
Temperature (field)	°C	Field temperature taken using handheld meters during sampling used in calculations	9.6	9.6
Turbidity (field)	NTU	Field turbidity taken using handheld meters during sampling used in calculations	10.47	10.47
Hardness (as CaCO3) (total)	mg/L	Laboratory tested total hardness taken at each respective sample site on the day of sampling used in guideline calculations	49.4	49.4
Dissolved Organic Carbon (DOC)	mg/L	Laboratory tested dissolved organic carbon tested at the lab used in guideline calculations	0.51	0.51
Total Alkalinity ($CaCO_3$)	mg/L	Laboratory tested total alkalinity used in calculations	55.2	55.2
Chloride	mg/L	Laboratory tested chloride taken at each respective sample site on the day of sampling used in guideline calculations	6.17	6.17
Total Suspended Solids	mg/L	Laboratory tested total suspended solids tested at the lab used in guideline calculations	< 5.0	< 5.0

RESULTS OF RAINBOW TROUT LC50 MULTI-CONCENTRATION

Client : 4800 Triton Environmental Consultants Ltd., Vancouver Job Number: C506623

Client Project Name & Number: 11964-Task 40-phase 3C-4C

Test Result:

96 hrs LC50 % vol/vol (95% CL): >100% (N/A) Statistical Method: Visual

Sample Name : WLNG EOP

Description:	Light green, clear			Sample Number:	DDF428-01
Sample Collected:	Jan 14, 2025 10:15 AM	Sampling Method :	N/A	Site Collection:	N/A
Sample Collected By:	N/A	Volume Received:	3 x ECO10	Avg Temp Arrival:	7 °C Storage: 2-6°C
Sample Received:	Jan 14, 2025 04:57 PM	pH:	7.6	Dissolved Oxygen:	10.7 mg/L
Analysis Start :	Jan 16, 2025 03:10 PM	Temperature :	14 °C	Sample Conductance:	135 µS/cm

Concentration	Temperature (°C)	Temperature (°C)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (mg/L)	pH	pH	Conductivity (uS/cm)	Mortality (#)	Mortality (%)	Atypical Behaviour (#)
% vol/vol	Initial	96 hrs	Initial	96 hrs	Initial	96 hrs	Initial	96 hrs	96 hrs	96 hrs
0	14	15	10.2	10.2	7.6	7.7	50	0	0	0
6.25	14	15	10.2	10.2	7.6	7.6	55	0	0	0
12.5	14	15	10.2	10.2	7.5	7.6	58	0	0	0
25	14	15	10.2	10.2	7.6	7.6	72	0	0	0
50	14	15	10.2	10.0	7.7	7.6	93	0	0	0
100	14	15	10.3	10.1	7.9	7.8	135	0	0	0

Comments : All fish appeared and behaved normally at 24 hours, 48 hours, 72 hours, and 96 hours into testing.

Culture/Control/Dilution Water Burnaby Municipal Dechlorinated Water

Hardness: 20 mg/L $CaCO_3$ Other parameters available on request.

Test Conditions Test concentration : 0,6.25,12.5,25,50,100 (% vol/vol)

Organisms per Vessel :	10	Test Temperature :	15 ± 1 °C	Solution Depth :	>15 cm
Total # of Organisms Used :	60	Pre-aeration Time :	120 min.	Rate of Aeration	6.5±1 mL/ (min*L)
Test Volume :	15 L	Vessel Volume :	20L	Test pH Adjusted:	No
Loading Density :	0.3 g/L	Photoperiod :	16:8 (light: dark)		

Test Organism : Rainbow Trout *(Oncorhynchus mykiss)* Source : Aqua Farm

Culture Temperature :	15 ± 2 °C	Weight (Mean) +- SD :	0.4 ± 0.1 g	Length (Mean) +- SD :	3.68 ± 0.31 cm
Culture Water Renewal :	≥ 1L/min/kg fish	Weight (Range) :	0.3 – 0.6 g	Length (Range) :	3.20 – 4.20 cm
Culture Photoperiod :	16:8 (light: dark)			% Mortality within 7 days :	0%
Feeding rate and frequency :	daily: 1-5% biomass of trout.			Acclimation Time:	>14 days

Reference chemical: Zinc Test Date: Jan 03, 2025

Test Endpoint 96 hrs LC50 (95% confidence interval) : 0.12 (0.07, 0.17)mg/L Statistical Method : Probit

Historical Mean LC50 (warning limits) : 0.17 (0.11, 0.27) mg/L Concentration : 0,0.04,0.08,0.16,0.32,0.64 mg/L

Test Method BV Lab's BBY2SOP-00004 is based on the latest version of EPS 1/RM9 and EPS 1 /RM13.

Method Deviations : None.

Analyst : Dayna Lee, Larissa dos Santos Soares, Melanie Mazziotti, Ryan Colman

Verified By : Kimberly Tamaki, Scientist, Ecotoxicology Date: Jan 28, 2025 10:07 AM

Woodfibre Site Sample Lab Documentation

CERTIFICATE OF ANALYSIS

Work Order	: **VA25A0826**		
Client	: **Triton Environmental Consultants Ltd.**	Laboratory	: ALS Environmental - Vancouver
Contact		Account Manager	
Address		Address	
Telephone		Telephone	
Project	: 11964	Date Samples Received	: 14-Jan-2025 20:27
PO	: ----	Date Analysis Commenced	: 15-Jan-2025
C-O-C number	: ----	Issue Date	: 22-Jan-2025 15:40
Sampler	: ----		
Site	: Water Analysis		
Quote number	: VA25-TRIT100-001		
No. of samples received	: 2		
No. of samples analysed	: 2		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
	Laboratory Analyst	Inorganics, Edmonton, Alberta
	Supervisor - Metals ICP Instrumentation	Metals, Burnaby, British Columbia
	Lab Assistant	Inorganics, Burnaby, British Columbia
	Department Manager - Organics	Organics, Burnaby, British Columbia
		Metals, Burnaby, British Columbia
	Account Manager Assistant	Administration, Burnaby, British Columbia
	Supervisor - Organics Extractions	Organics, Burnaby, British Columbia

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key: CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.
LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
°C	degrees celsius
mg/L	milligrams per litre
pH units	pH units
µg/L	micrograms per litre
µS/cm	microsiemens per centimetre

<: less than.
>: greater than.
Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Qualifiers

Qualifier	Description
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG EOP	WLNG EOP Field Blank	----	----	----
					Client sampling date / time	14-Jan-2025 10:15	14-Jan-2025 08:05	----	----	----
						VA25A0826-001	VA25A0826-002	----	----	----
						Result	Result	----	----	----
Field Tests										
Conductivity, field	----	EF001/VA	0.10	µS/cm		136.00	----	----	----	----
pH, field	----	EF001/VA	0.10	pH units		8.02	----	----	----	----
Temperature, field	----	EF001/VA	0.10	°C		10.5	----	----	----	----
Physical Tests										
Hardness (as CaCO3), dissolved	----	EC100/VA	0.60	mg/L		48.9	<0.60	----	----	----
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L		49.4	<0.60	----	----	----
Solids, total dissolved [TDS]	----	E162/VA	10	mg/L		82	<10	----	----	----
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L		5.0	<3.0	----	----	----
Alkalinity, total (as CaCO3)	----	E290/VA	2.0	mg/L		55.2	<2.0	----	----	----
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L		0.0122	<0.0050	----	----	----
Bromide	24959-67-9	E235.Br-L/VA	0.050	mg/L		<0.050	<0.050	----	----	----
Chloride	16887-00-6	E235.Cl/VA	0.50	mg/L		6.17	<0.50	----	----	----
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L		0.241	<0.020	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L		0.0188	<0.0050	----	----	----
Nitrite (as N)	14797-65-0	E235.NO2-L/VA	0.0010	mg/L		<0.0010	<0.0010	----	----	----
Nitrogen, total	7727-37-9	E366/VA	0.030	mg/L		0.150	<0.030	----	----	----
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L		0.0032	<0.0020	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L		6.34	<0.30	----	----	----
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L		0.51	<0.50	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: WLNG EOP	Client sample ID: WLNG EOP Field Blank	Client sample ID: ----	Client sample ID: ----	Client sample ID: ----
					Client sampling date / time: 14-Jan-2025 10:15	Client sampling date / time: 14-Jan-2025 08:05	----	----	----
					VA25A0826-001	VA25A0826-002	----	----	----
					Result	Result	----	----	----
Total Sulfides									
Sulfide, total (as S)	18496-25-8	E395/VA	0.0015	mg/L	<0.0015	<0.0015	----	----	----
Sulfide, un-ionized (as H2S), from total	7783-06-4	EC395/VA	0.0015	mg/L	<0.0015	----	----	----	----
Sulfide, total (as H2S)	7783-06-4	E395/VA	0.0016	mg/L	<0.0016	<0.0016	----	----	----
Total Metals									
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L	0.113	<0.0030	----	----	----
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L	0.00070	<0.00010	----	----	----
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L	0.00094	<0.00010	----	----	----
Barium, total	7440-39-3	E420/VA	0.00010	mg/L	0.00492	<0.00010	----	----	----
Beryllium, total	7440-41-7	E420/VA	0.000100	mg/L	<0.000100	<0.000100	----	----	----
Bismuth, total	7440-69-9	E420/VA	0.000050	mg/L	<0.000050	<0.000050	----	----	----
Boron, total	7440-42-8	E420/VA	0.010	mg/L	0.015	<0.010	----	----	----
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L	0.0000152	<0.0000050	----	----	----
Calcium, total	7440-70-2	E420/VA	0.050	mg/L	18.2	<0.050	----	----	----
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L	0.000035	<0.000010	----	----	----
Chromium, total	7440-47-3	E420/VA	0.00050	mg/L	<0.00050	<0.00050	----	----	----
Cobalt, total	7440-48-4	E420/VA	0.00010	mg/L	<0.00010	<0.00010	----	----	----
Copper, total	7440-50-8	E420/VA	0.00050	mg/L	0.0106	<0.00050	----	----	----
Iron, total	7439-89-6	E420/VA	0.010	mg/L	0.081	<0.010	----	----	----
Lead, total	7439-92-1	E420/VA	0.000050	mg/L	0.00575	<0.000050	----	----	----
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L	0.0060	<0.0010	----	----	----
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L	0.971	<0.0050	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG EOP	WLNG EOP Field Blank	----	----	----
					Client sampling date / time	14-Jan-2025 10:15	14-Jan-2025 08:05	----	----	----
						VA25A0826-001	VA25A0826-002	----	----	----
						Result	Result	----	----	----
Total Metals										
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L		0.0127	<0.00010	----	----	----
Mercury, total	7439-97-6	E508/VA	0.0000050	mg/L		<0.0000050	<0.0000050	----	----	----
Molybdenum, total	7439-98-7	E420/VA	0.000050	mg/L		0.0195	<0.000050	----	----	----
Nickel, total	7440-02-0	E420/VA	0.00050	mg/L		<0.00050	<0.00050	----	----	----
Phosphorus, total	7723-14-0	E420/VA	0.050	mg/L		<0.050	<0.050	----	----	----
Potassium, total	7440-09-7	E420/VA	0.050	mg/L		2.76	<0.050	----	----	----
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L		0.00434	<0.00020	----	----	----
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L		<0.000050	<0.000050	----	----	----
Silicon, total	7440-21-3	E420/VA	0.10	mg/L		5.41	<0.10	----	----	----
Silver, total	7440-22-4	E420/VA	0.000010	mg/L		<0.000010	<0.000010	----	----	----
Sodium, total	7440-23-5	E420/VA	0.050	mg/L		5.48	<0.050	----	----	----
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L		0.0414	<0.00020	----	----	----
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L		1.73	<0.50	----	----	----
Tellurium, total	13494-80-9	E420/VA	0.00020	mg/L		<0.00020	<0.00020	----	----	----
Thallium, total	7440-28-0	E420/VA	0.000010	mg/L		0.000016	<0.000010	----	----	----
Thorium, total	7440-29-1	E420/VA	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Tin, total	7440-31-5	E420/VA	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Titanium, total	7440-32-6	E420/VA	0.00030	mg/L		0.00352	<0.00030	----	----	----
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L		0.00079	<0.00010	----	----	----
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L		0.00323	<0.000010	----	----	----
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L		<0.00050	<0.00050	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG EOP	WLNG EOP Field Blank	----	----	----
					Client sampling date / time	14-Jan-2025 10:15	14-Jan-2025 08:05	----	----	----
						VA25A0826-001	VA25A0826-002	----	----	----
						Result	Result	----	----	----
Total Metals										
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L		0.0101	<0.0030	----	----	----
Zirconium, total	7440-67-7	E420/VA	0.00020	mg/L		<0.00020	<0.00020	----	----	----
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/VA	0.0010	mg/L		0.0325	<0.0010	----	----	----
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L		0.00055	<0.00010	----	----	----
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L		0.00079	<0.00010	----	----	----
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L		0.00410	<0.00010	----	----	----
Beryllium, dissolved	7440-41-7	E421/VA	0.000100	mg/L		<0.000100	<0.000100	----	----	----
Bismuth, dissolved	7440-69-9	E421/VA	0.000050	mg/L		<0.000050	<0.000050	----	----	----
Boron, dissolved	7440-42-8	E421/VA	0.010	mg/L		0.015	<0.010	----	----	----
Cadmium, dissolved	7440-43-9	E421/VA	0.0000050	mg/L		<0.0000150 DLM	<0.0000050	----	----	----
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L		18.0	<0.050	----	----	----
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L		0.000022	<0.000010	----	----	----
Chromium, dissolved	7440-47-3	E421/VA	0.00050	mg/L		<0.00050	<0.00050	----	----	----
Cobalt, dissolved	7440-48-4	E421/VA	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Copper, dissolved	7440-50-8	E421/VA	0.00020	mg/L		0.00089	<0.00020	----	----	----
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L		<0.010	<0.010	----	----	----
Lead, dissolved	7439-92-1	E421/VA	0.000050	mg/L		0.000217	<0.000050	----	----	----
Lithium, dissolved	7439-93-2	E421/VA	0.0010	mg/L		0.0053	<0.0010	----	----	----
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L		0.961	<0.0050	----	----	----
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L		0.0114	<0.00010	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG EOP	WLNG EOP Field Blank	----	----	----
					Client sampling date / time	14-Jan-2025 10:15	14-Jan-2025 08:05	----	----	----
						VA25A0826-001	VA25A0826-002	----	----	----
						Result	Result	----	----	----
Dissolved Metals										
Mercury, dissolved	7439-97-6	E509/VA	0.0000050	mg/L		<0.0000050	<0.0000050	----	----	----
Molybdenum, dissolved	7439-98-7	E421/VA	0.000050	mg/L		0.0187	<0.000050	----	----	----
Nickel, dissolved	7440-02-0	E421/VA	0.00050	mg/L		<0.00050	<0.00050	----	----	----
Phosphorus, dissolved	7723-14-0	E421/VA	0.050	mg/L		<0.050	<0.050	----	----	----
Potassium, dissolved	7440-09-7	E421/VA	0.050	mg/L		2.51	<0.050	----	----	----
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L		0.00394	<0.00020	----	----	----
Selenium, dissolved	7782-49-2	E421/VA	0.000050	mg/L		0.000065	<0.000050	----	----	----
Silicon, dissolved	7440-21-3	E421/VA	0.050	mg/L		5.66	<0.050	----	----	----
Silver, dissolved	7440-22-4	E421/VA	0.000010	mg/L		<0.000010	<0.000010	----	----	----
Sodium, dissolved	7440-23-5	E421/VA	0.050	mg/L		5.26	<0.050	----	----	----
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L		0.0393	<0.00020	----	----	----
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L		1.45	<0.50	----	----	----
Tellurium, dissolved	13494-80-9	E421/VA	0.00020	mg/L		<0.00020	<0.00020	----	----	----
Thallium, dissolved	7440-28-0	E421/VA	0.000010	mg/L		0.000011	<0.000010	----	----	----
Thorium, dissolved	7440-29-1	E421/VA	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Tin, dissolved	7440-31-5	E421/VA	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Titanium, dissolved	7440-32-6	E421/VA	0.00030	mg/L		<0.00030	<0.00030	----	----	----
Tungsten, dissolved	7440-33-7	E421/VA	0.00010	mg/L		0.00073	<0.00010	----	----	----
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L		0.00288	<0.000010	----	----	----
Vanadium, dissolved	7440-62-2	E421/VA	0.00050	mg/L		<0.00050	<0.00050	----	----	----
Zinc, dissolved	7440-66-6	E421/VA	0.0010	mg/L		0.0080	<0.0010	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG EOP	WLNG EOP Field Blank	----	----	----
					Client sampling date / time	14-Jan-2025 10:15	14-Jan-2025 08:05	----	----	----
						VA25A0826-001	VA25A0826-002	----	----	----
						Result	Result	----	----	----
Dissolved Metals										
Zirconium, dissolved	7440-67-7	E421/VA	0.00020	mg/L		<0.00020	<0.00020	----	----	----
Dissolved mercury filtration location	----	EP509/VA	-	-		Field	Field	----	----	----
Dissolved metals filtration location	----	EP421/VA	-	-		Field	Field	----	----	----
Speciated Metals										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532/VA	0.00050	mg/L		<0.00050	<0.00050	----	----	----
Chromium, trivalent [Cr III], total	16065-83-1	EC535/VA	0.00050	mg/L		<0.00050	<0.00050	----	----	----
Aggregate Organics										
Phenols, total (4AAP)	----	E562/EO	0.0010	mg/L		<0.0010	----	----	----	----
Volatile Organic Compounds										
Chlorobenzene	108-90-7	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Chloromethane	74-87-3	E611C/VA	5.0	µg/L		<5.0	<5.0	----	----	----
Dichlorobenzene, 1,2-	95-50-1	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Dichlorobenzene, 1,3-	541-73-1	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Dichlorobenzene, 1,4-	106-46-7	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloropropane, 1,2-	78-87-5	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611C/VA	0.75	µg/L		<0.75	<0.75	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611C/VA	0.20	µg/L		<0.20	<0.20	----	----	----
Trichloroethane, 1,1,2-	79-00-5	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Trichlorofluoromethane	75-69-4	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG EOP	WLNG EOP Field Blank	----	----	----
					Client sampling date / time	14-Jan-2025 10:15	14-Jan-2025 08:05	----	----	----
						VA25A0826-001	VA25A0826-002	----	----	----
						Result	Result	----	----	----
Volatile Organic Compounds [Drycleaning]										
Carbon tetrachloride	56-23-5	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Chloroethane	75-00-3	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloroethane, 1,1-	75-34-3	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloroethane, 1,2-	107-06-2	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloroethylene, 1,1-	75-35-4	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloroethylene, cis-1,2-	156-59-2	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloroethylene, trans-1,2-	156-60-5	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloromethane	75-09-2	E611C/VA	1.0	µg/L		<1.0	<1.0	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Tetrachloroethylene	127-18-4	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Trichloroethane, 1,1,1-	71-55-6	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Trichloroethylene	79-01-6	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Vinyl chloride	75-01-4	E611C/VA	0.40	µg/L		<0.40	<0.40	----	----	----
Volatile Organic Compounds [Fuels]										
Benzene	71-43-2	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Ethylbenzene	100-41-4	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Styrene	100-42-5	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Toluene	108-88-3	E611C/VA	0.40	µg/L		<0.40	<0.40	----	----	----
Xylene, m+p-	179601-23-1	E611C/VA	0.40	µg/L		<0.40	<0.40	----	----	----
Xylene, o-	95-47-6	E611C/VA	0.30	µg/L		<0.30	<0.30	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG EOP	WLNG EOP Field Blank	----	----	----
					Client sampling date / time	14-Jan-2025 10:15	14-Jan-2025 08:05	----	----	----
						VA25A0826-001	VA25A0826-002	----	----	----
						Result	Result	----	----	----
Volatile Organic Compounds [Fuels]										
Xylenes, total	1330-20-7	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Volatile Organic Compounds [THMs]										
Bromodichloromethane	75-27-4	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Bromoform	75-25-2	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Chloroform	67-66-3	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Dibromochloromethane	124-48-1	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Hydrocarbons										
EPH (C10-C19)	----	E601A/VA	250	µg/L		<250	<250	----	----	----
EPH (C19-C32)	----	E601A/VA	250	µg/L		<250	<250	----	----	----
VHw (C6-C10)	----	E581.VH+F1/VA	100	µg/L		<100	<100	----	----	----
HEPHw	----	EC600A/VA	250	µg/L		<250	<250	----	----	----
LEPHw	----	EC600A/VA	250	µg/L		<250	<250	----	----	----
VPHw	----	EC580A/VA	100	µg/L		<100	<100	----	----	----
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (EPH surrogate)	392-83-6	E601A/VA	1.0	%		88.1	84.7	----	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.VH+F1/VA	1.0	%		110	108	----	----	----
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611C/VA	1.0	%		108	110	----	----	----
Difluorobenzene, 1,4-	540-36-3	E611C/VA	1.0	%		106	107	----	----	----
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG EOP	WLNG EOP Field Blank	----	----	----
					Client sampling date / time	14-Jan-2025 10:15	14-Jan-2025 08:05	----	----	----
						VA25A0826-001	VA25A0826-002	----	----	----
						Result	Result	----	----	----
Polycyclic Aromatic Hydrocarbons										
Acenaphthylene	208-96-8	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Acridine	260-94-6	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Anthracene	120-12-7	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Benz(a)anthracene	56-55-3	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Benzo(a)pyrene	50-32-8	E641A/VA	0.0050	µg/L		<0.0050	<0.0050	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Benzo(b+j+k)fluoranthene	n/a	E641A/VA	0.015	µg/L		<0.015	<0.015	----	----	----
Benzo(g,h,i)perylene	191-24-2	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Benzo(k)fluoranthene	207-08-9	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Chrysene	218-01-9	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A/VA	0.0050	µg/L		<0.0050	<0.0050	----	----	----
Fluoranthene	206-44-0	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Fluorene	86-73-7	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A/VA	0.010	µg/L		0.022	<0.010	----	----	----
Methylnaphthalene, 2-	91-57-6	E641A/VA	0.010	µg/L		0.020	<0.010	----	----	----
Naphthalene	91-20-3	E641A/VA	0.050	µg/L		<0.050	<0.050	----	----	----
Phenanthrene	85-01-8	E641A/VA	0.020	µg/L		<0.020	<0.020	----	----	----
Pyrene	129-00-0	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Quinoline	91-22-5	E641A/VA	0.050	µg/L		<0.050	<0.050	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG EOP	WLNG EOP Field Blank	----	----	----
					Client sampling date / time	14-Jan-2025 10:15	14-Jan-2025 08:05	----	----	----
						VA25A0826-001	VA25A0826-002	----	----	----
						Result	Result	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A/VA	0.1	%		84.4	76.3	----	----	----
Naphthalene-d8	1146-65-2	E641A/VA	0.1	%		97.3	89.1	----	----	----
Phenanthrene-d10	1517-22-2	E641A/VA	0.1	%		87.4	80.4	----	----	----
Glycols										
Diethylene glycol	111-46-6	E680E/VA	5.0	mg/L		<5.0	<5.0	----	----	----
Ethylene glycol	107-21-1	E680E/VA	5.0	mg/L		<5.0	<5.0	----	----	----
Propylene glycol, 1,2-	57-55-6	E680E/VA	5.0	mg/L		<5.0	<5.0	----	----	----
Triethylene glycol	112-27-6	E680E/VA	5.0	mg/L		<5.0	<5.0	----	----	----
Glycols, total (EG+DEG+PG)	----	E680E/VA	10	mg/L		<10	<10	----	----	----
Glycols Surrogates										
Propanediol, 1,3-	504-63-2	E680E/VA	1.0	%		90.1	94.1	----	----	----

Please refer to the General Comments section for an explanation of any result qualifiers detected.

ALS Canada Ltd.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **VA25A0826**	Page	: 1 of 17
Client	: **Triton Environmental Consultants Ltd.**	Laboratory	: ALS Environmental - Vancouver
Contact		Account Manager	
Address		Address	
Telephone	: ----	Telephone	
Project	: 11964	Date Samples Received	: 14-Jan-2025 20:27
PO	: ----	Issue Date	: 22-Jan-2025 15:40
C-O-C number	: ----		
Sampler	: ----		
Site	: Water Analysis		
Quote number	: VA25-TRIT100-001		
No. of samples received	: 2		
No. of samples analysed	: 2		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO: Data Quality Objective.
LOR: Limit of Reporting (detection limit).
RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- Laboratory Control Sample (LCS) outliers occur - please see following pages for full details.
- Matrix Spike outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Laboratory Control Sample (LCS) Recoveries								
Dissolved Metals	QC-1839449-002	----	Phosphorus, dissolved	7723-14-0	E421	122 % MES	80.0-120%	Recovery greater than upper control limit

Result Qualifiers

Qualifier	Description
MES	*Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).*

Matrix Spike (MS) Recoveries								
Dissolved Metals	Anonymous	Anonymous	Silver, dissolved	7440-22-4	E421	54.5 % MS-Ag	70.0-130%	Recovery less than lower data quality objective

Result Qualifiers

Qualifier	Description
MS-Ag	*MS-Ag: Matrix Spike recovery for silver was marginally below DQO (40 to <60%) due to its instability in the sample matrix. Silver was not detected. Reported result (< LOR) is reliable*

Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Aggregate Organics : Phenols (4AAP) in Water by Colorimetry										
Amber glass total (sulfuric acid) WLNG EOP	E562	14-Jan-2025	17-Jan-2025	28 days	3 days	✓	17-Jan-2025	28 days	3 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WLNG EOP	E298	14-Jan-2025	15-Jan-2025	28 days	1 days	✓	15-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WLNG EOP Field Blank	E298	14-Jan-2025	15-Jan-2025	28 days	1 days	✓	15-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE WLNG EOP	E235.Br-L	14-Jan-2025	15-Jan-2025	28 days	1 days	✓	15-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE WLNG EOP Field Blank	E235.Br-L	14-Jan-2025	15-Jan-2025	28 days	1 days	✓	15-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE WLNG EOP	E235.Cl	14-Jan-2025	15-Jan-2025	28 days	1 days	✓	15-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE WLNG EOP Field Blank	E235.Cl	14-Jan-2025	15-Jan-2025	28 days	1 days	✓	15-Jan-2025	28 days	1 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Fluoride in Water by IC										
HDPE WLNG EOP	E235.F	14-Jan-2025	15-Jan-2025	28 days	1 days	✓	15-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE WLNG EOP Field Blank	E235.F	14-Jan-2025	15-Jan-2025	28 days	1 days	✓	15-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE WLNG EOP	E235.NO3-L	14-Jan-2025	15-Jan-2025	3 days	1 days	✓	15-Jan-2025	3 days	1 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE WLNG EOP Field Blank	E235.NO3-L	14-Jan-2025	15-Jan-2025	3 days	1 days	✓	15-Jan-2025	3 days	1 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE WLNG EOP	E235.NO2-L	14-Jan-2025	15-Jan-2025	3 days	1 days	✓	15-Jan-2025	3 days	1 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE WLNG EOP Field Blank	E235.NO2-L	14-Jan-2025	15-Jan-2025	3 days	1 days	✓	15-Jan-2025	3 days	1 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE WLNG EOP	E235.SO4	14-Jan-2025	15-Jan-2025	28 days	1 days	✓	15-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE WLNG EOP Field Blank	E235.SO4	14-Jan-2025	15-Jan-2025	28 days	1 days	✓	15-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) WLNG EOP	E366	14-Jan-2025	18-Jan-2025	28 days	4 days	✓	19-Jan-2025	28 days	5 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid)										
WLNG EOP Field Blank	E366	14-Jan-2025	18-Jan-2025	28 days	4 days	✓	19-Jan-2025	28 days	5 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
WLNG EOP	E372-U	14-Jan-2025	18-Jan-2025	28 days	4 days	✓	19-Jan-2025	28 days	5 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
WLNG EOP Field Blank	E372-U	14-Jan-2025	18-Jan-2025	28 days	4 days	✓	19-Jan-2025	28 days	5 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
WLNG EOP	E509	14-Jan-2025	17-Jan-2025	28 days	3 days	✓	17-Jan-2025	28 days	3 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
WLNG EOP Field Blank	E509	14-Jan-2025	17-Jan-2025	28 days	3 days	✓	17-Jan-2025	28 days	3 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
WLNG EOP	E421	14-Jan-2025	15-Jan-2025	180 days	1 days	✓	16-Jan-2025	180 days	2 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
WLNG EOP Field Blank	E421	14-Jan-2025	15-Jan-2025	180 days	1 days	✓	16-Jan-2025	180 days	2 days	✓
Field Tests : Field pH,EC,Salinity, TDS, Cl2,ClO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine										
Glass vial dissolved (hydrochloric acid)										
WLNG EOP	EF001	14-Jan-2025	----	----	----		15-Jan-2025	----	1 days	
Glycols : Glycols (4 analytes) by GC-FID										
Glass vial										
WLNG EOP	E680E	14-Jan-2025	20-Jan-2025	7 days	6 days	✓	20-Jan-2025	40 days	0 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Glycols : Glycols (4 analytes) by GC-FID										
Glass vial										
WLNG EOP Field Blank	E680E	14-Jan-2025	20-Jan-2025	7 days	6 days	✓	20-Jan-2025	40 days	0 days	✓
Hydrocarbons : BC PHCs - EPH by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
WLNG EOP	E601A	14-Jan-2025	16-Jan-2025	14 days	2 days	✓	16-Jan-2025	40 days	0 days	✓
Hydrocarbons : BC PHCs - EPH by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
WLNG EOP Field Blank	E601A	14-Jan-2025	16-Jan-2025	14 days	2 days	✓	16-Jan-2025	40 days	0 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate)										
WLNG EOP	E581.VH+F1	14-Jan-2025	20-Jan-2025	14 days	6 days	✓	20-Jan-2025	14 days	6 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate)										
WLNG EOP Field Blank	E581.VH+F1	14-Jan-2025	20-Jan-2025	14 days	6 days	✓	20-Jan-2025	14 days	6 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid)										
WLNG EOP	E358-L	14-Jan-2025	15-Jan-2025	28 days	1 days	✓	15-Jan-2025	28 days	1 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid)										
WLNG EOP Field Blank	E358-L	14-Jan-2025	15-Jan-2025	28 days	1 days	✓	15-Jan-2025	28 days	1 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
WLNG EOP	E290	14-Jan-2025	15-Jan-2025	14 days	1 days	✓	15-Jan-2025	14 days	1 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
WLNG EOP Field Blank	E290	14-Jan-2025	15-Jan-2025	14 days	1 days	✓	15-Jan-2025	14 days	1 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : TDS by Gravimetry										
HDPE WLNG EOP	E162	14-Jan-2025	----	----	----		20-Jan-2025	7 days	6 days	✓
Physical Tests : TDS by Gravimetry										
HDPE WLNG EOP Field Blank	E162	14-Jan-2025	----	----	----		20-Jan-2025	7 days	6 days	✓
Physical Tests : TSS by Gravimetry										
HDPE WLNG EOP	E160	14-Jan-2025	----	----	----		20-Jan-2025	7 days	6 days	✓
Physical Tests : TSS by Gravimetry										
HDPE WLNG EOP Field Blank	E160	14-Jan-2025	----	----	----		20-Jan-2025	7 days	6 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) WLNG EOP	E641A	14-Jan-2025	16-Jan-2025	14 days	2 days	✓	16-Jan-2025	40 days	0 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) WLNG EOP Field Blank	E641A	14-Jan-2025	16-Jan-2025	14 days	2 days	✓	16-Jan-2025	40 days	0 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide) WLNG EOP	E532	14-Jan-2025	----	----	----		15-Jan-2025	28 days	1 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide) WLNG EOP Field Blank	E532	14-Jan-2025	----	----	----		15-Jan-2025	28 days	1 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) WLNG EOP	E508	14-Jan-2025	17-Jan-2025	28 days	3 days	✓	17-Jan-2025	28 days	3 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	*Method*	*Sampling Date*	*Extraction / Preparation*				*Analysis*			
			Preparation Date	*Holding Times* Rec	*Holding Times* Actual	*Eval*	*Analysis Date*	*Holding Times* Rec	*Holding Times* Actual	*Eval*
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid)										
WLNG EOP Field Blank	E508	14-Jan-2025	17-Jan-2025	28 days	3 days	✓	17-Jan-2025	28 days	3 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid)										
WLNG EOP	E420	14-Jan-2025	16-Jan-2025	180 days	2 days	✓	17-Jan-2025	180 days	3 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid)										
WLNG EOP Field Blank	E420	14-Jan-2025	16-Jan-2025	180 days	2 days	✓	17-Jan-2025	180 days	3 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide)										
WLNG EOP	E395	14-Jan-2025	----	----	----		16-Jan-2025	7 days	2 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide)										
WLNG EOP Field Blank	E395	14-Jan-2025	----	----	----		16-Jan-2025	7 days	2 days	✓
Volatile Organic Compounds : VOCs (BC List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
WLNG EOP	E611C	14-Jan-2025	20-Jan-2025	14 days	6 days	✓	20-Jan-2025	14 days	6 days	✓
Volatile Organic Compounds : VOCs (BC List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
WLNG EOP Field Blank	E611C	14-Jan-2025	20-Jan-2025	14 days	6 days	✓	20-Jan-2025	14 days	6 days	✓

Legend & Qualifier Definitions

Rec. HT: ALS recommended hold time (see units).

Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water**

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Alkalinity Species by Titration	E290	1839523	1	13	7.6	5.0	✓
Ammonia by Fluorescence	E298	1839875	1	8	12.5	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1839517	1	13	7.6	5.0	✓
Chloride in Water by IC	E235.Cl	1839516	1	13	7.6	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1842513	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1839449	1	19	5.2	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1839873	1	8	12.5	5.0	✓
Fluoride in Water by IC	E235.F	1839515	1	17	5.8	5.0	✓
Glycols (4 analytes) by GC-FID	E680E	1845086	1	7	14.2	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1839518	1	15	6.6	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1839519	1	13	7.6	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1842937	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1839520	1	13	7.6	5.0	✓
TDS by Gravimetry	E162	1845563	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1840798	1	16	6.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1842523	1	8	12.5	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1840452	1	20	5.0	5.0	✓
Total Nitrogen by Colourimetry	E366	1843886	1	6	16.6	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1843887	1	9	11.1	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1841986	1	12	8.3	5.0	✓
TSS by Gravimetry	E160	1845557	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1845320	1	11	9.0	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1845321	1	9	11.1	5.0	✓
Laboratory Control Samples (LCS)							
Alkalinity Species by Titration	E290	1839523	1	13	7.6	5.0	✓
Ammonia by Fluorescence	E298	1839875	1	8	12.5	5.0	✓
BC PHCs - EPH by GC-FID	E601A	1840953	1	14	7.1	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1839517	1	13	7.6	5.0	✓
Chloride in Water by IC	E235.Cl	1839516	1	13	7.6	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1842513	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1839449	1	19	5.2	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1839873	1	8	12.5	5.0	✓
Fluoride in Water by IC	E235.F	1839515	1	17	5.8	5.0	✓
Glycols (4 analytes) by GC-FID	E680E	1845086	1	7	14.2	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1839518	1	15	6.6	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1839519	1	13	7.6	5.0	✓

Matrix: **Water**

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Control Samples (LCS) - Continued							
PAHs in Water by Hexane LVI GC-MS	E641A	1840954	1	10	10.0	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1842937	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1839520	1	13	7.6	5.0	✓
TDS by Gravimetry	E162	1845563	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1840798	1	16	6.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1842523	1	8	12.5	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1840452	1	20	5.0	5.0	✓
Total Nitrogen by Colourimetry	E366	1843886	1	6	16.6	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1843887	1	9	11.1	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1841986	1	12	8.3	5.0	✓
TSS by Gravimetry	E160	1845557	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1845320	1	11	9.0	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1845321	1	9	11.1	5.0	✓
Method Blanks (MB)							
Alkalinity Species by Titration	E290	1839523	1	13	7.6	5.0	✓
Ammonia by Fluorescence	E298	1839875	1	8	12.5	5.0	✓
BC PHCs - EPH by GC-FID	E601A	1840953	1	14	7.1	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1839517	1	13	7.6	5.0	✓
Chloride in Water by IC	E235.Cl	1839516	1	13	7.6	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1842513	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1839449	1	19	5.2	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1839873	1	8	12.5	5.0	✓
Fluoride in Water by IC	E235.F	1839515	1	17	5.8	5.0	✓
Glycols (4 analytes) by GC-FID	E680E	1845086	1	7	14.2	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1839518	1	15	6.6	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1839519	1	13	7.6	5.0	✓
PAHs in Water by Hexane LVI GC-MS	E641A	1840954	1	10	10.0	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1842937	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1839520	1	13	7.6	5.0	✓
TDS by Gravimetry	E162	1845563	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1840798	1	16	6.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1842523	1	8	12.5	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1840452	1	20	5.0	5.0	✓
Total Nitrogen by Colourimetry	E366	1843886	1	6	16.6	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1843887	1	9	11.1	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1841986	1	12	8.3	5.0	✓
TSS by Gravimetry	E160	1845557	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1845320	1	11	9.0	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1845321	1	9	11.1	5.0	✓

Matrix: **Water**

Evaluation: × = *QC frequency outside specification*; ✓ = *QC frequency within specification.*

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Matrix Spikes (MS)							
Ammonia by Fluorescence	E298	1839875	1	8	12.5	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1839517	1	13	7.6	5.0	✓
Chloride in Water by IC	E235.Cl	1839516	1	13	7.6	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1842513	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1839449	1	19	5.2	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1839873	1	8	12.5	5.0	✓
Fluoride in Water by IC	E235.F	1839515	1	17	5.8	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1839518	1	15	6.6	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1839519	1	13	7.6	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1842937	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1839520	1	13	7.6	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1840798	1	16	6.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1842523	1	8	12.5	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1840452	1	20	5.0	5.0	✓
Total Nitrogen by Colourimetry	E366	1843886	1	6	16.6	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1843887	1	9	11.1	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1841986	1	12	8.3	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1845320	1	11	9.0	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1845321	1	9	11.1	5.0	✓

Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
TSS by Gravimetry	E160 ALS Environmental - Vancouver	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at 104 ± 1°C, with gravimetric measurement of the filtered solids. Samples containing very high dissolved solid content (i.e. seawaters, brackish waters) may produce a positive bias by this method. Alternate analysis methods are available for these types of samples.
TDS by Gravimetry	E162 ALS Environmental - Vancouver	Water	APHA 2540 C (mod)	Total Dissolved Solids (TDS) are determined by filtering a sample through a glass fibre filter, with evaporation of the filtrate at 180 ± 2°C for 16 hours or to constant weight, with gravimetric measurement of the residue.
Bromide in Water by IC (Low Level)	E235.Br-L ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Chloride in Water by IC	E235.Cl ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Fluoride in Water by IC	E235.F ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrite in Water by IC (Low Level)	E235.NO2-L ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrate in Water by IC (Low Level)	E235.NO3-L ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Sulfate in Water by IC	E235.SO4 ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Alkalinity Species by Titration	E290 ALS Environmental - Vancouver	Water	APHA 2320 B (mod)	Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Ammonia by Fluorescence	E298 ALS Environmental - Vancouver	Water	Method Fialab 100, 2018	Ammonia in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021)
Dissolved Organic Carbon by Combustion (Low Level)	E358-L ALS Environmental - Vancouver	Water	APHA 5310 B (mod)	Dissolved Organic Carbon (Non-Purgeable), also known as NPOC (dissolved), is a direct measurement of DOC after a filtered (0.45 micron) sample has been acidified and purged to remove inorganic carbon (IC). Analysis is by high temperature combustion with infrared detection of CO2. NPOC does not include volatile organic species that are purged off with IC. For samples where the majority of DC (dissolved carbon) is comprised of IC (which is common), this method is more accurate and more reliable than the DOC by subtraction method (i.e. DC minus DIC).
Total Nitrogen by Colourimetry	E366 ALS Environmental - Vancouver	Water	Chinchilla Scientific Nitrate Method, 2011	Following digestion, total nitrogen is is determined colourimetrically using a discrete analyzer utilizing the vanadium chloride reduction method. This method of analysis is approved under US EPA 40 CFR Part 136 (May 2021).
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U ALS Environmental - Vancouver	Water	APHA 4500-P E (mod).	Total Phosphorus is determined colourimetrically using a discrete analyzer after heated persulfate digestion of the sample.
Total Sulfide by Colourimetry (Automated Flow)	E395 ALS Environmental - Vancouver	Water	APHA 4500 -S E-Auto-Colorimetry	Sulfide is determined using the gas dialysis automated methlyene blue colourimetric method. Results expressed "as H2S" if reported represent the maximum possible H2S concentration based on the total sulfide concentration in the sample. The H2S calculation converts Total Sulphide as (S2-) and reports it as Total Sulphide as (H2S)
Total Metals in Water by CRC ICPMS	E420 ALS Environmental - Vancouver	Water	EPA 200.2/6020B (mod)	Water samples are digested with nitric and hydrochloric acids, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Dissolved Metals in Water by CRC ICPMS	E421 ALS Environmental - Vancouver	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Total Mercury in Water by CVAAS	E508 ALS Environmental - Vancouver	Water	EPA 1631E (mod)	Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS
Dissolved Mercury in Water by CVAAS	E509 ALS Environmental - Vancouver	Water	APHA 3030B/EPA 1631E (mod)	Water samples are filtered (0.45 um), preserved with HCl, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Total Hexavalent Chromium (Cr VI) by IC	E532 ALS Environmental - Vancouver	Water	APHA 3500-Cr C (Ion Chromatography)	Hexavalent Chromium is measured by Ion chromatography-Post column reaction and UV detection. Results are based on an un-filtered, field-preserved sample.
Phenols (4AAP) in Water by Colorimetry	E562 ALS Environmental - Edmonton	Water	EPA 9066	This automated method is based on the distillation of phenol and subsequent reaction of the distillate with alkaline ferricyanide ($K_3Fe(CN)_6$) and 4-amino-antipyrine (4-AAP) to form a red complex which is measured colorimetrically.
VH and F1 by Headspace GC-FID	E581.VH+F1 ALS Environmental - Vancouver	Water	BC MOE Lab Manual / CCME PHC in Soil - Tier 1 (mod)	Volatile Hydrocarbons (VH and F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. Analytical methods for CCME Petroleum Hydrocarbons (PHCs) are validated to comply fully with the Reference Method for the Canada-Wide Standard for PHC. Unless qualified, all required quality control criteria of the CCME PHC method have been met, including response factor and linearity requirements.
BC PHCs - EPH by GC-FID	E601A ALS Environmental - Vancouver	Water	BC MOE Lab Manual	Sample extracts are analyzed by GC-FID for BC hydrocarbon fractions.
VOCs (BC List) by Headspace GC-MS	E611C ALS Environmental - Vancouver	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law. Total Xylenes is the sum of m,p-Xylene & o-Xylene. Total BTEX is the sum of Benzene, Toluene, Ethylbenzene, & Total Xylenes. Total BTEX+Styrene is the sum of Total BTEX & Styrene. Total Trihalomethanes [THMs] is the sum of Bromodichloromethane, Bromoform, Chloroform, & Dibromochloromethane.
PAHs in Water by Hexane LVI GC-MS	E641A ALS Environmental - Vancouver	Water	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS.
Glycols (4 analytes) by GC-FID	E680E ALS Environmental - Vancouver	Water	EPA 8015D (mod)	Derivatized glycols are analyzed by GC-FID.
Dissolved Hardness (Calculated)	EC100 ALS Environmental - Vancouver	Water	APHA 2340B	"Hardness (as $CaCO_3$), dissolved" is calculated from the sum of dissolved Calcium and Magnesium concentrations, expressed in $CaCO_3$ equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Hardness (Calculated) from Total Ca/Mg	EC100A ALS Environmental - Vancouver	Water	APHA 2340B	"Hardness (as CaCO3), from total Ca/Mg" is calculated from the sum of total Calcium and Magnesium concentrations, expressed in CaCO3 equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations. Hardness from total Ca/Mg is normally comparable to Dissolved Hardness in non-turbid waters.
Un-ionized Total Hydrogen Sulfide (calculated)	EC395 ALS Environmental - Vancouver	Water	APHA 4500 -S H	Un-ionized sulfide is calculated using results from total sulfide analysis, pH, temperature, and ionic strength of the sample. Calculation of un-ionized sulfide using total sulfide concentrations may be biased high due to particulate forms of sulfide measured during total sulfide testing.
Total Trivalent Chromium (Cr III) by Calculation	EC535 ALS Environmental - Vancouver	Water	APHA 3030B/6020A/EPA 7196A (mod)	Chromium (III)-Total is calculated as the difference between the total chromium and the total hexavalent chromium (Cr(VI)) results.The Limit of Reporting for Chromium (III) varies as a function of the test results.
VPH: VH-BTEX-Styrene	EC580A ALS Environmental - Vancouver	Water	BC MOE Lab Manual (VPH in Water and Solids) (mod)	Volatile Petroleum Hydrocarbons (VPH) is calculated as follows: VPHw = Volatile Hydrocarbons (VH C6-C10) minus benzene, toluene, ethylbenzene, xylenes (BTEX) and styrene.
LEPH and HEPH: EPH-PAH	EC600A ALS Environmental - Vancouver	Water	BC MOE Lab Manual (LEPH and HEPH)	Light Extractable Petroleum Hydrocarbons (LEPH) and Heavy Extractable Petroleum Hydrocarbons (HEPH) are calculated as follows: LEPH = Extractable Petroleum Hydrocarbons (EPH10-19) minus Acenaphthene, Acridine, Anthracene, Fluorene, Naphthalene and Phenanthrene; HEPH = Extractable Petroleum Hydrocarbons (EPH19-32) minus Benz(a)anthracene, Benzo(a)pyrene, Fluoranthene, and Pyrene.
Field pH,EC,Salinity, TDS, Cl2,ClO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine	EF001 ALS Environmental - Vancouver	Water	Field Measurement (Client Supplied)	Field pH,EC,Salinity, TDS, Cl2,ClO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3 or Chloramine measurements provided by client and recorded on ALS report may affect the validity of results.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Ammonia	EP298 ALS Environmental - Vancouver	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Preparation for Dissolved Organic Carbon for Combustion	EP358 ALS Environmental - Vancouver	Water	APHA 5310 B (mod)	Preparation for Dissolved Organic Carbon
Digestion for Total Nitrogen in water	EP366 ALS Environmental - Vancouver	Water	APHA 4500-P J (mod)	Samples for total nitrogen analysis are digested using a heated persulfate digestion. Nitrogen compounds are converted to nitrate in this digestion.
Digestion for Total Phosphorus in water	EP372 ALS Environmental - Vancouver	Water	APHA 4500-P E (mod).	Samples are heated with a persulfate digestion reagent.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Dissolved Metals Water Filtration	EP421 ALS Environmental - Vancouver	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO3.
Dissolved Mercury Water Filtration	EP509 ALS Environmental - Vancouver	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HCl.
VOCs Preparation for Headspace Analysis	EP581 ALS Environmental - Vancouver	Water	EPA 5021A (mod)	Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler. An aliquot of the headspace is then injected into a GC-MS-FID.
PHCs and PAHs Hexane Extraction	EP601 ALS Environmental - Vancouver	Water	EPA 3511 (mod)	Petroleum Hydrocarbons (PHCs) and Polycyclic Aromatic Hydrocarbons (PAHs) are extracted using a hexane liquid-liquid extraction.
Glycols Extraction and Derivatization (BC Only)	EP680E ALS Environmental - Vancouver	Water	EPA 8015D (mod)	Aqueous sample is derivatized and extracted with orgaic solvent.

ALS Canada Ltd.

