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
Daily	Visible Sheen	In field inspection
Daily (or per batch)	DO	Monitoring using YSI ProDSS
	ORP	Monitoring using YSI ProDSS
	Salinity	Monitoring using YSI ProDSS
Real Time (or per batch)	pH	Monitoring using GF Dryloc pH Series NPT
	Temperature	Monitoring using LevelPro PT100 Temperature and Signet 2350 Temp sensor
	NTU	Monitoring using Observator NEP9504GPI
	Electrical Conductivity	Monitoring using ProCon C450
Weekly (or per batch) Lab Samples	List prescribed in permit	Lab samples

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

Permit Frequency	Parameters	Details
Daily	Visible Sheen	In field inspection
Daily	DO	Monitoring using Sonde- AquaTROLL 600 datalogger
	ORP	Monitoring using Sonde- AquaTROLL 600 datalogger
	Salinity	Monitoring using Sonde- AquaTROLL 600 datalogger
Real Time	pH	Monitoring using Sonde- AquaTROLL 600 datalogger
	Temperature	Monitoring using Sonde- AquaTROLL 600 datalogger
	NTU	Monitoring using Sonde- AquaTROLL 600 datalogger
	Electrical Conductivity	Monitoring using Sonde- AquaTROLL 600 datalogger
Weekly Lab Samples	List prescribed in permit	Lab samples

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

Summary-BC Rail Site

Site Activities

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

Point of Discharge from Water Treatment System Monitoring

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

Table 3: Discharge from Water Treatment System Information

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

*Max discharge is 515 m3/day

Exceedances

No exceedances this reporting period.

Receiving Environment Monitoring

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

Table 4: Upstream Monitoring Information

Location	Date of Lab Sample	Real Time Monitored	Results
Squamish River Upstream	2025-01-06	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	2025-01-06	Yes *	Full set of lab sample results, photo and documentation are provided in Appendix B.

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

Receiving Environment Monitoring Details

- All receiving environment lab results are in Appendix B.
- Any recorded exceedances in the laboratory and field samples collected from the receiving environment (upstream and downstream) are indicative of the existing background water quality in the Squamish River, and are not related to the EGP Project activities.

Summary-Woodfibre

Site Activities

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

Point of Discharge from Water Treatment System Monitoring

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

Table 3: Discharges from Water Treatment System

Location	Date of Discharge	Real Time Monitored and Daily Monitoring	Discharge Volume
Woodfibre	2025-01-06	Yes-Appendix C	421m^3
Woodfibre	2025-01-07	Yes-Appendix C*lab sample day	487m^3
Woodfibre	2025-01-08	Yes-Appendix C	390m^3
Woodfibre	2025-01-09	Yes-Appendix C	444m^3
Woodfibre	2025-01-10	Yes-Appendix C	473m^3
Woodfibre	2025-01-11	Yes-Appendix C	425m^3
Woodfibre	2025-01-12	Yes-Appendix C	432m^3

*Max discharge is 1500m^3/day

Exceedances

No exceedances this reporting period.

Receiving Environment Monitoring

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

Table 4: Upstream Monitoring Information

Location	Date of Lab Sample	Real Time Monitored	Results
Woodfibre Upstream	2025-01-07	Yes *	Full set of lab sample results, photo and documentation are provided in Appendix D.

Table 5: Downstream Monitoring Information

	Date of Lab Sample	Real Time Monitored	Results
Woodfibre Downstream	2025-01-07	Yes *	Full set of lab sample results, photo and documentation are provided in Appendix D.

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

Receiving Environment Monitoring Details

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

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

BCR Site Batch Sample Analysis

No Discharges

BCR Site Batch Sample Lab Documentation

No Discharges

BCR Site WTP Discharge Field Notes and Logs
No Discharges

Appendix B: BCR Site Receiving Environment Documentation

BCR Site Receiving Environment Sample Analysis

TRITON	Sample ID	Reviewed and signed off by:	College of Applied Biologists Farshad Shafiei RPBio 3781 CAB		Farshad Shafiei Ph.D., R.P.Bio.	SQU US1 (Upstream)	SQU DS1 (Downstream)	Sample or value notes	BCWQ FAL - Short Term	BCWQ FAL - Long Term	BCWQ MAL - Short Term	BCWQ MAL - Long Term
	LAB ID					VA24D4481-001	VA24D4481-002					
	Date Sampled					06-Jan-2025	06-Jan-2025					
	Time Sampled					11:14	10:48					
Analyte	Units	FAL-ST [1,2]	FAL-LT [1,2]	MAL-ST [1]	MAL-LT [1,2]	Water	Water					
						N/A	N/A		Guideline notes			
In Situ Parameters												
pH (field)	pH units	6.5-9.0	6.5-9.0	7.0-8.7	7.0-8.7	7.18	7.18		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]	-	3.4	3.1		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	-	-	-	-	68	64					
Turbidity (field)	NTU	Varies with background, see note Guideline = 8.97	Varies with background, see note Guideline = 4.36 5-week discrete sampling average = 2.0 (DS)	Varies with background, see note Guideline = 8.97	Varies with background, see note Guideline = 4.36 5-week discrete sampling average = 2.0 (DS)	0.97	1.19		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	12.72	11.86		Buried embryo/alevin minimum 9 mg/L, all other life stages 5 mg/L. Refer to BC Water Quality Guidelines for more information.	Buried embryo/alevin minimum 11 mg/L, all other life stages 8 mg/L. Refer to BC Water Quality Guidelines for more information.	Buried embryo/alevin minimum 9 mg/L, all other life stages 5 mg/L. Refer to BC Water Quality Guidelines for more information.	Buried embryo/alevin minimum 11 mg/L, all other life stages 8 mg/L. Refer to BC Water Quality Guidelines for more information.
General Parameters												
Hardness (as $CaCO_3$) (total)	mg/L	-	-	-	-	23	22.4					
Total Dissolved Solids	mg/L	-	-	-	-	55	56					
Total Suspended Solids	mg/L	Varies with background, see note Guideline = 28	Varies with background, see note Guideline = 8.0 5-week discrete sampling average = 3.46 (DS)	Varies with background, see note Guideline = 28	Varies with background, see note Guideline = 8.0 5-week discrete sampling average = 3.46 (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	-	-	-	-	1.12	1.24			Long-term (30-day) median within 20% of background median [3]		
Total Alkalinity ($CaCO_3$)	mg/L	-	Categorical	-	-	18.9	18.8			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 = 19.0	Varies with pH and temperature. See note. Guideline = 1.97	Varies with pH and temperature. See note. Guideline = 121	Varies with pH, temperature and salinity. See note. Guideline = 29	0.0392	0.0293		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	4.09	3.22				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 = 0.743	-	1.5	-	0.024	0.023		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	0.165	0.0805					
Nitrite (as N)	mg/L	Varies with chloride. See note. Guideline = 0.18	Varies with chloride. See note. Guideline = 0.06	-	-	0.0112	0.0019		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	-	-	-	-	0.283	0.16					
Total Phosphorous	mg/L	-	0.005 to 0.015	-	-	0.0439	0.0177			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	-	-	6.61	6.15			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 = 0.073 5-week field average = 0.13 (US), 0.14 (DS)	-	-	0.0591	0.0624			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	0.0002	0.00019					Interim guideline status
Barium (Ba)-Total	mg/L	-	1	-	-	0.00966	0.0101			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	-	-	-	-	< 0.00005	< 0.00005					
Boron (B)-Total	mg/L	-	1.2	-	1.2	0.012	< 0.010					
Cadmium (Cd)-Total	mg/L	-	-	-	0.00012	0.0000118	0.0000085					Working guideline status
Calcium (Ca)-Total	mg/L	-	-	-	-	7.69	7.54					
Cesium (Cs)-Total	mg/L	-	-	-	-	0.000024	0.000022					
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	0.0014 5-week field average = 0.00093 (US), 0.00098 (DS)	0.00071	0.00075					
Iron (Fe)-Total	mg/L	1	-	-	-	0.189	0.208					
Lead (Pb)-Total	mg/L	-	-	0.14	0.002 5-week field average = 0.00005 (US), 0.00006 (DS)	< 0.000050	< 0.000050					
Lithium (Li)-Total	mg/L	-	-	-	-	0.0013	0.0014					
Magnesium (Mg)-Total	mg/L	-	-	-	-	0.934	0.861					
Manganese (Mn)-Total	mg/L	Varies with hardness Guideline = 0.715	Varies with hardness Guideline = 0.768	-	-	0.0104	0.0114		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	-	-	0.000604	0.000635					
Nickel (Ni)-Total	mg/L	-	-	-	0.0083	< 0.00050	< 0.00050					Working guideline status
Phosphorus (P)-Total	mg/L	-	0.005 to 0.015	-	-	0.057	< 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	-	-	-	-	0.85	0.756					
Rubidium (Rb)-Total	mg/L	-	-	-	-	0.00132	0.00108					
Selenium (Se)-Total	mg/L	-	0.002	-	0.002	< 0.00005	< 0.000050			Guideline for freshwater aquatic life (water column). Alert concentration is 0.001 mg/L, with separate guidelines for sediment, invertebrate and fish tissue. Refer to BC Water Quality Guidelines for more information on guideliens and sampling guidance.		Guideline for marine aquatic life (water column). Alert concentration is 0.001 mg/L, with separate guideliens for sediment, invertebrate and fish tissue. Refer to BC Water Quality Guidelines for
Silicon (Si)-Total	mg/L	-	-	-	-	5.96	5.53					
Silver (Ag)-Total	mg/L	Varies with hardness, see note Guideline = 0.0001	Varies with hardness, see note Guideline = 0.00005 5-week field average = < 0.00001 (US), 0.0000136 (DS)	0.003	0.0015	< 0.000010	< 0.000010		Varies with hardness Guideline ranges: Hardness ≤ 100: 0.0001 Hardness > 100: 0.003	Varies with hardness Guideline ranges: Hardness ≤ 100: 0.00005 Hardness > 100: 0.0015		Guideline applies to open coast and estuaries. Guideline is applicable to the EGP site.
Sodium (Na)-Total	mg/L	-	-	-	-	4.16	3.27					
Strontium (Sr)-Total	mg/L	-	-	-	-	0.0499	0.0482					
Sulfur (S)-Total	mg/L	-	-	-	-	2.32	2.17					
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	-	-	-	-	0.00125	0.0014					
Tungsten (W)-Total	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Uranium (U)-Total	mg/L	0.0165	0.0075	-	-	0.000031	0.00003			Working guideline status		
Vanadium (V)-Total	mg/L	-	0.06	-	0.005 5-week field average = 0.00123 (US), 0.00113 (DS)	0.00157	0.00129					Working guideline status
Zinc (Zn)-Total	mg/L	-	-	0.055	Guideline = 0.010 5-week field average = < 0.0055 (US), 0.77948 (DS)	< 0.0030	< 0.0030					
Zirconium (Zr)-Total	mg/L	-	-	-	-	< 0.00020	< 0.00020					
Dissolved Metals												
Aluminum (Al)-Dissolved	mg/L	-	-	-	-	0.0263	0.0272					
Antimony (Sb)-Dissolved	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Arsenic (As)-Dissolved	mg/L	-	-	-	-	0.00013	0.00014					
Barium (Ba)-Dissolved	mg/L	-	-	-	-	0.00883	0.00886					
Beryllium (Be)-Dissolved	mg/L	-	-	-	-	< 0.000100	< 0.000100					
Bismuth (Bi)-Dissolved	mg/L	-	-	-	-	< 0.000050	< 0.000050					
Boron (B)-Dissolved	mg/L	-	-	-	-	0.011	0.01					
Cadmium (Cd)-Dissolved	mg/L	Varies with hardness, see note Guideline = 0.000129	Varies with hardness, see note Guideline = 0.000060	-	-	0.0000078	0.0000071		Guideline is hardness dependent. Guideline is appilcable to water hardness between 7.0 and 455 mg/L. Guideline is calculated with the following formula: Guideline = (EXP(1.03 * (LN(hardness)) - 5.274)/1000) Lowest value for guideline is 0.000018 mg/L. If hardness is below the hardness range, the minimum hardness will be applied in the calculation.	Guideline is hardness dependent. Guideline is applicable to hardness between 3.4 and 285 mg/L. Guideline is calculated with the following formula: Guideline = (EXP(0.736 * (LN(hardness)) - 4.943)/1000) Lowest value for guiedeline is 0.00004. If hardness is below the hardness range, the minimum hardness will be applied in the calculation.		
Calcium (Ca)-Dissolved	mg/L	-	Categorical, see note	-	-	7.93	7.92			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	-	-	-	-	0.000022	0.00002					
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 = 0.0012	Guideline varies with other parameters, see note Guideline = 0.0003 5-week field average = 0.000756 (US), 0.000730 (DS)	-	-	0.00061	0.00059		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	-	-	-	0.115	0.123					
Lead (Pb)-Dissolved	mg/L	-	Guideline varies with DOC and hardness Guideline = 0.00211 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	-	-	-	-	0.0012	0.0013					
Magnesium (Mg)-Dissolved	mg/L	-	-	-	-	0.928	0.833					
Manganese (Mn)-Dissolved	mg/L	-	-	-	-	0.00974	0.01					
Mercury (Hg)-Dissolved	mg/L	-	-	-	-	< 0.0000050	< 0.0000050					
Molybdenum (Mo)-Dissolved	mg/L	-	-	-	-	0.000643	0.000608					
Nickel (Ni)-Dissolved	mg/L	Guideline varies with other parameters, see note Guideline = 0.0161	Guideline varies with other parameters, see note Guideline = 0.001058 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	-	-	-	-	0.82	0.714					
Rubidium (Rb)-Dissolved	mg/L	-	-	-	-	0.00114	0.00109					
Selenium (Se)-Dissolved	mg/L	-	-	-	-	< 0.000050	< 0.000050					
Silicon (Si)-Dissolved	mg/L	-	-	-	-	6	5.45					
Silver (Ag)-Dissolved	mg/L	-	-	-	-	< 0.000010	< 0.000010					
Sodium (Na)-Dissolved	mg/L	-	-	-	-	4.28	3.5					
Strontium (Sr)-Dissolved	mg/L	-	-	-	-	0.0476	0.0494					
Sulfur (S)-Dissolved	mg/L	-	-	-	-	1.92	1.58					
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	0.00035					
Tungsten (W)-Dissolved	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Uranium (U)-Dissolved	mg/L	-	-	-	-	0.00003	0.000028					
Vanadium (V)-Dissolved	mg/L	-	-	-	-	0.00141	0.00113					
Zinc (Zn)-Dissolved	mg/L	Varies with DOC and hardness Guideline = 0.012	Varies with pH, DOC, hardness Guideline = 0.0043 5-week field average = 0.0039 (US), 0.7137 (DS)	-	-	0.0022	0.0018		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)**										
Color Key:		**Exceeds FAL Short term Guideline**	***Exceeds both FAL and MAL Guidelines***	**Exceeds MAL Short term Guideline**								

[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	7.18	7.18
Temperature (field)	°C	Field temperature taken using handheld meters during sampling used in calculations	3.4	3.1
Turbidity (field)	NTU	Field turbidity taken using handheld meters during sampling used in calculations	0.97	1.19
Hardness (as CaCO3) (total)	mg/L	Laboratory tested total hardness taken at each respective sample site on the day of sampling used in guideline calculations	23	22.4
Dissolved Organic Carbon (DOC)	mg/L	Laboratory tested dissolved organic carbon tested at the lab used in guideline calculations	1.12	1.24
Total Alkalinity ($CaCO_3$)	mg/L	Laboratory tested total alkalinity used in calculations	18.9	18.8
Chloride	mg/L	Laboratory tested chloride taken at each respective sample site on the day of sampling used in guideline calculations	4.09	3.22

BCR Site Receiving Environment Lab Documentation

CERTIFICATE OF ANALYSIS

Work Order	: **VA25A0201**		
Client	: [redacted]	Laboratory	: [redacted]
Contact		Account Manager	
Address		Address	
Telephone		Telephone	
Project		Date Samples Received	: 06-Jan-2025 16:12
PO		Date Analysis Commenced	: 07-Jan-2025
C-O-C number		Issue Date	: 13-Jan-2025 09:43
Sampler	: ----		
Site	: Water Analysis		
Quote number	: VA23-TRIT100-012		
No. of samples received	: 3		
No. of samples analysed	: 3		

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

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

Signatories

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

Signatories	*Position*	*Laboratory Department*
[redacted]		Metals, Burnaby, British Columbia
		Metals, Burnaby, British Columbia
		Inorganics, Burnaby, British Columbia
		Metals, Burnaby, British Columbia
		Administration, Burnaby, British Columbia
		Metals, 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	BCR Duplicate	----	----
					Client sampling date / time	06-Jan-2025 11:14	06-Jan-2025 10:48	06-Jan-2025 00:00	----	----
						VA25A0201-001	VA25A0201-002	VA25A0201-003	----	----
						Result	Result	Result	----	----
Field Tests										
Conductivity, field	----	EF001/VA	0.10	µS/cm		68.000	64.000	----	----	----
pH, field	----	EF001/VA	0.10	pH units		7.18	7.18	----	----	----
Temperature, field	----	EF001/VA	0.10	°C		3.40	3.10	----	----	----
Physical Tests										
Hardness (as CaCO3), dissolved	----	EC100/VA	0.60	mg/L		23.6	23.2	23.4	----	----
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L		23.0	22.4	22.3	----	----
Solids, total dissolved [TDS]	----	E162/VA	10	mg/L		55	56	52	----	----
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L		<3.0	<3.0	<3.0	----	----
Alkalinity, total (as CaCO3)	----	E290/VA	2.0	mg/L		18.9	18.8	18.5	----	----
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L		0.0392	0.0293	0.0291	----	----
Bromide	24959-67-9	E235.Br-L/VA	0.050	mg/L		<0.050	<0.050	<0.050	----	----
Chloride	16887-00-6	E235.Cl/VA	0.50	mg/L		4.09	3.22	3.30	----	----
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L		0.024	0.023	0.023	----	----
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L		0.165	0.0805	0.0826	----	----
Nitrite (as N)	14797-65-0	E235.NO2-L/VA	0.0010	mg/L		0.0112	0.0019	0.0020	----	----
Nitrogen, total	7727-37-9	E366/VA	0.030	mg/L		0.283	0.160	0.162	----	----
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L		0.0439	0.0177	0.0179	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L		6.61	6.15	6.24	----	----
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L		1.12	1.24	1.42	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SQU US 1	SQU DS 1	BCR Duplicate	----	----
					Client sampling date / time	06-Jan-2025 11:14	06-Jan-2025 10:48	06-Jan-2025 00:00	----	----
						VA25A0201-001	VA25A0201-002	VA25A0201-003	----	----
						Result	Result	Result	----	----
Total Sulfides										
Sulfide, total (as S)	18496-25-8	E395/VA	0.0015	mg/L		<0.0015	<0.0015	<0.0015	----	----
Sulfide, un-ionized (as H2S), from total	7783-06-4	EC395/VA	0.0015	mg/L		<0.0015	<0.0015	----	----	----
Sulfide, total (as H2S)	7783-06-4	E395/VA	0.0016	mg/L		<0.0016	<0.0016	<0.0016	----	----
Total Metals										
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L		0.0591	0.0624	0.0599	----	----
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L		0.00020	0.00019	0.00019	----	----
Barium, total	7440-39-3	E420/VA	0.00010	mg/L		0.00966	0.0101	0.00985	----	----
Beryllium, total	7440-41-7	E420/VA	0.000100	mg/L		<0.000100	<0.000100	<0.000100	----	----
Bismuth, total	7440-69-9	E420/VA	0.000050	mg/L		<0.000050	<0.000050	<0.000050	----	----
Boron, total	7440-42-8	E420/VA	0.010	mg/L		0.012	<0.010	<0.010	----	----
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L		0.0000118	0.0000085	0.0000064	----	----
Calcium, total	7440-70-2	E420/VA	0.050	mg/L		7.69	7.54	7.53	----	----
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L		0.000024	0.000022	0.000025	----	----
Chromium, total	7440-47-3	E420/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	----	----
Cobalt, total	7440-48-4	E420/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Copper, total	7440-50-8	E420/VA	0.00050	mg/L		0.00071	0.00075	0.00074	----	----
Iron, total	7439-89-6	E420/VA	0.010	mg/L		0.189	0.208	0.201	----	----
Lead, total	7439-92-1	E420/VA	0.000050	mg/L		<0.000050	<0.000050	<0.000050	----	----
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L		0.0013	0.0014	0.0013	----	----
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L		0.934	0.861	0.846	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SQU US 1	SQU DS 1	BCR Duplicate	----	----
					Client sampling date / time	06-Jan-2025 11:14	06-Jan-2025 10:48	06-Jan-2025 00:00	----	----
						VA25A0201-001	VA25A0201-002	VA25A0201-003	----	----
						Result	Result	Result	----	----
Total Metals										
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L		0.0104	0.0114	0.0112	----	----
Mercury, total	7439-97-6	E508/VA	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	----	----
Molybdenum, total	7439-98-7	E420/VA	0.000050	mg/L		0.000604	0.000635	0.000582	----	----
Nickel, total	7440-02-0	E420/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	----	----
Phosphorus, total	7723-14-0	E420/VA	0.050	mg/L		0.057	<0.050	<0.050	----	----
Potassium, total	7440-09-7	E420/VA	0.050	mg/L		0.850	0.756	0.735	----	----
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L		0.00132	0.00108	0.00122	----	----
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L		<0.000050	<0.000050	<0.000050	----	----
Silicon, total	7440-21-3	E420/VA	0.10	mg/L		5.96	5.53	5.46	----	----
Silver, total	7440-22-4	E420/VA	0.000010	mg/L		<0.000010	<0.000010	<0.000010	----	----
Sodium, total	7440-23-5	E420/VA	0.050	mg/L		4.16	3.27	3.19	----	----
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L		0.0499	0.0482	0.0488	----	----
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L		2.32	2.17	2.02	----	----
Tellurium, total	13494-80-9	E420/VA	0.00020	mg/L		<0.00020	<0.00020	<0.00020	----	----
Thallium, total	7440-28-0	E420/VA	0.000010	mg/L		<0.000010	<0.000010	<0.000010	----	----
Thorium, total	7440-29-1	E420/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Tin, total	7440-31-5	E420/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Titanium, total	7440-32-6	E420/VA	0.00030	mg/L		0.00125	0.00140	0.00146	----	----
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L		0.000031	0.000030	0.000034	----	----
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L		0.00157	0.00129	0.00131	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SQU US 1	SQU DS 1	BCR Duplicate	----	----
					Client sampling date / time	06-Jan-2025 11:14	06-Jan-2025 10:48	06-Jan-2025 00:00	----	----
						VA25A0201-001	VA25A0201-002	VA25A0201-003	----	----
						Result	Result	Result	----	----
Total Metals										
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L		<0.0030	<0.0030	<0.0030	----	----
Zirconium, total	7440-67-7	E420/VA	0.00020	mg/L		<0.00020	<0.00020	<0.00020	----	----
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/VA	0.0010	mg/L		0.0263	0.0272	0.0254	----	----
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L		0.00013	0.00014	0.00013	----	----
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L		0.00883	0.00886	0.00897	----	----
Beryllium, dissolved	7440-41-7	E421/VA	0.000100	mg/L		<0.000100	<0.000100	<0.000100	----	----
Bismuth, dissolved	7440-69-9	E421/VA	0.000050	mg/L		<0.000050	<0.000050	<0.000050	----	----
Boron, dissolved	7440-42-8	E421/VA	0.010	mg/L		0.011	0.010	<0.010	----	----
Cadmium, dissolved	7440-43-9	E421/VA	0.0000050	mg/L		0.0000078	0.0000071	0.0000054	----	----
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L		7.93	7.92	7.99	----	----
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L		0.000022	0.000020	0.000020	----	----
Chromium, dissolved	7440-47-3	E421/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	----	----
Cobalt, dissolved	7440-48-4	E421/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Copper, dissolved	7440-50-8	E421/VA	0.00020	mg/L		0.00061	0.00059	0.00056	----	----
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L		0.115	0.123	0.125	----	----
Lead, dissolved	7439-92-1	E421/VA	0.000050	mg/L		<0.000050	<0.000050	<0.000050	----	----
Lithium, dissolved	7439-93-2	E421/VA	0.0010	mg/L		0.0012	0.0013	0.0013	----	----
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L		0.928	0.833	0.852	----	----
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L		0.00974	0.0100	0.0103	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SQU US 1	SQU DS 1	BCR Duplicate	----	----
					Client sampling date / time	06-Jan-2025 11:14	06-Jan-2025 10:48	06-Jan-2025 00:00	----	----
						VA25A0201-001	VA25A0201-002	VA25A0201-003	----	----
						Result	Result	Result	----	----
Dissolved Metals										
Mercury, dissolved	7439-97-6	E509/VA	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	----	----
Molybdenum, dissolved	7439-98-7	E421/VA	0.000050	mg/L		0.000643	0.000608	0.000595	----	----
Nickel, dissolved	7440-02-0	E421/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	----	----
Phosphorus, dissolved	7723-14-0	E421/VA	0.050	mg/L		<0.050	<0.050	<0.050	----	----
Potassium, dissolved	7440-09-7	E421/VA	0.050	mg/L		0.820	0.714	0.713	----	----
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L		0.00114	0.00109	0.00113	----	----
Selenium, dissolved	7782-49-2	E421/VA	0.000050	mg/L		<0.000050	<0.000050	<0.000050	----	----
Silicon, dissolved	7440-21-3	E421/VA	0.050	mg/L		6.00	5.45	5.48	----	----
Silver, dissolved	7440-22-4	E421/VA	0.000010	mg/L		<0.000010	<0.000010	<0.000010	----	----
Sodium, dissolved	7440-23-5	E421/VA	0.050	mg/L		4.28	3.50	3.53	----	----
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L		0.0476	0.0494	0.0489	----	----
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L		1.92	1.58	1.69	----	----
Tellurium, dissolved	13494-80-9	E421/VA	0.00020	mg/L		<0.00020	<0.00020	<0.00020	----	----
Thallium, dissolved	7440-28-0	E421/VA	0.000010	mg/L		<0.000010	<0.000010	<0.000010	----	----
Thorium, dissolved	7440-29-1	E421/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Tin, dissolved	7440-31-5	E421/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Titanium, dissolved	7440-32-6	E421/VA	0.00030	mg/L		<0.00030	0.00035	<0.00030	----	----
Tungsten, dissolved	7440-33-7	E421/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L		0.000030	0.000028	0.000028	----	----
Vanadium, dissolved	7440-62-2	E421/VA	0.00050	mg/L		0.00141	0.00113	0.00114	----	----
Zinc, dissolved	7440-66-6	E421/VA	0.0010	mg/L		0.0022	0.0018	0.0013	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SQU US 1	SQU DS 1	BCR Duplicate	----	----
					Client sampling date / time	06-Jan-2025 11:14	06-Jan-2025 10:48	06-Jan-2025 00:00	----	----
						VA25A0201-001	VA25A0201-002	VA25A0201-003	----	----
						Result	Result	Result	----	----
Dissolved Metals										
Zirconium, dissolved	7440-67-7	E421/VA	0.00020	mg/L		<0.00020	<0.00020	<0.00020	----	----
Dissolved mercury filtration location	----	EP509/VA	-	-		Field	Field	Field	----	----
Dissolved metals filtration location	----	EP421/VA	-	-		Field	Field	Field	----	----
Speciated Metals										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	----	----
Chromium, trivalent [Cr III], total	16065-83-1	EC535/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	----	----

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

ALS Canada Ltd.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **VA25A0201**	Page	: 1 of 17
Client	[redacted]	Laboratory	[redacted]
Contact		Account Manager	
Address		Address	
Telephone		Telephone	
Project		Date Samples Received	: 06-Jan-2025 16:12
PO		Issue Date	: 13-Jan-2025 09:41
C-O-C number			
Sampler	: ----		
Site	: Water Analysis		
Quote number	: VA23-TRIT100-012 _V2		
No. of samples received	: 3		
No. of samples analysed	: 3		

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

Key

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

Workorder Comments

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

Summary of Outliers

Outliers : Quality Control Samples

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

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Method Blank (MB) Values								
Physical Tests	QC-MRG2-1831050001	----	Alkalinity, total (as CaCO3)	----	E290	2.3 mg/L B	2 mg/L	Blank result exceeds permitted value
Anions and Nutrients	QC-1832321-001	----	Phosphorus, total	7723-14-0	E372-U	0.0083 mg/L B	0.002 mg/L	Blank result exceeds permitted value

Result Qualifiers

Qualifier	Description
B	*Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.*

Analysis Holding Time Compliance

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

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

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

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

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) BCR Duplicate	E298	06-Jan-2025	08-Jan-2025	28 days	2 days	✓	08-Jan-2025	28 days	2 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) SQU DS 1	E298	06-Jan-2025	08-Jan-2025	28 days	2 days	✓	08-Jan-2025	28 days	2 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) SQU US 1	E298	06-Jan-2025	08-Jan-2025	28 days	2 days	✓	08-Jan-2025	28 days	2 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE BCR Duplicate	E235.Br-L	06-Jan-2025	07-Jan-2025	28 days	1 days	✓	07-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE SQU DS 1	E235.Br-L	06-Jan-2025	07-Jan-2025	28 days	1 days	✓	07-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE SQU US 1	E235.Br-L	06-Jan-2025	07-Jan-2025	28 days	1 days	✓	07-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE BCR Duplicate	E235.Cl	06-Jan-2025	07-Jan-2025	28 days	1 days	✓	07-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		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Chloride in Water by IC										
HDPE										
SQU DS 1	E235.Cl	06-Jan-2025	07-Jan-2025	28 days	1 days	✓	07-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
SQU US 1	E235.Cl	06-Jan-2025	07-Jan-2025	28 days	1 days	✓	07-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
BCR Duplicate	E235.F	06-Jan-2025	07-Jan-2025	28 days	1 days	✓	07-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
SQU DS 1	E235.F	06-Jan-2025	07-Jan-2025	28 days	1 days	✓	07-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
SQU US 1	E235.F	06-Jan-2025	07-Jan-2025	28 days	1 days	✓	07-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE										
BCR Duplicate	E235.NO3-L	06-Jan-2025	07-Jan-2025	3 days	1 days	✓	07-Jan-2025	3 days	1 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE										
SQU DS 1	E235.NO3-L	06-Jan-2025	07-Jan-2025	3 days	1 days	✓	07-Jan-2025	3 days	1 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE										
SQU US 1	E235.NO3-L	06-Jan-2025	07-Jan-2025	3 days	1 days	✓	07-Jan-2025	3 days	1 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
BCR Duplicate	E235.NO2-L	06-Jan-2025	07-Jan-2025	3 days	1 days	✓	07-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		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
SQU DS 1	E235.NO2-L	06-Jan-2025	07-Jan-2025	3 days	1 days	✓	07-Jan-2025	3 days	1 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
SQU US 1	E235.NO2-L	06-Jan-2025	07-Jan-2025	3 days	1 days	✓	07-Jan-2025	3 days	1 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
BCR Duplicate	E235.SO4	06-Jan-2025	07-Jan-2025	28 days	1 days	✓	07-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
SQU DS 1	E235.SO4	06-Jan-2025	07-Jan-2025	28 days	1 days	✓	07-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
SQU US 1	E235.SO4	06-Jan-2025	07-Jan-2025	28 days	1 days	✓	07-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid)										
BCR Duplicate	E366	06-Jan-2025	08-Jan-2025	28 days	2 days	✓	09-Jan-2025	28 days	3 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid)										
SQU DS 1	E366	06-Jan-2025	08-Jan-2025	28 days	2 days	✓	09-Jan-2025	28 days	3 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid)										
SQU US 1	E366	06-Jan-2025	08-Jan-2025	28 days	2 days	✓	09-Jan-2025	28 days	3 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
BCR Duplicate	E372-U	06-Jan-2025	08-Jan-2025	28 days	2 days	✓	09-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
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
SQU DS 1	E372-U	06-Jan-2025	08-Jan-2025	28 days	2 days	✓	09-Jan-2025	28 days	3 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
SQU US 1	E372-U	06-Jan-2025	08-Jan-2025	28 days	2 days	✓	09-Jan-2025	28 days	3 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
BCR Duplicate	E509	06-Jan-2025	10-Jan-2025	28 days	4 days	✓	10-Jan-2025	28 days	4 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
SQU DS 1	E509	06-Jan-2025	10-Jan-2025	28 days	4 days	✓	10-Jan-2025	28 days	4 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
SQU US 1	E509	06-Jan-2025	10-Jan-2025	28 days	4 days	✓	10-Jan-2025	28 days	4 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
BCR Duplicate	E421	06-Jan-2025	08-Jan-2025	180 days	2 days	✓	10-Jan-2025	180 days	4 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
SQU DS 1	E421	06-Jan-2025	08-Jan-2025	180 days	2 days	✓	10-Jan-2025	180 days	4 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
SQU US 1	E421	06-Jan-2025	08-Jan-2025	180 days	2 days	✓	10-Jan-2025	180 days	4 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)										
SQU DS 1	EF001	06-Jan-2025	----	----	----		07-Jan-2025	----	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		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Field Tests : Field pH,EC,Salinity, TDS, Cl2,ClO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine										
Glass vial dissolved (hydrochloric acid)										
SQU US 1	EF001	06-Jan-2025	----	----	----		07-Jan-2025	----	1 days	
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid)										
BCR Duplicate	E358-L	06-Jan-2025	08-Jan-2025	28 days	2 days	✓	08-Jan-2025	28 days	2 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid)										
SQU DS 1	E358-L	06-Jan-2025	08-Jan-2025	28 days	2 days	✓	08-Jan-2025	28 days	2 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid)										
SQU US 1	E358-L	06-Jan-2025	08-Jan-2025	28 days	2 days	✓	08-Jan-2025	28 days	2 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
BCR Duplicate	E290	06-Jan-2025	07-Jan-2025	14 days	1 days	✓	07-Jan-2025	14 days	1 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
SQU DS 1	E290	06-Jan-2025	07-Jan-2025	14 days	1 days	✓	07-Jan-2025	14 days	1 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
SQU US 1	E290	06-Jan-2025	07-Jan-2025	14 days	1 days	✓	07-Jan-2025	14 days	1 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
BCR Duplicate	E162	06-Jan-2025	----	----	----		09-Jan-2025	7 days	3 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
SQU DS 1	E162	06-Jan-2025	----	----	----		09-Jan-2025	7 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		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Physical Tests : TDS by Gravimetry										
HDPE										
SQU US 1	E162	06-Jan-2025	----	----	----		09-Jan-2025	7 days	3 days	✓
Physical Tests : TSS by Gravimetry										
HDPE										
BCR Duplicate	E160	06-Jan-2025	----	----	----		09-Jan-2025	7 days	3 days	✓
Physical Tests : TSS by Gravimetry										
HDPE										
SQU DS 1	E160	06-Jan-2025	----	----	----		09-Jan-2025	7 days	3 days	✓
Physical Tests : TSS by Gravimetry										
HDPE										
SQU US 1	E160	06-Jan-2025	----	----	----		09-Jan-2025	7 days	3 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide)										
BCR Duplicate	E532	06-Jan-2025	----	----	----		07-Jan-2025	28 days	1 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide)										
SQU DS 1	E532	06-Jan-2025	----	----	----		07-Jan-2025	28 days	1 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide)										
SQU US 1	E532	06-Jan-2025	----	----	----		07-Jan-2025	28 days	1 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid)										
BCR Duplicate	E508	06-Jan-2025	11-Jan-2025	28 days	5 days	✓	11-Jan-2025	28 days	5 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid)										
SQU DS 1	E508	06-Jan-2025	11-Jan-2025	28 days	5 days	✓	11-Jan-2025	28 days	5 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid)										
SQU US 1	E508	06-Jan-2025	11-Jan-2025	28 days	5 days	✓	11-Jan-2025	28 days	5 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid)										
BCR Duplicate	E420	06-Jan-2025	07-Jan-2025	180 days	1 days	✓	09-Jan-2025	180 days	3 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid)										
SQU DS 1	E420	06-Jan-2025	07-Jan-2025	180 days	1 days	✓	09-Jan-2025	180 days	3 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid)										
SQU US 1	E420	06-Jan-2025	07-Jan-2025	180 days	1 days	✓	09-Jan-2025	180 days	3 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide)										
BCR Duplicate	E395	06-Jan-2025	----	----	----		07-Jan-2025	7 days	1 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide)										
SQU DS 1	E395	06-Jan-2025	----	----	----		07-Jan-2025	7 days	1 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide)										
SQU US 1	E395	06-Jan-2025	----	----	----		07-Jan-2025	7 days	1 days	✓

Legend & Qualifier Definitions

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

Quality Control Parameter Frequency Compliance

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

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Alkalinity Species by Titration	E290	1831051	1	7	14.2	5.0	✓
Ammonia by Fluorescence	E298	1832322	1	15	6.6	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1831055	1	8	12.5	5.0	✓
Chloride in Water by IC	E235.Cl	1831054	1	8	12.5	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1835694	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1831329	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1832316	1	12	8.3	5.0	✓
Fluoride in Water by IC	E235.F	1831053	1	8	12.5	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1831056	1	8	12.5	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1831057	1	8	12.5	5.0	✓
Sulfate in Water by IC	E235.SO4	1831058	1	8	12.5	5.0	✓
TDS by Gravimetry	E162	1834727	2	27	7.4	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1832247	1	19	5.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1836386	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1831774	1	19	5.2	5.0	✓
Total Nitrogen by Colourimetry	E366	1832317	1	8	12.5	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1832321	1	11	9.0	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1832119	1	3	33.3	5.0	✓
TSS by Gravimetry	E160	1834723	2	27	7.4	5.0	✓
Laboratory Control Samples (LCS)							
Alkalinity Species by Titration	E290	1831051	1	7	14.2	5.0	✓
Ammonia by Fluorescence	E298	1832322	1	15	6.6	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1831055	1	8	12.5	5.0	✓
Chloride in Water by IC	E235.Cl	1831054	1	8	12.5	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1835694	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1831329	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1832316	1	12	8.3	5.0	✓
Fluoride in Water by IC	E235.F	1831053	1	8	12.5	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1831056	1	8	12.5	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1831057	1	8	12.5	5.0	✓
Sulfate in Water by IC	E235.SO4	1831058	1	8	12.5	5.0	✓
TDS by Gravimetry	E162	1834727	2	27	7.4	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1832247	1	19	5.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1836386	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1831774	1	19	5.2	5.0	✓
Total Nitrogen by Colourimetry	E366	1832317	1	8	12.5	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*
Laboratory Control Samples (LCS) - Continued							
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1832321	1	11	9.0	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1832119	1	3	33.3	5.0	✓
TSS by Gravimetry	E160	1834723	2	27	7.4	5.0	✓
Method Blanks (MB)							
Alkalinity Species by Titration	E290	1831051	1	7	14.2	5.0	✓
Ammonia by Fluorescence	E298	1832322	1	15	6.6	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1831055	1	8	12.5	5.0	✓
Chloride in Water by IC	E235.Cl	1831054	1	8	12.5	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1835694	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1831329	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1832316	1	12	8.3	5.0	✓
Fluoride in Water by IC	E235.F	1831053	1	8	12.5	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1831056	1	8	12.5	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1831057	1	8	12.5	5.0	✓
Sulfate in Water by IC	E235.SO4	1831058	1	8	12.5	5.0	✓
TDS by Gravimetry	E162	1834727	2	27	7.4	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1832247	1	19	5.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1836386	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1831774	1	19	5.2	5.0	✓
Total Nitrogen by Colourimetry	E366	1832317	1	8	12.5	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1832321	1	11	9.0	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1832119	1	3	33.3	5.0	✓
TSS by Gravimetry	E160	1834723	2	27	7.4	5.0	✓
Matrix Spikes (MS)							
Ammonia by Fluorescence	E298	1832322	1	15	6.6	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1831055	1	8	12.5	5.0	✓
Chloride in Water by IC	E235.Cl	1831054	1	8	12.5	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1835694	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1831329	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1832316	1	12	8.3	5.0	✓
Fluoride in Water by IC	E235.F	1831053	1	8	12.5	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1831056	1	8	12.5	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1831057	1	8	12.5	5.0	✓
Sulfate in Water by IC	E235.SO4	1831058	1	8	12.5	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1832247	1	19	5.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1836386	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1831774	1	19	5.2	5.0	✓
Total Nitrogen by Colourimetry	E366	1832317	1	8	12.5	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1832321	1	11	9.0	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) - Continued							
Total Sulfide by Colourimetry (Automated Flow)	E395	1832119	1	3	33.3	5.0	✓

Methodology References and Summaries

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

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

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

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

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

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

QUALITY CONTROL REPORT

Work Order	: **VA25A0201**	Page	: 1 of 17
Client	[redacted]	Laboratory	[redacted]
Contact		Account Manager	
Address		Address	
Telephone		Telephone	
Project		Date Samples Received	: 06-Jan-2025 16:12
PO		Date Analysis Commenced	: 07-Jan-2025
C-O-C number	: ----	Issue Date	: 13-Jan-2025 09:41
Sampler	: ----		
Site	: Water Analysis		
Quote number	: VA23-TRIT100-012 _V2		
No. of samples received	: 3		
No. of samples analysed	: 3		

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Laboratory Department*
[redacted]		Vancouver Metals, Burnaby, British Columbia
		Vancouver Metals, Burnaby, British Columbia
		Vancouver Inorganics, Burnaby, British Columbia
		Vancouver Metals, Burnaby, British Columbia
		Vancouver Administration, Burnaby, British Columbia
		Vancouver Metals, 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: 1831051)											
VA25A0128-004	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	288	287	0.557%	20%	----
Physical Tests (QC Lot: 1834723)											
FJ2500023-001	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	7.3	7.9	0.6	Diff <2x LOR	----
Physical Tests (QC Lot: 1834724)											
VA25A0254-003	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	<3.0	<3.0	0	Diff <2x LOR	----
Physical Tests (QC Lot: 1834727)											
FJ2500023-001	Anonymous	Solids, total dissolved [TDS]	----	E162	20	mg/L	708	703	0.709%	20%	----
Physical Tests (QC Lot: 1834728)											
VA25A0254-003	Anonymous	Solids, total dissolved [TDS]	----	E162	20	mg/L	6390	6470	1.26%	20%	----
Anions and Nutrients (QC Lot: 1831053)											
VA25A0128-002	Anonymous	Fluoride	16984-48-8	E235.F	0.200	mg/L	0.222	<0.200	0.022	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1831054)											
VA25A0128-002	Anonymous	Chloride	16887-00-6	E235.Cl	5.00	mg/L	<5.00	<5.00	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1831055)											
VA25A0128-002	Anonymous	Bromide	24959-67-9	E235.Br-L	0.500	mg/L	<0.500	<0.500	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1831056)											
VA25A0128-002	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0500	mg/L	0.248	0.254	0.0054	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1831057)											
VA25A0128-002	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0100	mg/L	0.0134	0.0126	0.0008	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1831058)											
VA25A0128-002	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	3.00	mg/L	1280	1230	3.36%	20%	----
Anions and Nutrients (QC Lot: 1832317)											
FJ2500016-001	Anonymous	Nitrogen, total	7727-37-9	E366	1.50	mg/L	29.6	29.7	0.312%	20%	----
Anions and Nutrients (QC Lot: 1832321)											
FJ2500016-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0240	0.0239	0.250%	20%	----
Anions and Nutrients (QC Lot: 1832322)											
FJ2500016-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.0094	0.0090	0.0005	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 1832316)											
FJ2500023-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	1.51	1.69	0.18	Diff <2x LOR	----
Total Sulfides (QC Lot: 1832119)											

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 Sulfides (QC Lot: 1832119) - continued											
VA25A0201-001	SQU US 1	Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	<0.0015	0	Diff <2x LOR	----
Total Metals (QC Lot: 1831774)											
FJ2500015-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0143	0.0123	0.0020	Diff <2x LOR	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	0.00365	0.00362	0.960%	20%	----
		Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00060	0.00064	0.00004	Diff <2x LOR	----
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.133	0.131	1.52%	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	0.188	0.188	0.121%	20%	----
		Cadmium, total	7440-43-9	E420	0.0000050	mg/L	0.0000336	0.0000343	0.0000007	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	182	183	0.584%	20%	----
		Cesium, total	7440-46-2	E420	0.000010	mg/L	0.000033	0.000038	0.000004	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	0.00102	0.00101	1.29%	20%	----
		Copper, total	7440-50-8	E420	0.00050	mg/L	0.00055	0.00054	0.000005	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.010	mg/L	0.130	0.126	2.92%	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	0.245	0.245	0.0958%	20%	----
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	80.4	79.9	0.569%	20%	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.0573	0.0569	0.589%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.0109	0.0111	1.66%	20%	----
		Nickel, total	7440-02-0	E420	0.00050	mg/L	0.0140	0.0140	0.242%	20%	----
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	0.127	0.141	0.014	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.050	mg/L	5.58	5.64	1.21%	20%	----
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00521	0.00557	6.76%	20%	----
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.0185	0.0178	4.00%	20%	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	6.00	5.96	0.523%	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	202	204	1.19%	20%	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.319	0.321	0.587%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	241	236	1.99%	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	0.0000004	Diff <2x LOR	----
		Thorium, total	7440-29-1	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: 1831774) - continued											
FJ2500015-001	Anonymous	Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.00060	mg/L	<0.00090	<0.00060	0.00030	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	0.0134	0.0130	2.35%	20%	----
		Vanadium, total	7440-62-2	E420	0.00050	mg/L	0.00082	0.00079	0.00003	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0030	mg/L	0.0078	0.0078	0.00004	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: 1836386)											
FJ2500023-001	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1831329)											
VA25A0128-002	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0037	0.0035	0.0002	Diff <2x LOR	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	0.00046	0.00047	0.000004	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00136	0.00137	0.679%	20%	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0338	0.0331	2.00%	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	0.052	0.052	0.0002	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.000246	0.000239	2.80%	20%	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	330	337	1.86%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	0.000187	0.000184	1.46%	20%	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	0.00147	0.00144	0.00004	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	0.00179	0.00178	0.420%	20%	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00346	0.00345	0.412%	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	0.0062	0.0059	0.0003	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	90.0	89.6	0.469%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	1.36	1.34	1.49%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000712	0.000646	9.73%	20%	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.00244	0.00247	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	9.47	9.46	0.132%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00589	0.00587	0.286%	20%	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000152	0.000095	0.000057	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: 1831329) - continued											
VA25A0128-002	Anonymous	Silicon, dissolved	7440-21-3	E421	0.050	mg/L	3.60	3.52	2.11%	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	27.4	27.2	0.578%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.926	0.928	0.132%	20%	----
		Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	436	429	1.74%	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	0.000011	0.000012	0.0000006	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	0.000334	0.000338	1.37%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0166	0.0162	2.22%	20%	----
		Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1835694)											
VA25A0177-004	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	0.0000051	<0.0000050	0.0000001	Diff <2x LOR	----
Speciated Metals (QC Lot: 1832247)											
FJ2403883-013	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: 1831051)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	# 2.3	B
Physical Tests (QCLot: 1834723)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Physical Tests (QCLot: 1834724)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Physical Tests (QCLot: 1834727)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Physical Tests (QCLot: 1834728)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Anions and Nutrients (QCLot: 1831053)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 1831054)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 1831055)						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 1831056)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1831057)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 1831058)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 1832317)						
Nitrogen, total	7727-37-9	E366	0.03	mg/L	<0.030	----
Anions and Nutrients (QCLot: 1832321)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	# 0.0083	B
Anions and Nutrients (QCLot: 1832322)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Organic / Inorganic Carbon (QCLot: 1832316)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Total Sulfides (QCLot: 1832119)						
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	----
Total Metals (QCLot: 1831774)						

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1831774) - continued						
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	----
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	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1831774) - continued						
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	----
Total Metals (QCLot: 1836386)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Dissolved Metals (QCLot: 1831329)						
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	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 1831329) - continued						
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	----
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: 1835694)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Speciated Metals (QCLot: 1832247)						
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	<0.00050	----

Qualifiers

Qualifier	Description
B	*Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.*

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: 1831051)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	103	85.0	115	----
Physical Tests (QCLot: 1834723)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	103	85.0	115	----
Physical Tests (QCLot: 1834724)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	97.8	85.0	115	----
Physical Tests (QCLot: 1834727)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	110	85.0	115	----
Physical Tests (QCLot: 1834728)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	108	85.0	115	----
Anions and Nutrients (QCLot: 1831053)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	97.3	90.0	110	----
Anions and Nutrients (QCLot: 1831054)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	99.3	90.0	110	----
Anions and Nutrients (QCLot: 1831055)									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	102	85.0	115	----
Anions and Nutrients (QCLot: 1831056)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	99.1	90.0	110	----
Anions and Nutrients (QCLot: 1831057)									
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: 1831058)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 1832317)									
Nitrogen, total	7727-37-9	E366	0.03	mg/L	0.5 mg/L	98.2	75.0	125	----
Anions and Nutrients (QCLot: 1832321)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	91.5	80.0	120	----
Anions and Nutrients (QCLot: 1832322)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	104	85.0	115	----
Organic / Inorganic Carbon (QCLot: 1832316)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	102	80.0	120	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Total Sulfides (QCLot: 1832119)									
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.08 mg/L	105	80.0	120	----
Total Metals (QCLot: 1831774)									
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	108	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	111	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	108	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	95.9	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	101	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	91.4	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	104	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	99.7	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	103	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	110	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	104	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	106	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	108	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	98.1	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	102	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	105	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	102	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	102	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	106	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	112	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	102	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	97.0	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	102	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	107	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	106	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	101	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	97.0	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	107	80.0	120	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 1831774) - continued									
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	104	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	107	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	104	80.0	120	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	106	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	102	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	104	80.0	120	----
Total Metals (QCLot: 1836386)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	90.9	80.0	120	----
Dissolved Metals (QCLot: 1831329)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	106	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	106	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	1 mg/L	106	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	100	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	106	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	99.2	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	102	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	103	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	101	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	100	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	100	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	97.1	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.5 mg/L	97.7	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.25 mg/L	107	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	101	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	98.2	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	105	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	99.6	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	105	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	99.4	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	104	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	102	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	109	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	96.4	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: 1831329) - continued									
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	116	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	96.7	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	106	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	98.0	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	91.9	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	102	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	97.9	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	99.1	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	97.1	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	103	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	103	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	92.8	80.0	120	----
Speciated Metals (QCLot: 1832247)									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.25 mg/L	100	80.0	120	----

Matrix Spike (MS) Report

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

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 1831053)										
VA25A0128-003	Anonymous	Fluoride	16984-48-8	E235.F	19.5 mg/L	20 mg/L	97.5	75.0	125	----
Anions and Nutrients (QCLot: 1831054)										
VA25A0128-003	Anonymous	Chloride	16887-00-6	E235.Cl	1980 mg/L	2000 mg/L	99.2	75.0	125	----
Anions and Nutrients (QCLot: 1831055)										
VA25A0128-003	Anonymous	Bromide	24959-67-9	E235.Br-L	10.2 mg/L	10 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 1831056)										
VA25A0128-003	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	49.3 mg/L	50 mg/L	98.6	75.0	125	----
Anions and Nutrients (QCLot: 1831057)										
VA25A0128-003	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	9.86 mg/L	10 mg/L	98.6	75.0	125	----
Anions and Nutrients (QCLot: 1831058)										
VA25A0128-003	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	1920 mg/L	2000 mg/L	96.2	75.0	125	----
Anions and Nutrients (QCLot: 1832317)										
FJ2500016-002	Anonymous	Nitrogen, total	7727-37-9	E366	0.368 mg/L	0.4 mg/L	92.0	70.0	130	----
Anions and Nutrients (QCLot: 1832321)										
FJ2500016-002	Anonymous	Phosphorus, total	7723-14-0	E372-U	ND mg/L	----	ND	70.0	130	----
Anions and Nutrients (QCLot: 1832322)										
FJ2500016-002	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0972 mg/L	0.1 mg/L	97.2	75.0	125	----
Organic / Inorganic Carbon (QCLot: 1832316)										
FJ2500023-002	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	5.87 mg/L	5 mg/L	117	70.0	130	----
Total Sulfides (QCLot: 1832119)										
VA25A0201-002	SQU DS 1	Sulfide, total (as S)	18496-25-8	E395	0.230 mg/L	0.2 mg/L	115	75.0	125	----
Total Metals (QCLot: 1831774)										
FJ2500015-002	Anonymous	Aluminum, total	7429-90-5	E420	0.194 mg/L	0.2 mg/L	97.2	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0206 mg/L	0.02 mg/L	103	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0217 mg/L	0.02 mg/L	109	70.0	130	----
		Barium, total	7440-39-3	E420	ND mg/L	----	ND	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0390 mg/L	0.04 mg/L	97.4	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.00878 mg/L	0.01 mg/L	87.8	70.0	130	----
		Boron, total	7440-42-8	E420	ND mg/L	----	ND	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00392 mg/L	0.004 mg/L	98.1	70.0	130	----
		Calcium, total	7440-70-2	E420	ND mg/L	----	ND	70.0	130	----
		Cesium, total	7440-46-2	E420	0.00999 mg/L	0.01 mg/L	99.9	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0412 mg/L	0.04 mg/L	103	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: 1831774) - continued										
FJ2500015-002	Anonymous	Cobalt, total	7440-48-4	E420	0.0193 mg/L	0.02 mg/L	96.4	70.0	130	----
		Copper, total	7440-50-8	E420	0.0184 mg/L	0.02 mg/L	92.0	70.0	130	----
		Iron, total	7439-89-6	E420	1.94 mg/L	2 mg/L	97.1	70.0	130	----
		Lead, total	7439-92-1	E420	0.0181 mg/L	0.02 mg/L	90.4	70.0	130	----
		Lithium, total	7439-93-2	E420	ND mg/L	----	ND	70.0	130	----
		Magnesium, total	7439-95-4	E420	ND mg/L	----	ND	70.0	130	----
		Manganese, total	7439-96-5	E420	ND mg/L	----	ND	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0214 mg/L	0.02 mg/L	107	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0362 mg/L	0.04 mg/L	90.4	70.0	130	----
		Phosphorus, total	7723-14-0	E420	11.5 mg/L	10 mg/L	115	70.0	130	----
		Potassium, total	7440-09-7	E420	ND mg/L	----	ND	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0215 mg/L	0.02 mg/L	107	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0431 mg/L	0.04 mg/L	108	70.0	130	----
		Silicon, total	7440-21-3	E420	10.0 mg/L	10 mg/L	100	70.0	130	----
		Silver, total	7440-22-4	E420	0.00388 mg/L	0.004 mg/L	97.1	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	0.0421 mg/L	0.04 mg/L	105	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00358 mg/L	0.004 mg/L	89.5	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0191 mg/L	0.02 mg/L	95.5	70.0	130	----
		Tin, total	7440-31-5	E420	0.0207 mg/L	0.02 mg/L	104	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0429 mg/L	0.04 mg/L	107	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0202 mg/L	0.02 mg/L	101	70.0	130	----
		Uranium, total	7440-61-1	E420	ND mg/L	----	ND	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.104 mg/L	0.1 mg/L	104	70.0	130	----
		Zinc, total	7440-66-6	E420	0.354 mg/L	0.4 mg/L	88.6	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0431 mg/L	0.04 mg/L	108	70.0	130	----
Total Metals (QCLot: 1836386)										
FJ2500023-002	Anonymous	Mercury, total	7439-97-6	E508	0.0000882 mg/L	0 mg/L	88.2	70.0	130	----
Dissolved Metals (QCLot: 1831329)										
VA25A0128-003	Anonymous	Aluminum, dissolved	7429-90-5	E421	1.00 mg/L	1 mg/L	100	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0992 mg/L	0.1 mg/L	99.2	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.104 mg/L	0.1 mg/L	104	70.0	130	----
		Barium, dissolved	7440-39-3	E421	0.0977 mg/L	0.1 mg/L	97.7	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.206 mg/L	0.2 mg/L	103	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.0465 mg/L	0.05 mg/L	93.0	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.484 mg/L	0.5 mg/L	96.9	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	ND mg/L	----	ND	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.0500 mg/L	0.05 mg/L	100.0	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.199 mg/L	0.2 mg/L	99.6	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0982 mg/L	0.1 mg/L	98.2	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: 1831329) - continued										
VA25A0128-003	Anonymous	Copper, dissolved	7440-50-8	E421	0.0955 mg/L	0.1 mg/L	95.5	70.0	130	----
		Iron, dissolved	7439-89-6	E421	9.68 mg/L	10 mg/L	96.8	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0945 mg/L	0.1 mg/L	94.5	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.494 mg/L	0.5 mg/L	98.7	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	0.103 mg/L	0.1 mg/L	103	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.193 mg/L	0.2 mg/L	96.7	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	54.1 mg/L	50 mg/L	108	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	20.5 mg/L	20 mg/L	102	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.0998 mg/L	0.1 mg/L	99.8	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.208 mg/L	0.2 mg/L	104	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	48.5 mg/L	50 mg/L	97.0	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.0169 mg/L	0.02 mg/L	84.4	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	0.212 mg/L	0.2 mg/L	106	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.0185 mg/L	0.02 mg/L	92.5	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0954 mg/L	0.1 mg/L	95.4	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0988 mg/L	0.1 mg/L	98.8	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.198 mg/L	0.2 mg/L	98.8	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0981 mg/L	0.1 mg/L	98.1	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	0.0192 mg/L	0.02 mg/L	96.2	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.502 mg/L	0.5 mg/L	100	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	ND mg/L	----	ND	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.206 mg/L	0.2 mg/L	103	70.0	130	----
Dissolved Metals (QCLot: 1835694)										
VA25A0177-006	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000899 mg/L	0 mg/L	89.9	70.0	130	----
Speciated Metals (QCLot: 1832247)										
FJ2403883-014	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.264 mg/L	0.25 mg/L	106	70.0	130	----

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Contact:		Email 2

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

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

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

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

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

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

Project Information		Oil and Gas Required Fields (client use)	
ALS Account # / Quote #:	VA23-TRIT100-012	AFE/Cost Center:	PO#
Job #:	11964	Major/Minor Code:	Routing Code:
PO / AFE:	11964 - Task 20 - Phase 3C-4C	Requisitioner:	
LSD:		Location:	
ALS Lab Work Order # (lab use only):		ALS Contact: [redacted]	Sampler:

Analysis Request

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

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	Total metals + mercury	Dissolved metals + mercury	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: 7.18 cond: 68 temp: 3.4	06-01-25	11:14																		
	SQU DS 1			Water	R	R	R	R	R	R	R	R	R	R	R					N	9
	pH: 7.18 cond: 64 temp: 3.1	06-01-25	10:48																		

Environmental Division
Vancouver
Work Order Reference
VA25A0201

Telephone : +1 604 253 4188

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to a (elec
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			
				3.4°C			

SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
[redacted]	Time: 12:57	Received by:	Date:	Time:	Received by: MC	Date: Jan 6	Time: 13:1

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

SEPT 2007 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

2025-1-6-Renkers-47CBD

Project Component:	Tunnel	**Site Name:**	Receiving Environment - Downstream of Discharge
Inspection Date:	01/06/2025	**Location:**	BC Rail Site
Triton QP:	Stephanie Renkers	**Latitude/Longitude:**	49.72528 -123.165162
Temperature(c):	Low 2 High 4	**Permit:**	AE 111824
Weather Conditions:	Overcast	**Ground Conditions:**	Frozen

Observations

Time: 10:50:40 **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:**	Yes
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: DS1

Description: Downstream

Photo: 2

Location: DS1

Description: Across

Photos

Photo: 3

Location: DS1

Description: Upstream

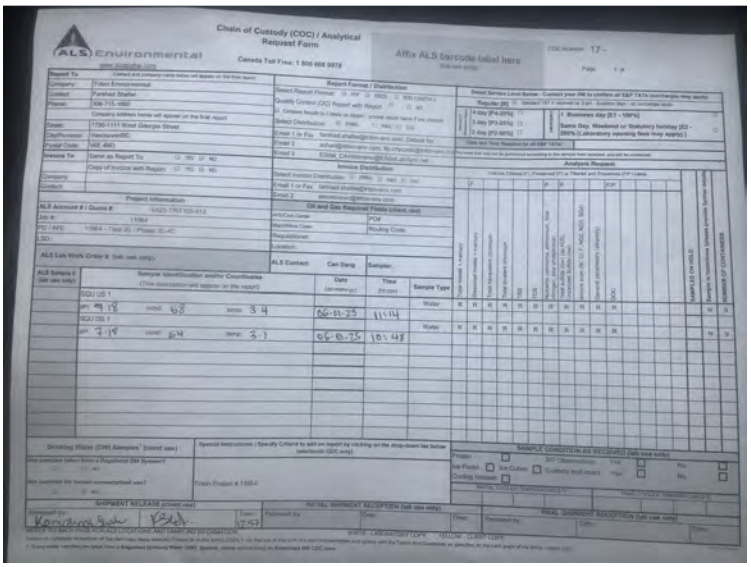


Photo: 4

Location: DS1

Description: COC

Sign Off

Report Prepared By:	Karishma Shah	**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

2025-1-6-Shah-59E24

Project Component:	Tunnel	**Site Name:**	Receiving Environment - Upstream of Discharge
Inspection Date:	01/06/2025	**Location:**	BC Rail Site
Triton QP:	Karishma Shah	**Latitude/Longitude:**	49.726866 -123.163912
Temperature(c):	Low 2 High 4	**Permit:**	AE 111824
Weather Conditions:	Clear	**Ground Conditions:**	Frozen

Observations

Time: 11:21:55 **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**	Yes		
DOC	Yes	**EPH, PAH, LEPH/HEPH**	Yes		
		Trout LC50	N/A		

