Eagle Mountain - Woodfibre Gas Pipeline Project

BCER Waste Discharge Permit Weekly Report

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Preamble

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

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

Introduction

The results provided in this document are submitted to BC Energy Regulator (BCER) by FortisBC as per the requirements listed in the Waste Discharge Permit PE-110163 Section 4.2:

> The Permittee shall summarize the results of the discharge and receiving environment compliance sampling and monitoring program in a report that shall be submitted weekly over the term of this permit. The sampling and monitoring results shall be suitably tabulated and include comparison to the respective British Columbia Approved and Working Water Quality Guidelines for Freshwater & Marine Aquatic Life, as published by the Ministry of Environment & Climate Change Strategy. Any exceedance of regulatory guidelines shall be clearly highlighted, and any missed sampling events/missing data shall be identified with an explanation provided. Reporting frequency may be reduced upon a history of compliance and by written confirmation from the BCER. These reports shall be submitted to Waste.Management@bc-er.ca. A copy of the reports shall be provided to each First Nation consulted with regarding the subject permit, and also made publicly available on the FortisBC Eagle Mountain-Woodfibre Gas Pipeline Project | Talking Energy webpage.

Sampling Methodology

The monitoring and sampling has been carried out in accordance with the procedures described in the most recent edition of the “British Columbia Field Sampling Manual” using field equipment and lab samples to meet daily and real time requirements for the Waste Discharge Permit.

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

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

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

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

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

Summary-BC Rail Site

Site Activities and Exceedances

- Weekly upstream and downstream taken by Triton.
- Water produced by the water treatment plant is being recirculated for tunneling and to create grout for tunneling.
- No discharge occurred during this reporting period.

Discharge from Water Treatment Plant

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

Table 3: Discharge from Water Treatment System Information

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

*Max discharge is 515 m3/day

Receiving Environment Monitoring-Squamish River

Table 4 and 5 below includes information on water quality and lab sampling. Appendix B includes a full set of lab results with real time data. The receiving environment is being monitored as outlined in the permit with additional oversight by the QP.

Table 4: Upstream Monitoring Information

Location	Date of Lab Sample	Real Time Monitored	Results
Squamish River Upstream	2025-02-10	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	2025-02-10	Yes *	Full set of lab sample results, photo and documentation are provided in Appendix B.

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

Summary-Woodfibre

Site Activities and Exceedances

- Weekly upstream, downstream and end of pipe taken by Triton.
- Ongoing tunnelling at WLNG and grouting works to mitigate water ingress.
- pH measured outside the applicable range is being assessed by the QP for this reporting period.
- The discharge volumes from the WTP on February 10th to February 12th exceeded the maximum discharge volume of 1500 m^3 per day. Please see Table 6 for discharge volume summaries.

Discharge from Water Treatment Plant

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

Table 6: Discharges from Water Treatment System

Location	Date of Discharge	Real Time Monitored and Daily Monitoring	Discharge Volume
Woodfibre	2025-02-10	Yes-Appendix C	1710 m^3
Woodfibre	2025-02-11	Yes-Appendix C	1672 m^3
Woodfibre	2025-02-12	Yes-Appendix C	1584 m^3
Woodfibre	2025-02-13	Yes-Appendix C	1197 m^3
Woodfibre	2025-02-14	Yes-Appendix C*lab sample day	1394 m^3
Woodfibre	2025-02-15	Yes-Appendix C	1386 m^3
Woodfibre	2025-02-16	Yes-Appendix C	1287 m^3

*Max discharge is 1500m^3/day

Receiving Environment Monitoring-East Creek

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

Table 7: Upstream Monitoring Information

Location	Date of Lab Sample	Real Time Monitored	Results
East Creek Upstream	2025-02-11	Yes *	Full set of lab sample results, photo and documentation are provided in Appendix D.

Table 8: Downstream Monitoring Information

	Date of Lab Sample	Real Time Monitored	Results
East Creek Downstream	2025-02-11	Yes *	Full set of lab sample results, photo and documentation are provided in Appendix D.

