Eagle Mountain - Woodfibre Gas Pipeline Project

BCER Waste Discharge Permit Weekly Report

Contents

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
During discharges	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
During discharges	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

Summary-BC Rail Site

Site Activities and Exceedances

- 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.
- No discharge occurred during this reporting period.

Discharge from Water Treatment Plant

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

Receiving Environment Monitoring-Squamish River

Table 4 and 5 below includes information on water quality and lab sampling. Appendix B includes a full set of lab results with real time data. 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
Squamish River Upstream	2025-01-27	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	2025-01-27	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.

Summary-Woodfibre

Site Activities and Exceedances

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

Discharge from Water Treatment Plant

Table 6 below includes information on the discharge water. Appendix C includes real time/field samples from the discharge.

Table 6: Discharges from Water Treatment System

Location	Date of Discharge	Real Time Monitored and Daily Monitoring	Discharge Volume
Woodfibre	2025-01-27	Yes-Appendix C	678m^3
Woodfibre	2025-01-28	Yes-Appendix C*lab sample day	592m^3
Woodfibre	2025-01-29	Yes-Appendix C	764m^3
Woodfibre	2025-01-30	Yes-Appendix C	671m^3
Woodfibre	2025-01-31	Yes-Appendix C	780m^3
Woodfibre	2025-02-01	Yes-Appendix C	876m^3
Woodfibre	2025-02-02	Yes-Appendix C	733m^3

*Max discharge is 1500m^3/day

Receiving Environment Monitoring-East Creek

Table 7 and 8 below includes information on water quality and lab sampling. Appendix D includes a full set of lab results with real time data. The receiving environment is being monitored as outlined in the permit with additional oversight by the QP.

Table 7: Upstream Monitoring Information

Location	Date of Lab Sample	Real Time Monitored	Results
East Creek Upstream	2025-01-28	Yes *	Full set of lab sample results, photo and documentation are provided in Appendix D.

Table 8: Downstream Monitoring Information

	Date of Lab Sample	Real Time Monitored	Results
East Creek Downstream	2025-01-28	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 interval

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

Analyte	Units	FAL-ST [1,2]	FAL-LT [1,2]	MAL-ST [1]	MAL-LT [1,2]	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
TRITON	Sample ID	Reviewed and signed off by:			Farshad Shafiei Ph.D., R.P.Bio.	SQU US1 (Upstream)	SQU DS1 (Downstream)					
	LAB ID					VA25A1809-001	VA25A1809-002					
	Date Sampled					27-Jan-2025	27-Jan-2025					
	Time Sampled					10:12	11:20					
						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	7.04	6.89	The pH at the DS location was outside the range for short-term BCWQG for MAL likely due to either natural variation or other inputs into the river. Not caused by the project.	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]	-	2	2.2		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	-	-	-	-	77	73					
Turbidity (field)	NTU	Varies with background, see note Guideline = 9.32	Varies with background, see note Guideline = 3.41 5-week discrete sampling average = 2.5 (DS)	Varies with background, see note Guideline = 9.32	Varies with background, see note Guideline = 3.41 5-week discrete sampling average = 2.5 (DS)	1.32	3.15		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	13.71	12.44		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	-	-	-	-	26.4	25					
Total Dissolved Solids	mg/L	-	-	-	-	50	48					
Total Suspended Solids	mg/L	Varies with background, see note Guideline = 28.0	Varies with background, see note Guideline = 8.0 5-week discrete sampling average = < 3.0 (DS)	Varies with background, see note Guideline = 28.0	Varies with background, see note Guideline = 8.0 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	-	-	-	-	0.88	0.78			Long-term (30-day) median within 20% of background median [3]		
Total Alkalinity ($CaCO_3$)	mg/L	-	Categorical	-	-	23.6	22.9			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 = 22.5	Varies with pH and temperature. See note. Guideline = 2.02	Varies with pH and temperature. See note. Guideline = 270	Varies with pH, temperature and salinity. See note. Guideline = 41	0.153	0.0512		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	7.05	5.82				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 = 0.799	-	1.5	-	0.036	0.032		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	0.377	0.117					
Nitrite (as N)	mg/L	Varies with chloride. See note. Guideline = 0.06	Varies with chloride. See note. Guideline = 0.02	-	-	0.022	0.0032		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	-	-	-	-	0.575	0.226					
Total Phosphorous	mg/L	-	0.005 to 0.015	-	-	0.125	0.0367			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	-	-	8.79	8.01			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 = 0.063 5-week field average = 0.055 (US), 0.06 (DS)	-	-	0.0401	0.0409			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	0.00021	0.0002					Interim guideline status
Barium (Ba)-Total	mg/L	-	1	-	-	0.0111	0.011			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	0.02	0.019					
Cadmium (Cd)-Total	mg/L	-	-	-	0.00012	< 0.0000050	0.0000053					Working guideline status
Calcium (Ca)-Total	mg/L	-	-	-	-	8.52	8.11					
Cesium (Cs)-Total	mg/L	-	-	-	-	0.00004	0.000038					
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	-	-	0.00016	0.00014					
Copper (Cu)-Total	mg/L	-	-	0.003	0.0014 5-week field average = 0.00071 (US), 0.00073 (DS)	0.00064	0.00057					
Iron (Fe)-Total	mg/L	1	-	-	-	0.333	0.34					
Lead (Pb)-Total	mg/L	-	-	0.14	0.002 5-week field average = < 0.00005 (US), < 0.00005 (DS)	< 0.000050	< 0.000050					
Lithium (Li)-Total	mg/L	-	-	-	-	0.0028	0.0028					
Magnesium (Mg)-Total	mg/L	-	-	-	-	1.24	1.15					
Manganese (Mn)-Total	mg/L	Varies with hardness Guideline = 0.831	Varies with hardness Guideline = 0.768	-	-	0.0232	0.0225		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	-	-	0.000616	0.00062					
Nickel (Ni)-Total	mg/L	-	-	-	0.0083	< 0.00050	< 0.00050					Working guideline status
Phosphorus (P)-Total	mg/L	-	0.005 to 0.015	-	-	0.088	0.055			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	-	-	-	-	1.22	1.1					
Rubidium (Rb)-Total	mg/L	-	-	-	-	0.00175	0.00164					
Selenium (Se)-Total	mg/L	-	0.002	-	0.002	0.000063	< 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 guidelienss for sediment, invertebrate and fish tissue. Refer to BC Water Quality Guidelines for
Silicon (Si)-Total	mg/L	-	-	-	-	6.92	6.45					
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), 0.000015 (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	-	-	-	-	6.12	4.88					
Strontium (Sr)-Total	mg/L	-	-	-	-	0.0591	0.0562					
Sulfur (S)-Total	mg/L	-	-	-	-	2.19	2.61					
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	-	-	-	-	0.00117	0.00102					
Tungsten (W)-Total	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Uranium (U)-Total	mg/L	0.0165	0.0075	-	-	0.000032	0.000032			Working guideline status		
Vanadium (V)-Total	mg/L	-	0.06	-	0.005 5-week field average = 0.00138 (US), 0.00126 (DS)	0.0014	0.00128					Working guideline status
Zinc (Zn)-Total	mg/L	-	-	0.055	Guideline = 0.010 5-week field average = 0.0031 (US), 0.0042 (DS)	< 0.0030	0.0034					
Zirconium (Zr)-Total	mg/L	-	-	-	-	< 0.00020	< 0.00020					
Dissolved Metals												
Aluminum (Al)-Dissolved	mg/L	-	-	-	-	0.0139	0.0141					
Antimony (Sb)-Dissolved	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Arsenic (As)-Dissolved	mg/L	-	-	-	-	0.0002	0.00016					
Barium (Ba)-Dissolved	mg/L	-	-	-	-	0.0114	0.0115					
Beryllium (Be)-Dissolved	mg/L	-	-	-	-	< 0.000100	< 0.000100					
Bismuth (Bi)-Dissolved	mg/L	-	-	-	-	< 0.000050	< 0.000050					
Boron (B)-Dissolved	mg/L	-	-	-	-	0.018	0.017					
Cadmium (Cd)-Dissolved	mg/L	Varies with hardness, see note Guideline = 0.000149	Varies with hardness, see note Guideline = 0.000072	-	-	< 0.0000050	< 0.0000050		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 gudeline 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	-	-	8.17	8.1			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	-	-	-	-	0.000031	0.000034					
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	-	-	-	-	0.00014	0.00015					
Copper (Cu)-Dissolved	mg/L	Guideline varies with other parameters, see note Guideline = 0.0009	Guideline varies with other parameters, see note Guideline = 0.0002 5-week field average = 0.000574 (US), 0.000548 (DS)	-	-	0.00051	0.00045		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	-	-	-	0.246	0.258					
Lead (Pb)-Dissolved	mg/L	-	Guideline varies with DOC and hardness Guideline = 0.00173 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	-	-	-	-	0.0025	0.0026					
Magnesium (Mg)-Dissolved	mg/L	-	-	-	-	1.26	1.21					
Manganese (Mn)-Dissolved	mg/L	-	-	-	-	0.0224	0.0225					
Mercury (Hg)-Dissolved	mg/L	-	-	-	-	< 0.0000050	< 0.0000050					
Molybdenum (Mo)-Dissolved	mg/L	-	-	-	-	0.000605	0.000615					
Nickel (Ni)-Dissolved	mg/L	Guideline varies with other parameters, see note Guideline = 0.0161	Guideline varies with other parameters, see note Guideline = 0.00105 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	-	-	-	-	0.074	< 0.050					
Potassium (K)-Dissolved	mg/L	-	-	-	-	1.37	1.19					
Rubidium (Rb)-Dissolved	mg/L	-	-	-	-	0.00181	0.00164					
Selenium (Se)-Dissolved	mg/L	-	-	-	-	< 0.000050	< 0.000050					
Silicon (Si)-Dissolved	mg/L	-	-	-	-	6.69	6.44					
Silver (Ag)-Dissolved	mg/L	-	-	-	-	< 0.000010	< 0.000010					
Sodium (Na)-Dissolved	mg/L	-	-	-	-	5.7	5.1					
Strontium (Sr)-Dissolved	mg/L	-	-	-	-	0.0556	0.057					
Sulfur (S)-Dissolved	mg/L	-	-	-	-	2.42	2.44					
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	-	-	-	-	0.00003	0.000031					
Vanadium (V)-Dissolved	mg/L	-	-	-	-	0.00131	0.00117					
Zinc (Zn)-Dissolved	mg/L	Varies with DOC and hardness Guideline = 0.013	Varies with pH, DOC, hardness Guideline = 0.0033 5-week field average = 0.0023 (US), 0.0023 (DS)	-	-	0.0023	0.0017		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)	Values: SQU DS1 (Downstream)
pH (field)	pH units	Field pH taken using handheld meters during sampling used in calculations	7.04	6.89
Temperature (field)	°C	Field temperature taken using handheld meters during sampling used in calculations	2	2.2
Turbidity (field)	NTU	Field turbidity taken using handheld meters during sampling used in calculations	1.32	3.15
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	26.4	25
Dissolved Organic Carbon (DOC)	mg/L	Laboratory tested dissolved organic carbon tested at the lab used in guideline calculations	0.88	0.78
Total Alkalinity ($CaCO_3$)	mg/L	Laboratory tested total alkalinity used in calculations	23.6	22.9
Chloride	mg/L	Laboratory tested chloride taken at each respective sample site on the day of sampling used in guideline calculations	7.05	5.82

BCR Site Receiving Environment Lab Documentation

CERTIFICATE OF ANALYSIS

Work Order	: **VA25A1809**		
Client	: **Triton Environmental Consultants Ltd.**	Laboratory	: ALS Environmental - Vancouver
Contact		Account Manager	
Address		Address	
Telephone	: ----	Telephone	
Project	: 11964	Date Samples Received	: 27-Jan-2025 14:25
PO	: 11964 - Task 20 - Phase 3C-4C	Date Analysis Commenced	: 27-Jan-2025
C-O-C number	: ----	Issue Date	: 03-Feb-2025 17:20
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*
	Lab Assistant	Metals, Burnaby, British Columbia
	Supervisor - Metals ICP Instrumentation	Metals, Burnaby, British Columbia
	Supervisor - Water Chemistry	Inorganics, Burnaby, British Columbia
	Department Manager - Inorganics	Inorganics, Burnaby, British Columbia
		Metals, Burnaby, British Columbia
	Account Manager Assistant	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	SQU US 1	SQU DS 1	----	----	----
					Client sampling date / time	27-Jan-2025 10:12	27-Jan-2025 11:20	----	----	----
						VA25A1809-001	VA25A1809-002	----	----	----
						Result	Result	----	----	----
Field Tests										
Conductivity, field	----	EF001/VA	0.10	µS/cm		77.000	73.000	----	----	----
pH, field	----	EF001/VA	0.10	pH units		7.04	6.89	----	----	----
Temperature, field	----	EF001/VA	0.10	°C		2.00	2.20	----	----	----
Physical Tests										
Hardness (as CaCO3), dissolved	----	EC100/VA	0.60	mg/L		25.6	25.2	----	----	----
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L		26.4	25.0	----	----	----
Solids, total dissolved [TDS]	----	E162/VA	10	mg/L		50	48	----	----	----
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L		<3.0	<3.0	----	----	----
Alkalinity, total (as CaCO3)	----	E290/VA	2.0	mg/L		23.6	22.9	----	----	----
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L		0.153	0.0512	----	----	----
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		7.05	5.82	----	----	----
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L		0.036	0.032	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L		0.377	0.117	----	----	----
Nitrite (as N)	14797-65-0	E235.NO2-L/VA	0.0010	mg/L		0.0220	0.0032	----	----	----
Nitrogen, total	7727-37-9	E366/VA	0.030	mg/L		0.575	0.226	----	----	----
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L		0.125	0.0367	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L		8.79	8.01	----	----	----
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L		0.88	0.78	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SQU US 1	SQU DS 1	----	----	----
					Client sampling date / time	27-Jan-2025 10:12	27-Jan-2025 11:20	----	----	----
						VA25A1809-001	VA25A1809-002	----	----	----
						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		0.0401	0.0409	----	----	----
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		0.00021	0.00020	----	----	----
Barium, total	7440-39-3	E420/VA	0.00010	mg/L		0.0111	0.0110	----	----	----
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		0.020	0.019	----	----	----
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L		<0.0000050	0.0000053	----	----	----
Calcium, total	7440-70-2	E420/VA	0.050	mg/L		8.52	8.11	----	----	----
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L		0.000040	0.000038	----	----	----
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		0.00016	0.00014	----	----	----
Copper, total	7440-50-8	E420/VA	0.00050	mg/L		0.00064	0.00057	----	----	----
Iron, total	7439-89-6	E420/VA	0.010	mg/L		0.333	0.340	----	----	----
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		0.0028	0.0028	----	----	----
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L		1.24	1.15	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SQU US 1	SQU DS 1	----	----	----
					Client sampling date / time	27-Jan-2025 10:12	27-Jan-2025 11:20	----	----	----
						VA25A1809-001	VA25A1809-002	----	----	----
						Result	Result	----	----	----
Total Metals										
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L		0.0232	0.0225	----	----	----
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		0.000616	0.000620	----	----	----
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		0.088	0.055	----	----	----
Potassium, total	7440-09-7	E420/VA	0.050	mg/L		1.22	1.10	----	----	----
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L		0.00175	0.00164	----	----	----
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L		0.000063	<0.000050	----	----	----
Silicon, total	7440-21-3	E420/VA	0.10	mg/L		6.92	6.45	----	----	----
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		6.12	4.88	----	----	----
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L		0.0591	0.0562	----	----	----
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L		2.19	2.61	----	----	----
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		0.00117	0.00102	----	----	----
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		0.000032	0.000032	----	----	----
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L		0.00140	0.00128	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SQU US 1	SQU DS 1	----	----	----
					Client sampling date / time	27-Jan-2025 10:12	27-Jan-2025 11:20	----	----	----
						VA25A1809-001	VA25A1809-002	----	----	----
						Result	Result	----	----	----
Total Metals										
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L		<0.0030	0.0034	----	----	----
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		0.0139	0.0141	----	----	----
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		0.00020	0.00016	----	----	----
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L		0.0114	0.0115	----	----	----
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		0.018	0.017	----	----	----
Cadmium, dissolved	7440-43-9	E421/VA	0.0000050	mg/L		<0.0000050	<0.0000050	----	----	----
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L		8.17	8.10	----	----	----
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L		0.000031	0.000034	----	----	----
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		0.00014	0.00015	----	----	----
Copper, dissolved	7440-50-8	E421/VA	0.00020	mg/L		0.00051	0.00045	----	----	----
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L		0.246	0.258	----	----	----
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		0.0025	0.0026	----	----	----
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L		1.26	1.21	----	----	----
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L		0.0224	0.0225	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SQU US 1	SQU DS 1	----	----	----
					Client sampling date / time	27-Jan-2025 10:12	27-Jan-2025 11:20	----	----	----
						VA25A1809-001	VA25A1809-002	----	----	----
						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		0.000605	0.000615	----	----	----
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		0.074	<0.050	----	----	----
Potassium, dissolved	7440-09-7	E421/VA	0.050	mg/L		1.37	1.19	----	----	----
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L		0.00181	0.00164	----	----	----
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		6.69	6.44	----	----	----
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		5.70	5.10	----	----	----
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L		0.0556	0.0570	----	----	----
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L		2.42	2.44	----	----	----
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		0.000030	0.000031	----	----	----
Vanadium, dissolved	7440-62-2	E421/VA	0.00050	mg/L		0.00131	0.00117	----	----	----
Zinc, dissolved	7440-66-6	E421/VA	0.0010	mg/L		0.0023	0.0017	----	----	----

Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	SQU US 1	SQU DS 1	----	----	----
					Client sampling date / time	27-Jan-2025 10:12	27-Jan-2025 11:20	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A1809-001	VA25A1809-002	----	----	----
						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	: **VA25A1809**	Page	: 1 of 14
Client	: **Triton Environmental Consultants Ltd.**	Laboratory	: ALS Environmental - Vancouver
Contact		Account Manager	
Address		Address	
Telephone	: ----	Telephone	
Project	: 11964	Date Samples Received	: 27-Jan-2025 14:25
PO	: 11964 - Task 20 - Phase 3C-4C	Issue Date	: 03-Feb-2025 17:20
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.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- 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.

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) SQU DS 1	E298	27-Jan-2025	30-Jan-2025	28 days	3 days	✓	30-Jan-2025	28 days	3 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) SQU US 1	E298	27-Jan-2025	30-Jan-2025	28 days	3 days	✓	30-Jan-2025	28 days	3 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE SQU DS 1	E235.Br-L	27-Jan-2025	27-Jan-2025	28 days	0 days	✓	27-Jan-2025	28 days	0 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE SQU US 1	E235.Br-L	27-Jan-2025	27-Jan-2025	28 days	0 days	✓	27-Jan-2025	28 days	0 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE SQU DS 1	E235.Cl	27-Jan-2025	27-Jan-2025	28 days	0 days	✓	27-Jan-2025	28 days	0 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE SQU US 1	E235.Cl	27-Jan-2025	27-Jan-2025	28 days	0 days	✓	27-Jan-2025	28 days	0 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE SQU DS 1	E235.F	27-Jan-2025	27-Jan-2025	28 days	0 days	✓	27-Jan-2025	28 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
Anions and Nutrients : Fluoride in Water by IC										
HDPE SQU US 1	E235.F	27-Jan-2025	27-Jan-2025	28 days	0 days	✓	27-Jan-2025	28 days	0 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE SQU DS 1	E235.NO3-L	27-Jan-2025	27-Jan-2025	3 days	0 days	✓	27-Jan-2025	3 days	0 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE SQU US 1	E235.NO3-L	27-Jan-2025	27-Jan-2025	3 days	0 days	✓	27-Jan-2025	3 days	0 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE SQU DS 1	E235.NO2-L	27-Jan-2025	27-Jan-2025	3 days	0 days	✓	27-Jan-2025	3 days	0 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE SQU US 1	E235.NO2-L	27-Jan-2025	27-Jan-2025	3 days	0 days	✓	27-Jan-2025	3 days	0 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE SQU DS 1	E235.SO4	27-Jan-2025	27-Jan-2025	28 days	0 days	✓	27-Jan-2025	28 days	0 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE SQU US 1	E235.SO4	27-Jan-2025	27-Jan-2025	28 days	0 days	✓	27-Jan-2025	28 days	0 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) SQU DS 1	E366	27-Jan-2025	30-Jan-2025	28 days	3 days	✓	03-Feb-2025	28 days	7 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) SQU US 1	E366	27-Jan-2025	30-Jan-2025	28 days	3 days	✓	03-Feb-2025	28 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
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
SQU DS 1	E372-U	27-Jan-2025	30-Jan-2025	28 days	3 days	✓	31-Jan-2025	28 days	4 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
SQU US 1	E372-U	27-Jan-2025	30-Jan-2025	28 days	3 days	✓	31-Jan-2025	28 days	4 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
SQU DS 1	E509	27-Jan-2025	30-Jan-2025	28 days	3 days	✓	30-Jan-2025	28 days	3 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
SQU US 1	E509	27-Jan-2025	30-Jan-2025	28 days	3 days	✓	30-Jan-2025	28 days	3 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
SQU DS 1	E421	27-Jan-2025	28-Jan-2025	180 days	1 days	✓	30-Jan-2025	180 days	3 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
SQU US 1	E421	27-Jan-2025	28-Jan-2025	180 days	1 days	✓	30-Jan-2025	180 days	3 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	27-Jan-2025	----	----	----		29-Jan-2025	----	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 US 1	EF001	27-Jan-2025	----	----	----		29-Jan-2025	----	2 days	
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
SQU DS 1	E358-L	27-Jan-2025	30-Jan-2025	28 days	3 days	✓	30-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 (field filtered/sulfuric acid)										
SQU US 1	E358-L	27-Jan-2025	30-Jan-2025	28 days	3 days	✓	30-Jan-2025	28 days	3 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
SQU DS 1	E290	27-Jan-2025	27-Jan-2025	14 days	0 days	✓	28-Jan-2025	14 days	1 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
SQU US 1	E290	27-Jan-2025	27-Jan-2025	14 days	0 days	✓	28-Jan-2025	14 days	1 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
SQU DS 1	E162	27-Jan-2025	----	----	----		31-Jan-2025	7 days	4 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
SQU US 1	E162	27-Jan-2025	----	----	----		31-Jan-2025	7 days	4 days	✓
Physical Tests : TSS by Gravimetry										
HDPE										
SQU DS 1	E160	27-Jan-2025	----	----	----		31-Jan-2025	7 days	4 days	✓
Physical Tests : TSS by Gravimetry										
HDPE										
SQU US 1	E160	27-Jan-2025	----	----	----		31-Jan-2025	7 days	4 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide)										
SQU DS 1	E532	27-Jan-2025	----	----	----		27-Jan-2025	28 days	0 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide)										
SQU US 1	E532	27-Jan-2025	----	----	----		27-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) SQU DS 1	E508	27-Jan-2025	30-Jan-2025	28 days	3 days	✓	30-Jan-2025	28 days	3 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) SQU US 1	E508	27-Jan-2025	30-Jan-2025	28 days	3 days	✓	30-Jan-2025	28 days	3 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid) SQU US 1	E420	27-Jan-2025	29-Jan-2025	180 days	2 days	✓	30-Jan-2025	180 days	3 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid) SQU DS 1	E420	27-Jan-2025	29-Jan-2025	180 days	2 days	✓	31-Jan-2025	180 days	4 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide) SQU DS 1	E395	27-Jan-2025	----	----	----		29-Jan-2025	7 days	2 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide) SQU US 1	E395	27-Jan-2025	----	----	----		29-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	1853546	1	12	8.3	5.0	✓
Ammonia by Fluorescence	E298	1856756	1	20	5.0	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1853554	1	9	11.1	5.0	✓
Chloride in Water by IC	E235.Cl	1853553	1	9	11.1	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1856811	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1854201	1	15	6.6	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1856751	1	14	7.1	5.0	✓
Fluoride in Water by IC	E235.F	1853552	1	9	11.1	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1853550	1	9	11.1	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1853551	1	9	11.1	5.0	✓
Sulfate in Water by IC	E235.SO4	1853549	1	9	11.1	5.0	✓
TDS by Gravimetry	E162	1859313	1	17	5.8	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1853686	1	19	5.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1856826	1	10	10.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1855026	1	19	5.2	5.0	✓
Total Nitrogen by Colourimetry	E366	1856753	1	16	6.2	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1856754	1	16	6.2	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1856544	1	9	11.1	5.0	✓
TSS by Gravimetry	E160	1859308	1	17	5.8	5.0	✓
Laboratory Control Samples (LCS)							
Alkalinity Species by Titration	E290	1853546	1	12	8.3	5.0	✓
Ammonia by Fluorescence	E298	1856756	1	20	5.0	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1853554	1	9	11.1	5.0	✓
Chloride in Water by IC	E235.Cl	1853553	1	9	11.1	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1856811	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1854201	1	15	6.6	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1856751	1	14	7.1	5.0	✓
Fluoride in Water by IC	E235.F	1853552	1	9	11.1	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1853550	1	9	11.1	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1853551	1	9	11.1	5.0	✓
Sulfate in Water by IC	E235.SO4	1853549	1	9	11.1	5.0	✓
TDS by Gravimetry	E162	1859313	1	17	5.8	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1853686	1	19	5.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1856826	1	10	10.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1855026	1	19	5.2	5.0	✓
Total Nitrogen by Colourimetry	E366	1856753	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*
Laboratory Control Samples (LCS) - Continued							
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1856754	1	16	6.2	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1856544	1	9	11.1	5.0	✓
TSS by Gravimetry	E160	1859308	1	17	5.8	5.0	✓
Method Blanks (MB)							
Alkalinity Species by Titration	E290	1853546	1	12	8.3	5.0	✓
Ammonia by Fluorescence	E298	1856756	1	20	5.0	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1853554	1	9	11.1	5.0	✓
Chloride in Water by IC	E235.Cl	1853553	1	9	11.1	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1856811	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1854201	1	15	6.6	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1856751	1	14	7.1	5.0	✓
Fluoride in Water by IC	E235.F	1853552	1	9	11.1	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1853550	1	9	11.1	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1853551	1	9	11.1	5.0	✓
Sulfate in Water by IC	E235.SO4	1853549	1	9	11.1	5.0	✓
TDS by Gravimetry	E162	1859313	1	17	5.8	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1853686	1	19	5.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1856826	1	10	10.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1855026	1	19	5.2	5.0	✓
Total Nitrogen by Colourimetry	E366	1856753	1	16	6.2	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1856754	1	16	6.2	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1856544	1	9	11.1	5.0	✓
TSS by Gravimetry	E160	1859308	1	17	5.8	5.0	✓
Matrix Spikes (MS)							
Ammonia by Fluorescence	E298	1856756	1	20	5.0	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1853554	1	9	11.1	5.0	✓
Chloride in Water by IC	E235.Cl	1853553	1	9	11.1	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1856811	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1854201	1	15	6.6	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1856751	1	14	7.1	5.0	✓
Fluoride in Water by IC	E235.F	1853552	1	9	11.1	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1853550	1	9	11.1	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1853551	1	9	11.1	5.0	✓
Sulfate in Water by IC	E235.SO4	1853549	1	9	11.1	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1853686	1	19	5.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1856826	1	10	10.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1855026	1	19	5.2	5.0	✓
Total Nitrogen by Colourimetry	E366	1856753	1	16	6.2	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1856754	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	1856544	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.
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.

QUALITY CONTROL REPORT

Work Order	: **VA25A1809**	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	: 27-Jan-2025 14:25
PO	: 11964 - Task 20 - Phase 3C-4C	Date Analysis Commenced	: 27-Jan-2025
C-O-C number	: ----	Issue Date	: 03-Feb-2025 17:20
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*
	Lab Assistant	Vancouver Metals, Burnaby, British Columbia
	Supervisor - Metals ICP Instrumentation	Vancouver Metals, Burnaby, British Columbia
	Supervisor - Water Chemistry	Vancouver Inorganics, Burnaby, British Columbia
	Department Manager - Inorganics	Vancouver Inorganics, Burnaby, British Columbia
		Vancouver Metals, Burnaby, British Columbia
	Account Manager Assistant	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: 1853546)											
VA25A1788-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	59.3	58.5	1.36%	20%	----
Physical Tests (QC Lot: 1859308)											
FJ2500273-004	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	60.3	55.9	7.57%	20%	----
Physical Tests (QC Lot: 1859313)											
FJ2500273-004	Anonymous	Solids, total dissolved [TDS]	----	E162	20	mg/L	2010	2000	0.348%	20%	----
Anions and Nutrients (QC Lot: 1853549)											
VA25A1788-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	16.1	16.0	0.314%	20%	----
Anions and Nutrients (QC Lot: 1853550)											
VA25A1788-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0050	mg/L	2.86	2.85	0.196%	20%	----
Anions and Nutrients (QC Lot: 1853551)											
VA25A1788-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L	0.128	0.130	0.903%	20%	----
Anions and Nutrients (QC Lot: 1853552)											
VA25A1788-001	Anonymous	Fluoride	16984-48-8	E235.F	0.020	mg/L	<0.020	<0.020	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1853553)											
VA25A1788-001	Anonymous	Chloride	16887-00-6	E235.Cl	0.50	mg/L	69.6	69.5	0.138%	20%	----
Anions and Nutrients (QC Lot: 1853554)											
VA25A1788-001	Anonymous	Bromide	24959-67-9	E235.Br-L	0.050	mg/L	0.304	0.301	0.004	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1856753)											
FJ2500273-001	Anonymous	Nitrogen, total	7727-37-9	E366	1.50	mg/L	28.1	28.2	0.515%	20%	----
Anions and Nutrients (QC Lot: 1856754)											
FJ2500273-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0043	0.0047	0.0004	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1856756)											
FJ2500273-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.0098	0.0090	0.0008	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 1856751)											
VA25A1726-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	4.17	4.57	0.40	Diff <2x LOR	----
Total Sulfides (QC Lot: 1856544)											
VA25A1809-001	SQU US 1	Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.0015	0.0017	0.0002	Diff <2x LOR	----
Total Metals (QC Lot: 1855026)											
VA25A1757-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0063	0.0072	0.0008	Diff <2x LOR	----
		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: 1855026) - continued											
VA25A1757-001	Anonymous	Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00067	0.00067	0.000003	Diff <2x LOR	----
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.0714	0.0724	1.42%	20%	----
		Beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	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	0.0000055	0.0000005	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	38.0	37.8	0.769%	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	<0.00050	<0.00050	0	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.010	mg/L	0.152	0.156	2.78%	20%	----
		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	0.0070	0.0069	0.00010	Diff <2x LOR	----
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	8.09	8.21	1.40%	20%	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.0178	0.0183	2.67%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000797	0.000830	4.06%	20%	----
		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	0.856	0.871	1.71%	20%	----
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00056	0.00063	0.00006	Diff <2x LOR	----
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.000497	0.000490	0.000007	Diff <2x LOR	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	6.27	6.24	0.484%	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	3.16	3.34	5.44%	20%	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.171	0.175	2.23%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	3.35	3.53	0.18	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	<0.00030	<0.00030	0	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	0.00226	0.00229	1.31%	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: 1855026) - continued											
VA25A1757-001	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: 1856826)											
VA25A1797-002	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1854201)											
VA25A1791-001	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	<0.00010	<0.00010	0	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.00278	0.00276	0.979%	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	0.012	0.012	0.00008	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.0000354	0.0000374	0.0000020	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	23.1	23.5	1.46%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	0.000029	0.000030	0.0000006	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	0.0282	0.0272	3.63%	20%	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.255	0.251	1.42%	20%	----
		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	0.0380	0.0381	0.237%	20%	----
		Magnesium, dissolved	7439-95-4	E421	0.100	mg/L	0.712	0.692	0.0196	Diff <2x LOR	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.0557	0.0549	1.42%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.00247	0.00244	0.973%	20%	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.0409	0.0401	2.11%	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	0.100	mg/L	1.84	1.78	2.77%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00121	0.00121	0.000003	Diff <2x LOR	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.00105	0.00102	3.32%	20%	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	0.050	<0.050	0.0003	Diff <2x LOR	----
		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	53.9	51.9	3.78%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.255	0.257	0.821%	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: 1854201) - continued											
VA25A1791-001	Anonymous	Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	9.83	9.77	0.642%	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	<0.000010	<0.000010	0	Diff <2x LOR	----
		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	0.0134	0.0136	1.64%	20%	----
		Zirconium, dissolved	7440-67-7	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1856811)											
VA25A1789-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Speciated Metals (QC Lot: 1853686)											
VA25A1515-041	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: 1853546)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 1859308)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Physical Tests (QCLot: 1859313)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Anions and Nutrients (QCLot: 1853549)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 1853550)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1853551)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 1853552)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 1853553)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 1853554)						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 1856753)						
Nitrogen, total	7727-37-9	E366	0.03	mg/L	<0.030	----
Anions and Nutrients (QCLot: 1856754)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 1856756)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Organic / Inorganic Carbon (QCLot: 1856751)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Total Sulfides (QCLot: 1856544)						
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	----
Total Metals (QCLot: 1855026)						
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: 1855026) - 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: 1856826)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Dissolved Metals (QCLot: 1854201)						
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: 1854201) - 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: 1856811)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Speciated Metals (QCLot: 1853686)						
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: 1853546)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	104	85.0	115	----
Physical Tests (QCLot: 1859308)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	88.8	85.0	115	----
Physical Tests (QCLot: 1859313)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	103	85.0	115	----
Anions and Nutrients (QCLot: 1853549)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	102	90.0	110	----
Anions and Nutrients (QCLot: 1853550)									
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: 1853551)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	98.2	90.0	110	----
Anions and Nutrients (QCLot: 1853552)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	97.7	90.0	110	----
Anions and Nutrients (QCLot: 1853553)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 1853554)									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	96.2	85.0	115	----
Anions and Nutrients (QCLot: 1856753)									
Nitrogen, total	7727-37-9	E366	0.03	mg/L	0.5 mg/L	97.6	75.0	125	----
Anions and Nutrients (QCLot: 1856754)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	96.6	80.0	120	----
Anions and Nutrients (QCLot: 1856756)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	102	85.0	115	----
Organic / Inorganic Carbon (QCLot: 1856751)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	105	80.0	120	----
Total Sulfides (QCLot: 1856544)									
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.08 mg/L	102	80.0	120	----
Total Metals (QCLot: 1855026)									

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: 1855026) - continued									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	104	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	107	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	106	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	100	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	106	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	102	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	105	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	103	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	99.4	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	110	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	102	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	100	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	99.2	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	100	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	107	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	103	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	105	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	100	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	115	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	103	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	102	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	98.8	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	104	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	97.6	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	105	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	104	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	97.3	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	104	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	98.1	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	98.5	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	103	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	97.4	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	96.4	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	102	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: 1855026) - 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	97.1	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	99.8	80.0	120	----
Total Metals (QCLot: 1856826)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	95.9	80.0	120	----
Dissolved Metals (QCLot: 1854201)									
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	101	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	1 mg/L	110	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	108	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	92.5	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	96.3	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	109	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	98.7	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	100	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	105	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	104	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	105	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	106	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.5 mg/L	101	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.25 mg/L	100	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	101	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	104	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	107	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	110	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	108	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	107	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	95.3	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	100	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	101	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: 1854201) - continued									
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	109	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	99.8	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	96.5	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	101	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	101	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	99.8	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	111	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	99.2	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	95.6	80.0	120	----
Speciated Metals (QCLot: 1853686)									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.25 mg/L	102	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: 1853549)										
VA25A1788-002	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	102 mg/L	100 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 1853550)										
VA25A1788-002	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	ND mg/L	----	ND	75.0	125	----
Anions and Nutrients (QCLot: 1853551)										
VA25A1788-002	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.492 mg/L	0.5 mg/L	98.4	75.0	125	----
Anions and Nutrients (QCLot: 1853552)										
VA25A1788-002	Anonymous	Fluoride	16984-48-8	E235.F	1.01 mg/L	1 mg/L	101	75.0	125	----
Anions and Nutrients (QCLot: 1853553)										
VA25A1788-002	Anonymous	Chloride	16887-00-6	E235.Cl	100 mg/L	100 mg/L	100	75.0	125	----
Anions and Nutrients (QCLot: 1853554)										
VA25A1788-002	Anonymous	Bromide	24959-67-9	E235.Br-L	0.488 mg/L	0.5 mg/L	97.5	75.0	125	----
Anions and Nutrients (QCLot: 1856753)										
FJ2500273-002	Anonymous	Nitrogen, total	7727-37-9	E366	ND mg/L	----	ND	70.0	130	----
Anions and Nutrients (QCLot: 1856754)										
FJ2500273-002	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0456 mg/L	0.05 mg/L	91.1	70.0	130	----
Anions and Nutrients (QCLot: 1856756)										
FJ2500273-002	Anonymous	Ammonia, total (as N)	7664-41-7	E298	ND mg/L	----	ND	75.0	125	----
Organic / Inorganic Carbon (QCLot: 1856751)										
VA25A1726-002	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	5.28 mg/L	5 mg/L	106	70.0	130	----
Total Sulfides (QCLot: 1856544)										
VA25A1809-002	SQU DS 1	Sulfide, total (as S)	18496-25-8	E395	0.218 mg/L	0.2 mg/L	109	75.0	125	----
Total Metals (QCLot: 1855026)										
VA25A1757-002	Anonymous	Aluminum, total	7429-90-5	E420	0.192 mg/L	0.2 mg/L	96.2	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0190 mg/L	0.02 mg/L	94.8	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0205 mg/L	0.02 mg/L	102	70.0	130	----
		Barium, total	7440-39-3	E420	ND mg/L	----	ND	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0403 mg/L	0.04 mg/L	101	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.0101 mg/L	0.01 mg/L	101	70.0	130	----
		Boron, total	7440-42-8	E420	0.096 mg/L	0.1 mg/L	96.6	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00376 mg/L	0.004 mg/L	93.9	70.0	130	----
		Calcium, total	7440-70-2	E420	ND mg/L	----	ND	70.0	130	----
		Cesium, total	7440-46-2	E420	0.00998 mg/L	0.01 mg/L	99.8	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0404 mg/L	0.04 mg/L	101	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: 1855026) - continued										
VA25A1757-002	Anonymous	Cobalt, total	7440-48-4	E420	0.0193 mg/L	0.02 mg/L	96.5	70.0	130	----
		Copper, total	7440-50-8	E420	0.0192 mg/L	0.02 mg/L	96.0	70.0	130	----
		Iron, total	7439-89-6	E420	1.98 mg/L	2 mg/L	98.8	70.0	130	----
		Lead, total	7439-92-1	E420	0.0182 mg/L	0.02 mg/L	91.2	70.0	130	----
		Lithium, total	7439-93-2	E420	0.0939 mg/L	0.1 mg/L	93.9	70.0	130	----
		Magnesium, total	7439-95-4	E420	ND mg/L	----	ND	70.0	130	----
		Manganese, total	7439-96-5	E420	0.0187 mg/L	0.02 mg/L	93.4	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0197 mg/L	0.02 mg/L	98.3	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0386 mg/L	0.04 mg/L	96.5	70.0	130	----
		Phosphorus, total	7723-14-0	E420	10.7 mg/L	10 mg/L	107	70.0	130	----
		Potassium, total	7440-09-7	E420	3.78 mg/L	4 mg/L	94.4	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0196 mg/L	0.02 mg/L	98.1	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0393 mg/L	0.04 mg/L	98.3	70.0	130	----
		Silicon, total	7440-21-3	E420	9.09 mg/L	10 mg/L	90.9	70.0	130	----
		Silver, total	7440-22-4	E420	0.00385 mg/L	0.004 mg/L	96.2	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	20.1 mg/L	20 mg/L	101	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0397 mg/L	0.04 mg/L	99.2	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00364 mg/L	0.004 mg/L	91.0	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0204 mg/L	0.02 mg/L	102	70.0	130	----
		Tin, total	7440-31-5	E420	0.0188 mg/L	0.02 mg/L	93.9	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0388 mg/L	0.04 mg/L	97.0	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0181 mg/L	0.02 mg/L	90.3	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00387 mg/L	0.004 mg/L	96.7	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.0982 mg/L	0.1 mg/L	98.2	70.0	130	----
		Zinc, total	7440-66-6	E420	0.376 mg/L	0.4 mg/L	94.0	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0392 mg/L	0.04 mg/L	98.0	70.0	130	----
Total Metals (QCLot: 1856826)										
VA25A1797-003	Anonymous	Mercury, total	7439-97-6	E508	0.0000952 mg/L	0 mg/L	95.2	70.0	130	----
Dissolved Metals (QCLot: 1854201)										
VA25A1792-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.201 mg/L	0.2 mg/L	100	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0196 mg/L	0.02 mg/L	97.8	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0205 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	0.0383 mg/L	0.04 mg/L	95.9	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.00859 mg/L	0.01 mg/L	85.9	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.092 mg/L	0.1 mg/L	92.0	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00414 mg/L	0.004 mg/L	103	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.00979 mg/L	0.01 mg/L	97.9	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0398 mg/L	0.04 mg/L	99.6	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	ND mg/L	----	ND	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: 1854201) - continued										
VA25A1792-001	Anonymous	Copper, dissolved	7440-50-8	E421	0.0196 mg/L	0.02 mg/L	97.8	70.0	130	----
		Iron, dissolved	7439-89-6	E421	1.96 mg/L	2 mg/L	97.9	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0193 mg/L	0.02 mg/L	96.5	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.0974 mg/L	0.1 mg/L	97.4	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	0.0377 mg/L	0.04 mg/L	94.2	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	10.0 mg/L	10 mg/L	100	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	3.78 mg/L	4 mg/L	94.5	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.0198 mg/L	0.02 mg/L	99.3	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0426 mg/L	0.04 mg/L	106	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	9.37 mg/L	10 mg/L	93.7	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00383 mg/L	0.004 mg/L	95.6	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	0.0429 mg/L	0.04 mg/L	107	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.00388 mg/L	0.004 mg/L	97.1	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0150 mg/L	0.02 mg/L	74.8	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0195 mg/L	0.02 mg/L	97.7	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0396 mg/L	0.04 mg/L	99.0	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0196 mg/L	0.02 mg/L	98.2	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	0.00396 mg/L	0.004 mg/L	99.1	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	0.400 mg/L	0.4 mg/L	100	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0409 mg/L	0.04 mg/L	102	70.0	130	----
Dissolved Metals (QCLot: 1856811)										
VA25A1789-002	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000960 mg/L	0 mg/L	96.0	70.0	130	----
Speciated Metals (QCLot: 1853686)										
VA25A1591-001	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.268 mg/L	0.25 mg/L	107	70.0	130	----

Chain of Custody (COC) / Analytical Request Form

ALS Environmental
www.alsglobal.com

Affix ALS barcode label here (lab use only)

COC Number: 17 -

Page 1 of

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:	

Report Format / Distribution

Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)
Quality Control (QC) Report with Report ☑ ☐ NO
☑ Compare Results to Criteria on Report - provide details below if box checked
Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

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

ALS Account # / Quote #:	~~VA25-TRIT100-012~~ VA25-TRIT100-001
Job #:	11964
PO / AFE:	11964 - Task 20 - Phase 3C-4C
LSD:	
ALS Lab Work Order # (lab use only):	A1809

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			Water	R	R	R	R	R	R	R	R	R	R	R		N	9
	pH: 7.04 cond: 77 temp: 2	27-Jan-25	10:12															
	SQU DS 1			Water	R	R	R	R	R	R	R	R	R	R	R		N	9
	pH: 6.89 cond: 73 temp: 2.2	"	11:20															

Environmental Division
Vancouver
Work Order Reference
VA25A1809

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 (below)

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			

SHIPMENT RELEASE (client use)

Released b: Jan 27/2025 Time: 2:22

INITIAL SHIPMENT RECEPTION (lab use only)

Received by: Date: Time:

FINAL SHIPMENT RECEPTION (lab use only)

Received by: Date: Jan 27 Time: 1425

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

SEPT 2017 FRONT

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

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

BCR Site Receiving Environment Field Notes and Logs

FortisBC Eagle Mountain-Woodfibre Gas Pipeline

Water Discharge Authorization Water Quality Monitoring

2025-1-27-Renkers-ACB37

Project Component:	Tunnel	**Site Name:**	Receiving Environment - Downstream of Discharge
Inspection Date:	01/27/2025	**Location:**	BC Rail Site
Triton QP:	Stephanie Renkers	**Latitude/Longitude:**	49.724401 -123.16261
Temperature(c):	Low -4 High 6	**Permit:**	AE 111824
Weather Conditions:	Clear	**Ground Conditions:**	Dry

Observations

Time: 11:16:21 **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	N/A		

Logger Maintenance

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

Describe Logger Maintenance

Checked and cleaned. VuLink batteries were replaced

Photos

Photo: 1

Location: SQU DS

Description: Upstream

Photo: 2

Location: SQU DS

Description: Across

Photos

Photo: 3

Location: SQU DS

Description: Downstream

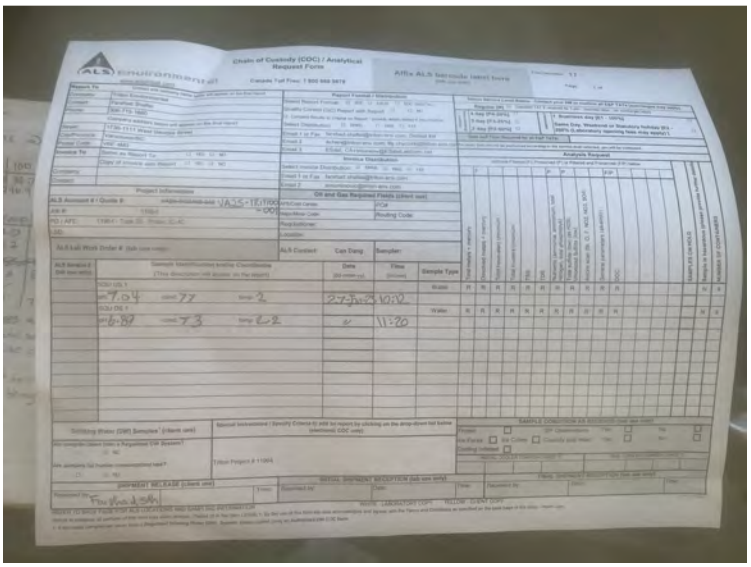


Photo: 4

Location: SQU DS

Description: 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

2025-1-27-Renkers-BBA99

Project Component:	Tunnel	**Site Name:**	Receiving Environment - Upstream of Discharge
Inspection Date:	01/27/2025	**Location:**	BC Rail Site
Triton QP:	Stephanie Renkers	**Latitude/Longitude:**	49.726866 -123.163912
Temperature(c):	Low -4 High 6	**Permit:**	AE 111824
Weather Conditions:	Clear	**Ground Conditions:**	Dry

Observations

Time: 10:12:02 **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

Changed out the batteries of the sonde

Photos

Photo: 1

Location: SQU US

Description: Upstream

Photo: 2

Location: SQU US

Description: Across

Photos

Photo: 3

Location: SQU US

Description: Downstream

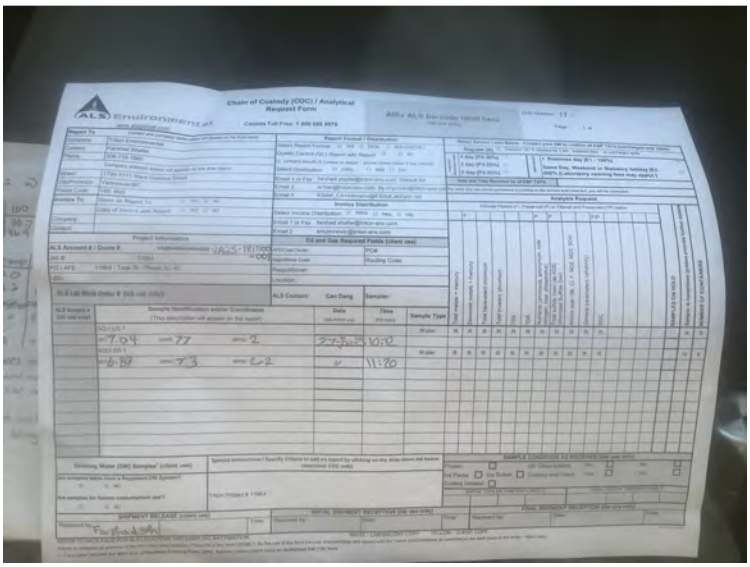


Photo: 4

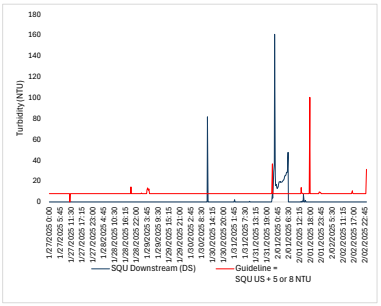
Location: SQU US

Description: 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
1/27/2025 0:00	1.8	87.9	0.0	6.9	12.2	0.0	1/27/2025 0:00	0.1	0.0	0.0	6.0	14.8	0.0	8.0
1/27/2025 0:15	1.8	87.9	0.0	6.9	12.2	0.0	1/27/2025 0:15	0.0	0.0	0.0	5.9	14.8	0.0	8.0
1/27/2025 0:30	1.8	87.9	0.0	6.9	12.2	0.0	1/27/2025 0:30	-0.2	0.0	0.0	5.9	14.8	0.0	8.0
1/27/2025 0:45	1.8	87.9	0.0	6.9	12.2	0.0	1/27/2025 0:45	-0.3	0.0	0.0	5.9	14.8	0.0	8.0
1/27/2025 1:00	1.8	87.9	0.0	6.9	12.2	0.0	1/27/2025 1:00	-0.4	0.0	0.0	5.9	14.9	0.0	8.0
1/27/2025 1:15	1.8	87.9	0.0	6.9	12.2	0.0	1/27/2025 1:15	-0.5	0.0	0.0	6.0	14.9	0.0	8.0
1/27/2025 1:30	1.7	87.8	0.0	6.9	12.2	0.0	1/27/2025 1:30	-0.5	0.0	0.0	6.1	14.9	0.0	8.0
1/27/2025 1:45	1.8	87.8	0.0	6.9	12.1	0.0	1/27/2025 1:45	-0.6	0.0	0.0	6.2	14.9	0.0	8.0
1/27/2025 2:00	1.7	87.5	0.0	6.9	12.2	0.0	1/27/2025 2:00	-0.7	0.0	0.0	6.5	14.9	0.0	8.0
1/27/2025 2:15	1.7	87.4	0.0	6.9	12.2	0.0	1/27/2025 2:15	-0.8	0.0	0.0	6.6	15.0	0.0	8.0
1/27/2025 2:30	1.7	87.5	0.0	6.9	12.3	0.0	1/27/2025 2:30	-0.8	0.0	0.0	6.5	15.0	0.0	8.0
1/27/2025 2:45	1.7	87.4	0.0	6.9	12.3	0.0	1/27/2025 2:45	-0.9	0.0	0.0	6.5	15.0	0.0	8.0
1/27/2025 3:00	1.7	87.3	0.0	6.9	12.3	0.0	1/27/2025 3:00	-1.0	0.0	0.0	6.4	15.1	0.0	8.0
1/27/2025 3:15	1.7	87.1	0.0	6.9	12.3	0.0	1/27/2025 3:15	-1.0	0.0	0.0	6.3	15.1	0.0	8.0
1/27/2025 3:30	1.7	87.0	0.0	6.9	12.3	0.0	1/27/2025 3:30	-1.0	0.0	0.0	6.2	15.1	0.0	8.0
1/27/2025 3:45	1.6	86.6	0.0	6.9	12.3	0.0	1/27/2025 3:45	-1.1	0.0	0.0	6.0	15.1	0.0	8.0
1/27/2025 4:00	1.6	86.3	0.0	6.9	12.4	0.0	1/27/2025 4:00	-1.1	0.0	0.0	6.0	15.1	0.0	8.0
1/27/2025 4:15	1.6	86.0	0.0	7.0	12.3	0.0	1/27/2025 4:15	1.8	93.8	0.0		13.2	0.0	8.0
1/27/2025 4:30	1.5	85.8	0.0	7.0	12.4	0.0	1/27/2025 4:30	2.1	95.0	0.0	7.3	13.1	0.0	8.0
1/27/2025 4:45	1.5	85.7	0.0	7.0	12.4	0.0	1/27/2025 4:45	2.2	94.1	0.0	7.3	13.0	0.0	8.0
1/27/2025 5:00	1.5	85.3	0.0	7.0	12.4	0.0	1/27/2025 5:00	2.3	93.5	0.0	7.3	13.0	0.0	8.0
1/27/2025 5:15	1.5	84.8	0.0	7.0	12.4	0.0	1/27/2025 5:15	2.3	92.9	0.0	7.3	13.0	0.0	8.0
1/27/2025 5:30	1.5	84.3	0.0	7.0	12.4	0.0	1/27/2025 5:30	2.4	92.5	0.0	7.3	12.9	0.0	8.0
1/27/2025 5:45	1.5	84.0	0.0	7.0	12.4	0.0	1/27/2025 5:45	2.4	92.5	0.0	7.3	13.0	0.0	8.0
1/27/2025 6:00	1.4	83.6	0.0	7.0	12.4	0.0	1/27/2025 6:00	2.4	93.4	0.0	7.3	12.9	0.0	8.0
1/27/2025 6:15	1.4	83.6	0.0	7.0	12.4	0.0	1/27/2025 6:15	2.5	96.2	0.0	7.2	12.9	0.0	8.0
1/27/2025 6:30	1.5	84.2	0.0	7.0	12.4	0.0	1/27/2025 6:30	2.5	96.7	0.0	7.2	12.8	0.0	8.0
1/27/2025 6:45	1.5	85.0	0.0	7.0	12.4	0.0	1/27/2025 6:45	2.5	94.0	0.0	7.2	12.8	0.0	8.0
1/27/2025 7:00	1.5	85.5	0.0	7.0	12.4	0.0	1/27/2025 7:00	2.5	93.0	0.0	7.1	12.9	0.0	8.0
1/27/2025 7:15	1.5	84.5	0.0	7.0	12.4	0.0	1/27/2025 7:15	2.5	92.9	0.0	7.2	12.9	0.0	8.0
1/27/2025 7:30	1.5	83.6	0.0	7.0	12.4	0.0	1/27/2025 7:30	2.5	93.7	0.0	7.1	12.9	0.0	8.0
1/27/2025 7:45	1.4	83.6	0.0	7.0	12.4	0.0	1/27/2025 7:45	2.5	93.6	0.0	7.1	12.9	0.0	8.0
1/27/2025 8:00	1.4	83.8	0.0	7.0	12.4	0.0	1/27/2025 8:00	2.5	95.6	0.0	7.1	12.9	0.0	8.0
1/27/2025 8:15	1.4	83.7	0.0	7.0	12.4	0.0	1/27/2025 8:15	2.6	99.2	0.0	7.1	12.8	0.0	8.0
1/27/2025 8:30	1.5	85.4	0.0	7.0	12.4	0.0	1/27/2025 8:30	2.5	97.8	0.0	7.1	12.7	0.0	8.0
1/27/2025 8:45	1.5	86.3	0.0	7.0	12.3	0.0	1/27/2025 8:45	2.5	96.8	0.0	7.0	12.8	0.0	8.0
1/27/2025 9:00	1.5	86.6	0.0	7.0	12.3	0.0	1/27/2025 9:00	2.5	96.9	0.0	7.1	12.8	0.0	8.0
1/27/2025 9:15	1.4	86.4	0.0	7.0	12.4	0.0	1/27/2025 9:15	2.5	98.6	0.0	7.0	12.8	0.0	8.0
1/27/2025 9:30	1.4	86.5	0.0	7.0	12.3	0.0	1/27/2025 9:30	2.5	97.5	0.0	7.0	12.8	0.0	8.0
1/27/2025 9:45	1.4	87.1	0.0	6.9	12.3	0.0	1/27/2025 9:45	2.5	96.5	0.0	7.1	12.8	0.0	8.0
1/27/2025 10:00	1.4	86.4	0.0	7.0	12.4	0.0	1/27/2025 10:00	2.5	101.4	0.0	7.0	12.7	0.0	8.0
1/27/2025 10:15	1.4	87.8	0.0	7.0	12.3	0.0	1/27/2025 10:15	2.6	104.3	0.0	7.0	12.6	0.0	8.0
1/27/2025 10:30	1.5	90.8	0.0	7.0	12.3	0.0	1/27/2025 10:30	2.6	100.7	0.0	6.9	12.7	0.0	8.0
1/27/2025 10:45	1.5	90.9	0.0	7.0	12.3	0.0	1/27/2025 10:45	2.6	99.2	0.0	7.1	12.8	0.0	8.0
1/27/2025 11:00	1.5	88.4	0.0	7.0	12.4	0.0	1/27/2025 11:00	2.6	100.2	0.0	7.0	12.8	0.0	0.0
1/27/2025 11:15	1.5	88.0	0.0	7.0	12.4	0.0	1/27/2025 11:15	2.5	3.6	0.0	7.3	13.6	0.0	8.0
1/27/2025 11:30	1.5	89.4	0.0	6.9	12.4	0.2	1/27/2025 11:30	2.6	97.3	0.0	7.1	13.1	0.0	8.0
1/27/2025 11:45	1.6	88.3	0.0	6.9	12.4	0.0	1/27/2025 11:45	2.6	95.1	0.0	7.1	13.0	0.0	8.0
1/27/2025 12:00	1.6	86.8	0.0	7.0	12.4	0.0	1/27/2025 12:00	2.7	94.8	0.0	7.0	13.0	0.0	8.0
1/27/2025 12:15	1.6	86.1	0.0	7.0	12.5	0.0	1/27/2025 12:15	2.7	93.6	0.0	7.1	13.0	0.0	8.0
1/27/2025 12:30	1.6	85.0	0.0	7.0	12.5	0.0	1/27/2025 12:30	2.8	93.2	0.0	7.1	13.1	0.0	8.0
1/27/2025 12:45	1.7	85.0	0.0	7.0	12.5	0.0	1/27/2025 12:45	2.8	91.8	0.0	7.1	13.1	0.0	8.0
1/27/2025 13:00	1.7	83.4	0.0	7.0	12.6	0.0	1/27/2025 13:00	2.8	91.1	0.0	7.1	13.1	0.0	8.0
1/27/2025 13:15	1.8	82.6	0.0	7.0	12.6	0.0	1/27/2025 13:15	2.9	90.0	0.0	7.1	13.2	0.0	8.0
1/27/2025 13:30	1.9	81.7	0.0	7.0	12.6	0.0	1/27/2025 13:30	3.0	89.5	0.0	7.1	13.2	0.0	8.0
1/27/2025 13:45	1.9	81.2	0.0	7.0	12.6	0.0	1/27/2025 13:45	3.0	89.0	0.0	7.1	13.2	0.0	8.0
1/27/2025 14:00	1.9	81.4	0.0	7.0	12.7	0.0	1/27/2025 14:00	3.1	88.5	0.0	7.1	13.2	0.0	8.0
1/27/2025 14:15	2.0	80.5	0.0	7.0	12.7	0.0	1/27/2025 14:15	3.1	88.2	0.0	7.1	13.2	0.0	8.0
1/27/2025 14:30	2.1	80.0	0.0	7.0	12.7	0.0	1/27/2025 14:30	3.2	88.0	0.0	7.1	13.2	0.0	8.0
1/27/2025 14:45	2.1	80.0	0.0	7.0	12.7	0.0	1/27/2025 14:45	3.2	87.9	0.0	7.1	13.2	0.0	8.0
1/27/2025 15:00	2.1	79.7	0.0	7.0	12.7	0.0	1/27/2025 15:00	3.3	88.4	0.0	7.1	13.2	0.0	8.0
1/27/2025 15:15	2.2	79.9	0.0	7.1	12.7	0.0	1/27/2025 15:15	3.3	88.2	0.0	7.1	13.2	0.0	8.0
1/27/2025 15:30	2.2	80.3	0.0	7.1	12.7	0.0	1/27/2025 15:30	3.3	88.4	0.0	7.1	13.2	0.0	8.0
1/27/2025 15:45	2.2	79.4	0.0	7.0	12.6	0.0	1/27/2025 15:45	3.3	89.6	0.0	7.1	13.2	0.0	8.0
1/27/2025 16:00	2.2	79.8	0.0	7.0	12.6	0.0	1/27/2025 16:00	3.3	89.2	0.0	7.0	13.1	0.0	8.0
1/27/2025 16:15	2.3	79.9	0.0	7.0	12.6	0.0	1/27/2025 16:15	3.3	88.4	0.0	7.0	13.1	0.0	8.0
1/27/2025 16:30	2.2	79.4	0.0	7.1	12.6	0.0	1/27/2025 16:30	3.3	88.6	0.0	7.0	13.2	0.0	8.0
1/27/2025 16:45	2.2	79.3	0.0	7.0	12.6	0.0	1/27/2025 16:45	3.3	88.8	0.0	7.0	13.1	0.0	8.0
1/27/2025 17:00	2.2	79.5	0.0	7.0	12.6	0.0	1/27/2025 17:00	3.3	91.3	0.0	7.0	13.1	0.0	8.0
1/27/2025 17:15	2.1	81.2	0.0	7.0	12.6	0.0	1/27/2025 17:15	3.3	93.5	0.0	7.0	13.0	0.0	8.0
1/27/2025 17:30	2.1	82.7	0.0	7.0	12.5	0.0	1/27/2025 17:30	3.2	95.4	0.0	7.0	12.9	0.0	8.0
1/27/2025 17:45	2.1	84.7	0.0	6.9	12.4	0.0	1/27/2025 17:45	3.3	100.1	0.0	6.9	12.8	0.0	8.0
1/27/2025 18:00	2.0	85.5	0.0	6.9	12.4	0.0	1/27/2025 18:00	3.2	98.1	0.0	6.9	12.8	0.0	8.0
1/27/2025 18:15	1.9	84.8	0.0	6.9	12.4	0.0	1/27/2025 18:15	3.1	95.8	0.0	6.9	12.8	0.0	8.0
1/27/2025 18:30	1.8	83.6	0.0	6.9	12.4	0.0	1/27/2025 18:30	2.9	92.4	0.0	6.9	12.8	0.0	8.0
1/27/2025 18:45	1.8	82.3	0.0	6.9	12.4	0.0	1/27/2025 18:45	2.8	15.6	0.0	6.9	12.9	0.0	8.0
1/27/2025 19:00	1.7	80.4	0.0	6.9	12.4	0.0	1/27/2025 19:00	2.5	6.6	0.0	7.0	13.7	0.0	8.0
1/27/2025 19:15	1.7	79.8	0.0	6.9	12.4	0.0	1/27/2025 19:15	2.3	6.6	0.0	7.1	13.8	0.0	8.0
1/27/2025 19:30	1.6	79.3	0.0	6.9	12.4	0.0	1/27/2025 19:30	2.2	6.6	0.0	7.2	13.8	0.0	8.0
1/27/2025 19:45	1.6	78.7	0.0	6.9	12.5	0.0	1/27/2025 19:45	2.1	6.0	0.0	7.1	13.9	0.0	8.0
1/27/2025 20:00	1.6	78.7	0.0	6.9	12.4	0.0	1/27/2025 20:00	2.0	5.9	0.0	7.1	13.9	0.0	8.0
1/27/2025 20:15	1.6	78.6	0.0	6.9	12.4	0.0	1/27/2025 20:15	1.9	5.9	0.0	7.2	14.0	0.0	8.0
1/27/2025 20:30	1.6	78.7	0.0	6.9	12.4	0.0	1/27/2025 20:30	1.9	6.0	0.0	7.2	14.0	0.0	8.0
1/27/2025 20:45	1.6	79.0	0.0	6.8	12.3	0.0	1/27/2025 20:45	1.9	6.1	0.0	7.2	14.0	0.0	8.0
1/27/2025 21:00		79.3	0.0	6.9	12.4	0.0	1/27/2025 21:00	1.9	6.1	0.0	7.2	14.0	0.0	8.0
1/27/2025 21:15	1.7	79.7	0.0	6.9	12.4	0.0	1/27/2025 21:15	1.9	6.1	0.0	7.2	14.0	0.0	8.0
1/27/2025 21:30	1.7	80.6	0.0	6.9	12.3	0.0	1/27/2025 21:30	1.9	6.0	0.0	7.2	14.0	0.0	8.0
1/27/2025 21:45	1.8	81.6	0.0	7.0	12.4	0.0	1/27/2025 21:45	1.9	6.1	0.0	7.2	14.0	0.0	8.0
1/27/2025 22:00	1.8	82.2	0.0	6.9	12.3	0.0	1/27/2025 22:00	1.9	6.0	0.0	7.2	14.0	0.0	8.0
1/27/2025 22:15	1.9	83.8	0.0	6.9	12.2	0.0	1/27/2025 22:15	1.9	6.1	0.0	7.1	14.0	0.0	8.0
1/27/2025 22:30	1.9	84.9	0.0	6.9	12.3	0.0	1/27/2025 22:30	1.9	6.0	0.0	7.1	14.0	0.0	8.0
1/27/2025 22:45	2.0	86.2	0.0	6.9	12.2	0.0	1/27/2025 22:45	1.9	6.0	0.0	7.2	14.0	0.0	8.0
1/27/2025 23:00	2.0	87.6	0.0	6.9	12.2	0.0	1/27/2025 23:00	2.0	6.0	0.0	7.2	14.0	0.0	8.0
1/27/2025 23:15	2.0	88.3	0.0	6.9	12.2	0.0	1/27/2025 23:15	2.0	6.0	0.0	7.2	14.0	0.0	8.0
1/27/2025 23:30	2.0	88.6	0.0	7.0	12.2	0.0	1/27/2025 23:30	1.9	6.0	0.0	7.2	14.0	0.0	8.0
1/27/2025 23:45	2.1	88.9	0.0	6.9	12.2	0.0	1/27/2025 23:45	1.8	6.0	0.0	7.2	14.0	0.0	8.0
1/28/2025 0:00	2.1	88.5	0.0	6.9	12.2	0.0	1/28/2025 0:00	1.9	6.0	0.0	7.2	14.0	0.0	8.0
1/28/2025 0:15		88.1	0.0	7.0	12.3	0.0	1/28/2025 0:15	1.9	6.1	0.0	7.2	14.0	0.0	8.0
1/28/2025 0:30	2.1	87.2	0.0	7.0	12.2	0.0	1/28/2025 0:30	1.8	6.0	0.0	7.2	14.0	0.0	8.0
1/28/2025 0:45	2.1	86.3	0.0	7.0	12.3	0.0	1/28/2025 0:45	1.8	5.9	0.0	7.2	14.0	0.0	8.0
1/28/2025 1:00	2.1	85.7	0.0	7.0	12.3	0.0	1/28/2025 1:00	1.8	6.0	0.0	7.2	14.0	0.0	8.0
1/28/2025 1:15	2.1	84.4	0.0	6.9	12.2	0.0	1/28/2025 1:15	1.8	6.1	0.0	7.2	14.0	0.0	8.0
1/28/2025 1:30	2.1	83.7	0.0	7.0	12.3	0.0	1/28/2025 1:30	1.8	6.0	0.0	7.2	14.0	0.0	8.0