Logger Maintenance

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

Describe Logger Maintenance

Photos

Photo: 1

Location: US1

Description: Downstream

Photo: 2

Location: US1

Description: Across

Photos

Photo: 3

Location: US1

Description: Upstream

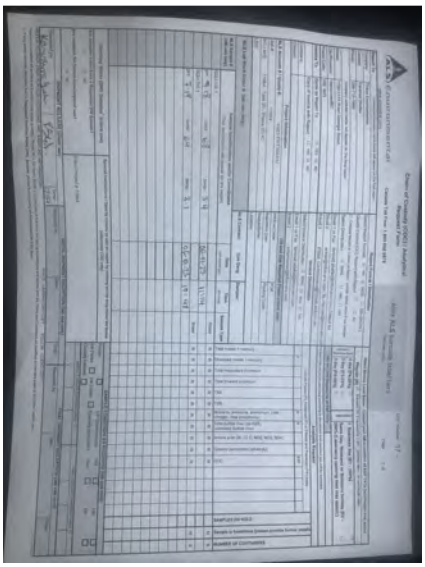


Photo: 4

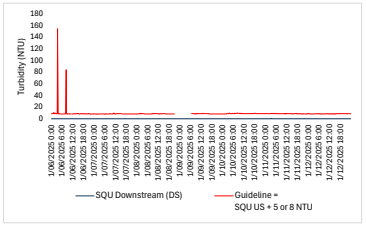
Location: US1

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
1/06/2025 0:00	3.5	50.4	0.0	7.0	11.8	0.0	1/06/2025 0:00	4.5	76.9	0.0	6.6	12.3	0.9	8.9
1/06/2025 0:15	3.5	50.2	0.0	7.0	11.8	0.0	1/06/2025 0:15	4.5	77.5	0.0	6.6	12.3	0.6	8.6
1/06/2025 0:30	3.4	50.2	0.0	6.9	11.8	0.0	1/06/2025 0:30	4.5	77.5	0.0	6.5	12.3	0.8	8.8
1/06/2025 0:45	3.4	49.9	0.0	7.0	11.9	0.0	1/06/2025 0:45	4.5	75.8	0.0	6.5	12.3	0.5	8.5
1/06/2025 1:00	3.4	49.0	0.0	7.0	11.9	0.0	1/06/2025 1:00	4.5	75.4	0.0	6.5	12.3	0.5	8.5
1/06/2025 1:15	3.4	48.6	0.0	7.0	11.9	0.0	1/06/2025 1:15	4.4	74.3	0.0	6.5	12.3	2.4	10.4
1/06/2025 1:30	3.4	48.2	0.0	7.0	11.9	0.0	1/06/2025 1:30	4.4	73.9	0.0	6.5	12.3	1.0	9.0
1/06/2025 1:45	3.4	48.1	0.0	7.0	11.9	0.0	1/06/2025 1:45	4.4	73.6	0.0	6.5	12.3	1.3	9.3
1/06/2025 2:00	3.4	47.5	0.0	7.0	11.9	0.0	1/06/2025 2:00	4.4	72.4	0.0	6.5	12.4	1.9	9.9
1/06/2025 2:15	3.4	47.2	0.0	7.0	11.9	0.0	1/06/2025 2:15	4.4	72.3	0.0	6.5	12.4	0.8	8.8
1/06/2025 2:30	3.3	46.9	0.0	7.0	12.0	0.0	1/06/2025 2:30	4.4	71.6	0.0	6.5	12.4	0.8	8.8
1/06/2025 2:45	3.3	46.8	0.0	7.0	12.0	0.0	1/06/2025 2:45	4.4	72.0	0.0	6.5	12.4	0.9	8.9
1/06/2025 3:00		47.3	0.0	7.1	12.0	0.0	1/06/2025 3:00	4.4	72.3	0.0	6.5	12.4	0.6	8.6
1/06/2025 3:15	3.3	47.2	0.0	7.0	12.0	0.0	1/06/2025 3:15	4.4	72.6	0.0	6.5	12.4	0.8	8.8
1/06/2025 3:30	3.3	47.7	0.0	7.0	12.0	0.0	1/06/2025 3:30	4.4	73.2	0.0	6.5	12.4	149.5	154.5
1/06/2025 3:45	3.3	48.2	0.0	7.1	12.0	0.0	1/06/2025 3:45	4.4	63.6	0.0	6.5	12.4	0.4	8.4
1/06/2025 4:00	3.3	48.4	0.0	7.1	12.0	0.0	1/06/2025 4:00	4.4	9.4	0.0	6.5	12.7	0.8	8.8
1/06/2025 4:15	3.2	48.9	0.0	7.1	12.1	0.0	1/06/2025 4:15	4.4	3.7	0.0	6.6	13.0	0.9	8.9
1/06/2025 4:30	3.2	49.6	0.0	7.0	12.0	0.0	1/06/2025 4:30	4.0	4.9	0.0	6.6	13.2	0.5	8.5
1/06/2025 4:45	3.2	49.6	0.0	7.1	12.1	0.0	1/06/2025 4:45	3.5	5.1	0.0	6.7	13.3	0.3	8.3
1/06/2025 5:00	3.2	49.8	0.0	7.1	12.1	0.0	1/06/2025 5:00	3.2	5.2	0.0	6.7	13.5	0.2	8.2
1/06/2025 5:15	3.2	50.8	0.0	7.0	12.0	0.0	1/06/2025 5:15	3.1	5.3	0.0	6.7	13.5	0.2	8.2
1/06/2025 5:30	3.2	50.9	0.0	7.1	12.0	0.0	1/06/2025 5:30	3.0	5.4	0.0	6.7	13.5	0.0	8.0
1/06/2025 5:45	3.2	50.8	0.0	7.1	12.0	0.0	1/06/2025 5:45	2.9	5.4	0.0	6.7	13.6	0.2	8.2
1/06/2025 6:00	3.2	50.9	0.0	7.1	12.0	0.0	1/06/2025 6:00	2.8	5.5	0.0	6.7	13.6	0.2	8.2
1/06/2025 6:15	3.2	51.7	0.0	7.0	12.0	0.0	1/06/2025 6:15	2.7	5.6	0.0	6.7	13.6	0.2	8.2
1/06/2025 6:30	3.2	51.7	0.0	7.0	12.0	0.0	1/06/2025 6:30	2.7	5.6	0.0	6.7	13.7	0.2	8.2
1/06/2025 6:45	3.1	51.6	0.0	7.0	12.0	0.0	1/06/2025 6:45	2.6	5.5	0.0	6.8	13.7	0.1	8.1
1/06/2025 7:00	3.1	52.0	0.0	7.0	12.0	0.0	1/06/2025 7:00	2.5	5.5	0.0	6.8	13.7	0.2	8.2
1/06/2025 7:15	3.1	51.9	0.0	7.1	12.0	0.0	1/06/2025 7:15	2.5	5.5	0.0	6.8	13.7	0.1	8.1
1/06/2025 7:30	3.1	51.7	0.0	7.0	12.0	0.0	1/06/2025 7:30	2.4	5.6	0.0	6.8	13.8	0.1	8.1
1/06/2025 7:45	3.1	52.0	0.0	7.1	12.0	0.0	1/06/2025 7:45	2.4	5.7	0.0	6.8	13.8	0.1	8.1
1/06/2025 8:00	3.1	51.8	0.0	7.0	12.0	0.0	1/06/2025 8:00	2.3	5.7	0.0	6.8	13.8	0.2	8.2
1/06/2025 8:15	3.1	51.2	0.0	7.1	12.0	0.0	1/06/2025 8:15	3.8	76.5	0.0	6.6	12.6	78.7	83.7
1/06/2025 8:30	3.1	50.9	0.0	7.0	12.0	0.0	1/06/2025 8:30	4.0	75.4	0.0	6.7	12.5	0.3	8.3
1/06/2025 8:45	3.1	50.5	0.0	7.1	12.1	0.0	1/06/2025 8:45	4.0	73.7	0.0	6.7	12.6	0.4	8.4
1/06/2025 9:00	3.0	49.9	0.0	7.1	12.1	0.0	1/06/2025 9:00	4.0	73.3	0.0	6.7	12.6	0.5	8.5
1/06/2025 9:15	3.0	49.7	0.0	7.1	12.1	0.0	1/06/2025 9:15	4.0	73.1	0.0	6.7	12.6	0.3	8.3
1/06/2025 9:30	3.0	49.6	0.0	7.2	12.1	0.0	1/06/2025 9:30	4.0	74.5	0.0	6.7	12.6	0.3	8.3
1/06/2025 9:45	3.0	49.7	0.0	7.1	12.1	0.0	1/06/2025 9:45	4.0	76.3	0.0	6.7	12.5	0.4	8.4
1/06/2025 10:00	3.0	50.4	0.0	7.1	12.1	0.0	1/06/2025 10:00	4.1	78.4	0.0	6.7	12.5	0.4	8.4
1/06/2025 10:15	3.0	51.5	0.0	7.1	12.0	0.0	1/06/2025 10:15	4.1	79.2	0.0	6.7	12.4	0.5	8.5
1/06/2025 10:30	3.0	52.2	0.0	7.1	12.0	0.0	1/06/2025 10:30	4.0	75.1	0.0	6.7	12.5	0.3	8.3
1/06/2025 10:45	3.0	51.1	0.0	7.1	12.0	0.0	1/06/2025 10:45	4.0	73.8	0.0	6.7	12.6	0.2	8.2
1/06/2025 11:00	3.0	50.4	0.0	7.1	12.1	0.0	1/06/2025 11:00	4.0	73.0	0.0	6.7	12.6	0.2	8.2
1/06/2025 11:15	3.0	49.7	0.0	7.1	12.1	0.0	1/06/2025 11:15	4.0	72.6	0.0	6.7	12.6	0.4	8.4
1/06/2025 11:30	3.0	49.3	0.0	7.1	12.1	0.0	1/06/2025 11:30	4.0	72.7	0.0	6.7	12.6	0.6	
1/06/2025 11:45	3.0	49.1	0.0	7.1	12.1	0.0	1/06/2025 11:45	4.0	74.5	0.0	6.7	12.7	0.3	8.3
1/06/2025 12:00	3.0	49.9	0.0	7.1	12.1	0.0	1/06/2025 12:00	4.1	77.4	0.0	6.7	12.6	0.3	8.3
1/06/2025 12:15	3.1	51.2	0.0	7.1	12.1	0.0	1/06/2025 12:15	4.1	78.2	0.0	6.7	12.7	0.3	8.3
1/06/2025 12:30	3.1	51.5	0.0	7.1	12.2	0.0	1/06/2025 12:30	4.3	85.5	0.0	6.7	12.6	0.3	8.3
1/06/2025 12:45	3.2	55.2	0.0	7.1	12.1	0.0	1/06/2025 12:45	4.4	88.9	0.0	6.6	12.5	0.5	8.5
1/06/2025 13:00	3.3	56.8	0.0	7.1	12.1	0.0	1/06/2025 13:00	4.4	88.8	0.0	6.6	12.5	0.5	8.5
1/06/2025 13:15	3.4	57.2	0.0	7.1	12.1	0.0	1/06/2025 13:15	4.5	89.2	0.0	6.6	12.4	0.4	8.4
1/06/2025 13:30	3.4	57.4	0.0	7.1	12.0	0.0	1/06/2025 13:30	4.6	92.0	0.0	6.6	12.4	0.4	8.4
1/06/2025 13:45	3.5	58.8	0.0	7.0	12.0	0.0	1/06/2025 13:45	4.6	93.5	0.0	6.6	12.3	0.6	8.6
1/06/2025 14:00	3.6	59.5	0.0	7.0	12.0	0.0	1/06/2025 14:00	4.7	91.3	0.0	6.6	12.4	0.5	8.5
1/06/2025 14:15	3.6	58.7	0.0	7.0	11.9	0.0	1/06/2025 14:15	4.7	88.4	0.0	6.6	12.4	0.5	8.5
1/06/2025 14:30	3.6	57.8	0.0	7.0	11.9	0.0	1/06/2025 14:30	4.7	88.2	0.0	6.6	12.3	0.6	8.6
1/06/2025 14:45	3.7	57.6	0.0	7.0	11.9	0.0	1/06/2025 14:45	4.7	87.5	0.0	6.6	12.3	0.7	8.7
1/06/2025 15:00	3.7	57.6	0.0	7.0	11.9	0.0	1/06/2025 15:00	4.8	88.0	0.0	6.6	12.2	1.2	9.2
1/06/2025 15:15	3.7	57.7	0.0	7.0	11.8	0.0	1/06/2025 15:15	4.9	4.9	0.0	6.6	12.9	0.4	8.4
1/06/2025 15:30	3.7	56.6	0.0	7.0	11.8	0.0	1/06/2025 15:30	5.0	5.0	0.0	6.6	12.9	0.4	8.4
1/06/2025 15:45	3.7	55.5	0.0	7.0	11.8	0.0	1/06/2025 15:45	5.1	5.0	0.0	6.7	12.8	0.4	8.4
1/06/2025 16:00	3.7	54.5	0.0	7.0	11.8	0.0	1/06/2025 16:00	5.1	5.0	0.0	6.6	12.8	0.4	8.4
1/06/2025 16:15	3.6	53.9	0.0	6.9	11.8	0.0	1/06/2025 16:15	5.0	5.1	0.0	6.6	12.9	0.5	8.5
1/06/2025 16:30	3.6	53.7	0.0	7.0	11.9	0.0	1/06/2025 16:30	4.9	5.2	0.0	6.6	12.9	0.5	8.5
1/06/2025 16:45	3.5	53.5	0.0	7.0	11.9	0.0	1/06/2025 16:45	4.8	5.0	0.0	6.7	12.9	0.4	8.4
1/06/2025 17:00	3.5	53.7	0.0	7.0	11.8	0.0	1/06/2025 17:00	4.7	5.1	0.0	6.7	13.0	0.5	8.5
1/06/2025 17:15	3.4	53.5	0.0	7.0	11.9	0.0	1/06/2025 17:15	4.6	5.1	0.0	6.7	13.0	0.5	8.5
1/06/2025 17:30	3.5	54.1	0.0	6.9	11.8	0.0	1/06/2025 17:30	4.4	5.1	0.0	6.7	13.1	0.5	8.5
1/06/2025 17:45	3.4	54.1	0.0	7.0	11.9	0.0	1/06/2025 17:45	4.3	5.1	0.0	6.7	13.1	0.4	8.4
1/06/2025 18:00	3.4	54.2	0.0	7.0	11.9	0.0	1/06/2025 18:00	4.2	5.2	0.0	6.7	13.2	0.5	8.5
1/06/2025 18:15	3.4	54.5	0.0	7.0	11.8	0.0	1/06/2025 18:15	4.0	5.2	0.0	6.7	13.2	0.5	8.5
1/06/2025 18:30	3.3	54.6	0.0	6.9	11.9	0.0	1/06/2025 18:30	3.9	5.3	0.0	6.7	13.2	0.5	8.5
1/06/2025 18:45	3.3	54.8	0.0	6.9	11.8	0.0	1/06/2025 18:45	3.8	5.4	0.0	6.7	13.3	0.4	8.4
1/06/2025 19:00	3.3	54.3	0.0	7.0	11.8	0.0	1/06/2025 19:00	3.7	5.4	0.0	6.7	13.3	0.4	8.4
1/06/2025 19:15	3.3	55.0	0.0	6.9	11.7	0.0	1/06/2025 19:15	3.6	5.4	0.0	6.7	13.4	0.5	8.5
1/06/2025 19:30	3.3	54.6	0.0	7.0	11.8	0.0	1/06/2025 19:30	3.5	5.4	0.0	6.7	13.4	0.5	8.5
1/06/2025 19:45	3.3	54.8	0.0	6.9	11.8	0.0	1/06/2025 19:45	3.4	5.4	0.0	6.7	13.4	0.4	8.4
1/06/2025 20:00	3.2	54.5	0.0	7.0	11.8	0.0	1/06/2025 20:00	3.3	5.4	0.0	6.7	13.5	0.4	8.4
1/06/2025 20:15	3.3	54.8	0.0	7.0	11.7	0.0	1/06/2025 20:15	3.2	5.5	0.0	6.7	13.5	0.5	8.5
1/06/2025 20:30	3.2	54.6	0.0	7.0	11.8	0.0	1/06/2025 20:30	3.1	5.5	0.0	6.7	13.5	0.5	8.5
1/06/2025 20:45	3.2	54.7	0.0	7.0	11.8	0.0	1/06/2025 20:45	3.1	5.4	0.0	6.7	13.6	0.5	8.5
1/06/2025 21:00	3.2	54.7	0.0	7.0	11.9	0.0	1/06/2025 21:00	3.0	5.5	0.0	6.7	13.6	0.5	8.5
1/06/2025 21:15	3.2	54.6	0.0	7.0	11.8	0.0	1/06/2025 21:15	3.0	5.5	0.0	6.7	13.6	0.5	8.5
1/06/2025 21:30	3.2	54.7	0.0	7.0	11.8	0.0	1/06/2025 21:30	2.9	5.5	0.0	6.7	13.6	0.5	8.5
1/06/2025 21:45	3.2	55.2	0.0	6.9	11.8	0.0	1/06/2025 21:45	2.9	5.5	0.0	6.7	13.6	0.3	8.3
1/06/2025 22:00	3.2	54.6	0.0	7.0	11.8	0.0	1/06/2025 22:00	2.7	5.6	0.0	6.7	13.7	0.0	8.0
1/06/2025 22:15	3.2	54.5	0.0	6.9	11.8	0.0	1/06/2025 22:15	2.6	5.8	0.0	6.7	13.7	0.0	8.0
1/06/2025 22:30	3.2	54.7	0.0	7.0	11.8	0.0	1/06/2025 22:30	2.6	5.9	0.0	6.7	13.8	0.1	8.1
1/06/2025 22:45	3.2	54.9	0.0	7.0	11.9	0.0	1/06/2025 22:45	2.5	5.8	0.0	6.7	13.8	0.0	8.0
1/06/2025 23:00	3.2	54.5	0.0	7.0	11.9	0.0	1/06/2025 23:00	2.4	5.8	0.0	6.7	13.8	0.1	8.1
1/06/2025 23:15	3.1	54.4	0.0	6.9	11.9	0.0	1/06/2025 23:15	2.4	5.8	0.0	6.7	13.8	0.1	8.1
1/06/2025 23:30	3.1	54.7	0.0	7.0	11.9	0.0	1/06/2025 23:30	2.4	5.8	0.0	6.7	13.8	0.1	8.1
1/06/2025 23:45	3.1	54.5	0.0	7.0	11.9	0.0	1/06/2025 23:45	2.3	5.7	0.0	6.7	13.9	0.0	8.0
1/07/2025 0:00	3.1	54.3	0.0	7.0	11.9	0.0	1/07/2025 0:00	2.3	5.7	0.0	6.7	13.9	0.1	8.1
1/07/2025 0:15	3.1	54.2	0.0	7.0	11.9	0.0	1/07/2025 0:15	2.2	5.8	0.0	6.7	13.9	0.1	8.1
1/07/2025 0:30	3.1	54.1	0.0	7.0	11.9	0.0	1/07/2025 0:30	2.2	5.8	0.0	6.7	13.9	0.1	8.1
1/07/2025 0:45	3.1	54.4	0.0	7.0	11.9	0.0	1/07/2025 0:45	2.1	5.7	0.0	6.7	13.9	0.0	8.0
1/07/2025 1:00	3.1	54.3	0.0	7.0	11.9	0.0	1/07/2025 1:00	2.1	5.7	0.0	6.7	14.0	0.1	8.1
1/07/2025 1:15	3.1	54.1	0.0	7.0	11.9	0.0	1/07/2025 1:15	2.1	5.7	0.0	6.7	14.0	0.1	8.1
1/07/2025 1:30	3.1	54.5	0.0	7.0	11.9	0.0	1/07/2025 1:30	2.0	5.7	0.0	6.7	14.0	0.2	8.2
1/07/2025 1:45	3.1	54.5	0.0	7.0	11.9	0.0	1/07/2025 1:45	2.0	5.6	0.0	6.8	14.0	0.0	8.0
1/07/2025 2:00	3.0	54.3	0.0	7.0	11.9	0.0	1/07/2025 2:00	2.0	5.6	0.0	6.8	14.0	0.0	8.0
1/07/2025 2:15	3.0	54.2	0.0	7.0	11.9	0.0	1/07/2025 2:15	2.0	5.6	0.0	6.7	14.0	0.1	8.1
1/07/2025 2:30	3.0	54.3	0.0	7.0	11.9	0.0	1/07/2025 2:30	2.0	5.6	0.0	6.7	14.0	0.1	8.1
1/07/2025 2:45	3.0	53.9	0.0	7.0	11.9	0.0	1/07/2025 2:45	2.0	5.6	0.0	6.7	14.0	0.0	8.0
1/07/2025 3:00	3.0	53.7	0.0	7.0	11.9	0.0	1/07/2025 3:00	1.9	5.6	0.0	6.7	14.0	0.1	8.1
1/07/2025 3:15	3.0	53.9	0.0	7.0	11.9	0.0	1/07/2025 3:15	1.9	5.6	0.0	6.7	14.0	0.1	8.1
1/07/2025 3:30	3.0	53.8	0.0	7.0	11.9	0.0	1/07/2025 3:30	2.0	5.6	0.0	6.7	14.0	0.1	8.1
1/07/2025 3:45	3.0	53.6	0.0	7.0	11.9	0.0	1/07/2025 3:45	1.9	5.6	0.0	6.8	14.0	0.0	8.0
1/07/2025 4:00	3.0	53.5	0.0	7.0	11.9	0.0	1/07/2025 4:00	1.9	5.8	0.0	6.8	14.0	0.1	8.1
1/07/2025 4:15	3.0	53.7	0.0	7.0	11.9	0.0	1/07/2025 4:15	1.8	5.8	0.0	6.7	14.0	0.1	8.1
1/07/2025 4:30	3.0	53.5	0.0	7.0	12.0	0.0	1/07/2025 4:30	1.9	5.8	0.0	6.7	14.0	0.1	8.1
1/07/2025 4:45	3.0	53.3	0.0	7.0	11.9	0.0	1/07/2025 4:45	1.9	5.6	0.0	6.7	14.0	0.1	8.1
1/07/2025 5:00	3.0	53.8	0.0	7.0	11.9	0.0	1/07/2025 5:00	1.9	5.6	0.0	6.7	14.0	0.1	8.1
1/07/2025 5:15	3.0	53.9	0.0	7.0	11.9	0.0	1/07/2025 5:15	1.9	5.7	0.0	6.7	14.0	0.1	8.1
1/07/2025 5:30	3.0	53.4	0.0	7.0	11.9	0.0	1/07/2025 5:30	2.0	5.7	0.0	6.7	14.0	0.1	8.1
1/07/2025 5:45	3.0	53.3	0.0	7.0	11.9	0.0	1/07/2025 5:45	2.0	5.4	0.0	6.8	14.0	0.0	8.0
1/07/2025 6:00	3.0	53.6	0.0	7.0	11.9	0.0	1/07/2025 6:00	2.0	5.5	0.0	6.7	13.9	0.0	8.0
1/07/2025 6:15	3.0	53.9	0.0	7.0	11.9	0.0	1/07/2025 6:15	2.0	5.6	0.0	6.7	14.0	0.1	8.1
1/07/2025 6:30	3.0	53.7	0.0	7.0	11.8	0.0	1/07/2025 6:30	1.9	5.6	0.0	6.7	14.0	0.1	8.1
1/07/2025 6:45	3.0	53.6	0.0	7.0	11.9	0.0	1/07/2025 6:45	1.9	5.4	0.0	6.7	14.0	0.0	8.0
1/07/2025 7:00	3.0	53.6	0.0	7.0	11.9	0.0	1/07/2025 7:00	1.9	5.5	0.0	6.7	14.0	0.1	8.1
1/07/2025 7:15	3.0	53.4	0.0	7.0	11.9	0.0	1/07/2025 7:15	1.9	5.5	0.0	6.7	14.0	0.1	8.1
1/07/2025 7:30	3.0	53.7	0.0	7.0	11.9	0.0	1/07/2025 7:30	1.9	5.6	0.0	6.7	14.0	0.2	8.2
1/07/2025 7:45	3.0	53.6	0.0	7.0	11.9	0.0	1/07/2025 7:45	1.8	5.2	0.0	6.8	14.0	0.0	8.0
1/07/2025 8:00	3.0	53.3	0.0	7.0	11.9	0.0	1/07/2025 8:00	1.8	5.4	0.0	6.8	14.0	0.1	8.1
1/07/2025 8:15	3.0	53.4	0.0	7.0	12.0	0.0	1/07/2025 8:15	1.8	5.5	0.0	6.7	14.0	0.1	8.1
1/07/2025 8:30	3.0	53.2	0.0	7.0	12.0	0.0	1/07/2025 8:30	1.8	5.5	0.0	6.7	14.0	0.2	8.2
1/07/2025 8:45	3.0	53.1	0.0	7.0	12.0	0.0	1/07/2025 8:45	3.8	78.6	0.0	6.6	12.5	0.7	8.7
1/07/2025 9:00	3.0	52.7	0.0	7.0	12.0	0.0	1/07/2025 9:00	3.9	77.1	0.0	6.6	12.5	0.5	8.5
1/07/2025 9:15	3.0	52.0	0.0	7.0	12.0	0.0	1/07/2025 9:15	3.9	75.8	0.0	6.6	12.6	0.4	8.4
1/07/2025 9:30	2.9	51.6	0.0	7.0	12.0	0.0	1/07/2025 9:30	3.9	75.5	0.0	6.7	12.6	0.3	8.3
1/07/2025 9:45	2.9	51.4	0.0	7.0	12.1	0.0	1/07/2025 9:45	3.9	75.3	0.0	6.7	12.6	0.4	8.4
1/07/2025 10:00	2.9	51.4	0.0	7.0	12.0	0.0	1/07/2025 10:00	3.9	75.7	0.0	6.7	12.6	0.4	8.4



1/07/2025 10:15	2.9	51.4	0.0	7.1	12.1	0.0	1/07/2025 10:15	4.0	79.9	0.0	6.6	12.5	0.4	8.4
1/07/2025 10:30	2.9	51.5	0.0	7.1	12.0	0.0	1/07/2025 10:30	4.0	80.8	0.0	6.6	12.4	0.8	8.8
1/07/2025 10:45	3.0	53.6	0.0	7.0	12.0	0.0	1/07/2025 10:45	4.0	77.3	0.0	6.6	12.5	0.6	8.6
1/07/2025 11:00	3.0	53.3	0.0	7.0	12.0	0.0	1/07/2025 11:00	4.0	75.8	0.0	6.7	12.6	1.7	9.7
1/07/2025 11:15	3.0	52.5	0.0	7.0	12.0	0.0	1/07/2025 11:15	4.0	75.1	0.0	6.7	12.6	0.4	8.4
1/07/2025 11:30	3.0	51.2	0.0	7.0	12.1	0.0	1/07/2025 11:30	4.0	74.5	0.0	6.7	12.6	0.4	8.4
1/07/2025 11:45	3.0	50.8	0.0	7.1	12.1	0.0	1/07/2025 11:45	4.0	78.0	0.0	6.7	12.6	0.5	8.5
1/07/2025 12:00	3.0	50.9	0.0	7.1	12.1	0.0	1/07/2025 12:00	4.1	78.8	0.0	6.6	12.6	0.4	8.4
1/07/2025 12:15	3.0	52.5	0.0	7.0	12.1	0.0	1/07/2025 12:15	4.1	79.5	0.0	6.6	12.6	0.4	8.4
1/07/2025 12:30	3.1	53.0	0.0	7.0	12.1	0.0	1/07/2025 12:30	4.1	76.4	0.0	6.7	12.7	0.5	8.5
1/07/2025 12:45	3.1	52.3	0.0	7.0	12.2	0.0	1/07/2025 12:45	4.3	88.3	0.0	6.6	12.6	0.7	8.7
1/07/2025 13:00	3.2	55.3	0.0	7.1	12.1	0.0	1/07/2025 13:00	4.4	92.0	0.0	6.6	12.5	0.7	8.7
1/07/2025 13:15	3.3	59.3	0.0	7.0	12.0	0.0	1/07/2025 13:15	4.3	86.9	0.0	6.6	12.5	0.7	8.7
1/07/2025 13:30	3.3	57.4	0.0	7.0	12.1	0.0	1/07/2025 13:30	4.3	83.5	0.0	6.6	12.6	0.7	8.7
1/07/2025 13:45	3.3	55.3	0.0	7.0	12.1	0.0	1/07/2025 13:45	4.5	95.3	0.0	6.6	12.4	0.5	8.5
1/07/2025 14:00	3.4	60.8	0.0	7.0	12.0	0.0	1/07/2025 14:00	4.5	94.7	0.0	6.6	12.4	0.5	8.5
1/07/2025 14:15	3.4	60.9	0.0	7.0	12.0	0.0	1/07/2025 14:15	4.5	90.9	0.0	6.6	12.4	0.8	8.8
1/07/2025 14:30	3.4	58.9	0.0	7.0	12.0	0.0	1/07/2025 14:30	4.5	87.5	0.0	6.6	12.5	0.7	8.7
1/07/2025 14:45	3.4	57.6	0.0	7.0	12.0	0.0	1/07/2025 14:45	4.4	82.5	0.0	6.6	12.5	0.6	8.6
1/07/2025 15:00	3.4	54.7	0.0	7.1	12.1	0.0	1/07/2025 15:00	4.4	83.7	0.0	6.6	12.5	0.8	8.8
1/07/2025 15:15	3.4	58.3	0.0	7.0	12.0	0.0	1/07/2025 15:15	4.6	91.8	0.0	6.6	12.3	0.9	8.9
1/07/2025 15:30	3.5	60.1	0.0	7.0	11.9	0.0	1/07/2025 15:30	4.6	4.9	0.0	6.6	13.0	0.1	8.1
1/07/2025 15:45	3.5	58.2	0.0	7.0	11.9	0.0	1/07/2025 15:45	4.6	5.0	0.0	6.7	13.0	0.2	8.2
1/07/2025 16:00	3.4	55.9	0.0	7.0	11.9	0.0	1/07/2025 16:00	4.7	5.0	0.0	6.7	13.0	0.2	8.2
1/07/2025 16:15	3.4	55.5	0.0	7.0	11.9	0.0	1/07/2025 16:15	4.7	5.0	0.0	6.6	12.9	0.3	8.3
1/07/2025 16:30	3.4	54.6	0.0	7.0	11.9	0.0	1/07/2025 16:30	4.6	5.0	0.0	6.6	12.9	0.4	8.4
1/07/2025 16:45	3.4	54.8	0.0	7.0	11.9	0.0	1/07/2025 16:45	4.6	5.0	0.0	6.7	13.0	0.2	8.2
1/07/2025 17:00	3.4	54.7	0.0	6.9	11.8	0.0	1/07/2025 17:00	4.6	5.1	0.0	6.6	13.0	0.3	8.3
1/07/2025 17:15	3.4	54.4	0.0	7.0	11.9	0.0	1/07/2025 17:15	4.5	5.1	0.0	6.6	13.0	0.3	8.3
1/07/2025 17:30	3.4	54.8	0.0	6.9	11.8	0.0	1/07/2025 17:30	4.5	5.1	0.0	6.6	13.0	0.3	8.3
1/07/2025 17:45	3.4	54.3	0.0	7.0	11.9	0.0	1/07/2025 17:45	4.5	5.1	0.0	6.7	13.0	0.2	8.2
1/07/2025 18:00	3.4	54.5	0.0	7.0	11.9	0.0	1/07/2025 18:00	4.4	5.1	0.0	6.7	13.0	0.2	8.2
1/07/2025 18:15	3.4	54.8	0.0	6.9	11.8	0.0	1/07/2025 18:15	4.4	5.1	0.0	6.7	13.0	0.3	8.3
1/07/2025 18:30	3.4	54.2	0.0	7.0	11.9	0.0	1/07/2025 18:30	4.3	5.1	0.0	6.6	13.1	0.3	8.3
1/07/2025 18:45	3.4	54.9	0.0	7.0	11.8	0.0	1/07/2025 18:45	4.3	5.0	0.0	6.7	13.1	0.1	8.1
1/07/2025 19:00	3.4	54.8	0.0	6.9	11.7	0.0	1/07/2025 19:00	4.3	5.1	0.0	6.7	13.1	0.2	8.2
1/07/2025 19:15	3.4	55.0	0.0	7.0	11.8	0.0	1/07/2025 19:15	4.3	5.1	0.0	6.7	13.1	0.2	8.2
1/07/2025 19:30	3.4	54.7	0.0	7.0	11.9	0.0	1/07/2025 19:30	4.3	5.1	0.0	6.7	13.1	0.2	8.2
1/07/2025 19:45	3.4	55.2	0.0	7.0	11.8	0.0	1/07/2025 19:45	4.2	5.1	0.0	6.7	13.1	0.1	8.1
1/07/2025 20:00	3.4	54.8	0.0	7.0	11.8	0.0	1/07/2025 20:00	4.2	5.1	0.0	6.7	13.1	0.2	8.2
1/07/2025 20:15	3.4	55.1	0.0	7.0	11.8	0.0	1/07/2025 20:15	4.2	5.1	0.0	6.7	13.1	0.2	8.2
1/07/2025 20:30	3.4	55.4	0.0	6.9	11.8	0.0	1/07/2025 20:30	4.2	5.1	0.0	6.7	13.1	0.2	8.2
1/07/2025 20:45	3.4	55.1	0.0	7.0	11.8	0.0	1/07/2025 20:45	4.2	5.1	0.0	6.7	13.1	0.2	8.2
1/07/2025 21:00	3.4	55.3	0.0	7.0	11.8	0.0	1/07/2025 21:00	4.2	5.1	0.0	6.7	13.1	0.1	8.1
1/07/2025 21:15	3.5	55.8	0.0	7.0	11.7	0.0	1/07/2025 21:15	4.2	5.1	0.0	6.7	13.1	0.2	8.2
1/07/2025 21:30	3.4	55.4	0.0	7.0	11.8	0.0	1/07/2025 21:30	4.2	5.1	0.0	6.7	13.1	0.3	8.3
1/07/2025 21:45	3.4	55.4	0.0	7.0	11.8	0.0	1/07/2025 21:45	4.2	5.0	0.0	6.7	13.1	0.1	8.1
1/07/2025 22:00	3.5	55.6	0.0	7.0	11.7	0.0	1/07/2025 22:00	4.2	5.1	0.0	6.7	13.1	0.2	8.2
1/07/2025 22:15	3.5	55.9	0.0	6.9	11.7	0.0	1/07/2025 22:15	4.2	5.1	0.0	6.7	13.1	0.2	8.2
1/07/2025 22:30	3.5	55.6	0.0	6.9	11.7	0.0	1/07/2025 22:30	4.2	5.1	0.0	6.7	13.1	0.3	8.3
1/07/2025 22:45	3.5	56.0	0.0	7.0	11.7	0.0	1/07/2025 22:45	4.2	5.1	0.0	6.7	13.1	0.2	8.2
1/07/2025 23:00	3.5	57.2	0.0	6.9	11.7	0.0	1/07/2025 23:00	4.2	5.1	0.0	6.7	13.1	0.2	8.2
1/07/2025 23:15	3.5	57.1	0.0	6.9	11.7	0.0	1/07/2025 23:15	4.2	5.1	0.0	6.7	13.1	0.2	8.2
1/07/2025 23:30	3.5	56.3	0.0	7.0	11.8	0.0	1/07/2025 23:30	4.2	5.1	0.0	6.7	13.1	0.2	8.2
1/07/2025 23:45	3.5	55.9	0.0	6.9	11.7	0.0	1/07/2025 23:45	4.2	5.1	0.0	6.7	13.1	0.1	8.1
1/08/2025 0:00	3.5	55.8	0.0	7.0	11.7	0.0	1/08/2025 0:00	4.3	5.1	0.0	6.7	13.1	0.2	8.2
1/08/2025 0:15	3.5	55.2	0.0	7.0	11.8	0.0	1/08/2025 0:15	4.3	5.1	0.0	6.7	13.1	0.2	8.2
1/08/2025 0:30	3.5	55.3	0.0	7.0	11.8	0.0	1/08/2025 0:30	4.3	5.1	0.0	6.7	13.1	0.2	8.2
1/08/2025 0:45	3.5	55.3	0.0	7.0	11.8	0.0	1/08/2025 0:45	4.3	5.0	0.0	6.7	13.1	0.2	8.2
1/08/2025 1:00	3.5	55.1	0.0	7.0	11.8	0.0	1/08/2025 1:00	4.3	5.1	0.0	6.7	13.1	0.2	8.2
1/08/2025 1:15	3.5	55.1	0.0	7.0	11.8	0.0	1/08/2025 1:15	4.4	11.1	0.0	6.5	12.9	0.9	8.9
1/08/2025 1:30	3.5	54.6	0.0	7.0	11.8	0.0	1/08/2025 1:30	4.5	79.6	0.0	6.6	12.3	0.8	8.8
1/08/2025 1:45	3.5	54.0	0.0	7.0	11.9	0.0	1/08/2025 1:45	4.5	78.8	0.0	6.6	12.3	1.1	9.1
1/08/2025 2:00	3.5	53.4	0.0	7.0	11.9	0.0	1/08/2025 2:00	4.6	78.6	0.0	6.6	12.3	0.6	8.6
1/08/2025 2:15	3.5	53.9	0.0	7.0	11.9	0.0	1/08/2025 2:15	4.6	82.6	0.0	6.5	12.2	0.4	8.4
1/08/2025 2:30	3.5	55.3	0.0	7.0	11.8	0.0	1/08/2025 2:30	4.6	81.1	0.0	6.6	12.3	1.0	9.0
1/08/2025 2:45	3.5	54.5	0.0	7.0	11.8	0.0	1/08/2025 2:45	4.6	79.9	0.0	6.6	12.3	0.8	8.8
1/08/2025 3:00	3.5	53.9	0.0	7.0	11.8	0.0	1/08/2025 3:00	4.6	78.9	0.0	6.6	12.3	0.7	8.7
1/08/2025 3:15	3.5	53.8	0.0	7.0	11.8	0.0	1/08/2025 3:15	4.7	84.6	0.0	6.4	12.0	0.5	8.5
1/08/2025 3:30	3.6	56.4	0.0	7.0	11.8	0.0	1/08/2025 3:30	4.8	85.0	0.0	6.4	12.0	0.5	8.5
1/08/2025 3:45	3.6	55.5	0.0	7.0	11.8	0.0	1/08/2025 3:45	4.7	81.5	0.0	6.4	12.1	0.7	8.7
1/08/2025 4:00	3.6	54.7	0.0	7.0	11.8	0.0	1/08/2025 4:00	4.7	74.6	0.0	6.4	12.1	0.4	8.4
1/08/2025 4:15	3.6	54.2	0.0	7.0	11.8	0.0	1/08/2025 4:15	4.8	5.0	0.0	6.5	12.9	0.2	8.2
1/08/2025 4:30	3.6	54.9	0.0	7.0	11.8	0.0	1/08/2025 4:30	4.7	5.2	0.0	6.5	12.9	0.2	8.2
1/08/2025 4:45	3.6	55.4	0.0	7.0	11.7	0.0	1/08/2025 4:45	4.7	5.2	0.0	6.6	13.0	0.2	8.2
1/08/2025 5:00	3.6	55.2	0.0	6.9	11.8	0.0	1/08/2025 5:00	4.7	5.2	0.0	6.5	13.0	0.2	8.2
1/08/2025 5:15	3.6	55.0	0.0	7.0	11.8	0.0	1/08/2025 5:15	4.7	5.2	0.0	6.5	13.0	0.3	8.3
1/08/2025 5:30	3.6	54.7	0.0	7.0	11.8	0.0	1/08/2025 5:30	4.7	5.3	0.0	6.5	13.0	0.4	8.4
1/08/2025 5:45	3.7	54.7	0.0	7.0	11.8	0.0	1/08/2025 5:45	4.7	5.2	0.0	6.6	13.0	0.2	8.2
1/08/2025 6:00	3.7	54.6	0.0	7.0	11.8	0.0	1/08/2025 6:00	4.7	5.2	0.0	6.6	12.9	0.2	8.2
1/08/2025 6:15	3.7	54.6	0.0	7.0	11.7	0.0	1/08/2025 6:15	4.7	5.3	0.0	6.6	12.9	0.3	8.3
1/08/2025 6:30	3.7	54.2	0.0	7.0	11.8	0.0	1/08/2025 6:30	4.7	5.3	0.0	6.6	12.9	0.3	8.3
1/08/2025 6:45	3.7	54.2	0.0	7.0	11.8	0.0	1/08/2025 6:45	4.7	5.2	0.0	6.6	12.9	0.3	8.3
1/08/2025 7:00	3.7	54.3	0.0	7.0	11.7	0.0	1/08/2025 7:00	4.8	5.3	0.0	6.6	13.0	0.3	8.3
1/08/2025 7:15	3.7	54.2	0.0	7.0	11.7	0.0	1/08/2025 7:15	4.8	5.3	0.0	6.6	12.9	0.2	8.2
1/08/2025 7:30	3.7	54.0	0.0	7.0	11.7	0.0	1/08/2025 7:30	4.8	5.3	0.0	6.6	12.9	0.3	8.3
1/08/2025 7:45	3.7	54.1	0.0	7.0	11.7	0.0	1/08/2025 7:45	4.8	5.2	0.0	6.6	12.9	0.1	8.1
1/08/2025 8:00	3.7	54.0	0.0	7.0	11.8	0.0	1/08/2025 8:00	4.8	5.3	0.0	6.6	12.9	0.2	8.2
1/08/2025 8:15	3.7	53.7	0.0	7.0	11.8	0.0	1/08/2025 8:15	4.8	5.3	0.0	6.6	12.9	0.3	8.3
1/08/2025 8:30	3.7	53.5	0.0	7.0	11.8	0.0	1/08/2025 8:30	4.8	78.4	0.0	6.5	12.2	1.1	9.1
1/08/2025 8:45	3.7	53.3	0.0	7.0	11.8	0.0	1/08/2025 8:45	4.7	77.8	0.0	6.6	12.3	0.6	8.6
1/08/2025 9:00	3.7	53.1	0.0	7.0	11.8	0.0	1/08/2025 9:00	4.7	77.2	0.0	6.6	12.3	0.5	8.5
1/08/2025 9:15	3.7	52.6	0.0	7.0	11.8	0.0	1/08/2025 9:15	4.7	76.8	0.0	6.6	12.3	0.6	8.6
1/08/2025 9:30	3.7	52.3	0.0	7.0	11.8	0.0	1/08/2025 9:30	4.7	76.1	0.0	6.6	12.3	0.6	8.6
1/08/2025 9:45	3.7	52.1	0.0	7.0	11.8	0.0	1/08/2025 9:45	4.7	75.9	0.0	6.6	12.4	1.2	9.2
1/08/2025 10:00	3.7	52.0	0.0	7.1	11.8	0.0	1/08/2025 10:00	4.7	75.8	0.0	6.7	12.3	0.7	8.7
1/08/2025 10:15	3.7	51.9	0.0	7.0	11.9	0.0	1/08/2025 10:15	4.7	76.8	0.0	6.7	12.3	0.8	8.8
1/08/2025 10:30	3.7	52.1	0.0	7.1	11.8	0.0	1/08/2025 10:30	4.8	78.9	0.0	6.6	12.3	0.6	8.6
1/08/2025 10:45	3.7	52.6	0.0	7.1	11.8	0.0	1/08/2025 10:45	4.8	78.6	0.0	6.6	12.3	0.5	8.5
1/08/2025 11:00	3.8	53.1	0.0	7.0	11.8	0.0	1/08/2025 11:00	4.8	82.0	0.0	6.6	12.3	0.6	8.6
1/08/2025 11:15	3.8	53.8	0.0	7.0	11.8	0.0	1/08/2025 11:15	4.9	82.0	0.0	6.6	12.2	0.6	8.6
1/08/2025 11:30	3.8	54.9	0.0	7.0	11.8	0.0	1/08/2025 11:30	4.8	77.2	0.0	6.6	12.3	0.5	8.5
1/08/2025 11:45	3.8	53.7	0.0	7.1	11.8	0.0	1/08/2025 11:45	4.8	78.1	0.0	6.6	12.3	0.4	8.4
1/08/2025 12:00	3.8	52.7	0.0	7.1	11.7	0.0	1/08/2025 12:00	4.8	77.3	0.0	6.7	12.4	0.3	8.3
1/08/2025 12:15	3.8	52.5	0.0	7.0	11.7	0.0	1/08/2025 12:15	4.8	76.3	0.0	6.7	12.4	0.5	8.5
1/08/2025 12:30	3.8	51.8	0.0	7.1	11.9	0.0	1/08/2025 12:30	4.9	77.7	0.0	6.7	12.4	0.4	8.4
1/08/2025 12:45	3.9	52.4	0.0	7.1	11.7	0.0	1/08/2025 12:45	5.0	83.4	0.0	6.6	12.3	0.4	8.4
1/08/2025 13:00	3.9	53.9	0.0	7.0	11.8	0.0	1/08/2025 13:00	5.0	84.7	0.0	6.6	12.3	0.5	8.5
1/08/2025 13:15	4.0	55.3	0.0	7.1	11.8	0.0	1/08/2025 13:15	5.0	83.1	0.0	6.6	12.4	0.5	8.5
1/08/2025 13:30	4.0	55.5	0.0	7.0	11.8	0.0	1/08/2025 13:30	5.1	88.2	0.0	6.6	12.3	0.4	8.4
1/08/2025 13:45	4.1	56.8	0.0	7.0	11.8	0.0	1/08/2025 13:45	5.2	92.6	0.0	6.6	12.2	0.5	8.5
1/08/2025 14:00	4.2	59.2	0.0	7.0	11.8	0.0	1/08/2025 14:00	5.3	93.5	0.0	6.6	12.2	0.5	8.5
1/08/2025 14:15	4.2	60.5	0.0	7.0	11.8	0.0	1/08/2025 14:15	5.4	97.3	0.0	6.6	12.2	0.6	8.6
1/08/2025 14:30	4.3	62.1	0.0	7.0	11.7	0.0	1/08/2025 14:30	5.5	100.7	0.0	6.5	12.1	0.8	8.8
1/08/2025 14:45	4.4	63.8	0.0	7.0	11.7	0.0	1/08/2025 14:45	5.5	94.9	0.0	6.6	12.1	0.6	8.6
1/08/2025 15:00	4.4	61.1	0.0	7.0	11.7	0.0	1/08/2025 15:00	5.5	89.3	0.0	6.6	12.2	0.5	8.5
1/08/2025 15:15	4.4	58.6	0.0	7.0	11.8	0.0	1/08/2025 15:15	5.5	88.6	0.0	6.6	12.2	0.6	8.6
1/08/2025 15:30	4.4	59.4	0.0	7.0	11.7	0.0	1/08/2025 15:30	5.5	92.9	0.0	6.6	12.1	0.8	8.8
1/08/2025 15:45	4.4	60.5	0.0	7.0	11.7	0.0	1/08/2025 15:45	5.5	49.6	0.0	6.5	12.0	0.6	8.6
1/08/2025 16:00	4.4	59.3	0.0	7.0	11.6	0.0	1/08/2025 16:00	5.7	4.9	0.0	6.5	12.6	0.2	8.2
1/08/2025 16:15	4.4	57.9	0.0	7.0	11.6	0.0	1/08/2025 16:15	5.8	4.9	0.0	6.5	12.6	0.2	8.2
1/08/2025 16:30	4.4	56.6	0.0	7.0	11.6	0.0	1/08/2025 16:30	5.9	4.9	0.0	6.5	12.6	0.2	8.2
1/08/2025 16:45	4.4	55.9	0.0	6.9	11.6	0.0	1/08/2025 16:45	5.9	4.8	0.0	6.6	12.6	0.2	8.2
1/08/2025 17:00	4.4	55.1	0.0	7.0	11.6	0.0	1/08/2025 17:00	5.9	4.8	0.0	6.6	12.6	0.3	8.3
1/08/2025 17:15	4.3	54.7	0.0	7.0	11.6	0.0	1/08/2025 17:15	5.9	4.9	0.0	6.6	12.6	0.3	8.3
1/08/2025 17:30	4.3	55.2	0.0	6.9	11.6	0.0	1/08/2025 17:30	5.8	4.9	0.0	6.6	12.6	0.3	8.3
1/08/2025 17:45	4.3	54.7	0.0	7.0	11.6	0.0	1/08/2025 17:45	5.8	4.8	0.0	6.6	12.6	0.2	8.2
1/08/2025 18:00	4.3	54.7	0.0	6.9	11.6	0.0	1/08/2025 18:00	5.8	4.8	0.0	6.6	12.6	0.2	8.2
1/08/2025 18:15	4.3	54.8	0.0	7.0	11.6	0.0	1/08/2025 18:15	5.7	4.9	0.0	6.6	12.7	0.2	8.2
1/08/2025 18:30	4.3	54.8	0.0	6.9	11.6	0.0	1/08/2025 18:30	5.7	4.9	0.0	6.6	12.7	0.3	8.3
1/08/2025 18:45	4.2	54.9	0.0	7.0	11.5	0.0	1/08/2025 18:45	5.6	4.9	0.0	6.6	12.7	0.2	8.2
1/08/2025 19:00	4.2	54.8	0.0	7.0	11.6	0.0	1/08/2025 19:00	5.5	5.0	0.0	6.6	12.7	0.2	8.2
1/08/2025 19:15	4.2	55.0	0.0	7.0	11.6	0.0	1/08/2025 19:15	5.4	5.0	0.0	6.6	12.8	0.2	8.2
1/08/2025 19:30	4.2	55.0	0.0	7.0	11.5	0.0	1/08/2025 19:30	5.4	5.0	0.0	6.6	12.8	0.3	8.3
1/08/2025 19:45	4.2	55.2	0.0	6.9	11.6	0.0	1/08/2025 19:45	5.3	4.8	0.0	6.7	12.8	0.1	8.1
1/08/2025 20:00	4.2	55.3	0.0	6.9	11.5	0.0	1/08/2025 20:00	5.2	4.9	0.0	6.7	12.8	0.1	8.1
1/08/2025 20:15	4.2	55.4	0.0	6.9	11.5	0.0	1/08/2025 20:15	5.0	4.9	0.0	6.6	12.9	0.2	8.2
1/08/2025 20:30	4.2	55.5	0.0	6.9	11.5	0.0	1/08/2025 20:30	4.8	5.0	0.0	6.6	12.9	0.2	8.2
1/08/2025 20:45	4.2	55.4	0.0	7.0	11.6	0.0	1/08/2025 20:45	4.7	5.0	0.0	6.7	13.0	0.1	8.1
1/08/2025 21:00	4.2	56.0	0.0	6.9	11.5	0.0	1/08/2025 21:00	4.6	5.0	0.0	6.7	13.0	0.1	8.1
1/08/2025 21:15	4.2	55.8	0.0	6.9	11.5	0.0	1/08/2025 21:15	4.5	5.1	0.0	6.7	13.1	0.1	

1/08/2025 21:30	4.1	55.6	0.0	6.9	11.5	0.0	1/08/2025 21:30	4.4	5.1	0.0	6.6	13.1	0.1	
1/08/2025 21:45	4.1	55.9	0.0	6.9	11.5	0.0	1/08/2025 21:45	4.3	5.0	0.0	6.7	13.1	0.1	
1/08/2025 22:00	4.1	55.3	0.0	7.0	11.6	0.0	1/08/2025 22:00	4.3	5.0	0.0	6.7	13.1	0.1	
1/08/2025 22:15	4.1	55.6	0.0	6.9	11.6	0.0	1/08/2025 22:15	4.1	5.1	0.0	6.7	13.2	0.1	
1/08/2025 22:30	4.1	55.9	0.0	6.9	11.5	0.0	1/08/2025 22:30	4.0	5.1	0.0	6.7	13.2	0.1	
1/08/2025 22:45	4.1	55.7	0.0	6.9	11.5	0.0	1/08/2025 22:45	3.9	5.1	0.0	6.7	13.3	0.1	
1/08/2025 23:00	4.0	55.6	0.0	7.0	11.6	0.0	1/08/2025 23:00	3.9	5.2	0.0	6.7	13.3	0.1	
1/08/2025 23:15	4.0	55.5	0.0	7.0	11.6	0.0	1/08/2025 23:15	3.8	5.2	0.0	6.7	13.3	0.1	
1/08/2025 23:30	4.0	55.8	0.0	6.9	11.6	0.0	1/08/2025 23:30	3.7	5.2	0.0	6.7	13.3	0.1	
1/08/2025 23:45	4.0	55.6	0.0	7.0	11.6	0.0	1/08/2025 23:45	3.6	5.1	0.0	6.7	13.4	0.1	
1/09/2025 0:00	4.0	55.5	0.0	7.0	11.7	0.0	1/09/2025 0:00	3.5	5.1	0.0	6.7	13.4	0.1	
1/09/2025 0:15	4.0	55.3	0.0	7.0	11.6	0.0	1/09/2025 0:15	3.5	5.1	0.0	6.7	13.4	0.1	
1/09/2025 0:30	4.0	55.4	0.0	7.0	11.6	0.0	1/09/2025 0:30	3.4	5.1	0.0	6.7	13.5	0.1	
1/09/2025 0:45	3.9	55.4	0.0	7.0	11.6	0.0	1/09/2025 0:45	3.3	5.2	0.0	6.7	13.5	0.1	
1/09/2025 1:00	3.9	55.6	0.0	7.0	11.6	0.0	1/09/2025 1:00	3.2	5.2	0.0	6.7	13.5	0.1	
1/09/2025 1:15	3.9	55.7	0.0	6.9	11.5	0.0	1/09/2025 1:15	3.1	5.2	0.0	6.7	13.6	0.1	
1/09/2025 1:30	3.9	55.0	0.0	7.0	11.7	0.0	1/09/2025 1:30	3.0	5.2	0.0	6.7	13.6	0.1	
1/09/2025 1:45	3.9	54.9	0.0	7.0	11.7	0.0	1/09/2025 1:45	2.9	5.1	0.0	6.8	13.6	0.0	
1/09/2025 2:00	3.8	54.5	0.0	7.0	11.7	0.0	1/09/2025 2:00	4.6	80.0	0.0	6.6	12.3	1.2	
1/09/2025 2:15	3.8	53.7	0.0	7.0	11.7	0.0	1/09/2025 2:15	4.8	78.0	0.0	6.6	12.3	0.6	
1/09/2025 2:30	3.8	53.0	0.0	7.0	11.8	0.0	1/09/2025 2:30	4.8	76.8	0.0	6.6	12.3	0.6	
1/09/2025 2:45	3.8	52.4	0.0	7.0	11.8	0.0	1/09/2025 2:45	4.8	77.8	0.0	6.6	12.3	0.7	
1/09/2025 3:00	3.8	53.1	0.0	7.0	11.8	0.0	1/09/2025 3:00	4.8	78.2	0.0	6.6	12.2	0.7	
1/09/2025 3:15	3.8	53.3	0.0	7.1	11.8	0.0	1/09/2025 3:15	4.8	76.2	0.0	6.7	12.3	0.8	
1/09/2025 3:30	3.8	52.2	0.0	7.1	11.8	0.0	1/09/2025 3:30	4.7	75.8	0.0	6.7	12.3	0.7	
1/09/2025 3:45	3.8	52.1	0.0	7.1	11.8	0.0	1/09/2025 3:45	4.8	81.4	0.0	6.6	12.2	0.7	
1/09/2025 4:00	3.8	54.4	0.0	7.0	11.8	0.0	1/09/2025 4:00	4.8	79.5	0.0	6.7	12.3	0.6	
1/09/2025 4:15	3.8	53.8	0.0	7.1	11.8	0.0	1/09/2025 4:15	4.8	80.8	0.0	6.6	12.2	0.4	
1/09/2025 4:30	3.8	54.5	0.0	7.0	11.7	0.0	1/09/2025 4:30	4.8	83.2	0.0	6.6	12.2	0.6	
1/09/2025 4:45	3.8	55.3	0.0	7.0	11.7	0.0	1/09/2025 4:45	4.8	78.7	0.0	6.6	12.3	0.5	
1/09/2025 5:00	3.8	53.3	0.0	7.1	11.8	0.0	1/09/2025 5:00	4.8	78.9	0.0	6.7	12.3	0.5	
1/09/2025 5:15	3.8	54.0	0.0	7.0	11.8	0.0	1/09/2025 5:15	4.8	81.0	0.0	6.6	12.2	0.5	
1/09/2025 5:30	3.8	54.9	0.0	7.0	11.7	0.0	1/09/2025 5:30	4.9	84.5	0.0	6.6	12.1	0.5	
1/09/2025 5:45	3.8	56.0	0.0	7.0	11.7	0.0	1/09/2025 5:45	4.8	79.7	0.0	6.6	12.2	0.6	
1/09/2025 6:00	3.8	54.2	0.0	7.0	11.8	0.0	1/09/2025 6:00	4.8	79.2	0.0	6.6	12.2	0.4	
1/09/2025 6:15	3.8	53.4	0.0	7.1	11.8	0.0	1/09/2025 6:15	4.8	81.1	0.0	6.6	12.2	0.6	8.6
1/09/2025 6:30	3.8	55.9	0.0	7.0	11.7	0.0	1/09/2025 6:30	4.9	85.5	0.0	6.6	12.1	0.5	8.5
1/09/2025 6:45	3.9	56.6	0.0	7.0	11.7	0.0	1/09/2025 6:45	4.9	87.1	0.0	6.5	12.0	0.7	
1/09/2025 7:00	3.9	57.6	0.0	7.0	11.7	0.0	1/09/2025 7:00	4.9	83.7	0.0	6.6	12.1	0.6	8.6
1/09/2025 7:15	3.8	55.0	0.0	7.0	11.7	0.0	1/09/2025 7:15	4.8	79.2	0.0	6.6	12.2	0.7	8.7
1/09/2025 7:30	3.8	54.0	0.0	7.0	11.7	0.0	1/09/2025 7:30	4.9	81.9	0.0	6.6	12.1	0.5	8.5
1/09/2025 7:45	3.8	54.9	0.0	7.0	11.7	0.0	1/09/2025 7:45	4.9	80.3	0.0	6.5	12.1	0.5	8.5
1/09/2025 8:00	3.8	54.2	0.0	7.0	11.7	0.0	1/09/2025 8:00	4.9	80.8	0.0	6.5	12.1	0.5	8.5
1/09/2025 8:15	3.8	54.2	0.0	7.0	11.7	0.0	1/09/2025 8:15	4.9	80.1	0.0	6.5	12.2	0.4	8.4
1/09/2025 8:30	3.8	54.2	0.0	7.0	11.7	0.0	1/09/2025 8:30	4.8	79.1	0.0	6.6	12.2	0.6	8.6
1/09/2025 8:45	3.8	53.6	0.0	7.0	11.7	0.0	1/09/2025 8:45	4.9	79.3	0.0	6.5	12.1	0.4	8.4
1/09/2025 9:00	3.8	54.1	0.0	7.0	11.7	0.0	1/09/2025 9:00	4.9	81.3	0.0	6.5	12.2	0.7	8.7
1/09/2025 9:15	3.8	54.7	0.0	7.0	11.7	0.0	1/09/2025 9:15	4.8	79.0	0.0	6.6	12.2	0.4	8.4
1/09/2025 9:30	3.8	53.7	0.0	7.0	11.7	0.0	1/09/2025 9:30	4.8	77.3	0.0	6.6	12.2	0.6	8.6
1/09/2025 9:45	3.8	52.6	0.0	7.0	11.8	0.0	1/09/2025 9:45	4.8	76.8	0.0	6.6	12.3	1.3	9.3
1/09/2025 10:00	3.8	52.4	0.0	7.1	11.8	0.0	1/09/2025 10:00	4.8	77.5	0.0	6.6	12.3	0.6	8.6
1/09/2025 10:15	3.8	53.3	0.0	7.1	11.8	0.0	1/09/2025 10:15	4.8	79.4	0.0	6.6	12.3	0.6	8.6
1/09/2025 10:30	3.8	53.6	0.0	7.1	11.8	0.0	1/09/2025 10:30	4.8	77.7	0.0	6.6	12.3	0.7	8.7
1/09/2025 10:45	3.8	53.1	0.0	7.1	11.8	0.0	1/09/2025 10:45	4.8	76.5	0.0	6.7	12.4	0.8	8.8
1/09/2025 11:00	3.8	52.5	0.0	7.1	11.8	0.0	1/09/2025 11:00	4.9	82.1	0.0	6.6	12.3	0.7	8.7
1/09/2025 11:15	3.8	52.7	0.0	7.1	11.8	0.0	1/09/2025 11:15	4.9	83.9	0.0	6.6	12.2	0.6	8.6
1/09/2025 11:30	3.9	55.3	0.0	7.0	11.8	0.0	1/09/2025 11:30	4.9	80.8	0.0	6.6	12.3	0.7	8.7
1/09/2025 11:45	3.9	55.2	0.0	7.1	11.7	0.0	1/09/2025 11:45	5.0	85.4	0.0	6.6	12.2	0.7	8.7
1/09/2025 12:00	3.9	56.2	0.0	7.0	11.8	0.0	1/09/2025 12:00	4.9	81.9	0.0	6.6	12.3	0.6	8.6
1/09/2025 12:15	3.9	55.9	0.0	7.1	11.8	0.0	1/09/2025 12:15	4.9	78.7	0.0	6.7	12.4	0.8	8.8
1/09/2025 12:30	3.9	53.9	0.0	7.1	11.8	0.0	1/09/2025 12:30	4.9	78.7	0.0	6.7	12.3	1.1	9.1
1/09/2025 12:45	3.9	53.4	0.0	7.1	11.8	0.0	1/09/2025 12:45	4.9	76.8	0.0	6.7	12.4	0.6	8.6
1/09/2025 13:00	3.9	53.1	0.0	7.1	11.8	0.0	1/09/2025 13:00	5.1	82.0	0.0	6.7	12.3	1.1	9.1
1/09/2025 13:15	4.0	53.5	0.0	7.1	11.9	0.0	1/09/2025 13:15	5.1	79.8	0.0	6.7	12.4	0.7	8.7
1/09/2025 13:30	4.1	54.1	0.0	7.1	11.9	0.0	1/09/2025 13:30	5.1	79.0	0.0	6.7	12.4	0.8	8.8
1/09/2025 13:45	4.1	53.9	0.0	7.0	11.9	0.0	1/09/2025 13:45	5.3	86.8	0.0	6.6	12.3	0.5	8.5
1/09/2025 14:00	4.2	55.5	0.0	7.1	11.9	0.0	1/09/2025 14:00	5.3	86.4	0.0	6.6	12.3	0.7	8.7
1/09/2025 14:15	4.2	56.7	0.0	7.0	11.8	0.0	1/09/2025 14:15	5.4	87.5	0.0	6.6	12.2	0.5	8.5
1/09/2025 14:30	4.3	58.0	0.0	7.0	11.8	0.0	1/09/2025 14:30	5.4	86.6	0.0	6.6	12.3	0.6	8.6
1/09/2025 14:45	4.4	57.9	0.0	7.0	11.8	0.0	1/09/2025 14:45	5.6	96.3	0.0	6.6	12.1	0.5	8.5
1/09/2025 15:00	4.4	60.2	0.0	7.0	11.7	0.0	1/09/2025 15:00	5.5	90.6	0.0	6.6	12.2	0.6	8.6
1/09/2025 15:15	4.4	59.6	0.0	7.0	11.7	0.0	1/09/2025 15:15	5.5	85.8	0.0	6.6	12.2	0.8	8.8
1/09/2025 15:30	4.4	57.4	0.0	7.0	11.8	0.0	1/09/2025 15:30	5.5	85.1	0.0	6.6	12.2	0.6	8.6
1/09/2025 15:45	4.4	56.4	0.0	7.0	11.8	0.0	1/09/2025 15:45	5.5	88.0	0.0	6.6	12.2	0.6	8.6
1/09/2025 16:00	4.5	59.8	0.0	7.0	11.7	0.0	1/09/2025 16:00	5.6	90.7	0.0	6.6	12.0	1.0	9.0
1/09/2025 16:15	4.5	60.6	0.0	7.0	11.6	0.0	1/09/2025 16:15	5.7	46.8	0.0	6.4	11.7	0.8	8.8
1/09/2025 16:30	4.4	58.6	0.0	7.0	11.6	0.0	1/09/2025 16:30	5.8	4.8	0.0	6.5	12.5	0.2	8.2
1/09/2025 16:45	4.4	57.8	0.0	7.0	11.6	0.0	1/09/2025 16:45	5.9	4.8	0.0	6.6	12.5	0.3	8.3
1/09/2025 17:00	4.4	57.0	0.0	7.0	11.6	0.0	1/09/2025 17:00	6.0	4.8	0.0	6.6	12.5	0.3	8.3
1/09/2025 17:15	4.4	56.5	0.0	6.9	11.5	0.0	1/09/2025 17:15	5.9	4.9	0.0	6.6	12.5	0.3	8.3
1/09/2025 17:30	4.3	55.8	0.0	6.9	11.5	0.0	1/09/2025 17:30	5.8	4.9	0.0	6.6	12.5	0.4	8.4
1/09/2025 17:45	4.3	55.7	0.0	6.9	11.5	0.0	1/09/2025 17:45	5.8	4.8	0.0	6.7	12.5	0.3	8.3
1/09/2025 18:00	4.3	55.7	0.0	7.0	11.6	0.0	1/09/2025 18:00	5.8	4.8	0.0	6.7	12.5	0.3	8.3
1/09/2025 18:15	4.3	55.1	0.0	7.0	11.6	0.0	1/09/2025 18:15	5.8	4.8	0.0	6.7	12.6	0.3	8.3
1/09/2025 18:30	4.3	55.3	0.0	6.9	11.5	0.0	1/09/2025 18:30	5.8	4.8	0.0	6.6	12.6	0.4	8.4
1/09/2025 18:45	4.3	55.3	0.0	7.0	11.5	0.0	1/09/2025 18:45	5.8	4.7	0.0	6.7	12.5	0.2	8.2
1/09/2025 19:00	4.3	55.9	0.0	6.9	11.4	0.0	1/09/2025 19:00	5.7	4.8	0.0	6.6	12.5	0.2	8.2
1/09/2025 19:15	4.3	55.8	0.0	6.9	11.4	0.0	1/09/2025 19:15	5.8	4.8	0.0	6.6	12.5	0.2	8.2
1/09/2025 19:30	4.3	55.1	0.0	7.0	11.5	0.0	1/09/2025 19:30	5.7	4.8	0.0	6.6	12.5	0.3	8.3
1/09/2025 19:45	4.3	55.3	0.0	7.0	11.5	0.0	1/09/2025 19:45	5.7	4.8	0.0	6.7	12.5	0.2	8.2
1/09/2025 20:00	4.3	55.9	0.0	6.9	11.4	0.0	1/09/2025 20:00	5.7	4.8	0.0	6.7	12.5	0.2	8.2
1/09/2025 20:15	4.3	55.4	0.0	6.9	11.5	0.0	1/09/2025 20:15	5.7	4.8	0.0	6.7	12.5	0.2	8.2
1/09/2025 20:30	4.3	55.7	0.0	7.0	11.5	0.0	1/09/2025 20:30	5.7	4.8	0.0	6.7	12.5	0.3	8.3
1/09/2025 20:45	4.3	56.0	0.0	6.9	11.4	0.0	1/09/2025 20:45	5.7	4.8	0.0	6.7	12.5	0.2	8.2
1/09/2025 21:00	4.3	55.7	0.0	7.0	11.5	0.0	1/09/2025 21:00	5.7	4.9	0.0	6.7	12.5	0.2	8.2
1/09/2025 21:15	4.3	56.3	0.0	6.9	11.4	0.0	1/09/2025 21:15	5.7	4.9	0.0	6.7	12.5	0.2	8.2
1/09/2025 21:30	4.3	55.9	0.0	7.0	11.5	0.0	1/09/2025 21:30	5.8	4.9	0.0	6.6	12.5	0.3	8.3
1/09/2025 21:45	4.3	56.3	0.0	6.9	11.4	0.0	1/09/2025 21:45	5.8	4.8	0.0	6.7	12.5	0.2	8.2
1/09/2025 22:00	4.3	56.4	0.0	7.0	11.4	0.0	1/09/2025 22:00	5.8	4.8	0.0	6.7	12.5	0.3	8.3
1/09/2025 22:15	4.4	56.7	0.0	6.9	11.2	0.0	1/09/2025 22:15	5.8	4.8	0.0	6.7	12.5	0.3	8.3
1/09/2025 22:30	4.4	56.7	0.0	6.9	11.3	0.0	1/09/2025 22:30	5.8	4.8	0.0	6.7	12.5	0.3	8.3
1/09/2025 22:45	4.3	55.9	0.0	7.0	11.4	0.0	1/09/2025 22:45	5.8	4.9	0.0	6.7	12.5	0.2	8.2
1/09/2025 23:00	4.4	56.2	0.0	7.0	11.4	0.0	1/09/2025 23:00	5.8	4.9	0.0	6.7	12.5	0.2	8.2
1/09/2025 23:15	4.4	56.5	0.0	6.9	11.4	0.0	1/09/2025 23:15	5.8	4.9	0.0	6.7	12.5	0.3	8.3
1/09/2025 23:30	4.4	56.8	0.0	6.9	11.3	0.0	1/09/2025 23:30	5.8	4.9	0.0	6.7	12.5	0.3	8.3
1/09/2025 23:45	4.4	56.2	0.0	7.0	11.4	0.0	1/09/2025 23:45	5.8	4.9	0.0	6.7	12.5	0.2	8.2
1/10/2025 0:00	4.4	56.0	0.0	7.0	11.4	0.0	1/10/2025 0:00	5.8	4.9	0.0	6.7	12.5	0.3	8.3
1/10/2025 0:15	4.4	56.3	0.0	6.9	11.4	0.0	1/10/2025 0:15	5.8	4.9	0.0	6.7	12.5	0.3	8.3
1/10/2025 0:30	4.4	56.3	0.0	7.0	11.4	0.0	1/10/2025 0:30	5.8	4.9	0.0	6.7	12.5	0.3	8.3
1/10/2025 0:45	4.4	56.0	0.0	7.0	11.4	0.0	1/10/2025 0:45	5.8	4.9	0.0	6.7	12.5	0.2	8.2
1/10/2025 1:00	4.4	56.3	0.0	7.0	11.3	0.0	1/10/2025 1:00	5.7	4.9	0.0	6.7	12.5	0.2	8.2
1/10/2025 1:15	4.4	56.2	0.0	6.9	11.3	0.0	1/10/2025 1:15	5.7	4.9	0.0	6.7	12.5	0.3	8.3
1/10/2025 1:30	4.4	56.1	0.0	7.0	11.4	0.0	1/10/2025 1:30	5.7	4.9	0.0	6.7	12.5	0.3	8.3
1/10/2025 1:45	4.4	56.2	0.0	7.0	11.4	0.0	1/10/2025 1:45	5.7	4.8	0.0	6.7	12.5	0.2	8.2
1/10/2025 2:00	4.4	55.7	0.0	7.0	11.4	0.0	1/10/2025 2:00	5.7	4.9	0.0	6.7	12.5	0.3	8.3
1/10/2025 2:15	4.4	55.2	0.0	7.0	11.5	0.0	1/10/2025 2:15	5.7	12.3	0.0	6.3	12.2	0.9	8.9
1/10/2025 2:30	4.4	55.5	0.0	7.0	11.5	0.0	1/10/2025 2:30	5.4	79.9	0.0	6.6	12.0	0.9	8.9
1/10/2025 2:45	4.4	55.1	0.0	7.0	11.5	0.0	1/10/2025 2:45	5.4	78.1	0.0	6.6	12.0	0.9	8.9
1/10/2025 3:00	4.4	53.5	0.0	7.0	11.5	0.0	1/10/2025 3:00	5.3	76.8	0.0	6.7	12.0	0.7	8.7
1/10/2025 3:15	4.4	53.0	0.0	7.0	11.5	0.0	1/10/2025 3:15	5.3	76.3	0.0	6.7	12.1	0.8	8.8
1/10/2025 3:30	4.4	52.6	0.0	7.1	11.5	0.0	1/10/2025 3:30	5.3	76.2	0.0	6.7	12.1	1.4	9.4
1/10/2025 3:45	4.4	52.2	0.0	7.1	11.6	0.0	1/10/2025 3:45	5.3	77.3	0.0	6.7	12.1	1.6	9.6
1/10/2025 4:00	4.4	52.0	0.0	7.1	11.6	0.0	1/10/2025 4:00	5.5	88.6	0.0	6.6	11.8	1.1	9.1
1/10/2025 4:15	4.4	55.7	0.0	7.1	11.5	0.0	1/10/2025 4:15	5.5	83.5	0.0	6.6	11.9	0.8	8.8
1/10/2025 4:30	4.5	56.5	0.0	7.0	11.4	0.0	1/10/2025 4:30	5.4	81.3	0.0	6.6	11.9	0.8	8.8
1/10/2025 4:45	4.5	56.4	0.0	7.0	11.4	0.0	1/10/2025 4:45	5.4	78.1	0.0	6.6	12.0	0.9	8.9
1/10/2025 5:00	4.4	53.3	0.0	7.0	11.5	0.0	1/10/2025 5:00	5.4	77.1	0.0	6.7	12.1	0.9	8.9
1/10/2025 5:15	4.4	52.2	0.0	7.1	11.5	0.0	1/10/2025 5:15	5.5	86.4	0.0	6.6	11.9	0.8	8.8
1/10/2025 5:30	4.5	54.3	0.0	7.1	11.5	0.0	1/10/2025 5:30	5.6	86.6	0.0	6.6	11.9	1.1	9.1
1/10/2025 5:45	4.5	55.5	0.0	7.1	11.5	0.0	1/10/2025 5:45	5.5	83.0	0.0	6.6	11.9	0.9	8.9
1/10/2025 6:00	4.5	55.4	0.0	7.1	11.5	0.0	1/10/2025 6:00	5.4	78.2	0.0	6.7	12.0	1.0	9.0
1/10/2025 6:15	4.5	54.7	0.0	7.1	11.5	0.0	1/10/2025 6:15	5.5	83.3	0.0	6.7	12.0	0.7	8.7
1/10/2025 6:30	4.5	52.5	0.0	7.1	11.5	0.0	1/10/2025 6:30	5.6	89.7	0.0	6.6	11.8	1.0	9.0
1/10/2025 6:45	4.6	57.7	0.0	7.1	11.4	0.0	1/10/2025 6:45	5.6	85.7	0.0	6.6	11.9	1.1	9.1
1/10/2025 7:00	4.6	57.2	0.0	7.0	11.4	0.0	1/10/2025 7:00	5.5	80.8	0.0	6.7	12.0	1.0	9.0
1/10/2025 7:15	4.5	54.5	0.0	7.0	11.5	0.0	1/10/2025 7:15	5.5	77.5	0.0	6.7	12.0	0.8	8.8
1/10/2025 7:30	4.5	53.3	0.0	7.1	11.5	0.0	1/10/2025 7:30	5.5	84.0	0.0	6.7	11.9	1.4	9.4
1/10/2025 7:45	4.5	55.2	0.0	7.1	11.5	0.0	1/10/2025 7:45	5.6	84.4	0.0	6.7	11.9	1.2	9.2
1/10/2025 8:00	4.5	55.5	0.0	7.1	11.5	0.0	1/10/2025 8:00	5.5	81.7	0.0	6.7	11.9	1.3	9.3
1/10/2025 8:15	4.5	55.1	0.0	7.1	11.5	0.0	1/10/2025 8:15	5.5	80.4	0.0	6.7	12.0	2.0	10.0
1/10/2025 8:30	4.5	53.8	0.0	7.0	11.5	0.0	1/10/2025 8:30	5.5	80.4	0.0	6.7	12.0	1.2	9.2