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

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

BCR Site Batch Sample Analysis

No Discharges

BCR Site Batch Sample Lab Documentation

No Discharges

BCR Site WTP Discharge Field Notes and Logs
No Discharges

Appendix B: BCR Site Receiving Environment Documentation

BCR Site Receiving Environment Sample Analysis

	Sample ID	Reviewed and signed off by:			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					VA25A2875-001	VA25A2875-002					
	Date Sampled					10-Feb-2025	10-Feb-2025					
	Time Sampled					10:50	12:30					
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	6.54	6.85		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]	-	0.8	1.2		Guideline is species-dependent. Short-term daily temperature guideline is 19°C for streams with unknown fish distribution. Refer to footnote 4 for background temperature range for the Squamish River. Refer to BC Water Quality Guidelines for more information Hourly rate of change not to exceed 1°C. Calculation: US value +/- 1 = guideline range		Guideline for marine waters are based on natural ambient conditions. Max and min. 1°C change from natural condition. Natural temperature cycle characteristic of the site should not be altered in amplitude or frequency by human activities. Max rate of any human-induced temperature change not to exceed 0.5°C hourly. treams with unknown fish distribution. Refer to footnote 4 for background temperature range for the	
Conductivity (field)	µS/cm	-	-	-	-	106	102					
Turbidity (field)	NTU	Varies with background, see note Guideline = 9.41	Varies with background, see note Guideline = 3.54 5-week discrete sampling average = 3.1 (DS)	Varies with background, see note Guideline = 9.41	Varies with background, see note Guideline = 3.54 5-week discrete sampling average = 3.1 (DS)	1.41	1.81		Change from background of 8 NTU at any one time for a duration of 24 h in all waters during clear flows or in clear waters. Calculation: US value + 8 = DS guideline Change from background of 5 NTU at any time when background is 8 - 50 NTU during high flows or in turbid waters. Calculation: US value + 5 = DS guideline Change from background of 10% when background is > 50 NTU at any time during high flows or in turbid waters. Calculation: US value + (US value*0.1) = DS guideline	Change from background of 2 NTU at any one time for 30 days in clear flows. Note that a rolling average of US values over a 30-day period is required to properly calculate this guideline. Guideline calculated in this spreadsheet using US concentration at the time of sampling.	Change from background of 8 NTU at any one time for a duration of 24 h in all waters during clear flows or in clear waters. Calculation: US value + 8 = DS guideline Change from background of 5 NTU at any time when background is 8 - 50 NTU during high flows or in turbid waters. Calculation: US value + 5 = DS guideline Change from background of 10% when background is > 50 NTU at any time during high flows or in turbid waters. Calculation: US value + (US value*0.1) = DS guideline	Change from background of 2 NTU at any one time for 30 days in clear flows. Note that a rolling average of US values over a 30-day period is required to properly calculate this guideline. Guideline calculated in this spreadsheet using US concentration at the time of sampling.
Dissolved Oxygen (field)	mg/L	Varies with life stage, see note	Varies with life stage, see note	Varies with life stage, see note	Varies with life stage, see note	13.61	12.47		Buried embryo/alevin minimum 9 mg/L, all other life stages 5 mg/L. Refer to BC Water Quality Guidelines for more information.	Buried embryo/alevin minimum 11 mg/L, all other life stages 8 mg/L. Refer to BC Water Quality Guidelines for more information.	Buried embryo/alevin minimum 9 mg/L, all other life stages 5 mg/L. Refer to BC Water Quality Guidelines for more information.	Buried embryo/alevin minimum 11 mg/L, all other life stages 8 mg/L. Refer to BC Water Quality Guidelines for more information.