1/28/2025 1:45	2.0	82.5	0.0	7.0	12.3	0.0	1/28/2025 1:45	1.8	6.0	0.0	7.1	14.0	0.0	8.0
1/28/2025 2:00	2.0	81.8	0.0	7.0	12.3	0.0	1/28/2025 2:00	1.8	6.0	0.0	7.1	14.1	0.0	8.0
1/28/2025 2:15	2.0	81.2	0.0	7.0	12.3	0.0	1/28/2025 2:15	1.7	6.0	0.0	7.1	14.1	0.0	8.0
1/28/2025 2:30	2.0	80.6	0.0	7.0	12.3	0.0	1/28/2025 2:30	1.8	6.1	0.0	7.1	14.0	0.0	8.0
1/28/2025 2:45	2.0	80.3	0.0	7.0	12.3	0.0	1/28/2025 2:45	1.8	5.9	0.0	7.2	14.1	0.0	8.0
1/28/2025 3:00	2.0	79.5	0.0	7.0	12.3	0.0	1/28/2025 3:00	1.7	5.9	0.0	7.2	14.1	0.0	8.0
1/28/2025 3:15	2.0	79.3	0.0	6.9	12.3	0.0	1/28/2025 3:15	1.8	6.0	0.0	7.2	14.1	0.0	8.0
1/28/2025 3:30	2.0	79.1	0.0	6.9	12.3	0.0	1/28/2025 3:30	1.8	5.9	0.0	7.2	14.1	0.0	8.0
1/28/2025 3:45	2.0	73.2	0.0	7.0	12.3	0.0	1/28/2025 3:45	1.8	6.1	0.0	7.2	14.1	0.0	8.0
1/28/2025 4:00	2.0	78.6	0.0	7.0	12.3	0.0	1/28/2025 4:00	2.1	5.6	0.0	7.0	13.8	0.0	8.0
1/28/2025 4:15	1.9	78.3	0.0	7.0	12.3	0.0	1/28/2025 4:15	2.8	87.1	0.0	6.9	12.9	0.0	8.0
1/28/2025 4:30	1.9	77.7	0.0	7.0	12.3	0.0	1/28/2025 4:30	2.9	86.5	0.0	6.9	12.9	0.0	8.0
1/28/2025 4:45	1.9	77.2	0.0	7.1	12.4	0.0	1/28/2025 4:45	2.9	85.7	0.0	7.0	12.9	0.0	8.0
1/28/2025 5:00	1.9	76.7	0.0	7.1	12.4	0.0	1/28/2025 5:00	2.8	84.7	0.0	7.0	13.0	0.0	8.0
1/28/2025 5:15	1.9	76.2	0.0	7.1	12.4	0.0	1/28/2025 5:15	2.8	84.4	0.0	7.0	13.0	0.0	8.0
1/28/2025 5:30	1.8	75.9	0.0	7.1	12.5	0.0	1/28/2025 5:30	2.8	84.3	0.0	7.0	13.0	0.0	8.0
1/28/2025 5:45	1.8	75.7	0.0	7.1	12.5	0.0	1/28/2025 5:45	2.8	84.3	0.0	7.0	13.0	0.0	8.0
1/28/2025 6:00	1.8	75.6	0.0	7.1	12.5	0.0	1/28/2025 6:00	2.8	85.4	0.0	7.0	13.0	0.0	8.0
1/28/2025 6:15	1.8	75.7	0.0	7.1	12.5	0.0	1/28/2025 6:15	2.9	91.2	0.0	6.9	12.8	0.0	8.0
1/28/2025 6:30	1.9	79.3	0.0	7.1	12.4	0.0	1/28/2025 6:30	2.9	91.2	0.0	6.9	12.8	0.0	8.0
1/28/2025 6:45	1.9	79.6	0.0	7.0	12.4	0.0	1/28/2025 6:45	2.8	87.6	0.0	6.9	12.9	0.0	8.0
1/28/2025 7:00	1.8	78.0	0.0	7.1	12.4	0.0	1/28/2025 7:00	2.8	84.8	0.0	7.0	12.9	0.0	8.0
1/28/2025 7:15	1.8	76.2	0.0	7.1	12.4	0.0	1/28/2025 7:15	2.8	84.1	0.0	7.0	13.0	0.0	8.0
1/28/2025 7:30	1.7	75.6	0.0	7.1	12.5	0.0	1/28/2025 7:30	2.8	85.3	0.0	7.0	13.0	0.0	8.0
1/28/2025 7:45	1.7	75.7	0.0	7.1	12.5	0.0	1/28/2025 7:45	2.8	87.8	0.0	7.0	12.9	0.0	8.0
1/28/2025 8:00	1.7	76.7	0.0	7.1	12.4	0.0	1/28/2025 8:00	2.8	90.3	0.0	6.9	12.8	0.0	8.0
1/28/2025 8:15	1.8	78.9	0.0	7.0	12.4	0.0	1/28/2025 8:15	2.8	89.1	0.0	6.9	12.8	0.0	8.0
1/28/2025 8:30	1.7	78.9	0.0	7.1	12.4	0.0	1/28/2025 8:30	2.8	93.3	0.0	6.9	12.8	0.0	8.0
1/28/2025 8:45	1.8	80.8	0.0	7.1	12.4	0.0	1/28/2025 8:45	2.8	94.7	0.0	6.9	12.7	0.0	8.0
1/28/2025 9:00	1.8	81.7	0.0	7.0	12.3	0.0	1/28/2025 9:00	2.8	95.3	0.0	6.9	12.7	0.0	8.0
1/28/2025 9:15	1.8	82.8	0.0	7.0	12.3	0.0	1/28/2025 9:15	2.8	94.0	0.0	6.9	12.7	0.0	8.0
1/28/2025 9:30	1.8	83.2	0.0	7.0	12.3	0.0	1/28/2025 9:30	2.8	93.1	0.0	6.9	12.8	0.0	8.0
1/28/2025 9:45	1.8	82.3	0.0	7.0	12.3	0.0	1/28/2025 9:45	2.8	96.4	0.0	6.9	12.7	0.0	8.0
1/28/2025 10:00	1.8	83.2	0.0	7.0	12.3	0.0	1/28/2025 10:00	2.8	95.4	0.0	6.9	12.8	0.0	8.0
1/28/2025 10:15	1.8	83.7	0.0	7.0	12.3	0.0	1/28/2025 10:15	2.8	93.0	0.0	6.9	12.8	0.0	8.0
1/28/2025 10:30	1.7	82.2	0.0	7.0	12.4	0.0	1/28/2025 10:30	2.8	94.4	0.0	6.9	12.8	0.0	8.0
1/28/2025 10:45	1.8	83.6	0.0	7.0	12.4	0.0	1/28/2025 10:45	2.9	97.7	0.0	6.9	12.8	0.0	8.0
1/28/2025 11:00	1.8	86.0	0.0	7.0	12.3	0.0	1/28/2025 11:00	2.9	101.2	0.0	6.9	12.7	0.0	8.0
1/28/2025 11:15	1.8	87.4	0.0	7.0	12.3	0.0	1/28/2025 11:15	3.0	99.6	0.0	6.9	12.7	0.0	8.0
1/28/2025 11:30	1.9	88.0	0.0	7.0	12.3	0.0	1/28/2025 11:30	3.0	96.5	0.0	6.9	12.8	0.0	8.0
1/28/2025 11:45	1.9	86.4	0.0	7.0	12.4	0.0	1/28/2025 11:45	3.0	98.7	0.0	6.9	12.8	0.0	8.0
1/28/2025 12:00	2.0	86.7	0.0	7.0	12.4	0.0	1/28/2025 12:00	3.1	97.4	0.0	6.9	12.8	0.0	8.0
1/28/2025 12:15	2.0	86.6	0.0	7.0	12.4	0.0	1/28/2025 12:15	3.1	96.2	0.0	6.9	12.8	0.0	8.0
1/28/2025 12:30	2.1	86.0	0.0	7.1	12.4	0.0	1/28/2025 12:30	3.2	94.8	0.0	6.9	12.9	0.0	8.0
1/28/2025 12:45	2.1	85.4	0.0	7.0	12.4	0.0	1/28/2025 12:45	3.2	94.6	0.0	6.9	12.9	0.0	8.0
1/28/2025 13:00	2.2	85.0	0.0	7.1	12.4	0.0	1/28/2025 13:00	3.3	93.6	0.0	6.9	12.9	0.0	8.0
1/28/2025 13:15	2.2	85.0	0.0	7.1	12.4	0.0	1/28/2025 13:15	3.3	93.0	0.0	6.9	13.0	0.0	8.0
1/28/2025 13:30	2.3	84.6	0.0	7.1	12.5	0.0	1/28/2025 13:30	3.4	92.0	0.0	6.9	13.0	0.0	8.0
1/28/2025 13:45	2.3	84.0	0.0	7.1	12.5	0.0	1/28/2025 13:45	3.4	91.5	0.0	6.9	13.0	0.0	8.0
1/28/2025 14:00	2.4	84.0	0.0	7.1	12.5	0.0	1/28/2025 14:00	3.5	91.1	0.0	6.9	13.0	0.0	8.0
1/28/2025 14:15	2.4	83.7	0.0	7.1	12.5	0.0	1/28/2025 14:15	3.5	90.5	0.0	6.9	13.0	0.0	8.0
1/28/2025 14:30	2.5	82.9	0.0	7.1	12.5	0.0	1/28/2025 14:30	3.6	90.0	0.0	7.0	13.1	0.0	8.0
1/28/2025 14:45	2.5	82.7	0.0	7.1	12.5	0.0	1/28/2025 14:45	3.7	89.8	0.0	7.0	13.1	0.0	8.0
1/28/2025 15:00	2.6	82.2	0.0	7.1	12.5	0.0	1/28/2025 15:00	3.7	90.0	0.0	7.0	13.1	0.0	8.0
1/28/2025 15:15	2.6	82.1	0.0	7.1	12.5	0.0	1/28/2025 15:15	3.8	89.7	0.0	7.0	13.1	0.0	8.0
1/28/2025 15:30	2.7	82.0	0.0	7.1	12.5	0.0	1/28/2025 15:30	3.8	89.6	0.0	7.0	13.1	0.0	8.0
1/28/2025 15:45	2.8	81.9	0.0	7.1	12.5	0.0	1/28/2025 15:45	3.8	89.5	0.0	7.0	13.1	0.0	8.0
1/28/2025 16:00	2.8	81.8	0.0	7.1	12.5	0.0	1/28/2025 16:00	3.9	89.7	0.0	7.0	13.1	0.0	8.0
1/28/2025 16:15	2.8	81.8	0.0	7.1	12.5	0.0	1/28/2025 16:15	3.9	90.2	0.0	7.0	13.1	0.0	8.0
1/28/2025 16:30	2.9	81.8	0.0	7.1	12.5	0.0	1/28/2025 16:30	3.9	90.7	0.0	7.0	13.0	0.0	8.0
1/28/2025 16:45	2.9	82.1	0.0	7.1	12.5	0.0	1/28/2025 16:45	4.0	93.2	0.0	7.0	13.0	0.0	8.0
1/28/2025 17:00	2.9	82.5	0.0	7.1	12.5	0.0	1/28/2025 17:00	4.0	92.3	0.0	7.0	12.9	0.0	8.0
1/28/2025 17:15	2.9	83.5	0.0	7.1	12.4	0.0	1/28/2025 17:15	3.9	91.5	0.0	7.0	13.0	0.0	8.0
1/28/2025 17:30	2.9	83.4	0.0	7.1	12.4	0.0	1/28/2025 17:30	3.9	91.7	0.0	7.0	13.0	0.0	8.0
1/28/2025 17:45	2.8	83.5	0.0	7.1	12.4	0.0	1/28/2025 17:45	3.9	92.8	0.0	7.0	12.9	0.0	8.0
1/28/2025 18:00	2.8	84.0	0.0	7.1	12.4	0.0	1/28/2025 18:00	3.9	97.1	0.0	6.9	12.8	0.0	8.0
1/28/2025 18:15	2.8	86.3	0.0	7.1	12.3	0.0	1/28/2025 18:15	3.9	102.7	0.0	6.9	12.6	0.0	8.0
1/28/2025 18:30	2.8	90.8	0.0	7.0	12.2	0.0	1/28/2025 18:30	4.0	110.6	0.1	6.8	12.4	0.0	8.0
1/28/2025 18:45	2.9	94.7	0.1	7.0	12.1	0.0	1/28/2025 18:45	4.1	117.9	0.1	6.8	12.1	0.0	8.0
1/28/2025 19:00	2.9	97.6	0.1	7.0	11.9	0.0	1/28/2025 19:00	4.0	115.1	0.1	6.7	12.1	0.0	8.0
1/28/2025 19:15	2.8	99.0	0.1	6.9	11.9	0.0	1/28/2025 19:15	3.8	106.8	0.0	6.7	12.1	6.3	14.3
1/28/2025 19:30	2.8	97.8	0.1	6.9	11.8	0.0	1/28/2025 19:30	3.3	5.1	0.0	6.9	13.3	0.0	8.0
1/28/2025 19:45	2.8	95.3	0.1	6.8	11.8	0.0	1/28/2025 19:45	2.9	5.3	0.0	6.9	13.5	0.0	8.0
1/28/2025 20:00	2.7	96.1	0.1	6.8	11.6	0.0	1/28/2025 20:00	2.5	5.5	0.0	6.9	13.6	0.0	8.0
1/28/2025 20:15	2.7	92.0	0.0	6.8	11.7	0.0	1/28/2025 20:15	2.2	5.5	0.0	6.8	13.7	0.0	8.0
1/28/2025 20:30	2.6	91.0	0.0	6.8	11.6	0.0	1/28/2025 20:30	2.0	5.6	0.0	6.9	13.8	0.0	8.0
1/28/2025 20:45	2.6	90.3	0.0	6.8	11.6	0.0	1/28/2025 20:45	1.6	5.6	0.0	7.0	13.9	0.0	8.0
1/28/2025 21:00	2.5	89.7	0.0	6.8	11.6	0.0	1/28/2025 21:00	1.4	5.7	0.0	7.0	14.0	0.0	8.0
1/28/2025 21:15	2.5	89.6	0.0	6.8	11.6	0.0	1/28/2025 21:15	1.4	5.6	0.0	7.0	14.0	0.0	8.0
1/28/2025 21:30	2.5	89.5	0.0	6.8	11.7	0.0	1/28/2025 21:30	1.2	5.7	0.0	7.0	14.1	0.0	8.0
1/28/2025 21:45	2.5	89.5	0.0	6.8	11.8	0.0	1/28/2025 21:45	1.1	5.7	0.0	7.1	14.1	0.0	8.0
1/28/2025 22:00	2.4	89.7	0.0	6.8	11.7	0.0	1/28/2025 22:00	1.1	5.8	0.0	7.1	14.1	0.0	8.0
1/28/2025 22:15	2.4	89.6	0.0	6.8	11.8	0.0	1/28/2025 22:15	1.0	5.7	0.0	7.0	14.2	0.0	8.0
1/28/2025 22:30	2.4	89.6	0.0	6.8	11.6	0.0	1/28/2025 22:30	1.0	5.7	0.0	7.0	14.2	0.0	8.0
1/28/2025 22:45	2.4	89.6	0.0	6.8	11.6	0.0	1/28/2025 22:45	0.8	5.7	0.0	7.0	14.3	0.0	8.0
1/28/2025 23:00	2.4	89.7	0.0	6.9	11.7	0.0	1/28/2025 23:00	0.8	5.8	0.0	7.0	14.3	0.0	8.0
1/28/2025 23:15	2.3	89.8	0.0	6.8	11.7	0.0	1/28/2025 23:15	0.8	5.7	0.0	7.0	14.3	0.0	8.0
1/28/2025 23:30	2.3	89.8	0.0	6.8	11.7	0.0	1/28/2025 23:30	0.8	5.8	0.0	7.0	14.3	0.0	8.0
1/28/2025 23:45	2.3	89.8	0.0	6.9	11.8	0.0	1/28/2025 23:45	0.6	5.9	0.0	7.1	14.3	0.0	8.0
1/29/2025 0:00	2.3	89.8	0.0	6.8	11.8	0.0	1/29/2025 0:00	0.6	5.8	0.0	7.0	14.3	0.0	8.0
1/29/2025 0:15	2.3	89.8	0.0	6.8	11.8	0.0	1/29/2025 0:15	1.0	5.8	0.0	7.0	14.2	0.0	8.0
1/29/2025 0:30	2.2	89.8	0.0	6.8	11.7	0.0	1/29/2025 0:30	1.0	5.7	0.0	7.0	14.2	0.0	8.0
1/29/2025 0:45	2.2	89.8	0.0	6.8	11.8	0.0	1/29/2025 0:45	1.0	5.7	0.0	7.0	14.2	0.3	8.3
1/29/2025 1:00	2.2	89.7	0.0	6.9	11.8	0.0	1/29/2025 1:00	1.0	5.8	0.0	7.0	14.2	0.0	8.0
1/29/2025 1:15	2.2	89.7	0.0	6.8	11.9	0.0	1/29/2025 1:15	1.0	5.5	0.0	7.0	14.2	0.0	8.0
1/29/2025 1:30		89.4	0.0	6.9	11.9	0.0	1/29/2025 1:30	1.0	5.0	0.0	6.9	14.3	0.0	8.0
1/29/2025 1:45	2.1	89.3	0.0	6.9	11.9	0.0	1/29/2025 1:45	1.0	4.9	0.0	6.9	14.3	0.0	8.0
1/29/2025 2:00	2.1	89.1	0.0	6.9	11.9	0.0	1/29/2025 2:00	1.0	10.1	0.0	6.7	14.5	0.0	8.0
1/29/2025 2:15	2.1	89.0	0.0	6.9	11.9	0.0	1/29/2025 2:15	0.9	12.6	0.0	6.5	14.5	0.0	8.0
1/29/2025 2:30	2.1	88.9	0.0	6.9	11.9	0.0	1/29/2025 2:30	0.8	14.8	0.0	6.4	14.5	0.0	8.0
1/29/2025 2:45	2.0	88.8	0.0	6.9	11.9	0.0	1/29/2025 2:45	0.8	7.8	0.0	6.6	14.7	0.0	8.0
1/29/2025 3:00	2.0	88.7	0.0	6.9	11.9	0.0	1/29/2025 3:00	0.7	5.9	0.0	6.5	14.6	0.0	8.0
1/29/2025 3:15	2.0	88.6	0.0	6.9	12.0	0.0	1/29/2025 3:15	0.6	6.4	0.0	6.4	14.6	0.0	8.0
1/29/2025 3:30	2.0	88.4	0.0	6.9	12.0	0.0	1/29/2025 3:30	0.6	6.5	0.0	6.3	14.6	0.0	8.0
1/29/2025 3:45	2.0	88.2	0.0	6.9	12.0	0.0	1/29/2025 3:45	0.6	6.7	0.0	6.1	14.6	3.2	11.2
1/29/2025 4:00	2.0	88.1	0.0	6.9	12.1	0.0	1/29/2025 4:00	0.5	0.0	0.0	6.1	14.6	5.3	13.3
1/29/2025 4:15	1.9	88.0	0.0	6.9	12.1	0.0	1/29/2025 4:15	0.5	0.0	0.0	6.2	14.5	3.8	11.8
1/29/2025 4:30	1.9	88.0	0.0	6.9	12.0	0.0	1/29/2025 4:30	0.5	0.0	0.0	6.1	14.5	3.1	11.1

1/29/2025 4:45	1.9	87.8	0.0	6.9	12.0	0.0	1/29/2025 4:45	0.9	5.6	0.0	2.3	14.0	4.3	12.3
1/29/2025 5:00	1.8	87.6	0.0	6.9	12.1	0.0	1/29/2025 5:00	2.4	96.4	0.0	6.9	12.8	0.0	8.0
1/29/2025 5:15	1.8	87.0	0.0	7.0	12.1	0.0	1/29/2025 5:15	2.6	94.7	0.0	6.8	12.7	0.0	8.0
1/29/2025 5:30	1.8	86.4	0.0	7.0	12.2	0.0	1/29/2025 5:30	2.6	93.9	0.0	6.9	12.7	0.0	8.0
1/29/2025 5:45	1.8	86.2	0.0	7.0	12.2	0.0	1/29/2025 5:45	2.7	93.5	0.0	6.9	12.7	0.0	8.0
1/29/2025 6:00	1.8	85.7	0.0	7.0	12.1	0.0	1/29/2025 6:00	2.7	93.2	0.0	6.9	12.7	0.0	8.0
1/29/2025 6:15	1.7	85.4	0.0	7.0	12.2	0.0	1/29/2025 6:15	2.7	92.9	0.0	6.9	12.7	0.0	8.0
1/29/2025 6:30	1.7	85.3	0.0	7.0	12.2	0.0	1/29/2025 6:30	2.8	95.5	0.0	6.8	12.7	0.0	8.0
1/29/2025 6:45	1.7	85.0	0.0	7.0	12.2	0.0	1/29/2025 6:45	2.8	97.4	0.0	6.8	12.6	0.0	8.0
1/29/2025 7:00	1.7	85.0	0.0	7.0	12.2	0.0	1/29/2025 7:00	2.8	97.5	0.0	6.8	12.6	0.0	8.0
1/29/2025 7:15	1.7	87.0	0.0	7.0	12.2	0.0	1/29/2025 7:15	2.8	94.6	0.0	6.8	12.6	0.0	8.0
1/29/2025 7:30	1.7	87.1	0.0	7.0	12.1	0.0	1/29/2025 7:30	2.7	93.1	0.0	6.8	12.7	0.0	8.0
1/29/2025 7:45	1.7	86.3	0.0	7.0	12.1	0.0	1/29/2025 7:45	2.7	92.1	0.0	6.8	12.7	0.0	8.0
1/29/2025 8:00	1.7	84.2	0.0	7.0	12.2	0.0	1/29/2025 8:00	2.7	92.9	0.0	6.8	12.7	0.0	8.0
1/29/2025 8:15	1.7	83.8	0.0	7.0	12.2	0.0	1/29/2025 8:15	2.7	93.1	0.0	6.8	12.7	0.0	8.0
1/29/2025 8:30	1.7	83.4	0.0	7.0	12.2	0.0	1/29/2025 8:30	2.7	93.4	0.0	6.8	12.7	0.0	8.0
1/29/2025 8:45	1.7	83.8	0.0	7.0	12.2	0.0	1/29/2025 8:45	2.8	98.5	0.0	6.8	12.6	0.0	8.0
1/29/2025 9:00	1.7	85.3	0.0	7.0	12.2	0.0	1/29/2025 9:00	2.7	96.6	0.0	6.8	12.6	0.0	8.0
1/29/2025 9:15	1.7	86.2	0.0	6.9	12.2	0.0	1/29/2025 9:15	2.7	95.0	0.0	6.8	12.7	0.0	8.0
1/29/2025 9:30	1.7	85.5	0.0	7.0	12.2	0.0	1/29/2025 9:30	2.7	97.7	0.0	6.8	12.6	0.0	8.0
1/29/2025 9:45	1.7	85.4	0.0	7.0	12.2	0.0	1/29/2025 9:45	2.8	101.4	0.0	6.8	12.6	0.0	8.0
1/29/2025 10:00	1.7	87.5	0.0	7.0	12.2	0.0	1/29/2025 10:00	2.8	100.0	0.0	6.8	12.6	0.0	8.0
1/29/2025 10:15	1.7	88.6	0.0	7.0	12.2	0.0	1/29/2025 10:15	2.8	98.3	0.0	6.8	12.7	0.0	8.0
1/29/2025 10:30	1.7	87.5	0.0	7.0	12.2	0.0	1/29/2025 10:30	2.8	100.3	0.0	6.8	12.6	0.0	8.0
1/29/2025 10:45	1.7	88.2	0.0	6.9	12.2	0.0	1/29/2025 10:45	2.8	99.6	0.0	6.8	12.7	0.0	8.0
1/29/2025 11:00	1.7	88.2	0.0	7.0	12.2	0.0	1/29/2025 11:00	2.8	98.6	0.0	6.8	12.7	0.0	8.0
1/29/2025 11:15	1.7	88.0	0.0	7.0	12.3	0.0	1/29/2025 11:15	2.8	100.4	0.0	6.8	12.7	0.0	8.0
1/29/2025 11:30	1.8	89.3	0.0	7.0	12.3	0.0	1/29/2025 11:30	2.9	104.7	0.0	6.8	12.7	0.0	8.0
1/29/2025 11:45	1.8	90.8	0.0	7.0	12.2	0.0	1/29/2025 11:45	3.0	106.4	0.0	6.8	12.6	0.0	8.0
1/29/2025 12:00	1.9	92.5	0.0	7.0	12.2	0.0	1/29/2025 12:00	3.0	102.7	0.0	6.8	12.7	0.0	8.0
1/29/2025 12:15	1.9	92.0	0.0	6.9	12.2	0.0	1/29/2025 12:15	3.1	101.2	0.0	6.8	12.7	0.0	8.0
1/29/2025 12:30	2.0	90.8	0.0	7.0	12.2	0.0	1/29/2025 12:30	3.1	100.0	0.0	6.8	12.7	0.0	8.0
1/29/2025 12:45	2.0	90.2	0.0	7.0	12.2	0.0	1/29/2025 12:45	3.2	97.8	0.0	6.8	12.7	0.0	8.0
1/29/2025 13:00	2.1	88.7	0.0	7.0	12.2	0.0	1/29/2025 13:00	3.2	95.8	0.0	6.8	12.8	0.0	8.0
1/29/2025 13:15	2.1	87.5	0.0	7.0	12.3	0.0	1/29/2025 13:15	3.3	95.3	0.0	6.8	12.8	0.0	8.0
1/29/2025 13:30	2.2	86.8	0.0	7.0	12.3	0.0	1/29/2025 13:30	3.4	95.7	0.0	6.8	12.8	0.0	8.0
1/29/2025 13:45	2.2	86.6	0.0	7.0	12.3	0.0	1/29/2025 13:45	3.4	95.4	0.0	6.8	12.8	0.0	8.0
1/29/2025 14:00	2.3	86.5	0.0	7.0	12.3	0.0	1/29/2025 14:00	3.4	94.1	0.0	6.8	12.8	0.0	8.0
1/29/2025 14:15	2.3	86.4	0.0	7.0	12.3	0.0	1/29/2025 14:15	3.5	93.0	0.0	6.8	12.9	0.0	8.0
1/29/2025 14:30	2.4	85.5	0.0	7.0	12.3	0.0	1/29/2025 14:30	3.5	92.0	0.0	6.8	12.9	0.0	8.0
1/29/2025 14:45	2.4	85.1	0.0	7.0	12.4	0.0	1/29/2025 14:45	3.6	91.8	0.0	6.8	12.9	0.0	8.0
1/29/2025 15:00	2.4	84.2	0.0	7.0	12.4	0.0	1/29/2025 15:00	3.6	91.1	0.0	6.8	12.9	0.0	8.0
1/29/2025 15:15	2.5	83.9	0.0	7.0	12.4	0.0	1/29/2025 15:15	3.6	90.7	0.0	6.8	12.9	0.0	8.0
1/29/2025 15:30	2.6	83.3	0.0	7.0	12.4	0.0	1/29/2025 15:30	3.6	90.3	0.0	6.9	13.0	0.0	8.0
1/29/2025 15:45	2.6	82.9	0.0	7.0	12.4	0.0	1/29/2025 15:45	3.7	89.9	0.0	6.9	13.0	0.0	8.0
1/29/2025 16:00	2.6	82.5	0.0	7.0	12.4	0.0	1/29/2025 16:00	3.7	89.7	0.0	6.9	13.0	0.0	8.0
1/29/2025 16:15	2.6	82.4	0.0	7.1	12.4	0.0	1/29/2025 16:15	3.7	89.6	0.0	6.9	13.0	0.0	8.0
1/29/2025 16:30	2.7	82.2	0.0	7.1	12.4	0.0	1/29/2025 16:30	3.8	89.8	0.0	6.9	13.0	0.0	8.0
1/29/2025 16:45	2.7	82.2	0.0	7.1	12.4	0.0	1/29/2025 16:45	3.7	89.6	0.0	6.9	13.0	0.0	8.0
1/29/2025 17:00	2.7	82.1	0.0	7.0	12.4	0.0	1/29/2025 17:00	3.7	91.0	0.0	6.9	12.9	0.0	8.0
1/29/2025 17:15	2.7	82.2	0.0	7.1	12.4	0.0	1/29/2025 17:15	3.8	94.1	0.0	6.9	12.9	0.0	8.0
1/29/2025 17:30	2.7	83.0	0.0	7.1	12.4	0.0	1/29/2025 17:30	3.8	93.1	0.0	6.9	12.9	0.0	8.0
1/29/2025 17:45	2.7	84.2	0.0	7.1	12.4	0.0	1/29/2025 17:45	3.7	90.8	0.0	6.9	12.9	0.0	8.0
1/29/2025 18:00	2.6	83.3	0.0	7.0	12.4	0.0	1/29/2025 18:00	3.7	92.1	0.0	6.9	12.9	0.0	8.0
1/29/2025 18:15	2.6	83.1	0.0	7.0	12.4	0.0	1/29/2025 18:15	3.7	93.4	0.0	6.9	12.8	0.0	8.0
1/29/2025 18:30	2.6	83.5	0.0	7.0	12.3	0.0	1/29/2025 18:30	3.6	94.8	0.0	6.9	12.8	0.0	8.0
1/29/2025 18:45	2.5	84.8	0.0	7.1	12.3	0.0	1/29/2025 18:45	3.6	97.2	0.0	6.9	12.7	0.0	8.0
1/29/2025 19:00	2.5	87.2	0.0	7.0	12.3	0.0	1/29/2025 19:00	3.6	100.3	0.0	6.8	12.6	0.0	8.0
1/29/2025 19:15	2.4	89.4	0.0	7.0	12.2	0.0	1/29/2025 19:15	3.7	110.3	0.1	6.8	12.4	0.0	8.0
1/29/2025 19:30	2.5	94.8	0.1	7.0	12.0	0.0	1/29/2025 19:30	3.8	116.8	0.1	6.7	12.2	0.0	8.0
1/29/2025 19:45	2.5	97.8	0.1	6.9	11.9	0.0	1/29/2025 19:45	3.7	116.4	0.1	6.7	12.1	0.0	8.0
1/29/2025 20:00	2.5	98.6	0.1	6.9	11.9	0.0	1/29/2025 20:00	3.5	10.9	0.0	6.6	12.2	0.0	8.0
1/29/2025 20:15	2.5	98.6	0.1	6.9	11.9	0.0	1/29/2025 20:15	2.9	5.3	0.0	6.8	13.4	0.0	8.0
1/29/2025 20:30	2.5	96.5	0.1	6.9	11.9	0.0	1/29/2025 20:30	2.4	5.4	0.0	6.8	13.6	0.0	8.0
1/29/2025 20:45	2.4	92.4	0.0	6.9	11.8	0.0	1/29/2025 20:45	2.0	5.5	0.0	6.9	13.8	0.0	8.0
1/29/2025 21:00	2.3	90.3	0.0	6.9	11.8	0.0	1/29/2025 21:00	1.6	5.5	0.0	6.9	13.9	0.0	8.0
1/29/2025 21:15	2.3	89.2	0.0	6.9	11.9	0.0	1/29/2025 21:15	1.3	5.5	0.0	6.9	14.1	0.0	8.0
1/29/2025 21:30	2.3	88.3	0.0	6.9	11.9	0.0	1/29/2025 21:30	1.1	5.5	0.0	6.9	14.1	0.0	8.0
1/29/2025 21:45	2.2	87.9	0.0	6.9	12.0	0.0	1/29/2025 21:45	1.0	5.6	0.0	6.9	14.2	0.0	8.0
1/29/2025 22:00	2.2	87.6	0.0	6.9	11.9	0.0	1/29/2025 22:00	0.8	5.5	0.0	6.9	14.2	0.0	8.0
1/29/2025 22:15	2.2	87.6	0.0	6.9	11.9	0.0	1/29/2025 22:15	0.7	5.7	0.0	6.9	14.3	0.0	8.0
1/29/2025 22:30	2.2	87.7	0.0	6.8	11.8	0.0	1/29/2025 22:30	0.7	5.6	0.0	6.9	14.3	0.0	8.0
1/29/2025 22:45	2.2	87.6	0.0	6.9	11.9	0.0	1/29/2025 22:45	0.7	5.6	0.0	7.0	14.3	0.0	8.0
1/29/2025 23:00	2.2	87.7	0.0	6.9	11.9	0.0	1/29/2025 23:00	0.8	5.7	0.0	7.0	14.2	0.0	8.0
1/29/2025 23:15	2.2	87.8	0.0	6.9	11.9	0.0	1/29/2025 23:15	0.9	5.7	0.0	7.0	14.2	0.0	8.0
1/29/2025 23:30	2.2	87.8	0.0	6.9	12.0	0.0	1/29/2025 23:30	1.0	5.6	0.0	7.0	14.2	0.0	8.0
1/29/2025 23:45	2.2	88.0	0.0	6.9	12.0	0.0	1/29/2025 23:45	1.1	5.6	0.0	6.9	14.1	0.0	8.0
1/30/2025 0:00	2.2	88.0	0.0	6.9	12.0	0.0	1/30/2025 0:00	1.2	5.6	0.0	6.9	14.1	0.0	8.0
1/30/2025 0:15	2.2	88.0	0.0	6.9	12.0	0.0	1/30/2025 0:15	1.3	5.5	0.0	6.9	14.1	0.0	8.0
1/30/2025 0:30	2.3	88.1	0.0	6.9	12.0	0.0	1/30/2025 0:30	1.4	5.6	0.0	6.9	14.0	0.0	8.0
1/30/2025 0:45	2.2	88.2	0.0	6.9	12.0	0.0	1/30/2025 0:45	1.5	5.5	0.0	6.9	14.0	0.0	8.0
1/30/2025 1:00	2.3	88.2	0.0	6.9	12.0	0.0	1/30/2025 1:00	1.5	5.6	0.0	6.9	14.0	0.0	8.0
1/30/2025 1:15	2.2	88.2	0.0	6.9	12.0	0.0	1/30/2025 1:15	1.6	5.5	0.0	6.9	14.0	0.0	8.0
1/30/2025 1:30	2.3	88.1	0.0	6.9	12.0	0.0	1/30/2025 1:30	1.6	5.5	0.0	6.9	13.9	0.0	8.0
1/30/2025 1:45	2.3	88.1	0.0	6.9	12.0	0.0	1/30/2025 1:45	1.6	5.5	0.0	6.9	13.9	0.0	8.0
1/30/2025 2:00	2.3	88.0	0.0	6.9	12.0	0.0	1/30/2025 2:00	1.7	5.5	0.0	6.9	13.9	0.0	8.0
1/30/2025 2:15	2.3	87.9	0.0	6.9	12.0	0.0	1/30/2025 2:15	1.7	5.4	0.0	6.9	13.9	0.0	8.0
1/30/2025 2:30	2.3	87.8	0.0	6.9	12.1	0.0	1/30/2025 2:30	1.8	5.5	0.0	6.9	13.9	0.0	8.0
1/30/2025 2:45	2.3	87.6	0.0	6.9	12.0	0.0	1/30/2025 2:45	1.8	5.5	0.0	7.1	13.8	0.0	8.0
1/30/2025 3:00	2.3	87.5	0.0	6.9	12.1	0.0	1/30/2025 3:00	1.8	5.5	0.0	7.0	13.8	0.0	8.0
1/30/2025 3:15	2.3	87.4	0.0	6.9	12.0	0.0	1/30/2025 3:15	1.8	5.5	0.0	7.0	13.9	0.0	8.0
1/30/2025 3:30	2.3	87.3	0.0	6.9	12.1	0.0	1/30/2025 3:30	1.7	5.5	0.0	7.0	13.9	0.0	8.0
1/30/2025 3:45	2.4	87.3	0.0	6.9	12.0	0.0	1/30/2025 3:45	1.7	5.6	0.0	6.9	13.9	0.0	8.0
1/30/2025 4:00	2.4	87.2	0.0	6.9	12.0	0.0	1/30/2025 4:00	1.7	5.5	0.0	6.9	13.9	0.0	8.0
1/30/2025 4:15	2.4	87.0	0.0	6.9	12.0	0.0	1/30/2025 4:15	1.6	5.6	0.0	6.9	13.9	0.0	8.0
1/30/2025 4:30	2.3	87.0	0.0	6.9	12.0	0.0	1/30/2025 4:30	1.5	5.6	0.0	6.9	13.9	0.0	8.0
1/30/2025 4:45	2.4	87.0	0.0	6.9	12.0	0.0	1/30/2025 4:45	1.4	5.4	0.0	7.1	14.0	0.0	8.0
1/30/2025 5:00	2.3	86.9	0.0	6.9	11.9	0.0	1/30/2025 5:00	1.4	5.5	0.0	7.1	14.0	0.0	8.0
1/30/2025 5:15	2.3	86.9	0.0	6.9	12.0	0.0	1/30/2025 5:15	1.4	5.5	0.0	7.1	14.0	0.0	8.0
1/30/2025 5:30	2.3	86.9	0.0	6.9	12.0	0.0	1/30/2025 5:30	3.0	95.1	0.0	6.7	12.6	0.0	8.0
1/30/2025 5:45	2.2	86.5	0.0	6.9	11.9	0.0	1/30/2025 5:45	3.2	94.0	0.0	6.7	12.6	0.0	8.0
1/30/2025 6:00	2.2	86.2	0.0	6.9	12.0	0.0	1/30/2025 6:00	3.2	92.6	0.0	6.8	12.6	0.0	8.0
1/30/2025 6:15	2.2	86.4	0.0	7.0	12.1	0.0	1/30/2025 6:15	3.2	92.3	0.0	6.8	12.6	0.0	8.0
1/30/2025 6:30	2.2	85.2	0.0	7.0	12.1	0.0	1/30/2025 6:30	3.1	92.2	0.0	6.8	12.6	0.0	8.0
1/30/2025 6:45	2.1	85.1	0.0	7.0	12.1	0.0	1/30/2025 6:45	3.2	94.1	0.0	6.8	12.6	0.0	8.0
1/30/2025 7:00	2.1	84.9	0.0	7.0	12.1	0.0	1/30/2025 7:00	3.2	93.3	0.0	6.8	12.6	0.0	8.0
1/30/2025 7:15	2.1	85.4	0.0	6.9	12.1	0.0	1/30/2025 7:15	3.2	94.3	0.0	6.8	12.6	0.0	8.0
1/30/2025 7:30	2.2	85.4	0.0	7.0	12.1	0.0	1/30/2025 7:30	3.2	94.3	0.0	6.8	12.6	0.0	8.0

1/30/2025 7:45	2.2	85.3	0.0	7.0	12.1	0.0	1/30/2025 7:45	3.2	94.0	0.0	6.8	12.6	0.0	8.0
1/30/2025 8:00	2.2	85.3	0.0	7.0	12.1	0.0	1/30/2025 8:00	3.2	94.4	0.0	6.8	12.5	0.0	8.0
1/30/2025 8:15	2.2	104.2	0.1	7.0	12.1	0.0	1/30/2025 8:15	3.2	93.1	0.0	6.8	12.6	0.0	8.0
1/30/2025 8:30	2.2	92.2	0.0	7.0	12.1	0.0	1/30/2025 8:30	3.2	91.4	0.0	6.8	12.6	0.0	8.0
1/30/2025 8:45	2.2	92.6	0.0	6.9	12.1	0.0	1/30/2025 8:45	3.2	93.0	0.0	6.8	12.6	0.0	8.0
1/30/2025 9:00	2.2	92.2	0.0	7.0	12.1	0.0	1/30/2025 9:00	3.3	93.6	0.0	6.8	12.6	0.0	8.0
1/30/2025 9:15	2.2	92.6	0.0	7.0	12.1	0.0	1/30/2025 9:15	3.3	96.9	0.0	6.8	12.5	0.0	8.0
1/30/2025 9:30	2.2	94.9	0.1	7.0	12.1	0.0	1/30/2025 9:30	3.3	95.0	0.0	6.8	12.5	0.0	8.0
1/30/2025 9:45	2.3	95.1	0.1	7.0	12.1	0.0	1/30/2025 9:45	3.3	93.9	0.0	6.8	12.6	0.0	8.0
1/30/2025 10:00	2.3	99.2	0.1	7.0	12.1	0.0	1/30/2025 10:00	3.3	93.0	0.0	6.8	12.6	0.0	8.0
1/30/2025 10:15	2.3	99.1	0.1	7.0	12.1	0.0	1/30/2025 10:15	3.3	95.8	0.0	6.8	12.6	0.0	8.0
1/30/2025 10:30	2.3	100.7	0.1	7.0	12.1	0.0	1/30/2025 10:30	3.4	97.7	0.0	6.8	12.6	0.0	8.0
1/30/2025 10:45	2.3	86.8	0.0	6.9	12.1	0.0	1/30/2025 10:45	3.5	102.8	0.0	6.7	12.5	0.0	8.0
1/30/2025 11:00		89.1	0.0	7.0	12.1	0.0	1/30/2025 11:00	3.5	103.4	0.0	6.7	12.5	0.0	8.0
1/30/2025 11:15	2.4	90.0	0.0	7.0	12.0	0.0	1/30/2025 11:15	3.5	102.4	0.0	6.7	12.5	0.0	8.0
1/30/2025 11:30	2.5	90.2	0.0	7.0	12.1	0.0	1/30/2025 11:30	3.6	102.7	0.0	6.7	12.6	0.0	8.0
1/30/2025 11:45	2.5	90.4	0.0	7.0	12.1	81.6	1/30/2025 11:45	3.7	112.2	0.1	6.7	12.4	0.0	8.0
1/30/2025 12:00	2.6	95.9	0.1	6.9	12.0	0.0	1/30/2025 12:00	3.7	108.1	0.0	6.7	12.4	0.0	8.0
1/30/2025 12:15	2.6	96.0	0.1	6.9	12.0	0.0	1/30/2025 12:15	3.7	104.2	0.0	6.7	12.5	0.0	8.0
1/30/2025 12:30	2.6	94.3	0.0	6.9	12.0	0.0	1/30/2025 12:30	3.7	100.7	0.0	6.7	12.5	0.0	8.0
1/30/2025 12:45	2.6	91.5	0.0	7.0	12.0	0.0	1/30/2025 12:45	3.7	28.7	0.0	6.7	12.6	0.0	8.0
1/30/2025 13:00	2.6	90.2	0.0	7.0	12.1	0.0	1/30/2025 13:00	3.6	5.1	0.0	6.8	13.2	0.0	8.0
1/30/2025 13:15	2.6	89.5	0.0	7.0	12.0	0.0	1/30/2025 13:15	3.6	5.3	0.0	6.9	13.2	0.0	8.0
1/30/2025 13:30	2.6	88.0	0.0	7.0	12.1	0.0	1/30/2025 13:30	3.6	5.1	0.0	6.8	13.1	0.0	8.0
1/30/2025 13:45	2.7	87.9	0.0	7.0	12.1	0.0	1/30/2025 13:45	3.6	5.2	0.0	6.9	13.1	0.0	8.0
1/30/2025 14:00	2.7	87.5	0.0	7.0	12.1	0.0	1/30/2025 14:00	3.6	5.3	0.0	6.9	13.2	0.0	8.0
1/30/2025 14:15	2.7	86.8	0.0	6.9	12.0	0.0	1/30/2025 14:15	3.7	5.3	0.0	6.9	13.1	0.0	8.0
1/30/2025 14:30	2.7	86.5	0.0	7.0	12.1	0.0	1/30/2025 14:30	3.8	5.3	0.0	6.9	13.1	0.0	8.0
1/30/2025 14:45	2.8	87.6	0.0	6.9	12.1	0.0	1/30/2025 14:45	3.8	94.5	0.0	6.7	12.7	0.0	8.0
1/30/2025 15:00	2.7	86.1	0.0	6.9	12.1	0.0	1/30/2025 15:00	3.8	94.2	0.0	6.7	12.7	0.0	8.0
1/30/2025 15:15	2.7	86.1	0.0	7.0	12.1	0.0	1/30/2025 15:15	3.8	93.9	0.0	6.7	12.7	0.0	8.0
1/30/2025 15:30	2.7	85.9	0.0	7.0	12.2	0.0	1/30/2025 15:30	3.8	93.6	0.0	6.7	12.7	0.0	8.0
1/30/2025 15:45	2.7	85.4	0.0	7.0	12.2	0.0	1/30/2025 15:45	3.8	92.6	0.0	6.8	12.7	0.0	8.0
1/30/2025 16:00	2.7	85.2	0.0	7.0	12.2	0.0	1/30/2025 16:00	3.8	92.1	0.0	6.8	12.8	0.0	8.0
1/30/2025 16:15	2.7	84.8	0.0	7.0	12.2	0.0	1/30/2025 16:15	3.8	91.6	0.0	6.8	12.8	0.0	8.0
1/30/2025 16:30	2.7	84.3	0.0	7.0	12.2	0.0	1/30/2025 16:30	3.8	91.0	0.0	6.8	12.8	0.0	8.0
1/30/2025 16:45	2.7	83.7	0.0	7.1	12.2	0.0	1/30/2025 16:45	3.7	90.4	0.0	6.8	12.8	0.0	8.0
1/30/2025 17:00	2.7	83.2	0.0	7.0	12.3	0.0	1/30/2025 17:00	3.7	90.1	0.0	6.8	12.8	0.0	8.0
1/30/2025 17:15	2.7	83.5	0.0	7.1	12.2	0.0	1/30/2025 17:15	3.7	89.7	0.0	6.8	12.8	0.0	8.0
1/30/2025 17:30	2.7	86.8	0.0	7.1	12.2	0.0	1/30/2025 17:30	3.7	89.8	0.0	6.9	12.8	0.0	8.0
1/30/2025 17:45	2.7	86.5	0.0	7.1	12.2	0.0	1/30/2025 17:45	3.8	91.1	0.0	6.9	12.8	0.0	8.0
1/30/2025 18:00	2.7	84.1	0.0	7.1	12.2	0.0	1/30/2025 18:00	3.8	94.8	0.0	6.8	12.7	0.0	8.0
1/30/2025 18:15	2.7	84.2	0.0	7.0	12.2	0.0	1/30/2025 18:15	3.9	96.2	0.0	6.8	12.6	0.0	8.0
1/30/2025 18:30	2.8	86.2	0.0	7.0	12.2	0.0	1/30/2025 18:30	3.8	94.0	0.0	6.8	12.6	0.0	8.0
1/30/2025 18:45	2.8	86.5	0.0	7.0	12.1	0.0	1/30/2025 18:45	3.8	94.0	0.0	6.8	12.6	0.0	8.0
1/30/2025 19:00	2.8	85.5	0.0	7.0	12.1	0.0	1/30/2025 19:00	3.9	95.3	0.0	6.8	12.6	0.0	8.0
1/30/2025 19:15	2.8	85.5	0.0	7.0	12.1	0.0	1/30/2025 19:15	3.9	97.1	0.0	6.8	12.5	0.0	8.0
1/30/2025 19:30	2.8	87.1	0.0	7.0	12.0	0.0	1/30/2025 19:30	3.9	96.4	0.0	6.8	12.5	0.0	8.0
1/30/2025 19:45	2.8	87.2	0.0	7.0	12.0	0.0	1/30/2025 19:45	3.9	99.2	0.0	6.8	12.4	0.0	8.0
1/30/2025 20:00	2.8	88.3	0.0	7.0	12.0	0.0	1/30/2025 20:00	4.0	102.6	0.0	6.8	12.3	0.0	8.0
1/30/2025 20:15	2.9	90.4	0.0	7.0	11.9	0.0	1/30/2025 20:15	4.1	113.1	0.1	6.7	12.1	0.0	8.0
1/30/2025 20:30	3.0	96.4	0.1	6.9	11.8	0.0	1/30/2025 20:30	4.1	113.5	0.1	6.7	12.0	0.0	8.0
1/30/2025 20:45	3.0	97.9	0.1	6.9	11.7	0.0	1/30/2025 20:45	4.2	114.1	0.1	6.6	12.0	0.0	8.0
1/30/2025 21:00	3.0	98.2	0.1	6.9	11.7	0.0	1/30/2025 21:00	4.0	4.2	0.0	6.7	13.0	0.0	8.0
1/30/2025 21:15	3.0	97.6	0.1	6.9	11.6	0.0	1/30/2025 21:15	3.7	5.0	0.0	6.9	13.1	0.0	8.0
1/30/2025 21:30	3.0	96.5	0.1	6.9	11.6	0.0	1/30/2025 21:30	3.5	5.1	0.0	6.9	13.2	0.0	8.0
1/30/2025 21:45	2.9	92.6	0.0	6.9	11.5	0.0	1/30/2025 21:45	3.3	5.2	0.0	6.9	13.2	0.0	8.0
1/30/2025 22:00	2.9	91.1	0.0	6.8	11.5	0.0	1/30/2025 22:00	3.2	5.2	0.0	6.9	13.3	0.0	8.0
1/30/2025 22:15	2.9	89.9	0.0	6.8	11.6	0.0	1/30/2025 22:15	3.1	5.3	0.0	6.8	13.3	0.0	8.0
1/30/2025 22:30	2.9	88.7	0.0	6.8	11.7	0.0	1/30/2025 22:30	3.0	5.2	0.0	6.9	13.3	0.0	8.0
1/30/2025 22:45	2.9	88.7	0.0	6.9	11.7	0.0	1/30/2025 22:45	2.9	5.2	0.0	6.9	13.3	0.0	8.0
1/30/2025 23:00	2.9	88.4	0.0	6.8	11.7	0.0	1/30/2025 23:00	2.9	5.3	0.0	6.9	13.4	0.0	8.0
1/30/2025 23:15	2.9	88.2	0.0	6.8	11.6	0.0	1/30/2025 23:15	2.9	5.4	0.0	6.9	13.4	0.0	8.0
1/30/2025 23:30	2.9	88.1	0.0	6.8	11.6	0.0	1/30/2025 23:30	2.9	5.4	0.0	6.9	13.4	0.0	8.0
1/30/2025 23:45	2.9	88.0	0.0	6.8	11.6	0.0	1/30/2025 23:45	2.8	5.3	0.0	6.9	13.4	0.0	8.0
1/31/2025 0:00	2.9	88.0	0.0	6.9	11.7	0.0	1/31/2025 0:00	2.8	5.3	0.0	6.9	13.4	0.0	8.0
1/31/2025 0:15	2.9	87.9	0.0	6.9	11.8	0.0	1/31/2025 0:15	2.7	5.3	0.0	6.9	13.4	0.0	8.0
1/31/2025 0:30	2.9	87.9	0.0	6.9	11.7	0.0	1/31/2025 0:30	2.6	5.3	0.0	6.9	13.4	0.0	8.0
1/31/2025 0:45	2.9	87.8	0.0	6.9	11.7	0.0	1/31/2025 0:45	2.5	5.3	0.0	6.9	13.5	0.0	8.0
1/31/2025 1:00	2.9	87.9	0.0	6.8	11.7	0.0	1/31/2025 1:00	2.5	5.3	0.0	6.9	13.5	0.0	8.0
1/31/2025 1:15	2.9	87.9	0.0	6.8	11.6	0.0	1/31/2025 1:15	2.4	5.4	0.0	6.9	13.5	0.0	8.0
1/31/2025 1:30	2.9	87.8	0.0	6.9	11.6	0.0	1/31/2025 1:30	2.4	5.3	0.0	6.9	13.5	0.0	8.0
1/31/2025 1:45	2.9	87.6	0.0	6.9	11.6	0.0	1/31/2025 1:45	2.4	5.3	0.0	6.9	13.5	0.0	8.0
1/31/2025 2:00	2.9	87.5	0.0	6.9	11.5	2.0	1/31/2025 2:00	2.4	5.4	0.0	6.9	13.5	0.0	8.0
1/31/2025 2:15	2.9	87.4	0.0	6.9	11.6	0.0	1/31/2025 2:15	2.4	5.4	0.0	6.9	13.5	0.0	8.0
1/31/2025 2:30	2.9	87.2	0.0	6.9	11.6	0.0	1/31/2025 2:30	2.4	5.4	0.0	6.9	13.5	0.0	8.0
1/31/2025 2:45	2.9	87.1	0.0	6.9	11.6	0.0	1/31/2025 2:45	2.3	5.3	0.0	6.9	13.5	0.0	8.0
1/31/2025 3:00	2.8	86.9	0.0	6.9	11.7	0.0	1/31/2025 3:00	2.3	5.3	0.0	6.9	13.5	0.0	8.0
1/31/2025 3:15	2.8	89.7	0.0	6.9	11.7	0.0	1/31/2025 3:15	2.3	5.4	0.0	6.9	13.5	0.0	8.0
1/31/2025 3:30	2.8	86.7	0.0	6.9	11.7	0.0	1/31/2025 3:30	2.3	5.4	0.0	6.9	13.5	0.0	8.0
1/31/2025 3:45	2.8	86.3	0.0	6.9	11.7	0.0	1/31/2025 3:45	2.3	5.3	0.0	6.9	13.5	0.0	8.0
1/31/2025 4:00	2.8	86.2	0.0	6.9	11.8	0.0	1/31/2025 4:00	2.3	5.4	0.0	6.9	13.5	0.0	8.0
1/31/2025 4:15	2.8	86.0	0.0	6.9	11.8	0.0	1/31/2025 4:15	2.3	5.4	0.0	6.9	13.5	0.0	8.0
1/31/2025 4:30	2.8	85.8	0.0	6.9	11.8	0.0	1/31/2025 4:30	2.3	5.4	0.0	6.9	13.5	0.0	8.0
1/31/2025 4:45	2.8	85.4	0.0	6.9	11.8	0.0	1/31/2025 4:45	2.3	5.3	0.0	6.9	13.5	0.0	8.0
1/31/2025 5:00	2.7	85.2	0.0	6.9	11.9	0.0	1/31/2025 5:00	2.3	5.4	0.0	6.9	13.5	0.0	8.0
1/31/2025 5:15	2.8	85.2	0.0	6.9	11.6	0.0	1/31/2025 5:15	2.3	5.5	0.0	6.9	13.5	0.0	8.0
1/31/2025 5:30	2.8	85.2	0.0	6.9	11.0	0.0	1/31/2025 5:30	2.3	5.4	0.0	6.9	13.5	0.0	8.0
1/31/2025 5:45	2.7	89.8	0.0	6.9	11.6	0.0	1/31/2025 5:45	3.5	93.6	0.0	6.7	12.4	0.0	8.0
1/31/2025 6:00	2.6	85.4	0.0	6.9	11.8	0.0	1/31/2025 6:00	3.6	92.4	0.0	6.7	12.4	0.0	8.0
1/31/2025 6:15	2.6	84.9	0.0	7.0	11.8	0.0	1/31/2025 6:15	3.5	91.4	0.0	6.7	12.4	0.0	8.0
1/31/2025 6:30	2.6	84.7	0.0	6.9	11.8	0.0	1/31/2025 6:30	3.5	91.0	0.0	6.7	12.4	0.0	8.0
1/31/2025 6:45	2.5	84.3	0.0	7.0	11.8	0.0	1/31/2025 6:45	3.5	90.8	0.0	6.8	12.4	0.0	8.0
1/31/2025 7:00	2.5	84.3	0.0	7.0	11.9	0.0	1/31/2025 7:00	3.5	90.7	0.0	6.8	12.4	0.0	8.0
1/31/2025 7:15	2.5	83.6	0.0	7.0	11.9	0.0	1/31/2025 7:15	3.5	90.6	0.0	6.8	12.4	0.0	8.0
1/31/2025 7:30	2.5	82.8	0.0	7.0	11.9	0.0	1/31/2025 7:30	3.5	90.4	0.0	6.8	12.4	0.0	8.0
1/31/2025 7:45	2.5	82.8	0.0	7.0	11.9	0.0	1/31/2025 7:45	3.5	90.3	0.0	6.8	12.4	0.0	8.0
1/31/2025 8:00	2.5	82.8	0.0	7.0	11.9	0.0	1/31/2025 8:00	3.5	91.3	0.0	6.8	12.4	0.0	8.0
1/31/2025 8:15	2.5	82.6	0.0	7.0	11.9	0.0	1/31/2025 8:15	3.5	91.3	0.0	6.8	12.4	0.0	8.0
1/31/2025 8:30	2.5	82.8	0.0	7.0	11.9	0.0	1/31/2025 8:30	3.5	91.3	0.0	6.8	12.4	0.0	8.0
1/31/2025 8:45	2.5	82.8	0.0	7.0	11.9	0.0	1/31/2025 8:45	3.5	90.6	0.0	6.8	12.4	0.0	8.0
1/31/2025 9:00	2.5	89.2	0.0	7.0	11.9	0.0	1/31/2025 9:00	3.5	89.6	0.0	6.8	12.4	0.0	8.0
1/31/2025 9:15	2.5	98.8	0.1	7.0	11.9	0.0	1/31/2025 9:15	3.5	89.5	0.0	6.8	12.4	0.0	8.0
1/31/2025 9:30	2.5	92.5	0.0	7.0	11.9	0.0	1/31/2025 9:30	3.6	92.1	0.0	6.8	12.4	0.0	8.0
1/31/2025 9:45	2.5	90.5	0.0	7.0	11.9	0.0	1/31/2025 9:45	3.6	94.0	0.0	6.7	12.3	0.0	8.0
1/31/2025 10:00	2.5	87.6	0.0	7.0	11.9	0.3	1/31/2025 10:00	3.7	95.4	0.0	6.7	12.3	0.0	8.0
1/31/2025 10:15	2.6	86.5	0.0	7.0	11.9	0.0	1/31/2025 10:15	3.7	93.9	0.0	6.7	12.3	0.0	8.0
1/31/2025 10:30	2.6	84.6	0.0	6.9	11.9	0.0	1/31/2025 10:30	3.7	94.2	0.0	6.8	12.4	0.0	8.0