1/10/2025 8:45	4.5	53.8	0.0	7.1	11.5	0.0	1/10/2025 8:45	5.5	81.4	0.0	6.7	12.0	1.3	9.3
1/10/2025 9:00	4.5	54.3	0.0	7.1	11.5	0.0	1/10/2025 9:00	5.5	80.3	0.0	6.7	11.9	1.0	9.0
1/10/2025 9:15	4.5	53.6	0.0	7.1	11.5	0.0	1/10/2025 9:15	5.5	78.1	0.0	6.7	12.0	1.1	9.1
1/10/2025 9:30	4.5	52.8	0.0	7.1	11.5	0.0	1/10/2025 9:30	5.5	79.1	0.0	6.7	12.0	1.2	9.2
1/10/2025 9:45	4.5	53.0	0.0	7.0	11.5	0.0	1/10/2025 9:45	5.5	78.7	0.0	6.7	12.0	0.9	8.9
1/10/2025 10:00	4.5	52.8	0.0	7.1	11.5	0.0	1/10/2025 10:00	5.5	79.1	0.0	6.7	12.0	1.5	9.5
1/10/2025 10:15	4.5	53.0	0.0	7.1	11.5	0.0	1/10/2025 10:15	5.5	77.8	0.0	6.7	12.0	1.1	9.1
1/10/2025 10:30	4.5	52.4	0.0	7.1	11.5	0.0	1/10/2025 10:30	5.5	77.2	0.0	6.7	12.0	0.8	8.8
1/10/2025 10:45	4.5	52.3	0.0	7.1	11.5	0.0	1/10/2025 10:45	5.5	80.2	0.0	6.7	12.0	0.8	8.8
1/10/2025 11:00	4.5	53.3	0.0	7.1	11.5	0.0	1/10/2025 11:00	5.5	79.8	0.0	6.7	12.0	1.2	9.2
1/10/2025 11:15	4.6	53.5	0.0	7.1	11.4	0.0	1/10/2025 11:15	5.6	82.2	0.0	6.7	11.9	0.7	8.7
1/10/2025 11:30	4.6	54.1	0.0	7.1	11.4	0.0	1/10/2025 11:30	5.6	81.6	0.0	6.7	12.0	1.0	9.0
1/10/2025 11:45	4.6	54.3	0.0	7.1	11.5	0.0	1/10/2025 11:45	5.6	79.5	0.0	6.7	12.0	0.8	8.8
1/10/2025 12:00	4.6	53.9	0.0	7.1	10.9	0.0	1/10/2025 12:00	5.6	77.3	0.0	6.7	12.1	0.7	8.7
1/10/2025 12:15	4.6	52.3	0.0	7.1	11.5	0.0	1/10/2025 12:15	5.6	76.4	0.0	6.7	12.1	0.7	8.7
1/10/2025 12:30	4.6	52.0	0.0	7.1	11.6	0.0	1/10/2025 12:30	5.6	75.8	0.0	6.7	12.1	0.6	8.6
1/10/2025 12:45	4.6	51.4	0.0	7.1	11.3	0.0	1/10/2025 12:45	5.6	75.5	0.0	6.7	12.2	0.7	8.7
1/10/2025 13:00	4.6	51.2	0.0	7.1	11.5	0.0	1/10/2025 13:00	5.6	75.6	0.0	6.7	12.2	0.7	8.7
1/10/2025 13:15	4.6	50.9	0.0	7.1	11.2	0.0	1/10/2025 13:15	5.6	75.5	0.0	6.7	12.2	0.7	8.7
1/10/2025 13:30	4.7	51.0	0.0	7.1	11.5	0.0	1/10/2025 13:30	5.6	74.6	0.0	6.7	12.2	0.8	8.8
1/10/2025 13:45	4.7	50.7	0.0	7.1	11.6	0.0	1/10/2025 13:45	5.7	75.3	0.0	6.7	12.2	0.7	8.7
1/10/2025 14:00	4.7	50.6	0.0	7.1	11.6	0.0	1/10/2025 14:00	5.8	81.1	0.0	6.7	12.1	0.6	8.6
1/10/2025 14:15	4.7	52.0	0.0	7.1	11.5	0.0	1/10/2025 14:15	5.8	79.1	0.0	6.7	12.1	0.8	8.8
1/10/2025 14:30	4.8	52.9	0.0	7.1	11.5	0.0	1/10/2025 14:30	5.7	76.3	0.0	6.7	12.2	0.7	8.7
1/10/2025 14:45	4.8	51.7	0.0	7.1	11.6	0.0	1/10/2025 14:45	5.8	81.9	0.0	6.7	12.1	0.9	8.9
1/10/2025 15:00	4.8	52.9	0.0	7.1	11.6	0.0	1/10/2025 15:00	5.9	86.2	0.0	6.7	12.1	1.0	9.0
1/10/2025 15:15	4.9	55.4	0.0	7.1	11.6	0.0	1/10/2025 15:15	5.9	87.2	0.0	6.6	12.0	0.7	8.7
1/10/2025 15:30	4.9	56.4	0.0	7.1	11.4	0.0	1/10/2025 15:30	6.0	86.9	0.0	6.6	12.1	0.7	8.7
1/10/2025 15:45	4.9	56.8	0.0	7.1	11.6	0.0	1/10/2025 15:45	6.1	91.4	0.0	6.6	12.0	0.9	8.9
1/10/2025 16:00	5.0	59.0	0.0	7.0	11.5	0.0	1/10/2025 16:00	6.1	92.6	0.0	6.6	11.9	1.0	9.0
1/10/2025 16:15	5.0	59.1	0.0	7.0	11.5	0.0	1/10/2025 16:15	6.0	86.7	0.0	6.6	11.9	0.7	8.7
1/10/2025 16:30	4.9	56.2	0.0	7.1	11.5	0.0	1/10/2025 16:30	5.9	85.3	0.0	6.6	12.0	0.8	8.8
1/10/2025 16:45	4.9	55.5	0.0	7.0	11.5	0.0	1/10/2025 16:45	5.9	83.7	0.0	6.6	11.9	0.8	8.8
1/10/2025 17:00	4.9	56.1	0.0	7.0	11.5	0.0	1/10/2025 17:00	5.9	83.9	0.0	6.6	11.8	1.4	9.4
1/10/2025 17:15	4.8	55.3	0.0	7.0	11.4	0.0	1/10/2025 17:15	5.9	4.5	0.0	6.5	12.4	0.8	8.8
1/10/2025 17:30	4.8	54.1	0.0	7.0	11.5	0.0	1/10/2025 17:30	5.9	4.8	0.0	6.5	12.5	0.9	8.9
1/10/2025 17:45	4.7	52.8	0.0	7.0	11.4	0.0	1/10/2025 17:45	5.8	4.8	0.0	6.6	12.5	0.9	8.9
1/10/2025 18:00	4.7	52.3	0.0	7.0	11.5	0.0	1/10/2025 18:00	5.6	4.9	0.0	6.6	12.5	1.1	9.1
1/10/2025 18:15	4.7	51.6	0.0	7.0	11.5	0.0	1/10/2025 18:15	5.4	4.9	0.0	6.6	12.6	1.1	9.1
1/10/2025 18:30	4.7	51.5	0.0	7.0	11.4	0.0	1/10/2025 18:30	5.3	5.0	0.0	6.6	12.6	1.2	9.2
1/10/2025 18:45	4.6	51.2	0.0	7.0	11.5	0.0	1/10/2025 18:45	5.1	4.8	0.0	6.7	12.7	1.0	9.0
1/10/2025 19:00	4.6	51.1	0.0	7.0	11.5	0.0	1/10/2025 19:00	5.0	4.9	0.0	6.6	12.7	0.9	8.9
1/10/2025 19:15	4.6	51.1	0.0	7.0	11.5	0.0	1/10/2025 19:15	5.1	4.9	0.0	6.6	12.7	0.8	8.8
1/10/2025 19:30	4.6	51.3	0.0	7.0	11.5	0.0	1/10/2025 19:30	5.1	4.9	0.0	6.6	12.7	0.8	8.8
1/10/2025 19:45	4.6	51.4	0.0	7.0	11.4	0.0	1/10/2025 19:45	5.2	4.9	0.0	6.7	12.7	0.7	8.7
1/10/2025 20:00	4.6	51.1	0.0	7.0	11.5	0.0	1/10/2025 20:00	5.2	5.0	0.0	6.7	12.7	0.7	8.7
1/10/2025 20:15	4.6	51.1	0.0	7.0	11.4	0.0	1/10/2025 20:15	5.2	5.0	0.0	6.7	12.7	0.7	8.7
1/10/2025 20:30	4.6	50.7	0.0	7.0	11.5	0.0	1/10/2025 20:30	5.2	5.0	0.0	6.7	12.7	0.7	8.7
1/10/2025 20:45	4.6	50.5	0.0	7.0	11.5	0.0	1/10/2025 20:45	5.2	5.0	0.0	6.7	12.7	0.8	8.8
1/10/2025 21:00	4.6	50.3	0.0	7.0	11.5	0.0	1/10/2025 21:00	5.2	5.1	0.0	6.7	12.7	0.7	8.7
1/10/2025 21:15	4.6	50.0	0.0	7.0	11.5	0.0	1/10/2025 21:15	5.2	5.0	0.0	6.7	12.7	0.7	8.7
1/10/2025 21:30	4.6	49.9	0.0	7.0	11.5	0.0	1/10/2025 21:30	5.2	5.0	0.0	6.7	12.7	0.7	8.7
1/10/2025 21:45	4.6	49.6	0.0	7.0	11.5	0.0	1/10/2025 21:45	5.3	4.9	0.0	6.7	12.7	0.6	8.6
1/10/2025 22:00	4.6	49.7	0.0	7.0	11.5	0.0	1/10/2025 22:00	5.3	5.0	0.0	6.7	12.7	0.7	8.7
1/10/2025 22:15	4.6	49.4	0.0	7.0	11.5	0.0	1/10/2025 22:15	5.4	5.0	0.0	6.7	12.7	0.7	8.7
1/10/2025 22:30	4.6	49.0	0.0	7.0	11.5	0.0	1/10/2025 22:30	5.4	5.0	0.0	6.7	12.7	0.7	8.7
1/10/2025 22:45	4.6	49.2	0.0	7.0	11.5	0.0	1/10/2025 22:45	5.4	4.9	0.0	6.7	12.7	0.6	8.6
1/10/2025 23:00	4.5	49.0	0.0	7.0	11.5	0.0	1/10/2025 23:00	5.5	5.0	0.0	6.7	12.7	0.7	8.7
1/10/2025 23:15	4.5	49.0	0.0	7.0	11.6	0.0	1/10/2025 23:15	5.4	5.0	0.0	6.7	12.7	0.7	8.7
1/10/2025 23:30	4.5	49.0	0.0	7.0	11.6	0.0	1/10/2025 23:30	5.4	5.0	0.0	6.7	12.7	0.7	8.7
1/10/2025 23:45	4.5	49.0	0.0	7.0	11.6	0.0	1/10/2025 23:45	5.4	4.8	0.0	6.7	12.7	0.7	8.7
1/11/2025 0:00	4.5	49.1	0.0	7.0	11.6	0.0	1/11/2025 0:00	5.4	4.9	0.0	6.7	12.7	0.8	8.8
1/11/2025 0:15	4.5	49.2	0.0	7.0	11.6	0.0	1/11/2025 0:15	5.4	4.9	0.0	6.7	12.7	0.7	8.7
1/11/2025 0:30	4.5	48.9	0.0	7.0	11.6	0.0	1/11/2025 0:30	5.4	4.9	0.0	6.7	12.7	0.8	8.8
1/11/2025 0:45	4.5	49.1	0.0	7.0	11.6	0.0	1/11/2025 0:45	5.4	4.9	0.0	6.7	12.7	0.6	8.6
1/11/2025 1:00	4.5	49.4	0.0	7.0	11.6	0.0	1/11/2025 1:00	5.4	4.9	0.0	6.7	12.7	0.7	8.7
1/11/2025 1:15	4.5	49.3	0.0	7.0	11.6	0.0	1/11/2025 1:15	5.4	4.9	0.0	6.7	12.7	0.7	8.7
1/11/2025 1:30	4.5	49.2	0.0	7.0	11.6	0.0	1/11/2025 1:30	5.4	4.9	0.0	6.7	12.7	0.7	8.7
1/11/2025 1:45	4.4	49.4	0.0	7.0	11.6	0.0	1/11/2025 1:45	5.4	4.8	0.0	6.7	12.7	0.6	8.6
1/11/2025 2:00	4.4	49.1	0.0	7.0	11.6	0.0	1/11/2025 2:00	5.3	4.8	0.0	6.7	12.7	0.7	8.7
1/11/2025 2:15	4.4	49.1	0.0	7.0	11.6	0.0	1/11/2025 2:15	5.3	4.9	0.0	6.7	12.7	0.7	8.7
1/11/2025 2:30	4.4	49.0	0.0	7.0	11.6	0.0	1/11/2025 2:30	5.3	4.9	0.0	6.7	12.7	0.7	8.7
1/11/2025 2:45	4.4	49.0	0.0	7.0	11.6	0.0	1/11/2025 2:45	5.3	4.9	0.0	6.7	12.7	0.7	8.7
1/11/2025 3:00	4.4	48.9	0.0	7.0	11.6	0.0	1/11/2025 3:00	5.2	4.9	0.0	6.7	12.8	0.8	8.8
1/11/2025 3:15	4.4	48.9	0.0	7.1	11.6	0.8	1/11/2025 3:15	5.4	71.8	0.0	6.6	12.1	1.6	9.6
1/11/2025 3:30	4.4	48.1	0.0	7.0	11.7	0.0	1/11/2025 3:30	5.3	70.0	0.0	6.7	12.2	0.9	8.9
1/11/2025 3:45	4.4	47.3	0.0	7.1	11.7	0.0	1/11/2025 3:45	5.3	69.1	0.0	6.7	12.3	1.1	9.1
1/11/2025 4:00	4.3	47.0	0.0	7.1	11.7	0.0	1/11/2025 4:00	5.3	69.2	0.0	6.7	12.3	0.9	8.9
1/11/2025 4:15	4.3	47.1	0.0	7.1	11.7	0.0	1/11/2025 4:15	5.3	69.5	0.0	6.7	12.3	1.0	9.0
1/11/2025 4:30	4.3	48.1	0.0	7.1	11.7	0.0	1/11/2025 4:30	5.3	71.4	0.0	6.7	12.2	0.9	8.9
1/11/2025 4:45	4.3	48.2	0.0	7.1	11.7	0.0	1/11/2025 4:45	5.3	75.2	0.0	6.7	12.2	1.0	9.0
1/11/2025 5:00	4.3	49.6	0.0	7.1	11.7	0.0	1/11/2025 5:00	5.3	74.5	0.0	6.7	12.2	1.3	9.3
1/11/2025 5:15	4.3	50.3	0.0	7.1	11.7	0.0	1/11/2025 5:15	5.3	72.8	0.0	6.7	12.2	1.0	9.0
1/11/2025 5:30	4.3	49.4	0.0	7.1	11.7	0.0	1/11/2025 5:30	5.2	71.7	0.0	6.7	12.3	0.6	8.6
1/11/2025 5:45	4.3	48.8	0.0	7.1	11.7	0.0	1/11/2025 5:45	5.2	72.5	0.0	6.7	12.3	0.6	8.6
1/11/2025 6:00	4.3	49.0	0.0	7.1	11.8	0.0	1/11/2025 6:00	5.2	73.0	0.0	6.7	12.3	1.3	9.3
1/11/2025 6:15	4.3	49.4	0.0	7.1	11.7	0.0	1/11/2025 6:15	5.2	76.7	0.0	6.7	12.2	0.7	8.7
1/11/2025 6:30	4.3	52.2	0.0	7.1	11.7	0.0	1/11/2025 6:30	5.2	76.6	0.0	6.7	12.2	0.7	8.7
1/11/2025 6:45	4.2	51.1	0.0	7.1	11.7	0.0	1/11/2025 6:45	5.2	75.8	0.0	6.7	12.2	0.5	8.5
1/11/2025 7:00	4.2	51.2	0.0	7.1	11.7	0.0	1/11/2025 7:00	5.2	76.3	0.0	6.7	12.2	0.4	8.4
1/11/2025 7:15	4.2	51.2	0.0	7.1	11.8	0.0	1/11/2025 7:15	5.2	80.4	0.0	6.7	12.2	0.5	8.5
1/11/2025 7:30	4.2	52.1	0.0	7.1	11.7	0.0	1/11/2025 7:30	5.2	80.2	0.0	6.7	12.2	0.5	8.5
1/11/2025 7:45	4.2	53.6	0.0	7.1	11.7	0.0	1/11/2025 7:45	5.1	79.5	0.0	6.7	12.2	0.7	8.7
1/11/2025 8:00	4.2	53.6	0.0	7.1	11.7	0.0	1/11/2025 8:00	5.1	79.1	0.0	6.7	12.2	0.6	8.6
1/11/2025 8:15	4.1	53.2	0.0	7.1	11.8	0.0	1/11/2025 8:15	5.1	81.6	0.0	6.7	12.2	0.6	8.6
1/11/2025 8:30	4.1	54.8	0.0	7.1	11.7	0.0	1/11/2025 8:30	5.2	86.3	0.0	6.7	12.1	0.6	8.6
1/11/2025 8:45	4.2	56.8	0.0	7.1	11.7	0.0	1/11/2025 8:45	5.2	84.2	0.0	6.7	12.1	0.6	8.6
1/11/2025 9:00	4.1	56.0	0.0	7.1	11.7	0.0	1/11/2025 9:00	5.1	83.1	0.0	6.7	12.2	0.6	8.6
1/11/2025 9:15	4.1	55.9	0.0	7.1	11.7	0.0	1/11/2025 9:15	5.1	83.6	0.0	6.7	12.1	0.4	8.4
1/11/2025 9:30	4.1	55.6	0.0	7.1	11.7	0.0	1/11/2025 9:30	5.1	80.5	0.0	6.7	12.2	0.5	8.5
1/11/2025 9:45	4.1	54.2	0.0	7.1	11.7	0.0	1/11/2025 9:45	5.0	79.0	0.0	6.7	12.2	0.5	8.5
1/11/2025 10:00	4.1	53.6	0.0	7.0	11.7	0.0	1/11/2025 10:00	5.0	78.6	0.0	6.7	12.2	0.5	8.5
1/11/2025 10:15	4.1	53.3	0.0	7.1	11.7	0.0	1/11/2025 10:15	5.0	79.1	0.0	6.7	12.2	0.5	8.5
1/11/2025 10:30	4.1	53.3	0.0	7.1	11.7	0.0	1/11/2025 10:30	5.1	78.4	0.0	6.7	12.2	0.6	8.6
1/11/2025 10:45	4.1	52.8	0.0	7.1	11.7	0.0	1/11/2025 10:45	5.1	77.7	0.0	6.7	12.2	0.6	8.6
1/11/2025 11:00	4.1	52.5	0.0	7.1	11.7	0.0	1/11/2025 11:00	5.1	78.5	0.0	6.6	12.2	0.4	8.4
1/11/2025 11:15	4.1	53.1	0.0	7.0	11.7	0.0	1/11/2025 11:15	5.1	78.7	0.0	6.6	12.2	1.1	9.1
1/11/2025 11:30	4.1	52.5	0.0	7.1	11.7	0.0	1/11/2025 11:30	5.1	76.5	0.0	6.6	12.2	0.5	8.5
1/11/2025 11:45	4.1	51.4	0.0	7.1	11.8	0.0	1/11/2025 11:45	5.1	75.7	0.0	6.6	12.3	0.6	8.6
1/11/2025 12:00	4.1	50.8	0.0	7.0	11.8	0.0	1/11/2025 12:00	5.1	74.2	0.0	6.7	12.3	0.5	8.5
1/11/2025 12:15	4.1	50.3	0.0	7.1	11.8	0.0	1/11/2025 12:15	5.1	73.5	0.0	6.7	12.4	0.5	8.5
1/11/2025 12:30	4.1	50.1	0.0	7.1	11.8	0.0	1/11/2025 12:30	5.1	73.2	0.0	6.7	12.4	0.5	8.5
1/11/2025 12:45	4.1	49.8	0.0	7.0	11.8	0.0	1/11/2025 12:45	5.1	73.6	0.0	6.7	12.4	0.7	8.7
1/11/2025 13:00	4.2	49.8	0.0	7.1	11.9	0.0	1/11/2025 13:00	5.1	72.5	0.0	6.7	12.4	0.6	8.6
1/11/2025 13:15	4.2	49.4	0.0	7.1	11.9	0.0	1/11/2025 13:15	5.1	72.9	0.0	6.7	12.4	0.7	8.7
1/11/2025 13:30	4.2	49.4	0.0	7.1	11.9	0.0	1/11/2025 13:30	5.2	73.4	0.0	6.7	12.4	0.6	8.6
1/11/2025 13:45	4.2	49.5	0.0	7.1	11.9	0.0	1/11/2025 13:45	5.3	81.9	0.0	6.6	12.3	0.6	8.6
1/11/2025 14:00	4.2	52.0	0.0	7.1	11.8	0.0	1/11/2025 14:00	5.3	82.6	0.0	6.6	12.2	0.7	8.7
1/11/2025 14:15	4.3	54.5	0.0	7.1	11.7	0.0	1/11/2025 14:15	5.3	78.4	0.0	6.6	12.3	0.6	8.6
1/11/2025 14:30	4.3	52.6	0.0	7.0	11.8	0.0	1/11/2025 14:30	5.3	78.0	0.0	6.7	12.3	0.5	8.5
1/11/2025 14:45	4.3	51.9	0.0	7.1	11.8	0.0	1/11/2025 14:45	5.3	77.2	0.0	6.7	12.3	0.5	8.5
1/11/2025 15:00	4.3	51.8	0.0	7.1	11.8	0.0	1/11/2025 15:00	5.4	77.8	0.0	6.7	12.3	0.6	8.6
1/11/2025 15:15	4.4	51.7	0.0	7.1	11.9	0.0	1/11/2025 15:15	5.4	81.4	0.0	6.6	12.3	0.5	8.5
1/11/2025 15:30	4.4	52.8	0.0	7.1	11.8	0.0	1/11/2025 15:30	5.4	81.0	0.0	6.6	12.3	0.5	8.5
1/11/2025 15:45	4.4	53.4	0.0	7.1	11.8	0.0	1/11/2025 15:45	5.4	80.1	0.0	6.6	12.3	0.4	8.4
1/11/2025 16:00	4.4	53.1	0.0	7.1	11.8	0.0	1/11/2025 16:00	5.4	81.2	0.0	6.6	12.3	0.5	8.5
1/11/2025 16:15	4.4	53.6	0.0	7.0	11.8	0.0	1/11/2025 16:15	5.4	81.2	0.0	6.6	12.3	0.6	8.6
1/11/2025 16:30	4.4	53.6	0.0	7.0	11.8	0.0	1/11/2025 16:30	5.4	81.7	0.0	6.6	12.3	0.5	8.5
1/11/2025 16:45	4.3	54.0	0.0	7.0	11.8	0.0	1/11/2025 16:45	5.4	82.8	0.0	6.6	12.2	0.7	8.7
1/11/2025 17:00	4.3	54.7	0.0	7.0	11.8	0.0	1/11/2025 17:00	5.4	83.6	0.0	6.6	12.2	0.6	8.6
1/11/2025 17:15	4.3	54.9	0.0	7.0	11.8	0.0	1/11/2025 17:15	5.4	91.5	0.0	6.5	12.0	1.0	9.0
1/11/2025 17:30	4.3	58.6	0.0	7.0	11.6	0.0	1/11/2025 17:30	5.6	9.2	0.0	6.2	11.6	0.9	8.9
1/11/2025 17:45	4.3	57.5	0.0	7.0	11.6	0.0	1/11/2025 17:45	5.5	4.6	0.0	6.5	12.7	0.3	8.3
1/11/2025 18:00	4.2	54.8	0.0	6.9	11.7	0.0	1/11/2025 18:00	5.4	4.7	0.0	6.5	12.8	0.4	8.4
1/11/2025 18:15	4.2	53.2	0.0	7.0	11.7	0.0	1/11/2025 18:15	5.2	4.7	0.0	6.5	12.8	0.5	8.5
1/11/2025 18:30	4.1	52.7	0.0	7.0	11.7	0.0	1/11/2025 18:30	5.1	4.8	0.0	6.5	12.8	0.6	8.6
1/11/2025 18:45	4.2	52.6	0.0	6.9	11.6	0.0	1/11/2025 18:45	5.0	4.6	0.0	6.6	12.9	0.5	8.5
1/11/2025 19:00	4.1	51.7	0.0	6.9	11.7	0.0	1/11/2025 19:00	4.9	4.6	0.0	6.6	12.9	0.5	8.5
1/11/2025 19:15	4.1	51.9	0.0	7.0	11.7	0.0	1/11/2025 19:15	4.9	4.7	0.0	6.6	12.9	0.5	8.5
1/11/2025 19:30	4.1	52.1	0.0	7.0	11.6	0.0	1/11/2025 19:30	4.8	4.7	0.0	6.6	12.9	0.6	8.6
1/11/2025 19:45	4.1	51.9	0.0	7.0	11.7	0.0	1/11/2025 19:45	4.8	4.6	0.0	6.6	12.9	0.3	8.3

1/11/2025 20:00	4.1	51.9	0.0	7.0	11.7	0.0	1/11/2025 20:00	4.7	4.6	0.0	6.6	13.0	0.4	8.4
1/11/2025 20:15	4.1	51.8	0.0	7.0	11.7	0.0	1/11/2025 20:15	4.6	4.7	0.0	6.6	13.0	0.4	8.4
1/11/2025 20:30	4.0	51.9	0.0	7.0	11.7	0.0	1/11/2025 20:30	4.5	4.7	0.0	6.6	13.0	0.5	8.5
1/11/2025 20:45	4.0	51.9	0.0	7.0	11.6	0.0	1/11/2025 20:45	4.5	4.8	0.0	6.6	13.1	0.3	8.3
1/11/2025 21:00	4.0	51.7	0.0	7.0	11.7	0.0	1/11/2025 21:00	4.4	4.8	0.0	6.6	13.1	0.4	8.4
1/11/2025 21:15	4.0	51.8	0.0	7.0	11.7	0.0	1/11/2025 21:15	4.4	4.8	0.0	6.6	13.1	0.4	8.4
1/11/2025 21:30	4.0	52.0	0.0	7.0	11.7	0.0	1/11/2025 21:30	4.2	4.9	0.0	6.6	13.1	0.5	8.5
1/11/2025 21:45	4.0	51.9	0.0	7.0	11.7	0.0	1/11/2025 21:45	4.0	4.8	0.0	6.6	13.2	0.3	8.3
1/11/2025 22:00	4.0	51.8	0.0	7.0	11.7	0.0	1/11/2025 22:00	3.9	4.8	0.0	6.6	13.2	0.3	8.3
1/11/2025 22:15	4.0	52.2	0.0	7.0	11.7	0.0	1/11/2025 22:15	3.8	4.9	0.0	6.6	13.3	0.4	8.4
1/11/2025 22:30	3.9	52.2	0.0	7.0	11.7	0.0	1/11/2025 22:30	3.7	4.9	0.0	6.6	13.3	0.4	8.4
1/11/2025 22:45	3.9	52.0	0.0	7.0	11.7	0.0	1/11/2025 22:45	3.5	4.8	0.0	6.7	13.4	0.3	8.3
1/11/2025 23:00	3.9	52.4	0.0	7.0	11.6	0.0	1/11/2025 23:00	3.3	4.9	0.0	6.6	13.5	0.4	8.4
1/11/2025 23:15	3.9	52.0	0.0	7.0	11.7	0.0	1/11/2025 23:15	3.3	4.9	0.0	6.6	13.5	0.4	8.4
1/11/2025 23:30	3.9	52.2	0.0	7.0	11.7	0.0	1/11/2025 23:30	3.2	4.8	0.0	6.6	13.5	0.5	8.5
1/11/2025 23:45	3.8	51.9	0.0	7.0	11.7	0.0	1/11/2025 23:45	3.2	4.7	0.0	6.7	13.5	0.3	8.3
1/12/2025 0:00	3.8	52.0	0.0	7.0	11.7	0.0	1/12/2025 0:00	3.1	4.8	0.0	6.7	13.5	0.5	8.5
1/12/2025 0:15	3.8	51.9	0.0	7.0	11.7	0.0	1/12/2025 0:15	3.0	4.9	0.0	6.7	13.6	0.5	8.5
1/12/2025 0:30	3.8	52.0	0.0	7.0	11.7	0.0	1/12/2025 0:30	2.9	4.9	0.0	6.6	13.6	0.5	8.5
1/12/2025 0:45	3.7	51.8	0.0	7.0	11.7	0.0	1/12/2025 0:45	2.7	4.9	0.0	6.7	13.7	0.4	8.4
1/12/2025 1:00	3.7	51.9	0.0	7.0	11.7	0.0	1/12/2025 1:00	2.6	4.9	0.0	6.6	13.7	0.5	8.5
1/12/2025 1:15	3.7	51.8	0.0	7.0	11.7	0.0	1/12/2025 1:15	2.5	4.9	0.0	6.6	13.7	0.3	8.3
1/12/2025 1:30	3.7	51.9	0.0	7.0	11.8	0.0	1/12/2025 1:30	2.5	4.9	0.0	6.6	13.8	0.4	8.4
1/12/2025 1:45	3.7	51.7	0.0	7.0	11.8	0.0	1/12/2025 1:45	2.5	4.9	0.0	6.7	13.8	0.3	8.3
1/12/2025 2:00	3.7	52.0	0.0	7.0	11.7	0.0	1/12/2025 2:00	2.5	4.9	0.0	6.7	13.8	0.3	8.3
1/12/2025 2:15	3.7	51.6	0.0	7.0	11.8	0.0	1/12/2025 2:15	2.5	4.9	0.0	6.7	13.8	0.4	8.4
1/12/2025 2:30	3.7	51.7	0.0	7.0	11.8	0.0	1/12/2025 2:30	2.5	4.9	0.0	6.7	13.8	0.4	8.4
1/12/2025 2:45	3.7	51.9	0.0	7.0	11.7	0.0	1/12/2025 2:45	2.5	4.9	0.0	6.7	13.7	0.3	8.3
1/12/2025 3:00	3.7	51.6	0.0	7.0	11.8	0.0	1/12/2025 3:00	2.6	5.0	0.0	6.7	13.7	0.4	8.4
1/12/2025 3:15	3.6	51.4	0.0	7.0	11.8	0.0	1/12/2025 3:15	2.6	5.0	0.0	6.7	13.7	0.4	8.4
1/12/2025 3:30	3.7	51.5	0.0	7.0	11.8	0.0	1/12/2025 3:30	2.7	5.0	0.0	6.7	13.7	0.4	8.4
1/12/2025 3:45	3.7	51.4	0.0	7.0	11.8	0.0	1/12/2025 3:45	2.8	4.9	0.0	6.7	13.7	0.3	8.3
1/12/2025 4:00	3.6	51.4	0.0	7.0	11.8	0.0	1/12/2025 4:00	3.8	75.2	0.0	6.6	13.0	0.9	8.9
1/12/2025 4:15	3.6	51.0	0.0	7.0	11.8	0.0	1/12/2025 4:15	4.5	74.6	0.0	6.6	12.4	0.5	8.5
1/12/2025 4:30	3.6	50.5	0.0	7.0	11.8	0.0	1/12/2025 4:30	4.6	73.0	0.0	6.6	12.4	0.7	8.7
1/12/2025 4:45	3.6	49.8	0.0	7.1	11.9	0.0	1/12/2025 4:45	4.6	72.5	0.0	6.7	12.4	0.3	8.3
1/12/2025 5:00	3.6	49.6	0.0	7.1	11.9	0.0	1/12/2025 5:00	4.6	72.3	0.0	6.7	12.4	0.4	8.4
1/12/2025 5:15	3.6	49.4	0.0	7.1	11.9	0.0	1/12/2025 5:15	4.6	73.1	0.0	6.7	12.4	0.5	8.5
1/12/2025 5:30	3.6	49.4	0.0	7.1	11.9	0.0	1/12/2025 5:30	4.6	74.6	0.0	6.7	12.4	0.5	8.5
1/12/2025 5:45	3.6	49.9	0.0	7.1	11.9	0.0	1/12/2025 5:45	4.7	76.7	0.0	6.6	12.3	0.5	8.5
1/12/2025 6:00	3.6	50.7	0.0	7.1	11.9	0.0	1/12/2025 6:00	4.6	75.4	0.0	6.6	12.3	0.4	8.4
1/12/2025 6:15	3.6	51.0	0.0	7.1	11.8	0.0	1/12/2025 6:15	4.6	73.9	0.0	6.7	12.4	0.5	8.5
1/12/2025 6:30	3.6	50.4	0.0	7.1	11.9	0.0	1/12/2025 6:30	4.6	74.4	0.0	6.7	12.4	0.4	8.4
1/12/2025 6:45	3.6	50.0	0.0	7.1	11.9	0.0	1/12/2025 6:45	4.6	73.3	0.0	6.7	12.4	0.5	8.5
1/12/2025 7:00	3.6	49.8	0.0	7.1	11.9	0.0	1/12/2025 7:00	4.6	74.2	0.0	6.7	12.4	0.4	8.4
1/12/2025 7:15	3.6	50.0	0.0	7.1	11.9	0.0	1/12/2025 7:15	4.7	78.1	0.0	6.6	12.3	0.4	8.4
1/12/2025 7:30	3.6	50.7	0.0	7.1	11.9	0.0	1/12/2025 7:30	4.6	76.3	0.0	6.7	12.4	0.3	8.3
1/12/2025 7:45	3.6	51.3	0.0	7.1	11.9	0.0	1/12/2025 7:45	4.6	74.7	0.0	6.7	12.4	0.4	8.4
1/12/2025 8:00	3.6	50.8	0.0	7.1	11.9	0.0	1/12/2025 8:00	4.6	75.2	0.0	6.7	12.4	0.3	8.3
1/12/2025 8:15	3.6	50.5	0.0	7.1	11.9	0.0	1/12/2025 8:15	4.7	79.6	0.0	6.7	12.3	0.3	8.3
1/12/2025 8:30	3.6	51.3	0.0	7.1	11.9	0.0	1/12/2025 8:30	4.7	79.1	0.0	6.6	12.3	0.4	8.4
1/12/2025 8:45	3.6	52.5	0.0	7.1	11.9	0.0	1/12/2025 8:45	4.6	76.1	0.0	6.7	12.4	0.5	8.5
1/12/2025 9:00	3.6	51.4	0.0	7.1	11.9	0.0	1/12/2025 9:00	4.6	76.8	0.0	6.7	12.4	0.4	8.4
1/12/2025 9:15	3.6	51.1	0.0	7.1	11.9	0.0	1/12/2025 9:15	4.6	78.6	0.0	6.7	12.4	0.4	8.4
1/12/2025 9:30	3.6	51.9	0.0	7.1	11.9	0.0	1/12/2025 9:30	4.7	82.8	0.0	6.6	12.2	0.4	8.4
1/12/2025 9:45	3.6	54.0	0.0	7.1	11.8	0.0	1/12/2025 9:45	4.6	79.1	0.0	6.6	12.3	0.5	8.5
1/12/2025 10:00	3.6	53.0	0.0	7.1	11.8	0.0	1/12/2025 10:00	4.6	77.9	0.0	6.6	12.3	0.5	8.5
1/12/2025 10:15	3.6	52.3	0.0	7.0	11.9	0.0	1/12/2025 10:15	4.6	79.3	0.0	6.6	12.3	0.4	8.4
1/12/2025 10:30	3.5	52.8	0.0	7.0	11.9	0.0	1/12/2025 10:30	4.6	79.5	0.0	6.6	12.3	0.4	8.4
1/12/2025 10:45	3.5	52.8	0.0	7.0	11.8	0.0	1/12/2025 10:45	4.5	78.3	0.0	6.6	12.3	0.6	8.6
1/12/2025 11:00	3.5	52.3	0.0	7.0	11.9	0.0	1/12/2025 11:00	4.5	77.4	0.0	6.6	12.3	0.5	8.5
1/12/2025 11:15	3.5	52.2	0.0	7.0	11.9	0.0	1/12/2025 11:15	4.5	78.3	0.0	6.6	12.3	0.5	8.5
1/12/2025 11:30	3.5	52.8	0.0	7.0	11.9	0.0	1/12/2025 11:30	4.6	79.6	0.0	6.6	12.3	0.4	8.4
1/12/2025 11:45	3.6	53.2	0.0	7.0	11.9	0.0	1/12/2025 11:45	4.6	79.5	0.0	6.6	12.3	0.7	8.7
1/12/2025 12:00	3.6	52.9	0.0	7.0	11.9	0.0	1/12/2025 12:00	4.6	77.7	0.0	6.6	12.3	0.4	8.4
1/12/2025 12:15	3.6	52.0	0.0	7.0	11.9	0.0	1/12/2025 12:15	4.6	77.1	0.0	6.6	12.4	0.4	8.4
1/12/2025 12:30	3.6	51.9	0.0	7.0	11.9	0.0	1/12/2025 12:30	4.7	77.9	0.0	6.6	12.4	0.6	8.6
1/12/2025 12:45	3.7	52.3	0.0	7.0	11.9	0.0	1/12/2025 12:45	4.7	76.5	0.0	6.6	12.3	0.5	8.5
1/12/2025 13:00	3.7	51.6	0.0	7.1	11.9	0.0	1/12/2025 13:00	4.7	75.4	0.0	6.6	12.4	0.4	8.4
1/12/2025 13:15	3.7	51.1	0.0	7.1	12.0	0.0	1/12/2025 13:15	4.7	74.7	0.0	6.6	12.5	0.5	8.5
1/12/2025 13:30	3.7	50.8	0.0	7.0	12.0	0.0	1/12/2025 13:30	4.8	74.2	0.0	6.7	12.5	0.5	8.5
1/12/2025 13:45	3.8	50.5	0.0	7.1	12.0	0.0	1/12/2025 13:45	4.8	74.3	0.0	6.7	12.5	0.5	8.5
1/12/2025 14:00	3.8	50.4	0.0	7.1	12.0	0.0	1/12/2025 14:00	4.9	75.0	0.0	6.7	12.5	0.4	8.4
1/12/2025 14:15	3.8	50.8	0.0	7.1	12.0	0.0	1/12/2025 14:15	4.9	74.5	0.0	6.7	12.5	0.5	8.5
1/12/2025 14:30	3.9	50.7	0.0	7.1	12.0	0.0	1/12/2025 14:30	4.9	74.8	0.0	6.7	12.5	0.4	8.4
1/12/2025 14:45	3.9	50.7	0.0	7.1	12.0	0.0	1/12/2025 14:45	4.9	74.7	0.0	6.7	12.5	0.4	8.4
1/12/2025 15:00	3.9	50.7	0.0	7.1	12.0	0.0	1/12/2025 15:00	5.0	81.3	0.0	6.6	12.4	0.6	8.6
1/12/2025 15:15	4.0	52.8	0.0	7.1	12.0	0.0	1/12/2025 15:15	5.0	79.3	0.0	6.6	12.4	0.5	8.5
1/12/2025 15:30	4.0	53.2	0.0	7.0	11.9	0.0	1/12/2025 15:30	5.1	81.9	0.0	6.6	12.4	0.6	8.6
1/12/2025 15:45	4.0	53.5	0.0	7.1	11.9	0.0	1/12/2025 15:45	5.0	77.6	0.0	6.6	12.4	0.5	8.5
1/12/2025 16:00	4.0	53.2	0.0	7.1	11.9	0.0	1/12/2025 16:00	5.0	76.6	0.0	6.7	12.5	0.5	8.5
1/12/2025 16:15	4.0	51.8	0.0	7.1	12.0	0.0	1/12/2025 16:15	5.0	78.5	0.0	6.7	12.5	0.8	8.8
1/12/2025 16:30	4.0	52.0	0.0	7.1	12.0	0.0	1/12/2025 16:30	5.0	81.4	0.0	6.6	12.4	0.7	8.7
1/12/2025 16:45	4.0	53.4	0.0	7.1	12.0	0.0	1/12/2025 16:45	5.0	80.5	0.0	6.6	12.4	0.5	8.5
1/12/2025 17:00	3.9	53.7	0.0	7.1	11.9	0.0	1/12/2025 17:00	5.0	85.0	0.0	6.6	12.3	0.5	8.5
1/12/2025 17:15	3.9	55.2	0.0	7.0	11.9	0.0	1/12/2025 17:15	5.0	86.2	0.0	6.6	12.3	0.6	8.6
1/12/2025 17:30	3.9	56.4	0.0	7.0	11.9	0.0	1/12/2025 17:30	4.9	87.5	0.0	6.6	12.3	0.4	8.4
1/12/2025 17:45	3.8	56.9	0.0	7.0	11.8	0.0	1/12/2025 17:45	4.9	86.8	0.0	6.6	12.2	0.7	8.7
1/12/2025 18:00	3.7	57.3	0.0	7.0	11.8	0.0	1/12/2025 18:00	4.9	93.4	0.0	6.5	12.1	0.7	8.7
1/12/2025 18:15	3.8	61.3	0.0	6.9	11.7	0.0	1/12/2025 18:15	4.9	94.9	0.0	6.5	11.9	0.6	8.6
1/12/2025 18:30	3.7	61.0	0.0	7.0	11.7	0.0	1/12/2025 18:30	4.8	4.4	0.0	6.4	12.9	0.6	8.6
1/12/2025 18:45	3.9	61.1	0.0	6.8	11.2	0.0	1/12/2025 18:45	4.3	4.6	0.0	6.6	13.1	0.8	8.8
1/12/2025 19:00	3.9	59.5	0.0	6.7	10.8	0.0	1/12/2025 19:00	3.9	4.8	0.0	6.6	13.3	0.8	8.8
1/12/2025 19:15	3.7	56.9	0.0	6.8	11.3	0.0	1/12/2025 19:15	3.6	4.9	0.0	6.6	13.4	0.9	8.9
1/12/2025 19:30	3.6	55.6	0.0	6.8	11.3	0.0	1/12/2025 19:30	3.3	4.9	0.0	6.6	13.5	1.0	9.0
1/12/2025 19:45	3.5	55.3	0.0	6.9	11.3	0.0	1/12/2025 19:45	3.1	4.8	0.0	6.7	13.6	0.7	8.7
1/12/2025 20:00	3.5	54.4	0.0	6.8	11.6	0.0	1/12/2025 20:00	2.8	4.9	0.0	6.7	13.6	0.8	8.8
1/12/2025 20:15	3.5	54.7	0.0	6.9	11.6	0.0	1/12/2025 20:15	2.6	5.0	0.0	6.6	13.7	0.8	8.8
1/12/2025 20:30	3.5	54.4	0.0	6.9	11.6	0.0	1/12/2025 20:30	2.4	5.0	0.0	6.6	13.8	0.7	8.7
1/12/2025 20:45	3.5	54.9	0.0	6.9	11.5	0.0	1/12/2025 20:45	2.3	5.0	0.0	6.7	13.9	0.6	8.6
1/12/2025 21:00	3.5	54.6	0.0	6.9	11.4	0.0	1/12/2025 21:00	2.3	5.0	0.0	6.6	13.9	0.5	8.5
1/12/2025 21:15	3.5	54.7	0.0	6.9	11.6	0.0	1/12/2025 21:15	2.2	5.0	0.0	6.6	13.9	0.5	8.5
1/12/2025 21:30	3.5	55.6	0.0	6.8	11.5	0.0	1/12/2025 21:30	2.1	5.1	0.0	6.6	13.9	0.6	8.6
1/12/2025 21:45	3.4	54.3	0.0	6.8	11.5	0.0	1/12/2025 21:45	2.0	4.9	0.0	6.7	14.0	0.4	8.4
1/12/2025 22:00	3.4	54.8	0.0	6.9	11.6	0.0	1/12/2025 22:00	1.9	5.0	0.0	6.7	14.0	0.5	8.5
1/12/2025 22:15	3.4	54.9	0.0	6.9	11.6	0.0	1/12/2025 22:15	1.8	5.0	0.0	6.7	14.0	0.6	8.6
1/12/2025 22:30	3.4	54.9	0.0	6.9	11.6	0.0	1/12/2025 22:30	1.8	5.1	0.0	6.7	14.1	0.6	8.6
1/12/2025 22:45	3.4	55.2	0.0	6.8	11.6	0.0	1/12/2025 22:45	1.7	4.9	0.0	6.7	14.1	0.5	8.5
1/12/2025 23:00	3.4	55.1	0.0	6.8	11.6	0.0	1/12/2025 23:00	1.7	5.0	0.0	6.7	14.1	0.5	8.5
1/12/2025 23:15	3.3	54.8	0.0	6.9	11.6	0.0	1/12/2025 23:15	1.6	5.0	0.0	6.7	14.1	0.6	8.6
1/12/2025 23:30	3.3	55.0	0.0	6.9	11.6	0.0	1/12/2025 23:30	1.6	5.0	0.0	6.7	14.1	0.5	8.5
1/12/2025 23:45	3.3	55.4	0.0	6.8	11.6	0.0	1/12/2025 23:45	1.6	4.9	0.0	6.8	14.1	0.4	8.4

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			VA25A0279-001			
	Date Sampled			07-Jan-2025			
	Time Sampled			14:02			
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	7.53	The pH reading is likely erroneous as the water treatment pH sensor indicated pH value of 7 and within the guidelines.	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	10		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	-	-	150			
Turbidity (field)	NTU	Varies with background, see note Guideline = 10.9	Varies with background, see note Guideline = 10.9	2.92		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	-	-	53.8			
Total Dissolved Solids	mg/L	-	-	86			
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	-	-	0.68			
Total Phenols	mg/L	0.05	-	< 0.0010		Interim guideline	Interim guideline
Total Alkalinity ($CaCO_3$)	mg/L	-	-	53.3			
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 = 12.7	Varies with pH and temperature. See note. Guideline = 33	0.0246		Guideline for ammonia as N and is pH and temperature dependent. Refer to Table 27D in BC WQG for guideline values.	Guideline for ammonia as N. Guideline is pH, temperature and salinity dependent. Refer to Table 27F in BC WQG for guideline values.
Bromide	mg/L	-	-	< 0.050			
Chloride	mg/L	600	+/- 10% from BKG	6.2			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 = 1.085	1.5	0.183		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	-	0.0194			
Nitrite (as N)	mg/L	Varies with chloride. Table 27B, see note. Guideline = 0.06	-	< 0.0010		Varies with chloride. Refer to Table 27B in BC WQG for guideline values.	
Total Nitrogen	mg/L	-	-	0.262			
Total Phosphorous	mg/L	-	-	0.0036			
Sulfate (as SO_4)	mg/L	-	-	5.88			
Total Metals							
Aluminum (Al)-Total	mg/L	-	-	0.0588			
Antimony (Sb)-Total	mg/L	0.25	-	0.00041			
Arsenic (As)-Total	mg/L	-	-	0.00088			
Barium (Ba)-Total	mg/L	-	-	0.00392			
Beryllium (Be)-Total	mg/L	-	-	< 0.000100			
Bismuth (Bi)-Total	mg/L	-	-	< 0.000050			
Boron (B)-Total	mg/L	-	-	0.015			
Cadmium (Cd)-Total	mg/L	-	-	< 0.000010			
Calcium (Ca)-Total	mg/L	-	-	20			
Cesium (Cs)-Total	mg/L	-	-	0.000022			
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	0.00107			
Iron (Fe)-Total	mg/L	1	-	0.016			
Lead (Pb)-Total	mg/L		0.14	0.000269			
Lithium (Li)-Total	mg/L	-	-	0.0045			
Magnesium (Mg)-Total	mg/L	-	-	0.932			
Manganese (Mn)-Total	mg/L	Varies with hardness Guideline = 1.133	-	0.0107		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	-	0.0206			
Nickel (Ni)-Total	mg/L	-	-	<0.00050			
Phosphorus (P)-Total	mg/L	-	-	< 0.050			
Potassium (K)-Total	mg/L	-	-	2.08			
Rubidium (Rb)-Total	mg/L	-	-	0.00358			
Selenium (Se)-Total	mg/L	-	-	< 0.000050			
Silicon (Si)-Total	mg/L	-	-	5.38			
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	-	-	5.12			
Strontium (Sr)-Total	mg/L	-	-	0.0453			
Sulfur (S)-Total	mg/L	-	-	2.02			
Tellurium (Te)-Total	mg/L	-	-	< 0.00020			
Thallium (Tl)-Total	mg/L	-	-	0.000013			
Thorium (Th)-Total	mg/L	-	-	< 0.00010			
Tin (Sn)-Total	mg/L	-	-	< 0.00010			
Titanium (Ti)-Total	mg/L	-	-	0.00063			
Tungsten (W)-Total	mg/L	-	-	0.00102			
Uranium (U)-Total	mg/L	0.0165	-	0.00247			
Vanadium (V)-Total	mg/L	-	-	< 0.00050			
Zinc (Zn)-Total	mg/L	-	0.055	0.0148			
Zirconium (Zr)-Total	mg/L	-	-	< 0.00020			
Dissolved Metals							
Aluminum (Al)-Dissolved	mg/L	-	-	0.0288			
Antimony (Sb)-Dissolved	mg/L	-	-	0.00039			
Arsenic (As)-Dissolved	mg/L	-	-	0.0008			
Barium (Ba)-Dissolved	mg/L	-	-	0.00376			
Beryllium (Be)-Dissolved	mg/L	-	-	< 0.000100			
Bismuth (Bi)-Dissolved	mg/L	-	-	< 0.000050			
Boron (B)-Dissolved	mg/L	-	-	0.014			
Cadmium (Cd)-Dissolved	mg/L	Varies with hardness, see note Guideline = 0.000311	-	0.0000164		Guideline is hardness dependent. Guideline is appilcable to water hardness between 7.0 and 455 mg/L. Guideline is calculated with the following formula: Guideline = (EXP(1.03 * (LN(hardness)) - 5.274)/1000) Lowest value for guideline is 0.000018 mg/L. If hardness is below the hardness range, the minimum hardness will be applied in the calculation.	
Calcium (Ca)-Dissolved	mg/L	-	-	18.9			
Cesium (Cs)-Dissolved	mg/L	-	-	0.000022			
Chromium (Cr)-Dissolved	mg/L	-	-	< 0.00050			
Chromium (Cr(III))-Dissolved	mg/L	-	-	< 0.00050			
Chromium (Cr(VI))-Dissolved	mg/L	-	-	< 0.00050			
Cobalt (Co)-Dissolved	mg/L	-	-	< 0.00010			
Copper (Cu)-Dissolved	mg/L	Guideline varies with other parameters, see note Guideline = 0.0013	-	0.00073		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	-	-	0.000161			
Lithium (Li)-Dissolved	mg/L	-	-	0.0043			
Magnesium (Mg)-Dissolved	mg/L	-	-	0.92			
Manganese (Mn)-Dissolved	mg/L	-	-	0.0108			
Mercury (Hg)-Dissolved	mg/L	-	-	< 0.000005			
Molybdenum (Mo)-Dissolved	mg/L	-	-	0.0203			
Nickel (Ni)-Dissolved	mg/L	Guideline varies with pH, temperature, DOC, and hardness Guideline: 0.0275	-	< 0.00050		Guideline varies with other parameters and is calculated using BC BLM software. Simplified model: Temperature, pH, DOC and hardness Detailed model: Temperature, pH, DOC, humic acid content, total calcium, total magnesium, total sodium, total potassium, sulphate, chloride, and alkalinity Guideline calculated using values for parameters above taken at the specific site on each sampling date	
Phosphorus (P)-Dissolved	mg/L	-	-	< 0.050			
Potassium (K)-Dissolved	mg/L	-	-	2.1			
Rubidium (Rb)-Dissolved	mg/L	-	-	0.00363			
Selenium (Se)-Dissolved	mg/L	-	-	0.000062			
Silicon (Si)-Dissolved	mg/L	-	-	5.08			
Silver (Ag)-Dissolved	mg/L	-	-	< 0.000010			
Sodium (Na)-Dissolved	mg/L	-	-	5.28			
Strontium (Sr)-Dissolved	mg/L	-	-	0.046			
Sulfur (S)-Dissolved	mg/L	-	-	1.92			
Tellurium (Te)-Dissolved	mg/L	-	-	< 0.00020			
Thallium (Tl)-Dissolved	mg/L	-	-	0.000013			
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	-	-	0.00097			
Uranium (U)-Dissolved	mg/L	-	-	0.00221			
Vanadium (V)-Dissolved	mg/L	-	-	< 0.00050			
Zinc (Zn)-Dissolved	mg/L	Varies with DOC and hardness Guideline = 0.021	-	0.0147		Guideline varies with DOC and hardness. Guideline is calculated using the following formula: Guideline = (EXP((0.833 * (LN(hardness))) + (0.24 * (LN(DOC))) + 0.526)/2/1000) If hardness or DOC is below the hardness or DOC range, the minimum hardness or DOC will be applied in the calculation.	
Zirconium (Zr)-Dissolved	mg/L	-	-	< 0.00020			
Volatile Organic Compounds							
Chlorobenzene	µg/L	-	-	< 0.50			
Chloromethane	µg/L	-	-	< 5.0			
Dichlorobenzene, 1,2-	µg/L	-	-	< 0.50			
Dichlorobenzene, 1,3-	µg/L	-	-	< 0.50			
Dichlorobenzene, 1,4-	µg/L	-	-	< 0.50			
Dichloropropane, 1,2-	µg/L	-	-	< 0.50			
Dichloropropylene, cis+trans-1,3-	µg/L	-	-	< 0.75			
Dichloropropylene, cis-1,3-	µg/L	-	-	< 0.50			
Tetrachloroethane, 1,1,1,2-	µg/L	-	-	< 0.50			
Tetrachloroethane, 1,1,2,2-	µg/L	-	-	< 0.20			
Trichloroethane, 1,1,2-	µg/L	-	-	< 0.50			
Trichlorofluoromethane	µg/L	-	-	< 0.50			
Carbon tetrachloride	µg/L	-	-	< 0.50			
Chloroethane	µg/L	-	-	< 0.50			
Dichloroethane, 1,1-	µg/L	-	-	< 0.50			
Dichloroethane, 1,2-	µg/L	-	-	< 0.50			
Dichloroethylene, 1,1-	µg/L	-	-	< 0.50			
Dichloroethylene, cis-1,2-	µg/L	-	-	< 0.50			
Dichloroethylene, trans-1,2-	µg/L	-	-	< 0.50			
Dichloromethane	µg/L	-	-	< 1.0			
Dichloropropylene, trans-1,3-	µg/L	-	-	< 0.50			
Tetrachloroethylene	µg/L	-	-	< 0.50			
Trichloroethane, 1,1,1-	µg/L	-	-	< 0.50			
Trichloroethylene	µg/L	-	-	< 0.50			
Vinyl chloride	µg/L	-	-	< 0.40			
Benzene	µg/L	-	-	< 0.50			
Ethylbenzene	µg/L	-	-	< 0.50			
Methyl-tert-butyl ether [MTBE]	µg/L	3400	440	< 0.50			
Styrene	µg/L	-	-	< 0.50			
Toluene	µg/L	-	-	< 0.40			
Xylene, m+p-	µg/L	-	-	< 0.40			
Xylene, o-	µg/L	-	-	< 0.30			
Xylenes, total	µg/L	-	-	< 0.50			
Bromodichloromethane	µg/L	-	-	< 0.50			
Bromoform	µg/L	-	-	< 0.50			
Chloroform	µg/L	-	-	< 0.50			
Dibromochloromethane	µg/L	-	-	< 0.50			
Hydrocarbons							
EPH (C10-C19)	µg/L	-	-	< 250			
EPH (C19-C32)	µg/L	-	-	< 250			
VHw (C6-C10)	µg/L	-	-	< 100			
VPHw	µg/L	-	-	< 100			
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	µg/L	-	-	< 0.010			
Acenaphthylene	µg/L	-	-	< 0.010			
Acridine	µg/L	-	-	< 0.010			
Anthracene	µg/L	0.1	-	< 0.010			
Benz(a)anthracene	µg/L	0.1	-	< 0.010			
Benzo(a)pyrene	µg/L	-	-	< 0.0050			
Benzo(b+j)fluoranthene	µg/L	-	-	< 0.010			
Benzo(b+j+k)fluoranthene	µg/L	-	-	< 0.015			
Benzo(g,h,i)perylene	µg/L	-	-	< 0.010			
Benzo(k)fluoranthene	µg/L	-	-	< 0.010			
Chrysene	µg/L	-	-	< 0.010			
Dibenz(a,h)anthracene	µg/L	-	-	< 0.0050			
Fluoranthene	µg/L	0.2	-	< 0.010		Guideline is for phototoxic effects	
Fluorene	µg/L	-	-	< 0.010			
Indeno(1,2,3-c,d)pyrene	µg/L	-	-	< 0.010			
Methylnaphthalene, 1-	µg/L	-	-	0.024			
Methylnaphthalene, 2-	µg/L	-	-	0.023			
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	7.53	7.53
Temperature (field)	°C	Field temperature taken using handheld meters during sampling used in calculations	10	10
Turbidity (field)	NTU	Field turbidity taken using handheld meters during sampling used in calculations	2.92	2.92
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	53.8	53.8
Dissolved Organic Carbon (DOC)	mg/L	Laboratory tested dissolved organic carbon tested at the lab used in guideline calculations	0.68	0.68
Total Alkalinity ($CaCO_3$)	mg/L	Laboratory tested total alkalinity used in calculations	53.3	53.3
Chloride	mg/L	Laboratory tested chloride taken at each respective sample site on the day of sampling used in guideline calculations	6.2	6.2
Total Suspended Solids	mg/L	Laboratory tested total suspended solids tested at the lab used in guideline calculations	< 3.0	< 3.0

Woodfibre Site Sample Lab Documentation

CERTIFICATE OF ANALYSIS

Work Order	: **VA25A0279**		
Client	: **Triton Environmental Consultants Ltd.**	Laboratory	: ALS Environmental - Vancouver
Contact		Account Manager	
Address		Address	
Telephone	: ----	Telephone	
Project	: 11964	Date Samples Received	: 07-Jan-2025 18:00
PO	: 11964-Task 40-Phase 3C-4C	Date Analysis Commenced	: 07-Jan-2025
C-O-C number	: ----	Issue Date	: 15-Jan-2025 12:35
Sampler	: ----		
Site	: Water Analysis		
Quote number	: VA25-TRIT100-001		
No. of samples received	: 2		
No. of samples analysed	: 2		

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

Signatories	*Position*	*Laboratory Department*
	Laboratory Analyst	Metals, Burnaby, British Columbia
	Supervisor - Metals Mercury & Speciation	Metals, Burnaby, British Columbia
	Lab Assistant	Metals, Burnaby, British Columbia
	Analyst	Metals, Burnaby, British Columbia
	Supervisor - Water Chemistry	Inorganics, Burnaby, British Columbia
	Department Manager - Organics	Organics, Burnaby, British Columbia
	Account Manager Assistant	Administration, Burnaby, British Columbia
	Team Leader - Inorganics	Inorganics, Edmonton, Alberta
	Analyst- General	Metals, Burnaby, British Columbia