General Parameters												
Hardness (as $CaCO_3$) (total)	mg/L	-	-	-	-	26.6	26.4					
Total Dissolved Solids	mg/L	-	-	-	-	64	60					
Total Suspended Solids	mg/L	Varies with background, see note Guideline = 28.0	Varies with background, see note Guideline = 16.8 5-week discrete sampling average = < 3.0 (DS)	Varies with background, see note Guideline = 28.0	Varies with background, see note Guideline = 16.8 5-week discrete sampling average = < 3.0 (DS)	< 3.0	< 3.0		Change from background of 25 mg/L at any one time for duration of 24 h in all waters during clear flows or in clear waters. Calculation: US value + 25 = DS guideline Change from background of 10 mg/L at any one time when background 25-100 mg/L during high flows or turbid waters. Calculation: US value + 10 = DS guideline Change from background of 10% when background is > 100 mg/L at any time during high flows or turbid waters. Calculation: US value + (US value*0.1) = DS guideline	Change from background of 5 mg/L @ one time for a druation of 30 days in clear flow. Note that a rolling average of US values over a 30-day period is required to properly calculate this guideline. Guideline calculated in this spreadsheet using US concentration at the time of sampling.	Change from background of 25 mg/L at any one time for duration of 24 h in all waters during clear flows or in clear waters. Calculation: US value + 25 = DS guideline Change from background of 10 mg/L at any one time when background 25-100 mg/L during high flows or turbid waters. Calculation: US value + 10 = DS guideline Change from background of 10% when background is > 100 mg/L at any time during high flows or turbid waters. Calculation: US value + (US value*0.1) = DS guideline	Change from background of 5 mg/L @ one time for a druation of 30 days in clear flow. Note that a rolling average of US values over a 30-day period is required to properly calculate this guideline. Guideline calculated in this spreadsheet using US concentration at the time of sampling.
Dissolved Organic Carbon (DOC)	mg/L	-	-	-	-	0.85	1.67			Long-term (30-day) median within 20% of background median [3]		
Total Alkalinity ($CaCO_3$)	mg/L	-	Categorical	-	-	24	23.7			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 = 28.3	Varies with pH and temperature. See note. Guideline = 2.02	Varies with pH and temperature. See note. Guideline = 270	Varies with pH, temperature and salinity. See note. Guideline = 41	0.0792	0.0564		Guideline for ammonia as N and is pH and temperature dependent. Refer to Table 27D in BC WQG for guideline values.	Guideline for ammonia as N and is pH and temperature dependent. Refer to Table 27C in BC WQG for guideline values.	Guideline for ammonia as N. Guideline is pH, temperature and salinity dependent. Refer to Table 27F in BC WQG for guideline values.	Guideline for ammonia as N. Guideline is pH, temperature and salinity dependent. Refer to Table 27E in BC WQG for guideline values.
Bromide	mg/L	-	-	-	-	< 0.050	< 0.050					
Chloride	mg/L	600	150	+/- 10% from BKG	+/- 10% from BKG	7.54	7.16				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 = 0.802	-	1.5	-	0.033	0.032		Guideline has interim status. Guideline is calculated with the following equation: Guideline = [-51.73 + 92.57 log10 (hardness)] * 0.01			
Nitrate (as N)	mg/L	32.8	3	-	3.7	0.16	0.12					
Nitrite (as N)	mg/L	Varies with chloride. See note. Guideline = 0.24	Varies with chloride. See note. Guideline = 0.08	-	-	0.005	0.003		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	-	-	-	-	0.266	0.2					
Total Phosphorous	mg/L	-	0.005 to 0.015	-	-	0.0474	0.0407			Guideline is for lakes, refer to BCWQ guideline for nutrients and algae for more information. Guideline does not apply to site.		
Sulfate (as SO_4)	mg/L	-	Varies with hardness. See note. Guideline = 128	-	-	8.34	8.26			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 = 0.051 5-week field average = 0.042 (US), 0.05 (DS)	-	-	0.0361	0.0452			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	0.0003	0.00029					Interim guideline status