1/31/2025 10:45	2.6	84.2	0.0	7.0	11.9	0.0	1/31/2025 10:45	3.7	98.8	0.0	6.7	12.3	0.0	8.0
1/31/2025 11:00	2.7	85.6	0.0	7.0	11.9	0.0	1/31/2025 11:00	3.9	107.9	0.0	6.7	12.2	0.0	8.0
1/31/2025 11:15	2.8	92.4	0.0	7.0	11.8	0.0	1/31/2025 11:15	3.9	106.3	0.0	6.7	12.2	0.0	8.0
1/31/2025 11:30	2.8	93.0	0.0	7.0	11.8	0.0	1/31/2025 11:30	4.0	108.7	0.0	6.7	12.2	0.0	8.0
1/31/2025 11:45	2.8	93.6	0.0	6.9	11.8	0.0	1/31/2025 11:45	4.0	107.7	0.0	6.7	12.2	0.0	8.0
1/31/2025 12:00	2.9	93.2	0.0	6.9	11.8	0.0	1/31/2025 12:00	3.9	104.6	0.0	6.7	12.3	0.0	8.0
1/31/2025 12:15	2.8	91.4	0.0	7.0	11.8	0.0	1/31/2025 12:15	3.9	101.8	0.0	6.7	12.3	0.0	8.0
1/31/2025 12:30	2.8	89.7	0.0	7.0	11.9	0.0	1/31/2025 12:30	3.9	103.3	0.0	6.7	12.3	0.0	8.0
1/31/2025 12:45	2.8	90.9	0.0	7.0	11.9	0.0	1/31/2025 12:45	3.9	103.7	0.0	6.7	12.3	0.0	8.0
1/31/2025 13:00	2.8	91.8	0.0	7.0	11.8	0.0	1/31/2025 13:00	4.0	103.1	0.0	6.7	12.3	0.0	8.0
1/31/2025 13:15	2.8	91.6	0.0	7.0	11.8	0.0	1/31/2025 13:15	3.9	101.1	0.0	6.7	12.3	0.0	8.0
1/31/2025 13:30	2.8	91.2	0.0	7.0	11.9	0.0	1/31/2025 13:30	3.9	59.5	0.0	6.7	12.4	0.0	8.0
1/31/2025 13:45	2.8	88.6	0.0	7.0	11.9	0.0	1/31/2025 13:45	3.8	4.8	0.0	6.8	12.9	0.0	8.0
1/31/2025 14:00	2.8	87.3	0.0	7.0	11.9	0.0	1/31/2025 14:00	3.8	5.0	0.0	6.8	12.9	0.0	8.0
1/31/2025 14:15	2.8	86.2	0.0	7.0	11.9	0.0	1/31/2025 14:15	3.7	5.0	0.0	6.8	12.9	0.0	8.0
1/31/2025 14:30	2.8	85.0	0.0	7.0	11.9	0.0	1/31/2025 14:30	3.7	5.2	0.0	6.8	12.9	0.0	8.0
1/31/2025 14:45	2.8	84.2	0.0	7.0	11.9	0.0	1/31/2025 14:45	3.6	5.0	0.0	6.9	12.9	0.0	8.0
1/31/2025 15:00	2.8	83.8	0.0	7.0	11.9	0.0	1/31/2025 15:00	3.6	5.0	0.0	6.9	13.0	0.0	8.0
1/31/2025 15:15	2.8	83.3	0.0	7.0	11.9	0.0	1/31/2025 15:15	3.6	5.1	0.0	6.9	13.0	0.0	8.0
1/31/2025 15:30	2.8	83.0	0.0	7.0	11.9	0.0	1/31/2025 15:30	3.7	5.2	0.0	6.9	12.8	0.0	8.0
1/31/2025 15:45	2.8	82.8	0.0	7.0	12.0	0.0	1/31/2025 15:45	3.8	90.7	0.0	6.7	12.5	0.0	8.0
1/31/2025 16:00		82.7	0.0	7.0	12.0	0.0	1/31/2025 16:00	3.8	90.6	0.0	6.7	12.5	0.0	8.0
1/31/2025 16:15	2.8	82.1	0.0	7.0	12.0	0.0	1/31/2025 16:15	3.8	89.9	0.0	6.7	12.5	0.0	8.0
1/31/2025 16:30	2.7	81.6	0.0	7.0	12.0	0.0	1/31/2025 16:30	3.8	88.7	0.0	6.7	12.5	0.0	8.0
1/31/2025 16:45	2.7	80.9	0.0	7.0	12.0	0.0	1/31/2025 16:45	3.8	88.2	0.0	6.8	12.5	0.0	8.0
1/31/2025 17:00	2.7	80.5	0.0	7.0	12.0	0.0	1/31/2025 17:00	3.7	87.6	0.0	6.8	12.5	0.0	8.0
1/31/2025 17:15	2.7	81.4	0.0	7.0	12.0	0.0	1/31/2025 17:15	3.7	87.0	0.0	6.8	12.6	0.0	8.0
1/31/2025 17:30	2.7	79.3	0.0	7.1	12.0	0.0	1/31/2025 17:30	3.7	86.7	0.0	6.8	12.6	0.0	8.0
1/31/2025 17:45	2.7	79.3	0.0	7.1	12.0	0.0	1/31/2025 17:45	3.7	86.6	0.0	6.8	12.6	0.0	8.0
1/31/2025 18:00	2.7	79.1	0.0	7.1	12.0	0.0	1/31/2025 18:00	3.7	86.6	0.0	6.8	12.6	0.0	8.0
1/31/2025 18:15	2.7	78.9	0.0	7.1	12.0	0.0	1/31/2025 18:15	3.7	86.6	0.0	6.8	12.6	0.0	8.0
1/31/2025 18:30	2.6	78.8	0.0	7.0	12.0	0.0	1/31/2025 18:30	3.7	88.4	0.0	6.8	12.5	0.0	8.0
1/31/2025 18:45	2.6	79.3	0.0	7.0	12.0	0.0	1/31/2025 18:45	3.7	90.9	0.0	6.8	12.4	0.0	8.0
1/31/2025 19:00	2.7	80.2	0.0	7.1	12.0	0.0	1/31/2025 19:00	3.8	91.9	0.0	6.8	12.4	0.0	8.0
1/31/2025 19:15	2.7	81.0	0.0	7.0	12.0	0.0	1/31/2025 19:15	3.7	89.6	0.0	6.8	12.4	0.0	8.0
1/31/2025 19:30	2.7	81.1	0.0	7.0	11.9	0.0	1/31/2025 19:30	3.7	89.3	0.0	6.8	12.4	0.0	8.0
1/31/2025 19:45	2.7	80.5	0.0	7.0	11.9	0.0	1/31/2025 19:45	3.7	88.9	0.0	6.8	12.4	0.0	8.0
1/31/2025 20:00	2.7	79.7	0.0	7.0	11.9	0.0	1/31/2025 20:00	3.8	94.9	0.0	6.8	12.3	0.0	8.0
1/31/2025 20:15	2.7	80.8	0.0	7.0	11.9	0.0	1/31/2025 20:15	3.9	103.3	0.0	6.7	12.2	0.0	8.0
1/31/2025 20:30	2.7	82.9	0.0	7.0	11.9	0.0	1/31/2025 20:30	4.0	105.3	0.0	6.7	12.1	0.0	8.0
1/31/2025 20:45	2.8	89.3	0.0	7.0	11.7	0.0	1/31/2025 20:45	4.0	105.8	0.0	6.7	12.1	0.0	8.0
1/31/2025 21:00	2.8	90.7	0.0	6.9	11.7	0.0	1/31/2025 21:00	4.0	110.3	0.1	6.7	12.0	0.0	8.0
1/31/2025 21:15	2.9	94.1	0.0	7.0	11.7	0.0	1/31/2025 21:15	4.1	112.1	0.1	6.6	12.0	0.0	8.0
1/31/2025 21:30	2.9	96.1	0.1	6.9	11.6	0.0	1/31/2025 21:30	4.1	113.0	0.1	6.6	12.0	0.0	8.0
1/31/2025 21:45	2.9	97.0	0.1	6.9	11.6	0.8	1/31/2025 21:45	4.1	111.7	0.1	6.6	11.9	1.1	9.1
1/31/2025 22:00	2.9	96.3	0.1	6.9	11.6	8.3	1/31/2025 22:00	4.1	112.4	0.1	6.6	11.9	31.5	36.5
1/31/2025 22:15	3.0	96.4	0.1	6.9	11.5	3.6	1/31/2025 22:15	4.3	3.6	0.0	6.7	12.7	0.0	8.0
1/31/2025 22:30	2.9	94.9	0.1	6.8	11.6	18.1	1/31/2025 22:30	4.7	4.6	0.0	6.7	12.6	0.0	8.0
1/31/2025 22:45	2.8	88.2	0.0	6.8	11.7	28.4	1/31/2025 22:45	4.7	4.6	0.0	6.3	12.6	0.0	8.0
1/31/2025 23:00	2.8	85.9	0.0	6.9	11.7	36.4	1/31/2025 23:00	4.6	4.7	0.0	5.8	12.6	0.0	8.0
1/31/2025 23:15	2.8	88.9	0.0	6.6	11.8	161.1	1/31/2025 23:15	4.5	4.8	0.0	6.0	12.6	0.0	8.0
1/31/2025 23:30	2.8	59.9	0.0	6.5	11.7	25.0	1/31/2025 23:30	4.4	4.8	0.0	5.7	12.7	0.0	8.0
1/31/2025 23:45	2.8	49.5	0.0	6.5	11.7	15.6	1/31/2025 23:45	4.4	4.7	0.0	6.2	12.7	0.0	8.0
2/01/2025 0:00	2.9	43.9	0.0	6.5	11.6	16.7	2/01/2025 0:00	4.3	4.7	0.0	6.0	12.7	0.0	8.0
2/01/2025 0:15	2.8	42.0	0.0	6.5	11.6	14.8	2/01/2025 0:15	4.3	4.8	0.0	6.0	12.7	0.0	8.0
2/01/2025 0:30	2.9	37.2	0.0	6.5	11.6	12.8	2/01/2025 0:30	4.3	4.8	0.0	5.5	12.7	0.0	8.0
2/01/2025 0:45	2.9	36.7	0.0	6.5	11.5	13.9	2/01/2025 0:45	4.2	4.6	0.0	6.1	12.8	0.0	8.0
2/01/2025 1:00	2.9	36.7	0.0	6.5	11.5	14.1	2/01/2025 1:00	4.1	4.7	0.0	6.2	12.8	0.0	8.0
2/01/2025 1:15	2.9	36.5	0.0	6.5	11.4	16.5	2/01/2025 1:15	4.0	4.6	0.0	6.1	12.9	0.0	8.0
2/01/2025 1:30	2.9	36.4	0.0	6.5	11.4	19.1	2/01/2025 1:30	4.0	4.5	0.0	5.9	12.9	0.0	8.0
2/01/2025 1:45	2.9	36.6	0.0	6.5	11.3	19.1	2/01/2025 1:45	3.8	4.4	0.0	6.1	12.9	0.0	8.0
2/01/2025 2:00	2.8	36.3	0.0	6.5	11.3	19.2	2/01/2025 2:00	3.7	4.4	0.0	5.7	13.0	0.0	8.0
2/01/2025 2:15	2.8	36.3	0.0	6.5	11.3	19.5	2/01/2025 2:15	3.7	4.5	0.0	5.9	13.0	0.0	8.0
2/01/2025 2:30	2.8	35.9	0.0	6.5	11.3	18.7	2/01/2025 2:30	3.7	4.5	0.0	5.0	13.0	0.0	8.0
2/01/2025 2:45	2.8	35.9	0.0	6.5	11.2	18.8	2/01/2025 2:45	3.6	4.4	0.0	6.3	13.0	0.0	8.0
2/01/2025 3:00	2.8	36.0	0.0	6.6	11.0	19.1	2/01/2025 3:00	3.6	4.4	0.0	6.0	13.1	0.0	8.0
2/01/2025 3:15	2.8	36.0	0.0	6.6	10.9	19.3	2/01/2025 3:15	3.6	4.6	0.0	5.1	13.1	0.0	8.0
2/01/2025 3:30	2.8	36.0	0.0	6.5	10.7	19.9	2/01/2025 3:30	3.5	4.5	0.0	6.0	13.1	0.0	8.0
2/01/2025 3:45	2.8	36.0	0.0	6.5	10.6	20.6	2/01/2025 3:45	3.5	4.3	0.0	6.0	13.1	0.0	8.0
2/01/2025 4:00	2.8	36.0	0.0	6.5	10.4	20.8	2/01/2025 4:00	3.5	4.3	0.0	6.0	13.1	0.0	8.0
2/01/2025 4:15	2.8	36.1	0.0	6.5	10.3	22.3	2/01/2025 4:15	3.5	4.3	0.0	6.0	13.1	0.0	8.0
2/01/2025 4:30		36.2	0.0	6.5	10.1	24.3	2/01/2025 4:30	3.4	4.3	0.0	6.0	13.1	0.0	8.0
2/01/2025 4:45	2.9	36.3	0.0	6.5	9.9	25.3	2/01/2025 4:45	3.3	4.3	0.0	6.1	13.1	0.0	8.0
2/01/2025 5:00	2.9	36.3	0.0	6.5	9.8	25.2	2/01/2025 5:00	3.2	4.3	0.0	6.1	13.2	0.0	8.0
2/01/2025 5:15	2.9	36.4	0.0	6.5	9.6	26.7	2/01/2025 5:15	3.1	4.3	0.0	6.0	13.2	0.0	8.0
2/01/2025 5:30	2.9	36.4	0.0	6.5	9.4	28.0	2/01/2025 5:30	3.1	4.3	0.0	6.0	13.2	0.0	8.0
2/01/2025 5:45	2.9	36.4	0.0	6.5	9.2	28.2	2/01/2025 5:45	3.0	4.3	0.0	6.2	13.3	0.0	8.0
2/01/2025 6:00	2.9	36.5	0.0	6.5	9.1	30.1	2/01/2025 6:00	2.9	4.4	0.0	6.2	13.3	0.0	8.0
2/01/2025 6:15	2.9	35.1	0.0	6.4	9.8	47.6	2/01/2025 6:15	3.4	88.4	0.0	6.7	12.4	0.0	8.0
2/01/2025 6:30	2.5	79.5	0.0	6.4	7.1	0.0	2/01/2025 6:30	3.4	87.9	0.0	6.7	12.4	0.0	8.0
2/01/2025 6:45	2.4	79.7	0.0	6.9	11.6	0.0	2/01/2025 6:45	3.4	87.0	0.0	6.7	12.5	0.0	8.0
2/01/2025 7:00	2.4	79.2	0.0	7.0	11.9	0.0	2/01/2025 7:00	3.4	86.3	0.0	6.7	12.5	0.0	8.0
2/01/2025 7:15	2.4	78.6	0.0	7.0	11.9	0.0	2/01/2025 7:15	3.4	86.1	0.0	6.7	12.5	0.0	8.0
2/01/2025 7:30	2.3	78.3	0.0	7.0	11.9	0.0	2/01/2025 7:30	3.4	86.0	0.0	6.8	12.5	0.0	8.0
2/01/2025 7:45	2.3	78.5	0.0	7.0	12.0	0.0	2/01/2025 7:45	3.3	85.9	0.0	6.8	12.5	0.0	8.0
2/01/2025 8:00	2.3	78.3	0.0	7.0	12.0	0.0	2/01/2025 8:00	3.3	85.8	0.0	6.8	12.5	0.0	8.0
2/01/2025 8:15	2.3	78.2	0.0	7.0	12.0	0.0	2/01/2025 8:15	3.3	85.7	0.0	6.8	12.5	0.0	8.0
2/01/2025 8:30	2.3	78.2	0.0	7.0	12.0	0.0	2/01/2025 8:30	3.3	85.7	0.0	6.8	12.5	0.0	8.0
2/01/2025 8:45	2.3	78.0	0.0	7.0	12.0	0.0	2/01/2025 8:45	3.4	85.1	0.0	6.8	12.5	0.0	8.0
2/01/2025 9:00	2.3	77.8	0.0	7.0	12.0	0.0	2/01/2025 9:00	3.4	84.7	0.0	6.8	12.5	0.0	8.0
2/01/2025 9:15	2.3	77.4	0.0	7.0	12.0	0.0	2/01/2025 9:15	3.4	85.5	0.0	6.8	12.5	0.0	8.0
2/01/2025 9:30	2.3	77.4	0.0	7.0	12.0	0.0	2/01/2025 9:30	3.4	86.2	0.0	6.8	12.5	0.0	8.0
2/01/2025 9:45	2.4	77.4	0.0	7.0	12.0	0.0	2/01/2025 9:45	3.4	87.3	0.0	6.8	12.5	0.0	8.0
2/01/2025 10:00	2.4	78.0	0.0	7.0	12.0	0.0	2/01/2025 10:00	3.4	89.7	0.0	6.7	12.4	0.0	8.0
2/01/2025 10:15	2.4	79.6	0.0	7.0	12.0	0.0	2/01/2025 10:15	3.4	89.8	0.0	6.8	12.4	0.0	8.0
2/01/2025 10:30	2.4	80.2	0.0	7.0	12.0	0.0	2/01/2025 10:30	3.5	91.7	0.0	6.7	12.4	0.0	8.0
2/01/2025 10:45	2.4	81.4	0.0	7.0	11.9	0.0	2/01/2025 10:45	3.5	93.9	0.0	6.7	12.4	0.0	8.0
2/01/2025 11:00	2.4	81.6	0.0	7.0	11.9	0.0	2/01/2025 11:00	3.5	97.5	0.0	6.7	12.4	0.0	8.0
2/01/2025 11:15	2.4	84.2	0.0	7.0	11.9	0.0	2/01/2025 11:15	3.5	97.4	0.0	6.7	12.4	0.0	8.0
2/01/2025 11:30	2.4	85.5	0.0	7.0	11.9	0.0	2/01/2025 11:30	3.4	95.8	0.0	6.7	12.4	0.0	8.0
2/01/2025 11:45	2.4	84.6	0.0	7.0	11.9	0.0	2/01/2025 11:45	3.4	95.9	0.0	6.7	12.5	0.0	8.0
2/01/2025 12:00	2.4	84.0	0.0	7.0	12.0	0.0	2/01/2025 12:00	3.5	103.2	0.0	6.7	12.4	0.0	8.0
2/01/2025 12:15	2.4	85.5	0.0	7.0	12.0	0.0	2/01/2025 12:15	3.4	100.8	0.0	6.7	12.4	0.0	8.0
2/01/2025 12:30	2.3	87.8	0.0	7.0	12.0	0.0	2/01/2025 12:30	3.4	100.2	0.0	6.7	12.4	0.0	8.0
2/01/2025 12:45	2.3	87.8	0.0	7.0	12.0	0.0	2/01/2025 12:45	3.4	99.9	0.0	6.7	12.4	0.0	8.0
2/01/2025 13:00	2.3	87.5	0.0	7.0	12.0	0.0	2/01/2025 13:00	3.4	99.6	0.0	6.7	12.4	0.0	8.0
2/01/2025 13:15	2.3	87.7	0.0	6.9	12.0	0.5	2/01/2025 13:15	3.3	3.3	0.0	6.7	13.0	5.8	13.8
2/01/2025 13:30	2.3	87.1	0.0	6.9	12.0	0.0	2/01/2025 13:30	3.0	4.6	0.0	6.8	13.3	1.5	9.5

2/01/2025 13:45	2.3	84.0	0.0	6.9	12.0	0.0	2/01/2025 13:45	2.9	4.8	0.0	6.8	13.3	0.0	8.0
2/01/2025 14:00	2.3	82.9	0.0	6.9	12.0	0.9	2/01/2025 14:00	2.8	5.0	0.0	6.7	13.3	0.0	8.0
2/01/2025 14:15	2.3	82.1	0.0	6.9	12.0	0.0	2/01/2025 14:15	2.8	5.0	0.0	6.7	13.3	0.0	8.0
2/01/2025 14:30	2.3	82.0	0.0	6.8	12.0	6.8	2/01/2025 14:30	3.0	5.0	0.0	6.6	13.3	0.0	8.0
2/01/2025 14:45	2.4	82.0	0.0	6.8	11.9	1.0	2/01/2025 14:45	3.0	5.0	0.0	6.7	13.2	0.0	8.0
2/01/2025 15:00	2.4	82.0	0.0	6.9	12.0	0.0	2/01/2025 15:00	3.1	5.0	0.0	6.5	13.2	0.0	8.0
2/01/2025 15:15	2.5	82.0	0.0	6.8	11.9	0.0	2/01/2025 15:15	3.2	4.9	0.0	6.4	13.2	0.0	8.0
2/01/2025 15:30	2.4	82.4	0.0	6.9	12.0	1.4	2/01/2025 15:30	3.3	5.0	0.0	6.3	13.1	0.0	8.0
2/01/2025 15:45	2.5	82.4	0.0	6.8	12.0	0.0	2/01/2025 15:45	3.2	4.9	0.0	6.4	13.2	0.0	8.0
2/01/2025 16:00	2.5	82.3	0.0	6.9	12.0	0.0	2/01/2025 16:00	3.2	4.9	0.0	6.3	13.2	0.0	8.0
2/01/2025 16:15	2.5	82.3	0.0	6.8	11.9	0.0	2/01/2025 16:15	3.2	4.9	0.0	6.3	13.2	0.0	8.0
2/01/2025 16:30	2.5	82.6	0.0	6.8	12.0	0.0	2/01/2025 16:30	3.1	4.9	0.0	6.3	13.2	0.0	8.0
2/01/2025 16:45	2.5	82.3	0.0	6.9	12.0	0.0	2/01/2025 16:45	3.0	4.8	0.0	6.6	13.2	0.0	8.0
2/01/2025 17:00	2.5	82.2	0.0	6.8	11.9	0.0	2/01/2025 17:00	3.0	4.8	0.0	6.6	13.3	0.0	8.0
2/01/2025 17:15	2.5	82.5	0.0	6.9	12.0	0.0	2/01/2025 17:15	2.8	4.8	0.0	6.6	13.3	0.0	8.0
2/01/2025 17:30	2.5	82.1	0.0	6.9	12.1	0.0	2/01/2025 17:30	2.7	4.8	0.0	6.6	13.4	0.0	8.0
2/01/2025 17:45	2.4	82.0	0.0	7.0	12.0	0.0	2/01/2025 17:45	3.3	84.3	0.0	6.7	12.7	95.4	100.4
2/01/2025 18:00	2.4	81.4	0.0	7.0	12.1	0.0	2/01/2025 18:00	3.4	90.2	0.0	6.7	12.6	0.0	8.0
2/01/2025 18:15	2.4	81.3	0.0	7.0	12.1	0.0	2/01/2025 18:15	3.4	88.8	0.0	6.7	12.6	0.0	8.0
2/01/2025 18:30	2.4	81.0	0.0	7.0	12.1	0.0	2/01/2025 18:30	3.4	87.7	0.0	6.7	12.6	0.0	8.0
2/01/2025 18:45	2.4	80.2	0.0	7.0	12.1	0.0	2/01/2025 18:45	3.4	87.1	0.0	6.7	12.6	0.0	8.0
2/01/2025 19:00	2.3	79.3	0.0	7.0	12.1	0.0	2/01/2025 19:00	3.4	85.9	0.0	6.8	12.6	0.0	8.0
2/01/2025 19:15	2.3	78.8	0.0	7.0	12.1	0.0	2/01/2025 19:15	3.3	85.5	0.0	6.8	12.6	0.0	8.0
2/01/2025 19:30	2.3	78.5	0.0	7.0	12.1	0.0	2/01/2025 19:30	3.3	85.5	0.0	6.8	12.6	0.0	8.0
2/01/2025 19:45	2.3	78.3	0.0	7.0	12.1	0.0	2/01/2025 19:45	3.3	85.6	0.0	6.8	12.6	0.0	8.0
2/01/2025 20:00	2.3	78.2	0.0	7.1	12.1	0.0	2/01/2025 20:00	3.3	85.9	0.0	6.8	12.6	0.0	8.0
2/01/2025 20:15	2.3	78.3	0.0	7.0	12.1	0.0	2/01/2025 20:15	3.3	87.0	0.0	6.8	12.6	0.0	8.0
2/01/2025 20:30	2.3	78.7	0.0	7.0	12.1	0.0	2/01/2025 20:30	3.4	88.9	0.0	6.8	12.5	0.0	8.0
2/01/2025 20:45	2.3	79.0	0.0	7.0	12.1	0.0	2/01/2025 20:45	3.4	91.6	0.0	6.8	12.4	0.0	8.0
2/01/2025 21:00	2.3	80.7	0.0	7.0	12.0	0.0	2/01/2025 21:00	3.4	92.4	0.0	6.7	12.4	0.0	8.0
2/01/2025 21:15	2.3	82.1	0.0	7.0	12.0	0.0	2/01/2025 21:15	3.4	94.1	0.0	6.7	12.4	0.0	8.0
2/01/2025 21:30	2.3	83.2	0.0	7.0	11.9	0.0	2/01/2025 21:30	3.5	100.7	0.0	6.7	12.3	0.0	8.0
2/01/2025 21:45	2.4	86.0	0.0	7.0	11.9	0.0	2/01/2025 21:45	3.5	106.2	0.0	6.7	12.2	0.0	8.0
2/01/2025 22:00	2.4	91.6	0.0	7.0	11.8	0.0	2/01/2025 22:00	3.6	120.3	0.1	6.6	12.1	0.0	8.0
2/01/2025 22:15	2.5	96.3	0.1	6.9	11.8	0.0	2/01/2025 22:15	3.7	121.8	0.1	6.6	12.0	0.0	8.0
2/01/2025 22:30	2.5	100.2	0.1	6.9	11.7	0.0	2/01/2025 22:30	3.6	118.7	0.1	6.6	12.0	0.0	8.0
2/01/2025 22:45	2.5	100.5	0.1	6.9	11.7	0.0	2/01/2025 22:45	3.2	4.3	0.0	6.7	13.2	1.5	9.5
2/01/2025 23:00	2.4	97.1	0.1	6.9	11.7	0.0	2/01/2025 23:00	2.7	4.7	0.0	6.8	13.4	1.4	9.4
2/01/2025 23:15	2.4	94.4	0.0	6.9	11.7	0.0	2/01/2025 23:15	2.4	4.7	0.0	6.8	13.5	1.2	9.2
2/01/2025 23:30	2.5	92.3	0.0	6.9	11.7	0.0	2/01/2025 23:30	2.2	4.7	0.0	6.8	13.6	0.7	8.7
2/01/2025 23:45	2.4	89.1	0.0	6.8	11.7	0.0	2/01/2025 23:45	2.1	4.6	0.0	6.8	13.6	0.0	8.0
2/02/2025 0:00	2.4	86.3	0.0	6.8	11.7	0.0	2/02/2025 0:00	2.0	4.7	0.0	6.8	13.6	0.0	8.0
2/02/2025 0:15	2.4	85.1	0.0	6.8	11.6	0.0	2/02/2025 0:15	1.9	4.7	0.0	6.8	13.7	0.0	8.0
2/02/2025 0:30	2.4	84.4	0.0	6.8	11.7	0.0	2/02/2025 0:30	1.9	4.7	0.0	6.8	13.7	0.0	8.0
2/02/2025 0:45	2.4	84.5	0.0	6.8	11.7	0.0	2/02/2025 0:45	1.8	4.6	0.0	6.9	13.7	0.0	8.0
2/02/2025 1:00	2.4	84.3	0.0	6.8	11.7	0.0	2/02/2025 1:00	1.8	4.7	0.0	6.9	13.7	0.0	8.0
2/02/2025 1:15	2.4	84.1	0.0	6.8	11.7	0.0	2/02/2025 1:15	1.8	4.7	0.0	6.9	13.7	0.0	8.0
2/02/2025 1:30	2.4	83.9	0.0	6.8	11.7	0.0	2/02/2025 1:30	1.8	4.7	0.0	6.9	13.7	0.0	8.0
2/02/2025 1:45	2.4	83.9	0.0	6.8	11.7	0.0	2/02/2025 1:45	1.8	4.8	0.0	6.8	13.7	0.0	8.0
2/02/2025 2:00	2.4	83.5	0.0	6.8	11.7	0.0	2/02/2025 2:00	1.7	4.8	0.0	6.8	13.8	0.0	8.0
2/02/2025 2:15	2.4	83.5	0.0	6.9	11.8	0.0	2/02/2025 2:15	1.6	4.8	0.0	6.8	13.8	0.0	8.0
2/02/2025 2:30	2.4	83.4	0.0	6.9	11.8	0.0	2/02/2025 2:30	1.6	4.9	0.0	6.8	13.8	0.0	8.0
2/02/2025 2:45	2.4	83.4	0.0	6.9	11.8	0.0	2/02/2025 2:45	1.5	4.8	0.0	6.9	13.8	0.0	8.0
2/02/2025 3:00	2.4	83.2	0.0	6.8	11.7	0.0	2/02/2025 3:00	1.5	4.9	0.0	6.9	13.9	0.0	8.0
2/02/2025 3:15	2.4	83.1	0.0	6.8	11.7	0.0	2/02/2025 3:15	1.4	4.8	0.0	6.9	13.9	0.0	8.0
2/02/2025 3:30	2.4	83.2	0.0	6.8	11.7	0.0	2/02/2025 3:30	1.4	4.9	0.0	6.9	13.9	0.0	8.0
2/02/2025 3:45	2.4	83.0	0.0	6.8	11.7	0.0	2/02/2025 3:45	1.4	4.9	0.0	6.8	13.9	0.0	8.0
2/02/2025 4:00	2.4	82.8	0.0	6.8	11.7	0.0	2/02/2025 4:00	1.3	4.9	0.0	6.8	13.9	0.0	8.0
2/02/2025 4:15	2.4	82.7	0.0	6.8	11.7	0.0	2/02/2025 4:15	1.3	5.0	0.0	6.8	13.9	0.0	8.0
2/02/2025 4:30	2.4	82.5	0.0	6.9	11.8	0.0	2/02/2025 4:30	1.2	4.9	0.0	6.8	13.9	0.0	8.0
2/02/2025 4:45	2.4	82.4	0.0	6.9	11.8	0.0	2/02/2025 4:45	1.2	4.9	0.0	6.9	14.0	0.0	8.0
2/02/2025 5:00	2.4	82.4	0.0	6.9	11.8	0.0	2/02/2025 5:00	1.1	4.9	0.0	6.9	14.0	0.0	8.0
2/02/2025 5:15	2.4	82.4	0.0	6.9	11.8	0.0	2/02/2025 5:15	1.1	4.9	0.0	6.9	14.0	0.0	8.0
2/02/2025 5:30	2.4	82.4	0.0	6.9	11.8	0.0	2/02/2025 5:30	1.0	5.0	0.0	6.9	14.0	0.0	8.0
2/02/2025 5:45		82.5	0.0	6.9	11.8	0.0	2/02/2025 5:45	1.0	5.0	0.0	6.8	14.0	0.0	8.0
2/02/2025 6:00	2.4	82.5	0.0	6.9	11.8	0.0	2/02/2025 6:00	1.0	4.9	0.0	6.8	14.0	0.0	8.0
2/02/2025 6:15	2.3	82.7	0.0	6.9	11.8	0.0	2/02/2025 6:15	1.1	5.0	0.0	6.8	14.0	0.0	8.0
2/02/2025 6:30	2.3	82.6	0.0	6.9	11.8	0.0	2/02/2025 6:30	2.7	91.5	0.0	6.7	12.7	0.0	8.0
2/02/2025 6:45	2.3	82.4	0.0	6.9	11.8	0.0	2/02/2025 6:45	3.2	89.5	0.0	6.7	12.5	0.0	8.0
2/02/2025 7:00	2.2	81.9	0.0	7.0	11.9	0.0	2/02/2025 7:00	3.2	88.4	0.0	6.7	12.5	0.0	8.0
2/02/2025 7:15	2.2	81.7	0.0	7.0	11.9	0.0	2/02/2025 7:15	3.2	87.7	0.0	6.7	12.5	0.0	8.0
2/02/2025 7:30	2.2	81.5	0.0	6.9	11.9	0.0	2/02/2025 7:30	3.2	87.6	0.0	6.7	12.5	0.0	8.0
2/02/2025 7:45	2.2	80.8	0.0	7.0	11.9	0.0	2/02/2025 7:45	3.2	87.5	0.0	6.7	12.5	0.0	8.0
2/02/2025 8:00	2.2	80.4	0.0	7.0	12.0	0.0	2/02/2025 8:00	3.2	87.4	0.0	6.7	12.5	0.0	8.0
2/02/2025 8:15	2.2	80.3	0.0	7.0	11.9	0.0	2/02/2025 8:15	3.2	87.1	0.0	6.7	12.5	0.0	8.0
2/02/2025 8:30	2.2	80.2	0.0	6.9	12.0	0.0	2/02/2025 8:30	3.2	87.3	0.0	6.7	12.5	0.0	8.0
2/02/2025 8:45	2.2	79.9	0.0	7.0	12.0	0.0	2/02/2025 8:45	3.2	87.6	0.0	6.7	12.5	0.0	8.0
2/02/2025 9:00	2.2	80.2	0.0	7.0	12.0	0.0	2/02/2025 9:00	3.2	87.3	0.0	6.7	12.5	0.0	8.0
2/02/2025 9:15	2.2	79.8	0.0	7.0	12.0	0.0	2/02/2025 9:15	3.2	86.7	0.0	6.7	12.5	0.0	8.0
2/02/2025 9:30	2.2	79.6	0.0	6.9	12.0	0.0	2/02/2025 9:30	3.2	86.3	0.0	6.7	12.5	0.0	8.0
2/02/2025 9:45	2.2	79.1	0.0	7.0	12.0	0.0	2/02/2025 9:45	3.2	86.0	0.0	6.7	12.5	0.0	8.0
2/02/2025 10:00	2.2	78.6	0.0	7.0	12.0	0.0	2/02/2025 10:00	3.2	87.7	0.0	6.7	12.5	0.0	8.0
2/02/2025 10:15	2.2	78.4	0.0	7.0	12.0	0.0	2/02/2025 10:15	3.2	88.6	0.0	6.7	12.5	0.0	8.0
2/02/2025 10:30	2.1	79.8	0.0	7.0	12.0	0.0	2/02/2025 10:30	3.1	90.0	0.0	6.7	12.5	0.0	8.0
2/02/2025 10:45		80.4	0.0	7.0	12.0	0.0	2/02/2025 10:45	3.1	90.6	0.0	6.7	12.5	0.0	8.0
2/02/2025 11:00	2.1	81.6	0.0	7.0	12.0	0.0	2/02/2025 11:00	3.1	90.8	0.0	6.7	12.5	0.0	8.0
2/02/2025 11:15	2.1	81.3	0.0	7.0	12.0	0.0	2/02/2025 11:15	3.1	94.9	0.0	6.7	12.5	0.0	8.0
2/02/2025 11:30	2.1	81.5	0.0	7.0	12.0	0.0	2/02/2025 11:30	3.1	101.4	0.0	6.7	12.4	0.0	8.0
2/02/2025 11:45	2.1	87.4	0.0	7.0	12.0	0.0	2/02/2025 11:45	3.1	102.3	0.0	6.7	12.4	0.0	8.0
2/02/2025 12:00	2.1	89.1	0.0	7.0	12.0	0.0	2/02/2025 12:00	3.0	100.8	0.0	6.7	12.5	0.0	8.0
2/02/2025 12:15	2.0	88.8	0.0	7.0	12.0	0.0	2/02/2025 12:15	3.1	108.5	0.0	6.7	12.4	0.0	8.0
2/02/2025 12:30	2.0	93.4	0.0	6.9	12.0	0.0	2/02/2025 12:30	3.1	112.7	0.1	6.7	12.4	0.0	8.0
2/02/2025 12:45	2.0	95.9	0.1	7.0	12.0	0.0	2/02/2025 12:45	3.0	106.2	0.0	6.7	12.5	0.0	8.0
2/02/2025 13:00	1.8	92.3	0.0	7.0	12.0	0.0	2/02/2025 13:00	2.8	106.8	0.0	6.7	12.4	0.0	8.0
2/02/2025 13:15	1.7	92.5	0.0	7.0	12.0	0.0	2/02/2025 13:15	2.7	111.5	0.1	6.7	12.3	0.0	8.0
2/02/2025 13:30	1.6	93.4	0.0	7.0	12.0	0.0	2/02/2025 13:30	2.3	3.3	0.0	6.7	13.4	0.0	8.0
2/02/2025 13:45	1.7	93.6	0.0	7.0	12.0	0.0	2/02/2025 13:45	1.7	4.8	0.0	6.7	13.7	0.0	8.0
2/02/2025 14:00	1.7	90.6	0.0	6.9	11.9	0.0	2/02/2025 14:00	1.3	4.9	0.0	6.7	13.9	0.0	8.0
2/02/2025 14:15	1.7	87.6	0.0	6.9	12.0	0.0	2/02/2025 14:15	1.1	5.0	0.0	6.7	14.0	0.0	8.0
2/02/2025 14:30	1.7	85.1	0.0	7.0	12.0	0.0	2/02/2025 14:30	1.0	5.0	0.0	6.7	14.0	0.0	8.0
2/02/2025 14:45	1.7	83.8	0.0	6.9	12.0	0.0	2/02/2025 14:45	1.0	5.0	0.0	6.8	14.0	0.0	8.0
2/02/2025 15:00	1.7	82.9	0.0	6.9	12.1	0.0	2/02/2025 15:00	1.0	4.8	0.0	6.8	14.0	0.0	8.0
2/02/2025 15:15	1.8	82.6	0.0	7.0	12.1	0.0	2/02/2025 15:15	1.0	4.7	0.0	6.8	14.0	0.0	8.0
2/02/2025 15:30	1.8	82.4	0.0	7.0	12.1	0.0	2/02/2025 15:30	1.0	4.9	0.0	6.8	14.0	0.0	8.0
2/02/2025 15:45	1.8	82.5	0.0	6.9	12.1	0.0	2/02/2025 15:45	1.0	4.9	0.0	6.8	14.0	0.0	8.0
2/02/2025 16:00	1.8	82.5	0.0	6.9	12.1	0.0	2/02/2025 16:00	1.0	5.3	0.0	6.7	14.0	0.8	8.8
2/02/2025 16:15	1.8	82.6	0.0	6.9	12.1	0.0	2/02/2025 16:15	1.0	6.1	0.0	6.7	14.0	2.8	10.8
2/02/2025 16:30	1.9	82.7	0.0	6.9	12.1	0.0	2/02/2025 16:30	1.0	9.3	0.0	6.7	14.0	0.2	8.2

2/02/2025 16:45	1.9	82.7	0.0	6.9	12.1	0.0	2/02/2025 16:45	1.0	8.1	0.0	6.8	14.0	0.0	8.0
2/02/2025 17:00	1.9	82.8	0.0	6.9	12.2	0.0	2/02/2025 17:00	1.0	8.2	0.0	6.7	14.0	0.0	8.0
2/02/2025 17:15	1.9	83.0	0.0	6.9	12.2	0.0	2/02/2025 17:15	1.0	8.7	0.0	6.6	14.0	0.0	8.0
2/02/2025 17:30	1.9	83.2	0.0	6.9	12.2	0.0	2/02/2025 17:30	0.9	10.6	0.0	6.5	14.1	0.0	8.0
2/02/2025 17:45	1.9	83.4	0.0	6.9	12.2	0.0	2/02/2025 17:45	0.8	13.3	0.0	6.5	14.2	0.0	8.0
2/02/2025 18:00	1.9	83.9	0.0	6.9	12.2	0.0	2/02/2025 18:00	0.8	12.3	0.0	6.3	14.1	0.0	8.0
2/02/2025 18:15	1.9	83.9	0.0	6.9	12.2	0.0	2/02/2025 18:15	0.7	6.1	0.0	6.1	14.2	0.0	8.0
2/02/2025 18:30	1.9	84.1	0.0	6.9	12.2	0.0	2/02/2025 18:30	0.6	6.2	0.0	5.8	14.2	0.0	8.0
2/02/2025 18:45	1.8	84.3	0.0	6.9	12.2	0.0	2/02/2025 18:45	0.6	6.3	0.0	5.9	14.2	0.0	8.0
2/02/2025 19:00	1.8	84.4	0.0	6.9	12.2	0.0	2/02/2025 19:00	0.4	0.0	0.0	5.9	14.3	0.0	8.0
2/02/2025 19:15	1.7	84.4	0.0	6.9	12.1	0.0	2/02/2025 19:15	0.3	0.0	0.0	6.1	14.3	0.0	8.0
2/02/2025 19:30	1.7	84.5	0.0	6.9	12.2	0.0	2/02/2025 19:30	0.5	0.0	0.0	5.4	14.5	0.0	8.0
2/02/2025 19:45	1.6	84.2	0.0	7.0	12.2	0.0	2/02/2025 19:45	2.0	94.6	0.0	6.7	12.8	0.0	8.0
2/02/2025 20:00	1.5	84.1	0.0	7.0	12.2	0.0	2/02/2025 20:00	2.2	93.0	0.0	6.7	12.7	0.0	8.0
2/02/2025 20:15	1.4	83.2	0.0	7.0	12.2	0.0	2/02/2025 20:15	2.2	90.6	0.0	6.7	12.7	0.0	8.0
2/02/2025 20:30	1.3	82.2	0.0	7.0	12.2	0.0	2/02/2025 20:30	2.2	89.2	0.0	6.7	12.7	0.0	8.0
2/02/2025 20:45	1.3	81.5	0.0	7.0	12.2	0.0	2/02/2025 20:45	2.2	88.6	0.0	6.7	12.7	0.0	8.0
2/02/2025 21:00	1.2	80.5	0.0	7.0	12.2	0.0	2/02/2025 21:00	2.1	87.9	0.0	6.7	12.7	0.0	8.0
2/02/2025 21:15	1.2	80.1	0.0	7.0	12.2	0.0	2/02/2025 21:15	2.1	86.8	0.0	6.8	12.8	0.0	8.0
2/02/2025 21:30	1.1	79.3	0.0	7.0	12.2	0.0	2/02/2025 21:30	2.1	86.5	0.0	6.8	12.8	0.0	8.0
2/02/2025 21:45	1.1	78.9	0.0	7.0	12.2	0.0	2/02/2025 21:45	2.1	87.6	0.0	6.8	12.7	0.0	8.0
2/02/2025 22:00	1.1	79.5	0.0	7.1	12.2	0.0	2/02/2025 22:00	2.1	90.4	0.0	6.7	12.7	0.0	8.0
2/02/2025 22:15	1.1	81.4	0.0	7.0	12.2	0.0	2/02/2025 22:15	2.2	96.5	0.0	6.7	12.6	0.0	8.0
2/02/2025 22:30	1.1	87.7	0.0	7.0	12.1	0.0	2/02/2025 22:30	2.3	107.8	0.0	6.7	12.5	0.0	8.0
2/02/2025 22:45	1.2	91.4	0.0	7.0	12.1	0.0	2/02/2025 22:45	2.3	117.0	0.1	6.6	12.4	0.0	8.0
2/02/2025 23:00	1.2	93.8	0.0	7.0	12.0	0.0	2/02/2025 23:00	2.4	123.3	0.1	6.6	12.3	0.0	8.0
2/02/2025 23:15	1.2	100.8	0.1	6.9	12.0	0.0	2/02/2025 23:15	2.4	121.4	0.1	6.6	12.3	0.0	8.0
2/02/2025 23:30	1.2	101.4	0.1	6.9	12.0	0.0	2/02/2025 23:30	1.8	4.5	0.0	6.6	13.8	0.0	8.0
2/02/2025 23:45	1.2	99.6	0.1	6.9	12.0	0.0	2/02/2025 23:45	1.0	4.8	0.0	6.6	14.0	26.3	31.3

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

Woodfibre Site Sample Analysis

TRITON	Sample ID	Reviewed and signed off by: Farshad Shafiei Ph.D., R.P.Bio.	COLLEGE OF APPLIED BIOLOGISTS Farshad Shafiei RPBio 3781 CAB	WLNG EOP	Sample or value notes	BCWQ FAL - Short Term	BCWQ MAL - Short Term
	LAB ID			VA25A1903-001			
	Date Sampled			28-Jan-2025			
	Time Sampled			11:23			
Analyte	Units	FAL-ST [1,2]	MAL-ST [1]	Water N/A		Guideline notes	
In Situ Parameters							
pH (field)	pH units	6.5-9.0	7.0-8.7	7.93		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	9.2		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	-	-	243.9			
Turbidity (field)	NTU	Varies with background, see note Guideline = 8.2	Varies with background, see note Guideline = 8.2	0.23		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	-	-	51.3			
Total Dissolved Solids	mg/L	-	-	89			
Total Suspended Solids	mg/L	Varies with background, see note Guideline = 28	Varies with background, see note Guideline = 28	< 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 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	-	-	51.1			
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 = 777	Varies with pH and temperature. See note. Guideline = 17.3	0.0142		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	7.62			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 = 1.066	1.5	0.172		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	-	0.0165			
Nitrite (as N)	mg/L	Varies with chloride. Table 27B, see note. Guideline = 0.08	-	< 0.0010		Varies with chloride. Refer to Table 27B in BC WQG for guideline values.	
Total Nitrogen	mg/L	-	-	0.17			
Total Phosphorous	mg/L	-	-	0.216			
Sulfate (as SO_4)	mg/L	-	-	5.99			
Total Metals							
Aluminum (Al)-Total	mg/L	-	-	0.047			
Antimony (Sb)-Total	mg/L	0.25	-	0.00061			
Arsenic (As)-Total	mg/L	-	-	0.00083			
Barium (Ba)-Total	mg/L	-	-	0.00329			
Beryllium (Be)-Total	mg/L	-	-	< 0.000100			
Bismuth (Bi)-Total	mg/L	-	-	< 0.000050			
Boron (B)-Total	mg/L	-	-	0.018			
Cadmium (Cd)-Total	mg/L	-	-	0.0000086			
Calcium (Ca)-Total	mg/L	-	-	19			
Cesium (Cs)-Total	mg/L	-	-	0.000016			
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	< 0.00050			
Iron (Fe)-Total	mg/L	1	-	< 0.010			
Lead (Pb)-Total	mg/L		0.14	< 0.000050			
Lithium (Li)-Total	mg/L	-	-	0.0047			
Magnesium (Mg)-Total	mg/L	-	-	0.935			
Manganese (Mn)-Total	mg/L	Varies with hardness Guideline = 1.105	-	0.0105		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	-	0.0167			
Nickel (Ni)-Total	mg/L	-	-	<0.00050			
Phosphorus (P)-Total	mg/L	-	-	< 0.050			
Potassium (K)-Total	mg/L	-	-	1.98			
Rubidium (Rb)-Total	mg/L	-	-	0.00304			
Selenium (Se)-Total	mg/L	-	-	< 0.000050			
Silicon (Si)-Total	mg/L	-	-	4.97			
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	-	-	5.14			
Strontium (Sr)-Total	mg/L	-	-	0.0387			
Sulfur (S)-Total	mg/L	-	-	2.11			
Tellurium (Te)-Total	mg/L	-	-	< 0.00020			
Thallium (Tl)-Total	mg/L	-	-	0.000011			
Thorium (Th)-Total	mg/L	-	-	< 0.00010			
Tin (Sn)-Total	mg/L	-	-	< 0.00010			
Titanium (Ti)-Total	mg/L	-	-	< 0.00030			
Tungsten (W)-Total	mg/L	-	-	0.00032			
Uranium (U)-Total	mg/L	0.0165	-	0.00142			
Vanadium (V)-Total	mg/L	-	-	< 0.00050			
Zinc (Zn)-Total	mg/L	-	0.055	0.0065			
Zirconium (Zr)-Total	mg/L	-	-	< 0.00020			
Dissolved Metals							
Aluminum (Al)-Dissolved	mg/L	-	-	0.034			
Antimony (Sb)-Dissolved	mg/L	-	-	0.00058			
Arsenic (As)-Dissolved	mg/L	-	-	0.00084			
Barium (Ba)-Dissolved	mg/L	-	-	0.00305			
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 = 0.000296	-	0.0000146		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	-	-	17.7			
Cesium (Cs)-Dissolved	mg/L	-	-	0.000016			
Chromium (Cr)-Dissolved	mg/L	-	-	< 0.00050			
Chromium (Cr(III))-Dissolved	mg/L	-	-	-			
Chromium (Cr(VI))-Dissolved	mg/L	-	-	-			
Cobalt (Co)-Dissolved	mg/L	-	-	< 0.00010			
Copper (Cu)-Dissolved	mg/L	Guideline varies with other parameters, see note Guideline = 0.0014	-	< 0.00020		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	-	-	< 0.000050			
Lithium (Li)-Dissolved	mg/L	-	-	0.004			
Magnesium (Mg)-Dissolved	mg/L	-	-	0.898			
Manganese (Mn)-Dissolved	mg/L	-	-	0.0101			
Mercury (Hg)-Dissolved	mg/L	-	-	< 0.000005			
Molybdenum (Mo)-Dissolved	mg/L	-	-	0.0189			
Nickel (Ni)-Dissolved	mg/L	Guideline varies with pH, temperature, DOC, and hardness Guideline: 0.026	-	0.017		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	-	-	1.92			
Rubidium (Rb)-Dissolved	mg/L	-	-	0.00301			
Selenium (Se)-Dissolved	mg/L	-	-	< 0.00005			
Silicon (Si)-Dissolved	mg/L	-	-	4.79			
Silver (Ag)-Dissolved	mg/L	-	-	< 0.000010			
Sodium (Na)-Dissolved	mg/L	-	-	4.99			
Strontium (Sr)-Dissolved	mg/L	-	-	0.0409			
Sulfur (S)-Dissolved	mg/L	-	-	1.84			
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	-	-	0.00032			
Uranium (U)-Dissolved	mg/L	-	-	0.00134			
Vanadium (V)-Dissolved	mg/L	-	-	< 0.00050			
Zinc (Zn)-Dissolved	mg/L	Varies with DOC and hardness Guideline = 0.019	-	0.0061		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			
LEPHw	µg/L	-	-	< 250			
VPHw	µg/L	-	-	< 100			
HEPHw	µg/L	-	-	< 250			
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	-	-	0.019			
Methylnaphthalene, 2-	µg/L	-	-	0.013			
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	7.93	7.93
Temperature (field)	°C	Field temperature taken using handheld meters during sampling used in calculations	9.2	9.2
Turbidity (field)	NTU	Field turbidity taken using handheld meters during sampling used in calculations	0.23	0.23
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	51.3	51.3
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	51.1	51.1
Chloride	mg/L	Laboratory tested chloride taken at each respective sample site on the day of sampling used in guideline calculations	7.62	7.62
Total Suspended Solids	mg/L	Laboratory tested total suspended solids tested at the lab used in guideline calculations	< 3.0	< 3.0

RESULTS OF RAINBOW TROUT LC50 MULTI-CONCENTRATION

Client : 4800 Triton Environmental Consultants Ltd., Vancouver Job Number: C510460

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:	Bright blue, transparent			Sample Number:	DDW234-01
Sample Collected:	Jan 28, 2025 11:23 AM	Sampling Method :	N/A	Site Collection:	N/A
Sample Collected By:	N/A	Volume Received:	4 x ECO10	Avg Temp Arrival:	9 °C Storage: 2-6°C
Sample Received:	Jan 28, 2025 05:01 PM	pH:	7.5	Dissolved Oxygen:	10.5 mg/L
Analysis Start :	Jan 29, 2025 02:05 PM	Temperature :	15 °C	Sample Conductance:	137 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	15	15	10.2	9.9	7.5	7.5	52	0	0	0
6.25	15	15	10.1	9.9	7.6	7.6	58	0	0	0
12.5	15	15	10.2	9.9	7.6	7.6	63	0	0	0
25	15	15	10.2	9.8	7.6	7.6	74	0	0	0
50	15	15	10.2	9.9	7.6	7.8	97	0	0	0
100	15	15	10.3	9.8	7.7	7.9	137	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 :	100 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 :	0.5 ± 0.1 g	Length (Mean) +- SD :	4.02 ± 0.21 cm
Culture Water Renewal :	≥ 1L/min/kg fish	Weight (Range) :	0.4 – 0.6 g	Length (Range) :	3.70 – 4.40 cm
Culture Photoperiod :	16:8 (light: dark)			% Mortality within 7 days :	0.21%
Feeding rate and frequency :	daily: 1-5% biomass of trout.			Acclimation Time:	>14 days

Reference chemical: Zinc Test Date: Jan 27, 2025

Test Endpoint 96 hrs LC50 (95% confidence interval) : 0.16 (0.11, 0.23)mg/L Statistical Method : Probit

Historical Mean LC50 (warning limits) : 0.17 (0.10, 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.

Note: The results contained in this report refer only to the testing of the sample submitted. Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation, including the toxicity parameters reported herein. The conductivity, dissolved oxygen and pH data contained within the toxicity report are provided for information purposes and are not individually accredited parameters. This report may not be reproduced, except in its entirety, without the written approval of the laboratory.

Analyst : Donald Lai, Larissa dos Santos Soares, Melanie Mazziotti, Ryan Colman

Verified By : Kimberly Tamaki, Scientist, Ecotoxicology Date: Feb 12, 2025 03:16 PM

Woodfibre Site Sample Lab Documentation

CERTIFICATE OF ANALYSIS

Work Order	: **VA25A1903**			
Client	: [redacted]	Laboratory	: [redacted]	
Contact	:	Account Manager	:	
Address	:	Address	:	
Telephone	:	Telephone	:	
Project	:	Date Samples Received	:	28-Jan-2025 17:25
PO	:	Date Analysis Commenced	:	28-Jan-2025
C-O-C number	:	Issue Date	:	05-Feb-2025 11:06
Sampler	: ARR			
Site	: Water Analysis			
Quote number	: VA25-TRIT100-001			
No. of samples received	: 1			
No. of samples analysed	: 1			

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*
[redacted]	Laboratory Analyst	Inorganics, Edmonton, Alberta
	Supervisor - Metals Mercury & Speciation	Metals, Burnaby, British Columbia
	Supervisor - Organics Instrumentation	Organics, Burnaby, British Columbia
	Supervisor - Metals ICP Instrumentation	Metals, Burnaby, British Columbia
	Analyst	Inorganics, Burnaby, British Columbia
	Supervisor - Water Chemistry	Inorganics, Burnaby, British Columbia
	Department Manager - Inorganics	Inorganics, 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.