General Comments

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

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

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

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

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

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

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

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

Qualifiers

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

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG EOP	WLNG EOP Dup	----	----	----
					Client sampling date / time	07-Jan-2025 14:02	07-Jan-2025 14:02	----	----	----
						VA25A0279-001	VA25A0279-002	----	----	----
						Result	Result	----	----	----
Field Tests										
Conductivity, field	----	EF001/VA	0.10	µS/cm		150.00	150.00	----	----	----
pH, field	----	EF001/VA	0.10	pH units		7.53	7.53	----	----	----
Temperature, field	----	EF001/VA	0.10	°C		10.0	10.0	----	----	----
Physical Tests										
Hardness (as CaCO3), dissolved	----	EC100/VA	0.60	mg/L		51.0	52.7	----	----	----
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L		53.8	54.8	----	----	----
Solids, total dissolved [TDS]	----	E162/VA	10	mg/L		86	86	----	----	----
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L		<3.0	<3.0	----	----	----
Alkalinity, total (as CaCO3)	----	E290/VA	2.0	mg/L		53.3	52.5	----	----	----
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L		0.0246	0.0248	----	----	----
Bromide	24959-67-9	E235.Br-L/VA	0.050	mg/L		<0.050	<0.050	----	----	----
Chloride	16887-00-6	E235.Cl/VA	0.50	mg/L		6.20	6.16	----	----	----
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L		0.183	0.180	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L		0.0194	0.0178	----	----	----
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		0.262	0.262	----	----	----
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L		0.0036	0.0037	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L		5.88	5.85	----	----	----
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L		0.68	0.65	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: WLNG EOP	Client sample ID: WLNG EOP Dup	Client sample ID: ----	Client sample ID: ----	Client sample ID: ----
					Client sampling date / time: 07-Jan-2025 14:02	07-Jan-2025 14:02	----	----	----
					VA25A0279-001	VA25A0279-002	----	----	----
					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	0.0588	0.0574	----	----	----
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L	0.00041	0.00042	----	----	----
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L	0.00088	0.00090	----	----	----
Barium, total	7440-39-3	E420/VA	0.00010	mg/L	0.00392	0.00394	----	----	----
Beryllium, total	7440-41-7	E420/VA	0.000100	mg/L	<0.000100	<0.000100	----	----	----
Bismuth, total	7440-69-9	E420/VA	0.000050	mg/L	<0.000050	<0.000050	----	----	----
Boron, total	7440-42-8	E420/VA	0.010	mg/L	0.015	0.015	----	----	----
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L	<0.0000200 DLM	<0.0000200 DLM	----	----	----
Calcium, total	7440-70-2	E420/VA	0.050	mg/L	20.0	20.4	----	----	----
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L	0.000022	0.000022	----	----	----
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	0.00011	----	----	----
Copper, total	7440-50-8	E420/VA	0.00050	mg/L	0.00107	0.00106	----	----	----
Iron, total	7439-89-6	E420/VA	0.010	mg/L	0.016	0.015	----	----	----
Lead, total	7439-92-1	E420/VA	0.000050	mg/L	0.000269	0.000254	----	----	----
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L	0.0045	0.0046	----	----	----
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L	0.932	0.928	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG EOP	WLNG EOP Dup	----	----	----
					Client sampling date / time	07-Jan-2025 14:02	07-Jan-2025 14:02	----	----	----
						VA25A0279-001	VA25A0279-002	----	----	----
						Result	Result	----	----	----
Total Metals										
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L		0.0107	0.0108	----	----	----
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		0.0206	0.0210	----	----	----
Nickel, total	7440-02-0	E420/VA	0.00050	mg/L		<0.00050	<0.00050	----	----	----
Phosphorus, total	7723-14-0	E420/VA	0.050	mg/L		<0.050	<0.050	----	----	----
Potassium, total	7440-09-7	E420/VA	0.050	mg/L		2.08	2.07	----	----	----
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L		0.00358	0.00349	----	----	----
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L		<0.000050	<0.000050	----	----	----
Silicon, total	7440-21-3	E420/VA	0.10	mg/L		5.38	5.44	----	----	----
Silver, total	7440-22-4	E420/VA	0.000010	mg/L		<0.000010	<0.000010	----	----	----
Sodium, total	7440-23-5	E420/VA	0.050	mg/L		5.12	4.95	----	----	----
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L		0.0453	0.0450	----	----	----
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L		2.02	2.13	----	----	----
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		0.000013	0.000013	----	----	----
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		0.00063	0.00059	----	----	----
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L		0.00102	0.00098	----	----	----
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L		0.00247	0.00237	----	----	----
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L		<0.00050	<0.00050	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG EOP	WLNG EOP Dup	----	----	----
					Client sampling date / time	07-Jan-2025 14:02	07-Jan-2025 14:02	----	----	----
						VA25A0279-001	VA25A0279-002	----	----	----
						Result	Result	----	----	----
Total Metals										
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L		0.0148	0.0148	----	----	----
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		0.0288	0.0274	----	----	----
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L		0.00039	0.00039	----	----	----
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L		0.00080	0.00082	----	----	----
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L		0.00376	0.00375	----	----	----
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		0.014	0.014	----	----	----
Cadmium, dissolved	7440-43-9	E421/VA	0.0000050	mg/L		0.0000164	0.0000169	----	----	----
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L		18.9	19.6	----	----	----
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L		0.000022	0.000020	----	----	----
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		0.00073	0.00071	----	----	----
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L		<0.010	<0.010	----	----	----
Lead, dissolved	7439-92-1	E421/VA	0.000050	mg/L		0.000161	0.000163	----	----	----
Lithium, dissolved	7439-93-2	E421/VA	0.0010	mg/L		0.0043	0.0044	----	----	----
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L		0.920	0.924	----	----	----
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L		0.0108	0.0111	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG EOP	WLNG EOP Dup	----	----	----
					Client sampling date / time	07-Jan-2025 14:02	07-Jan-2025 14:02	----	----	----
						VA25A0279-001	VA25A0279-002	----	----	----
						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		0.0203	0.0202	----	----	----
Nickel, dissolved	7440-02-0	E421/VA	0.00050	mg/L		<0.00050	<0.00050	----	----	----
Phosphorus, dissolved	7723-14-0	E421/VA	0.050	mg/L		<0.050	<0.050	----	----	----
Potassium, dissolved	7440-09-7	E421/VA	0.050	mg/L		2.10	2.12	----	----	----
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L		0.00363	0.00365	----	----	----
Selenium, dissolved	7782-49-2	E421/VA	0.000050	mg/L		0.000062	0.000053	----	----	----
Silicon, dissolved	7440-21-3	E421/VA	0.050	mg/L		5.08	5.10	----	----	----
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		5.28	5.29	----	----	----
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L		0.0460	0.0455	----	----	----
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L		1.92	1.97	----	----	----
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		0.000013	0.000013	----	----	----
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		0.00097	0.00097	----	----	----
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L		0.00221	0.00225	----	----	----
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		0.0147	0.0148	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	WLNG EOP	WLNG EOP Dup	----	----	----
Client sample ID					**VA25A0279-001**	**VA25A0279-002**	**----**	**----**	**----**
Client sampling date / time					07-Jan-2025 14:02	07-Jan-2025 14:02	----	----	----
					Result	Result	----	----	----
Dissolved Metals									
Zirconium, dissolved	7440-67-7	E421/VA	0.00020	mg/L	<0.00020	<0.00020	----	----	----
Dissolved mercury filtration location	----	EP509/VA	-	-	Field	Field	----	----	----
Dissolved metals filtration location	----	EP421/VA	-	-	Field	Field	----	----	----
Speciated Metals									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532/VA	0.00050	mg/L	<0.00050	<0.00050	----	----	----
Chromium, trivalent [Cr III], total	16065-83-1	EC535/VA	0.00050	mg/L	<0.00050	<0.00050	----	----	----
Aggregate Organics									
Phenols, total (4AAP)	----	E562/EO	0.0010	mg/L	<0.0010	<0.0010	----	----	----
Volatile Organic Compounds									
Chlorobenzene	108-90-7	E611C/VA	0.50	µg/L	<0.50	<0.50	----	----	----
Chloromethane	74-87-3	E611C/VA	5.0	µg/L	<5.0	<5.0	----	----	----
Dichlorobenzene, 1,2-	95-50-1	E611C/VA	0.50	µg/L	<0.50	<0.50	----	----	----
Dichlorobenzene, 1,3-	541-73-1	E611C/VA	0.50	µg/L	<0.50	<0.50	----	----	----
Dichlorobenzene, 1,4-	106-46-7	E611C/VA	0.50	µg/L	<0.50	<0.50	----	----	----
Dichloropropane, 1,2-	78-87-5	E611C/VA	0.50	µg/L	<0.50	<0.50	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	E611C/VA	0.50	µg/L	<0.50	<0.50	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611C/VA	0.75	µg/L	<0.75	<0.75	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611C/VA	0.50	µg/L	<0.50	<0.50	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611C/VA	0.20	µg/L	<0.20	<0.20	----	----	----
Trichloroethane, 1,1,2-	79-00-5	E611C/VA	0.50	µg/L	<0.50	<0.50	----	----	----
Trichlorofluoromethane	75-69-4	E611C/VA	0.50	µg/L	<0.50	<0.50	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG EOP	WLNG EOP Dup	----	----	----
					Client sampling date / time	07-Jan-2025 14:02	07-Jan-2025 14:02	----	----	----
						VA25A0279-001	VA25A0279-002	----	----	----
						Result	Result	----	----	----
Volatile Organic Compounds [Drycleaning]										
Carbon tetrachloride	56-23-5	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Chloroethane	75-00-3	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloroethane, 1,1-	75-34-3	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloroethane, 1,2-	107-06-2	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloroethylene, 1,1-	75-35-4	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloroethylene, cis-1,2-	156-59-2	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloroethylene, trans-1,2-	156-60-5	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Dichloromethane	75-09-2	E611C/VA	1.0	µg/L		<1.0	<1.0	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Tetrachloroethylene	127-18-4	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Trichloroethane, 1,1,1-	71-55-6	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Trichloroethylene	79-01-6	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Vinyl chloride	75-01-4	E611C/VA	0.40	µg/L		<0.40	<0.40	----	----	----
Volatile Organic Compounds [Fuels]										
Benzene	71-43-2	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Ethylbenzene	100-41-4	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Styrene	100-42-5	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Toluene	108-88-3	E611C/VA	0.40	µg/L		<0.40	<0.40	----	----	----
Xylene, m+p-	179601-23-1	E611C/VA	0.40	µg/L		<0.40	<0.40	----	----	----
Xylene, o-	95-47-6	E611C/VA	0.30	µg/L		<0.30	<0.30	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG EOP	WLNG EOP Dup	----	----	----
					Client sampling date / time	07-Jan-2025 14:02	07-Jan-2025 14:02	----	----	----
						VA25A0279-001	VA25A0279-002	----	----	----
						Result	Result	----	----	----
Volatile Organic Compounds [Fuels]										
Xylenes, total	1330-20-7	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Volatile Organic Compounds [THMs]										
Bromodichloromethane	75-27-4	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Bromoform	75-25-2	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Chloroform	67-66-3	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Dibromochloromethane	124-48-1	E611C/VA	0.50	µg/L		<0.50	<0.50	----	----	----
Hydrocarbons										
EPH (C10-C19)	----	E601A/VA	250	µg/L		<250	<250	----	----	----
EPH (C19-C32)	----	E601A/VA	250	µg/L		<250	<250	----	----	----
VHw (C6-C10)	----	E581.VH+F1/VA	100	µg/L		<100	<100	----	----	----
HEPHw	----	EC600A/VA	250	µg/L		<250	<250	----	----	----
LEPHw	----	EC600A/VA	250	µg/L		<250	<250	----	----	----
VPHw	----	EC580A/VA	100	µg/L		<100	<100	----	----	----
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (EPH surrogate)	392-83-6	E601A/VA	1.0	%		83.4	82.2	----	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.VH+F1/VA	1.0	%		85.8	102	----	----	----
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611C/VA	1.0	%		96.6	97.3	----	----	----
Difluorobenzene, 1,4-	540-36-3	E611C/VA	1.0	%		104	105	----	----	----
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG EOP	WLNG EOP Dup	----	----	----
					Client sampling date / time	07-Jan-2025 14:02	07-Jan-2025 14:02	----	----	----
						VA25A0279-001	VA25A0279-002	----	----	----
						Result	Result	----	----	----
Polycyclic Aromatic Hydrocarbons										
Acenaphthylene	208-96-8	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Acridine	260-94-6	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Anthracene	120-12-7	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Benz(a)anthracene	56-55-3	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Benzo(a)pyrene	50-32-8	E641A/VA	0.0050	µg/L		<0.0050	<0.0050	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Benzo(b+j+k)fluoranthene	n/a	E641A/VA	0.015	µg/L		<0.015	<0.015	----	----	----
Benzo(g,h,i)perylene	191-24-2	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Benzo(k)fluoranthene	207-08-9	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Chrysene	218-01-9	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A/VA	0.0050	µg/L		<0.0050	<0.0050	----	----	----
Fluoranthene	206-44-0	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Fluorene	86-73-7	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A/VA	0.010	µg/L		0.024	0.025	----	----	----
Methylnaphthalene, 2-	91-57-6	E641A/VA	0.010	µg/L		0.023	0.024	----	----	----
Naphthalene	91-20-3	E641A/VA	0.050	µg/L		<0.050	<0.050	----	----	----
Phenanthrene	85-01-8	E641A/VA	0.020	µg/L		<0.020	<0.020	----	----	----
Pyrene	129-00-0	E641A/VA	0.010	µg/L		<0.010	<0.010	----	----	----
Quinoline	91-22-5	E641A/VA	0.050	µg/L		<0.050	<0.050	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG EOP	WLNG EOP Dup	----	----	----
					Client sampling date / time	07-Jan-2025 14:02	07-Jan-2025 14:02	----	----	----
						VA25A0279-001	VA25A0279-002	----	----	----
						Result	Result	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A/VA	0.1	%		81.8	85.2	----	----	----
Naphthalene-d8	1146-65-2	E641A/VA	0.1	%		81.4	85.0	----	----	----
Phenanthrene-d10	1517-22-2	E641A/VA	0.1	%		80.8	84.3	----	----	----
Glycols										
Diethylene glycol	111-46-6	E680E/VA	5.0	mg/L		<5.0	<5.0	----	----	----
Ethylene glycol	107-21-1	E680E/VA	5.0	mg/L		<5.0	<5.0	----	----	----
Propylene glycol, 1,2-	57-55-6	E680E/VA	5.0	mg/L		<5.0	<5.0	----	----	----
Triethylene glycol	112-27-6	E680E/VA	5.0	mg/L		<5.0	<5.0	----	----	----
Glycols, total (EG+DEG+PG)	----	E680E/VA	10	mg/L		<10	<10	----	----	----
Glycols Surrogates										
Propanediol, 1,3-	504-63-2	E680E/VA	1.0	%		112	110	----	----	----

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

ALS Canada Ltd.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **VA25A0279**	Page	: 1 of 18
Client	: **Triton Environmental Consultants Ltd.**	Laboratory	: ALS Environmental - Vancouver
Contact		Account Manager	
Address		Address	
Telephone	: ----	Telephone	
Project	: 11964	Date Samples Received	: 07-Jan-2025 18:00
PO	: 11964-Task 40-Phase 3C-4C	Issue Date	: 15-Jan-2025 12:35
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
- Matrix Spike outliers occur - please see following pages for full details.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Matrix Spike (MS) Recoveries								
Dissolved Metals	Anonymous	Anonymous	Thorium, dissolved	7440-29-1	E421	68.1 % MES	70.0-130%	Recovery less than lower data quality objective

Result Qualifiers

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

Analysis Holding Time Compliance

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

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

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

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

Matrix: **Water** Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Aggregate Organics : Phenols (4AAP) in Water by Colorimetry										
Amber glass total (sulfuric acid) WLNG EOP	E562	07-Jan-2025	13-Jan-2025	28 days	6 days	✓	13-Jan-2025	28 days	6 days	✓
Aggregate Organics : Phenols (4AAP) in Water by Colorimetry										
Amber glass total (sulfuric acid) WLNG EOP Dup	E562	07-Jan-2025	13-Jan-2025	28 days	6 days	✓	13-Jan-2025	28 days	6 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WLNG EOP	E298	07-Jan-2025	09-Jan-2025	28 days	1 days	✓	09-Jan-2025	28 days	2 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WLNG EOP Dup	E298	07-Jan-2025	09-Jan-2025	28 days	1 days	✓	09-Jan-2025	28 days	2 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE WLNG EOP	E235.Br-L	07-Jan-2025	08-Jan-2025	28 days	1 days	✓	08-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE WLNG EOP Dup	E235.Br-L	07-Jan-2025	08-Jan-2025	28 days	1 days	✓	08-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE WLNG EOP	E235.Cl	07-Jan-2025	08-Jan-2025	28 days	1 days	✓	08-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 : Chloride in Water by IC										
HDPE WLNG EOP Dup	E235.Cl	07-Jan-2025	08-Jan-2025	28 days	1 days	✓	08-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE WLNG EOP	E235.F	07-Jan-2025	08-Jan-2025	28 days	1 days	✓	08-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE WLNG EOP Dup	E235.F	07-Jan-2025	08-Jan-2025	28 days	1 days	✓	08-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE WLNG EOP	E235.NO3-L	07-Jan-2025	08-Jan-2025	3 days	1 days	✓	08-Jan-2025	3 days	1 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE WLNG EOP Dup	E235.NO3-L	07-Jan-2025	08-Jan-2025	3 days	1 days	✓	08-Jan-2025	3 days	1 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE WLNG EOP	E235.NO2-L	07-Jan-2025	08-Jan-2025	3 days	1 days	✓	08-Jan-2025	3 days	1 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE WLNG EOP Dup	E235.NO2-L	07-Jan-2025	08-Jan-2025	3 days	1 days	✓	08-Jan-2025	3 days	1 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE WLNG EOP	E235.SO4	07-Jan-2025	08-Jan-2025	28 days	1 days	✓	08-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE WLNG EOP Dup	E235.SO4	07-Jan-2025	08-Jan-2025	28 days	1 days	✓	08-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 : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) WLNG EOP	E366	07-Jan-2025	09-Jan-2025	28 days	1 days	✓	10-Jan-2025	28 days	3 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) WLNG EOP Dup	E366	07-Jan-2025	09-Jan-2025	28 days	1 days	✓	10-Jan-2025	28 days	3 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) WLNG EOP	E372-U	07-Jan-2025	09-Jan-2025	28 days	1 days	✓	10-Jan-2025	28 days	3 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) WLNG EOP Dup	E372-U	07-Jan-2025	09-Jan-2025	28 days	1 days	✓	10-Jan-2025	28 days	3 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid) WLNG EOP	E509	07-Jan-2025	12-Jan-2025	28 days	5 days	✓	12-Jan-2025	28 days	5 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid) WLNG EOP Dup	E509	07-Jan-2025	12-Jan-2025	28 days	5 days	✓	12-Jan-2025	28 days	5 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) WLNG EOP	E421	07-Jan-2025	08-Jan-2025	180 days	1 days	✓	10-Jan-2025	180 days	3 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) WLNG EOP Dup	E421	07-Jan-2025	08-Jan-2025	180 days	1 days	✓	10-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) WLNG EOP	EF001	07-Jan-2025	----	----	----		08-Jan-2025	----	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
Field Tests : Field pH,EC,Salinity, TDS, Cl2,ClO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine										
Glass vial total (hydrochloric acid)										
WLNG EOP Dup	EF001	07-Jan-2025	----	----	----		08-Jan-2025	----	1 days	
Glycols : Glycols (4 analytes) by GC-FID										
Glass vial										
WLNG EOP	E680E	07-Jan-2025	08-Jan-2025	7 days	1 days	✓	09-Jan-2025	40 days	1 days	✓
Glycols : Glycols (4 analytes) by GC-FID										
Glass vial										
WLNG EOP Dup	E680E	07-Jan-2025	08-Jan-2025	7 days	1 days	✓	09-Jan-2025	40 days	1 days	✓
Hydrocarbons : BC PHCs - EPH by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
WLNG EOP	E601A	07-Jan-2025	08-Jan-2025	14 days	1 days	✓	08-Jan-2025	40 days	1 days	✓
Hydrocarbons : BC PHCs - EPH by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
WLNG EOP Dup	E601A	07-Jan-2025	08-Jan-2025	14 days	1 days	✓	08-Jan-2025	40 days	1 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate)										
WLNG EOP	E581.VH+F1	07-Jan-2025	08-Jan-2025	14 days	1 days	✓	08-Jan-2025	14 days	1 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate)										
WLNG EOP Dup	E581.VH+F1	07-Jan-2025	08-Jan-2025	14 days	1 days	✓	08-Jan-2025	14 days	1 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid)										
WLNG EOP	E358-L	07-Jan-2025	09-Jan-2025	28 days	1 days	✓	09-Jan-2025	28 days	2 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid)										
WLNG EOP Dup	E358-L	07-Jan-2025	09-Jan-2025	28 days	1 days	✓	09-Jan-2025	28 days	2 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : Alkalinity Species by Titration										
HDPE WLNG EOP	E290	07-Jan-2025	08-Jan-2025	14 days	1 days	✓	08-Jan-2025	14 days	1 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE WLNG EOP Dup	E290	07-Jan-2025	08-Jan-2025	14 days	1 days	✓	08-Jan-2025	14 days	1 days	✓
Physical Tests : TDS by Gravimetry										
HDPE WLNG EOP	E162	07-Jan-2025	----	----	----		13-Jan-2025	7 days	6 days	✓
Physical Tests : TDS by Gravimetry										
HDPE WLNG EOP Dup	E162	07-Jan-2025	----	----	----		13-Jan-2025	7 days	6 days	✓
Physical Tests : TSS by Gravimetry										
HDPE WLNG EOP	E160	07-Jan-2025	----	----	----		13-Jan-2025	7 days	6 days	✓
Physical Tests : TSS by Gravimetry										
HDPE WLNG EOP Dup	E160	07-Jan-2025	----	----	----		13-Jan-2025	7 days	6 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) WLNG EOP	E641A	07-Jan-2025	08-Jan-2025	14 days	1 days	✓	08-Jan-2025	40 days	1 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) WLNG EOP Dup	E641A	07-Jan-2025	08-Jan-2025	14 days	1 days	✓	08-Jan-2025	40 days	1 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide) WLNG EOP	E532	07-Jan-2025	----	----	----		07-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
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide)										
WLNG EOP Dup	E532	07-Jan-2025	----	----	----		07-Jan-2025	28 days	0 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid)										
WLNG EOP	E508	07-Jan-2025	11-Jan-2025	28 days	4 days	✓	11-Jan-2025	28 days	4 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid)										
WLNG EOP Dup	E508	07-Jan-2025	11-Jan-2025	28 days	4 days	✓	11-Jan-2025	28 days	4 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid)										
WLNG EOP	E420	07-Jan-2025	08-Jan-2025	180 days	1 days	✓	10-Jan-2025	180 days	3 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid)										
WLNG EOP Dup	E420	07-Jan-2025	08-Jan-2025	180 days	1 days	✓	10-Jan-2025	180 days	3 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide)										
WLNG EOP	E395	07-Jan-2025	----	----	----		08-Jan-2025	7 days	1 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide)										
WLNG EOP Dup	E395	07-Jan-2025	----	----	----		08-Jan-2025	7 days	1 days	✓
Volatile Organic Compounds : VOCs (BC List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
WLNG EOP	E611C	07-Jan-2025	08-Jan-2025	14 days	1 days	✓	08-Jan-2025	14 days	1 days	✓
Volatile Organic Compounds : VOCs (BC List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
WLNG EOP Dup	E611C	07-Jan-2025	08-Jan-2025	14 days	1 days	✓	08-Jan-2025	14 days	1 days	✓

Legend & Qualifier Definitions

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

Quality Control Parameter Frequency Compliance

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

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Alkalinity Species by Titration	E290	1832345	1	11	9.0	5.0	✓
Ammonia by Fluorescence	E298	1833454	1	16	6.2	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1832342	1	6	16.6	5.0	✓
Chloride in Water by IC	E235.Cl	1832336	1	19	5.2	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1836816	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1832621	1	14	7.1	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1833451	1	16	6.2	5.0	✓
Fluoride in Water by IC	E235.F	1832340	1	10	10.0	5.0	✓
Glycols (4 analytes) by GC-FID	E680E	1833169	1	4	25.0	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1832341	1	7	14.2	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1832338	1	10	10.0	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1837622	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1832337	1	11	9.0	5.0	✓
TDS by Gravimetry	E162	1837751	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1832247	1	19	5.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1836626	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1832617	1	13	7.6	5.0	✓
Total Nitrogen by Colourimetry	E366	1833456	1	10	10.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1833457	1	10	10.0	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1833235	1	4	25.0	5.0	✓
TSS by Gravimetry	E160	1837747	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1832574	1	9	11.1	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1832575	1	9	11.1	5.0	✓
Laboratory Control Samples (LCS)							
Alkalinity Species by Titration	E290	1832345	1	11	9.0	5.0	✓
Ammonia by Fluorescence	E298	1833454	1	16	6.2	5.0	✓
BC PHCs - EPH by GC-FID	E601A	1832300	1	14	7.1	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1832342	1	6	16.6	5.0	✓
Chloride in Water by IC	E235.Cl	1832336	1	19	5.2	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1836816	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1832621	1	14	7.1	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1833451	1	16	6.2	5.0	✓
Fluoride in Water by IC	E235.F	1832340	1	10	10.0	5.0	✓
Glycols (4 analytes) by GC-FID	E680E	1833169	1	4	25.0	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1832341	1	7	14.2	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1832338	1	10	10.0	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*
Laboratory Control Samples (LCS) - Continued							
PAHs in Water by Hexane LVI GC-MS	E641A	1832301	1	12	8.3	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1837622	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1832337	1	11	9.0	5.0	✓
TDS by Gravimetry	E162	1837751	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1832247	1	19	5.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1836626	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1832617	1	13	7.6	5.0	✓
Total Nitrogen by Colourimetry	E366	1833456	1	10	10.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1833457	1	10	10.0	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1833235	1	4	25.0	5.0	✓
TSS by Gravimetry	E160	1837747	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1832574	1	9	11.1	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1832575	1	9	11.1	5.0	✓
Method Blanks (MB)							
Alkalinity Species by Titration	E290	1832345	1	11	9.0	5.0	✓
Ammonia by Fluorescence	E298	1833454	1	16	6.2	5.0	✓
BC PHCs - EPH by GC-FID	E601A	1832300	1	14	7.1	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1832342	1	6	16.6	5.0	✓
Chloride in Water by IC	E235.Cl	1832336	1	19	5.2	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1836816	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1832621	1	14	7.1	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1833451	1	16	6.2	5.0	✓
Fluoride in Water by IC	E235.F	1832340	1	10	10.0	5.0	✓
Glycols (4 analytes) by GC-FID	E680E	1833169	1	4	25.0	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1832341	1	7	14.2	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1832338	1	10	10.0	5.0	✓
PAHs in Water by Hexane LVI GC-MS	E641A	1832301	1	12	8.3	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1837622	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1832337	1	11	9.0	5.0	✓
TDS by Gravimetry	E162	1837751	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1832247	1	19	5.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1836626	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1832617	1	13	7.6	5.0	✓
Total Nitrogen by Colourimetry	E366	1833456	1	10	10.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1833457	1	10	10.0	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1833235	1	4	25.0	5.0	✓
TSS by Gravimetry	E160	1837747	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1832574	1	9	11.1	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1832575	1	9	11.1	5.0	✓

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Matrix Spikes (MS)							
Ammonia by Fluorescence	E298	1833454	1	16	6.2	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1832342	1	6	16.6	5.0	✓
Chloride in Water by IC	E235.Cl	1832336	1	19	5.2	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1836816	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1832621	1	14	7.1	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1833451	1	16	6.2	5.0	✓
Fluoride in Water by IC	E235.F	1832340	1	10	10.0	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1832341	1	7	14.2	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1832338	1	10	10.0	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1837622	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1832337	1	11	9.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1832247	1	19	5.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1836626	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1832617	1	13	7.6	5.0	✓
Total Nitrogen by Colourimetry	E366	1833456	1	10	10.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1833457	1	10	10.0	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1833235	1	4	25.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1832574	1	9	11.1	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1832575	1	9	11.1	5.0	✓

Methodology References and Summaries

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

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

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

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

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

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

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

QUALITY CONTROL REPORT

Work Order	: **VA25A0279**	Page	: 1 of 23
Client	: Triton Environmental Consultants Ltd.	Laboratory	: ALS Environmental - Vancouver
Contact		Account Manager	
Address		Address	
Telephone	: ----	Telephone	
Project	: 11964	Date Samples Received	: 07-Jan-2025 18:00
PO	: 11964-Task 40-Phase 3C-4C	Date Analysis Commenced	: 07-Jan-2025
C-O-C number	: ----	Issue Date	: 15-Jan-2025 12:35
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*
	Supervisor - Metals Mercury & Speciation	Vancouver Metals, Burnaby, British Columbia
	Lab Assistant	Vancouver Metals, Burnaby, British Columbia
	Analyst	Vancouver Metals, Burnaby, British Columbia
	Supervisor - Water Chemistry	Vancouver Inorganics, Burnaby, British Columbia
	Department Manager - Organics	Vancouver Organics, Burnaby, British Columbia
	Account Manager Assistant	Vancouver Administration, Burnaby, British Columbia
	Team Leader - Inorganics	Edmonton Inorganics, Edmonton, Alberta
	Analyst- General	Vancouver Metals, 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: 1832345)											
VA25A0242-002	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	45.6	45.3	0.660%	20%	----
Physical Tests (QC Lot: 1837747)											
FJ2500073-001	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	<3.0	<3.0	0	Diff <2x LOR	----
Physical Tests (QC Lot: 1837751)											
FJ2500073-001	Anonymous	Solids, total dissolved [TDS]	----	E162	20	mg/L	215	204	5.25%	20%	----
Anions and Nutrients (QC Lot: 1832336)											
VA25A0242-001	Anonymous	Chloride	16887-00-6	E235.Cl	0.50	mg/L	0.60	0.59	0.01	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1832337)											
VA25A0249-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	18.7	18.5	0.750%	20%	----
Anions and Nutrients (QC Lot: 1832338)											
VA25A0249-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L	0.0119	0.0117	1.94%	20%	----
Anions and Nutrients (QC Lot: 1832340)											
VA25A0249-001	Anonymous	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.052	0.051	0.0004	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1832341)											
VA25A0242-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0050	mg/L	0.0782	0.0786	0.508%	20%	----
Anions and Nutrients (QC Lot: 1832342)											
VA25A0249-001	Anonymous	Bromide	24959-67-9	E235.Br-L	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1833454)											
VA25A0230-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.294	0.295	0.441%	20%	----
Anions and Nutrients (QC Lot: 1833456)											
VA25A0230-001	Anonymous	Nitrogen, total	7727-37-9	E366	1.50	mg/L	40.7	41.6	2.09%	20%	----
Anions and Nutrients (QC Lot: 1833457)											
VA25A0230-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0069	0.0079	0.0010	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 1833451)											
VA25A0230-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	19.7	20.8	5.20%	20%	----
Total Sulfides (QC Lot: 1833235)											
VA25A0278-001	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: 1832617)											
VA25A0254-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0150	mg/L	0.0165	<0.0150	0.0015	Diff <2x LOR	----
		Antimony, total	7440-36-0	E420	0.00050	mg/L	0.00134	0.00139	0.00005	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: 1832617) - continued											
VA25A0254-001	Anonymous	Arsenic, total	7440-38-2	E420	0.00050	mg/L	0.00647	0.00681	5.07%	20%	----
		Barium, total	7440-39-3	E420	0.00050	mg/L	0.0143	0.0146	1.94%	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	0.000250	mg/L	<0.000250	<0.000250	0	Diff <2x LOR	----
		Boron, total	7440-42-8	E420	0.050	mg/L	0.680	0.678	0.394%	20%	----
		Cadmium, total	7440-43-9	E420	0.0000250	mg/L	0.0000802	0.0000919	0.0000117	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.250	mg/L	178	186	4.42%	20%	----
		Cesium, total	7440-46-2	E420	0.000050	mg/L	0.000178	0.000169	0.000009	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420	0.00250	mg/L	<0.00250	<0.00250	0	Diff <2x LOR	----
		Cobalt, total	7440-48-4	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Copper, total	7440-50-8	E420	0.00250	mg/L	0.0652	0.0671	2.82%	20%	----
		Iron, total	7439-89-6	E420	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Lead, total	7439-92-1	E420	0.000250	mg/L	<0.000250	<0.000250	0	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0050	mg/L	0.0164	0.0165	0.0001	Diff <2x LOR	----
		Magnesium, total	7439-95-4	E420	0.0250	mg/L	407	410	0.861%	20%	----
		Manganese, total	7439-96-5	E420	0.00050	mg/L	0.00141	0.00134	0.00007	Diff <2x LOR	----
		Molybdenum, total	7439-98-7	E420	0.000250	mg/L	0.0897	0.0914	1.90%	20%	----
		Nickel, total	7440-02-0	E420	0.00250	mg/L	0.00326	0.00340	0.00014	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E420	0.250	mg/L	<0.250	<0.250	0	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.250	mg/L	20.5	21.9	6.52%	20%	----
		Rubidium, total	7440-17-7	E420	0.00100	mg/L	0.00661	0.00662	0.00001	Diff <2x LOR	----
		Selenium, total	7782-49-2	E420	0.000250	mg/L	0.192	0.201	4.32%	20%	----
		Silicon, total	7440-21-3	E420	0.50	mg/L	5.52	5.80	5.02%	20%	----
		Silver, total	7440-22-4	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Sodium, total	7440-23-5	E420	0.250	mg/L	847	862	1.82%	20%	----
		Strontium, total	7440-24-6	E420	0.00100	mg/L	5.66	5.86	3.41%	20%	----
		Sulfur, total	7704-34-9	E420	2.50	mg/L	1230	1280	3.40%	20%	----
		Tellurium, total	13494-80-9	E420	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
		Thallium, total	7440-28-0	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Thorium, total	7440-29-1	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.00150	mg/L	<0.00150	<0.00150	0	Diff <2x LOR	----
		Tungsten, total	7440-33-7	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Uranium, total	7440-61-1	E420	0.000050	mg/L	0.00654	0.00679	3.83%	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: 1832617) - continued											
VA25A0254-001	Anonymous	Vanadium, total	7440-62-2	E420	0.00250	mg/L	<0.00250	<0.00250	0	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0150	mg/L	<0.0150	<0.0150	0	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
Total Metals (QC Lot: 1836626)											
VA25A0245-001	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1832621)											
VA25A0254-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0020	mg/L	<0.0020	0.0024	0.0004	Diff <2x LOR	----
		Antimony, dissolved	7440-36-0	E421	0.00020	mg/L	0.00135	0.00133	0.00002	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00020	mg/L	0.00667	0.00650	2.54%	20%	----
		Barium, dissolved	7440-39-3	E421	0.00020	mg/L	0.0135	0.0141	4.42%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000040	mg/L	<0.000040	<0.000040	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.020	mg/L	0.655	0.652	0.393%	20%	----
		Cadmium, dissolved	7440-43-9	E421	0.0000650	mg/L	<0.0000650	<0.0000650	0	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.100	mg/L	176	171	2.88%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000020	mg/L	0.000167	0.000180	0.000012	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00040	mg/L	0.0540	0.0531	1.69%	20%	----
		Iron, dissolved	7439-89-6	E421	0.020	mg/L	<0.020	<0.020	0	Diff <2x LOR	----
		Lead, dissolved	7439-92-1	E421	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0020	mg/L	0.0151	0.0150	0.0002	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.0100	mg/L	401	387	3.47%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00020	mg/L	0.00069	0.00064	0.00005	Diff <2x LOR	----
		Molybdenum, dissolved	7439-98-7	E421	0.000100	mg/L	0.0915	0.0927	1.28%	20%	----
		Nickel, dissolved	7440-02-0	E421	0.00100	mg/L	0.00306	0.00290	0.00016	Diff <2x LOR	----
		Phosphorus, dissolved	7723-14-0	E421	0.100	mg/L	<0.100	<0.100	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.100	mg/L	21.9	20.7	5.49%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00040	mg/L	0.00661	0.00643	2.65%	20%	----
		Selenium, dissolved	7782-49-2	E421	0.000100	mg/L	0.202	0.201	0.661%	20%	----
		Silicon, dissolved	7440-21-3	E421	0.100	mg/L	5.42	5.34	1.64%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.100	mg/L	926	912	1.53%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00040	mg/L	5.85	5.92	1.32%	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: 1832621) - continued											
VA25A0254-001	Anonymous	Sulfur, dissolved	7704-34-9	E421	1.00	mg/L	1380	1390	0.106%	20%	----
		Tellurium, dissolved	13494-80-9	E421	0.00040	mg/L	<0.00040	<0.00040	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.00060	mg/L	<0.00060	<0.00060	0	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000020	mg/L	0.00646	0.00664	2.84%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00100	mg/L	0.00208	0.00207	0.00002	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0020	mg/L	<0.0020	<0.0020	0	Diff <2x LOR	----
		Zirconium, dissolved	7440-67-7	E421	0.00040	mg/L	<0.00040	<0.00040	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1836816)											
VA25A0230-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.000500	mg/L	0.0299	0.0290	3.09%	20%	----
Speciated Metals (QC Lot: 1832247)											
FJ2403883-013	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
Aggregate Organics (QC Lot: 1837622)											
VA25A0354-003	Anonymous	Phenols, total (4AAP)	----	E562	0.0010	mg/L	0.0049	0.0044	0.0005	Diff <2x LOR	----
Volatile Organic Compounds (QC Lot: 1832575)											
VA25A0167-001	Anonymous	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: 1832575) - continued											
VA25A0167-001	Anonymous	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: 1832574)											
VA25A0167-001	Anonymous	VHw (C6-C10)	----	E581.VH+F1	100	µg/L	<100	<100	0.0%	30%	----
Glycols (QC Lot: 1833169)											
VA25A0169-001	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: 1832345)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 1837747)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Physical Tests (QCLot: 1837751)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Anions and Nutrients (QCLot: 1832336)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 1832337)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 1832338)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 1832340)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 1832341)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1832342)						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 1833454)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1833456)						
Nitrogen, total	7727-37-9	E366	0.03	mg/L	<0.030	----
Anions and Nutrients (QCLot: 1833457)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Organic / Inorganic Carbon (QCLot: 1833451)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Total Sulfides (QCLot: 1833235)						
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	----
Total Metals (QCLot: 1832617)						
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: 1832617) - 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: 1836626)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Dissolved Metals (QCLot: 1832621)						
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: 1832621) - 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: 1836816)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Speciated Metals (QCLot: 1832247)						
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	<0.00050	----
Aggregate Organics (QCLot: 1837622)						
Phenols, total (4AAP)	----	E562	0.001	mg/L	<0.0010	----
Volatile Organic Compounds (QCLot: 1832575)						
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: 1832575) - 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: 1832300)						
EPH (C10-C19)	----	E601A	250	µg/L	<250	----
EPH (C19-C32)	----	E601A	250	µg/L	<250	----
Hydrocarbons (QCLot: 1832574)						
VHw (C6-C10)	----	E581.VH+F1	100	µg/L	<100	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1832301)						
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: 1832301) - 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: 1833169)						
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: 1832345)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	104	85.0	115	----
Physical Tests (QCLot: 1837747)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	93.8	85.0	115	----
Physical Tests (QCLot: 1837751)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	108	85.0	115	----
Anions and Nutrients (QCLot: 1832336)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	96.9	90.0	110	----
Anions and Nutrients (QCLot: 1832337)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	98.4	90.0	110	----
Anions and Nutrients (QCLot: 1832338)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	96.5	90.0	110	----
Anions and Nutrients (QCLot: 1832340)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	96.1	90.0	110	----
Anions and Nutrients (QCLot: 1832341)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	95.9	90.0	110	----
Anions and Nutrients (QCLot: 1832342)									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	92.6	85.0	115	----
Anions and Nutrients (QCLot: 1833454)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	97.9	85.0	115	----
Anions and Nutrients (QCLot: 1833456)									
Nitrogen, total	7727-37-9	E366	0.03	mg/L	0.5 mg/L	99.1	75.0	125	----
Anions and Nutrients (QCLot: 1833457)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	89.8	80.0	120	----
Organic / Inorganic Carbon (QCLot: 1833451)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	104	80.0	120	----
Total Sulfides (QCLot: 1833235)									
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.08 mg/L	102	80.0	120	----
Total Metals (QCLot: 1832617)									

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: 1832617) - continued									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	103	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	105	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	108	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	99.6	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	101	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	91.7	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	105	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	101	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	99.0	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	104	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	101	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	103	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	95.3	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	105	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	98.2	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	111	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	102	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	99.9	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	104	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	101	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	104	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	102	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	109	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	91.9	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	100	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	105	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	103	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	109	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	106	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	98.3	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	105	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	105	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	102	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	97.9	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: 1832617) - continued									
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	105	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	107	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	99.7	80.0	120	----
Total Metals (QCLot: 1836626)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	93.8	80.0	120	----
Dissolved Metals (QCLot: 1832621)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	103	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	110	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	1 mg/L	108	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	105	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	102	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	95.2	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	94.6	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	107	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	99.6	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	99.9	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	104	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	102	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	102	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	93.8	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.5 mg/L	103	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.25 mg/L	97.6	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	115	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	108	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	105	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	101	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	109	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	102	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	108	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	106	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	108	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	93.0	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	113	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.25 mg/L	106	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	104	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: 1832621) - continued									
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	113	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	107	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	93.3	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	106	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	106	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	101	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	93.9	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	108	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	102	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	96.7	80.0	120	----
Speciated Metals (QCLot: 1832247)									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.25 mg/L	100	80.0	120	----
Aggregate Organics (QCLot: 1837622)									
Phenols, total (4AAP)	----	E562	0.001	mg/L	0.02 mg/L	103	85.0	115	----
Volatile Organic Compounds (QCLot: 1832575)									
Benzene	71-43-2	E611C	0.5	µg/L	100 µg/L	102	70.0	130	----
Bromodichloromethane	75-27-4	E611C	0.5	µg/L	100 µg/L	99.8	70.0	130	----
Bromoform	75-25-2	E611C	0.5	µg/L	100 µg/L	91.1	70.0	130	----
Carbon tetrachloride	56-23-5	E611C	0.5	µg/L	100 µg/L	105	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	122	60.0	140	----
Chloroform	67-66-3	E611C	0.5	µg/L	100 µg/L	103	70.0	130	----
Chloromethane	74-87-3	E611C	5	µg/L	100 µg/L	93.1	60.0	140	----
Dibromochloromethane	124-48-1	E611C	0.5	µg/L	100 µg/L	95.3	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611C	0.5	µg/L	100 µg/L	95.9	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611C	0.5	µg/L	100 µg/L	97.2	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611C	0.5	µg/L	100 µg/L	98.9	70.0	130	----
Dichloroethane, 1,1-	75-34-3	E611C	0.5	µg/L	100 µg/L	109	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611C	0.5	µg/L	100 µg/L	102	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611C	0.5	µg/L	100 µg/L	114	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611C	0.5	µg/L	100 µg/L	101	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611C	0.5	µg/L	100 µg/L	108	70.0	130	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 1832575) - continued									
Dichloromethane	75-09-2	E611C	1	µg/L	100 µg/L	106	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611C	0.5	µg/L	100 µg/L	105	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611C	0.5	µg/L	100 µg/L	104	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611C	0.5	µg/L	100 µg/L	99.0	70.0	130	----
Ethylbenzene	100-41-4	E611C	0.5	µg/L	100 µg/L	94.0	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	0.5	µg/L	100 µg/L	102	70.0	130	----
Styrene	100-42-5	E611C	0.5	µg/L	100 µg/L	93.7	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	0.5	µg/L	100 µg/L	99.5	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	0.2	µg/L	100 µg/L	86.5	70.0	130	----
Tetrachloroethylene	127-18-4	E611C	0.5	µg/L	100 µg/L	99.5	70.0	130	----
Toluene	108-88-3	E611C	0.4	µg/L	100 µg/L	99.6	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611C	0.5	µg/L	100 µg/L	108	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611C	0.5	µg/L	100 µg/L	95.2	70.0	130	----
Trichloroethylene	79-01-6	E611C	0.5	µg/L	100 µg/L	105	70.0	130	----
Trichlorofluoromethane	75-69-4	E611C	0.5	µg/L	100 µg/L	124	60.0	140	----
Vinyl chloride	75-01-4	E611C	0.4	µg/L	100 µg/L	103	60.0	140	----
Xylene, m+p-	179601-23-1	E611C	0.4	µg/L	200 µg/L	99.2	70.0	130	----
Xylene, o-	95-47-6	E611C	0.3	µg/L	100 µg/L	93.7	70.0	130	----
Hydrocarbons (QCLot: 1832300)									
EPH (C10-C19)	----	E601A	250	µg/L	6490 µg/L	108	70.0	130	----
EPH (C19-C32)	----	E601A	250	µg/L	3360 µg/L	108	70.0	130	----
Hydrocarbons (QCLot: 1832574)									
VHw (C6-C10)	----	E581.VH+F1	100	µg/L	6310 µg/L	76.8	70.0	130	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1832301)									
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	105	60.0	130	----
Acridine	260-94-6	E641A	0.01	µg/L	0.5 µg/L	108	60.0	130	----
Anthracene	120-12-7	E641A	0.01	µg/L	0.5 µg/L	109	60.0	130	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	0.5 µg/L	122	60.0	130	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	0.5 µg/L	97.2	60.0	130	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	0.5 µg/L	97.9	60.0	130	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	0.5 µg/L	104	60.0	130	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	0.5 µg/L	99.0	60.0	130	----
Chrysene	218-01-9	E641A	0.01	µg/L	0.5 µg/L	110	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: 1832301) - continued									
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	0.5 µg/L	105	60.0	130	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	0.5 µg/L	108	60.0	130	----
Fluorene	86-73-7	E641A	0.01	µg/L	0.5 µg/L	105	60.0	130	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	0.5 µg/L	112	60.0	130	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	0.5 µg/L	99.5	60.0	130	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	0.5 µg/L	116	60.0	130	----
Naphthalene	91-20-3	E641A	0.05	µg/L	0.5 µg/L	112	50.0	130	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	0.5 µg/L	114	60.0	130	----
Pyrene	129-00-0	E641A	0.01	µg/L	0.5 µg/L	109	60.0	130	----
Quinoline	91-22-5	E641A	0.05	µg/L	0.5 µg/L	116	60.0	130	----
Glycols (QCLot: 1833169)									
Diethylene glycol	111-46-6	E680E	5	mg/L	25 mg/L	107	70.0	130	----
Ethylene glycol	107-21-1	E680E	5	mg/L	25 mg/L	106	70.0	130	----
Propylene glycol, 1,2-	57-55-6	E680E	5	mg/L	25 mg/L	104	70.0	130	----
Triethylene glycol	112-27-6	E680E	5	mg/L	25 mg/L	106	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: 1832336)										
VA25A0278-001	Anonymous	Chloride	16887-00-6	E235.Cl	99.3 mg/L	100 mg/L	99.3	75.0	125	----
Anions and Nutrients (QCLot: 1832337)										
VA25A0278-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	100 mg/L	100 mg/L	100	75.0	125	----
Anions and Nutrients (QCLot: 1832338)										
VA25A0278-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.497 mg/L	0.5 mg/L	99.4	75.0	125	----
Anions and Nutrients (QCLot: 1832340)										
VA25A0278-001	Anonymous	Fluoride	16984-48-8	E235.F	0.977 mg/L	1 mg/L	97.7	75.0	125	----
Anions and Nutrients (QCLot: 1832341)										
VA25A0278-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	2.46 mg/L	2.5 mg/L	98.3	75.0	125	----
Anions and Nutrients (QCLot: 1832342)										
VA25A0278-001	Anonymous	Bromide	24959-67-9	E235.Br-L	0.480 mg/L	0.5 mg/L	95.9	75.0	125	----
Anions and Nutrients (QCLot: 1833454)										
VA25A0230-003	Anonymous	Ammonia, total (as N)	7664-41-7	E298	ND mg/L	----	ND	75.0	125	----
Anions and Nutrients (QCLot: 1833456)										
VA25A0230-003	Anonymous	Nitrogen, total	7727-37-9	E366	ND mg/L	----	ND	70.0	130	----
Anions and Nutrients (QCLot: 1833457)										
VA25A0230-003	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0457 mg/L	0.05 mg/L	91.4	70.0	130	----
Organic / Inorganic Carbon (QCLot: 1833451)										
VA25A0230-003	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	ND mg/L	----	ND	70.0	130	----
Total Sulfides (QCLot: 1833235)										
VA25A0278-002	Anonymous	Sulfide, total (as S)	18496-25-8	E395	0.196 mg/L	0.2 mg/L	98.1	75.0	125	----
Total Metals (QCLot: 1832617)										
VA25A0254-002	Anonymous	Aluminum, total	7429-90-5	E420	0.986 mg/L	1 mg/L	98.6	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0978 mg/L	0.1 mg/L	97.8	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.106 mg/L	0.1 mg/L	106	70.0	130	----
		Barium, total	7440-39-3	E420	0.0935 mg/L	0.1 mg/L	93.5	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.188 mg/L	0.2 mg/L	94.0	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.0432 mg/L	0.05 mg/L	86.4	70.0	130	----
		Boron, total	7440-42-8	E420	ND mg/L	----	ND	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.0198 mg/L	0.02 mg/L	98.8	70.0	130	----
		Calcium, total	7440-70-2	E420	ND mg/L	----	ND	70.0	130	----
		Cesium, total	7440-46-2	E420	0.0478 mg/L	0.05 mg/L	95.6	70.0	130	----
		Chromium, total	7440-47-3	E420	0.200 mg/L	0.2 mg/L	99.9	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: 1832617) - continued										
VA25A0254-002	Anonymous	Cobalt, total	7440-48-4	E420	0.0973 mg/L	0.1 mg/L	97.3	70.0	130	----
		Copper, total	7440-50-8	E420	0.0921 mg/L	0.1 mg/L	92.1	70.0	130	----
		Iron, total	7439-89-6	E420	9.68 mg/L	10 mg/L	96.8	70.0	130	----
		Lead, total	7439-92-1	E420	0.0892 mg/L	0.1 mg/L	89.2	70.0	130	----
		Lithium, total	7439-93-2	E420	0.466 mg/L	0.5 mg/L	93.2	70.0	130	----
		Magnesium, total	7439-95-4	E420	ND mg/L	----	ND	70.0	130	----
		Manganese, total	7439-96-5	E420	0.0997 mg/L	0.1 mg/L	99.7	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0945 mg/L	0.1 mg/L	94.5	70.0	130	----
		Nickel, total	7440-02-0	E420	0.190 mg/L	0.2 mg/L	95.3	70.0	130	----
		Phosphorus, total	7723-14-0	E420	50.4 mg/L	50 mg/L	101	70.0	130	----
		Potassium, total	7440-09-7	E420	ND mg/L	----	ND	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0986 mg/L	0.1 mg/L	98.6	70.0	130	----
		Selenium, total	7782-49-2	E420	0.209 mg/L	0.2 mg/L	104	70.0	130	----
		Silicon, total	7440-21-3	E420	50.6 mg/L	50 mg/L	101	70.0	130	----
		Silver, total	7440-22-4	E420	0.0183 mg/L	0.02 mg/L	91.5	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	0.213 mg/L	0.2 mg/L	107	70.0	130	----
		Thallium, total	7440-28-0	E420	0.0177 mg/L	0.02 mg/L	88.4	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0905 mg/L	0.1 mg/L	90.5	70.0	130	----
		Tin, total	7440-31-5	E420	0.102 mg/L	0.1 mg/L	102	70.0	130	----
		Titanium, total	7440-32-6	E420	0.212 mg/L	0.2 mg/L	106	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0953 mg/L	0.1 mg/L	95.3	70.0	130	----
		Uranium, total	7440-61-1	E420	0.0180 mg/L	0.02 mg/L	89.8	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.514 mg/L	0.5 mg/L	103	70.0	130	----
		Zinc, total	7440-66-6	E420	2.04 mg/L	2 mg/L	102	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.215 mg/L	0.2 mg/L	108	70.0	130	----
Total Metals (QCLot: 1836626)										
VA25A0245-002	Anonymous	Mercury, total	7439-97-6	E508	0.0000920 mg/L	0 mg/L	92.0	70.0	130	----
Dissolved Metals (QCLot: 1832621)										
VA25A0254-002	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.971 mg/L	1 mg/L	97.1	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.100 mg/L	0.1 mg/L	100	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.106 mg/L	0.1 mg/L	106	70.0	130	----
		Barium, dissolved	7440-39-3	E421	0.0996 mg/L	0.1 mg/L	99.6	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.186 mg/L	0.2 mg/L	92.8	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.0428 mg/L	0.05 mg/L	85.7	70.0	130	----
		Boron, dissolved	7440-42-8	E421	ND mg/L	----	ND	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.0199 mg/L	0.02 mg/L	99.3	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.0489 mg/L	0.05 mg/L	97.8	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.198 mg/L	0.2 mg/L	98.9	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0969 mg/L	0.1 mg/L	96.9	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: 1832621) - continued										
VA25A0254-002	Anonymous	Copper, dissolved	7440-50-8	E421	0.0929 mg/L	0.1 mg/L	92.9	70.0	130	----
		Iron, dissolved	7439-89-6	E421	9.73 mg/L	10 mg/L	97.3	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0921 mg/L	0.1 mg/L	92.1	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.474 mg/L	0.5 mg/L	94.8	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	ND mg/L	----	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	0.104 mg/L	0.1 mg/L	104	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.105 mg/L	0.1 mg/L	105	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.191 mg/L	0.2 mg/L	95.3	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	51.8 mg/L	50 mg/L	104	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	ND mg/L	----	ND	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.103 mg/L	0.1 mg/L	103	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.217 mg/L	0.2 mg/L	109	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	52.5 mg/L	50 mg/L	105	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.0185 mg/L	0.02 mg/L	92.4	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	0.222 mg/L	0.2 mg/L	111	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.0181 mg/L	0.02 mg/L	90.7	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0681 mg/L	0.1 mg/L	68.1	70.0	130	MES
		Tin, dissolved	7440-31-5	E421	0.102 mg/L	0.1 mg/L	102	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.212 mg/L	0.2 mg/L	106	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0977 mg/L	0.1 mg/L	97.7	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	0.0176 mg/L	0.02 mg/L	88.1	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.517 mg/L	0.5 mg/L	103	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	2.00 mg/L	2 mg/L	100.0	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.233 mg/L	0.2 mg/L	116	70.0	130	----
Dissolved Metals (QCLot: 1836816)										
VA25A0230-003	Anonymous	Mercury, dissolved	7439-97-6	E509	ND mg/L	----	ND	70.0	130	----
Speciated Metals (QCLot: 1832247)										
FJ2403883-014	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.264 mg/L	0.25 mg/L	106	70.0	130	----
Aggregate Organics (QCLot: 1837622)										
VA25A0357-004	Anonymous	Phenols, total (4AAP)	----	E562	0.0208 mg/L	0.02 mg/L	104	75.0	125	----
Volatile Organic Compounds (QCLot: 1832575)										
VA25A0169-001	Anonymous	Benzene	71-43-2	E611C	97.7 µg/L	100 µg/L	97.7	60.0	140	----
		Bromodichloromethane	75-27-4	E611C	98.0 µg/L	100 µg/L	98.0	60.0	140	----
		Bromoform	75-25-2	E611C	93.2 µg/L	100 µg/L	93.2	60.0	140	----
		Carbon tetrachloride	56-23-5	E611C	105 µg/L	100 µg/L	105	60.0	140	----
		Chlorobenzene	108-90-7	E611C	97.2 µg/L	100 µg/L	97.2	60.0	140	----
		Chloroethane	75-00-3	E611C	106 µg/L	100 µg/L	106	50.0	150	----
		Chloroform	67-66-3	E611C	101 µg/L	100 µg/L	101	60.0	140	----
		Chloromethane	74-87-3	E611C	76.7 µg/L	100 µg/L	76.7	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: 1832575) - continued										
VA25A0169-001	Anonymous	Dibromochloromethane	124-48-1	E611C	97.0 µg/L	100 µg/L	97.0	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611C	96.6 µg/L	100 µg/L	96.6	60.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611C	96.7 µg/L	100 µg/L	96.7	60.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611C	98.0 µg/L	100 µg/L	98.0	60.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611C	104 µg/L	100 µg/L	104	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611C	103 µg/L	100 µg/L	103	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611C	98.2 µg/L	100 µg/L	98.2	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611C	98.3 µg/L	100 µg/L	98.3	60.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611C	108 µg/L	100 µg/L	108	60.0	140	----
		Dichloromethane	75-09-2	E611C	98.2 µg/L	100 µg/L	98.2	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611C	100 µg/L	100 µg/L	100	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611C	93.5 µg/L	100 µg/L	93.5	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611C	87.1 µg/L	100 µg/L	87.1	60.0	140	----
		Ethylbenzene	100-41-4	E611C	88.9 µg/L	100 µg/L	88.9	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	106 µg/L	100 µg/L	106	60.0	140	----
		Styrene	100-42-5	E611C	89.4 µg/L	100 µg/L	89.4	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	99.9 µg/L	100 µg/L	99.9	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	84.4 µg/L	100 µg/L	84.4	60.0	140	----
		Tetrachloroethylene	127-18-4	E611C	97.1 µg/L	100 µg/L	97.1	60.0	140	----
		Toluene	108-88-3	E611C	93.8 µg/L	100 µg/L	93.8	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611C	105 µg/L	100 µg/L	105	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611C	91.6 µg/L	100 µg/L	91.6	60.0	140	----
		Trichloroethylene	79-01-6	E611C	103 µg/L	100 µg/L	103	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611C	106 µg/L	100 µg/L	106	50.0	150	----
		Vinyl chloride	75-01-4	E611C	94.4 µg/L	100 µg/L	94.4	50.0	150	----
		Xylene, m+p-	179601-23-1	E611C	190 µg/L	200 µg/L	95.2	60.0	140	----
		Xylene, o-	95-47-6	E611C	89.6 µg/L	100 µg/L	89.6	60.0	140	----
Hydrocarbons (QCLot: 1832574)										
VA25A0266-001	Anonymous	VHw (C6-C10)	----	E581.VH+F1	3950 µg/L	6310 µg/L	62.6	60.0	140	----

Qualifiers

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

Chain of Custody (COC) / Analytical Request Form

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

COC Number: 20 -

Page 2 of 2

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

Reports / Recipients

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

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

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

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Turnaround Time (TAT) Requested

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

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

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

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

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

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

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

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm Jan 15/2025

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

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Project Information

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

ALS Lab Work Order # (ALS use only):

Analysis Request

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

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	Total metals + mercury	Dissolved metals + mercury	Total hexavalent chromium	Total trivalent chromium	TSS, TDS, T-Alkalinity,Anions scan (Br, Cl, F, NO2, NO3, SO4)	Total sulfide (low) (as H2S), Unionized Sulfide (low)	Nutrients (ammonia, ammonium, total nitrogen, total phosphorus)	VOC/VPH	EPH, PAH, LEPH/HEPH	DOC	Glycols	General parameters (alkalinity)	Phenols	SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
						F					P	P	P	P	F/P						
	WLNG EOP	Jan 7/25	2:02	Water	16	R	R	R	R	R	R	R	R	R	R	R	R	R			
	pH: 7.53 cond: 150 temp: 10.0																				
	WLNG EOP Dup	Jan 7/25	2:02	water	16	R	R	R	R	R	R	R	R	R	R	R	R	R			
	pH: 7.53 cond: 150 temp: 10.0																				

Environmental Division
Vancouver
Work Order Reference
VA25A0279

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 evaluation by selecting from drop-d (Excel COC only)

ESDAT EDD to ESdat_CA+tritonenv@ESdatLabSync.net

SAMPLE RECEIPT DETAILS (ALS use only)

☐ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED

fied on Sample Receipt Notification: ☐ YES ☐ NO

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

ERATURES °C | FINAL COOLER TEMPERATURES °C

8°C

SHIPMENT RELEASE (client use)

Released by:	Date:	Time:
	Jan 7/2025	6:00 pm

INITIAL SHIPMENT RECEPTION (ALS use only)

Received by:	Date:	Time:

FINAL SHIPMENT RECEPTION (ALS use only)

R	Date:	Time:
	8/1/25	6:1 pm

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

AUC 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

2025-1-7-Renkers-D49AF

Project Component:	Tunnel	**Site Name:**	WLNG Treatment Discharge
Inspection Date:	01/07/2025	**Location:**	WLNG
Triton QP:	Stephanie Renkers	**Latitude/Longitude:**	49.66902 -123.250079
Temperature(c):	Low -1 High 7	**Permit:**	PE 110136
Weather Conditions:	Overcast	**Ground Conditions:**	Dry

Observations

Time: 14:02:00 **Flow Volume (visual):** N/A

Notes:

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

Samples Collected - Parameters

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

Logger Maintenance

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

Describe Logger Maintenance

Photos

Photo: 1

Location: WLNG EOP

Description: Discharge sampling area

Photo: 2

Location: WLNG EOP

Description: Spigot on

Photos

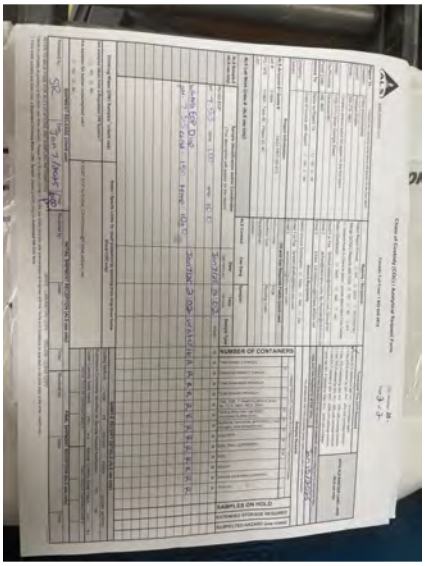


Photo: 3

Location: WLNG EOP

Description: Lab COC

Sign Off

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

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 6, 2025 to January 12, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 23, 2025**

Table of Contents:

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 6 was 45,358 m^3.