QUALITY CONTROL REPORT

Work Order	: **VA25A0826**	Page	: 1 of 23
Client	: Triton Environmental Consultants Ltd.	Laboratory	: ALS Environmental - Vancouver
Contact		Account Manager	
Address		Address	
Telephone		Telephone	
Project	: 11964	Date Samples Received	: 14-Jan-2025 20:27
PO	: ----	Date Analysis Commenced	: 15-Jan-2025
C-O-C number	: ----	Issue Date	: 22-Jan-2025 15:40
Sampler	: ----		
Site	: Water Analysis		
Quote number	: VA25-TRIT100-001		
No. of samples received	: 2		
No. of samples analysed	: 2		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
	Laboratory Analyst	Edmonton Inorganics, Edmonton, Alberta
	Supervisor - Metals ICP Instrumentation	Vancouver Metals, Burnaby, British Columbia
	Lab Assistant	Vancouver Inorganics, Burnaby, British Columbia
	Department Manager - Organics	Vancouver Organics, Burnaby, British Columbia
		Vancouver Metals, Burnaby, British Columbia
	Account Manager Assistant	Vancouver Administration, Burnaby, British Columbia
	Supervisor - Organics Extractions	Vancouver Organics, Burnaby, British Columbia

General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO = Data Quality Objective.
LOR = Limit of Reporting (detection limit).
RPD = Relative Percent Difference
# = Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Physical Tests (QC Lot: 1839523)											
VA25A0812-003	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	134	134	0.00%	20%	----
Physical Tests (QC Lot: 1845557)											
VA25A0825-001	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	<3.0	<3.0	0	Diff <2x LOR	----
Physical Tests (QC Lot: 1845563)											
VA25A0825-001	Anonymous	Solids, total dissolved [TDS]	----	E162	20	mg/L	25	22	2	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1839515)											
VA25A0812-001	Anonymous	Fluoride	16984-48-8	E235.F	2.00	mg/L	<2.00	<2.00	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1839516)											
VA25A0812-001	Anonymous	Chloride	16887-00-6	E235.Cl	50.0	mg/L	10400	10700	2.09%	20%	----
Anions and Nutrients (QC Lot: 1839517)											
VA25A0812-001	Anonymous	Bromide	24959-67-9	E235.Br-L	5.00	mg/L	31.6	32.4	0.748	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1839518)											
VA25A0812-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	0.500	mg/L	<0.500	<0.500	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1839519)											
VA25A0812-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.100	mg/L	<0.100	<0.100	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1839520)											
VA25A0812-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	30.0	mg/L	1830	1870	2.17%	20%	----
Anions and Nutrients (QC Lot: 1839875)											
FJ2500123-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.0413	0.0402	0.0011	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1843886)											
FJ2500159-001	Anonymous	Nitrogen, total	7727-37-9	E366	0.030	mg/L	0.808	0.800	1.06%	20%	----
Anions and Nutrients (QC Lot: 1843887)											
VA25A0826-001	WLNG EOP	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0032	0.0033	0.00009	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 1839873)											
FJ2500123-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	2.76	2.85	0.09	Diff <2x LOR	----
Total Sulfides (QC Lot: 1841986)											
VA25A0825-001	Anonymous	Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	<0.0015	0	Diff <2x LOR	----
Total Metals (QC Lot: 1840452)											
VA25A0825-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0950	0.0872	8.62%	20%	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Total Metals (QC Lot: 1840452) - continued											
VA25A0825-001	Anonymous	Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00011	0.00011	0.000006	Diff <2x LOR	----
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.00290	0.00281	3.35%	20%	----
		Beryllium, total	7440-41-7	E420	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, total	7440-42-8	E420	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.0000050	mg/L	<0.0000050	0.0000096	0.0000046	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	1.71	1.72	0.0248%	20%	----
		Cesium, total	7440-46-2	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, total	7440-48-4	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Copper, total	7440-50-8	E420	0.00050	mg/L	0.00063	0.00059	0.00004	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.010	mg/L	0.039	0.037	0.001	Diff <2x LOR	----
		Lead, total	7439-92-1	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	0.231	0.216	6.59%	20%	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.00203	0.00192	5.52%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000283	0.000294	0.000011	Diff <2x LOR	----
		Nickel, total	7440-02-0	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.050	mg/L	0.167	0.154	0.013	Diff <2x LOR	----
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00026	0.00023	0.00003	Diff <2x LOR	----
		Selenium, total	7782-49-2	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	3.78	3.62	4.17%	20%	----
		Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, total	7440-23-5	E420	0.050	mg/L	1.22	1.17	4.25%	20%	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.00973	0.00978	0.584%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.00030	mg/L	0.00097	0.00086	0.00011	Diff <2x LOR	----
		Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.000106	0.000106	0.737%	20%	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Total Metals (QC Lot: 1840452) - continued											
VA25A0825-001	Anonymous	Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	<0.0030	0	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Total Metals (QC Lot: 1842523)											
VA25A0825-002	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1839449)											
VA25A0681-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.0199	0.0201	0.949%	20%	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0649	0.0683	5.18%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	79.9	84.3	5.37%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	0.00067	0.00067	0.000003	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	2.30	2.35	2.44%	20%	----
		Lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0119	0.0120	1.11%	20%	----
		Magnesium, dissolved	7439-95-4	E421	0.100	mg/L	30.6	29.7	2.84%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.482	0.492	2.11%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000310	0.000304	0.000007	Diff <2x LOR	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.00171	0.00172	0.000006	Diff <2x LOR	----
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.100	mg/L	2.19	2.24	2.12%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00298	0.00292	2.18%	20%	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	5.62	5.41	3.93%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.050	mg/L	4.15	4.14	0.306%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.404	0.396	2.03%	20%	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Dissolved Metals (QC Lot: 1839449) - continued											
VA25A0681-001	Anonymous	Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	40.5	38.9	3.90%	20%	----
		Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.00170	0.00171	0.793%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Zirconium, dissolved	7440-67-7	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1842513)											
VA25A0704-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Speciated Metals (QC Lot: 1840798)											
VA25A0597-021	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
Aggregate Organics (QC Lot: 1842937)											
CG2500212-001	Anonymous	Phenols, total (4AAP)	----	E562	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
Volatile Organic Compounds (QC Lot: 1845321)											
VA25A0826-001	WLNG EOP	Benzene	71-43-2	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromodichloromethane	75-27-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromoform	75-25-2	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Carbon tetrachloride	56-23-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chlorobenzene	108-90-7	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroethane	75-00-3	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroform	67-66-3	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloromethane	74-87-3	E611C	5.0	µg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Dibromochloromethane	124-48-1	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,2-	95-50-1	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,3-	541-73-1	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,4-	106-46-7	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,1-	75-34-3	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,2-	107-06-2	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, 1,1-	75-35-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, cis-1,2-	156-59-2	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Volatile Organic Compounds (QC Lot: 1845321) - continued											
VA25A0826-001	WLNG EOP	Dichloroethylene, trans-1,2-	156-60-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloromethane	75-09-2	E611C	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Dichloropropane, 1,2-	78-87-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Styrene	100-42-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Tetrachloroethylene	127-18-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Toluene	108-88-3	E611C	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Trichloroethane, 1,1,1-	71-55-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,2-	79-00-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichlorofluoromethane	75-69-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Vinyl chloride	75-01-4	E611C	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611C	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611C	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 1845320)											
VA25A0826-001	WLNG EOP	VHw (C6-C10)	----	E581.VH+F1	100	µg/L	<100	<100	0.0%	30%	----
Glycols (QC Lot: 1845086)											
VA25A0775-001	Anonymous	Diethylene glycol	111-46-6	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Ethylene glycol	107-21-1	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Propylene glycol, 1,2-	57-55-6	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Triethylene glycol	112-27-6	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----

Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1839523)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 1845557)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Physical Tests (QCLot: 1845563)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Anions and Nutrients (QCLot: 1839515)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 1839516)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 1839517)						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 1839518)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1839519)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 1839520)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 1839875)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1843886)						
Nitrogen, total	7727-37-9	E366	0.03	mg/L	<0.030	----
Anions and Nutrients (QCLot: 1843887)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Organic / Inorganic Carbon (QCLot: 1839873)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Total Sulfides (QCLot: 1841986)						
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	----
Total Metals (QCLot: 1840452)						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
Barium, total	7440-39-3	E420	0.0001	mg/L	<0.00010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1840452) - continued						
Beryllium, total	7440-41-7	E420	0.00002	mg/L	<0.000020	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	<0.000050	----
Boron, total	7440-42-8	E420	0.01	mg/L	<0.010	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
Calcium, total	7440-70-2	E420	0.05	mg/L	<0.050	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	<0.000010	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
Copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----
Iron, total	7439-89-6	E420	0.01	mg/L	<0.010	----
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----
Lithium, total	7439-93-2	E420	0.001	mg/L	<0.0010	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	<0.0050	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	<0.00010	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	<0.050	----
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	<0.00020	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silicon, total	7440-21-3	E420	0.1	mg/L	<0.10	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	<0.00020	MBRR
Thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	<0.00010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	<0.00010	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1842523)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Dissolved Metals (QCLot: 1839449)						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 1839449) - continued						
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 1842513)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Speciated Metals (QCLot: 1840798)						
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	<0.00050	----
Aggregate Organics (QCLot: 1842937)						
Phenols, total (4AAP)	----	E562	0.001	mg/L	<0.0010	----
Volatile Organic Compounds (QCLot: 1845321)						
Benzene	71-43-2	E611C	0.5	µg/L	<0.50	----
Bromodichloromethane	75-27-4	E611C	0.5	µg/L	<0.50	----
Bromoform	75-25-2	E611C	0.5	µg/L	<0.50	----
Carbon tetrachloride	56-23-5	E611C	0.5	µg/L	<0.50	----
Chlorobenzene	108-90-7	E611C	0.5	µg/L	<0.50	----
Chloroethane	75-00-3	E611C	0.5	µg/L	<0.50	----
Chloroform	67-66-3	E611C	0.5	µg/L	<0.50	----
Chloromethane	74-87-3	E611C	5	µg/L	<5.0	----
Dibromochloromethane	124-48-1	E611C	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,2-	95-50-1	E611C	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,3-	541-73-1	E611C	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,4-	106-46-7	E611C	0.5	µg/L	<0.50	----
Dichloroethane, 1,1-	75-34-3	E611C	0.5	µg/L	<0.50	----
Dichloroethane, 1,2-	107-06-2	E611C	0.5	µg/L	<0.50	----
Dichloroethylene, 1,1-	75-35-4	E611C	0.5	µg/L	<0.50	----
Dichloroethylene, cis-1,2-	156-59-2	E611C	0.5	µg/L	<0.50	----
Dichloroethylene, trans-1,2-	156-60-5	E611C	0.5	µg/L	<0.50	----
Dichloromethane	75-09-2	E611C	1	µg/L	<1.0	----
Dichloropropane, 1,2-	78-87-5	E611C	0.5	µg/L	<0.50	----
Dichloropropylene, cis-1,3-	10061-01-5	E611C	0.5	µg/L	<0.50	----
Dichloropropylene, trans-1,3-	10061-02-6	E611C	0.5	µg/L	<0.50	----
Ethylbenzene	100-41-4	E611C	0.5	µg/L	<0.50	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 1845321) - continued						
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	0.5	µg/L	<0.50	----
Styrene	100-42-5	E611C	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	0.2	µg/L	<0.20	----
Tetrachloroethylene	127-18-4	E611C	0.5	µg/L	<0.50	----
Toluene	108-88-3	E611C	0.4	µg/L	<0.40	----
Trichloroethane, 1,1,1-	71-55-6	E611C	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,2-	79-00-5	E611C	0.5	µg/L	<0.50	----
Trichloroethylene	79-01-6	E611C	0.5	µg/L	<0.50	----
Trichlorofluoromethane	75-69-4	E611C	0.5	µg/L	<0.50	----
Vinyl chloride	75-01-4	E611C	0.4	µg/L	<0.40	----
Xylene, m+p-	179601-23-1	E611C	0.4	µg/L	<0.40	----
Xylene, o-	95-47-6	E611C	0.3	µg/L	<0.30	----
Hydrocarbons (QCLot: 1840953)						
EPH (C10-C19)	----	E601A	250	µg/L	<250	----
EPH (C19-C32)	----	E601A	250	µg/L	<250	----
Hydrocarbons (QCLot: 1845320)						
VHw (C6-C10)	----	E581.VH+F1	100	µg/L	<100	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1840954)						
Acenaphthene	83-32-9	E641A	0.01	µg/L	<0.010	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	<0.010	----
Acridine	260-94-6	E641A	0.01	µg/L	<0.010	----
Anthracene	120-12-7	E641A	0.01	µg/L	<0.010	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	<0.010	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	<0.0050	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	<0.010	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	<0.010	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	<0.010	----
Chrysene	218-01-9	E641A	0.01	µg/L	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	<0.0050	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	<0.010	----
Fluorene	86-73-7	E641A	0.01	µg/L	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	<0.010	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	<0.010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 1840954) - continued						
Naphthalene	91-20-3	E641A	0.05	µg/L	<0.050	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	<0.020	----
Pyrene	129-00-0	E641A	0.01	µg/L	<0.010	----
Quinoline	91-22-5	E641A	0.05	µg/L	<0.050	----
Glycols (QCLot: 1845086)						
Diethylene glycol	111-46-6	E680E	5	mg/L	<5.0	----
Ethylene glycol	107-21-1	E680E	5	mg/L	<5.0	----
Propylene glycol, 1,2-	57-55-6	E680E	5	mg/L	<5.0	----
Triethylene glycol	112-27-6	E680E	5	mg/L	<5.0	----

Qualifiers

Qualifier	Description
MBRR	*Initial MB for this submission had positive results for flagged analyte (data not shown). Low level samples were repeated with new QC (2nd MB results shown). High level results (>5x initial MB level) and non-detect results were reported and are defensible*

Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1839523)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	104	85.0	115	----
Physical Tests (QCLot: 1845557)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	86.3	85.0	115	----
Physical Tests (QCLot: 1845563)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	109	85.0	115	----
Anions and Nutrients (QCLot: 1839515)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	103	90.0	110	----
Anions and Nutrients (QCLot: 1839516)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	104	90.0	110	----
Anions and Nutrients (QCLot: 1839517)									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	100	85.0	115	----
Anions and Nutrients (QCLot: 1839518)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 1839519)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 1839520)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	105	90.0	110	----
Anions and Nutrients (QCLot: 1839875)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	101	85.0	115	----
Anions and Nutrients (QCLot: 1843886)									
Nitrogen, total	7727-37-9	E366	0.03	mg/L	0.5 mg/L	97.7	75.0	125	----
Anions and Nutrients (QCLot: 1843887)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	94.1	80.0	120	----
Organic / Inorganic Carbon (QCLot: 1839873)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	101	80.0	120	----
Total Sulfides (QCLot: 1841986)									
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.08 mg/L	98.8	80.0	120	----
Total Metals (QCLot: 1840452)									

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 1840452) - continued									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	102	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	105	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	103	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	103	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	94.3	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	101	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	91.1	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	102	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	96.6	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	101	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	101	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	99.1	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	101	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	102	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	99.9	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	95.3	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	101	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	99.3	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	102	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	100.0	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	112	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	106	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	103	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	98.9	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	107	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	97.2	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	101	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	101	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	83.2	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	106	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	98.4	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	91.4	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	104	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	96.8	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	99.5	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	95.8	80.0	120	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 1840452) - continued									
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	101	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	93.6	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	101	80.0	120	----
Total Metals (QCLot: 1842523)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	99.7	80.0	120	----
Dissolved Metals (QCLot: 1839449)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	107	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	102	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	1 mg/L	107	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	103	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	107	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	104	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	97.0	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	101	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	98.2	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	102	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	106	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	102	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	103	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	98.5	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.5 mg/L	102	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.25 mg/L	102	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	111	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	104	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	104	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	101	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	# 122	80.0	120	MES
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	108	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	108	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	101	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	101	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	97.1	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	107	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.25 mg/L	102	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	93.7	80.0	120	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report: Spike: Target Concentration	Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High	Qualifier
Dissolved Metals (QCLot: 1839449) - continued									
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	99.0	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	101	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	95.1	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	98.9	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	98.5	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	97.3	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	99.3	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.5 mg/L	104	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	98.0	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	92.9	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	102	80.0	120	----
Speciated Metals (QCLot: 1840798)									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.25 mg/L	100	80.0	120	----
Aggregate Organics (QCLot: 1842937)									
Phenols, total (4AAP)	----	E562	0.001	mg/L	0.02 mg/L	106	85.0	115	----
Volatile Organic Compounds (QCLot: 1845321)									
Benzene	71-43-2	E611C	0.5	µg/L	100 µg/L	96.8	70.0	130	----
Bromodichloromethane	75-27-4	E611C	0.5	µg/L	100 µg/L	96.9	70.0	130	----
Bromoform	75-25-2	E611C	0.5	µg/L	100 µg/L	91.0	70.0	130	----
Carbon tetrachloride	56-23-5	E611C	0.5	µg/L	100 µg/L	106	70.0	130	----
Chlorobenzene	108-90-7	E611C	0.5	µg/L	100 µg/L	98.4	70.0	130	----
Chloroethane	75-00-3	E611C	0.5	µg/L	100 µg/L	102	60.0	140	----
Chloroform	67-66-3	E611C	0.5	µg/L	100 µg/L	101	70.0	130	----
Chloromethane	74-87-3	E611C	5	µg/L	100 µg/L	87.6	60.0	140	----
Dibromochloromethane	124-48-1	E611C	0.5	µg/L	100 µg/L	98.9	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611C	0.5	µg/L	100 µg/L	96.5	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611C	0.5	µg/L	100 µg/L	96.0	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611C	0.5	µg/L	100 µg/L	96.6	70.0	130	----
Dichloroethane, 1,1-	75-34-3	E611C	0.5	µg/L	100 µg/L	103	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611C	0.5	µg/L	100 µg/L	95.6	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611C	0.5	µg/L	100 µg/L	97.8	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611C	0.5	µg/L	100 µg/L	96.6	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611C	0.5	µg/L	100 µg/L	105	70.0	130	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 1845321) - continued									
Dichloromethane	75-09-2	E611C	1	µg/L	100 µg/L	100	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611C	0.5	µg/L	100 µg/L	99.3	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611C	0.5	µg/L	100 µg/L	89.1	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611C	0.5	µg/L	100 µg/L	86.1	70.0	130	----
Ethylbenzene	100-41-4	E611C	0.5	µg/L	100 µg/L	88.5	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	0.5	µg/L	100 µg/L	105	70.0	130	----
Styrene	100-42-5	E611C	0.5	µg/L	100 µg/L	88.2	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	0.5	µg/L	100 µg/L	105	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	0.2	µg/L	100 µg/L	80.1	70.0	130	----
Tetrachloroethylene	127-18-4	E611C	0.5	µg/L	100 µg/L	103	70.0	130	----
Toluene	108-88-3	E611C	0.4	µg/L	100 µg/L	92.9	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611C	0.5	µg/L	100 µg/L	105	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611C	0.5	µg/L	100 µg/L	92.5	70.0	130	----
Trichloroethylene	79-01-6	E611C	0.5	µg/L	100 µg/L	109	70.0	130	----
Trichlorofluoromethane	75-69-4	E611C	0.5	µg/L	100 µg/L	108	60.0	140	----
Vinyl chloride	75-01-4	E611C	0.4	µg/L	100 µg/L	100	60.0	140	----
Xylene, m+p-	179601-23-1	E611C	0.4	µg/L	200 µg/L	93.6	70.0	130	----
Xylene, o-	95-47-6	E611C	0.3	µg/L	100 µg/L	88.8	70.0	130	----
Hydrocarbons (QCLot: 1840953)									
EPH (C10-C19)	----	E601A	250	µg/L	6490 µg/L	108	70.0	130	----
EPH (C19-C32)	----	E601A	250	µg/L	3360 µg/L	109	70.0	130	----
Hydrocarbons (QCLot: 1845320)									
VHw (C6-C10)	----	E581.VH+F1	100	µg/L	6310 µg/L	92.6	70.0	130	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1840954)									
Acenaphthene	83-32-9	E641A	0.01	µg/L	0.5 µg/L	103	60.0	130	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	0.5 µg/L	104	60.0	130	----
Acridine	260-94-6	E641A	0.01	µg/L	0.5 µg/L	111	60.0	130	----
Anthracene	120-12-7	E641A	0.01	µg/L	0.5 µg/L	114	60.0	130	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	0.5 µg/L	111	60.0	130	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	0.5 µg/L	105	60.0	130	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	0.5 µg/L	97.4	60.0	130	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	0.5 µg/L	104	60.0	130	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	0.5 µg/L	102	60.0	130	----
Chrysene	218-01-9	E641A	0.01	µg/L	0.5 µg/L	116	60.0	130	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 1840954) - continued									
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	0.5 µg/L	112	60.0	130	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	0.5 µg/L	110	60.0	130	----
Fluorene	86-73-7	E641A	0.01	µg/L	0.5 µg/L	100	60.0	130	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	0.5 µg/L	102	60.0	130	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	0.5 µg/L	100	60.0	130	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	0.5 µg/L	118	60.0	130	----
Naphthalene	91-20-3	E641A	0.05	µg/L	0.5 µg/L	117	50.0	130	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	0.5 µg/L	122	60.0	130	----
Pyrene	129-00-0	E641A	0.01	µg/L	0.5 µg/L	108	60.0	130	----
Quinoline	91-22-5	E641A	0.05	µg/L	0.5 µg/L	117	60.0	130	----
Glycols (QCLot: 1845086)									
Diethylene glycol	111-46-6	E680E	5	mg/L	25 mg/L	98.0	70.0	130	----
Ethylene glycol	107-21-1	E680E	5	mg/L	25 mg/L	96.2	70.0	130	----
Propylene glycol, 1,2-	57-55-6	E680E	5	mg/L	25 mg/L	95.1	70.0	130	----
Triethylene glycol	112-27-6	E680E	5	mg/L	25 mg/L	91.8	70.0	130	----

Qualifiers

Qualifier	Description
MES	*Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).*

Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 1839515)										
VA25A0812-002	Anonymous	Fluoride	16984-48-8	E235.F	102 mg/L	100 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 1839516)										
VA25A0812-002	Anonymous	Chloride	16887-00-6	E235.Cl	9860 mg/L	10000 mg/L	98.6	75.0	125	----
Anions and Nutrients (QCLot: 1839517)										
VA25A0812-002	Anonymous	Bromide	24959-67-9	E235.Br-L	49.8 mg/L	50 mg/L	99.6	75.0	125	----
Anions and Nutrients (QCLot: 1839518)										
VA25A0812-002	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	241 mg/L	250 mg/L	96.5	75.0	125	----
Anions and Nutrients (QCLot: 1839519)										
VA25A0812-002	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	48.0 mg/L	50 mg/L	96.0	75.0	125	----
Anions and Nutrients (QCLot: 1839520)										
VA25A0812-002	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	9960 mg/L	10000 mg/L	99.6	75.0	125	----
Anions and Nutrients (QCLot: 1839875)										
FJ2500123-002	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0978 mg/L	0.1 mg/L	97.8	75.0	125	----
Anions and Nutrients (QCLot: 1843886)										
FJ2500160-001	Anonymous	Nitrogen, total	7727-37-9	E366	1.84 mg/L	2 mg/L	92.1	70.0	130	----
Anions and Nutrients (QCLot: 1843887)										
VA25A0826-002	WLNG EOP Field Blank	Phosphorus, total	7723-14-0	E372-U	0.0483 mg/L	0.05 mg/L	96.5	70.0	130	----
Organic / Inorganic Carbon (QCLot: 1839873)										
FJ2500123-002	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	4.69 mg/L	5 mg/L	93.8	70.0	130	----
Total Sulfides (QCLot: 1841986)										
VA25A0825-002	Anonymous	Sulfide, total (as S)	18496-25-8	E395	0.201 mg/L	0.2 mg/L	101	75.0	125	----
Total Metals (QCLot: 1840452)										
VA25A0825-002	Anonymous	Aluminum, total	7429-90-5	E420	0.178 mg/L	0.2 mg/L	88.9	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0184 mg/L	0.02 mg/L	92.3	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0186 mg/L	0.02 mg/L	93.0	70.0	130	----
		Barium, total	7440-39-3	E420	0.0187 mg/L	0.02 mg/L	93.6	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0346 mg/L	0.04 mg/L	86.6	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.00957 mg/L	0.01 mg/L	95.7	70.0	130	----
		Boron, total	7440-42-8	E420	0.080 mg/L	0.1 mg/L	80.5	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00388 mg/L	0.004 mg/L	97.0	70.0	130	----
		Calcium, total	7440-70-2	E420	3.36 mg/L	4 mg/L	84.1	70.0	130	----
		Cesium, total	7440-46-2	E420	0.00915 mg/L	0.01 mg/L	91.5	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0374 mg/L	0.04 mg/L	93.6	70.0	130	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Total Metals (QCLot: 1840452) - continued										
VA25A0825-002	Anonymous	Cobalt, total	7440-48-4	E420	0.0183 mg/L	0.02 mg/L	91.6	70.0	130	----
		Copper, total	7440-50-8	E420	0.0184 mg/L	0.02 mg/L	91.9	70.0	130	----
		Iron, total	7439-89-6	E420	1.82 mg/L	2 mg/L	91.3	70.0	130	----
		Lead, total	7439-92-1	E420	0.0192 mg/L	0.02 mg/L	95.8	70.0	130	----
		Lithium, total	7439-93-2	E420	0.0860 mg/L	0.1 mg/L	86.0	70.0	130	----
		Magnesium, total	7439-95-4	E420	0.913 mg/L	1 mg/L	91.3	70.0	130	----
		Manganese, total	7439-96-5	E420	0.0180 mg/L	0.02 mg/L	89.9	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0184 mg/L	0.02 mg/L	91.8	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0376 mg/L	0.04 mg/L	93.9	70.0	130	----
		Phosphorus, total	7723-14-0	E420	8.99 mg/L	10 mg/L	89.9	70.0	130	----
		Potassium, total	7440-09-7	E420	3.82 mg/L	4 mg/L	95.4	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0183 mg/L	0.02 mg/L	91.6	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0373 mg/L	0.04 mg/L	93.3	70.0	130	----
		Silicon, total	7440-21-3	E420	8.85 mg/L	10 mg/L	88.5	70.0	130	----
		Silver, total	7440-22-4	E420	0.00382 mg/L	0.004 mg/L	95.4	70.0	130	----
		Sodium, total	7440-23-5	E420	1.77 mg/L	2 mg/L	88.6	70.0	130	----
		Strontium, total	7440-24-6	E420	0.0184 mg/L	0.02 mg/L	92.1	70.0	130	----
		Sulfur, total	7704-34-9	E420	18.4 mg/L	20 mg/L	92.1	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0375 mg/L	0.04 mg/L	93.8	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00372 mg/L	0.004 mg/L	93.1	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0194 mg/L	0.02 mg/L	97.1	70.0	130	----
		Tin, total	7440-31-5	E420	0.0188 mg/L	0.02 mg/L	94.2	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0350 mg/L	0.04 mg/L	87.6	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0191 mg/L	0.02 mg/L	95.4	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00371 mg/L	0.004 mg/L	92.7	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.0919 mg/L	0.1 mg/L	91.9	70.0	130	----
		Zinc, total	7440-66-6	E420	0.347 mg/L	0.4 mg/L	86.8	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0366 mg/L	0.04 mg/L	91.5	70.0	130	----
Total Metals (QCLot: 1842523)										
VA25A0826-001	WLNG EOP	Mercury, total	7439-97-6	E508	0.000102 mg/L	0 mg/L	102	70.0	130	----
Dissolved Metals (QCLot: 1839449)										
VA25A0738-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.204 mg/L	0.2 mg/L	102	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0195 mg/L	0.02 mg/L	97.6	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0209 mg/L	0.02 mg/L	105	70.0	130	----
		Barium, dissolved	7440-39-3	E421	0.0192 mg/L	0.02 mg/L	96.2	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.0404 mg/L	0.04 mg/L	101	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.00781 mg/L	0.01 mg/L	78.1	70.0	130	----
		Boron, dissolved	7440-42-8	E421	ND mg/L	----	ND	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00380 mg/L	0.004 mg/L	95.0	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.00968 mg/L	0.01 mg/L	96.8	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0375 mg/L	0.04 mg/L	93.7	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0183 mg/L	0.02 mg/L	91.5	70.0	130	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 1839449) - continued										
VA25A0738-001	Anonymous	Copper, dissolved	7440-50-8	E421	0.0172 mg/L	0.02 mg/L	86.2	70.0	130	----
		Iron, dissolved	7439-89-6	E421	1.77 mg/L	2 mg/L	88.4	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0181 mg/L	0.02 mg/L	90.7	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.0966 mg/L	0.1 mg/L	96.6	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	ND mg/L	----	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	ND mg/L	----	ND	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.0201 mg/L	0.02 mg/L	100	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0351 mg/L	0.04 mg/L	87.8	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	11.0 mg/L	10 mg/L	110	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	ND mg/L	----	ND	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	ND mg/L	----	ND	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0400 mg/L	0.04 mg/L	100	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	9.42 mg/L	10 mg/L	94.2	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00218 mg/L	0.004 mg/L	54.5	70.0	130	MS-Ag
		Sodium, dissolved	7440-23-5	E421	ND mg/L	----	ND	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	ND mg/L	----	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	ND mg/L	----	ND	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.0395 mg/L	0.04 mg/L	98.7	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.00354 mg/L	0.004 mg/L	88.5	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0214 mg/L	0.02 mg/L	107	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0173 mg/L	0.02 mg/L	86.5	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0361 mg/L	0.04 mg/L	90.3	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0189 mg/L	0.02 mg/L	94.6	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	0.00349 mg/L	0.004 mg/L	87.4	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.0973 mg/L	0.1 mg/L	97.3	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.352 mg/L	0.4 mg/L	87.9	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0339 mg/L	0.04 mg/L	84.8	70.0	130	----
Dissolved Metals (QCLot: 1842513)										
VA25A0704-002	Anonymous	Mercury, dissolved	7439-97-6	E509	0.000101 mg/L	0 mg/L	101	70.0	130	----
Speciated Metals (QCLot: 1840798)										
VA25A0597-022	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.256 mg/L	0.25 mg/L	102	70.0	130	----
Aggregate Organics (QCLot: 1842937)										
CG2500212-001	Anonymous	Phenols, total (4AAP)	----	E562	0.0194 mg/L	0.02 mg/L	96.8	75.0	125	----
Volatile Organic Compounds (QCLot: 1845321)										
VA25A0826-002	WLNG EOP Field Blank	Benzene	71-43-2	E611C	92.9 µg/L	100 µg/L	92.9	60.0	140	----
		Bromodichloromethane	75-27-4	E611C	94.4 µg/L	100 µg/L	94.4	60.0	140	----
		Bromoform	75-25-2	E611C	89.6 µg/L	100 µg/L	89.6	60.0	140	----
		Carbon tetrachloride	56-23-5	E611C	99.7 µg/L	100 µg/L	99.7	60.0	140	----
		Chlorobenzene	108-90-7	E611C	94.3 µg/L	100 µg/L	94.3	60.0	140	----
		Chloroethane	75-00-3	E611C	95.6 µg/L	100 µg/L	95.6	50.0	150	----
		Chloroform	67-66-3	E611C	97.4 µg/L	100 µg/L	97.4	60.0	140	----
		Chloromethane	74-87-3	E611C	79.0 µg/L	100 µg/L	79.0	50.0	150	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 1845321) - continued										
VA25A0826-002	WLNG EOP Field Blank	Dibromochloromethane	124-48-1	E611C	96.3 µg/L	100 µg/L	96.3	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611C	92.4 µg/L	100 µg/L	92.4	60.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611C	92.8 µg/L	100 µg/L	92.8	60.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611C	93.5 µg/L	100 µg/L	93.5	60.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611C	99.6 µg/L	100 µg/L	99.6	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611C	94.8 µg/L	100 µg/L	94.8	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611C	91.3 µg/L	100 µg/L	91.3	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611C	93.3 µg/L	100 µg/L	93.3	60.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611C	91.7 µg/L	100 µg/L	91.7	60.0	140	----
		Dichloromethane	75-09-2	E611C	98.1 µg/L	100 µg/L	98.1	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611C	96.5 µg/L	100 µg/L	96.5	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611C	88.1 µg/L	100 µg/L	88.1	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611C	85.6 µg/L	100 µg/L	85.6	60.0	140	----
		Ethylbenzene	100-41-4	E611C	83.3 µg/L	100 µg/L	83.3	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	104 µg/L	100 µg/L	104	60.0	140	----
		Styrene	100-42-5	E611C	83.7 µg/L	100 µg/L	83.7	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	101 µg/L	100 µg/L	101	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	76.7 µg/L	100 µg/L	76.7	60.0	140	----
		Tetrachloroethylene	127-18-4	E611C	97.4 µg/L	100 µg/L	97.4	60.0	140	----
		Toluene	108-88-3	E611C	88.3 µg/L	100 µg/L	88.3	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611C	100 µg/L	100 µg/L	100	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611C	90.2 µg/L	100 µg/L	90.2	60.0	140	----
		Trichloroethylene	79-01-6	E611C	104 µg/L	100 µg/L	104	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611C	100 µg/L	100 µg/L	100	50.0	150	----
		Vinyl chloride	75-01-4	E611C	90.7 µg/L	100 µg/L	90.7	50.0	150	----
		Xylene, m+p-	179601-23-1	E611C	178 µg/L	200 µg/L	88.9	60.0	140	----
		Xylene, o-	95-47-6	E611C	84.5 µg/L	100 µg/L	84.5	60.0	140	----
Hydrocarbons (QCLot: 1845320)										
VA25A1025-009	Anonymous	VHw (C6-C10)	----	E581.VH+F1	5410 µg/L	6310 µg/L	85.8	60.0	140	----

Qualifiers

Qualifier	Description
MS-Ag	*MS-Ag: Matrix Spike recovery for silver was marginally below DQO (40 to <60%) due to its instability in the sample matrix. Silver was not detected. Reported result (< LOR) is reliable*

Chain of Custody (COC) / Analytical Request Form

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Canada Toll Free: 1 800 668 9878

COC Number: 20 -

Page 1 of 2

Environmental Division Vancouver

Work Order Reference

VA25A0826

Telephone : +1 604 253 4188

Report To	Contact and company name below will appear on the final report
Company:	Triton Environmental
Contact:	
Phone:	
Street:	
City/Province:	
Postal Code:	
Invoice To	Same as Report To ☐ YES ☑ NO
	Copy of Invoice with Report ☐ YES ☑ NO
Company:	
Contact:	

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Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)

Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Turnaround Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply

☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minir

☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge mini

☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge mini

☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge mini

☐ Same day [E2] if received by 10am M-S - 200% rush surcharg

Additional fees may apply to rush requests on weeken

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

For all tests with rush TATs requested, please contact your AM to confirm availability.

Project Information

ALS Account # / Quote #:	VA23-TRIT100-012
Job #:	11964
PO / AFE:	11964 - Task 40 - Phase 3C-4C
LSD:	
ALS Lab Work Order # (ALS use only):	

Analysis Request

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

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	Total metals + mercury	Dissolved metals + mercury	Total hexavalent chromium	Total trivalent chromium	TSS, TDS, T-Alkalinity,Anions scan (Br, Cl, F, NO2, NO3, SO4)	Total sulfide (low) (as H2S), Unionized Sulfide (low)	Nutrients (ammonia, ammonium, total nitrogen, total phosphorus)	VOC/VPH	EPH, PAH, LEPH/HEPH	DOC	Glycols	General parameters (alkalinity)	Phenols	SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
							F				P	P	P	P	F/P						
	WLNG EOP	Jan14/25	10:15	Water	16	R	R	R	R	R	R	R	R	R	R	R	R	R			
	pH: 8.02 cond: 136 temp: 10.47	~~Jan14/25~~																			

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System?

☐ YES ☑ NO

Are samples for human consumption/ use?

☐ YES ☑ NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☐ ICE ☑ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
				8.5			

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (ALS use only)			FINAL SHIPMENT RECEPTION (ALS use only)		
Released by:	Date: Jan 14/25	Time: 5:55	Received by:	Date:	Time:	Received by:	Date: JAN 14	Time: 1800

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION WHITE - LABORATORY COPY YELLOW - CLIENT COPY

AUG 2020 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**.

Chain of Custody (COC) / Analytical Request Form

COC Number: 20 -

Page 2 of 2

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

Report To	Contact and company name below will appear on the final report
Company:	Triton Environmental
Contact:	
Phone:	
Street:	
City/Province:	
Postal Code:	
Invoice To	
Company:	
Contact:	

Reports / Recipients

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)

Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A

☐ Compare Results to Criteria on Report - provide details below if box checked

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Turnaround Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply
☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum
☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum
☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum
☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum
☐ Same day [E2] if received by 10am M-S - 200% rush surcharge.

Additional fees may apply to rush requests on weekends, statutory holidays and for non-routine tests.

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

For all tests with rush TATs requested, please contact your AM to confirm availability.

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Project Information

ALS Account # / Quote #:	VA23-TRIT100-012
Job #:	11964
PO / AFE:	11964 - Task 40 - Phase 3C-4C
LSD:	

ALS Lab Work Order # (ALS use only):

Analysis Request

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

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	Total metals + mercury	Dissolved metals + mercury	Total hexavalent chromium	Total trivalent chromium	TSS, TDS, T-Alkalinity, Anions scan (Br, Cl, F, NO2, NO3, SO4)	Total sulfide (low) (as H2S), Unionized Sulfide (low)	Nutrients (ammonia, ammonium, total -	VOC/VPH	EPH, PAH, LEPH/HEPH	DOC	Glycols	General parameters (alkalinity)			SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	~~WLNG EOP Duplicate~~			~~Water~~	15	R	R	R	R	R	R	R	R	R	R	R	R					
	pH: cond: temp:																					
	WLNG EOP Field Blank	Jan 14/25	8:05	Water	15	R	R	R	R	R	R	R	R	R	R	R	R					
	~~WLNG EOP Trip Blank~~			~~Water~~	15	R	R	R	R	R	R	R	R	R	R	R	R					

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System?
☐ YES ☑ NO

Are samples for human consumption/ use?
☐ YES ☑ NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

ESDAT EDD to ESdat_CA+tritonenv@ESdatLabSync.net, reports also to stephanie.renkers@triton-env.com

SAMPLE RECEIPT DETAILS (ALS use only)

Cooling Method: ☐ NONE ☐ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO

Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
				8.2			

SHIPMENT RELEASE (client use)

Released by:	Date:	Time:
	Jan 14/25	5:55

INITIAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:

FINAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:
	JAN 14	8W

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

AUG 2020 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.**

Your Project #: 11964-Task 40-phase 3C-4C
Your C.O.C. #: C#742651-01-01

Attention: REPORT

Triton Environmental Consultants Ltd.
1730-1111 West Georgia St
Vancouver, BC
CANADA V6E 4M3

Report Date: 2025/01/28
Report #: R3616262
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C506623
Received: 2025/01/14, 16:57

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Rainbow Trout LC50 Multi-concentration	1	N/A	2025/01/16	BBY2SOP-00004	EPS 1/RM/13

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: 11964-Task 40-phase 3C-4C
Your C.O.C. #: C#742651-01-01

Attention: REPORT

Triton Environmental Consultants Ltd.
1730-1111 West Georgia St
Vancouver, BC
CANADA V6E 4M3

Report Date: 2025/01/28
Report #: R3616262
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C506623
Received: 2025/01/14, 16:57

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Rheybee Ann Ceniza, Project Support Specialist
Email: rheybee-ann.ceniza@bureauveritas.com
Phone# (604) 734 7276

==========

This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Raphael Kwan, General Manager, BC and Yukon Regions responsible for British Columbia Environmental laboratory operations.

RESULTS OF CHEMICAL ANALYSES OF WATER

Bureau Veritas ID		DDF428	
Sampling Date		2025/01/14 10:15	
COC Number		C#742651-01-01	
	UNITS	**WLNG EOP**	**QC Batch**
Rainbow Trout			
LC50	% vol/vol	ATTACHED	B662274

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	6.3°C
Package 2	6.7°C

Results relate only to the items tested.

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Kimberly Tamaki, Scientist, Ecotoxicology

Bureau Veritas Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

C506623
2025/01/14 16:57

Bureau Veritas
4606 Canada Way, Burnaby, British Columbia Canada V5G 1K5 Tel:(604) 734 7276 Toll-free:800-563-6266 Fax:(604) 731 2386 www.bvna.com

Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#4800 Triton Environmental Consultants Ltd.	Company Name		Quotation #	C31262	Bureau Veritas Job #	Bottle Order #:
Contact Name	INVOICE	Contact Name	REPORT	P.O. #			742651
Address	# 1730-1111 West Georgia St	Address		Project #	11964-Task 40-phase 3C-4C	Chain Of Custody Record	Project Manager
	Vancouver BC V6E 4M3			Project Name		C#742651-01-01	Shanaz Akber
Phone	(604) 631-2211 Fax: (604) 279-2047	Phone	Fax:	Site #			
Email	farshad.shafiei@triton-env.com;smuminovic@triton-env.	Email	farshad.shafiei@triton-env.com;achan@triton-env.com;li	Sampled By			

Regulatory Criteria:
- ☐ CSR
- ☐ CCME
- ☐ BC Water Quality
- ☐ Other _____

Special Instructions

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: ☑
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
1 DAY ☐ 2 Day ☐ 3 Day ☐ Date Required: _____ ☐
Rush Confirmation Number: _____ (call lab for #)

SAMPLES MUST BE KEPT COOL (<.10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	Rainbow Trout LC50 Multi-concentration	# of Bottles	Comments
1		WLNG [redacted] EOP	Jan 14/25	10:15	Water	N	Regular TAT	4	LC50
2									
3									
4									
5									
6									
7									
8									
9									
10									

MVAN-2025-01-524

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Stephanie Renkes SR	Jan 14/25	4:55	ASHLEIGH THOMAS VANCOUVER	2025/01/14	16:57		☐	(6,6,7)(7,7,6)	☐ Yes ☑ No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Bureau Veritas Yellow: Client

Ice packs frozen.

Woodfibre Site WTP Discharge Field Notes and Logs

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
Title	**WoodFibre Weekly Water Discharge Report**	**Revision:**	**0**
Data Date Range	**January 13, 2025 to January 19, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 24, 2025**

Table of Contents:

1. Executive Summary and Notes
2. Discharge Parameter Summary
3. WTP Calibration Log

Appendices:

Appendix A- WTP Data Log
Appendix B- YSI Data Log
Appendix C- Photos

1. Executive Summary and Field Notes:

The discharged water consistently remained within regulatory guidelines. The key parameters, including temperature, pH, NTU, salinity, conductivity, and oxidation-reduction potential (ORP), were monitored throughout the discharge process and remained within the prescribed limits. No visible sheen observed on top of the WTP tanks and discharged water. All relevant parameters were measured using YSI instruments and WTP probes. The total discharge volume up to January 13 was 48,468 m^3.