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	28-Jan-2025 11:23	----	----	----	----
						VA25A1903-001	----	----	----	----
						Result	----	----	----	----
Field Tests										
Conductivity, field	----	EF001/VA	0.10	µS/cm		243.90	----	----	----	----
pH, field	----	EF001/VA	0.10	pH units		7.93	----	----	----	----
Temperature, field	----	EF001/VA	0.10	°C		9.20	----	----	----	----
Physical Tests										
Hardness (as CaCO3), dissolved	----	EC100/VA	0.60	mg/L		47.9	----	----	----	----
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L		51.3	----	----	----	----
Solids, total dissolved [TDS]	----	E162/VA	10	mg/L		89	----	----	----	----
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L		<3.0	----	----	----	----
Alkalinity, total (as CaCO3)	----	E290/VA	2.0	mg/L		51.1	----	----	----	----
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L		0.0142	----	----	----	----
Bromide	24959-67-9	E235.Br-L/VA	0.050	mg/L		<0.050	----	----	----	----
Chloride	16887-00-6	E235.Cl/VA	0.50	mg/L		7.62	----	----	----	----
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L		0.172	----	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L		0.0165	----	----	----	----
Nitrite (as N)	14797-65-0	E235.NO2-L/VA	0.0010	mg/L		<0.0010	----	----	----	----
Nitrogen, total	7727-37-9	E366/VA	0.030	mg/L		0.216	----	----	----	----
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L		<0.0020	----	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L		5.99	----	----	----	----
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L		0.51	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: WLNG EOP	----	----	----	----
					Client sampling date / time: 28-Jan-2025 11:23	----	----	----	----
					VA25A1903-001	----	----	----	----
					Result	----	----	----	----
Total Sulfides									
Sulfide, total (as S)	18496-25-8	E395/VA	0.0015	mg/L	<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	----	----	----	----
Total Metals									
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L	0.0470	----	----	----	----
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L	0.00061	----	----	----	----
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L	0.00083	----	----	----	----
Barium, total	7440-39-3	E420/VA	0.00010	mg/L	0.00329	----	----	----	----
Beryllium, total	7440-41-7	E420/VA	0.000100	mg/L	<0.000100	----	----	----	----
Bismuth, total	7440-69-9	E420/VA	0.000050	mg/L	<0.000050	----	----	----	----
Boron, total	7440-42-8	E420/VA	0.010	mg/L	0.018	----	----	----	----
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L	0.0000086	----	----	----	----
Calcium, total	7440-70-2	E420/VA	0.050	mg/L	19.0	----	----	----	----
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L	0.000016	----	----	----	----
Chromium, total	7440-47-3	E420/VA	0.00050	mg/L	<0.00050	----	----	----	----
Cobalt, total	7440-48-4	E420/VA	0.00010	mg/L	<0.00010	----	----	----	----
Copper, total	7440-50-8	E420/VA	0.00050	mg/L	<0.00050	----	----	----	----
Iron, total	7439-89-6	E420/VA	0.010	mg/L	<0.010	----	----	----	----
Lead, total	7439-92-1	E420/VA	0.000050	mg/L	<0.000050	----	----	----	----
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L	0.0047	----	----	----	----
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L	0.935	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: WLNG EOP	----	----	----	----
					Client sampling date / time: 28-Jan-2025 11:23	----	----	----	----
					VA25A1903-001	----	----	----	----
					Result	----	----	----	----
Total Metals									
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L	0.0105	----	----	----	----
Mercury, total	7439-97-6	E508/VA	0.0000050	mg/L	<0.0000050	----	----	----	----
Molybdenum, total	7439-98-7	E420/VA	0.000050	mg/L	0.0167	----	----	----	----
Nickel, total	7440-02-0	E420/VA	0.00050	mg/L	<0.00050	----	----	----	----
Phosphorus, total	7723-14-0	E420/VA	0.050	mg/L	<0.050	----	----	----	----
Potassium, total	7440-09-7	E420/VA	0.050	mg/L	1.98	----	----	----	----
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L	0.00304	----	----	----	----
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L	<0.000050	----	----	----	----
Silicon, total	7440-21-3	E420/VA	0.10	mg/L	4.97	----	----	----	----
Silver, total	7440-22-4	E420/VA	0.000010	mg/L	<0.000010	----	----	----	----
Sodium, total	7440-23-5	E420/VA	0.050	mg/L	5.14	----	----	----	----
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L	0.0387	----	----	----	----
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L	2.11	----	----	----	----
Tellurium, total	13494-80-9	E420/VA	0.00020	mg/L	<0.00020	----	----	----	----
Thallium, total	7440-28-0	E420/VA	0.000010	mg/L	0.000011	----	----	----	----
Thorium, total	7440-29-1	E420/VA	0.00010	mg/L	<0.00010	----	----	----	----
Tin, total	7440-31-5	E420/VA	0.00010	mg/L	<0.00010	----	----	----	----
Titanium, total	7440-32-6	E420/VA	0.00030	mg/L	<0.00030	----	----	----	----
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L	0.00032	----	----	----	----
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L	0.00142	----	----	----	----
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L	<0.00050	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	28-Jan-2025 11:23	----	----	----	----
						VA25A1903-001	----	----	----	----
						Result	----	----	----	----
Total Metals										
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L		0.0065	----	----	----	----
Zirconium, total	7440-67-7	E420/VA	0.00020	mg/L		<0.00020	----	----	----	----
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/VA	0.0010	mg/L		0.0340	----	----	----	----
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L		0.00058	----	----	----	----
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L		0.00084	----	----	----	----
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L		0.00305	----	----	----	----
Beryllium, dissolved	7440-41-7	E421/VA	0.000100	mg/L		<0.000100	----	----	----	----
Bismuth, dissolved	7440-69-9	E421/VA	0.000050	mg/L		<0.000050	----	----	----	----
Boron, dissolved	7440-42-8	E421/VA	0.010	mg/L		0.015	----	----	----	----
Cadmium, dissolved	7440-43-9	E421/VA	0.0000050	mg/L		0.0000146	----	----	----	----
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L		17.7	----	----	----	----
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L		0.000016	----	----	----	----
Chromium, dissolved	7440-47-3	E421/VA	0.00050	mg/L		<0.00050	----	----	----	----
Cobalt, dissolved	7440-48-4	E421/VA	0.00010	mg/L		<0.00010	----	----	----	----
Copper, dissolved	7440-50-8	E421/VA	0.00020	mg/L		<0.00020	----	----	----	----
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L		<0.010	----	----	----	----
Lead, dissolved	7439-92-1	E421/VA	0.000050	mg/L		<0.000050	----	----	----	----
Lithium, dissolved	7439-93-2	E421/VA	0.0010	mg/L		0.0040	----	----	----	----
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L		0.898	----	----	----	----
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L		0.0101	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	28-Jan-2025 11:23	----	----	----	----
						VA25A1903-001	----	----	----	----
						Result	----	----	----	----
Dissolved Metals										
Mercury, dissolved	7439-97-6	E509/VA	0.0000050	mg/L		<0.0000050	----	----	----	----
Molybdenum, dissolved	7439-98-7	E421/VA	0.000050	mg/L		0.0170	----	----	----	----
Nickel, dissolved	7440-02-0	E421/VA	0.00050	mg/L		<0.00050	----	----	----	----
Phosphorus, dissolved	7723-14-0	E421/VA	0.050	mg/L		<0.050	----	----	----	----
Potassium, dissolved	7440-09-7	E421/VA	0.050	mg/L		1.92	----	----	----	----
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L		0.00301	----	----	----	----
Selenium, dissolved	7782-49-2	E421/VA	0.000050	mg/L		<0.000050	----	----	----	----
Silicon, dissolved	7440-21-3	E421/VA	0.050	mg/L		4.79	----	----	----	----
Silver, dissolved	7440-22-4	E421/VA	0.000010	mg/L		<0.000010	----	----	----	----
Sodium, dissolved	7440-23-5	E421/VA	0.050	mg/L		4.99	----	----	----	----
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L		0.0409	----	----	----	----
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L		1.84	----	----	----	----
Tellurium, dissolved	13494-80-9	E421/VA	0.00020	mg/L		<0.00020	----	----	----	----
Thallium, dissolved	7440-28-0	E421/VA	0.000010	mg/L		0.000011	----	----	----	----
Thorium, dissolved	7440-29-1	E421/VA	0.00010	mg/L		<0.00010	----	----	----	----
Tin, dissolved	7440-31-5	E421/VA	0.00010	mg/L		<0.00010	----	----	----	----
Titanium, dissolved	7440-32-6	E421/VA	0.00030	mg/L		<0.00030	----	----	----	----
Tungsten, dissolved	7440-33-7	E421/VA	0.00010	mg/L		0.00032	----	----	----	----
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L		0.00134	----	----	----	----
Vanadium, dissolved	7440-62-2	E421/VA	0.00050	mg/L		<0.00050	----	----	----	----
Zinc, dissolved	7440-66-6	E421/VA	0.0010	mg/L		0.0061	----	----	----	----

Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	28-Jan-2025 11:23	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A1903-001	----	----	----	----
						Result	----	----	----	----
Dissolved Metals										
Zirconium, dissolved	7440-67-7	E421/VA	0.00020	mg/L		<0.00020	----	----	----	----
Dissolved mercury filtration location	----	EP509/VA	-	-		Field	----	----	----	----
Dissolved metals filtration location	----	EP421/VA	-	-		Field	----	----	----	----
Speciated Metals										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532/VA	0.00050	mg/L		<0.00050	----	----	----	----
Chromium, trivalent [Cr III], total	16065-83-1	EC535/VA	0.00050	mg/L		<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	----	----	----	----
Chloromethane	74-87-3	E611C/VA	5.0	µg/L		<5.0	----	----	----	----
Dichlorobenzene, 1,2-	95-50-1	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Dichlorobenzene, 1,3-	541-73-1	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Dichlorobenzene, 1,4-	106-46-7	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Dichloropropane, 1,2-	78-87-5	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611C/VA	0.75	µg/L		<0.75	----	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611C/VA	0.20	µg/L		<0.20	----	----	----	----
Trichloroethane, 1,1,2-	79-00-5	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Trichlorofluoromethane	75-69-4	E611C/VA	0.50	µg/L		<0.50	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: WLNG EOP	----	----	----	----
					Client sampling date / time: 28-Jan-2025 11:23	----	----	----	----
					VA25A1903-001	----	----	----	----
					Result	----	----	----	----
Volatile Organic Compounds [Drycleaning]									
Carbon tetrachloride	56-23-5	E611C/VA	0.50	µg/L	<0.50	----	----	----	----
Chloroethane	75-00-3	E611C/VA	0.50	µg/L	<0.50	----	----	----	----
Dichloroethane, 1,1-	75-34-3	E611C/VA	0.50	µg/L	<0.50	----	----	----	----
Dichloroethane, 1,2-	107-06-2	E611C/VA	0.50	µg/L	<0.50	----	----	----	----
Dichloroethylene, 1,1-	75-35-4	E611C/VA	0.50	µg/L	<0.50	----	----	----	----
Dichloroethylene, cis-1,2-	156-59-2	E611C/VA	0.50	µg/L	<0.50	----	----	----	----
Dichloroethylene, trans-1,2-	156-60-5	E611C/VA	0.50	µg/L	<0.50	----	----	----	----
Dichloromethane	75-09-2	E611C/VA	1.0	µg/L	<1.0	----	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	E611C/VA	0.50	µg/L	<0.50	----	----	----	----
Tetrachloroethylene	127-18-4	E611C/VA	0.50	µg/L	<0.50	----	----	----	----
Trichloroethane, 1,1,1-	71-55-6	E611C/VA	0.50	µg/L	<0.50	----	----	----	----
Trichloroethylene	79-01-6	E611C/VA	0.50	µg/L	<0.50	----	----	----	----
Vinyl chloride	75-01-4	E611C/VA	0.40	µg/L	<0.40	----	----	----	----
Volatile Organic Compounds [Fuels]									
Benzene	71-43-2	E611C/VA	0.50	µg/L	<0.50	----	----	----	----
Ethylbenzene	100-41-4	E611C/VA	0.50	µg/L	<0.50	----	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C/VA	0.50	µg/L	<0.50	----	----	----	----
Styrene	100-42-5	E611C/VA	0.50	µg/L	<0.50	----	----	----	----
Toluene	108-88-3	E611C/VA	0.40	µg/L	<0.40	----	----	----	----
Xylene, m+p-	179601-23-1	E611C/VA	0.40	µg/L	<0.40	----	----	----	----
Xylene, o-	95-47-6	E611C/VA	0.30	µg/L	<0.30	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	28-Jan-2025 11:23	----	----	----	----
					VA25A1903-001	----	----	----	----	----
					Result	----	----	----	----	----
Volatile Organic Compounds [Fuels]										
Xylenes, total	1330-20-7	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Volatile Organic Compounds [THMs]										
Bromodichloromethane	75-27-4	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Bromoform	75-25-2	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Chloroform	67-66-3	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Dibromochloromethane	124-48-1	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Hydrocarbons										
EPH (C10-C19)	----	E601A/VA	250	µg/L		<250	----	----	----	----
EPH (C19-C32)	----	E601A/VA	250	µg/L		<250	----	----	----	----
VHw (C6-C10)	----	E581.VH+F1/VA	100	µg/L		<100	----	----	----	----
HEPHw	----	EC600A/VA	250	µg/L		<250	----	----	----	----
LEPHw	----	EC600A/VA	250	µg/L		<250	----	----	----	----
VPHw	----	EC580A/VA	100	µg/L		<100	----	----	----	----
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (EPH surrogate)	392-83-6	E601A/VA	1.0	%		88.6	----	----	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.VH+F1/VA	1.0	%		106	----	----	----	----
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611C/VA	1.0	%		102	----	----	----	----
Difluorobenzene, 1,4-	540-36-3	E611C/VA	1.0	%		104	----	----	----	----
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A/VA	0.010	µg/L		<0.010	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

				Client sample ID	WLNG EOP	----	----	----	----
				Client sampling date / time	28-Jan-2025 11:23	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A1903-001	----	----	----	----
					Result	----	----	----	----
Polycyclic Aromatic Hydrocarbons									
Acenaphthylene	208-96-8	E641A/VA	0.010	µg/L	<0.010	----	----	----	----
Acridine	260-94-6	E641A/VA	0.010	µg/L	<0.010	----	----	----	----
Anthracene	120-12-7	E641A/VA	0.010	µg/L	<0.010	----	----	----	----
Benz(a)anthracene	56-55-3	E641A/VA	0.010	µg/L	<0.010	----	----	----	----
Benzo(a)pyrene	50-32-8	E641A/VA	0.0050	µg/L	<0.0050	----	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A/VA	0.010	µg/L	<0.010	----	----	----	----
Benzo(b+j+k)fluoranthene	n/a	E641A/VA	0.015	µg/L	<0.015	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	E641A/VA	0.010	µg/L	<0.010	----	----	----	----
Benzo(k)fluoranthene	207-08-9	E641A/VA	0.010	µg/L	<0.010	----	----	----	----
Chrysene	218-01-9	E641A/VA	0.010	µg/L	<0.010	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A/VA	0.0050	µg/L	<0.0050	----	----	----	----
Fluoranthene	206-44-0	E641A/VA	0.010	µg/L	<0.010	----	----	----	----
Fluorene	86-73-7	E641A/VA	0.010	µg/L	<0.010	----	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/VA	0.010	µg/L	<0.010	----	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A/VA	0.010	µg/L	0.019	----	----	----	----
Methylnaphthalene, 2-	91-57-6	E641A/VA	0.010	µg/L	0.013	----	----	----	----
Naphthalene	91-20-3	E641A/VA	0.050	µg/L	<0.050	----	----	----	----
Phenanthrene	85-01-8	E641A/VA	0.020	µg/L	<0.020	----	----	----	----
Pyrene	129-00-0	E641A/VA	0.010	µg/L	<0.010	----	----	----	----
Quinoline	91-22-5	E641A/VA	0.050	µg/L	<0.050	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: WLNG EOP	----	----	----	----
					Client sampling date / time: 28-Jan-2025 11:23	----	----	----	----
					VA25A1903-001	----	----	----	----
					Result	----	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates									
Chrysene-d12	1719-03-5	E641A/VA	0.1	%	73.6	----	----	----	----
Naphthalene-d8	1146-65-2	E641A/VA	0.1	%	80.3	----	----	----	----
Phenanthrene-d10	1517-22-2	E641A/VA	0.1	%	76.0	----	----	----	----
Glycols									
Diethylene glycol	111-46-6	E680E/VA	5.0	mg/L	<5.0	----	----	----	----
Ethylene glycol	107-21-1	E680E/VA	5.0	mg/L	<5.0	----	----	----	----
Propylene glycol, 1,2-	57-55-6	E680E/VA	5.0	mg/L	<5.0	----	----	----	----
Triethylene glycol	112-27-6	E680E/VA	5.0	mg/L	<5.0	----	----	----	----
Glycols, total (EG+DEG+PG)	----	E680E/VA	10	mg/L	<10	----	----	----	----
Glycols Surrogates									
Propanediol, 1,3-	504-63-2	E680E/VA	1.0	%	104	----	----	----	----

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

ALS Canada Ltd.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **VA25A1903**	Page	: 1 of 14
Client	: [redacted]	Laboratory	[redacted]
Contact	:	Account Manager	
Address	:	Address	
Telephone	:	Telephone	
Project	:	Date Samples Received	: 28-Jan-2025 17:25
PO	:	Issue Date	: 05-Feb-2025 11:04
C-O-C number	:		
Sampler	: ARR		
Site	: Water Analysis		
Quote number	: VA25-TRIT100-001		
No. of samples received	: 1		
No. of samples analysed	: 1		

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
- No Matrix Spike outliers occur.
- 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.

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	28-Jan-2025	03-Feb-2025	28 days	6 days	✓	03-Feb-2025	28 days	6 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WLNG EOP	E298	28-Jan-2025	01-Feb-2025	28 days	4 days	✓	01-Feb-2025	28 days	4 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE WLNG EOP	E235.Br-L	28-Jan-2025	29-Jan-2025	28 days	1 days	✓	29-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE WLNG EOP	E235.Cl	28-Jan-2025	29-Jan-2025	28 days	1 days	✓	29-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE WLNG EOP	E235.F	28-Jan-2025	29-Jan-2025	28 days	1 days	✓	29-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE WLNG EOP	E235.NO3-L	28-Jan-2025	29-Jan-2025	3 days	1 days	✓	29-Jan-2025	3 days	1 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE WLNG EOP	E235.NO2-L	28-Jan-2025	29-Jan-2025	3 days	1 days	✓	29-Jan-2025	3 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 : Sulfate in Water by IC										
HDPE										
WLNG EOP	E235.SO4	28-Jan-2025	29-Jan-2025	28 days	1 days	✓	29-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid)										
WLNG EOP	E366	28-Jan-2025	01-Feb-2025	28 days	4 days	✓	03-Feb-2025	28 days	6 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
WLNG EOP	E372-U	28-Jan-2025	01-Feb-2025	28 days	4 days	✓	02-Feb-2025	28 days	5 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
WLNG EOP	E509	28-Jan-2025	31-Jan-2025	28 days	3 days	✓	31-Jan-2025	28 days	3 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
WLNG EOP	E421	28-Jan-2025	29-Jan-2025	180 days	1 days	✓	30-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	28-Jan-2025	----	----	----		29-Jan-2025	----	1 days	
Glycols : Glycols (4 analytes) by GC-FID										
Glass vial										
WLNG EOP	E680E	28-Jan-2025	30-Jan-2025	7 days	2 days	✓	31-Jan-2025	40 days	1 days	✓
Hydrocarbons : BC PHCs - EPH by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
WLNG EOP	E601A	28-Jan-2025	04-Feb-2025	14 days	7 days	✓	04-Feb-2025	40 days	0 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate)										
WLNG EOP	E581.VH+F1	28-Jan-2025	04-Feb-2025	14 days	7 days	✓	04-Feb-2025	14 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
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid) WLNG EOP	E358-L	28-Jan-2025	01-Feb-2025	28 days	4 days	✓	01-Feb-2025	28 days	4 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE WLNG EOP	E290	28-Jan-2025	29-Jan-2025	14 days	1 days	✓	29-Jan-2025	14 days	1 days	✓
Physical Tests : TDS by Gravimetry										
HDPE WLNG EOP	E162	28-Jan-2025	----	----	----		03-Feb-2025	7 days	6 days	✓
Physical Tests : TSS by Gravimetry										
HDPE WLNG EOP	E160	28-Jan-2025	----	----	----		03-Feb-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	28-Jan-2025	04-Feb-2025	14 days	7 days	✓	04-Feb-2025	40 days	0 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide) WLNG EOP	E532	28-Jan-2025	----	----	----		28-Jan-2025	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) WLNG EOP	E508	28-Jan-2025	01-Feb-2025	28 days	4 days	✓	01-Feb-2025	28 days	4 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid) WLNG EOP	E420	28-Jan-2025	29-Jan-2025	180 days	1 days	✓	30-Jan-2025	180 days	2 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide) WLNG EOP	E395	28-Jan-2025	----	----	----		02-Feb-2025	7 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		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Volatile Organic Compounds : VOCs (BC List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
WLNG EOP	E611C	28-Jan-2025	04-Feb-2025	14 days	7 days	✓	04-Feb-2025	14 days	7 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	1855298	1	12	8.3	5.0	✓
Ammonia by Fluorescence	E298	1859774	1	20	5.0	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1855304	1	6	16.6	5.0	✓
Chloride in Water by IC	E235.Cl	1855303	1	12	8.3	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1858320	1	8	12.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1855395	1	11	9.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1859770	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	1855302	1	12	8.3	5.0	✓
Glycols (4 analytes) by GC-FID	E680E	1857013	1	6	16.6	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1855305	1	11	9.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1855306	1	13	7.6	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1860881	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1855307	1	13	7.6	5.0	✓
TDS by Gravimetry	E162	1861492	1	16	6.2	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1855241	1	7	14.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1860027	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1855240	1	7	14.2	5.0	✓
Total Nitrogen by Colourimetry	E366	1859771	1	10	10.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1859772	1	10	10.0	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1860357	1	5	20.0	5.0	✓
TSS by Gravimetry	E160	1861491	1	11	9.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1861759	1	8	12.5	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1861760	1	20	5.0	5.0	✓
Laboratory Control Samples (LCS)							
Alkalinity Species by Titration	E290	1855298	1	12	8.3	5.0	✓
Ammonia by Fluorescence	E298	1859774	1	20	5.0	5.0	✓
BC PHCs - EPH by GC-FID	E601A	1861702	1	13	7.6	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1855304	1	6	16.6	5.0	✓
Chloride in Water by IC	E235.Cl	1855303	1	12	8.3	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1858320	1	8	12.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1855395	1	11	9.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1859770	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	1855302	1	12	8.3	5.0	✓
Glycols (4 analytes) by GC-FID	E680E	1857013	1	6	16.6	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1855305	1	11	9.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1855306	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	1861701	1	11	9.0	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1860881	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1855307	1	13	7.6	5.0	✓
TDS by Gravimetry	E162	1861492	1	16	6.2	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1855241	1	7	14.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1860027	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1855240	1	7	14.2	5.0	✓
Total Nitrogen by Colourimetry	E366	1859771	1	10	10.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1859772	1	10	10.0	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1860357	1	5	20.0	5.0	✓
TSS by Gravimetry	E160	1861491	1	11	9.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1861759	1	8	12.5	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1861760	1	20	5.0	5.0	✓
Method Blanks (MB)							
Alkalinity Species by Titration	E290	1855298	1	12	8.3	5.0	✓
Ammonia by Fluorescence	E298	1859774	1	20	5.0	5.0	✓
BC PHCs - EPH by GC-FID	E601A	1861702	1	13	7.6	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1855304	1	6	16.6	5.0	✓
Chloride in Water by IC	E235.Cl	1855303	1	12	8.3	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1858320	1	8	12.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1855395	1	11	9.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1859770	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	1855302	1	12	8.3	5.0	✓
Glycols (4 analytes) by GC-FID	E680E	1857013	1	6	16.6	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1855305	1	11	9.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1855306	1	13	7.6	5.0	✓
PAHs in Water by Hexane LVI GC-MS	E641A	1861701	1	11	9.0	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1860881	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1855307	1	13	7.6	5.0	✓
TDS by Gravimetry	E162	1861492	1	16	6.2	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1855241	1	7	14.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1860027	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1855240	1	7	14.2	5.0	✓
Total Nitrogen by Colourimetry	E366	1859771	1	10	10.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1859772	1	10	10.0	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1860357	1	5	20.0	5.0	✓
TSS by Gravimetry	E160	1861491	1	11	9.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1861759	1	8	12.5	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1861760	1	20	5.0	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	1859774	1	20	5.0	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1855304	1	6	16.6	5.0	✓
Chloride in Water by IC	E235.Cl	1855303	1	12	8.3	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1858320	1	8	12.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1855395	1	11	9.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1859770	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	1855302	1	12	8.3	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1855305	1	11	9.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1855306	1	13	7.6	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1860881	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1855307	1	13	7.6	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1855241	1	7	14.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1860027	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1855240	1	7	14.2	5.0	✓
Total Nitrogen by Colourimetry	E366	1859771	1	10	10.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1859772	1	10	10.0	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1860357	1	5	20.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1861759	1	8	12.5	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1861760	1	20	5.0	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	[redacted]	Page	: 1 of 23
Client		Laboratory	
Contact		Account Manager	
Address		Address	[redacted]
Telephone		Telephone	
Project		Date Samples Received	: 28-Jan-2025 17:25
PO		Date Analysis Commenced	: 28-Jan-2025
C-O-C number	: ----	Issue Date	: 05-Feb-2025 11:04
Sampler	: ARR		
Site	: Water Analysis		
Quote number	: VA25-TRIT100-001		
No. of samples received	: 1		
No. of samples analysed	: 1		

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]		Edmonton Inorganics, Edmonton, Alberta
		Vancouver Metals, Burnaby, British Columbia
		Vancouver Organics, Burnaby, British Columbia
		Vancouver Metals, Burnaby, British Columbia
		Vancouver Inorganics, Burnaby, British Columbia
		Vancouver Inorganics, Burnaby, British Columbia
		Vancouver Inorganics, Burnaby, British Columbia
		Vancouver Metals, Burnaby, British Columbia
		Vancouver Administration, Burnaby, British Columbia
		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: 1855298)											
VA25A1916-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	124	124	0.0807%	20%	----
Physical Tests (QC Lot: 1861491)											
VA25A1903-001	WLNG EOP	Solids, total suspended [TSS]	----	E160	3.0	mg/L	<3.0	<3.0	0	Diff <2x LOR	----
Physical Tests (QC Lot: 1861492)											
KS2500345-001	Anonymous	Solids, total dissolved [TDS]	----	E162	20	mg/L	1080	1150	6.02%	20%	----
Anions and Nutrients (QC Lot: 1855302)											
FJ2500283-001	Anonymous	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.192	0.189	0.003	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1855303)											
FJ2500283-001	Anonymous	Chloride	16887-00-6	E235.Cl	0.50	mg/L	31.3	31.3	0.0524%	20%	----
Anions and Nutrients (QC Lot: 1855304)											
FJ2500283-001	Anonymous	Bromide	24959-67-9	E235.Br-L	0.050	mg/L	0.491	0.490	0.0006	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1855305)											
FJ2500283-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0050	mg/L	0.160	0.159	0.420%	20%	----
Anions and Nutrients (QC Lot: 1855306)											
FJ2500283-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L	0.0014	0.0013	0.00009	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1855307)											
FJ2500283-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	46.5	46.5	0.0648%	20%	----
Anions and Nutrients (QC Lot: 1859771)											
VA25A1903-001	WLNG EOP	Nitrogen, total	7727-37-9	E366	0.030	mg/L	0.216	0.216	0.00001	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1859772)											
VA25A1903-001	WLNG EOP	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	<0.0020	<0.0020	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1859774)											
VA25A1903-001	WLNG EOP	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.0142	0.0128	0.0014	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 1859770)											
VA25A1903-001	WLNG EOP	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	0.51	<0.50	0.008	Diff <2x LOR	----
Total Sulfides (QC Lot: 1860357)											
VA25A1903-001	WLNG EOP	Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	<0.0015	0	Diff <2x LOR	----
Total Metals (QC Lot: 1855240)											
FJ2500283-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.227	0.235	3.30%	20%	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	0.00049	0.00048	0.00001	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: 1855240) - continued											
FJ2500283-001	Anonymous	Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00086	0.00086	0.0000004	Diff <2x LOR	----
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.0427	0.0443	3.70%	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	0.056	0.054	0.002	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.0000050	mg/L	<0.0000050	0.0000071	0.0000021	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	22.9	21.8	4.88%	20%	----
		Cesium, total	7440-46-2	E420	0.000010	mg/L	0.000033	0.000034	0.000001	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420	0.00050	mg/L	0.00095	0.00097	0.00002	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	0.00091	0.00092	0.000009	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.010	mg/L	0.073	0.076	0.002	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	0.0188	0.0181	3.53%	20%	----
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	5.68	5.69	0.144%	20%	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.00237	0.00240	1.19%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.00380	0.00369	2.92%	20%	----
		Nickel, total	7440-02-0	E420	0.00050	mg/L	0.00073	0.00071	0.00002	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	4.34	4.36	0.524%	20%	----
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00471	0.00473	0.475%	20%	----
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.000336	0.000422	0.000086	Diff <2x LOR	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	3.12	3.36	7.28%	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	66.6	66.5	0.155%	20%	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.106	0.103	2.84%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	15.9	17.1	7.72%	20%	----
		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	0.00174	0.00159	0.00015	Diff <2x LOR	----
		Tungsten, total	7440-33-7	E420	0.00010	mg/L	0.00011	0.00012	0.000002	Diff <2x LOR	----
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.000777	0.000745	4.22%	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: 1855240) - continued											
FJ2500283-001	Anonymous	Vanadium, total	7440-62-2	E420	0.00050	mg/L	0.00141	0.00146	0.00005	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0030	mg/L	0.0042	0.0042	0.00007	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: 1860027)											
VA25A1903-001	WLNG EOP	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1855395)											
FJ2500283-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.132	0.129	2.21%	20%	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	0.00053	0.00051	0.00002	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00086	0.00083	0.00003	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0395	0.0389	1.56%	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	0.050	0.051	0.0009	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	21.6	21.8	0.885%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	0.000017	0.000014	0.000002	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	0.00080	0.00081	0.00001	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00079	0.00076	0.00003	Diff <2x LOR	----
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.011	0.011	0.00002	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	0.0169	0.0171	1.26%	20%	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	5.60	5.55	0.887%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.00125	0.00125	0.382%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.00380	0.00379	0.244%	20%	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.00064	0.00060	0.00003	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	0.050	mg/L	4.39	4.42	0.712%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00436	0.00456	4.56%	20%	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000324	0.000358	0.000034	Diff <2x LOR	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	2.92	2.88	1.39%	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	66.4	66.1	0.451%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.110	0.109	0.686%	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: 1855395) - continued											
FJ2500283-001	Anonymous	Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	16.2	15.8	2.23%	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	0.00031	0.00034	0.00003	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	0.00012	0.00012	0.000006	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.000775	0.000742	4.38%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	0.00106	0.00111	0.00005	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0031	0.0027	0.0004	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: 1858320)											
VA25A1885-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Speciated Metals (QC Lot: 1855241)											
VA25A1839-001	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00150	mg/L	<0.00150	<0.00150	0	Diff <2x LOR	----
Aggregate Organics (QC Lot: 1860881)											
CG2501163-001	Anonymous	Phenols, total (4AAP)	----	E562	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
Volatile Organic Compounds (QC Lot: 1861760)											
VA25A1903-001	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: 1861760) - continued											
VA25A1903-001	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: 1861759)											
VA25A1903-001	WLNG EOP	VHw (C6-C10)	----	E581.VH+F1	100	µg/L	<100	<100	0.0%	30%	----
Glycols (QC Lot: 1857013)											
VA25A1828-001	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: 1855298)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 1861491)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Physical Tests (QCLot: 1861492)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Anions and Nutrients (QCLot: 1855302)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 1855303)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 1855304)						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 1855305)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1855306)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 1855307)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 1859771)						
Nitrogen, total	7727-37-9	E366	0.03	mg/L	<0.030	----
Anions and Nutrients (QCLot: 1859772)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 1859774)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Organic / Inorganic Carbon (QCLot: 1859770)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Total Sulfides (QCLot: 1860357)						
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	----
Total Metals (QCLot: 1855240)						
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: 1855240) - 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: 1860027)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Dissolved Metals (QCLot: 1855395)						
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: 1855395) - 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: 1858320)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Speciated Metals (QCLot: 1855241)						
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	<0.00050	----
Aggregate Organics (QCLot: 1860881)						
Phenols, total (4AAP)	----	E562	0.001	mg/L	<0.0010	----
Volatile Organic Compounds (QCLot: 1861760)						
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: 1861760) - 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: 1861702)						
EPH (C10-C19)	----	E601A	250	µg/L	<250	----
EPH (C19-C32)	----	E601A	250	µg/L	<250	----
Hydrocarbons (QCLot: 1861759)						
VHw (C6-C10)	----	E581.VH+F1	100	µg/L	<100	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1861701)						
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: 1861701) - 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: 1857013)						
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	----

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: 1855298)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	103	85.0	115	----
Physical Tests (QCLot: 1861491)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	99.2	85.0	115	----
Physical Tests (QCLot: 1861492)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	103	85.0	115	----
Anions and Nutrients (QCLot: 1855302)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	98.1	90.0	110	----
Anions and Nutrients (QCLot: 1855303)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	99.0	90.0	110	----
Anions and Nutrients (QCLot: 1855304)									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	99.9	85.0	115	----
Anions and Nutrients (QCLot: 1855305)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	98.0	90.0	110	----
Anions and Nutrients (QCLot: 1855306)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 1855307)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 1859771)									
Nitrogen, total	7727-37-9	E366	0.03	mg/L	0.5 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 1859772)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	95.0	80.0	120	----
Anions and Nutrients (QCLot: 1859774)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	103	85.0	115	----
Organic / Inorganic Carbon (QCLot: 1859770)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	98.3	80.0	120	----
Total Sulfides (QCLot: 1860357)									
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.08 mg/L	102	80.0	120	----
Total Metals (QCLot: 1855240)									

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: 1855240) - 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	96.8	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	102	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	102	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	104	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	99.1	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	99.8	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	96.4	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	99.2	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	99.5	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	101	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	101	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	101	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	103	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	101	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	100	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	99.1	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	108	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	102	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	95.9	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	108	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	92.3	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	106	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	97.6	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	97.4	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	96.7	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	98.9	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	98.9	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	101	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	101	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	105	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: 1855240) - 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	99.4	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	99.9	80.0	120	----
Total Metals (QCLot: 1860027)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	90.6	80.0	120	----
Dissolved Metals (QCLot: 1855395)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	99.0	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	105	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	102	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	92.0	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	102	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	91.5	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	100	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	93.8	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	100	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	97.0	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	98.9	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	104	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	90.1	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	99.3	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	98.7	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	102	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	97.5	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	93.8	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	107	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	101	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	102	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	95.6	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	104	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	92.6	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: 1855395) - continued									
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	104	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	98.8	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	101	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	98.6	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	98.8	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.5 mg/L	102	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	96.1	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	98.7	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	95.2	80.0	120	----
Speciated Metals (QCLot: 1855241)									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.25 mg/L	100.0	80.0	120	----
Aggregate Organics (QCLot: 1860881)									
Phenols, total (4AAP)	----	E562	0.001	mg/L	0.02 mg/L	98.4	85.0	115	----
Volatile Organic Compounds (QCLot: 1861760)									
Benzene	71-43-2	E611C	0.5	µg/L	100 µg/L	92.8	70.0	130	----
Bromodichloromethane	75-27-4	E611C	0.5	µg/L	100 µg/L	84.2	70.0	130	----
Bromoform	75-25-2	E611C	0.5	µg/L	100 µg/L	85.9	70.0	130	----
Carbon tetrachloride	56-23-5	E611C	0.5	µg/L	100 µg/L	95.8	70.0	130	----
Chlorobenzene	108-90-7	E611C	0.5	µg/L	100 µg/L	101	70.0	130	----
Chloroethane	75-00-3	E611C	0.5	µg/L	100 µg/L	109	60.0	140	----
Chloroform	67-66-3	E611C	0.5	µg/L	100 µg/L	95.2	70.0	130	----
Chloromethane	74-87-3	E611C	5	µg/L	100 µg/L	109	60.0	140	----
Dibromochloromethane	124-48-1	E611C	0.5	µg/L	100 µg/L	92.9	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611C	0.5	µg/L	100 µg/L	100	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611C	0.5	µg/L	100 µg/L	103	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611C	0.5	µg/L	100 µg/L	103	70.0	130	----
Dichloroethane, 1,1-	75-34-3	E611C	0.5	µg/L	100 µg/L	93.8	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611C	0.5	µg/L	100 µg/L	84.4	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611C	0.5	µg/L	100 µg/L	102	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611C	0.5	µg/L	100 µg/L	91.4	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611C	0.5	µg/L	100 µg/L	98.8	70.0	130	----

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
Volatile Organic Compounds (QCLot: 1861760) - continued									
Dichloromethane	75-09-2	E611C	1	µg/L	100 µg/L	94.4	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611C	0.5	µg/L	100 µg/L	89.5	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611C	0.5	µg/L	100 µg/L	84.3	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611C	0.5	µg/L	100 µg/L	87.2	70.0	130	----
Ethylbenzene	100-41-4	E611C	0.5	µg/L	100 µg/L	97.9	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	0.5	µg/L	100 µg/L	106	70.0	130	----
Styrene	100-42-5	E611C	0.5	µg/L	100 µg/L	90.3	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	0.5	µg/L	100 µg/L	98.0	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	0.2	µg/L	100 µg/L	90.5	70.0	130	----
Tetrachloroethylene	127-18-4	E611C	0.5	µg/L	100 µg/L	102	70.0	130	----
Toluene	108-88-3	E611C	0.4	µg/L	100 µg/L	104	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611C	0.5	µg/L	100 µg/L	96.9	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611C	0.5	µg/L	100 µg/L	89.5	70.0	130	----
Trichloroethylene	79-01-6	E611C	0.5	µg/L	100 µg/L	92.2	70.0	130	----
Trichlorofluoromethane	75-69-4	E611C	0.5	µg/L	100 µg/L	123	60.0	140	----
Vinyl chloride	75-01-4	E611C	0.4	µg/L	100 µg/L	107	60.0	140	----
Xylene, m+p-	179601-23-1	E611C	0.4	µg/L	200 µg/L	98.8	70.0	130	----
Xylene, o-	95-47-6	E611C	0.3	µg/L	100 µg/L	94.8	70.0	130	----
Hydrocarbons (QCLot: 1861702)									
EPH (C10-C19)	----	E601A	250	µg/L	6490 µg/L	98.2	70.0	130	----
EPH (C19-C32)	----	E601A	250	µg/L	3360 µg/L	99.6	70.0	130	----
Hydrocarbons (QCLot: 1861759)									
VHw (C6-C10)	----	E581.VH+F1	100	µg/L	6310 µg/L	94.0	70.0	130	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1861701)									
Acenaphthene	83-32-9	E641A	0.01	µg/L	0.5 µg/L	105	60.0	130	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	0.5 µg/L	106	60.0	130	----
Acridine	260-94-6	E641A	0.01	µg/L	0.5 µg/L	107	60.0	130	----
Anthracene	120-12-7	E641A	0.01	µg/L	0.5 µg/L	105	60.0	130	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	0.5 µg/L	119	60.0	130	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	0.5 µg/L	107	60.0	130	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	0.5 µg/L	106	60.0	130	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	0.5 µg/L	118	60.0	130	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	0.5 µg/L	109	60.0	130	----
Chrysene	218-01-9	E641A	0.01	µg/L	0.5 µg/L	111	60.0	130	----

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
Polycyclic Aromatic Hydrocarbons (QCLot: 1861701) - continued									
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	0.5 µg/L	113	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	104	60.0	130	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	0.5 µg/L	111	60.0	130	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	0.5 µg/L	104	60.0	130	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	0.5 µg/L	111	60.0	130	----
Naphthalene	91-20-3	E641A	0.05	µg/L	0.5 µg/L	106	50.0	130	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	0.5 µg/L	110	60.0	130	----
Pyrene	129-00-0	E641A	0.01	µg/L	0.5 µg/L	113	60.0	130	----
Quinoline	91-22-5	E641A	0.05	µg/L	0.5 µg/L	113	60.0	130	----
Glycols (QCLot: 1857013)									
Diethylene glycol	111-46-6	E680E	5	mg/L	25 mg/L	97.2	70.0	130	----
Ethylene glycol	107-21-1	E680E	5	mg/L	25 mg/L	98.6	70.0	130	----
Propylene glycol, 1,2-	57-55-6	E680E	5	mg/L	25 mg/L	95.0	70.0	130	----
Triethylene glycol	112-27-6	E680E	5	mg/L	25 mg/L	97.1	70.0	130	----

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: 1855302)										
FJ2500283-002	Anonymous	Fluoride	16984-48-8	E235.F	4.62 mg/L	5 mg/L	92.4	75.0	125	----
Anions and Nutrients (QCLot: 1855303)										
FJ2500283-002	Anonymous	Chloride	16887-00-6	E235.Cl	477 mg/L	500 mg/L	95.4	75.0	125	----
Anions and Nutrients (QCLot: 1855304)										
FJ2500283-002	Anonymous	Bromide	24959-67-9	E235.Br-L	2.40 mg/L	2.5 mg/L	96.0	75.0	125	----
Anions and Nutrients (QCLot: 1855305)										
FJ2500283-002	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	11.8 mg/L	12.5 mg/L	94.1	75.0	125	----
Anions and Nutrients (QCLot: 1855306)										
FJ2500283-002	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	2.37 mg/L	2.5 mg/L	94.7	75.0	125	----
Anions and Nutrients (QCLot: 1855307)										
FJ2500283-002	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	473 mg/L	500 mg/L	94.5	75.0	125	----
Anions and Nutrients (QCLot: 1859771)										
VA25A1976-001	Anonymous	Nitrogen, total	7727-37-9	E366	ND mg/L	----	ND	70.0	130	----
Anions and Nutrients (QCLot: 1859772)										
VA25A1976-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	----	----		70.0	130	----
Anions and Nutrients (QCLot: 1859774)										
VA25A1976-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	ND mg/L	----	ND	75.0	125	----
Organic / Inorganic Carbon (QCLot: 1859770)										
VA25A1976-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	ND mg/L	----	ND	70.0	130	----
Total Sulfides (QCLot: 1860357)										
VA25A1905-001	Anonymous	Sulfide, total (as S)	18496-25-8	E395	0.209 mg/L	0.2 mg/L	104	75.0	125	----
Total Metals (QCLot: 1855240)										
FJ2500283-002	Anonymous	Aluminum, total	7429-90-5	E420	ND mg/L	----	ND	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0187 mg/L	0.02 mg/L	93.7	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0212 mg/L	0.02 mg/L	106	70.0	130	----
		Barium, total	7440-39-3	E420	ND mg/L	----	ND	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0386 mg/L	0.04 mg/L	96.5	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.00902 mg/L	0.01 mg/L	90.2	70.0	130	----
		Boron, total	7440-42-8	E420	ND mg/L	----	ND	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00387 mg/L	0.004 mg/L	96.8	70.0	130	----
		Calcium, total	7440-70-2	E420	ND mg/L	----	ND	70.0	130	----
		Cesium, total	7440-46-2	E420	0.00946 mg/L	0.01 mg/L	94.6	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0398 mg/L	0.04 mg/L	99.4	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: 1855240) - continued										
FJ2500283-002	Anonymous	Cobalt, total	7440-48-4	E420	0.0198 mg/L	0.02 mg/L	99.2	70.0	130	----
		Copper, total	7440-50-8	E420	0.0193 mg/L	0.02 mg/L	96.6	70.0	130	----
		Iron, total	7439-89-6	E420	1.98 mg/L	2 mg/L	99.2	70.0	130	----
		Lead, total	7439-92-1	E420	0.0181 mg/L	0.02 mg/L	90.3	70.0	130	----
		Lithium, total	7439-93-2	E420	0.0955 mg/L	0.1 mg/L	95.5	70.0	130	----
		Magnesium, total	7439-95-4	E420	ND mg/L	----	ND	70.0	130	----
		Manganese, total	7439-96-5	E420	0.0198 mg/L	0.02 mg/L	98.8	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0198 mg/L	0.02 mg/L	98.9	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0386 mg/L	0.04 mg/L	96.6	70.0	130	----
		Phosphorus, total	7723-14-0	E420	10.3 mg/L	10 mg/L	103	70.0	130	----
		Potassium, total	7440-09-7	E420	ND mg/L	----	ND	70.0	130	----
		Rubidium, total	7440-17-7	E420	ND mg/L	----	ND	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0394 mg/L	0.04 mg/L	98.6	70.0	130	----
		Silicon, total	7440-21-3	E420	9.81 mg/L	10 mg/L	98.1	70.0	130	----
		Silver, total	7440-22-4	E420	0.00365 mg/L	0.004 mg/L	91.2	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	ND mg/L	----	ND	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0396 mg/L	0.04 mg/L	99.1	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00359 mg/L	0.004 mg/L	89.7	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0186 mg/L	0.02 mg/L	93.3	70.0	130	----
		Tin, total	7440-31-5	E420	0.0193 mg/L	0.02 mg/L	96.3	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0402 mg/L	0.04 mg/L	100	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0188 mg/L	0.02 mg/L	94.1	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00380 mg/L	0.004 mg/L	95.0	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.101 mg/L	0.1 mg/L	101	70.0	130	----
		Zinc, total	7440-66-6	E420	0.398 mg/L	0.4 mg/L	99.5	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0413 mg/L	0.04 mg/L	103	70.0	130	----
Total Metals (QCLot: 1860027)										
VA25A1905-001	Anonymous	Mercury, total	7439-97-6	E508	0.0000899 mg/L	0 mg/L	89.9	70.0	130	----
Dissolved Metals (QCLot: 1855395)										
FJ2500283-002	Anonymous	Aluminum, dissolved	7429-90-5	E421	ND mg/L	----	ND	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0210 mg/L	0.02 mg/L	105	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0209 mg/L	0.02 mg/L	104	70.0	130	----
		Barium, dissolved	7440-39-3	E421	ND mg/L	----	ND	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.0362 mg/L	0.04 mg/L	90.5	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.00842 mg/L	0.01 mg/L	84.2	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.091 mg/L	0.1 mg/L	91.3	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00388 mg/L	0.004 mg/L	96.9	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.0102 mg/L	0.01 mg/L	102	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0385 mg/L	0.04 mg/L	96.2	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0182 mg/L	0.02 mg/L	91.1	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: 1855395) - continued										
FJ2500283-002	Anonymous	Copper, dissolved	7440-50-8	E421	0.0180 mg/L	0.02 mg/L	90.3	70.0	130	----
		Iron, dissolved	7439-89-6	E421	1.87 mg/L	2 mg/L	93.6	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0190 mg/L	0.02 mg/L	94.9	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.0855 mg/L	0.1 mg/L	85.5	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	ND mg/L	----	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	0.0184 mg/L	0.02 mg/L	91.9	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.0202 mg/L	0.02 mg/L	101	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0360 mg/L	0.04 mg/L	89.9	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	9.57 mg/L	10 mg/L	95.7	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	ND mg/L	----	ND	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.0174 mg/L	0.02 mg/L	87.3	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0426 mg/L	0.04 mg/L	106	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	9.80 mg/L	10 mg/L	98.0	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00336 mg/L	0.004 mg/L	84.1	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	0.0420 mg/L	0.04 mg/L	105	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.00370 mg/L	0.004 mg/L	92.4	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0163 mg/L	0.02 mg/L	81.4	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0196 mg/L	0.02 mg/L	97.8	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0398 mg/L	0.04 mg/L	99.4	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0196 mg/L	0.02 mg/L	97.8	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	0.00379 mg/L	0.004 mg/L	94.7	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.0978 mg/L	0.1 mg/L	97.8	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.367 mg/L	0.4 mg/L	91.7	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0409 mg/L	0.04 mg/L	102	70.0	130	----
Dissolved Metals (QCLot: 1858320)										
VA25A1903-001	WLNG EOP	Mercury, dissolved	7439-97-6	E509	0.0000975 mg/L	0 mg/L	97.5	70.0	130	----
Speciated Metals (QCLot: 1855241)										
VA25A1839-002	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.769 mg/L	0.75 mg/L	102	70.0	130	----
Aggregate Organics (QCLot: 1860881)										
CG2501163-002	Anonymous	Phenols, total (4AAP)	----	E562	0.0193 mg/L	0.02 mg/L	96.7	75.0	125	----
Volatile Organic Compounds (QCLot: 1861760)										
VA25A2005-001	Anonymous	Benzene	71-43-2	E611C	94.4 µg/L	100 µg/L	94.4	60.0	140	----
		Bromodichloromethane	75-27-4	E611C	89.5 µg/L	100 µg/L	89.5	60.0	140	----
		Bromoform	75-25-2	E611C	88.9 µg/L	100 µg/L	88.9	60.0	140	----
		Carbon tetrachloride	56-23-5	E611C	94.9 µg/L	100 µg/L	94.9	60.0	140	----
		Chlorobenzene	108-90-7	E611C	101 µg/L	100 µg/L	101	60.0	140	----
		Chloroethane	75-00-3	E611C	106 µg/L	100 µg/L	106	50.0	150	----
		Chloroform	67-66-3	E611C	97.7 µg/L	100 µg/L	97.7	60.0	140	----
		Chloromethane	74-87-3	E611C	102 µg/L	100 µg/L	102	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: 1861760) - continued										
VA25A2005-001	Anonymous	Dibromochloromethane	124-48-1	E611C	96.3 µg/L	100 µg/L	96.3	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611C	102 µg/L	100 µg/L	102	60.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611C	102 µg/L	100 µg/L	102	60.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611C	103 µg/L	100 µg/L	103	60.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611C	103 µg/L	100 µg/L	103	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611C	90.1 µg/L	100 µg/L	90.1	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611C	99.2 µg/L	100 µg/L	99.2	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611C	93.6 µg/L	100 µg/L	93.6	60.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611C	99.4 µg/L	100 µg/L	99.4	60.0	140	----
		Dichloromethane	75-09-2	E611C	97.3 µg/L	100 µg/L	97.3	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611C	92.4 µg/L	100 µg/L	92.4	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611C	89.3 µg/L	100 µg/L	89.3	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611C	90.1 µg/L	100 µg/L	90.1	60.0	140	----
		Ethylbenzene	100-41-4	E611C	95.3 µg/L	100 µg/L	95.3	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	108 µg/L	100 µg/L	108	60.0	140	----
		Styrene	100-42-5	E611C	90.8 µg/L	100 µg/L	90.8	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	98.5 µg/L	100 µg/L	98.5	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	94.3 µg/L	100 µg/L	94.3	60.0	140	----
		Tetrachloroethylene	127-18-4	E611C	98.6 µg/L	100 µg/L	98.6	60.0	140	----
		Toluene	108-88-3	E611C	101 µg/L	100 µg/L	101	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611C	95.8 µg/L	100 µg/L	95.8	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611C	92.8 µg/L	100 µg/L	92.8	60.0	140	----
		Trichloroethylene	79-01-6	E611C	93.2 µg/L	100 µg/L	93.2	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611C	138 µg/L	100 µg/L	138	50.0	150	----
		Vinyl chloride	75-01-4	E611C	100 µg/L	100 µg/L	100	50.0	150	----
		Xylene, m+p-	179601-23-1	E611C	194 µg/L	200 µg/L	96.8	60.0	140	----
		Xylene, o-	95-47-6	E611C	93.5 µg/L	100 µg/L	93.5	60.0	140	----
Hydrocarbons (QCLot: 1861759)										
VA25A2015-001	Anonymous	VHw (C6-C10)	----	E581.VH+F1	5280 µg/L	6310 µg/L	83.7	60.0	140	----

Chain of Custody (COC) / Analytical Request Form

COC Number: 20 -

Page 1 of 1

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

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

Email 1 or Fax [redacted]

Email 2

Email 3

Select Invoice

Email 1 or Fax

Email 2

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):	VA25A1903

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	
ALS Contact:	[redacted]

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 (P)	Dissolved metals + mercury (F/P)	Total hexavalent chromium (P)	Total trivalent chromium (P)	TSS, TDS, T-Alkalinity,Anions scan (Br, Cl, F, NO2, NO3, SO4)	Total sulfide (low) (as H2S), Unionized Sulfide (low) (P)	Nutrients (ammonia, ammonium, total nitrogen, total phosphorus) (P)	VOC/VPH (P)	EPH, PAH, LEPH/HEPH (P)	DOC (F/P)	Glycols	General parameters (alkalinity)	Phenols	SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	WLNG EOP	28-Jan-25	11:23	Water	16	R	R	R	R	R	R	R	R	R	R	R	R	R			
	pH: 7.43 cond: 243.4 µs temp: 9.2°C																				

Environmental Division Vancouver
Work Order Reference
VA25A1903

Telephone : +1 604 253 4188

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 evaluatio (Excel CO

ESDAT EDD to ESdat_CA+tritonenv@ESdatLabSync.net

SAMPLE RECEIPT DETAILS (ALS use only)

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

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

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

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
				7.0			

SHIPMENT RELEASE (client use)

[redacted] Time: 17:29

INITIAL SHIPMENT RECEPTION (ALS use only)

Received by: Date: Time:

FINAL SHIPMENT RECEPTION (ALS use only)

Received by: SPM Date: 28/1/25 Time: 5:25P

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**.

Woodfibre Site WTP Discharge Field Notes and Logs

FortisBC Eagle Mountain-Woodfibre Gas Pipeline

Water Discharge Authorization Water Quality Monitoring

2025-1-28-Rysdale-F80B8

Project Component:	Tunnel	**Site Name:**	WLNG Treatment Discharge
Inspection Date:	01/28/2025	**Location:**	WLNG
Triton QP:	Aaron Rysdale	**Latitude/Longitude:**	49.669273 -123.248903
Temperature(c):	Low -2 High 4	**Permit:**	PE 110136
Weather Conditions:	Clear	**Ground Conditions:**	Frozen

Observations

Time: 11:23:11 **Flow Volume (visual):** N/A

Notes: Taken directly from EOP where it discharges into culvert, ongoing discussion between FKM and Fortis over previously used spigot on line

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	Phenols	
TSS	Yes	**Anions**	Yes		
TDS	Yes	**Total Trivalent Chromium**	Yes	**QA Samples:**	No
Nutrients	Yes	**VOC/VPH**	Yes	Phenols	
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

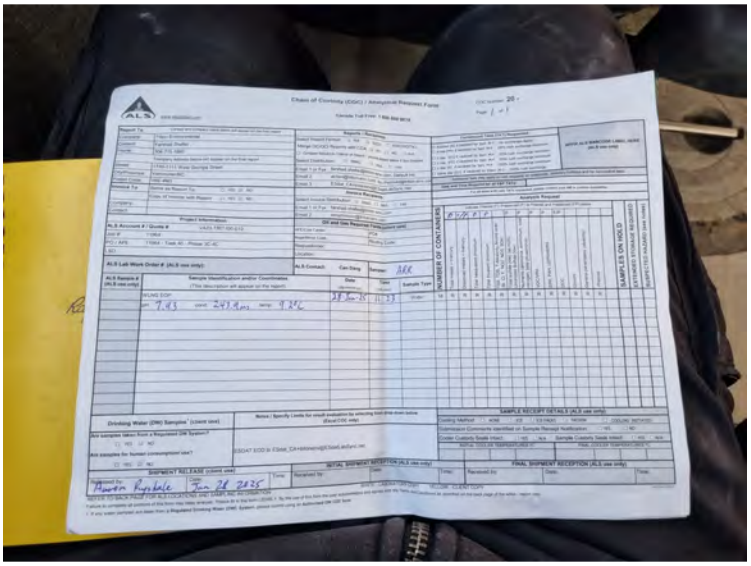


Photo: 1

Location:

Description: ALS sample COC

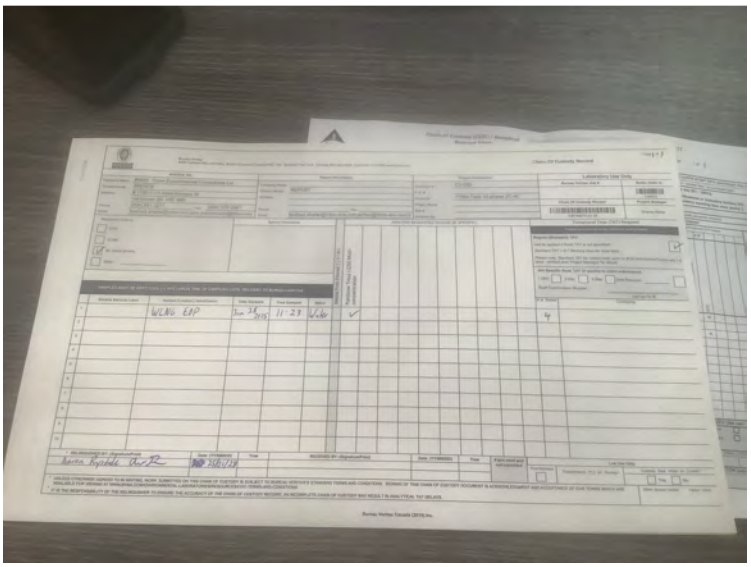


Photo: 2

Location:

Description: BV LC50 COC

Photos

Photo: 3

Location: WLNG EOP

Description: Sampling location

Sign Off

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

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 27, 2025 to February 2, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **February 10, 2025**

Table of Contents:

Appendices:

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 27 was 54,977 m^3.

Daily Volume Summary:

Table 1: Discharge Volumes Daily Summary

Date	Location	Volume (m3)	Comments
January 27	Woodfibre (WF)	678	None
January 28	WF	592	None
January 29	WF	764	None
January 30	WF	671	None
January 31	WF	780	None
February 1	WF	876	None
February 2	WF	733	None
	Total	5,094	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)
1/27/2025	0:00:00	7.5	1.142	0	54,977	10.2	119
1/27/2025	0:15:00	7.5	1.108	0	54,994	10.2	119
1/27/2025	0:30:00	7.5	0.575	0	55,009	10.3	119
1/27/2025	1:45:00	7.5	1.096	0	55,031	10	118
1/27/2025	2:00:00	7.5	0.000	0	55,036	10.4	116
1/27/2025	2:15:00	7.6	0.518	0	55,038	10.3	114
1/27/2025	2:30:00	7.5	1.089	0	55,050	9.8	113
1/27/2025	4:00:00	7.5	0.964	0	55,068	9.4	113
1/27/2025	4:15:00	7.5	1.013	0	55,082	9.7	113
1/27/2025	4:30:00	7.5	0.987	0	55,093	9.8	113
1/27/2025	4:45:00	7.5	0.998	0	55,108	9.8	111
1/27/2025	5:00:00	7.5	1.021	0	55,123	9.9	111
1/27/2025	5:15:00	7.5	0.000	0	55,131	10	111
1/27/2025	5:30:00	7.5	1.005	0	55,136	9.8	110
1/27/2025	6:15:00	7.5	0.465	0	55,144	10.7	111
1/27/2025	6:30:00	7.5	0.998	0	55,158	9.7	112
1/27/2025	6:45:00	7.5	1.009	0	55,173	9.7	111
1/27/2025	7:00:00	7.5	1.036	0	55,188	9.7	111
1/27/2025	8:15:00	7.4	0.964	0	55,201	9.7	110
1/27/2025	8:30:00	7.5	1.013	0	55,216	9.5	110
1/27/2025	8:45:00	7.5	0.994	0	55,231	9.6	110

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
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Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/27/2025	9:00:00	7.5	0.174	0	55,243	9.6	110
1/27/2025	10:00:00	7.4	1.047	0	55,257	9.9	111
1/27/2025	10:15:00	7.5	1.013	0	55,272	10	111
1/27/2025	10:30:00	7.5	1.024	0	55,287	10.2	111
1/27/2025	10:45:00	7.5	1.024	0	55,303	10.3	110
1/27/2025	11:45:00	7.4	0.930	0	55,313	10.3	111
1/27/2025	12:30:00	7.4	1.013	0	55,320	10.4	111
1/27/2025	12:45:00	7.4	0.318	0	55,331	10.6	111
1/27/2025	13:00:00	7.5	0.000	0	55,332	10.9	111
1/27/2025	13:30:00	7.5	1.009	0	55,337	10.8	265
1/27/2025	13:45:00	7.5	1.024	0	55,352	10.8	264
1/27/2025	14:00:00	7.5	1.021	0	55,367	10.9	265
1/27/2025	14:15:00	7.5	0.567	0	55,380	11.1	267
1/27/2025	15:15:00	7.4	1.115	0	55,394	10.8	277
1/27/2025	15:30:00	7.4	0.140	0	55,404	10.7	278
1/27/2025	15:45:00	7.5	1.085	0	55,418	12.9	110
1/27/2025	16:00:00	7.4	1.081	0	55,434	13.6	109
1/27/2025	16:15:00	7.4	1.062	0	55,450	10.8	293
1/27/2025	16:30:00	7.3	1.028	0	55,466	10.6	298
1/27/2025	17:45:00	7.4	0.321	0	55,478	10.4	298
1/27/2025	18:00:00	7.4	1.055	0	55,493	10.4	288
1/27/2025	18:15:00	7.4	1.111	0	55,509	10.4	286
1/27/2025	18:30:00	7.4	1.077	0	55,525	10.4	283
1/27/2025	19:45:00	7.4	1.100	0	55,540	10.2	279
1/27/2025	20:00:00	7.4	1.089	0	55,556	10.1	276

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
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Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/27/2025	20:15:00	7.4	0.639	0	55,572	10.1	274
1/27/2025	21:45:00	7.3	0.000	0	55,577	11.4	271
1/27/2025	22:00:00	7.4	1.017	0	55,588	10.2	272
1/27/2025	22:15:00	7.4	1.051	0	55,604	10.2	272
1/27/2025	22:30:00	7.4	0.359	0	55,616	10.2	272
1/27/2025	23:15:00	7.4	1.009	0	55,625	10.1	268
1/27/2025	23:30:00	7.4	0.975	0	55,640	10.2	114
1/27/2025	23:45:00	7.4	0.994	0	55,655	10.3	114
1/28/2025	0:00:00	7.4	1.009	0	55,670	10.3	114
1/28/2025	0:15:00	7.4	0.960	0	55,685	10.3	114
1/28/2025	0:30:00	7.5	1.024	0	55,700	10.4	115
1/28/2025	1:30:00	7.4	0.975	0	55,712	10.4	116
1/28/2025	1:45:00	7.4	0.990	0	55,727	10.6	272
1/28/2025	2:45:00	7.4	0.000	0	55,735	12.4	272
1/28/2025	3:45:00	7.4	0.945	0	55,745	10.5	272
1/28/2025	4:00:00	7.4	0.990	0	55,760	10.7	272
1/28/2025	4:15:00	7.4	0.956	0	55,775	10.8	272
1/28/2025	4:30:00	7.4	0.964	0	55,790	10.8	269
1/28/2025	4:45:00	7.4	1.021	0	55,805	10.8	271
1/28/2025	6:00:00	7.4	0.000	0	55,821	10.8	270
1/28/2025	6:15:00	7.4	0.000	0	55,821	11.4	272
1/28/2025	6:30:00	7.4	1.028	0	55,831	10.9	116
1/28/2025	7:15:00	7.4	0.979	0	55,840	10.5	113
1/28/2025	7:30:00	7.4	0.987	0	55,855	10.5	114
1/28/2025	7:45:00	7.4	1.021	0	55,870	10.5	114

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
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Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/28/2025	8:00:00	7.4	1.005	0	55,886	10.5	115
1/28/2025	8:15:00	7.4	0.994	0	55,901	10.5	114
1/28/2025	8:30:00	7.4	1.032	0	55,916	10.4	116
1/28/2025	9:30:00	7.3	0.990	0	55,927	12.5	116
1/28/2025	9:45:00	7.4	1.040	0	55,942	10.3	116
1/28/2025	10:00:00	7.4	1.024	0	55,957	10.4	114
1/28/2025	10:15:00	7.4	0.537	0	55,970	10.6	113
1/28/2025	11:15:00	7.3	1.013	0	55,983	11.8	116
1/28/2025	11:30:00	7.4	0.990	0	55,998	10.7	115
1/28/2025	11:45:00	7.4	0.994	0	56,013	10.9	116
1/28/2025	13:15:00	7.4	0.756	0	56,032	11	116
1/28/2025	13:30:00	7.4	0.987	0	56,047	11.2	114
1/28/2025	13:45:00	7.4	1.017	0	56,063	11.2	113
1/28/2025	15:30:00	7.3	1.036	0	56,079	11.1	113
1/28/2025	15:45:00	7.3	0.000	0	56,084	11.1	113
1/28/2025	16:15:00	7.3	1.047	0	56,095	11	113
1/28/2025	16:30:00	7.4	1.017	0	56,111	10.9	113
1/28/2025	16:45:00	7.4	1.092	0	56,127	10.8	113
1/28/2025	17:00:00	7.4	1.047	0	56,143	10.9	114
1/28/2025	17:15:00	7.4	1.055	0	56,159	10.9	114
1/28/2025	18:45:00	7.4	1.051	0	56,175	11.1	116
1/28/2025	19:00:00	7.4	1.055	0	56,191	10.7	117
1/28/2025	19:15:00	7.4	1.051	0	56,207	10.7	115
1/28/2025	21:00:00	7.4	0.000	0	56,218	13.8	259
1/28/2025	21:15:00	7.4	1.081	0	56,231	10.4	114

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/28/2025	21:30:00	7.4	1.055	0	56,247	10.2	114
1/28/2025	21:45:00	7.4	1.028	0	56,262	10.2	116
1/29/2025	0:00:00	7.4	1.032	0	56,275	9.9	117
1/29/2025	0:15:00	7.4	1.028	0	56,291	10	116
1/29/2025	0:30:00	7.4	1.055	0	56,306	10	116
1/29/2025	0:45:00	7.4	1.070	0	56,322	10.1	116
1/29/2025	1:00:00	7.4	0.994	0	56,337	10.1	116
1/29/2025	1:15:00	7.4	0.495	0	56,350	10.2	116
1/29/2025	1:30:00	7.4	0.000	0	56,356	10.4	116
1/29/2025	1:45:00	7.4	1.024	0	56,368	10.2	116
1/29/2025	3:00:00	7.4	0.971	0	56,382	11	116
1/29/2025	3:15:00	7.4	1.051	0	56,397	10	116
1/29/2025	3:30:00	7.4	1.021	0	56,412	9.9	116
1/29/2025	3:45:00	7.4	0.983	0	56,427	9.9	116
1/29/2025	4:00:00	7.5	0.979	0	56,442	9.9	116
1/29/2025	4:15:00	7.4	0.971	0	56,457	9.9	116
1/29/2025	5:15:00	7.4	0.000	0	56,460	11.4	118
1/29/2025	5:30:00	7.4	0.454	0	56,464	10.2	116
1/29/2025	5:45:00	7.4	0.953	0	56,476	9.7	118
1/29/2025	6:00:00	7.4	0.956	0	56,490	9.7	117
1/29/2025	6:15:00	7.5	0.979	0	56,505	9.8	118
1/29/2025	7:30:00	7.4	0.983	0	56,519	11	119
1/29/2025	7:45:00	7.4	0.949	0	56,534	9.7	118
1/29/2025	8:00:00	7.4	0.926	0	56,548	9.8	118
1/29/2025	8:15:00	7.4	0.934	0	56,562	9.7	117

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 27, 2025 to February 2, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **February 10, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/29/2025	8:30:00	7.5	0.922	0	56,576	9.8	117
1/29/2025	8:45:00	7.5	0.930	0	56,590	9.8	117
1/29/2025	9:45:00	7.4	0.968	0	56,593	10.3	118
1/29/2025	10:30:00	7.4	1.009	0	56,606	9.9	119
1/29/2025	10:45:00	7.4	1.055	0	56,621	10.1	117
1/29/2025	11:00:00	7.5	1.040	0	56,637	10.3	119
1/29/2025	11:15:00	7.4	1.032	0	56,653	10.4	118
1/29/2025	11:30:00	7.4	1.047	0	56,668	10.5	119
1/29/2025	13:00:00	7.4	0.533	0	56,691	11.8	265
1/29/2025	13:15:00	7.4	1.047	0	56,706	10.7	117
1/29/2025	13:30:00	7.4	0.983	0	56,721	10.9	117
1/29/2025	14:15:00	7.4	0.730	0	56,735	10.9	118
1/29/2025	14:30:00	7.4	1.021	0	56,746	11	118
1/29/2025	14:45:00	7.4	0.987	0	56,761	11	118
1/29/2025	15:00:00	7.4	0.971	0	56,776	11.1	118
1/29/2025	15:45:00	7.4	1.024	0	56,784	11.3	119
1/29/2025	16:30:00	7.4	1.043	0	56,797	11.2	119
1/29/2025	16:45:00	7.4	1.024	0	56,813	11.1	119
1/29/2025	17:00:00	7.4	1.021	0	56,829	11.1	119
1/29/2025	17:15:00	7.4	1.032	0	56,845	11.1	269
1/29/2025	17:30:00	7.4	1.077	0	56,860	11.2	269
1/29/2025	18:30:00	7.3	1.017	0	56,863	14.9	267
1/29/2025	18:45:00	7.4	1.009	0	56,873	10.9	119
1/29/2025	19:00:00	7.4	0.968	0	56,889	11	269
1/29/2025	19:15:00	7.4	1.024	0	56,904	11.1	269