Daily Volume Summary:

Table 1: Discharge Volumes Daily Summary

Date	Location	Volume (m3)	Comments
January 6	Woodfibre (WF)	421	None
January 7	WF	487	None
January 8	WF	390	None
January 9	WF	444	None
January 10	WF	473	None
January 11	WF	425	None
January 12	WF	432	None
	Total	3,072	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)
1/6/2025	0:30:00	7.2	0.824	0	45,368	11.3	119
1/6/2025	1:30:00	7.2	0.798	0	45,382	11	118
1/6/2025	1:45:00	7.1	0.000	0	45,385	11.5	118
1/6/2025	2:30:00	7.2	0.805	2.2	45,393	11.3	119
1/6/2025	2:45:00	7.2	0.813	0	45,405	11.3	118
1/6/2025	3:00:00	7.2	0.786	0	45,417	11.3	119
1/6/2025	4:15:00	7.2	0.771	2.5	45,427	12.8	117
1/6/2025	5:15:00	7.3	0.771	0	45,446	11	116
1/6/2025	5:30:00	7.3	0.756	0.3	45,458	11.1	117
1/6/2025	5:45:00	7.3	0.000	0.6	45,467	11.3	117
1/6/2025	6:45:00	7.2	0.779	3	45,472	11.3	263
1/6/2025	7:00:00	7.3	0.745	2.4	45,484	11.4	264
1/6/2025	7:15:00	7.3	0.745	2.2	45,495	11.5	264
1/6/2025	7:30:00	7.3	0.745	2.9	45,506	11.5	264
1/6/2025	8:30:00	7.3	0.764	2.4	45,517	11.3	263
1/6/2025	8:45:00	7.3	0.733	2.1	45,528	11.1	264
1/6/2025	9:45:00	7.3	0.748	0	45,549	10.7	110
1/6/2025	10:00:00	7.3	0.745	0	45,560	10.6	111
1/6/2025	10:45:00	7.2	0.733	0	45,569	10.5	109
1/6/2025	12:15:00	7.2	0.794	0	45,585	10.5	110
1/6/2025	13:45:00	7.2	0.756	0	45,605	10.7	110

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/6/2025	14:00:00	7.2	0.756	0	45,616	10.8	109
1/6/2025	15:00:00	7.2	0.779	0	45,624	11.2	112
1/6/2025	15:15:00	7.2	0.714	0	45,635	11.1	111
1/6/2025	15:30:00	7.2	0.635	0	45,645	11.1	264
1/6/2025	15:45:00	7.2	0.548	0	45,654	11.2	267
1/6/2025	16:00:00	7.2	0.488	0	45,662	11.6	270
1/6/2025	16:15:00	7.1	0.480	0	45,669	12.4	270
1/6/2025	16:45:00	7.2	0.771	0	45,674	11.4	275
1/6/2025	18:15:00	7.3	0.828	0	45,692	10.9	273
1/6/2025	19:45:00	7.1	0.000	0	45,714	12	261
1/6/2025	20:00:00	7.1	0.000	0	45,714	12.5	263
1/6/2025	20:15:00	7	0.000	0	45,714	13.1	264
1/6/2025	20:30:00	7	0.000	0	45,714	13.7	264
1/6/2025	20:45:00	7.2	0.798	0	45,723	11.1	114
1/6/2025	21:15:00	7.2	0.956	5.5	45,724	11.5	116
1/6/2025	21:30:00	7.2	0.862	0	45,735	11	114
1/6/2025	21:45:00	7.2	0.805	0	45,748	11	113
1/6/2025	22:00:00	7.2	0.786	0	45,760	11	114
1/6/2025	22:45:00	7.2	0.699	0	45,771	11.1	117
1/6/2025	23:00:00	7.2	0.000	0	45,778	11.4	116
1/6/2025	23:15:00	7.1	0.000	2.6	45,778	11.9	116
1/7/2025	0:45:00	7.2	0.446	0	45,783	11.6	116
1/7/2025	1:00:00	7.2	1.070	0	45,793	11.2	114
1/7/2025	1:15:00	7.2	1.126	0	45,810	10	114
1/7/2025	1:45:00	7.2	0.000	0	45,819	10	113

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 6, 2025 to January 12, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 23, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/7/2025	2:00:00	7.2	0.941	0	45,827	10.1	113
1/7/2025	2:15:00	7.2	0.000	0	45,835	10.7	113
1/7/2025	2:45:00	7.2	0.964	0	45,846	10.4	114
1/7/2025	3:00:00	7.2	0.881	0	45,860	10.6	116
1/7/2025	4:00:00	7.2	0.673	0	45,878	11	118
1/7/2025	4:15:00	7.2	0.378	0	45,886	12	118
1/7/2025	4:30:00	7.2	0.885	0	45,899	10.9	115
1/7/2025	5:30:00	7.2	0.888	0	45,911	10.7	116
1/7/2025	5:45:00	7.2	0.851	0	45,924	10.6	113
1/7/2025	6:45:00	7.2	0.847	0	45,928	10.5	113
1/7/2025	7:00:00	7.2	0.862	0	45,940	10.7	114
1/7/2025	7:15:00	7.2	0.824	0	45,953	10.7	115
1/7/2025	7:30:00	7.3	0.159	0	45,965	10.7	113
1/7/2025	8:15:00	7.2	0.748	0	45,974	10.8	117
1/7/2025	8:30:00	7.2	0.733	0	45,985	10.7	261
1/7/2025	8:45:00	7.2	0.684	0	45,996	10.6	262
1/7/2025	9:45:00	7.2	0.737	0	46,000	10.6	265
1/7/2025	10:00:00	7.2	0.703	0	46,011	10.8	262
1/7/2025	11:00:00	7.1	0.692	0	46,018	10.7	111
1/7/2025	11:15:00	7.1	0.669	0	46,029	10.9	111
1/7/2025	12:00:00	7.1	0.605	0	46,038	10.7	112
1/7/2025	12:15:00	7.1	0.609	0	46,048	11	111
1/7/2025	13:00:00	7.1	0.578	0	46,053	11.4	115
1/7/2025	13:15:00	7.2	0.575	0	46,062	10.9	114
1/7/2025	13:30:00	7.2	0.658	0	46,071	10.9	113

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/7/2025	15:00:00	7.2	0.971	0	46,087	10.7	114
1/7/2025	15:15:00	7.2	0.990	0	46,102	10.7	112
1/7/2025	16:00:00	7.1	0.934	0	46,114	11	109
1/7/2025	16:15:00	7.2	0.979	0	46,128	10.6	109
1/7/2025	16:30:00	7.2	0.949	0	46,142	10.6	109
1/7/2025	17:45:00	7.2	0.869	0	46,160	10.7	109
1/7/2025	18:00:00	7.1	0.854	0	46,173	10.9	108
1/7/2025	18:15:00	7.1	0.752	0	46,185	10.9	108
1/7/2025	19:00:00	7.2	0.741	0	46,191	10.7	108
1/7/2025	19:15:00	7.1	0.000	0.1	46,192	10.7	108
1/7/2025	19:30:00	7.1	0.000	0	46,192	10.6	108
1/7/2025	19:45:00	7	0.000	0	46,192	10.7	108
1/7/2025	20:00:00	7	0.665	0	46,195	10.9	108
1/7/2025	20:15:00	7	0.541	0	46,204	11	108
1/7/2025	20:30:00	7	0.408	0	46,211	11.1	109
1/7/2025	20:45:00	7	0.000	0	46,213	11.2	108
1/7/2025	21:00:00	7	0.000	0	46,213	11.1	109
1/7/2025	21:15:00	7	0.000	0	46,213	11	108
1/7/2025	21:30:00	7	0.820	0	46,214	11	108
1/7/2025	22:15:00	7.1	0.000	0	46,220	10.5	106
1/7/2025	22:30:00	7.1	0.843	4.7	46,222	10.3	108
1/7/2025	23:15:00	7.2	0.873	0	46,240	10.4	108
1/7/2025	23:30:00	7.2	0.869	0	46,253	10.5	108
1/7/2025	23:45:00	7.2	0.798	0	46,266	10.5	108
1/8/2025	0:00:00	7.2	0.786	0	46,273	10.4	108

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/8/2025	1:00:00	7.2	0.707	0	46,283	9.9	116
1/8/2025	2:15:00	7.2	0.639	0	46,300	10.9	116
1/8/2025	2:30:00	7.1	0.582	0	46,310	12.2	116
1/8/2025	3:15:00	7.2	1.005	0	46,327	11.1	117
1/8/2025	3:30:00	7.1	0.000	0	46,330	11.5	118
1/8/2025	4:30:00	7.2	0.790	0	46,343	11.1	116
1/8/2025	4:45:00	7.2	0.703	0	46,354	11.2	116
1/8/2025	5:00:00	7.2	0.832	0	46,366	11.6	117
1/8/2025	6:00:00	7.1	0.737	0	46,376	11.8	258
1/8/2025	7:00:00	7.2	0.934	0	46,396	10.7	113
1/8/2025	8:00:00	7.2	0.915	0	46,412	10.6	111
1/8/2025	8:15:00	7.2	0.915	0	46,426	10.6	111
1/8/2025	9:00:00	7.2	0.873	0	46,435	10.6	113
1/8/2025	9:15:00	7.2	0.824	0	46,448	10.6	111
1/8/2025	10:00:00	7.1	0.771	0	46,450	11.5	115
1/8/2025	10:45:00	7.2	0.832	0	46,467	10.6	112
1/8/2025	11:30:00	7.2	0.888	0	46,477	10.7	111
1/8/2025	11:45:00	7.1	0.835	0	46,490	11.1	113
1/8/2025	13:15:00	7.1	0.832	4.1	46,494	12.4	259
1/8/2025	13:30:00	7.1	0.816	0	46,507	10.9	261
1/8/2025	13:45:00	7.1	0.684	0	46,518	11.2	264
1/8/2025	14:00:00	7.1	0.575	0	46,528	14.5	269
1/8/2025	15:00:00	7.1	0.926	0	46,536	10.8	269
1/8/2025	15:45:00	7.1	0.000	0	46,545	12.1	264
1/8/2025	16:15:00	7.1	0.892	0	46,553	11.1	267

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 6, 2025 to January 12, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 23, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/8/2025	16:30:00	7.2	0.885	0	46,567	11.1	271
1/8/2025	16:45:00	7.2	0.888	0	46,580	11.2	271
1/8/2025	18:15:00	7.2	0.862	0	46,589	11.2	274
1/8/2025	18:30:00	7.2	0.862	0	46,602	11.3	276
1/8/2025	18:45:00	7.2	0.835	0	46,615	11.3	274
1/8/2025	19:00:00	7.3	0.000	0	46,624	11.5	273
1/8/2025	19:30:00	7.3	0.000	0	46,625	11.9	272
1/8/2025	19:45:00	7.2	0.000	0	46,625	12.5	271
1/8/2025	20:00:00	7.2	0.646	0	46,634	11.7	269
1/8/2025	20:15:00	7.2	0.571	0	46,644	11.9	269
1/8/2025	20:30:00	7.2	0.469	0	46,652	12	268
1/8/2025	20:45:00	7.3	0.000	0	46,653	12.3	268
1/8/2025	21:00:00	7.2	0.000	0	46,653	12.6	266
1/8/2025	21:45:00	7.2	0.790	0	46,654	12.5	268
1/8/2025	22:00:00	7.3	0.000	0	46,662	11.2	264
1/9/2025	0:00:00	7.2	0.930	0	46,668	11	264
1/9/2025	0:15:00	7.2	0.835	0	46,682	11.1	112
1/9/2025	1:15:00	7.2	0.578	0	46,697	12	261
1/9/2025	1:30:00	7.2	0.847	0	46,701	11.6	116
1/9/2025	1:45:00	7.2	0.813	0.8	46,714	11.6	263
1/9/2025	3:15:00	7.3	0.839	7	46,734	11.9	272
1/9/2025	4:30:00	7.3	0.677	0	46,743	11.2	268
1/9/2025	4:45:00	7.3	0.809	0	46,753	11.1	265
1/9/2025	5:45:00	7.3	0.760	0	46,773	11.6	268
1/9/2025	6:00:00	7.3	0.382	0	46,785	11.9	269

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/9/2025	6:45:00	7.3	0.726	0	46,789	11.8	269
1/9/2025	7:00:00	7.3	0.851	0	46,802	11.5	264
1/9/2025	7:15:00	7.3	0.782	0	46,814	11.5	267
1/9/2025	7:30:00	7.3	0.839	0	46,826	11.4	271
1/9/2025	8:15:00	7.2	0.782	0	46,829	11.4	272
1/9/2025	8:30:00	7.3	0.673	0	46,841	11.5	273
1/9/2025	8:45:00	7.2	0.495	0	46,849	11.6	275
1/9/2025	10:30:00	7.2	0.854	0	46,880	11.4	272
1/9/2025	10:45:00	7.2	0.843	0	46,883	11.4	269
1/9/2025	11:45:00	7.2	0.786	0	46,891	11.5	263
1/9/2025	12:00:00	7.2	0.469	0	46,901	11.7	266
1/9/2025	12:15:00	7.2	0.756	0	46,908	11.4	267
1/9/2025	12:30:00	7.2	0.775	0	46,920	11.5	269
1/9/2025	12:45:00	7.2	0.677	0	46,930	11.5	272
1/9/2025	13:00:00	7.2	0.748	0	46,936	11.8	273
1/9/2025	14:00:00	7.2	0.809	0	46,948	11.6	271
1/9/2025	14:30:00	7.2	0.756	0	46,963	11.7	271
1/9/2025	14:45:00	7.2	0.556	0	46,973	11.7	272
1/9/2025	15:15:00	7.2	0.752	0	46,984	11.6	273
1/9/2025	16:45:00	7.2	0.764	0	46,991	11.5	273
1/9/2025	17:00:00	7.2	0.733	0	47,003	11.5	276
1/9/2025	17:15:00	7.2	0.771	0	47,013	11.6	276
1/9/2025	17:30:00	7.2	0.578	0	47,023	11.6	276
1/9/2025	18:00:00	7.2	0.775	0	47,031	11.7	276
1/9/2025	18:15:00	7.2	0.760	0	47,043	11.6	274

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/9/2025	19:00:00	7.2	0.752	0.1	47,058	11.6	273
1/9/2025	20:30:00	7.2	0.775	0	47,070	11.9	268
1/9/2025	20:45:00	7.2	0.767	0	47,081	11.9	268
1/9/2025	22:15:00	7.2	0.752	0	47,091	11.8	269
1/9/2025	22:30:00	7.2	0.737	0	47,102	11.7	261
1/9/2025	23:45:00	7.3	0.760	3.2	47,112	11.6	113
1/10/2025	0:00:00	7.3	0.703	3.7	47,115	11.7	114
1/10/2025	0:15:00	7.3	0.703	1.7	47,126	12	113
1/10/2025	0:30:00	7.2	0.609	0.3	47,135	12.3	113
1/10/2025	1:30:00	7.3	0.862	0	47,146	11.7	114
1/10/2025	1:45:00	7.3	0.851	0	47,158	11.7	116
1/10/2025	2:45:00	7.3	0.801	0	47,172	11.8	114
1/10/2025	3:30:00	7.3	0.677	0	47,186	11.4	114
1/10/2025	3:45:00	7.3	0.662	0	47,196	11.5	113
1/10/2025	4:00:00	7.2	0.673	0	47,206	13	258
1/10/2025	5:00:00	7.3	0.862	2.3	47,213	11.8	118
1/10/2025	5:15:00	7.3	0.869	0	47,226	11.6	115
1/10/2025	6:45:00	7.3	0.582	0	47,239	11.2	111
1/10/2025	7:00:00	7.3	0.624	0	47,248	11.3	266
1/10/2025	7:15:00	7.3	0.590	0	47,257	11.4	263
1/10/2025	7:30:00	7.3	0.582	0	47,266	11.4	264
1/10/2025	8:00:00	7.3	0.677	0	47,273	11.6	118
1/10/2025	8:15:00	7.3	0.639	0	47,283	11.9	117
1/10/2025	8:30:00	7.4	0.658	0	47,293	12.1	259
1/10/2025	8:45:00	7.3	0.620	0	47,303	12.4	259

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/10/2025	9:00:00	7.2	0.627	0	47,312	12.7	259
1/10/2025	9:30:00	7.3	0.639	0	47,319	13.4	257
1/10/2025	9:45:00	7.3	0.650	0	47,328	13.5	261
1/10/2025	10:30:00	6.9	0.677	3.7	47,335	12	114
1/10/2025	10:45:00	7.1	0.673	0	47,345	11.7	113
1/10/2025	11:00:00	7.3	0.000	0	47,349	11.9	116
1/10/2025	11:15:00	7.2	0.662	0	47,351	12	116
1/10/2025	11:30:00	7.2	0.646	0	47,361	12	118
1/10/2025	11:45:00	7.3	0.000	0	47,362	13.3	252
1/10/2025	12:00:00	7.3	0.677	0	47,365	12.1	117
1/10/2025	12:30:00	7.3	0.654	0	47,377	12.2	118
1/10/2025	12:45:00	7.3	0.631	0	47,386	12.9	116
1/10/2025	13:15:00	7.2	0.578	4.7	47,390	14.7	259
1/10/2025	13:30:00	7.3	0.605	0	47,399	12.3	118
1/10/2025	15:00:00	7.3	0.805	0	47,419	11.8	264
1/10/2025	15:15:00	7.3	0.816	0	47,431	11.8	263
1/10/2025	16:30:00	7.2	0.771	19.1	47,441	13.2	262
1/10/2025	16:45:00	7.3	0.696	0	47,452	11.5	266
1/10/2025	17:00:00	7.3	0.684	0	47,463	11.4	265
1/10/2025	18:00:00	7.3	0.707	0	47,479	11.1	109
1/10/2025	18:15:00	7.3	0.692	0	47,489	11.1	109
1/10/2025	19:00:00	7.3	0.677	0	47,498	11.1	110
1/10/2025	19:15:00	7.3	0.733	0	47,509	11.1	110
1/10/2025	20:15:00	7.3	0.703	0	47,521	11.1	264
1/10/2025	20:30:00	7.3	0.707	0	47,532	11.1	110

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/10/2025	21:45:00	7.3	0.733	0	47,543	11.5	115
1/10/2025	22:00:00	7.3	0.000	0	47,549	11.6	114
1/10/2025	22:45:00	7.3	0.779	0	47,556	11.2	111
1/10/2025	23:00:00	7.3	0.752	0	47,567	11.3	113
1/10/2025	23:15:00	7.3	0.741	0	47,579	11.5	113
1/11/2025	0:45:00	7.3	0.881	0	47,595	11.5	118
1/11/2025	1:30:00	7.3	0.571	0	47,603	11.3	112
1/11/2025	2:15:00	7.3	0.851	0	47,614	11.4	117
1/11/2025	2:30:00	7.3	0.722	0	47,626	11.7	116
1/11/2025	3:30:00	7.3	0.748	0	47,638	11.7	118
1/11/2025	3:45:00	7.3	0.722	0	47,648	11.7	118
1/11/2025	4:00:00	7.3	0.684	4.5	47,659	11.8	118
1/11/2025	4:15:00	7.3	0.775	0	47,666	11.7	118
1/11/2025	4:45:00	7.3	0.730	0	47,683	11.4	115
1/11/2025	6:00:00	7.3	0.000	0	47,689	11	113
1/11/2025	6:15:00	7.3	0.862	0	47,696	11	113
1/11/2025	7:00:00	7.3	0.851	0	47,699	11.5	116
1/11/2025	7:15:00	7.3	0.851	0	47,711	11	114
1/11/2025	7:30:00	7.3	0.726	0	47,723	11.2	114
1/11/2025	7:45:00	7.3	0.665	0	47,733	11.8	116
1/11/2025	8:00:00	7.3	0.662	0	47,743	12.5	118
1/11/2025	8:15:00	7.3	0.665	0	47,751	13	116
1/11/2025	9:00:00	7.2	0.684	0	47,757	11.4	112
1/11/2025	9:15:00	7.3	0.677	0	47,768	11.5	111
1/11/2025	9:30:00	7.3	0.665	0	47,778	11.7	111

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/11/2025	10:45:00	7.3	0.662	0	47,783	11	111
1/11/2025	11:00:00	7.3	0.631	0	47,792	11.1	113
1/11/2025	11:15:00	7.3	0.620	0	47,802	11.4	111
1/11/2025	11:45:00	7.2	0.601	0	47,813	11.2	112
1/11/2025	12:00:00	7.3	0.586	0	47,822	11.5	111
1/11/2025	12:30:00	7.3	0.782	0	47,831	10.9	114
1/11/2025	14:00:00	7.3	0.847	0	47,842	10.7	113
1/11/2025	14:15:00	7.3	0.782	0	47,854	10.8	113
1/11/2025	14:30:00	7.3	0.760	0	47,865	10.9	113
1/11/2025	14:45:00	7.3	0.627	0	47,876	11.1	111
1/11/2025	15:00:00	7.3	0.469	0	47,881	11.4	112
1/11/2025	15:15:00	7.3	0.544	0	47,884	11.8	112
1/11/2025	16:30:00	7.3	0.839	0	47,894	11.1	114
1/11/2025	16:45:00	7.3	0.760	0	47,906	10.9	113
1/11/2025	17:15:00	7.3	0.741	0	47,911	10.8	113
1/11/2025	18:45:00	7.3	0.824	0	47,932	10.8	116
1/11/2025	19:00:00	7.3	0.779	0	47,944	11.3	116
1/11/2025	19:15:00	7.3	0.639	0	47,955	12	116
1/11/2025	20:15:00	7.2	0.643	0	47,961	15.2	250
1/11/2025	21:00:00	7.3	0.525	0	47,974	11.4	116
1/11/2025	21:15:00	7.3	0.491	0	47,982	12.2	117
1/11/2025	22:15:00	7.3	0.839	0	47,991	11.8	115
1/11/2025	22:30:00	7.3	0.813	0	48,004	12	113
1/11/2025	23:45:00	7.3	0.820	0	48,013	10.4	113
1/12/2025	0:00:00	7.3	0.272	0	48,024	10.4	111

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/12/2025	0:15:00	7.3	0.684	0	48,031	10.4	111
1/12/2025	0:30:00	7.3	0.556	0	48,040	10.7	114
1/12/2025	2:15:00	7.2	0.643	0	48,049	12.3	119
1/12/2025	2:30:00	7.3	0.612	0	48,059	12.7	116
1/12/2025	2:45:00	7.2	0.000	0	48,067	14	114
1/12/2025	3:00:00	7.2	0.586	0	48,071	15	253
1/12/2025	3:00:00	7.2	0.620	0	48,074	17.2	243
1/12/2025	3:15:00	7.3	0.643	0	48,080	11.3	118
1/12/2025	3:30:00	7.3	0.650	0	48,090	11.6	114
1/12/2025	4:30:00	7.3	0.866	0	48,103	10.8	115
1/12/2025	4:45:00	7.3	0.835	0	48,116	11.6	117
1/12/2025	5:45:00	7.3	0.805	0	48,122	10.9	111
1/12/2025	6:00:00	7.3	0.779	0	48,128	10.5	112
1/12/2025	6:15:00	7.3	0.616	0	48,139	10.7	113
1/12/2025	7:15:00	7.3	0.631	0	48,150	11.4	117
1/12/2025	7:30:00	7.3	0.616	0	48,160	11.9	116
1/12/2025	7:45:00	7.3	0.593	0	48,169	12.1	259
1/12/2025	8:15:00	7.3	0.616	0	48,182	12.7	258
1/12/2025	8:45:00	7.3	0.779	0	48,187	10.5	111
1/12/2025	9:45:00	7.3	0.798	0	48,196	10.5	116
1/12/2025	10:00:00	7.3	0.775	0	48,208	10.7	113
1/12/2025	11:00:00	7.3	0.756	0	48,223	10.8	111
1/12/2025	11:15:00	7.3	0.756	0	48,235	10.9	113
1/12/2025	12:15:00	7.3	0.782	0	48,252	11.2	116
1/12/2025	12:30:00	7.3	0.737	0	48,263	11.3	117

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/12/2025	14:00:00	7.3	0.000	0	48,278	11.6	114
1/12/2025	14:15:00	7.2	0.816	0	48,279	14.6	257
1/12/2025	14:30:00	7.3	0.862	0	48,292	11.5	115
1/12/2025	14:45:00	7.3	0.911	0	48,305	11.8	116
1/12/2025	15:45:00	7.3	0.862	0	48,308	12.5	255
1/12/2025	16:00:00	7.3	0.873	0	48,322	11.7	113
1/12/2025	16:15:00	7.3	0.843	0	48,335	11.9	263
1/12/2025	17:00:00	7.3	0.824	0	48,342	11.9	261
1/12/2025	17:15:00	7.3	0.832	0	48,355	12.5	266
1/12/2025	18:15:00	7.3	0.813	0	48,365	13	262
1/12/2025	18:30:00	7.3	0.809	0	48,377	12.8	270
1/12/2025	18:45:00	7.3	0.809	0	48,390	13.3	273
1/12/2025	20:15:00	7.3	0.401	0	48,395	13.7	272
1/12/2025	20:30:00	7.3	0.000	0	48,400	12	273
1/12/2025	21:30:00	7.3	0.873	0	48,407	12	268
1/12/2025	21:45:00	7.3	0.881	0	48,420	11.7	267
1/12/2025	22:00:00	7.3	0.450	0	48,431	12.5	266
1/12/2025	22:15:00	7.3	0.851	0	48,442	11.6	119
1/12/2025	23:30:00	7.3	0.854	0	48,444	18.6	257
1/12/2025	23:45:00	7.3	0.824	0	48,456	11.9	119

Table 3. In-Situ Parameters

Date	Time	Temperature °C	DO mg/L	Conductivity SPC-uS/cm	SAL-ppt	pH	ORP (mV)	NTU
01/06/2025	03:56:12PM	10.1	11.21	148.4	0.06	7.87	118.7	1.22
01/07/2025	05:55:56PM	10.1	11.18	209.7	0.10	7.93	144.5	3.53
01/08/2025	04:56:21PM	11.1	9.73	163.2	0.08	7.76	152.3	0.65
01/09/2025	12:26:29PM	11.2	10.23	139.2	0.06	7.95	146.2	0.01
01/10/2025	04:40:10PM	10.0	11.86	124.3	0.06	7.86	128.1	0.13
01/11/2025	03:0:28PM	10.8	11.81	143.4	0.07	8.08	118.5	3.16
01/12/2025	05:40:56PM	12.6	11.19	309.6	0.15	7.77	131.0	0.34

3. Calibration Log:

Table 4. Calibration Log

Date	Unit	pH	Conductivity/Temp.	Salinity	NTU
1/10/2025	YSI	✓	✓	✓	✓
1/10/2025	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)
1/6/2025	0:00:00	7.1	0.000	0	45,358	Closed	12.4	118
1/6/2025	0:15:00	7	0.000	0	45,358	Closed	13.1	118
1/6/2025	0:30:00	7.2	0.824	0	45,368	Open	11.3	119
1/6/2025	0:45:00	7.2	0.000	2.7	45,374	Closed	11.5	118
1/6/2025	1:00:00	7.2	0.000	19.6	45,374	Closed	11.4	117
1/6/2025	1:15:00	7.1	0.000	22	45,374	Closed	11.8	116
1/6/2025	1:30:00	7.2	0.798	0	45,382	Open	11	118
1/6/2025	1:45:00	7.1	0.000	0	45,385	Open	11.5	118
1/6/2025	2:00:00	7.1	0.000	0	45,385	Closed	12.3	118
1/6/2025	2:15:00	7.1	0.000	0	45,385	Closed	13.1	118
1/6/2025	2:30:00	7.2	0.805	2.2	45,393	Open	11.3	119
1/6/2025	2:45:00	7.2	0.813	0	45,405	Open	11.3	118
1/6/2025	3:00:00	7.2	0.786	0	45,417	Open	11.3	119
1/6/2025	3:15:00	7.2	0.000	0	45,426	Closed	11.5	119
1/6/2025	3:30:00	7.1	0.000	0	45,426	Closed	12.2	118
1/6/2025	3:45:00	7.1	0.000	0	45,426	Closed	13	258
1/6/2025	4:00:00	7.1	0.000	0	45,426	Closed	13.2	255
1/6/2025	4:15:00	7.2	0.771	2.5	45,427	Open	12.8	117
1/6/2025	4:30:00	7.2	0.473	19.6	45,437	Closed	11.2	117
1/6/2025	4:45:00	7.3	0.344	50.8	45,437	Closed	11.7	118
1/6/2025	5:00:00	7.2	0.000	28.4	45,437	Closed	11.6	261
1/6/2025	5:15:00	7.3	0.771	0	45,446	Open	11	116
1/6/2025	5:30:00	7.3	0.756	0.3	45,458	Open	11.1	117
1/6/2025	5:45:00	7.3	0.000	0.6	45,467	Open	11.3	117

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
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Data Date Range	**January 6, 2025 to January 12, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 23, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/6/2025	6:00:00	7.2	0.000	0.7	45,467	Closed	12	263
1/6/2025	6:15:00	7.1	0.000	0.3	45,467	Closed	12.6	266
1/6/2025	6:30:00	7.1	0.000	0.3	45,467	Closed	13.4	264
1/6/2025	6:45:00	7.2	0.779	3	45,472	Open	11.3	263
1/6/2025	7:00:00	7.3	0.745	2.4	45,484	Open	11.4	264
1/6/2025	7:15:00	7.3	0.745	2.2	45,495	Open	11.5	264
1/6/2025	7:30:00	7.3	0.745	2.9	45,506	Open	11.5	264
1/6/2025	7:45:00	7.2	0.000	2.4	45,507	Closed	12.3	266
1/6/2025	8:00:00	7.1	0.000	2.3	45,507	Closed	13.2	266
1/6/2025	8:15:00	7.1	0.000	2.2	45,507	Closed	14	268
1/6/2025	8:30:00	7.3	0.764	2.4	45,517	Open	11.3	263
1/6/2025	8:45:00	7.3	0.733	2.1	45,528	Open	11.1	264
1/6/2025	9:00:00	7.3	0.000	1.1	45,538	Closed	11	263
1/6/2025	9:15:00	7.2	0.000	2.1	45,540	Closed	11	263
1/6/2025	9:30:00	7.4	0.174	272.4	45,540	Closed	10.7	111
1/6/2025	9:45:00	7.3	0.748	0	45,549	Open	10.7	110
1/6/2025	10:00:00	7.3	0.745	0	45,560	Open	10.6	111
1/6/2025	10:15:00	7.2	0.000	0	45,564	Closed	11.1	263
1/6/2025	10:30:00	7.1	0.000	0	45,564	Closed	11.3	259
1/6/2025	10:45:00	7.2	0.733	0	45,569	Open	10.5	109
1/6/2025	11:00:00	7.2	0.000	0	45,571	Closed	10.6	109
1/6/2025	11:15:00	7.2	0.730	3	45,571	Closed	11.1	110
1/6/2025	11:30:00	7.2	0.000	0	45,573	Closed	10.7	109
1/6/2025	11:45:00	7.1	0.000	0	45,573	Closed	10.8	264
1/6/2025	12:00:00	7.1	0.752	0	45,573	Closed	12.2	266

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
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Data Date Range	**January 6, 2025 to January 12, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 23, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/6/2025	12:15:00	7.2	0.794	0	45,585	Open	10.5	110
1/6/2025	12:30:00	7.3	0.000	0	45,596	Closed	10.6	110
1/6/2025	12:45:00	7.2	0.000	0	45,596	Closed	10.8	111
1/6/2025	13:00:00	7.1	0.000	0	45,596	Closed	10.9	109
1/6/2025	13:15:00	7.1	0.000	0	45,596	Closed	11	109
1/6/2025	13:30:00	7.1	0.000	0	45,596	Closed	11.2	110
1/6/2025	13:45:00	7.2	0.756	0	45,605	Open	10.7	110
1/6/2025	14:00:00	7.2	0.756	0	45,616	Open	10.8	109
1/6/2025	14:15:00	7.3	0.416	49	45,622	Closed	10.9	111
1/6/2025	14:30:00	7.3	0.000	0	45,622	Closed	10.9	111
1/6/2025	14:45:00	7.2	0.000	0	45,622	Closed	11.2	111
1/6/2025	15:00:00	7.2	0.779	0	45,624	Open	11.2	112
1/6/2025	15:15:00	7.2	0.714	0	45,635	Open	11.1	111
1/6/2025	15:30:00	7.2	0.635	0	45,645	Open	11.1	264
1/6/2025	15:45:00	7.2	0.548	0	45,654	Open	11.2	267
1/6/2025	16:00:00	7.2	0.488	0	45,662	Open	11.6	270
1/6/2025	16:15:00	7.1	0.480	0	45,669	Open	12.4	270
1/6/2025	16:30:00	7.1	0.000	0	45,673	Closed	12.6	269
1/6/2025	16:45:00	7.2	0.771	0	45,674	Open	11.4	275
1/6/2025	17:00:00	7.2	0.000	0	45,684	Closed	11.2	280
1/6/2025	17:15:00	7.1	0.000	0	45,684	Closed	11.3	279
1/6/2025	17:30:00	7.2	0.087	0	45,689	Closed	11.1	280
1/6/2025	17:45:00	7.3	0.518	76.4	45,689	Closed	11	275
1/6/2025	18:00:00	7.3	0.000	37.8	45,689	Closed	11	271
1/6/2025	18:15:00	7.3	0.828	0	45,692	Open	10.9	273

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
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Data Date Range	**January 6, 2025 to January 12, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 23, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/6/2025	18:30:00	7.3	0.000	75.4	45,702	Closed	11	267
1/6/2025	18:45:00	7.3	0.854	73.9	45,702	Closed	10.9	267
1/6/2025	19:00:00	7.3	0.000	0	45,714	Closed	11.1	264
1/6/2025	19:15:00	7.1	0.000	0	45,714	Closed	11.5	263
1/6/2025	19:30:00	7.1	0.000	0	45,714	Closed	11.8	263
1/6/2025	19:45:00	7.1	0.000	0	45,714	Open	12	261
1/6/2025	20:00:00	7.1	0.000	0	45,714	Open	12.5	263
1/6/2025	20:15:00	7	0.000	0	45,714	Open	13.1	264
1/6/2025	20:30:00	7	0.000	0	45,714	Open	13.7	264
1/6/2025	20:45:00	7.2	0.798	0	45,723	Open	11.1	114
1/6/2025	21:00:00	7.1	0.000	0	45,724	Closed	12.3	261
1/6/2025	21:15:00	7.2	0.956	5.5	45,724	Open	11.5	116
1/6/2025	21:30:00	7.2	0.862	0	45,735	Open	11	114
1/6/2025	21:45:00	7.2	0.805	0	45,748	Open	11	113
1/6/2025	22:00:00	7.2	0.786	0	45,760	Open	11	114
1/6/2025	22:15:00	7.2	0.000	0	45,764	Closed	11.4	116
1/6/2025	22:30:00	7.1	0.000	0	45,764	Closed	11.8	117
1/6/2025	22:45:00	7.2	0.699	0	45,771	Open	11.1	117
1/6/2025	23:00:00	7.2	0.000	0	45,778	Open	11.4	116
1/6/2025	23:15:00	7.1	0.000	2.6	45,778	Open	11.9	116
1/6/2025	23:30:00	7.2	0.000	6	45,779	Closed	11.5	116
1/6/2025	23:45:00	7.1	0.000	3.2	45,779	Closed	12.1	118
1/7/2025	0:00:00	7.1	0.000	2	45,779	Closed	12.9	118
1/7/2025	0:15:00	7.2	0.635	0	45,779	Closed	11.1	118
1/7/2025	0:30:00	7.2	0.510	0	45,779	Closed	11.2	118

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/7/2025	0:45:00	7.2	0.446	0	45,783	Open	11.6	116
1/7/2025	1:00:00	7.2	1.070	0	45,793	Open	11.2	114
1/7/2025	1:15:00	7.2	1.126	0	45,810	Open	10	114
1/7/2025	1:30:00	7.2	0.000	0	45,819	Closed	9.7	114
1/7/2025	1:45:00	7.2	0.000	0	45,819	Open	10	113
1/7/2025	2:00:00	7.2	0.941	0	45,827	Open	10.1	113
1/7/2025	2:15:00	7.2	0.000	0	45,835	Open	10.7	113
1/7/2025	2:30:00	7.2	0.000	15.5	45,835	Closed	10.6	113
1/7/2025	2:45:00	7.2	0.964	0	45,846	Open	10.4	114
1/7/2025	3:00:00	7.2	0.881	0	45,860	Open	10.6	116
1/7/2025	3:15:00	7.2	0.000	0	45,870	Closed	10.9	117
1/7/2025	3:30:00	7.1	0.000	0	45,870	Closed	11.6	116
1/7/2025	3:45:00	7.1	0.000	0	45,870	Closed	12.3	118
1/7/2025	4:00:00	7.2	0.673	0	45,878	Open	11	118
1/7/2025	4:15:00	7.2	0.378	0	45,886	Open	12	118
1/7/2025	4:30:00	7.2	0.885	0	45,899	Open	10.9	115
1/7/2025	4:45:00	7.2	0.000	0	45,900	Closed	11.3	117
1/7/2025	5:00:00	7.1	0.000	0	45,900	Closed	11.9	117
1/7/2025	5:15:00	7.2	0.000	0	45,901	Closed	11.4	116
1/7/2025	5:30:00	7.2	0.888	0	45,911	Open	10.7	116
1/7/2025	5:45:00	7.2	0.851	0	45,924	Open	10.6	113
1/7/2025	6:00:00	7.2	0.121	18.9	45,925	Closed	11	113
1/7/2025	6:15:00	7.3	0.000	11	45,925	Closed	10.7	111
1/7/2025	6:30:00	7.2	0.000	10.6	45,925	Closed	11.2	116
1/7/2025	6:45:00	7.2	0.847	0	45,928	Open	10.5	113

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/7/2025	7:00:00	7.2	0.862	0	45,940	Open	10.7	114
1/7/2025	7:15:00	7.2	0.824	0	45,953	Open	10.7	115
1/7/2025	7:30:00	7.3	0.159	0	45,965	Open	10.7	113
1/7/2025	7:45:00	7.2	0.000	0	45,965	Closed	11	264
1/7/2025	8:00:00	7.1	0.000	0	45,965	Closed	11.5	262
1/7/2025	8:15:00	7.2	0.748	0	45,974	Open	10.8	117
1/7/2025	8:30:00	7.2	0.733	0	45,985	Open	10.7	261
1/7/2025	8:45:00	7.2	0.684	0	45,996	Open	10.6	262
1/7/2025	9:00:00	7.2	0.000	0	45,998	Closed	10.9	263
1/7/2025	9:15:00	7.1	0.000	0	45,998	Closed	11.5	265
1/7/2025	9:30:00	7.3	0.200	41.8	45,998	Closed	10.7	115
1/7/2025	9:45:00	7.2	0.737	0	46,000	Open	10.6	265
1/7/2025	10:00:00	7.2	0.703	0	46,011	Open	10.8	262
1/7/2025	10:15:00	7.1	0.000	0	46,013	Closed	11	262
1/7/2025	10:30:00	7.1	0.000	0	46,013	Closed	11.1	263
1/7/2025	10:45:00	7.1	0.000	0	46,013	Closed	11.2	261
1/7/2025	11:00:00	7.1	0.692	0	46,018	Open	10.7	111
1/7/2025	11:15:00	7.1	0.669	0	46,029	Open	10.9	111
1/7/2025	11:30:00	7.1	0.000	0	46,033	Closed	11.1	111
1/7/2025	11:45:00	7.1	0.000	0	46,033	Closed	11.1	262
1/7/2025	12:00:00	7.1	0.605	0	46,038	Open	10.7	112
1/7/2025	12:15:00	7.1	0.609	0	46,048	Open	11	111
1/7/2025	12:30:00	7.1	0.000	0	46,051	Closed	11.2	112
1/7/2025	12:45:00	7.1	0.000	0	46,051	Closed	11.3	113
1/7/2025	13:00:00	7.1	0.578	0	46,053	Open	11.4	115

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/7/2025	13:15:00	7.2	0.575	0	46,062	Open	10.9	114
1/7/2025	13:30:00	7.2	0.658	0	46,071	Open	10.9	113
1/7/2025	13:45:00	7.1	0.000	0	46,080	Closed	11.1	111
1/7/2025	14:00:00	7.3	1.005	162.2	46,080	Closed	10.6	111
1/7/2025	14:15:00	7.2	0.000	0	46,080	Closed	10.8	111
1/7/2025	14:30:00	7.2	0.000	0	46,081	Closed	10.7	111
1/7/2025	14:45:00	7.1	0.000	0	46,083	Closed	10.8	111
1/7/2025	15:00:00	7.2	0.971	0	46,087	Open	10.7	114
1/7/2025	15:15:00	7.2	0.990	0	46,102	Open	10.7	112
1/7/2025	15:30:00	7.2	0.000	0	46,113	Closed	10.7	111
1/7/2025	15:45:00	7.1	0.000	0	46,113	Closed	10.9	109
1/7/2025	16:00:00	7.1	0.934	0	46,114	Open	11	109
1/7/2025	16:15:00	7.2	0.979	0	46,128	Open	10.6	109
1/7/2025	16:30:00	7.2	0.949	0	46,142	Open	10.6	109
1/7/2025	16:45:00	7.3	0.178	118.8	46,148	Closed	10.7	109
1/7/2025	17:00:00	7.3	0.000	63.6	46,148	Closed	10.7	109
1/7/2025	17:15:00	7.2	0.000	3.1	46,148	Closed	10.7	108
1/7/2025	17:30:00	7.1	0.873	0	46,148	Closed	10.6	109
1/7/2025	17:45:00	7.2	0.869	0	46,160	Open	10.7	109
1/7/2025	18:00:00	7.1	0.854	0	46,173	Open	10.9	108
1/7/2025	18:15:00	7.1	0.752	0	46,185	Open	10.9	108
1/7/2025	18:30:00	7	4.336	58.4	46,185	Closed	11	108
1/7/2025	18:45:00	7.3	0.287	105.2	46,186	Closed	10.7	108
1/7/2025	19:00:00	7.2	0.741	0	46,191	Open	10.7	108
1/7/2025	19:15:00	7.1	0.000	0.1	46,192	Open	10.7	108

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 6, 2025 to January 12, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 23, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/7/2025	19:30:00	7.1	0.000	0	46,192	Open	10.6	108
1/7/2025	19:45:00	7	0.000	0	46,192	Open	10.7	108
1/7/2025	20:00:00	7	0.665	0	46,195	Open	10.9	108
1/7/2025	20:15:00	7	0.541	0	46,204	Open	11	108
1/7/2025	20:30:00	7	0.408	0	46,211	Open	11.1	109
1/7/2025	20:45:00	7	0.000	0	46,213	Open	11.2	108
1/7/2025	21:00:00	7	0.000	0	46,213	Open	11.1	109
1/7/2025	21:15:00	7	0.000	0	46,213	Open	11	108
1/7/2025	21:30:00	7	0.820	0	46,214	Open	11	108
1/7/2025	21:45:00	7	0.000	0	46,219	Closed	10.8	108
1/7/2025	22:00:00	7	0.000	0	46,219	Closed	10.7	106
1/7/2025	22:15:00	7.1	0.000	0	46,220	Open	10.5	106
1/7/2025	22:30:00	7.1	0.843	4.7	46,222	Open	10.3	108
1/7/2025	22:45:00	7.1	0.000	15.5	46,229	Closed	10.2	108
1/7/2025	23:00:00	7.1	0.578	21.4	46,230	Closed	10.5	108
1/7/2025	23:15:00	7.2	0.873	0	46,240	Open	10.4	108
1/7/2025	23:30:00	7.2	0.869	0	46,253	Open	10.5	108
1/7/2025	23:45:00	7.2	0.798	0	46,266	Open	10.5	108
1/8/2025	0:00:00	7.2	0.786	0	46,273	Open	10.4	108
1/8/2025	0:15:00	7.2	0.000	0	46,279	Closed	9.8	110
1/8/2025	0:30:00	7.1	0.000	0	46,279	Closed	10.4	114
1/8/2025	0:45:00	7.2	0.000	0	46,280	Closed	10.1	116
1/8/2025	1:00:00	7.2	0.707	0	46,283	Open	9.9	116
1/8/2025	1:15:00	7.2	0.000	0	46,292	Closed	10.8	116
1/8/2025	1:30:00	7.1	0.000	16.6	46,292	Closed	11.3	116

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
Title	**WoodFibre Weekly Water Discharge Report**	**Revision:**	**0**
Data Date Range	**January 6, 2025 to January 12, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 23, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/8/2025	1:45:00	7.2	0.692	0	46,292	Closed	10.8	115
1/8/2025	2:00:00	7.1	0.000	0	46,292	Closed	11	114
1/8/2025	2:15:00	7.2	0.639	0	46,300	Open	10.9	116
1/8/2025	2:30:00	7.1	0.582	0	46,310	Open	12.2	116
1/8/2025	2:45:00	7.1	0.000	0	46,316	Closed	12.8	118
1/8/2025	3:00:00	7.1	0.000	0	46,316	Closed	12.7	116
1/8/2025	3:15:00	7.2	1.005	0	46,327	Open	11.1	117
1/8/2025	3:30:00	7.1	0.000	0	46,330	Open	11.5	118
1/8/2025	3:45:00	7.1	0.000	0	46,330	Closed	12.2	118
1/8/2025	4:00:00	7.2	0.000	0.2	46,334	Closed	11.3	118
1/8/2025	4:15:00	7.1	0.000	0.2	46,334	Closed	12	117
1/8/2025	4:30:00	7.2	0.790	0	46,343	Open	11.1	116
1/8/2025	4:45:00	7.2	0.703	0	46,354	Open	11.2	116
1/8/2025	5:00:00	7.2	0.832	0	46,366	Open	11.6	117
1/8/2025	5:15:00	7.1	0.000	0	46,373	Closed	12.5	262
1/8/2025	5:30:00	7.1	0.000	0	46,373	Closed	13.2	263
1/8/2025	5:45:00	7.1	0.000	0	46,373	Closed	13.7	259
1/8/2025	6:00:00	7.1	0.737	0	46,376	Open	11.8	258
1/8/2025	6:15:00	7.1	0.000	0	46,386	Closed	12.2	261
1/8/2025	6:30:00	7.2	0.140	63	46,386	Closed	12.2	266
1/8/2025	6:45:00	7.3	0.000	19.7	46,386	Closed	11	113
1/8/2025	7:00:00	7.2	0.934	0	46,396	Open	10.7	113
1/8/2025	7:15:00	7.2	0.000	0	46,397	Closed	11	266
1/8/2025	7:30:00	7.1	0.000	0	46,397	Closed	11.3	266
1/8/2025	7:45:00	7.2	0.000	0	46,406	Closed	10.7	111

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/8/2025	8:00:00	7.2	0.915	0	46,412	Open	10.6	111
1/8/2025	8:15:00	7.2	0.915	0	46,426	Open	10.6	111
1/8/2025	8:30:00	7.2	0.000	0	46,432	Closed	10.7	111
1/8/2025	8:45:00	7.1	0.000	0	46,432	Closed	10.9	265
1/8/2025	9:00:00	7.2	0.873	0	46,435	Open	10.6	113
1/8/2025	9:15:00	7.2	0.824	0	46,448	Open	10.6	111
1/8/2025	9:30:00	7.1	0.000	0	46,449	Closed	10.9	114
1/8/2025	9:45:00	7.1	0.000	0	46,449	Closed	11.8	263
1/8/2025	10:00:00	7.1	0.771	0	46,450	Open	11.5	115
1/8/2025	10:15:00	7.2	0.000	0	46,457	Closed	11.4	113
1/8/2025	10:30:00	7.1	0.000	0	46,457	Closed	11.5	264
1/8/2025	10:45:00	7.2	0.832	0	46,467	Open	10.6	112
1/8/2025	11:00:00	7.1	0.000	0	46,467	Closed	11.3	264
1/8/2025	11:15:00	7.1	0.000	0	46,467	Closed	11.7	262
1/8/2025	11:30:00	7.2	0.888	0	46,477	Open	10.7	111
1/8/2025	11:45:00	7.1	0.835	0	46,490	Open	11.1	113
1/8/2025	12:00:00	7.2	0.125	10.6	46,493	Closed	10.5	112
1/8/2025	12:15:00	7.1	0.000	0	46,494	Closed	10.7	114
1/8/2025	12:30:00	7.1	0.000	0	46,494	Closed	11	263
1/8/2025	12:45:00	7	0.000	0	46,494	Closed	11.5	263
1/8/2025	13:00:00	7	0.000	0	46,494	Closed	12.3	262
1/8/2025	13:15:00	7.1	0.832	4.1	46,494	Open	12.4	259
1/8/2025	13:30:00	7.1	0.816	0	46,507	Open	10.9	261
1/8/2025	13:45:00	7.1	0.684	0	46,518	Open	11.2	264
1/8/2025	14:00:00	7.1	0.575	0	46,528	Open	14.5	269

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
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Data Date Range	**January 6, 2025 to January 12, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 23, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/8/2025	14:15:00	7.1	0.257	6	46,532	Closed	10.8	267
1/8/2025	14:30:00	7.1	0.000	7.7	46,532	Closed	10.9	268
1/8/2025	14:45:00	7	0.000	6.3	46,532	Closed	11.2	271
1/8/2025	15:00:00	7.1	0.926	0	46,536	Open	10.8	269
1/8/2025	15:15:00	7.3	0.000	0	46,545	Closed	11.1	268
1/8/2025	15:30:00	7.1	0.000	0	46,545	Closed	11.6	268
1/8/2025	15:45:00	7.1	0.000	0	46,545	Open	12.1	264
1/8/2025	16:00:00	7.1	0.000	0	46,545	Closed	13.9	272
1/8/2025	16:15:00	7.1	0.892	0	46,553	Open	11.1	267
1/8/2025	16:30:00	7.2	0.885	0	46,567	Open	11.1	271
1/8/2025	16:45:00	7.2	0.888	0	46,580	Open	11.2	271
1/8/2025	17:00:00	7.3	0.000	0	46,584	Closed	12.5	274
1/8/2025	17:15:00	7.3	0.000	0	46,586	Closed	11.6	272
1/8/2025	17:30:00	7.3	0.000	0	46,586	Closed	12	273
1/8/2025	17:45:00	7.2	0.299	11	46,587	Closed	11.2	271
1/8/2025	18:00:00	7.2	0.000	0	46,588	Closed	11.3	276
1/8/2025	18:15:00	7.2	0.862	0	46,589	Open	11.2	274
1/8/2025	18:30:00	7.2	0.862	0	46,602	Open	11.3	276
1/8/2025	18:45:00	7.2	0.835	0	46,615	Open	11.3	274
1/8/2025	19:00:00	7.3	0.000	0	46,624	Open	11.5	273
1/8/2025	19:15:00	7.2	0.000	0	46,625	Closed	11.6	272
1/8/2025	19:30:00	7.3	0.000	0	46,625	Open	11.9	272
1/8/2025	19:45:00	7.2	0.000	0	46,625	Open	12.5	271
1/8/2025	20:00:00	7.2	0.646	0	46,634	Open	11.7	269
1/8/2025	20:15:00	7.2	0.571	0	46,644	Open	11.9	269

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
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Data Date Range	**January 6, 2025 to January 12, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 23, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/8/2025	20:30:00	7.2	0.469	0	46,652	Open	12	268
1/8/2025	20:45:00	7.3	0.000	0	46,653	Open	12.3	268
1/8/2025	21:00:00	7.2	0.000	0	46,653	Open	12.6	266
1/8/2025	21:15:00	7.2	0.000	0	46,653	Closed	12.8	266
1/8/2025	21:30:00	7.2	0.000	0	46,654	Closed	11.9	269
1/8/2025	21:45:00	7.2	0.790	0	46,654	Open	12.5	268
1/8/2025	22:00:00	7.3	0.000	0	46,662	Open	11.2	264
1/8/2025	22:15:00	7.3	0.000	13.4	46,662	Closed	11.5	262
1/8/2025	22:30:00	7.3	0.000	8.6	46,662	Closed	11.7	262
1/8/2025	22:45:00	7.2	0.000	6.9	46,662	Closed	11.8	262
1/8/2025	23:00:00	7.2	0.000	5.4	46,662	Closed	11.9	259
1/8/2025	23:15:00	7.2	0.000	7.1	46,662	Closed	11.9	259
1/8/2025	23:30:00	7.2	0.869	1.2	46,662	Closed	11.9	259
1/8/2025	23:45:00	7.2	0.000	0	46,663	Closed	11.3	263
1/9/2025	0:00:00	7.2	0.930	0	46,668	Open	11	264
1/9/2025	0:15:00	7.2	0.835	0	46,682	Open	11.1	112
1/9/2025	0:30:00	7.2	0.000	0	46,692	Closed	11.2	113
1/9/2025	0:45:00	7.2	0.000	0	46,692	Closed	11.5	261
1/9/2025	1:00:00	7.1	0.000	0	46,692	Closed	11.8	258
1/9/2025	1:15:00	7.2	0.578	0	46,697	Open	12	261
1/9/2025	1:30:00	7.2	0.847	0	46,701	Open	11.6	116
1/9/2025	1:45:00	7.2	0.813	0.8	46,714	Open	11.6	263
1/9/2025	2:00:00	7.3	0.000	6.2	46,724	Closed	11.8	268
1/9/2025	2:15:00	7.3	0.000	6.2	46,724	Closed	12.4	269
1/9/2025	2:30:00	7.2	0.000	6	46,724	Closed	13.1	268

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 6, 2025 to January 12, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 23, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/9/2025	2:45:00	7.2	0.000	5.8	46,724	Closed	13.8	269
1/9/2025	3:00:00	7.2	0.000	5.8	46,724	Closed	14.4	268
1/9/2025	3:15:00	7.3	0.839	7	46,734	Open	11.9	272
1/9/2025	3:30:00	7.4	0.866	46.4	46,735	Closed	12.5	274
1/9/2025	3:45:00	7.5	0.692	54.8	46,735	Closed	12.6	114
1/9/2025	4:00:00	7.4	0.000	54.3	46,735	Closed	12.9	113
1/9/2025	4:15:00	7.4	0.677	44.2	46,735	Closed	13.3	115
1/9/2025	4:30:00	7.3	0.677	0	46,743	Open	11.2	268
1/9/2025	4:45:00	7.3	0.809	0	46,753	Open	11.1	265
1/9/2025	5:00:00	7.3	0.000	0	46,763	Closed	11.1	264
1/9/2025	5:15:00	7.3	0.000	0	46,763	Closed	11.6	265
1/9/2025	5:30:00	7.2	0.000	0	46,763	Closed	13.7	274
1/9/2025	5:45:00	7.3	0.760	0	46,773	Open	11.6	268
1/9/2025	6:00:00	7.3	0.382	0	46,785	Open	11.9	269
1/9/2025	6:15:00	7.4	0.000	15.8	46,785	Closed	13	269
1/9/2025	6:30:00	7.3	0.000	0	46,786	Closed	12.1	270
1/9/2025	6:45:00	7.3	0.726	0	46,789	Open	11.8	269
1/9/2025	7:00:00	7.3	0.851	0	46,802	Open	11.5	264
1/9/2025	7:15:00	7.3	0.782	0	46,814	Open	11.5	267
1/9/2025	7:30:00	7.3	0.839	0	46,826	Open	11.4	271
1/9/2025	7:45:00	7.3	0.000	0	46,827	Closed	11.6	269
1/9/2025	8:00:00	7.2	0.000	0	46,827	Closed	11.8	269
1/9/2025	8:15:00	7.2	0.782	0	46,829	Open	11.4	272
1/9/2025	8:30:00	7.3	0.673	0	46,841	Open	11.5	273
1/9/2025	8:45:00	7.2	0.495	0	46,849	Open	11.6	275

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 6, 2025 to January 12, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 23, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/9/2025	9:00:00	7.2	0.000	0	46,853	Closed	11.8	277
1/9/2025	9:15:00	7.3	0.000	0	46,859	Closed	11.4	276
1/9/2025	9:30:00	7.3	0.000	0	46,866	Closed	11.4	277
1/9/2025	9:45:00	7.2	0.000	0	46,870	Closed	11.4	276
1/9/2025	10:00:00	7.2	0.000	0	46,870	Closed	11.7	269
1/9/2025	10:15:00	7.2	0.000	0	46,870	Closed	12	270
1/9/2025	10:30:00	7.2	0.854	0	46,880	Open	11.4	272
1/9/2025	10:45:00	7.2	0.843	0	46,883	Open	11.4	269
1/9/2025	11:00:00	7.2	0.144	22.4	46,887	Closed	11.3	265
1/9/2025	11:15:00	7.2	0.000	13.5	46,887	Closed	11.5	268
1/9/2025	11:30:00	7.2	0.000	0	46,888	Closed	11.4	267
1/9/2025	11:45:00	7.2	0.786	0	46,891	Open	11.5	263
1/9/2025	12:00:00	7.2	0.469	0	46,901	Open	11.7	266
1/9/2025	12:15:00	7.2	0.756	0	46,908	Open	11.4	267
1/9/2025	12:30:00	7.2	0.775	0	46,920	Open	11.5	269
1/9/2025	12:45:00	7.2	0.677	0	46,930	Open	11.5	272
1/9/2025	13:00:00	7.2	0.748	0	46,936	Open	11.8	273
1/9/2025	13:15:00	7.3	0.000	0	46,940	Closed	12.3	271
1/9/2025	13:30:00	7.3	0.000	53.6	46,940	Closed	11.6	272
1/9/2025	13:45:00	7.2	0.000	26	46,940	Closed	11.9	270
1/9/2025	14:00:00	7.2	0.809	0	46,948	Open	11.6	271
1/9/2025	14:15:00	7.2	0.000	0	46,958	Closed	11.7	271
1/9/2025	14:30:00	7.2	0.756	0	46,963	Open	11.7	271
1/9/2025	14:45:00	7.2	0.556	0	46,973	Open	11.7	272
1/9/2025	15:00:00	7.2	0.000	0	46,974	Closed	11.8	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 6, 2025 to January 12, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 23, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/9/2025	15:15:00	7.2	0.752	0	46,984	Open	11.6	273
1/9/2025	15:30:00	7.3	0.106	49.1	46,988	Closed	11.7	273
1/9/2025	15:45:00	7.4	0.000	36.5	46,988	Closed	11.6	271
1/9/2025	16:00:00	7.2	0.000	0	46,989	Closed	11.9	272
1/9/2025	16:15:00	7.1	0.000	0	46,989	Closed	12	272
1/9/2025	16:30:00	7.1	0.000	0	46,989	Closed	12.1	271
1/9/2025	16:45:00	7.2	0.764	0	46,991	Open	11.5	273
1/9/2025	17:00:00	7.2	0.733	0	47,003	Open	11.5	276
1/9/2025	17:15:00	7.2	0.771	0	47,013	Open	11.6	276
1/9/2025	17:30:00	7.2	0.578	0	47,023	Open	11.6	276
1/9/2025	17:45:00	7.2	0.000	0	47,027	Closed	11.8	276
1/9/2025	18:00:00	7.2	0.775	0	47,031	Open	11.7	276
1/9/2025	18:15:00	7.2	0.760	0	47,043	Open	11.6	274
1/9/2025	18:30:00	7.4	0.178	197.6	47,049	Closed	11.6	273
1/9/2025	18:45:00	7.5	0.000	60.5	47,049	Closed	11.6	274
1/9/2025	19:00:00	7.2	0.752	0.1	47,058	Open	11.6	273
1/9/2025	19:15:00	7.3	0.000	0	47,063	Closed	11.7	272
1/9/2025	19:30:00	7.2	0.000	0	47,063	Closed	11.9	271
1/9/2025	19:45:00	7.1	0.000	0	47,063	Closed	12.5	270
1/9/2025	20:00:00	7.1	0.000	0	47,063	Closed	13.1	271
1/9/2025	20:15:00	7.1	0.000	0	47,063	Closed	13.7	271
1/9/2025	20:30:00	7.2	0.775	0	47,070	Open	11.9	268
1/9/2025	20:45:00	7.2	0.767	0	47,081	Open	11.9	268
1/9/2025	21:00:00	7.3	0.000	0	47,086	Closed	12.1	268
1/9/2025	21:15:00	7.2	0.000	0	47,086	Closed	12.6	265

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 6, 2025 to January 12, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 23, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/9/2025	21:30:00	7.1	0.000	0	47,086	Closed	13.1	267
1/9/2025	21:45:00	7.1	0.000	0	47,086	Closed	13.3	268
1/9/2025	22:00:00	7.1	0.000	0	47,086	Closed	13.4	267
1/9/2025	22:15:00	7.2	0.752	0	47,091	Open	11.8	269
1/9/2025	22:30:00	7.2	0.737	0	47,102	Open	11.7	261
1/9/2025	22:45:00	7.5	0.000	47.8	47,103	Closed	11.9	114
1/9/2025	23:00:00	7.2	0.000	3.1	47,104	Closed	12	261
1/9/2025	23:15:00	7.2	0.000	0.8	47,104	Closed	12.2	260
1/9/2025	23:30:00	7.1	0.000	1.9	47,104	Closed	12.3	262
1/9/2025	23:45:00	7.3	0.760	3.2	47,112	Open	11.6	113
1/10/2025	0:00:00	7.3	0.703	3.7	47,115	Open	11.7	114
1/10/2025	0:15:00	7.3	0.703	1.7	47,126	Open	12	113
1/10/2025	0:30:00	7.2	0.609	0.3	47,135	Open	12.3	113
1/10/2025	0:45:00	7.2	0.000	0.2	47,140	Closed	12.6	113
1/10/2025	1:00:00	7.2	0.000	0.8	47,140	Closed	12.7	111
1/10/2025	1:15:00	7.2	0.000	1.1	47,140	Closed	13.8	254
1/10/2025	1:30:00	7.3	0.862	0	47,146	Open	11.7	114
1/10/2025	1:45:00	7.3	0.851	0	47,158	Open	11.7	116
1/10/2025	2:00:00	7.3	0.000	0	47,170	Closed	11.9	117
1/10/2025	2:15:00	7.3	0.000	0	47,170	Closed	12.5	116
1/10/2025	2:30:00	7.3	0.000	0	47,170	Closed	12.7	114
1/10/2025	2:45:00	7.3	0.801	0	47,172	Open	11.8	114
1/10/2025	3:00:00	7.5	0.522	32.7	47,176	Closed	11.6	114
1/10/2025	3:15:00	7.6	0.348	23.4	47,176	Closed	11.4	113
1/10/2025	3:30:00	7.3	0.677	0	47,186	Open	11.4	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 6, 2025 to January 12, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 23, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/10/2025	3:45:00	7.3	0.662	0	47,196	Open	11.5	113
1/10/2025	4:00:00	7.2	0.673	0	47,206	Open	13	258
1/10/2025	4:15:00	7.2	0.000	0	47,208	Closed	13.7	253
1/10/2025	4:30:00	7.2	0.000	0	47,208	Closed	14.3	256
1/10/2025	4:45:00	7.2	0.000	0	47,208	Closed	14.7	256
1/10/2025	5:00:00	7.3	0.862	2.3	47,213	Open	11.8	118
1/10/2025	5:15:00	7.3	0.869	0	47,226	Open	11.6	115
1/10/2025	5:30:00	7.3	0.000	0	47,228	Closed	11.9	115
1/10/2025	5:45:00	7.3	0.000	0	47,228	Closed	12.2	258
1/10/2025	6:00:00	7.2	0.000	0	47,228	Closed	12.4	257
1/10/2025	6:15:00	7.2	0.000	0	47,228	Closed	12.5	256
1/10/2025	6:30:00	7.3	0.000	0	47,237	Closed	11.2	111
1/10/2025	6:45:00	7.3	0.582	0	47,239	Open	11.2	111
1/10/2025	7:00:00	7.3	0.624	0	47,248	Open	11.3	266
1/10/2025	7:15:00	7.3	0.590	0	47,257	Open	11.4	263
1/10/2025	7:30:00	7.3	0.582	0	47,266	Open	11.4	264
1/10/2025	7:45:00	7.3	0.000	0	47,267	Closed	11.7	263
1/10/2025	8:00:00	7.3	0.677	0	47,273	Open	11.6	118
1/10/2025	8:15:00	7.3	0.639	0	47,283	Open	11.9	117
1/10/2025	8:30:00	7.4	0.658	0	47,293	Open	12.1	259
1/10/2025	8:45:00	7.3	0.620	0	47,303	Open	12.4	259
1/10/2025	9:00:00	7.2	0.627	0	47,312	Open	12.7	259
1/10/2025	9:15:00	7.2	0.000	0	47,315	Closed	12.9	261
1/10/2025	9:30:00	7.3	0.639	0	47,319	Open	13.4	257
1/10/2025	9:45:00	7.3	0.650	0	47,328	Open	13.5	261

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 6, 2025 to January 12, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 23, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/10/2025	10:00:00	7.5	0.643	69.3	47,332	Closed	11.7	113
1/10/2025	10:15:00	2.7	0.000	0	47,332	Closed	12.5	113
1/10/2025	10:30:00	6.9	0.677	3.7	47,335	Open	12	114
1/10/2025	10:45:00	7.1	0.673	0	47,345	Open	11.7	113
1/10/2025	11:00:00	7.3	0.000	0	47,349	Open	11.9	116
1/10/2025	11:15:00	7.2	0.662	0	47,351	Open	12	116
1/10/2025	11:30:00	7.2	0.646	0	47,361	Open	12	118
1/10/2025	11:45:00	7.3	0.000	0	47,362	Open	13.3	252
1/10/2025	12:00:00	7.3	0.677	0	47,365	Open	12.1	117
1/10/2025	12:15:00	7.3	0.000	0	47,372	Closed	12.4	118
1/10/2025	12:30:00	7.3	0.654	0	47,377	Open	12.2	118
1/10/2025	12:45:00	7.3	0.631	0	47,386	Open	12.9	116
1/10/2025	13:00:00	7.3	0.000	0	47,390	Closed	13.6	256
1/10/2025	13:15:00	7.2	0.578	4.7	47,390	Open	14.7	259
1/10/2025	13:30:00	7.3	0.605	0	47,399	Open	12.3	118
1/10/2025	13:45:00	7.4	0.265	62.7	47,406	Closed	12	116
1/10/2025	14:00:00	7.5	0.000	50.5	47,406	Closed	11.7	263
1/10/2025	14:15:00	7.5	0.000	37.9	47,406	Closed	12.1	264
1/10/2025	14:30:00	7.3	0.000	0	47,414	Closed	11.8	264
1/10/2025	14:45:00	7.3	0.000	0	47,414	Closed	12.4	265
1/10/2025	15:00:00	7.3	0.805	0	47,419	Open	11.8	264
1/10/2025	15:15:00	7.3	0.816	0	47,431	Open	11.8	263
1/10/2025	15:30:00	7.3	0.000	0	47,441	Closed	11.7	262
1/10/2025	15:45:00	7.3	0.000	0	47,441	Closed	12.6	268
1/10/2025	16:00:00	7.3	0.000	0	47,441	Closed	12.8	265

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 6, 2025 to January 12, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 23, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/10/2025	16:15:00	7.3	0.000	0	47,441	Closed	14.2	268
1/10/2025	16:30:00	7.2	0.771	19.1	47,441	Open	13.2	262
1/10/2025	16:45:00	7.3	0.696	0	47,452	Open	11.5	266
1/10/2025	17:00:00	7.3	0.684	0	47,463	Open	11.4	265
1/10/2025	17:15:00	7.3	0.000	0	47,471	Closed	11.5	264
1/10/2025	17:30:00	7.5	0.000	43.1	47,471	Closed	11.3	110
1/10/2025	17:45:00	7.5	0.000	18.7	47,471	Closed	11.4	259
1/10/2025	18:00:00	7.3	0.707	0	47,479	Open	11.1	109
1/10/2025	18:15:00	7.3	0.692	0	47,489	Open	11.1	109
1/10/2025	18:30:00	7.3	0.000	0	47,493	Closed	11.2	109
1/10/2025	18:45:00	7.2	0.000	0	47,493	Closed	11.4	264
1/10/2025	19:00:00	7.3	0.677	0	47,498	Open	11.1	110
1/10/2025	19:15:00	7.3	0.733	0	47,509	Open	11.1	110
1/10/2025	19:30:00	7.3	0.000	0	47,513	Closed	11.2	264
1/10/2025	19:45:00	7.3	0.000	0	47,513	Closed	11.4	264
1/10/2025	20:00:00	7.2	0.000	0	47,513	Closed	11.6	263
1/10/2025	20:15:00	7.3	0.703	0	47,521	Open	11.1	264
1/10/2025	20:30:00	7.3	0.707	0	47,532	Open	11.1	110
1/10/2025	20:45:00	7.3	0.726	0	47,534	Closed	11.1	110
1/10/2025	21:00:00	7.3	0.000	0	47,534	Closed	11.1	112
1/10/2025	21:15:00	7.3	0.000	0	47,534	Closed	11.7	117
1/10/2025	21:30:00	7.2	0.000	0	47,534	Closed	12.3	257
1/10/2025	21:45:00	7.3	0.733	0	47,543	Open	11.5	115
1/10/2025	22:00:00	7.3	0.000	0	47,549	Open	11.6	114
1/10/2025	22:15:00	7.4	0.000	0.8	47,549	Closed	12	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 6, 2025 to January 12, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 23, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/10/2025	22:30:00	7.4	0.000	0.7	47,549	Closed	12.1	111
1/10/2025	22:45:00	7.3	0.779	0	47,556	Open	11.2	111
1/10/2025	23:00:00	7.3	0.752	0	47,567	Open	11.3	113
1/10/2025	23:15:00	7.3	0.741	0	47,579	Open	11.5	113
1/10/2025	23:30:00	7.3	0.000	0	47,583	Closed	12.6	115
1/10/2025	23:45:00	7.3	0.000	0	47,588	Closed	11.5	113
1/11/2025	0:00:00	7.3	0.000	0	47,588	Closed	12	116
1/11/2025	0:15:00	7.2	0.000	0	47,588	Closed	12.6	117
1/11/2025	0:30:00	7.2	0.000	0	47,588	Closed	13.2	118
1/11/2025	0:45:00	7.3	0.881	0	47,595	Open	11.5	118
1/11/2025	1:00:00	7.3	0.000	0	47,601	Closed	11.7	113
1/11/2025	1:15:00	7.3	0.000	0	47,601	Closed	11.8	113
1/11/2025	1:30:00	7.3	0.571	0	47,603	Open	11.3	112
1/11/2025	1:45:00	7.3	0.000	0	47,604	Closed	11.2	114
1/11/2025	2:00:00	7.3	0.000	0	47,604	Closed	11.6	116
1/11/2025	2:15:00	7.3	0.851	0	47,614	Open	11.4	117
1/11/2025	2:30:00	7.3	0.722	0	47,626	Open	11.7	116
1/11/2025	2:45:00	7.3	0.000	0	47,632	Closed	12.1	116
1/11/2025	3:00:00	7.3	0.000	0	47,632	Closed	12.7	117
1/11/2025	3:15:00	7.3	0.000	0	47,632	Closed	13.4	118
1/11/2025	3:30:00	7.3	0.748	0	47,638	Open	11.7	118
1/11/2025	3:45:00	7.3	0.722	0	47,648	Open	11.7	118
1/11/2025	4:00:00	7.3	0.684	4.5	47,659	Open	11.8	118
1/11/2025	4:15:00	7.3	0.775	0	47,666	Open	11.7	118
1/11/2025	4:30:00	7.4	0.000	0	47,676	Closed	11.6	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 6, 2025 to January 12, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 23, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/11/2025	4:45:00	7.3	0.730	0	47,683	Open	11.4	115
1/11/2025	5:00:00	7.4	0.000	0	47,685	Closed	11.6	113
1/11/2025	5:15:00	7.3	0.000	0	47,685	Closed	11.8	111
1/11/2025	5:30:00	7.3	0.000	0	47,685	Closed	11.9	112
1/11/2025	5:45:00	7.2	0.000	0	47,685	Closed	12.1	111
1/11/2025	6:00:00	7.3	0.000	0	47,689	Open	11	113
1/11/2025	6:15:00	7.3	0.862	0	47,696	Open	11	113
1/11/2025	6:30:00	7.3	0.000	0	47,697	Closed	11.2	114
1/11/2025	6:45:00	7.3	0.000	0	47,697	Closed	11.6	114
1/11/2025	7:00:00	7.3	0.851	0	47,699	Open	11.5	116
1/11/2025	7:15:00	7.3	0.851	0	47,711	Open	11	114
1/11/2025	7:30:00	7.3	0.726	0	47,723	Open	11.2	114
1/11/2025	7:45:00	7.3	0.665	0	47,733	Open	11.8	116
1/11/2025	8:00:00	7.3	0.662	0	47,743	Open	12.5	118
1/11/2025	8:15:00	7.3	0.665	0	47,751	Open	13	116
1/11/2025	8:30:00	7.4	0.000	0	47,752	Closed	12	114
1/11/2025	8:45:00	7.3	0.000	0	47,752	Closed	12.1	112
1/11/2025	9:00:00	7.2	0.684	0	47,757	Open	11.4	112
1/11/2025	9:15:00	7.3	0.677	0	47,768	Open	11.5	111
1/11/2025	9:30:00	7.3	0.665	0	47,778	Open	11.7	111
1/11/2025	9:45:00	7.4	0.662	26	47,780	Closed	10.9	111
1/11/2025	10:00:00	7.3	0.000	0	47,780	Closed	11.1	112
1/11/2025	10:15:00	7.4	0.000	0	47,780	Closed	11.4	112
1/11/2025	10:30:00	7.3	0.000	0	47,780	Closed	11.6	111
1/11/2025	10:45:00	7.3	0.662	0	47,783	Open	11	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 6, 2025 to January 12, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 23, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/11/2025	11:00:00	7.3	0.631	0	47,792	Open	11.1	113
1/11/2025	11:15:00	7.3	0.620	0	47,802	Open	11.4	111
1/11/2025	11:30:00	7.3	0.000	0	47,809	Closed	11.5	111
1/11/2025	11:45:00	7.2	0.601	0	47,813	Open	11.2	112
1/11/2025	12:00:00	7.3	0.586	0	47,822	Open	11.5	111
1/11/2025	12:15:00	7.2	0.000	0	47,825	Closed	12.3	113
1/11/2025	12:30:00	7.3	0.782	0	47,831	Open	10.9	114
1/11/2025	12:45:00	7.3	0.000	0	47,835	Closed	11.3	116
1/11/2025	13:00:00	7.3	0.000	0	47,835	Closed	11.5	113
1/11/2025	13:15:00	7.4	0.990	31	47,835	Closed	10.7	111
1/11/2025	13:30:00	7.3	0.000	0	47,836	Closed	10.9	113
1/11/2025	13:45:00	7.3	0.000	0	47,836	Closed	11.2	114
1/11/2025	14:00:00	7.3	0.847	0	47,842	Open	10.7	113
1/11/2025	14:15:00	7.3	0.782	0	47,854	Open	10.8	113
1/11/2025	14:30:00	7.3	0.760	0	47,865	Open	10.9	113
1/11/2025	14:45:00	7.3	0.627	0	47,876	Open	11.1	111
1/11/2025	15:00:00	7.3	0.469	0	47,881	Open	11.4	112
1/11/2025	15:15:00	7.3	0.544	0	47,884	Open	11.8	112
1/11/2025	15:30:00	7.3	0.000	0	47,886	Closed	11.8	112
1/11/2025	15:45:00	7.3	0.000	0	47,886	Closed	12.1	113
1/11/2025	16:00:00	7.2	0.000	0	47,886	Closed	12.3	114
1/11/2025	16:15:00	7.2	0.000	0	47,886	Closed	12.5	113
1/11/2025	16:30:00	7.3	0.839	0	47,894	Open	11.1	114
1/11/2025	16:45:00	7.3	0.760	0	47,906	Open	10.9	113
1/11/2025	17:00:00	7.3	0.000	0	47,908	Closed	11.1	113