Daily Volume Summary:

Table 1: Discharge Volumes Daily Summary

Date	Location	Volume (m3)	Comments
January 13	Woodfibre (WF)	411	None
January 14	WF	444	None
January 15	WF	498	None
January 16	WF	487	None
January 17	WF	467	None
January 18	WF	411	None
January 19	WF	421	None
	Total	3,139	None

2. Discharge Parameter Summary:

Table 2: Discharge Parameter Summary

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/13/2025	0:00:00	7.3	0.805	0	48,468	13	260
1/13/2025	1:15:00	7.3	0.386	0	48,479	11.5	119
1/13/2025	1:30:00	7.3	0.798	0	48,488	11.2	118
1/13/2025	2:45:00	7.3	0.809	0	48,495	13	119
1/13/2025	3:00:00	7.3	0.794	0	48,507	12.1	119
1/13/2025	4:00:00	7.3	0.809	0	48,515	15.4	256
1/13/2025	4:15:00	7.3	0.892	0	48,522	11.2	119
1/13/2025	4:30:00	7.3	0.885	0	48,536	11.8	119
1/13/2025	5:15:00	7.3	0.843	0	48,540	11.7	118
1/13/2025	5:30:00	7.3	0.824	0	48,553	11.5	118
1/13/2025	5:45:00	7.3	0.824	0	48,565	12.2	118
1/13/2025	6:00:00	7.3	0.401	0	48,569	13.2	118
1/13/2025	7:00:00	7.3	0.820	0	48,572	14.4	258
1/13/2025	7:15:00	7.3	0.835	0	48,585	11.5	119
1/13/2025	7:30:00	7.3	0.809	0	48,597	12	117
1/13/2025	8:30:00	7.3	0.786	0	48,613	11.5	261
1/13/2025	8:45:00	7.3	0.805	0	48,625	11.8	261
1/13/2025	9:45:00	7.3	0.779	0	48,638	13.1	258
1/13/2025	10:00:00	7.2	0.756	0	48,649	13.5	261
1/13/2025	10:30:00	7.2	0.000	0	48,652	14	262
1/13/2025	11:30:00	7.3	0.862	0	48,658	11.8	116

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
Title	**WoodFibre Weekly Water Discharge Report**	**Revision:**	**0**
Data Date Range	**January 13, 2025 to January 19, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 24, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/13/2025	11:45:00	7.3	0.722	0	48,670	12.1	258
1/13/2025	12:00:00	7.2	0.170	0	48,677	12.4	258
1/13/2025	12:15:00	7.3	0.805	0	48,684	11.1	114
1/13/2025	13:30:00	7.3	0.794	0	48,695	12	114
1/13/2025	13:45:00	7.2	0.786	0	48,706	12.3	116
1/13/2025	15:15:00	7.3	0.582	0	48,720	13.4	113
1/13/2025	15:30:00	7.2	0.476	0	48,727	13.5	255
1/13/2025	15:45:00	7.2	0.442	0	48,734	14.3	253
1/13/2025	16:30:00	7.3	0.915	0	48,744	15.7	253
1/13/2025	16:45:00	7.2	0.907	0	48,758	15.5	251
1/13/2025	17:15:00	7.3	0.767	0	48,774	12.1	113
1/13/2025	18:15:00	7.3	0.567	0	48,785	12.8	113
1/13/2025	18:30:00	7.2	0.200	0	48,790	13	255
1/13/2025	19:00:00	7.3	0.858	0	48,796	11.9	118
1/13/2025	19:15:00	7.3	0.847	0	48,809	12.5	118
1/13/2025	19:30:00	7.3	0.374	0	48,816	13.6	257
1/13/2025	20:45:00	7.3	0.000	0	48,819	17.5	255
1/13/2025	21:30:00	7.3	0.873	0	48,830	11.9	118
1/13/2025	21:45:00	7.3	0.869	0	48,843	11.8	120
1/13/2025	22:45:00	7.3	0.828	0	48,858	11.7	119
1/13/2025	23:00:00	7.3	0.824	0	48,871	11.7	119
1/14/2025	0:00:00	7.3	0.881	0	48,891	11.2	116
1/14/2025	1:00:00	7.2	0.382	0	48,902	13.1	119
1/14/2025	1:15:00	7.4	0.699	0	48,913	11.2	118
1/14/2025	2:30:00	7.3	0.741	0	48,925	12.5	119

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
Title	**WoodFibre Weekly Water Discharge Report**	**Revision:**	**0**
Data Date Range	**January 13, 2025 to January 19, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 24, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/14/2025	2:45:00	7.3	0.707	0	48,936	13.5	258
1/14/2025	3:00:00	7.4	0.786	0	48,943	11.8	119
1/14/2025	4:00:00	7.3	0.809	0	48,947	15.9	255
1/14/2025	4:15:00	7.3	0.839	0	48,959	12	117
1/14/2025	5:15:00	7.3	0.801	0	48,978	11.4	114
1/14/2025	6:00:00	7.3	0.896	0	48,984	13.9	261
1/14/2025	6:15:00	7.4	0.877	0	48,997	11	117
1/14/2025	7:15:00	7.4	0.779	0	49,018	11	117
1/14/2025	7:30:00	7.4	0.639	0	49,029	11.1	116
1/14/2025	7:45:00	7.4	0.692	0	49,040	11.2	117
1/14/2025	8:15:00	7.3	0.782	0	49,049	12	115
1/14/2025	9:00:00	7.3	0.805	0	49,067	13.3	257
1/14/2025	9:15:00	7.2	0.782	0	49,079	13.2	257
1/14/2025	10:15:00	7.3	0.730	0	49,085	13.9	257
1/14/2025	10:30:00	7.2	0.760	0	49,096	13.8	258
1/14/2025	11:45:00	7.2	0.726	0	49,113	14.8	255
1/14/2025	12:00:00	7.2	0.730	0	49,124	15.1	256
1/14/2025	13:00:00	7.2	0.703	0	49,135	15.6	254
1/14/2025	13:15:00	7.2	0.730	0	49,145	15.5	257
1/14/2025	13:30:00	7.4	0.643	0	49,155	11.2	113
1/14/2025	13:45:00	7.4	0.624	0	49,165	11.2	115
1/14/2025	14:00:00	7.4	0.605	0	49,174	11.2	115
1/14/2025	14:30:00	7.5	0.696	5.8	49,180	11.1	112
1/14/2025	14:45:00	7.4	0.688	0	49,191	11.1	112
1/14/2025	15:15:00	7.4	0.000	0	49,196	11.1	112

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
Title	**WoodFibre Weekly Water Discharge Report**	**Revision:**	**0**
Data Date Range	**January 13, 2025 to January 19, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 24, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/14/2025	16:15:00	7.4	0.609	0	49,207	11.2	116
1/14/2025	16:30:00	7.3	0.514	0	49,215	11.5	115
1/14/2025	16:45:00	7.3	0.469	0	49,222	11.8	113
1/14/2025	17:00:00	7.2	0.431	0	49,229	12	259
1/14/2025	17:15:00	7.2	0.420	0	49,235	12.3	258
1/14/2025	17:30:00	7.2	0.404	0	49,241	12.8	256
1/14/2025	18:15:00	7.4	0.839	0	49,251	11.6	115
1/14/2025	18:30:00	7.4	0.816	0	49,264	11.6	116
1/14/2025	18:45:00	7.4	0.794	0	49,276	11.9	117
1/14/2025	19:45:00	7.3	0.238	0	49,283	13.4	259
1/14/2025	20:00:00	7.3	0.000	0	49,285	14.3	258
1/14/2025	20:45:00	7.2	0.302	0	49,287	17.2	258
1/14/2025	21:00:00	7.2	0.000	0	49,290	17.5	258
1/14/2025	21:15:00	7.2	0.352	0	49,293	17.8	259
1/14/2025	22:00:00	7.3	0.605	0	49,302	12.3	114
1/14/2025	22:15:00	7.3	0.000	0	49,310	12.7	114
1/14/2025	22:30:00	7.2	0.707	0	49,319	13.7	256
1/15/2025	0:00:00	7.4	0.934	0	49,346	11.3	118
1/15/2025	0:15:00	7.4	0.934	0	49,359	10.9	114
1/15/2025	0:30:00	7.4	0.866	0	49,373	10.8	114
1/15/2025	1:30:00	7.4	0.699	0	49,388	11	118
1/15/2025	1:45:00	7.4	0.355	0	49,397	11.5	118
1/15/2025	2:00:00	7.4	0.000	0	49,406	11.3	119
1/15/2025	2:45:00	7.4	0.873	0	49,410	11.2	119
1/15/2025	3:00:00	7.4	0.801	0	49,422	11.1	118

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
Title	**WoodFibre Weekly Water Discharge Report**	**Revision:**	**0**
Data Date Range	**January 13, 2025 to January 19, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 24, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/15/2025	4:15:00	7.3	0.805	0	49,435	14.9	260
1/15/2025	4:30:00	7.4	0.828	0	49,447	11.2	119
1/15/2025	5:00:00	7.4	0.748	0	49,466	11.1	119
1/15/2025	5:15:00	7.4	0.771	0	49,472	11.1	119
1/15/2025	6:15:00	7.4	0.866	0	49,476	10.7	117
1/15/2025	6:30:00	7.4	0.869	0	49,490	10.7	117
1/15/2025	6:45:00	7.4	0.873	0	49,495	10.7	116
1/15/2025	7:30:00	7.3	0.635	0	49,508	11.2	119
1/15/2025	7:45:00	7.2	0.499	0	49,516	12	116
1/15/2025	8:00:00	7.2	0.968	0	49,524	12.7	116
1/15/2025	8:15:00	7.4	0.858	0	49,537	10.6	113
1/15/2025	8:30:00	7.4	0.707	0	49,549	10.7	111
1/15/2025	9:30:00	7.2	0.525	0	49,559	10.7	111
1/15/2025	9:45:00	7.2	0.454	0	49,566	10.9	111
1/15/2025	10:45:00	7	0.941	0	49,585	12.3	114
1/15/2025	11:00:00	7	0.854	0	49,599	13.5	114
1/15/2025	12:00:00	7.3	0.786	0	49,610	11.1	115
1/15/2025	12:15:00	7.2	0.620	0	49,620	11.4	113
1/15/2025	12:30:00	7.2	0.393	0	49,628	11.7	113
1/15/2025	13:00:00	7.3	0.862	0.6	49,633	11.7	113
1/15/2025	13:15:00	7.3	0.843	0	49,646	11.3	113
1/15/2025	14:15:00	7.3	0.839	0	49,648	12.3	114
1/15/2025	14:30:00	7.4	0.775	0	49,661	11.5	116
1/15/2025	14:45:00	7.4	0.442	0	49,670	11.7	115
1/15/2025	15:45:00	7.4	0.832	0	49,688	11.4	111

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
Title	**WoodFibre Weekly Water Discharge Report**	**Revision:**	**0**
Data Date Range	**January 13, 2025 to January 19, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 24, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/15/2025	16:30:00	7.4	0.801	0	49,698	11.5	110
1/15/2025	17:15:00	7.4	0.692	0	49,713	11.2	110
1/15/2025	17:30:00	7.3	0.578	0	49,723	11.3	110
1/15/2025	18:30:00	7.3	0.000	0	49,740	11.2	108
1/15/2025	18:45:00	7.5	0.885	0	49,746	11.1	109
1/15/2025	19:30:00	7.4	0.877	0	49,755	11.4	111
1/15/2025	19:45:00	7.4	0.824	0	49,767	11.3	111
1/15/2025	20:45:00	7.3	0.703	0	49,778	11.7	112
1/15/2025	21:00:00	7.2	0.423	0	49,782	12	111
1/15/2025	21:45:00	7.2	0.805	0	49,795	11.5	111
1/15/2025	22:00:00	7.2	0.771	0	49,807	11.7	111
1/15/2025	22:15:00	7.2	0.291	0	49,815	12.6	111
1/15/2025	22:30:00	7.2	0.662	0	49,825	12.9	258
1/15/2025	23:15:00	7.3	0.612	0.3	49,827	14.2	255
1/15/2025	23:30:00	7.1	0.537	0	49,836	14.6	113
1/15/2025	23:45:00	7.2	0.563	0	49,844	14.4	257
1/16/2025	1:30:00	7.1	0.631	0	49,853	14.4	257
1/16/2025	1:45:00	7.2	0.442	0	49,862	14.5	257
1/16/2025	2:00:00	7.2	0.000	0	49,866	14.6	257
1/16/2025	2:15:00	7.2	0.658	0	49,873	14.6	259
1/16/2025	2:30:00	7.1	0.643	0	49,883	14.6	259
1/16/2025	2:45:00	7.1	0.624	0	49,892	14.6	259
1/16/2025	3:00:00	7.1	0.646	0	49,902	14.7	259
1/16/2025	3:15:00	7.1	0.654	0	49,912	14.7	261
1/16/2025	3:30:00	7.1	0.593	0	49,921	14.8	261

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/16/2025	3:45:00	7.1	0.639	0	49,930	14.8	261
1/16/2025	4:00:00	7.1	0.253	0	49,938	14.9	262
1/16/2025	5:45:00	7.1	0.620	0	49,944	15.3	257
1/16/2025	6:00:00	7.2	0.000	0	49,952	15.1	259
1/16/2025	6:15:00	7.1	0.646	0	49,961	15	258
1/16/2025	6:45:00	7.1	0.643	0	49,964	14.7	258
1/16/2025	7:00:00	7.1	0.714	0	49,975	14.7	258
1/16/2025	7:15:00	7.1	0.692	0	49,985	14.7	258
1/16/2025	7:30:00	7.1	0.646	0	49,995	14.7	259
1/16/2025	7:45:00	7.1	0.544	0	50,004	14.7	258
1/16/2025	8:30:00	7.1	0.457	0	50,013	14	259
1/16/2025	9:00:00	7.4	0.733	0	50,026	11	109
1/16/2025	9:15:00	7.4	0.673	0	50,037	11	109
1/16/2025	10:30:00	7.3	0.473	0	50,051	11	110
1/16/2025	10:45:00	7.4	0.745	0	50,063	10.9	109
1/16/2025	11:00:00	7.4	0.760	0	50,074	10.9	109
1/16/2025	11:15:00	7.4	0.718	0	50,085	10.9	109
1/16/2025	11:45:00	7.3	0.000	4.1	50,096	11.1	111
1/16/2025	13:00:00	7.4	0.718	8.2	50,102	11.3	109
1/16/2025	13:15:00	7.4	0.688	5.1	50,113	11.4	264
1/16/2025	13:30:00	7.4	0.673	2	50,123	11.5	263
1/16/2025	13:45:00	7.4	0.639	1	50,133	11.6	265
1/16/2025	14:45:00	7.4	0.533	0	50,148	11.7	265
1/16/2025	15:15:00	7.4	0.680	3.1	50,164	11.9	265
1/16/2025	16:00:00	7.3	0.703	0.2	50,176	11.8	265

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/16/2025	16:15:00	7.3	0.669	0	50,186	11.8	266
1/16/2025	17:00:00	7.3	0.609	0	50,197	11.7	269
1/16/2025	17:45:00	7.3	0.537	0	50,208	12	271
1/16/2025	18:00:00	7.2	0.442	0	50,215	12.5	269
1/16/2025	18:30:00	7.4	0.620	0	50,221	11.3	268
1/16/2025	18:45:00	7.4	0.609	0	50,230	11.2	266
1/16/2025	19:45:00	7.4	0.593	0	50,240	11.4	264
1/16/2025	20:00:00	7.2	0.204	0	50,246	12	262
1/16/2025	20:15:00	7.2	0.541	0	50,255	13.1	262
1/16/2025	20:30:00	7.2	0.000	0	50,259	14.1	262
1/16/2025	21:00:00	7.2	0.522	0	50,265	17.2	259
1/16/2025	21:15:00	7.1	0.423	0	50,272	16.3	259
1/16/2025	22:00:00	7.3	0.684	0	50,279	11.8	114
1/16/2025	22:15:00	7.2	0.703	0	50,289	11.9	115
1/16/2025	22:30:00	7.1	0.680	0	50,300	12.1	113
1/16/2025	22:45:00	7.1	0.639	0	50,309	15.6	256
1/16/2025	23:00:00	7.1	0.593	0	50,319	15.6	252
1/16/2025	23:15:00	7.1	0.510	0	50,323	16.7	254
1/16/2025	23:30:00	7.1	0.559	0	50,331	17	255
1/17/2025	0:15:00	7.1	0.627	0	50,337	19.1	251
1/17/2025	0:30:00	7.1	0.000	0	50,347	19.2	252
1/17/2025	0:45:00	7.1	0.696	0	50,349	20	252
1/17/2025	1:00:00	7.1	0.654	0	50,359	20.6	253
1/17/2025	1:45:00	7	0.669	0	50,363	19.9	252
1/17/2025	2:00:00	7	0.295	0	50,371	20.3	255

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/17/2025	2:15:00	7	0.665	0	50,379	20.1	253
1/17/2025	2:30:00	7	0.658	0	50,389	19.7	254
1/17/2025	2:45:00	7	0.669	0	50,398	19.7	255
1/17/2025	3:00:00	7	0.639	0	50,408	19.6	250
1/17/2025	3:45:00	7.2	0.635	0	50,413	22	259
1/17/2025	4:00:00	7	0.620	9.5	50,422	21.8	119
1/17/2025	4:15:00	7	0.000	0	50,430	22.2	120
1/17/2025	5:15:00	7.3	0.696	0	50,446	11.8	119
1/17/2025	5:30:00	7.3	0.699	0	50,457	11.6	119
1/17/2025	5:45:00	7.3	0.658	0	50,467	11.7	118
1/17/2025	6:00:00	7.1	0.597	0	50,476	12.2	119
1/17/2025	6:15:00	7.1	0.529	0	50,485	13.1	119
1/17/2025	6:30:00	7	0.159	0	50,488	15	117
1/17/2025	7:15:00	7.2	0.801	0	50,498	10.9	115
1/17/2025	7:30:00	7.2	0.798	0	50,510	11.3	117
1/17/2025	7:45:00	7.1	0.688	0	50,521	11.9	116
1/17/2025	8:00:00	7	0.510	0	50,530	12.2	114
1/17/2025	8:15:00	7	0.461	0	50,537	12.3	112
1/17/2025	9:15:00	7.2	0.718	0	50,550	9.9	110
1/17/2025	9:30:00	7.1	0.658	0	50,561	10.1	111
1/17/2025	9:45:00	7	0.363	0	50,569	10.3	111
1/17/2025	11:00:00	7.1	0.684	0	50,582	11.7	113
1/17/2025	11:15:00	7	0.646	0	50,592	15.4	113
1/17/2025	11:30:00	7	0.525	0	50,601	15.2	113
1/17/2025	12:00:00	7.1	0.393	0	50,606	13.4	116

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/17/2025	12:15:00	7.1	0.627	0	50,613	11	113
1/17/2025	13:15:00	7.2	0.650	0	50,616	13	111
1/17/2025	13:30:00	7	0.635	0	50,626	13.1	111
1/17/2025	13:45:00	7	0.597	0	50,635	13.4	252
1/17/2025	14:30:00	7.1	0.525	0	50,644	13.8	114
1/17/2025	14:45:00	7.1	0.442	0	50,651	15.1	252
1/17/2025	15:45:00	7	0.000	0	50,653	16.2	250
1/17/2025	16:00:00	7.2	0.336	0	50,655	14.6	248
1/17/2025	16:15:00	7.3	0.730	0	50,660	11.1	113
1/17/2025	16:30:00	7.3	0.714	0	50,670	10.9	115
1/17/2025	16:45:00	7.1	0.688	0	50,681	11.7	117
1/17/2025	17:45:00	7.2	0.499	0	50,700	11	116
1/17/2025	18:45:00	7.3	0.450	0	50,709	10.7	115
1/17/2025	19:30:00	7.4	0.752	0	50,723	10.3	116
1/17/2025	19:45:00	7.4	0.794	0	50,735	10.2	115
1/17/2025	20:15:00	7.2	0.000	0	50,744	10.7	114
1/17/2025	21:00:00	7.3	0.748	0	50,747	10.4	117
1/17/2025	21:15:00	7.3	0.714	0	50,758	10.2	113
1/17/2025	21:30:00	7.2	0.567	0	50,768	11.4	114
1/17/2025	22:45:00	7.3	0.616	0	50,781	9.9	111
1/17/2025	23:00:00	7.2	0.627	0	50,791	10.3	114
1/17/2025	23:15:00	7.2	0.643	0	50,797	11.9	116
1/18/2025	0:30:00	7.1	0.000	0	50,805	12.4	118
1/18/2025	0:45:00	7.2	0.646	0	50,810	11.4	118
1/18/2025	1:30:00	7.1	0.541	0	50,822	14.8	255

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/18/2025	1:45:00	7.1	0.461	0	50,830	15.2	255
1/18/2025	2:00:00	7.1	0.533	0	50,836	18	256
1/18/2025	2:30:00	7.1	0.344	0	50,842	18.7	251
1/18/2025	2:45:00	7.1	0.249	0	50,847	18.7	253
1/18/2025	3:00:00	7.1	0.197	0	50,850	21	258
1/18/2025	4:00:00	7.2	0.680	0	50,857	12.9	119
1/18/2025	4:15:00	7.1	0.733	0	50,867	14.6	255
1/18/2025	5:30:00	7.1	0.650	0	50,880	13.2	119
1/18/2025	5:45:00	7.1	0.631	0	50,890	14.3	256
1/18/2025	6:45:00	7.1	0.178	0	50,900	17.4	252
1/18/2025	7:30:00	7.1	0.627	0	50,908	16.8	254
1/18/2025	7:45:00	7.1	0.541	0	50,917	17.1	252
1/18/2025	8:00:00	7.1	0.465	0	50,924	16.9	252
1/18/2025	8:15:00	7.1	0.401	0	50,931	16.9	252
1/18/2025	8:30:00	7.3	0.646	0	50,937	10.4	116
1/18/2025	9:00:00	7.2	0.650	0	50,946	10.6	118
1/18/2025	9:15:00	7.1	0.627	0	50,956	11.1	113
1/18/2025	10:00:00	7.2	0.612	0	50,957	10.7	111
1/18/2025	10:15:00	7.1	0.605	0	50,966	9.9	110
1/18/2025	10:30:00	7.1	0.620	0	50,976	10.8	256
1/18/2025	11:45:00	7.2	0.537	0	50,989	11.9	116
1/18/2025	12:00:00	7.1	0.491	0	50,996	11.6	116
1/18/2025	12:15:00	7.1	0.431	0	51,004	12.1	116
1/18/2025	12:45:00	7.3	0.586	0	51,014	10.1	116
1/18/2025	13:45:00	8.2	0.673	0	51,027	10	113

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/18/2025	14:15:00	7.8	0.552	0	51,042	10.3	113
1/18/2025	14:30:00	7.7	0.480	0	51,052	11.1	265
1/18/2025	15:30:00	7.8	0.805	0	51,060	10.2	113
1/18/2025	15:45:00	7.8	0.767	0	51,073	10.3	113
1/18/2025	16:15:00	7.7	0.779	0	51,083	10.5	116
1/18/2025	16:45:00	7.6	0.684	0	51,093	11.6	114
1/18/2025	18:15:00	7.4	0.537	0	51,113	12.4	116
1/18/2025	18:30:00	7.3	0.404	0	51,120	12.6	113
1/18/2025	19:00:00	7.5	0.873	3.9	51,124	10.5	116
1/18/2025	19:30:00	7.5	0.801	0	51,137	10.7	118
1/18/2025	19:45:00	7.5	0.722	0	51,149	10.8	118
1/18/2025	20:15:00	7.3	0.302	0	51,157	11	116
1/18/2025	20:30:00	7.4	0.650	0	51,159	11.3	117
1/18/2025	21:30:00	7.4	0.752	0	51,172	10.1	113
1/18/2025	21:45:00	7.4	0.760	0	51,183	9.9	111
1/18/2025	22:00:00	7.4	0.703	0	51,194	10	116
1/18/2025	23:30:00	7.2	0.518	0	51,204	16.8	248
1/18/2025	23:45:00	7.2	0.129	0	51,211	16.8	248
1/19/2025	0:00:00	7.2	0.159	0	51,215	17.1	250
1/19/2025	1:00:00	7.1	0.658	0	51,219	18.5	247
1/19/2025	1:15:00	7.2	0.730	0	51,230	15.7	250
1/19/2025	1:30:00	7.2	0.733	0	51,241	16.3	255
1/19/2025	2:15:00	7.1	0.658	0	51,249	17.9	248
1/19/2025	2:30:00	7.1	0.646	0	51,259	17.6	252
1/19/2025	2:45:00	7.1	0.593	0	51,269	17.1	251

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/19/2025	4:00:00	7.1	0.760	0	51,277	15.3	255
1/19/2025	4:15:00	7.1	0.741	0	51,288	14.8	255
1/19/2025	4:30:00	7.2	0.741	0	51,299	14.8	253
1/19/2025	4:45:00	7.1	0.586	0	51,304	15.9	253
1/19/2025	6:00:00	7.1	0.601	0	51,312	19	255
1/19/2025	6:15:00	7.1	0.518	0	51,315	19.1	253
1/19/2025	6:30:00	7.1	0.646	0	51,324	19.3	255
1/19/2025	7:00:00	7.2	0.665	0	51,325	18.5	247
1/19/2025	7:15:00	7.3	0.703	0	51,335	10.7	119
1/19/2025	7:30:00	7.3	0.677	0	51,346	10.7	118
1/19/2025	8:15:00	7.2	0.654	0	51,347	12.8	117
1/19/2025	8:30:00	7.3	0.684	0	51,358	10.2	116
1/19/2025	8:45:00	7.2	0.643	0	51,368	10.7	116
1/19/2025	9:00:00	7.2	0.000	0	51,371	10.6	115
1/19/2025	9:15:00	7.1	0.000	0	51,371	11.4	116
1/19/2025	10:00:00	7.3	0.748	0	51,383	10.1	117
1/19/2025	10:15:00	7.2	0.737	0	51,394	10	113
1/19/2025	10:30:00	7.1	0.722	0	51,405	10.4	111
1/19/2025	10:45:00	7.1	0.684	0	51,416	11	111
1/19/2025	11:00:00	7.3	0.000	0	51,422	11.8	114
1/19/2025	12:00:00	7.2	0.684	0	51,431	11	118
1/19/2025	12:15:00	7.1	0.000	0	51,435	11.4	118
1/19/2025	12:30:00	7.1	0.000	0	51,435	12.2	118
1/19/2025	13:00:00	7.2	0.760	0	51,442	10.8	117
1/19/2025	13:15:00	7.1	0.714	0	51,454	11.4	118

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/19/2025	13:30:00	7.1	0.714	0	51,464	12	116
1/19/2025	14:30:00	7.2	0.624	0	51,470	10.5	117
1/19/2025	15:00:00	7.3	0.696	0	51,482	10.1	114
1/19/2025	15:15:00	7.3	0.707	0	51,493	10.3	116
1/19/2025	15:30:00	7.3	0.000	0	51,499	10.5	116
1/19/2025	16:15:00	7.2	0.726	0	51,505	10.5	118
1/19/2025	16:45:00	7.3	0.000	4.9	51,521	10.8	119
1/19/2025	17:30:00	7.2	0.609	0	51,524	10.5	119
1/19/2025	17:45:00	7.3	0.714	0	51,535	10.3	118
1/19/2025	18:00:00	7.3	0.707	0	51,545	10.3	118
1/19/2025	19:15:00	7.2	0.680	0	51,552	11.1	118
1/19/2025	19:30:00	7.3	0.733	0	51,563	10.3	119
1/19/2025	19:45:00	7.3	0.643	0	51,573	10.3	118
1/19/2025	21:00:00	7.2	0.590	0	51,583	10.4	116
1/19/2025	21:15:00	7.2	0.514	0	51,591	10.3	114
1/19/2025	21:30:00	7.1	0.484	0	51,600	10.5	111
1/19/2025	22:30:00	7.1	0.748	0	51,608	10.7	111
1/19/2025	23:30:00	7.1	0.764	0	51,625	10.3	114
1/19/2025	23:45:00	7.1	0.696	0	51,636	10.9	114

Table 3. In-Situ Parameters

Date	Time	Temperature °C	DO mg/L	Conductivity SPC-uS/cm	SAL-ppt	pH	ORP (mV)	NTU
01/13/2025	11:44:40AM	11.2	11.50	147.8	0.07	8.02	116.6	1.69
01/14/2025	08:23:34AM	11.1	11.30	142.4	0.07	8.12	122.1	1.89
01/15/2025	09:55:43AM	11.0	11.32	149.6	0.06	7.77	122.8	1.48
01/16/2025	06:48:44PM	11.1	11.30	151.0	0.07	7.56	124.1	2.32
01/17/2025	11:12:45PM	10.9	11.09	134.5	0.07	7.89	123.9	2.56
01/18/2025	01:35:02PM	9.7	12.13	142.3	0.07	7.81	120.6	0.86
01/19/2025	10:35:30AM	10.0	11.97	130.0	0.06	7.65	130.0	0.37

3. Calibration Log:

Table 4. Calibration Log

Date	Unit	pH	Conductivity/Temp.	Salinity	NTU
1/15/2025	YSI	✓	✓	✓	✓
1/15/2025	WTP	✓	N/A	N/A	✓

APPENDIX A: WTP Log

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/13/2025	0:00:00	7.3	0.805	0	48,468	Open	13	260
1/13/2025	0:15:00	7.3	0.000	0	48,472	Closed	13.8	260
1/13/2025	0:30:00	7.2	0.000	0	48,472	Closed	14.5	262
1/13/2025	0:45:00	7.2	0.000	0	48,472	Closed	15	259
1/13/2025	1:00:00	7.2	0.000	0	48,472	Closed	15.7	261
1/13/2025	1:15:00	7.3	0.386	0	48,479	Open	11.5	119
1/13/2025	1:30:00	7.3	0.798	0	48,488	Open	11.2	118
1/13/2025	1:45:00	7.3	0.000	0	48,493	Closed	11.7	119
1/13/2025	2:00:00	7.3	0.000	0	48,493	Closed	12.6	261
1/13/2025	2:15:00	7.2	0.000	0	48,493	Closed	13.5	259
1/13/2025	2:30:00	7.2	0.000	0	48,493	Closed	14.4	258
1/13/2025	2:45:00	7.3	0.809	0	48,495	Open	13	119
1/13/2025	3:00:00	7.3	0.794	0	48,507	Open	12.1	119
1/13/2025	3:15:00	7.3	0.000	0	48,515	Closed	14.2	261
1/13/2025	3:30:00	7.3	0.000	0	48,515	Closed	14.6	261
1/13/2025	3:45:00	7.2	0.000	0	48,515	Closed	15.3	261
1/13/2025	4:00:00	7.3	0.809	0	48,515	Open	15.4	256
1/13/2025	4:15:00	7.3	0.892	0	48,522	Open	11.2	119
1/13/2025	4:30:00	7.3	0.885	0	48,536	Open	11.8	119
1/13/2025	4:45:00	7.3	0.000	0	48,538	Closed	12.5	257
1/13/2025	5:00:00	7.2	0.000	0	48,538	Closed	12.9	256
1/13/2025	5:15:00	7.3	0.843	0	48,540	Open	11.7	118
1/13/2025	5:30:00	7.3	0.824	0	48,553	Open	11.5	118
1/13/2025	5:45:00	7.3	0.824	0	48,565	Open	12.2	118
1/13/2025	6:00:00	7.3	0.401	0	48,569	Open	13.2	118

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/13/2025	6:15:00	7.3	0.000	0	48,572	Closed	11.7	118
1/13/2025	6:30:00	7.3	0.000	0	48,572	Closed	12.6	258
1/13/2025	6:45:00	7.2	0.000	0	48,572	Closed	13.4	261
1/13/2025	7:00:00	7.3	0.820	0	48,572	Open	14.4	258
1/13/2025	7:15:00	7.3	0.835	0	48,585	Open	11.5	119
1/13/2025	7:30:00	7.3	0.809	0	48,597	Open	12	117
1/13/2025	7:45:00	7.3	0.000	0	48,602	Closed	12.7	259
1/13/2025	8:00:00	7.2	0.000	0	48,602	Closed	13.6	259
1/13/2025	8:15:00	7.2	0.000	0	48,602	Closed	14	256
1/13/2025	8:30:00	7.3	0.786	0	48,613	Open	11.5	261
1/13/2025	8:45:00	7.3	0.805	0	48,625	Open	11.8	261
1/13/2025	9:00:00	7.2	0.000	0	48,631	Closed	12.2	261
1/13/2025	9:15:00	7.2	0.000	0	48,631	Closed	16	264
1/13/2025	9:30:00	7.2	0.000	0	48,631	Closed	15.9	265
1/13/2025	9:45:00	7.3	0.779	0	48,638	Open	13.1	258
1/13/2025	10:00:00	7.2	0.756	0	48,649	Open	13.5	261
1/13/2025	10:15:00	7.2	0.000	0	48,651	Closed	13.4	258
1/13/2025	10:30:00	7.2	0.000	0	48,652	Open	14	262
1/13/2025	10:45:00	7.2	0.000	0	48,652	Closed	14.2	264
1/13/2025	11:00:00	7.2	0.000	0	48,652	Closed	14.7	268
1/13/2025	11:15:00	7.2	0.000	0	48,652	Closed	15	266
1/13/2025	11:30:00	7.3	0.862	0	48,658	Open	11.8	116
1/13/2025	11:45:00	7.3	0.722	0	48,670	Open	12.1	258
1/13/2025	12:00:00	7.2	0.170	0	48,677	Open	12.4	258
1/13/2025	12:15:00	7.3	0.805	0	48,684	Open	11.1	114
1/13/2025	12:30:00	7.3	0.000	0	48,689	Closed	11.2	111
1/13/2025	12:45:00	7.2	0.000	0	48,689	Closed	11.4	114

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/13/2025	13:00:00	7.2	0.000	0	48,689	Closed	11.6	114
1/13/2025	13:15:00	7.2	0.000	0	48,689	Closed	11.9	114
1/13/2025	13:30:00	7.3	0.794	0	48,695	Open	12	114
1/13/2025	13:45:00	7.2	0.786	0	48,706	Open	12.3	116
1/13/2025	14:00:00	7.6	0.212	82.8	48,713	Closed	11.1	115
1/13/2025	14:15:00	7.4	0.000	0	48,713	Closed	11.2	113
1/13/2025	14:30:00	7.4	0.000	0	48,717	Closed	11	111
1/13/2025	14:45:00	7.3	0.000	0	48,717	Closed	11.4	116
1/13/2025	15:00:00	7.2	0.000	0	48,717	Closed	12	116
1/13/2025	15:15:00	7.3	0.582	0	48,720	Open	13.4	113
1/13/2025	15:30:00	7.2	0.476	0	48,727	Open	13.5	255
1/13/2025	15:45:00	7.2	0.442	0	48,734	Open	14.3	253
1/13/2025	16:00:00	7.2	0.000	0	48,736	Closed	14.1	252
1/13/2025	16:15:00	7.2	0.000	0	48,736	Closed	18.3	113
1/13/2025	16:30:00	7.3	0.915	0	48,744	Open	15.7	253
1/13/2025	16:45:00	7.2	0.907	0	48,758	Open	15.5	251
1/13/2025	17:00:00	7.2	0.000	0	48,768	Closed	15.3	251
1/13/2025	17:15:00	7.3	0.767	0	48,774	Open	12.1	113
1/13/2025	17:30:00	7.2	0.000	0	48,779	Closed	12.1	111
1/13/2025	17:45:00	7.2	0.000	0	48,779	Closed	12	111
1/13/2025	18:00:00	7.2	0.000	0	48,779	Closed	12.1	114
1/13/2025	18:15:00	7.3	0.567	0	48,785	Open	12.8	113
1/13/2025	18:30:00	7.2	0.200	0	48,790	Open	13	255
1/13/2025	18:45:00	7.2	0.000	0	48,791	Closed	13.3	255
1/13/2025	19:00:00	7.3	0.858	0	48,796	Open	11.9	118
1/13/2025	19:15:00	7.3	0.847	0	48,809	Open	12.5	118
1/13/2025	19:30:00	7.3	0.374	0	48,816	Open	13.6	257

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/13/2025	19:45:00	7.3	0.000	0	48,819	Closed	14.2	257
1/13/2025	20:00:00	7.2	0.000	0	48,819	Closed	14.6	256
1/13/2025	20:15:00	7.2	0.000	0	48,819	Closed	19.1	259
1/13/2025	20:30:00	7.2	0.000	0	48,819	Closed	19.1	258
1/13/2025	20:45:00	7.3	0.000	0	48,819	Open	17.5	255
1/13/2025	21:00:00	7.3	0.000	2	48,825	Closed	15.2	256
1/13/2025	21:15:00	7.3	0.000	0	48,825	Closed	15.6	258
1/13/2025	21:30:00	7.3	0.873	0	48,830	Open	11.9	118
1/13/2025	21:45:00	7.3	0.869	0	48,843	Open	11.8	120
1/13/2025	22:00:00	7.3	0.000	0	48,854	Closed	12.6	118
1/13/2025	22:15:00	7.3	0.000	0	48,854	Closed	13.2	119
1/13/2025	22:30:00	7.2	0.000	0	48,854	Closed	14	119
1/13/2025	22:45:00	7.3	0.828	0	48,858	Open	11.7	119
1/13/2025	23:00:00	7.3	0.824	0	48,871	Open	11.7	119
1/13/2025	23:15:00	7.3	0.000	0	48,879	Closed	12.5	119
1/13/2025	23:30:00	7.3	0.000	0	48,879	Closed	13.3	119
1/13/2025	23:45:00	7.2	0.000	0	48,879	Closed	13.8	116
1/14/2025	0:00:00	7.3	0.881	0	48,891	Open	11.2	116
1/14/2025	0:15:00	7.3	0.000	0	48,897	Closed	11.5	118
1/14/2025	0:30:00	7.3	0.000	0	48,897	Closed	12.3	118
1/14/2025	0:45:00	7.2	0.000	0	48,897	Closed	13.5	255
1/14/2025	1:00:00	7.2	0.382	0	48,902	Open	13.1	119
1/14/2025	1:15:00	7.4	0.699	0	48,913	Open	11.2	118
1/14/2025	1:30:00	7.3	0.000	0	48,920	Closed	11.5	118
1/14/2025	1:45:00	7.3	0.000	0	48,920	Closed	15.3	258
1/14/2025	2:00:00	7.2	0.000	0	48,920	Closed	15.7	256
1/14/2025	2:15:00	7.2	0.000	0	48,920	Closed	16.1	255

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/14/2025	2:30:00	7.3	0.741	0	48,925	Open	12.5	119
1/14/2025	2:45:00	7.3	0.707	0	48,936	Open	13.5	258
1/14/2025	3:00:00	7.4	0.786	0	48,943	Open	11.8	119
1/14/2025	3:15:00	7.4	0.000	0	48,946	Closed	12.5	120
1/14/2025	3:30:00	7.3	0.000	0	48,946	Closed	13.4	261
1/14/2025	3:45:00	7.2	0.000	0	48,946	Closed	14.2	260
1/14/2025	4:00:00	7.3	0.809	0	48,947	Open	15.9	255
1/14/2025	4:15:00	7.3	0.839	0	48,959	Open	12	117
1/14/2025	4:30:00	7.3	0.000	0	48,971	Closed	12.2	261
1/14/2025	4:45:00	7.2	0.000	0	48,971	Closed	13.2	262
1/14/2025	5:00:00	7.2	0.000	0	48,971	Closed	14.2	261
1/14/2025	5:15:00	7.3	0.801	0	48,978	Open	11.4	114
1/14/2025	5:30:00	7.3	0.000	0	48,983	Closed	11.8	117
1/14/2025	5:45:00	7.2	0.000	0	48,983	Closed	12.6	259
1/14/2025	6:00:00	7.3	0.896	0	48,984	Open	13.9	261
1/14/2025	6:15:00	7.4	0.877	0	48,997	Open	11	117
1/14/2025	6:30:00	7.4	0.000	0	49,008	Closed	10.9	113
1/14/2025	6:45:00	7.3	0.000	0	49,008	Closed	11.1	113
1/14/2025	7:00:00	7.2	0.000	0	49,008	Closed	11.6	116
1/14/2025	7:15:00	7.4	0.779	0	49,018	Open	11	117
1/14/2025	7:30:00	7.4	0.639	0	49,029	Open	11.1	116
1/14/2025	7:45:00	7.4	0.692	0	49,040	Open	11.2	117
1/14/2025	8:00:00	7.3	0.000	0	49,040	Closed	11.9	118
1/14/2025	8:15:00	7.3	0.782	0	49,049	Open	12	115
1/14/2025	8:30:00	7.2	0.000	0	49,058	Closed	14.9	256
1/14/2025	8:45:00	7.2	0.000	0	49,058	Closed	14.7	256
1/14/2025	9:00:00	7.3	0.805	0	49,067	Open	13.3	257

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/14/2025	9:15:00	7.2	0.782	0	49,079	Open	13.2	257
1/14/2025	9:30:00	7.2	0.000	0	49,081	Closed	13.1	257
1/14/2025	9:45:00	7.2	0.000	0	49,081	Closed	13	253
1/14/2025	10:00:00	7.2	0.000	0	49,081	Closed	12.9	254
1/14/2025	10:15:00	7.3	0.730	0	49,085	Open	13.9	257
1/14/2025	10:30:00	7.2	0.760	0	49,096	Open	13.8	258
1/14/2025	10:45:00	7.2	0.000	0	49,102	Closed	13.7	259
1/14/2025	11:00:00	7.2	0.000	0	49,102	Closed	14.1	113
1/14/2025	11:15:00	7.2	0.000	0	49,102	Closed	14.2	254
1/14/2025	11:30:00	7.2	0.000	0	49,102	Closed	14	254
1/14/2025	11:45:00	7.2	0.726	0	49,113	Open	14.8	255
1/14/2025	12:00:00	7.2	0.730	0	49,124	Open	15.1	256
1/14/2025	12:15:00	7.2	0.000	0	49,133	Closed	15	252
1/14/2025	12:30:00	7.2	0.000	0	49,133	Closed	14.8	253
1/14/2025	12:45:00	7.2	0.000	0	49,133	Closed	14.6	253
1/14/2025	13:00:00	7.2	0.703	0	49,135	Open	15.6	254
1/14/2025	13:15:00	7.2	0.730	0	49,145	Open	15.5	257
1/14/2025	13:30:00	7.4	0.643	0	49,155	Open	11.2	113
1/14/2025	13:45:00	7.4	0.624	0	49,165	Open	11.2	115
1/14/2025	14:00:00	7.4	0.605	0	49,174	Open	11.2	115
1/14/2025	14:15:00	7.6	0.000	222.4	49,180	Closed	11.1	113
1/14/2025	14:30:00	7.5	0.696	5.8	49,180	Open	11.1	112
1/14/2025	14:45:00	7.4	0.688	0	49,191	Open	11.1	112
1/14/2025	15:00:00	7.3	0.000	0	49,192	Closed	11.3	111
1/14/2025	15:15:00	7.4	0.000	0	49,196	Open	11.1	112
1/14/2025	15:30:00	7.4	0.775	86.6	49,196	Closed	11.6	113
1/14/2025	15:45:00	7.3	0.000	0	49,200	Closed	11.2	113

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/14/2025	16:00:00	7.2	0.000	0	49,200	Closed	11.8	262
1/14/2025	16:15:00	7.4	0.609	0	49,207	Open	11.2	116
1/14/2025	16:30:00	7.3	0.514	0	49,215	Open	11.5	115
1/14/2025	16:45:00	7.3	0.469	0	49,222	Open	11.8	113
1/14/2025	17:00:00	7.2	0.431	0	49,229	Open	12	259
1/14/2025	17:15:00	7.2	0.420	0	49,235	Open	12.3	258
1/14/2025	17:30:00	7.2	0.404	0	49,241	Open	12.8	256
1/14/2025	17:45:00	7.2	0.000	0	49,245	Closed	15.6	257
1/14/2025	18:00:00	7.2	0.000	0	49,245	Closed	15.9	258
1/14/2025	18:15:00	7.4	0.839	0	49,251	Open	11.6	115
1/14/2025	18:30:00	7.4	0.816	0	49,264	Open	11.6	116
1/14/2025	18:45:00	7.4	0.794	0	49,276	Open	11.9	117
1/14/2025	19:00:00	7.3	0.000	0	49,281	Closed	12.8	118
1/14/2025	19:15:00	7.3	0.000	0	49,281	Closed	13.5	259
1/14/2025	19:30:00	7.2	0.000	0	49,281	Closed	14.1	261
1/14/2025	19:45:00	7.3	0.238	0	49,283	Open	13.4	259
1/14/2025	20:00:00	7.3	0.000	0	49,285	Open	14.3	258
1/14/2025	20:15:00	7.2	0.000	0	49,285	Closed	14.7	260
1/14/2025	20:30:00	7.2	0.000	0	49,285	Closed	15.2	259
1/14/2025	20:45:00	7.2	0.302	0	49,287	Open	17.2	258
1/14/2025	21:00:00	7.2	0.000	0	49,290	Open	17.5	258
1/14/2025	21:15:00	7.2	0.352	0	49,293	Open	17.8	259
1/14/2025	21:30:00	7.2	0.000	0	49,297	Closed	20.2	268
1/14/2025	21:45:00	7.2	0.000	0	49,297	Closed	19.7	260
1/14/2025	22:00:00	7.3	0.605	0	49,302	Open	12.3	114
1/14/2025	22:15:00	7.3	0.000	0	49,310	Open	12.7	114
1/14/2025	22:30:00	7.2	0.707	0	49,319	Open	13.7	256

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/14/2025	22:45:00	7.2	0.000	0	49,329	Closed	14	258
1/14/2025	23:00:00	7.2	0.000	0	49,335	Closed	15.3	255
1/14/2025	23:15:00	7.2	0.000	0	49,335	Closed	17.6	118
1/14/2025	23:30:00	7.1	0.000	0	49,335	Closed	17.8	118
1/14/2025	23:45:00	7.1	0.000	0	49,335	Closed	18.6	119
1/15/2025	0:00:00	7.4	0.934	0	49,346	Open	11.3	118
1/15/2025	0:15:00	7.4	0.934	0	49,359	Open	10.9	114
1/15/2025	0:30:00	7.4	0.866	0	49,373	Open	10.8	114
1/15/2025	0:45:00	7.3	0.000	0	49,378	Closed	11.2	116
1/15/2025	1:00:00	7.3	0.000	0	49,378	Closed	12	118
1/15/2025	1:15:00	7.2	0.000	0	49,378	Closed	12.9	257
1/15/2025	1:30:00	7.4	0.699	0	49,388	Open	11	118
1/15/2025	1:45:00	7.4	0.355	0	49,397	Open	11.5	118
1/15/2025	2:00:00	7.4	0.000	0	49,406	Open	11.3	119
1/15/2025	2:15:00	7.3	0.000	0	49,406	Closed	11.9	117
1/15/2025	2:30:00	7.3	0.000	0	49,406	Closed	12.7	259
1/15/2025	2:45:00	7.4	0.873	0	49,410	Open	11.2	119
1/15/2025	3:00:00	7.4	0.801	0	49,422	Open	11.1	118
1/15/2025	3:15:00	7.3	0.000	0	49,434	Closed	11.4	119
1/15/2025	3:30:00	7.3	0.000	0	49,434	Closed	12	262
1/15/2025	3:45:00	7.3	0.000	0	49,434	Closed	13	264
1/15/2025	4:00:00	7.2	0.000	0	49,434	Closed	13.9	262
1/15/2025	4:15:00	7.3	0.805	0	49,435	Open	14.9	260
1/15/2025	4:30:00	7.4	0.828	0	49,447	Open	11.2	119
1/15/2025	4:45:00	7.3	0.756	0	49,458	Closed	11.4	119
1/15/2025	5:00:00	7.4	0.748	0	49,466	Open	11.1	119
1/15/2025	5:15:00	7.4	0.771	0	49,472	Open	11.1	119

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/15/2025	5:30:00	7.3	0.000	0	49,473	Closed	11.5	115
1/15/2025	5:45:00	7.3	0.000	0	49,473	Closed	11.7	261
1/15/2025	6:00:00	7.2	0.000	0	49,473	Closed	12	258
1/15/2025	6:15:00	7.4	0.866	0	49,476	Open	10.7	117
1/15/2025	6:30:00	7.4	0.869	0	49,490	Open	10.7	117
1/15/2025	6:45:00	7.4	0.873	0	49,495	Open	10.7	116
1/15/2025	7:00:00	7.3	0.000	0	49,504	Closed	11.1	119
1/15/2025	7:15:00	7.3	0.000	0	49,504	Closed	11.8	119
1/15/2025	7:30:00	7.3	0.635	0	49,508	Open	11.2	119
1/15/2025	7:45:00	7.2	0.499	0	49,516	Open	12	116
1/15/2025	8:00:00	7.2	0.968	0	49,524	Open	12.7	116
1/15/2025	8:15:00	7.4	0.858	0	49,537	Open	10.6	113
1/15/2025	8:30:00	7.4	0.707	0	49,549	Open	10.7	111
1/15/2025	8:45:00	7.3	0.000	0	49,552	Closed	10.8	111
1/15/2025	9:00:00	7.2	0.000	0	49,552	Closed	10.9	110
1/15/2025	9:15:00	7.2	0.000	0	49,552	Closed	11	111
1/15/2025	9:30:00	7.2	0.525	0	49,559	Open	10.7	111
1/15/2025	9:45:00	7.2	0.454	0	49,566	Open	10.9	111
1/15/2025	10:00:00	7.2	0.000	0	49,576	Closed	11	111
1/15/2025	10:15:00	7.2	0.000	0	49,576	Closed	11.1	110
1/15/2025	10:30:00	7.2	0.000	0	49,576	Closed	15.1	258
1/15/2025	10:45:00	7	0.941	0	49,585	Open	12.3	114
1/15/2025	11:00:00	7	0.854	0	49,599	Open	13.5	114
1/15/2025	11:15:00	7.2	0.000	0	49,607	Closed	12	113
1/15/2025	11:30:00	7.1	0.000	0	49,607	Closed	12.3	114
1/15/2025	11:45:00	7.1	0.000	0	49,607	Closed	12.5	113
1/15/2025	12:00:00	7.3	0.786	0	49,610	Open	11.1	115

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/15/2025	12:15:00	7.2	0.620	0	49,620	Open	11.4	113
1/15/2025	12:30:00	7.2	0.393	0	49,628	Open	11.7	113
1/15/2025	12:45:00	7.3	0.000	0	49,632	Closed	11.4	114
1/15/2025	13:00:00	7.3	0.862	0.6	49,633	Open	11.7	113
1/15/2025	13:15:00	7.3	0.843	0	49,646	Open	11.3	113
1/15/2025	13:30:00	7.7	0.998	96.1	49,648	Closed	11.2	114
1/15/2025	13:45:00	7.4	0.000	0	49,648	Closed	11.3	113
1/15/2025	14:00:00	7.2	0.000	0	49,648	Closed	11.6	114
1/15/2025	14:15:00	7.3	0.839	0	49,648	Open	12.3	114
1/15/2025	14:30:00	7.4	0.775	0	49,661	Open	11.5	116
1/15/2025	14:45:00	7.4	0.442	0	49,670	Open	11.7	115
1/15/2025	15:00:00	7.4	0.000	0	49,678	Closed	11.6	114
1/15/2025	15:15:00	7.3	0.000	0	49,678	Closed	11.9	113
1/15/2025	15:30:00	7.2	0.000	0	49,678	Closed	12.1	112
1/15/2025	15:45:00	7.4	0.832	0	49,688	Open	11.4	111
1/15/2025	16:00:00	7.4	0.000	0	49,697	Closed	11.5	111
1/15/2025	16:15:00	7.2	0.000	0	49,697	Closed	11.6	111
1/15/2025	16:30:00	7.4	0.801	0	49,698	Open	11.5	110
1/15/2025	16:45:00	7.3	0.000	0	49,704	Closed	11.3	110
1/15/2025	17:00:00	7.2	0.000	0	49,704	Closed	11.5	111
1/15/2025	17:15:00	7.4	0.692	0	49,713	Open	11.2	110
1/15/2025	17:30:00	7.3	0.578	0	49,723	Open	11.3	110
1/15/2025	17:45:00	7.2	0.000	0	49,730	Closed	11.4	110
1/15/2025	18:00:00	7.3	0.000	0	49,736	Closed	11.2	109
1/15/2025	18:15:00	7.2	0.000	0	49,736	Closed	11.2	108
1/15/2025	18:30:00	7.3	0.000	0	49,740	Open	11.2	108
1/15/2025	18:45:00	7.5	0.885	0	49,746	Open	11.1	109

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/15/2025	19:00:00	7.3	0.000	0	49,752	Closed	11.3	110
1/15/2025	19:15:00	7.2	0.000	0	49,752	Closed	11.6	112
1/15/2025	19:30:00	7.4	0.877	0	49,755	Open	11.4	111
1/15/2025	19:45:00	7.4	0.824	0	49,767	Open	11.3	111
1/15/2025	20:00:00	7.4	0.000	0	49,774	Closed	11.5	111
1/15/2025	20:15:00	7.4	0.000	0	49,777	Closed	11.7	111
1/15/2025	20:30:00	7.2	0.000	0	49,777	Closed	11.9	111
1/15/2025	20:45:00	7.3	0.703	0	49,778	Open	11.7	112
1/15/2025	21:00:00	7.2	0.423	0	49,782	Open	12	111
1/15/2025	21:15:00	7.2	0.000	0	49,785	Closed	12.2	110
1/15/2025	21:30:00	7.1	0.000	0	49,785	Closed	12.9	258
1/15/2025	21:45:00	7.2	0.805	0	49,795	Open	11.5	111
1/15/2025	22:00:00	7.2	0.771	0	49,807	Open	11.7	111
1/15/2025	22:15:00	7.2	0.291	0	49,815	Open	12.6	111
1/15/2025	22:30:00	7.2	0.662	0	49,825	Open	12.9	258
1/15/2025	22:45:00	7.1	0.000	0	49,827	Closed	13	258
1/15/2025	23:00:00	7.1	0.000	0	49,827	Closed	13.9	258
1/15/2025	23:15:00	7.3	0.612	0.3	49,827	Open	14.2	255
1/15/2025	23:30:00	7.1	0.537	0	49,836	Open	14.6	113
1/15/2025	23:45:00	7.2	0.563	0	49,844	Open	14.4	257
1/16/2025	0:00:00	7.2	0.000	0	49,846	Closed	14.4	257
1/16/2025	0:15:00	7.1	0.000	0	49,846	Closed	14.4	255
1/16/2025	0:30:00	7.1	0.000	0	49,846	Closed	14.2	255
1/16/2025	0:45:00	7.1	0.000	0	49,846	Closed	14	258
1/16/2025	1:00:00	7.1	0.000	0	49,846	Closed	14	257
1/16/2025	1:15:00	7.1	0.000	0	49,846	Closed	14	257
1/16/2025	1:30:00	7.1	0.631	0	49,853	Open	14.4	257