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/29/2025	19:30:00	7.4	1.043	0	56,919	11.1	269
1/29/2025	21:00:00	7.4	1.013	0	56,940	10.4	266
1/29/2025	21:15:00	7.4	0.998	0	56,956	10.4	271
1/29/2025	21:30:00	7.4	1.013	0	56,971	10.4	268
1/29/2025	23:00:00	7.4	1.085	0	56,996	10.4	267
1/29/2025	23:15:00	7.4	1.036	0	57,012	10.5	268
1/29/2025	23:30:00	7.4	0.998	0	57,023	10.5	268
1/29/2025	23:45:00	7.4	1.115	0	57,039	10.5	26
1/30/2025	0:00:00	7.4	1.104	0	57,055	10.5	268
1/30/2025	0:15:00	7.4	1.074	0	57,072	10.5	268
1/30/2025	1:45:00	7.3	1.089	0	57,086	10.3	268
1/30/2025	2:00:00	7.3	1.062	0	57,102	10.5	265
1/30/2025	2:15:00	7.3	1.028	0	57,117	10.5	267
1/30/2025	2:30:00	7.4	0.000	0	57,126	10.6	267
1/30/2025	3:15:00	7.3	1.074	0	57,126	11.8	265
1/30/2025	3:30:00	7.3	1.070	0	57,142	10.6	268
1/30/2025	3:45:00	7.3	1.066	0	57,158	10.6	267
1/30/2025	4:00:00	7.3	1.013	0	57,173	10.5	267
1/30/2025	5:30:00	7.3	1.055	0	57,182	11.9	265
1/30/2025	5:45:00	7.3	1.005	0	57,193	10.2	268
1/30/2025	6:00:00	7.3	1.028	0	57,208	10.4	268
1/30/2025	6:15:00	7.4	1.058	0	57,223	10.5	266
1/30/2025	7:30:00	7.3	1.002	0	57,229	11	268
1/30/2025	7:45:00	7.3	1.043	0	57,245	10.8	116
1/30/2025	8:00:00	7.4	1.043	0	57,256	10.9	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 27, 2025 to February 2, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **February 10, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/30/2025	8:15:00	7.4	1.009	0	57,271	10.8	117
1/30/2025	8:30:00	7.4	0.987	0	57,286	10.8	118
1/30/2025	10:00:00	7.3	0.507	0	57,303	11	118
1/30/2025	10:45:00	7.3	1.032	0	57,320	11	267
1/30/2025	11:00:00	7.3	0.964	0	57,335	10.8	271
1/30/2025	11:15:00	7.4	0.359	0	57,345	10.7	272
1/30/2025	11:30:00	7.4	0.960	0	57,359	10.8	272
1/30/2025	12:30:00	7.3	0.616	0	57,370	11.7	273
1/30/2025	12:45:00	7.3	0.960	0	57,382	10.9	273
1/30/2025	13:00:00	7.4	0.000	0	57,392	11	271
1/30/2025	13:30:00	7.3	1.085	0	57,395	11.3	266
1/30/2025	13:45:00	7.3	1.051	0	57,412	11	271
1/30/2025	14:00:00	7.4	1.043	0	57,427	10.9	271
1/30/2025	15:15:00	7.3	1.043	0	57,449	11	269
1/30/2025	15:30:00	7.3	1.077	0	57,460	11	269
1/30/2025	15:45:00	7.4	1.017	0	57,475	11.1	267
1/30/2025	16:00:00	7.3	1.066	0	57,491	11.2	268
1/30/2025	16:15:00	7.4	1.017	0	57,507	11.2	271
1/30/2025	17:15:00	7.3	0.321	0	57,523	11	271
1/30/2025	17:30:00	7.3	1.021	0	57,534	11	274
1/30/2025	17:45:00	7.3	1.081	0	57,550	11.1	274
1/30/2025	18:00:00	7.3	1.066	0	57,566	11.2	274
1/30/2025	18:15:00	7.3	1.051	0	57,582	11.2	274
1/30/2025	19:30:00	7.3	1.055	0	57,595	11.1	271
1/30/2025	19:45:00	7.3	1.024	0	57,611	11.1	271

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/30/2025	20:00:00	7.3	1.081	0	57,627	11	264
1/30/2025	21:45:00	7.3	1.062	0	57,651	10.5	114
1/30/2025	22:00:00	7.3	1.081	0	57,667	10.4	114
1/30/2025	22:15:00	7.3	1.077	0	57,682	10.3	114
1/30/2025	22:30:00	7.3	1.055	0	57,698	10.3	114
1/30/2025	23:30:00	7.2	1.021	0	57,714	10.8	261
1/30/2025	23:45:00	7.2	1.032	0	57,726	10.4	113
1/31/2025	0:00:00	7.3	1.058	0	57,741	10.1	111
1/31/2025	0:15:00	7.2	1.024	0	57,757	10	111
1/31/2025	0:30:00	7.3	1.043	0	57,772	10	111
1/31/2025	1:45:00	7.2	1.055	0	57,787	10.4	116
1/31/2025	2:00:00	7.3	1.040	0	57,802	9.9	267
1/31/2025	2:15:00	7.3	1.036	0	57,818	9.8	270
1/31/2025	2:30:00	7.3	1.074	0	57,833	9.7	273
1/31/2025	3:45:00	7.3	1.062	0	57,843	12.3	271
1/31/2025	4:00:00	7.3	1.028	0	57,854	9.8	276
1/31/2025	4:15:00	7.3	1.032	0	57,870	9.8	277
1/31/2025	4:30:00	7.3	1.074	0	57,886	9.9	279
1/31/2025	4:45:00	7.3	1.028	0	57,902	10.1	281
1/31/2025	5:45:00	7.3	1.081	0	57,914	10.2	281
1/31/2025	6:00:00	7.3	0.556	0	57,925	11.4	278
1/31/2025	6:15:00	7.3	1.058	0	57,941	10.5	281
1/31/2025	7:30:00	7.3	1.043	0	57,955	16.1	279
1/31/2025	7:45:00	7.3	1.009	0	57,971	10.8	274
1/31/2025	8:00:00	7.3	1.036	0	57,986	10.8	272

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 27, 2025 to February 2, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **February 10, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/31/2025	8:15:00	7.3	0.990	0	57,997	10.6	270
1/31/2025	8:30:00	7.3	1.032	0	58,012	10.5	115
1/31/2025	8:45:00	7.3	0.990	0	58,028	10.6	116
1/31/2025	9:45:00	7.3	1.024	0	58,036	10.3	118
1/31/2025	10:00:00	7.3	1.043	0	58,052	10.6	281
1/31/2025	10:15:00	7.3	0.000	0	58,064	10.6	279
1/31/2025	11:00:00	7.3	1.047	0	58,075	10.5	279
1/31/2025	11:15:00	7.3	0.344	0	58,086	10.5	286
1/31/2025	11:30:00	7.3	1.013	0	58,101	10.5	286
1/31/2025	11:45:00	7.3	1.028	0	58,117	10.5	286
1/31/2025	12:00:00	7.3	1.043	0	58,133	10.5	287
1/31/2025	13:00:00	7.3	1.066	0	58,149	10.5	284
1/31/2025	13:15:00	7.3	0.446	0	58,160	10.7	286
1/31/2025	13:30:00	7.3	1.062	0	58,175	10.8	286
1/31/2025	13:45:00	7.3	1.058	0	58,191	11	286
1/31/2025	14:00:00	7.3	1.089	0	58,207	10.8	286
1/31/2025	14:15:00	7.3	1.104	0	58,223	10.8	286
1/31/2025	15:15:00	7.3	1.040	0	58,228	10.8	284
1/31/2025	15:30:00	7.3	1.092	0	58,243	10.8	283
1/31/2025	15:45:00	7.3	1.100	0	58,259	10.9	282
1/31/2025	16:00:00	7.3	1.021	0	58,275	10.9	282
1/31/2025	16:15:00	7.3	1.100	0	58,291	10.9	282
1/31/2025	17:30:00	7.3	0.185	0	58,310	10.5	281
1/31/2025	17:45:00	7.3	1.028	0	58,321	10.9	281
1/31/2025	18:00:00	7.3	1.051	0	58,336	11	281

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/31/2025	18:15:00	7.3	1.047	0	58,352	11.1	281
1/31/2025	18:30:00	7.3	1.066	0	58,368	11.3	281
1/31/2025	18:45:00	7.3	1.066	0	58,383	11.4	281
1/31/2025	20:00:00	7.3	0.541	0	58,399	11	277
1/31/2025	20:15:00	7.3	1.040	0	58,413	10.5	275
1/31/2025	20:30:00	7.3	1.036	0	58,428	10.5	276
1/31/2025	20:45:00	7.3	1.043	0	58,444	10.5	272
1/31/2025	21:00:00	7.3	1.028	0	58,459	10.5	273
1/31/2025	22:15:00	7.3	0.990	0	58,476	10.5	272
1/31/2025	22:30:00	7.3	0.987	0	58,491	10.5	269
1/31/2025	22:45:00	7.3	1.055	0	58,506	10.6	269
1/31/2025	23:00:00	7.3	0.979	0	58,521	10.6	270
2/1/2025	0:00:00	7.2	0.000	0	58,524	12.5	271
2/1/2025	0:15:00	7.3	0.953	0	58,524	13.1	266
2/1/2025	0:30:00	7.3	0.544	0	58,537	11.1	268
2/1/2025	0:45:00	7.2	1.047	0	58,552	10.5	267
2/1/2025	1:00:00	7.3	1.043	0	58,567	10.5	271
2/1/2025	1:15:00	7.3	1.040	0	58,583	10.5	272
2/1/2025	1:30:00	7.3	1.005	0	58,598	10.4	269
2/1/2025	2:30:00	7.3	0.537	0	58,609	11.8	270
2/1/2025	2:45:00	7.3	1.066	0	58,621	10.1	269
2/1/2025	3:00:00	7.3	1.051	0	58,637	10	272
2/1/2025	3:15:00	7.3	0.998	0	58,652	10	273
2/1/2025	3:30:00	7.3	1.058	0	58,668	10.1	276
2/1/2025	3:45:00	7.3	1.055	0	58,683	10.1	276

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/1/2025	4:30:00	7.2	0.000	0	58,689	11.6	272
2/1/2025	5:00:00	7.3	0.525	0	58,690	11.6	272
2/1/2025	5:15:00	7.3	1.040	0	58,702	10.1	272
2/1/2025	5:30:00	7.3	1.002	0	58,717	10.1	271
2/1/2025	5:45:00	7.3	0.990	0	58,732	10.1	271
2/1/2025	6:00:00	7.3	1.002	0	58,747	10.1	271
2/1/2025	6:15:00	7.3	0.987	0	58,762	10.1	271
2/1/2025	7:15:00	7.3	1.040	0	58,776	9.9	268
2/1/2025	7:30:00	7.3	1.036	0	58,790	10	114
2/1/2025	7:45:00	7.3	0.968	0	58,805	10.1	113
2/1/2025	8:00:00	7.3	0.953	0	58,820	10	113
2/1/2025	8:15:00	7.2	1.040	0	58,835	9.9	111
2/1/2025	8:30:00	7.3	0.945	0	58,843	9.9	111
2/1/2025	8:45:00	7.3	0.953	0	58,858	9.8	111
2/1/2025	9:00:00	7.3	1.021	0	58,873	9.9	114
2/1/2025	9:15:00	7.2	1.009	0	58,888	9.9	113
2/1/2025	9:30:00	7.2	1.013	0	58,903	9.9	113
2/1/2025	9:45:00	7.2	0.998	0	58,913	9.9	113
2/1/2025	10:30:00	7.2	0.994	0	58,930	10.3	113
2/1/2025	10:45:00	7.2	0.934	0	58,941	9.9	114
2/1/2025	11:00:00	7.2	1.021	0	58,956	9.6	113
2/1/2025	11:15:00	7.1	1.021	0	58,971	9.7	113
2/1/2025	11:30:00	7.1	0.953	0	58,986	9.7	114
2/1/2025	11:45:00	7.1	0.998	0	58,996	9.7	113
2/1/2025	12:00:00	7.1	0.975	0	59,011	9.8	114

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/1/2025	13:45:00	7.1	0.964	0	59,026	9.9	114
2/1/2025	14:00:00	7.2	0.960	0	59,040	9.5	114
2/1/2025	14:15:00	7.2	0.971	0	59,055	9.6	113
2/1/2025	14:30:00	7.2	0.971	0	59,069	9.7	271
2/1/2025	15:30:00	7.2	0.401	0	59,082	9.8	273
2/1/2025	15:45:00	7.2	0.000	0	59,093	9.7	276
2/1/2025	16:00:00	7.2	1.047	0	59,104	9.7	276
2/1/2025	16:15:00	7.2	1.002	0	59,120	9.7	276
2/1/2025	16:30:00	7.2	1.028	0	59,136	9.6	276
2/1/2025	16:45:00	7.2	1.062	0	59,146	9.6	274
2/1/2025	17:00:00	7.2	1.062	0	59,162	9.7	274
2/1/2025	18:00:00	7.2	1.009	0	59,182	9.7	273
2/1/2025	18:15:00	7.2	0.000	0	59,186	9.8	273
2/1/2025	18:45:00	7.2	1.013	0	59,198	9.8	272
2/1/2025	19:00:00	7.2	0.510	0	59,212	9.7	271
2/1/2025	19:15:00	7.2	1.062	0	59,225	9.7	271
2/1/2025	19:30:00	7.2	1.051	0	59,240	9.7	271
2/1/2025	19:45:00	7.2	1.028	0	59,256	9.8	271
2/1/2025	20:00:00	7.2	1.017	0	59,271	9.7	268
2/1/2025	20:15:00	7.3	1.021	0	59,287	9.7	113
2/1/2025	20:30:00	7.2	1.066	0	59,302	9.9	114
2/1/2025	21:45:00	7.2	1.021	0	59,320	9.8	116
2/1/2025	22:00:00	7.2	0.601	0	59,335	9.8	269
2/1/2025	22:15:00	7.2	1.221	0	59,347	9.7	272
2/1/2025	22:30:00	7.2	0.000	0	59,363	9.6	272

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/1/2025	22:45:00	7.1	0.000	0	59,363	10	274
2/1/2025	23:30:00	7.2	1.168	0	59,380	9.7	272
2/1/2025	23:45:00	7.2	1.327	0	59,400	9.7	272
2/2/2025	0:45:00	7.1	1.334	0	59,412	12	266
2/2/2025	1:00:00	7.2	1.293	0	59,431	9.7	114
2/2/2025	1:15:00	7.2	1.323	0	59,451	9.7	116
2/2/2025	2:15:00	7.2	0.696	0	59,470	10.1	118
2/2/2025	2:30:00	7.2	1.168	0	59,485	9.8	116
2/2/2025	2:45:00	7.2	1.221	0	59,504	9.6	114
2/2/2025	4:00:00	7.2	1.236	0	59,528	9.5	115
2/2/2025	4:15:00	7.2	1.259	0	59,546	9.5	114
2/2/2025	4:30:00	7.2	0.741	0	59,564	9.6	115
2/2/2025	5:45:00	7.2	1.293	0	59,573	9.8	116
2/2/2025	6:00:00	7.3	1.274	0	59,592	9.7	118
2/2/2025	6:15:00	7.2	1.240	0	59,611	9.8	117
2/2/2025	7:45:00	7.2	1.108	0	59,636	9.7	118
2/2/2025	8:00:00	7.3	1.055	0	59,653	9.6	117
2/2/2025	8:15:00	7.3	1.070	0	59,669	9.6	117
2/2/2025	9:45:00	7.2	1.092	0	59,683	9.5	119
2/2/2025	10:00:00	7.2	0.597	0	59,693	9.7	115
2/2/2025	10:15:00	7.2	1.123	0	59,710	9.5	116
2/2/2025	10:30:00	7.3	1.130	0	59,727	9.6	116
2/2/2025	11:30:00	7.3	1.115	0	59,747	9.6	119
2/2/2025	12:15:00	7.3	1.172	0	59,770	9.1	117
2/2/2025	12:30:00	7.3	1.157	0	59,787	9.1	117

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/2/2025	12:45:00	7.3	1.130	0	59,805	9.1	117
2/2/2025	13:00:00	7.3	1.111	0	59,822	9.1	117
2/2/2025	14:00:00	7.3	0.597	0	59,831	9.8	118
2/2/2025	14:15:00	7.3	1.145	0	59,846	9.1	117
2/2/2025	14:30:00	7.3	1.115	0	59,863	9.2	117
2/2/2025	15:45:00	7.3	0.605	0	59,881	9.8	118
2/2/2025	16:00:00	7.3	1.092	0	59,894	9.3	118
2/2/2025	16:15:00	7.3	1.104	0	59,911	9.4	117
2/2/2025	16:30:00	7.3	1.096	0	59,927	9.5	117
2/2/2025	17:15:00	7.2	0.000	0	59,939	11.5	267
2/2/2025	18:00:00	7.3	0.578	0	59,947	9.6	119
2/2/2025	18:15:00	7.3	1.104	0	59,959	9.6	118
2/2/2025	18:30:00	7.3	1.123	0	59,976	9.5	117
2/2/2025	18:45:00	7.3	1.123	0	59,992	9.6	117
2/2/2025	19:00:00	7.3	1.104	0	60,009	9.5	117
2/2/2025	20:15:00	7.3	1.115	0	60,023	9.6	119
2/2/2025	21:00:00	7.3	0.616	0	60,039	11	118
2/2/2025	21:15:00	7.3	1.115	0	60,051	9.2	116
2/2/2025	21:30:00	7.3	1.051	0	60,067	9.3	118
2/2/2025	21:45:00	7.3	1.051	0	60,083	9.4	118
2/2/2025	22:00:00	7.3	1.100	0	60,099	9.3	117
2/2/2025	23:15:00	7.2	0.484	0	60,114	11.4	269
2/2/2025	23:30:00	7.3	0.975	0	60,129	9.2	116
2/2/2025	23:45:00	7.3	1.081	0	60,145	9.1	116

Table 3. In-Situ Parameters

Date	Time	Temperature °C	DO mg/L	Conductivity SPC-uS/cm	SAL-ppt	pH	ORP (mV)	NTU
01/27/2025	01:45:46PM	11.0	11.27	153.4	0.07	8.05	91.1	4.71
01/28/2025	06:22:13PM	12.8	11.21	134.4	0.06	8.04	92.4	0.49
01/29/2025	03:57:00PM	13.3	10.26	140.8	0.07	7.61	145.8	2.95
01/30/2025	05:22:29PM	11.4	10.54	152.8	0.07	7.65	139.6	025
01/31/2025	07:42:06PM	10.9	10.93	148.4	0.07	6.90	167.7	2.60
02/1/2025	04:40:00PM	9.8	11.20	159.8	0.07	7.94	120.2	0.97
02/2/2025	04:17:45PM	11.1	11.28	146.0	0.07	7.46	140.9	0.81

3. Calibration Log:

Table 4. Calibration Log

Date	Unit	pH	Conductivity/Temp.	Salinity	NTU
1/22/2025	YSI	✓	✓	✓	✓
1/22/2025	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)
1/27/2025	0:00:00	7.5	1.142	0	54,977	Open	10.2	119
1/27/2025	0:15:00	7.5	1.108	0	54,994	Open	10.2	119
1/27/2025	0:30:00	7.5	0.575	0	55,009	Open	10.3	119
1/27/2025	0:45:00	7.5	0.000	0	55,015	Closed	10.5	119
1/27/2025	1:00:00	7.5	0.000	0	55,015	Closed	11.4	257
1/27/2025	1:15:00	7.4	0.000	0	55,015	Closed	12.6	259
1/27/2025	1:30:00	7.4	0.000	0	55,015	Closed	13.4	258
1/27/2025	1:45:00	7.5	1.096	0	55,031	Open	10	118
1/27/2025	2:00:00	7.5	0.000	0	55,036	Open	10.4	116
1/27/2025	2:15:00	7.6	0.518	0	55,038	Open	10.3	114
1/27/2025	2:30:00	7.5	1.089	0	55,050	Open	9.8	113
1/27/2025	2:45:00	7.5	0.000	0	55,057	Closed	10	113
1/27/2025	3:00:00	7.5	0.000	0	55,057	Closed	10.5	114
1/27/2025	3:15:00	7.5	0.000	0	55,057	Closed	11.1	113
1/27/2025	3:30:00	7.5	0.000	0	55,058	Closed	10.8	113
1/27/2025	3:45:00	7.4	0.000	0	55,058	Closed	11.3	114
1/27/2025	4:00:00	7.5	0.964	0	55,068	Open	9.4	113
1/27/2025	4:15:00	7.5	1.013	0	55,082	Open	9.7	113
1/27/2025	4:30:00	7.5	0.987	0	55,093	Open	9.8	113
1/27/2025	4:45:00	7.5	0.998	0	55,108	Open	9.8	111
1/27/2025	5:00:00	7.5	1.021	0	55,123	Open	9.9	111
1/27/2025	5:15:00	7.5	0.000	0	55,131	Open	10	111
1/27/2025	5:30:00	7.5	1.005	0	55,136	Open	9.8	110
1/27/2025	5:45:00	7.5	0.000	0	55,140	Closed	10.1	111
1/27/2025	6:00:00	7.5	0.000	0	55,140	Closed	10.6	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 27, 2025 to February 2, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **February 10, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/27/2025	6:15:00	7.5	0.465	0	55,144	Open	10.7	111
1/27/2025	6:30:00	7.5	0.998	0	55,158	Open	9.7	112
1/27/2025	6:45:00	7.5	1.009	0	55,173	Open	9.7	111
1/27/2025	7:00:00	7.5	1.036	0	55,188	Open	9.7	111
1/27/2025	7:15:00	7.5	0.000	0	55,198	Closed	9.9	111
1/27/2025	7:30:00	7.4	0.000	0	55,198	Closed	10.2	111
1/27/2025	7:45:00	7.4	0.000	0	55,198	Closed	10.6	111
1/27/2025	8:00:00	7.4	0.000	0	55,198	Closed	10.9	111
1/27/2025	8:15:00	7.4	0.964	0	55,201	Open	9.7	110
1/27/2025	8:30:00	7.5	1.013	0	55,216	Open	9.5	110
1/27/2025	8:45:00	7.5	0.994	0	55,231	Open	9.6	110
1/27/2025	9:00:00	7.5	0.174	0	55,243	Open	9.6	110
1/27/2025	9:15:00	7.5	0.000	0	55,252	Closed	9.7	110
1/27/2025	9:30:00	7.4	0.000	0	55,252	Closed	10.1	111
1/27/2025	9:45:00	7.4	0.000	0	55,252	Closed	10.7	111
1/27/2025	10:00:00	7.4	1.047	0	55,257	Open	9.9	111
1/27/2025	10:15:00	7.5	1.013	0	55,272	Open	10	111
1/27/2025	10:30:00	7.5	1.024	0	55,287	Open	10.2	111
1/27/2025	10:45:00	7.5	1.024	0	55,303	Open	10.3	110
1/27/2025	11:00:00	7.5	0.000	0	55,309	Closed	10.5	111
1/27/2025	11:15:00	7.4	0.000	0	55,309	Closed	10.7	110
1/27/2025	11:30:00	7.5	0.000	0	55,309	Closed	11.2	110
1/27/2025	11:45:00	7.4	0.930	0	55,313	Open	10.3	111
1/27/2025	12:00:00	7.4	0.000	0	55,313	Closed	10.6	111
1/27/2025	12:15:00	7.4	0.000	0	55,313	Closed	11	111
1/27/2025	12:30:00	7.4	1.013	0	55,320	Open	10.4	111
1/27/2025	12:45:00	7.4	0.318	0	55,331	Open	10.6	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 27, 2025 to February 2, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **February 10, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/27/2025	13:00:00	7.5	0.000	0	55,332	Open	10.9	111
1/27/2025	13:15:00	7.4	0.000	0	55,332	Closed	11.2	111
1/27/2025	13:30:00	7.5	1.009	0	55,337	Open	10.8	265
1/27/2025	13:45:00	7.5	1.024	0	55,352	Open	10.8	264
1/27/2025	14:00:00	7.5	1.021	0	55,367	Open	10.9	265
1/27/2025	14:15:00	7.5	0.567	0	55,380	Open	11.1	267
1/27/2025	14:30:00	7.5	0.000	0	55,384	Closed	11.2	267
1/27/2025	14:45:00	7.4	0.000	0	55,384	Closed	11.9	114
1/27/2025	15:00:00	7.4	0.000	0	55,384	Closed	13	112
1/27/2025	15:15:00	7.4	1.115	0	55,394	Open	10.8	277
1/27/2025	15:30:00	7.4	0.140	0	55,404	Open	10.7	278
1/27/2025	15:45:00	7.5	1.085	0	55,418	Open	12.9	110
1/27/2025	16:00:00	7.4	1.081	0	55,434	Open	13.6	109
1/27/2025	16:15:00	7.4	1.062	0	55,450	Open	10.8	293
1/27/2025	16:30:00	7.3	1.028	0	55,466	Open	10.6	298
1/27/2025	16:45:00	7.3	0.000	0	55,470	Closed	10.9	299
1/27/2025	17:00:00	7.3	0.000	0	55,470	Closed	11.2	299
1/27/2025	17:15:00	7.3	0.000	0	55,470	Closed	11.5	298
1/27/2025	17:30:00	7.3	0.000	0	55,470	Closed	11.7	298
1/27/2025	17:45:00	7.4	0.321	0	55,478	Open	10.4	298
1/27/2025	18:00:00	7.4	1.055	0	55,493	Open	10.4	288
1/27/2025	18:15:00	7.4	1.111	0	55,509	Open	10.4	286
1/27/2025	18:30:00	7.4	1.077	0	55,525	Open	10.4	283
1/27/2025	18:45:00	7.4	0.000	0	55,526	Closed	10.6	282
1/27/2025	19:00:00	7.3	0.000	0	55,526	Closed	10.8	282
1/27/2025	19:15:00	7.3	0.000	0	55,526	Closed	11.1	281
1/27/2025	19:30:00	7.3	0.000	0	55,526	Closed	11.3	280

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/27/2025	19:45:00	7.4	1.100	0	55,540	Open	10.2	279
1/27/2025	20:00:00	7.4	1.089	0	55,556	Open	10.1	276
1/27/2025	20:15:00	7.4	0.639	0	55,572	Open	10.1	274
1/27/2025	20:30:00	7.4	0.000	0	55,577	Closed	10.3	274
1/27/2025	20:45:00	7.4	0.000	0	55,577	Closed	10.3	274
1/27/2025	21:00:00	7.3	0.000	0	55,577	Closed	10.3	276
1/27/2025	21:15:00	7.3	0.000	0	55,577	Closed	10.8	273
1/27/2025	21:30:00	7.3	0.000	0	55,577	Closed	11.3	274
1/27/2025	21:45:00	7.3	0.000	0	55,577	Open	11.4	271
1/27/2025	22:00:00	7.4	1.017	0	55,588	Open	10.2	272
1/27/2025	22:15:00	7.4	1.051	0	55,604	Open	10.2	272
1/27/2025	22:30:00	7.4	0.359	0	55,616	Open	10.2	272
1/27/2025	22:45:00	7.4	0.000	0	55,618	Closed	10.3	111
1/27/2025	23:00:00	7.4	0.000	0	55,618	Closed	11.4	113
1/27/2025	23:15:00	7.4	1.009	0	55,625	Open	10.1	268
1/27/2025	23:30:00	7.4	0.975	0	55,640	Open	10.2	114
1/27/2025	23:45:00	7.4	0.994	0	55,655	Open	10.3	114
1/28/2025	0:00:00	7.4	1.009	0	55,670	Open	10.3	114
1/28/2025	0:15:00	7.4	0.960	0	55,685	Open	10.3	114
1/28/2025	0:30:00	7.5	1.024	0	55,700	Open	10.4	115
1/28/2025	0:45:00	7.5	0.000	0	55,705	Closed	10.8	269
1/28/2025	1:00:00	7.4	0.000	0	55,705	Closed	12.5	268
1/28/2025	1:15:00	7.4	0.000	0	55,705	Closed	13.1	265
1/28/2025	1:30:00	7.4	0.975	0	55,712	Open	10.4	116
1/28/2025	1:45:00	7.4	0.990	0	55,727	Open	10.6	272
1/28/2025	2:00:00	7.5	0.000	0	55,735	Closed	10.8	270
1/28/2025	2:15:00	7.4	0.000	0	55,735	Closed	11.6	270

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/28/2025	2:30:00	7.4	0.000	0	55,735	Closed	12.3	270
1/28/2025	2:45:00	7.4	0.000	0	55,735	Open	12.4	272
1/28/2025	3:00:00	7.5	0.000	0	55,738	Closed	10.8	270
1/28/2025	3:15:00	7.4	0.000	0	55,738	Closed	11.1	268
1/28/2025	3:30:00	7.4	0.000	0	55,738	Closed	11.7	269
1/28/2025	3:45:00	7.4	0.945	0	55,745	Open	10.5	272
1/28/2025	4:00:00	7.4	0.990	0	55,760	Open	10.7	272
1/28/2025	4:15:00	7.4	0.956	0	55,775	Open	10.8	272
1/28/2025	4:30:00	7.4	0.964	0	55,790	Open	10.8	269
1/28/2025	4:45:00	7.4	1.021	0	55,805	Open	10.8	271
1/28/2025	5:00:00	7.5	0.000	0	55,811	Closed	11.1	272
1/28/2025	5:15:00	7.4	0.000	0	55,811	Closed	11.8	270
1/28/2025	5:30:00	7.3	0.000	0	55,811	Closed	12.5	270
1/28/2025	5:45:00	7.4	0.866	0	55,811	Closed	13.4	270
1/28/2025	6:00:00	7.4	0.000	0	55,821	Open	10.8	270
1/28/2025	6:15:00	7.4	0.000	0	55,821	Open	11.4	272
1/28/2025	6:30:00	7.4	1.028	0	55,831	Open	10.9	116
1/28/2025	6:45:00	7.4	0.000	0	55,833	Closed	11.3	268
1/28/2025	7:00:00	7.3	0.000	0	55,833	Closed	11.6	264
1/28/2025	7:15:00	7.4	0.979	0	55,840	Open	10.5	113
1/28/2025	7:30:00	7.4	0.987	0	55,855	Open	10.5	114
1/28/2025	7:45:00	7.4	1.021	0	55,870	Open	10.5	114
1/28/2025	8:00:00	7.4	1.005	0	55,886	Open	10.5	115
1/28/2025	8:15:00	7.4	0.994	0	55,901	Open	10.5	114
1/28/2025	8:30:00	7.4	1.032	0	55,916	Open	10.4	116
1/28/2025	8:45:00	7.4	0.000	0	55,926	Closed	10.6	114
1/28/2025	9:00:00	7.3	0.000	0	55,926	Closed	11.2	116

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/28/2025	9:15:00	7.3	0.000	0	55,926	Closed	12	116
1/28/2025	9:30:00	7.3	0.990	0	55,927	Open	12.5	116
1/28/2025	9:45:00	7.4	1.040	0	55,942	Open	10.3	116
1/28/2025	10:00:00	7.4	1.024	0	55,957	Open	10.4	114
1/28/2025	10:15:00	7.4	0.537	0	55,970	Open	10.6	113
1/28/2025	10:30:00	7.4	0.000	0	55,982	Closed	10.5	114
1/28/2025	10:45:00	7.4	0.000	0	55,982	Closed	10.9	114
1/28/2025	11:00:00	7.3	0.000	0	55,982	Closed	11.5	114
1/28/2025	11:15:00	7.3	1.013	0	55,983	Open	11.8	116
1/28/2025	11:30:00	7.4	0.990	0	55,998	Open	10.7	115
1/28/2025	11:45:00	7.4	0.994	0	56,013	Open	10.9	116
1/28/2025	12:00:00	7.4	0.000	0	56,025	Closed	11	116
1/28/2025	12:15:00	7.3	0.000	0	56,025	Closed	11.6	116
1/28/2025	12:30:00	7.3	0.000	0	56,025	Closed	12.3	116
1/28/2025	12:45:00	7.3	0.000	0	56,025	Closed	13	116
1/28/2025	13:00:00	7.3	0.000	0	56,025	Closed	14.9	256
1/28/2025	13:15:00	7.4	0.756	0	56,032	Open	11	116
1/28/2025	13:30:00	7.4	0.987	0	56,047	Open	11.2	114
1/28/2025	13:45:00	7.4	1.017	0	56,063	Open	11.2	113
1/28/2025	14:00:00	7.4	0.000	0	56,073	Closed	11.5	113
1/28/2025	14:15:00	7.3	0.000	0	56,073	Closed	12.1	114
1/28/2025	14:30:00	7.3	0.000	0	56,073	Closed	12.5	113
1/28/2025	14:45:00	7.3	0.000	0	56,073	Closed	12.7	113
1/28/2025	15:00:00	7.2	0.000	0	56,073	Closed	12.8	113
1/28/2025	15:15:00	7.2	0.000	0	56,073	Closed	12.9	255
1/28/2025	15:30:00	7.3	1.036	0	56,079	Open	11.1	113
1/28/2025	15:45:00	7.3	0.000	0	56,084	Open	11.1	113

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/28/2025	16:00:00	7.2	0.000	0	56,084	Closed	12.3	257
1/28/2025	16:15:00	7.3	1.047	0	56,095	Open	11	113
1/28/2025	16:30:00	7.4	1.017	0	56,111	Open	10.9	113
1/28/2025	16:45:00	7.4	1.092	0	56,127	Open	10.8	113
1/28/2025	17:00:00	7.4	1.047	0	56,143	Open	10.9	114
1/28/2025	17:15:00	7.4	1.055	0	56,159	Open	10.9	114
1/28/2025	17:30:00	7.4	0.000	0	56,166	Closed	11	114
1/28/2025	17:45:00	7.3	0.000	0	56,166	Closed	11.6	115
1/28/2025	18:00:00	7.3	0.000	0	56,166	Closed	13.7	259
1/28/2025	18:15:00	7.3	0.000	0	56,166	Closed	14.1	258
1/28/2025	18:30:00	7.3	0.000	0	56,166	Closed	15.1	256
1/28/2025	18:45:00	7.4	1.051	0	56,175	Open	11.1	116
1/28/2025	19:00:00	7.4	1.055	0	56,191	Open	10.7	117
1/28/2025	19:15:00	7.4	1.051	0	56,207	Open	10.7	115
1/28/2025	19:30:00	7.4	0.000	0	56,217	Closed	10.8	116
1/28/2025	19:45:00	7.4	0.000	0	56,217	Closed	11.4	116
1/28/2025	20:00:00	7.3	0.000	0	56,217	Closed	15	265
1/28/2025	20:15:00	7.3	0.000	0	56,217	Closed	15.9	263
1/28/2025	20:30:00	7.3	0.000	0	56,217	Closed	16.2	259
1/28/2025	20:45:00	7.3	0.000	0	56,217	Closed	16.6	257
1/28/2025	21:00:00	7.4	0.000	0	56,218	Open	13.8	259
1/28/2025	21:15:00	7.4	1.081	0	56,231	Open	10.4	114
1/28/2025	21:30:00	7.4	1.055	0	56,247	Open	10.2	114
1/28/2025	21:45:00	7.4	1.028	0	56,262	Open	10.2	116
1/28/2025	22:00:00	7.4	0.000	0	56,267	Closed	10.5	116
1/28/2025	22:15:00	7.3	0.000	0	56,267	Closed	11.4	116
1/28/2025	22:30:00	7.3	0.000	0	56,267	Closed	12	262

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/28/2025	22:45:00	7.3	0.000	0	56,267	Closed	14.9	262
1/28/2025	23:00:00	7.4	0.000	0	56,267	Closed	12.7	260
1/28/2025	23:15:00	7.3	0.000	0	56,267	Closed	13.4	262
1/28/2025	23:30:00	7.3	0.000	0	56,267	Closed	13.9	260
1/28/2025	23:45:00	7.3	0.000	0	56,267	Closed	14.5	261
1/29/2025	0:00:00	7.4	1.032	0	56,275	Open	9.9	117
1/29/2025	0:15:00	7.4	1.028	0	56,291	Open	10	116
1/29/2025	0:30:00	7.4	1.055	0	56,306	Open	10	116
1/29/2025	0:45:00	7.4	1.070	0	56,322	Open	10.1	116
1/29/2025	1:00:00	7.4	0.994	0	56,337	Open	10.1	116
1/29/2025	1:15:00	7.4	0.495	0	56,350	Open	10.2	116
1/29/2025	1:30:00	7.4	0.000	0	56,356	Open	10.4	116
1/29/2025	1:45:00	7.4	1.024	0	56,368	Open	10.2	116
1/29/2025	2:00:00	7.4	0.000	0	56,374	Closed	10.5	116
1/29/2025	2:15:00	7.4	0.000	0	56,374	Closed	11.2	267
1/29/2025	2:30:00	7.3	0.000	0	56,374	Closed	12	265
1/29/2025	2:45:00	7.4	0.000	0	56,375	Closed	11.5	265
1/29/2025	3:00:00	7.4	0.971	0	56,382	Open	11	116
1/29/2025	3:15:00	7.4	1.051	0	56,397	Open	10	116
1/29/2025	3:30:00	7.4	1.021	0	56,412	Open	9.9	116
1/29/2025	3:45:00	7.4	0.983	0	56,427	Open	9.9	116
1/29/2025	4:00:00	7.5	0.979	0	56,442	Open	9.9	116
1/29/2025	4:15:00	7.4	0.971	0	56,457	Open	9.9	116
1/29/2025	4:30:00	7.5	0.000	0	56,460	Closed	10.4	116
1/29/2025	4:45:00	7.4	0.000	0	56,460	Closed	11.3	265
1/29/2025	5:00:00	7.3	0.000	0	56,460	Closed	12.2	261
1/29/2025	5:15:00	7.4	0.000	0	56,460	Open	11.4	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 27, 2025 to February 2, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **February 10, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/29/2025	5:30:00	7.4	0.454	0	56,464	Open	10.2	116
1/29/2025	5:45:00	7.4	0.953	0	56,476	Open	9.7	118
1/29/2025	6:00:00	7.4	0.956	0	56,490	Open	9.7	117
1/29/2025	6:15:00	7.5	0.979	0	56,505	Open	9.8	118
1/29/2025	6:30:00	7.5	0.000	0	56,517	Closed	9.8	118
1/29/2025	6:45:00	7.5	0.000	0	56,517	Closed	10.7	118
1/29/2025	7:00:00	7.4	0.000	0	56,517	Closed	11.8	261
1/29/2025	7:15:00	7.3	0.000	0	56,517	Closed	12.8	261
1/29/2025	7:30:00	7.4	0.983	0	56,519	Open	11	119
1/29/2025	7:45:00	7.4	0.949	0	56,534	Open	9.7	118
1/29/2025	8:00:00	7.4	0.926	0	56,548	Open	9.8	118
1/29/2025	8:15:00	7.4	0.934	0	56,562	Open	9.7	117
1/29/2025	8:30:00	7.5	0.922	0	56,576	Open	9.8	117
1/29/2025	8:45:00	7.5	0.930	0	56,590	Open	9.8	117
1/29/2025	9:00:00	7.5	0.000	0	56,591	Closed	10.5	118
1/29/2025	9:15:00	7.4	0.000	0	56,591	Closed	11.4	118
1/29/2025	9:30:00	7.3	0.000	0	56,591	Closed	12.4	262
1/29/2025	9:45:00	7.4	0.968	0	56,593	Open	10.3	118
1/29/2025	10:00:00	7.4	0.000	0	56,601	Closed	9.9	118
1/29/2025	10:15:00	7.4	0.000	0	56,601	Closed	11.5	264
1/29/2025	10:30:00	7.4	1.009	0	56,606	Open	9.9	119
1/29/2025	10:45:00	7.4	1.055	0	56,621	Open	10.1	117
1/29/2025	11:00:00	7.5	1.040	0	56,637	Open	10.3	119
1/29/2025	11:15:00	7.4	1.032	0	56,653	Open	10.4	118
1/29/2025	11:30:00	7.4	1.047	0	56,668	Open	10.5	119
1/29/2025	11:45:00	7.4	0.816	0	56,683	Closed	10.6	118
1/29/2025	12:00:00	7.4	0.000	0	56,683	Closed	11.3	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 27, 2025 to February 2, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **February 10, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/29/2025	12:15:00	7.3	0.000	0	56,683	Closed	12.3	263
1/29/2025	12:30:00	7.3	0.000	0	56,683	Closed	12.9	258
1/29/2025	12:45:00	7.3	0.000	0	56,683	Closed	13.3	258
1/29/2025	13:00:00	7.4	0.533	0	56,691	Open	11.8	265
1/29/2025	13:15:00	7.4	1.047	0	56,706	Open	10.7	117
1/29/2025	13:30:00	7.4	0.983	0	56,721	Open	10.9	117
1/29/2025	13:45:00	7.4	0.000	0	56,724	Closed	11.2	117
1/29/2025	14:00:00	7.3	0.000	0	56,724	Closed	12	118
1/29/2025	14:15:00	7.4	0.730	0	56,735	Open	10.9	118
1/29/2025	14:30:00	7.4	1.021	0	56,746	Open	11	118
1/29/2025	14:45:00	7.4	0.987	0	56,761	Open	11	118
1/29/2025	15:00:00	7.4	0.971	0	56,776	Open	11.1	118
1/29/2025	15:15:00	7.5	0.000	0	56,780	Closed	11.5	119
1/29/2025	15:30:00	7.3	0.000	0	56,780	Closed	12.5	260
1/29/2025	15:45:00	7.4	1.024	0	56,784	Open	11.3	119
1/29/2025	16:00:00	7.4	0.000	0	56,793	Closed	11.1	119
1/29/2025	16:15:00	7.4	0.000	0	56,793	Closed	11.8	266
1/29/2025	16:30:00	7.4	1.043	0	56,797	Open	11.2	119
1/29/2025	16:45:00	7.4	1.024	0	56,813	Open	11.1	119
1/29/2025	17:00:00	7.4	1.021	0	56,829	Open	11.1	119
1/29/2025	17:15:00	7.4	1.032	0	56,845	Open	11.1	269
1/29/2025	17:30:00	7.4	1.077	0	56,860	Open	11.2	269
1/29/2025	17:45:00	7.4	0.000	0	56,863	Closed	11.6	268
1/29/2025	18:00:00	7.3	0.000	0	56,863	Closed	12.7	267
1/29/2025	18:15:00	7.3	0.000	0	56,863	Closed	13.7	268
1/29/2025	18:30:00	7.3	1.017	0	56,863	Open	14.9	267
1/29/2025	18:45:00	7.4	1.009	0	56,873	Open	10.9	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 27, 2025 to February 2, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **February 10, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/29/2025	19:00:00	7.4	0.968	0	56,889	Open	11	269
1/29/2025	19:15:00	7.4	1.024	0	56,904	Open	11.1	269
1/29/2025	19:30:00	7.4	1.043	0	56,919	Open	11.1	269
1/29/2025	19:45:00	7.4	0.000	0	56,932	Closed	11	271
1/29/2025	20:00:00	7.4	0.000	0	56,932	Closed	11.4	270
1/29/2025	20:15:00	7.3	0.000	0	56,932	Closed	11.8	269
1/29/2025	20:30:00	7.3	0.000	0	56,932	Closed	12.5	270
1/29/2025	20:45:00	7.3	0.000	0	56,932	Closed	13	268
1/29/2025	21:00:00	7.4	1.013	0	56,940	Open	10.4	266
1/29/2025	21:15:00	7.4	0.998	0	56,956	Open	10.4	271
1/29/2025	21:30:00	7.4	1.013	0	56,971	Open	10.4	268
1/29/2025	21:45:00	7.4	0.420	0	56,984	Closed	10.6	269
1/29/2025	22:00:00	7.4	0.000	0	56,987	Closed	10.7	269
1/29/2025	22:15:00	7.3	0.000	0	56,987	Closed	11.2	271
1/29/2025	22:30:00	7.3	0.000	0	56,987	Closed	11.5	270
1/29/2025	22:45:00	7.3	0.000	0	56,987	Closed	11.6	268
1/29/2025	23:00:00	7.4	1.085	0	56,996	Open	10.4	267
1/29/2025	23:15:00	7.4	1.036	0	57,012	Open	10.5	268
1/29/2025	23:30:00	7.4	0.998	0	57,023	Open	10.5	268
1/29/2025	23:45:00	7.4	1.115	0	57,039	Open	10.5	26
1/30/2025	0:00:00	7.4	1.104	0	57,055	Open	10.5	268
1/30/2025	0:15:00	7.4	1.074	0	57,072	Open	10.5	268
1/30/2025	0:30:00	7.4	0.000	0	57,077	Closed	10.6	268
1/30/2025	0:45:00	7.3	0.000	0	57,077	Closed	10.8	268
1/30/2025	1:00:00	7.2	0.000	0	57,077	Closed	11	268
1/30/2025	1:15:00	7.2	0.000	0	57,077	Closed	11.2	267
1/30/2025	1:30:00	7.2	0.000	0	57,077	Closed	11.6	268

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/30/2025	1:45:00	7.3	1.089	0	57,086	Open	10.3	268
1/30/2025	2:00:00	7.3	1.062	0	57,102	Open	10.5	265
1/30/2025	2:15:00	7.3	1.028	0	57,117	Open	10.5	267
1/30/2025	2:30:00	7.4	0.000	0	57,126	Open	10.6	267
1/30/2025	2:45:00	7.3	0.000	0	57,126	Closed	10.9	265
1/30/2025	3:00:00	7.2	0.000	0	57,126	Closed	11.3	267
1/30/2025	3:15:00	7.3	1.074	0	57,126	Open	11.8	265
1/30/2025	3:30:00	7.3	1.070	0	57,142	Open	10.6	268
1/30/2025	3:45:00	7.3	1.066	0	57,158	Open	10.6	267
1/30/2025	4:00:00	7.3	1.013	0	57,173	Open	10.5	267
1/30/2025	4:15:00	7.4	0.000	0	57,181	Closed	10.5	268
1/30/2025	4:30:00	7.3	0.000	0	57,181	Closed	10.7	268
1/30/2025	4:45:00	7.2	0.000	0	57,181	Closed	11.2	269
1/30/2025	5:00:00	7.2	0.000	0	57,181	Closed	11.4	270
1/30/2025	5:15:00	7.2	0.000	0	57,181	Closed	11.5	268
1/30/2025	5:30:00	7.3	1.055	0	57,182	Open	11.9	265
1/30/2025	5:45:00	7.3	1.005	0	57,193	Open	10.2	268
1/30/2025	6:00:00	7.3	1.028	0	57,208	Open	10.4	268
1/30/2025	6:15:00	7.4	1.058	0	57,223	Open	10.5	266
1/30/2025	6:30:00	7.4	0.000	0	57,226	Closed	10.8	264
1/30/2025	6:45:00	7.3	0.000	0	57,226	Closed	11.2	266
1/30/2025	7:00:00	7.4	0.000	0	57,226	Closed	12.7	266
1/30/2025	7:15:00	7.3	0.000	0	57,226	Closed	13.3	266
1/30/2025	7:30:00	7.3	1.002	0	57,229	Open	11	268
1/30/2025	7:45:00	7.3	1.043	0	57,245	Open	10.8	116
1/30/2025	8:00:00	7.4	1.043	0	57,256	Open	10.9	118
1/30/2025	8:15:00	7.4	1.009	0	57,271	Open	10.8	117

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/30/2025	8:30:00	7.4	0.987	0	57,286	Open	10.8	118
1/30/2025	8:45:00	7.4	0.000	0	57,299	Closed	10.9	118
1/30/2025	9:00:00	7.4	0.000	0	57,299	Closed	11.5	264
1/30/2025	9:15:00	7.3	0.000	0	57,299	Closed	12.3	266
1/30/2025	9:30:00	7.3	0.000	0	57,299	Closed	13.2	266
1/30/2025	9:45:00	7.2	0.000	0	57,299	Closed	14	261
1/30/2025	10:00:00	7.3	0.507	0	57,303	Open	11	118
1/30/2025	10:15:00	7.4	0.000	0	57,317	Closed	10.6	116
1/30/2025	10:30:00	7.3	0.000	0	57,317	Closed	11.2	266
1/30/2025	10:45:00	7.3	1.032	0	57,320	Open	11	267
1/30/2025	11:00:00	7.3	0.964	0	57,335	Open	10.8	271
1/30/2025	11:15:00	7.4	0.359	0	57,345	Open	10.7	272
1/30/2025	11:30:00	7.4	0.960	0	57,359	Open	10.8	272
1/30/2025	11:45:00	7.4	0.000	0	57,366	Closed	11	274
1/30/2025	12:00:00	7.3	0.000	0	57,366	Closed	11.9	274
1/30/2025	12:15:00	7.3	0.000	0	57,366	Closed	13.5	276
1/30/2025	12:30:00	7.3	0.616	0	57,370	Open	11.7	273
1/30/2025	12:45:00	7.3	0.960	0	57,382	Open	10.9	273
1/30/2025	13:00:00	7.4	0.000	0	57,392	Open	11	271
1/30/2025	13:15:00	7.3	0.000	0	57,392	Closed	12	273
1/30/2025	13:30:00	7.3	1.085	0	57,395	Open	11.3	266
1/30/2025	13:45:00	7.3	1.051	0	57,412	Open	11	271
1/30/2025	14:00:00	7.4	1.043	0	57,427	Open	10.9	271
1/30/2025	14:15:00	7.4	0.000	0	57,442	Closed	10.9	271
1/30/2025	14:30:00	7.4	0.000	0	57,442	Closed	11.7	271
1/30/2025	14:45:00	7.3	0.000	0	57,442	Closed	12.8	269
1/30/2025	15:00:00	7.3	0.000	0	57,442	Closed	14	286

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/30/2025	15:15:00	7.3	1.043	0	57,449	Open	11	269
1/30/2025	15:30:00	7.3	1.077	0	57,460	Open	11	269
1/30/2025	15:45:00	7.4	1.017	0	57,475	Open	11.1	267
1/30/2025	16:00:00	7.3	1.066	0	57,491	Open	11.2	268
1/30/2025	16:15:00	7.4	1.017	0	57,507	Open	11.2	271
1/30/2025	16:30:00	7.4	0.000	0	57,519	Closed	11.3	271
1/30/2025	16:45:00	7.3	0.000	0	57,519	Closed	12	273
1/30/2025	17:00:00	7.2	0.000	0	57,519	Closed	12.5	272
1/30/2025	17:15:00	7.3	0.321	0	57,523	Open	11	271
1/30/2025	17:30:00	7.3	1.021	0	57,534	Open	11	274
1/30/2025	17:45:00	7.3	1.081	0	57,550	Open	11.1	274
1/30/2025	18:00:00	7.3	1.066	0	57,566	Open	11.2	274
1/30/2025	18:15:00	7.3	1.051	0	57,582	Open	11.2	274
1/30/2025	18:30:00	7.3	0.000	0	57,582	Closed	11.8	273
1/30/2025	18:45:00	7.2	0.000	0	57,582	Closed	12.8	273
1/30/2025	19:00:00	7.2	0.000	0	57,582	Closed	13.8	271
1/30/2025	19:15:00	7.2	0.000	0	57,582	Closed	14.6	271
1/30/2025	19:30:00	7.3	1.055	0	57,595	Open	11.1	271
1/30/2025	19:45:00	7.3	1.024	0	57,611	Open	11.1	271
1/30/2025	20:00:00	7.3	1.081	0	57,627	Open	11	264
1/30/2025	20:15:00	7.3	0.000	0	57,642	Closed	10.8	266
1/30/2025	20:30:00	7.3	0.000	0	57,642	Closed	11.2	265
1/30/2025	20:45:00	7.2	0.000	0	57,642	Closed	12.1	267
1/30/2025	21:00:00	7.3	0.000	0	57,642	Closed	12.2	267
1/30/2025	21:15:00	7.2	0.000	0	57,642	Closed	12.8	264
1/30/2025	21:30:00	7.2	0.000	0	57,642	Closed	13.1	265
1/30/2025	21:45:00	7.3	1.062	0	57,651	Open	10.5	114

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 27, 2025 to February 2, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **February 10, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/30/2025	22:00:00	7.3	1.081	0	57,667	Open	10.4	114
1/30/2025	22:15:00	7.3	1.077	0	57,682	Open	10.3	114
1/30/2025	22:30:00	7.3	1.055	0	57,698	Open	10.3	114
1/30/2025	23:00:00	7.3	0.000	0	57,713	Closed	10.4	111
1/30/2025	23:15:00	7.2	0.000	0	57,713	Closed	10.7	263
1/30/2025	23:30:00	7.2	1.021	0	57,714	Open	10.8	261
1/30/2025	23:45:00	7.2	1.032	0	57,726	Open	10.4	113
1/31/2025	0:00:00	7.3	1.058	0	57,741	Open	10.1	111
1/31/2025	0:15:00	7.2	1.024	0	57,757	Open	10	111
1/31/2025	0:30:00	7.3	1.043	0	57,772	Open	10	111
1/31/2025	0:45:00	7.3	0.000	0	57,780	Closed	10	111
1/31/2025	1:00:00	7.2	0.000	0	57,780	Closed	10.2	112
1/31/2025	1:15:00	7.2	0.000	0	57,780	Closed	10.3	266
1/31/2025	1:30:00	7.1	0.000	0	57,780	Closed	10.7	263
1/31/2025	1:45:00	7.2	1.055	0	57,787	Open	10.4	116
1/31/2025	2:00:00	7.3	1.040	0	57,802	Open	9.9	267
1/31/2025	2:15:00	7.3	1.036	0	57,818	Open	9.8	270
1/31/2025	2:30:00	7.3	1.074	0	57,833	Open	9.7	273
1/31/2025	2:45:00	7.3	0.000	0	57,843	Closed	9.8	276
1/31/2025	3:00:00	7.3	0.000	0	57,843	Closed	10.1	276
1/31/2025	3:15:00	7.2	0.000	0	57,843	Closed	10.7	275
1/31/2025	3:30:00	7.2	0.000	0	57,843	Closed	11.4	272
1/31/2025	3:45:00	7.3	1.062	0	57,843	Open	12.3	271
1/31/2025	4:00:00	7.3	1.028	0	57,854	Open	9.8	276
1/31/2025	4:15:00	7.3	1.032	0	57,870	Open	9.8	277
1/31/2025	4:30:00	7.3	1.074	0	57,886	Open	9.9	279
1/31/2025	4:45:00	7.3	1.028	0	57,902	Open	10.1	281

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/31/2025	5:00:00	7.3	0.000	0	57,905	Closed	10.6	277
1/31/2025	5:15:00	7.3	0.000	0	57,905	Closed	11.5	281
1/31/2025	5:30:00	7.2	0.000	0	57,905	Closed	12.3	277
1/31/2025	5:45:00	7.3	1.081	0	57,914	Open	10.2	281
1/31/2025	6:00:00	7.3	0.556	0	57,925	Open	11.4	278
1/31/2025	6:15:00	7.3	1.058	0	57,941	Open	10.5	281
1/31/2025	6:30:00	7.3	0.000	0	57,954	Closed	10.9	278
1/31/2025	6:45:00	7.3	0.000	0	57,954	Closed	11.6	277
1/31/2025	7:00:00	7.2	0.000	0	57,954	Closed	12.4	276
1/31/2025	7:15:00	7.2	0.000	0	57,954	Closed	13.2	276
1/31/2025	7:30:00	7.3	1.043	0	57,955	Open	16.1	279
1/31/2025	7:45:00	7.3	1.009	0	57,971	Open	10.8	274
1/31/2025	8:00:00	7.3	1.036	0	57,986	Open	10.8	272
1/31/2025	8:15:00	7.3	0.990	0	57,997	Open	10.6	270
1/31/2025	8:30:00	7.3	1.032	0	58,012	Open	10.5	115
1/31/2025	8:45:00	7.3	0.990	0	58,028	Open	10.6	116
1/31/2025	9:00:00	7.3	0.000	0	58,030	Closed	10.8	117
1/31/2025	9:15:00	7.3	0.000	0	58,030	Closed	11.7	270
1/31/2025	9:30:00	7.2	0.000	0	58,030	Closed	14.6	269
1/31/2025	9:45:00	7.3	1.024	0	58,036	Open	10.3	118
1/31/2025	10:00:00	7.3	1.043	0	58,052	Open	10.6	281
1/31/2025	10:15:00	7.3	0.000	0	58,064	Open	10.6	279
1/31/2025	10:30:00	7.3	0.000	0	58,064	Closed	11.3	282
1/31/2025	10:45:00	7.2	0.000	0	58,064	Closed	12.7	284
1/31/2025	11:00:00	7.3	1.047	0	58,075	Open	10.5	279
1/31/2025	11:15:00	7.3	0.344	0	58,086	Open	10.5	286
1/31/2025	11:30:00	7.3	1.013	0	58,101	Open	10.5	286

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/31/2025	11:45:00	7.3	1.028	0	58,117	Open	10.5	286
1/31/2025	12:00:00	7.3	1.043	0	58,133	Open	10.5	287
1/31/2025	12:15:00	7.3	0.000	0	58,139	Closed	10.8	286
1/31/2025	12:30:00	7.3	0.000	0	58,139	Closed	11.8	286
1/31/2025	12:45:00	7.2	0.000	0	58,139	Closed	12.9	286
1/31/2025	13:00:00	7.3	1.066	0	58,149	Open	10.5	284
1/31/2025	13:15:00	7.3	0.446	0	58,160	Open	10.7	286
1/31/2025	13:30:00	7.3	1.062	0	58,175	Open	10.8	286
1/31/2025	13:45:00	7.3	1.058	0	58,191	Open	11	286
1/31/2025	14:00:00	7.3	1.089	0	58,207	Open	10.8	286
1/31/2025	14:15:00	7.3	1.104	0	58,223	Open	10.8	286
1/31/2025	14:30:00	7.3	0.000	0	58,224	Closed	11.4	284
1/31/2025	14:45:00	7.2	0.000	0	58,224	Closed	12.4	286
1/31/2025	15:00:00	7.2	0.000	0	58,224	Closed	13.4	286
1/31/2025	15:15:00	7.3	1.040	0	58,228	Open	10.8	284
1/31/2025	15:30:00	7.3	1.092	0	58,243	Open	10.8	283
1/31/2025	15:45:00	7.3	1.100	0	58,259	Open	10.9	282
1/31/2025	16:00:00	7.3	1.021	0	58,275	Open	10.9	282
1/31/2025	16:15:00	7.3	1.100	0	58,291	Open	10.9	282
1/31/2025	16:30:00	7.3	0.000	0	58,303	Closed	10.9	281
1/31/2025	16:45:00	7.3	0.000	0	58,303	Closed	11.6	281
1/31/2025	17:00:00	7.2	0.000	0	58,303	Closed	12.7	279
1/31/2025	17:15:00	7.2	0.000	0	58,303	Closed	13.7	281
1/31/2025	17:30:00	7.3	0.185	0	58,310	Open	10.5	281
1/31/2025	17:45:00	7.3	1.028	0	58,321	Open	10.9	281
1/31/2025	18:00:00	7.3	1.051	0	58,336	Open	11	281
1/31/2025	18:15:00	7.3	1.047	0	58,352	Open	11.1	281

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/31/2025	18:30:00	7.3	1.066	0	58,368	Open	11.3	281
1/31/2025	18:45:00	7.3	1.066	0	58,383	Open	11.4	281
1/31/2025	19:00:00	7.3	0.000	0	58,388	Closed	10.8	278
1/31/2025	19:15:00	7.3	0.000	0	58,388	Closed	11.7	278
1/31/2025	19:30:00	7.2	0.000	0	58,388	Closed	12.8	276
1/31/2025	19:45:00	7.2	0.000	0	58,388	Closed	14.1	282
1/31/2025	20:00:00	7.3	0.541	0	58,399	Open	11	277
1/31/2025	20:15:00	7.3	1.040	0	58,413	Open	10.5	275
1/31/2025	20:30:00	7.3	1.036	0	58,428	Open	10.5	276
1/31/2025	20:45:00	7.3	1.043	0	58,444	Open	10.5	272
1/31/2025	21:00:00	7.3	1.028	0	58,459	Open	10.5	273
1/31/2025	21:15:00	7.2	0.000	0	58,462	Closed	11	274
1/31/2025	21:30:00	7.2	0.000	0	58,462	Closed	11.9	271
1/31/2025	21:45:00	7.2	0.000	0	58,462	Closed	12.5	271
1/31/2025	22:00:00	7.1	0.000	0	58,462	Closed	13.6	277
1/31/2025	22:15:00	7.3	0.990	0	58,476	Open	10.5	272
1/31/2025	22:30:00	7.3	0.987	0	58,491	Open	10.5	269
1/31/2025	22:45:00	7.3	1.055	0	58,506	Open	10.6	269
1/31/2025	23:00:00	7.3	0.979	0	58,521	Open	10.6	270
1/31/2025	23:15:00	7.2	0.000	0	58,524	Closed	10.9	270
1/31/2025	23:30:00	7.2	0.000	0	58,524	Closed	11.2	269
1/31/2025	23:45:00	7.2	0.000	0	58,524	Closed	11.7	270
2/1/2025	0:00:00	7.2	0.000	0	58,524	Open	12.5	271
2/1/2025	0:15:00	7.3	0.953	0	58,524	Open	13.1	266
2/1/2025	0:30:00	7.3	0.544	0	58,537	Open	11.1	268
2/1/2025	0:45:00	7.2	1.047	0	58,552	Open	10.5	267
2/1/2025	1:00:00	7.3	1.043	0	58,567	Open	10.5	271

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/1/2025	1:15:00	7.3	1.040	0	58,583	Open	10.5	272
2/1/2025	1:30:00	7.3	1.005	0	58,598	Open	10.4	269
2/1/2025	1:45:00	7.3	0.000	0	58,608	Closed	10.6	270
2/1/2025	2:00:00	7.2	0.000	0	58,608	Closed	11	271
2/1/2025	2:15:00	7.2	0.000	0	58,608	Closed	11.6	268
2/1/2025	2:30:00	7.3	0.537	0	58,609	Open	11.8	270
2/1/2025	2:45:00	7.3	1.066	0	58,621	Open	10.1	269
2/1/2025	3:00:00	7.3	1.051	0	58,637	Open	10	272
2/1/2025	3:15:00	7.3	0.998	0	58,652	Open	10	273
2/1/2025	3:30:00	7.3	1.058	0	58,668	Open	10.1	276
2/1/2025	3:45:00	7.3	1.055	0	58,683	Open	10.1	276
2/1/2025	4:00:00	7.3	0.000	0	58,689	Closed	10.3	276
2/1/2025	4:15:00	7.2	0.000	0	58,689	Closed	11	273
2/1/2025	4:30:00	7.2	0.000	0	58,689	Open	11.6	272
2/1/2025	4:45:00	7.2	0.000	0	58,689	Closed	11.9	273
2/1/2025	5:00:00	7.3	0.525	0	58,690	Open	11.6	272
2/1/2025	5:15:00	7.3	1.040	0	58,702	Open	10.1	272
2/1/2025	5:30:00	7.3	1.002	0	58,717	Open	10.1	271
2/1/2025	5:45:00	7.3	0.990	0	58,732	Open	10.1	271
2/1/2025	6:00:00	7.3	1.002	0	58,747	Open	10.1	271
2/1/2025	6:15:00	7.3	0.987	0	58,762	Open	10.1	271
2/1/2025	6:30:00	7.2	0.000	0	58,768	Closed	10.2	268
2/1/2025	6:45:00	7.2	0.000	0	58,768	Closed	10.6	271
2/1/2025	7:00:00	7.2	0.000	0	58,768	Closed	11.3	269
2/1/2025	7:15:00	7.3	1.040	0	58,776	Open	9.9	268
2/1/2025	7:30:00	7.3	1.036	0	58,790	Open	10	114
2/1/2025	7:45:00	7.3	0.968	0	58,805	Open	10.1	113