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 6, 2025 to January 12, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 23, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/11/2025	17:15:00	7.3	0.741	0	47,911	Open	10.8	113
1/11/2025	17:30:00	7.4	0.302	96.1	47,920	Closed	10.9	112
1/11/2025	17:45:00	7.5	0.000	16.3	47,920	Closed	10.7	112
1/11/2025	18:00:00	7.3	0.000	0	47,922	Closed	10.9	111
1/11/2025	18:15:00	7.3	0.000	0	47,922	Closed	11.1	111
1/11/2025	18:30:00	7.2	0.000	0	47,922	Closed	11.2	113
1/11/2025	18:45:00	7.3	0.824	0	47,932	Open	10.8	116
1/11/2025	19:00:00	7.3	0.779	0	47,944	Open	11.3	116
1/11/2025	19:15:00	7.3	0.639	0	47,955	Open	12	116
1/11/2025	19:30:00	7.3	0.000	0	47,961	Closed	12.6	118
1/11/2025	19:45:00	7.2	0.000	0	47,961	Closed	13.3	118
1/11/2025	20:00:00	7.2	0.000	0	47,961	Closed	14.1	251
1/11/2025	20:15:00	7.2	0.643	0	47,961	Open	15.2	250
1/11/2025	20:30:00	7.3	0.204	0	47,967	Closed	11.5	118
1/11/2025	20:45:00	7.3	0.529	0	47,967	Closed	11	114
1/11/2025	21:00:00	7.3	0.525	0	47,974	Open	11.4	116
1/11/2025	21:15:00	7.3	0.491	0	47,982	Open	12.2	117
1/11/2025	21:30:00	7.2	0.000	0	47,983	Closed	12.9	253
1/11/2025	22:00:00	7.2	0.000	0	47,983	Closed	13.9	252
1/11/2025	22:15:00	7.3	0.839	0	47,991	Open	11.8	115
1/11/2025	22:30:00	7.3	0.813	0	48,004	Open	12	113
1/11/2025	22:45:00	7.3	0.000	0	48,005	Closed	11.2	113
1/11/2025	23:00:00	7.3	0.000	0	48,005	Closed	11.5	114
1/11/2025	23:15:00	7.2	0.000	0	48,005	Closed	12.1	116
1/11/2025	23:30:00	7.2	0.000	0	48,005	Closed	12.3	113

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 6, 2025 to January 12, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 23, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/11/2025	23:45:00	7.3	0.820	0	48,013	Open	10.4	113
1/12/2025	0:00:00	7.3	0.272	0	48,024	Open	10.4	111
1/12/2025	0:15:00	7.3	0.684	0	48,031	Open	10.4	111
1/12/2025	0:30:00	7.3	0.556	0	48,040	Open	10.7	114
1/12/2025	0:45:00	7.3	0.000	0	48,043	Closed	11.5	116
1/12/2025	1:00:00	7.3	0.000	0	48,043	Closed	12.3	117
1/12/2025	1:15:00	7.2	0.000	0	48,043	Closed	13	118
1/12/2025	1:30:00	7.2	0.000	0	48,043	Closed	13.7	118
1/12/2025	1:45:00	7.2	0.000	0	48,043	Closed	14.3	118
1/12/2025	2:00:00	7.2	0.000	0	48,043	Closed	15	119
1/12/2025	2:15:00	7.2	0.643	0	48,049	Open	12.3	119
1/12/2025	2:30:00	7.3	0.612	0	48,059	Open	12.7	116
1/12/2025	2:45:00	7.2	0.000	0	48,067	Open	14	114
1/12/2025	3:00:00	7.2	0.586	0	48,071	Open	15	253
1/12/2025	3:15:00	7.2	0.000	0	48,073	Closed	15.2	250
1/12/2025	3:30:00	7.2	0.000	0	48,073	Closed	15.6	251
1/12/2025	2:45:00	7.2	0.000	0	48,073	Closed	16.8	251
1/12/2025	3:00:00	7.2	0.620	0	48,074	Open	17.2	243
1/12/2025	3:15:00	7.3	0.643	0	48,080	Open	11.3	118
1/12/2025	3:30:00	7.3	0.650	0	48,090	Open	11.6	114
1/12/2025	3:45:00	7.3	0.000	0	48,094	Closed	12.1	116
1/12/2025	4:00:00	7.2	0.000	0	48,094	Closed	12.9	118
1/12/2025	4:15:00	7.2	0.000	0	48,094	Closed	13.3	250
1/12/2025	4:30:00	7.3	0.866	0	48,103	Open	10.8	115
1/12/2025	4:45:00	7.3	0.835	0	48,116	Open	11.6	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 6, 2025 to January 12, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 23, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/12/2025	5:00:00	7.3	0.000	0	48,119	Closed	12.1	116
1/12/2025	5:15:00	7.3	0.000	0	48,119	Closed	12.7	115
1/12/2025	5:30:00	7.2	0.000	0	48,119	Closed	12.8	254
1/12/2025	5:45:00	7.3	0.805	0	48,122	Open	10.9	111
1/12/2025	6:00:00	7.3	0.779	0	48,128	Open	10.5	112
1/12/2025	6:15:00	7.3	0.616	0	48,139	Open	10.7	113
1/12/2025	6:30:00	7.3	0.000	0	48,146	Closed	10.9	111
1/12/2025	6:45:00	7.2	0.000	0	48,146	Closed	11.3	114
1/12/2025	7:00:00	7.2	0.000	0	48,146	Closed	12	117
1/12/2025	7:15:00	7.3	0.631	0	48,150	Open	11.4	117
1/12/2025	7:30:00	7.3	0.616	0	48,160	Open	11.9	116
1/12/2025	7:45:00	7.3	0.593	0	48,169	Open	12.1	259
1/12/2025	8:00:00	7.2	0.000	0	48,177	Closed	12.2	257
1/12/2025	8:15:00	7.3	0.616	0	48,182	Open	12.7	258
1/12/2025	8:30:00	7.5	0.903	133.9	48,184	Closed	10.5	111
1/12/2025	8:45:00	7.3	0.779	0	48,187	Open	10.5	111
1/12/2025	9:00:00	7.3	0.000	0	48,187	Closed	10.6	111
1/12/2025	9:15:00	7.3	0.000	0	48,188	Closed	10.2	111
1/12/2025	9:30:00	7.3	0.000	0	48,188	Closed	11.4	262
1/12/2025	9:45:00	7.3	0.798	0	48,196	Open	10.5	116
1/12/2025	10:00:00	7.3	0.775	0	48,208	Open	10.7	113
1/12/2025	10:15:00	7.3	0.000	0	48,215	Closed	10.9	113
1/12/2025	10:30:00	7.3	0.000	0	48,215	Closed	11	111
1/12/2025	10:45:00	7.2	0.000	0	48,215	Closed	11.2	111
1/12/2025	11:00:00	7.3	0.756	0	48,223	Open	10.8	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 6, 2025 to January 12, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 23, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/12/2025	11:15:00	7.3	0.756	0	48,235	Open	10.9	113
1/12/2025	11:30:00	7.3	0.000	0	48,242	Closed	11.2	114
1/12/2025	11:45:00	7.3	0.000	0	48,242	Closed	11.7	116
1/12/2025	12:00:00	7.3	0.000	0	48,242	Closed	12.2	257
1/12/2025	12:15:00	7.3	0.782	0	48,252	Open	11.2	116
1/12/2025	12:30:00	7.3	0.737	0	48,263	Open	11.3	117
1/12/2025	12:45:00	7.3	0.000	0	48,265	Closed	11.8	116
1/12/2025	13:00:00	7.5	0.775	45.7	48,270	Closed	11.6	116
1/12/2025	13:15:00	7.3	0.000	0.2	48,277	Closed	11.8	116
1/12/2025	13:30:00	7.5	0.000	29.4	48,277	Closed	11.5	114
1/12/2025	13:45:00	7.5	0.000	28	48,277	Closed	11.9	115
1/12/2025	14:00:00	7.3	0.000	0	48,278	Open	11.6	114
1/12/2025	14:15:00	7.2	0.816	0	48,279	Open	14.6	257
1/12/2025	14:30:00	7.3	0.862	0	48,292	Open	11.5	115
1/12/2025	14:45:00	7.3	0.911	0	48,305	Open	11.8	116
1/12/2025	15:00:00	7.2	0.000	0	48,306	Closed	15.1	263
1/12/2025	15:15:00	7.2	0.000	0	48,306	Closed	15	258
1/12/2025	15:30:00	7.2	0.000	0	48,306	Closed	14.9	259
1/12/2025	15:45:00	7.3	0.862	0	48,308	Open	12.5	255
1/12/2025	16:00:00	7.3	0.873	0	48,322	Open	11.7	113
1/12/2025	16:15:00	7.3	0.843	0	48,335	Open	11.9	263
1/12/2025	16:30:00	7.2	0.000	0	48,336	Closed	12.4	260
1/12/2025	16:45:00	7.2	0.000	0	48,336	Closed	13	261
1/12/2025	17:00:00	7.3	0.824	0	48,342	Open	11.9	261
1/12/2025	17:15:00	7.3	0.832	0	48,355	Open	12.5	266

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 6, 2025 to January 12, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 23, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/12/2025	17:30:00	7.3	0.000	0	48,363	Closed	13.3	267
1/12/2025	17:45:00	7.2	0.000	0	48,363	Closed	14	266
1/12/2025	18:00:00	7.2	0.000	0	48,363	Closed	14.6	266
1/12/2025	18:15:00	7.3	0.813	0	48,365	Open	13	262
1/12/2025	18:30:00	7.3	0.809	0	48,377	Open	12.8	270
1/12/2025	18:45:00	7.3	0.809	0	48,390	Open	13.3	273
1/12/2025	19:00:00	7.3	0.000	0	48,392	Closed	14.1	272
1/12/2025	19:15:00	7.2	0.000	0	48,392	Closed	14.9	274
1/12/2025	19:30:00	7.2	0.000	0	48,392	Closed	15.4	274
1/12/2025	19:45:00	7.2	0.000	0	48,392	Closed	15.6	274
1/12/2025	20:00:00	7.2	0.000	0	48,392	Closed	15.6	272
1/12/2025	20:15:00	7.3	0.401	0	48,395	Open	13.7	272
1/12/2025	20:30:00	7.3	0.000	0	48,400	Open	12	273
1/12/2025	20:45:00	7.3	0.000	0	48,404	Closed	11.8	269
1/12/2025	21:00:00	7.3	0.000	0	48,404	Closed	12.6	269
1/12/2025	21:15:00	7.3	0.000	0	48,404	Closed	13.5	271
1/12/2025	21:30:00	7.3	0.873	0	48,407	Open	12	268
1/12/2025	21:45:00	7.3	0.881	0	48,420	Open	11.7	267
1/12/2025	22:00:00	7.3	0.450	0	48,431	Open	12.5	266
1/12/2025	22:15:00	7.3	0.851	0	48,442	Open	11.6	119
1/12/2025	22:30:00	7.4	0.000	0	48,443	Closed	12.3	263
1/12/2025	22:45:00	7.3	0.000	0	48,443	Closed	13.2	261
1/12/2025	23:00:00	7.2	0.000	0	48,443	Closed	18.7	267
1/12/2025	23:15:00	7.2	0.000	0	48,443	Closed	18.7	265
1/12/2025	23:30:00	7.3	0.854	0	48,444	Open	18.6	257

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 6, 2025 to January 12, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **January 23, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
1/12/2025	23:45:00	7.3	0.824	0	48,456	Open	11.9	119

Photos:

Photo 1: No visible sheen observed in the WTP water, January 6

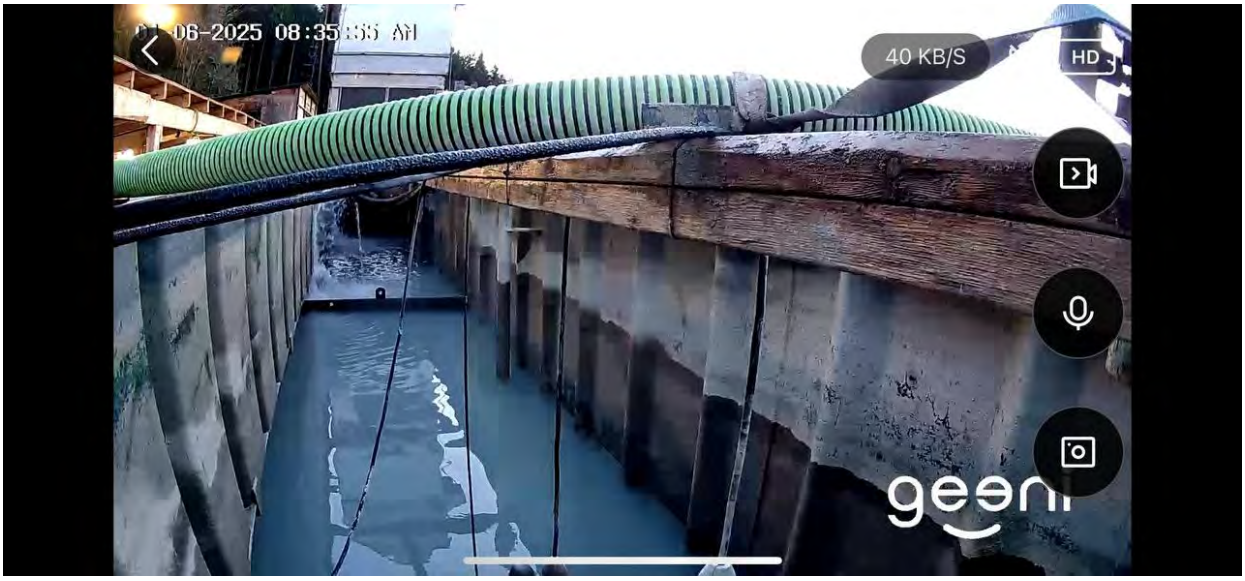


Photo 2: No visible sheen observed in the WTP water, January 7

Photo 3: No visible sheen observed in the WTP water, January 8

Photo 4: No visible sheen observed in the WTP water, January 10

Photo 5: No visible sheen observed in the WTP water, January 12


Appendix D: Woodfibre Site Receiving Environment Documentation

Woodfibre Site Receiving Environment Sample Analysis

TRITON	Sample ID					EAS US1 (Upstream)	EAS DS 1 (Downstream)					
	LAB ID	Reviewed and signed off by:			Finished Shafiei Ph.D., RCP.Bio.	VA25S0278-001	VA25S0278-002	Sample or value notes	BCWQ FAL - Short Term	BCWQ FAL - Long Term	BCWQ MAL - Short Term	BCWQ MAL - Long Term
	Date Sampled					07-Jan-2025	07-Jan-2025					
	Time Sampled					02:50	01:41					
Analyte	Units	FAL-ST [1,2]	FAL-LT [1,2]	MAL-ST [1]	MAL-LT [1,2]	Water	Water					
						N/A	N/A		Guideline notes			
In Situ Parameters												
pH (field)	pH units	6.5-9.0	6.5-9.0	7.0-8.7	7.0-8.7	7.91	7.35		If natural pH < 6.5, no statistically significant decrease from background. No restriction in increase except in areas with unique flora or fauna. Unrestricted change permitted within range of 6.5 to 9.0. If natural pH > 9.0, no statistically significant increase from background. Refer to BC Water Quality Guidelines for more information.		Unrestricted change within this range (for protection of mollusc embryo development)	
Temperature (field)	°C	Short-term daily temperature guideline is 19°C for streams with unknown fish distribution Max +/- from BKG 1°C [4]	-	Short-term daily temperature guideline is 19°C for streams with unknown fish distribution Max +/- from BKG 1°C [4]	-	5.7	6.3		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 Guideline 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 > 10% Guideline for East Creek: Short-term daily temperature change not to exceed 0.5°C hourly. Assess 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	-	-	-	-	23	34					
Turbidity (field)	NTU	Varies with background, see note Guideline = 8.3	Varies with background, see note Guideline = 2.71 5-week discrete sampling average = 1.85 (DS)	Varies with background, see note Guideline = 8.3	Varies with background, see note Guideline = 2.71 5-week discrete sampling average = 1.85 (DS)	0.25	3.39		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 10% when background is > 50 NTU at any time during high flow 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 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 flow or 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	13.35	11.93		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	-	-	-	-	6.01	8.33					
Total Dissolved Solids	mg/L	-	-	-	-	22	27					
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 flow 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 flow or turbid waters. Calculation: US value + (US value*0.1) = DS guideline	Change from background of 5 mg/L @ one time for a duration 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 flow or turbid waters. Calculation: US value + (US value*0.1) = DS guideline	Change from background of 5 mg/L @ one time for a duration 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	-	-	-	-	2.24	2.01			Long-term (30-day) median within 20% of background median [3]		
Total Alkalinity ($CaCO_3$)	mg/L	-	Categorical	-	-	5.1	7.5			Guideline is for alkalinity (as $CaCO_3$) 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 = 7.25	Varies with pH and temperature. See note. Guideline = 1.92	Varies with pH and temperature. See note. Guideline = 19	Varies with pH, temperature and salinity. See note. Guideline = 12	< 0.0050	< 0.0050		Guideline for ammonia as N and in pH and temperature dependent. Refer to Table 27O in BC WQG for guideline values.	Guideline for ammonia as N and in 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 27T 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	0.71	0.99				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 = 0.204	-	1.5	-	< 0.020	0.027		Guideline has interim status. Guideline is calculated with the following equation: Guideline = [51.75 + (0.67*(LN(Hardness)^2))]/1000			
Nitrate (as N)	mg/L	32.8	3	-	3.7	0.0065	0.0218					
Nitrite (as N)	mg/L	Varies with chloride. Table 27S, see note. Guideline = 0.06	Varies with chloride. Table 27S, 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	-	-	-	-	0.083	0.069					
Total Phosphorous	mg/L	-	0.005 to 0.015	-	-	0.0177	0.0114			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	-	-	2.64	2.56			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 = 0.086 5-week field average = 0.062 (US), 0.075 (DS)	-	-	0.0832	0.0736			Guideline varies with pH, hardness and Dissolved Organic Carbon (DOC). Guideline is calculated with the following equation: Guideline = (EXP(1.6485*LN(pH) - 3.3263)) * (0.065*DOC + 0.931) * (1.985 * pH + 0.2841 * (LN(Hardness)^2) - pH*0.8892*LN(Hardness) + 4.1845) 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	0.053	-	-	< 0.00010	< 0.00010					
Arsenic (As)-Total	mg/L	-	0.005	-	0.0125	0.00013	0.00015					Interim guideline status
Barium (Ba)-Total	mg/L	-	1	-	-	0.00212	0.00255			Working guideline status		
Beryllium (Be)-Total	mg/L	-	0.00013	-	0.100	< 0.000100	< 0.000100			Working guideline status		Working guideline status
Bismuth (Bi)-Total	mg/L	-	-	-	-	< 0.000050	< 0.000050					
Boron (B)-Total	mg/L	-	1.2	-	1.2	< 0.010	< 0.010					
Cadmium (Cd)-Total	mg/L	-	-	-	0.000012	0.000006	0.000074					Working guideline status
Calcium (Ca)-Total	mg/L	-	-	-	-	1.66	2.68					
Cesium (Cs)-Total	mg/L	-	-	-	-	< 0.000010	< 0.000010					
Chromium (Cr)-Total	mg/L	-	-	-	-	< 0.00050	< 0.00050					
Chromium (Cr(III))-Total	mg/L	-	0.0089	-	0.056	< 0.00050	< 0.00050			Working guideline status		Working guideline status
Chromium (Cr(VI))-Total	mg/L	-	0.0005	-	0.0015	< 0.00050	< 0.00050			Working guideline status		Working guideline status
Cobalt (Co)-Total	mg/L	0.11	0.004	-	-	< 0.000010	< 0.000010					
Copper (Cu)-Total	mg/L	-	-	0.003	0.003 5-week field averages = 0.00079 (US), 0.0008 (DS)	0.00065	0.00053					
Iron (Fe)-Total	mg/L	1	-	-	-	0.029	0.023					
Lead (Pb)-Total	mg/L	-	-	0.14	0.002 5-week field averages = 0.000054 (US), 0.000050 (DS)	< 0.00005	< 0.00005		Guideline varies with hardness, refer to BC Water Quality Guidelines for more information. Guideline is 0.003 where hardness ≤8mg/L, Guideline uses equation EXP(1.273*ln(hardness)-1.460), where hardness is 8-360 mg/L. Lowest value for guideline is 0.003 mg/L.	Guideline varies with hardness, refer to BC Water Quality Guidelines for more information. Guideline equation EXP(1.273*ln(hardness)-4.704) applies to samples with hardness 8-360 mg/L.		
Lithium (Li)-Total	mg/L	-	-	-	-	< 0.0010	< 0.0010					
Magnesium (Mg)-Total	mg/L	-	-	-	-	0.278	0.277					
Manganese (Mn)-Total	mg/L	Varies with hardness Guideline = 0.82	Varies with hardness Guideline = 0.77	-	-	0.00132	0.00158		Guideline varies with hardness. The guideline is calculated using the following equation: Guideline = (0.0344 * hardness + 0.825) Guideline applies to samples with hardness 25-250 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 = (0.0182 * hardness + 0.591) Guideline applies to samples with hardness 31-360 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 is 0.5% of total Hg, guideline is equal to 0.02 mg/L. Guideline = (0.1(MeHg/total Hg) When MeHg is 5% of total Hg, guideline is equal to 0.02 mg/L		
Molybdenum (Mo)-Total	mg/L	46	7.6	-	-	0.000018	0.00152					
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 < 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	-	-	< 0.05	< 0.05			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	-	-	-	-	0.197	0.258					
Rubidium (Rb)-Total	mg/L	-	-	-	-	0.00029	0.0004					
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 guidelines for sediment, invertebrate and fish tissue. Refer to BC Water Quality Guidelines for more information on guidelines and sampling guidance.		Guideline for marine aquatic life (water column) Alert concentration is 0.001 mg/L, with separate guidelines for sediment, invertebrate and fish tissue. Refer to BC Water Quality Guidelines for more information on guidelines and sampling guidance.
Silicon (Si)-Total	mg/L	-	-	-	-	3.69	3.83					
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: 0.0012	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	-	-	-	-	1.32	1.39					
Strontium (Sr)-Total	mg/L	-	-	-	-	0.00968	0.0113					
Sulfur (S)-Total	mg/L	-	-	-	-	0.8	0.75					
Tellurium (Te)-Total	mg/L	-	-	-	-	< 0.00020	< 0.00020					
Thallium (Tl)-Total	mg/L	-	0.00003 5-week field average = <0.00005 (US), <0.00010 (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	-	-	-	-	< 0.000010	< 0.000010					
Tin (Sn)-Total	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Titanium (Ti)-Total	mg/L	-	-	-	-	0.00274	0.00297					
Tungsten (W)-Total	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Uranium (U)-Total	mg/L	0.0165	0.0075	-	-	0.000168	0.000226			Working guideline status		
Vanadium (V)-Total	mg/L	-	0.06	-	0.001	< 0.00050	< 0.00050					Working guideline status
Zinc (Zn)-Total	mg/L	-	-	0.055	0.010 5-week field average = 0.00033 (US), 0.0050 (DS)	< 0.0030	< 0.0030					
Zirconium (Zr)-Total	mg/L	-	-	-	-	< 0.00020	< 0.00020					
Dissolved Metals												
Aluminum (Al)-Dissolved	mg/L	-	-	-	-	0.0713	0.0643					
Antimony (Sb)-Dissolved	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Arsenic (As)-Dissolved	mg/L	-	-	-	-	0.00012	0.00012					
Barium (Ba)-Dissolved	mg/L	-	-	-	-	0.00264	0.00253					
Beryllium (Be)-Dissolved	mg/L	-	-	-	-	< 0.000100	< 0.000100					
Bismuth (Bi)-Dissolved	mg/L	-	-	-	-	< 0.000050	< 0.000050					
Boron (B)-Dissolved	mg/L	-	-	-	-	< 0.010	< 0.010					
Cadmium (Cd)-Dissolved	mg/L	Varies with hardness, see note Guideline = 0.000038	Varies with hardness, see note Guideline = 0.000028	-	-	< 0.000005	0.0000051		Guideline is hardness dependent. Guideline is applicable to water hardness between 7.0 and 455 mg/L. Guideline is calculated with the following formula: Guideline = (EXP(1.017 * LN(Hardness) - 3.574))/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 guideline 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	-	-	1.87	2.44			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	-	-	-	-	< 0.000010	< 0.000010					
Copper (Cu)-Dissolved	mg/L	Guideline varies with other parameters, see note Guideline = 0.0040	Guideline varies with other parameters, see note Guideline = 0.0004 5-week field average = 0.00070 (US), 0.00040 (DS)	-	-	0.00063	0.0005		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	-	-	-	0.016	0.015					
Lead (Pb)-Dissolved	mg/L	-	Guideline varies with DOC and hardness Guideline: 0.00168 5-week field average = <0.00005 (US), 0.000056 (DS)	-	-	< 0.000050	< 0.000050			Guideline varies with DOC and hardness, refer to BC Water Quality Guidelines for more information. Guideline uses equation (EXP(0.5*LN(DOC)+0.8*LN(Hardness)-0.435*LN(DOC)+0.91)) where DOC range is 0.3-3.5 mg/L and hardness range is 4.7-331 mg/L		
Lithium (Li)-Dissolved	mg/L	-	-	-	-	< 0.0010	< 0.0010					
Magnesium (Mg)-Dissolved	mg/L	-	-	-	-	0.279	0.253					
Manganese (Mn)-Dissolved	mg/L	-	-	-	-	0.00084	0.00104					
Mercury (Hg)-Dissolved	mg/L	-	-	-	-	< 0.000050	< 0.000050					
Molybdenum (Mo)-Dissolved	mg/L	-	-	-	-	0.00009	0.00091					
Nickel (Ni)-Dissolved	mg/L	Guideline varies with pH, temperature, DOC, and hardness Guideline: 0.0217	Guideline varies with pH, temperature, DOC, and hardness Guideline: 0.00123 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	-	-	-	-	0.198	0.212					
Rubidium (Rb)-Dissolved	mg/L	-	-	-	-	0.00028	0.00033					
Selenium (Se)-Dissolved	mg/L	-	-	-	-	< 0.00005	< 0.00005					
Silicon (Si)-Dissolved	mg/L	-	-	-	-	3.61	3.8					
Silver (Ag)-Dissolved	mg/L	-	-	-	-	< 0.000010	< 0.000010					
Sodium (Na)-Dissolved	mg/L	-	-	-	-	1.36	1.32					
Strontium (Sr)-Dissolved	mg/L	-	-	-	-	0.00951	0.0097					
Sulfur (S)-Dissolved	mg/L	-	-	-	-	0.89	0.87					
Tellurium (Te)-Dissolved	mg/L	-	-	-	-	< 0.00020	< 0.00020					
Thallium (Tl)-Dissolved	mg/L	-	-	-	-	< 0.000010	< 0.000010					
Thorium (Th)-Dissolved	mg/L	-	-	-	-	< 0.000010	< 0.000010					
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	-	-	-	-	0.000098	0.000159					
Vanadium (V)-Dissolved	mg/L	-	-	-	-	< 0.00050	< 0.00050					
Zinc (Zn)-Dissolved	mg/L	Varies with DOC and hardness Guideline = 0.009	Varies with pH, DOC, hardness Guideline = 0.003521 5-week field average = 0.0019 (US), 0.0047 (DS)	-	-	0.0026	0.0026	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))/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((0.554 * LN(Hardness)) - (0.915 * pH) + 10.396 + (0.485*LN(DOC)))) Guideline only applies to water with pH between 6.5 and 8.15, DOC between 0.3 and 22.9 mg/L, ammD hardness between 23.4 and 359 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)**										
Color Key:		**Exceeds FAL Short term Guideline**	**Exceeds both FAL and MAL Guideline**	**Exceeds MAL Short term Guideline**								

[1]BC MOECCS. 2023. BC Water Quality Guidelines for the Protection of Aquatic Life, Wildlife & Agriculture. Accessed from: wqg_summary_aquatic2pg_wildlife_agri.pdf (gov.bc.ca)
[2]BC MOECCS. 2021. BC Working Water Quality Guidelines for the Protection of Aquatic Life, Wildlife & Agriculture. Accessed from: bc_env_working_water_quality_guidelines.pdf (gov.bc.ca)
[3]Note that long-term guidelines apply to averaged data to account for chronic impacts to aquatic life. Ideally, five samples collected at evenly spaced intervals over 30 days is considered to be the minimum number needed to calculate the long-term average of any parameter, though this may vary by parameter and site conditions. Long-term guidelines applied here are for reference only and may not indicate chronic impacts to aquatic life if exceedances occur in the short term.
[4]Background temperature ranges: Dec-Feb: 0.3-8.0C; Mar-Apr: 3.0-10.2C; May-June: 6.8-15.1C; Juneweek 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

Parameters Used to Calculate Guidelines

Analyte	Units	Measurement method	Values	
			EAS US1 (Upstream)	EAS DS 1 (Downstream)
pH (field)	pH units	Field pH taken using handheld meters during sampling used in calculations	7.91	7.35
Temperature (field)	°C	Field temperature taken using handheld meters during sampling used in calculations	5.7	6.3
Turbidity (field)	NTU	Field turbidity taken using handheld meters during sampling used in calculations	0.25	3.39
Hardness (as $CaCO_3$) (total)	mg/L	Laboratory tested total hardness taken at each respective sample site on the day of sampling used in guideline calculations	6.01	8.33
Dissolved Organic Carbon (DOC)	mg/L	Laboratory tested dissolved organic carbon tested at the lab used in guideline calculations	2.24	2.01
Total Alkalinity ($CaCO_3$)	mg/L	Laboratory tested total alkalinity used in calculations	5.1	7.5
Chloride	mg/L	Laboratory tested chloride taken at each respective sample site on the day of sampling used in guideline calculations	0.71	0.99

Woodfibre Site Receiving Environment Lab Documentation

CERTIFICATE OF ANALYSIS

Work Order	: **VA25A0278**		
Client	: [redacted]	Laboratory	: [redacted]
Contact	:	Account Manager	:
Address	:	Address	:
Telephone	:	Telephone	:
Project	:	Date Samples Received	: 07-Jan-2025 18:00
PO	:	Date Analysis Commenced	: 07-Jan-2025
C-O-C number	: ----	Issue Date	: 15-Jan-2025 12:40
Sampler	: ----		
Site	: Water Analysis		
Quote number	: VA25-TRIT100-001		
No. of samples received	: 2		
No. of samples analysed	: 2		

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

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]	[redacted]	Metals, Burnaby, British Columbia
		Metals, Burnaby, British Columbia
		Metals, Burnaby, British Columbia
		Metals, Burnaby, British Columbia
		Inorganics, Burnaby, British Columbia
		Inorganics, Burnaby, British Columbia
		Inorganics, Burnaby, British Columbia
		Administration, Burnaby, British Columbia
		Metals, 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 US 1	WLNG DS 1	----	----	----
					Client sampling date / time	07-Jan-2025 02:50	07-Jan-2025 01:41	----	----	----
						VA25A0278-001	VA25A0278-002	----	----	----
						Result	Result	----	----	----
Field Tests										
Conductivity, field	----	EF001/VA	0.10	µS/cm		23.000	34.000	----	----	----
pH, field	----	EF001/VA	0.10	pH units		7.91	7.35	----	----	----
Temperature, field	----	EF001/VA	0.10	°C		5.70	6.30	----	----	----
Physical Tests										
Hardness (as CaCO3), dissolved	----	EC100/VA	0.60	mg/L		5.82	7.13	----	----	----
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L		6.01	8.33	----	----	----
Solids, total dissolved [TDS]	----	E162/VA	10	mg/L		22	27	----	----	----
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L		<3.0	<3.0	----	----	----
Alkalinity, total (as CaCO3)	----	E290/VA	2.0	mg/L		5.1	7.5	----	----	----
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L		<0.0050	<0.0050	----	----	----
Bromide	24959-67-9	E235.Br-L/VA	0.050	mg/L		<0.050	<0.050	----	----	----
Chloride	16887-00-6	E235.Cl/VA	0.50	mg/L		0.71	0.99	----	----	----
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L		<0.020	0.027	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L		0.0365	0.0218	----	----	----
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		0.083	0.069	----	----	----
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L		0.0177	0.0114	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L		2.64	2.56	----	----	----
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L		2.24	2.01	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG US 1	WLNG DS 1	----	----	----
					Client sampling date / time	07-Jan-2025 02:50	07-Jan-2025 01:41	----	----	----
						VA25A0278-001	VA25A0278-002	----	----	----
						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		0.0832	0.0736	----	----	----
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		0.00013	0.00015	----	----	----
Barium, total	7440-39-3	E420/VA	0.00010	mg/L		0.00272	0.00276	----	----	----
Beryllium, total	7440-41-7	E420/VA	0.000100	mg/L		<0.000100	<0.000100	----	----	----
Bismuth, total	7440-69-9	E420/VA	0.000050	mg/L		<0.000050	<0.000050	----	----	----
Boron, total	7440-42-8	E420/VA	0.010	mg/L		<0.010	<0.010	----	----	----
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L		0.0000060	0.0000074	----	----	----
Calcium, total	7440-70-2	E420/VA	0.050	mg/L		1.95	2.88	----	----	----
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L		<0.000010	<0.000010	----	----	----
Chromium, total	7440-47-3	E420/VA	0.00050	mg/L		<0.00050	<0.00050	----	----	----
Cobalt, total	7440-48-4	E420/VA	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Copper, total	7440-50-8	E420/VA	0.00050	mg/L		0.00065	0.00053	----	----	----
Iron, total	7439-89-6	E420/VA	0.010	mg/L		0.029	0.023	----	----	----
Lead, total	7439-92-1	E420/VA	0.000050	mg/L		<0.000050	<0.000050	----	----	----
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L		<0.0010	<0.0010	----	----	----
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L		0.278	0.277	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG US 1	WLNG DS 1	----	----	----
					Client sampling date / time	07-Jan-2025 02:50	07-Jan-2025 01:41	----	----	----
						VA25A0278-001	VA25A0278-002	----	----	----
						Result	Result	----	----	----
Total Metals										
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L		0.00132	0.00158	----	----	----
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		0.000318	0.00152	----	----	----
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		0.197	0.258	----	----	----
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L		0.00029	0.00040	----	----	----
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		3.69	3.83	----	----	----
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		1.32	1.39	----	----	----
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L		0.00998	0.0113	----	----	----
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L		0.80	0.75	----	----	----
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		0.00075	0.00047	----	----	----
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		0.000108	0.000226	----	----	----
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L		<0.00050	<0.00050	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG US 1	WLNG DS 1	----	----	----
					Client sampling date / time	07-Jan-2025 02:50	07-Jan-2025 01:41	----	----	----
						VA25A0278-001	VA25A0278-002	----	----	----
						Result	Result	----	----	----
Total Metals										
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L		<0.0030	<0.0030	----	----	----
Zirconium, total	7440-67-7	E420/VA	0.00020	mg/L		<0.00020	<0.00020	----	----	----
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/VA	0.0010	mg/L		0.0713	0.0645	----	----	----
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		0.00012	0.00012	----	----	----
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L		0.00264	0.00253	----	----	----
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		<0.0000050	0.0000051	----	----	----
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L		1.87	2.44	----	----	----
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		0.00063	0.00050	----	----	----
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L		0.016	0.015	----	----	----
Lead, dissolved	7439-92-1	E421/VA	0.000050	mg/L		<0.000050	<0.000050	----	----	----
Lithium, dissolved	7439-93-2	E421/VA	0.0010	mg/L		<0.0010	<0.0010	----	----	----
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L		0.279	0.253	----	----	----
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L		0.00084	0.00104	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG US 1	WLNG DS 1	----	----	----
					Client sampling date / time	07-Jan-2025 02:50	07-Jan-2025 01:41	----	----	----
						VA25A0278-001	VA25A0278-002	----	----	----
						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		0.000309	0.000921	----	----	----
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		0.198	0.212	----	----	----
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L		0.00028	0.00033	----	----	----
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		3.61	3.80	----	----	----
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	1.32	----	----	----
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L		0.00991	0.00987	----	----	----
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L		0.86	0.87	----	----	----
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		0.000098	0.000159	----	----	----
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		0.0026	0.0026	----	----	----

Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	WLNG US 1	WLNG DS 1	----	----	----
					Client sampling date / time	07-Jan-2025 02:50	07-Jan-2025 01:41	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A0278-001	VA25A0278-002	----	----	----
						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	: **VA25A0278**	Page	: 1 of 15
Client	: [redacted]	Laboratory	[redacted]
Contact	:	Account Manager	
Address	:	Address	
Telephone	:	Telephone	
Project	: 11964	Date Samples Received	: 07-Jan-2025 18:00
PO	: 11964-tASK 20-Phase 3C-4C	Issue Date	: 15-Jan-2025 12:40
C-O-C number	: ----		
Sampler	: ----		
Site	: Water Analysis		
Quote number	: VA25-TRIT100-001		
No. of samples received	: 2		
No. of samples analysed	: 2		

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

Key

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

Workorder Comments

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

Summary of Outliers

Outliers : Quality Control Samples

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

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **Water**

Analyte Group	Laboratory sample ID	Client/Ref Sample ID	Analyte	CAS Number	Method	Result	Limits	Comment
Matrix Spike (MS) Recoveries								
Dissolved Metals	Anonymous	Anonymous	Thorium, dissolved	7440-29-1	E421	68.1 % MES	70.0-130%	Recovery less than lower data quality objective

Result Qualifiers

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

Analysis Holding Time Compliance

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

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

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

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

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WLNG DS 1	E298	07-Jan-2025	09-Jan-2025	28 days	2 days	✓	09-Jan-2025	28 days	2 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WLNG US 1	E298	07-Jan-2025	09-Jan-2025	28 days	2 days	✓	09-Jan-2025	28 days	2 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE WLNG DS 1	E235.Br-L	07-Jan-2025	08-Jan-2025	28 days	1 days	✓	08-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE WLNG US 1	E235.Br-L	07-Jan-2025	08-Jan-2025	28 days	1 days	✓	08-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE WLNG DS 1	E235.Cl	07-Jan-2025	08-Jan-2025	28 days	1 days	✓	08-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE WLNG US 1	E235.Cl	07-Jan-2025	08-Jan-2025	28 days	1 days	✓	08-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE WLNG DS 1	E235.F	07-Jan-2025	08-Jan-2025	28 days	1 days	✓	08-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 US 1	E235.F	07-Jan-2025	08-Jan-2025	28 days	1 days	✓	08-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE										
WLNG DS 1	E235.NO3-L	07-Jan-2025	08-Jan-2025	3 days	1 days	✓	08-Jan-2025	3 days	1 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE										
WLNG US 1	E235.NO3-L	07-Jan-2025	08-Jan-2025	3 days	1 days	✓	08-Jan-2025	3 days	1 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
WLNG DS 1	E235.NO2-L	07-Jan-2025	08-Jan-2025	3 days	1 days	✓	08-Jan-2025	3 days	1 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
WLNG US 1	E235.NO2-L	07-Jan-2025	08-Jan-2025	3 days	1 days	✓	08-Jan-2025	3 days	1 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
WLNG DS 1	E235.SO4	07-Jan-2025	08-Jan-2025	28 days	1 days	✓	08-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
WLNG US 1	E235.SO4	07-Jan-2025	08-Jan-2025	28 days	1 days	✓	08-Jan-2025	28 days	1 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid)										
WLNG DS 1	E366	07-Jan-2025	09-Jan-2025	28 days	2 days	✓	10-Jan-2025	28 days	3 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid)										
WLNG US 1	E366	07-Jan-2025	09-Jan-2025	28 days	2 days	✓	10-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
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
WLNG US 1	E372-U	07-Jan-2025	09-Jan-2025	28 days	2 days	✓	10-Jan-2025	28 days	3 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
WLNG DS 1	E372-U	07-Jan-2025	09-Jan-2025	28 days	2 days	✓	10-Jan-2025	28 days	4 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
WLNG DS 1	E509	07-Jan-2025	12-Jan-2025	28 days	5 days	✓	12-Jan-2025	28 days	5 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
WLNG US 1	E509	07-Jan-2025	12-Jan-2025	28 days	5 days	✓	12-Jan-2025	28 days	5 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
WLNG DS 1	E421	07-Jan-2025	08-Jan-2025	180 days	2 days	✓	10-Jan-2025	180 days	3 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
WLNG US 1	E421	07-Jan-2025	08-Jan-2025	180 days	2 days	✓	10-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)										
WLNG DS 1	EF001	07-Jan-2025	----	----	----		08-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 total (hydrochloric acid)										
WLNG US 1	EF001	07-Jan-2025	----	----	----		08-Jan-2025	----	1 days	
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid)										
WLNG DS 1	E358-L	07-Jan-2025	09-Jan-2025	28 days	2 days	✓	09-Jan-2025	28 days	2 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass dissolved (sulfuric acid)										
WLNG US 1	E358-L	07-Jan-2025	09-Jan-2025	28 days	2 days	✓	09-Jan-2025	28 days	2 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
WLNG DS 1	E290	07-Jan-2025	08-Jan-2025	14 days	1 days	✓	08-Jan-2025	14 days	1 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
WLNG US 1	E290	07-Jan-2025	08-Jan-2025	14 days	1 days	✓	08-Jan-2025	14 days	1 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
WLNG US 1	E162	07-Jan-2025	----	----	----		13-Jan-2025	7 days	6 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
WLNG DS 1	E162	07-Jan-2025	----	----	----		13-Jan-2025	7 days	7 days	✓
Physical Tests : TSS by Gravimetry										
HDPE										
WLNG US 1	E160	07-Jan-2025	----	----	----		13-Jan-2025	7 days	6 days	✓
Physical Tests : TSS by Gravimetry										
HDPE										
WLNG DS 1	E160	07-Jan-2025	----	----	----		13-Jan-2025	7 days	7 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide)										
WLNG DS 1	E532	07-Jan-2025	----	----	----		07-Jan-2025	28 days	1 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide)										
WLNG US 1	E532	07-Jan-2025	----	----	----		07-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 DS 1	E508	07-Jan-2025	11-Jan-2025	28 days	4 days	✓	11-Jan-2025	28 days	4 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid)										
WLNG US 1	E508	07-Jan-2025	11-Jan-2025	28 days	4 days	✓	11-Jan-2025	28 days	4 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid)										
WLNG DS 1	E420	07-Jan-2025	08-Jan-2025	180 days	2 days	✓	10-Jan-2025	180 days	3 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid)										
WLNG US 1	E420	07-Jan-2025	08-Jan-2025	180 days	2 days	✓	10-Jan-2025	180 days	3 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide)										
WLNG US 1	E395	07-Jan-2025	----	----	----		08-Jan-2025	7 days	1 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide)										
WLNG DS 1	E395	07-Jan-2025	----	----	----		08-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	1832345	1	11	9.0	5.0	✓
Ammonia by Fluorescence	E298	1833454	1	16	6.2	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1832342	1	6	16.6	5.0	✓
Chloride in Water by IC	E235.Cl	1832336	1	19	5.2	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1836816	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1832621	1	14	7.1	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1833451	1	16	6.2	5.0	✓
Fluoride in Water by IC	E235.F	1832340	1	10	10.0	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1832341	1	7	14.2	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1832338	1	10	10.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1832337	1	11	9.0	5.0	✓
TDS by Gravimetry	E162	1837751	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1832247	1	19	5.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1836626	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1832617	1	13	7.6	5.0	✓
Total Nitrogen by Colourimetry	E366	1833456	1	10	10.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1833457	1	10	10.0	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1833235	1	4	25.0	5.0	✓
TSS by Gravimetry	E160	1837747	1	20	5.0	5.0	✓
Laboratory Control Samples (LCS)							
Alkalinity Species by Titration	E290	1832345	1	11	9.0	5.0	✓
Ammonia by Fluorescence	E298	1833454	1	16	6.2	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1832342	1	6	16.6	5.0	✓
Chloride in Water by IC	E235.Cl	1832336	1	19	5.2	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1836816	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1832621	1	14	7.1	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1833451	1	16	6.2	5.0	✓
Fluoride in Water by IC	E235.F	1832340	1	10	10.0	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1832341	1	7	14.2	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1832338	1	10	10.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1832337	1	11	9.0	5.0	✓
TDS by Gravimetry	E162	1837751	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1832247	1	19	5.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1836626	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1832617	1	13	7.6	5.0	✓
Total Nitrogen by Colourimetry	E366	1833456	1	10	10.0	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*
Laboratory Control Samples (LCS) - Continued							
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1833457	1	10	10.0	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1833235	1	4	25.0	5.0	✓
TSS by Gravimetry	E160	1837747	1	20	5.0	5.0	✓
Method Blanks (MB)							
Alkalinity Species by Titration	E290	1832345	1	11	9.0	5.0	✓
Ammonia by Fluorescence	E298	1833454	1	16	6.2	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1832342	1	6	16.6	5.0	✓
Chloride in Water by IC	E235.Cl	1832336	1	19	5.2	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1836816	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1832621	1	14	7.1	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1833451	1	16	6.2	5.0	✓
Fluoride in Water by IC	E235.F	1832340	1	10	10.0	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1832341	1	7	14.2	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1832338	1	10	10.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1832337	1	11	9.0	5.0	✓
TDS by Gravimetry	E162	1837751	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1832247	1	19	5.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1836626	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1832617	1	13	7.6	5.0	✓
Total Nitrogen by Colourimetry	E366	1833456	1	10	10.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1833457	1	10	10.0	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1833235	1	4	25.0	5.0	✓
TSS by Gravimetry	E160	1837747	1	20	5.0	5.0	✓
Matrix Spikes (MS)							
Ammonia by Fluorescence	E298	1833454	1	16	6.2	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1832342	1	6	16.6	5.0	✓
Chloride in Water by IC	E235.Cl	1832336	1	19	5.2	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1836816	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1832621	1	14	7.1	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1833451	1	16	6.2	5.0	✓
Fluoride in Water by IC	E235.F	1832340	1	10	10.0	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1832341	1	7	14.2	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1832338	1	10	10.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1832337	1	11	9.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1832247	1	19	5.2	5.0	✓
Total Mercury in Water by CVAAS	E508	1836626	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1832617	1	13	7.6	5.0	✓
Total Nitrogen by Colourimetry	E366	1833456	1	10	10.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1833457	1	10	10.0	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) - Continued							
Total Sulfide by Colourimetry (Automated Flow)	E395	1833235	1	4	25.0	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.

QUALITY CONTROL REPORT

Work Order	: **VA25A0278**	Page	: 1 of 17
Client	[redacted]	Laboratory	[redacted]
Contact		Account Manager	
Address		Address	
Telephone		Telephone	
Project	: 11964	Date Samples Received	: 07-Jan-2025 18:00
PO	: 11964-tASK 20-Phase 3C-4C	Date Analysis Commenced	: 07-Jan-2025
C-O-C number	: ----	Issue Date	: 15-Jan-2025 12:40
Sampler	: ----		
Site	: Water Analysis		
Quote number	: VA25-TRIT100-001		
No. of samples received	: 2		
No. of samples analysed	: 2		

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Laboratory Department*
[redacted]		Vancouver Metals, Burnaby, British Columbia
		Vancouver Metals, Burnaby, British Columbia
		Vancouver Metals, Burnaby, British Columbia
		Vancouver Inorganics, Burnaby, British Columbia
		Vancouver Inorganics, Burnaby, British Columbia
		Vancouver Inorganics, Burnaby, British Columbia
		Vancouver Administration, Burnaby, British Columbia
		Vancouver Metals, 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: 1832345)											
VA25A0242-002	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	45.6	45.3	0.660%	20%	----
Physical Tests (QC Lot: 1837747)											
FJ2500073-001	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	<3.0	<3.0	0	Diff <2x LOR	----
Physical Tests (QC Lot: 1837751)											
FJ2500073-001	Anonymous	Solids, total dissolved [TDS]	----	E162	20	mg/L	215	204	5.25%	20%	----
Anions and Nutrients (QC Lot: 1832336)											
VA25A0242-001	Anonymous	Chloride	16887-00-6	E235.Cl	0.50	mg/L	0.60	0.59	0.01	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1832337)											
VA25A0249-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	18.7	18.5	0.750%	20%	----
Anions and Nutrients (QC Lot: 1832338)											
VA25A0249-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L	0.0119	0.0117	1.94%	20%	----
Anions and Nutrients (QC Lot: 1832340)											
VA25A0249-001	Anonymous	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.052	0.051	0.0004	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1832341)											
VA25A0242-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0050	mg/L	0.0782	0.0786	0.508%	20%	----
Anions and Nutrients (QC Lot: 1832342)											
VA25A0249-001	Anonymous	Bromide	24959-67-9	E235.Br-L	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1833454)											
VA25A0230-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.294	0.295	0.441%	20%	----
Anions and Nutrients (QC Lot: 1833456)											
VA25A0230-001	Anonymous	Nitrogen, total	7727-37-9	E366	1.50	mg/L	40.7	41.6	2.09%	20%	----
Anions and Nutrients (QC Lot: 1833457)											
VA25A0230-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0069	0.0079	0.0010	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 1833451)											
VA25A0230-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	19.7	20.8	5.20%	20%	----
Total Sulfides (QC Lot: 1833235)											
VA25A0278-001	WLNG US 1	Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	<0.0015	0	Diff <2x LOR	----
Total Metals (QC Lot: 1832617)											
VA25A0254-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0150	mg/L	0.0165	<0.0150	0.0015	Diff <2x LOR	----
		Antimony, total	7440-36-0	E420	0.00050	mg/L	0.00134	0.00139	0.00005	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: 1832617) - continued											
VA25A0254-001	Anonymous	Arsenic, total	7440-38-2	E420	0.00050	mg/L	0.00647	0.00681	5.07%	20%	----
		Barium, total	7440-39-3	E420	0.00050	mg/L	0.0143	0.0146	1.94%	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	0.000250	mg/L	<0.000250	<0.000250	0	Diff <2x LOR	----
		Boron, total	7440-42-8	E420	0.050	mg/L	0.680	0.678	0.394%	20%	----
		Cadmium, total	7440-43-9	E420	0.0000250	mg/L	0.0000802	0.0000919	0.0000117	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.250	mg/L	178	186	4.42%	20%	----
		Cesium, total	7440-46-2	E420	0.000050	mg/L	0.000178	0.000169	0.000009	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420	0.00250	mg/L	<0.00250	<0.00250	0	Diff <2x LOR	----
		Cobalt, total	7440-48-4	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Copper, total	7440-50-8	E420	0.00250	mg/L	0.0652	0.0671	2.82%	20%	----
		Iron, total	7439-89-6	E420	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Lead, total	7439-92-1	E420	0.000250	mg/L	<0.000250	<0.000250	0	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0050	mg/L	0.0164	0.0165	0.0001	Diff <2x LOR	----
		Magnesium, total	7439-95-4	E420	0.0250	mg/L	407	410	0.861%	20%	----
		Manganese, total	7439-96-5	E420	0.00050	mg/L	0.00141	0.00134	0.00007	Diff <2x LOR	----
		Molybdenum, total	7439-98-7	E420	0.000250	mg/L	0.0897	0.0914	1.90%	20%	----
		Nickel, total	7440-02-0	E420	0.00250	mg/L	0.00326	0.00340	0.00014	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E420	0.250	mg/L	<0.250	<0.250	0	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.250	mg/L	20.5	21.9	6.52%	20%	----
		Rubidium, total	7440-17-7	E420	0.00100	mg/L	0.00661	0.00662	0.00001	Diff <2x LOR	----
		Selenium, total	7782-49-2	E420	0.000250	mg/L	0.192	0.201	4.32%	20%	----
		Silicon, total	7440-21-3	E420	0.50	mg/L	5.52	5.80	5.02%	20%	----
		Silver, total	7440-22-4	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Sodium, total	7440-23-5	E420	0.250	mg/L	847	862	1.82%	20%	----
		Strontium, total	7440-24-6	E420	0.00100	mg/L	5.66	5.86	3.41%	20%	----
		Sulfur, total	7704-34-9	E420	2.50	mg/L	1230	1280	3.40%	20%	----
		Tellurium, total	13494-80-9	E420	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
		Thallium, total	7440-28-0	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Thorium, total	7440-29-1	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.00150	mg/L	<0.00150	<0.00150	0	Diff <2x LOR	----
		Tungsten, total	7440-33-7	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Uranium, total	7440-61-1	E420	0.000050	mg/L	0.00654	0.00679	3.83%	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: 1832617) - continued											
VA25A0254-001	Anonymous	Vanadium, total	7440-62-2	E420	0.00250	mg/L	<0.00250	<0.00250	0	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0150	mg/L	<0.0150	<0.0150	0	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
Total Metals (QC Lot: 1836626)											
VA25A0245-001	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1832621)											
VA25A0254-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0020	mg/L	<0.0020	0.0024	0.0004	Diff <2x LOR	----
		Antimony, dissolved	7440-36-0	E421	0.00020	mg/L	0.00135	0.00133	0.00002	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00020	mg/L	0.00667	0.00650	2.54%	20%	----
		Barium, dissolved	7440-39-3	E421	0.00020	mg/L	0.0135	0.0141	4.42%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000040	mg/L	<0.000040	<0.000040	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.020	mg/L	0.655	0.652	0.393%	20%	----
		Cadmium, dissolved	7440-43-9	E421	0.0000650	mg/L	<0.0000650	<0.0000650	0	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.100	mg/L	176	171	2.88%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000020	mg/L	0.000167	0.000180	0.000012	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00040	mg/L	0.0540	0.0531	1.69%	20%	----
		Iron, dissolved	7439-89-6	E421	0.020	mg/L	<0.020	<0.020	0	Diff <2x LOR	----
		Lead, dissolved	7439-92-1	E421	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0020	mg/L	0.0151	0.0150	0.0002	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.0100	mg/L	401	387	3.47%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00020	mg/L	0.00069	0.00064	0.00005	Diff <2x LOR	----
		Molybdenum, dissolved	7439-98-7	E421	0.000100	mg/L	0.0915	0.0927	1.28%	20%	----
		Nickel, dissolved	7440-02-0	E421	0.00100	mg/L	0.00306	0.00290	0.00016	Diff <2x LOR	----
		Phosphorus, dissolved	7723-14-0	E421	0.100	mg/L	<0.100	<0.100	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.100	mg/L	21.9	20.7	5.49%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00040	mg/L	0.00661	0.00643	2.65%	20%	----
		Selenium, dissolved	7782-49-2	E421	0.000100	mg/L	0.202	0.201	0.661%	20%	----
		Silicon, dissolved	7440-21-3	E421	0.100	mg/L	5.42	5.34	1.64%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.100	mg/L	926	912	1.53%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00040	mg/L	5.85	5.92	1.32%	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: 1832621) - continued											
VA25A0254-001	Anonymous	Sulfur, dissolved	7704-34-9	E421	1.00	mg/L	1380	1390	0.106%	20%	----
		Tellurium, dissolved	13494-80-9	E421	0.00040	mg/L	<0.00040	<0.00040	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.00060	mg/L	<0.00060	<0.00060	0	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000020	mg/L	0.00646	0.00664	2.84%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00100	mg/L	0.00208	0.00207	0.00002	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0020	mg/L	<0.0020	<0.0020	0	Diff <2x LOR	----
		Zirconium, dissolved	7440-67-7	E421	0.00040	mg/L	<0.00040	<0.00040	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1836816)											
VA25A0230-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.000500	mg/L	0.0299	0.0290	3.09%	20%	----
Speciated Metals (QC Lot: 1832247)											
FJ2403883-013	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: 1832345)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 1837747)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Physical Tests (QCLot: 1837751)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Anions and Nutrients (QCLot: 1832336)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 1832337)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 1832338)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 1832340)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 1832341)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1832342)						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 1833454)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1833456)						
Nitrogen, total	7727-37-9	E366	0.03	mg/L	<0.030	----
Anions and Nutrients (QCLot: 1833457)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Organic / Inorganic Carbon (QCLot: 1833451)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Total Sulfides (QCLot: 1833235)						
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	----
Total Metals (QCLot: 1832617)						
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: 1832617) - 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: 1836626)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Dissolved Metals (QCLot: 1832621)						
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: 1832621) - 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: 1836816)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Speciated Metals (QCLot: 1832247)						
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: 1832345)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	104	85.0	115	----
Physical Tests (QCLot: 1837747)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	93.8	85.0	115	----
Physical Tests (QCLot: 1837751)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	108	85.0	115	----
Anions and Nutrients (QCLot: 1832336)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	96.9	90.0	110	----
Anions and Nutrients (QCLot: 1832337)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	98.4	90.0	110	----
Anions and Nutrients (QCLot: 1832338)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	96.5	90.0	110	----
Anions and Nutrients (QCLot: 1832340)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	96.1	90.0	110	----
Anions and Nutrients (QCLot: 1832341)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	95.9	90.0	110	----
Anions and Nutrients (QCLot: 1832342)									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	92.6	85.0	115	----
Anions and Nutrients (QCLot: 1833454)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	97.9	85.0	115	----
Anions and Nutrients (QCLot: 1833456)									
Nitrogen, total	7727-37-9	E366	0.03	mg/L	0.5 mg/L	99.1	75.0	125	----
Anions and Nutrients (QCLot: 1833457)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	89.8	80.0	120	----
Organic / Inorganic Carbon (QCLot: 1833451)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	104	80.0	120	----
Total Sulfides (QCLot: 1833235)									
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.08 mg/L	102	80.0	120	----
Total Metals (QCLot: 1832617)									

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: 1832617) - continued									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	103	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	105	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	108	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	99.6	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	101	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	91.7	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	105	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	101	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	99.0	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	104	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	101	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	103	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	95.3	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	105	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	98.2	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	111	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	102	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	99.9	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	104	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	101	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	104	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	102	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	109	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	91.9	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	100	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	105	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	103	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	109	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	106	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	98.3	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	105	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	105	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	102	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	97.9	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: 1832617) - continued									
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	105	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	107	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	99.7	80.0	120	----
Total Metals (QCLot: 1836626)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	93.8	80.0	120	----
Dissolved Metals (QCLot: 1832621)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	103	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	110	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	1 mg/L	108	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	105	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	102	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	95.2	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	94.6	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	107	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	99.6	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	99.9	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	104	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	102	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	102	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	93.8	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.5 mg/L	103	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.25 mg/L	97.6	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	115	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	108	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	105	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	101	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	109	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	102	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	108	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	106	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	108	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	93.0	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	113	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.25 mg/L	106	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	104	80.0	120	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 1832621) - continued									
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	113	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	107	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	93.3	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	106	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	106	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	101	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	93.9	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	108	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	102	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	96.7	80.0	120	----
Speciated Metals (QCLot: 1832247)									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.25 mg/L	100	80.0	120	----