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/16/2025	1:45:00	7.2	0.442	0	49,862	Open	14.5	257
1/16/2025	2:00:00	7.2	0.000	0	49,866	Open	14.6	257
1/16/2025	2:15:00	7.2	0.658	0	49,873	Open	14.6	259
1/16/2025	2:30:00	7.1	0.643	0	49,883	Open	14.6	259
1/16/2025	2:45:00	7.1	0.624	0	49,892	Open	14.6	259
1/16/2025	3:00:00	7.1	0.646	0	49,902	Open	14.7	259
1/16/2025	3:15:00	7.1	0.654	0	49,912	Open	14.7	261
1/16/2025	3:30:00	7.1	0.593	0	49,921	Open	14.8	261
1/16/2025	3:45:00	7.1	0.639	0	49,930	Open	14.8	261
1/16/2025	4:00:00	7.1	0.253	0	49,938	Open	14.9	262
1/16/2025	4:15:00	7.1	0.000	0	49,944	Closed	15.1	259
1/16/2025	4:30:00	7.1	0.000	0	49,944	Closed	15.1	261
1/16/2025	4:45:00	7.1	0.000	0	49,944	Closed	15.2	261
1/16/2025	5:00:00	7.1	0.000	0	49,944	Closed	15.2	261
1/16/2025	5:15:00	7.1	0.000	0	49,944	Closed	15.2	261
1/16/2025	5:30:00	7.1	0.000	0	49,944	Closed	15.6	258
1/16/2025	5:45:00	7.1	0.620	0	49,944	Open	15.3	257
1/16/2025	6:00:00	7.2	0.000	0	49,952	Open	15.1	259
1/16/2025	6:15:00	7.1	0.646	0	49,961	Open	15	258
1/16/2025	6:30:00	7.1	0.000	0	49,964	Closed	15	258
1/16/2025	6:45:00	7.1	0.643	0	49,964	Open	14.7	258
1/16/2025	7:00:00	7.1	0.714	0	49,975	Open	14.7	258
1/16/2025	7:15:00	7.1	0.692	0	49,985	Open	14.7	258
1/16/2025	7:30:00	7.1	0.646	0	49,995	Open	14.7	259
1/16/2025	7:45:00	7.1	0.544	0	50,004	Open	14.7	258
1/16/2025	8:00:00	7.1	0.000	0	50,006	Closed	14.6	258
1/16/2025	8:15:00	7.1	0.000	0	50,006	Closed	14.3	258

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/16/2025	8:30:00	7.1	0.457	0	50,013	Open	14	259
1/16/2025	8:45:00	7.2	0.000	0	50,016	Closed	12.4	110
1/16/2025	9:00:00	7.4	0.733	0	50,026	Open	11	109
1/16/2025	9:15:00	7.4	0.673	0	50,037	Open	11	109
1/16/2025	9:30:00	7.3	0.000	0	50,044	Closed	11.1	109
1/16/2025	9:45:00	7.2	0.000	0	50,044	Closed	11.2	109
1/16/2025	10:00:00	7.1	0.000	0	50,044	Closed	11.2	109
1/16/2025	10:15:00	7.1	0.000	0	50,044	Closed	11.3	109
1/16/2025	10:30:00	7.3	0.473	0	50,051	Open	11	110
1/16/2025	10:45:00	7.4	0.745	0	50,063	Open	10.9	109
1/16/2025	11:00:00	7.4	0.760	0	50,074	Open	10.9	109
1/16/2025	11:15:00	7.4	0.718	0	50,085	Open	10.9	109
1/16/2025	11:30:00	7.3	0.000	2.1	50,091	Closed	11.1	109
1/16/2025	11:45:00	7.3	0.000	4.1	50,096	Open	11.1	111
1/16/2025	12:00:00	7.2	0.000	4.4	50,096	Closed	11.2	111
1/16/2025	12:15:00	7.4	0.000	12.7	50,096	Closed	11.1	111
1/16/2025	12:30:00	7.3	0.000	13.2	50,097	Closed	11.2	109
1/16/2025	12:45:00	7.4	0.662	13.8	50,098	Closed	11.2	109
1/16/2025	13:00:00	7.4	0.718	8.2	50,102	Open	11.3	109
1/16/2025	13:15:00	7.4	0.688	5.1	50,113	Open	11.4	264
1/16/2025	13:30:00	7.4	0.673	2	50,123	Open	11.5	263
1/16/2025	13:45:00	7.4	0.639	1	50,133	Open	11.6	265
1/16/2025	14:00:00	7.7	0.000	386.4	50,138	Closed	11.6	265
1/16/2025	14:15:00	7.5	0.000	124.4	50,138	Closed	11.7	267
1/16/2025	14:30:00	7.4	0.000	0	50,142	Closed	11.7	265
1/16/2025	14:45:00	7.4	0.533	0	50,148	Open	11.7	265
1/16/2025	15:00:00	7.4	0.000	0.4	50,154	Closed	11.8	265

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/16/2025	15:15:00	7.4	0.680	3.1	50,164	Open	11.9	265
1/16/2025	15:30:00	7.3	0.000	1.7	50,167	Closed	12	264
1/16/2025	15:45:00	7.2	0.000	1.5	50,167	Closed	12.1	264
1/16/2025	16:00:00	7.3	0.703	0.2	50,176	Open	11.8	265
1/16/2025	16:15:00	7.3	0.669	0	50,186	Open	11.8	266
1/16/2025	16:30:00	7.2	0.000	0.3	50,191	Closed	11.8	266
1/16/2025	16:45:00	7.2	0.000	0	50,191	Closed	11.9	267
1/16/2025	17:00:00	7.3	0.609	0	50,197	Open	11.7	269
1/16/2025	17:15:00	7.2	0.000	0	50,200	Closed	12	270
1/16/2025	17:30:00	7.1	0.000	0	50,200	Closed	12.6	270
1/16/2025	17:45:00	7.3	0.537	0	50,208	Open	12	271
1/16/2025	18:00:00	7.2	0.442	0	50,215	Open	12.5	269
1/16/2025	18:15:00	7.2	0.000	0	50,218	Closed	11.9	271
1/16/2025	18:30:00	7.4	0.620	0	50,221	Open	11.3	268
1/16/2025	18:45:00	7.4	0.609	0	50,230	Open	11.2	266
1/16/2025	19:00:00	7.2	0.000	0	50,233	Closed	11.5	267
1/16/2025	19:15:00	7.2	0.000	0	50,233	Closed	12.1	263
1/16/2025	19:30:00	7.1	0.000	0	50,233	Closed	12.8	264
1/16/2025	19:45:00	7.4	0.593	0	50,240	Open	11.4	264
1/16/2025	20:00:00	7.2	0.204	0	50,246	Open	12	262
1/16/2025	20:15:00	7.2	0.541	0	50,255	Open	13.1	262
1/16/2025	20:30:00	7.2	0.000	0	50,259	Open	14.1	262
1/16/2025	20:45:00	7.1	0.000	0	50,265	Closed	15.1	262
1/16/2025	21:00:00	7.2	0.522	0	50,265	Open	17.2	259
1/16/2025	21:15:00	7.1	0.423	0	50,272	Open	16.3	259
1/16/2025	21:30:00	7.1	0.000	0	50,275	Closed	16.8	259
1/16/2025	21:45:00	7.1	0.000	0	50,275	Closed	16.6	261

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/16/2025	22:00:00	7.3	0.684	0	50,279	Open	11.8	114
1/16/2025	22:15:00	7.2	0.703	0	50,289	Open	11.9	115
1/16/2025	22:30:00	7.1	0.680	0	50,300	Open	12.1	113
1/16/2025	22:45:00	7.1	0.639	0	50,309	Open	15.6	256
1/16/2025	23:00:00	7.1	0.593	0	50,319	Open	15.6	252
1/16/2025	23:15:00	7.1	0.510	0	50,323	Open	16.7	254
1/16/2025	23:30:00	7.1	0.559	0	50,331	Open	17	255
1/16/2025	23:45:00	7.1	0.000	0	50,333	Closed	17.4	253
1/17/2025	0:00:00	7.1	0.000	0	50,333	Closed	17.6	251
1/17/2025	0:15:00	7.1	0.627	0	50,337	Open	19.1	251
1/17/2025	0:30:00	7.1	0.000	0	50,347	Open	19.2	252
1/17/2025	0:45:00	7.1	0.696	0	50,349	Open	20	252
1/17/2025	1:00:00	7.1	0.654	0	50,359	Open	20.6	253
1/17/2025	1:15:00	7	0.000	0	50,362	Closed	20.6	253
1/17/2025	1:30:00	7	0.000	0	50,362	Closed	20.5	253
1/17/2025	1:45:00	7	0.669	0	50,363	Open	19.9	252
1/17/2025	2:00:00	7	0.295	0	50,371	Open	20.3	255
1/17/2025	2:15:00	7	0.665	0	50,379	Open	20.1	253
1/17/2025	2:30:00	7	0.658	0	50,389	Open	19.7	254
1/17/2025	2:45:00	7	0.669	0	50,398	Open	19.7	255
1/17/2025	3:00:00	7	0.639	0	50,408	Open	19.6	250
1/17/2025	3:15:00	7	0.000	0	50,411	Closed	21.7	118
1/17/2025	3:30:00	7	0.000	0	50,411	Closed	21.5	119
1/17/2025	3:45:00	7.2	0.635	0	50,413	Open	22	259
1/17/2025	4:00:00	7	0.620	9.5	50,422	Open	21.8	119
1/17/2025	4:15:00	7	0.000	0	50,430	Open	22.2	120
1/17/2025	4:30:00	7.1	0.302	9.8	50,433	Closed	20.8	250

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/17/2025	4:45:00	7.1	0.000	2.7	50,437	Closed	21	248
1/17/2025	5:00:00	7	0.000	0	50,437	Closed	21	250
1/17/2025	5:15:00	7.3	0.696	0	50,446	Open	11.8	119
1/17/2025	5:30:00	7.3	0.699	0	50,457	Open	11.6	119
1/17/2025	5:45:00	7.3	0.658	0	50,467	Open	11.7	118
1/17/2025	6:00:00	7.1	0.597	0	50,476	Open	12.2	119
1/17/2025	6:15:00	7.1	0.529	0	50,485	Open	13.1	119
1/17/2025	6:30:00	7	0.159	0	50,488	Open	15	117
1/17/2025	6:45:00	7	0.000	0	50,489	Closed	16	116
1/17/2025	7:00:00	7.1	0.000	0	50,490	Closed	15	113
1/17/2025	7:15:00	7.2	0.801	0	50,498	Open	10.9	115
1/17/2025	7:30:00	7.2	0.798	0	50,510	Open	11.3	117
1/17/2025	7:45:00	7.1	0.688	0	50,521	Open	11.9	116
1/17/2025	8:00:00	7	0.510	0	50,530	Open	12.2	114
1/17/2025	8:15:00	7	0.461	0	50,537	Open	12.3	112
1/17/2025	8:30:00	7.2	0.000	0	50,543	Closed	10.6	111
1/17/2025	8:45:00	7	0.000	0	50,543	Closed	10.7	111
1/17/2025	9:00:00	7	0.000	0	50,543	Closed	10.7	109
1/17/2025	9:15:00	7.2	0.718	0	50,550	Open	9.9	110
1/17/2025	9:30:00	7.1	0.658	0	50,561	Open	10.1	111
1/17/2025	9:45:00	7	0.363	0	50,569	Open	10.3	111
1/17/2025	10:00:00	7.1	0.000	0	50,575	Closed	10.3	111
1/17/2025	10:15:00	7	0.000	0	50,575	Closed	10.6	114
1/17/2025	10:30:00	7	0.000	0	50,575	Closed	14.9	116
1/17/2025	10:45:00	7	0.000	0	50,575	Closed	14.9	114
1/17/2025	11:00:00	7.1	0.684	0	50,582	Open	11.7	113
1/17/2025	11:15:00	7	0.646	0	50,592	Open	15.4	113

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/17/2025	11:30:00	7	0.525	0	50,601	Open	15.2	113
1/17/2025	11:45:00	7	0.000	0	50,602	Closed	15	113
1/17/2025	12:00:00	7.1	0.393	0	50,606	Open	13.4	116
1/17/2025	12:15:00	7.1	0.627	0	50,613	Open	11	113
1/17/2025	12:30:00	7.1	0.000	0	50,614	Closed	11.2	112
1/17/2025	12:45:00	7.1	0.000	0	50,614	Closed	11.3	111
1/17/2025	13:00:00	7	0.000	0	50,614	Closed	11.4	111
1/17/2025	13:15:00	7.2	0.650	0	50,616	Open	13	111
1/17/2025	13:30:00	7	0.635	0	50,626	Open	13.1	111
1/17/2025	13:45:00	7	0.597	0	50,635	Open	13.4	252
1/17/2025	14:00:00	7	0.000	0	50,639	Closed	13.6	250
1/17/2025	14:15:00	7	0.000	0	50,639	Closed	13.6	251
1/17/2025	14:30:00	7.1	0.525	0	50,644	Open	13.8	114
1/17/2025	14:45:00	7.1	0.442	0	50,651	Open	15.1	252
1/17/2025	15:00:00	7	0.000	0	50,653	Closed	15.2	248
1/17/2025	15:15:00	7.1	0.000	0	50,653	Closed	14.8	247
1/17/2025	15:30:00	7.1	0.000	0	50,653	Closed	16.5	249
1/17/2025	15:45:00	7	0.000	0	50,653	Open	16.2	250
1/17/2025	16:00:00	7.2	0.336	0	50,655	Open	14.6	248
1/17/2025	16:15:00	7.3	0.730	0	50,660	Open	11.1	113
1/17/2025	16:30:00	7.3	0.714	0	50,670	Open	10.9	115
1/17/2025	16:45:00	7.1	0.688	0	50,681	Open	11.7	117
1/17/2025	17:00:00	7.1	0.000	0	50,689	Closed	12.2	116
1/17/2025	17:15:00	7.1	0.000	0	50,689	Closed	12.4	113
1/17/2025	17:30:00	7.2	0.000	0	50,695	Closed	11.1	114
1/17/2025	17:45:00	7.2	0.499	0	50,700	Open	11	116
1/17/2025	18:00:00	7.1	0.000	0	50,705	Closed	11.6	116

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/17/2025	18:15:00	7.5	0.000	30	50,705	Closed	10.3	115
1/17/2025	18:30:00	7.3	0.000	0	50,706	Closed	10.4	115
1/17/2025	18:45:00	7.3	0.450	0	50,709	Open	10.7	115
1/17/2025	19:00:00	7.3	0.000	0	50,714	Closed	10.4	113
1/17/2025	19:15:00	7.1	0.000	0	50,714	Closed	10.9	116
1/17/2025	19:30:00	7.4	0.752	0	50,723	Open	10.3	116
1/17/2025	19:45:00	7.4	0.794	0	50,735	Open	10.2	115
1/17/2025	20:00:00	7.3	0.000	0	50,743	Closed	10.4	114
1/17/2025	20:15:00	7.2	0.000	0	50,744	Open	10.7	114
1/17/2025	20:30:00	7.2	0.000	0	50,744	Closed	11.1	115
1/17/2025	20:45:00	7.1	0.000	0	50,744	Closed	11.6	116
1/17/2025	21:00:00	7.3	0.748	0	50,747	Open	10.4	117
1/17/2025	21:15:00	7.3	0.714	0	50,758	Open	10.2	113
1/17/2025	21:30:00	7.2	0.567	0	50,768	Open	11.4	114
1/17/2025	21:45:00	7.1	0.000	0	50,773	Closed	12	115
1/17/2025	22:00:00	7.1	0.000	0	50,773	Closed	12	252
1/17/2025	22:15:00	7.1	0.000	0	50,773	Closed	12.2	255
1/17/2025	22:30:00	7.1	0.000	0	50,773	Closed	12.6	255
1/17/2025	22:45:00	7.3	0.616	0	50,781	Open	9.9	111
1/17/2025	23:00:00	7.2	0.627	0	50,791	Open	10.3	114
1/17/2025	23:15:00	7.2	0.643	0	50,797	Open	11.9	116
1/17/2025	23:30:00	7.1	0.000	0	50,800	Closed	11.3	116
1/17/2025	23:45:00	7.1	0.000	0	50,800	Closed	12.1	118
1/18/2025	0:00:00	7.1	0.000	0	50,800	Closed	12.8	256
1/18/2025	0:15:00	7.1	0.000	0	50,800	Closed	13.5	255
1/18/2025	0:30:00	7.1	0.000	0	50,805	Open	12.4	118
1/18/2025	0:45:00	7.2	0.646	0	50,810	Open	11.4	118

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/18/2025	1:00:00	7.1	0.000	0	50,818	Closed	11.9	118
1/18/2025	1:15:00	7.1	0.000	0	50,818	Closed	15.4	258
1/18/2025	1:30:00	7.1	0.541	0	50,822	Open	14.8	255
1/18/2025	1:45:00	7.1	0.461	0	50,830	Open	15.2	255
1/18/2025	2:00:00	7.1	0.533	0	50,836	Open	18	256
1/18/2025	2:15:00	7.1	0.000	0	50,838	Closed	18.1	255
1/18/2025	2:30:00	7.1	0.344	0	50,842	Open	18.7	251
1/18/2025	2:45:00	7.1	0.249	0	50,847	Open	18.7	253
1/18/2025	3:00:00	7.1	0.197	0	50,850	Open	21	258
1/18/2025	3:15:00	7.1	0.000	0	50,851	Closed	20.5	255
1/18/2025	3:30:00	7.1	0.000	0	50,851	Closed	20.5	255
1/18/2025	3:45:00	7.1	0.000	0	50,851	Closed	20.4	255
1/18/2025	4:00:00	7.2	0.680	0	50,857	Open	12.9	119
1/18/2025	4:15:00	7.1	0.733	0	50,867	Open	14.6	255
1/18/2025	4:30:00	7.1	0.000	0	50,873	Closed	15.1	253
1/18/2025	4:45:00	7.1	0.000	0	50,873	Closed	15.6	253
1/18/2025	5:00:00	7.1	0.000	0	50,873	Closed	16.1	255
1/18/2025	5:15:00	7.1	0.000	0	50,873	Closed	16.5	255
1/18/2025	5:30:00	7.1	0.650	0	50,880	Open	13.2	119
1/18/2025	5:45:00	7.1	0.631	0	50,890	Open	14.3	256
1/18/2025	6:00:00	7.1	0.000	0	50,898	Closed	14.9	256
1/18/2025	6:15:00	7.1	0.000	0	50,898	Closed	15.5	255
1/18/2025	6:30:00	7.1	0.000	0	50,898	Closed	16	252
1/18/2025	6:45:00	7.1	0.178	0	50,900	Open	17.4	252
1/18/2025	7:00:00	7.1	0.000	0	50,901	Closed	18	252
1/18/2025	7:15:00	7.1	0.000	0	50,901	Closed	18	253
1/18/2025	7:30:00	7.1	0.627	0	50,908	Open	16.8	254

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
Title	**WoodFibre Weekly Water Discharge Report**	**Revision:**	**0**
Data Date Range	**January 13, 2025 to January 19, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 24, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/18/2025	7:45:00	7.1	0.541	0	50,917	Open	17.1	252
1/18/2025	8:00:00	7.1	0.465	0	50,924	Open	16.9	252
1/18/2025	8:15:00	7.1	0.401	0	50,931	Open	16.9	252
1/18/2025	8:30:00	7.3	0.646	0	50,937	Open	10.4	116
1/18/2025	8:45:00	7.2	0.000	0	50,939	Closed	10.7	118
1/18/2025	9:00:00	7.2	0.650	0	50,946	Open	10.6	118
1/18/2025	9:15:00	7.1	0.627	0	50,956	Open	11.1	113
1/18/2025	9:30:00	7.1	0.000	0	50,956	Closed	11.2	111
1/18/2025	9:45:00	7.1	0.000	0	50,956	Closed	11.2	111
1/18/2025	10:00:00	7.2	0.612	0	50,957	Open	10.7	111
1/18/2025	10:15:00	7.1	0.605	0	50,966	Open	9.9	110
1/18/2025	10:30:00	7.1	0.620	0	50,976	Open	10.8	256
1/18/2025	10:45:00	7.1	0.000	0	50,984	Closed	11.2	253
1/18/2025	11:00:00	7.1	0.000	0	50,984	Closed	11.7	254
1/18/2025	11:15:00	7.1	0.000	0	50,984	Closed	12.1	252
1/18/2025	11:30:00	7.1	0.000	0	50,984	Closed	12.6	252
1/18/2025	11:45:00	7.2	0.537	0	50,989	Open	11.9	116
1/18/2025	12:00:00	7.1	0.491	0	50,996	Open	11.6	116
1/18/2025	12:15:00	7.1	0.431	0	51,004	Open	12.1	116
1/18/2025	12:30:00	7.1	0.000	0	51,009	Closed	13.3	118
1/18/2025	12:45:00	7.3	0.586	0	51,014	Open	10.1	116
1/18/2025	13:00:00	7.2	0.000	0	51,021	Closed	10.4	116
1/18/2025	13:15:00	11.2	0.000	400	51,022	Closed	8.2	648
1/18/2025	13:30:00	9.2	0.000	0	51,022	Closed	10	286
1/18/2025	13:45:00	8.2	0.673	0	51,027	Open	10	113
1/18/2025	14:00:00	7.9	0.000	0	51,035	Closed	10.2	113
1/18/2025	14:15:00	7.8	0.552	0	51,042	Open	10.3	113

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/18/2025	14:30:00	7.7	0.480	0	51,052	Open	11.1	265
1/18/2025	14:45:00	7.6	0.000	0	51,052	Closed	11.3	264
1/18/2025	15:00:00	7.5	0.000	0	51,052	Closed	11.4	263
1/18/2025	15:15:00	7.5	0.000	0	51,052	Closed	11.7	266
1/18/2025	15:30:00	7.8	0.805	0	51,060	Open	10.2	113
1/18/2025	15:45:00	7.8	0.767	0	51,073	Open	10.3	113
1/18/2025	16:00:00	7.7	0.000	0	51,079	Closed	10.5	113
1/18/2025	16:15:00	7.7	0.779	0	51,083	Open	10.5	116
1/18/2025	16:30:00	7.7	0.000	0	51,092	Closed	10.8	116
1/18/2025	16:45:00	7.6	0.684	0	51,093	Open	11.6	114
1/18/2025	17:00:00	7.6	0.000	0	51,100	Closed	10.8	115
1/18/2025	17:15:00	7.5	0.000	0	51,106	Closed	11	116
1/18/2025	17:30:00	7.4	0.000	0	51,106	Closed	11.7	118
1/18/2025	17:45:00	7.4	0.000	0	51,106	Closed	12.3	115
1/18/2025	18:00:00	7.4	0.000	0	51,106	Closed	12.8	254
1/18/2025	18:15:00	7.4	0.537	0	51,113	Open	12.4	116
1/18/2025	18:30:00	7.3	0.404	0	51,120	Open	12.6	113
1/18/2025	18:45:00	7.6	0.000	31.1	51,120	Closed	10.4	114
1/18/2025	19:00:00	7.5	0.873	3.9	51,124	Open	10.5	116
1/18/2025	19:15:00	7.4	0.000	0	51,126	Closed	11.1	117
1/18/2025	19:30:00	7.5	0.801	0	51,137	Open	10.7	118
1/18/2025	19:45:00	7.5	0.722	0	51,149	Open	10.8	118
1/18/2025	20:00:00	7.4	0.000	0	51,154	Closed	10.9	113
1/18/2025	20:15:00	7.3	0.302	0	51,157	Open	11	116
1/18/2025	20:30:00	7.4	0.650	0	51,159	Open	11.3	117
1/18/2025	20:45:00	7.3	0.000	0	51,162	Closed	10.9	114
1/18/2025	21:00:00	7.2	0.000	0	51,162	Closed	11.2	114

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/18/2025	21:15:00	7.2	0.000	0	51,162	Closed	11.8	116
1/18/2025	21:30:00	7.4	0.752	0	51,172	Open	10.1	113
1/18/2025	21:45:00	7.4	0.760	0	51,183	Open	9.9	111
1/18/2025	22:00:00	7.4	0.703	0	51,194	Open	10	116
1/18/2025	22:15:00	7.3	0.000	0	51,202	Closed	10.4	116
1/18/2025	22:30:00	7.2	0.000	0	51,202	Closed	11	116
1/18/2025	22:45:00	7.2	0.000	0	51,202	Closed	14.9	252
1/18/2025	23:00:00	7.2	0.000	0	51,202	Closed	15.2	248
1/18/2025	23:15:00	7.2	0.000	0	51,204	Closed	13.2	116
1/18/2025	23:30:00	7.2	0.518	0	51,204	Open	16.8	248
1/18/2025	23:45:00	7.2	0.129	0	51,211	Open	16.8	248
1/19/2025	0:00:00	7.2	0.159	0	51,215	Open	17.1	250
1/19/2025	0:15:00	7.2	0.000	0	51,219	Closed	17.4	249
1/19/2025	0:30:00	7.1	0.000	0	51,219	Closed	17.5	250
1/19/2025	0:45:00	7.1	0.000	0	51,219	Closed	18.3	250
1/19/2025	1:00:00	7.1	0.658	0	51,219	Open	18.5	247
1/19/2025	1:15:00	7.2	0.730	0	51,230	Open	15.7	250
1/19/2025	1:30:00	7.2	0.733	0	51,241	Open	16.3	255
1/19/2025	1:45:00	7.2	0.000	0	51,248	Closed	17.5	252
1/19/2025	2:00:00	7.1	0.000	0	51,248	Closed	17.6	249
1/19/2025	2:15:00	7.1	0.658	0	51,249	Open	17.9	248
1/19/2025	2:30:00	7.1	0.646	0	51,259	Open	17.6	252
1/19/2025	2:45:00	7.1	0.593	0	51,269	Open	17.1	251
1/19/2025	3:00:00	7.1	0.000	0	51,274	Closed	16.8	252
1/19/2025	3:15:00	7.2	0.000	0	51,275	Closed	16.7	250
1/19/2025	3:30:00	7.1	0.000	0	51,275	Closed	16.5	252
1/19/2025	3:45:00	7.1	0.000	0	51,275	Closed	15.9	253

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/19/2025	4:00:00	7.1	0.760	0	51,277	Open	15.3	255
1/19/2025	4:15:00	7.1	0.741	0	51,288	Open	14.8	255
1/19/2025	4:30:00	7.2	0.741	0	51,299	Open	14.8	253
1/19/2025	4:45:00	7.1	0.586	0	51,304	Open	15.9	253
1/19/2025	5:00:00	7.1	0.000	0	51,307	Closed	16.5	254
1/19/2025	5:15:00	7.1	0.000	0	51,307	Closed	16.8	256
1/19/2025	5:30:00	7.1	0.000	0	51,307	Closed	17	255
1/19/2025	5:45:00	7.1	0.000	0	51,307	Closed	17.3	253
1/19/2025	6:00:00	7.1	0.601	0	51,312	Open	19	255
1/19/2025	6:15:00	7.1	0.518	0	51,315	Open	19.1	253
1/19/2025	6:30:00	7.1	0.646	0	51,324	Open	19.3	255
1/19/2025	6:45:00	7.1	0.000	0	51,324	Closed	19.4	255
1/19/2025	7:00:00	7.2	0.665	0	51,325	Open	18.5	247
1/19/2025	7:15:00	7.3	0.703	0	51,335	Open	10.7	119
1/19/2025	7:30:00	7.3	0.677	0	51,346	Open	10.7	118
1/19/2025	7:45:00	7.2	0.000	0	51,347	Closed	11.2	119
1/19/2025	8:00:00	7.2	0.000	0	51,347	Closed	11.9	117
1/19/2025	8:15:00	7.2	0.654	0	51,347	Open	12.8	117
1/19/2025	8:30:00	7.3	0.684	0	51,358	Open	10.2	116
1/19/2025	8:45:00	7.2	0.643	0	51,368	Open	10.7	116
1/19/2025	9:00:00	7.2	0.000	0	51,371	Open	10.6	115
1/19/2025	9:15:00	7.1	0.000	0	51,371	Open	11.4	116
1/19/2025	9:30:00	7.2	0.000	0	51,372	Closed	10.2	116
1/19/2025	9:45:00	7.1	0.000	0	51,372	Closed	10.9	117
1/19/2025	10:00:00	7.3	0.748	0	51,383	Open	10.1	117
1/19/2025	10:15:00	7.2	0.737	0	51,394	Open	10	113
1/19/2025	10:30:00	7.1	0.722	0	51,405	Open	10.4	111

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/19/2025	10:45:00	7.1	0.684	0	51,416	Open	11	111
1/19/2025	11:00:00	7.3	0.000	0	51,422	Open	11.8	114
1/19/2025	11:15:00	7.2	0.000	0	51,423	Closed	13.1	117
1/19/2025	11:30:00	7.1	0.000	0	51,423	Closed	14	117
1/19/2025	11:45:00	7.1	0.000	0	51,423	Closed	14.6	119
1/19/2025	12:00:00	7.2	0.684	0	51,431	Open	11	118
1/19/2025	12:15:00	7.1	0.000	0	51,435	Open	11.4	118
1/19/2025	12:30:00	7.1	0.000	0	51,435	Open	12.2	118
1/19/2025	12:45:00	7.1	0.000	0	51,435	Closed	13	119
1/19/2025	13:00:00	7.2	0.760	0	51,442	Open	10.8	117
1/19/2025	13:15:00	7.1	0.714	0	51,454	Open	11.4	118
1/19/2025	13:30:00	7.1	0.714	0	51,464	Open	12	116
1/19/2025	13:45:00	7.1	0.000	0	51,466	Closed	12.7	116
1/19/2025	14:00:00	7.1	0.000	0	51,466	Closed	13	114
1/19/2025	14:15:00	7.1	0.000	0	51,466	Closed	13.3	116
1/19/2025	14:30:00	7.2	0.624	0	51,470	Open	10.5	117
1/19/2025	14:45:00	7.2	0.000	0	51,472	Closed	11.8	116
1/19/2025	15:00:00	7.3	0.696	0	51,482	Open	10.1	114
1/19/2025	15:15:00	7.3	0.707	0	51,493	Open	10.3	116
1/19/2025	15:30:00	7.3	0.000	0	51,499	Open	10.5	116
1/19/2025	15:45:00	7.1	0.000	0	51,499	Closed	11.3	117
1/19/2025	16:00:00	7.1	0.000	0	51,499	Closed	12.2	118
1/19/2025	16:15:00	7.2	0.726	0	51,505	Open	10.5	118
1/19/2025	16:45:00	7.3	0.000	4.9	51,521	Open	10.8	119
1/19/2025	17:00:00	7.3	0.000	7.4	51,521	Closed	10.8	118
1/19/2025	17:15:00	7.2	0.000	4.5	51,521	Closed	11.6	118
1/19/2025	17:30:00	7.2	0.609	0	51,524	Open	10.5	119

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
Title	**WoodFibre Weekly Water Discharge Report**	**Revision:**	**0**
Data Date Range	**January 13, 2025 to January 19, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 24, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/19/2025	17:45:00	7.3	0.714	0	51,535	Open	10.3	118
1/19/2025	18:00:00	7.3	0.707	0	51,545	Open	10.3	118
1/19/2025	18:15:00	7.2	0.000	0	51,550	Closed	10.7	118
1/19/2025	18:30:00	7.1	0.000	0	51,550	Closed	11.6	119
1/19/2025	18:45:00	7.1	0.000	0	51,550	Closed	12.5	120
1/19/2025	19:00:00	7.1	0.000	0	51,550	Closed	13.4	119
1/19/2025	19:15:00	7.2	0.680	0	51,552	Open	11.1	118
1/19/2025	19:30:00	7.3	0.733	0	51,563	Open	10.3	119
1/19/2025	19:45:00	7.3	0.643	0	51,573	Open	10.3	118
1/19/2025	20:00:00	7.3	0.000	0	51,581	Closed	10.5	119
1/19/2025	20:15:00	7.2	0.000	0	51,581	Closed	11.3	118
1/19/2025	20:30:00	7.1	0.000	0	51,581	Closed	13.7	254
1/19/2025	20:45:00	7.1	0.000	0	51,581	Closed	14.3	251
1/19/2025	21:00:00	7.2	0.590	0	51,583	Open	10.4	116
1/19/2025	21:15:00	7.2	0.514	0	51,591	Open	10.3	114
1/19/2025	21:30:00	7.1	0.484	0	51,600	Open	10.5	111
1/19/2025	21:45:00	7.2	0.000	0	51,601	Closed	12.6	111
1/19/2025	22:00:00	7.1	0.000	0	51,601	Closed	12.8	113
1/19/2025	22:15:00	7.1	0.000	0	51,601	Closed	13	113
1/19/2025	22:30:00	7.1	0.748	0	51,608	Open	10.7	111
1/19/2025	23:00:00	7.1	0.000	0	51,618	Closed	10.5	114
1/19/2025	23:15:00	7.1	0.000	0	51,618	Closed	11.2	113
1/19/2025	23:30:00	7.1	0.764	0	51,625	Open	10.3	114
1/19/2025	23:45:00	7.1	0.696	0	51,636	Open	10.9	114

Photos:

Photo 1: No visible sheen observed in the WTP water, January 13

Photo 2: No visible sheen observed in the WTP water, January 14


Photo 3: No visible sheen observed in the WTP water, January 15

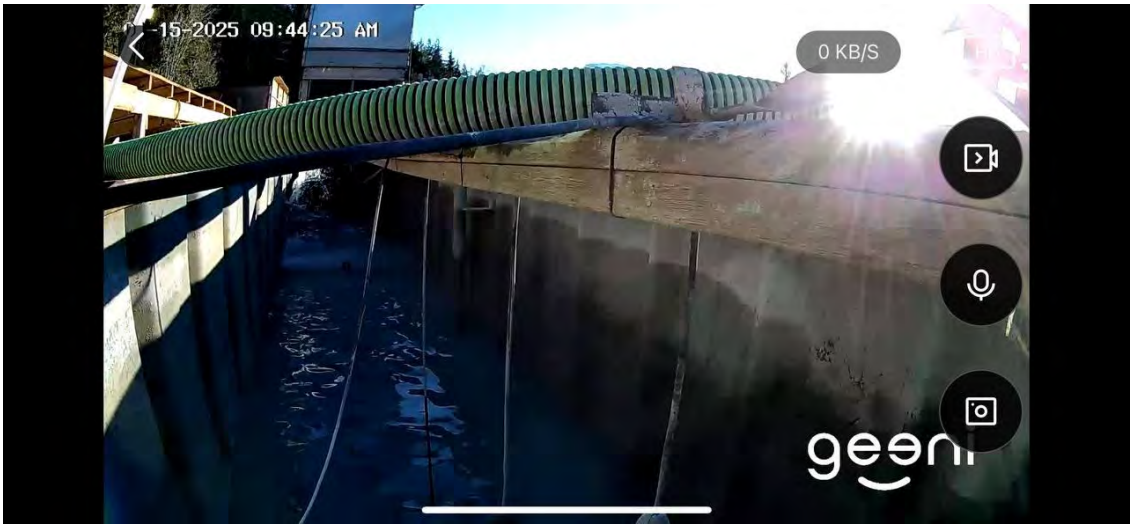



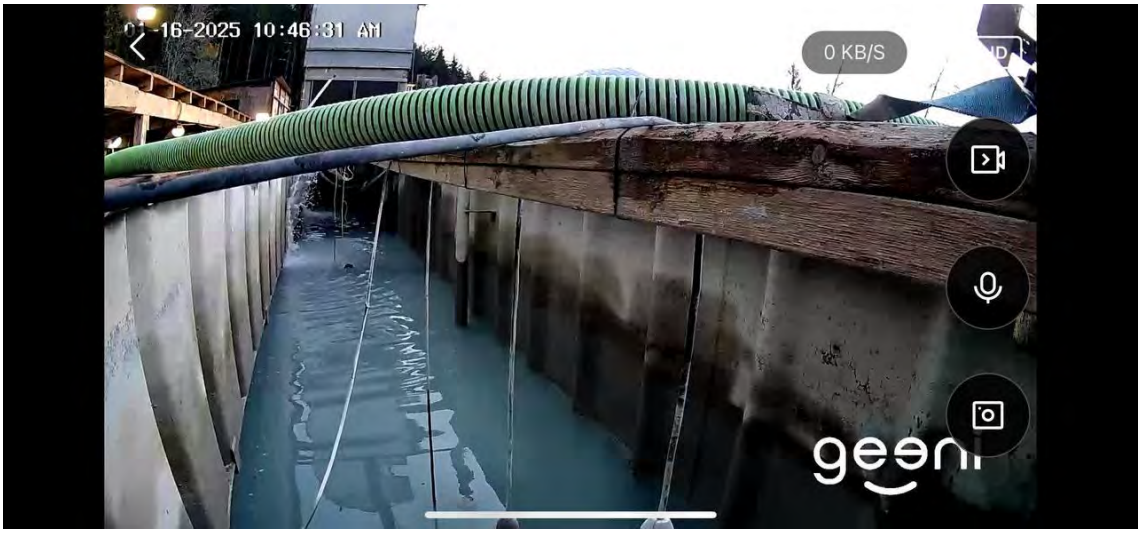
Photo 4: No visible sheen observed in the WTP water, January 16


Photo 5: No visible sheen observed in the WTP water, January 17

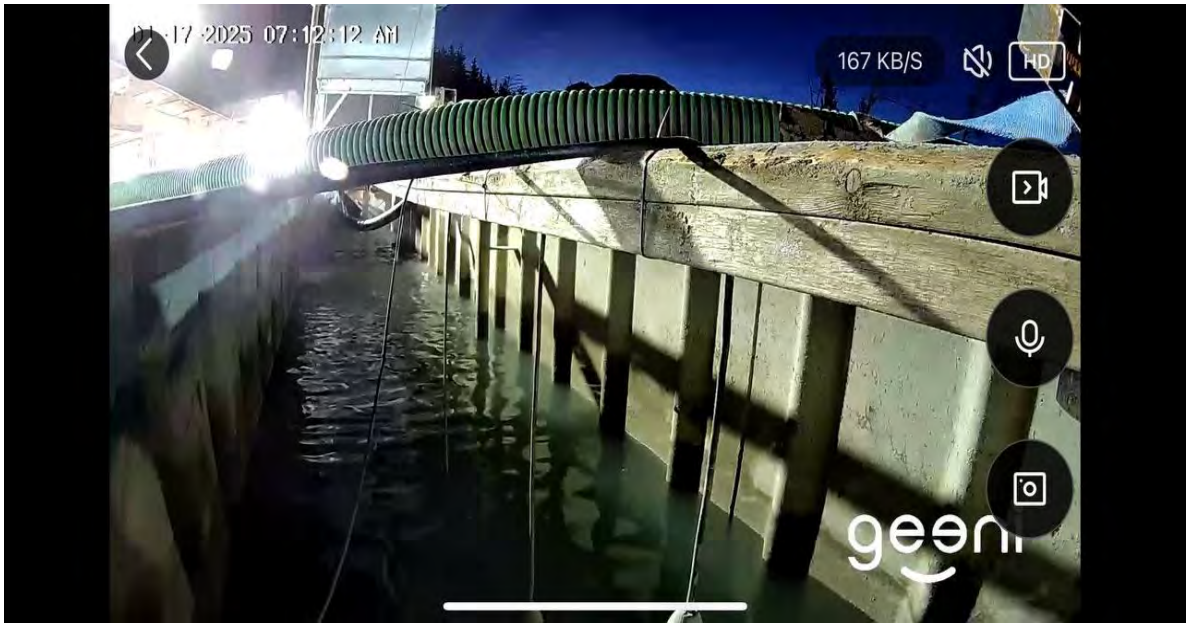


Photo 6: No visible sheen observed in the WTP water, January 19

Photo 7: No visible sheen observed in the WTP water, January 19


FortisBC Eagle Mountain-Woodfibre Gas Pipeline

Water Discharge Authorization Water Quality Monitoring

2025-1-14-Renkers-A7614

Project Component:	Tunnel	**Site Name:**	WLNG Treatment Discharge
Inspection Date:	01/14/2025	**Location:**	WLNG
Triton QP:	Stephanie Renkers	**Latitude/Longitude:**	49.66902 -123.250079
Temperature(c):	Low -4 High 3	**Permit:**	PE 110136
Weather Conditions:	Overcast	**Ground Conditions:**	Dry

Observations

Time: 10:15:00 **Flow Volume (visual):**

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	**Total Trivalent Chromium**	Yes	**QA Samples:**	Yes
Nutrients	Yes	**VOC/VPH**	Yes		
DOC	Yes	**EPH, PAH, LEPH/HEPH**	Yes		
		Trout LC50	Yes		

Logger Maintenance

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

Describe Logger Maintenance

Photos

Photo: 1

Location: WLNG EOP

Description: Spigot off

Photo: 2

Location: WLNG EOP

Description: Spigot on

Photos

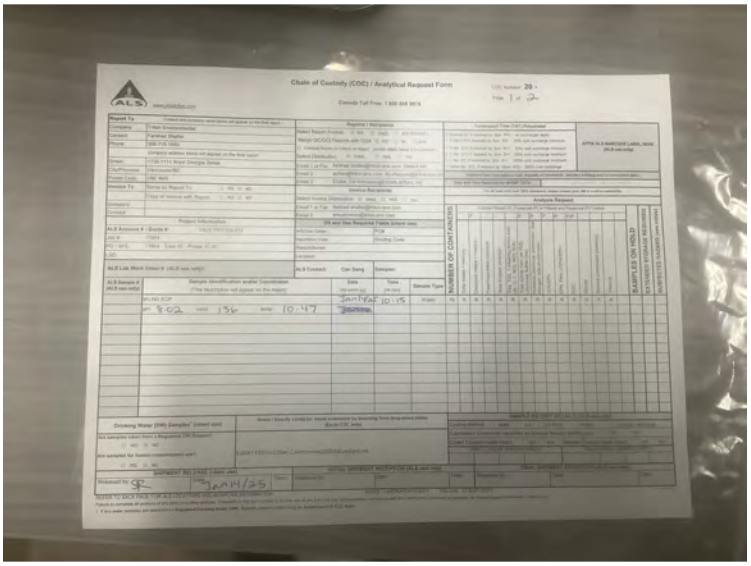


Photo: 3

Location: WLNG EOP

Description: Lab COC

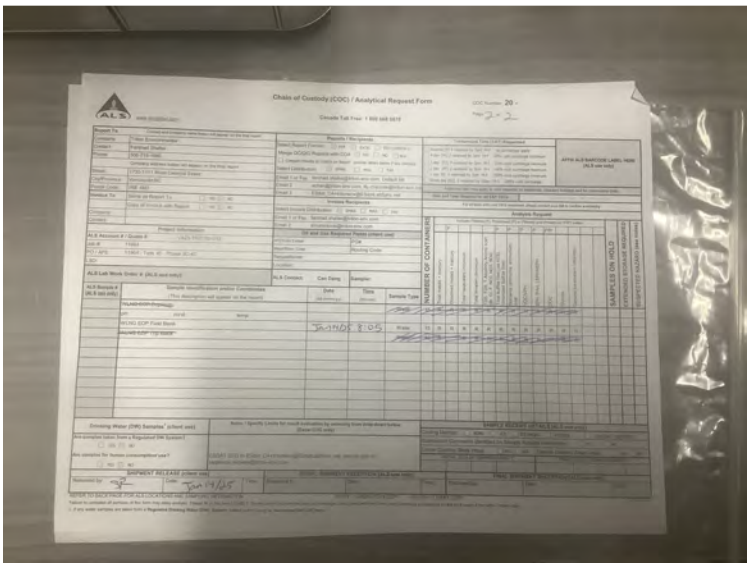


Photo: 4

Location: WLNG EOP

Description: Lab COC

Photos

Photo: 5

Location: WLNG EOP

Description: Lab COC

Sign Off

Report Prepared By:	Stephanie Renkers	**Report Reviewed:**	Yes
Report Reviewer:		**Professional(s) of Record:**	
Name:			
Designation:			
Designation Number:			