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/1/2025	8:00:00	7.3	0.953	0	58,820	Open	10	113
2/1/2025	8:15:00	7.2	1.040	0	58,835	Open	9.9	111
2/1/2025	8:30:00	7.3	0.945	0	58,843	Open	9.9	111
2/1/2025	8:45:00	7.3	0.953	0	58,858	Open	9.8	111
2/1/2025	9:00:00	7.3	1.021	0	58,873	Open	9.9	114
2/1/2025	9:15:00	7.2	1.009	0	58,888	Open	9.9	113
2/1/2025	9:30:00	7.2	1.013	0	58,903	Open	9.9	113
2/1/2025	9:45:00	7.2	0.998	0	58,913	Open	9.9	113
2/1/2025	10:00:00	7.2	0.775	0	58,928	Closed	9.9	113
2/1/2025	10:15:00	7.2	0.000	0	58,928	Closed	10.3	113
2/1/2025	10:30:00	7.2	0.994	0	58,930	Open	10.3	113
2/1/2025	10:45:00	7.2	0.934	0	58,941	Open	9.9	114
2/1/2025	11:00:00	7.2	1.021	0	58,956	Open	9.6	113
2/1/2025	11:15:00	7.1	1.021	0	58,971	Open	9.7	113
2/1/2025	11:30:00	7.1	0.953	0	58,986	Open	9.7	114
2/1/2025	11:45:00	7.1	0.998	0	58,996	Open	9.7	113
2/1/2025	12:00:00	7.1	0.975	0	59,011	Open	9.8	114
2/1/2025	12:15:00	7.1	0.000	0	59,019	Closed	9.9	113
2/1/2025	12:30:00	7.1	0.000	0	59,019	Closed	10.5	114
2/1/2025	12:45:00	7	0.000	0	59,019	Closed	11	114
2/1/2025	13:00:00	7	0.000	0	59,019	Closed	11.6	114
2/1/2025	13:15:00	7	0.000	0	59,019	Closed	12.1	114
2/1/2025	13:30:00	7.2	0.000	0	59,024	Closed	9.4	114
2/1/2025	13:45:00	7.1	0.964	0	59,026	Open	9.9	114
2/1/2025	14:00:00	7.2	0.960	0	59,040	Open	9.5	114
2/1/2025	14:15:00	7.2	0.971	0	59,055	Open	9.6	113
2/1/2025	14:30:00	7.2	0.971	0	59,069	Open	9.7	271

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 27, 2025 to February 2, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **February 10, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/1/2025	14:45:00	7.2	0.000	0	59,079	Closed	9.8	272
2/1/2025	15:00:00	7.1	0.000	0	59,079	Closed	10.3	274
2/1/2025	15:15:00	7.1	0.000	0	59,079	Closed	10.9	274
2/1/2025	15:30:00	7.2	0.401	0	59,082	Open	9.8	273
2/1/2025	15:45:00	7.2	0.000	0	59,093	Open	9.7	276
2/1/2025	16:00:00	7.2	1.047	0	59,104	Open	9.7	276
2/1/2025	16:15:00	7.2	1.002	0	59,120	Open	9.7	276
2/1/2025	16:30:00	7.2	1.028	0	59,136	Open	9.6	276
2/1/2025	16:45:00	7.2	1.062	0	59,146	Open	9.6	274
2/1/2025	17:00:00	7.2	1.062	0	59,162	Open	9.7	274
2/1/2025	17:15:00	7.2	0.000	0	59,175	Closed	9.7	271
2/1/2025	17:30:00	7.2	0.000	0	59,175	Closed	10.2	273
2/1/2025	17:45:00	7.1	0.000	0	59,175	Closed	11.1	272
2/1/2025	18:00:00	7.2	1.009	0	59,182	Open	9.7	273
2/1/2025	18:15:00	7.2	0.000	0	59,186	Open	9.8	273
2/1/2025	18:30:00	7.2	0.000	0	59,186	Closed	10.6	273
2/1/2025	18:45:00	7.2	1.013	0	59,198	Open	9.8	272
2/1/2025	19:00:00	7.2	0.510	0	59,212	Open	9.7	271
2/1/2025	19:15:00	7.2	1.062	0	59,225	Open	9.7	271
2/1/2025	19:30:00	7.2	1.051	0	59,240	Open	9.7	271
2/1/2025	19:45:00	7.2	1.028	0	59,256	Open	9.8	271
2/1/2025	20:00:00	7.2	1.017	0	59,271	Open	9.7	268
2/1/2025	20:15:00	7.3	1.021	0	59,287	Open	9.7	113
2/1/2025	20:30:00	7.2	1.066	0	59,302	Open	9.9	114
2/1/2025	20:45:00	7.2	0.000	0	59,306	Closed	10.1	269
2/1/2025	21:00:00	7.2	0.000	0	59,306	Closed	10.7	267
2/1/2025	21:15:00	7.1	0.000	0	59,306	Closed	11.5	266

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/1/2025	21:30:00	7.1	0.000	0	59,306	Closed	12	267
2/1/2025	21:45:00	7.2	1.021	0	59,320	Open	9.8	116
2/1/2025	22:00:00	7.2	0.601	0	59,335	Open	9.8	269
2/1/2025	22:15:00	7.2	1.221	0	59,347	Open	9.7	272
2/1/2025	22:30:00	7.2	0.000	0	59,363	Open	9.6	272
2/1/2025	22:45:00	7.1	0.000	0	59,363	Open	10	274
2/1/2025	23:00:00	7.1	0.000	0	59,363	Closed	10.7	271
2/1/2025	23:15:00	7.1	0.915	0	59,363	Closed	11.4	271
2/1/2025	23:30:00	7.2	1.168	0	59,380	Open	9.7	272
2/1/2025	23:45:00	7.2	1.327	0	59,400	Open	9.7	272
2/2/2025	0:00:00	7.2	0.000	0	59,411	Closed	9.9	273
2/2/2025	0:15:00	7.1	0.000	0	59,411	Closed	10.6	271
2/2/2025	0:30:00	7.1	0.000	0	59,411	Closed	11	273
2/2/2025	0:45:00	7.1	1.334	0	59,412	Open	12	266
2/2/2025	1:00:00	7.2	1.293	0	59,431	Open	9.7	114
2/2/2025	1:15:00	7.2	1.323	0	59,451	Open	9.7	116
2/2/2025	1:30:00	7.2	0.000	0	59,465	Closed	9.7	114
2/2/2025	1:45:00	7.1	0.000	0	59,465	Closed	10.4	269
2/2/2025	2:00:00	7.1	0.000	0	59,465	Closed	11.2	268
2/2/2025	2:15:00	7.2	0.696	0	59,470	Open	10.1	118
2/2/2025	2:30:00	7.2	1.168	0	59,485	Open	9.8	116
2/2/2025	2:45:00	7.2	1.221	0	59,504	Open	9.6	114
2/2/2025	3:00:00	7.2	0.000	0	59,514	Closed	9.6	113
2/2/2025	3:15:00	7.1	0.000	0	59,514	Closed	9.8	267
2/2/2025	3:30:00	7.1	0.000	0	59,514	Closed	10	265
2/2/2025	3:45:00	7.1	0.000	0	59,514	Closed	10.3	267
2/2/2025	4:00:00	7.2	1.236	0	59,528	Open	9.5	115

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
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Data Date Range	**January 27, 2025 to February 2, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **February 10, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/2/2025	4:15:00	7.2	1.259	0	59,546	Open	9.5	114
2/2/2025	4:30:00	7.2	0.741	0	59,564	Open	9.6	115
2/2/2025	4:45:00	7.2	0.000	0	59,569	Closed	10	116
2/2/2025	5:00:00	7.1	0.000	0	59,569	Closed	10.7	267
2/2/2025	5:15:00	7.1	0.000	0	59,569	Closed	11.5	267
2/2/2025	5:30:00	7.1	0.000	0	59,569	Closed	12.1	266
2/2/2025	5:45:00	7.2	1.293	0	59,573	Open	9.8	116
2/2/2025	6:00:00	7.3	1.274	0	59,592	Open	9.7	118
2/2/2025	6:15:00	7.2	1.240	0	59,611	Open	9.8	117
2/2/2025	6:30:00	7.2	0.000	0	59,619	Closed	10.1	272
2/2/2025	6:45:00	7.2	0.000	0	59,619	Closed	10.6	272
2/2/2025	7:00:00	7.1	0.000	0	59,619	Closed	11.4	272
2/2/2025	7:15:00	7.1	0.000	0	59,619	Closed	12.1	271
2/2/2025	7:30:00	7.2	1.247	0	59,619	Closed	12.9	271
2/2/2025	7:45:00	7.2	1.108	0	59,636	Open	9.7	118
2/2/2025	8:00:00	7.3	1.055	0	59,653	Open	9.6	117
2/2/2025	8:15:00	7.3	1.070	0	59,669	Open	9.6	117
2/2/2025	8:30:00	7.2	0.000	0	59,673	Closed	10.1	279
2/2/2025	8:45:00	7.2	0.000	0	59,673	Closed	11.3	271
2/2/2025	9:00:00	7.1	0.000	0	59,673	Closed	12	270
2/2/2025	9:15:00	7.1	0.000	0	59,673	Closed	12.7	269
2/2/2025	9:30:00	7.2	0.000	0	59,673	Closed	13.7	273
2/2/2025	9:45:00	7.2	1.092	0	59,683	Open	9.5	119
2/2/2025	10:00:00	7.2	0.597	0	59,693	Open	9.7	115
2/2/2025	10:15:00	7.2	1.123	0	59,710	Open	9.5	116
2/2/2025	10:30:00	7.3	1.130	0	59,727	Open	9.6	116
2/2/2025	10:45:00	7.2	0.000	0	59,734	Closed	9.9	272

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
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Data Date Range	**January 27, 2025 to February 2, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **February 10, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/2/2025	11:00:00	7.2	0.000	0	59,734	Closed	10.8	269
2/2/2025	11:15:00	7.1	0.000	0	59,734	Closed	12.5	271
2/2/2025	11:30:00	7.3	1.115	0	59,747	Open	9.6	119
2/2/2025	11:45:00	7.2	0.000	0	59,753	Closed	9.7	117
2/2/2025	12:00:00	7.2	0.000	0	59,753	Closed	10.5	271
2/2/2025	12:15:00	7.3	1.172	0	59,770	Open	9.1	117
2/2/2025	12:30:00	7.3	1.157	0	59,787	Open	9.1	117
2/2/2025	12:45:00	7.3	1.130	0	59,805	Open	9.1	117
2/2/2025	13:00:00	7.3	1.111	0	59,822	Open	9.1	117
2/2/2025	13:15:00	7.2	0.000	0	59,823	Closed	9.7	272
2/2/2025	13:30:00	7.2	0.000	0	59,823	Closed	10.8	272
2/2/2025	13:45:00	7.2	0.000	0	59,823	Closed	11.8	271
2/2/2025	14:00:00	7.3	0.597	0	59,831	Open	9.8	118
2/2/2025	14:15:00	7.3	1.145	0	59,846	Open	9.1	117
2/2/2025	14:30:00	7.3	1.115	0	59,863	Open	9.2	117
2/2/2025	14:45:00	7.3	0.000	0	59,879	Closed	9.3	117
2/2/2025	15:00:00	7.2	0.000	0	59,879	Closed	10	271
2/2/2025	15:15:00	7.2	0.000	0	59,879	Closed	11	271
2/2/2025	15:30:00	7.1	0.000	0	59,879	Closed	11.9	271
2/2/2025	15:45:00	7.3	0.605	0	59,881	Open	9.8	118
2/2/2025	16:00:00	7.3	1.092	0	59,894	Open	9.3	118
2/2/2025	16:15:00	7.3	1.104	0	59,911	Open	9.4	117
2/2/2025	16:30:00	7.3	1.096	0	59,927	Open	9.5	117
2/2/2025	16:45:00	7.3	0.000	0	59,939	Closed	9.7	117
2/2/2025	17:00:00	7.2	0.000	0	59,939	Closed	10.5	118
2/2/2025	17:15:00	7.2	0.000	0	59,939	Open	11.5	267
2/2/2025	17:30:00	7.1	0.000	0	59,939	Closed	12.4	266

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
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Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/2/2025	17:45:00	7.1	0.000	0	59,939	Closed	14.4	269
2/2/2025	18:00:00	7.3	0.578	0	59,947	Open	9.6	119
2/2/2025	18:15:00	7.3	1.104	0	59,959	Open	9.6	118
2/2/2025	18:30:00	7.3	1.123	0	59,976	Open	9.5	117
2/2/2025	18:45:00	7.3	1.123	0	59,992	Open	9.6	117
2/2/2025	19:00:00	7.3	1.104	0	60,009	Open	9.5	117
2/2/2025	19:15:00	7.3	0.000	0	60,017	Closed	9.7	117
2/2/2025	19:30:00	7.2	0.000	0	60,017	Closed	10.7	268
2/2/2025	19:45:00	7.2	0.000	0	60,017	Closed	11.6	266
2/2/2025	20:00:00	7.2	0.000	0	60,017	Closed	12.4	268
2/2/2025	20:15:00	7.3	1.115	0	60,023	Open	9.6	119
2/2/2025	20:30:00	7.3	0.000	0	60,038	Closed	9.3	119
2/2/2025	20:45:00	7.2	0.000	0	60,038	Closed	9.8	117
2/2/2025	21:00:00	7.3	0.616	0	60,039	Open	11	118
2/2/2025	21:15:00	7.3	1.115	0	60,051	Open	9.2	116
2/2/2025	21:30:00	7.3	1.051	0	60,067	Open	9.3	118
2/2/2025	21:45:00	7.3	1.051	0	60,083	Open	9.4	118
2/2/2025	22:00:00	7.3	1.100	0	60,099	Open	9.3	117
2/2/2025	22:15:00	7.3	0.000	0	60,109	Closed	9.5	117
2/2/2025	22:30:00	7.2	0.000	0	60,109	Closed	10.4	118
2/2/2025	22:45:00	7.2	0.000	0	60,109	Closed	11.4	265
2/2/2025	23:00:00	7.1	0.000	0	60,109	Closed	11.7	264
2/2/2025	23:15:00	7.2	0.484	0	60,114	Open	11.4	269
2/2/2025	23:30:00	7.3	0.975	0	60,129	Open	9.2	116
2/2/2025	23:45:00	7.3	1.081	0	60,145	Open	9.1	116

Appendix C Photos

Photo 1: No visible sheen observed in the WTP water, January 27

Photo 2: No visible sheen observed in the WTP water, January 28

Photo 3: No visible sheen observed in the WTP water, January 29

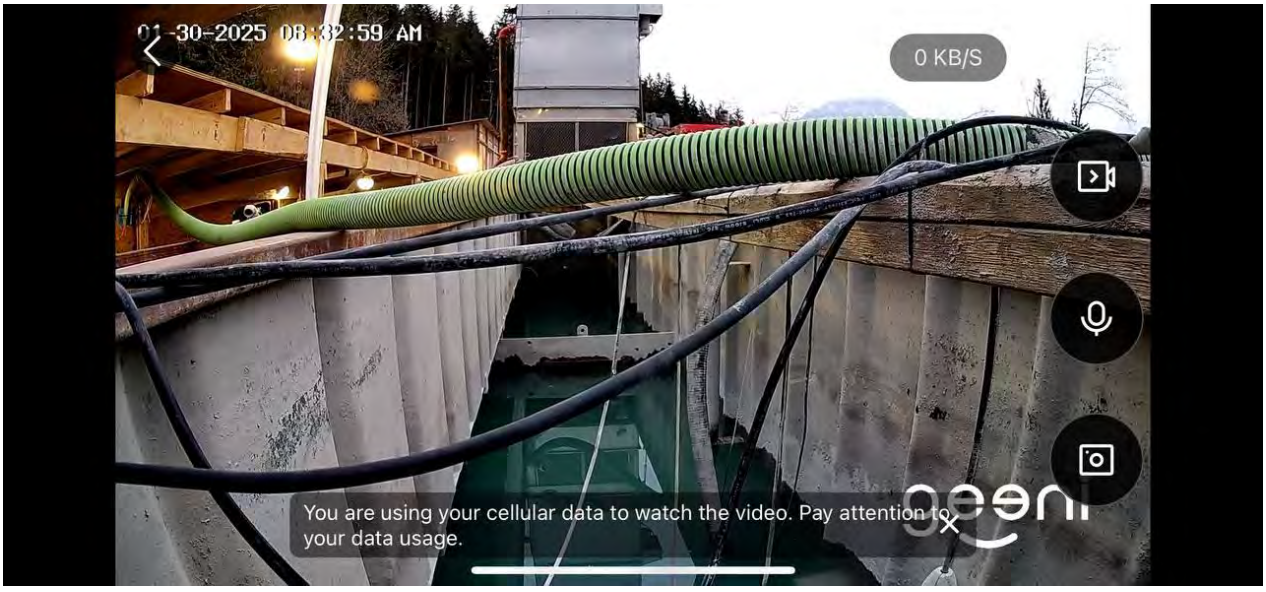
Photo 4: No visible sheen observed in the WTP water, January 30


Photo 5: No visible sheen observed in the WTP water, January 31

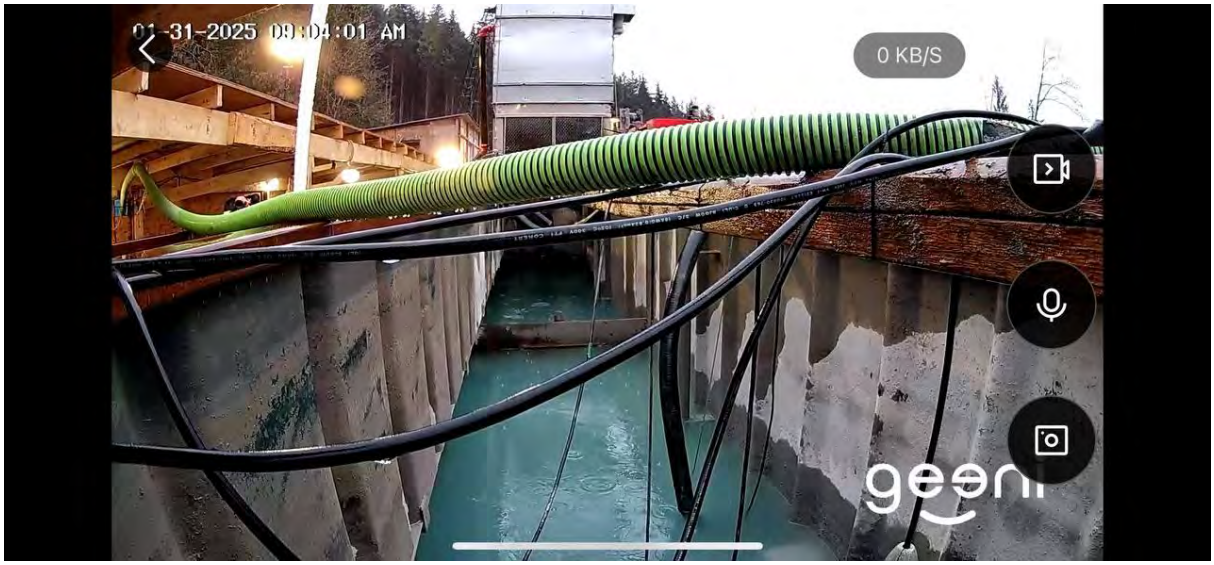
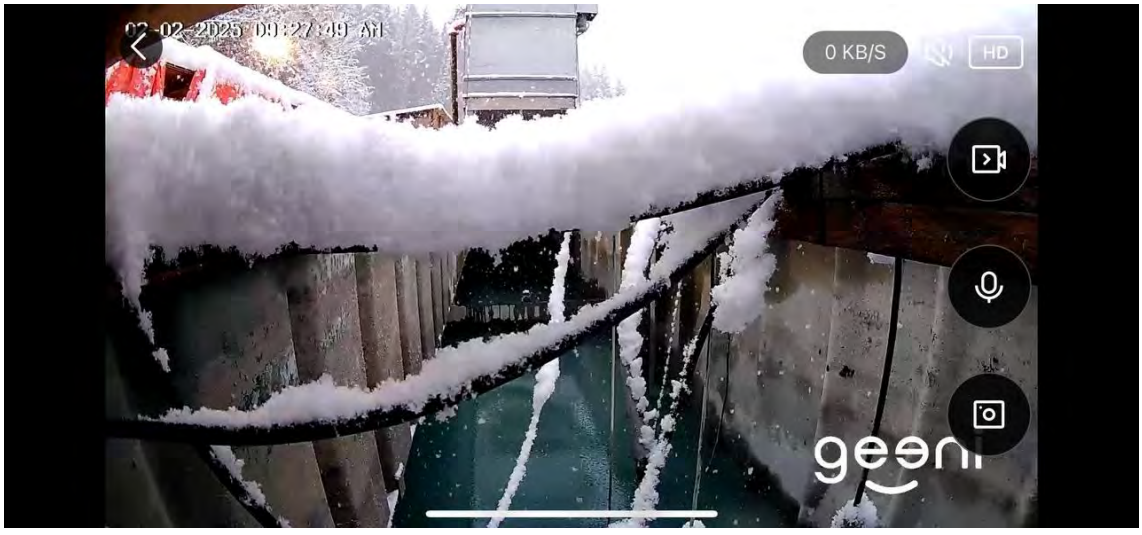


Photo 6: No visible sheen observed in the WTP water, February 2



Appendix D: Woodfibre Site Receiving Environment Documentation

Woodfibre Site Receiving Environment Sample Analysis

TRITON Environmental Consultants	Sample ID	Reviewed and signed off by:	COLLEGE OF APPLIED BIOLOGISTS Farshad Shafiei RPBio 3781 CAB		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					VA25A1905-001	VA25A1905-002					
	Date Sampled					28-Jan-2025	28-Jan-2025					
	Time Sampled					10:10	11:54					
Analyte	Units	FAL-ST [1,2]	FAL-LT [1,2]	MAL-ST [1]	MAL-LT [1,2]	Water	Water		Guideline notes			
						N/A	N/A					
In Situ Parameters												
pH (field)	pH units	6.5-9.0	6.5-9.0	7.0-8.7	7.0-8.7	7.33	7.83		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]	-	3.2	7.4		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	-	-	-	-	158.1	208.1					
Turbidity (field)	NTU	Varies with background, see note Guideline = 8.4	Varies with background, see note Guideline = 3.62 5-week discrete sampling average = 1.79 (DS)	Varies with background, see note Guideline = 8.4	Varies with background, see note Guideline = 3.62 5-week discrete sampling average = 1.79 (DS)	0.43	0.37		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	13.33	12.40		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	-	-	-	-	5.5	35.2					
Total Dissolved Solids	mg/L	-	-	-	-	22	48					
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	-	-	-	-	1.27	0.68			Long-term (30-day) median within 20% of background median [3]		
Total Alkalinity ($CaCO_3$)	mg/L	-	Categorical	-	-	4.5	34.9			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 = 17.3	Varies with pH and temperature. See note. Guideline = 1.95	Varies with pH and temperature. See note. Guideline = 777	Varies with pH, temperature and salinity. See note. Guideline = 7.2	< 0.0050	0.0068		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	0.64	4.72				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 = 0.168	-	1.5	-	< 0.020	0.118		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	0.0226	0.0197					
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	-	-	-	-	0.051	0.156					
Total Phosphorous	mg/L	-	0.005 to 0.015	-	-	0.005	0.0046			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	-	-	2.45	4.57			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 = 0.109 5-week field average = 0.080 (US), 0.092 (DS)	-	-	0.0659	0.171			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	0.00036					
Arsenic (As)-Total	mg/L	-	0.005	-	0.0125	0.0001	0.00058					Interim guideline status
Barium (Ba)-Total	mg/L	-	1	-	-	0.00317	0.00521			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	0.011					
Cadmium (Cd)-Total	mg/L	-	-	-	0.00012	< 0.0000050	0.0000066					Working guideline status
Calcium (Ca)-Total	mg/L	-	-	-	-	1.84	12.9					
Cesium (Cs)-Total	mg/L	-	-	-	-	<0.000010	0.000019					
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 = 0.000594 (US), 0.000506 (DS)	< 0.00050	0.0005					
Iron (Fe)-Total	mg/L	1	-	-	-	0.028	0.198					
Lead (Pb)-Total	mg/L	-	-	0.14	0.002 5-week field averages = 0.00005 (US), 0.000053 (DS)	< 0.00005	0.000066		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	0.0029					
Magnesium (Mg)-Total	mg/L	-	-	-	-	0.22	0.729					
Manganese (Mn)-Total	mg/L	Varies with hardness Guideline = 0.82	Varies with hardness Guideline = 0.77	-	-	0.00143	0.00995		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	-	-	0.000274	0.0109					
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	-	-	-	-	0.16	1.33					
Rubidium (Rb)-Total	mg/L	-	-	-	-	0.00024	0.00216					
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 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 more information on guideliens and sampling guidance.
Silicon (Si)-Total	mg/L	-	-	-	-	3.97	4.71					
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	-	-	-	-	1.35	3.72					
Strontium (Sr)-Total	mg/L	-	-	-	-	0.00967	0.0289					
Sulfur (S)-Total	mg/L	-	-	-	-	0.73	1.54					
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	-	-	-	-	0.00051	0.00536					
Tungsten (W)-Total	mg/L	-	-	-	-	< 0.00010	0.00019					
Uranium (U)-Total	mg/L	0.0165	0.0075	-	-	0.000081	0.00103			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 = 0.0032 (US), 0.0043 (DS)	< 0.0030	0.0058					
Zirconium (Zr)-Total	mg/L	-	-	-	-	< 0.00020	< 0.00020					
Dissolved Metals												
Aluminum (Al)-Dissolved	mg/L	-	-	-	-	0.0586	0.0418					
Antimony (Sb)-Dissolved	mg/L	-	-	-	-	< 0.00010	0.00034					
Arsenic (As)-Dissolved	mg/L	-	-	-	-	< 0.00010	0.00051					
Barium (Ba)-Dissolved	mg/L	-	-	-	-	0.003	0.0036					
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	0.01					
Cadmium (Cd)-Dissolved	mg/L	Varies with hardness, see note Guideline = 0.000038	Varies with hardness, see note Guideline = 0.000025	-	-	0.0000065	0.000012		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	-	-	1.8	12.1			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					
Cobalt (Co)-Dissolved	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Copper (Cu)-Dissolved	mg/L	Guideline varies with other parameters, see note Guideline = 0.0014	Guideline varies with other parameters, see note Guideline = 0.0005 5-week field average = 0.00053 (US), 0.00036 (DS)	-	-	0.00042	< 0.00020		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	-	-	-	0.017	< 0.010					
Lead (Pb)-Dissolved	mg/L	-	Guideline varies with DOC and hardness Guideline: 0.00146 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	0.0025					
Magnesium (Mg)-Dissolved	mg/L	-	-	-	-	0.217	0.661					
Manganese (Mn)-Dissolved	mg/L	-	-	-	-	0.00098	0.0061					
Mercury (Hg)-Dissolved	mg/L	-	-	-	-	< 0.0000050	< 0.0000050					
Molybdenum (Mo)-Dissolved	mg/L	-	-	-	-	0.000303	0.0111					
Nickel (Ni)-Dissolved	mg/L	Guideline varies with pH, temperature, DOC, and hardness Guideline: 0.015	Guideline varies with pH, temperature, DOC, and hardness Guideline: 0.00135 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	-	-	-	-	0.155	1.3					
Rubidium (Rb)-Dissolved	mg/L	-	-	-	-	0.00026	0.00209					
Selenium (Se)-Dissolved	mg/L	-	-	-	-	< 0.00005	< 0.00005					
Silicon (Si)-Dissolved	mg/L	-	-	-	-	3.7	4.52					
Silver (Ag)-Dissolved	mg/L	-	-	-	-	< 0.000010	< 0.000010					
Sodium (Na)-Dissolved	mg/L	-	-	-	-	1.38	3.7					
Strontium (Sr)-Dissolved	mg/L	-	-	-	-	0.0105	0.0302					
Sulfur (S)-Dissolved	mg/L	-	-	-	-	0.51	1.32					
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	0.00021					
Uranium (U)-Dissolved	mg/L	-	-	-	-	0.000077	0.000953					
Vanadium (V)-Dissolved	mg/L	-	-	-	-	< 0.00050	< 0.00050					
Zinc (Zn)-Dissolved	mg/L	Varies with DOC and hardness Guideline = 0.008	Varies with pH, DOC, hardness Guideline = 0.0026 5-week field average = 0.0022 (US), 0.0036 (DS)	-	-	0.0011	0.0038		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	7.33	7.83
Temperature (field)	°C	Field temperature taken using handheld meters during sampling used in calculations	3.2	7.4
Turbidity (field)	NTU	Field turbidity taken using handheld meters during sampling used in calculations	0.43	0.37
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	5.5	35.2
Dissolved Organic Carbon (DOC)	mg/L	Laboratory tested dissolved organic carbon tested at the lab used in guideline calculations	1.27	0.68
Total Alkalinity ($CaCO_3$)	mg/L	Laboratory tested total alkalinity used in calculations	4.5	34.9
Chloride	mg/L	Laboratory tested chloride taken at each respective sample site on the day of sampling used in guideline calculations	0.64	4.72

Woodfibre Site Receiving Environment Lab Documentation

CERTIFICATE OF ANALYSIS

Work Order	:			
Client	:		Laboratory	:
Contact	:		Account Manager	:
Address	:		Address	:
Telephone	:		Telephone	:
Project	:		Date Samples Received	: 28-Jan-2025 17:25
PO	:		Date Analysis Commenced	: 28-Jan-2025
C-O-C number	:	----	Issue Date	: 04-Feb-2025 15:10
Sampler	:	ARR		
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
		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	WLNG US1	WLNG DS1	----	----	----
					Client sampling date / time	28-Jan-2025 10:10	28-Jan-2025 11:54	----	----	----
						VA25A1905-001	VA25A1905-002	----	----	----
						Result	Result	----	----	----
Field Tests										
Conductivity, field	----	EF001/VA	0.10	µS/cm		158.10	208.10	----	----	----
pH, field	----	EF001/VA	0.10	pH units		7.33	7.83	----	----	----
Temperature, field	----	EF001/VA	0.10	°C		3.20	7.40	----	----	----
Physical Tests										
Hardness (as CaCO3), dissolved	----	EC100/VA	0.60	mg/L		5.39	32.9	----	----	----
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L		5.50	35.2	----	----	----
Solids, total dissolved [TDS]	----	E162/VA	10	mg/L		22	48	----	----	----
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L		<3.0	<3.0	----	----	----
Alkalinity, total (as CaCO3)	----	E290/VA	2.0	mg/L		4.5	34.9	----	----	----
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L		<0.0050	0.0068	----	----	----
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		0.64	4.72	----	----	----
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L		<0.020	0.118	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L		0.0226	0.0197	----	----	----
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		0.051	0.156	----	----	----
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L		0.0050	0.0046	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L		2.45	4.57	----	----	----
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L		1.27	0.68	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG US1	WLNG DS1	----	----	----
					Client sampling date / time	28-Jan-2025 10:10	28-Jan-2025 11:54	----	----	----
						VA25A1905-001	VA25A1905-002	----	----	----
						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		0.0659	0.171	----	----	----
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L		<0.00010	0.00036	----	----	----
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L		0.00010	0.00058	----	----	----
Barium, total	7440-39-3	E420/VA	0.00010	mg/L		0.00317	0.00521	----	----	----
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	0.011	----	----	----
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L		<0.0000050	0.0000066	----	----	----
Calcium, total	7440-70-2	E420/VA	0.050	mg/L		1.84	12.9	----	----	----
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L		<0.000010	0.000019	----	----	----
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		<0.00050	0.00050	----	----	----
Iron, total	7439-89-6	E420/VA	0.010	mg/L		0.028	0.198	----	----	----
Lead, total	7439-92-1	E420/VA	0.000050	mg/L		<0.000050	0.000066	----	----	----
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L		<0.0010	0.0029	----	----	----
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L		0.220	0.729	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG US1	WLNG DS1	----	----	----
					Client sampling date / time	28-Jan-2025 10:10	28-Jan-2025 11:54	----	----	----
						VA25A1905-001	VA25A1905-002	----	----	----
						Result	Result	----	----	----
Total Metals										
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L		0.00143	0.00995	----	----	----
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		0.000274	0.0109	----	----	----
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		0.160	1.33	----	----	----
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L		0.00024	0.00216	----	----	----
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		3.97	4.71	----	----	----
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		1.35	3.72	----	----	----
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L		0.00967	0.0289	----	----	----
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L		0.73	1.54	----	----	----
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		0.00051	0.00536	----	----	----
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L		<0.00010	0.00019	----	----	----
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L		0.000081	0.00103	----	----	----
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L		<0.00050	<0.00050	----	----	----

Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	WLNG US1	WLNG DS1	----	----	----
					Client sampling date / time	28-Jan-2025 10:10	28-Jan-2025 11:54	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A1905-001	VA25A1905-002	----	----	----
						Result	Result	----	----	----
Total Metals										
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L		<0.0030	0.0058	----	----	----
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		0.0586	0.0418	----	----	----
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L		<0.00010	0.00034	----	----	----
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L		<0.00010	0.00051	----	----	----
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L		0.00300	0.00360	----	----	----
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		0.0000065	0.0000120	----	----	----
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L		1.80	12.1	----	----	----
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		0.00042	<0.00020	----	----	----
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L		0.017	<0.010	----	----	----
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	0.0025	----	----	----
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L		0.217	0.661	----	----	----
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L		0.00098	0.00610	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG US1	WLNG DS1	----	----	----
					Client sampling date / time	28-Jan-2025 10:10	28-Jan-2025 11:54	----	----	----
						VA25A1905-001	VA25A1905-002	----	----	----
						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		0.000303	0.0111	----	----	----
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		0.155	1.30	----	----	----
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L		0.00026	0.00209	----	----	----
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		3.70	4.52	----	----	----
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		1.38	3.70	----	----	----
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L		0.0105	0.0302	----	----	----
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L		0.51	1.32	----	----	----
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	0.00021	----	----	----
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L		0.000077	0.000953	----	----	----
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		0.0011	0.0038	----	----	----

Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	WLNG US1	WLNG DS1	----	----	----
					Client sampling date / time	28-Jan-2025 10:10	28-Jan-2025 11:54	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A1905-001	VA25A1905-002	----	----	----
						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 14
Client		Laboratory	[redacted]
Contact		Account Manager	
Address		Address	
Telephone		Telephone	
Project		Date Samples Received	: 28-Jan-2025 17:25
PO		Issue Date	: 04-Feb-2025 15:09
C-O-C number	: ----		
Sampler	: ARR		
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.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- 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

- Quality Control Sample Frequency Outliers occur - please see following pages for full details.

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) WLNG DS1	E298	28-Jan-2025	01-Feb-2025	28 days	4 days	✓	01-Feb-2025	28 days	4 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WLNG US1	E298	28-Jan-2025	01-Feb-2025	28 days	4 days	✓	01-Feb-2025	28 days	5 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE WLNG DS1	E235.Br-L	28-Jan-2025	29-Jan-2025	28 days	1 days	✓	29-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE WLNG US1	E235.Br-L	28-Jan-2025	29-Jan-2025	28 days	1 days	✓	29-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE WLNG DS1	E235.Cl	28-Jan-2025	29-Jan-2025	28 days	1 days	✓	29-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE WLNG US1	E235.Cl	28-Jan-2025	29-Jan-2025	28 days	1 days	✓	29-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE WLNG DS1	E235.F	28-Jan-2025	29-Jan-2025	28 days	1 days	✓	29-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 US1	E235.F	28-Jan-2025	29-Jan-2025	28 days	1 days	✓	29-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE										
WLNG DS1	E235.NO3-L	28-Jan-2025	29-Jan-2025	3 days	1 days	✓	29-Jan-2025	3 days	1 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE										
WLNG US1	E235.NO3-L	28-Jan-2025	29-Jan-2025	3 days	1 days	✓	29-Jan-2025	3 days	1 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
WLNG DS1	E235.NO2-L	28-Jan-2025	29-Jan-2025	3 days	1 days	✓	29-Jan-2025	3 days	1 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
WLNG US1	E235.NO2-L	28-Jan-2025	29-Jan-2025	3 days	1 days	✓	29-Jan-2025	3 days	1 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
WLNG DS1	E235.SO4	28-Jan-2025	29-Jan-2025	28 days	1 days	✓	29-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
WLNG US1	E235.SO4	28-Jan-2025	29-Jan-2025	28 days	1 days	✓	29-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid)										
WLNG DS1	E366	28-Jan-2025	01-Feb-2025	28 days	4 days	✓	04-Feb-2025	28 days	7 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid)										
WLNG US1	E366	28-Jan-2025	01-Feb-2025	28 days	4 days	✓	04-Feb-2025	28 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
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
WLNG DS1	E372-U	28-Jan-2025	01-Feb-2025	28 days	4 days	✓	02-Feb-2025	28 days	5 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
WLNG US1	E372-U	28-Jan-2025	01-Feb-2025	28 days	4 days	✓	02-Feb-2025	28 days	5 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
WLNG DS1	E509	28-Jan-2025	31-Jan-2025	28 days	3 days	✓	31-Jan-2025	28 days	3 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
WLNG US1	E509	28-Jan-2025	31-Jan-2025	28 days	3 days	✓	31-Jan-2025	28 days	3 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
WLNG DS1	E421	28-Jan-2025	29-Jan-2025	180 days	1 days	✓	30-Jan-2025	180 days	2 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
WLNG US1	E421	28-Jan-2025	29-Jan-2025	180 days	1 days	✓	30-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 DS1	EF001	28-Jan-2025	----	----	----		29-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 US1	EF001	28-Jan-2025	----	----	----		29-Jan-2025	----	1 days	
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
WLNG DS1	E358-L	28-Jan-2025	01-Feb-2025	28 days	4 days	✓	01-Feb-2025	28 days	4 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 (field filtered/sulfuric acid)										
WLNG US1	E358-L	28-Jan-2025	01-Feb-2025	28 days	4 days	✓	01-Feb-2025	28 days	4 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
WLNG DS1	E290	28-Jan-2025	29-Jan-2025	14 days	1 days	✓	29-Jan-2025	14 days	1 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
WLNG US1	E290	28-Jan-2025	29-Jan-2025	14 days	1 days	✓	29-Jan-2025	14 days	1 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
WLNG DS1	E162	28-Jan-2025	----	----	----		03-Feb-2025	7 days	6 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
WLNG US1	E162	28-Jan-2025	----	----	----		03-Feb-2025	7 days	6 days	✓
Physical Tests : TSS by Gravimetry										
HDPE										
WLNG DS1	E160	28-Jan-2025	----	----	----		03-Feb-2025	7 days	6 days	✓
Physical Tests : TSS by Gravimetry										
HDPE										
WLNG US1	E160	28-Jan-2025	----	----	----		03-Feb-2025	7 days	6 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide)										
WLNG DS1	E532	28-Jan-2025	----	----	----		28-Jan-2025	28 days	0 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide)										
WLNG US1	E532	28-Jan-2025	----	----	----		28-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)										
WLNG DS1	E508	28-Jan-2025	01-Feb-2025	28 days	4 days	✓	01-Feb-2025	28 days	4 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid)										
WLNG US1	E508	28-Jan-2025	01-Feb-2025	28 days	4 days	✓	01-Feb-2025	28 days	4 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid)										
WLNG DS1	E420	28-Jan-2025	29-Jan-2025	180 days	1 days	✓	30-Jan-2025	180 days	2 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid)										
WLNG US1	E420	28-Jan-2025	29-Jan-2025	180 days	1 days	✓	30-Jan-2025	180 days	2 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide)										
WLNG DS1	E395	28-Jan-2025	----	----	----		02-Feb-2025	7 days	5 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide)										
WLNG US1	E395	28-Jan-2025	----	----	----		02-Feb-2025	7 days	5 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	1855298	1	12	8.3	5.0	✓
Ammonia by Fluorescence	E298	1860063	1	16	6.2	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1855304	1	6	16.6	5.0	✓
Chloride in Water by IC	E235.Cl	1855303	1	12	8.3	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1858320	1	8	12.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1855395	1	11	9.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1860065	1	11	9.0	5.0	✓
Fluoride in Water by IC	E235.F	1855302	1	12	8.3	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1855305	1	11	9.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1855306	1	13	7.6	5.0	✓
Sulfate in Water by IC	E235.SO4	1855307	1	13	7.6	5.0	✓
TDS by Gravimetry	E162	1861492	1	16	6.2	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1855241	1	7	14.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1860027	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1855240	1	7	14.2	5.0	✓
Total Nitrogen by Colourimetry	E366	1860062	0	9	0.0	5.0	✗
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1860064	1	18	5.5	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1860357	1	5	20.0	5.0	✓
TSS by Gravimetry	E160	1861491	1	11	9.0	5.0	✓
Laboratory Control Samples (LCS)							
Alkalinity Species by Titration	E290	1855298	1	12	8.3	5.0	✓
Ammonia by Fluorescence	E298	1860063	1	16	6.2	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1855304	1	6	16.6	5.0	✓
Chloride in Water by IC	E235.Cl	1855303	1	12	8.3	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1858320	1	8	12.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1855395	1	11	9.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1860065	1	11	9.0	5.0	✓
Fluoride in Water by IC	E235.F	1855302	1	12	8.3	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1855305	1	11	9.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1855306	1	13	7.6	5.0	✓
Sulfate in Water by IC	E235.SO4	1855307	1	13	7.6	5.0	✓
TDS by Gravimetry	E162	1861492	1	16	6.2	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1855241	1	7	14.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1860027	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1855240	1	7	14.2	5.0	✓
Total Nitrogen by Colourimetry	E366	1860062	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*
Laboratory Control Samples (LCS) - Continued							
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1860064	1	18	5.5	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1860357	1	5	20.0	5.0	✓
TSS by Gravimetry	E160	1861491	1	11	9.0	5.0	✓
Method Blanks (MB)							
Alkalinity Species by Titration	E290	1855298	1	12	8.3	5.0	✓
Ammonia by Fluorescence	E298	1860063	1	16	6.2	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1855304	1	6	16.6	5.0	✓
Chloride in Water by IC	E235.Cl	1855303	1	12	8.3	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1858320	1	8	12.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1855395	1	11	9.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1860065	1	11	9.0	5.0	✓
Fluoride in Water by IC	E235.F	1855302	1	12	8.3	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1855305	1	11	9.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1855306	1	13	7.6	5.0	✓
Sulfate in Water by IC	E235.SO4	1855307	1	13	7.6	5.0	✓
TDS by Gravimetry	E162	1861492	1	16	6.2	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1855241	1	7	14.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1860027	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1855240	1	7	14.2	5.0	✓
Total Nitrogen by Colourimetry	E366	1860062	1	9	11.1	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1860064	1	18	5.5	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1860357	1	5	20.0	5.0	✓
TSS by Gravimetry	E160	1861491	1	11	9.0	5.0	✓
Matrix Spikes (MS)							
Ammonia by Fluorescence	E298	1860063	1	16	6.2	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1855304	1	6	16.6	5.0	✓
Chloride in Water by IC	E235.Cl	1855303	1	12	8.3	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1858320	1	8	12.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1855395	1	11	9.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1860065	1	11	9.0	5.0	✓
Fluoride in Water by IC	E235.F	1855302	1	12	8.3	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1855305	1	11	9.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1855306	1	13	7.6	5.0	✓
Sulfate in Water by IC	E235.SO4	1855307	1	13	7.6	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1855241	1	7	14.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1860027	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1855240	1	7	14.2	5.0	✓
Total Nitrogen by Colourimetry	E366	1860062	1	9	11.1	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1860064	1	18	5.5	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	1860357	1	5	20.0	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	: **VA25A1905**	Page	: 1 of 17
Client	[redacted]	Laboratory	[redacted]
Contact		Account Manager	
Address		Address	
Telephone		Telephone	
Project		Date Samples Received	: 28-Jan-2025 17:25
PO		Date Analysis Commenced	: 28-Jan-2025
C-O-C number	: ----	Issue Date	: 04-Feb-2025 15:09
Sampler	: ARR		
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 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: 1855298)											
VA25A1916-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	124	124	0.0807%	20%	----
Physical Tests (QC Lot: 1861491)											
VA25A1903-001	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	<3.0	<3.0	0	Diff <2x LOR	----
Physical Tests (QC Lot: 1861492)											
KS2500345-001	Anonymous	Solids, total dissolved [TDS]	----	E162	20	mg/L	1080	1150	6.02%	20%	----
Anions and Nutrients (QC Lot: 1855302)											
FJ2500283-001	Anonymous	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.192	0.189	0.003	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1855303)											
FJ2500283-001	Anonymous	Chloride	16887-00-6	E235.Cl	0.50	mg/L	31.3	31.3	0.0524%	20%	----
Anions and Nutrients (QC Lot: 1855304)											
FJ2500283-001	Anonymous	Bromide	24959-67-9	E235.Br-L	0.050	mg/L	0.491	0.490	0.0006	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1855305)											
FJ2500283-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0050	mg/L	0.160	0.159	0.420%	20%	----
Anions and Nutrients (QC Lot: 1855306)											
FJ2500283-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L	0.0014	0.0013	0.00009	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1855307)											
FJ2500283-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	46.5	46.5	0.0648%	20%	----
Anions and Nutrients (QC Lot: 1860063)											
FJ2500305-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.250	mg/L	29.6	26.3	11.6%	20%	----
Anions and Nutrients (QC Lot: 1860064)											
FJ2500305-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0400	mg/L	5.60	5.57	0.531%	20%	----
Organic / Inorganic Carbon (QC Lot: 1860065)											
VA25A1905-001	WLNG US1	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	1.27	1.33	0.06	Diff <2x LOR	----
Total Sulfides (QC Lot: 1860357)											
VA25A1903-001	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: 1855240)											
FJ2500283-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.227	0.235	3.30%	20%	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	0.00049	0.00048	0.00001	Diff <2x LOR	----
		Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00086	0.00086	0.0000004	Diff <2x LOR	----
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.0427	0.0443	3.70%	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: 1855240) - continued											
FJ2500283-001	Anonymous	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	0.056	0.054	0.002	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.0000050	mg/L	<0.0000050	0.0000071	0.0000021	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	22.9	21.8	4.88%	20%	----
		Cesium, total	7440-46-2	E420	0.000010	mg/L	0.000033	0.000034	0.000001	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420	0.00050	mg/L	0.00095	0.00097	0.00002	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	0.00091	0.00092	0.000009	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.010	mg/L	0.073	0.076	0.002	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	0.0188	0.0181	3.53%	20%	----
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	5.68	5.69	0.144%	20%	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.00237	0.00240	1.19%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.00380	0.00369	2.92%	20%	----
		Nickel, total	7440-02-0	E420	0.00050	mg/L	0.00073	0.00071	0.00002	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	4.34	4.36	0.524%	20%	----
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00471	0.00473	0.475%	20%	----
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.000336	0.000422	0.000086	Diff <2x LOR	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	3.12	3.36	7.28%	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	66.6	66.5	0.155%	20%	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.106	0.103	2.84%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	15.9	17.1	7.72%	20%	----
		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	0.00174	0.00159	0.00015	Diff <2x LOR	----
		Tungsten, total	7440-33-7	E420	0.00010	mg/L	0.00011	0.00012	0.000002	Diff <2x LOR	----
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.000777	0.000745	4.22%	20%	----
		Vanadium, total	7440-62-2	E420	0.00050	mg/L	0.00141	0.00146	0.00005	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0030	mg/L	0.0042	0.0042	0.00007	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: 1855240) - continued											
FJ2500283-001	Anonymous	Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Total Metals (QC Lot: 1860027)											
VA25A1903-001	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1855395)											
FJ2500283-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.132	0.129	2.21%	20%	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	0.00053	0.00051	0.00002	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00086	0.00083	0.00003	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0395	0.0389	1.56%	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	0.050	0.051	0.0009	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	21.6	21.8	0.885%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	0.000017	0.000014	0.000002	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	0.00080	0.00081	0.00001	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00079	0.00076	0.00003	Diff <2x LOR	----
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.011	0.011	0.00002	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	0.0169	0.0171	1.26%	20%	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	5.60	5.55	0.887%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.00125	0.00125	0.382%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.00380	0.00379	0.244%	20%	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.00064	0.00060	0.00003	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	0.050	mg/L	4.39	4.42	0.712%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00436	0.00456	4.56%	20%	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000324	0.000358	0.000034	Diff <2x LOR	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	2.92	2.88	1.39%	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	66.4	66.1	0.451%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.110	0.109	0.686%	20%	----
		Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	16.2	15.8	2.23%	20%	----
		Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	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: 1855395) - continued											
FJ2500283-001	Anonymous	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	0.00031	0.00034	0.00003	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	0.00012	0.00012	0.000006	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.000775	0.000742	4.38%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	0.00106	0.00111	0.00005	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0031	0.0027	0.0004	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: 1858320)											
VA25A1885-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Speciated Metals (QC Lot: 1855241)											
VA25A1839-001	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00150	mg/L	<0.00150	<0.00150	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: 1855298)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 1861491)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Physical Tests (QCLot: 1861492)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Anions and Nutrients (QCLot: 1855302)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 1855303)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 1855304)						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 1855305)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1855306)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 1855307)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 1860062)						
Nitrogen, total	7727-37-9	E366	0.03	mg/L	<0.030	----
Anions and Nutrients (QCLot: 1860063)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1860064)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Organic / Inorganic Carbon (QCLot: 1860065)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Total Sulfides (QCLot: 1860357)						
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	----
Total Metals (QCLot: 1855240)						
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: 1855240) - 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: 1860027)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Dissolved Metals (QCLot: 1855395)						
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: 1855395) - 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: 1858320)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Speciated Metals (QCLot: 1855241)						
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: 1855298)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	103	85.0	115	----
Physical Tests (QCLot: 1861491)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	99.2	85.0	115	----
Physical Tests (QCLot: 1861492)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	103	85.0	115	----
Anions and Nutrients (QCLot: 1855302)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	98.1	90.0	110	----
Anions and Nutrients (QCLot: 1855303)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	99.0	90.0	110	----
Anions and Nutrients (QCLot: 1855304)									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	99.9	85.0	115	----
Anions and Nutrients (QCLot: 1855305)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	98.0	90.0	110	----
Anions and Nutrients (QCLot: 1855306)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 1855307)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 1860062)									
Nitrogen, total	7727-37-9	E366	0.03	mg/L	0.5 mg/L	97.8	75.0	125	----
Anions and Nutrients (QCLot: 1860063)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	91.6	85.0	115	----
Anions and Nutrients (QCLot: 1860064)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	95.3	80.0	120	----
Organic / Inorganic Carbon (QCLot: 1860065)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	100	80.0	120	----
Total Sulfides (QCLot: 1860357)									
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.08 mg/L	102	80.0	120	----
Total Metals (QCLot: 1855240)									

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: 1855240) - 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	96.8	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	102	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	102	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	104	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	99.1	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	99.8	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	96.4	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	99.2	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	99.5	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	101	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	101	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	101	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	103	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	101	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	100	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	99.1	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	108	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	102	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	95.9	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	108	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	92.3	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	106	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	97.6	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	97.4	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	96.7	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	98.9	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	98.9	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	101	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	101	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	105	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: 1855240) - 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	99.4	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	99.9	80.0	120	----
Total Metals (QCLot: 1860027)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	90.6	80.0	120	----
Dissolved Metals (QCLot: 1855395)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	99.0	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	105	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	102	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	92.0	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	102	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	91.5	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	100	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	93.8	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	100	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	97.0	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	98.9	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	104	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	90.1	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	99.3	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	98.7	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	102	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	97.5	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	93.8	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	107	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	101	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	102	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	95.6	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	104	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	92.6	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: 1855395) - continued									
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	104	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	98.8	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	101	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	98.6	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	98.8	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.5 mg/L	102	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	96.1	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	98.7	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	95.2	80.0	120	----
Speciated Metals (QCLot: 1855241)									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.25 mg/L	100.0	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: 1855302)										
FJ2500283-002	Anonymous	Fluoride	16984-48-8	E235.F	4.62 mg/L	5 mg/L	92.4	75.0	125	----
Anions and Nutrients (QCLot: 1855303)										
FJ2500283-002	Anonymous	Chloride	16887-00-6	E235.Cl	477 mg/L	500 mg/L	95.4	75.0	125	----
Anions and Nutrients (QCLot: 1855304)										
FJ2500283-002	Anonymous	Bromide	24959-67-9	E235.Br-L	2.40 mg/L	2.5 mg/L	96.0	75.0	125	----
Anions and Nutrients (QCLot: 1855305)										
FJ2500283-002	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	11.8 mg/L	12.5 mg/L	94.1	75.0	125	----
Anions and Nutrients (QCLot: 1855306)										
FJ2500283-002	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	2.37 mg/L	2.5 mg/L	94.7	75.0	125	----
Anions and Nutrients (QCLot: 1855307)										
FJ2500283-002	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	473 mg/L	500 mg/L	94.5	75.0	125	----
Anions and Nutrients (QCLot: 1860062)										
VA25A1905-001	WLNG US1	Nitrogen, total	7727-37-9	E366	0.405 mg/L	0.4 mg/L	101	70.0	130	----
Anions and Nutrients (QCLot: 1860063)										
VA25A1905-001	WLNG US1	Ammonia, total (as N)	7664-41-7	E298	0.0883 mg/L	0.1 mg/L	88.3	75.0	125	----
Anions and Nutrients (QCLot: 1860064)										
VA25A1905-001	WLNG US1	Phosphorus, total	7723-14-0	E372-U	0.0473 mg/L	0.05 mg/L	94.6	70.0	130	----
Organic / Inorganic Carbon (QCLot: 1860065)										
VA25A1905-002	WLNG DS1	Carbon, dissolved organic [DOC]	----	E358-L	5.52 mg/L	5 mg/L	110	70.0	130	----
Total Sulfides (QCLot: 1860357)										
VA25A1905-001	WLNG US1	Sulfide, total (as S)	18496-25-8	E395	0.209 mg/L	0.2 mg/L	104	75.0	125	----
Total Metals (QCLot: 1855240)										
FJ2500283-002	Anonymous	Aluminum, total	7429-90-5	E420	ND mg/L	----	ND	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0187 mg/L	0.02 mg/L	93.7	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0212 mg/L	0.02 mg/L	106	70.0	130	----
		Barium, total	7440-39-3	E420	ND mg/L	----	ND	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0386 mg/L	0.04 mg/L	96.5	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.00902 mg/L	0.01 mg/L	90.2	70.0	130	----
		Boron, total	7440-42-8	E420	ND mg/L	----	ND	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00387 mg/L	0.004 mg/L	96.8	70.0	130	----
		Calcium, total	7440-70-2	E420	ND mg/L	----	ND	70.0	130	----
		Cesium, total	7440-46-2	E420	0.00946 mg/L	0.01 mg/L	94.6	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0398 mg/L	0.04 mg/L	99.4	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: 1855240) - continued										
FJ2500283-002	Anonymous	Cobalt, total	7440-48-4	E420	0.0198 mg/L	0.02 mg/L	99.2	70.0	130	----
		Copper, total	7440-50-8	E420	0.0193 mg/L	0.02 mg/L	96.6	70.0	130	----
		Iron, total	7439-89-6	E420	1.98 mg/L	2 mg/L	99.2	70.0	130	----
		Lead, total	7439-92-1	E420	0.0181 mg/L	0.02 mg/L	90.3	70.0	130	----
		Lithium, total	7439-93-2	E420	0.0955 mg/L	0.1 mg/L	95.5	70.0	130	----
		Magnesium, total	7439-95-4	E420	ND mg/L	----	ND	70.0	130	----
		Manganese, total	7439-96-5	E420	0.0198 mg/L	0.02 mg/L	98.8	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0198 mg/L	0.02 mg/L	98.9	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0386 mg/L	0.04 mg/L	96.6	70.0	130	----
		Phosphorus, total	7723-14-0	E420	10.3 mg/L	10 mg/L	103	70.0	130	----
		Potassium, total	7440-09-7	E420	ND mg/L	----	ND	70.0	130	----
		Rubidium, total	7440-17-7	E420	ND mg/L	----	ND	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0394 mg/L	0.04 mg/L	98.6	70.0	130	----
		Silicon, total	7440-21-3	E420	9.81 mg/L	10 mg/L	98.1	70.0	130	----
		Silver, total	7440-22-4	E420	0.00365 mg/L	0.004 mg/L	91.2	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	ND mg/L	----	ND	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0396 mg/L	0.04 mg/L	99.1	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00359 mg/L	0.004 mg/L	89.7	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0186 mg/L	0.02 mg/L	93.3	70.0	130	----
		Tin, total	7440-31-5	E420	0.0193 mg/L	0.02 mg/L	96.3	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0402 mg/L	0.04 mg/L	100	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0188 mg/L	0.02 mg/L	94.1	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00380 mg/L	0.004 mg/L	95.0	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.101 mg/L	0.1 mg/L	101	70.0	130	----
		Zinc, total	7440-66-6	E420	0.398 mg/L	0.4 mg/L	99.5	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0413 mg/L	0.04 mg/L	103	70.0	130	----
Total Metals (QCLot: 1860027)										
VA25A1905-001	WLNG US1	Mercury, total	7439-97-6	E508	0.0000899 mg/L	0 mg/L	89.9	70.0	130	----
Dissolved Metals (QCLot: 1855395)										
FJ2500283-002	Anonymous	Aluminum, dissolved	7429-90-5	E421	ND mg/L	----	ND	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0210 mg/L	0.02 mg/L	105	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0209 mg/L	0.02 mg/L	104	70.0	130	----
		Barium, dissolved	7440-39-3	E421	ND mg/L	----	ND	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.0362 mg/L	0.04 mg/L	90.5	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.00842 mg/L	0.01 mg/L	84.2	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.091 mg/L	0.1 mg/L	91.3	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00388 mg/L	0.004 mg/L	96.9	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.0102 mg/L	0.01 mg/L	102	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0385 mg/L	0.04 mg/L	96.2	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0182 mg/L	0.02 mg/L	91.1	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: 1855395) - continued										
FJ2500283-002	Anonymous	Copper, dissolved	7440-50-8	E421	0.0180 mg/L	0.02 mg/L	90.3	70.0	130	----
		Iron, dissolved	7439-89-6	E421	1.87 mg/L	2 mg/L	93.6	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0190 mg/L	0.02 mg/L	94.9	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.0855 mg/L	0.1 mg/L	85.5	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	ND mg/L	----	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	0.0184 mg/L	0.02 mg/L	91.9	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.0202 mg/L	0.02 mg/L	101	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0360 mg/L	0.04 mg/L	89.9	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	9.57 mg/L	10 mg/L	95.7	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	ND mg/L	----	ND	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.0174 mg/L	0.02 mg/L	87.3	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0426 mg/L	0.04 mg/L	106	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	9.80 mg/L	10 mg/L	98.0	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00336 mg/L	0.004 mg/L	84.1	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	0.0420 mg/L	0.04 mg/L	105	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.00370 mg/L	0.004 mg/L	92.4	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0163 mg/L	0.02 mg/L	81.4	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0196 mg/L	0.02 mg/L	97.8	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0398 mg/L	0.04 mg/L	99.4	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0196 mg/L	0.02 mg/L	97.8	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	0.00379 mg/L	0.004 mg/L	94.7	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.0978 mg/L	0.1 mg/L	97.8	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.367 mg/L	0.4 mg/L	91.7	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0409 mg/L	0.04 mg/L	102	70.0	130	----
Dissolved Metals (QCLot: 1858320)										
VA25A1903-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000975 mg/L	0 mg/L	97.5	70.0	130	----
Speciated Metals (QCLot: 1855241)										
VA25A1839-002	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.769 mg/L	0.75 mg/L	102	70.0	130	----

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	Report Format / Distribution		Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)
Company:	[redacted]	Select Report Format: ☑ EXCEL ☐ EDD (DIGITAL)		Regular [R] ☑ Standard TAT if received by 3 pm - business days - no surcharges apply
Contact:		Quality Control (QC) Report with Report ☑ YES ☐ NO		
Phone:		☑ Compare Results to Criteria on Report - provide details below if box checked		PRIORITY (Business Days): 4 day [P4-20%] ☐ / 3 day [P3-25%] ☐ / 2 day [P2-50%] ☐
		Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX		EMERGENCY: 1 Business day [E1 - 100%] ☐ / Same Day, Weekend or Statutory holiday [E2 - 200% (Laboratory opening fees may apply)] ☐
Street:		Email 1 or Fax	[redacted]	Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm
City/Province:		Email 2		For tests that can not be performed according to the service level selected, you will be contacted.
Postal Code:		Email 3		
Invoice To	Same as Report To ☐ YES ☑ NO			
	Copy of Invoice with Report ☐ YES ☑ NO	Select Invoice D		
Company:		Email 1 or Fax		
Contact:		Email 2		

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):		ALS Contact:	[redacted]

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 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
					P	F/P	P	P			P	P			F/P						
	WLNG US 1	28-Jan-25	10:10	Water	R	R	R	R	R	R	R	R	R	R	R					N	9
	pH: 7.33 cond: 158.1 temp: 3.2	↓	↓																		
	WLNG DS 1	↓	11:54	Water	R	R	R	R	R	R	R	R	R	R	R					N	9
	pH: 7.83 cond: 208.1 temp: 7.4	↓	↓																		

Environmental Division Vancouver
Work Order Reference
VA25A1905

Telephone : +1 604 253 4188

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to ad (elect
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	6	C	

SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
[redacted]	Time: 17:25	Received by:	Date:	Time:	Received by: SM	Date: 28/1/25	Time: 5:25PM

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.