Matrix Spike (MS) Report

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

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 1832336)										
VA25A0278-001	WLNG US 1	Chloride	16887-00-6	E235.Cl	99.3 mg/L	100 mg/L	99.3	75.0	125	----
Anions and Nutrients (QCLot: 1832337)										
VA25A0278-001	WLNG US 1	Sulfate (as SO4)	14808-79-8	E235.SO4	100 mg/L	100 mg/L	100	75.0	125	----
Anions and Nutrients (QCLot: 1832338)										
VA25A0278-001	WLNG US 1	Nitrite (as N)	14797-65-0	E235.NO2-L	0.497 mg/L	0.5 mg/L	99.4	75.0	125	----
Anions and Nutrients (QCLot: 1832340)										
VA25A0278-001	WLNG US 1	Fluoride	16984-48-8	E235.F	0.977 mg/L	1 mg/L	97.7	75.0	125	----
Anions and Nutrients (QCLot: 1832341)										
VA25A0278-001	WLNG US 1	Nitrate (as N)	14797-55-8	E235.NO3-L	2.46 mg/L	2.5 mg/L	98.3	75.0	125	----
Anions and Nutrients (QCLot: 1832342)										
VA25A0278-001	WLNG US 1	Bromide	24959-67-9	E235.Br-L	0.480 mg/L	0.5 mg/L	95.9	75.0	125	----
Anions and Nutrients (QCLot: 1833454)										
VA25A0230-003	Anonymous	Ammonia, total (as N)	7664-41-7	E298	ND mg/L	----	ND	75.0	125	----
Anions and Nutrients (QCLot: 1833456)										
VA25A0230-003	Anonymous	Nitrogen, total	7727-37-9	E366	ND mg/L	----	ND	70.0	130	----
Anions and Nutrients (QCLot: 1833457)										
VA25A0230-003	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0457 mg/L	0.05 mg/L	91.4	70.0	130	----
Organic / Inorganic Carbon (QCLot: 1833451)										
VA25A0230-003	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	ND mg/L	----	ND	70.0	130	----
Total Sulfides (QCLot: 1833235)										
VA25A0278-002	WLNG DS 1	Sulfide, total (as S)	18496-25-8	E395	0.196 mg/L	0.2 mg/L	98.1	75.0	125	----
Total Metals (QCLot: 1832617)										
VA25A0254-002	Anonymous	Aluminum, total	7429-90-5	E420	0.986 mg/L	1 mg/L	98.6	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0978 mg/L	0.1 mg/L	97.8	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.106 mg/L	0.1 mg/L	106	70.0	130	----
		Barium, total	7440-39-3	E420	0.0935 mg/L	0.1 mg/L	93.5	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.188 mg/L	0.2 mg/L	94.0	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.0432 mg/L	0.05 mg/L	86.4	70.0	130	----
		Boron, total	7440-42-8	E420	ND mg/L	----	ND	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.0198 mg/L	0.02 mg/L	98.8	70.0	130	----
		Calcium, total	7440-70-2	E420	ND mg/L	----	ND	70.0	130	----
		Cesium, total	7440-46-2	E420	0.0478 mg/L	0.05 mg/L	95.6	70.0	130	----
		Chromium, total	7440-47-3	E420	0.200 mg/L	0.2 mg/L	99.9	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: 1832617) - continued										
VA25A0254-002	Anonymous	Cobalt, total	7440-48-4	E420	0.0973 mg/L	0.1 mg/L	97.3	70.0	130	----
		Copper, total	7440-50-8	E420	0.0921 mg/L	0.1 mg/L	92.1	70.0	130	----
		Iron, total	7439-89-6	E420	9.68 mg/L	10 mg/L	96.8	70.0	130	----
		Lead, total	7439-92-1	E420	0.0892 mg/L	0.1 mg/L	89.2	70.0	130	----
		Lithium, total	7439-93-2	E420	0.466 mg/L	0.5 mg/L	93.2	70.0	130	----
		Magnesium, total	7439-95-4	E420	ND mg/L	----	ND	70.0	130	----
		Manganese, total	7439-96-5	E420	0.0997 mg/L	0.1 mg/L	99.7	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0945 mg/L	0.1 mg/L	94.5	70.0	130	----
		Nickel, total	7440-02-0	E420	0.190 mg/L	0.2 mg/L	95.3	70.0	130	----
		Phosphorus, total	7723-14-0	E420	50.4 mg/L	50 mg/L	101	70.0	130	----
		Potassium, total	7440-09-7	E420	ND mg/L	----	ND	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0986 mg/L	0.1 mg/L	98.6	70.0	130	----
		Selenium, total	7782-49-2	E420	0.209 mg/L	0.2 mg/L	104	70.0	130	----
		Silicon, total	7440-21-3	E420	50.6 mg/L	50 mg/L	101	70.0	130	----
		Silver, total	7440-22-4	E420	0.0183 mg/L	0.02 mg/L	91.5	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	0.213 mg/L	0.2 mg/L	107	70.0	130	----
		Thallium, total	7440-28-0	E420	0.0177 mg/L	0.02 mg/L	88.4	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0905 mg/L	0.1 mg/L	90.5	70.0	130	----
		Tin, total	7440-31-5	E420	0.102 mg/L	0.1 mg/L	102	70.0	130	----
		Titanium, total	7440-32-6	E420	0.212 mg/L	0.2 mg/L	106	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0953 mg/L	0.1 mg/L	95.3	70.0	130	----
		Uranium, total	7440-61-1	E420	0.0180 mg/L	0.02 mg/L	89.8	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.514 mg/L	0.5 mg/L	103	70.0	130	----
		Zinc, total	7440-66-6	E420	2.04 mg/L	2 mg/L	102	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.215 mg/L	0.2 mg/L	108	70.0	130	----
Total Metals (QCLot: 1836626)										
VA25A0245-002	Anonymous	Mercury, total	7439-97-6	E508	0.0000920 mg/L	0 mg/L	92.0	70.0	130	----
Dissolved Metals (QCLot: 1832621)										
VA25A0254-002	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.971 mg/L	1 mg/L	97.1	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.100 mg/L	0.1 mg/L	100	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.106 mg/L	0.1 mg/L	106	70.0	130	----
		Barium, dissolved	7440-39-3	E421	0.0996 mg/L	0.1 mg/L	99.6	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.186 mg/L	0.2 mg/L	92.8	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.0428 mg/L	0.05 mg/L	85.7	70.0	130	----
		Boron, dissolved	7440-42-8	E421	ND mg/L	----	ND	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.0199 mg/L	0.02 mg/L	99.3	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.0489 mg/L	0.05 mg/L	97.8	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.198 mg/L	0.2 mg/L	98.9	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0969 mg/L	0.1 mg/L	96.9	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: 1832621) - continued										
VA25A0254-002	Anonymous	Copper, dissolved	7440-50-8	E421	0.0929 mg/L	0.1 mg/L	92.9	70.0	130	----
		Iron, dissolved	7439-89-6	E421	9.73 mg/L	10 mg/L	97.3	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0921 mg/L	0.1 mg/L	92.1	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.474 mg/L	0.5 mg/L	94.8	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	ND mg/L	----	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	0.104 mg/L	0.1 mg/L	104	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.105 mg/L	0.1 mg/L	105	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.191 mg/L	0.2 mg/L	95.3	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	51.8 mg/L	50 mg/L	104	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	ND mg/L	----	ND	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.103 mg/L	0.1 mg/L	103	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.217 mg/L	0.2 mg/L	109	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	52.5 mg/L	50 mg/L	105	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.0185 mg/L	0.02 mg/L	92.4	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	0.222 mg/L	0.2 mg/L	111	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.0181 mg/L	0.02 mg/L	90.7	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0681 mg/L	0.1 mg/L	68.1	70.0	130	MES
		Tin, dissolved	7440-31-5	E421	0.102 mg/L	0.1 mg/L	102	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.212 mg/L	0.2 mg/L	106	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0977 mg/L	0.1 mg/L	97.7	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	0.0176 mg/L	0.02 mg/L	88.1	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.517 mg/L	0.5 mg/L	103	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	2.00 mg/L	2 mg/L	100.0	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.233 mg/L	0.2 mg/L	116	70.0	130	----
Dissolved Metals (QCLot: 1836816)										
VA25A0230-003	Anonymous	Mercury, dissolved	7439-97-6	E509	ND mg/L	----	ND	70.0	130	----
Speciated Metals (QCLot: 1832247)										
FJ2403883-014	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.264 mg/L	0.25 mg/L	106	70.0	130	----

Qualifiers

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

Chain of Custody (COC) / Analytical Request Form

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 2

Report To	Contact and company name below will appear on the final report
Company:	
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:	☑ EXCEL ☐ EDD (DIGITAL)
Quality Control (QC) Report with Report	☑ YES ☐ NO
☑ Compare Results to Criteria on Report - provide details below if box checked	
Select Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	
Email 2	
Email 3	
Select Invoice	
Email 1 or Fax	
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:	Sampler:

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: Jan 15/2025

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

Analysis Request

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

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	Total metals + mercury	Dissolved metals + mercury	Total hexavalent chromium	Total trivalent chromium	TSS	TDS	Nutrients (ammonia, ammonium, total nitrogen, total phosphorus)	Total sulfide (low) (as H2S), Unionized Sulfide (low)	Anions scan (Br, Cl, F, NO2, NO3, SO4)	General parameters (alkalinity)	DOC					SAMPLES ON HOLD	Sample is hazardous (please provide further details	NUMBER OF CONTAINERS
					F	F					P	P			F/P							
	WLNG US 1	Jan 7/25	2:50	Water	R	R	R	R	R	R	R	R	R	R	R						N	9
	pH: 7.91 cond: 23 temp: 5.7																					
	WLNG DS 1	Jan 7/25	1:41	Water	R	R	R	R	R	R	R	R	R	R	R						N	9
	pH: ~~7.35~~ 7.35 cond: 34 temp: 6.3																					

Environmental Division
Vancouver
Work Order Reference
VA25A0278

Telephone : +1 604 253 4188

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add or (electronic
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			
				8° C			

SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
	Time: 6:00 pm	Received by:	Date:	Time:	Received by: SH	Date: 7/1/25	Time: 6 PM

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

SEPT 2017 FRONT

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

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

Woodfibre Site Receiving Environment Field Notes and Logs

FortisBC Eagle Mountain-Woodfibre Gas Pipeline

Water Discharge Authorization Water Quality Monitoring

2025-1-7-Renkers-56566

Project Component:	Tunnel	**Site Name:**	Receiving Environment - Downstream of Discharge
Inspection Date:	01/07/2025	**Location:**	WLNG
Triton QP:	Stephanie Renkers	**Latitude/Longitude:**	49.66913 -123.248129
Temperature(c):	Low -1 High 7	**Permit:**	PE 110136
Weather Conditions:	Overcast	**Ground Conditions:**	Dry

Observations

Time: 13:41:00 **Flow Volume (visual):** moderate

Notes:

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

Samples Collected - Parameters

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

Logger Maintenance

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

Describe Logger Maintenance

Photos

Photo: 1

Location: EAS DS1

Description: Upstream

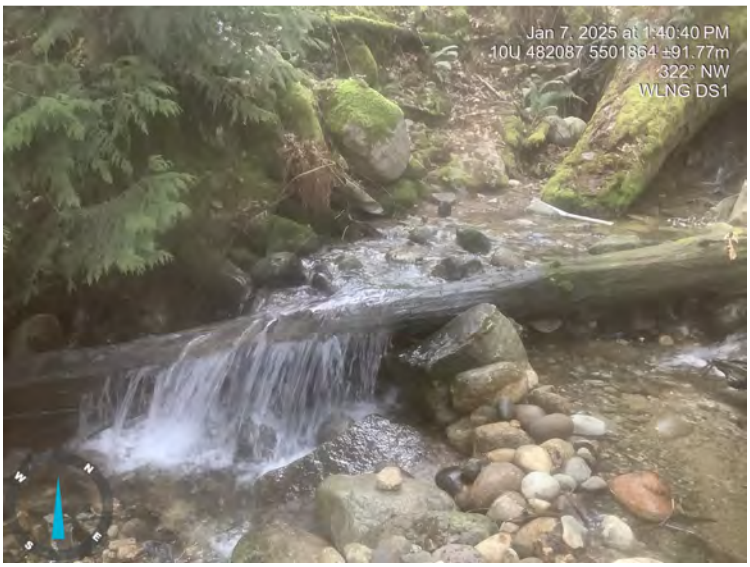


Photo: 2

Location: EAS DS1

Description: Across

Photos

Photo: 3
Location: EAS DS1
Description: Downstream

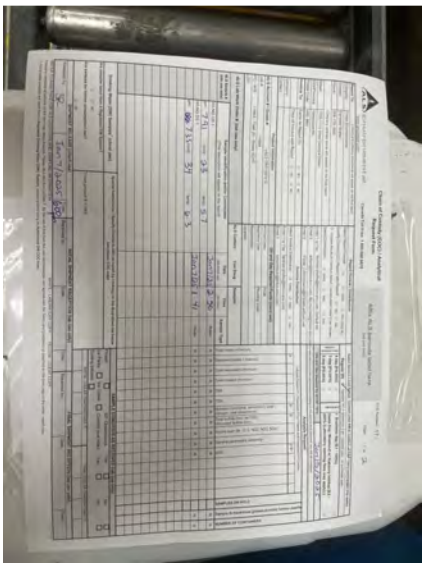


Photo: 4
Location: EAS DS1
Description: Lab COC

Sign Off

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

FortisBC Eagle Mountain-Woodfibre Gas Pipeline

Water Discharge Authorization Water Quality Monitoring

2025-1-7-Renkers-4FBEA

Project Component:	Tunnel	**Site Name:**	Receiving Environment - Upstream of Discharge
Inspection Date:	01/07/2025	**Location:**	WLNG
Triton QP:	Stephanie Renkers	**Latitude/Longitude:**	49.669455 -123.25087
Temperature(c):	Low -1 High 7	**Permit:**	PE 110136
Weather Conditions:	Overcast	**Ground Conditions:**	Dry

Observations

Time: 14:50:00 **Flow Volume (visual):** moderate

Notes:

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

Samples Collected - Parameters

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

Logger Maintenance

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

Describe Logger Maintenance

Photos

Photo: 1

Location: EAS US1

Description: Upstream

Photo: 2

Location: EAS US1

Description: Across

Photos

Photo: 3

Location: EAS US1

Description: Downstream

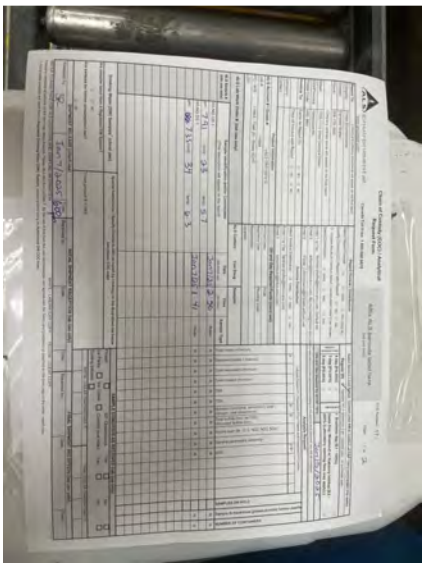


Photo: 4

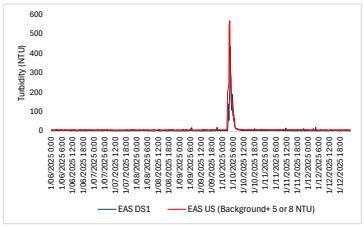
Location: EAS US1

Description: Lab COC

Sign Off

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

Woodfibre Plant site East Creek (WC 309-R2)	EAS DS1							EAS US1 (Background)						
Date	Temperature (c)	Specific Conductivity (µS/cm)	Salinity PSU	pH	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Date	Temperature (c)	Specific Conductivity (µS/cm)	Salinity PSU	pH	Dissolved Oxygen (mg/L)	Turbidity (NTU)	EAS US (Background+ 5 or 8 NTU)
1/06/2025 0:00	5.4	20.6	0.0	6.7	11.9	3.0	1/06/2025 0:00	5.4	14.6	0.0	7.0	11.6	0.1	8.1
1/06/2025 0:15	5.3	20.3	0.0	6.6	11.9	3.2	1/06/2025 0:15	5.4	13.1	0.0	7.0	11.6	0.0	8.0
1/06/2025 0:30	6.6	53.1	0.0	7.2	11.5	3.0	1/06/2025 0:30	5.4	14.5	0.0	7.0	11.6	0.2	8.2
1/06/2025 0:45	5.7	24.9	0.0	6.9	11.7	3.0	1/06/2025 0:45	5.4	13.2	0.0	7.0	11.6	0.0	8.0
1/06/2025 1:00	5.3	20.4	0.0	6.7	11.9	3.0	1/06/2025 1:00	5.4	14.4	0.0	7.0	11.6	0.0	8.0
1/06/2025 1:15	5.3	20.0	0.0	6.6	11.9	3.8	1/06/2025 1:15	5.4	12.9	0.0	7.0	11.6	0.0	8.0
1/06/2025 1:30	6.5	54.6	0.0	7.1	11.5	3.2	1/06/2025 1:30	5.4	14.2	0.0	7.0	11.6	0.0	8.0
1/06/2025 1:45	5.5	21.9	0.0	6.9	11.9	3.2	1/06/2025 1:45	5.4	12.9	0.0	7.0	11.6	0.1	8.1
1/06/2025 2:00	5.3	20.0	0.0	6.7	12.0	3.6	1/06/2025 2:00	5.4	14.2	0.0	7.0	11.6	0.0	8.0
1/06/2025 2:15	5.2	19.7	0.0	6.7	12.0	3.6	1/06/2025 2:15	5.3	12.7	0.0	7.0	11.6	0.0	8.0
1/06/2025 2:30	6.4	59.0	0.0	7.1	11.6	4.1	1/06/2025 2:30	5.3	14.1	0.0	7.0	11.6	0.4	8.4
1/06/2025 2:45	6.6	61.8	0.0	7.2	11.6	4.2	1/06/2025 2:45	5.3	14.2	0.0	7.0	11.6	2.7	10.7
1/06/2025 3:00	6.6	62.3	0.0	7.3	11.5	4.8	1/06/2025 3:00	5.3	14.0	0.0	7.0	11.6	0.0	8.0
1/06/2025 3:15	6.6	63.1	0.0	7.3	11.5	6.4	1/06/2025 3:15	5.3	12.8	0.0	7.0	11.6	0.0	8.0
1/06/2025 3:30	5.3	20.8	0.0	6.8	11.9	3.0	1/06/2025 3:30	5.3	14.2	0.0	7.0	11.6	0.0	8.0
1/06/2025 3:45	5.2	20.1	0.0	6.6	12.0	3.5	1/06/2025 3:45	5.3	13.5	0.0	7.0	11.6	0.1	8.1
1/06/2025 4:00	5.2	19.9	0.0	6.7	11.9	3.5	1/06/2025 4:00	5.2	14.0	0.0	7.0	11.7	0.0	8.0
1/06/2025 4:15	5.1	19.7	0.0	6.6	12.0	3.0	1/06/2025 4:15	5.2	14.2	0.0	7.0	11.7	0.0	8.0
1/06/2025 4:30	6.5	64.4	0.0	7.2	11.6	4.4	1/06/2025 4:30	5.2	14.0	0.0	7.0	11.7	0.0	8.0
1/06/2025 4:45	5.2	20.6	0.0	6.7	11.9	3.0	1/06/2025 4:45	5.3	12.8	0.0	6.9	11.6	0.0	8.0
1/06/2025 5:00	5.1	19.9	0.0	6.7	12.0	4.7	1/06/2025 5:00	5.2	14.0	0.0	7.0	11.7	0.1	8.1
1/06/2025 5:15	6.4	66.0	0.0	7.2	11.6	4.0	1/06/2025 5:15	5.2	12.6	0.0	7.0	11.7	0.0	8.0
1/06/2025 5:30	6.6	67.8	0.0	7.3	11.6	6.2	1/06/2025 5:30	5.2	13.9	0.0	7.0	11.7	0.0	8.0
1/06/2025 5:45	6.6	67.5	0.0	7.3	11.6	6.5	1/06/2025 5:45	5.2	12.5	0.0	7.0	11.7	0.0	8.0
1/06/2025 6:00	5.2	20.7	0.0	6.7	11.9	3.5	1/06/2025 6:00	5.2	13.8	0.0	7.0	11.7	0.0	8.0
1/06/2025 6:15	5.1	19.9	0.0	6.7	12.0	3.6	1/06/2025 6:15	5.2	12.5	0.0	7.0	11.7	0.0	8.0
1/06/2025 6:30	5.1	19.6	0.0	6.6	12.0	3.0	1/06/2025 6:30	5.2	13.7	0.0	7.0	11.7	0.0	8.0
1/06/2025 6:45	6.1	62.5	0.0	7.0	11.7	5.7	1/06/2025 6:45	5.2	13.8	0.0	7.0	11.7	0.0	8.0
1/06/2025 7:00	6.6	68.4	0.0	7.3	11.5	6.0	1/06/2025 7:00	5.2	13.5	0.0	7.0	11.7	0.0	8.0
1/06/2025 7:15	6.6	68.8	0.0	7.3	11.6	6.0	1/06/2025 7:15	5.2	13.6	0.0	7.0	11.7	0.0	8.0
1/06/2025 7:30	6.6	68.2	0.0	7.3	11.5	6.6	1/06/2025 7:30	5.2	13.6	0.0	7.0	11.7	0.0	8.0
1/06/2025 7:45	5.2	21.4	0.0	6.8	11.9	3.7	1/06/2025 7:45	5.1	12.3	0.0	7.0	11.7	0.0	8.0
1/06/2025 8:00	5.1	19.9	0.0	6.7	12.0	3.3	1/06/2025 8:00	5.1	13.4	0.0	6.8	11.7	0.0	8.0
1/06/2025 8:15	5.1	19.5	0.0	6.6	12.0	3.0	1/06/2025 8:15	5.1	13.4	0.0	7.0	11.7	0.0	8.0
1/06/2025 8:30	6.4	67.7	0.0	7.2	11.6	5.8	1/06/2025 8:30	5.1	13.4	0.0	7.0	11.7	0.0	8.0
1/06/2025 8:45	6.6	68.4	0.0	7.3	11.5	6.4	1/06/2025 8:45	5.1	13.3	0.0	7.0	11.7	0.0	8.0
1/06/2025 9:00	6.6	68.9	0.0	7.3	11.5	5.4	1/06/2025 9:00	5.1	12.1	0.0	7.0	11.7	0.0	8.0
1/06/2025 9:15	5.6	37.0	0.0	7.0	11.8	4.1	1/06/2025 9:15	5.1	13.3	0.0	6.9	11.7	0.0	8.0
1/06/2025 9:30	5.1	19.9	0.0	6.7	12.0	3.0	1/06/2025 9:30	5.1	13.3	0.0	7.0	11.7	0.1	8.1
1/06/2025 9:45	6.4	66.9	0.0	7.2	11.6	4.5	1/06/2025 9:45	5.1	12.1	0.0	7.0	11.7	0.0	8.0
1/06/2025 10:00	6.6	66.7	0.0	7.3	11.5	3.6	1/06/2025 10:00	5.1	13.2	0.0	7.0	11.8	0.0	8.0
1/06/2025 10:15	5.3	23.3	0.0	6.9	11.9	3.1	1/06/2025 10:15	5.1	13.3	0.0	7.0	11.7	0.2	8.2
1/06/2025 10:30	5.1	19.8	0.0	6.7	12.0	3.0	1/06/2025 10:30	5.2	13.2	0.0	7.0	11.7	0.0	8.0
1/06/2025 10:45	6.2	61.1	0.0	7.1	11.7	3.9	1/06/2025 10:45	5.2	11.9	0.0	7.0	11.7	0.0	8.0
1/06/2025 11:00	5.3	21.1	0.0	6.9	11.9	3.0	1/06/2025 11:00	5.3	13.2	0.0	7.0	11.7	0.1	8.1
1/06/2025 11:15	5.2	19.3	0.0	6.6	12.0	3.1	1/06/2025 11:15	5.3	12.0	0.0	7.0	11.7	0.0	8.0
1/06/2025 11:30	5.3	19.6	0.0	6.7	11.9	2.9	1/06/2025 11:30	5.3	13.5	0.0	6.9	11.7	0.0	8.0
1/06/2025 11:45	5.3	19.2	0.0	6.6	11.9	3.1	1/06/2025 11:45	5.4	13.5	0.0	6.9	11.7	0.0	8.0
1/06/2025 12:00	5.4	19.2	0.0	6.7	11.9	3.7	1/06/2025 12:00	5.5	13.6	0.0	7.0	11.7	0.3	8.3
1/06/2025 12:15	6.8	66.5	0.0	7.3	11.5	4.0	1/06/2025 12:15	5.5	12.4	0.0	7.0	11.6	0.0	8.0
1/06/2025 12:30	7.0	66.7	0.0	7.3	11.5	6.1	1/06/2025 12:30	5.6	13.7	0.0	7.0	11.6	0.0	8.0
1/06/2025 12:45	5.7	21.0	0.0	6.7	11.8	3.2	1/06/2025 12:45	5.6	12.5	0.0	7.0	11.6	0.3	8.3
1/06/2025 13:00	5.7	19.8	0.0	6.7	11.8	3.7	1/06/2025 13:00	5.7	13.8	0.0	7.0	11.6	0.0	8.0
1/06/2025 13:15	5.7	19.5	0.0	6.6	11.8	3.1	1/06/2025 13:15	5.7	12.6	0.0	7.0	11.6	0.5	8.5
1/06/2025 13:30	5.7	19.5	0.0	6.8	11.8	2.9	1/06/2025 13:30	5.8	14.1	0.0	7.0	11.6	0.0	8.0
1/06/2025 13:45	7.0	65.5	0.0	7.2	11.4	3.1	1/06/2025 13:45	5.8	13.2	0.0	7.0	11.6	0.0	8.0
1/06/2025 14:00	7.2	66.0	0.0	7.3	11.4	3.5	1/06/2025 14:00	5.9	14.8	0.0	7.0	11.5	0.0	8.0
1/06/2025 14:15	6.4	29.9	0.0	7.1	11.6	2.9	1/06/2025 14:15	5.9	13.5	0.0	7.0	11.5	0.0	8.0
1/06/2025 14:30	6.1	27.5	0.0	6.8	11.7	3.0	1/06/2025 14:30	5.9	14.9	0.0	7.0	11.5	0.0	8.0
1/06/2025 14:45	5.9	20.6	0.0	6.6	11.7	3.4	1/06/2025 14:45	5.9	13.3	0.0	7.0	11.5	0.0	8.0
1/06/2025 15:00	5.9	20.4	0.0	6.7	11.8	2.9	1/06/2025 15:00	5.9	14.6	0.0	6.9	11.5	0.0	8.0
1/06/2025 15:15	7.3	67.9	0.0	7.3	11.4	3.0	1/06/2025 15:15	6.0	14.4	0.0	7.0	11.5	0.0	8.0
1/06/2025 15:30	7.3	69.8	0.0	7.4	11.3	3.0	1/06/2025 15:30	6.0	12.9	0.0	7.0	11.5	0.1	8.1
1/06/2025 15:45	7.2	68.6	0.0	7.3	11.4	3.5	1/06/2025 15:45	6.0	14.1	0.0	7.0	11.5	0.0	8.0
1/06/2025 16:00	7.2	68.3	0.0	7.3	11.4	3.1	1/06/2025 16:00	5.9	12.6	0.0	7.0	11.5	0.0	8.0
1/06/2025 16:15	7.2	70.2	0.0	7.3	11.4	3.2	1/06/2025 16:15	5.9	13.9	0.0	7.0	11.5	0.0	8.0
1/06/2025 16:30	6.3	28.7	0.0	7.1	11.6	2.9	1/06/2025 16:30	5.9	12.4	0.0	7.0	11.5	0.0	8.0
1/06/2025 16:45	6.0	23.2	0.0	6.7	11.7	3.1	1/06/2025 16:45	5.9	13.7	0.0	7.0	11.5	0.0	8.0
1/06/2025 17:00	7.3	80.1	0.0	7.4	11.3	4.0	1/06/2025 17:00	5.9	12.3	0.0	7.0	11.5	0.0	8.0
1/06/2025 17:15	5.9	21.1	0.0	6.7	11.7	2.9	1/06/2025 17:15	5.9	13.7	0.0	7.0	11.5	0.0	8.0
1/06/2025 17:30	7.0	74.2	0.0	7.2	11.4	5.3	1/06/2025 17:30	5.9	12.4	0.0	7.0	11.5	1.2	9.2
1/06/2025 17:45	5.9	20.6	0.0	6.7	11.8	3.0	1/06/2025 17:45	5.9	13.6	0.0	7.0	11.5	0.0	8.0
1/06/2025 18:00	5.8	19.9	0.0	6.7	11.8	3.6	1/06/2025 18:00		13.7	0.0	7.0	11.5	0.0	8.0
1/06/2025 18:15	5.8	19.8	0.0	6.6	11.8	3.0	1/06/2025 18:15	5.8	13.4	0.0	7.0	11.5	0.0	8.0
1/06/2025 18:30	7.2	73.1	0.0	7.3	11.4	4.1	1/06/2025 18:30	5.7	13.6	0.0	7.0	11.5	0.3	8.3
1/06/2025 18:45	5.8	20.5	0.0	6.7	11.8	2.9	1/06/2025 18:45	5.7	13.5	0.0	7.0	11.5	0.0	8.0
1/06/2025 19:00	7.2	73.8	0.0	7.3	11.4	4.9	1/06/2025 19:00	5.7	12.2	0.0	7.0	11.6	0.0	8.0
1/06/2025 19:15	5.8	20.9	0.0	6.7	11.8	3.1	1/06/2025 19:15	5.7	13.4	0.0	7.0	11.6	0.0	8.0
1/06/2025 19:30	5.6	19.8	0.0	6.7	11.8	2.9	1/06/2025 19:30	5.6	12.1	0.0	7.0	11.6	0.0	8.0
1/06/2025 19:45	5.6	19.9	0.0	6.6	11.8	2.9	1/06/2025 19:45	5.6	13.4	0.0	6.9	11.6	0.0	8.0
1/06/2025 20:00	5.6	20.9	0.0	6.7	11.9	3.2	1/06/2025 20:00	5.6	13.1	0.0	7.0	11.6	0.0	8.0
1/06/2025 20:15	5.5	20.1	0.0	6.7	11.9	2.9	1/06/2025 20:15	5.6	13.5	0.0	7.0	11.6	0.1	8.1
1/06/2025 20:30	5.5	19.8	0.0	6.7	11.9	3.4	1/06/2025 20:30	5.6	13.5	0.0	7.0	11.6	0.0	8.0
1/06/2025 20:45	6.9	71.1	0.0	7.3	11.5	3.6	1/06/2025 20:45	5.6	12.2	0.0	7.0	11.6	0.0	8.0
1/06/2025 21:00	5.6	21.0	0.0	6.8	11.8	3.0	1/06/2025 21:00	5.6	13.4	0.0	7.0	11.6	0.0	8.0
1/06/2025 21:15	5.5	19.6	0.0	6.6	11.9	3.0	1/06/2025 21:15	5.5	12.1	0.0	7.0	11.6	0.0	8.0
1/06/2025 21:30	7.0	70.2	0.0	7.3	11.4	3.4	1/06/2025 21:30	5.5	13.4	0.0	7.0	11.6	0.0	8.0
1/06/2025 21:45	7.1	69.4	0.0	7.3	11.4	4.1	1/06/2025 21:45	5.5	12.1	0.0	7.0	11.6	0.0	8.0
1/06/2025 22:00	7.0	68.0	0.0	7.3	11.4	4.2	1/06/2025 22:00	5.5	13.4	0.0	7.0	11.6	0.1	8.1
1/06/2025 22:15	5.8	24.0	0.0	6.9	11.8	3.1	1/06/2025 22:15	5.5	13.3	0.0	7.0	11.6	0.0	8.0
1/06/2025 22:30	5.5	20.1	0.0	6.7	11.9	2.9	1/06/2025 22:30	5.5	13.2	0.0	6.9	11.6	0.0	8.0
1/06/2025 22:45	6.7	64.4	0.0	7.2	11.5	3.4	1/06/2025 22:45	5.4	12.1	0.0	7.0	11.6	0.0	8.0
1/06/2025 23:00	6.7	59.3	0.0	7.3	11.5	4.2	1/06/2025 23:00	5.4	13.3	0.0	7.0	11.6	0.1	8.1
1/06/2025 23:15	5.5	20.2	0.0	6.7	11.9	3.7	1/06/2025 23:15	5.4	13.3	0.0	7.0	11.6	0.0	8.0
1/06/2025 23:30	5.6	26.7	0.0	6.9	11.8	2.9	1/06/2025 23:30	5.4	13.1	0.0	7.0	11.6	0.0	8.0
1/06/2025 23:45	5.3	19.3	0.0	6.6	11.9	3.3	1/06/2025 23:45	5.4	11.9	0.0	7.0	11.6	0.6	8.6
1/07/2025 0:00	5.3	19.1	0.0	6.6	11.9	3.2	1/07/2025 0:00	5.4	13.1	0.0	6.9	11.7	0.0	8.0
1/07/2025 0:15	5.3	19.0	0.0	6.7	12.0	3.0	1/07/2025 0:15	5.4	13.1	0.0	7.0	11.7	0.0	8.0
1/07/2025 0:30	5.2	17.6	0.0	6.6	12.0	3.0	1/07/2025 0:30	5.3	11.7	0.0	7.0	11.7	0.1	8.1
1/07/2025 0:45	6.1	53.1	0.0	7.0	11.7	3.7	1/07/2025 0:45	5.3	12.9	0.0	7.0	11.7	0.0	8.0
1/07/2025 1:00	6.9	69.5	0.0	7.3	11.5	3.2	1/07/2025 1:00	5.3	11.7	0.0	7.0	11.7	0.0	8.0
1/07/2025 1:15	6.7	71.9	0.0	7.3	11.5	3.0	1/07/2025 1:15	5.3	12.9	0.0	6.9	11.7	0.0	8.0
1/07/2025 1:30	6.4	65.3	0.0	7.2	11.6	3.4	1/07/2025 1:30	5.3	11.6	0.0	7.0	11.7	0.1	8.1
1/07/2025 1:45	5.4	20.6	0.0	6.8	12.0	3.3	1/07/2025 1:45	5.3	12.8	0.0	6.8	11.7	0.0	8.0
1/07/2025 2:00	6.4	65.5	0.0	7.2	11.7	3.5	1/07/2025 2:00	5.3	12.9	0.0	7.0	11.7	0.0	8.0
1/07/2025 2:15	6.1	40.7	0.0	7.3	11.7	3.2	1/07/2025 2:15	5.2	13.0	0.0	7.0	11.7	0.0	8.0
1/07/2025 2:30	5.4	22.1	0.0	6.8	11.9	3.2	1/07/2025 2:30	5.2	13.0	0.0	7.0	11.7	0.0	8.0
1/07/2025 2:45	6.7	68.0	0.0	7.3	11.5	3.3	1/07/2025 2:45	5.2	13.1	0.0	7.0	11.7	0.3	8.3
1/07/2025 3:00	6.8	68.5	0.0	7.3	11.5	4.2	1/07/2025 3:00	5.2	12.8	0.0	6.9	11.7	0.0	8.0
1/07/2025 3:15	6.8	65.8	0.0	7.3	11.5	3.5	1/07/2025 3:15	5.2	13.0	0.0	6.9	11.7	0.0	8.0
1/07/2025 3:30	5.3	20.4	0.0	6.8	11.9	3.1	1/07/2025 3:30	5.2	12.9	0.0	7.0	11.7	0.0	8.0
1/07/2025 3:45	5.2	19.5	0.0	6.6	12.0	2.9	1/07/2025 3:45	5.2	12.9	0.0	6.9	11.7	0.3	8.3
1/07/2025 4:00	6.5	63.9	0.0	7.2	11.6	3.7	1/07/2025 4:00	5.2	12.9	0.0	6.9	11.7	0.1	8.1
1/07/2025 4:15	6.5	59.6	0.0	7.3	11.6	3.2	1/07/2025 4:15	5.2	11.8	0.0	7.0	11.7	0.0	8.0
1/07/2025 4:30	6.8	69.9	0.0	7.3	11.5	3.4	1/07/2025 4:30	5.2	12.9	0.0	6.9	11.7	0.1	8.1
1/07/2025 4:45	5.4	21.5	0.0	6.9	11.9	3.0	1/07/2025 4:45	5.2	12.9	0.0	7.0	11.7	0.0	8.0
1/07/2025 5:00	5.2	19.6	0.0	6.7	12.0	3.0	1/07/2025 5:00	5.2	12.8	0.0	7.0	11.7	0.0	8.0
1/07/2025 5:15	5.4	32.5	0.0	6.9	11.9	3.0	1/07/2025 5:15	5.1	12.8	0.0	7.0	11.7	0.1	8.1
1/07/2025 5:30	6.6	70.4	0.0	7.3	11.6	4.3	1/07/2025 5:30	5.1	12.8	0.0	6.9	11.7	0.2	8.2
1/07/2025 5:45	6.7	72.4	0.0	7.3	11.5	5.5	1/07/2025 5:45	5.1	12.9	0.0	6.9	11.7	0.1	8.1
1/07/2025 6:00	5.3	21.8	0.0	6.9	11.9	3.4	1/07/2025 6:00	5.1	12.8	0.0	7.0	11.7	0.0	8.0
1/07/2025 6:15	5.1	19.6	0.0	6.7	12.0	3.3	1/07/2025 6:15	5.1	12.9	0.0	6.9	11.7	0.0	8.0
1/07/2025 6:30	5.1	19.1	0.0	6.6	12.0	3.0	1/07/2025 6:30	5.1	12.8	0.0	6.9	11.7	0.0	8.0
1/07/2025 6:45	5.0	18.9	0.0	6.7	12.0	3.2	1/07/2025 6:45	5.1	12.8	0.0	7.0	11.7	0.0	8.0
1/07/2025 7:00	6.7	75.2	0.0	7.3	11.5	3.2	1/07/2025 7:00	5.1	12.6	0.0	6.9	11.7	0.0	8.0
1/07/2025 7:15	6.8	75.9	0.0	7.4	11.5	3.1	1/07/2025 7:15	5.1	12.8	0.0	7.0	11.7	1.5	9.5
1/07/2025 7:30	6.8	75.3	0.0	7.4	11.5	3.3	1/07/2025 7:30	5.1	12.7	0.0	7.0	11.7	0.0	8.0
1/07/2025 7:45	5.2	21.5	0.0	6.9	12.0	3.4	1/07/2025 7:45	5.1	12.8	0.0	7.0	11.7	0.1	8.1
1/07/2025 8:00	5.1	18.4	0.0	6.6	12.0	3.0	1/07/2025 8:00	5.0	12.7	0.0	6.9	11.7	0.0	8.0
1/07/2025 8:15	6.5	73.0	0.0	7.3	11.6	4.0	1/07/2025 8:15	5.0	12.7	0.0	6.9	11.7	0.0	8.0
1/07/2025 8:30	6.6	74.0	0.0	7.3	11.5	3.0	1/07/2025 8:30	5.0	12.6	0.0	6.9	11.7	0.0	8.0
1/07/2025 8:45	6.6	73.9	0.0	7.4	11.5	3.5	1/07/2025 8:45	5.0	12.7	0.0	6.9	11.7	0.0	8.0
1/07/2025 9:00	5.2	22.3	0.0	6.9	11.9	3.0	1/07/2025 9:00	5.0	12.6	0.0	7.0	11.7	0.0	8.0
1/07/2025 9:15	5.0	19.8	0.0	6.7	12.0	2.8	1/07/2025 9:15	5.0	12.7	0.0	6.9	11.7	0.0	8.0
1/07/2025 9:30	5.0	19.2	0.0	6.6	12.1	2.9	1/07/2025 9:30	5.0	12.6	0.0	7.0	11.8	0.0	8.0
1/07/2025 9:45	5.0	20.9	0.0	6.6	12.0	3.0	1/07/2025 9:45	5.0	12.6	0.0	6.9	11.8	0.0	8.0



1/07/2025 10:00	6.6	70.7	0.0	7.3	11.6	3.3
1/07/2025 10:15	5.2	21.8	0.0	6.9	12.0	2.9
1/07/2025 10:30	5.0	19.3	0.0	6.7	12.0	3.0
1/07/2025 10:45	5.0	18.9	0.0	6.7	12.0	2.9
1/07/2025 11:00	6.3	66.0	0.0	7.1	11.7	3.1
1/07/2025 11:15	6.7	67.5	0.0	7.3	11.5	3.2
1/07/2025 11:30	5.7	29.2	0.0	7.1	11.8	4.0
1/07/2025 11:45	5.2	19.6	0.0	6.7	12.0	2.8
1/07/2025 12:00	6.4	62.3	0.0	7.1	11.7	3.1
1/07/2025 12:15	6.7	64.7	0.0	7.3	11.5	4.1
1/07/2025 12:30	5.7	26.3	0.0	7.0	11.8	3.0
1/07/2025 12:45	5.3	19.7	0.0	6.7	11.9	3.2
1/07/2025 13:00	5.3	19.1	0.0	6.6	11.9	2.8
1/07/2025 13:15	6.7	63.2	0.0	7.3	11.5	3.0
1/07/2025 13:30	6.8	65.1	0.0	7.3	11.5	3.1
1/07/2025 13:45	6.9	65.7	0.0	7.3	11.4	3.7
1/07/2025 14:00	5.5	21.0	0.0	6.8	11.8	3.0
1/07/2025 14:15	5.4	19.8	0.0	6.7	11.9	2.8
1/07/2025 14:30	5.4	19.4	0.0	6.7	11.9	2.8
1/07/2025 14:45	5.5	22.2	0.0	6.9	11.8	2.8
1/07/2025 15:00	5.9	43.9	0.0	6.8	11.8	3.8
1/07/2025 15:15	7.1	70.4	0.0	7.4	11.4	3.3
1/07/2025 15:30	7.1	70.0	0.0	7.3	11.4	3.8
1/07/2025 15:45	5.6	21.6	0.0	6.8	11.8	2.8
1/07/2025 16:00	5.5	20.4	0.0	6.7	11.9	2.9
1/07/2025 16:15	7.1	71.1	0.0	7.3	11.4	5.1
1/07/2025 16:30	7.2	72.2	0.0	7.4	11.3	4.1
1/07/2025 16:45	6.0	28.2	0.0	7.1	11.7	3.0
1/07/2025 17:00	5.5	20.7	0.0	6.7	11.8	2.9
1/07/2025 17:15	5.5	20.0	0.0	6.7	11.8	2.9
1/07/2025 17:30	5.4	19.6	0.0	6.6	11.8	3.2
1/07/2025 17:45	7.1	72.4	0.0	7.3	11.3	3.5
1/07/2025 18:00	7.2	72.9	0.0	7.3	11.3	3.6
1/07/2025 18:15	7.2	72.3	0.0	7.4	11.3	5.6
1/07/2025 18:30	5.7	22.1	0.0	6.8	11.7	2.8
1/07/2025 18:45	5.5	20.2	0.0	6.7	11.8	2.8
1/07/2025 19:00	6.7	65.7	0.0	7.1	11.5	3.9
1/07/2025 19:15	5.7	21.7	0.0	6.8	11.8	2.8
1/07/2025 19:30	5.5	20.2	0.0	6.6	11.8	3.4
1/07/2025 19:45	5.5	21.3	0.0	6.7	11.8	5.4
1/07/2025 20:00	5.6	23.6	0.0	6.7		2.9
1/07/2025 20:15	7.0	64.2	0.0	7.3	11.4	5.5
1/07/2025 20:30	7.0	60.4	0.0	7.3	11.4	5.0
1/07/2025 20:45	6.0	26.3	0.0	7.1	11.7	3.2
1/07/2025 21:00	5.6	20.4	0.0	6.7	11.8	2.9
1/07/2025 21:15	5.5	19.7	0.0	6.7	11.8	2.8
1/07/2025 21:30	5.5	19.4	0.0	6.6	11.8	3.1
1/07/2025 21:45	5.8	24.3	0.0	6.9	11.7	5.3
1/07/2025 22:00	5.5	19.4	0.0	6.7	11.8	3.1
1/07/2025 22:15	5.7	24.4	0.0	6.9	11.7	2.9
1/07/2025 22:30	5.5	19.1	0.0	6.6	11.8	2.8
1/07/2025 22:45	6.3	40.5	0.0	7.3	11.5	3.5
1/07/2025 23:00	5.8	31.2	0.0	6.9	11.7	3.4
1/07/2025 23:15	7.0	71.4	0.0	7.3	11.4	3.2
1/07/2025 23:30	7.2	71.8	0.0	7.3	11.3	3.4
1/07/2025 23:45	7.3	71.5	0.0	7.4	11.3	3.0
1/08/2025 0:00	7.0	66.5	0.0	7.3	11.4	4.0
1/08/2025 0:15	6.2	37.8	0.0	7.2	11.6	2.9
1/08/2025 0:30	5.6	20.7	0.0	6.7	11.8	2.8
1/08/2025 0:45	5.7	32.0	0.0	6.7	11.8	5.0
1/08/2025 1:00	5.6	23.6	0.0	6.7	11.8	3.0
1/08/2025 1:15	7.0	67.2	0.0	7.3	11.4	3.1
1/08/2025 1:30	5.6	21.5	0.0	6.8	11.8	3.2
1/08/2025 1:45	5.5	20.2	0.0	6.7	11.8	2.9
1/08/2025 2:00	5.5	19.9	0.0	6.6	11.8	5.8
1/08/2025 2:15	6.9	65.2	0.0	7.3	11.4	3.0
1/08/2025 2:30	7.0	65.5	0.0	7.3	11.4	3.9
1/08/2025 2:45	6.5	42.7	0.0	7.3	11.5	3.8
1/08/2025 3:00	5.7	22.2	0.0	6.8	11.8	3.2
1/08/2025 3:15	7.1	75.2	0.0	7.3	11.4	4.9
1/08/2025 3:30	5.9	24.7	0.0	6.9	11.7	3.3
1/08/2025 3:45	5.6	20.4	0.0	6.7	11.8	3.0
1/08/2025 4:00	6.7	67.9	0.0	7.2	11.5	5.5
1/08/2025 4:15	5.6	20.3	0.0	6.7	11.8	2.8
1/08/2025 4:30	7.0	75.7	0.0	7.3	11.4	5.8
1/08/2025 4:45	7.2	76.7	0.0	7.4	11.4	5.9
1/08/2025 5:00	7.3	79.0	0.0	7.4	11.3	5.9
1/08/2025 5:15	6.7	51.6	0.0	7.4	11.4	3.4
1/08/2025 5:30	5.7	21.4	0.0	6.8	11.7	2.8
1/08/2025 5:45	5.6	20.3	0.0	6.7	11.8	2.9
1/08/2025 6:00	5.6	20.6	0.0	6.6	11.8	2.9
1/08/2025 6:15	7.1	77.1	0.0	7.4	11.4	3.5
1/08/2025 6:30	5.8	22.2	0.0	6.7	11.7	3.1
1/08/2025 6:45	5.6	20.4	0.0	6.7	11.8	2.9
1/08/2025 7:00	7.2	82.1	0.0	7.3	11.4	3.5
1/08/2025 7:15	5.9	23.3	0.0	6.9	11.7	2.8
1/08/2025 7:30	5.7	20.4	0.0	6.7	11.8	3.1
1/08/2025 7:45	7.2	81.7	0.0	7.4	11.3	3.3
1/08/2025 8:00	6.9	75.1	0.0	7.2	11.5	3.2
1/08/2025 8:15	7.4	82.9	0.0	7.4	11.3	3.5
1/08/2025 8:30	6.4	40.1	0.0	7.2	11.5	3.0
1/08/2025 8:45	5.8	21.6	0.0	6.8	11.8	2.9
1/08/2025 9:00	5.7	21.4	0.0	6.7	11.8	2.9
1/08/2025 9:15	7.3	80.7	0.0	7.4	11.3	3.0
1/08/2025 9:30	5.9	23.8	0.0	6.8	11.7	2.8
1/08/2025 9:45	5.7	20.9	0.0	6.7	11.8	2.8
1/08/2025 10:00	5.7	20.3	0.0	6.6	11.8	3.0
1/08/2025 10:15	6.7	51.1	0.0	7.3	11.5	2.9
1/08/2025 10:30	5.8	21.1	0.0	6.7	11.8	2.9
1/08/2025 10:45	7.2	79.6	0.0	7.3	11.4	5.0
1/08/2025 11:00	5.9	22.6	0.0	6.8	11.8	3.1
1/08/2025 11:15	5.7	20.5	0.0	6.7	11.8	3.4
1/08/2025 11:30	7.2	80.9	0.0	7.3	11.4	4.8
1/08/2025 11:45	7.4	81.9	0.0	7.4	11.3	3.7
1/08/2025 12:00	6.1	26.4	0.0	6.9	11.7	2.8
1/08/2025 12:15	5.9	24.7	0.0	6.8	11.7	10.9
1/08/2025 12:30	5.8	20.3	0.0	6.7	11.8	3.1
1/08/2025 12:45	5.8	20.0	0.0	6.7	11.8	2.8
1/08/2025 13:00	5.8	19.7	0.0	6.7	11.8	3.4
1/08/2025 13:15	5.8	19.6	0.0	6.6	11.8	2.9
1/08/2025 13:30	7.4	83.8	0.0	7.4	11.3	2.9
1/08/2025 13:45	7.4	82.2	0.0	7.4	11.3	2.9
1/08/2025 14:00	7.4	79.4	0.0	7.3	11.3	3.3
1/08/2025 14:15	6.7	36.6	0.0	7.1	11.5	2.9
1/08/2025 14:30	6.2	21.3	0.0	6.7	11.7	2.8
1/08/2025 14:45	6.1	20.3	0.0	6.7	11.7	4.7
1/08/2025 15:00	6.7	55.4	0.0	6.9	11.6	4.6
1/08/2025 15:15	7.5	71.1	0.0	7.4	11.2	5.2
1/08/2025 15:30	6.3	21.5	0.0	6.7	11.7	2.8
1/08/2025 15:45	6.2	20.5	0.0	6.7	11.6	2.8
1/08/2025 16:00	6.1	19.4	0.0	6.6	11.7	3.5
1/08/2025 16:15	7.6	85.8	0.0	7.3	11.3	3.0
1/08/2025 16:30	7.9	90.5	0.0	7.4	11.2	3.0
1/08/2025 16:45	7.9	91.8	0.0	7.4	11.2	3.2
1/08/2025 17:00	6.6	29.4	0.0	7.0	11.5	3.0
1/08/2025 17:15	6.6	32.5	0.0	7.1	11.5	2.8
1/08/2025 17:30	6.2	20.8	0.0	6.7	11.7	2.9
1/08/2025 17:45	6.3	26.4	0.0	6.9	11.6	3.1
1/08/2025 18:00	6.6	46.8	0.0	7.0	11.5	6.9
1/08/2025 18:15	6.1	20.1	0.0	6.7	11.7	2.9
1/08/2025 18:30	7.8	89.9	0.0	7.3	11.2	6.0
1/08/2025 18:45	8.0	90.2	0.0	7.4	11.2	3.3
1/08/2025 19:00	7.7	77.3	0.0	7.3	11.2	3.1
1/08/2025 19:15	6.3	22.4	0.0	6.7	11.6	3.4
1/08/2025 19:30	6.2	21.5	0.0	6.7	11.6	2.8
1/08/2025 19:45	6.2	22.6	0.0	6.8	11.7	3.1
1/08/2025 20:00	7.7	83.0	0.0	7.3	11.2	5.2
1/08/2025 20:15	7.8	80.5	0.0	7.4	11.2	3.1
1/08/2025 20:30	7.7	76.1	0.0	7.3	11.2	3.3
1/08/2025 20:45	6.4	23.9	0.0	6.9	11.6	2.9
1/08/2025 21:00	6.2	21.6	0.0	6.7	11.7	2.8

1/07/2025 10:00	5.0	12.4	0.0	6.9	11.8	0.1	8.1
1/07/2025 10:15	5.0	12.6	0.0	7.0	11.8	0.0	8.0
1/07/2025 10:30	5.0	12.6	0.0	6.9	11.8	0.0	8.0
1/07/2025 10:45	5.1	12.6	0.0	7.0	11.8	0.0	8.0
1/07/2025 11:00	5.1	12.5	0.0	7.0	11.8	0.0	8.0
1/07/2025 11:15	5.1	12.6	0.0	7.0	11.7	0.0	8.0
1/07/2025 11:30	5.1	12.5	0.0	7.0	11.7	0.0	8.0
1/07/2025 11:45	5.2	12.7	0.0	7.0	11.7	0.0	8.0
1/07/2025 12:00	5.2	12.7	0.0	7.0	11.7	0.0	8.0
1/07/2025 12:15	5.2	12.8	0.0	7.0	11.7	0.0	8.0
1/07/2025 12:30	5.3	12.8	0.0	7.0	11.7	0.0	8.0
1/07/2025 12:45	5.3	12.9	0.0	7.0	11.7	0.0	8.0
1/07/2025 13:00		12.8	0.0	7.0	11.7	0.0	8.0
1/07/2025 13:15	5.3	12.9	0.0	7.0	11.6	0.0	8.0
1/07/2025 13:30	5.4	12.8	0.0	7.0	11.7	0.0	8.0
1/07/2025 13:45	5.4	11.8	0.0	7.0	11.6	0.0	8.0
1/07/2025 14:00	5.4	13.1	0.0	6.9	11.6	0.0	8.0
1/07/2025 14:15	5.4	13.5	0.0	7.0	11.6	0.0	8.0
1/07/2025 14:30	5.4	13.6	0.0	7.0	11.6	0.0	8.0
1/07/2025 14:45	5.4	13.9	0.0	7.0	11.6	0.0	8.0
1/07/2025 15:00	5.4	13.8	0.0	7.0	11.6	0.0	8.0
1/07/2025 15:15	5.4	12.6	0.0	7.0	11.6	0.0	8.0
1/07/2025 15:30	5.5	14.0	0.0	7.0	11.6	0.0	8.0
1/07/2025 15:45	5.5	12.5	0.0	7.0	11.6	0.0	8.0
1/07/2025 16:00	5.5	13.8	0.0	6.9	11.6	0.0	8.0
1/07/2025 16:15	5.5	13.5	0.0	7.0	11.6	0.0	8.0
1/07/2025 16:30	5.5	13.6	0.0	7.0	11.6	0.0	8.0
1/07/2025 16:45	5.5	13.4	0.0	7.0	11.6	0.0	8.0
1/07/2025 17:00	5.5	12.0	0.0	7.0	11.6	0.0	8.0
1/07/2025 17:15	5.5	13.4	0.0	6.9	11.6	0.0	8.0
1/07/2025 17:30	5.5	13.2	0.0	7.0	11.6	0.0	8.0
1/07/2025 17:45	5.5	13.3	0.0	7.0	11.5	0.0	8.0
1/07/2025 18:00	5.5	13.1	0.0	7.0	11.5	0.1	8.1
1/07/2025 18:15	5.5	13.2	0.0	7.0	11.5	0.0	8.0
1/07/2025 18:30	5.5	13.1	0.0	7.0	11.6	1.1	9.1
1/07/2025 18:45	5.5	11.8	0.0	7.0	11.5	0.2	8.2
1/07/2025 19:00	5.5	13.0	0.0	7.0	11.6	0.0	8.0
1/07/2025 19:15	5.5	13.1	0.0	7.0	11.5	0.0	8.0
1/07/2025 19:30	5.5	13.0	0.0	7.0	11.5	0.0	8.0
1/07/2025 19:45	5.5	11.7	0.0	7.0	11.5	0.0	8.0
1/07/2025 20:00	5.5	13.0	0.0	7.0	11.6	0.0	8.0
1/07/2025 20:15	5.5	11.6	0.0	7.0	11.5	0.0	8.0
1/07/2025 20:30	5.5	12.9	0.0	6.9	11.5	0.0	8.0
1/07/2025 20:45	5.5	12.7	0.0	7.0	11.5	2.0	10.0
1/07/2025 21:00	5.5	11.7	0.0	7.0	11.5	0.0	8.0
1/07/2025 21:15	5.5	13.0	0.0	6.9	11.5	0.0	8.0
1/07/2025 21:30	5.5	12.9	0.0	7.0	11.5	0.0	8.0
1/07/2025 21:45	5.5	13.0	0.0	7.0	11.5	0.1	8.1
1/07/2025 22:00	5.5	13.0	0.0	7.0	11.5	0.0	8.0
1/07/2025 22:15	5.6	13.1	0.0	7.0	11.5	0.0	8.0
1/07/2025 22:30	5.6	13.2	0.0	7.0	11.5	0.1	8.1
1/07/2025 22:45	5.5	13.6	0.0	7.0	11.5	0.1	8.1
1/07/2025 23:00	5.5	14.0	0.0	7.0	11.5	0.0	8.0
1/07/2025 23:15	5.6	12.7	0.0	7.0	11.5	0.8	8.8
1/07/2025 23:30	5.6	14.3	0.0	7.0	11.5	0.0	8.0
1/07/2025 23:45	5.6	13.0	0.0	7.0	11.5	0.0	8.0
1/08/2025 0:00	5.6	14.3	0.0	7.0	11.6	0.0	8.0
1/08/2025 0:15	5.6	12.8	0.0	7.0	11.5	0.0	8.0
1/08/2025 0:30	5.6	14.1	0.0	6.9	11.6	0.0	8.0
1/08/2025 0:45	5.6	13.8	0.0	7.0	11.5	0.0	8.0
1/08/2025 1:00	5.6	13.9	0.0	7.0	11.5	0.0	8.0
1/08/2025 1:15	5.6	13.8	0.0	7.0	11.5	0.0	8.0
1/08/2025 1:30	5.6	13.8	0.0	7.0	11.5	0.0	8.0
1/08/2025 1:45	5.6	13.6	0.0	7.0	11.5	0.0	8.0
1/08/2025 2:00	5.6	13.8	0.0	7.0	11.5	0.0	8.0
1/08/2025 2:15	5.6	13.5	0.0	7.0	11.5	0.0	8.0
1/08/2025 2:30	5.6	13.6	0.0	7.0	11.5	0.0	8.0
1/08/2025 2:45	5.6	13.4	0.0	7.0	11.5	0.0	8.0
1/08/2025 3:00	5.6	13.5	0.0	7.0	11.5	0.0	8.0
1/08/2025 3:15	5.6	13.5	0.0	7.0	11.5	0.1	8.1
1/08/2025 3:30	5.6	13.5	0.0	7.0	11.5	0.0	8.0
1/08/2025 3:45	5.6	13.5	0.0	7.0	11.5	0.4	8.4
1/08/2025 4:00	5.6	13.6	0.0	7.0	11.5	0.1	8.1
1/08/2025 4:15	5.6	13.5	0.0	7.0	11.5	0.0	8.0
1/08/2025 4:30	5.6	13.6	0.0	7.0	11.5	0.0	8.0
1/08/2025 4:45	5.6	13.6	0.0	7.0	11.5	0.0	8.0
1/08/2025 5:00	5.6	13.6	0.0	7.0	11.5	0.0	8.0
1/08/2025 5:15	5.7	13.4	0.0	7.0	11.5	0.0	8.0
1/08/2025 5:30	5.7	13.5	0.0	7.0	11.5	0.0	8.0
1/08/2025 5:45	5.7	13.5	0.0	7.0	11.5	0.2	8.2
1/08/2025 6:00	5.7	13.5	0.0	7.0	11.5	0.0	8.0
1/08/2025 6:15	5.7	13.5	0.0	7.1	11.5	0.0	8.0
1/08/2025 6:30	5.7	13.7	0.0	7.0	11.5	0.0	8.0
1/08/2025 6:45	5.7	13.6	0.0	7.0	11.5	0.0	8.0
1/08/2025 7:00	5.7	12.4	0.0	7.0	11.5	0.0	8.0
1/08/2025 7:15	5.7	13.6	0.0	7.0	11.5	0.0	8.0
1/08/2025 7:30	5.7	13.8	0.0	7.0	11.5	0.0	8.0
1/08/2025 7:45	5.7	13.8	0.0	7.0	11.5	0.0	8.0
1/08/2025 8:00	5.7	14.0	0.0	7.0	11.5	0.0	8.0
1/08/2025 8:15	5.7	13.9	0.0	7.0	11.5	0.4	8.4
1/08/2025 8:30	5.7	12.5	0.0	7.0	11.5	0.0	8.0
1/08/2025 8:45	5.7	13.9	0.0	6.9	11.5	0.0	8.0
1/08/2025 9:00	5.7	13.9	0.0	7.0	11.5	0.0	8.0
1/08/2025 9:15	5.7	12.6	0.0	7.0	11.5	0.0	8.0
1/08/2025 9:30	5.7	13.9	0.0	6.9	11.5	0.0	8.0
1/08/2025 9:45	5.7	13.8	0.0	7.0	11.5	0.0	8.0
1/08/2025 10:00	5.7	12.6	0.0	7.0	11.5	0.0	8.0
1/08/2025 10:15	5.8	13.8	0.0	6.9	11.5	0.0	8.0
1/08/2025 10:30	5.8	13.7	0.0	7.0	11.5	0.0	8.0
1/08/2025 10:45	5.8	12.5	0.0	7.0	11.5	0.0	8.0
1/08/2025 11:00	5.8	13.8	0.0	7.0	11.6	0.0	8.0
1/08/2025 11:15	5.8	13.9	0.0	7.0	11.5	0.0	8.0
1/08/2025 11:30	5.8	13.6	0.0	7.0	11.5	0.0	8.0
1/08/2025 11:45	5.8	13.8	0.0	7.0	11.5	0.0	8.0
1/08/2025 12:00	5.8	13.6	0.0	7.0	11.5	0.0	8.0
1/08/2025 12:15	5.8	13.8	0.0	7.0	11.5	0.0	8.0
1/08/2025 12:30	5.8	13.7	0.0	7.0	11.5	0.0	8.0
1/08/2025 12:45	5.9	13.7	0.0	7.0	11.5	0.0	8.0
1/08/2025 13:00	5.9	13.6	0.0	7.0	11.5	0.0	8.0
1/08/2025 13:15	5.9	13.7	0.0	7.0	11.5	0.0	8.0
1/08/2025 13:30	5.9	13.5	0.0	7.0	11.5	0.0	8.0
1/08/2025 13:45	6.0	13.6	0.0	7.0	11.5	0.0	8.0
1/08/2025 14:00	6.0	13.6	0.0	7.1	11.5	0.0	8.0
1/08/2025 14:15	6.1	13.6	0.0	7.0	11.5	0.0	8.0
1/08/2025 14:30	6.1	13.6	0.0	7.0	11.5	0.0	8.0
1/08/2025 14:45	6.2	13.6	0.0	7.0	11.4	0.0	8.0
1/08/2025 15:00	6.2	13.5	0.0	7.1	11.4	0.0	8.0
1/08/2025 15:15	6.2	13.6	0.0	7.0	11.4	0.0	8.0
1/08/2025 15:30	6.2	13.5	0.0	7.0	11.4	0.0	8.0
1/08/2025 15:45	6.2	13.6	0.0	7.0	11.4	0.0	8.0
1/08/2025 16:00	6.2	13.5	0.0	7.0	11.4	0.0	8.0
1/08/2025 16:15	6.2	13.6	0.0	7.0	11.4	0.4	8.4
1/08/2025 16:30	6.2	13.4	0.0	7.0	11.4	0.0	8.0
1/08/2025 16:45	6.2	13.5	0.0	7.0	11.4	0.0	8.0
1/08/2025 17:00	6.2	13.3	0.0	7.0	11.4	0.0	8.0
1/08/2025 17:15	6.2	12.2	0.0	7.0	11.4	0.0	8.0
1/08/2025 17:30	6.2	13.4	0.0	7.0	11.4	0.0	8.0
1/08/2025 17:45	6.2	13.5	0.0	7.0	11.4	0.0	8.0
1/08/2025 18:00	6.2	13.3	0.0	7.0	11.4	0.0	8.0
1/08/2025 18:15	6.2	13.5	0.0	7.0	11.4	0.0	8.0
1/08/2025 18:30	6.2	13.5	0.0	7.0	11.4	0.0	8.0
1/08/2025 18:45	6.2	13.6	0.0	7.0	11.4	0.0	8.0
1/08/2025 19:00	6.2	13.3	0.0	7.0	11.4	0.0	8.0
1/08/2025 19:15	6.2	12.0	0.0	7.0	11.4	0.0	8.0
1/08/2025 19:30	6.2	13.4	0.0	7.0	11.4	0.0	8.0
1/08/2025 19:45	6.2	12.1	0.0	7.0	11.4	0.1	8.1
1/08/2025 20:00	6.2	13.4	0.0	7.0	11.4	0.0	8.0
1/08/2025 20:15	6.2	12.1	0.0	7.0	11.4	0.0	8.0
1/08/2025 20:30	6.2	13.4	0.0	7.0	11.4	0.0	8.0
1/08/2025 20:45	6.2	12.4	0.0	7.0	11.4	0.0	8.0
1/08/2025 21:00	6.2	13.4	0.0	7.0	11.4	0.0	8.0