Appendix D: Woodfibre Site Receiving Environment Documentation

Woodfibre Site Receiving Environment Sample Analysis

	Sample ID	Reviewed and signed off by:			Farshad Shafiei Ph.D., R.P.Bio.	EAS US1 (Upstream)	EAS 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					VA25A0825-001	VA25A0825-002					
	Date Sampled					14-Jan-2025	14-Jan-2025					
	Time Sampled					09:52	10:57					
Analyte	Units	FAL-ST [1,2]	FAL-LT [1,2]	MAL-ST [1]	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	7.73	7.89		If natural pH < 6.5, no statisticaly 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	Short-term daily temperature guideline is 19°C for streams with unknown fish distribution Max +/- from BKG 1°C [4]	-	Short-term daily temperature guideline is 19°C for streams with unknown fish distribution Max +/- from BKG 1°C [4]	-	5.1	5.4		Guideline is species-dependent. Short-term daily temperature guideline is 19°C for streams with unknown fish distribution. Refer to footnote 4 for background temperature range for East Creek. Refer to BC Water Quality Guidelines for more information Hourly rate of change not to exceed 1°C. Calculation: US value +/- 1 = guideline range		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. treams with unknown fish distribution. Refer to footnote 4 for background temperature range for East Creek. Calculation: US value +/- 1 = guideline range	
Conductivity (field)	µS/cm	-	-	-	-	26	24					
Turbidity (field)	NTU	Varies with background, see note Guideline = 12.87	Varies with background, see note Guideline = 3.65 5-week discrete sampling average = 2.71 (DS)	Varies with background, see note Guideline = 12.87	Varies with background, see note Guideline = 3.635 5-week discrete sampling average = 2.71 (DS)	4.87	4.41		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. Calculation: US value + 8 = DS guideline Change from background of 5 NTU at any time when background is 8 - 50 NTU during high flows or in turbid waters. Calculation: US value + 5 = DS guideline Change from background of 10% when background is > 50 NTU at any time during high flows or in turbid waters. Calculation: US value + (US value*0.1) = DS guideline	Change from background of 2 NTU at any one time for 30 days in clear flows. Note that a rolling average of US values over a 30-day period is required to properly calculate this guideline. Guideline calculated in this spreadsheet using US concentration at the time of sampling.	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. Calculation: US value + 8 = DS guideline Change from background of 5 NTU at any time when background is 8 - 50 NTU during high flows or in turbid waters. Calculation: US value + 5 = DS guideline Change from background of 10% when background is > 50 NTU at any time during high flows or in turbid waters. Calculation: US value + (US value*0.1) = DS guideline	Change from background of 2 NTU at any one time for 30 days in clear flows. Note that a rolling average of US values over a 30-day period is required to properly calculate this guideline. Guideline calculated in this spreadsheet using US concentration at the time of sampling.
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	13.16	12.63		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 $CaCO_3$) (total)	mg/L	-	-	-	-	5.22	7.19					
Total Dissolved Solids	mg/L	-	-	-	-	25	28					
Total Suspended Solids	mg/L	Varies with background, see note Guideline = 28	Varies with background, see note Guideline = 8.00 5-week discrete sampling average = 3.0 (DS)	Varies with background, see note Guideline = 28	Varies with background, see note Guideline = 8.00 5-week discrete sampling average = 3.0 (DS)	< 3.0	< 3.0		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. Calculation: US value + 25 = DS guideline Change from background of 10 mg/L at any one time when background 25-100 mg/L during high flows or turbid waters. Calculation: US value + 10 = DS guideline Change from background of 10% when background is > 100 mg/L at any time during high flows or turbid waters. Calculation: US value + (US value*0.1) = DS guideline	Change from background of 5 mg/L @ one time for a druation of 30 days in clear flow. Note that a rolling average of US values over a 30-day period is required to properly calculate this guideline. Guideline calculated in this spreadsheet using US concentration at the time of sampling.	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. Calculation: US value + 25 = DS guideline Change from background of 10 mg/L at any one time when background 25-100 mg/L during high flows or turbid waters. Calculation: US value + 10 = DS guideline Change from background of 10% when background is > 100 mg/L at any time during high flows or turbid waters. Calculation: US value + (US value*0.1) = DS guideline	Change from background of 5 mg/L @ one time for a druation of 30 days in clear flow. Note that a rolling average of US values over a 30-day period is required to properly calculate this guideline. Guideline calculated in this spreadsheet using US concentration at the time of sampling.
Dissolved Organic Carbon (DOC)	mg/L	-	-	-	-	1.91	1.75			Long-term (30-day) median within 20% of background median [3]		
Total Alkalinity ($CaCO_3$)	mg/L	-	Categorical	-	-	4.6	6.9			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 H_2S)	mg/L	-	0.002	-	-	< 0.0015	< 0.0015			Working guideline		
Total Sulfide (as H_2S)	mg/L	-	-	-	-	< 0.0016	< 0.0016					
Anions and Nutrients												
Ammonia	mg/L ammonia-N	Varies with pH and temperature. See note. Guideline = 10.1	Varies with pH and temperature. See note. Guideline = 1.92	Varies with pH and temperature. See note. Guideline = 777	Varies with pH, temperature and salinity. See note. Guideline = 12	< 0.0050	< 0.0050		Guideline for ammonia as N and is pH and temperature dependent. Refer to Table 27D in BC WQG for guideline values.	Guideline for ammonia as N and is pH and temperature dependent. Refer to Table 27C in BC WQG for guideline values.	Guideline for ammonia as N. Guideline is pH, temperature and salinity dependent. Refer to Table 27F in BC WQG for guideline values.	Guideline for ammonia as N. Guideline is pH, temperature and salinity dependent. Refer to Table 27E in BC WQG for guideline values.
Bromide	mg/L	-	-	-	-	< 0.050	< 0.050					
Chloride	mg/L	600	150	> 110% of background	< 90% of background	0.75	0.92				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 Guideline = 0.147	-	1.5	-	< 0.020	0.035		Guideline has interim status. Guideline is calculated with the following equation: Guideline = [-51.73 + 92.57 log10 (hardness)] * 0.01			
Nitrate (as N)	mg/L	32.8	3	-	3.7	0.0234	0.0216					
Nitrite (as N)	mg/L	Varies with chloride. Table 27B, see note. Guideline = 0.06	Varies with chloride. Table 27B, see note. Guideline = 0.02	-	-	< 0.0010	< 0.0010		Varies with chloride. Refer to Table 27B in BC WQG for guideline values.	Varies with chloride. Refer to Table 27B in BC WQG for guideline values.		
Total Nitrogen	mg/L	-	-	-	-	0.064	0.059					
Total Phosphorous	mg/L	-	0.005 to 0.015	-	-	0.0113	0.0068			Guideline is for lakes, refer to BCWQ guideline for nutrients and algae for more information. Guideline does not apply to site.		
Sulfate (as SO_4)	mg/L	-	Varies with hardness. See note. Guideline = 128	-	-	2.56	2.64			Guidelines for hardness ranges below: Hardness 0 - 30: 128 Hardness 31 - 75: 218 Hardness 76 - 180: 309 Hardness 181 - 250: 429		
Total Metals												
Aluminum (Al)-Total	mg/L	-	Varies with pH, DOC, hardness Guideline = 0.101 5-week field average = 0.092 (US), 0.081 (DS)	-	-	0.095	0.0777			Guideline varies with pH, hardness and Dissolved Organic Carbon (DOC). Guideline is calculated with the following equation: Guideline = (EXP((0.645 * LN(DOC)) + (2.255 * LN(hardness)) + (1.995 * pH) + (-0.284 * (LN(hardness) * pH))-9.898)/3/1000) If hardness or DOC is below the hardness range, the minimum hardness or DOC will be applied in the calculation.		
Antimony (Sb)-Total	mg/L	0.25	0.074	-	-	< 0.00010	< 0.00010					
Arsenic (As)-Total	mg/L	-	0.005	-	0.0125	0.00011	0.00014					Interim guideline status
Barium (Ba)-Total	mg/L	-	1	-	-	0.0029	0.00259			Working guideline status		
Beryllium (Be)-Total	mg/L	-	0.00013	-	0.100	< 0.000100	< 0.000100			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					
Cadmium (Cd)-Total	mg/L	-	-	-	0.00012	< 0.0000050	< 0.0000050					Working guideline status
Calcium (Ca)-Total	mg/L	-	-	-	-	1.71	2.48					
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	-	0.0025	-	0.0015	< 0.00050	< 0.00050			Working guideline status		Working guideline status
Cobalt (Co)-Total	mg/L	0.11	0.004	-	-	< 0.00010	< 0.00010					
Copper (Cu)-Total	mg/L	-	-	0.003	0.003 5-week field averages = 0.000748 (US), 0.0006 (DS)	0.00063	< 0.00050					
Iron (Fe)-Total	mg/L	1	-	-	-	0.039	0.028					
Lead (Pb)-Total	mg/L	-	-	0.14	0.002 5-week field averages = 0.0000504 (US), 0.000050 (DS)	< 0.00005	< 0.00005		Guideline varies with hardness, refer to BC Water Quality Guidelines for more information. Guideline is 0.003 where hardness ≤8mg/L. Guideline uses equation EXP[1.273*on(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 EXP[1.273*on(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	-	-	-	-	0.231	0.242					
Manganese (Mn)-Total	mg/L	Varies with hardness Guideline = 0.82	Varies with hardness Guideline = 0.77	-	-	0.00203	0.00155		Guideline varies with hardness. The guideline is calculated using the following equation: Guideline = (0.0044 * hardness + 0.605) Guideline applies to samples with hardness 25-259 mg/L. Lowest value for guideline is 0.77 mg/L. If hardness is below the hardness range, the minimum hardness will be applied in the calculation.	Guideline varies with hardness, refer to BC Water Quality Guidelines for more information. The guideline is calculated using the following formula: Guideline = (0.01102 * hardness + 0.54) Guideline applies to samples with hardness 37-450 mg/L. Lowest value for guideline is 0.81 mg/L. If hardness is below the hardness range, the minimum hardness will be applied in the calculation.		
Mercury (Hg)-Total	mg/L	-	Varies with methyl mercury Guideline = N/A	-	-	< 0.0000050	< 0.0000050			When MeHg ≤ 0.5% of total Hg, guideline is equal to 0.02 mg/L Guideline = 0.1/[MeHg/totalHg]. When MeHg ≤ 0.5% of total Hg, guideline is equal to 0.02 mg/L		
Molybdenum (Mo)-Total	mg/L	46	7.6	-	-	0.000283	0.00113					
Nickel (Ni)-Total	mg/L	-	-	-	0.0083	< 0.00050	< 0.00050			Working guideline status. Guideline varies with hardness. Refer to BC Water Quality Guidelines for more information. Hardness 0 ≤ 60: 0.025 Hardness > 60 ≤ 180: Guideline = (EXP((0.76 * (LN(hardness)) + 1.06))/1000) Hardness ≥ 180: 0.15		Working guideline status
Phosphorus (P)-Total	mg/L	-	0.005 to 0.015	-	-	< 0.050	< 0.050			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	-	-	-	-	0.167	0.256					
Rubidium (Rb)-Total	mg/L	-	-	-	-	0.00026	0.00044					
Selenium (Se)-Total	mg/L	-	0.002	-	0.002	< 0.000050	< 0.000050			Guideline for freshwater aquatic life (water column). Alert concentration is 0.001 mg/L, with separate guidelien for sediment, invertebrate and fish tissue. Refer to BC Water Quality Guidelines for more information on guideliens 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 guideliens and sampling guidance.
Silicon (Si)-Total	mg/L	-	-	-	-	3.78	3.87					
Silver (Ag)-Total	mg/L	Varies with hardness, see note Guideline = 0.0001	Varies with hardness, see note Guideline = 0.00005	0.003	0.0015	< 0.000010	< 0.000010		Varies with hardness Guideline ranges: Hardness ≤ 100: 0.0001 Hardness > 100: 0.003	Varies with hardness Guideline ranges: Hardness ≤ 100: 0.00005 Hardness > 100: 0.0015		Guideline applies to open coast and estuaries. Guideline is applicable to the EGP site.
Sodium (Na)-Total	mg/L	-	-	-	-	1.22	1.29					
Strontium (Sr)-Total	mg/L	-	-	-	-	0.00973	0.00961					
Sulfur (S)-Total	mg/L	-	-	-	-	< 0.500	< 0.500					
Tellurium (Te)-Total	mg/L	-	-	-	-	< 0.00020	< 0.00020					
Thallium (Tl)-Total	mg/L	-	0.00003 5-week field average = <0.000010 (US), <0.000010 (DS)	-	-	< 0.000010	< 0.000010			30-day average, site-specific objective for the lower Columbia River, BC. Guideline is for reference only and does not apply to the 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	-	-	-	-	0.00097	0.00059					
Tungsten (W)-Total	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Uranium (U)-Total	mg/L	0.0165	0.0075	-	-	0.000106	0.000177			Working guideline status		
Vanadium (V)-Total	mg/L	-	0.06	-	0.005	< 0.00050	< 0.00050					Working guideline status
Zinc (Zn)-Total	mg/L	-	-	0.055	0.010 5-week field average = 0.00030 (US), 0.0050 (DS)	< 0.0030	< 0.0030					
Zirconium (Zr)-Total	mg/L	-	-	-	-	< 0.00020	< 0.00020					
Dissolved Metals												
Aluminum (Al)-Dissolved	mg/L	-	-	-	-	0.0686	0.0638					
Antimony (Sb)-Dissolved	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Arsenic (As)-Dissolved	mg/L	-	-	-	-	< 0.00010	0.00012					
Barium (Ba)-Dissolved	mg/L	-	-	-	-	0.00277	0.0026					
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, see note Guideline = 0.000038	Varies with hardness, see note Guideline = 0.000027	-	-	0.0000059	0.0000051		Guideline is hardness dependent. Guideline is applicable to water hardness between 7.0 and 455 mg/L. Guideline is calculated with the following formula: Guideline = (EXP(1.03 * (LN(hardness)) - 5.274)/1000) Lowest value for guideline is 0.000018 mg/L. If hardness is below the hardness range, the minimum hardness will be applied in the calculation.	Guideline is hardness dependent. Guideline is applicable to hardness between 3.4 and 285 mg/L. Guideline is calculated with the following formula: Guideline = (EXP(0.736 * (LN(hardness)) - 4.943)/1000) Lowest value for guiedeline is 0.00004. If hardness is below the hardness range, the minimum hardness will be applied in the calculation.		
Calcium (Ca)-Dissolved	mg/L	-	Categorical, see note	-	-	1.74	2.4			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	-	-	-	-	-	-					
Chromium (Cr(VI))-Dissolved	mg/L	-	-	-	-	-	-					
Cobalt (Co)-Dissolved	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Copper (Cu)-Dissolved	mg/L	Guideline varies with other parameters, see note Guideline = 0.0034	Guideline varies with other parameters, see note Guideline = 0.0005 5-week field average = 0.00068 (US), 0.00050 (DS)	-	-	0.00057	0.00046		Guideline varies with other parameters and is calculated using BC BLM software. Simplified model: Temperature, pH, DOC and hardness Detailed model: Temperature, pH, DOC, humic acid content, total calcium, total magnesium, total sodium, total potassium, sulphate, chloride, and alkalinity Guideline calculated using values for parameters above taken at the specific site on each sampling date	Guideline varies with other parameters and is calculated using BC BLM software. Simplified model: Temperature, pH, DOC and hardness Detailed model: Temperature, pH, DOC, humic acid content, total calcium, total magnesium, total sodium, total potassium, sulphate, chloride, and alkalinity Guideline calculated using values for parameters above taken at the specific site on each sampling date		
Iron (Fe)-Dissolved	mg/L	0.35	-	-	-	0.019	0.016					
Lead (Pb)-Dissolved	mg/L	-	Guideline varies with DOC and hardness Guideline: 0.00165 5-week field average = <0.000050 (US), 0.0000556 (DS)	-	-	< 0.000050	< 0.000050			Guideline varies with DOC and hardness, refer to BC Water Quality Guidelines for more information. Guideline uses equation (EXP((0.514*LN(DOC))+(0.214*(LN(Hardness)))+0.4354))/2/1000 where DOC range is 0.5-31.5 mg/L and hardness range is 4.7-511 mg/L.		
Lithium (Li)-Dissolved	mg/L	-	-	-	-	< 0.0010	< 0.0010					
Magnesium (Mg)-Dissolved	mg/L	-	-	-	-	0.23	0.245					
Manganese (Mn)-Dissolved	mg/L	-	-	-	-	0.00092	0.00101					
Mercury (Hg)-Dissolved	mg/L	-	-	-	-	< 0.0000050	< 0.0000050					
Molybdenum (Mo)-Dissolved	mg/L	-	-	-	-	0.000294	0.000947					
Nickel (Ni)-Dissolved	mg/L	Guideline varies with pH, temperature, DOC, and hardness Guideline: 0.0194	Guideline varies with pH, temperature, DOC, and hardness Guideline: 0.00132 5-week field average = < 0.0005 (US), < 0.0005 (DS)	-	-	< 0.00050	< 0.00050		Guideline varies with other parameters and is calculated using BC BLM software. Simplified model: Temperature, pH, DOC and hardness Detailed model: Temperature, pH, DOC, humic acid content, total calcium, total magnesium, total sodium, total potassium, sulphate, chloride, and alkalinity Guideline calculated using values for parameters above taken at the specific site on each sampling date	Guideline varies with other parameters and is calculated using BC BLM software. Simplified model: Temperature, pH, DOC and hardness Detailed model: Temperature, pH, DOC, humic acid content, total calcium, total magnesium, total sodium, total potassium, sulphate, chloride, and alkalinity Guideline calculated using values for parameters above taken at the specific site on each sampling date		
Phosphorus (P)-Dissolved	mg/L	-	-	-	-	< 0.050	< 0.050					
Potassium (K)-Dissolved	mg/L	-	-	-	-	0.204	0.244					
Rubidium (Rb)-Dissolved	mg/L	-	-	-	-	0.0002	0.00041					
Selenium (Se)-Dissolved	mg/L	-	-	-	-	< 0.00005	< 0.00005					
Silicon (Si)-Dissolved	mg/L	-	-	-	-	3.85	4.04					
Silver (Ag)-Dissolved	mg/L	-	-	-	-	< 0.000010	< 0.000010					
Sodium (Na)-Dissolved	mg/L	-	-	-	-	1.25	1.3					
Strontium (Sr)-Dissolved	mg/L	-	-	-	-	0.00961	0.00917					
Sulfur (S)-Dissolved	mg/L	-	-	-	-	0.78	0.51					
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	-	-	-	-	< 0.00030	< 0.00030					
Tungsten (W)-Dissolved	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Uranium (U)-Dissolved	mg/L	-	-	-	-	0.000097	0.000151					
Vanadium (V)-Dissolved	mg/L	-	-	-	-	< 0.00050	< 0.00050					
Zinc (Zn)-Dissolved	mg/L	Varies with DOC and hardness Guideline = 0.009	Varies with pH, DOC, hardness Guideline = 0.0031 5-week field average = 0.0023 (US), 0.0042 (DS)	-	-	0.0036	0.0021		Guideline varies with DOC and hardness. Guideline is calculated using the following formula: Guideline = (EXP((0.833 * (LN(hardness))) + (0.24 * (LN(DOC))) + 0.526)/2/1000) If hardness or DOC is below the hardness or DOC range, the minimum hardness or DOC will be applied in the calculation.	Guideline varies with pH, hardness and Dissolved Organic Carbon (DOC). Guideline is calculated using the following formula: Guideline = (EXP((0.974 * (LN(hardness))) - (0.815 * pH) + (0.398 * (LN(DOC))) + 4.625)/2/1000) Guideline only applies to water with pH between 6.5 and 8.13, DOC between 0.3 and 22.9 mg/L, anmd hardness between 23.4 and 399 mg/L. If hardness or DOC is below the hardness or DOC range, the minimum hardness or DOC will be applied in the calculation.		
Zirconium (Zr)-Dissolved	mg/L	-	-	-	-	< 0.00020	< 0.00020					
Applied Guideline:		**British Columbia Approved and Working Water Quality Guidelines (NOV 2023) for Freshwater Aquatic Life (FAL) & Marine Aquatic Life (MAL) Short-Term (ST) & Long-Term (LT)**										

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

[2]BC MOECCS. 2021. BC Working Water Qualtiy Guidelines for the Protection of Aquatic Life, Widlife & 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.

[4]Background temperature ranges: Dec-Feb: 0.3-8.0C; Mar-Apr: 3.0-10.2C; May-June: 6.8-15.1C; Jul-present: 12.9-18.2C
Reference: AquaTROLL In-Situ Data Logger - Background water quality readings collected from Dec.-present.
For guidelines dependent on other parameters, when hardness, pH or DOC are below the range stated in the guideline, the lowest value in the range is used to calculate the guideline.

Parameters Used to Calculate Guidelines

Analyte	Units	Measurement method	Values: EAS US1 (Upstream)	Values: EAS DS 1 (Downstream)
pH (field)	pH units	Field pH taken using handheld meters during sampling used in calculations	7.73	7.89
Temperature (field)	°C	Field temperature taken using handheld meters during sampling used in calculations	5.1	5.4
Turbidity (field)	NTU	Field turbidity taken using handheld meters during sampling used in calculations	4.87	4.41
Hardness (as CaCO3) (total)	mg/L	Laboratory tested total hardness taken at each respective sample site on the day of sampling used in guideline calculations	5.22	7.19
Dissolved Organic Carbon (DOC)	mg/L	Laboratory tested dissolved organic carbon tested at the lab used in guideline calculations	1.91	1.75
Total Alkalinity ($CaCO_3$)	mg/L	Laboratory tested total alkalinity used in calculations	4.6	6.9
Chloride	mg/L	Laboratory tested chloride taken at each respective sample site on the day of sampling used in guideline calculations	0.75	0.92

Woodfibre Site Receiving Environment Lab Documentation

CERTIFICATE OF ANALYSIS

Work Order	:		
Client		Laboratory	
Contact		Account Manager	
Address		Address	
Telephone		Telephone	
Project		Date Samples Received	: 14-Jan-2025 18:00
PO	: ----	Date Analysis Commenced	: 15-Jan-2025
C-O-C number	: ----	Issue Date	: 22-Jan-2025 15:41
Sampler	: ----		
Site	: Water Analysis		
Quote number	: VA25-TRIT100-001		
No. of samples received	: 2		
No. of samples analysed	: 2		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
		Metals, Burnaby, British Columbia
		Metals, Burnaby, British Columbia
		Inorganics, Burnaby, British Columbia
		Inorganics, Burnaby, British Columbia
		Metals, Burnaby, British Columbia
		Administration, Burnaby, British Columbia

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key: CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.
LOR: Limit of Reporting (detection limit).

Unit	*Description*
-	no units
°C	degrees celsius
mg/L	milligrams per litre
pH units	pH units
µS/cm	microsiemens per centimetre

<: less than.
>: greater than.
Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLG US1	WLNG DS1	----	----	----
					Client sampling date / time	14-Jan-2025 09:52	14-Jan-2025 10:57	----	----	----
						VA25A0825-001	VA25A0825-002	----	----	----
						Result	Result	----	----	----
Field Tests										
Conductivity, field	----	EF001/VA	0.10	µS/cm		26.000	24.000	----	----	----
pH, field	----	EF001/VA	0.10	pH units		7.73	7.89	----	----	----
Temperature, field	----	EF001/VA	0.10	°C		5.10	5.40	----	----	----
Physical Tests										
Hardness (as CaCO3), dissolved	----	EC100/VA	0.60	mg/L		5.29	7.00	----	----	----
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L		5.22	7.19	----	----	----
Solids, total dissolved [TDS]	----	E162/VA	10	mg/L		25	28	----	----	----
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L		<3.0	<3.0	----	----	----
Alkalinity, total (as CaCO3)	----	E290/VA	2.0	mg/L		4.6	6.9	----	----	----
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L		<0.0050	<0.0050	----	----	----
Bromide	24959-67-9	E235.Br-L/VA	0.050	mg/L		<0.050	<0.050	----	----	----
Chloride	16887-00-6	E235.Cl/VA	0.50	mg/L		0.75	0.92	----	----	----
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L		<0.020	0.035	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L		0.0234	0.0216	----	----	----
Nitrite (as N)	14797-65-0	E235.NO2-L/VA	0.0010	mg/L		<0.0010	<0.0010	----	----	----
Nitrogen, total	7727-37-9	E366/VA	0.030	mg/L		0.064	0.059	----	----	----
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L		0.0113	0.0068	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L		2.56	2.64	----	----	----
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L		1.91	1.75	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLG US1	WLNG DS1	----	----	----
					Client sampling date / time	14-Jan-2025 09:52	14-Jan-2025 10:57	----	----	----
						VA25A0825-001	VA25A0825-002	----	----	----
						Result	Result	----	----	----
Total Sulfides										
Sulfide, total (as S)	18496-25-8	E395/VA	0.0015	mg/L		<0.0015	<0.0015	----	----	----
Sulfide, un-ionized (as H2S), from total	7783-06-4	EC395/VA	0.0015	mg/L		<0.0015	<0.0015	----	----	----
Sulfide, total (as H2S)	7783-06-4	E395/VA	0.0016	mg/L		<0.0016	<0.0016	----	----	----
Total Metals										
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L		0.0950	0.0777	----	----	----
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L		0.00011	0.00014	----	----	----
Barium, total	7440-39-3	E420/VA	0.00010	mg/L		0.00290	0.00259	----	----	----
Beryllium, total	7440-41-7	E420/VA	0.000100	mg/L		<0.000100	<0.000100	----	----	----
Bismuth, total	7440-69-9	E420/VA	0.000050	mg/L		<0.000050	<0.000050	----	----	----
Boron, total	7440-42-8	E420/VA	0.010	mg/L		<0.010	<0.010	----	----	----
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L		<0.0000050	<0.0000050	----	----	----
Calcium, total	7440-70-2	E420/VA	0.050	mg/L		1.71	2.48	----	----	----
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L		<0.000010	<0.000010	----	----	----
Chromium, total	7440-47-3	E420/VA	0.00050	mg/L		<0.00050	<0.00050	----	----	----
Cobalt, total	7440-48-4	E420/VA	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Copper, total	7440-50-8	E420/VA	0.00050	mg/L		0.00063	<0.00050	----	----	----
Iron, total	7439-89-6	E420/VA	0.010	mg/L		0.039	0.028	----	----	----
Lead, total	7439-92-1	E420/VA	0.000050	mg/L		<0.000050	<0.000050	----	----	----
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L		<0.0010	<0.0010	----	----	----
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L		0.231	0.242	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLG US1	WLNG DS1	----	----	----
					Client sampling date / time	14-Jan-2025 09:52	14-Jan-2025 10:57	----	----	----
						VA25A0825-001	VA25A0825-002	----	----	----
						Result	Result	----	----	----
Total Metals										
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L		0.00203	0.00155	----	----	----
Mercury, total	7439-97-6	E508/VA	0.0000050	mg/L		<0.0000050	<0.0000050	----	----	----
Molybdenum, total	7439-98-7	E420/VA	0.000050	mg/L		0.000283	0.00113	----	----	----
Nickel, total	7440-02-0	E420/VA	0.00050	mg/L		<0.00050	<0.00050	----	----	----
Phosphorus, total	7723-14-0	E420/VA	0.050	mg/L		<0.050	<0.050	----	----	----
Potassium, total	7440-09-7	E420/VA	0.050	mg/L		0.167	0.256	----	----	----
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L		0.00026	0.00044	----	----	----
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L		<0.000050	<0.000050	----	----	----
Silicon, total	7440-21-3	E420/VA	0.10	mg/L		3.78	3.87	----	----	----
Silver, total	7440-22-4	E420/VA	0.000010	mg/L		<0.000010	<0.000010	----	----	----
Sodium, total	7440-23-5	E420/VA	0.050	mg/L		1.22	1.29	----	----	----
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L		0.00973	0.00961	----	----	----
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L		<0.50	<0.50	----	----	----
Tellurium, total	13494-80-9	E420/VA	0.00020	mg/L		<0.00020	<0.00020	----	----	----
Thallium, total	7440-28-0	E420/VA	0.000010	mg/L		<0.000010	<0.000010	----	----	----
Thorium, total	7440-29-1	E420/VA	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Tin, total	7440-31-5	E420/VA	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Titanium, total	7440-32-6	E420/VA	0.00030	mg/L		0.00097	0.00059	----	----	----
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L		0.000106	0.000177	----	----	----
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L		<0.00050	<0.00050	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLG US1	WLNG DS1	----	----	----
					Client sampling date / time	14-Jan-2025 09:52	14-Jan-2025 10:57	----	----	----
						VA25A0825-001	VA25A0825-002	----	----	----
						Result	Result	----	----	----
Total Metals										
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L		<0.0030	<0.0030	----	----	----
Zirconium, total	7440-67-7	E420/VA	0.00020	mg/L		<0.00020	<0.00020	----	----	----
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/VA	0.0010	mg/L		0.0686	0.0638	----	----	----
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L		<0.00010	0.00012	----	----	----
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L		0.00277	0.00260	----	----	----
Beryllium, dissolved	7440-41-7	E421/VA	0.000100	mg/L		<0.000100	<0.000100	----	----	----
Bismuth, dissolved	7440-69-9	E421/VA	0.000050	mg/L		<0.000050	<0.000050	----	----	----
Boron, dissolved	7440-42-8	E421/VA	0.010	mg/L		<0.010	<0.010	----	----	----
Cadmium, dissolved	7440-43-9	E421/VA	0.0000050	mg/L		0.0000059	0.0000051	----	----	----
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L		1.74	2.40	----	----	----
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L		<0.000010	<0.000010	----	----	----
Chromium, dissolved	7440-47-3	E421/VA	0.00050	mg/L		<0.00050	<0.00050	----	----	----
Cobalt, dissolved	7440-48-4	E421/VA	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Copper, dissolved	7440-50-8	E421/VA	0.00020	mg/L		0.00057	0.00046	----	----	----
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L		0.019	0.016	----	----	----
Lead, dissolved	7439-92-1	E421/VA	0.000050	mg/L		<0.000050	<0.000050	----	----	----
Lithium, dissolved	7439-93-2	E421/VA	0.0010	mg/L		<0.0010	<0.0010	----	----	----
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L		0.230	0.245	----	----	----
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L		0.00092	0.00101	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLG US1	WLNG DS1	----	----	----
					Client sampling date / time	14-Jan-2025 09:52	14-Jan-2025 10:57	----	----	----
						VA25A0825-001	VA25A0825-002	----	----	----
						Result	Result	----	----	----
Dissolved Metals										
Mercury, dissolved	7439-97-6	E509/VA	0.0000050	mg/L		<0.0000050	<0.0000050	----	----	----
Molybdenum, dissolved	7439-98-7	E421/VA	0.000050	mg/L		0.000294	0.000947	----	----	----
Nickel, dissolved	7440-02-0	E421/VA	0.00050	mg/L		<0.00050	<0.00050	----	----	----
Phosphorus, dissolved	7723-14-0	E421/VA	0.050	mg/L		<0.050	<0.050	----	----	----
Potassium, dissolved	7440-09-7	E421/VA	0.050	mg/L		0.204	0.244	----	----	----
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L		0.00020	0.00041	----	----	----
Selenium, dissolved	7782-49-2	E421/VA	0.000050	mg/L		<0.000050	<0.000050	----	----	----
Silicon, dissolved	7440-21-3	E421/VA	0.050	mg/L		3.85	4.04	----	----	----
Silver, dissolved	7440-22-4	E421/VA	0.000010	mg/L		<0.000010	<0.000010	----	----	----
Sodium, dissolved	7440-23-5	E421/VA	0.050	mg/L		1.25	1.30	----	----	----
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L		0.00961	0.00917	----	----	----
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L		0.78	0.51	----	----	----
Tellurium, dissolved	13494-80-9	E421/VA	0.00020	mg/L		<0.00020	<0.00020	----	----	----
Thallium, dissolved	7440-28-0	E421/VA	0.000010	mg/L		<0.000010	<0.000010	----	----	----
Thorium, dissolved	7440-29-1	E421/VA	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Tin, dissolved	7440-31-5	E421/VA	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Titanium, dissolved	7440-32-6	E421/VA	0.00030	mg/L		<0.00030	<0.00030	----	----	----
Tungsten, dissolved	7440-33-7	E421/VA	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L		0.000097	0.000151	----	----	----
Vanadium, dissolved	7440-62-2	E421/VA	0.00050	mg/L		<0.00050	<0.00050	----	----	----
Zinc, dissolved	7440-66-6	E421/VA	0.0010	mg/L		0.0036	0.0021	----	----	----

Analytical Results

Sub-Matrix: Water (Matrix: Water)			Client sample ID		WLG US1	WLNG DS1	----	----	----
			Client sampling date / time		14-Jan-2025 09:52	14-Jan-2025 10:57	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A0825-001	VA25A0825-002	----	----	----
					Result	Result	----	----	----
Dissolved Metals									
Zirconium, dissolved	7440-67-7	E421/VA	0.00020	mg/L	<0.00020	<0.00020	----	----	----
Dissolved mercury filtration location	----	EP509/VA	-	-	Field	Field	----	----	----
Dissolved metals filtration location	----	EP421/VA	-	-	Field	Field	----	----	----
Speciated Metals									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532/VA	0.00050	mg/L	<0.00050	<0.00050	----	----	----
Chromium, trivalent [Cr III], total	16065-83-1	EC535/VA	0.00050	mg/L	<0.00050	<0.00050	----	----	----

Please refer to the General Comments section for an explanation of any result qualifiers detected.

ALS Canada Ltd.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	[redacted]	Page	: 1 of 15
Client		Laboratory	[redacted]
Contact		Account Manager	
Address		Address	
Telephone		Telephone	
Project		Date Samples Received	: 14-Jan-2025 18:00
PO	: ----	Issue Date	: 22-Jan-2025 15:40
C-O-C number	: ----		
Sampler	: ----		
Site	: Water Analysis		
Quote number	: VA25-TRIT100-001		
No. of samples received	: 2		
No. of samples analysed	: 2		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO: Data Quality Objective.
LOR: Limit of Reporting (detection limit).
RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- Laboratory Control Sample (LCS) outliers occur - please see following pages for full details.
- Matrix Spike outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Laboratory Control Sample (LCS) Recoveries								
Dissolved Metals	QC-1839449-002	----	Phosphorus, dissolved	7723-14-0	E421	122 % MES	80.0-120%	Recovery greater than upper control limit

Result Qualifiers

Qualifier	Description
MES	*Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).*

Matrix Spike (MS) Recoveries								
Dissolved Metals	Anonymous	Anonymous	Silver, dissolved	7440-22-4	E421	54.5 % MS-Ag	70.0-130%	Recovery less than lower data quality objective

Result Qualifiers

Qualifier	Description
MS-Ag	*MS-Ag: Matrix Spike recovery for silver was marginally below DQO (40 to <60%) due to its instability in the sample matrix. Silver was not detected. Reported result (< LOR) is reliable*

Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WLG US1	E298	14-Jan-2025	17-Jan-2025	28 days	3 days	✓	18-Jan-2025	28 days	4 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WLNG DS1	E298	14-Jan-2025	17-Jan-2025	28 days	3 days	✓	18-Jan-2025	28 days	4 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE WLG US1	E235.Br-L	14-Jan-2025	15-Jan-2025	28 days	1 days	✓	15-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE WLNG DS1	E235.Br-L	14-Jan-2025	15-Jan-2025	28 days	1 days	✓	15-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE WLG US1	E235.Cl	14-Jan-2025	15-Jan-2025	28 days	1 days	✓	15-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE WLNG DS1	E235.Cl	14-Jan-2025	15-Jan-2025	28 days	1 days	✓	15-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE WLG US1	E235.F	14-Jan-2025	15-Jan-2025	28 days	1 days	✓	15-Jan-2025	28 days	1 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Fluoride in Water by IC										
HDPE WLNG DS1	E235.F	14-Jan-2025	15-Jan-2025	28 days	1 days	✓	15-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE WLG US1	E235.NO3-L	14-Jan-2025	15-Jan-2025	3 days	1 days	✓	15-Jan-2025	3 days	1 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE WLNG DS1	E235.NO3-L	14-Jan-2025	15-Jan-2025	3 days	1 days	✓	15-Jan-2025	3 days	1 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE WLG US1	E235.NO2-L	14-Jan-2025	15-Jan-2025	3 days	1 days	✓	15-Jan-2025	3 days	1 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE WLNG DS1	E235.NO2-L	14-Jan-2025	15-Jan-2025	3 days	1 days	✓	15-Jan-2025	3 days	1 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE WLG US1	E235.SO4	14-Jan-2025	15-Jan-2025	28 days	1 days	✓	15-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE WLNG DS1	E235.SO4	14-Jan-2025	15-Jan-2025	28 days	1 days	✓	15-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) WLG US1	E366	14-Jan-2025	17-Jan-2025	28 days	3 days	✓	19-Jan-2025	28 days	5 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) WLNG DS1	E366	14-Jan-2025	17-Jan-2025	28 days	3 days	✓	19-Jan-2025	28 days	5 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
WLG US1	E372-U	14-Jan-2025	17-Jan-2025	28 days	3 days	✓	19-Jan-2025	28 days	5 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
WLNG DS1	E372-U	14-Jan-2025	17-Jan-2025	28 days	3 days	✓	19-Jan-2025	28 days	5 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
WLG US1	E509	14-Jan-2025	17-Jan-2025	28 days	3 days	✓	17-Jan-2025	28 days	3 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
WLNG DS1	E509	14-Jan-2025	17-Jan-2025	28 days	3 days	✓	17-Jan-2025	28 days	3 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
WLG US1	E421	14-Jan-2025	15-Jan-2025	180 days	1 days	✓	16-Jan-2025	180 days	2 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
WLNG DS1	E421	14-Jan-2025	15-Jan-2025	180 days	1 days	✓	16-Jan-2025	180 days	2 days	✓
Field Tests : Field pH,EC,Salinity, TDS, Cl2,ClO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine										
Glass vial dissolved (hydrochloric acid)										
WLG US1	EF001	14-Jan-2025	----	----	----		15-Jan-2025	----	1 days	
Field Tests : Field pH,EC,Salinity, TDS, Cl2,ClO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine										
Glass vial dissolved (hydrochloric acid)										
WLNG DS1	EF001	14-Jan-2025	----	----	----		15-Jan-2025	----	1 days	
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid)										
WLG US1	E358-L	14-Jan-2025	17-Jan-2025	28 days	3 days	✓	17-Jan-2025	28 days	3 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid) WLNG DS1	E358-L	14-Jan-2025	17-Jan-2025	28 days	3 days	✓	17-Jan-2025	28 days	3 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE WLG US1	E290	14-Jan-2025	15-Jan-2025	14 days	1 days	✓	15-Jan-2025	14 days	1 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE WLNG DS1	E290	14-Jan-2025	15-Jan-2025	14 days	1 days	✓	15-Jan-2025	14 days	1 days	✓
Physical Tests : TDS by Gravimetry										
HDPE WLG US1	E162	14-Jan-2025	----	----	----		20-Jan-2025	7 days	6 days	✓
Physical Tests : TDS by Gravimetry										
HDPE WLNG DS1	E162	14-Jan-2025	----	----	----		20-Jan-2025	7 days	6 days	✓
Physical Tests : TSS by Gravimetry										
HDPE WLG US1	E160	14-Jan-2025	----	----	----		20-Jan-2025	7 days	6 days	✓
Physical Tests : TSS by Gravimetry										
HDPE WLNG DS1	E160	14-Jan-2025	----	----	----		20-Jan-2025	7 days	6 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide) WLG US1	E532	14-Jan-2025	----	----	----		15-Jan-2025	28 days	1 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide) WLNG DS1	E532	14-Jan-2025	----	----	----		15-Jan-2025	28 days	1 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid)										
WLG US1	E508	14-Jan-2025	17-Jan-2025	28 days	3 days	✓	17-Jan-2025	28 days	3 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid)										
WLNG DS1	E508	14-Jan-2025	17-Jan-2025	28 days	3 days	✓	17-Jan-2025	28 days	3 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid)										
WLG US1	E420	14-Jan-2025	16-Jan-2025	180 days	2 days	✓	17-Jan-2025	180 days	3 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid)										
WLNG DS1	E420	14-Jan-2025	16-Jan-2025	180 days	2 days	✓	17-Jan-2025	180 days	3 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide)										
WLG US1	E395	14-Jan-2025	----	----	----		16-Jan-2025	7 days	2 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide)										
WLNG DS1	E395	14-Jan-2025	----	----	----		16-Jan-2025	7 days	2 days	✓

Legend & Qualifier Definitions

Rec. HT: ALS recommended hold time (see units).

Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water**

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Alkalinity Species by Titration	E290	1839523	1	13	7.6	5.0	✓
Ammonia by Fluorescence	E298	1843271	1	17	5.8	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1839517	1	13	7.6	5.0	✓
Chloride in Water by IC	E235.Cl	1839516	1	13	7.6	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1842513	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1839449	1	19	5.2	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1843268	1	11	9.0	5.0	✓
Fluoride in Water by IC	E235.F	1839515	1	17	5.8	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1839518	1	15	6.6	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1839519	1	13	7.6	5.0	✓
Sulfate in Water by IC	E235.SO4	1839520	1	13	7.6	5.0	✓
TDS by Gravimetry	E162	1845563	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1840798	1	16	6.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1842522	2	28	7.1	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1840452	1	20	5.0	5.0	✓
Total Nitrogen by Colourimetry	E366	1843269	1	14	7.1	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1843272	1	14	7.1	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1841986	1	12	8.3	5.0	✓
TSS by Gravimetry	E160	1845557	1	20	5.0	5.0	✓
Laboratory Control Samples (LCS)							
Alkalinity Species by Titration	E290	1839523	1	13	7.6	5.0	✓
Ammonia by Fluorescence	E298	1843271	1	17	5.8	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1839517	1	13	7.6	5.0	✓
Chloride in Water by IC	E235.Cl	1839516	1	13	7.6	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1842513	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1839449	1	19	5.2	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1843268	1	11	9.0	5.0	✓
Fluoride in Water by IC	E235.F	1839515	1	17	5.8	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1839518	1	15	6.6	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1839519	1	13	7.6	5.0	✓
Sulfate in Water by IC	E235.SO4	1839520	1	13	7.6	5.0	✓
TDS by Gravimetry	E162	1845563	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1840798	1	16	6.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1842522	2	28	7.1	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1840452	1	20	5.0	5.0	✓
Total Nitrogen by Colourimetry	E366	1843269	1	14	7.1	5.0	✓

Matrix: **Water**

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Control Samples (LCS) - Continued							
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1843272	1	14	7.1	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1841986	1	12	8.3	5.0	✓
TSS by Gravimetry	E160	1845557	1	20	5.0	5.0	✓
Method Blanks (MB)							
Alkalinity Species by Titration	E290	1839523	1	13	7.6	5.0	✓
Ammonia by Fluorescence	E298	1843271	1	17	5.8	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1839517	1	13	7.6	5.0	✓
Chloride in Water by IC	E235.Cl	1839516	1	13	7.6	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1842513	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1839449	1	19	5.2	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1843268	1	11	9.0	5.0	✓
Fluoride in Water by IC	E235.F	1839515	1	17	5.8	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1839518	1	15	6.6	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1839519	1	13	7.6	5.0	✓
Sulfate in Water by IC	E235.SO4	1839520	1	13	7.6	5.0	✓
TDS by Gravimetry	E162	1845563	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1840798	1	16	6.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1842522	2	28	7.1	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1840452	1	20	5.0	5.0	✓
Total Nitrogen by Colourimetry	E366	1843269	1	14	7.1	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1843272	1	14	7.1	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1841986	1	12	8.3	5.0	✓
TSS by Gravimetry	E160	1845557	1	20	5.0	5.0	✓
Matrix Spikes (MS)							
Ammonia by Fluorescence	E298	1843271	1	17	5.8	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1839517	1	13	7.6	5.0	✓
Chloride in Water by IC	E235.Cl	1839516	1	13	7.6	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1842513	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1839449	1	19	5.2	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1843268	1	11	9.0	5.0	✓
Fluoride in Water by IC	E235.F	1839515	1	17	5.8	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1839518	1	15	6.6	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1839519	1	13	7.6	5.0	✓
Sulfate in Water by IC	E235.SO4	1839520	1	13	7.6	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1840798	1	16	6.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1842522	2	28	7.1	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1840452	1	20	5.0	5.0	✓
Total Nitrogen by Colourimetry	E366	1843269	1	14	7.1	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1843272	1	14	7.1	5.0	✓

Matrix: **Water**

Evaluation: × = *QC frequency outside specification*; ✓ = *QC frequency within specification.*

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Matrix Spikes (MS) - Continued							
Total Sulfide by Colourimetry (Automated Flow)	E395	1841986	1	12	8.3	5.0	✓

Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
TSS by Gravimetry	E160 ALS Environmental - Vancouver	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at 104 ± 1°C, with gravimetric measurement of the filtered solids. Samples containing very high dissolved solid content (i.e. seawaters, brackish waters) may produce a positive bias by this method. Alternate analysis methods are available for these types of samples.
TDS by Gravimetry	E162 ALS Environmental - Vancouver	Water	APHA 2540 C (mod)	Total Dissolved Solids (TDS) are determined by filtering a sample through a glass fibre filter, with evaporation of the filtrate at 180 ± 2°C for 16 hours or to constant weight, with gravimetric measurement of the residue.
Bromide in Water by IC (Low Level)	E235.Br-L ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Chloride in Water by IC	E235.Cl ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Fluoride in Water by IC	E235.F ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrite in Water by IC (Low Level)	E235.NO2-L ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrate in Water by IC (Low Level)	E235.NO3-L ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Sulfate in Water by IC	E235.SO4 ALS Environmental - Vancouver	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Alkalinity Species by Titration	E290 ALS Environmental - Vancouver	Water	APHA 2320 B (mod)	Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Ammonia by Fluorescence	E298 ALS Environmental - Vancouver	Water	Method Fialab 100, 2018	Ammonia in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021)
Dissolved Organic Carbon by Combustion (Low Level)	E358-L ALS Environmental - Vancouver	Water	APHA 5310 B (mod)	Dissolved Organic Carbon (Non-Purgeable), also known as NPOC (dissolved), is a direct measurement of DOC after a filtered (0.45 micron) sample has been acidified and purged to remove inorganic carbon (IC). Analysis is by high temperature combustion with infrared detection of CO2. NPOC does not include volatile organic species that are purged off with IC. For samples where the majority of DC (dissolved carbon) is comprised of IC (which is common), this method is more accurate and more reliable than the DOC by subtraction method (i.e. DC minus DIC).
Total Nitrogen by Colourimetry	E366 ALS Environmental - Vancouver	Water	Chinchilla Scientific Nitrate Method, 2011	Following digestion, total nitrogen is is determined colourimetrically using a discrete analyzer utilizing the vanadium chloride reduction method. This method of analysis is approved under US EPA 40 CFR Part 136 (May 2021).
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U ALS Environmental - Vancouver	Water	APHA 4500-P E (mod).	Total Phosphorus is determined colourimetrically using a discrete analyzer after heated persulfate digestion of the sample.
Total Sulfide by Colourimetry (Automated Flow)	E395 ALS Environmental - Vancouver	Water	APHA 4500 -S E-Auto-Colorimetry	Sulfide is determined using the gas dialysis automated methlyene blue colourimetric method. Results expressed "as H2S" if reported represent the maximum possible H2S concentration based on the total sulfide concentration in the sample. The H2S calculation converts Total Sulphide as (S2-) and reports it as Total Sulphide as (H2S)
Total Metals in Water by CRC ICPMS	E420 ALS Environmental - Vancouver	Water	EPA 200.2/6020B (mod)	Water samples are digested with nitric and hydrochloric acids, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Dissolved Metals in Water by CRC ICPMS	E421 ALS Environmental - Vancouver	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Total Mercury in Water by CVAAS	E508 ALS Environmental - Vancouver	Water	EPA 1631E (mod)	Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS
Dissolved Mercury in Water by CVAAS	E509 ALS Environmental - Vancouver	Water	APHA 3030B/EPA 1631E (mod)	Water samples are filtered (0.45 um), preserved with HCl, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Total Hexavalent Chromium (Cr VI) by IC	E532 ALS Environmental - Vancouver	Water	APHA 3500-Cr C (Ion Chromatography)	Hexavalent Chromium is measured by Ion chromatography-Post column reaction and UV detection. Results are based on an un-filtered, field-preserved sample.
Dissolved Hardness (Calculated)	EC100 ALS Environmental - Vancouver	Water	APHA 2340B	"Hardness (as CaCO3), dissolved" is calculated from the sum of dissolved Calcium and Magnesium concentrations, expressed in CaCO3 equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations.
Hardness (Calculated) from Total Ca/Mg	EC100A ALS Environmental - Vancouver	Water	APHA 2340B	"Hardness (as CaCO3), from total Ca/Mg" is calculated from the sum of total Calcium and Magnesium concentrations, expressed in CaCO3 equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because it is a property of water due to dissolved divalent cations. Hardness from total Ca/Mg is normally comparable to Dissolved Hardness in non-turbid waters.
Un-ionized Total Hydrogen Sulfide (calculated)	EC395 ALS Environmental - Vancouver	Water	APHA 4500 -S H	Un-ionized sulfide is calculated using results from total sulfide analysis, pH, temperature, and ionic strength of the sample. Calculation of un-ionized sulfide using total sulfide concentrations may be biased high due to particulate forms of sulfide measured during total sulfide testing.
Total Trivalent Chromium (Cr III) by Calculation	EC535 ALS Environmental - Vancouver	Water	APHA 3030B/6020A/EPA 7196A (mod)	Chromium (III)-Total is calculated as the difference between the total chromium and the total hexavalent chromium (Cr(VI)) results.The Limit of Reporting for Chromium (III) varies as a function of the test results.
Field pH,EC,Salinity, TDS, Cl2,ClO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine	EF001 ALS Environmental - Vancouver	Water	Field Measurement (Client Supplied)	Field pH,EC,Salinity, TDS, Cl2,ClO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3 or Chloramine measurements provided by client and recorded on ALS report may affect the validity of results.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Ammonia	EP298 ALS Environmental - Vancouver	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Preparation for Dissolved Organic Carbon for Combustion	EP358 ALS Environmental - Vancouver	Water	APHA 5310 B (mod)	Preparation for Dissolved Organic Carbon
Digestion for Total Nitrogen in water	EP366 ALS Environmental - Vancouver	Water	APHA 4500-P J (mod)	Samples for total nitrogen analysis are digested using a heated persulfate digestion. Nitrogen compounds are converted to nitrate in this digestion.
Digestion for Total Phosphorus in water	EP372 ALS Environmental - Vancouver	Water	APHA 4500-P E (mod).	Samples are heated with a persulfate digestion reagent.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Dissolved Metals Water Filtration	EP421 ALS Environmental - Vancouver	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO3.
Dissolved Mercury Water Filtration	EP509 ALS Environmental - Vancouver	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HCl.

ALS Canada Ltd.