Barium (Ba)-Total	mg/L	-	1	-	-	0.011	0.0112			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	0.021	0.02					
Cadmium (Cd)-Total	mg/L	-	-	-	0.00012	0.0000058	0.0000056					Working guideline status
Calcium (Ca)-Total	mg/L	-	-	-	-	8.5	8.48					
Cesium (Cs)-Total	mg/L	-	-	-	-	0.000035	0.000036					
Chromium (Cr) - Total	mg/L	-	-	-	-	< 0.00050	< 0.00050					
Chromium (Cr(III))-Total	mg/L	-	0.0089	-	0.056	< 0.00050	< 0.00050			Working guideline status		Working guideline status
Chromium (Cr(VI))-Total	mg/L	-	0.0025	-	0.0015	< 0.00050	< 0.00050			Working guideline status		Working guideline status
Cobalt (Co)-Total	mg/L	0.11	0.004	-	-	0.00014	0.00015					
Copper (Cu)-Total	mg/L	-	-	0.003	0.0014 5-week field average = 0.00063 (US), 0.00061 (DS)	0.00053	0.00052					
Iron (Fe)-Total	mg/L	1	-	-	-	0.342	0.332					
Lead (Pb)-Total	mg/L	-	-	0.14	0.002 5-week field average = < 0.00005 (US), < 0.00005 (DS)	< 0.000050	< 0.000050					
Lithium (Li)-Total	mg/L	-	-	-	-	0.0029	0.003					
Magnesium (Mg)-Total	mg/L	-	-	-	-	1.31	1.27					
Manganese (Mn)-Total	mg/L	Varies with hardness Guideline = 0.833	Varies with hardness Guideline = 0.768	-	-	0.024	0.0226		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	-	-	0.000657	0.000702					
Nickel (Ni)-Total	mg/L	-	-	-	0.0083	< 0.00050	< 0.00050					Working guideline status
Potassium (K)-Total	mg/L	-	-	-	-	1.23	1.16					
Rubidium (Rb)-Total	mg/L	-	-	-	-	0.00187	0.00176					
Selenium (Se)-Total	mg/L	-	0.002	-	0.002	< 0.000050	0.00005			Guideline for freshwater aquatic life (water column). Alert concentration is 0.001 mg/L, with separate guidleiens for sediment, invertebrate and fish tissue. Refer to BC Water Quality Guidelines for more information on guidleiens and sampling guidance.		Guideline for marine aquatic life (water column). Alert concentration is 0.001 mg/L, with separate guidleiens for sediment, invertebrate and fish tissue. Refer to BC Water Quality Guidelines for
Silicon (Si)-Total	mg/L	-	-	-	-	6.6	6.44					
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), 0.0000124 (DS)	0.003	0.0015	< 0.000010	< 0.000010		Varies with hardness Guideline ranges: Hardness ≤ 100: 0.0001 Hardness > 100: 0.003	Varies with hardness Guideline ranges: Hardness ≤ 100: 0.00005 Hardness > 100: 0.0015		Guideline applies to open coast and estuaries. Guideline is applicable to the EGP site.
Sodium (Na)-Total	mg/L	-	-	-	-	6.24	5.81					
Strontium (Sr)-Total	mg/L	-	-	-	-	0.0636	0.0663					
Sulfur (S)-Total	mg/L	-	-	-	-	2.38	2.44					
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	-	-	-	-	0.0009	0.00095					
Tungsten (W)-Total	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Uranium (U)-Total	mg/L	0.0165	0.0075	-	-	0.00003	0.000033			Working guideline status		
Vanadium (V)-Total	mg/L	-	0.06	-	0.005 5-week field average = 0.00143 (US), 0.00133 (DS)	0.00133	0.0013					Working guideline status
Zinc (Zn)-Total	mg/L	-	-	0.055	Guideline = 0.010 5-week field average = 0.00344 (US), 0.00312 (DS)	0.0041	< 0.0030					
Zirconium (Zr)-Total	mg/L	-	-	-	-	< 0.00020	< 0.00020					
Dissolved Metals												
Aluminum (Al)-Dissolved	mg/L	-	-	-	-	0.0104	0.0102					
Antimony (Sb)-Dissolved	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Arsenic (As)-Dissolved	mg/L	-	-	-	-	0.00021	0.00022					
Barium (Ba)-Dissolved	mg/L	-	-	-	-	0.0108	0.0108					
Beryllium (Be)-Dissolved	mg/L	-	-	-	-	< 0.000100	< 0.000100					
Bismuth (Bi)-Dissolved	mg/L	-	-	-	-	< 0.000050	< 0.000050					
Boron (B)-Dissolved	mg/L	-	-	-	-	0.019	0.019					
Cadmium (Cd)-Dissolved	mg/L	Varies with hardness, see note Guideline = 0.000150	Varies with hardness, see note Guideline = 0.000077	-	-	0.0000054	< 0.0000050		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	-	-	7.82	7.69			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	-	-	-	-	0.000037	0.000033					
Chromium (Cr)-Dissolved	mg/L	-	-	-	-	< 0.00050	< 0.00050					
Cobalt (Co)-Dissolved	mg/L	-	-	-	-	0.00013	0.00014					