Woodfibre Site Receiving Environment Field Notes and Logs

FortisBC Eagle Mountain-Woodfibre Gas Pipeline

Water Discharge Authorization Water Quality Monitoring

2025-1-28-Rysdale-D2C30

Project Component:	Tunnel	**Site Name:**	Receiving Environment - Downstream of Discharge
Inspection Date:	01/28/2025	**Location:**	WLNG
Triton QP:	Aaron Rysdale	**Latitude/Longitude:**	49.669091 -123.248204
Temperature(c):	Low -2 High 4	**Permit:**	PE 110136
Weather Conditions:	Clear	**Ground Conditions:**	Frozen

Observations

Time: 11:54:57 **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

Vulink batteries changed out at 12:20

Photos

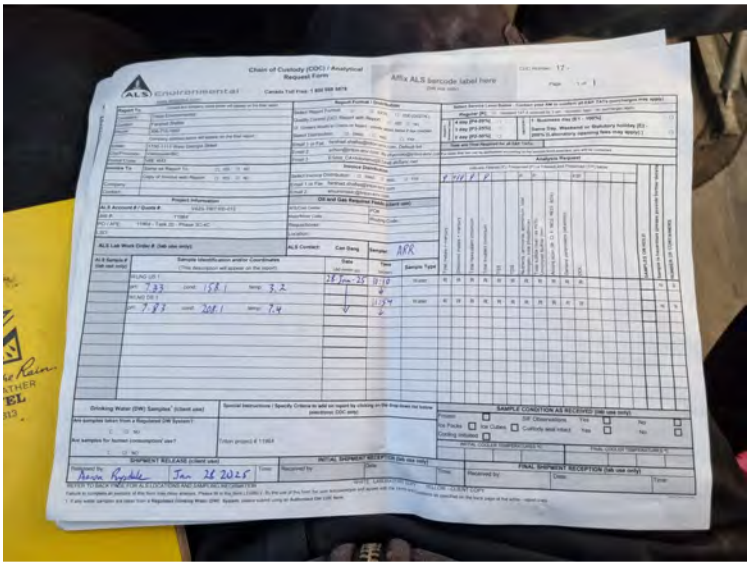


Photo: 1

Location:

Description: Sample COC

Photo: 2

Location: EAS DS1

Description: Facing upstream from sampling point

Photos

Photo: 3

Location: EAS DS1

Description: Sampling point

Photo: 4

Location: EAS DS1

Description: Facing downstream from sampling point

Sign Off

Report Prepared By:	Aaron Rysdale	**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

2025-1-28-Rysdale-E41FA

Project Component:	Tunnel	**Site Name:**	Receiving Environment - Upstream of Discharge
Inspection Date:	01/28/2025	**Location:**	WLNG
Triton QP:	Aaron Rysdale	**Latitude/Longitude:**	49.669455 -123.25087
Temperature(c):	Low -2 High 4	**Permit:**	PE 110136
Weather Conditions:	Clear	**Ground Conditions:**	Frozen

Observations

Time: 10:10:24 **Flow Volume (visual):** moderate

Notes: YSI pro quatro 24E102986 used in place of Hanna pen due to poor calibration, record stored here: 1413us = 1414, 4.0 ph = 4.00, 7.0 ph = 7.05, 10.0 ph = 10.12, Temp = 13.4, Time 9:41

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

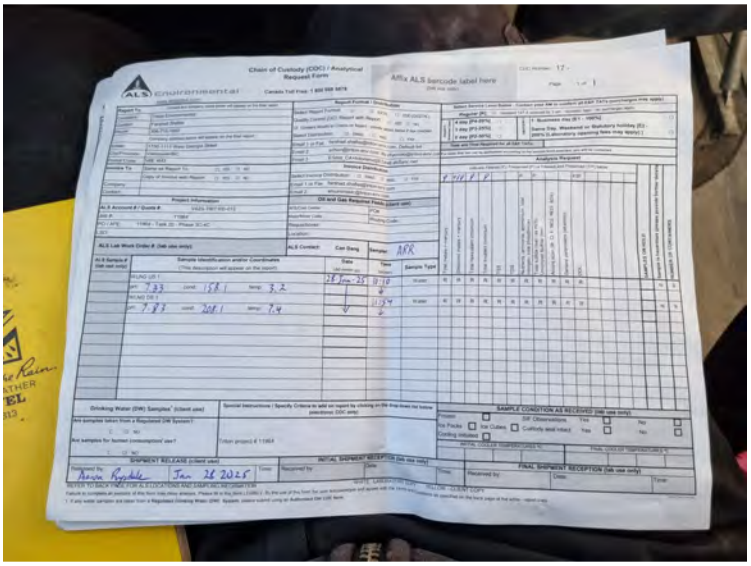


Photo: 1

Location:

Description: Sample COC

Photo: 2

Location: EAS US1

Description: Facing upstream from sampling point

Photos

Photo: 3

Location: EAS US1

Description: Sampling point

Photo: 4

Location: EAS US1

Description: Facing downstream from sampling point

Sign Off

Report Prepared By: Aaron Rysdale

Report Reviewed: Yes

Report Reviewer:

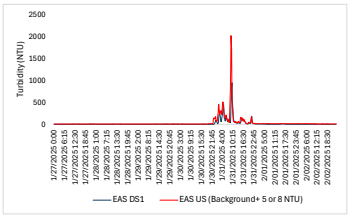
Professional(s) of Record:

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)
1/27/2025 0:00	4.7	50.6	0.0	7.4	12.0	0.0		1/27/2025 0:00	2.8	13.0	0.0	7.0	12.4	0.0	8.0
1/27/2025 0:15	3.4	26.6	0.0	6.9	12.5	0.0		1/27/2025 0:15	2.8	12.9	0.0	7.0	12.4	0.0	8.0
1/27/2025 0:30	3.0	24.1	0.0	6.8	12.6	0.0		1/27/2025 0:30	2.8	12.1	0.0	7.0	12.4	0.0	8.0
1/27/2025 0:45	4.4	85.5	0.0	7.2	12.4	0.0		1/27/2025 0:45	2.8	13.0	0.0	7.0	12.4	0.0	8.0
1/27/2025 1:00	6.1	111.7	0.1	7.6	11.6	0.0		1/27/2025 1:00	2.8	12.2	0.0	6.9	12.4	0.0	8.0
1/27/2025 1:15	6.3	112.3	0.1	7.6	11.6	0.0		1/27/2025 1:15	2.8	12.9	0.0	6.9	12.4	0.0	8.0
1/27/2025 1:30	6.4	112.7	0.1	7.6	11.5	0.0		1/27/2025 1:30	2.8	13.0	0.0	7.0	12.4	0.0	8.0
1/27/2025 1:45	5.7	95.4	0.0	7.6	11.7	0.0		1/27/2025 1:45	2.7	12.9	0.0	7.0	12.4	0.0	8.0
1/27/2025 2:00	3.6	30.5	0.0	7.0	12.4	0.0		1/27/2025 2:00	2.7	13.0	0.0	7.0	12.4	0.0	8.0
1/27/2025 2:15	3.1	25.6	0.0	6.9	12.6	0.0		1/27/2025 2:15	2.7	12.9	0.0	7.0	12.4	0.0	8.0
1/27/2025 2:30	2.9	24.0	0.0	6.8	12.7	0.0		1/27/2025 2:30	2.7	12.0	0.0	7.0	12.4	0.0	8.0
1/27/2025 2:45	5.8	110.8	0.1	7.6	11.7	0.0		1/27/2025 2:45	2.7	13.0	0.0	6.9	12.4	0.0	8.0
1/27/2025 3:00	5.0	69.3	0.0	7.5	11.9	0.0		1/27/2025 3:00	2.7	12.9	0.0	7.0	12.4	0.0	8.0
1/27/2025 3:15	3.2	27.0	0.0	6.9	12.5	0.0		1/27/2025 3:15	2.7	12.1	0.0	7.0	12.4	0.0	8.0
1/27/2025 3:30	5.7	108.1	0.0	7.6	11.8	0.0		1/27/2025 3:30	2.7	13.0	0.0	7.0	12.4	0.0	8.0
1/27/2025 3:45	5.4	84.4	0.0	7.5	11.8	0.0		1/27/2025 3:45	2.6	11.7	0.0	7.0	12.4	0.0	8.0
1/27/2025 4:00	3.3	28.6	0.0	7.0	12.5	0.0		1/27/2025 4:00	2.6	13.0	0.0	6.8	12.4	0.0	8.0
1/27/2025 4:15	2.9	24.9	0.0	6.8	12.7	0.0		1/27/2025 4:15	2.6	12.9	0.0	7.0	12.4	0.0	8.0
1/27/2025 4:30	3.0	34.6	0.0	7.0	12.6	0.0		1/27/2025 4:30	2.6	13.0	0.0	7.0	12.4	0.0	8.0
1/27/2025 4:45	2.7	23.3	0.0	6.8	12.7	0.0		1/27/2025 4:45	2.6	12.9	0.0	7.0	12.4	0.0	8.0
1/27/2025 5:00	5.1	105.6	0.0	7.5	11.9	0.0		1/27/2025 5:00	2.6	13.0	0.0	7.0	12.5	0.0	8.0
1/27/2025 5:15	5.8	110.1	0.1	7.6	11.7	0.0		1/27/2025 5:15	2.6	12.9	0.0	6.9	12.5	0.0	8.0
1/27/2025 5:30	5.6	100.8	0.0	7.5	11.8	0.0		1/27/2025 5:30	2.6	13.0	0.0	7.0	12.4	0.0	8.0
1/27/2025 5:45	6.1	111.0	0.1	7.6	11.6	0.0		1/27/2025 5:45	2.6	12.9	0.0	7.0	12.4	0.0	8.0
1/27/2025 6:00	6.2	109.9	0.1	7.6	11.6	0.0		1/27/2025 6:00	2.5	13.0	0.0	7.0	12.5	0.0	8.0
1/27/2025 6:15	6.0	96.9	0.0	7.6	11.6	0.0		1/27/2025 6:15	2.5	12.9	0.0	6.9	12.4	0.0	8.0
1/27/2025 6:30	4.4	70.5	0.0	7.2	12.4	0.1		1/27/2025 6:30	2.5	11.6	0.0	7.0	12.4	0.0	8.0
1/27/2025 6:45	4.5	53.5	0.0	7.4	12.0	0.0		1/27/2025 6:45	2.5	12.9	0.0	6.9	12.5	0.0	8.0
1/27/2025 7:00	3.1	27.1	0.0	6.9	12.6	0.0		1/27/2025 7:00	2.5	12.9	0.0	7.0	12.5	0.0	8.0
1/27/2025 7:15	4.1	75.4	0.0	7.3	12.3	0.0		1/27/2025 7:15	2.5	11.7	0.0	7.0	12.5	0.0	8.0
1/27/2025 7:30	5.9	100.7	0.0	7.6	11.7	0.0		1/27/2025 7:30	2.5	13.0	0.0	7.0	12.5	0.0	8.0
1/27/2025 7:45	6.1	100.7	0.0	7.6	11.6	0.0		1/27/2025 7:45	2.5	13.0	0.0	7.0	12.5	0.0	8.0
1/27/2025 8:00	6.2	100.8	0.0	7.6	11.6	0.0		1/27/2025 8:00	2.5	13.0	0.0	7.0	12.5	0.0	8.0
1/27/2025 8:15	6.0	96.0	0.0	7.6	11.6	0.0		1/27/2025 8:15	2.5	11.5	0.0	7.0	12.5	0.0	8.0
1/27/2025 8:30	3.6	31.3	0.0	7.1	12.4	0.0		1/27/2025 8:30	2.4	13.0	0.0	6.8	12.5	0.0	8.0
1/27/2025 8:45	3.0	25.9	0.0	6.9	12.6	0.0		1/27/2025 8:45	2.4	12.9	0.0	7.0	12.5	0.0	8.0
1/27/2025 9:00	2.7	24.3	0.0	6.8	12.7	0.0		1/27/2025 9:00	2.4	13.0	0.0	7.0	12.5	0.0	8.0
1/27/2025 9:15	2.6	23.4	0.0	6.7	12.8	0.0		1/27/2025 9:15	2.4	12.9	0.0	7.0	12.5	0.0	8.0
1/27/2025 9:30	5.7	101.1	0.0	7.5	11.7	0.0		1/27/2025 9:30	2.4	13.0	0.0	7.0	12.5	0.0	8.0
1/27/2025 9:45	6.0	102.7	0.0	7.6	11.6	0.0		1/27/2025 9:45	2.4	13.0	0.0	6.9	12.5	0.0	8.0
1/27/2025 10:00	6.1	102.6	0.0	7.6	11.6	0.0		1/27/2025 10:00	2.5	12.9	0.0	7.0	12.5	0.0	8.0
1/27/2025 10:15	6.0	101.8	0.0	7.6	11.7	0.0		1/27/2025 10:15	2.6	13.0	0.0	7.0	12.5	0.0	8.0
1/27/2025 10:30	3.9	36.0	0.0	7.2	12.3	0.0		1/27/2025 10:30	2.6	12.9	0.0	6.9	12.5	0.0	8.0
1/27/2025 10:45	3.1	26.2	0.0	6.9	12.6	0.0		1/27/2025 10:45	2.7	12.2	0.0	7.0	12.5	0.0	8.0
1/27/2025 11:00	3.2	39.7	0.0	6.8	12.7	0.0		1/27/2025 11:00	2.8	12.7	0.0	7.0	12.5	0.0	8.0
1/27/2025 11:15	6.1	105.2	0.0	7.6	11.6	0.0		1/27/2025 11:15	2.8	12.2	0.0	7.0	12.4	0.0	8.0
1/27/2025 11:30	6.5	107.1	0.0	7.6	11.5	0.0		1/27/2025 11:30	2.9	13.0	0.0	7.0	12.5	0.0	8.0
1/27/2025 11:45	6.7	108.7	0.1	7.6	11.4	0.0		1/27/2025 11:45	2.9	13.0	0.0	6.9	12.4	0.6	8.6
1/27/2025 12:00	6.1	80.6	0.0	7.5	11.6	0.0		1/27/2025 12:00	3.0	13.0	0.0	7.0	12.4	0.0	8.0
1/27/2025 12:15	4.0	29.4	0.0	7.0	12.3	0.0		1/27/2025 12:15	3.0	12.9	0.0	7.0	12.4	0.0	8.0
1/27/2025 12:30	3.6	25.5	0.0	6.9	12.4	0.0		1/27/2025 12:30	3.1	13.0	0.0	7.0	12.4	0.0	8.0
1/27/2025 12:45	4.9	73.0	0.0	7.3	12.0	0.0		1/27/2025 12:45	3.2	12.8	0.0	7.0	12.3	0.0	8.0
1/27/2025 13:00	4.2	34.0	0.0	7.1	12.1	0.0		1/27/2025 13:00	3.3	13.0	0.0	7.0	12.3	0.0	8.0
1/27/2025 13:15	3.7	24.5	0.0	6.8	12.4	0.0		1/27/2025 13:15	3.3	13.0	0.0	7.0	12.3	0.0	8.0
1/27/2025 13:30	5.5	91.9	0.0	7.3	11.9	0.2		1/27/2025 13:30	3.4	13.0	0.0	7.0	12.3	0.0	8.0
1/27/2025 13:45	6.5	98.9	0.0	7.6	11.4	0.2		1/27/2025 13:45	3.5	12.9	0.0	7.0	12.2	0.0	8.0
1/27/2025 14:00	5.1	45.7	0.0	7.4	11.8	0.2		1/27/2025 14:00	3.6	12.1	0.0	7.0	12.2	0.0	8.0
1/27/2025 14:15	4.1	26.0	0.0	6.9	12.2	0.0		1/27/2025 14:15	3.6	13.0	0.0	6.9	12.1	0.0	8.0
1/27/2025 14:30	4.7	57.1	0.0	6.9	12.2	0.0		1/27/2025 14:30	3.7	12.9	0.0	7.1	12.1	0.0	8.0
1/27/2025 14:45	7.2	115.0	0.1	7.6	11.2	0.9		1/27/2025 14:45	3.7	13.0	0.0	7.0	12.1	0.0	8.0
1/27/2025 15:00	7.5	117.1	0.1	7.6	11.2	0.4		1/27/2025 15:00	3.7	12.9	0.0	7.0	12.1	0.0	8.0
1/27/2025 15:15	7.3	110.1	0.1	7.6	11.2	0.0		1/27/2025 15:15	3.8	13.1	0.0	7.0	12.1	0.0	8.0
1/27/2025 15:30	6.5	77.6	0.0	7.5	11.4	1.2		1/27/2025 15:30	3.8	12.9	0.0	7.0	12.1	0.0	8.0
1/27/2025 15:45	4.7	29.3	0.0	7.0	12.0	0.0		1/27/2025 15:45	3.8	13.0	0.0	7.0	12.1	0.0	8.0
1/27/2025 16:00	4.3	25.5	0.0	6.9	12.2	0.0		1/27/2025 16:00	3.8	12.9	0.0	7.1	12.1	0.0	8.0
1/27/2025 16:15	6.7	110.0	0.1	7.5	11.5	0.0		1/27/2025 16:15	3.8	11.8	0.0	7.0	12.1	0.0	8.0
1/27/2025 16:30	7.0	101.4	0.0	7.6	11.3	0.0		1/27/2025 16:30	3.8	13.0	0.0	7.0	12.0	0.0	8.0
1/27/2025 16:45	7.4	119.5	0.1	7.6	11.2	0.0		1/27/2025 16:45	3.7	13.1	0.0	7.0	12.1	0.0	8.0
1/27/2025 17:00	7.5	127.2	0.1	7.6	11.2	0.0		1/27/2025 17:00	3.7	12.9	0.0	7.0	12.1	0.0	8.0
1/27/2025 17:15	7.6	133.8	0.1	7.6	11.1	0.0		1/27/2025 17:15	3.6	13.1	0.0	7.0	12.1	0.0	8.0
1/27/2025 17:30	7.5	136.8	0.1	7.6	11.2	0.0		1/27/2025 17:30	3.6	12.8	0.0	7.0	12.1	0.0	8.0
1/27/2025 17:45	6.2	73.8	0.0	7.4	11.5	0.0		1/27/2025 17:45	3.6	13.1	0.0	7.0	12.1	0.0	8.0
1/27/2025 18:00	4.5	31.4	0.0	7.0	12.0	0.0		1/27/2025 18:00	3.6	12.9	0.0	7.0	12.1	0.0	8.0
1/27/2025 18:15	4.1	27.1	0.0	6.9	12.2	0.0		1/27/2025 18:15	3.5	13.1	0.0	7.0	12.1	0.0	8.0
1/27/2025 18:30	3.9	25.2	0.0	6.8	12.3	0.0		1/27/2025 18:30	3.5	13.0	0.0	7.0	12.1	0.0	8.0
1/27/2025 18:45	5.9	99.9	0.0	7.5	11.6	0.0		1/27/2025 18:45	3.5	13.1	0.0	7.0	12.1	0.0	8.0
1/27/2025 19:00	7.0	129.8	0.1	7.6	11.3	0.0		1/27/2025 19:00	3.5	13.1	0.0	7.0	12.1	0.0	8.0
1/27/2025 19:15	7.2	127.4	0.1	7.6	11.2	0.0		1/27/2025 19:15	3.4	11.8	0.0	7.0	12.1	0.0	8.0
1/27/2025 19:30	7.3	124.7	0.1	7.6	11.2	0.0		1/27/2025 19:30	3.4	13.1	0.0	6.9	12.1	0.0	8.0
1/27/2025 19:45	5.5	55.3	0.0	7.4	11.6	0.0		1/27/2025 19:45	3.4	13.0	0.0	6.9	12.1	0.0	8.0
1/27/2025 20:00	4.2	29.7	0.0	6.9	12.2	0.0		1/27/2025 20:00	3.4	12.9	0.0	7.0	12.1	0.0	8.0
1/27/2025 20:15	3.8	26.3	0.0	6.9	12.3	0.0		1/27/2025 20:15	3.3	13.1	0.0	7.0	12.2	0.0	8.0
1/27/2025 20:30	3.6	24.8	0.0	6.8	12.4	0.0		1/27/2025 20:30	3.3	13.0	0.0	7.0	12.2	0.0	8.0
1/27/2025 20:45	6.5	119.1	0.1	7.6	11.5	0.0		1/27/2025 20:45	3.3	11.8	0.0	6.9	12.1	0.0	8.0
1/27/2025 21:00	6.9	117.5	0.1	7.6	11.3	0.0		1/27/2025 21:00	3.3	13.1	0.0	7.0	12.2	0.0	8.0
1/27/2025 21:15	7.0	117.0	0.1	7.6	11.3	0.0		1/27/2025 21:15	3.3	11.9	0.0	7.0	12.2	2.7	10.7
1/27/2025 21:30	6.3	97.9	0.0	7.5	11.5	0.0		1/27/2025 21:30	3.3	13.2	0.0	7.0	12.2	0.0	8.0
1/27/2025 21:45	4.3	32.4	0.0	7.0	12.1	0.0		1/27/2025 21:45	3.2	11.8	0.0	7.0	12.2	0.0	8.0
1/27/2025 22:00	3.7	26.5	0.0	6.9	12.3	0.0		1/27/2025 22:00	3.2	13.1	0.0	6.8	12.2	0.1	8.1
1/27/2025 22:15	3.5	24.8	0.0	6.8	12.4	0.0		1/27/2025 22:15	3.2	13.0	0.0	7.0	12.2	0.0	8.0
1/27/2025 22:30	3.4	23.8	0.0	6.8	12.4	0.0		1/27/2025 22:30	3.2	11.8	0.0	7.0	12.2	0.0	8.0
1/27/2025 22:45	3.4	26.2	0.0	6.9	12.5	0.0		1/27/2025 22:45	3.2	13.1	0.0	6.8	12.2	0.0	8.0
1/27/2025 23:00	6.1	110.6	0.1	7.5	11.6	0.3		1/27/2025 23:00	3.2	12.8	0.0	7.0	12.2	0.0	8.0
1/27/2025 23:15	6.7	113.0	0.1	7.6	11.4	1.2		1/27/2025 23:15	3.1	11.7	0.0	7.0	12.2	0.0	8.0
1/27/2025 23:30	6.5	104.4	0.0	7.6	11.4	1.1		1/27/2025 23:30	3.1	13.0	0.0	6.8	12.2	0.0	8.0
1/27/2025 23:45	5.2	56.6	0.0	7.4	11.8	0.0		1/27/2025 23:45	3.1	13.0	0.0	7.0	12.2	0.0	8.0
1/28/2025 0:00	3.8	27.9	0.0	6.9	12.3	0.0		1/28/2025 0:00	3.1	11.9	0.0	7.0	12.2	0.0	8.0
1/28/2025 0:15	5.4	97.6	0.0	7.4	11.9	0.4		1/28/2025 0:15	3.1	13.2	0.0	7.0	12.2	0.0	8.0
1/28/2025 0:30	6.6	110.8	0.1	7.6	11.4	0.5		1/28/2025 0:30	3.1	13.1	0.0	6.8	12.2	0.0	8.0
1/28/2025 0:45	6.8	110.5	0.1	7.6	11.4	0.2		1/28/2025 0:45	3.0	13.1	0.0	7.0	12.2	0.0	8.0
1/28/2025 1:00	6.8	110.8	0.1	7.6	11.4	0.0		1/28/2025 1:00	3.0	13.0	0.0	7.0	12.2	0.0	8.0
1/28/2025 1:15	6.9	110.8	0.1	7.6	11.4	0.0		1/28/2025 1:15	3.0	13.1	0.0	7.0	12.2	0.0	8.0
1/28/2025 1:30	6.9	111.2	0.1	7.6	11.3	0.0		1/28/2025 1:30	3.0	13.0	0.0	7.0	12.2	0.0	8.0
1/28/2025 1:45	6.0	74.9	0.0	7.5	11.5	0.6		1/28/2025 1:45	3.0	13.1	0.0	7.0	12.2	0.0	8.0
1/28/2025 2:00	4.0	30.2	0.0	7.0	12.2	0.0		1/28/2025 2:00	3.0	13.1	0.0	7.0	12.3	0.0	8.0
1/28/2025 2:15	3.5	26.3	0.0	6.8	12.4	0.0		1/28/2025 2:15	3.0	13.1	0.0	7.0	12.3	0.0	8.0
1/28/2025 2:30	5.3	88.9	0.0	7.4	11.8	0.0		1/28/2025 2:30	2.9	13.0	0.0	7.0	12.3	0.0	8.0
1/28/2025 2:45	6.6	110.5	0.1	7.6	11.4	0.0		1/28/2025 2:45	2.9	13.1	0.0	7.0	12.3	0.0	8.0
1/28/2025 3:00	6.5	101.8	0.0	7.6	11.4	0.0		1/28/2025 3:00	2.9	13.0	0.0	7.0	12.3	0.0	8.0
1/28/2025 3:15	4.0	31.3	0.0	7.0	12.2	0.0		1/28/2025 3:15	2.9	13.1	0.0	7.0	12.3	0.0	8.0
1/28/2025 3:30	3.4	26.2	0.0	6.9	12.4	0.0		1/28/2025 3:30	2.9	12.9	0.0	7.0	12.3	0.0	8.0
1/28/2025 3:45	3.2	25.9	0.0	6.8	12.5	0.0		1/28/2025 3:45	2.9	13.1	0.0	7.0	12.3	0.0	8.0
1/28/2025 4:00	4.4	78.7	0.0	7.1	12.3	0.0		1/28/2025 4:00	2.9	13.0	0.0	7.0	12.3	0.0	8.0
1/28/2025 4:15	3.6	30.8	0.0	7.0	12.3	0.0		1/28/2025 4:15	2.9	13.1	0.0	7.0	12.3	0.0	8.0
1/28/2025 4:30	3.1	24.0	0.0	6.8	12.5	0.0		1/28/2025 4:30	2.8	13.0	0.0	7.0	12.3	0.0	8.0
1/28/2025 4:45	5.0	86.7	0.0	7.4	11.9	0.0		1/28/2025 4:45	2.8	13.1	0.0	7.0	12.3	0.0	8.0
1/28/2025 5:00	6.5	111.9	0.1	7.6	11.4	0.0		1/28/2025 5:00	2.8	13.1	0.0	7.0	12.3	0.0	8.0
1/28/2025 5:15	6.8	113.1	0.1	7.6	11.3	0.0		1/28/2025 5:15	2.8	13.1	0.0	7.0	12.3	0.0	8.0
1/28/2025 5:30	6.9	113.3	0.1	7.6	11.3	0.0		1/28/2025 5:30	2.8	12.9	0.0	7.0	12.3	0.0	8.0
1/28/2025 5:45	7.0	112.9	0.1	7.6	11.3	0.0		1/28/2025 5:45	2.8	13.1	0.0	7.0	12.3	0.0	8.0
1/28/2025 6:00	6.4	90.7	0.0	7.5	11.4	0.0		1/28/2025 6:00	2.8	13.0	0.0	6.9	12.3	0.0	8.0
1/28/2025 6:15	3.9	31.1	0.0	7.0	12.2	0.0		1/28/2025 6:15	2.8	12.2	0.0	6.9	12.3	0.0	8.0
1/28/2025 6:30	3.3	26.4	0.0	6.9	12.4	0.0		1/28/2025 6:30	2.8	13.0	0.0	7.0	12.3	0.0	8.0
1/28/2025 6:45	3.1	24.7	0.0	6.8	12.5	0.0		1/28/2025 6:45	2.8	13.1	0.0	7.0	12.3	0.0	8.0
1/28/2025 7:00	5.5	91.3	0.0	7.5	11.7	0.0		1/28/2025 7:00	2.7	13.0	0.0	7.0	12.3	0.0	8.0
1/28/2025 7:15	4.0	35.8	0.0	7.2	12.2	0.0		1/28/2025 7:15	2.7	13.1	0.0	7.0	12.3	0.0	8.0
1/28/2025 7:30	6.1	103.9	0.0	7.5	11.6	0.0		1/28/2025 7:30	2.7	13.0	0.0	7.0	12.3	0.0	8.0
1/28/2025 7:45	4.7	47.2	0.0	7.3	11.9	0.0		1/28/2025 7:45	2.7	13.1	0.0	7.0	12.3	0.0	8.0
1/28/2025 8:00	3.3	26.3	0.0	6.9	12.4	0.0		1/28/2025 8:00	2.7	13.0	0.0	7.0	12.3	0.0	8.0
1/28/2025 8:15	5.2	93.6	0.0	7.3	11.9	0.0		1/28/2025 8:15	2.7	13.1	0.0	7.0	12.3	0.0	8.0
1/28/2025 8:30	6.6	106.9	0.0	7.6	11.4	0.0		1/28/2025 8:30	2.7	13.0	0.0	7.0	12.3	0.0	8.0
1/28/2025 8:45	6.7	106.7	0.0	7.6	11.4	0.0		1/28/2025 8:45	2.7	13.1	0.0	7.0	12.3	0.0	8.0
1/28/2025 9:00	6.8	106.5	0.0	7.6	11.3	0.0		1/28/2025 9:00	2.7	13.0	0.0	7.0	12.3	0.0	8.0
1/28/2025 9:15	6.8	105.5	0.0	7.6	11.3	0.0		1/28/2025 9:15	2.7	13.1	0.0	7.0	12.3	0.0	8.0
1/28/2025 9:30	6.8	105.3	0.0	7.6	11.3	0.0		1/28/2025 9:30	2.7	13.0	0.0	7.0	12.4	0.0	8.0
1/28/2025 9:45	6.6	100.4	0.0	7.6	11.3	0.0		1/28/2025 9:45	2.7	13.0	0.0	7.0	12.4	0.0	8.0
1/28/2025 10:00	4.1	33.0	0.0	7.1	12.1	0.0		1/28/2025 10:00	2.7	13.1	0.0	7.0	12.4	0.0	8.0
1/28/2025 10:15	3.4	26.8	0.0	6.9	12.4	0.0		1/28/2025 10:15	2.8	13.0	0.0	7.0	12.4	0.0	8.0
1/28/2025 10:30	3.1	24.8	0.0	6.8	12.5	0.0		1/28/2025 10:30	2.8	13.1	0.0	7.0	12.4	0.0	8.0
1/28/2025 10:45	6.3	103.2	0.0	7.5	11.5	0.0		1/28/2025 10:45	2.9	13.1	0.0	7.0	12.4	0.0	8.0
1/28/2025 11:00	6.7	103.4	0.0	7.6		0.0		1/28/2025 11:00	3.0	13.0	0.0	7.0	12.3	0.0	8.0
1/28/2025 11:15	6.7	100.5	0.0	7.6	11.4	0.0		1/28/2025 11:15	3.0	13.1	0.0	7.0	12.3	0.0	8.0



1/28/2025 11:30	6.8	102.7	0.0	7.6	11.4	0.0	1/28/2025 11:30	3.1	12.9	0.0	7.0	12.3	0.0	8.0
1/28/2025 11:45	4.8	38.4	0.0	7.2	11.9	0.0	1/28/2025 11:45	3.1	13.1	0.0	7.0	12.3	0.0	8.0
1/28/2025 12:00	3.9	27.1	0.0	6.9	12.3	0.0	1/28/2025 12:00	3.2	12.9	0.0	7.0	12.3	0.0	8.0
1/28/2025 12:15	3.7	24.8	0.0	6.8	12.4	0.0	1/28/2025 12:15	3.3	13.1	0.0	7.0	12.2	0.0	8.0
1/28/2025 12:30	6.8	102.3	0.0	7.5	11.4	0.0	1/28/2025 12:30	3.3	13.0	0.0	7.0	12.2	0.0	8.0
1/28/2025 12:45	7.2	101.4	0.0	7.6	11.2	0.0	1/28/2025 12:45	3.4	11.9	0.0	7.0	12.2	0.0	8.0
1/28/2025 13:00	7.4	100.8	0.0	7.6	11.2	0.0	1/28/2025 13:00	3.5	13.0	0.0	7.0	12.2	0.0	8.0
1/28/2025 13:15	5.0	33.8	0.0	7.1	11.9	0.0	1/28/2025 13:15	3.6	13.1	0.0	7.0	12.1	0.0	8.0
1/28/2025 13:30	4.3	26.2	0.0	6.9	12.1	0.0	1/28/2025 13:30	3.6	13.0	0.0	7.0	12.1	0.0	8.0
1/28/2025 13:45	4.1	24.4	0.0	6.8	12.2	0.0	1/28/2025 13:45	3.7	13.1	0.0	7.0	12.1	0.0	8.0
1/28/2025 14:00	4.0	23.4	0.0	6.8	12.2	0.0	1/28/2025 14:00	3.8	12.8	0.0	7.0	12.0	0.0	8.0
1/28/2025 14:15	6.0	76.1	0.0	7.4	11.5	0.0	1/28/2025 14:15	3.8	13.0	0.0	7.0	12.0	0.0	8.0
1/28/2025 14:30	7.5	99.6	0.0	7.6	11.1	0.0	1/28/2025 14:30	3.9	12.9	0.0	7.0	12.0	0.0	8.0
1/28/2025 14:45	7.8	100.5	0.0	7.6	11.0	0.0	1/28/2025 14:45	3.9	12.3	0.0	7.0	12.0	0.0	8.0
1/28/2025 15:00	7.7	96.9	0.0	7.6	11.0	0.0	1/28/2025 15:00	3.9	12.9	0.0	7.0	12.0	0.0	8.0
1/28/2025 15:15	5.3	32.0	0.0	7.1	11.7	0.0	1/28/2025 15:15	4.0	13.1	0.0	7.0	12.0	0.0	8.0
1/28/2025 15:30	4.7	25.8	0.0	6.9	12.0	0.0	1/28/2025 15:30	4.0	13.1	0.0	7.1	12.0	0.0	8.0
1/28/2025 15:45	4.4	24.1	0.0	6.8	12.1	0.0	1/28/2025 15:45	4.0	13.1	0.0	7.0	11.9	0.0	8.0
1/28/2025 16:00	4.3	23.2	0.0	6.8	12.1	0.0	1/28/2025 16:00	4.0	13.1	0.0	7.0	11.9	0.0	8.0
1/28/2025 16:15	4.2	22.7	0.0	6.7	12.1	0.0	1/28/2025 16:15	4.0	13.1	0.0	7.0	11.9	0.0	8.0
1/28/2025 16:30	5.4	67.7	0.0	7.1	11.9	0.0	1/28/2025 16:30	4.0	13.0	0.0	7.0	11.9	0.0	8.0
1/28/2025 16:45	6.4	76.0	0.0	7.4	11.4	0.0	1/28/2025 16:45	3.9	13.1	0.0	7.0	11.9	0.0	8.0
1/28/2025 17:00	4.7	27.9	0.0	7.0	11.9	0.0	1/28/2025 17:00	3.9	13.1	0.0	7.0	12.0	0.0	8.0
1/28/2025 17:15	7.1	97.3	0.0	7.5	11.2	0.0	1/28/2025 17:15	3.9	13.2	0.0	6.9	12.0	0.0	8.0
1/28/2025 17:30	7.6	100.7	0.0	7.6	11.1	0.0	1/28/2025 17:30	3.8	13.1	0.0	7.0	12.0	0.0	8.0
1/28/2025 17:45	7.7	101.9	0.0	7.6	11.0	0.0	1/28/2025 17:45	3.8	13.2	0.0	7.0	12.0	0.0	8.0
1/28/2025 18:00	7.7	103.0	0.0	7.6	11.1	0.0	1/28/2025 18:00	3.8	13.1	0.0	7.0	12.0	0.0	8.0
1/28/2025 18:15	7.6	104.3	0.0	7.6	11.1	0.0	1/28/2025 18:15	3.7	13.2	0.0	7.0	12.0	0.0	8.0
1/28/2025 18:30	7.1	87.7	0.0	7.6	11.2	0.0	1/28/2025 18:30	3.7	13.1	0.0	7.0	12.0	0.0	8.0
1/28/2025 18:45	4.9	30.8	0.0	7.0	11.9	0.0	1/28/2025 18:45	3.7	13.2	0.0	7.0	12.0	0.0	8.0
1/28/2025 19:00	4.3	26.1	0.0	6.9	12.1	0.0	1/28/2025 19:00	3.6	13.1	0.0	7.0	12.0	0.0	8.0
1/28/2025 19:15	4.0	24.5	0.0	6.8	12.2	0.0	1/28/2025 19:15	3.6	13.2	0.0	7.0	12.0	0.0	8.0
1/28/2025 19:30	3.9	23.6	0.0	6.8	12.2	0.0	1/28/2025 19:30	3.6	13.1	0.0	7.0	12.0	0.0	8.0
1/28/2025 19:45	5.9	84.9	0.0	7.4	11.6	0.0	1/28/2025 19:45	3.6	13.2	0.0	7.0	12.0	0.0	8.0
1/28/2025 20:00	7.1	105.9	0.0	7.6	11.2	0.0	1/28/2025 20:00	3.5	13.1	0.0	7.0	12.0	0.0	8.0
1/28/2025 20:15	7.2	107.8	0.0	7.6	11.2	0.0	1/28/2025 20:15	3.5	13.2	0.0	6.9	12.0	0.0	8.0
1/28/2025 20:30	7.1	101.9	0.0	7.6	11.2	0.0	1/28/2025 20:30	3.5	13.1	0.0	7.0	12.0	0.0	8.0
1/28/2025 20:45	4.7	32.7	0.0	7.1	11.9	0.0	1/28/2025 20:45	3.5	12.4	0.0	6.9	12.0	0.0	8.0
1/28/2025 21:00	4.1	26.3	0.0	6.9	12.2	0.0	1/28/2025 21:00	3.5	13.3	0.0	7.0	12.0	0.0	8.0
1/28/2025 21:15	3.8	24.6	0.0	6.8	12.2	0.0	1/28/2025 21:15	3.4	13.2	0.0	7.0	12.1	0.0	8.0
1/28/2025 21:30	3.7	23.6	0.0	6.8	12.3	0.0	1/28/2025 21:30	3.4	13.2	0.0	7.0	12.0	0.0	8.0
1/28/2025 21:45	3.6	23.0	0.0	6.7	12.3	0.0	1/28/2025 21:45	3.4	13.2	0.0	7.0	12.1	0.0	8.0
1/28/2025 22:00	3.9	49.5	0.0	7.0	12.2	0.0	1/28/2025 22:00	3.4	13.0	0.0	6.9	12.1	0.0	8.0
1/28/2025 22:15	6.5	104.9	0.0	7.6	11.4	0.0	1/28/2025 22:15	3.3	12.3	0.0	7.0	12.1	0.0	8.0
1/28/2025 22:30	6.8	106.8	0.0	7.6	11.3	0.0	1/28/2025 22:30	3.3	13.2	0.0	6.9	12.1	0.0	8.0
1/28/2025 22:45	6.9	107.5	0.0	7.6	11.3	0.0	1/28/2025 22:45	3.3	13.1	0.0	7.0	12.1	0.0	8.0
1/28/2025 23:00	5.9	69.2	0.0	7.5	11.4	0.0	1/28/2025 23:00	3.3	11.8	0.0	7.0	12.1	0.0	8.0
1/28/2025 23:15	4.2	29.0	0.0	7.0	12.1	0.0	1/28/2025 23:15	3.3	13.1	0.0	6.9	12.1	0.0	8.0
1/28/2025 23:30	3.7	25.3	0.0	6.8	12.3	0.0	1/28/2025 23:30	3.2	13.1	0.0	7.0	12.1	0.0	8.0
1/28/2025 23:45	3.5	23.9	0.0	6.8	12.3	0.0	1/28/2025 23:45	3.2	13.2	0.0	7.0	12.1	0.0	8.0
1/29/2025 0:00	3.5	28.6	0.0	6.9	12.3	0.0	1/29/2025 0:00	3.2	13.1	0.0	7.0	12.1	0.0	8.0
1/29/2025 0:15	3.3	23.0	0.0	6.7	12.4	0.0	1/29/2025 0:15	3.2	13.2	0.0	7.0	12.1	0.0	8.0
1/29/2025 0:30	3.2	22.4	0.0	6.7	12.4	0.0	1/29/2025 0:30	3.1	13.1	0.0	7.0	12.2	0.0	8.0
1/29/2025 0:45	3.1	22.1	0.0	6.7	12.5	0.0	1/29/2025 0:45	3.1	11.8	0.0	7.0	12.2	0.0	8.0
1/29/2025 1:00	5.2	95.3	0.0	7.4	11.9	0.0	1/29/2025 1:00	3.1	13.1	0.0	7.0	12.2	0.0	8.0
1/29/2025 1:15	6.3	105.9	0.0	7.6	11.4	0.0	1/29/2025 1:15	3.1	11.9	0.0	7.0	12.2	0.0	8.0
1/29/2025 1:30	6.5	106.2	0.0	7.6	11.4	0.0	1/29/2025 1:30	3.1	13.1	0.0	7.0	12.2	0.0	8.0
1/29/2025 1:45	6.6	106.6	0.0	7.6	11.4	0.0	1/29/2025 1:45	3.0	12.6	0.0	7.0	12.2	0.0	8.0
1/29/2025 2:00	6.7	107.3	0.0	7.6	11.3	0.0	1/29/2025 2:00	3.0	13.1	0.0	7.0	12.2	0.0	8.0
1/29/2025 2:15	6.7	108.1	0.0	7.6	11.3	0.0	1/29/2025 2:15	3.0	13.2	0.0	7.0	12.2	0.0	8.0
1/29/2025 2:30	6.1	95.3	0.0	7.6	11.5	0.0	1/29/2025 2:30	3.0	13.0	0.0	7.0	12.2	0.0	8.0
1/29/2025 2:45	6.4	106.5	0.0	7.6	11.4	0.0	1/29/2025 2:45	3.0	11.9	0.0	7.0	12.2	0.0	8.0
1/29/2025 3:00	6.1	86.6	0.0	7.6	11.5	0.0	1/29/2025 3:00	3.0	13.1	0.0	6.9	12.2	0.0	8.0
1/29/2025 3:15	3.9	30.4	0.0	7.1	12.2	0.0	1/29/2025 3:15	2.9	13.1	0.0	7.0	12.2	0.0	8.0
1/29/2025 3:30	3.4	26.1	0.0	6.9	12.4	0.0	1/29/2025 3:30	2.9	12.5	0.0	7.0	12.2	0.0	8.0
1/29/2025 3:45	3.5	37.3	0.0	7.0	12.3	0.0	1/29/2025 3:45	2.9	13.2	0.0	7.1	12.2	0.0	8.0
1/29/2025 4:00	5.0	85.7	0.0	7.4	11.8	0.0	1/29/2025 4:00	2.9	13.2	0.0	7.0	12.2	0.0	8.0
1/29/2025 4:15	6.2	108.3	0.0	7.6	11.5	0.0	1/29/2025 4:15	2.9	13.2	0.0	7.0	12.2	0.0	8.0
1/29/2025 4:30	6.4	109.4	0.1	7.6	11.4	0.0	1/29/2025 4:30	2.9	13.1	0.0	7.0	12.3	0.0	8.0
1/29/2025 4:45	6.5	109.4	0.1	7.6	11.4	0.0	1/29/2025 4:45	2.8	13.2	0.0	7.0	12.2	0.0	8.0
1/29/2025 5:00	6.5	109.3	0.1	7.6	11.4	0.0	1/29/2025 5:00	2.8	13.2	0.0	7.0	12.2	0.0	8.0
1/29/2025 5:15	6.5	109.1	0.1	7.6	11.4	0.0	1/29/2025 5:15	2.8	13.0	0.0	7.0	12.2	0.0	8.0
1/29/2025 5:30	5.1	56.8	0.0	7.5	11.7	0.0	1/29/2025 5:30	2.8	12.3	0.0	7.0	12.2	0.0	8.0
1/29/2025 5:45	3.7	29.4	0.0	7.0	12.2	0.0	1/29/2025 5:45	2.8	11.4	0.0	7.1	12.3	0.0	8.0
1/29/2025 6:00	3.3	26.0	0.0	6.9	12.4	0.0	1/29/2025 6:00	2.8	13.1	0.0	7.0	12.2	0.0	8.0
1/29/2025 6:15	3.1	26.2	0.0	6.8	12.5	0.0	1/29/2025 6:15	2.8	13.2	0.0	7.0	12.3	0.0	8.0
1/29/2025 6:30	3.8	67.1	0.0	7.1	12.3	0.0	1/29/2025 6:30	2.8	13.1	0.0	6.9	12.3	0.0	8.0
1/29/2025 6:45	5.8	104.3	0.0	7.6	11.6	0.0	1/29/2025 6:45	2.7	12.3	0.0	7.0	12.2	0.0	8.0
1/29/2025 7:00	6.1	106.8	0.0	7.6	11.5	0.0	1/29/2025 7:00	2.7	11.4	0.0	7.1	12.3	0.0	8.0
1/29/2025 7:15	6.2	107.2	0.0	7.6	11.5	0.0	1/29/2025 7:15	2.7	13.1	0.0	7.0	12.3	0.0	8.0
1/29/2025 7:30	6.2	107.2	0.0	7.6	11.5	0.0	1/29/2025 7:30	2.7	13.1	0.0	7.0	12.3	0.0	8.0
1/29/2025 7:45	4.3	38.8	0.0	7.2	12.0	0.0	1/29/2025 7:45	2.7	13.2	0.0	7.0	12.3	0.0	8.0
1/29/2025 8:00	3.3	27.6	0.0	6.9	12.4	0.0	1/29/2025 8:00	2.7	13.2	0.0	7.0	12.3	0.0	8.0
1/29/2025 8:15	3.0	25.2	0.0	6.8	12.5	0.0	1/29/2025 8:15	2.7	13.1	0.0	6.8	12.3	0.0	8.0
1/29/2025 8:30	2.9	24.1	0.0	6.8	12.5	0.0	1/29/2025 8:30	2.6	13.2	0.0	7.0	12.3	0.0	8.0
1/29/2025 8:45	5.7	105.9	0.0	7.6	11.6	0.0	1/29/2025 8:45	2.6	13.1	0.0	7.0	12.3	0.0	8.0
1/29/2025 9:00	6.0	106.1	0.0	7.6	11.5	0.0	1/29/2025 9:00	2.6	13.2	0.0	7.0	12.3	0.0	8.0
1/29/2025 9:15	6.1	106.5	0.0	7.6	11.5	0.0	1/29/2025 9:15	2.6	13.2	0.0	7.0	12.3	0.0	8.0
1/29/2025 9:30	6.1	106.2	0.0	7.6	11.5	0.0	1/29/2025 9:30	2.6	13.1	0.0	6.9	12.3	0.0	8.0
1/29/2025 9:45	6.2	106.1	0.0	7.6	11.5	0.0	1/29/2025 9:45	2.6	13.1	0.0	7.0	12.3	0.0	8.0
1/29/2025 10:00	4.5	44.7	0.0	7.3	11.9	0.0	1/29/2025 10:00	2.7	13.0	0.0	7.0	12.3	0.0	8.0
1/29/2025 10:15	3.4	28.3	0.0	7.0	12.3	0.0	1/29/2025 10:15	2.8	13.1	0.0	7.0	12.4	0.0	8.0
1/29/2025 10:30	3.1	25.6	0.0	6.8	12.5	0.0	1/29/2025 10:30	2.8	12.9	0.0	7.0	12.3	0.0	8.0
1/29/2025 10:45	3.0	24.3	0.0	6.8	12.5	0.0	1/29/2025 10:45	2.9	13.1	0.0	7.0	12.3	0.0	8.0
1/29/2025 11:00	5.1	88.8	0.0	7.5	11.9	0.0	1/29/2025 11:00	2.9	13.0	0.0	7.1	12.3	0.0	8.0
1/29/2025 11:15	3.9	36.1	0.0	7.2	12.1	0.0	1/29/2025 11:15	3.0	13.1	0.0	7.0	12.3	0.0	8.0
1/29/2025 11:30	3.6	41.4	0.0	6.9	12.5	0.0	1/29/2025 11:30	3.0	13.0	0.0	7.0	12.3	0.0	8.0
1/29/2025 11:45	6.3	107.2	0.0	7.6	11.5	0.0	1/29/2025 11:45	3.1	13.1	0.0	7.0	12.3	0.0	8.0
1/29/2025 12:00	6.6	107.6	0.0	7.6	11.4	0.0	1/29/2025 12:00	3.1	13.2	0.0	7.1	12.2	0.0	8.0
1/29/2025 12:15	6.8	108.1	0.0	7.6	11.3	0.2	1/29/2025 12:15	3.2	13.1	0.0	7.0	12.2	0.0	8.0
1/29/2025 12:30	7.0	108.5	0.1	7.6	11.3	0.0	1/29/2025 12:30	3.3	13.1	0.0	7.0	12.2	0.0	8.0
1/29/2025 12:45	7.1	108.4	0.1	7.6	11.2	0.0	1/29/2025 12:45	3.4	13.2	0.0	7.1	12.2	0.2	8.2
1/29/2025 13:00	5.4	45.1	0.0	7.4	11.6	0.0	1/29/2025 13:00	3.4	13.1	0.0	7.1	12.2	0.0	8.0
1/29/2025 13:15	4.3	28.5	0.0	7.0	12.1	0.0	1/29/2025 13:15	3.5	13.0	0.0	7.0	12.1	0.0	8.0
1/29/2025 13:30	4.1	25.7	0.0	6.9	12.1	0.0	1/29/2025 13:30	3.6	13.1	0.0	7.0	12.1	0.0	8.0
1/29/2025 13:45	4.0	24.4	0.0	6.8	12.2	0.0	1/29/2025 13:45	3.7	13.1	0.0	7.1	12.1	0.0	8.0
1/29/2025 14:00	5.9	89.2	0.0	7.5	11.6	0.0	1/29/2025 14:00	3.7	13.1	0.0	7.0	12.0	0.0	8.0
1/29/2025 14:15	7.1	106.5	0.0	7.6	11.2	0.0	1/29/2025 14:15	3.8	13.0	0.0	7.1	12.0	0.0	8.0
1/29/2025 14:30	7.4	107.3	0.0	7.6	11.1	0.0	1/29/2025 14:30	3.8	12.2	0.0	7.0	12.0	0.0	8.0
1/29/2025 14:45	6.2	59.6	0.0	7.5	11.4	0.0	1/29/2025 14:45	3.8	13.1	0.0	6.9	12.0	0.0	8.0
1/29/2025 15:00	4.8	28.9	0.0	7.0	11.9	0.0	1/29/2025 15:00	3.9	13.1	0.0	7.0	12.0	0.0	8.0
1/29/2025 15:15	7.0	103.4	0.0	7.6	11.3	0.0	1/29/2025 15:15	3.9	13.1	0.0	7.0	12.0	0.0	8.0
1/29/2025 15:30	7.1	99.9	0.0	7.6	11.2	0.0	1/29/2025 15:30	3.9	13.1	0.0	7.0	11.9	0.0	8.0
1/29/2025 15:45	7.6	108.1	0.0	7.6	11.1	0.5	1/29/2025 15:45	3.9	12.3	0.0	7.0	11.9	0.0	8.0
1/29/2025 16:00	7.6	109.2	0.1	7.6	11.0	0.3	1/29/2025 16:00	3.9	13.1	0.0	6.9	11.9	0.0	8.0
1/29/2025 16:15	6.7	72.1	0.0	7.5	11.2	0.0	1/29/2025 16:15	3.9	13.0	0.0	7.0	11.9	0.0	8.0
1/29/2025 16:30	5.0	30.1	0.0	7.0	11.8	0.0	1/29/2025 16:30	3.9	13.2	0.0	7.0	12.0	0.0	8.0
1/29/2025 16:45	4.5	26.2	0.0	6.9	12.0	0.0	1/29/2025 16:45	3.8	13.2	0.0	7.0	11.9	0.0	8.0
1/29/2025 17:00	6.5	87.5	0.0	7.5	11.3	0.0	1/29/2025 17:00	3.8	13.2	0.0	7.0	11.9	0.0	8.0
1/29/2025 17:15	5.2	39.7	0.0	7.2	11.7	0.0	1/29/2025 17:15	3.8	13.1	0.0	7.0	11.9	0.0	8.0
1/29/2025 17:30	4.5	32.2	0.0	6.9	12.1	0.0	1/29/2025 17:30	3.7	13.2	0.0	7.0	12.0	0.0	8.0
1/29/2025 17:45	7.3	112.0	0.1	7.6	11.1	1.1	1/29/2025 17:45	3.7	13.2	0.0	7.0	12.0	0.0	8.0
1/29/2025 18:00	7.4	114.2	0.1	7.6	11.1	0.0	1/29/2025 18:00	3.7	12.3	0.0	7.0	12.0	0.0	8.0
1/29/2025 18:15	7.5	114.7	0.1	7.6	11.1	0.0	1/29/2025 18:15	3.6	13.2	0.0	6.9	12.0	0.0	8.0
1/29/2025 18:30	7.5	115.4	0.1	7.6	11.1	0.0	1/29/2025 18:30	3.6	13.2	0.0	7.0	12.0	0.0	8.0
1/29/2025 18:45	6.3	64.0	0.0	7.4	11.3	0.0	1/29/2025 18:45	3.6	13.3	0.0	7.0	12.0	0.0	8.0
1/29/2025 19:00	4.6	30.7	0.0	7.0	11.9	0.0	1/29/2025 19:00	3.6	13.3	0.0	7.0	12.0	0.1	8.1
1/29/2025 19:15	4.2	26.9	0.0	6.9	12.1	0.0	1/29/2025 19:15	3.6	13.3	0.0	6.9	12.0	0.0	8.0
1/29/2025 19:30	4.0	25.2	0.0	6.8	12.1	0.0	1/29/2025 19:30	3.5	13.2	0.0	7.0	12.0	0.0	8.0
1/29/2025 19:45	6.2	101.9	0.0	7.5	11.5	0.0	1/29/2025 19:45	3.5	13.3	0.0	7.0	12.0	0.0	8.0
1/29/2025 20:00	7.2	114.4	0.1	7.6	11.2	0.0	1/29/2025 20:00	3.5	13.2	0.0	7.0	12.0	0.0	8.0
1/29/2025 20:15	7.3	115.8	0.1	7.6	11.1	0.0	1/29/2025 20:15	3.5	13.3	0.0	7.0	12.0	0.0	8.0
1/29/2025 20:30	7.4	116.2	0.1	7.6	11.1	0.4	1/29/2025 20:30	3.5	13.2	0.0	7.0	12.0	0.0	8.0
1/29/2025 20:45	7.4	116.3	0.1	7.6	11.1	0.0	1/29/2025 20:45	3.4	12.6	0.0	7.0	12.0	0.0	8.0
1/29/2025 21:00	5.2	41.0	0.0	7.2	11.7	0.0	1/29/2025 21:00	3.4	13.0	0.0	7.0	12.0	0.0	8.0
1/29/2025 21:15	4.3	28.8	0.0	6.9	12.0	0.0	1/29/2025 21:15	3.4	13.3	0.0	7.0	12.0	0.0	8.0
1/29/2025 21:30	4.0	26.2	0.0	6.9	12.1	0.0	1/29/2025 21:30	3.5	13.2	0.0	7.1	12.0	0.0	8.0
1/29/2025 21:45	3.9	24.9	0.0	6.8	12.2	0.0	1/29/2025 21:45	3.5	13.3	0.0	7.0	12.0	0.0	8.0
1/29/2025 22:00	6.1	104.7	0.0	7.4	11.6	0.0	1/29/2025 22:00	3.5	13.2	0.0	7.0	12.0	0.0	8.0
1/29/2025 22:15	7.1	115.3	0.1	7.6	11.2	0.0	1/29/2025 22:15	3.5	13.3	0.0	7.0	12.0	0.0	8.0
1/29/2025 22:30	7.3	115.9	0.1	7.6	11.1	0.0	1/29/2025 22:30	3.6	13.1	0.0	7.0	12.0	0.0	8.0
1/29/2025 22:45	7.4	115.3	0.1	7.6	11.1	0.0	1/29/2025 22:45	3.6	13.3	0.0	7.0	12.0	1.0	9.0
1/29/2025 23:00	6.2	68.0	0.0	7.5	11.4	0.0	1/29/2025 23:00	3.6	13.2	0.0	7.0	12.0	0.0	8.0
1/29/2025 23:15	4.6	30.5	0.0	7.0	11.9	0.0	1/29/2025 23:15	3.6	13.3	0.0	7.0	12.0	0.0	8.0
1/29/2025 23:30	4.2	26.8	0.0	6.9	12.1	0.0	1/29/2025 23:30	3.6	13.2	0.0	7.0	12.0	0.0	8.0
1/29/2025 23:45	4.0	25.1	0.0	6.8	12.1	0.0	1/29/2025 23:45	3.6	12.1	0.0	7.0	12.0	0.0	8.0
1/30/2025 0:00	6.4	107.0	0.0	7.5	11.4	0.0	1/30/2025 0:00	3.6	13.3	0.0	7.0	12.0	0.0	8.0
1/30/2025 0:15	7.3	113.7	0.1	7.6	11.1	0.0	1/30/2025 0:15	3.6	12.2	0.0	7.0	12.0	0.0	8.0