QUALITY CONTROL REPORT

Work Order	: **VA25A0825**	Page	: 1 of 17
Client	[redacted]	Laboratory	:
Contact		Account Manager	:
Address		Address	: [redacted]
Telephone		Telephone	:
Project		Date Samples Received	: 14-Jan-2025 18:00
PO	: ----	Date Analysis Commenced	: 15-Jan-2025
C-O-C number	: ----	Issue Date	: 22-Jan-2025 15:41
Sampler	: ----		
Site	: Water Analysis		
Quote number	: VA25-TRIT100-001		
No. of samples received	: 2		
No. of samples analysed	: 2		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
[redacted]		Vancouver Metals, Burnaby, British Columbia
		Vancouver Metals, Burnaby, British Columbia
		Vancouver Inorganics, Burnaby, British Columbia
		Vancouver Inorganics, Burnaby, British Columbia
		Vancouver Metals, Burnaby, British Columbia
		Vancouver Administration, Burnaby, British Columbia

General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO = Data Quality Objective.
LOR = Limit of Reporting (detection limit).
RPD = Relative Percent Difference
# = Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
Physical Tests (QC Lot: 1839523)											
VA25A0812-003	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	134	134	0.00%	20%	----
Physical Tests (QC Lot: 1845557)											
VA25A0825-001	WLG US1	Solids, total suspended [TSS]	----	E160	3.0	mg/L	<3.0	<3.0	0	Diff <2x LOR	----
Physical Tests (QC Lot: 1845563)											
VA25A0825-001	WLG US1	Solids, total dissolved [TDS]	----	E162	20	mg/L	25	22	2	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1839515)											
VA25A0812-001	Anonymous	Fluoride	16984-48-8	E235.F	2.00	mg/L	<2.00	<2.00	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1839516)											
VA25A0812-001	Anonymous	Chloride	16887-00-6	E235.Cl	50.0	mg/L	10400	10700	2.09%	20%	----
Anions and Nutrients (QC Lot: 1839517)											
VA25A0812-001	Anonymous	Bromide	24959-67-9	E235.Br-L	5.00	mg/L	31.6	32.4	0.748	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1839518)											
VA25A0812-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	0.500	mg/L	<0.500	<0.500	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1839519)											
VA25A0812-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.100	mg/L	<0.100	<0.100	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1839520)											
VA25A0812-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	30.0	mg/L	1830	1870	2.17%	20%	----
Anions and Nutrients (QC Lot: 1843269)											
FJ2500139-001	Anonymous	Nitrogen, total	7727-37-9	E366	0.030	mg/L	0.206	0.203	0.003	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1843271)											
FJ2500139-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1843272)											
FJ2500144-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0038	0.0038	0.00001	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 1843268)											
FJ2500139-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	1.83	1.86	0.03	Diff <2x LOR	----
Total Sulfides (QC Lot: 1841986)											
VA25A0825-001	WLG US1	Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	<0.0015	0	Diff <2x LOR	----
Total Metals (QC Lot: 1840452)											
VA25A0825-001	WLG US1	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0950	0.0872	8.62%	20%	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Total Metals (QC Lot: 1840452) - continued											
VA25A0825-001	WLG US1	Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00011	0.00011	0.000006	Diff <2x LOR	----
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.00290	0.00281	3.35%	20%	----
		Beryllium, total	7440-41-7	E420	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, total	7440-42-8	E420	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.0000050	mg/L	<0.0000050	0.0000096	0.0000046	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	1.71	1.72	0.0248%	20%	----
		Cesium, total	7440-46-2	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, total	7440-48-4	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Copper, total	7440-50-8	E420	0.00050	mg/L	0.00063	0.00059	0.00004	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.010	mg/L	0.039	0.037	0.001	Diff <2x LOR	----
		Lead, total	7439-92-1	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	0.231	0.216	6.59%	20%	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.00203	0.00192	5.52%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000283	0.000294	0.000011	Diff <2x LOR	----
		Nickel, total	7440-02-0	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.050	mg/L	0.167	0.154	0.013	Diff <2x LOR	----
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00026	0.00023	0.00003	Diff <2x LOR	----
		Selenium, total	7782-49-2	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	3.78	3.62	4.17%	20%	----
		Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, total	7440-23-5	E420	0.050	mg/L	1.22	1.17	4.25%	20%	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.00973	0.00978	0.584%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.00030	mg/L	0.00097	0.00086	0.00011	Diff <2x LOR	----
		Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.000106	0.000106	0.737%	20%	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Total Metals (QC Lot: 1840452) - continued											
VA25A0825-001	WLG US1	Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	<0.0030	0	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Total Metals (QC Lot: 1842522)											
FJ2500108-001	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Total Metals (QC Lot: 1842523)											
VA25A0825-002	WLNG DS1	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1839449)											
VA25A0681-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.0199	0.0201	0.949%	20%	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0649	0.0683	5.18%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	79.9	84.3	5.37%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	0.00067	0.00067	0.000003	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	2.30	2.35	2.44%	20%	----
		Lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0119	0.0120	1.11%	20%	----
		Magnesium, dissolved	7439-95-4	E421	0.100	mg/L	30.6	29.7	2.84%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.482	0.492	2.11%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000310	0.000304	0.000007	Diff <2x LOR	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.00171	0.00172	0.000006	Diff <2x LOR	----
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.100	mg/L	2.19	2.24	2.12%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00298	0.00292	2.18%	20%	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	5.62	5.41	3.93%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Dissolved Metals (QC Lot: 1839449) - continued											
VA25A0681-001	Anonymous	Sodium, dissolved	7440-23-5	E421	0.050	mg/L	4.15	4.14	0.306%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.404	0.396	2.03%	20%	----
		Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	40.5	38.9	3.90%	20%	----
		Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.00170	0.00171	0.793%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Zirconium, dissolved	7440-67-7	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1842513)											
VA25A0704-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Speciated Metals (QC Lot: 1840798)											
VA25A0597-021	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----

Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 1839523)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 1845557)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Physical Tests (QCLot: 1845563)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Anions and Nutrients (QCLot: 1839515)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 1839516)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 1839517)						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 1839518)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1839519)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 1839520)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 1843269)						
Nitrogen, total	7727-37-9	E366	0.03	mg/L	<0.030	----
Anions and Nutrients (QCLot: 1843271)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1843272)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Organic / Inorganic Carbon (QCLot: 1843268)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Total Sulfides (QCLot: 1841986)						
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	----
Total Metals (QCLot: 1840452)						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
Barium, total	7440-39-3	E420	0.0001	mg/L	<0.00010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1840452) - continued						
Beryllium, total	7440-41-7	E420	0.00002	mg/L	<0.000020	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	<0.000050	----
Boron, total	7440-42-8	E420	0.01	mg/L	<0.010	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
Calcium, total	7440-70-2	E420	0.05	mg/L	<0.050	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	<0.000010	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
Copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----
Iron, total	7439-89-6	E420	0.01	mg/L	<0.010	----
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----
Lithium, total	7439-93-2	E420	0.001	mg/L	<0.0010	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	<0.0050	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	<0.00010	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	<0.050	----
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	<0.00020	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silicon, total	7440-21-3	E420	0.1	mg/L	<0.10	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	<0.00020	MBRR
Thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	<0.00010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	<0.00010	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1842522)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Total Metals (QCLot: 1842523)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Dissolved Metals (QCLot: 1839449)						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 1839449) - continued						
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 1842513)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Speciated Metals (QCLot: 1840798)						
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	<0.00050	----

Qualifiers

Qualifier	Description
MBRR	*Initial MB for this submission had positive results for flagged analyte (data not shown). Low level samples were repeated with new QC (2nd MB results shown). High level results (>5x initial MB level) and non-detect results were reported and are defensible*

Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 1839523)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	104	85.0	115	----
Physical Tests (QCLot: 1845557)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	86.3	85.0	115	----
Physical Tests (QCLot: 1845563)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	109	85.0	115	----
Anions and Nutrients (QCLot: 1839515)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	103	90.0	110	----
Anions and Nutrients (QCLot: 1839516)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	104	90.0	110	----
Anions and Nutrients (QCLot: 1839517)									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	100	85.0	115	----
Anions and Nutrients (QCLot: 1839518)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 1839519)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 1839520)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	105	90.0	110	----
Anions and Nutrients (QCLot: 1843269)									
Nitrogen, total	7727-37-9	E366	0.03	mg/L	0.5 mg/L	99.4	75.0	125	----
Anions and Nutrients (QCLot: 1843271)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	93.2	85.0	115	----
Anions and Nutrients (QCLot: 1843272)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	92.4	80.0	120	----
Organic / Inorganic Carbon (QCLot: 1843268)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	108	80.0	120	----
Total Sulfides (QCLot: 1841986)									
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.08 mg/L	98.8	80.0	120	----
Total Metals (QCLot: 1840452)									

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 1840452) - continued									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	102	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	105	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	103	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	103	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	94.3	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	101	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	91.1	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	102	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	96.6	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	101	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	101	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	99.1	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	101	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	102	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	99.9	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	95.3	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	101	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	99.3	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	102	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	100.0	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	112	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	106	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	103	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	98.9	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	107	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	97.2	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	101	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	101	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	83.2	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	106	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	98.4	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	91.4	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	104	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	96.8	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	99.5	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	95.8	80.0	120	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 1840452) - continued									
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	101	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	93.6	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	101	80.0	120	----
Total Metals (QCLot: 1842522)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	99.2	80.0	120	----
Total Metals (QCLot: 1842523)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	99.7	80.0	120	----
Dissolved Metals (QCLot: 1839449)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	107	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	102	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	1 mg/L	107	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	103	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	107	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	104	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	97.0	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	101	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	98.2	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	102	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	106	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	102	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	103	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	98.5	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.5 mg/L	102	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.25 mg/L	102	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	111	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	104	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	104	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	101	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	# 122	80.0	120	MES
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	108	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	108	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	101	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	101	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	97.1	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	107	80.0	120	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 1839449) - continued									
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.25 mg/L	102	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	93.7	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	99.0	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	101	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	95.1	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	98.9	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	98.5	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	97.3	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	99.3	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.5 mg/L	104	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	98.0	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	92.9	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	102	80.0	120	----
Speciated Metals (QCLot: 1840798)									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.25 mg/L	100	80.0	120	----

Qualifiers

Qualifier	Description
MES	*Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).*

Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 1839515)										
VA25A0812-002	Anonymous	Fluoride	16984-48-8	E235.F	102 mg/L	100 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 1839516)										
VA25A0812-002	Anonymous	Chloride	16887-00-6	E235.Cl	9860 mg/L	10000 mg/L	98.6	75.0	125	----
Anions and Nutrients (QCLot: 1839517)										
VA25A0812-002	Anonymous	Bromide	24959-67-9	E235.Br-L	49.8 mg/L	50 mg/L	99.6	75.0	125	----
Anions and Nutrients (QCLot: 1839518)										
VA25A0812-002	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	241 mg/L	250 mg/L	96.5	75.0	125	----
Anions and Nutrients (QCLot: 1839519)										
VA25A0812-002	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	48.0 mg/L	50 mg/L	96.0	75.0	125	----
Anions and Nutrients (QCLot: 1839520)										
VA25A0812-002	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	9960 mg/L	10000 mg/L	99.6	75.0	125	----
Anions and Nutrients (QCLot: 1843269)										
FJ2500139-002	Anonymous	Nitrogen, total	7727-37-9	E366	0.382 mg/L	0.4 mg/L	95.5	70.0	130	----
Anions and Nutrients (QCLot: 1843271)										
FJ2500139-002	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0913 mg/L	0.1 mg/L	91.3	75.0	125	----
Anions and Nutrients (QCLot: 1843272)										
FJ2500144-002	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0470 mg/L	0.05 mg/L	94.0	70.0	130	----
Organic / Inorganic Carbon (QCLot: 1843268)										
FJ2500139-002	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	5.60 mg/L	5 mg/L	112	70.0	130	----
Total Sulfides (QCLot: 1841986)										
VA25A0825-002	WLNG DS1	Sulfide, total (as S)	18496-25-8	E395	0.201 mg/L	0.2 mg/L	101	75.0	125	----
Total Metals (QCLot: 1840452)										
VA25A0825-002	WLNG DS1	Aluminum, total	7429-90-5	E420	0.178 mg/L	0.2 mg/L	88.9	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0184 mg/L	0.02 mg/L	92.3	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0186 mg/L	0.02 mg/L	93.0	70.0	130	----
		Barium, total	7440-39-3	E420	0.0187 mg/L	0.02 mg/L	93.6	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0346 mg/L	0.04 mg/L	86.6	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.00957 mg/L	0.01 mg/L	95.7	70.0	130	----
		Boron, total	7440-42-8	E420	0.080 mg/L	0.1 mg/L	80.5	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00388 mg/L	0.004 mg/L	97.0	70.0	130	----
		Calcium, total	7440-70-2	E420	3.36 mg/L	4 mg/L	84.1	70.0	130	----
		Cesium, total	7440-46-2	E420	0.00915 mg/L	0.01 mg/L	91.5	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0374 mg/L	0.04 mg/L	93.6	70.0	130	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Total Metals (QCLot: 1840452) - continued										
VA25A0825-002	WLNG DS1	Cobalt, total	7440-48-4	E420	0.0183 mg/L	0.02 mg/L	91.6	70.0	130	----
		Copper, total	7440-50-8	E420	0.0184 mg/L	0.02 mg/L	91.9	70.0	130	----
		Iron, total	7439-89-6	E420	1.82 mg/L	2 mg/L	91.3	70.0	130	----
		Lead, total	7439-92-1	E420	0.0192 mg/L	0.02 mg/L	95.8	70.0	130	----
		Lithium, total	7439-93-2	E420	0.0860 mg/L	0.1 mg/L	86.0	70.0	130	----
		Magnesium, total	7439-95-4	E420	0.913 mg/L	1 mg/L	91.3	70.0	130	----
		Manganese, total	7439-96-5	E420	0.0180 mg/L	0.02 mg/L	89.9	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0184 mg/L	0.02 mg/L	91.8	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0376 mg/L	0.04 mg/L	93.9	70.0	130	----
		Phosphorus, total	7723-14-0	E420	8.99 mg/L	10 mg/L	89.9	70.0	130	----
		Potassium, total	7440-09-7	E420	3.82 mg/L	4 mg/L	95.4	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0183 mg/L	0.02 mg/L	91.6	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0373 mg/L	0.04 mg/L	93.3	70.0	130	----
		Silicon, total	7440-21-3	E420	8.85 mg/L	10 mg/L	88.5	70.0	130	----
		Silver, total	7440-22-4	E420	0.00382 mg/L	0.004 mg/L	95.4	70.0	130	----
		Sodium, total	7440-23-5	E420	1.77 mg/L	2 mg/L	88.6	70.0	130	----
		Strontium, total	7440-24-6	E420	0.0184 mg/L	0.02 mg/L	92.1	70.0	130	----
		Sulfur, total	7704-34-9	E420	18.4 mg/L	20 mg/L	92.1	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0375 mg/L	0.04 mg/L	93.8	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00372 mg/L	0.004 mg/L	93.1	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0194 mg/L	0.02 mg/L	97.1	70.0	130	----
		Tin, total	7440-31-5	E420	0.0188 mg/L	0.02 mg/L	94.2	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0350 mg/L	0.04 mg/L	87.6	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0191 mg/L	0.02 mg/L	95.4	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00371 mg/L	0.004 mg/L	92.7	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.0919 mg/L	0.1 mg/L	91.9	70.0	130	----
		Zinc, total	7440-66-6	E420	0.347 mg/L	0.4 mg/L	86.8	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0366 mg/L	0.04 mg/L	91.5	70.0	130	----
Total Metals (QCLot: 1842522)										
FJ2500108-003	Anonymous	Mercury, total	7439-97-6	E508	0.000103 mg/L	0 mg/L	103	70.0	130	----
Total Metals (QCLot: 1842523)										
VA25A0826-001	Anonymous	Mercury, total	7439-97-6	E508	0.000102 mg/L	0 mg/L	102	70.0	130	----
Dissolved Metals (QCLot: 1839449)										
VA25A0738-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.204 mg/L	0.2 mg/L	102	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0195 mg/L	0.02 mg/L	97.6	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0209 mg/L	0.02 mg/L	105	70.0	130	----
		Barium, dissolved	7440-39-3	E421	0.0192 mg/L	0.02 mg/L	96.2	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.0404 mg/L	0.04 mg/L	101	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.00781 mg/L	0.01 mg/L	78.1	70.0	130	----
		Boron, dissolved	7440-42-8	E421	ND mg/L	----	ND	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00380 mg/L	0.004 mg/L	95.0	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.00968 mg/L	0.01 mg/L	96.8	70.0	130	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 1839449) - continued										
VA25A0738-001	Anonymous	Chromium, dissolved	7440-47-3	E421	0.0375 mg/L	0.04 mg/L	93.7	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0183 mg/L	0.02 mg/L	91.5	70.0	130	----
		Copper, dissolved	7440-50-8	E421	0.0172 mg/L	0.02 mg/L	86.2	70.0	130	----
		Iron, dissolved	7439-89-6	E421	1.77 mg/L	2 mg/L	88.4	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0181 mg/L	0.02 mg/L	90.7	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.0966 mg/L	0.1 mg/L	96.6	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	ND mg/L	----	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	ND mg/L	----	ND	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.0201 mg/L	0.02 mg/L	100	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0351 mg/L	0.04 mg/L	87.8	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	11.0 mg/L	10 mg/L	110	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	ND mg/L	----	ND	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	ND mg/L	----	ND	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0400 mg/L	0.04 mg/L	100	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	9.42 mg/L	10 mg/L	94.2	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00218 mg/L	0.004 mg/L	54.5	70.0	130	MS-Ag
		Sodium, dissolved	7440-23-5	E421	ND mg/L	----	ND	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	ND mg/L	----	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	ND mg/L	----	ND	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.0395 mg/L	0.04 mg/L	98.7	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.00354 mg/L	0.004 mg/L	88.5	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0214 mg/L	0.02 mg/L	107	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0173 mg/L	0.02 mg/L	86.5	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0361 mg/L	0.04 mg/L	90.3	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0189 mg/L	0.02 mg/L	94.6	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	0.00349 mg/L	0.004 mg/L	87.4	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.0973 mg/L	0.1 mg/L	97.3	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.352 mg/L	0.4 mg/L	87.9	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0339 mg/L	0.04 mg/L	84.8	70.0	130	----
Dissolved Metals (QCLot: 1842513)										
VA25A0704-002	Anonymous	Mercury, dissolved	7439-97-6	E509	0.000101 mg/L	0 mg/L	101	70.0	130	----
Speciated Metals (QCLot: 1840798)										
VA25A0597-022	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.256 mg/L	0.25 mg/L	102	70.0	130	----

Qualifiers

Qualifier	Description
MS-Ag	*MS-Ag: Matrix Spike recovery for silver was marginally below DQO (40 to <60%) due to its instability in the sample matrix. Silver was not detected. Reported result (< LOR) is reliable*

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:	[redacted]
Contact:	
Phone:	
Street:	
City/Province:	
Postal Code:	
Invoice To	
Company:	
Contact:	

Report Format / Distribution

Select Report Format: ☑ 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: [redacted]
Email 2:
Email 3:
Select Invoice D:
Email 1 or Fax:
Email 2:

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.

Project Information		Oil and Gas Required Fields (client use)	
ALS Account # / Quote #:	VA23-TRiT100-012	AFE/Cost Center:	PO#:
Job #:	11964	Major/Minor Code:	Routing Code:
PO / AFE:	11964 - Task 20 - Phase 3C-4C	Requisitioner:	
LSD:		Location:	
ALS Lab Work Order # (lab use only):	VA25A0825	ALS Contact: [redacted]	Sampler:

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 + mercury	Dissolved metals + mercury (F)	Total hexavalent chromium	Total trivalent chromium	TSS	TDS	Nutrients (ammonia, ammonium, total nitrogen, total phosphorus) (P)	Total sulfide (low) (as H2S), Unionized Sulfide (low) (P)	Anions scan (Br, Cl, F, NO2, NO3, SO4)	General parameters (alkalinity)	DOC (F/P)	SAMPLES ON HOLD	Sample is hazardous (please provide further details)	NUMBER OF CONTAINERS
	WLNG US 1	Jan14/25	9:52	Water	R	R	R	R	R	R	R	R	R	R	R		N	9
	pH: 7.73 cond: 26 temp: 5.1																	
	WLNG DS 1	Jan14/25	10:57	Water	R	R	R	R	R	R	R	R	R	R	R		N	9
	pH: 7.89 cond: 24 temp: 5.4																	

Environmental Division
Vancouver
Work Order Reference
VA25A0825

Telephone : +1 604 253 4188

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

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			
				6.9			

SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
[redacted]	Time: 5:55	Received by:	Date:	Time:	Received by: KJ	Date: JAN-14	Time: 1800

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

BLY. 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**.

SEPT 2017 FRONT

Woodfibre Site Receiving Environment Field Notes and Logs

FortisBC Eagle Mountain-Woodfibre Gas Pipeline

Water Discharge Authorization Water Quality Monitoring

2025-1-14-Renkers-DF955

Project Component:	Tunnel	**Site Name:**	Receiving Environment - Downstream of Discharge
Inspection Date:	01/14/2025	**Location:**	WLNG
Triton QP:	Stephanie Renkers	**Latitude/Longitude:**	49.669103 -123.248235
Temperature(c):	Low -4 High 3	**Permit:**	PE 110136
Weather Conditions:	Overcast	**Ground Conditions:**	Dry

Observations

Time: 10:57:00 **Flow Volume (visual):** moderate

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	**Total Trivalent Chromium**	Yes	**QA Samples:**	No
Nutrients	Yes	**VOC/VPH**	No		
DOC	Yes	**EPH, PAH, LEPH/HEPH**	No		
		Trout LC50	No		

Logger Maintenance

Logger Maintenance Performed?	Yes	**Photo of COC with Lab Signature?**	Yes

Describe Logger Maintenance

Calibrated turbidity at DS sonde due to recent high readings.

Photos

Photo: 1

Location: DS1

Description: Upstream

Photo: 2

Location: DS1

Description: Across

Photos

Photo: 3

Location: DS1

Description: Downstream

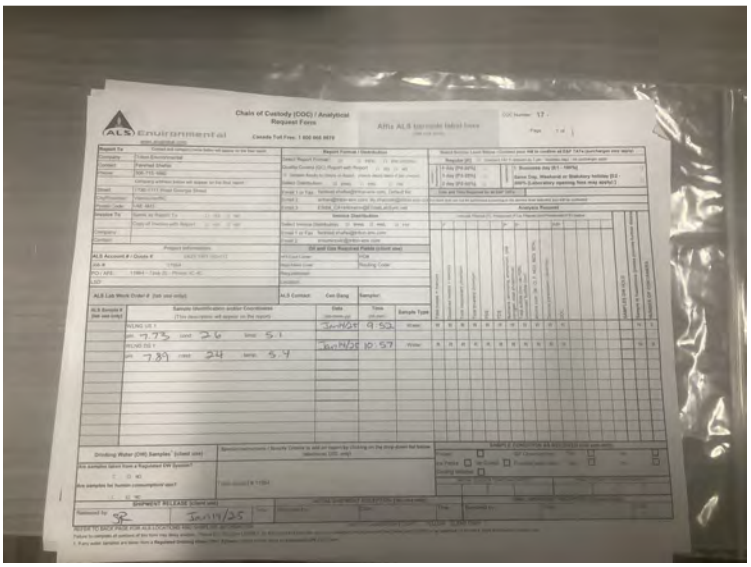


Photo: 4

Location: DS1

Description: Lab COC

Sign Off

Report Prepared By:	Stephanie Renkers	**Report Reviewed:**	Yes
Report Reviewer:		**Professional(s) of Record:**	
Name:			
Designation:			
Designation Number:			

FortisBC Eagle Mountain-Woodfibre Gas Pipeline

Water Discharge Authorization Water Quality Monitoring

2025-1-14-Renkers-E2E88

Project Component:	Tunnel	**Site Name:**	Receiving Environment - Upstream of Discharge
Inspection Date:	01/14/2025	**Location:**	WLNG
Triton QP:	Stephanie Renkers	**Latitude/Longitude:**	49.669455 -123.25087
Temperature(c):	Low -4 High 3	**Permit:**	PE 110136
Weather Conditions:	Overcast	**Ground Conditions:**	Dry

Observations

Time: 09:52:00 **Flow Volume (visual):** low

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	**Total Trivalent Chromium**	Yes	**QA Samples:**	No
Nutrients	Yes	**VOC/VPH**	No		
DOC	Yes	**EPH, PAH, LEPH/HEPH**	No		
		Trout LC50	No		

Logger Maintenance

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

Describe Logger Maintenance

Photos

Photo: 1

Location: US1

Description: Upstream

Photo: 2

Location: US1

Description: Across

Photos

Photo: 3

Location: US1

Description: Downstream

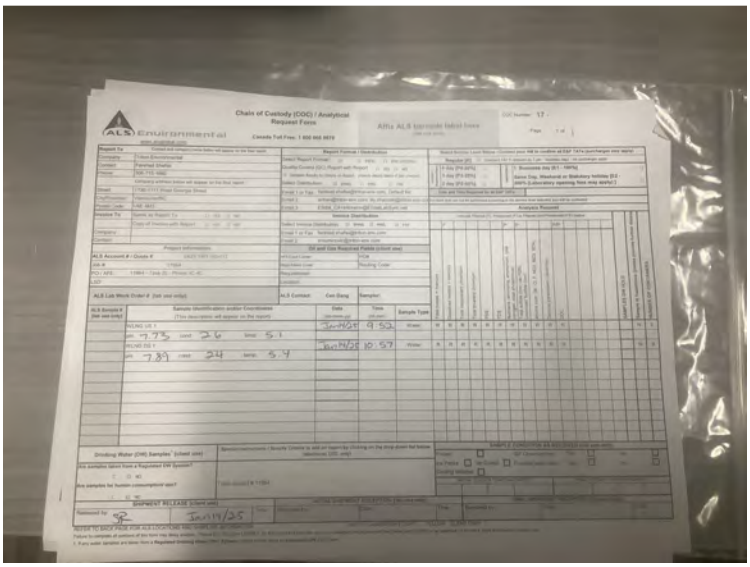


Photo: 4

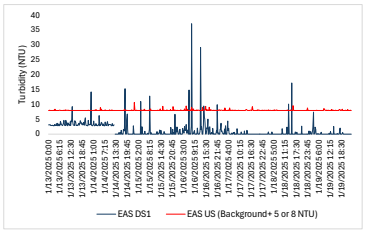
Location: US1

Description: Lab COC

Sign Off

Report Prepared By:	Stephanie Renkers	**Report Reviewed:**	Yes
Report Reviewer:		**Professional(s) of Record:**	
Name:			
Designation:			
Designation Number:			

Woodfibre Plant site East Creek (WC 309-R2)	EAS DS1							EAS US1 (Background)							
Date	Temperature (c)	Specific Conductivity (µS/cm)	Salinity PSU	pH	Dissolved Oxygen (mg/L)	Turbidity (NTU)		Date	Temperature (c)	Specific Conductivity (µS/cm)	Salinity PSU	pH	Dissolved Oxygen (mg/L)	Turbidity (NTU)	EAS US (Background+ 5 or 8 NTU)
1/13/2025 0:00	4.8	20.9	0.0	6.7	12.1	3.0		1/13/2025 0:00	4.8	13.5	0.0	7.0	11.8	0.0	8.0
1/13/2025 0:15	4.7	20.5	0.0	6.7	12.1	3.1		1/13/2025 0:15	4.7	12.1	0.0	6.9	11.8	0.0	8.0
1/13/2025 0:30	4.7	20.3	0.0	6.7	12.1	3.1		1/13/2025 0:30	4.7	13.4	0.0	6.9	11.8	0.0	8.0
1/13/2025 0:45	6.7	86.6	0.0	7.4	11.5	3.2		1/13/2025 0:45	4.7	11.9	0.0	6.9	11.8	0.0	8.0
1/13/2025 1:00	6.8	87.0	0.0	7.4	11.5	3.0		1/13/2025 1:00	4.7	13.3	0.0	6.8	11.8	0.0	8.0
1/13/2025 1:15	5.3	30.1	0.0	7.0	11.9	2.8		1/13/2025 1:15	4.7	13.4	0.0	7.0	11.8	0.0	8.0
1/13/2025 1:30	4.8	21.7	0.0	6.7	12.1	2.8		1/13/2025 1:30	4.6	12.0	0.0	7.0	11.8	0.0	8.0
1/13/2025 1:45	4.7	20.7	0.0	6.7	12.1	2.9		1/13/2025 1:45	4.6	13.3	0.0	6.8	11.9	0.0	8.0
1/13/2025 2:00	4.6	20.3	0.0	6.7	12.2	3.0		1/13/2025 2:00	4.6	13.2	0.0	7.0	11.9	0.0	8.0
1/13/2025 2:15	6.3	84.3	0.0	7.3	11.6	2.9		1/13/2025 2:15	4.6	12.0	0.0	6.9	11.8	0.0	8.0
1/13/2025 2:30	6.6	86.5	0.0	7.4	11.6	2.8		1/13/2025 2:30	4.6	13.2	0.0	6.8	11.9	0.0	8.0
1/13/2025 2:45	5.4	36.4	0.0	7.2	11.9	2.8		1/13/2025 2:45	4.6	13.2	0.0	7.0	11.9	0.0	8.0
1/13/2025 3:00	4.7	21.6	0.0	6.7	12.1	2.8		1/13/2025 3:00	4.6	13.2	0.0	6.9	11.9	0.0	8.0
1/13/2025 3:15	4.6	20.6	0.0	6.7	12.2	3.1		1/13/2025 3:15	4.6	13.2	0.0	7.0	11.9	0.0	8.0
1/13/2025 3:30	4.5	20.2	0.0	6.7	12.2	2.8		1/13/2025 3:30	4.6	11.9	0.0	6.9	11.8	0.4	8.4
1/13/2025 3:45	4.5	19.9	0.0	6.7	12.2	2.8		1/13/2025 3:45	4.6	13.1	0.0	6.9	11.9	0.0	8.0
1/13/2025 4:00	6.5	87.1	0.0	7.4	11.6	3.0		1/13/2025 4:00	4.6	13.2	0.0	7.0	11.9	0.0	8.0
1/13/2025 4:15	6.3	76.0	0.0	7.4	11.6	3.3		1/13/2025 4:15	4.5	13.1	0.0	6.9	11.9	0.0	8.0
1/13/2025 4:30	4.7	22.3	0.0	6.8	12.1	2.9		1/13/2025 4:30	4.5	13.1	0.0	6.9	11.9	0.0	8.0
1/13/2025 4:45	4.5	20.7	0.0	6.7	12.2	3.6		1/13/2025 4:45	4.5	13.1	0.0	7.0	11.9	0.0	8.0
1/13/2025 5:00	4.5	20.2	0.0	6.7	12.2	2.8		1/13/2025 5:00	4.5	11.8	0.0	6.9	11.9	0.0	8.0
1/13/2025 5:15	6.2	84.3	0.0	7.3	11.7	3.4		1/13/2025 5:15	4.5	13.1	0.0	6.9	11.9	0.0	8.0
1/13/2025 5:30	6.7	89.2	0.0	7.4	11.5	3.1		1/13/2025 5:30	4.5	11.8	0.0	6.9	11.9	0.0	8.0
1/13/2025 5:45	5.0	26.8	0.0	7.0	12.0	2.8		1/13/2025 5:45	4.5	13.1	0.0	6.8	11.9	0.0	8.0
1/13/2025 6:00	4.5	21.2	0.0	6.7	12.2	3.3		1/13/2025 6:00	4.4	13.1	0.0	7.0	11.9	0.0	8.0
1/13/2025 6:15	4.4	20.2	0.0	6.6	12.2	2.9		1/13/2025 6:15	4.4	11.9	0.0	6.9	11.9	0.0	8.0
1/13/2025 6:30	6.6	88.0	0.0	7.5	11.6	4.3		1/13/2025 6:30	4.4	13.1	0.0	6.8	11.9	0.0	8.0
1/13/2025 6:45	6.7	88.8	0.0	7.5	11.5	4.0		1/13/2025 6:45	4.4	13.2	0.0	7.0	11.9	0.0	8.0
1/13/2025 7:00	5.8	64.8	0.0	7.2	11.8	3.3		1/13/2025 7:00	4.4	11.9	0.0	7.0	11.9	0.0	8.0
1/13/2025 7:15	4.9	28.8	0.0	7.0	12.0	3.0		1/13/2025 7:15	4.4	13.0	0.0	6.8	11.9	0.0	8.0
1/13/2025 7:30	4.4	21.3	0.0	6.7	12.2	2.9		1/13/2025 7:30	4.3	13.1	0.0	6.8	11.9	0.0	8.0
1/13/2025 7:45	4.3	20.6	0.0	6.7	12.2	2.8		1/13/2025 7:45	4.3	13.1	0.0	7.0	11.9	0.0	8.0
1/13/2025 8:00	4.3	20.1	0.0	6.7	12.3	3.4		1/13/2025 8:00	4.3	11.7	0.0	6.9	12.0	0.0	8.0
1/13/2025 8:15	6.5	88.4	0.0	7.4	11.6	4.0		1/13/2025 8:15	4.3	12.9	0.0	6.9	11.9	0.0	8.0
1/13/2025 8:30	6.7	90.1	0.0	7.5	11.5	4.5		1/13/2025 8:30	4.3	12.0	0.0	6.9	12.0	0.0	8.0
1/13/2025 8:45	5.2	35.8	0.0	7.2	11.9	2.9		1/13/2025 8:45	4.3	13.0	0.0	7.1	11.9	0.0	8.0
1/13/2025 9:00	4.5	21.7	0.0	6.8	12.2	2.8		1/13/2025 9:00	4.3	13.0	0.0	6.9	11.9	0.0	8.0
1/13/2025 9:15	4.3	20.7	0.0	6.7	12.3	2.8		1/13/2025 9:15	4.3	12.9	0.0	7.0	12.0	0.1	8.1
1/13/2025 9:30	6.5	89.8	0.0	7.4	11.6	4.5		1/13/2025 9:30	4.3	13.0	0.0	6.9	12.0	0.0	8.0
1/13/2025 9:45	6.7	90.0	0.0	7.5	11.5	4.0		1/13/2025 9:45	4.3	12.9	0.0	7.0	12.0	0.0	8.0
1/13/2025 10:00	5.7	47.3	0.0	7.3	11.8	3.0		1/13/2025 10:00	4.3	11.7	0.0	6.9	12.0	0.1	8.1
1/13/2025 10:15	4.6	21.9	0.0	6.8	12.2	3.7		1/13/2025 10:15	4.4	12.9	0.0	6.8	12.0	0.0	8.0
1/13/2025 10:30	4.4	20.7	0.0	6.7	12.2	2.8		1/13/2025 10:30	4.4	12.8	0.0	7.0	11.9	0.0	8.0
1/13/2025 10:45	6.3	85.6	0.0	7.3	11.7	3.6		1/13/2025 10:45	4.4	12.9	0.0	7.0	12.0	0.0	8.0
1/13/2025 11:00	6.7	85.9	0.0	7.4	11.5	3.5		1/13/2025 11:00	4.4	12.9	0.0	7.0	12.0	0.0	8.0
1/13/2025 11:15	5.0	25.8	0.0	6.9	12.0	3.1		1/13/2025 11:15	4.5	11.7	0.0	7.0	12.0	0.0	8.0
1/13/2025 11:30	5.2	40.4	0.0	7.1	12.0	3.0		1/13/2025 11:30	4.5	12.9	0.0	7.0	12.0	0.0	8.0
1/13/2025 11:45	4.6	20.7	0.0	6.7	12.2	2.9		1/13/2025 11:45	4.5	11.7	0.0	7.0	11.9	0.0	8.0
1/13/2025 12:00	4.5	20.1	0.0	6.7	12.2	4.1		1/13/2025 12:00	4.5	12.9	0.0	6.9	11.9	0.0	8.0
1/13/2025 12:15	4.5	19.9	0.0	6.7	12.2	2.8		1/13/2025 12:15	4.6	11.9	0.0	7.0	11.9	0.0	8.0
1/13/2025 12:30	6.0	76.0	0.0	7.1	11.8	4.5		1/13/2025 12:30	4.6	13.1	0.0	7.0	11.9	0.0	8.0
1/13/2025 12:45	6.9	83.9	0.0	7.5	11.5	4.1		1/13/2025 12:45	4.6	11.9	0.0	7.0	11.9	0.0	8.0
1/13/2025 13:00	6.3	60.7	0.0	7.3	11.6	9.2		1/13/2025 13:00	4.6	13.2	0.0	7.0	11.9	0.0	8.0
1/13/2025 13:15	6.8	82.2	0.0	7.4	11.5	4.5		1/13/2025 13:15	4.7	12.0	0.0	7.0	11.9	0.0	8.0
1/13/2025 13:30	5.5	31.7	0.0	7.1	11.8	3.0		1/13/2025 13:30	4.7	13.3	0.0	6.8	11.9	0.0	8.0
1/13/2025 13:45	4.9	21.6	0.0	6.8	12.1	3.0		1/13/2025 13:45	4.7	13.6	0.0	7.0	11.9	0.0	8.0
1/13/2025 14:00	4.8	20.7	0.0	6.7	12.1	2.9		1/13/2025 14:00	4.7	13.6	0.0	6.9	11.9	0.0	8.0
1/13/2025 14:15	4.7	20.4	0.0	6.7	12.1	2.8		1/13/2025 14:15	4.7	13.7	0.0	7.0	11.9	0.0	8.0
1/13/2025 14:30	6.5	79.4	0.0	7.3	11.6	4.5		1/13/2025 14:30	4.8	13.7	0.0	7.0	11.8	0.0	8.0
1/13/2025 14:45	7.1	82.4	0.0	7.4	11.4	4.0		1/13/2025 14:45	4.8	12.4	0.0	7.0	11.9	0.0	8.0
1/13/2025 15:00	6.3	50.2	0.0	7.3	11.6	3.9		1/13/2025 15:00	4.9	13.8	0.0	6.9	11.8	0.0	8.0
1/13/2025 15:15	5.1	22.3	0.0	6.8	12.0	2.9		1/13/2025 15:15	4.9	13.9	0.0	7.0	11.8	0.0	8.0
1/13/2025 15:30	6.2	55.9	0.0	7.3	11.6	2.9		1/13/2025 15:30	4.9	12.6	0.0	7.0	11.8	0.0	8.0
1/13/2025 15:45	5.0	21.7	0.0	6.8	12.0	2.9		1/13/2025 15:45	4.9	14.0	0.0	7.0	11.8	0.0	8.0
1/13/2025 16:00	4.9	20.9	0.0	6.7	12.1	2.8		1/13/2025 16:00	4.9	12.8	0.0	7.0	11.8	0.0	8.0
1/13/2025 16:15	5.6	51.6	0.0	6.9	12.0	3.2		1/13/2025 16:15	4.9	14.5	0.0	7.0	11.8	0.0	8.0
1/13/2025 16:30	6.8	73.4	0.0	7.4	11.5	3.1		1/13/2025 16:30	4.9	13.2	0.0	7.0	11.8	0.0	8.0
1/13/2025 16:45	6.8	72.8	0.0	7.4	11.5	3.5		1/13/2025 16:45	5.0	14.7	0.0	7.0	11.8	0.0	8.0
1/13/2025 17:00	5.4	27.4	0.0	7.0	11.9	2.9		1/13/2025 17:00	5.0	13.3	0.0	7.0	11.8	0.0	8.0
1/13/2025 17:15	5.0	22.3	0.0	6.7	12.0	3.6		1/13/2025 17:15	5.0	14.9	0.0	7.0	11.8	0.0	8.0
1/13/2025 17:30	7.0	84.4	0.0	7.3	11.4	4.5		1/13/2025 17:30	5.0	13.5	0.0	7.0	11.7	0.0	8.0
1/13/2025 17:45	7.4	88.1	0.0	7.5	11.3	4.3		1/13/2025 17:45	4.9	15.0	0.0	6.9	11.8	0.0	8.0
1/13/2025 18:00	7.2	78.8	0.0	7.5	11.3	3.5		1/13/2025 18:00	4.9	14.9	0.0	7.0	11.7	0.0	8.0
1/13/2025 18:15	6.9	82.1	0.0	7.4	11.5	3.7		1/13/2025 18:15	4.9	14.9	0.0	7.0	11.8	0.0	8.0
1/13/2025 18:30	6.0	41.1	0.0	7.2	11.7	3.0		1/13/2025 18:30	4.9	14.6	0.0	7.0	11.8	0.0	8.0
1/13/2025 18:45	5.0	23.3	0.0	6.8	12.0	3.4		1/13/2025 18:45	4.9	13.1	0.0	7.0	11.8	0.0	8.0
1/13/2025 19:00	4.9	22.1	0.0	6.7	12.1	3.0		1/13/2025 19:00	4.9	14.5	0.0	7.0	11.8	0.0	8.0
1/13/2025 19:15	6.5	78.9	0.0	7.3	11.6	3.9		1/13/2025 19:15	4.8	12.9	0.0	7.0	11.8	0.0	8.0
1/13/2025 19:30	6.5	69.4	0.0	7.4	11.6	3.7		1/13/2025 19:30	4.8	14.2	0.0	7.0	11.8	0.0	8.0
1/13/2025 19:45	5.1	25.9	0.0	6.9	12.0	2.9		1/13/2025 19:45	4.8	14.2	0.0	7.0	11.8	0.0	8.0
1/13/2025 20:00	6.1	74.2	0.0	7.1	11.8	4.5		1/13/2025 20:00	4.8	14.0	0.0	7.0	11.8	0.0	8.0
1/13/2025 20:15	7.2	90.2	0.0	7.5	11.4	5.4		1/13/2025 20:15	4.7	14.0	0.0	7.0	11.8	0.0	8.0
1/13/2025 20:30	6.7	75.3	0.0	7.4	11.5	3.6		1/13/2025 20:30	4.7	13.8	0.0	7.0	11.8	0.0	8.0
1/13/2025 20:45	5.7	39.9	0.0	7.2	11.7	3.0		1/13/2025 20:45	4.7	13.8	0.0	7.0	11.8	0.0	8.0
1/13/2025 21:00	4.8	22.2	0.0	6.8	12.1	2.9		1/13/2025 21:00	4.7	13.6	0.0	7.0	11.8	0.0	8.0
1/13/2025 21:15	4.7	21.4	0.0	6.7	12.1	2.8		1/13/2025 21:15	4.6	12.3	0.0	7.0	11.8	0.0	8.0
1/13/2025 21:30	4.6	20.9	0.0	6.7	12.2	2.8		1/13/2025 21:30	4.6	13.5	0.0	7.0	11.9	0.0	8.0
1/13/2025 21:45	4.8	32.3	0.0	7.0	12.1	2.8		1/13/2025 21:45	4.6	13.5	0.0	7.0	11.8	0.0	8.0
1/13/2025 22:00	6.7	86.5	0.0	7.4	11.5	4.5		1/13/2025 22:00	4.6	13.3	0.0	7.0	11.8	0.0	8.0
1/13/2025 22:15	4.7	22.2	0.0	6.8	12.1	3.0		1/13/2025 22:15	4.6	13.4	0.0	7.0	11.9	0.0	8.0
1/13/2025 22:30	5.6	65.6	0.0	7.0	12.0	3.0		1/13/2025 22:30	4.6	13.3	0.0	7.0	11.9	0.0	8.0
1/13/2025 22:45	7.0	86.9	0.0	7.5	11.4	3.2		1/13/2025 22:45	4.5	12.0	0.0	6.9	11.9	0.0	8.0
1/13/2025 23:00	7.1	86.3	0.0	7.5	11.4	3.2		1/13/2025 23:00	4.5	13.3	0.0	7.0	11.9	0.0	8.0
1/13/2025 23:15	4.9	23.6	0.0	6.8	12.1	3.2		1/13/2025 23:15	4.5	12.0	0.0	7.0	11.9	0.0	8.0
1/13/2025 23:30	4.6	21.2	0.0	6.7	12.2	14.1		1/13/2025 23:30	4.5	13.2	0.0	7.0	11.9	0.0	8.0
1/13/2025 23:45	5.7	64.4	0.0	7.0	12.0	3.0		1/13/2025 23:45	4.5	11.8	0.0	6.9	11.9	0.0	8.0
1/14/2025 0:00	6.9	84.2	0.0	7.4	11.4	2.9		1/14/2025 0:00	4.5	13.2	0.0	7.0	11.9	0.0	8.0
1/14/2025 0:15	6.5	65.3	0.0	7.4	11.5	2.8		1/14/2025 0:15	4.5	11.8	0.0	6.9	11.9	0.0	8.0
1/14/2025 0:30	4.7	22.5	0.0	6.8	12.1	3.0		1/14/2025 0:30	4.5	13.1	0.0	6.9	11.9	0.0	8.0
1/14/2025 0:45	4.5	20.9	0.0	6.7	12.2	3.3		1/14/2025 0:45	4.5	11.9	0.0	7.0	11.9	0.0	8.0
1/14/2025 1:00	6.8	84.8	0.0	7.4	11.5	4.3		1/14/2025 1:00	4.5	13.1	0.0	6.9	11.9	0.0	8.0
1/14/2025 1:15	5.6	42.0	0.0	7.2	11.8	2.7		1/14/2025 1:15	4.4	13.1	0.0	7.0	11.9	0.0	8.0
1/14/2025 1:30	4.6	21.8	0.0	6.7	12.2	2.9		1/14/2025 1:30	4.4	13.2	0.0	7.0	11.9	0.0	8.0
1/14/2025 1:45	4.4	20.7	0.0	6.7	12.2	2.8		1/14/2025 1:45	4.4	11.8	0.0	7.0	11.9	0.0	8.0
1/14/2025 2:00	6.0	69.9	0.0	7.3	11.7	3.0		1/14/2025 2:00	4.4	13.1	0.0	6.8	11.9	0.0	8.0
1/14/2025 2:15	6.7	84.5	0.0	7.4	11.5	3.5		1/14/2025 2:15	4.4	13.1	0.0	6.9	11.9	0.2	8.2
1/14/2025 2:30	6.3	66.6	0.0	7.4	11.6	2.8		1/14/2025 2:30	4.4	11.9	0.0	7.0	11.9	0.0	8.0
1/14/2025 2:45	4.7	22.3	0.0	6.8	12.1	2.8		1/14/2025 2:45	4.4	13.0	0.0	6.8	11.9	0.0	8.0
1/14/2025 3:00	4.5	20.8	0.0	6.7	12.2	2.8		1/14/2025 3:00	4.4	13.1	0.0	7.0	11.9	0.0	8.0
1/14/2025 3:15	4.4	20.2	0.0	6.7	12.2	2.7		1/14/2025 3:15	4.4	13.0	0.0	6.8	11.9	0.0	8.0
1/14/2025 3:30	5.9	70.5	0.0	7.3	11.7	3.0		1/14/2025 3:30	4.4	11.8	0.0	6.9	11.9	0.0	8.0
1/14/2025 3:45	6.6	87.4	0.0	7.5	11.5	3.1		1/14/2025 3:45	4.4	11.7	0.0	6.8	11.9	0.0	8.0
1/14/2025 4:00	6.1	78.4	0.0	7.3	11.8	6.2		1/14/2025 4:00	4.4	13.1	0.0	7.0	11.9	0.0	8.0
1/14/2025 4:15	5.0	30.1	0.0	7.1	12.0	2.8		1/14/2025 4:15	4.4	13.0	0.0	6.8	11.9	0.0	8.0
1/14/2025 4:30	4.5	21.6	0.0	6.7	12.2	3.2		1/14/2025 4:30	4.4	11.8	0.0	6.9	11.9	0.0	8.0
1/14/2025 4:45	4.3	20.6	0.0	6.7	12.2	2.9		1/14/2025 4:45	4.4	13.0	0.0	7.0	11.9	0.9	8.9
1/14/2025 5:00	4.3	20.2	0.0	6.7	12.3	3.2		1/14/2025 5:00	4.4	13.0	0.0	6.9	11.9	0.0	8.0
1/14/2025 5:15	6.6	91.0	0.0	7.4	11.5	4.0		1/14/2025 5:15	4.3	12.9	0.0	7.0	11.9	0.4	8.4
1/14/2025 5:30	6.8	91.5	0.0	7.5	11.5	3.6		1/14/2025 5:30	4.3	12.9	0.0	6.9	11.9	0.0	8.0
1/14/2025 5:45	4.7	24.4	0.0	6.9	12.1	3.0		1/14/2025 5:45	4.3	12.7	0.0	7.0	11.9	0.0	8.0
1/14/2025 6:00	4.4	21.0	0.0	6.7	12.2	2.8		1/14/2025 6:00	4.4	12.9	0.0	6.9	11.9	0.0	8.0
1/14/2025 6:15	6.2	79.0	0.0	7.4	11.7	3.4		1/14/2025 6:15	4.4	12.8	0.0	6.9	11.9	0.0	8.0
1/14/2025 6:30	5.4	38.0	0.0	7.3	11.8	2.9		1/14/2025 6:30	4.4	12.8	0.0	6.9	11.9	0.0	8.0
1/14/2025 6:45	4.5	21.6	0.0	6.8	12.2	2.7		1/14/2025 6:45	4.4	12.8	0.0	6.9	12.0	0.0	8.0
1/14/2025 7:00	4.4	20.5	0.0	6.6	12.2	2.8		1/14/2025 7:00	4.4	12.9	0.0	6.9	11.9	0.0	8.0
1/14/2025 7:15	6.8	90.8	0.0	7.5	11.5	4.0		1/14/2025 7:15	4.4	12.8	0.0	7.0	11.9	0.1	8.1
1/14/2025 7:30	6.9	90.6	0.0	7.5	11.5	3.3		1/14/2025 7:30	4.4	12.9	0.0	6.9	11.9	0.0	8.0
1/14/2025 7:45	4.7	23.7	0.0	6.8	12.1	2.8		1/14/2025 7:45	4.4	12.8	0.0	6.9	11.9	0.0	8.0
1/14/2025 8:00	4.4	21.1	0.0	6.7	12.2	2.9		1/14/2025 8:00	4.4	12.9	0.0	7.0	11.9	0.0	8.0
1/14/2025 8:15	6.6	87.5	0.0	7.4	11.5	3.3		1/14/2025 8:15	4.4	12.8	0.0	7.0	11.9	0.0	8.0
1/14/2025 8:30	6.8	85.0	0.0	7.5	11.5	4.2		1/14/2025 8:30	4.4	12.9	0.0	6.9	11.9	0.0	8.0
1/14/2025 8:45	6.9	86.6	0.0	7.5	11.4	3.6		1/14/2025 8:45	4.4	12.7	0.0	6.9	11.9	0.0	8.0
1/14/2025 9:00	4.9	25.4	0.0	6.9	12.1	2.8		1/14/2025 9:00	4.4	12.8	0.0	7.0	11.9	0.0	8.0