Copper (Cu)-Dissolved	mg/L	Guideline varies with other parameters, see note Guideline = 0.0003	Guideline varies with other parameters, see note Guideline = 0.0002 5-week field average = 0.000482 (US), 0.000458(DS)	-	-	0.00042	0.0004	**Dissolved copper exceeds the BCWQ guidelines for FAL short-term at both DS1 and US1 locations.**	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		
Lead (Pb)-Dissolved	mg/L	-	Guideline varies with DOC and hardness Guideline = 0.00164 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	-	-	-	-	0.0029	0.0029					
Magnesium (Mg)-Dissolved	mg/L	-	-	-	-	1.29	1.29					
Manganese (Mn)-Dissolved	mg/L	-	-	-	-	0.023	0.0222					
Mercury (Hg)-Dissolved	mg/L	-	-	-	-	< 0.0000050	< 0.0000050					
Molybdenum (Mo)-Dissolved	mg/L	-	-	-	-	0.000631	0.00061					
Nickel (Ni)-Dissolved	mg/L	Guideline varies with other parameters, see note Guideline = 0.0155	Guideline varies with other parameters, see note Guideline = 0.00103 5-week field average = < 0.0005 (US), < 0.0005 (DS)	0.0003+G141+C140	-	< 0.00050	< 0.00050		Guideline varies with other parameters and is calculated using BC BLM software. Simplified model: Temperature, pH, DOC and hardness Detailed model: Temperature, pH, DOC, humic acid content, total calcium, total magnesium, total sodium, total potassium, sulphate, chloride, and alkalinity Guideline calculated using values for parameters above taken at the specific site on each sampling date	Guideline varies with other parameters and is calculated using BC BLM software. Simplified model: Temperature, pH, DOC and hardness Detailed model: Temperature, pH, DOC, humic acid content, total calcium, total magnesium, total sodium, total potassium, sulphate, chloride, and alkalinity Guideline calculated using values for parameters above taken at the specific site on each sampling date		
Phosphorus (P)-Dissolved	mg/L	-	-	-	-	< 0.050	< 0.050					
Potassium (K)-Dissolved	mg/L	-	-	-	-	1.25	1.18					
Rubidium (Rb)-Dissolved	mg/L	-	-	-	-	0.00177	0.00165					
Selenium (Se)-Dissolved	mg/L	-	-	-	-	< 0.000050	< 0.000050					
Silicon (Si)-Dissolved	mg/L	-	-	-	-	6.63	6.35					
Silver (Ag)-Dissolved	mg/L	-	-	-	-	< 0.000010	< 0.000010					
Sodium (Na)-Dissolved	mg/L	-	-	-	-	6.14	5.92					
Strontium (Sr)-Dissolved	mg/L	-	-	-	-	0.0606	0.061					
Sulfur (S)-Dissolved	mg/L	-	-	-	-	2.84	2.72					
Tellurium (Te)-Dissolved	mg/L	-	-	-	-	< 0.00020	< 0.00020					
Thallium (Tl)-Dissolved	mg/L	-	-	-	-	< 0.000010	< 0.000010					
Thorium (Th)-Dissolved	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Tin (Sn)-Dissolved	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Titanium (Ti)-Dissolved	mg/L	-	-	-	-	< 0.00030	< 0.00030					
Tungsten (W)-Dissolved	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Uranium (U)-Dissolved	mg/L	-	-	-	-	0.000026	0.000028					
Vanadium (V)-Dissolved	mg/L	-	-	-	-	0.00108	0.00104					
Zinc (Zn)-Dissolved	mg/L	Varies with DOC and hardness Guideline = 0.013	Varies with pH, DOC, hardness Guideline = 0.003765 5-week field average = 0.0026 (US), 0.0022 (DS)	-	-	0.0023	0.0021		Guideline varies with DOC and hardness. Guideline is calculated using the following formula: Guideline = (EXP((0.833 * (LN(hardness))) + (0.24 * (LN(DOC))) + 0.526)/2/1000) If hardness or DOC is below the hardness or DOC range, the minimum hardness or DOC will be applied in the calculation.	Guideline varies with pH, hardness and Dissolved Organic Carbon (DOC). Guideline is calculated using the following formula: Guideline = (EXP((0.974 * (LN(hardness))) - (0.815 * pH) + (0.398 * (LN(DOC))) + 4.625)/2/1000) Guideline only applies to water with pH between 6.5 and 8.13, DOC between 0.3 and 22.9 mg/L, anmd hardness between 23.4 and 399 mg/L. If hardness or DOC is below the hardness or DOC range, the minimum hardness or DOC will be applied in the calculation.		
Zirconium (Zr)-Dissolved	mg/L	-	-	-	-	< 0.00020	< 0.00020					
Applied Guideline:		**British Columbia Approved and Working Water Quality Guidelines (NOV 2023) for Freshwater Aquatic Life (FAL) & Marine Aquatic Life (MAL) Short-Term (ST) & Long-Term (LT)**										