1/08/2025 21:15	6.1	20.4	0.0	6.7	11.7	2.9	1/08/2025 21:15	6.2	12.3	0.0	7.0	11.4	0.0	8.0
1/08/2025 21:30	6.3	31.9	0.0	6.7	11.7	2.9	1/08/2025 21:30	6.1	13.4	0.0	6.9	11.4	0.0	8.0
1/08/2025 21:45	6.1	20.5	0.0	6.8	11.7	2.8	1/08/2025 21:45	6.1	13.2	0.0	7.0	11.4	0.0	8.0
1/08/2025 22:00	7.5	76.0	0.0	7.3	11.3	4.0	1/08/2025 22:00	6.1	13.5	0.0	7.0	11.4	0.0	8.0
1/08/2025 22:15	6.1	25.5	0.0	6.8	11.7	3.0	1/08/2025 22:15	6.1	13.3	0.0	7.0	11.4	0.0	8.0
1/08/2025 22:30	6.0	20.3	0.0	6.6	11.7	2.9	1/08/2025 22:30	6.0	13.4	0.0	7.0	11.4	0.0	8.0
1/08/2025 22:45	5.9	19.9	0.0	6.7	11.7	2.8	1/08/2025 22:45	6.0	13.3	0.0	7.0	11.5	0.0	8.0
1/08/2025 23:00	5.8	19.5	0.0	6.6	11.8	2.8	1/08/2025 23:00	6.0	13.4	0.0	7.0	11.5	0.1	8.1
1/08/2025 23:15	5.8	19.4	0.0	6.7	11.8	3.0	1/08/2025 23:15	5.9	13.2	0.0	7.0	11.5	0.0	8.0
1/08/2025 23:30	5.8	18.3	0.0	6.6	11.8	2.9	1/08/2025 23:30	5.9	13.3	0.0	7.0	11.5	0.0	8.0
1/08/2025 23:45	5.8	19.8	0.0	6.7	11.8	2.8	1/08/2025 23:45	5.9	13.3	0.0	7.0	11.5	0.0	8.0
1/09/2025 0:00	6.9	69.2	0.0	7.0	11.6	3.1	1/09/2025 0:00	5.8	13.3	0.0	7.0	11.5	0.0	8.0
1/09/2025 0:15	7.7	82.7	0.0	7.3	11.2	2.9	1/09/2025 0:15	5.8	13.1	0.0	7.0	11.5	0.0	8.0
1/09/2025 0:30	7.6	78.9	0.0	7.3	11.3	2.9	1/09/2025 0:30	5.8	12.0	0.0	7.0	11.5	0.0	8.0
1/09/2025 0:45	5.9	22.2	0.0	6.8	11.8	2.8	1/09/2025 0:45	5.7	13.2	0.0	7.0	11.5	0.0	8.0
1/09/2025 1:00	5.7	20.2	0.0	6.7	11.8	3.0	1/09/2025 1:00	5.7	12.0	0.0	7.0	11.6	0.0	8.0
1/09/2025 1:15	7.1	72.2	0.0	7.2	11.4	3.1	1/09/2025 1:15	5.7	13.2	0.0	7.0	11.5	0.0	8.0
1/09/2025 1:30	5.9	24.0	0.0	6.9	11.8	2.9	1/09/2025 1:30	5.6	13.2	0.0	7.0	11.5	0.0	8.0
1/09/2025 1:45	7.6	86.6	0.0	7.3	11.3	6.4	1/09/2025 1:45	5.6	13.2	0.0	7.0	11.6	0.0	8.0
1/09/2025 2:00	7.7	87.8	0.0	7.4	11.2	7.6	1/09/2025 2:00	5.6	13.2	0.0	7.0	11.6	0.0	8.0
1/09/2025 2:15	5.8	22.2	0.0	6.8	11.8	2.8	1/09/2025 2:15	5.6	13.2	0.0	7.1	11.5	0.0	8.0
1/09/2025 2:30	5.7	20.4	0.0	6.7	11.8	2.8	1/09/2025 2:30	5.6	13.1	0.0	6.9	11.6	0.0	8.0
1/09/2025 2:45	5.6	19.9	0.0	6.7	11.8	2.8	1/09/2025 2:45	5.6	13.2	0.0	7.0	11.6	0.0	8.0
1/09/2025 3:00	5.6	19.5	0.0	6.7	11.8	2.8	1/09/2025 3:00	5.6	13.1	0.0	7.0	11.5	0.0	8.0
1/09/2025 3:15	7.5	88.8	0.0	7.3	11.3	9.0	1/09/2025 3:15	5.6	11.8	0.0	7.0	11.5	0.0	8.0
1/09/2025 3:30	5.8	23.0	0.0	6.8	11.8	2.8	1/09/2025 3:30	5.6	13.1	0.0	7.0	11.6	0.0	8.0
1/09/2025 3:45	5.6	20.2	0.0	6.7	11.9	2.8	1/09/2025 3:45	5.6	13.1	0.0	7.0	11.6	0.0	8.0
1/09/2025 4:00	5.6	19.6	0.0	6.6	11.8	3.0	1/09/2025 4:00	5.6	13.0	0.0	7.0	11.6	0.1	8.1
1/09/2025 4:15	5.6	19.4	0.0	6.6	11.9	2.7	1/09/2025 4:15	5.6	13.2	0.0	7.0	11.6	0.0	8.0
1/09/2025 4:30	7.2	81.3	0.0	7.3	11.4	4.1	1/09/2025 4:30	5.6	13.0	0.0	7.0	11.6	0.0	8.0
1/09/2025 4:45	7.4	83.1	0.0	7.3	11.3	3.8	1/09/2025 4:45	5.6	13.1	0.0	7.0	11.5	0.0	8.0
1/09/2025 5:00	7.5	85.9	0.0	7.4	11.3	4.0	1/09/2025 5:00	5.7	12.9	0.0	7.0	11.5	0.0	8.0
1/09/2025 5:15	5.8	22.0	0.0	6.8	11.8	2.9	1/09/2025 5:15	5.7	11.9	0.0	7.0	11.5	0.0	8.0
1/09/2025 5:30	5.7	20.2	0.0	6.6	11.8	3.2	1/09/2025 5:30	5.7	13.1	0.0	7.0	11.5	0.0	8.0
1/09/2025 5:45	7.3	84.3	0.0	7.3	11.3	3.6	1/09/2025 5:45	5.7	11.9	0.0	7.0	11.5	0.2	8.2
1/09/2025 6:00	7.6	87.1	0.0	7.4	11.2	3.7	1/09/2025 6:00	5.7	13.1	0.0	6.9	11.5	0.0	8.0
1/09/2025 6:15	6.0	24.4	0.0	6.8	11.7	14.4	1/09/2025 6:15	5.7	13.0	0.0	7.0	11.5	0.0	8.0
1/09/2025 6:30	5.9	23.1	0.0	6.8	11.7	4.2	1/09/2025 6:30	5.7	13.2	0.0	7.0	11.5	0.0	8.0
1/09/2025 6:45	5.7	20.5	0.0	6.7	11.8	18.0	1/09/2025 6:45	5.7	13.1	0.0	7.0	11.5	0.0	8.0
1/09/2025 7:00	7.5	88.7	0.0	7.4	11.3	4.5	1/09/2025 7:00	5.7	13.1	0.0	7.0	11.5	0.0	8.0
1/09/2025 7:15	7.8	89.5	0.0	7.4	11.2	3.1	1/09/2025 7:15	5.7	13.1	0.0	7.0	11.5	0.0	8.0
1/09/2025 7:30	7.7	88.5	0.0	7.4	11.2	3.1	1/09/2025 7:30	5.7	13.1	0.0	7.0	11.5	0.0	8.0
1/09/2025 7:45	6.1	24.8	0.0	6.9	11.7	3.2	1/09/2025 7:45	5.8	13.1	0.0	7.0	11.5	0.0	8.0
1/09/2025 8:00	5.8	21.0	0.0	6.7	11.8	2.8	1/09/2025 8:00	5.8	13.1	0.0	7.0	11.5	0.0	8.0
1/09/2025 8:15	5.7	20.6	0.0	6.7	11.8	2.9	1/09/2025 8:15	5.8	12.8	0.0	7.0	11.5	0.0	8.0
1/09/2025 8:30	7.6	90.5	0.0	7.4	11.2	2.9	1/09/2025 8:30	5.7	11.8	0.0	7.0	11.5	0.0	8.0
1/09/2025 8:45	7.5	84.0	0.0	7.4	11.3	2.8	1/09/2025 8:45	5.7	13.1	0.0	7.0	11.5	0.0	8.0
1/09/2025 9:00	6.5	37.5	0.0	7.1	11.5	2.7	1/09/2025 9:00	5.8	11.8	0.0	7.0	11.5	0.0	8.0
1/09/2025 9:15	7.5	90.7	0.0	7.3	11.3	3.1	1/09/2025 9:15	5.8	13.0	0.0	7.0	11.5	0.0	8.0
1/09/2025 9:30	7.7	92.1	0.0	7.3	11.2	2.9	1/09/2025 9:30	5.8	13.1	0.0	7.0	11.5	0.0	8.0
1/09/2025 9:45	7.4	85.9	0.0	7.2	11.4	3.0	1/09/2025 9:45	5.8	13.0	0.0	7.0	11.5	0.0	8.0
1/09/2025 10:00	5.9	21.9	0.0	6.8	11.7	3.0	1/09/2025 10:00	5.8	11.8	0.0	7.0	11.5	0.0	8.0
1/09/2025 10:15	5.8	20.3	0.0	6.7	11.8	2.9	1/09/2025 10:15	5.8	13.0	0.0	7.0	11.5	0.3	8.3
1/09/2025 10:30	7.6	90.2	0.0	7.3	11.2	3.0	1/09/2025 10:30	5.8	13.1	0.0	7.0	11.5	0.0	8.0
1/09/2025 10:45	6.0	24.0	0.0	6.8	11.7	3.2	1/09/2025 10:45	5.8	12.8	0.0	7.0	11.5	0.0	8.0
1/09/2025 11:00	6.3	28.1	0.0	6.9	11.6	3.0	1/09/2025 11:00	5.8	13.1	0.0	7.0	11.5	0.0	8.0
1/09/2025 11:15	5.9	20.6	0.0	6.7	11.7	2.7	1/09/2025 11:15	5.9	12.8	0.0	7.0	11.5	0.0	8.0
1/09/2025 11:30	5.9	22.1	0.0	6.8	11.7	2.8	1/09/2025 11:30	5.9	13.0	0.0	7.0	11.5	0.0	8.0
1/09/2025 11:45	5.9	19.4	0.0	6.7	11.8	3.1	1/09/2025 11:45	5.9	12.9	0.0	7.1	11.5	0.0	8.0
1/09/2025 12:00	7.7	80.1	0.0	7.3	11.2	3.0	1/09/2025 12:00	6.0	11.6	0.0	7.0	11.5	0.0	8.0
1/09/2025 12:15	7.7	84.1	0.0	7.3	11.2	3.4	1/09/2025 12:15	6.0	13.1	0.0	7.0	11.5	0.0	8.0
1/09/2025 12:30	8.0	89.7	0.0	7.4	11.1	3.0	1/09/2025 12:30	6.1	11.7	0.0	7.0	11.4	0.1	8.1
1/09/2025 12:45	8.0	89.7	0.0	7.4	11.1	3.0	1/09/2025 12:45	6.1	13.0	0.0	7.0	11.4	0.0	8.0
1/09/2025 13:00	7.2	51.6	0.0	7.3	11.3	10.6	1/09/2025 13:00	6.1	13.1	0.0	7.0	11.4	0.1	8.1
1/09/2025 13:15	6.8	31.0	0.0	7.0	11.4	2.8	1/09/2025 13:15	6.2	13.0	0.0	7.1	11.4	0.0	8.0
1/09/2025 13:30	6.3	21.2	0.0	6.8	11.6	3.6	1/09/2025 13:30	6.2	11.7	0.0	7.0	11.4	0.0	8.0
1/09/2025 13:45	6.3	20.3	0.0	6.7	11.6	2.9	1/09/2025 13:45	6.2	13.0	0.0	6.9	11.4	0.0	8.0
1/09/2025 14:00	7.9	90.2	0.0	7.3	11.2	3.5	1/09/2025 14:00	6.2	13.0	0.0	6.9	11.4	0.0	8.0
1/09/2025 14:15	8.2	91.1	0.0	7.4	11.0	3.0	1/09/2025 14:15	6.2	13.0	0.0	7.0	11.4	0.0	8.0
1/09/2025 14:30	7.6	75.7	0.0	7.1	11.3	4.0	1/09/2025 14:30	6.3	11.8	0.0	7.0	11.4	0.0	8.0
1/09/2025 14:45	8.1	86.7	0.0	7.4	11.1	3.0	1/09/2025 14:45	6.3	13.0	0.0	7.0	11.3	0.0	8.0
1/09/2025 15:00	6.8	27.4	0.0	7.0	11.4	2.7	1/09/2025 15:00		11.7	0.0	7.0	11.3	0.0	8.0
1/09/2025 15:15	8.1	90.1	0.0	7.4	11.0	3.2	1/09/2025 15:15	6.4	13.0	0.0	7.0	11.3	0.5	8.5
1/09/2025 15:30	7.0	32.1	0.0	7.1	11.3	2.9	1/09/2025 15:30	6.4	11.6	0.0	7.0	11.3	0.0	8.0
1/09/2025 15:45	6.5	21.3	0.0	6.7	11.5	2.9	1/09/2025 15:45	6.4	12.9	0.0	7.0	11.3	0.0	8.0
1/09/2025 16:00	6.6	25.2	0.0	6.9	11.5	2.7	1/09/2025 16:00	6.4	11.6	0.0	7.0	11.3	0.0	8.0
1/09/2025 16:15	6.4	20.1	0.0	6.7	11.5	2.8	1/09/2025 16:15	6.4	13.0	0.0	7.0	11.3	0.0	8.0
1/09/2025 16:30	6.3	19.7	0.0	6.7	11.6	2.8	1/09/2025 16:30	6.3	11.7	0.0	7.0	11.3	0.5	8.5
1/09/2025 16:45	6.3	19.5	0.0	6.7	11.6	2.9	1/09/2025 16:45	6.3	12.9	0.0	7.0	11.3	0.0	8.0
1/09/2025 17:00	8.1	89.9	0.0	7.3	11.0	3.6	1/09/2025 17:00	6.3	11.8	0.0	7.0	11.3	0.1	8.1
1/09/2025 17:15	8.1	87.4	0.0	7.4	11.0	2.9	1/09/2025 17:15	6.3	13.0	0.0	7.0	11.3	0.0	8.0
1/09/2025 17:30	8.1	83.2	0.0	7.3	11.0	3.0	1/09/2025 17:30	6.3	11.8	0.0	7.0	11.3	0.1	8.1
1/09/2025 17:45	7.2	42.8	0.0	7.2	11.2	2.8	1/09/2025 17:45	6.3	13.0	0.0	6.9	11.3	0.0	8.0
1/09/2025 18:00	7.3	65.7	0.0	7.0	11.4	5.2	1/09/2025 18:00	6.3	13.0	0.0	6.9	11.3	0.0	8.0
1/09/2025 18:15	8.2	91.5	0.0	7.4	11.0	3.1	1/09/2025 18:15	6.3	13.0	0.0	7.0	11.3	0.0	8.0
1/09/2025 18:30	7.5	56.7	0.0	7.3	11.2	2.9	1/09/2025 18:30	6.3	11.7	0.0	7.0	11.3	0.0	8.0
1/09/2025 18:45	6.4	22.1	0.0	6.7	11.5	2.8	1/09/2025 18:45	6.2	13.0	0.0	7.0	11.3	0.0	8.0
1/09/2025 19:00	8.1	93.0	0.0	7.4	11.0	4.9	1/09/2025 19:00	6.2	11.7	0.0	7.0	11.3	0.0	8.0
1/09/2025 19:15	7.3	47.6	0.0	7.3	11.2	3.8	1/09/2025 19:15	6.2	13.0	0.0	7.0	11.3	0.0	8.0
1/09/2025 19:30	6.4	21.7	0.0	6.7	11.5	3.0	1/09/2025 19:30	6.2	11.7	0.0	7.0	11.3	0.1	8.1
1/09/2025 19:45	6.3	20.5	0.0	6.7	11.5	2.8	1/09/2025 19:45	6.2	13.0	0.0	7.0	11.3	0.0	8.0
1/09/2025 20:00	6.2	19.9	0.0	6.7	11.6	4.2	1/09/2025 20:00	6.2	13.0	0.0	7.0	11.3	0.0	8.0
1/09/2025 20:15	6.2	19.3	0.0	6.7	11.6	2.9	1/09/2025 20:15	6.2	13.0	0.0	7.0	11.3	0.0	8.0
1/09/2025 20:30	7.9	91.9	0.0	7.2	11.1	4.7	1/09/2025 20:30	6.2	13.1	0.0	7.0	11.3	0.0	8.0
1/09/2025 20:45	8.2	92.3	0.0	7.4	11.0	3.9	1/09/2025 20:45	6.2	12.8	0.0	7.0	11.3	0.0	8.0
1/09/2025 21:00	7.1	40.6	0.0	7.2	11.2	19.6	1/09/2025 21:00	6.2	13.1	0.0	7.0	11.3	0.0	8.0
1/09/2025 21:15	6.3	21.5	0.0	6.7	11.5	2.8	1/09/2025 21:15	6.2	12.9	0.0	7.0	11.2	0.0	8.0
1/09/2025 21:30	6.2	20.3	0.0	6.7	11.5	2.9	1/09/2025 21:30	6.2	11.8	0.0	7.0	11.3	0.0	8.0
1/09/2025 21:45	6.2	19.9	0.0	6.6	11.5	6.0	1/09/2025 21:45	6.2	13.0	0.0	7.0	11.3	0.0	8.0
1/09/2025 22:00	6.2	19.6	0.0	6.7	11.5	3.0	1/09/2025 22:00	6.2	11.7	0.0	7.0	11.2	0.0	8.0
1/09/2025 22:15	7.1	72.0	0.0	7.0	11.3	3.1	1/09/2025 22:15	6.2	13.0	0.0	7.0	11.3	0.2	8.2
1/09/2025 22:30	8.2	85.9	0.0	7.4	11.0	3.7	1/09/2025 22:30	6.2	11.8	0.0	7.0	11.3	0.0	8.0
1/09/2025 22:45	6.6	25.2	0.0	6.9	11.4	2.8	1/09/2025 22:45	6.2	13.0	0.0	6.8	11.2	0.0	8.0
1/09/2025 23:00	6.3	21.5	0.0	6.7	11.5	3.1	1/09/2025 23:00	6.2	12.9	0.0	7.0	11.2	0.0	8.0
1/09/2025 23:15	6.2	20.0	0.0	6.7	11.5	2.8	1/09/2025 23:15	6.2	11.7	0.0	7.0	11.2	0.0	8.0
1/09/2025 23:30	6.2	19.7	0.0	6.7	11.5	2.8	1/09/2025 23:30	6.2	13.1	0.0	6.8	11.2	0.0	8.0
1/09/2025 23:45	8.0	83.1	0.0	7.3	11.0	4.9	1/09/2025 23:45	6.2	13.0	0.0	7.0	11.2	0.0	8.0
1/10/2025 0:00	6.5	24.0	0.0	6.9	11.4	3.8	1/10/2025 0:00	6.2	11.8	0.0	7.0	11.2	0.0	8.0
1/10/2025 0:15	8.1	77.3	0.0	7.4	11.0	5.6	1/10/2025 0:15	6.2	13.0	0.0	7.0	11.2	0.0	8.0
1/10/2025 0:30	8.1	76.7	0.0	7.4	10.9	5.2	1/10/2025 0:30	6.2	13.1	0.0	7.0	11.2	0.0	8.0
1/10/2025 0:45	7.3	43.2	0.0	7.3	11.1	3.2	1/10/2025 0:45	6.2	12.9	0.0	7.0	11.2	0.0	8.0
1/10/2025 1:00	6.3	21.3	0.0	6.7	11.5	2.8	1/10/2025 1:00	6.2	13.1	0.0	7.0	11.2	0.0	8.0
1/10/2025 1:15	6.2	20.3	0.0	6.7	11.5	3.4	1/10/2025 1:15	6.2	12.9	0.0	7.0	11.2	0.0	8.0
1/10/2025 1:30	7.5	74.1	0.0	7.1	11.2	6.2	1/10/2025 1:30	6.2	13.1	0.0	7.0	11.2	0.0	8.0
1/10/2025 1:45	8.2	83.0	0.0	7.4	11.0	4.4	1/10/2025 1:45	6.2	13.0	0.0	7.0	11.2	0.0	8.0
1/10/2025 2:00	8.3	82.1	0.0	7.4	10.9	4.9	1/10/2025 2:00	6.2	13.2	0.0	7.0	11.2	0.0	8.0
1/10/2025 2:15	6.4	22.6	0.0	6.9	11.5	2.9	1/10/2025 2:15	6.2	13.8	0.0	7.0	11.3	0.1	8.1
1/10/2025 2:30	6.2	20.5	0.0	6.7	11.5	4.3	1/10/2025 2:30	6.2	22.3	0.0	7.1	11.3	7.6	15.6
1/10/2025 2:45	6.2	21.5	0.0	6.7	11.5	3.3	1/10/2025 2:45	6.1	35.9	0.0	7.3	11.3	200.1	205.1
1/10/2025 3:00	6.5	34.6	0.0	7.0	11.4	24.5	1/10/2025 3:00	6.1	33.7	0.0	7.4	11.3	204.1	209.1
1/10/2025 3:15	6.1	37.4	0.0	6.9	11.5	139.6	1/10/2025 3:15	6.1	38.1	0.0	7.4	11.3	214.4	219.4
1/10/2025 3:30	7.6	80.6	0.0	7.3	11.1	57.2	1/10/2025 3:30	6.0	40.3	0.0	7.5	11.3	241.4	246.4
1/10/2025 3:45	7.5	79.6	0.0	7.4	11.1	128.6	1/10/2025 3:45	6.0	38.9	0.0	7.5	11.3	539.8	544.8
1/10/2025 4:00	7.5	80.4	0.0	7.4	11.2	221.5	1/10/2025 4:00	6.0	44.7	0.0	7.6	11.3	563.7	568.7
1/10/2025 4:15	6.2	49.1	0.0	7.1	11.5	435.8	1/10/2025 4:15	6.0	36.3	0.0	7.6	11.3	316.7	321.7
1/10/2025 4:30	6.0	46.7	0.0	7.0	11.5	314.2	1/10/2025 4:30	6.0	38.9	0.0	7.5	11.3	241.0	246.0
1/10/2025 4:45	6.0	44.0	0.0	7.0	11.6	269.6	1/10/2025 4:45	6.0	37.1	0.0	7.5	11.3	184.0	189.0
1/10/2025 5:00	6.9	76.0	0.0	7.2	11.4	109.1	1/10/2025 5:00	6.0	45.8	0.0	7.5	11.4	132.0	137.0
1/10/2025 5:15	7.4	84.9	0.0	7.3	11.2	147.9	1/10/2025 5:15	6.0	45.5	0.0	7.6	11.3	156.4	161.4
1/10/2025 5:30	6.2	53.7	0.0	7.1	11.6	188.9	1/10/2025 5:30	6.0	54.4	0.0	7.6	11.4	116.4	121.4
1/10/2025 5:45	6.0	55.5	0.0	7.1	11.6	153.9	1/10/2025 5:45	6.0	51.9	0.0	7.6	11.3	80.1	85.1
1/10/2025 6:00	5.9	58.6	0.0	7.1	11.6	103.3	1/10/2025 6:00	5.9	63.6	0.0	7.6	11.4	71.0	76.0
1/10/2025 6:15	5.9	64.2	0.0	7.1	11.6	94.0	1/10/2025 6:15	5.9	58.8	0.0	7.6	11.4	79.8	84.8
1/10/2025 6:30	7.1	95.0	0.0	7.4	11.3	55.7	1/10/2025 6:30	5.9	66.5	0.0	7.6	11.4	47.8	52.8
1/10/2025 6:45	6.1	73.4	0.0	7.1	11.7	66.1	1/10/2025 6:45	5.9	63.8	0.0	7.6	11.4	27.5	32.5
1/10/2025 7:00	7.0	92.7	0.0	7.4	11.3	21.6	1/10/2025 7:00	5.9	61.5	0.0	7.6	11.3	17.8	22.8
1/10/2025 7:15	7.0	90.2	0.0	7.3	11.3	19.1	1/10/2025 7:15	5.9	58.6	0.0	7.6	11.4	9.1	14.1
1/10/2025 7:30	7.0	88.0	0.0	7.3	11.3	14.3	1/10/2025 7:30	5.9	50.5	0.0	7.6	11.4	8.8	13.8
1/10/2025 7:45	6.0	61.1	0.0	7.1	11.6	13.4	1/10/2025 7:45	6.0	53.6	0.0	7.5	11.4	7.6	15.6
1/10/2025 8:00	7.0	85.7	0.0	7.3	11.3	12.4	1/10/2025 8:00	6.0	51.6	0.0	7.6	11.3	6.5	14.5
1/10/2025 8:15	7.1	84.3	0.0	7.3	11.3	9.4	1/10/2025 8:15	6.0	44.4	0.0	7.5	11.3	4.9	12.9

1/10/2025 8:30	7.2	83.2	0.0	7.3	11.2	9.7	1/10/2025 8:30	6.0	48.3	0.0	7.5	11.4	5.6	13.6
1/10/2025 8:45	7.2	82.2	0.0	7.3	11.2	10.3	1/10/2025 8:45	6.0	41.4	0.0	7.5	11.3	3.2	11.2
1/10/2025 9:00	7.2	80.6	0.0	7.3	11.2	7.6	1/10/2025 9:00	6.0	44.5	0.0	7.5	11.4	3.0	11.0
1/10/2025 9:15	6.2	50.6	0.0	7.0	11.5	7.1	1/10/2025 9:15	6.0	38.3	0.0	7.5	11.3	1.6	9.6
1/10/2025 9:30	6.5	67.9	0.0	7.1	11.5	7.0	1/10/2025 9:30	6.0	41.4	0.0	7.5	11.4	1.3	9.3
1/10/2025 9:45	7.2	76.9	0.0	7.3	11.2	6.5	1/10/2025 9:45	6.0	40.2	0.0	7.4	11.3	1.3	9.3
1/10/2025 10:00	6.2	46.5	0.0	7.0	11.5	5.7	1/10/2025 10:00	6.0	38.1	0.0	7.4	11.3	1.3	9.3
1/10/2025 10:15	6.1	44.6	0.0	7.0	11.5	5.2	1/10/2025 10:15	6.0	33.3	0.0	7.4	11.3	2.6	10.6
1/10/2025 10:30	6.1	43.0	0.0	7.0	11.6	5.4	1/10/2025 10:30	6.0	36.1	0.0	7.3	11.4	0.8	8.8
1/10/2025 10:45	7.3	73.0	0.0	7.3	11.2	4.1	1/10/2025 10:45	6.0	35.1	0.0	7.4	11.3	1.7	9.7
1/10/2025 11:00	6.3	42.7	0.0	7.0	11.5	5.9	1/10/2025 11:00	6.0	30.2	0.0	7.4	11.3	0.8	8.8
1/10/2025 11:15	6.1	39.9	0.0	6.9	11.6	4.2	1/10/2025 11:15	6.0	33.1	0.0	7.3	11.3	0.7	8.7
1/10/2025 11:30	7.3	70.5	0.0	7.3	11.2	6.8	1/10/2025 11:30	6.1	31.7	0.0	7.4	11.3	0.5	8.5
1/10/2025 11:45	6.2	37.7	0.0	6.9	11.5	4.1	1/10/2025 11:45	6.1	28.4	0.0	7.3	11.3	0.5	8.5
1/10/2025 12:00	6.8	61.8	0.0	7.1	11.4	3.9	1/10/2025 12:00	6.1	30.5	0.0	7.3	11.3	0.8	8.8
1/10/2025 12:15	6.8	50.0	0.0	7.2	11.3	4.3	1/10/2025 12:15	6.1	26.7	0.0	7.3	11.3	0.4	8.4
1/10/2025 12:30	7.2	70.0	0.0	7.2	11.2	4.4	1/10/2025 12:30	6.2	29.1	0.0	7.3	11.3	0.8	8.8
1/10/2025 12:45	7.4	72.9	0.0	7.3	11.2	4.0	1/10/2025 12:45	6.2	25.6	0.0	7.3	11.3	0.3	8.3
1/10/2025 13:00	6.5	36.0	0.0	6.9	11.5	4.3	1/10/2025 13:00	6.2	27.9	0.0	7.3	11.3	0.6	8.6
1/10/2025 13:15	6.3	33.0	0.0	6.9	11.5	3.7	1/10/2025 13:15	6.2	24.6	0.0	7.3	11.3	0.6	8.6
1/10/2025 13:30	7.4	71.6	0.0	7.3	11.2	4.3	1/10/2025 13:30	6.2	26.8	0.0	7.3	11.3	0.2	8.2
1/10/2025 13:45	7.5	71.1	0.0	7.3	11.2	4.6	1/10/2025 13:45	6.3	23.7	0.0	7.3	11.3	0.5	8.5
1/10/2025 14:00	6.3	32.1	0.0	6.8	11.5	4.3	1/10/2025 14:00	6.3	26.1	0.0	7.2	11.3	0.2	8.2
1/10/2025 14:15	6.3	31.1	0.0	6.8	11.5	4.1	1/10/2025 14:15	6.3	25.7	0.0	7.2	11.3	0.3	8.3
1/10/2025 14:30	7.6	70.7	0.0	7.3	11.2	4.0	1/10/2025 14:30	6.3	25.3	0.0	7.2	11.3	0.2	8.2
1/10/2025 14:45	6.4	30.9	0.0	6.8	11.5	8.7	1/10/2025 14:45	6.3	22.5	0.0	7.2	11.3	0.2	8.2
1/10/2025 15:00	7.3	68.8	0.0	7.1	11.3	5.1	1/10/2025 15:00	6.4	24.7	0.0	7.1	11.3	0.7	8.7
1/10/2025 15:15	7.8	77.5	0.0	7.4	11.1	3.6	1/10/2025 15:15	6.4	24.2	0.0	7.2	11.3	0.2	8.2
1/10/2025 15:30	7.7	76.3	0.0	7.3	11.1	3.7	1/10/2025 15:30	6.4	21.7	0.0	7.2	11.3	0.4	8.4
1/10/2025 15:45	6.4	30.2	0.0	6.8	11.5	4.0	1/10/2025 15:45	6.4	23.9	0.0	7.2	11.2	0.2	8.2
1/10/2025 16:00	6.3	29.1	0.0	6.8	11.5	5.8	1/10/2025 16:00	6.4	23.6	0.0	7.2	11.2	0.1	8.1
1/10/2025 16:15	6.3	28.7	0.0	6.8	11.5	3.6	1/10/2025 16:15	6.4	23.2	0.0	7.2	11.3	0.3	8.3
1/10/2025 16:30	6.3	28.0	0.0	6.7	11.5	4.0	1/10/2025 16:30	6.4	20.6	0.0	7.2	11.3	0.2	8.2
1/10/2025 16:45	7.6	74.4	0.0	7.3	11.1	3.8	1/10/2025 16:45	6.3	22.9	0.0	7.1	11.3	0.8	8.8
1/10/2025 17:00	7.6	73.2	0.0	7.3	11.1	4.0	1/10/2025 17:00	6.3	22.7	0.0	7.2	11.3	0.2	8.2
1/10/2025 17:15	7.6	73.0	0.0	7.3	11.1	3.4	1/10/2025 17:15	6.3	22.7	0.0	7.2	11.3	0.5	8.5
1/10/2025 17:30	6.3	28.9	0.0	6.8	11.5	3.2	1/10/2025 17:30	6.3	22.4	0.0	7.2	11.3	0.1	8.1
1/10/2025 17:45	6.2	28.0	0.0	6.7	11.5	3.2	1/10/2025 17:45	6.2	21.0	0.0	7.2	11.3	0.2	8.2
1/10/2025 18:00	7.4	72.2	0.0	7.3	11.2	13.1	1/10/2025 18:00	6.2	22.2	0.0	7.1	11.3	0.2	8.2
1/10/2025 18:15	7.5	72.4	0.0	7.3	11.2	3.5	1/10/2025 18:15	6.2	22.1	0.0	7.1	11.3	0.2	8.2
1/10/2025 18:30	6.5	32.7	0.0	7.0	11.5	3.7	1/10/2025 18:30	6.2	21.7	0.0	7.1	11.3	0.3	8.3
1/10/2025 18:45	6.1	27.7	0.0	6.8	11.6	3.2	1/10/2025 18:45	6.1	21.8	0.0	7.1	11.3	0.1	8.1
1/10/2025 19:00	6.9	63.9	0.0	7.1	11.4	4.9	1/10/2025 19:00	6.1	21.5	0.0	7.2	11.3	0.4	8.4
1/10/2025 19:15	7.4	74.0	0.0	7.3	11.2	3.4	1/10/2025 19:15	6.1	21.5	0.0	7.1	11.3	0.4	8.4
1/10/2025 19:30	6.4	33.0	0.0	7.0	11.5	4.0	1/10/2025 19:30	6.0	21.3	0.0	7.1	11.3	0.1	8.1
1/10/2025 19:45	6.0	27.3	0.0	6.8	11.6	3.2	1/10/2025 19:45	6.0	21.4	0.0	7.1	11.3	0.2	8.2
1/10/2025 20:00	6.0	26.7	0.0	6.7	11.6	3.3	1/10/2025 20:00	6.0	21.1	0.0	7.1	11.4	0.1	8.1
1/10/2025 20:15	7.2	73.1	0.0	7.2	11.3	3.8	1/10/2025 20:15	6.0	19.2	0.0	7.1	11.4	0.3	8.3
1/10/2025 20:30	7.4	73.6	0.0	7.3	11.2	3.4	1/10/2025 20:30	6.0	20.8	0.0	7.0	11.4	0.2	8.2
1/10/2025 20:45	6.2	29.2	0.0	6.9	11.6	3.2	1/10/2025 20:45	6.0	20.7	0.0	7.1	11.4	0.2	8.2
1/10/2025 21:00	6.0	26.7	0.0	6.8	11.6	3.4	1/10/2025 21:00	6.0	18.7	0.0	7.1	11.4	0.2	8.2
1/10/2025 21:15	5.9	26.2	0.0	6.7	11.6	3.5	1/10/2025 21:15	6.0	20.5	0.0	7.1	11.4	0.1	8.1
1/10/2025 21:30	5.9	25.9	0.0	6.7	11.7	4.0	1/10/2025 21:30	5.9	20.5	0.0	7.1	11.4	0.3	8.3
1/10/2025 21:45	7.3	71.7	0.0	7.2	11.3	3.1	1/10/2025 21:45	5.9	20.4	0.0	7.1	11.4	1.6	9.6
1/10/2025 22:00	6.6	41.8	0.0	7.2	11.4	3.8	1/10/2025 22:00	5.9	18.2	0.0	7.1	11.4	0.1	8.1
1/10/2025 22:15	6.0	26.7	0.0	6.8	11.6	3.7	1/10/2025 22:15	5.9	20.1	0.0	7.1	11.4	0.1	8.1
1/10/2025 22:30	5.9	25.7	0.0	6.7	11.7	3.5	1/10/2025 22:30	5.8	20.1	0.0	7.1	11.4	0.1	8.1
1/10/2025 22:45	7.1	69.4	0.0	7.2	11.3	6.8	1/10/2025 22:45	5.8	19.8	0.0	7.1	11.4	0.1	8.1
1/10/2025 23:00	7.4	70.9	0.0	7.3	11.2	3.2	1/10/2025 23:00		19.8	0.0	7.1	11.4	0.2	8.2
1/10/2025 23:15	7.4	70.6	0.0	7.3	11.2	5.0	1/10/2025 23:15	5.8	19.5	0.0	7.1	11.4	0.1	8.1
1/10/2025 23:30	6.3	31.4	0.0	7.0	11.5	4.4	1/10/2025 23:30	5.8	19.6	0.0	7.1	11.4	0.6	8.6
1/10/2025 23:45	6.4	37.0	0.0	7.1	11.5	3.1	1/10/2025 23:45	5.8	19.4	0.0	7.1	11.4	0.1	8.1
1/11/2025 0:00	5.9	25.6	0.0	6.8	11.7	5.4	1/11/2025 0:00	5.8	17.2	0.0	7.1	11.4	0.1	8.1
1/11/2025 0:15	5.8	25.1	0.0	6.7	11.7	3.9	1/11/2025 0:15	5.8	19.2	0.0	7.0	11.5	0.0	8.0
1/11/2025 0:30	5.8	24.8	0.0	6.7	11.7	3.1	1/11/2025 0:30	5.8	19.3	0.0	7.1	11.5	0.1	8.1
1/11/2025 0:45	7.1	70.5	0.0	7.2	11.4	3.6	1/11/2025 0:45	5.8	17.2	0.0	7.1	11.5	0.0	8.0
1/11/2025 1:00	7.2	66.1	0.0	7.3	11.3	3.0	1/11/2025 1:00	5.8	19.1	0.0	7.1	11.5	0.1	8.1
1/11/2025 1:15	5.9	25.4	0.0	6.8	11.7	3.0	1/11/2025 1:15	5.8	19.1	0.0	7.1	11.5	0.1	8.1
1/11/2025 1:30	5.8	24.7	0.0	6.7	11.7	3.1	1/11/2025 1:30	5.8	18.6	0.0	7.1	11.4	0.0	8.0
1/11/2025 1:45	6.0	31.3	0.0	6.8	11.7	3.4	1/11/2025 1:45	5.8	18.9	0.0	7.1	11.5	0.2	8.2
1/11/2025 2:00	5.8	24.0	0.0	6.7	11.7	3.1	1/11/2025 2:00	5.8	18.7	0.0	7.1	11.4	0.1	8.1
1/11/2025 2:15	7.3	72.2	0.0	7.3	11.3	4.2	1/11/2025 2:15	5.7	16.5	0.0	7.1	11.5	0.0	8.0
1/11/2025 2:30	7.4	70.9	0.0	7.3	11.3	3.4	1/11/2025 2:30	5.7	18.5	0.0	7.1	11.5	0.2	8.2
1/11/2025 2:45	6.7	45.7	0.0	7.3	11.4	3.2	1/11/2025 2:45	5.7	16.6	0.0	7.1	11.5	0.0	8.0
1/11/2025 3:00	5.9	25.1	0.0	6.7	11.7	3.4	1/11/2025 3:00	5.7	18.4	0.0	7.1	11.5	0.0	8.0
1/11/2025 3:15	5.8	24.4	0.0	6.7	11.7	3.1	1/11/2025 3:15	5.7	16.5	0.0	7.0	11.5	0.3	8.3
1/11/2025 3:30	7.0	66.6	0.0	7.2	11.4	3.5	1/11/2025 3:30	5.7	18.2	0.0	7.0	11.5	0.1	8.1
1/11/2025 3:45	7.4	71.2	0.0	7.3	11.3	3.1	1/11/2025 3:45	5.7	18.2	0.0	7.1	11.5	0.1	8.1
1/11/2025 4:00	7.4	71.0	0.0	7.3	11.3	3.0	1/11/2025 4:00	5.7	18.2	0.0	7.1	11.5	0.1	8.1
1/11/2025 4:15	7.2	67.4	0.0	7.3	11.3	4.0	1/11/2025 4:15	5.7	17.7	0.0	7.1	11.5	0.1	8.1
1/11/2025 4:30	7.4	71.3	0.0	7.3	11.2	3.1	1/11/2025 4:30	5.7	17.1	0.0	7.1	11.5	0.1	8.1
1/11/2025 4:45	6.9	54.3	0.0	7.2	11.5	3.3	1/11/2025 4:45	5.7	17.8	0.0	7.0	11.5	0.0	8.0
1/11/2025 5:00	6.0	26.4	0.0	6.8	11.7	3.0	1/11/2025 5:00	5.7	18.0	0.0	7.0	11.5	0.0	8.0
1/11/2025 5:15	5.8	24.4	0.0	6.7	11.7	3.0	1/11/2025 5:15	5.7	17.6	0.0	7.1	11.5	0.1	8.1
1/11/2025 5:30	5.8	23.9	0.0	6.7	11.7	3.1	1/11/2025 5:30	5.7	16.0	0.0	7.0	11.5	0.0	8.0
1/11/2025 5:45	5.7	23.7	0.0	6.8	11.7	3.1	1/11/2025 5:45	5.7	17.7	0.0	7.0	11.5	0.1	8.1
1/11/2025 6:00	7.1	72.1	0.0	7.2	11.4	3.2	1/11/2025 6:00	5.7	15.9	0.0	7.1	11.5	0.1	8.1
1/11/2025 6:15	7.1	70.6	0.0	7.2	11.4	3.6	1/11/2025 6:15	5.7	17.5	0.0	7.0	11.5	0.2	8.2
1/11/2025 6:30	5.9	25.3	0.0	6.9	11.7	3.1	1/11/2025 6:30	5.7	17.6	0.0	7.1	11.5	0.1	8.1
1/11/2025 6:45	5.7	23.7	0.0	6.8	11.8	3.4	1/11/2025 6:45	5.6	17.5	0.0	7.0	11.5	0.0	8.0
1/11/2025 7:00	5.7	23.3	0.0	6.7	11.8	5.5	1/11/2025 7:00	5.6	17.6	0.0	7.0	11.5	0.0	8.0
1/11/2025 7:15	7.3	73.1	0.0	7.4	11.3	3.1	1/11/2025 7:15	5.6	17.3	0.0	7.1	11.5	0.2	8.2
1/11/2025 7:30	7.3	72.3	0.0	7.3	11.3	3.0	1/11/2025 7:30	5.6	15.6	0.0	7.0	11.5	0.1	8.1
1/11/2025 7:45	7.2	69.2	0.0	7.3	11.3	3.1	1/11/2025 7:45	5.6	17.3	0.0	6.9	11.5	0.0	8.0
1/11/2025 8:00	7.3	69.3	0.0	7.4	11.3	4.9	1/11/2025 8:00	5.6	17.3	0.0	7.0	11.5	0.1	8.1
1/11/2025 8:15	7.0	58.5	0.0	7.4	11.3	3.1	1/11/2025 8:15	5.6	17.0	0.0	7.1	11.5	0.0	8.0
1/11/2025 8:30	5.9	25.7	0.0	6.8	11.7	3.0	1/11/2025 8:30	5.6	17.3	0.0	7.0	11.5	0.1	8.1
1/11/2025 8:45	5.7	23.8	0.0	6.7	11.8	3.0	1/11/2025 8:45	5.6	17.2	0.0	7.0	11.5	0.1	8.1
1/11/2025 9:00	6.9	67.3	0.0	7.2	11.4	3.2	1/11/2025 9:00	5.6	17.2	0.0	7.0	11.5	0.0	8.0
1/11/2025 9:15	7.2	69.1	0.0	7.3	11.3	3.4	1/11/2025 9:15	5.6	17.1	0.0	7.1	11.5	0.2	8.2
1/11/2025 9:30	7.3	68.9	0.0	7.3	11.3	3.2	1/11/2025 9:30	5.6	17.1	0.0	7.0	11.5	0.0	8.0
1/11/2025 9:45	6.0	27.7	0.0	6.9	11.7	3.2	1/11/2025 9:45	5.6	17.0	0.0	7.1	11.5	0.1	8.1
1/11/2025 10:00	5.7	23.7	0.0	6.7	11.8	7.5	1/11/2025 10:00	5.6	17.0	0.0	7.0	11.5	0.1	8.1
1/11/2025 10:15	5.6	23.4	0.0	6.7	11.8	2.9	1/11/2025 10:15	5.6	16.6	0.0	7.0	11.6	0.0	8.0
1/11/2025 10:30	5.6	22.9	0.0	6.7	11.8	3.5	1/11/2025 10:30	5.6	16.9	0.0	7.0	11.6	0.0	8.0
1/11/2025 10:45	5.8	34.1	0.0	6.7	11.8	4.0	1/11/2025 10:45	5.6	16.7	0.0	7.1	11.6	0.1	8.1
1/11/2025 11:00	7.2	69.8	0.0	7.3	11.3	3.2	1/11/2025 11:00	5.6	15.1	0.0	7.1	11.5	0.0	8.0
1/11/2025 11:15	7.3	69.7	0.0	7.3	11.3	2.9	1/11/2025 11:15	5.6	16.8	0.0	7.0	11.6	0.0	8.0
1/11/2025 11:30	7.2	65.3	0.0	7.3	11.3	17.0	1/11/2025 11:30	5.6	15.1	0.0	7.0	11.6	0.0	8.0
1/11/2025 11:45	7.0	66.2	0.0	7.2	11.4	3.0	1/11/2025 11:45	5.7	16.7	0.0	6.9	11.6	0.0	8.0
1/11/2025 12:00	7.3	69.1	0.0	7.3	11.3	3.0	1/11/2025 12:00	5.7	16.5	0.0	7.1	11.6	0.0	8.0
1/11/2025 12:15	6.1	27.9	0.0	6.9	11.7	3.2	1/11/2025 12:15	5.7	16.7	0.0	7.0	11.6	0.0	8.0
1/11/2025 12:30	7.1	70.8	0.0	7.2	11.4	3.1	1/11/2025 12:30	5.7	16.4	0.0	7.1	11.6	0.0	8.0
1/11/2025 12:45	6.2	29.8	0.0	7.0	11.6	3.4	1/11/2025 12:45	5.7	16.7	0.0	7.1	11.6	0.1	8.1
1/11/2025 13:00	5.8	23.4	0.0	6.7	11.8	3.0	1/11/2025 13:00	5.7	16.5	0.0	7.1	11.6	0.0	8.0
1/11/2025 13:15	5.9	24.9	0.0	6.8	11.8	3.1	1/11/2025 13:15	5.8	16.5	0.0	7.0	11.6	0.0	8.0
1/11/2025 13:30	6.0	28.5	0.0	6.9	11.7	2.9	1/11/2025 13:30	5.8	16.4	0.0	7.1	11.6	0.0	8.0
1/11/2025 13:45	5.8	22.5	0.0	6.7	11.8	2.9	1/11/2025 13:45	5.8	16.4	0.0	7.0	11.6	0.0	8.0
1/11/2025 14:00	7.0	69.8	0.0	7.2	11.4	3.5	1/11/2025 14:00	5.8	16.1	0.0	7.1	11.5	0.0	8.0
1/11/2025 14:15	7.5	76.6	0.0	7.4	11.3	5.2	1/11/2025 14:15	5.8	16.3	0.0	7.0	11.5	0.0	8.0
1/11/2025 14:30	7.5	75.4	0.0	7.4	11.3	3.8	1/11/2025 14:30	5.8	16.2	0.0	7.1	11.5	0.0	8.0
1/11/2025 14:45	7.5	73.3	0.0	7.3	11.3	3.0	1/11/2025 14:45	5.8	16.2	0.0	7.0	11.5	0.1	8.1
1/11/2025 15:00	7.1	66.4	0.0	7.3	11.4	3.0	1/11/2025 15:00	5.8	16.0	0.0	7.0	11.5	0.0	8.0
1/11/2025 15:15	6.1	26.3	0.0	6.9	11.7	2.9	1/11/2025 15:15	5.8	16.1	0.0	7.0	11.5	0.0	8.0
1/11/2025 15:30	6.1	26.5	0.0	6.9	11.6	3.1	1/11/2025 15:30	5.8	16.0	0.0	7.1	11.5	0.0	8.0
1/11/2025 15:45	5.8	22.9	0.0	6.8	11.7	3.0	1/11/2025 15:45	5.8	16.0	0.0	7.0	11.5	0.2	8.2
1/11/2025 16:00	5.8	22.4	0.0	6.7	11.8	2.9	1/11/2025 16:00	5.8	15.9	0.0	7.0	11.5	0.1	8.1
1/11/2025 16:15	5.7	22.1	0.0	6.7	11.8	2.9	1/11/2025 16:15	5.8	15.9	0.0	7.0	11.5	0.0	8.0
1/11/2025 16:30	7.2	74.4	0.0	7.3	11.4	3.3	1/11/2025 16:30	5.8	15.9	0.0	7.0	11.5	0.0	8.0
1/11/2025 16:45	7.4	75.0	0.0	7.4	11.3	3.0	1/11/2025 16:45	5.8	16.0	0.0	7.0	11.5	0.0	8.0
1/11/2025 17:00	6.1	26.1	0.0	6.9	11.7	3.0	1/11/2025 17:00	5.8	15.9	0.0	7.1	11.5	0.1	8.1
1/11/2025 17:15	6.4	48.4	0.0	6.9	11.7	3.1	1/11/2025 17:15	5.8	16.0	0.0	7.0	11.5	0.0	8.0
1/11/2025 17:30	7.4	74.0	0.0	7.4	11.3	2.9	1/11/2025 17:30	5.8	15.5	0.0	7.1	11.5	0.1	8.1
1/11/2025 17:45	5.9	23.8	0.0	6.8	11.7	3.0	1/11/2025 17:45	5.8	16.0	0.0	7.0	11.5	0.1	8.1
1/11/2025 18:00	5.9	24.7	0.0	6.8	11.7	2.9	1/11/2025 18:00	5.8	15.6	0.0	7.0	11.5	0.0	8.0
1/11/2025 18:15	5.8	22.3	0.0	6.7	11.8	3.2	1/11/2025 18:15	5.8	15.9	0.0	7.0	11.5	1.6	9.6
1/11/2025 18:30	5.7	22.1	0.0	6.7	11.8	3.1	1/11/2025 18:30	5.8	15.8	0.0	7.0	11.5	0.0	8.0
1/11/2025 18:45	7.2	75.6	0.0	7.3	11.3	3.2	1/11/2025 18:45	5.8	15.8	0.0	7.0	11.5	0.0	8.0
1/11/2025 19:00	7.4	75.3	0.0	7.4	11.3	3.9	1/11/2025 19:00	5.8	15.6	0.0	7.0	11.5	0.1	8.1
1/11/2025 19:15	7.3	73.2	0.0	7.4	11.3	4.7	1/11/2025 19:15	5.7	15.8	0.0	7.0	11.5	0.0	8.0
1/11/2025 19:30	6.8	54.7	0.0	7.3	11.4	3.0	1/11/2025 19:30	5.7	15.6	0.0	7.0	11.5	0.0	8.0

1/11/2025 19:45	5.8	23.6	0.0	6.8	11.8	2.9
1/11/2025 20:00	5.7	22.5	0.0	6.7	11.8	2.8
1/11/2025 20:15	5.6	22.1	0.0	6.7	11.8	3.0
1/11/2025 20:30	6.7	57.6	0.0	7.3	11.4	3.0
1/11/2025 20:45	5.7	22.8	0.0	6.8	11.8	3.0
1/11/2025 21:00	6.9	67.8	0.0	7.3	11.4	3.2
1/11/2025 21:15	7.0	67.0	0.0	7.3	11.4	3.5
1/11/2025 21:30	5.8	25.1	0.0	6.8	11.7	14.4
1/11/2025 21:45	5.6	22.5	0.0	6.7	11.8	2.9
1/11/2025 22:00	5.5	22.0	0.0	6.7	11.9	2.9
1/11/2025 22:15	6.9	75.8	0.0	7.3	11.4	2.9
1/11/2025 22:30	7.2	76.2	0.0	7.4	11.4	7.4
1/11/2025 22:45	5.7	25.1	0.0	6.9	11.8	3.0
1/11/2025 23:00	5.4	22.5	0.0	6.7	11.9	2.9
1/11/2025 23:15	5.4	22.0	0.0	6.6	11.9	3.2
1/11/2025 23:30	5.3	21.7	0.0	6.6	11.9	2.9
1/11/2025 23:45	6.8	74.2	0.0	7.3	11.5	3.6
1/12/2025 0:00	7.0	73.3	0.0	7.4	11.4	3.7
1/12/2025 0:15	6.8	70.2	0.0	7.3	11.5	4.5
1/12/2025 0:30	6.8	68.6	0.0	7.3	11.5	3.0
1/12/2025 0:45	5.9	33.0	0.0	7.1	11.7	3.4
1/12/2025 1:00	5.3	22.8	0.0	6.7	11.9	3.1
1/12/2025 1:15	5.2	22.0	0.0	6.7	11.9	2.8
1/12/2025 1:30	5.2	21.6	0.0	6.7	11.9	2.8
1/12/2025 1:45	5.2	21.3	0.0	6.7	12.0	2.8
1/12/2025 2:00	5.2	21.2	0.0	6.7	12.0	3.7
1/12/2025 2:15	6.4	68.2	0.0	7.2	11.6	3.0
1/12/2025 2:30	6.7	69.6	0.0	7.3	11.5	3.0
1/12/2025 2:45	6.7	69.7	0.0	7.3	11.5	9.2
1/12/2025 3:00	6.4	65.9	0.0	7.2	11.6	14.3
1/12/2025 3:15	5.5	26.6	0.0	6.9	11.8	3.3
1/12/2025 3:30	5.2	21.7	0.0	6.7	11.9	3.0
1/12/2025 3:45	5.2	21.7	0.0	6.6	12.0	3.0
1/12/2025 4:00	5.2	21.4	0.0	6.7	12.0	2.9
1/12/2025 4:15	6.5	70.4	0.0	7.2	11.6	19.6
1/12/2025 4:30	6.8	74.8	0.0	7.4	11.5	2.9
1/12/2025 4:45	5.6	29.3	0.0	7.0	11.8	3.0
1/12/2025 5:00	5.2	22.4	0.0	6.7	11.9	2.8
1/12/2025 5:15	5.2	21.8	0.0	6.7	12.0	2.8
1/12/2025 5:30	6.8	80.6	0.0	7.3	11.5	5.8
1/12/2025 5:45	7.0	82.1	0.0	7.4	11.4	3.2
1/12/2025 6:00	5.6	27.1	0.0	6.9	11.8	2.9
1/12/2025 6:15	5.2	22.4	0.0	6.7	11.9	2.9
1/12/2025 6:30	5.2	21.7	0.0	6.7	12.0	3.1
1/12/2025 6:45	5.3	31.4	0.0	6.7	12.0	3.4
1/12/2025 7:00	6.5	75.5	0.0	7.2	11.6	3.5
1/12/2025 7:15	6.9	78.8	0.0	7.4	11.4	3.3
1/12/2025 7:30	6.8	75.6	0.0	7.4	11.4	3.3
1/12/2025 7:45	5.3	23.2	0.0	6.8	11.9	2.9
1/12/2025 8:00	5.2	21.8	0.0	6.7	12.0	2.9
1/12/2025 8:15	6.4	72.4	0.0	7.2	11.6	3.0
1/12/2025 8:30	6.9	78.7	0.0	7.4	11.4	4.0
1/12/2025 8:45	6.9	78.8	0.0	7.4	11.4	3.1
1/12/2025 9:00	6.9	78.6	0.0	7.4		3.0
1/12/2025 9:15	6.7	76.0	0.0	7.3	11.5	3.6
1/12/2025 9:30	5.5	28.5	0.0	7.0	11.8	2.9
1/12/2025 9:45	5.5	39.0	0.0	7.0	11.9	3.7
1/12/2025 10:00	5.1	22.9	0.0	6.8	12.0	2.8
1/12/2025 10:15	5.5	43.6	0.0	7.1	11.8	2.9
1/12/2025 10:30	5.0	21.6	0.0	6.7	12.0	3.0
1/12/2025 10:45	6.7	80.9	0.0	7.4	11.5	3.1
1/12/2025 11:00	7.1	80.8	0.0	7.4	11.4	2.9
1/12/2025 11:15	6.7	60.9	0.0	7.4	11.5	2.8
1/12/2025 11:30	5.3	22.7	0.0	6.8	11.9	2.8
1/12/2025 11:45	5.3	20.9	0.0	6.7	11.9	3.1
1/12/2025 12:00	7.0	78.8	0.0	7.3	11.4	4.2
1/12/2025 12:15	7.3	79.7	0.0	7.4	11.3	3.3
1/12/2025 12:30	6.8	56.0	0.0	7.4	11.4	3.0
1/12/2025 12:45	5.6	22.7	0.0	6.7	11.8	2.9
1/12/2025 13:00	5.5	21.5	0.0	6.7	11.8	3.0
1/12/2025 13:15	7.3	80.2	0.0	7.4	11.3	4.1
1/12/2025 13:30	7.5	83.2	0.0	7.4	11.3	5.3
1/12/2025 13:45	6.0	25.7	0.0	7.0	11.7	2.9
1/12/2025 14:00	7.0	72.9	0.0	7.2	11.5	4.6
1/12/2025 14:15	7.0	57.4	0.0	7.3	11.3	4.9
1/12/2025 14:30	5.8	22.4	0.0	6.7	11.8	3.7
1/12/2025 14:45	5.8	21.3	0.0	6.7	11.8	5.8
1/12/2025 15:00	6.1	33.3	0.0	7.0	11.6	3.0
1/12/2025 15:15	5.7	21.2	0.0	6.7	11.8	3.5
1/12/2025 15:30	7.7	84.4	0.0	7.4	11.2	4.4
1/12/2025 15:45	7.9	87.5	0.0	7.4	11.2	4.3
1/12/2025 16:00	6.1	25.2	0.0	6.9	11.7	3.0
1/12/2025 16:15	5.7	21.7	0.0	6.7	11.8	2.9
1/12/2025 16:30	5.6	21.0	0.0	6.7	11.8	2.9
1/12/2025 16:45	5.6	20.7	0.0	6.7	11.8	3.0
1/12/2025 17:00	7.7	88.0	0.0	7.4	11.2	4.2
1/12/2025 17:15	7.8	89.8	0.0	7.5	11.2	4.2
1/12/2025 17:30	5.9	25.4	0.0	6.9	11.7	2.8
1/12/2025 17:45	5.6	21.7	0.0	6.8	11.8	2.8
1/12/2025 18:00	7.2	85.3	0.0	7.3	11.4	3.7
1/12/2025 18:15	7.6	92.9	0.0	7.5	11.3	3.6
1/12/2025 18:30	7.2	71.7	0.0	7.4	11.3	4.0
1/12/2025 18:45	5.6	23.0	0.0	6.8	11.9	2.8
1/12/2025 19:00	5.4	21.5	0.0	6.7	11.9	2.9
1/12/2025 19:15	5.3	21.1	0.0	6.7	12.0	3.0
1/12/2025 19:30	7.4	96.6	0.0	7.4	11.3	4.4
1/12/2025 19:45	7.5	98.1	0.0	7.5	11.3	3.0
1/12/2025 20:00	5.7	27.8	0.0	7.0	11.8	2.9
1/12/2025 20:15	5.3	22.2	0.0	6.7	11.9	3.1
1/12/2025 20:30	5.2	21.3	0.0	6.6	12.0	4.1
1/12/2025 20:45	5.1	20.9	0.0	6.7	12.0	4.6
1/12/2025 21:00	5.0	20.6	0.0	6.6	12.0	3.0
1/12/2025 21:15	6.2	76.1	0.0	7.2	11.6	2.9
1/12/2025 21:30	5.9	44.4	0.0	7.2	11.6	2.8
1/12/2025 21:45	6.2	57.6	0.0	7.3	11.6	2.8
1/12/2025 22:00	5.0	21.8	0.0	6.8	12.0	3.2
1/12/2025 22:15	4.9	20.9	0.0	6.7	12.0	3.0
1/12/2025 22:30	4.9	24.7	0.0	6.7	12.1	2.9
1/12/2025 22:45	7.0	91.6	0.0	7.5	11.4	3.3
1/12/2025 23:00	6.8	79.1	0.0	7.4	11.5	2.9
1/12/2025 23:15	7.0	90.0	0.0	7.5	11.4	3.5
1/12/2025 23:30	5.3	26.4	0.0	6.9	11.9	2.8
1/12/2025 23:45	4.9	21.7	0.0	6.8	12.0	2.8

1/11/2025 19:45	5.7	15.7	0.0	7.0	11.5	0.0	8.0
1/11/2025 20:00	5.7	15.6	0.0	7.0	11.5	0.0	8.0
1/11/2025 20:15	5.7	14.2	0.0	7.0	11.5	0.0	8.0
1/11/2025 20:30	5.7	15.6	0.0	6.9	11.5	0.0	8.0
1/11/2025 20:45	5.7	15.7	0.0	7.0	11.5	0.1	8.1
1/11/2025 21:00	5.6	15.7	0.0	7.0	11.5	0.0	8.0
1/11/2025 21:15	5.6	15.5	0.0	7.0	11.6	0.0	8.0
1/11/2025 21:30	5.6	15.7	0.0	7.0	11.5	0.0	8.0
1/11/2025 21:45	5.6	15.6	0.0	7.0	11.6	0.0	8.0
1/11/2025 22:00	5.5	15.6	0.0	7.0	11.6	0.0	8.0
1/11/2025 22:15	5.5	15.5	0.0	7.0	11.6	0.0	8.0
1/11/2025 22:30	5.5	14.1	0.0	7.0	11.6	0.0	8.0
1/11/2025 22:45	5.4	15.5	0.0	7.0	11.6	0.2	8.2
1/11/2025 23:00	5.4	14.0	0.0	7.0	11.6	0.0	8.0
1/11/2025 23:15	5.4	15.5	0.0	7.0	11.6	0.0	8.0
1/11/2025 23:30	5.4	13.9	0.0	7.0	11.6	0.0	8.0
1/11/2025 23:45	5.3	15.5	0.0	7.0	11.6	0.0	8.0
1/12/2025 0:00	5.3	15.5	0.0	7.0	11.6	0.0	8.0
1/12/2025 0:15	5.3	15.4	0.0	7.0	11.6	0.0	8.0
1/12/2025 0:30	5.2	15.4	0.0	7.0	11.7	0.1	8.1
1/12/2025 0:45	5.2	15.4	0.0	7.1	11.7	0.0	8.0
1/12/2025 1:00	5.2	13.8	0.0	7.0	11.7	0.0	8.0
1/12/2025 1:15	5.2	15.1	0.0	6.9	11.6	0.0	8.0
1/12/2025 1:30	5.2	14.9	0.0	7.0	11.7	0.0	8.0
1/12/2025 1:45	5.2	13.6	0.0	7.0	11.7	0.0	8.0
1/12/2025 2:00	5.2	15.1	0.0	7.0	11.6	0.0	8.0
1/12/2025 2:15	5.2	15.3	0.0	7.0	11.7	0.0	8.0
1/12/2025 2:30	5.2	14.9	0.0	7.0	11.6	0.0	8.0
1/12/2025 2:45	5.2	15.2	0.0	7.0	11.6	0.0	8.0
1/12/2025 3:00	5.2	15.1	0.0	7.0	11.6	0.0	8.0
1/12/2025 3:15	5.2	15.2	0.0	7.0	11.7	0.0	8.0
1/12/2025 3:30	5.2	14.8	0.0	7.0	11.6	0.0	8.0
1/12/2025 3:45	5.2	15.2	0.0	7.0	11.6	0.0	8.0
1/12/2025 4:00	5.2	15.0	0.0	7.0	11.7	0.0	8.0
1/12/2025 4:15	5.2	15.2	0.0	7.0	11.6	0.0	8.0
1/12/2025 4:30	5.2	15.1	0.0	7.0	11.7	0.2	8.2
1/12/2025 4:45	5.2	13.7	0.0	7.0	11.7	0.0	8.0
1/12/2025 5:00	5.2	15.2	0.0	6.9	11.7	0.0	8.0
1/12/2025 5:15	5.2	15.0	0.0	7.0	11.7	0.0	8.0
1/12/2025 5:30	5.2	13.7	0.0	7.0	11.6	0.0	8.0
1/12/2025 5:45	5.2	15.1	0.0	7.0	11.7	0.0	8.0
1/12/2025 6:00	5.2	13.7	0.0	7.0	11.7	0.0	8.0
1/12/2025 6:15	5.2	15.0	0.0	6.9	11.6	0.0	8.0
1/12/2025 6:30	5.2	15.0	0.0	7.0	11.6	0.0	8.0
1/12/2025 6:45	5.2	13.5	0.0	7.0	11.7	0.0	8.0
1/12/2025 7:00	5.2	14.9	0.0	7.0	11.7	0.1	8.1
1/12/2025 7:15	5.2	15.0	0.0	7.0	11.7	0.0	8.0
1/12/2025 7:30	5.2	14.9	0.0	7.0	11.7	0.0	8.0
1/12/2025 7:45	5.2	13.3	0.0	7.0	11.7	0.0	8.0
1/12/2025 8:00	5.2	14.9	0.0	7.0	11.7	0.0	8.0
1/12/2025 8:15	5.2	14.9	0.0	7.0	11.7	0.0	8.0
1/12/2025 8:30	5.2	14.8	0.0	7.0	11.7	0.0	8.0
1/12/2025 8:45	5.1	14.9	0.0	7.0	11.7	0.0	8.0
1/12/2025 9:00	5.1	14.5	0.0	7.0	11.7	0.1	8.1
1/12/2025 9:15	5.1	14.8	0.0	7.0	11.7	0.0	8.0
1/12/2025 9:30	5.1	14.7	0.0	7.0	11.7	0.0	8.0
1/12/2025 9:45	5.1	14.7	0.0	7.0	11.7	0.2	8.2
1/12/2025 10:00	5.0	14.6	0.0	7.0	11.7	0.0	8.0
1/12/2025 10:15	5.0	13.2	0.0	7.0	11.7	0.0	8.0
1/12/2025 10:30	5.0	14.6	0.0	7.0	11.7	0.0	8.0
1/12/2025 10:45	5.1	13.1	0.0	7.0	11.7	0.0	8.0
1/12/2025 11:00	5.1	14.5	0.0	7.0	11.7	0.0	8.0
1/12/2025 11:15	5.2	14.5	0.0	7.0	11.8	0.0	8.0
1/12/2025 11:30	5.2	14.4	0.0	7.0	11.7	0.0	8.0
1/12/2025 11:45	5.2	13.1	0.0	7.0	11.7	0.0	8.0
1/12/2025 12:00	5.2	14.5	0.0	7.0	11.7	0.0	8.0
1/12/2025 12:15	5.3	13.0	0.0	7.0	11.7	0.0	8.0
1/12/2025 12:30	5.3	14.4	0.0	6.9	11.7	0.0	8.0
1/12/2025 12:45	5.4	14.3	0.0	7.1	11.6	0.0	8.0
1/12/2025 13:00	5.4	13.0	0.0	7.0	11.6	0.0	8.0
1/12/2025 13:15	5.5	14.4	0.0	6.9	11.6	0.0	8.0
1/12/2025 13:30	5.5	14.2	0.0	7.0	11.6	0.0	8.0
1/12/2025 13:45	5.6	14.3	0.0	7.0	11.6	0.0	8.0
1/12/2025 14:00		14.1	0.0	7.0	11.6	0.0	8.0
1/12/2025 14:15	5.7	14.3	0.0	7.0	11.6	0.0	8.0
1/12/2025 14:30	5.7	14.1	0.0	7.0	11.5	0.0	8.0
1/12/2025 14:45	5.7	14.1	0.0	7.0	11.6	0.0	8.0
1/12/2025 15:00	5.7	14.1	0.0	7.0	11.5	0.0	8.0
1/12/2025 15:15	5.7	14.2	0.0	7.0	11.5	0.0	8.0
1/12/2025 15:30	5.7	13.9	0.0	7.0	11.6	0.0	8.0
1/12/2025 15:45	5.7	14.0	0.0	7.0	11.5	0.0	8.0
1/12/2025 16:00	5.7	14.0	0.0	7.0	11.6	0.0	8.0
1/12/2025 16:15	5.6	14.0	0.0	7.0	11.5	0.0	8.0
1/12/2025 16:30	5.6	13.9	0.0	7.0	11.5	0.0	8.0
1/12/2025 16:45	5.6	12.5	0.0	7.0	11.6	0.3	8.3
1/12/2025 17:00	5.5	13.9	0.0	6.9	11.5	0.0	8.0
1/12/2025 17:15	5.5	13.9	0.0	7.0	11.6	0.0	8.0
1/12/2025 17:30	5.5	12.4	0.0	7.0	11.6	0.0	8.0
1/12/2025 17:45	5.5	13.9	0.0	6.8	11.6	0.1	8.1
1/12/2025 18:00	5.4	13.7	0.0	7.0	11.6	0.0	8.0
1/12/2025 18:15	5.4	13.0	0.0	7.0	11.6	0.0	8.0
1/12/2025 18:30	5.4	13.8	0.0	7.0	11.6	0.0	8.0
1/12/2025 18:45	5.3	13.9	0.0	7.0	11.6	0.0	8.0
1/12/2025 19:00	5.3	13.6	0.0	7.0	11.6	0.2	8.2
1/12/2025 19:15	5.3	13.9	0.0	7.0	11.6	0.0	8.0
1/12/2025 19:30	5.2	13.8	0.0	7.0	11.7	0.0	8.0
1/12/2025 19:45	5.2	12.4	0.0	7.0	11.6	0.0	8.0
1/12/2025 20:00	5.2	13.9	0.0	7.0	11.6	0.0	8.0
1/12/2025 20:15	5.2	12.5	0.0	7.0	11.7	0.0	8.0
1/12/2025 20:30	5.1	13.8	0.0	6.9	11.7	0.0	8.0
1/12/2025 20:45	5.1	13.9	0.0	7.0	11.7	0.0	8.0
1/12/2025 21:00	5.1	13.8	0.0	7.0	11.7	0.0	8.0
1/12/2025 21:15	5.0	12.4	0.0	7.0	11.7	1.4	9.4
1/12/2025 21:30	5.0	13.8	0.0	6.8	11.7	0.0	8.0
1/12/2025 21:45	5.0	13.8	0.0	6.8	11.7	0.0	8.0
1/12/2025 22:00	5.0	13.8	0.0	7.0	11.7	0.0	8.0
1/12/2025 22:15	4.9	13.7	0.0	7.0	11.8	0.0	8.0
1/12/2025 22:30	4.9	13.6	0.0	7.0	11.8	0.0	8.0
1/12/2025 22:45	4.9	13.6	0.0	7.0	11.8	0.0	8.0
1/12/2025 23:00	4.8	13.5	0.0	7.0	11.8	0.0	8.0
1/12/2025 23:15	4.8	13.6	0.0	7.0	11.8	0.0	8.0
1/12/2025 23:30	4.8	13.4	0.0	7.0	11.8	0.0	8.0
1/12/2025 23:45	4.8	12.1	0.0	7.0	11.8	0.0	8.0