1/14/2025 9:15	6.8	86.4	0.0	7.4	11.5	3.2
1/14/2025 9:30	6.9	81.0	0.0	7.5	11.4	3.1
1/14/2025 9:45	4.7	23.0	0.0	6.8	12.1	3.1
1/14/2025 10:00	6.8	85.0	0.0	7.5	11.5	3.2
1/14/2025 10:15	7.0	85.2	0.0	7.5	11.4	3.2
1/14/2025 10:30	5.2	28.3	0.0	7.0	12.0	3.0
1/14/2025 10:45	4.6	21.6	0.0	6.7	12.2	2.8
1/14/2025 11:00	4.5	20.7	0.0	6.8	12.2	2.8
1/14/2025 11:15	5.3	55.3	0.0	6.9	12.1	3.5
1/14/2025 11:30	7.0	83.0	0.0	7.4	11.4	2.9
1/14/2025 11:45	6.3	53.3	0.0	7.3	11.6	2.7
1/14/2025 12:00	4.9	21.9	0.0	6.8	12.1	3.0
1/14/2025 12:15	4.8	20.5	0.0	6.6	12.1	3.1
1/14/2025 12:30						
1/14/2025 12:45	7.1	82.5	0.0	7.4	11.4	0.0
1/14/2025 13:00	7.3	83.4	0.0	7.5	11.3	0.0
1/14/2025 13:15	7.3	83.6	0.0	7.5	11.3	0.0
1/14/2025 13:30	5.3	23.8	0.0	6.9	11.9	0.0
1/14/2025 13:45	5.1	21.5	0.0	6.7	12.0	0.0
1/14/2025 14:00	5.1	20.8	0.0	6.7	12.0	0.0
1/14/2025 14:15	7.2	83.1	0.0	7.4	11.3	0.0
1/14/2025 14:30	7.3	82.1	0.0	7.5	11.3	0.0
1/14/2025 14:45	7.4	82.6	0.0	7.5	11.3	0.0
1/14/2025 15:00	7.4	82.8	0.0	7.5	11.3	0.5
1/14/2025 15:15	6.8	59.8	0.0	7.4	11.4	0.0
1/14/2025 15:30	5.4	23.1	0.0	6.8	11.9	0.0
1/14/2025 15:45	7.4	85.8	0.0	7.5	11.3	0.4
1/14/2025 16:00	5.7	26.8	0.0	6.9	11.8	0.0
1/14/2025 16:15	7.1	83.5	0.0	7.3	11.4	1.2
1/14/2025 16:30	5.4	22.9	0.0	6.8	11.9	0.0
1/14/2025 16:45	5.8	33.7	0.0	7.1	11.7	0.0
1/14/2025 17:00	5.2	21.7	0.0	6.7	11.9	0.0
1/14/2025 17:15	7.1	84.6	0.0	7.4	11.4	0.0
1/14/2025 17:30	7.3	81.6	0.0	7.4	11.3	1.6
1/14/2025 17:45	7.2	79.4	0.0	7.4	11.3	1.1
1/14/2025 18:00	7.2	78.5	0.0	7.4	11.3	1.0
1/14/2025 18:15	7.2	77.9	0.0	7.4	11.3	15.2
1/14/2025 18:30	7.2	78.0	0.0	7.4	11.3	1.8
1/14/2025 18:45	6.3	43.6	0.0	7.3	11.5	0.0
1/14/2025 19:00	5.3	22.7	0.0	6.8	11.9	0.0
1/14/2025 19:15	7.0	85.2	0.0	7.4	11.4	4.7
1/14/2025 19:30	7.6	93.6	0.0	7.5	11.2	6.7
1/14/2025 19:45	7.7	92.7	0.0	7.5	11.2	1.6
1/14/2025 20:00	6.5	47.3	0.0	7.3	11.5	0.0
1/14/2025 20:15	5.3	23.1	0.0	6.8	11.9	0.0
1/14/2025 20:30	5.1	21.6	0.0	6.7	12.0	0.0
1/14/2025 20:45	5.7	52.1	0.0	6.9	11.9	0.0
1/14/2025 21:00	6.2	55.4	0.0	7.3	11.6	0.0
1/14/2025 21:15	5.3	23.5	0.0	6.8	11.9	0.0
1/14/2025 21:30	5.0	21.0	0.0	6.7	12.0	0.0
1/14/2025 21:45	5.3	37.5	0.0	6.8	12.0	0.0
1/14/2025 22:00	6.4	61.4	0.0	7.3	11.5	0.0
1/14/2025 22:15	6.7	70.9	0.0	7.3	11.5	0.0
1/14/2025 22:30	6.3	50.0	0.0	7.3	11.5	0.0
1/14/2025 22:45	5.1	21.7	0.0	6.8	12.0	0.0
1/14/2025 23:00	6.7	74.6	0.0	7.3	11.5	2.8
1/14/2025 23:15	7.1	81.1	0.0	7.4	11.3	0.0
1/14/2025 23:30	7.2	85.8	0.0	7.5	11.3	0.0
1/14/2025 23:45	7.3	86.1	0.0	7.5	11.3	0.0
1/15/2025 0:00	6.9	73.8	0.0	7.4	11.4	0.0
1/15/2025 0:15	5.2	23.5	0.0	6.9	11.9	0.0
1/15/2025 0:30	4.9	21.1	0.0	6.8	12.0	0.0
1/15/2025 0:45	4.8	20.6	0.0	6.8	12.1	0.0
1/15/2025 1:00	7.1	91.1	0.0	7.5	11.4	0.0
1/15/2025 1:15	7.3	93.6	0.0	7.5	11.3	0.0
1/15/2025 1:30	7.3	93.4	0.0	7.5	11.3	0.0
1/15/2025 1:45	5.9	42.8	0.0	7.3	11.7	0.0
1/15/2025 2:00	4.9	22.6	0.0	6.8	12.0	0.0
1/15/2025 2:15	4.8	21.3	0.0	6.6	12.1	0.0
1/15/2025 2:30	6.8	89.3	0.0	7.5	11.4	0.0
1/15/2025 2:45	6.8	82.4	0.0	7.5	11.4	0.0
1/15/2025 3:00	7.0	93.5	0.0	7.5	11.4	10.9
1/15/2025 3:15	5.1	27.4	0.0	7.0	11.9	0.0
1/15/2025 3:30	4.7	21.6	0.0	6.7	12.1	0.0
1/15/2025 3:45	5.5	62.6	0.0	7.0	12.0	2.4
1/15/2025 4:00	6.9	96.6	0.0	7.5	11.4	0.0
1/15/2025 4:15	7.0	97.2	0.0	7.5	11.4	0.0
1/15/2025 4:30	5.0	25.5	0.0	6.9	12.0	0.0
1/15/2025 4:45	4.7	21.7	0.0	6.8	12.1	0.0
1/15/2025 5:00	4.6	20.2	0.0	6.7	12.1	0.0
1/15/2025 5:15	4.5	20.4	0.0	6.7	12.1	0.9
1/15/2025 5:30	6.7	93.9	0.0	7.4	11.4	0.0
1/15/2025 5:45	6.9	94.6	0.0	7.5	11.4	0.0
1/15/2025 6:00	6.7	89.8	0.0	7.4	11.5	0.0
1/15/2025 6:15	6.0	69.1	0.0	7.2	11.8	0.0
1/15/2025 6:30	4.9	23.4	0.0	6.9	12.0	0.0
1/15/2025 6:45	4.6	21.6	0.0	6.7	12.1	0.0
1/15/2025 7:00	4.5	20.8	0.0	6.7	12.2	0.2
1/15/2025 7:15	5.1	54.9	0.0	6.9	12.0	0.0
1/15/2025 7:30	6.8	89.5	0.0	7.5	11.4	0.0
1/15/2025 7:45	5.6	54.7	0.0	7.1	11.9	1.5
1/15/2025 8:00	6.8	83.8	0.0	7.5	11.4	12.8
1/15/2025 8:15	4.7	23.3	0.0	6.8	12.1	0.0
1/15/2025 8:30	5.4	59.1	0.0	7.0	11.9	0.0
1/15/2025 8:45	6.5	79.0	0.0	7.4	11.5	0.5
1/15/2025 9:00	6.5	77.8	0.0	7.4	11.5	0.0
1/15/2025 9:15	6.9	88.3	0.0	7.5	11.4	0.0
1/15/2025 9:30	6.9	86.0	0.0	7.5	11.4	0.0
1/15/2025 9:45	5.3	32.7	0.0	7.1	11.8	0.0
1/15/2025 10:00	4.6	22.0	0.0	6.8	12.1	0.0
1/15/2025 10:15	4.4	20.9	0.0	6.7	12.2	0.0
1/15/2025 10:30	6.4	79.0	0.0	7.4	11.5	0.0
1/15/2025 10:45	6.5	77.4	0.0	7.4	11.5	0.0
1/15/2025 11:00	6.9	83.6	0.0	7.5	11.3	0.0
1/15/2025 11:15	4.9	23.1	0.0	6.8	12.0	0.0
1/15/2025 11:30	4.7	21.0	0.0	6.7	12.1	0.0
1/15/2025 11:45	6.9	89.6	0.0	7.4	11.4	0.0
1/15/2025 12:00	7.3	90.2	0.0	7.5	11.3	0.8
1/15/2025 12:15	6.7	61.6	0.0	7.4	11.4	0.0
1/15/2025 12:30	5.2	22.7	0.0	6.9	11.9	0.0
1/15/2025 12:45	5.1	20.8	0.0	6.7	12.0	0.0
1/15/2025 13:00	5.7	45.7	0.0	6.8	11.9	0.2
1/15/2025 13:15	7.3	83.6	0.0	7.4	11.2	0.4
1/15/2025 13:30	7.3	77.3	0.0	7.4	11.2	1.3
1/15/2025 13:45	6.5	45.5	0.0	7.4	11.4	0.0
1/15/2025 14:00	5.5	22.3	0.0	6.8	11.8	0.0
1/15/2025 14:15	7.8	88.3	0.0	7.5	11.1	1.2
1/15/2025 14:30	5.9	26.6	0.0	7.0	11.6	0.0
1/15/2025 14:45	5.8	31.5	0.0	6.7	11.7	0.0
1/15/2025 15:00	5.6	21.1	0.0	6.7	11.7	0.0
1/15/2025 15:15	5.5	20.3	0.0	6.7	11.8	0.0
1/15/2025 15:30	7.9	86.3	0.0	7.5	11.1	0.0
1/15/2025 15:45	7.9	82.5	0.0	7.5	11.1	0.0
1/15/2025 16:00	8.0	88.7	0.0	7.5	11.0	0.8
1/15/2025 16:15	5.9	23.7	0.0	6.9	11.6	0.0
1/15/2025 16:30	5.6	21.3	0.0	6.8	11.7	0.0
1/15/2025 16:45	7.8	88.7	0.0	7.5	11.1	0.1
1/15/2025 17:00	7.6	73.3	0.0	7.5	11.1	0.0
1/15/2025 17:15	5.7	22.8	0.0	6.9	11.7	0.0
1/15/2025 17:30	5.5	20.9	0.0	6.7	11.8	0.0
1/15/2025 17:45	6.5	43.5	0.0	7.3	11.4	0.0
1/15/2025 18:00	5.5	21.5	0.0	6.8	11.7	0.0
1/15/2025 18:15	7.6	86.5	0.0	7.5	11.1	0.0
1/15/2025 18:30	7.7	84.0	0.0	7.5	11.1	0.0
1/15/2025 18:45	7.5	78.2	0.0	7.5	11.1	0.0
1/15/2025 19:00	6.9	52.2	0.0	7.4	11.2	0.0
1/15/2025 19:15	5.6	22.5	0.0	6.9	11.7	0.0
1/15/2025 19:30	6.8	60.2	0.0	7.4	11.3	0.0

1/14/2025 9:15	4.4	12.9	0.0	6.9	11.9	0.0	8.0
1/14/2025 9:30	4.4	12.8	0.0	6.8	11.9	0.0	8.0
1/14/2025 9:45	4.4	12.9	0.0	7.0	11.9	0.1	8.1
1/14/2025 10:00	4.4	12.7	0.0	7.0	11.9	0.0	8.0
1/14/2025 10:15	4.4	11.5	0.0	7.0	11.9	0.0	8.0
1/14/2025 10:30	4.4	12.8	0.0	6.8	11.9	0.0	8.0
1/14/2025 10:45	4.5	12.9	0.0	7.0	11.9	0.0	8.0
1/14/2025 11:00	4.5	12.8	0.0	6.9	11.9	0.1	8.1
1/14/2025 11:15	4.5	12.9	0.0	7.0	11.9	0.0	8.0
1/14/2025 11:30	4.6	12.7	0.0	7.0	11.9	0.0	8.0
1/14/2025 11:45	4.7	12.9	0.0	7.0	11.9	0.0	8.0
1/14/2025 12:00	4.7	12.8	0.0	7.0	11.9	0.0	8.0
1/14/2025 12:15	4.8	13.0	0.0	7.0	11.9	0.0	8.0
1/14/2025 12:30	4.8	13.0	0.0	7.0	11.9	0.0	8.0
1/14/2025 12:45	4.9	13.2	0.0	7.0	11.8	0.0	8.0
1/14/2025 13:00	4.9	13.0	0.0	7.0	11.8	0.0	8.0
1/14/2025 13:15	4.9	13.4	0.0	7.0	11.8	0.0	8.0
1/14/2025 13:30	5.0	13.3	0.0	7.0	11.8	0.0	8.0
1/14/2025 13:45	5.0	13.5	0.0	7.0	11.8	0.0	8.0
1/14/2025 14:00	5.0	13.4	0.0	7.0	11.8	0.0	8.0
1/14/2025 14:15	5.1	13.4	0.0	7.0	11.8	0.0	8.0
1/14/2025 14:30	5.1	13.3	0.0	7.0	11.8	0.0	8.0
1/14/2025 14:45	5.1	13.4	0.0	7.0	11.7	0.0	8.0
1/14/2025 15:00	5.1	13.6	0.0	7.0	11.7	0.0	8.0
1/14/2025 15:15	5.1	12.4	0.0	7.0	11.7	0.0	8.0
1/14/2025 15:30	5.1	13.8	0.0	6.9	11.7	0.0	8.0
1/14/2025 15:45	5.1	13.7	0.0	7.0	11.7	0.0	8.0
1/14/2025 16:00	5.2	13.8	0.0	7.0	11.7	0.0	8.0
1/14/2025 16:15	5.2	13.6	0.0	7.0	11.7	0.0	8.0
1/14/2025 16:30	5.2	13.7	0.0	7.0	11.7	0.0	8.0
1/14/2025 16:45	5.2	13.5	0.0	7.0	11.7	0.0	8.0
1/14/2025 17:00	5.2	13.6	0.0	7.0	11.7	0.0	8.0
1/14/2025 17:15	5.2	13.4	0.0	7.0	11.7	0.0	8.0
1/14/2025 17:30	5.1	13.5	0.0	7.0	11.7	0.0	8.0
1/14/2025 17:45	5.1	13.1	0.0	7.0	11.7	0.0	8.0
1/14/2025 18:00	5.1	13.4	0.0	7.0	11.7	0.3	8.3
1/14/2025 18:15	5.1	13.3	0.0	7.0	11.7	0.0	8.0
1/14/2025 18:30	5.1	12.1	0.0	7.0	11.7	0.0	8.0
1/14/2025 18:45	5.1	13.2	0.0	6.9	11.7	0.0	8.0
1/14/2025 19:00	5.1	13.0	0.0	7.0	11.7	0.0	8.0
1/14/2025 19:15	5.1	13.2	0.0	6.9	11.7	0.1	8.1
1/14/2025 19:30	5.1	13.1	0.0	7.0	11.7	0.0	8.0
1/14/2025 19:45	5.1	13.1	0.0	7.0	11.7	0.0	8.0
1/14/2025 20:00	5.1	13.0	0.0	7.0	11.7	0.0	8.0
1/14/2025 20:15	5.1	12.4	0.0	7.0	11.7	0.0	8.0
1/14/2025 20:30	5.0	13.1	0.0	6.9	11.7	0.0	8.0
1/14/2025 20:45	5.0	11.8	0.0	6.9	11.7	0.0	8.0
1/14/2025 21:00	5.0	13.1	0.0	7.0	11.7	0.0	8.0
1/14/2025 21:15	5.0	13.1	0.0	7.0	11.7	0.0	8.0
1/14/2025 21:30	5.0	13.1	0.0	6.9	11.7	0.0	8.0
1/14/2025 21:45	5.0	13.1	0.0	7.0	11.7	0.0	8.0
1/14/2025 22:00	5.0	12.9	0.0	6.9	11.7	0.2	8.2
1/14/2025 22:15	5.0	13.1	0.0	7.0	11.7	0.0	8.0
1/14/2025 22:30	5.0	12.9	0.0	7.0	11.7	0.0	8.0
1/14/2025 22:45	5.0	13.1	0.0	7.0	11.7	0.0	8.0
1/14/2025 23:00	5.0	12.8	0.0	7.0	11.7	0.0	8.0
1/14/2025 23:15	5.0	13.0	0.0	7.0	11.7	0.0	8.0
1/14/2025 23:30	4.9	12.9	0.0	7.0	11.7	2.7	10.7
1/14/2025 23:45	4.9	13.0	0.0	7.0	11.7	0.0	8.0
1/15/2025 0:00	4.9	12.8	0.0	7.0	11.7	0.0	8.0
1/15/2025 0:15	4.9	13.0	0.0	7.0	11.7	0.0	8.0
1/15/2025 0:30	4.8	12.9	0.0	7.0	11.7	0.0	8.0
1/15/2025 0:45	4.8	13.0	0.0	6.9	11.8	0.0	8.0
1/15/2025 1:00	4.8	13.0	0.0	6.9	11.8	0.0	8.0
1/15/2025 1:15	4.8	13.0	0.0	6.9	11.8	0.0	8.0
1/15/2025 1:30	4.8	13.0	0.0	7.0	11.8	0.0	8.0
1/15/2025 1:45	4.7	13.0	0.0	7.0	11.8	0.0	8.0
1/15/2025 2:00	4.7	12.9	0.0	6.9	11.8	0.0	8.0
1/15/2025 2:15	4.7	13.0	0.0	7.0	11.8	0.0	8.0
1/15/2025 2:30	4.7	12.9	0.0	7.0	11.8	0.0	8.0
1/15/2025 2:45	4.7	13.0	0.0	7.0	11.8	0.0	8.0
1/15/2025 3:00	4.7	12.8	0.0	7.0	11.8	0.0	8.0
1/15/2025 3:15	4.6	12.9	0.0	7.0	11.8	0.1	8.1
1/15/2025 3:30	4.6	12.8	0.0	7.0	11.8	0.0	8.0
1/15/2025 3:45	4.6	11.6	0.0	7.0	11.8	0.0	8.0
1/15/2025 4:00	4.6	12.8	0.0	7.0	11.8	0.0	8.0
1/15/2025 4:15	4.6	11.6	0.0	7.0	11.8	0.0	8.0
1/15/2025 4:30	4.6	12.8	0.0	6.8	11.8	0.0	8.0
1/15/2025 4:45	4.6	12.8	0.0	7.0	11.8	0.0	8.0
1/15/2025 5:00	4.6	11.5	0.0	7.0	11.8	0.4	8.4
1/15/2025 5:15	4.6	12.7	0.0	6.9	11.8	0.0	8.0
1/15/2025 5:30	4.6	12.7	0.0	7.0	11.8	0.0	8.0
1/15/2025 5:45	4.5	12.8	0.0	6.9	11.8	0.0	8.0
1/15/2025 6:00	4.5	12.8	0.0	6.9	11.8	0.0	8.0
1/15/2025 6:15	4.5	11.5	0.0	7.0	11.8	0.0	8.0
1/15/2025 6:30	4.5	12.7	0.0	7.0	11.9	0.0	8.0
1/15/2025 6:45	4.5	11.9	0.0	6.9	11.8	0.0	8.0
1/15/2025 7:00	4.5	12.6	0.0	7.0	11.8	0.0	8.0
1/15/2025 7:15	4.5	12.8	0.0	7.0	11.8	0.0	8.0
1/15/2025 7:30	4.4	12.6	0.0	7.0	11.9	0.0	8.0
1/15/2025 7:45	4.4	11.6	0.0	6.9	11.9	0.1	8.1
1/15/2025 8:00	4.4	12.7	0.0	6.9	11.9	0.0	8.0
1/15/2025 8:15	4.4	12.8	0.0	7.0	11.9	0.0	8.0
1/15/2025 8:30	4.4	12.7	0.0	6.8	11.9	0.5	8.5
1/15/2025 8:45	4.4	12.7	0.0	6.9	11.9	0.0	8.0
1/15/2025 9:00	4.4	12.6	0.0	6.9	11.9	0.0	8.0
1/15/2025 9:15	4.4	11.9	0.0	6.9	11.9	0.0	8.0
1/15/2025 9:30	4.4	12.6	0.0	6.9	11.9	0.0	8.0
1/15/2025 9:45	4.4	12.6	0.0	7.0	11.9	0.0	8.0
1/15/2025 10:00	4.4	12.6	0.0	7.0	11.9	0.0	8.0
1/15/2025 10:15	4.4	12.5	0.0	7.0	11.9	0.0	8.0
1/15/2025 10:30	4.5	11.9	0.0	7.0	11.9	0.0	8.0
1/15/2025 10:45	4.5	12.5	0.0	6.9	11.9	0.0	8.0
1/15/2025 11:00	4.6	12.6	0.0	6.9	11.9	0.0	8.0
1/15/2025 11:15	4.6	12.6	0.0	7.0	11.9	0.0	8.0
1/15/2025 11:30	4.7	12.6	0.0	7.0	11.8	0.0	8.0
1/15/2025 11:45	4.7	12.6	0.0	7.0	11.8	0.0	8.0
1/15/2025 12:00		12.7	0.0	7.0	11.8	0.0	8.0
1/15/2025 12:15	4.8	12.6	0.0	7.0	11.8	0.0	8.0
1/15/2025 12:30	4.9	12.8	0.0	7.0	11.8	0.1	8.1
1/15/2025 12:45	4.9	12.7	0.0	7.0	11.7	0.0	8.0
1/15/2025 13:00	5.0	12.9	0.0	7.0	11.7	0.0	8.0
1/15/2025 13:15	5.0	12.8	0.0	7.0	11.7	0.0	8.0
1/15/2025 13:30	5.1	11.7	0.0	7.0	11.7	0.0	8.0
1/15/2025 13:45	5.2	12.9	0.0	7.0	11.7	0.4	8.4
1/15/2025 14:00	5.3	13.0	0.0	7.0	11.6	0.0	8.0
1/15/2025 14:15	5.3	12.9	0.0	7.0	11.6	0.0	8.0
1/15/2025 14:30	5.4	13.0	0.0	7.0	11.6	0.0	8.0
1/15/2025 14:45	5.4	12.9	0.0	7.0	11.6	0.0	8.0
1/15/2025 15:00	5.4	12.9	0.0	7.0	11.6	0.0	8.0
1/15/2025 15:15	5.5	12.7	0.0	7.0	11.5	1.3	9.3
1/15/2025 15:30	5.5	12.9	0.0	7.0	11.5	0.0	8.0
1/15/2025 15:45	5.5	12.8	0.0	7.0	11.5	0.0	8.0
1/15/2025 16:00	5.5	12.8	0.0	7.0	11.5	0.0	8.0
1/15/2025 16:15	5.5	12.8	0.0	7.0	11.5	0.0	8.0
1/15/2025 16:30	5.5	12.9	0.0	7.0	11.5	0.0	8.0
1/15/2025 16:45	5.5	12.7	0.0	6.9	11.5	0.0	8.0
1/15/2025 17:00	5.4	12.8	0.0	7.0	11.5	0.0	8.0
1/15/2025 17:15	5.4	12.7	0.0	7.0	11.5	0.0	8.0
1/15/2025 17:30	5.4	11.5	0.0	7.0	11.5	0.1	8.1
1/15/2025 17:45	5.4	12.7	0.0	6.9	11.5	0.0	8.0
1/15/2025 18:00	5.4	12.8	0.0	6.9	11.5	0.0	8.0
1/15/2025 18:15	5.4	12.7	0.0	7.0	11.5	0.0	8.0
1/15/2025 18:30	5.3	12.8	0.0	7.0	11.5	0.0	8.0
1/15/2025 18:45	5.3	12.8	0.0	7.0	11.5	0.0	8.0
1/15/2025 19:00	5.3	11.4	0.0	7.0	11.5	0.0	8.0
1/15/2025 19:15	5.3	12.8	0.0	6.9	11.5	0.0	8.0
1/15/2025 19:30	5.3	12.8	0.0	7.0	11.5	0.2	8.2

1/15/2025 19:45	7.4	84.3	0.0	7.4	11.2	2.2	1/15/2025 19:45	5.3	12.9	0.0	6.9	11.5	0.0	8.0
1/15/2025 20:00	6.4	39.1	0.0	7.3	11.4	0.0	1/15/2025 20:00	5.3	12.8	0.0	7.0	11.5	0.0	8.0
1/15/2025 20:15	5.5	21.9	0.0	6.8	11.7	0.0	1/15/2025 20:15	5.3	11.7	0.0	7.0	11.5	0.0	8.0
1/15/2025 20:30	5.4	23.1	0.0	6.7	11.8	0.0	1/15/2025 20:30	5.3	12.9	0.0	6.9	11.5	0.0	8.0
1/15/2025 20:45	7.9	87.9	0.0	7.5	11.0	1.5	1/15/2025 20:45	5.3	12.9	0.0	7.0	11.5	0.0	8.0
1/15/2025 21:00	7.0	55.5	0.0	7.4	11.2	0.0	1/15/2025 21:00	5.4	12.9	0.0	7.0	11.5	1.2	9.2
1/15/2025 21:15	7.1	67.1	0.0	7.4	11.2	0.5	1/15/2025 21:15	5.4	12.9	0.0	6.9	11.5	0.0	8.0
1/15/2025 21:30	5.6	22.4	0.0	6.8	11.7	0.0	1/15/2025 21:30	5.4	12.8	0.0	6.9	11.5	0.1	8.1
1/15/2025 21:45	5.4	19.8	0.0	6.7	11.7	0.0	1/15/2025 21:45	5.3	12.9	0.0	7.0	11.5	0.0	8.0
1/15/2025 22:00	6.9	72.4	0.0	7.3	11.4	6.6	1/15/2025 22:00		12.8	0.0	7.0	11.5	0.0	8.0
1/15/2025 22:15	7.0	67.5	0.0	7.4	11.2	0.0	1/15/2025 22:15	5.4	12.9	0.0	7.0	11.5	0.0	8.0
1/15/2025 22:30	5.5	22.0	0.0	6.8	11.7	0.0	1/15/2025 22:30	5.4	12.9	0.0	7.0	11.5	0.0	8.0
1/15/2025 22:45	7.6	89.6	0.0	7.5	11.1	2.3	1/15/2025 22:45	5.3	12.9	0.0	7.0	11.5	0.0	8.0
1/15/2025 23:00	7.9	90.2	0.0	7.5	11.0	0.7	1/15/2025 23:00		12.9	0.0	7.0	11.5	0.0	8.0
1/15/2025 23:15	7.5	75.5	0.0	7.5	11.1	2.3	1/15/2025 23:15	5.3	11.7	0.0	7.0	11.5	0.0	8.0
1/15/2025 23:30	7.8	87.9	0.0	7.5	11.0	1.3	1/15/2025 23:30	5.3	12.8	0.0	6.8	11.5	0.0	8.0
1/15/2025 23:45	6.1	28.9	0.0	7.1	11.5	0.0	1/15/2025 23:45	5.4	12.7	0.0	6.9	11.5	0.0	8.0
1/16/2025 0:00	5.6	22.1	0.0	6.8	11.7	0.0	1/16/2025 0:00	5.4	12.9	0.0	7.0	11.5	0.0	8.0
1/16/2025 0:15	5.4	21.0	0.0	6.8	11.7	0.0	1/16/2025 0:15	5.4	12.7	0.0	7.0	11.5	0.0	8.0
1/16/2025 0:30	7.5	84.4	0.0	7.5	11.1	1.3	1/16/2025 0:30	5.4	11.7	0.0	7.0	11.5	0.0	8.0
1/16/2025 0:45	7.7	85.9	0.0	7.5	11.1	1.5	1/16/2025 0:45	5.4	12.8	0.0	6.9	11.5	0.0	8.0
1/16/2025 1:00	6.0	27.8	0.0	7.0	11.6	0.0	1/16/2025 1:00	5.4	12.7	0.0	6.9	11.5	0.0	8.0
1/16/2025 1:15	5.5	21.8	0.0	6.7	11.7	0.0	1/16/2025 1:15	5.4	13.0	0.0	6.9	11.5	0.1	8.1
1/16/2025 1:30	5.4	20.8	0.0	6.7	11.7	0.0	1/16/2025 1:30	5.4	12.8	0.0	6.9	11.5	0.0	8.0
1/16/2025 1:45	5.3	20.4	0.0	6.7	11.8	0.0	1/16/2025 1:45	5.3	13.0	0.0	7.0	11.5	0.0	8.0
1/16/2025 2:00	5.3	20.1	0.0	6.7	11.8	0.0	1/16/2025 2:00	5.3	13.0	0.0	7.0	11.5	0.0	8.0
1/16/2025 2:15	5.2	19.9	0.0	6.7	11.8	1.8	1/16/2025 2:15	5.3	12.9	0.0	7.0	11.5	0.0	8.0
1/16/2025 2:30	7.3	86.5	0.0	7.4	11.2	1.1	1/16/2025 2:30	5.3	12.9	0.0	7.0	11.5	0.0	8.0
1/16/2025 2:45	7.3	88.5	0.0	7.5	11.1	0.9	1/16/2025 2:45	5.3	12.9	0.0	7.0	11.5	0.0	8.0
1/16/2025 3:00	7.0	77.9	0.0	7.4	11.2	0.3	1/16/2025 3:00	5.3	12.9	0.0	7.0	11.5	0.0	8.0
1/16/2025 3:15	7.3	89.9	0.0	7.4	11.2	2.6	1/16/2025 3:15	5.3	12.9	0.0	7.0	11.5	0.4	8.4
1/16/2025 3:30	7.5	90.8	0.0	7.5	11.1	1.3	1/16/2025 3:30	5.3	12.7	0.0	7.0	11.5	0.0	8.0
1/16/2025 3:45	7.5	91.1	0.0	7.5	11.1	1.1	1/16/2025 3:45	5.3	13.0	0.0	7.0	11.5	0.0	8.0
1/16/2025 4:00	7.6	90.8	0.0	7.5	11.1	1.3	1/16/2025 4:00	5.3	12.9	0.0	7.0	11.5	0.0	8.0
1/16/2025 4:15	7.6	90.7	0.0	7.5	11.1	3.2	1/16/2025 4:15	5.3	11.6	0.0	7.0	11.5	1.4	9.4
1/16/2025 4:30	7.6	90.2	0.0	7.5	11.1	0.2	1/16/2025 4:30	5.4	12.9	0.0	6.9	11.5	0.0	8.0
1/16/2025 4:45	7.6	89.3	0.0	7.5	11.1	1.3	1/16/2025 4:45	5.4	12.6	0.0	7.0	11.5	0.3	8.3
1/16/2025 5:00	7.6	84.2	0.0	7.5	11.1	1.2	1/16/2025 5:00	5.4	12.5	0.0	6.9	11.5	0.0	8.0
1/16/2025 5:15	7.7	86.2	0.0	7.5	11.1	0.3	1/16/2025 5:15	5.4	12.8	0.0	6.9	11.5	0.0	8.0
1/16/2025 5:30	5.8	24.7	0.0	6.9	11.6	0.0	1/16/2025 5:30	5.4	13.0	0.0	6.9	11.4	0.0	8.0
1/16/2025 5:45	5.6	21.9	0.0	6.7	11.7	14.8	1/16/2025 5:45	5.4	12.9	0.0	7.0	11.5	0.0	8.0
1/16/2025 6:00	5.5	21.2	0.0	6.7	11.7	0.0	1/16/2025 6:00	5.4	11.7	0.0	6.9	11.4	0.0	8.0
1/16/2025 6:15	5.4	20.7	0.0	6.7	11.7	0.0	1/16/2025 6:15	5.4	12.9	0.0	6.9	11.4	0.0	8.0
1/16/2025 6:30	5.4	20.4	0.0	6.7	11.7	0.0	1/16/2025 6:30	5.5	13.0	0.0	7.0	11.4	0.1	8.1
1/16/2025 6:45	5.4	20.2	0.0	6.7	11.7	0.0	1/16/2025 6:45	5.5	12.9	0.0	7.0	11.4	0.1	8.1
1/16/2025 7:00	7.5	84.5	0.0	7.4	11.1	2.6	1/16/2025 7:00	5.5	13.0	0.0	7.0	11.4	0.0	8.0
1/16/2025 7:15	7.7	84.9	0.0	7.5	11.0	37.2	1/16/2025 7:15	5.5	12.7	0.0	7.0	11.4	1.0	9.0
1/16/2025 7:30	6.2	29.5	0.0	7.1	11.5	0.0	1/16/2025 7:30	5.5	12.2	0.0	7.0	11.4	0.0	8.0
1/16/2025 7:45	5.6	21.7	0.0	6.8	11.6	0.0	1/16/2025 7:45	5.5	13.0	0.0	6.9	11.4	0.1	8.1
1/16/2025 8:00	7.7	85.6	0.0	7.5	11.0	0.3	1/16/2025 8:00	5.5	12.9	0.0	6.9	11.4	0.0	8.0
1/16/2025 8:15	7.9	85.8	0.0	7.5	11.0	0.0	1/16/2025 8:15	5.5	13.0	0.0	6.9	11.4	0.4	8.4
1/16/2025 8:30	7.9	84.7	0.0	7.5	11.0	0.7	1/16/2025 8:30	5.5	12.9	0.0	7.0	11.4	0.0	8.0
1/16/2025 8:45	7.8	82.5	0.0	7.5	11.0	1.1	1/16/2025 8:45	5.5	11.6	0.0	7.0	11.4	0.0	8.0
1/16/2025 9:00	6.4	32.0	0.0	7.1	11.4	0.0	1/16/2025 9:00	5.5	12.8	0.0	7.0	11.4	0.0	8.0
1/16/2025 9:15	5.7	21.7	0.0	6.8	11.6	0.0	1/16/2025 9:15	5.5	12.9	0.0	7.0	11.4	0.0	8.0
1/16/2025 9:30	7.5	77.0	0.0	7.4	11.1	0.0	1/16/2025 9:30	5.5	12.9	0.0	7.0	11.4	0.0	8.0
1/16/2025 9:45	6.8	52.1	0.0	7.3	11.3	0.0	1/16/2025 9:45	5.6	11.6	0.0	7.0	11.4	0.0	8.0
1/16/2025 10:00	7.8	85.9	0.0	7.5	11.0	0.0	1/16/2025 10:00	5.6	12.9	0.0	7.0	11.4	0.0	8.0
1/16/2025 10:15	7.9	85.9	0.0	7.5	11.0	0.4	1/16/2025 10:15	5.6	13.0	0.0	7.0	11.4	0.1	8.1
1/16/2025 10:30	7.6	73.8	0.0	7.5	11.0	2.0	1/16/2025 10:30	5.6	12.9	0.0	7.0	11.4	0.0	8.0
1/16/2025 10:45	5.9	23.5	0.0	6.8	11.6	0.0	1/16/2025 10:45	5.6	13.0	0.0	7.0	11.4	0.0	8.0
1/16/2025 11:00	5.7	21.5	0.0	6.8	11.6	0.0	1/16/2025 11:00	5.6	13.1	0.0	7.0	11.4	0.0	8.0
1/16/2025 11:15	5.7	20.7	0.0	6.8	11.7	0.0	1/16/2025 11:15	5.7	12.3	0.0	7.0	11.4	0.0	8.0
1/16/2025 11:30	7.5	78.0	0.0	7.4	11.1	0.0	1/16/2025 11:30	5.7	12.8	0.0	7.0	11.5	0.0	8.0
1/16/2025 11:45	8.0	88.7	0.0	7.5	11.0	0.7	1/16/2025 11:45	5.7	13.0	0.0	7.0	11.4	0.0	8.0
1/16/2025 12:00	8.0	89.1	0.0	7.5	11.0	2.0	1/16/2025 12:00	5.8	12.9	0.0	7.0	11.4	0.0	8.0
1/16/2025 12:15	8.1	89.1	0.0	7.5	10.9	29.2	1/16/2025 12:15	5.9	12.1	0.0	7.0	11.4	0.0	8.0
1/16/2025 12:30	7.6	61.7	0.0	7.5	11.0	1.4	1/16/2025 12:30	5.9	12.8	0.0	7.0	11.4	0.0	8.0
1/16/2025 12:45	7.8	74.6	0.0	7.5	11.0	2.5	1/16/2025 12:45	6.0	13.0	0.0	6.9	11.4	0.0	8.0
1/16/2025 13:00	6.3	23.2	0.0	6.9	11.5	0.0	1/16/2025 13:00	6.1	13.0	0.0	7.0	11.4	0.0	8.0
1/16/2025 13:15	6.3	22.2	0.0	6.8	11.5	0.0	1/16/2025 13:15	6.1	13.0	0.0	7.0	11.3	1.0	9.0
1/16/2025 13:30	6.5	30.9	0.0	7.0	11.4	0.0	1/16/2025 13:30	6.2	13.0	0.0	7.0	11.3	0.0	8.0
1/16/2025 13:45	6.4	25.5	0.0	6.7	11.5	3.0	1/16/2025 13:45	6.2	13.0	0.0	7.0	11.3	0.0	8.0
1/16/2025 14:00	7.8	82.2	0.0	7.4	11.1	9.4	1/16/2025 14:00	6.2	12.9	0.0	7.0	11.3	0.0	8.0
1/16/2025 14:15	8.4	94.1	0.0	7.5	10.9	5.4	1/16/2025 14:15	6.2	12.9	0.0	7.0	11.3	0.0	8.0
1/16/2025 14:30	8.5	95.2	0.0	7.5	10.8	5.2	1/16/2025 14:30	6.2	12.7	0.0	7.0	11.3	0.1	8.1
1/16/2025 14:45	8.5	95.3	0.0	7.5	10.8	3.6	1/16/2025 14:45	6.2	13.0	0.0	7.0	11.3	0.3	8.3
1/16/2025 15:00	7.5	49.4	0.0	7.4	11.1	0.0	1/16/2025 15:00		12.7	0.0	7.0	11.3	1.3	9.3
1/16/2025 15:15	6.5	23.1	0.0	6.8	11.4	0.0	1/16/2025 15:15	6.2	13.0	0.0	7.0	11.3	0.0	8.0
1/16/2025 15:30	8.1	90.2	0.0	7.5	10.9	1.0	1/16/2025 15:30	6.2	12.9	0.0	7.0	11.3	0.0	8.0
1/16/2025 15:45	8.3	91.0	0.0	7.5	10.9	2.1	1/16/2025 15:45	6.2	12.9	0.0	7.0	11.3	0.3	8.3
1/16/2025 16:00	8.3	87.3	0.0	7.5	10.9	1.8	1/16/2025 16:00	6.2	12.5	0.0	7.0	11.3	0.0	8.0
1/16/2025 16:15	8.6	96.4	0.0	7.5	10.8	5.0	1/16/2025 16:15	6.1	12.9	0.0	7.0	11.3	0.0	8.0
1/16/2025 16:30	7.1	34.9	0.0	7.2	11.2	0.0	1/16/2025 16:30	6.1	13.0	0.0	7.0	11.3	0.0	8.0
1/16/2025 16:45	6.3	22.8	0.0	6.9	11.4	0.0	1/16/2025 16:45	6.0	11.7	0.0	7.0	11.3	0.0	8.0
1/16/2025 17:00	8.3	96.4	0.0	7.5	10.9	2.2	1/16/2025 17:00	6.0	13.0	0.0	7.0	11.3	0.9	8.9
1/16/2025 17:15	8.5	99.4	0.0	7.5	10.8	2.4	1/16/2025 17:15	5.9	12.9	0.0	7.0	11.3	0.0	8.0
1/16/2025 17:30	7.2	47.5	0.0	7.3	11.1	0.0	1/16/2025 17:30	5.9	12.8	0.0	7.0	11.3	0.1	8.1
1/16/2025 17:45	6.2	23.3	0.0	6.9	11.5	0.0	1/16/2025 17:45	5.8	11.5	0.0	7.0	11.3	0.0	8.0
1/16/2025 18:00	8.0	97.1	0.0	7.5	11.0	0.2	1/16/2025 18:00	5.8	12.9	0.0	7.0	11.3	0.1	8.1
1/16/2025 18:15	6.7	35.9	0.0	7.2	11.3	0.5	1/16/2025 18:15	5.7	11.7	0.0	7.0	11.4	0.1	8.1
1/16/2025 18:30	5.9	22.6	0.0	6.8	11.6	0.0	1/16/2025 18:30	5.7	12.9	0.0	7.0	11.4	0.0	8.0
1/16/2025 18:45	7.8	97.2	0.0	7.5	11.0	0.1	1/16/2025 18:45	5.6	12.9	0.0	6.9	11.4	0.0	8.0
1/16/2025 19:00	7.8	93.8	0.0	7.5	11.0	1.9	1/16/2025 19:00	5.6	12.6	0.0	7.0	11.4	0.0	8.0
1/16/2025 19:15	6.7	49.3	0.0	7.3	11.3	0.0	1/16/2025 19:15	5.5	11.6	0.0	7.0	11.4	0.0	8.0
1/16/2025 19:30	6.8	72.4	0.0	7.2	11.4	0.0	1/16/2025 19:30	5.5	12.8	0.0	6.9	11.4	0.0	8.0
1/16/2025 19:45	7.8	96.3	0.0	7.5	11.1	0.0	1/16/2025 19:45	5.5	12.7	0.0	7.0	11.5	0.0	8.0
1/16/2025 20:00	6.2	31.4	0.0	7.1	11.5	0.0	1/16/2025 20:00	5.4	12.9	0.0	7.0	11.5	0.0	8.0
1/16/2025 20:15	5.6	22.5	0.0	6.8	11.7	0.0	1/16/2025 20:15	5.4	12.8	0.0	7.0	11.5	0.0	8.0
1/16/2025 20:30	5.5	21.3	0.0	6.7	11.7	0.0	1/16/2025 20:30	5.3	12.9	0.0	6.9	11.5	0.0	8.0
1/16/2025 20:45	7.4	93.4	0.0	7.5	11.2	0.0	1/16/2025 20:45	5.3	12.9	0.0	7.0	11.5	0.0	8.0
1/16/2025 21:00	7.1	76.5	0.0	7.4	11.2	1.2	1/16/2025 21:00	5.3	11.5	0.0	6.9	11.5	0.0	8.0
1/16/2025 21:15	7.5	89.4	0.0	7.5	11.1	0.5	1/16/2025 21:15	5.2	12.9	0.0	6.9	11.5	0.0	8.0
1/16/2025 21:30	6.8	57.5	0.0	7.4	11.3	9.9	1/16/2025 21:30	5.2	12.9	0.0	6.9	11.5	0.0	8.0
1/16/2025 21:45	7.4	84.1	0.0	7.5	11.1	0.2	1/16/2025 21:45	5.1	12.9	0.0	6.8	11.6	0.0	8.0
1/16/2025 22:00	5.5	23.7	0.0	6.9	11.7	0.0	1/16/2025 22:00	5.1	12.9	0.0	7.0	11.6	0.0	8.0
1/16/2025 22:15	7.3	82.5	0.0	7.5	11.2	0.3	1/16/2025 22:15	5.0	12.7	0.0	7.0	11.6	0.2	8.2
1/16/2025 22:30	6.1	35.6	0.0	7.2	11.5	0.0	1/16/2025 22:30	5.0	12.9	0.0	7.0	11.6	0.1	8.1
1/16/2025 22:45	5.3	22.4	0.0	6.8	11.8	0.0	1/16/2025 22:45	5.0	12.8	0.0	7.0	11.6	0.1	8.1
1/16/2025 23:00	6.9	82.9	0.0	7.3	11.4	1.5	1/16/2025 23:00	4.9	12.9	0.0	7.0	11.6	0.0	8.0
1/16/2025 23:15	7.7	87.8	0.0	7.5	11.1	1.5	1/16/2025 23:15	4.9	12.7	0.0	7.0	11.6	0.0	8.0
1/16/2025 23:30	7.8	86.4	0.0	7.5	11.1	3.6	1/16/2025 23:30	4.9	11.5	0.0	7.0	11.6	0.0	8.0
1/16/2025 23:45	7.8	83.9	0.0	7.5	11.1	0.9	1/16/2025 23:45	4.9	12.8	0.0	6.9	11.7	0.0	8.0
1/17/2025 0:00	7.8	81.8	0.0	7.5	11.1	1.0	1/17/2025 0:00	4.9	12.6	0.0	7.0	11.7	0.0	8.0
1/17/2025 0:15	7.0	62.4	0.0	7.4	11.3	0.4	1/17/2025 0:15	4.8	11.6	0.0	7.0	11.7	0.0	8.0
1/17/2025 0:30	7.5	78.4	0.0	7.4	11.1	0.2	1/17/2025 0:30	4.8	12.8	0.0	6.9	11.7	0.0	8.0
1/17/2025 0:45	5.9	30.6	0.0	7.1	11.6	0.0	1/17/2025 0:45	4.8	12.7	0.0	7.0	11.7	0.0	8.0
1/17/2025 1:00	5.1	22.5	0.0	6.8	11.9	0.0	1/17/2025 1:00	4.7	11.6	0.0	6.9	11.7	0.1	8.1
1/17/2025 1:15	6.7	74.1	0.0	7.2	11.5	0.6	1/17/2025 1:15	4.7	12.7	0.0	6.9	11.7	0.0	8.0
1/17/2025 1:30	7.6	83.8	0.0	7.5	11.2	1.6	1/17/2025 1:30	4.7	12.6	0.0	7.0	11.7	0.0	8.0
1/17/2025 1:45	5.4	30.0	0.0	6.9	11.9	0.0	1/17/2025 1:45	4.6	12.8	0.0	7.0	11.8	0.7	8.7
1/17/2025 2:00	7.6	84.4	0.0	7.5	11.1	2.7	1/17/2025 2:00	4.6	12.7	0.0	7.0	11.8	0.0	8.0
1/17/2025 2:15	5.6	30.2	0.0	7.0	11.7	0.0	1/17/2025 2:15	4.6	11.6	0.0	7.0	11.8	0.0	8.0
1/17/2025 2:30	4.9	22.2	0.0	6.8	12.0	0.0	1/17/2025 2:30	4.5	12.7	0.0	7.0	11.8	0.0	8.0
1/17/2025 2:45	4.7	21.1	0.0	6.8	12.0	0.0	1/17/2025 2:45	4.5	12.8	0.0	7.0	11.8	0.0	8.0
1/17/2025 3:00	7.3	82.1	0.0	7.4	11.2	1.6	1/17/2025 3:00	4.5	12.7	0.0	7.0	11.8	0.0	8.0
1/17/2025 3:15	7.3	81.0	0.0	7.4	11.2	4.4	1/17/2025 3:15	4.5	12.8	0.0	7.0	11.8	0.0	8.0
1/17/2025 3:30	7.5	82.3	0.0	7.5	11.2	1.1	1/17/2025 3:30	4.5	12.7	0.0	6.9	11.8	0.0	8.0
1/17/2025 3:45	7.5	82.1	0.0	7.5	11.2	1.9	1/17/2025 3:45	4.4	12.7	0.0	7.0	11.8	0.0	8.0
1/17/2025 4:00	7.5	81.4	0.0	7.4	11.2	0.3	1/17/2025 4:00	4.4	12.6	0.0	6.9	11.8	0.0	8.0
1/17/2025 4:15	5.6	32.0	0.0	7.1	11.7	0.0	1/17/2025 4:15	4.4	12.7	0.0	6.9	11.9	0.8	8.8
1/17/2025 4:30	4.8	22.4	0.0	6.8	12.0	0.0	1/17/2025 4:30	4.4	12.8	0.0	6.9	11.9	0.0	8.0
1/17/2025 4:45	4.7	24.6	0.0	6.7	12.1	0.0	1/17/2025 4:45	4.3	12.7	0.0	6.8	11.9	0.0	8.0
1/17/2025 5:00	7.1	78.5	0.0	7.4	11.3	0.0	1/17/2025 5:00	4.3	12.7	0.0	7.0	11.9	0.0	8.0
1/17/2025 5:15	7.1	77.4	0.0	7.4	11.3	0.0	1/17/2025 5:15	4.3	12.6	0.0	7.0	11.9	0.0	8.0
1/17/2025 5:30	6.5	70.3	0.0	7.3	11.5	0.4	1/17/2025 5:30	4.3	12.7	0.0	6.9	11.9	0.0	8.0
1/17/2025 5:45	6.5	65.5	0.0	7.4	11.5	0.0	1/17/2025 5:45	4.2	12.5	0.0	7.0	11.9	0.0	8.0
1/17/2025 6:00	4.6	22.6	0.0	6.8	12.1	0.0	1/17/2025 6:00	4.2	12.7	0.0	7.0	11.9	0.0	8.0