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

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

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

[4] Background temperature ranges: Dec-Feb: 2.0-4.0C; Mar-Apr: 4.0-6.0C; May-June: 6.0-12.0C; Jul-Sept: 9.0-12.0C; Oct-Nov: 3.0-5.0
Reference: Triton Environmental Consulants Ltd. 2023. Memo - Background water quality values for the BC Rail Discharge to Squamish River
For guidelines dependent on other parameters, when hardness, pH or DOC are below the range stated in the guideline, the lowest value in the range is used to calculate the guideline.

Parameters Used to Calculate Guidelines

Analyte	Units	Method of Measurements	Values	
			SQU US1 (Upstream)	SQU DS1 (Downstream)
pH (field)	pH units	Field pH taken using handheld meters during sampling used in calculations	6.54	6.85
Temperature (field)	°C	Field temperature taken using handheld meters during sampling used in calculations	0.8	1.2
Turbidity (field)	NTU	Field turbidity taken using handheld meters during sampling used in calculations	1.41	1.81
Hardness (as CaCO3) (total)	mg/L	Laboratory tested total hardness taken at each respective sample site on the day of sampling used in guideline calculations	26.6	26.4
Dissolved Organic Carbon (DOC)	mg/L	Laboratory tested dissolved organic carbon tested at the lab used in guideline calculations	0.85	1.67
Total Alkalinity ($CaCO_3$)	mg/L	Laboratory tested total alkalinity used in calculations	24	23.7
Chloride	mg/L	Laboratory tested chloride taken at each respective sample site on the day of sampling used in guideline calculations	7.54	7.16

BCR Site Receiving Environment Lab Documentation

CERTIFICATE OF ANALYSIS

Work Order	:	Laboratory	
Client	:	Account Manager	
Contact	:	Address	
Address	:	Telephone	
Telephone	:	Date Samples Received	: 10-Feb-2025 16:30
Project	:	Date Analysis Commenced	: 10-Feb-2025
PO	:	Issue Date	: 18-Feb-2025 16:03
C-O-C number	: ----		
Sampler	: ----		
Site	: Water Analysis		
Quote number	: VA25-TRIT100-001		
No. of samples received	: 3		
No. of samples analysed	: 3		