1/30/2025 0:30	6.8	97.9	0.0	7.5	11.3	0.0	1/30/2025 0:30	3.6	13.3	0.0	6.9	12.0	0.0	8.0
1/30/2025 0:45	7.6	116.5	0.1	7.6	11.1	0.0	1/30/2025 0:45	3.6	13.3	0.0	7.0	12.0	0.0	8.0
1/30/2025 1:00	7.6	116.9	0.1	7.6	11.1	0.0	1/30/2025 1:00	3.6	13.3	0.0	7.0	12.0	0.0	8.0
1/30/2025 1:15	7.7	116.5	0.1	7.6	11.0	0.0	1/30/2025 1:15	3.6	13.3	0.0	7.0	12.0	0.0	8.0
1/30/2025 1:30	6.9	81.5	0.0	7.5	11.2	0.0	1/30/2025 1:30	3.6	13.3	0.0	7.0	12.0	1.2	9.2
1/30/2025 1:45	4.8	32.3	0.0	7.1	11.8	0.0	1/30/2025 1:45	3.6	13.1	0.0	7.0	12.0	0.0	8.0
1/30/2025 2:00	4.3	27.6	0.0	6.9	12.0	0.0	1/30/2025 2:00	3.6	13.3	0.0	7.0	12.0	0.0	8.0
1/30/2025 2:15	4.1	25.7	0.0	6.8	12.1	0.0	1/30/2025 2:15	3.6	13.2	0.0	7.0	12.0	0.0	8.0
1/30/2025 2:30	4.0	24.6	0.0	6.8	12.2	0.0	1/30/2025 2:30	3.6	12.1	0.0	7.0	12.0	0.0	8.0
1/30/2025 2:45	6.1	94.1	0.0	7.4	11.5	0.0	1/30/2025 2:45	3.6	13.3	0.0	6.9	12.0	0.0	8.0
1/30/2025 3:00	7.3	111.8	0.1	7.6	11.1	0.0	1/30/2025 3:00	3.6	13.1	0.0	7.0	12.0	0.0	8.0
1/30/2025 3:15	7.5	112.6	0.1	7.6	11.1	0.0	1/30/2025 3:15	3.6	13.3	0.0	7.0	12.0	0.0	8.0
1/30/2025 3:30	7.3	103.1	0.0	7.6	11.1	0.0	1/30/2025 3:30	3.6	13.2	0.0	7.0	11.9	0.0	8.0
1/30/2025 3:45	5.0	34.5	0.0	7.1	11.8	0.0	1/30/2025 3:45	3.6	13.3	0.0	7.0	12.0	0.0	8.0
1/30/2025 4:00	4.3	27.5	0.0	6.9	12.0	0.0	1/30/2025 4:00	3.6	13.2	0.0	7.0	11.9	0.0	8.0
1/30/2025 4:15	4.1	25.5	0.0	6.8	12.1	0.0	1/30/2025 4:15	3.6	12.0	0.0	7.0	12.0	0.2	8.2
1/30/2025 4:30	7.1	113.1	0.1	7.6	11.2	0.0	1/30/2025 4:30	3.6	13.3	0.0	7.0	12.0	0.0	8.0
1/30/2025 4:45	7.4	114.7	0.1	7.6	11.1	0.0	1/30/2025 4:45	3.6	12.5	0.0	7.0	12.0	0.0	8.0
1/30/2025 5:00	7.5	115.2	0.1	7.6	11.1	0.0	1/30/2025 5:00	3.5	13.2	0.0	7.0	12.0	0.0	8.0
1/30/2025 5:15	7.2	102.3	0.0	7.6	11.1	0.0	1/30/2025 5:15	3.5	13.3	0.0	7.0	12.0	0.0	8.0
1/30/2025 5:30	4.9	34.0	0.0	7.1	11.8	0.0	1/30/2025 5:30	3.5	13.0	0.0	7.0	12.0	0.0	8.0
1/30/2025 5:45	4.2	27.6	0.0	6.9	12.1	0.0	1/30/2025 5:45	3.5	12.4	0.0	7.0	12.0	0.0	8.0
1/30/2025 6:00	4.0	25.6	0.0	6.8	12.1	0.0	1/30/2025 6:00	3.5	13.2	0.0	7.0		0.0	8.0
1/30/2025 6:15	3.8	24.5	0.0	6.8	12.2	0.0	1/30/2025 6:15	3.5	13.3	0.0	7.0	12.0	0.0	8.0
1/30/2025 6:30	3.7	23.8	0.0	6.8	12.2	0.0	1/30/2025 6:30	3.5	13.2	0.0	7.0	12.0	0.0	8.0
1/30/2025 6:45	6.0	93.4	0.0	7.4	11.5	0.0	1/30/2025 6:45	3.5	13.3	0.0	7.0	12.0	0.0	8.0
1/30/2025 7:00	7.2	112.9	0.1	7.6	11.2	0.0	1/30/2025 7:00	3.5	13.4	0.0	7.0	12.0	0.0	8.0
1/30/2025 7:15	7.3	113.4	0.1	7.6	11.1	0.0	1/30/2025 7:15	3.5	13.3	0.0	6.9	12.0	0.0	8.0
1/30/2025 7:30	6.0	61.5	0.0	7.4	11.4	0.0	1/30/2025 7:30	3.5	13.4	0.0	7.0	12.0	0.0	8.0
1/30/2025 7:45	4.4	29.8	0.0	7.0	12.0	0.0	1/30/2025 7:45	3.5	13.1	0.0	7.0	12.0	0.0	8.0
1/30/2025 8:00	4.0	26.2	0.0	6.9	12.1	0.0	1/30/2025 8:00	3.5	12.0	0.0	7.0	12.0	0.0	8.0
1/30/2025 8:15	3.8	24.7	0.0	6.8	12.2	0.0	1/30/2025 8:15	3.5	13.3	0.0	6.9	12.0	0.0	8.0
1/30/2025 8:30	3.7	23.8	0.0	6.8	12.2	0.0	1/30/2025 8:30	3.5	13.3	0.0	7.0	12.0	0.0	8.0
1/30/2025 8:45	7.0	111.8	0.1	7.6	11.2	0.0	1/30/2025 8:45	3.5	13.3	0.0	7.0	12.0	0.0	8.0
1/30/2025 9:00	6.5	93.6	0.0	7.5	11.3	0.0	1/30/2025 9:00	3.5	13.3	0.0	7.0	12.0	0.0	8.0
1/30/2025 9:15	7.3	111.6	0.1	7.6	11.1	0.0	1/30/2025 9:15	3.5	11.9	0.0	7.0	12.0	0.0	8.0
1/30/2025 9:30	7.3	111.5	0.1	7.6	11.1	0.0	1/30/2025 9:30	3.5	13.2	0.0	7.0	12.0	0.0	8.0
1/30/2025 9:45	7.4	111.6	0.1	7.6	11.1	0.3	1/30/2025 9:45	3.5	13.3	0.0	7.0	12.0	0.0	8.0
1/30/2025 10:00	5.3	41.9	0.0	7.3	11.7	0.0	1/30/2025 10:00	3.5	12.9	0.0	7.0	12.0	0.0	8.0
1/30/2025 10:15	4.4	28.6	0.0	6.9	12.0	0.0	1/30/2025 10:15	3.6	13.3	0.0	7.0	12.0	0.0	8.0
1/30/2025 10:30	4.1	25.9	0.0	6.8	12.1	0.0	1/30/2025 10:30	3.6	13.3	0.0	7.0	12.0	0.0	8.0
1/30/2025 10:45	3.9	24.7	0.0	6.8	12.2	0.0	1/30/2025 10:45	3.6	13.3	0.0	7.0	12.0	0.0	8.0
1/30/2025 11:00	4.7	65.1	0.0	7.2	12.0	0.0	1/30/2025 11:00	3.6	13.2	0.0	7.0	12.0	0.0	8.0
1/30/2025 11:15	6.9	110.7	0.1	7.6	11.2	0.0	1/30/2025 11:15	3.7	13.3	0.0	7.0	12.0	0.0	8.0
1/30/2025 11:30	5.3	43.7	0.0	7.3	11.6	0.0	1/30/2025 11:30	3.7	13.2	0.0	7.0	12.0	0.0	8.0
1/30/2025 11:45	4.3	27.1	0.0	6.9	12.0	0.0	1/30/2025 11:45	3.8	13.3	0.0	7.0	12.0	0.0	8.0
1/30/2025 12:00	7.1	114.0	0.1	7.6	11.2	0.0	1/30/2025 12:00	3.8	13.2	0.0	7.1	12.0	0.0	8.0
1/30/2025 12:15	6.9	99.8	0.0	7.6	11.2	0.0	1/30/2025 12:15	3.8	13.3	0.0	7.0	12.0	0.0	8.0
1/30/2025 12:30	7.3	116.5	0.1	7.6	11.1	0.0	1/30/2025 12:30	3.8	13.2	0.0	7.0	12.0	0.0	8.0
1/30/2025 12:45	7.1	103.6	0.0	7.6	11.1	0.0	1/30/2025 12:45	3.9	13.3	0.0	7.0	12.0	0.0	8.0
1/30/2025 13:00	5.0	33.3	0.0	7.1	11.8	0.0	1/30/2025 13:00	3.9	13.0	0.0	7.0	11.9	0.0	8.0
1/30/2025 13:15	4.5	27.4	0.0	6.9	12.0	0.0	1/30/2025 13:15	3.9	13.3	0.0	7.0	11.9	0.0	8.0
1/30/2025 13:30	5.2	71.6	0.0	7.1	11.9	0.0	1/30/2025 13:30	3.9	13.2	0.0	7.0	12.0	0.0	8.0
1/30/2025 13:45	7.0	114.6	0.1	7.6	11.2	0.0	1/30/2025 13:45	4.0	13.3	0.0	7.0	11.9	0.0	8.0
1/30/2025 14:00	7.3	112.5	0.1	7.6	11.1	0.0	1/30/2025 14:00	4.0	13.1	0.0	7.0	11.9	0.0	8.0
1/30/2025 14:15	5.2	35.8	0.0	7.2	11.7	0.0	1/30/2025 14:15	4.1	13.3	0.0	7.0	11.9	0.0	8.0
1/30/2025 14:30	4.6	27.1	0.0	6.9	11.9	0.0	1/30/2025 14:30	4.1	13.4	0.0	7.0	11.9	0.0	8.0
1/30/2025 14:45	7.4	117.7	0.1	7.6	11.1	0.0	1/30/2025 14:45	4.1	13.3	0.0	6.9	11.9	0.0	8.0
1/30/2025 15:00	7.6	117.5	0.1	7.6	11.0	0.0	1/30/2025 15:00	4.1	13.3	0.0	7.0	11.9	0.0	8.0
1/30/2025 15:15	7.7	117.5	0.1	7.6	11.0	0.0	1/30/2025 15:15	4.1	13.2	0.0	7.1	11.9	0.0	8.0
1/30/2025 15:30	5.9	46.8	0.0	7.3	11.4	0.0	1/30/2025 15:30	4.1	12.3	0.0	7.0	11.8	0.0	8.0
1/30/2025 15:45	4.9	29.4	0.0	7.0	11.8	0.0	1/30/2025 15:45	4.1	11.5	0.0	7.1	11.8	0.0	8.0
1/30/2025 16:00	4.6	26.3	0.0	6.9	11.9	0.0	1/30/2025 16:00	4.1	13.3	0.0	7.0	11.9	0.0	8.0
1/30/2025 16:15	5.9	91.6	0.0	7.3	11.6	0.0	1/30/2025 16:15	4.1	13.0	0.0	7.0	11.8	0.0	8.0
1/30/2025 16:30	6.8	104.3	0.0	7.5	11.3	0.0	1/30/2025 16:30	4.1	13.4	0.0	7.0	11.8	0.0	8.0
1/30/2025 16:45	7.6	114.3	0.1	7.6	11.0	0.0	1/30/2025 16:45	4.1	13.3	0.0	7.0	11.8	0.0	8.0
1/30/2025 17:00	7.7	115.0	0.1	7.6	11.0	0.0	1/30/2025 17:00	4.1	13.4	0.0	7.0	11.8	0.0	8.0
1/30/2025 17:15	7.7	115.9	0.1	7.6	11.0	0.0	1/30/2025 17:15	4.1	13.8	0.0	7.1	11.8	0.0	8.0
1/30/2025 17:30	7.8	117.4	0.1	7.6	11.0	0.0	1/30/2025 17:30	4.1	14.8	0.0	7.0	11.8	0.0	8.0
1/30/2025 17:45	5.6	38.6	0.0	7.2	11.6	0.0	1/30/2025 17:45	4.1	17.2	0.0	7.0	11.8	0.0	8.0
1/30/2025 18:00	4.8	28.8	0.0	6.9	11.8	0.0	1/30/2025 18:00	4.1	19.4	0.0	7.1	11.8	0.0	8.0
1/30/2025 18:15	4.9	47.1	0.0	6.9	11.9	0.0	1/30/2025 18:15	4.1	23.8	0.0	7.0	11.8	0.0	8.0
1/30/2025 18:30	7.1	114.5	0.1	7.6	11.2	0.0	1/30/2025 18:30	4.1	23.7	0.0	7.0	11.8	0.0	8.0
1/30/2025 18:45	7.6	117.8	0.1	7.6	11.0	0.0	1/30/2025 18:45	4.1	23.4	0.0	7.1	11.8	0.0	8.0
1/30/2025 19:00	7.7	118.6	0.1	7.6	11.0	0.0	1/30/2025 19:00	4.1	23.6	0.0	7.1	11.8	0.0	8.0
1/30/2025 19:15	7.7	117.8	0.1	7.6	11.0	0.0	1/30/2025 19:15	4.0	25.6	0.0	7.1	11.8	0.0	8.0
1/30/2025 19:30	5.9	52.3	0.0	7.3	11.5	0.0	1/30/2025 19:30	4.0	30.3	0.0	7.1	11.8	0.0	8.0
1/30/2025 19:45	4.8	36.5	0.0	7.0	11.8	0.0	1/30/2025 19:45	4.0	37.8	0.0	7.1	11.8	0.5	8.5
1/30/2025 20:00	4.5	34.8	0.0	6.9	11.9	0.0	1/30/2025 20:00		36.4	0.0	7.2	11.8	3.9	11.9
1/30/2025 20:15	4.3	35.9	0.0	6.9	12.0	0.0	1/30/2025 20:15	4.0	38.4	0.0	7.3	11.8	5.2	13.2
1/30/2025 20:30	7.0	118.8	0.1	7.5	11.2	0.2	1/30/2025 20:30	4.0	35.1	0.0	7.2	11.8	5.1	13.1
1/30/2025 20:45	7.4	119.2	0.1	7.6	11.1	0.0	1/30/2025 20:45	4.0	31.2	0.0	7.2	11.8	2.5	10.5
1/30/2025 21:00	7.5	118.3	0.1	7.6	11.0	0.0	1/30/2025 21:00	4.0	28.5	0.0	7.2	11.8	0.9	8.9
1/30/2025 21:15	7.5	116.2	0.1	7.6	11.0	0.0	1/30/2025 21:15	4.0	26.3	0.0	7.2	11.8	0.4	8.4
1/30/2025 21:30	5.7	55.5	0.0	7.2	11.5	0.0	1/30/2025 21:30	4.0	25.1	0.0	7.1	11.8	0.4	8.4
1/30/2025 21:45	4.7	41.2	0.0	7.0	11.9	0.0	1/30/2025 21:45	4.0	24.3	0.0	7.1	11.8	0.2	8.2
1/30/2025 22:00	4.5	40.5	0.0	7.0	11.9	0.0	1/30/2025 22:00	3.9	27.0	0.0	7.1	11.8	0.4	8.4
1/30/2025 22:15	4.3	35.2	0.0	6.9	12.0	0.0	1/30/2025 22:15	3.9	33.6	0.0	7.2	11.8	2.7	10.7
1/30/2025 22:30	4.2	33.7	0.0	6.8	12.0	0.0	1/30/2025 22:30	3.9	40.2	0.0	7.3	11.8	17.9	22.9
1/30/2025 22:45	5.9	90.7	0.0	7.4	11.5	0.3	1/30/2025 22:45	3.9	53.9	0.0	7.4	11.9	122.3	127.3
1/30/2025 23:00	7.0	108.1	0.0	7.5	11.2	0.0	1/30/2025 23:00	3.8	54.6	0.0	7.5	11.9	134.1	139.1
1/30/2025 23:15	7.1	110.7	0.1	7.5	11.1	5.3	1/30/2025 23:15	3.8	45.8	0.0	7.4	11.9	112.6	117.6
1/30/2025 23:30	7.1	112.6	0.1	7.5	11.1	16.7	1/30/2025 23:30	3.8	50.3	0.0	7.4	11.9	114.3	119.3
1/30/2025 23:45	7.0	112.7	0.1	7.5	11.1	34.3	1/30/2025 23:45	3.8	52.3	0.0	7.5	11.9	143.3	148.3
1/31/2025 0:00	4.9	60.9	0.0	7.2	11.8	81.4	1/31/2025 0:00	3.7	51.7	0.0	7.5	11.9	167.0	172.0
1/31/2025 0:15	4.3	55.7	0.0	7.0	12.0	62.9	1/31/2025 0:15	3.7	47.7	0.0	7.4	11.9	82.4	87.4
1/31/2025 0:30	4.1	55.8	0.0	7.0	12.1	91.2	1/31/2025 0:30	3.7	45.9	0.0	7.4	11.9	56.8	61.8
1/31/2025 0:45	6.0	99.3	0.0	7.5	11.4	51.5	1/31/2025 0:45	3.7	46.2	0.0	7.4	11.9	66.0	71.0
1/31/2025 1:00	6.8	111.1	0.1	7.5	11.2	27.0	1/31/2025 1:00	3.7	44.8	0.0	7.4	11.9	62.9	67.9
1/31/2025 1:15	6.8	110.4	0.1	7.5	11.2	14.9	1/31/2025 1:15	3.7	46.5	0.0	7.5	11.9	146.5	151.5
1/31/2025 1:30	6.8	109.8	0.1	7.5	11.2	19.1	1/31/2025 1:30	3.7	50.0	0.0	7.6	11.9	266.2	271.2
1/31/2025 1:45	6.0	84.2	0.0	7.4	11.4	59.7	1/31/2025 1:45	3.6	50.4	0.0	7.6	11.9	433.6	438.6
1/31/2025 2:00	4.3	54.1	0.0	7.1	12.0	186.0	1/31/2025 2:00	3.6	48.1	0.0	7.7	11.9	446.3	451.3
1/31/2025 2:15	4.0	54.2	0.0	7.1	12.1	284.6	1/31/2025 2:15	3.6	40.7	0.0	7.6	11.9	235.8	240.8
1/31/2025 2:30	3.9	54.0	0.0	7.1	12.1	235.8	1/31/2025 2:30	3.6	43.2	0.0	7.5	11.9	216.9	221.9
1/31/2025 2:45	5.3	93.1	0.0	7.4	11.7	204.0	1/31/2025 2:45	3.6	44.5	0.0	7.5	11.9	294.9	299.9
1/31/2025 3:00	6.4	111.6	0.1	7.5	11.3	85.0	1/31/2025 3:00	3.6	47.0	0.0	7.5	11.9	251.4	256.4
1/31/2025 3:15	6.5	113.0	0.1	7.5	11.3	58.2	1/31/2025 3:15	3.6	46.8	0.0	7.6	11.9	271.7	276.7
1/31/2025 3:30	6.5	115.0	0.1	7.5	11.3	82.0	1/31/2025 3:30	3.5	47.3	0.0	7.6	11.9	295.0	300.0
1/31/2025 3:45	6.0	98.7	0.0	7.5	11.4	121.8	1/31/2025 3:45	3.5	47.5	0.0	7.6	11.9	221.5	226.5
1/31/2025 4:00	4.0	53.8	0.0	7.1	12.1	213.4	1/31/2025 4:00	3.5	47.8	0.0	7.7	12.0	392.1	397.1
1/31/2025 4:15	3.8	53.1	0.0	7.1	12.1	278.9	1/31/2025 4:15	3.4	54.8	0.0	7.8	11.9	463.7	468.7
1/31/2025 4:30	3.7	54.9	0.0	7.1	12.2	355.6	1/31/2025 4:30	3.4	53.0	0.0	7.8	12.0	504.9	509.9
1/31/2025 4:45	3.6	58.1	0.0	7.1	12.2	439.3	1/31/2025 4:45	3.4	50.2	0.0	7.6	11.9	346.3	351.3
1/31/2025 5:00	5.5	111.6	0.1	7.5	11.6	285.9	1/31/2025 5:00	3.4	48.1	0.0	7.6	11.9	245.9	250.9
1/31/2025 5:15	6.2	117.9	0.1	7.6	11.3	140.5	1/31/2025 5:15	3.4	43.2	0.0	7.6	11.9	188.1	193.1
1/31/2025 5:30	6.3	116.9	0.1	7.6	11.3	114.1	1/31/2025 5:30	3.4	47.2	0.0	7.5	12.0	157.5	162.5
1/31/2025 5:45	6.3	115.8	0.1	7.6	11.3	71.5	1/31/2025 5:45	3.4	49.4	0.0	7.5	11.9	141.0	146.0
1/31/2025 6:00	4.4	60.2	0.0	7.2	11.9	143.4	1/31/2025 6:00	3.4	50.6	0.0	7.6	11.9	176.3	181.3
1/31/2025 6:15	3.7	54.8	0.0	7.1	12.1	140.4	1/31/2025 6:15	3.4	44.9	0.0	7.6	11.9	202.6	207.6
1/31/2025 6:30	3.6	55.4	0.0	7.1	12.2	180.1	1/31/2025 6:30	3.4	51.2	0.0	7.5	11.9	120.9	125.9
1/31/2025 6:45	5.4	110.2	0.1	7.4	11.6	115.3	1/31/2025 6:45	3.4	53.1	0.0	7.5	11.9	110.0	115.0
1/31/2025 7:00	5.5	100.1	0.0	7.5	11.5	75.8	1/31/2025 7:00	3.4	57.9	0.0	7.6	11.9	71.9	76.9
1/31/2025 7:15	6.1	112.9	0.1	7.5	11.4	51.7	1/31/2025 7:15	3.4	62.0	0.0	7.6	11.9	116.2	121.2
1/31/2025 7:30	6.2	114.9	0.1	7.5	11.3	52.2	1/31/2025 7:30	3.4	63.9	0.0	7.6	12.0	97.2	102.2
1/31/2025 7:45	3.9	66.9	0.0	7.1	12.1	100.3	1/31/2025 7:45	3.4	62.6	0.0	7.6	11.9	48.6	53.6
1/31/2025 8:00	3.6	66.8	0.0	7.1	12.2	90.7	1/31/2025 8:00	3.4	65.6	0.0	7.6	11.9	33.4	38.4
1/31/2025 8:15	3.5	66.2	0.0	7.1	12.2	67.8	1/31/2025 8:15	3.4	69.7	0.0	7.6	11.9	35.7	40.7
1/31/2025 8:30	3.5	68.1	0.0	7.0	12.2	53.1	1/31/2025 8:30	3.3	71.4	0.0	7.7	11.9	290.3	295.3
1/31/2025 8:45	5.5	111.4	0.1	7.5	11.5	36.6	1/31/2025 8:45	3.3	89.3	0.0	7.8	12.0	773.9	778.9
1/31/2025 9:00	5.5	113.0	0.1	7.5	11.5	130.8	1/31/2025 9:00	3.2	88.8	0.0	8.1	12.0	1261.4	1266.4
1/31/2025 9:15	4.7	109.1	0.0	7.4	11.8	466.6	1/31/2025 9:15	3.1	105.2	0.1	8.3	12.1	2012.1	2017.1
1/31/2025 9:30	5.1	123.4	0.1	7.5	11.7	842.3	1/31/2025 9:30	3.0	92.4	0.0	8.2	12.1	1704.8	1709.8
1/31/2025 9:45	4.9	124.5	0.1	7.5	11.7	949.4	1/31/2025 9:45	3.0	97.3	0.1	8.0	12.1	532.8	537.8
1/31/2025 10:00	3.8	112.4	0.1	7.4	12.1	539.9	1/31/2025 10:00	3.0	83.6	0.0	7.8	12.1	388.6	393.6
1/31/2025 10:15	3.2	101.9	0.0	7.3	12.3	345.2	1/31/2025 10:15	3.1	90.8	0.0	7.8	12.1	212.9	217.9
1/31/2025 10:30	3.2	98.6	0.0	7.2	12.3	179.3	1/31/2025 10:30	3.2	86.0	0.0	7.7	12.1	88.9	93.9
1/31/2025 10:45	3.9	101.6	0.0	7.3	12.1	112.3	1/31/2025 10:45	3.3	82.3	0.0	7.7	12.0	56.7	61.7
1/31/2025 11:00	4.6	108.3	0.0	7.3	11.8	49.2	1/31/2025 11:00	3.3	70.2	0.0	7.7	12.0	50.8	55.8
1/31/2025 11:15	4.6	103.0	0.0	7.3	11.8	43.8	1/31/2025 11:15	3.4	75.9	0.0	7.6	12.0	53.7	58.7
1/31/2025 11:30	3.5	81.7	0.0	7.1	12.2	39.5	1/31/2025 11:30	3.4	74.9	0.0	7.6	12.0	59.4	64.4
1/31/2025 11:45	3.4	79.2	0.0	7.1	12.2	59.4	1/31/2025 11:45	3.5	66.2	0.0	7.6	12.0	33.9	38.9
1/31/2025 12:00	4.7	100.9	0.0	7.3	11.8	35.5	1/31/2025 12:00	3.5	71.0	0.0	7.6	11.9	53.6	58.6
1/31/2025 12:15	4.3	90.0	0.0	7.3	11.9	35.6	1/31/2025 12:15	3.6	69.2	0.0	7.6	11.9	42.0	47.0
1/31/2025 12:30	4.9	100.9	0.0	7.3	11.7	33.9	1/31/2025 12:30	3.6	60.3	0.0	7.6	11.9	36.5	41.5
1/31/2025 12:45	4.9	99.0	0.0	7.3	11.7	20.5	1/31/2025 12:45	3.6	65.0	0.0	7.5	11.9	22.2	27.2
1/31/2025 13:00	5.0	97.1	0.0	7.3	11.7	17.8	1/31/2025 13:00	3.7	65.0	0.0	7.6	11.9	34.5	39.5
1/31/2025 13:15	3.9	69.7	0.0	7.1	12.1	28.9	1/31/2025 13:15	3.7	64.4	0.0	7.6	11.8	38.1	43.1

1/31/2025 13:30	3.7	68.4	0.0	7.0	12.1	31.7	1/31/2025 13:30	3.7	61.5	0.0	7.6	11.9	60.4	65.4
1/31/2025 13:45	3.7	66.6	0.0	7.0	12.1	52.6	1/31/2025 13:45	3.8	60.3	0.0	7.6	11.8	35.8	40.8
1/31/2025 14:00	4.8	93.0	0.0	7.3	11.7	25.8	1/31/2025 14:00	3.8	57.8	0.0	7.6	11.8	35.4	40.4
1/31/2025 14:15	4.5	79.7	0.0	7.2	11.8	30.0	1/31/2025 14:15	3.8	51.1	0.0	7.5	11.8	29.7	34.7
1/31/2025 14:30	5.0	91.2	0.0	7.3	11.6	21.7	1/31/2025 14:30	3.9	55.7	0.0	7.5	11.8	31.1	36.1
1/31/2025 14:45	5.1	89.6	0.0	7.3	11.6	21.6	1/31/2025 14:45	3.9	53.2	0.0	7.6	11.8	102.0	107.0
1/31/2025 15:00	5.0	90.1	0.0	7.3	11.6	58.8	1/31/2025 15:00	3.9	58.9	0.0	7.5	11.8	155.8	160.8
1/31/2025 15:15	5.0	89.6	0.0	7.3	11.6	88.0	1/31/2025 15:15	3.9	58.5	0.0	7.6	11.8	116.3	121.3
1/31/2025 15:30	3.9	62.8	0.0	7.1	12.0	105.3	1/31/2025 15:30	3.9	54.8	0.0	7.6	11.8	116.6	121.6
1/31/2025 15:45	3.8	64.5	0.0	7.1	12.0	110.4	1/31/2025 15:45	3.9	60.7	0.0	7.5	11.8	137.1	142.1
1/31/2025 16:00	3.8	64.9	0.0	7.0	12.0	138.5	1/31/2025 16:00	3.9	61.2	0.0	7.6	11.8	90.3	95.3
1/31/2025 16:15	4.2	75.1	0.0	7.1	11.9	100.3	1/31/2025 16:15	3.9	52.2	0.0	7.6	11.8	72.6	77.6
1/31/2025 16:30	4.7	82.5	0.0	7.2	11.7	78.7	1/31/2025 16:30	3.9	56.6	0.0	7.6	11.8	100.2	105.2
1/31/2025 16:45	4.7	80.3	0.0	7.2	11.7	74.3	1/31/2025 16:45	4.0	49.6	0.0	7.5	11.8	116.0	121.0
1/31/2025 17:00	4.8	77.6	0.0	7.2	11.7	85.7	1/31/2025 17:00	4.0	51.8	0.0	7.4	11.8	60.2	65.2
1/31/2025 17:15	4.8	74.3	0.0	7.2	11.7	70.7	1/31/2025 17:15	4.1	47.8	0.0	7.5	11.8	83.4	88.4
1/31/2025 17:30	4.5	62.6	0.0	7.1	11.8	58.2	1/31/2025 17:30	4.1	42.8	0.0	7.4	11.8	40.1	45.1
1/31/2025 17:45	4.0	49.5	0.0	6.9	11.9	42.0	1/31/2025 17:45	4.2	43.0	0.0	7.3	11.7	31.8	36.8
1/31/2025 18:00	4.1	46.7	0.0	6.9	11.9	23.7	1/31/2025 18:00	4.2	40.5	0.0	7.4	11.7	14.0	19.0
1/31/2025 18:15	4.1	44.0	0.0	6.9	11.9	21.7	1/31/2025 18:15	4.2	39.1	0.0	7.3	11.7	13.8	18.8
1/31/2025 18:30	4.7	58.0	0.0	7.1	11.7	14.3	1/31/2025 18:30	4.2	36.2	0.0	7.3	11.7	8.9	13.9
1/31/2025 18:45	4.9	61.1	0.0	7.1	11.6	10.6	1/31/2025 18:45	4.3	32.4	0.0	7.2	11.7	8.7	13.7
1/31/2025 19:00	5.0	59.7	0.0	7.1	11.6	7.3	1/31/2025 19:00	4.3	33.5	0.0	7.3	11.6	6.5	14.5
1/31/2025 19:15	5.0	58.8	0.0	7.0	11.6	7.4	1/31/2025 19:15	4.3	30.5	0.0	7.2	11.6	8.5	13.5
1/31/2025 19:30	5.0	58.9	0.0	7.1	11.6	10.2	1/31/2025 19:30	4.4	35.0	0.0	7.2	11.6	30.1	35.1
1/31/2025 19:45	5.1	59.3	0.0	7.1	11.6	19.0	1/31/2025 19:45	4.4	36.1	0.0	7.3	11.6	40.4	45.4
1/31/2025 20:00	4.5	42.6	0.0	6.9	11.8	26.0	1/31/2025 20:00	4.4	33.4	0.0	7.3	11.7	28.5	33.5
1/31/2025 20:15	4.3	39.9	0.0	6.8	11.8	27.8	1/31/2025 20:15	4.4	37.6	0.0	7.2	11.7	24.3	29.3
1/31/2025 20:30	4.3	40.4	0.0	6.8	11.8	26.7	1/31/2025 20:30	4.4	37.5	0.0	7.3	11.6	27.7	32.7
1/31/2025 20:45	4.4	40.7	0.0	6.8	11.8	22.1	1/31/2025 20:45	4.4	38.8	0.0	7.3	11.6	19.8	24.8
1/31/2025 21:00	4.8	51.8	0.0	7.0	11.7	21.4	1/31/2025 21:00	4.4	41.3	0.0	7.4	11.7	83.1	88.1
1/31/2025 21:15	5.0	57.3	0.0	7.1	11.6	135.1	1/31/2025 21:15	4.4	44.4	0.0	7.5	11.7	175.5	180.5
1/31/2025 21:30	5.1	57.8	0.0	7.1	11.6	172.6	1/31/2025 21:30	4.5	41.1	0.0	7.5	11.7	104.8	109.8
1/31/2025 21:45	5.1	55.4	0.0	7.1	11.6	70.6	1/31/2025 21:45	4.6	38.3	0.0	7.4	11.6	58.3	63.3
1/31/2025 22:00	5.1	52.1	0.0	7.1	11.6	34.8	1/31/2025 22:00	4.6	35.6	0.0	7.3	11.6	19.7	24.7
1/31/2025 22:15	4.6	36.4	0.0	6.8	11.8	20.6	1/31/2025 22:15	4.6	29.7	0.0	7.3	11.6	13.6	18.6
1/31/2025 22:30	4.6	34.1	0.0	6.8	11.8	13.6	1/31/2025 22:30	4.6	31.5	0.0	7.3	11.6	11.5	16.5
1/31/2025 22:45	4.6	32.4	0.0	6.8	11.8	11.1	1/31/2025 22:45	4.6	26.5	0.0	7.2	11.6	11.3	16.3
1/31/2025 23:00	4.5	30.8	0.0	6.8	11.8	9.7	1/31/2025 23:00	4.6	28.3	0.0	7.2	11.6	7.3	15.3
1/31/2025 23:15	5.1	45.7	0.0	7.0	11.7	8.5	1/31/2025 23:15	4.6	24.6	0.0	7.2	11.6	7.0	15.0
1/31/2025 23:30	5.1	44.6	0.0	7.0	11.7	7.0	1/31/2025 23:30	4.5	26.4	0.0	7.0	11.7	7.2	15.2
1/31/2025 23:45	5.1	44.8	0.0	7.0	11.7	7.3	1/31/2025 23:45	4.5	25.5	0.0	7.1	11.7	5.5	13.5
2/01/2025 0:00	5.1	44.4	0.0	7.0	11.7	5.1	2/01/2025 0:00	4.5	21.6	0.0	7.2	11.7	8.8	13.8
2/01/2025 0:15	4.5	27.4	0.0	6.7	11.9	4.6	2/01/2025 0:15	4.5	24.2	0.0	7.2	11.7	7.0	15.0
2/01/2025 0:30	4.5	26.7	0.0	6.7	11.9	4.5	2/01/2025 0:30	4.5	23.6	0.0	7.1	11.7	4.4	12.4
2/01/2025 0:45	4.4	26.4	0.0	6.7	11.9	4.0	2/01/2025 0:45	4.5	23.5	0.0	7.1	11.7	3.3	11.3
2/01/2025 1:00	4.4	25.9	0.0	6.7	11.9	3.1	2/01/2025 1:00	4.5	23.1	0.0	7.1	11.7	2.8	10.8
2/01/2025 1:15	4.4	25.7	0.0	6.7	11.9	3.2	2/01/2025 1:15	4.5	20.2	0.0	7.0	11.8	6.1	14.1
2/01/2025 1:30	4.9	37.9	0.0	7.0	11.8	2.1	2/01/2025 1:30	4.4	22.1	0.0	7.1	11.8	1.4	9.4
2/01/2025 1:45	5.1	45.5	0.0	7.0	11.7	3.3	2/01/2025 1:45	4.4	20.0	0.0	7.1	11.8	2.9	10.9
2/01/2025 2:00	5.1	45.9	0.0	7.0	11.7	0.8	2/01/2025 2:00	4.4	21.9	0.0	7.0	11.8	1.4	9.4
2/01/2025 2:15	5.1	46.2	0.0	7.1	11.7	1.3	2/01/2025 2:15	4.4	21.9	0.0	7.0	11.8	3.7	11.7
2/01/2025 2:30	5.1	46.2	0.0	7.1	11.7	1.2	2/01/2025 2:30	4.3	21.0	0.0	7.1	11.8	1.9	9.9
2/01/2025 2:45	4.4	26.5	0.0	6.8	11.9	2.7	2/01/2025 2:45	4.3	21.2	0.0	7.0	11.7	2.3	10.3
2/01/2025 3:00	4.2	24.4	0.0	6.7	12.0	1.0	2/01/2025 3:00	4.3	20.2	0.0	7.1	11.8	1.6	9.6
2/01/2025 3:15	4.2	23.8	0.0	6.7	12.0	1.5	2/01/2025 3:15	4.3	18.0	0.0	7.0	11.8	1.8	9.8
2/01/2025 3:30	4.2	23.6	0.0	6.7	12.0	0.6	2/01/2025 3:30	4.3	20.7	0.0	6.9	11.8	2.5	10.5
2/01/2025 3:45	5.0	47.8	0.0	7.1	11.7	1.1	2/01/2025 3:45	4.3	20.8	0.0	6.9	11.8	0.9	8.9
2/01/2025 4:00	5.1	48.8	0.0	7.1	11.7	1.1	2/01/2025 4:00		20.6	0.0	7.0	11.7	0.5	8.5
2/01/2025 4:15	5.1	49.4	0.0	7.1	11.7	1.5	2/01/2025 4:15	4.3	20.8	0.0	7.0	11.7	1.0	9.0
2/01/2025 4:30	5.1	49.6	0.0	7.1	11.7	0.3	2/01/2025 4:30	4.3	20.5	0.0	7.1	11.7	0.5	8.5
2/01/2025 4:45	5.1	49.9	0.0	7.1	11.7	0.7	2/01/2025 4:45	4.3	18.4	0.0	7.0	11.7	0.4	8.4
2/01/2025 5:00	4.3	24.6	0.0	6.8	12.0	3.3	2/01/2025 5:00	4.3	20.4	0.0	7.0	11.7	0.5	8.5
2/01/2025 5:15	4.2	23.9	0.0	6.7	12.0	3.4	2/01/2025 5:15	4.3	18.1	0.0	7.0	11.7	0.4	8.4
2/01/2025 5:30	4.2	23.7	0.0	6.7	12.0	0.9	2/01/2025 5:30	4.3	20.2	0.0	7.0	11.7	0.3	8.3
2/01/2025 5:45	4.2	23.5	0.0	6.7	12.0	0.0	2/01/2025 5:45	4.3	20.2	0.0	7.0	11.7	0.5	8.5
2/01/2025 6:00	4.2	23.5	0.0	6.7	12.1	0.9	2/01/2025 6:00		20.0	0.0	7.0	11.7	0.6	8.6
2/01/2025 6:15	5.0	50.4	0.0	7.1	11.7	0.5	2/01/2025 6:15	4.2	20.1	0.0	7.0	11.7	0.4	8.4
2/01/2025 6:30	5.1	50.7	0.0	7.2	11.7	0.5	2/01/2025 6:30	4.2	19.8	0.0	7.0	11.7	2.0	10.0
2/01/2025 6:45	5.1	51.0	0.0	7.1	11.7	0.0	2/01/2025 6:45	4.2	19.7	0.0	7.0	11.7	0.4	8.4
2/01/2025 7:00	5.1	50.8	0.0	7.2	11.7	0.0	2/01/2025 7:00	4.2	19.7	0.0	7.0	11.7	0.4	8.4
2/01/2025 7:15	5.2	50.9	0.0	7.1	11.7	0.0	2/01/2025 7:15	4.2	19.8	0.0	7.0	11.7	1.1	9.1
2/01/2025 7:30	4.3	24.3	0.0	6.8	12.0	10.6	2/01/2025 7:30	4.2	19.8	0.0	7.1	11.7	1.2	9.2
2/01/2025 7:45	4.2	23.4	0.0	6.7	12.1	0.0	2/01/2025 7:45	4.2	17.9	0.0	7.0	11.7	1.1	9.1
2/01/2025 8:00	4.1	23.3	0.0	6.7	12.1	0.0	2/01/2025 8:00	4.2	19.6	0.0	6.9	11.8	0.4	8.4
2/01/2025 8:15	4.9	51.2	0.0	7.1	11.8	0.7	2/01/2025 8:15	4.0	19.5	0.0	7.0	11.8	0.5	8.5
2/01/2025 8:30	5.1	51.6	0.0	7.1	11.7	0.1	2/01/2025 8:30	4.1	16.3	0.0	7.0	11.8	0.9	8.9
2/01/2025 8:45	5.1	50.9	0.0	7.2	11.7	0.0	2/01/2025 8:45	4.1	17.9	0.0	6.9	11.8	0.2	8.2
2/01/2025 9:00	5.1	51.0	0.0	7.2	11.7	0.0	2/01/2025 9:00	4.1	18.7	0.0	7.1	11.8	0.1	8.1
2/01/2025 9:15	5.1	51.4	0.0	7.2	11.7	0.0	2/01/2025 9:15	4.1	16.9	0.0	7.1	11.8	0.2	8.2
2/01/2025 9:30	4.5	35.7	0.0	7.0	11.9	0.0	2/01/2025 9:30	4.0	19.5	0.0	7.0	11.8	0.6	8.6
2/01/2025 9:45	5.1	52.6	0.0	7.2	11.7	0.0	2/01/2025 9:45	4.0	16.7	0.0	7.0	11.8	0.4	8.4
2/01/2025 10:00	5.1	53.0	0.0	7.2	11.7	0.2	2/01/2025 10:00	4.0	17.9	0.0	7.0	11.8	0.3	8.3
2/01/2025 10:15	5.1	53.0	0.0	7.2	11.7	0.0	2/01/2025 10:15	4.0	17.8	0.0	7.0	11.8	0.3	8.3
2/01/2025 10:30	5.1	52.8	0.0	7.2	11.7	0.0	2/01/2025 10:30	4.0	17.4	0.0	7.0	11.8	0.5	8.5
2/01/2025 10:45	4.6	37.3	0.0	7.0	11.9	0.0	2/01/2025 10:45	4.0	16.3	0.0	7.0	11.8	0.5	8.5
2/01/2025 11:00	5.1	50.0	0.0	7.1	11.7	0.0	2/01/2025 11:00	3.9	18.7	0.0	7.0	11.8	0.2	8.2
2/01/2025 11:15	3.9	22.6	0.0	6.8	12.2	0.0	2/01/2025 11:15	3.8	16.5	0.0	7.0	11.8	0.3	8.3
2/01/2025 11:30	3.8	22.2	0.0	6.7	12.2	0.0	2/01/2025 11:30	3.8	17.1	0.0	7.0	11.9	0.3	8.3
2/01/2025 11:45	4.4	37.1	0.0	7.0	12.0	0.0	2/01/2025 11:45	3.8	17.0	0.0	7.0	11.9	0.4	8.4
2/01/2025 12:00	4.9	46.8	0.0	7.1	11.8	0.0	2/01/2025 12:00	3.8	17.3	0.0	7.0	11.9	0.3	8.3
2/01/2025 12:15	4.9	47.0	0.0	7.0	11.8	0.0	2/01/2025 12:15	3.8	17.8	0.0	7.0	11.9	0.1	8.1
2/01/2025 12:30	4.9	47.6	0.0	7.1	11.8	0.0	2/01/2025 12:30	3.8	18.2	0.0	7.0	11.9	0.3	8.3
2/01/2025 12:45	4.6	39.1	0.0	6.9	11.9	0.0	2/01/2025 12:45	3.8	18.5	0.0	6.9	11.9	2.2	10.2
2/01/2025 13:00	5.0	49.8	0.0	7.0	11.8	0.2	2/01/2025 13:00	3.8	17.2	0.0	7.0	11.9	0.8	8.8
2/01/2025 13:15	4.2	25.6	0.0	6.9	12.0	0.8	2/01/2025 13:15	3.8	20.0	0.0	6.9	11.9	0.8	8.8
2/01/2025 13:30	3.9	22.8	0.0	6.7	12.1	2.8	2/01/2025 13:30	3.9	21.0	0.0	7.1	11.8	0.3	8.3
2/01/2025 13:45	3.9	23.1	0.0	6.7	12.1	0.0	2/01/2025 13:45	3.8	19.9	0.0	7.1	11.9	0.4	8.4
2/01/2025 14:00	3.8	23.7	0.0	6.7	12.2	0.0	2/01/2025 14:00	3.7	23.8	0.0	7.0	11.9	0.9	8.9
2/01/2025 14:15	3.8	24.6	0.0	6.7	12.2	0.0	2/01/2025 14:15	3.8	24.0	0.0	7.1	11.9	0.7	8.7
2/01/2025 14:30	4.4	41.8	0.0	6.9	12.0	0.3	2/01/2025 14:30	3.8	24.7	0.0	7.1	11.9	3.8	11.8
2/01/2025 14:45	3.8	25.4	0.0	6.7	12.2	1.9	2/01/2025 14:45	3.7	27.1	0.0	7.2	11.9	10.0	15.0
2/01/2025 15:00	4.8	56.9	0.0	7.1	11.8	1.6	2/01/2025 15:00	3.6	28.1	0.0	7.2	11.9	8.9	13.9
2/01/2025 15:15	4.9	58.9	0.0	7.1	11.8	4.1	2/01/2025 15:15	3.7	27.5	0.0	7.2	11.9	11.2	16.2
2/01/2025 15:30	4.9	59.5	0.0	7.1	11.8	3.9	2/01/2025 15:30	3.5	25.5	0.0	7.2	11.9	10.1	15.1
2/01/2025 15:45	4.4	41.5	0.0	7.2	11.9	5.1	2/01/2025 15:45	3.6	27.6	0.0	7.2	11.9	4.7	12.7
2/01/2025 16:00	3.8	28.3	0.0	6.8	12.2	5.5	2/01/2025 16:00	3.7	25.3	0.0	7.2	11.9	5.4	13.4
2/01/2025 16:15	3.5	27.7	0.0	6.8	12.2	3.0	2/01/2025 16:15	3.3	29.6	0.0	7.2	11.9	5.7	13.7
2/01/2025 16:30	3.8	44.7	0.0	6.9	12.2	3.3	2/01/2025 16:30	3.3	25.9	0.0	7.2	12.0	6.6	14.6
2/01/2025 16:45	4.5	62.7	0.0	7.2	11.8	2.2	2/01/2025 16:45	3.2	26.2	0.0	7.0	12.0	4.9	12.9
2/01/2025 17:00	4.2	62.5	0.0	7.2	12.0	2.1	2/01/2025 17:00	2.6	25.4	0.0	7.1	12.1	2.3	10.3
2/01/2025 17:15	4.4	62.3	0.0	7.2	11.9	1.0	2/01/2025 17:15	2.8	20.6	0.0	7.1	12.1	2.1	10.1
2/01/2025 17:30	4.4	61.6	0.0	7.2	11.9	0.1	2/01/2025 17:30	3.0	21.4	0.0	6.9	12.1	2.1	10.1
2/01/2025 17:45	4.3	58.3	0.0	7.2	12.0	0.0	2/01/2025 17:45	3.1	22.2	0.0	7.1	12.0	0.6	8.6
2/01/2025 18:00	4.6	60.2	0.0	7.2	11.9	0.2	2/01/2025 18:00	3.3	20.6	0.0	7.1	12.0	0.5	8.5
2/01/2025 18:15	4.7	60.5	0.0	7.2	11.9	0.0	2/01/2025 18:15	3.4	24.0	0.0	7.1	12.0	1.7	9.7
2/01/2025 18:30	3.5	25.8	0.0	6.8	12.2	1.4	2/01/2025 18:30	3.5	22.0	0.0	7.2	11.9	0.3	8.3
2/01/2025 18:45	3.5	26.1	0.0	6.8	12.2	0.0	2/01/2025 18:45	3.5	25.2	0.0	7.1	11.9	0.5	8.5
2/01/2025 19:00	4.4	58.1	0.0	7.0	12.0	0.0	2/01/2025 19:00	3.6	23.0	0.0	7.1	11.9	0.5	8.5
2/01/2025 19:15	4.0	33.9	0.0	7.0	12.1	0.0	2/01/2025 19:15	3.6	26.3	0.0	7.0	11.9	0.4	8.4
2/01/2025 19:30	3.7	27.0	0.0	6.8	12.2	0.0	2/01/2025 19:30	3.6	26.6	0.0	7.1	11.9	0.5	8.5
2/01/2025 19:45	4.8	63.2	0.0	7.2	11.8	0.0	2/01/2025 19:45	3.6	27.1	0.0	7.1	11.9	0.6	8.6
2/01/2025 20:00	4.9	63.1	0.0	7.2	11.8	0.0	2/01/2025 20:00	3.6	27.2	0.0	7.2	11.9	0.4	8.4
2/01/2025 20:15	4.9	64.9	0.0	7.2	11.8	0.0	2/01/2025 20:15	3.6	27.0	0.0	7.0	11.9	0.4	8.4
2/01/2025 20:30	5.0	64.8	0.0	7.2	11.7	0.0	2/01/2025 20:30	3.7	26.9	0.0	7.1	11.9	0.4	8.4
2/01/2025 20:45	5.1	65.2	0.0	7.3	11.7	0.0	2/01/2025 20:45	3.7	26.1	0.0	7.1	11.9	0.5	8.5
2/01/2025 21:00	5.1	64.2	0.0	7.2	11.7	0.0	2/01/2025 21:00	3.7	25.2	0.0	7.1	11.9	0.6	8.6
2/01/2025 21:15	5.1	64.6	0.0	7.2	11.7	0.0	2/01/2025 21:15	3.7	26.1	0.0	7.1	11.9	0.5	8.5
2/01/2025 21:30	5.1	64.2	0.0	7.2	11.7	0.0	2/01/2025 21:30	3.7	23.9	0.0	7.1	11.9	0.5	8.5
2/01/2025 21:45	4.0	29.4	0.0	6.9	12.1	0.1	2/01/2025 21:45	3.7	26.4	0.0	7.0	11.9	0.9	8.9
2/01/2025 22:00	3.8	28.2	0.0	6.8	12.2	0.0	2/01/2025 22:00	3.7	26.0	0.0	7.1	11.9	0.8	8.8
2/01/2025 22:15	3.7	27.9	0.0	6.8	12.2	0.1	2/01/2025 22:15	3.7	26.5	0.0	7.1	11.9	0.5	8.5
2/01/2025 22:30	3.7	27.7	0.0	6.8	12.2	0.0	2/01/2025 22:30	3.7	26.2	0.0	7.1	11.9	0.9	8.9
2/01/2025 22:45	5.0	65.7	0.0	7.2	11.8	0.0	2/01/2025 22:45	3.7	26.2	0.0	7.1	11.9	0.3	8.3
2/01/2025 23:00	5.1	66.3	0.0	7.2	11.7	0.0	2/01/2025 23:00	3.7	25.5	0.0	7.2	11.9	0.6	8.6
2/01/2025 23:15	5.0	65.7	0.0	7.2	11.8	0.0	2/01/2025 23:15	3.7	23.1	0.0	7.1	11.9	0.5	8.5
2/01/2025 23:30	5.3	72.2	0.0	7.3	11.7	0.0	2/01/2025 23:30	3.7	25.8	0.0	7.1	11.9	0.5	8.5
2/01/2025 23:45	3.9	28.4	0.0	6.9	12.1	0.0	2/01/2025 23:45	3.7	25.8	0.0	7.1	11.9	0.6	8.6
2/02/2025 0:00	3.7	27.6	0.0	6.8	12.2	0.0	2/02/2025 0:00		25.5	0.0	7.2	11.9	0.4	8.4
2/02/2025 0:15	3.7	27.3	0.0	6.8	12.2	0.0	2/02/2025 0:15	3.7	25.7	0.0	7.1	11.9	0.5	8.5
2/02/2025 0:30	5.2	71.2	0.0	7.2	11.7	0.0	2/02/2025 0:30	3.6	25.4	0.0	7.1	11.9	0.4	8.4
2/02/2025 0:45	5.5	75.8	0.0	7.3	11.6	0.7	2/02/2025 0:45	3.6	23.1	0.0	7.1	11.9	0.7	8.7
2/02/2025 1:00	4.6	43.0	0.0	7.2	11.8	0.0	2/02/2025 1:00	3.6	25.3	0.0	7.0	11.9	0.3	8.3
2/02/2025 1:15	3.8	27.8	0.0	6.9	12.1	0.0	2/02/2025 1:15	3.6	25.3	0.0	7.1	11.9	0.4	8.4
2/02/2025 1:30	3.7	27.2	0.0	6.8	12.2	1.6	2/02/2025 1:30	3.6	25.4	0.0	7.1	11.9	0.2	8.2
2/02/2025 1:45	3.7	27.3	0.0	6.8	12.2	0.0	2/02/2025 1:45	3.6	25.2	0.0	7.2	11.9	0.5	8.5
2/02/2025 2:00	5.3	74.5	0.0	7.3	11.6	0.0	2/02/2025 2:00	3.6	22.6	0.0	7.1	11.9	0.2	8.2
2/02/2025 2:15	5.4	74.9	0.0	7.3	11.6	0.0	2/02/2025 2:15	3.6	24.9	0.0	7.0	11.9	0.3	8.3

2/02/2025 2:30	5.2	65.7	0.0	7.2	11.7	0.0	2/02/2025 2:30	3.6	24.6	0.0	7.1	11.9	0.1	8.1
2/02/2025 2:45	3.9	28.2	0.0	6.9	12.1	0.0	2/02/2025 2:45	3.6	24.8	0.0	7.1	11.9	0.1	8.1
2/02/2025 3:00	3.7	27.1	0.0	6.9	12.2	0.0	2/02/2025 3:00	3.6	24.5	0.0	7.2	11.9	0.3	8.3
2/02/2025 3:15	4.4	57.5	0.0	6.9	12.1	0.0	2/02/2025 3:15	3.6	24.7	0.0	7.1	11.9	0.2	8.2
2/02/2025 3:30	5.3	73.2	0.0	7.2	11.7	0.0	2/02/2025 3:30	3.6	24.5	0.0	7.1	11.9	0.2	8.2
2/02/2025 3:45	5.4	74.2	0.0	7.3	11.6	0.0	2/02/2025 3:45	3.6	21.8	0.0	7.1	11.9	0.2	8.2
2/02/2025 4:00	4.6	51.0	0.0	7.0	12.0	0.0	2/02/2025 4:00	3.6	24.3	0.0	7.1	11.9	0.1	8.1
2/02/2025 4:15	3.8	27.8	0.0	6.9	12.1	0.0	2/02/2025 4:15	3.6	22.0	0.0	7.1	11.9	0.1	8.1
2/02/2025 4:30	3.7	27.0	0.0	6.9	12.2	0.0	2/02/2025 4:30	3.6	24.1	0.0	7.1	11.9	0.3	8.3
2/02/2025 4:45	3.6	26.9	0.0	6.9	12.2	0.0	2/02/2025 4:45	3.6	21.6	0.0	7.1	11.9	0.2	8.2
2/02/2025 5:00	5.2	75.0	0.0	7.2	11.7	0.0	2/02/2025 5:00	3.6	24.0	0.0	7.0	11.9	0.0	8.0
2/02/2025 5:15	5.4	75.5	0.0	7.3	11.6	0.7	2/02/2025 5:15	3.6	24.1	0.0	7.1	11.9	0.0	8.0
2/02/2025 5:30	5.4	75.0	0.0	7.3	11.6	0.0	2/02/2025 5:30	3.6	21.6	0.0	7.1	11.9	0.1	8.1
2/02/2025 5:45	4.1	31.7	0.0	7.2	12.0	0.0	2/02/2025 5:45	3.6	24.0	0.0	7.0	11.9	0.2	8.2
2/02/2025 6:00	3.7	27.4	0.0	6.9	12.1	0.0	2/02/2025 6:00	3.6	23.7	0.0	7.1	11.9	0.1	8.1
2/02/2025 6:15	3.6	27.0	0.0	6.9	12.2	0.5	2/02/2025 6:15	3.6	21.1	0.0	7.1	11.9	0.1	8.1
2/02/2025 6:30	3.6	26.4	0.0	6.8	12.2	0.0	2/02/2025 6:30	3.5	23.3	0.0	7.0	11.9	0.2	8.2
2/02/2025 6:45	3.6	29.0	0.0	6.7	12.2	2.4	2/02/2025 6:45	3.5	23.1	0.0	7.1	11.9	0.0	8.0
2/02/2025 7:00	5.3	76.5	0.0	7.3	11.6	0.0	2/02/2025 7:00	3.5	23.2	0.0	7.1	11.9	0.1	8.1
2/02/2025 7:15	5.4	78.5	0.0	7.3	11.6	0.0	2/02/2025 7:15	3.5	23.0	0.0	7.2	11.9	0.2	8.2
2/02/2025 7:30	4.1	33.7	0.0	7.2	11.9	0.0	2/02/2025 7:30	3.4	21.3	0.0	7.1	11.9	0.0	8.0
2/02/2025 7:45	3.6	27.2	0.0	6.9	12.2	0.0	2/02/2025 7:45	3.4	20.4	0.0	7.2	11.9	0.3	8.3
2/02/2025 8:00	3.4	26.6	0.0	6.8	12.2	0.0	2/02/2025 8:00	3.3	22.8	0.0	7.1	11.9	0.1	8.1
2/02/2025 8:15	3.3	26.4	0.0	6.8	12.3	0.0	2/02/2025 8:15	3.3	22.3	0.0	7.1	11.9	0.0	8.0
2/02/2025 8:30	3.2	26.0	0.0	6.8	12.3	0.0	2/02/2025 8:30	3.1	22.2	0.0	7.1	12.0	0.0	8.0
2/02/2025 8:45	4.8	76.0	0.0	7.3	11.8	0.0	2/02/2025 8:45	3.0	21.5	0.0	7.1	12.0	0.7	8.7
2/02/2025 9:00	4.9	76.2	0.0	7.3	11.8	0.0	2/02/2025 9:00	3.0	20.7	0.0	7.0	12.0	0.0	8.0
2/02/2025 9:15	4.9	75.7	0.0	7.3	11.8	0.0	2/02/2025 9:15	3.0	20.7	0.0	7.1	12.0	0.1	8.1
2/02/2025 9:30	3.5	28.4	0.0	7.0	12.2	0.0	2/02/2025 9:30	2.9	19.5	0.0	7.1	12.0	0.0	8.0
2/02/2025 9:45	3.1	26.2	0.0	6.8	12.3	0.0	2/02/2025 9:45	3.0	22.0	0.0	7.0	12.0	0.0	8.0
2/02/2025 10:00	3.0	26.1	0.0	6.8	12.4	0.0	2/02/2025 10:00	2.9	22.1	0.0	7.1	12.0	0.0	8.0
2/02/2025 10:15	3.0	26.0	0.0	6.8	12.4	0.0	2/02/2025 10:15	2.9	19.8	0.0	7.1	12.0	0.0	8.0
2/02/2025 10:30	3.0	26.0	0.0	6.7	12.4	0.0	2/02/2025 10:30	2.9	21.8	0.0	7.0	12.1	0.1	8.1
2/02/2025 10:45	4.4	74.7	0.0	7.2	11.9	0.0	2/02/2025 10:45	2.9	21.7	0.0	7.1	12.1	0.1	8.1
2/02/2025 11:00	4.2	59.7	0.0	7.2	12.0	0.0	2/02/2025 11:00	2.9	22.0	0.0	7.1	12.1	0.0	8.0
2/02/2025 11:15	4.7	77.4	0.0	7.3	11.8	0.0	2/02/2025 11:15	2.7	21.8	0.0	7.1	12.1	0.0	8.0
2/02/2025 11:30	4.8	77.7	0.0	7.3	11.8	0.0	2/02/2025 11:30	2.6	19.4	0.0	7.1	12.1	0.0	8.0
2/02/2025 11:45	3.3	33.2	0.0	7.2	12.2	0.0	2/02/2025 11:45	2.4	21.4	0.0	7.0	12.2	0.0	8.0
2/02/2025 12:00	2.5	26.4	0.0	6.9	12.5	4.0	2/02/2025 12:00	2.2	18.9	0.0	7.1	12.2	0.0	8.0
2/02/2025 12:15	2.4	25.9	0.0	6.8	12.6	0.0	2/02/2025 12:15	1.8	20.8	0.0	7.0	12.3	0.0	8.0
2/02/2025 12:30	4.2	76.8	0.0	7.3	12.0	0.0	2/02/2025 12:30	2.0	18.7	0.0	7.0	12.4	0.0	8.0
2/02/2025 12:45	3.3	44.6	0.0	7.2	12.2	0.0	2/02/2025 12:45	2.1	21.3	0.0	7.1	12.3	0.0	8.0
2/02/2025 13:00	2.4	26.1	0.0	6.8	12.6		2/02/2025 13:00	2.0	18.9	0.0	7.1	12.4	0.0	8.0
2/02/2025 13:15	4.4	78.4	0.0	7.3	11.9	0.0	2/02/2025 13:15	2.2	21.0	0.0	7.1	12.3	0.1	8.1
2/02/2025 13:30	4.5	79.3	0.0	7.4	11.9	0.0	2/02/2025 13:30	2.5	19.1	0.0	7.1	12.3	0.0	8.0
2/02/2025 13:45	4.6	79.8	0.0	7.4	11.9	0.0	2/02/2025 13:45	2.6	21.4	0.0	7.0	12.2	0.0	8.0
2/02/2025 14:00	4.7	79.8	0.0	7.4	11.8	0.0	2/02/2025 14:00	2.7	21.2	0.0	7.1	12.2	0.0	8.0
2/02/2025 14:15	3.2	28.8	0.0	7.0	12.3	0.0	2/02/2025 14:15	2.8	19.2	0.0	7.1	12.2	0.0	8.0
2/02/2025 14:30	3.0	26.3	0.0	6.8	12.4	0.0	2/02/2025 14:30	2.8	21.2	0.0	7.0	12.2	0.0	8.0
2/02/2025 14:45	3.0	25.6	0.0	6.8	12.4	0.0	2/02/2025 14:45	2.9	20.7	0.0	7.1	12.1	0.0	8.0
2/02/2025 15:00	4.1	67.0	0.0	7.2	12.0	0.0	2/02/2025 15:00	2.9	20.6	0.0	7.1	12.1	0.1	8.1
2/02/2025 15:15	4.7	79.5	0.0	7.3	11.8	0.0	2/02/2025 15:15	2.9	20.9	0.0	7.1	12.1	0.0	8.0
2/02/2025 15:30	4.8	80.9	0.0	7.4	11.8	0.0	2/02/2025 15:30	3.0	18.8	0.0	7.1	12.1	0.1	8.1
2/02/2025 15:45	4.9	80.6	0.0	7.4	11.8	0.0	2/02/2025 15:45	3.0	20.9	0.0	7.1	12.1	0.0	8.0
2/02/2025 16:00	3.3	27.5	0.0	6.9	12.3	0.0	2/02/2025 16:00	3.0	21.0	0.0	7.1	12.1	0.0	8.0
2/02/2025 16:15	3.2	26.0	0.0	6.8	12.3	0.0	2/02/2025 16:15	3.0	20.8	0.0	7.1	12.1	0.0	8.0
2/02/2025 16:30	3.1	25.7	0.0	6.8	12.4	0.0	2/02/2025 16:30	3.0	20.9	0.0	7.1	12.0	0.0	8.0
2/02/2025 16:45	3.1	25.5	0.0	6.8	12.4	0.0	2/02/2025 16:45	3.0	20.7	0.0	7.1	12.1	0.0	8.0
2/02/2025 17:00	4.6	78.1	0.0	7.3	11.9	0.0	2/02/2025 17:00	3.0	20.9	0.0	7.0	12.0	0.1	8.1
2/02/2025 17:15	4.9	79.9	0.0	7.4	11.7	0.0	2/02/2025 17:15	3.0	20.7	0.0	7.1	12.0	0.0	8.0
2/02/2025 17:30	5.0	79.6	0.0	7.4	11.7	0.0	2/02/2025 17:30	3.0	18.9	0.0	7.0	12.0	0.0	8.0
2/02/2025 17:45	4.8	69.0	0.0	7.4	11.7	0.0	2/02/2025 17:45	3.0	20.9	0.0	6.9	12.1	0.0	8.0
2/02/2025 18:00	3.3	27.0	0.0	6.9	12.3	0.0	2/02/2025 18:00	3.0	20.8	0.0	7.1	12.0	0.0	8.0
2/02/2025 18:15	3.1	26.0	0.0	6.8	12.3	0.0	2/02/2025 18:15	3.0	21.1	0.0	7.1	12.0	0.0	8.0
2/02/2025 18:30	3.0	25.8	0.0	6.8	12.4	0.0	2/02/2025 18:30	3.0	21.1	0.0	7.1	12.0	0.0	8.0
2/02/2025 18:45	2.8	25.6	0.0	6.8	12.4	0.0	2/02/2025 18:45	2.7	20.0	0.0	7.1	12.1	0.0	8.0
2/02/2025 19:00	4.1	73.8	0.0	7.1	12.1	0.0	2/02/2025 19:00	2.6	20.7	0.0	7.1	12.1	0.1	8.1
2/02/2025 19:15	4.5	76.7	0.0	7.3	11.9	0.0	2/02/2025 19:15	2.5	20.9	0.0	7.0	12.2	0.0	8.0
2/02/2025 19:30	4.7	79.2	0.0	7.4	11.8	0.0	2/02/2025 19:30	2.4	20.4	0.0	7.0	12.2	0.0	8.0
2/02/2025 19:45	4.6	79.5	0.0	7.4	11.9	0.0	2/02/2025 19:45	2.0	20.3	0.0	7.0	12.2	0.0	8.0
2/02/2025 20:00	4.5	79.3	0.0	7.4	11.9	0.0	2/02/2025 20:00	2.0	19.9	0.0	7.1	12.3	0.0	8.0
2/02/2025 20:15	3.4	41.8	0.0	7.4	12.2	0.0	2/02/2025 20:15	2.0	18.0	0.0	7.0	12.3	0.0	8.0
2/02/2025 20:30	2.5	26.4	0.0	6.8	12.6	0.0	2/02/2025 20:30	2.2	20.1	0.0	7.0	12.3	0.0	8.0
2/02/2025 20:45	2.4	25.5	0.0	6.8	12.6	0.0	2/02/2025 20:45	2.0	20.6	0.0	7.0	12.3	0.0	8.0
2/02/2025 21:00	2.3	25.3	0.0	6.8	12.7	0.0	2/02/2025 21:00	2.1	20.4	0.0	7.1	12.3	0.0	8.0
2/02/2025 21:15	2.8	53.1	0.0	6.8	12.6	0.0	2/02/2025 21:15	2.2	20.7	0.0	7.0	12.3	0.0	8.0
2/02/2025 21:30	4.3	79.4	0.0	7.4	12.0	0.0	2/02/2025 21:30	2.3	20.8	0.0	7.1	12.3	0.0	8.0
2/02/2025 21:45	2.6	27.4	0.0	6.9	12.5	0.0	2/02/2025 21:45	2.4	20.7	0.0	7.1	12.3	0.0	8.0
2/02/2025 22:00	2.4	25.9	0.0	6.8	12.6	0.3	2/02/2025 22:00	2.4	20.9	0.0	7.2	12.3	0.0	8.0
2/02/2025 22:15	4.1	76.8	0.0	7.2	12.1	0.0	2/02/2025 22:15	2.4	18.5	0.0	7.2	12.3	0.0	8.0
2/02/2025 22:30	4.5	80.4	0.0	7.4	11.9	0.0	2/02/2025 22:30	2.4	21.0	0.0	6.9	12.3	0.0	8.0
2/02/2025 22:45	4.5	80.7	0.0	7.4	11.9	0.0	2/02/2025 22:45	2.4	21.0	0.0	7.0	12.2	0.0	8.0
2/02/2025 23:00	4.6	80.8	0.0	7.4	11.9	0.0	2/02/2025 23:00	2.4	18.9	0.0	7.1	12.3	0.0	8.0
2/02/2025 23:15	4.1	63.6	0.0	7.4	12.0	0.0	2/02/2025 23:15	2.4	21.0	0.0	6.9	12.3	0.0	8.0
2/02/2025 23:30	2.7	27.4	0.0	6.9	12.5	0.0	2/02/2025 23:30	2.4	21.1	0.0	7.0	12.2	0.0	8.0
2/02/2025 23:45	2.5	26.4	0.0	6.8	12.6	0.0	2/02/2025 23:45	2.4	21.0	0.0	6.9	12.3	0.1	8.1