1/17/2025 6:15	6.9	77.7	0.0	7.4	11.4	0.3
1/17/2025 6:30	7.0	77.6	0.0	7.4	11.3	0.5
1/17/2025 6:45	7.0	76.9	0.0	7.4	11.3	0.0
1/17/2025 7:00	7.0	75.8	0.0	7.4	11.3	0.5
1/17/2025 7:15	6.9	74.0	0.0	7.4	11.4	0.0
1/17/2025 7:30	5.8	54.8	0.0	7.2	11.7	0.0
1/17/2025 7:45	5.4	38.3	0.0	7.2	11.8	0.0
1/17/2025 8:00	4.4	24.7	0.0	6.8	12.2	0.0
1/17/2025 8:15	6.6	77.3	0.0	7.4	11.5	0.0
1/17/2025 8:30	6.8	77.6	0.0	7.4	11.4	1.8
1/17/2025 8:45	6.8	76.2	0.0	7.4	11.4	0.0
1/17/2025 9:00	6.6	72.1	0.0	7.4	11.5	0.0
1/17/2025 9:15	6.5	69.5	0.0	7.4	11.5	0.0
1/17/2025 9:30	6.4	72.0	0.0	7.4	11.5	0.0
1/17/2025 9:45	4.4	22.7	0.0	6.8	12.2	0.0
1/17/2025 10:00	4.1	21.2	0.0	6.8	12.2	0.0
1/17/2025 10:15	6.2	75.2	0.0	7.4	11.6	0.0
1/17/2025 10:30	6.5	76.0	0.0	7.4	11.5	0.0
1/17/2025 10:45	6.4	72.8	0.0	7.4	11.5	0.7
1/17/2025 11:00	6.6	78.3	0.0	7.4	11.5	0.0
1/17/2025 11:15	4.5	23.3	0.0	6.8	12.1	0.0
1/17/2025 11:30	4.3	21.2	0.0	6.7	12.2	0.0
1/17/2025 11:45	4.3	20.5	0.0	6.7	12.2	0.0
1/17/2025 12:00	6.3	78.9	0.0	7.4	11.6	0.0
1/17/2025 12:15	6.7	83.8	0.0	7.4	11.5	0.0
1/17/2025 12:30	6.7	83.0	0.0	7.5	11.5	1.0
1/17/2025 12:45	5.0	26.7	0.0	7.0	12.0	0.0
1/17/2025 13:00	6.3	76.2	0.0	7.4		0.0
1/17/2025 13:15	6.7	84.6	0.0	7.5	11.5	0.0
1/17/2025 13:30	5.1	25.8	0.0	7.0	12.0	0.0
1/17/2025 13:45	4.8	21.6	0.0	6.7	12.1	0.0
1/17/2025 14:00	4.7	20.7	0.0	6.8		1.2
1/17/2025 14:15	5.1	39.2	0.0	6.8	12.1	0.0
1/17/2025 14:30	6.9	87.5	0.0	7.5	11.4	0.0
1/17/2025 14:45	7.1	87.9	0.0	7.5	11.3	0.0
1/17/2025 15:00	5.9	40.4	0.0	7.3		0.0
1/17/2025 15:15	5.0	22.7	0.0	6.7	12.0	0.0
1/17/2025 15:30	6.7	82.9	0.0	7.4	11.5	0.0
1/17/2025 15:45	7.0	83.2	0.0	7.5	11.4	0.0
1/17/2025 16:00	5.5	29.2	0.0	7.1	11.8	0.0
1/17/2025 16:15	5.4	40.3	0.0	7.1	11.9	0.0
1/17/2025 16:30	4.8	21.5	0.0	6.7	12.0	0.0
1/17/2025 16:45	4.7	20.8	0.0	6.7	12.1	0.0
1/17/2025 17:00	5.0	41.1	0.0	6.8	12.1	0.0
1/17/2025 17:15	5.8	52.4	0.0	7.2	11.8	0.0
1/17/2025 17:30	7.0	91.3	0.0	7.5	11.4	0.0
1/17/2025 17:45	7.1	91.3	0.0	7.5	11.3	0.0
1/17/2025 18:00	7.0	90.2	0.0	7.5	11.4	0.0
1/17/2025 18:15	4.9	25.0	0.0	7.0	12.0	0.0
1/17/2025 18:30	6.6	86.6	0.0	7.5	11.5	0.0
1/17/2025 18:45	6.4	82.6	0.0	7.4	11.6	0.0
1/17/2025 19:00	6.5	81.6	0.0	7.5	11.5	0.0
1/17/2025 19:15	4.8	32.0	0.0	6.9	12.1	0.0
1/17/2025 19:30	4.8	34.8	0.0	7.0	12.1	0.0
1/17/2025 19:45	5.8	76.2	0.0	7.3	11.8	0.0
1/17/2025 20:00	6.1	74.8	0.0	7.4		0.0
1/17/2025 20:15	4.5	23.4	0.0	6.8	12.1	0.0
1/17/2025 20:30	6.4	89.9	0.0	7.5	11.6	0.0
1/17/2025 20:45	6.7	92.8	0.0	7.5	11.5	0.0
1/17/2025 21:00	6.3	76.0	0.0	7.5	11.5	0.0
1/17/2025 21:15	4.9	39.1	0.0	7.1	12.0	0.0
1/17/2025 21:30	4.3	24.7	0.0	6.9	12.2	0.0
1/17/2025 21:45	4.1	21.2	0.0	6.8	12.3	0.0
1/17/2025 22:00	4.4	43.1	0.0	6.8	12.3	0.0
1/17/2025 22:15	6.4	93.4	0.0	7.5	11.6	0.0
1/17/2025 22:30	6.4	91.3	0.0	7.5	11.6	0.0
1/17/2025 22:45	5.9	73.0	0.0	7.5	11.7	0.0
1/17/2025 23:00	4.2	23.5	0.0	6.8	12.2	0.0
1/17/2025 23:15	4.0	21.5	0.0	6.7	12.3	0.0
1/17/2025 23:30	3.9	20.8	0.0	6.7	12.4	0.0
1/17/2025 23:45	6.0	91.2	0.0	7.5	11.7	0.0
1/18/2025 0:00	6.2	92.6	0.0	7.5	11.6	0.0
1/18/2025 0:15	5.8	77.4	0.0	7.4	11.8	0.0
1/18/2025 0:30	4.8	36.3	0.0	7.2	12.0	0.0
1/18/2025 0:45	4.0	22.7	0.0	6.8	12.3	0.0
1/18/2025 1:00	3.8	21.4	0.0	6.8	12.4	0.0
1/18/2025 1:15	3.7	20.7	0.0	6.7	12.4	0.0
1/18/2025 1:30	5.6	84.3	0.0	7.5	11.8	0.0
1/18/2025 1:45	5.5	81.6	0.0	7.4	11.9	0.7
1/18/2025 2:00	6.0	88.8	0.0	7.5	11.7	0.0
1/18/2025 2:15	4.1	25.0	0.0	6.9	12.3	0.0
1/18/2025 2:30	5.2	78.8	0.0	7.3	12.0	0.0
1/18/2025 2:45	5.9	85.4	0.0	7.5	11.7	0.0
1/18/2025 3:00	5.8	83.0	0.0	7.5	11.7	0.0
1/18/2025 3:15	5.3	70.8	0.0	7.4	11.9	0.0
1/18/2025 3:30	5.4	77.5	0.0	7.4	11.9	0.0
1/18/2025 3:45	5.5	76.5	0.0	7.4	11.9	0.7
1/18/2025 4:00	5.4	72.3	0.0	7.4	11.9	0.0
1/18/2025 4:15	4.3	31.8	0.0	7.1	12.2	0.0
1/18/2025 4:30	3.7	22.3	0.0	6.8	12.5	0.0
1/18/2025 4:45	3.5	21.2	0.0	6.7	12.5	0.0
1/18/2025 5:00	5.4	87.9	0.0	7.4	11.9	0.0
1/18/2025 5:15	5.9	91.4	0.0	7.5	11.7	0.0
1/18/2025 5:30	5.2	59.1	0.0	7.4	11.9	0.0
1/18/2025 5:45	3.7	23.2	0.0	6.8	12.4	0.0
1/18/2025 6:00	3.5	21.5	0.0	6.7	12.5	0.0
1/18/2025 6:15	3.4	20.8	0.0	6.7	12.5	0.0
1/18/2025 6:30	5.4	88.2	0.0	7.4	11.9	0.0
1/18/2025 6:45	5.8	89.9	0.0	7.5	11.7	0.0
1/18/2025 7:00	5.9	89.6	0.0	7.5	11.7	0.0
1/18/2025 7:15	3.9	25.5	0.0	6.9	12.4	0.0
1/18/2025 7:30	3.5	21.9	0.0	6.7	12.5	0.0
1/18/2025 7:45	4.7	66.2	0.0	7.3	12.1	0.0
1/18/2025 8:00	4.2	48.5	0.0	7.1	12.3	0.0
1/18/2025 8:15	3.5	21.7	0.0	6.8	12.5	0.0
1/18/2025 8:30	5.5	86.5	0.0	7.4	11.9	0.0
1/18/2025 8:45	5.7	86.4	0.0	7.5	11.8	0.0
1/18/2025 9:00	5.7	84.6	0.0	7.5	11.8	0.0
1/18/2025 9:15	5.7	82.5	0.0	7.5	11.8	0.0
1/18/2025 9:30	5.5	82.6	0.0	7.4	11.9	1.8
1/18/2025 9:45	4.1	31.0	0.0	7.1	12.3	0.0
1/18/2025 10:00	5.7	88.9	0.0	7.5	11.8	0.0
1/18/2025 10:15	5.9	90.2	0.0	7.5	11.7	0.0
1/18/2025 10:30	3.9	27.2	0.0	7.0	12.4	0.0
1/18/2025 10:45	3.5	22.2	0.0	6.8	12.5	0.0
1/18/2025 11:00	3.4	21.2	0.0	6.7	12.5	0.0
1/18/2025 11:15	5.7	89.0	0.0	7.5	11.8	0.0
1/18/2025 11:30	5.9	90.1	0.0	7.5	11.7	0.0
1/18/2025 11:45	6.0	88.9	0.0	7.5	11.7	0.0
1/18/2025 12:00	4.1	26.3	0.0	6.9	12.3	2.3
1/18/2025 12:15	3.8	22.1	0.0	6.8	12.4	0.0
1/18/2025 12:30	3.7	21.1	0.0	6.7	12.4	0.0
1/18/2025 12:45	5.4	81.3	0.0	7.3	11.9	0.0
1/18/2025 13:00	5.9	84.3	0.0	7.5	11.7	10.0
1/18/2025 13:15	6.0	82.9	0.0	7.5	11.7	0.0
1/18/2025 13:30	6.0	79.8	0.0	7.5	11.7	0.0
1/18/2025 13:45	6.0	83.2	0.0	7.5	11.7	0.0
1/18/2025 14:00	6.4	87.0	0.0	7.5	11.6	0.0
1/18/2025 14:15	4.7	33.6	0.0	7.0	12.1	0.0
1/18/2025 14:30	4.3	22.0	0.0	6.8	12.2	0.0
1/18/2025 14:45	6.1	93.0	0.0	8.3	11.7	17.2
1/18/2025 15:00	6.6	90.9	0.0	7.6	11.5	0.0
1/18/2025 15:15	6.6	93.3	0.0	7.6	11.5	0.0
1/18/2025 15:30	6.8	97.3	0.0	7.6	11.4	0.0
1/18/2025 15:45	4.9	27.9	0.0	7.0	12.0	0.0
1/18/2025 16:00	4.5	22.9	0.0	6.8	12.2	0.0
1/18/2025 16:15	4.4	21.9	0.0	6.8	12.2	0.0
1/18/2025 16:30	6.6	100.1	0.0	7.6	11.5	0.0

1/17/2025 6:15	4.2	12.7	0.0	6.9	11.9	0.0	8.0
1/17/2025 6:30	4.2	12.6	0.0	6.9	11.9	0.0	8.0
1/17/2025 6:45	4.1	12.6	0.0	7.0	11.9	0.0	8.0
1/17/2025 7:00	4.1	11.9	0.0	7.0	11.9	0.0	8.0
1/17/2025 7:15	4.1	12.7	0.0	6.9	12.0	0.0	8.0
1/17/2025 7:30	4.1	12.7	0.0	7.0	12.0	0.1	8.1
1/17/2025 7:45	4.1	12.7	0.0	7.0	12.0	0.0	8.0
1/17/2025 8:00	4.0	11.4	0.0	7.0	12.0	0.0	8.0
1/17/2025 8:15	4.0	12.6	0.0	7.0	12.0	0.0	8.0
1/17/2025 8:30	4.0	11.5	0.0	7.0	12.0	0.0	8.0
1/17/2025 8:45	4.0	12.6	0.0	6.9	12.0	0.0	8.0
1/17/2025 9:00	4.0	12.4	0.0	6.9	12.0	0.0	8.0
1/17/2025 9:15	4.0	11.3	0.0	6.9	12.0	0.0	8.0
1/17/2025 9:30	3.9	12.7	0.0	6.9	12.0	0.0	8.0
1/17/2025 9:45	3.9	12.4	0.0	7.0	12.0	0.0	8.0
1/17/2025 10:00	3.9	11.6	0.0	6.9	12.1	0.0	8.0
1/17/2025 10:15	3.9	12.7	0.0	7.0	12.1	0.0	8.0
1/17/2025 10:30	4.0	12.6	0.0	6.8	12.1	0.0	8.0
1/17/2025 10:45	4.0	11.4	0.0	7.0	12.1	0.0	8.0
1/17/2025 11:00	4.1	12.6	0.0	7.0	12.1	0.0	8.0
1/17/2025 11:15	4.1	12.6	0.0	7.0	12.0	0.0	8.0
1/17/2025 11:30	4.1	12.7	0.0	7.0	12.0	0.0	8.0
1/17/2025 11:45	4.2	11.3	0.0	7.0	12.0	0.0	8.0
1/17/2025 12:00	4.2	12.6	0.0	6.9	12.0	0.0	8.0
1/17/2025 12:15	4.3	12.4	0.0	7.0	12.0	0.0	8.0
1/17/2025 12:30	4.3	12.7	0.0	7.0	12.0	0.0	8.0
1/17/2025 12:45	4.4	12.6	0.0	7.0	12.0	0.0	8.0
1/17/2025 13:00	4.4	12.9	0.0	7.0	11.9	0.0	8.0
1/17/2025 13:15	4.4	12.6	0.0	6.9	11.9	0.1	8.1
1/17/2025 13:30	4.5	12.8	0.0	7.0	11.9	0.2	8.2
1/17/2025 13:45	4.6	12.7	0.0	7.0	11.9	0.3	8.3
1/17/2025 14:00	4.6	13.0	0.0	7.0	11.9	0.0	8.0
1/17/2025 14:15	4.7	13.0	0.0	6.9	11.8	0.0	8.0
1/17/2025 14:30	4.7	13.2	0.0	7.0	11.8	0.0	8.0
1/17/2025 14:45	4.7	12.9	0.0	7.0	11.8	0.0	8.0
1/17/2025 15:00	4.7	13.2	0.0	7.0	11.8	0.0	8.0
1/17/2025 15:15	4.8	13.1	0.0	7.0	11.8	0.0	8.0
1/17/2025 15:30	4.8	13.2	0.0	7.0	11.8	0.0	8.0
1/17/2025 15:45	4.8	13.1	0.0	7.0	11.8	0.0	8.0
1/17/2025 16:00	4.8	13.2	0.0	7.0	11.8	0.0	8.0
1/17/2025 16:15	4.8	12.9	0.0	7.0	11.8	0.0	8.0
1/17/2025 16:30	4.7	12.0	0.0	7.0	11.8	0.0	8.0
1/17/2025 16:45	4.7	13.2	0.0	6.9	11.8	0.9	8.9
1/17/2025 17:00	4.6	13.1	0.0	7.0	11.8	1.2	9.2
1/17/2025 17:15	4.6	13.0	0.0	7.0	11.8	0.0	8.0
1/17/2025 17:30	4.6	12.9	0.0	7.0	11.8	0.0	8.0
1/17/2025 17:45	4.5	11.9	0.0	7.0	11.8	0.0	8.0
1/17/2025 18:00	4.5	13.0	0.0	7.0	11.9	0.0	8.0
1/17/2025 18:15	4.5	11.7	0.0	7.0	11.9	0.0	8.0
1/17/2025 18:30	4.4	13.0	0.0	7.0	11.9	0.0	8.0
1/17/2025 18:45	4.4	11.7	0.0	6.9	11.9	0.0	8.0
1/17/2025 19:00	4.4	12.9	0.0	6.9	11.9	0.0	8.0
1/17/2025 19:15	4.3	13.0	0.0	6.8	11.9	0.0	8.0
1/17/2025 19:30	4.3	12.9	0.0	7.0	11.9	0.0	8.0
1/17/2025 19:45	4.3	11.5	0.0	7.0	11.9	0.1	8.1
1/17/2025 20:00	4.2	12.8	0.0	7.0	11.9	0.0	8.0
1/17/2025 20:15	4.2	11.5	0.0	7.0	12.0	0.0	8.0
1/17/2025 20:30	4.2	12.8	0.0	6.9	12.0	0.1	8.1
1/17/2025 20:45	4.2	12.6	0.0	7.0	11.9	0.0	8.0
1/17/2025 21:00	4.1	11.5	0.0	7.0	12.0	0.0	8.0
1/17/2025 21:15	4.1	12.7	0.0	6.9	12.0	0.0	8.0
1/17/2025 21:30	4.1	12.6	0.0	6.9	12.0	0.0	8.0
1/17/2025 21:45	4.0	12.8	0.0	7.0	12.0	0.0	8.0
1/17/2025 22:00	4.0	12.4	0.0	6.9	12.0	0.0	8.0
1/17/2025 22:15	4.0	12.8	0.0	7.0	12.0	0.0	8.0
1/17/2025 22:30	3.9	12.7	0.0	7.0	12.1	0.0	8.0
1/17/2025 22:45	3.9	12.7	0.0	7.0	12.1	0.0	8.0
1/17/2025 23:00		12.6	0.0	6.9	12.0	0.0	8.0
1/17/2025 23:15	3.9	12.8	0.0	6.9	12.1	0.0	8.0
1/17/2025 23:30	3.8	12.6	0.0	7.0	12.1	0.0	8.0
1/17/2025 23:45	3.8	11.5	0.0	6.9	12.1	0.0	8.0
1/18/2025 0:00	3.8	12.7	0.0	6.9	12.1	0.0	8.0
1/18/2025 0:15	3.8	12.7	0.0	6.9	12.1	0.0	8.0
1/18/2025 0:30	3.8	11.5	0.0	7.0	12.1	0.0	8.0
1/18/2025 0:45	3.7	12.6	0.0	6.9	12.1	0.0	8.0
1/18/2025 1:00	3.7	12.5	0.0	7.0	12.1	0.0	8.0
1/18/2025 1:15	3.7	11.5	0.0	6.9	12.1	0.0	8.0
1/18/2025 1:30	3.7	12.7	0.0	6.9	12.2	0.0	8.0
1/18/2025 1:45	3.7	12.5	0.0	6.9	12.1	0.1	8.1
1/18/2025 2:00	3.6	12.1	0.0	6.9	12.2	0.0	8.0
1/18/2025 2:15	3.6	12.7	0.0	6.9	12.2	0.0	8.0
1/18/2025 2:30	3.6	12.7	0.0	7.0	12.2	0.0	8.0
1/18/2025 2:45	3.6	12.6	0.0	6.9	12.2	0.0	8.0
1/18/2025 3:00	3.6	12.7	0.0	6.9	12.2	0.0	8.0
1/18/2025 3:15	3.5	12.4	0.0	7.0	12.2	0.0	8.0
1/18/2025 3:30	3.5	11.5	0.0	6.9	12.2	0.0	8.0
1/18/2025 3:45	3.5	12.7	0.0	7.0	12.2	0.0	8.0
1/18/2025 4:00	3.5	12.6	0.0	6.9	12.2	0.0	8.0
1/18/2025 4:15	3.5	12.5	0.0	6.9	12.2	0.0	8.0
1/18/2025 4:30	3.5	12.7	0.0	7.0	12.2	0.0	8.0
1/18/2025 4:45	3.5	12.5	0.0	7.0	12.2	0.0	8.0
1/18/2025 5:00	3.5	11.9	0.0	6.9	12.2	0.0	8.0
1/18/2025 5:15	3.5	12.7	0.0	6.9	12.2	0.1	8.1
1/18/2025 5:30	3.4	12.7	0.0	6.9	12.2	0.0	8.0
1/18/2025 5:45	3.4	12.7	0.0	6.9	12.2	0.0	8.0
1/18/2025 6:00	3.4	12.7	0.0	6.9	12.3	0.0	8.0
1/18/2025 6:15	3.4	11.8	0.0	7.0	12.3	0.1	8.1
1/18/2025 6:30	3.4	12.6	0.0	6.9	12.2	0.0	8.0
1/18/2025 6:45	3.4	12.6	0.0	6.9	12.2	0.0	8.0
1/18/2025 7:00	3.4	12.7	0.0	6.9	12.2	0.0	8.0
1/18/2025 7:15	3.4	12.6	0.0	7.0	12.2	0.0	8.0
1/18/2025 7:30	3.4	12.7	0.0	6.9	12.3	0.0	8.0
1/18/2025 7:45	3.4	12.5	0.0	7.0	12.3	0.0	8.0
1/18/2025 8:00	3.4	12.7	0.0	6.9	12.2	0.0	8.0
1/18/2025 8:15	3.4	12.4	0.0	6.9	12.3	0.0	8.0
1/18/2025 8:30	3.4	12.7	0.0	7.0	12.3	0.0	8.0
1/18/2025 8:45	3.3	12.6	0.0	7.0	12.2	0.0	8.0
1/18/2025 9:00	3.3	12.7	0.0	7.0	12.3	0.0	8.0
1/18/2025 9:15	3.3	12.6	0.0	6.9	12.3	0.0	8.0
1/18/2025 9:30	3.3	12.6	0.0	6.9	12.3	0.0	8.0
1/18/2025 9:45	3.3	12.6	0.0	6.9	12.3	0.0	8.0
1/18/2025 10:00	3.3	12.7	0.0	7.0	12.3	0.0	8.0
1/18/2025 10:15	3.3	12.3	0.0	7.0	12.3	0.0	8.0
1/18/2025 10:30	3.3	12.6	0.0	7.0	12.3	0.0	8.0
1/18/2025 10:45	3.4	12.6	0.0	6.9	12.3	0.0	8.0
1/18/2025 11:00	3.4	11.9	0.0	7.0	12.3	0.0	8.0
1/18/2025 11:15	3.5	12.6	0.0	7.0	12.3	0.0	8.0
1/18/2025 11:30	3.5	12.6	0.0	7.0	12.3	0.0	8.0
1/18/2025 11:45	3.5	12.5	0.0	7.0	12.3	0.0	8.0
1/18/2025 12:00	3.6	12.7	0.0	7.0	12.3	0.0	8.0
1/18/2025 12:15	3.6	12.6	0.0	7.0	12.2	0.1	8.1
1/18/2025 12:30	3.7	12.7	0.0	7.0	12.2	0.0	8.0
1/18/2025 12:45	3.7	12.3	0.0	7.0	12.2	0.0	8.0
1/18/2025 13:00	3.8	12.6	0.0	7.0	12.2	0.0	8.0
1/18/2025 13:15	3.8	12.5	0.0	7.0	12.2	0.0	8.0
1/18/2025 13:30	3.9	12.6	0.0	7.0	12.1	0.0	8.0
1/18/2025 13:45	4.0	12.6	0.0	6.9	12.1	0.0	8.0
1/18/2025 14:00	4.1	12.7	0.0	7.0	12.1	0.0	8.0
1/18/2025 14:15	4.1	12.5	0.0	7.0	12.1	0.2	8.2
1/18/2025 14:30	4.1	12.9	0.0	7.0	12.1	0.0	8.0
1/18/2025 14:45	4.2	12.7	0.0	7.0	12.1	0.0	8.0
1/18/2025 15:00	4.2	13.0	0.0	7.0	12.1	0.0	8.0
1/18/2025 15:15	4.2	12.9	0.0	7.0	12.0	0.0	8.0
1/18/2025 15:30	4.2	13.1	0.0	7.0	12.0	1.5	9.5
1/18/2025 15:45	4.3	13.0	0.0	7.0	12.0	0.0	8.0
1/18/2025 16:00	4.3	13.2	0.0	7.0	12.0	0.0	8.0
1/18/2025 16:15	4.3	13.1	0.0	7.0	12.0	0.0	8.0
1/18/2025 16:30	4.3	13.2	0.0	7.0	12.0	0.0	8.0

1/18/2025 16:45	7.0	100.1	0.0	7.6	11.4	0.7	1/18/2025 16:45	4.3	13.1	0.0	7.0	12.0	0.0	8.0
1/18/2025 17:00	6.3	68.3	0.0	7.5	11.5	0.0	1/18/2025 17:00	4.3	13.1	0.0	7.0	12.0	0.0	8.0
1/18/2025 17:15	5.4	60.9	0.0	7.1	12.0	0.0	1/18/2025 17:15	4.3	13.1	0.0	6.9	11.9	0.0	8.0
1/18/2025 17:30	6.9	94.3	0.0	7.6	11.4	0.5	1/18/2025 17:30	4.3	13.1	0.0	7.0	11.9	0.0	8.0
1/18/2025 17:45	4.7	25.8	0.0	6.9	12.1	0.0	1/18/2025 17:45	4.2	13.1	0.0	7.0	12.0	0.0	8.0
1/18/2025 18:00	6.3	74.7	0.0	7.5	11.5	0.0	1/18/2025 18:00	4.2	13.1	0.0	7.0	12.0	0.0	8.0
1/18/2025 18:15	6.6	87.5	0.0	7.5	11.5	0.0	1/18/2025 18:15	4.2	12.8	0.0	7.0	12.0	0.0	8.0
1/18/2025 18:30	4.6	26.2	0.0	7.0	12.1	0.0	1/18/2025 18:30	4.1	13.0	0.0	7.0	12.0	0.0	8.0
1/18/2025 18:45	4.2	22.4	0.0	6.8	12.2	0.0	1/18/2025 18:45	4.1	13.0	0.0	7.0	12.0	0.0	8.0
1/18/2025 19:00	4.1	20.1	0.0	6.8	12.3	0.0	1/18/2025 19:00	4.1	13.0	0.0	6.9	12.0	0.0	8.0
1/18/2025 19:15	6.3	84.3	0.0	7.5	11.6	0.0	1/18/2025 19:15	4.1	12.9	0.0	6.9	12.0	0.0	8.0
1/18/2025 19:30	6.4	80.2	0.0	7.5	11.5	0.0	1/18/2025 19:30	4.1	13.0	0.0	6.9	12.0	0.0	8.0
1/18/2025 19:45	4.6	26.9	0.0	7.0	12.1	0.0	1/18/2025 19:45	4.0	12.9	0.0	7.0	12.0	0.0	8.0
1/18/2025 20:00	4.9	45.4	0.0	7.0	12.2	0.0	1/18/2025 20:00	4.0	13.0	0.0	6.9	12.0	0.0	8.0
1/18/2025 20:15	4.5	26.6	0.0	7.0	12.1	2.6	1/18/2025 20:15	4.0	13.0	0.0	7.0	12.0	0.0	8.0
1/18/2025 20:30	6.7	88.3	0.0	7.5	11.5	0.0	1/18/2025 20:30	4.0	13.0	0.0	6.9	12.0	0.0	8.0
1/18/2025 20:45	6.9	88.4	0.0	7.5	11.4	0.0	1/18/2025 20:45	4.0	12.8	0.0	7.0	12.0	0.0	8.0
1/18/2025 21:00	5.8	51.7	0.0	7.4	11.7	0.0	1/18/2025 21:00	4.0	13.0	0.0	7.0	12.0	0.0	8.0
1/18/2025 21:15	5.9	66.6	0.0	7.4	11.7	0.0	1/18/2025 21:15	4.0	12.9	0.0	7.0	12.0	0.0	8.0
1/18/2025 21:30	4.8	32.2	0.0	7.1	12.0	0.0	1/18/2025 21:30	4.0	12.9	0.0	6.9	12.0	0.0	8.0
1/18/2025 21:45	4.8	31.9	0.0	7.1	12.0	0.0	1/18/2025 21:45	4.0	12.8	0.0	7.0	12.0	0.0	8.0
1/18/2025 22:00	4.1	22.3	0.0	6.8	12.3	0.0	1/18/2025 22:00	3.9	13.0	0.0	6.9	12.0	0.0	8.0
1/18/2025 22:15	3.9	21.2	0.0	6.7	12.3	0.0	1/18/2025 22:15	3.9	12.9	0.0	7.0	12.0	0.0	8.0
1/18/2025 22:30	6.3	86.8	0.0	7.5	11.6	0.0	1/18/2025 22:30	3.9	12.9	0.0	6.9	12.0	0.0	8.0
1/18/2025 22:45	6.4	88.1	0.0	7.5	11.5	0.0	1/18/2025 22:45	3.8	12.8	0.0	7.0	12.1	0.0	8.0
1/18/2025 23:00	6.5	88.5	0.0	7.5	11.5	0.0	1/18/2025 23:00	3.8	12.9	0.0	6.9	12.1	0.0	8.0
1/18/2025 23:15	6.4	87.9	0.0	7.5	11.5	0.0	1/18/2025 23:15	3.8	12.7	0.0	7.0	12.0	0.0	8.0
1/18/2025 23:30	4.3	25.8	0.0	6.9	12.2	0.0	1/18/2025 23:30	3.8	12.9	0.0	6.9	12.1	0.8	8.8
1/18/2025 23:45	3.9	22.3	0.0	6.8	12.3	0.0	1/18/2025 23:45	3.7	12.8	0.0	6.9	12.1	0.0	8.0
1/19/2025 0:00	3.7	21.4	0.0	6.7	12.4	0.0	1/19/2025 0:00	3.7	12.9	0.0	6.9	12.1	0.0	8.0
1/19/2025 0:15	5.0	71.8	0.0	7.3	12.0	1.0	1/19/2025 0:15	3.7	12.8	0.0	6.9	12.1	0.0	8.0
1/19/2025 0:30	3.7	22.0	0.0	6.8	12.4	0.0	1/19/2025 0:30	3.6	12.8	0.0	6.9	12.1	0.0	8.0
1/19/2025 0:45	5.6	79.6	0.0	7.5	11.7	0.0	1/19/2025 0:45	3.6	12.7	0.0	6.9	12.1	0.0	8.0
1/19/2025 1:00	5.7	82.9	0.0	7.5	11.7	0.1	1/19/2025 1:00	3.6	12.8	0.0	6.9	12.1	0.0	8.0
1/19/2025 1:15	5.5	77.5	0.0	7.4	11.8	0.8	1/19/2025 1:15	3.6	12.7	0.0	7.0	12.2	0.0	8.0
1/19/2025 1:30	4.0	25.5	0.0	6.9	12.3	0.0	1/19/2025 1:30	3.6	12.8	0.0	7.0	12.2	0.0	8.0
1/19/2025 1:45	3.6	21.9	0.0	6.8	12.4	0.0	1/19/2025 1:45	3.5	12.5	0.0	6.9	12.2	0.0	8.0
1/19/2025 2:00	3.5	21.0	0.0	6.7	12.5	0.0	1/19/2025 2:00	3.5	12.1	0.0	7.0	12.2	0.0	8.0
1/19/2025 2:15	6.0	95.9	0.0	7.5	11.7	1.1	1/19/2025 2:15	3.5	12.7	0.0	6.9	12.2	0.0	8.0
1/19/2025 2:30	6.2	97.2	0.0	7.6	11.6	2.3	1/19/2025 2:30	3.5	12.8	0.0	7.0	12.2	0.0	8.0
1/19/2025 2:45	5.8	78.8	0.0	7.6	11.6	7.3	1/19/2025 2:45	3.4	12.6	0.0	6.9	12.2	0.0	8.0
1/19/2025 3:00	3.8	24.5	0.0	6.9	12.4	0.0	1/19/2025 3:00	3.4	12.7	0.0	7.0	12.2	0.0	8.0
1/19/2025 3:15	3.5	21.9	0.0	6.7	12.5	0.0	1/19/2025 3:15	3.4	12.7	0.0	6.9	12.2	0.0	8.0
1/19/2025 3:30	6.0	93.4	0.0	7.5	11.7	0.4	1/19/2025 3:30	3.4	12.8	0.0	7.0	12.2	0.0	8.0
1/19/2025 3:45	6.2	92.0	0.0	7.5	11.6	2.3	1/19/2025 3:45	3.4	12.6	0.0	6.9	12.2	0.0	8.0
1/19/2025 4:00	5.4	63.0	0.0	7.4	11.8	1.6	1/19/2025 4:00	3.3	12.7	0.0	7.0	12.2	0.0	8.0
1/19/2025 4:15	4.2	41.5	0.0	7.2	12.2	0.0	1/19/2025 4:15	3.3	12.6	0.0	7.0	12.2	0.0	8.0
1/19/2025 4:30	3.6	23.7	0.0	6.9	12.5	0.0	1/19/2025 4:30	3.3	12.7	0.0	7.0	12.2	0.0	8.0
1/19/2025 4:45	3.3	21.5	0.0	6.7	12.5	0.0	1/19/2025 4:45	3.3	12.5	0.0	7.0	12.2	0.0	8.0
1/19/2025 5:00	3.2	20.8	0.0	6.7	12.6	0.0	1/19/2025 5:00	3.3	12.7	0.0	7.0	12.2	0.0	8.0
1/19/2025 5:15	6.0	93.7	0.0	7.5	11.7	0.2	1/19/2025 5:15	3.3	12.7	0.0	7.0	12.3	0.0	8.0
1/19/2025 5:30	6.1	93.9	0.0	7.6	11.6	0.0	1/19/2025 5:30	3.2	12.7	0.0	6.9	12.3	0.0	8.0
1/19/2025 5:45	5.3	74.3	0.0	7.4	11.9	0.0	1/19/2025 5:45	3.2	12.6	0.0	6.9	12.3	0.0	8.0
1/19/2025 6:00	4.4	38.6	0.0	7.2	12.1	0.0	1/19/2025 6:00	3.2	12.7	0.0	6.9	12.2	0.0	8.0
1/19/2025 6:15	3.4	22.9	0.0	6.9	12.5	0.0	1/19/2025 6:15	3.2	12.6	0.0	7.0	12.3	0.0	8.0
1/19/2025 6:30	3.2	21.6	0.0	6.8	12.6	0.0	1/19/2025 6:30	3.2	12.7	0.0	6.9	12.3	0.0	8.0
1/19/2025 6:45	3.1	20.9	0.0	6.7	12.6	0.0	1/19/2025 6:45	3.2	12.6	0.0	7.0	12.3	0.0	8.0
1/19/2025 7:00	5.2	86.6	0.0	7.4	11.9	0.5	1/19/2025 7:00	3.2	12.7	0.0	6.9	12.3	0.0	8.0
1/19/2025 7:15	3.9	33.3	0.0	7.1	12.3	0.0	1/19/2025 7:15	3.1	12.5	0.0	7.0	12.3	0.0	8.0
1/19/2025 7:30	5.8	90.8	0.0	7.5	11.7	0.0	1/19/2025 7:30	3.1	12.7	0.0	7.0	12.3	0.0	8.0
1/19/2025 7:45	3.7	27.1	0.0	7.0	12.4	0.0	1/19/2025 7:45	3.1	12.6	0.0	7.0	12.3	0.0	8.0
1/19/2025 8:00	3.2	22.0	0.0	6.8	12.6	0.0	1/19/2025 8:00	3.1	12.7	0.0	7.0	12.3	0.0	8.0
1/19/2025 8:15	5.8	89.7	0.0	7.5	11.7	0.0	1/19/2025 8:15	3.1	12.6	0.0	6.9	12.3	0.0	8.0
1/19/2025 8:30	5.9	89.9	0.0	7.5	11.7	0.0	1/19/2025 8:30	3.1	12.6	0.0	6.9	12.3	0.5	8.5
1/19/2025 8:45	3.9	29.7	0.0	7.0	12.3	0.0	1/19/2025 8:45	3.1	12.7	0.0	7.0	12.3	0.5	8.5
1/19/2025 9:00	3.3	22.5	0.0	6.8	12.6	0.0	1/19/2025 9:00	3.0	12.7	0.0	6.9	12.3	0.0	8.0
1/19/2025 9:15	3.1	21.3	0.0	6.7	12.6	0.0	1/19/2025 9:15	3.0	12.6	0.0	6.9	12.3	0.0	8.0
1/19/2025 9:30	5.6	88.2	0.0	7.5	11.8	0.0	1/19/2025 9:30	3.0	12.7	0.0	6.9	12.3	0.0	8.0
1/19/2025 9:45	5.8	88.0	0.0	7.5	11.8	0.0	1/19/2025 9:45	3.0	12.6	0.0	7.0	12.3	0.0	8.0
1/19/2025 10:00	4.2	36.7	0.0	7.2	12.2	0.0	1/19/2025 10:00	3.0	12.7	0.0	7.0	12.4	0.0	8.0
1/19/2025 10:15	3.4	24.3	0.0	6.8	12.5	0.0	1/19/2025 10:15	3.0	12.6	0.0	7.0	12.4	0.0	8.0
1/19/2025 10:30	4.3	57.2	0.0	7.3	12.2	0.0	1/19/2025 10:30	3.1	12.7	0.0	6.9	12.4	0.0	8.0
1/19/2025 10:45	3.2	21.8	0.0	6.7	12.6	0.0	1/19/2025 10:45	3.2	12.6	0.0	7.0	12.4	0.0	8.0
1/19/2025 11:00	5.6	88.9	0.0	7.5	11.8	0.0	1/19/2025 11:00	3.2	12.6	0.0	7.0	12.4	0.0	8.0
1/19/2025 11:15	5.9	89.9	0.0	7.5	11.7	0.0	1/19/2025 11:15	3.3	12.6	0.0	7.0	12.4	0.0	8.0
1/19/2025 11:30	6.0	89.8	0.0	7.5	11.7	0.2	1/19/2025 11:30	3.3	12.6	0.0	6.9	12.3	0.0	8.0
1/19/2025 11:45	6.1	89.0	0.0	7.5	11.7	0.0	1/19/2025 11:45	3.4	12.6	0.0	7.0	12.3	0.0	8.0
1/19/2025 12:00	5.7	70.2	0.0	7.5	11.8	0.0	1/19/2025 12:00	3.4	12.7	0.0	6.9	12.3	0.0	8.0
1/19/2025 12:15	4.4	39.8	0.0	7.2	12.2	0.8	1/19/2025 12:15	3.5	12.6	0.0	7.0	12.3	0.0	8.0
1/19/2025 12:30	3.7	22.5	0.0	6.8	12.4	0.0	1/19/2025 12:30	3.5	12.7	0.0	7.0	12.3	0.0	8.0
1/19/2025 12:45	3.6	21.2	0.0	6.8	12.5	0.0	1/19/2025 12:45	3.6	12.5	0.0	7.0	12.2	0.3	8.3
1/19/2025 13:00	5.9	84.8	0.0	7.5	11.7	0.0	1/19/2025 13:00	3.6	12.7	0.0	7.0	12.2	0.0	8.0
1/19/2025 13:15	4.8	39.8	0.0	7.2	12.0	0.0	1/19/2025 13:15	3.7	12.6	0.0	7.0	12.2	0.0	8.0
1/19/2025 13:30	3.9	22.3	0.0	6.8	12.4	0.0	1/19/2025 13:30	3.7	12.7	0.0	7.0	12.2	0.1	8.1
1/19/2025 13:45	3.8	21.1	0.0	6.7	12.4	0.0	1/19/2025 13:45	3.8	12.6	0.0	6.9	12.1	0.0	8.0
1/19/2025 14:00	6.0	86.9	0.0	7.4	11.7	2.5	1/19/2025 14:00	3.9	12.7	0.0	6.9	12.1	0.0	8.0
1/19/2025 14:15	6.4	90.4	0.0	7.5	11.6	0.0	1/19/2025 14:15	4.0	12.6	0.0	7.0	12.1	0.0	8.0
1/19/2025 14:30	6.5	90.6	0.0	7.5	11.5	0.0	1/19/2025 14:30	4.0	12.7	0.0	7.0	12.1	0.0	8.0
1/19/2025 14:45	4.8	30.2	0.0	7.1	12.1	0.0	1/19/2025 14:45	4.0	12.7	0.0	6.9	12.1	0.0	8.0
1/19/2025 15:00	4.3	22.5	0.0	6.8	12.3	0.0	1/19/2025 15:00	4.0	12.9	0.0	7.0	12.1	0.0	8.0
1/19/2025 15:15	4.1	21.3	0.0	6.7	12.3	0.0	1/19/2025 15:15	4.1	12.5	0.0	6.9	12.1	0.0	8.0
1/19/2025 15:30	5.7	78.7	0.0	7.3	11.8	0.0	1/19/2025 15:30	4.1	12.9	0.0	7.0	12.1	0.0	8.0
1/19/2025 15:45	4.7	30.3	0.0	7.0	12.1	0.0	1/19/2025 15:45	4.1	12.8	0.0	7.0	12.1	0.0	8.0
1/19/2025 16:00	6.5	90.6	0.0	7.5	11.5	0.1	1/19/2025 16:00	4.1	12.9	0.0	7.0	12.0	0.0	8.0
1/19/2025 16:15	6.6	91.1	0.0	7.5	11.5	0.0	1/19/2025 16:15	4.1	12.8	0.0	7.0	12.0	0.0	8.0
1/19/2025 16:30	6.2	72.7	0.0	7.5	11.6	0.0	1/19/2025 16:30	4.0	12.9	0.0	6.9	12.0	0.0	8.0
1/19/2025 16:45	4.4	24.4	0.0	6.8	12.2	0.0	1/19/2025 16:45	4.0	12.9	0.0	7.0	12.1	0.0	8.0
1/19/2025 17:00	4.1	22.1	0.0	6.8	12.3	0.0	1/19/2025 17:00	4.0	13.0	0.0	6.9	12.1	0.2	8.2
1/19/2025 17:15	5.8	83.8	0.0	7.4	11.8	0.6	1/19/2025 17:15	3.9	12.8	0.0	6.9	12.1	0.2	8.2
1/19/2025 17:30	6.4	91.3	0.0	7.5	11.6	2.0	1/19/2025 17:30	3.9	13.0	0.0	6.9	12.1	0.1	8.1
1/19/2025 17:45	5.8	67.7	0.0	7.5	11.7	0.0	1/19/2025 17:45	3.9	12.6	0.0	6.9	12.1	0.0	8.0
1/19/2025 18:00	4.3	28.6	0.0	7.0	12.2	0.0	1/19/2025 18:00		13.0	0.0	6.9	12.1	0.0	8.0
1/19/2025 18:15	3.9	22.2	0.0	6.8	12.4	0.0	1/19/2025 18:15	3.8	12.9	0.0	6.9	12.1	0.0	8.0
1/19/2025 18:30	4.9	66.0	0.0	7.1	12.2	0.0	1/19/2025 18:30	3.8	13.0	0.0	6.9	12.1	0.0	8.0
1/19/2025 18:45	6.3	92.4	0.0	7.5	11.6	0.1	1/19/2025 18:45	3.8	12.8	0.0	6.9	12.1	0.4	8.4
1/19/2025 19:00	6.4	93.5	0.0	7.5	11.6	0.4	1/19/2025 19:00	3.8	12.9	0.0	7.0	12.1	0.0	8.0
1/19/2025 19:15	5.4	53.7	0.0	7.4	11.8	0.0	1/19/2025 19:15	3.7	12.8	0.0	7.0	12.1	0.0	8.0
1/19/2025 19:30	4.0	24.0	0.0	6.8	12.3	0.0	1/19/2025 19:30	3.7	12.9	0.0	7.0	12.1	0.0	8.0
1/19/2025 19:45	3.8	22.1	0.0	6.7	12.4	0.0	1/19/2025 19:45	3.7	12.9	0.0	7.0	12.1	0.0	8.0
1/19/2025 20:00	3.7	21.3	0.0	6.7	12.4	0.0	1/19/2025 20:00	3.7	12.9	0.0	6.9	12.1	0.0	8.0
1/19/2025 20:15	3.6	19.6	0.0	6.7	12.5	0.0	1/19/2025 20:15	3.7	12.8	0.0	7.0	12.1	0.0	8.0
1/19/2025 20:30	6.1	92.1	0.0	7.5	11.7	0.0	1/19/2025 20:30	3.6	12.9	0.0	7.0	12.2	0.0	8.0
1/19/2025 20:45	6.2	91.6	0.0	7.5	11.6	0.0	1/19/2025 20:45	3.6	12.7	0.0	7.0	12.2	0.0	8.0
1/19/2025 21:00	6.2	90.0	0.0	7.5	11.6	0.0	1/19/2025 21:00	3.6	12.8	0.0	6.9	12.2	0.0	8.0
1/19/2025 21:15	4.0	25.8	0.0	7.0	12.3	0.0	1/19/2025 21:15	3.6	12.7	0.0	7.0	12.2	0.0	8.0
1/19/2025 21:30	3.7	22.4	0.0	6.7	12.4	0.0	1/19/2025 21:30	3.6	12.7	0.0	6.9	12.2	0.0	8.0
1/19/2025 21:45	3.5	21.4	0.0	6.7	12.5	0.0	1/19/2025 21:45	3.5	12.7	0.0	6.9	12.2	0.2	8.2
1/19/2025 22:00	3.9	46.1	0.0	6.9	12.5	0.0	1/19/2025 22:00	3.5	12.8	0.0	7.0	12.2	0.0	8.0
1/19/2025 22:15	5.8	86.1	0.0	7.5	11.8	0.0	1/19/2025 22:15	3.5	12.7	0.0	7.0	12.2	0.0	8.0
1/19/2025 22:30	6.0	87.4	0.0	7.5	11.7	0.0	1/19/2025 22:30	3.5	12.8	0.0	6.8	12.2	0.0	8.0
1/19/2025 22:45	4.7	55.2	0.0	7.2	12.2	0.0	1/19/2025 22:45	3.4	12.7	0.0	7.0	12.2	0.0	8.0
1/19/2025 23:00	3.7	24.1	0.0	6.9	12.4	0.0	1/19/2025 23:00	3.4	12.7	0.0	6.9	12.2	0.0	8.0
1/19/2025 23:15	3.4	21.7	0.0	6.8	12.5	0.0	1/19/2025 23:15	3.4	12.7	0.0	6.9	12.2	0.0	8.0
1/19/2025 23:30	5.3	78.1	0.0	7.5	11.9	0.0	1/19/2025 23:30	3.4	12.8	0.0	7.0	12.3	0.0	8.0
1/19/2025 23:45	6.1	92.2	0.0	7.5	11.7	0.0	1/19/2025 23:45	3.4	12.7	0.0	6.9	12.3	0.0	8.0