This report 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*
		Inorganics, Burnaby, British Columbia
		Metals, Burnaby, British Columbia
		Metals, Burnaby, British Columbia
		Inorganics, 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)				Client sample ID	SQU US 1	SQU DS 1	Field Blank	----	----
				Client sampling date / time	10-Feb-2025 10:50	10-Feb-2025 12:30	10-Feb-2025 10:09	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA25A2875-001	VA25A2875-002	VA25A2875-003	----	----
					Result	Result	Result	----	----
Field Tests									
Conductivity, field	----	EF001/VA	0.10	µS/cm	106.00	102.00	----	----	----
pH, field	----	EF001/VA	0.10	pH units	6.54	6.85	----	----	----
Temperature, field	----	EF001/VA	0.10	°C	0.80	1.20	----	----	----
Physical Tests									
Hardness (as CaCO3), dissolved	----	EC100/VA	0.60	mg/L	24.8	24.5	<0.60	----	----
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L	26.6	26.4	<0.60	----	----
Solids, total dissolved [TDS]	----	E162/VA	10	mg/L	64	60	<10	----	----
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L	<3.0	<3.0	<3.0	----	----
Alkalinity, total (as CaCO3)	----	E290/VA	2.0	mg/L	24.0	23.7	<2.0	----	----
Anions and Nutrients									
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L	0.0792	0.0564	<0.0050	----	----
Bromide	24959-67-9	E235.Br-L/VA	0.050	mg/L	<0.050	<0.050	<0.050	----	----
Chloride	16887-00-6	E235.Cl/VA	0.50	mg/L	7.54	7.16	<0.50	----	----
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L	0.033	0.032	<0.020	----	----
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L	0.160	0.120	<0.0050	----	----
Nitrite (as N)	14797-65-0	E235.NO2-L/VA	0.0010	mg/L	0.0050	0.0030	<0.0010	----	----
Nitrogen, total	7727-37-9	E366/VA	0.030	mg/L	0.266	0.200	<0.030	----	----
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L	0.0474	0.0407	<0.0020	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L	8.34	8.26	<0.30	----	----
Organic / Inorganic Carbon									
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L	0.85	1.67	<0.50	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SQU US 1	SQU DS 1	Field Blank	----	----
					Client sampling date / time	10-Feb-2025 10:50	10-Feb-2025 12:30	10-Feb-2025 10:09	----	----
						VA25A2875-001	VA25A2875-002	VA25A2875-003	----	----
						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		0.0361	0.0452	<0.0030	----	----
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L		0.00030	0.00029	<0.00010	----	----
Barium, total	7440-39-3	E420/VA	0.00010	mg/L		0.0110	0.0112	<0.00010	----	----
Beryllium, total	7440-41-7	E420/VA	0.000100	mg/L		<0.000100	<0.000100	<0.000100	----	----
Bismuth, total	7440-69-9	E420/VA	0.000050	mg/L		<0.000050	<0.000050	<0.000050	----	----
Boron, total	7440-42-8	E420/VA	0.010	mg/L		0.021	0.020	<0.010	----	----
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L		0.0000058	0.0000056	<0.0000050	----	----
Calcium, total	7440-70-2	E420/VA	0.050	mg/L		8.50	8.48	<0.050	----	----
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L		0.000035	0.000036	<0.000010	----	----
Chromium, total	7440-47-3	E420/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	----	----
Cobalt, total	7440-48-4	E420/VA	0.00010	mg/L		0.00014	0.00015	<0.00010	----	----
Copper, total	7440-50-8	E420/VA	0.00050	mg/L		0.00053	0.00052	<0.00050	----	----
Iron, total	7439-89-6	E420/VA	0.010	mg/L		0.342	0.332	<0.010	----	----
Lead, total	7439-92-1	E420/VA	0.000050	mg/L		<0.000050	<0.000050	<0.000050	----	----
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L		0.0029	0.0030	<0.0010	----	----
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L		1.31	1.27	<0.0050	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SQU US 1	SQU DS 1	Field Blank	----	----
					Client sampling date / time	10-Feb-2025 10:50	10-Feb-2025 12:30	10-Feb-2025 10:09	----	----
						VA25A2875-001	VA25A2875-002	VA25A2875-003	----	----
						Result	Result	Result	----	----
Total Metals										
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L		0.0240	0.0226	<0.00010	----	----
Mercury, total	7439-97-6	E508/VA	0.0000050	mg/L		<0.0000050	<0.0000050	<0.0000050	----	----
Molybdenum, total	7439-98-7	E420/VA	0.000050	mg/L		0.000657	0.000702	<0.000050	----	----
Nickel, total	7440-02-0	E420/VA	0.00050	mg/L		<0.00050	<0.00050	0.00053	----	----
Phosphorus, total	7723-14-0	E420/VA	0.050	mg/L		0.052	<0.050	<0.050	----	----
Potassium, total	7440-09-7	E420/VA	0.050	mg/L		1.23	1.16	<0.050	----	----
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L		0.00187	0.00176	<0.00020	----	----
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L		<0.000050	<0.000050	<0.000050	----	----
Silicon, total	7440-21-3	E420/VA	0.10	mg/L		6.60	6.44	<0.10	----	----
Silver, total	7440-22-4	E420/VA	0.000010	mg/L		<0.000010	<0.000010	<0.000010	----	----
Sodium, total	7440-23-5	E420/VA	0.050	mg/L		6.24	5.81	<0.050	----	----
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L		0.0636	0.0663	<0.00020	----	----
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L		2.38	2.44	<0.50	----	----
Tellurium, total	13494-80-9	E420/VA	0.00020	mg/L		<0.00020	<0.00020	<0.00020	----	----
Thallium, total	7440-28-0	E420/VA	0.000010	mg/L		<0.000010	<0.000010	<0.000010	----	----
Thorium, total	7440-29-1	E420/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Tin, total	7440-31-5	E420/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Titanium, total	7440-32-6	E420/VA	0.00030	mg/L		0.00090	0.00095	<0.00030	----	----
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L		0.000030	0.000033	<0.000010	----	----
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L		0.00133	0.00130	<0.00050	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SQU US 1	SQU DS 1	Field Blank	----	----
					Client sampling date / time	10-Feb-2025 10:50	10-Feb-2025 12:30	10-Feb-2025 10:09	----	----
						VA25A2875-001	VA25A2875-002	VA25A2875-003	----	----
						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		0.0104	0.0102	<0.0010	----	----
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L		0.00021	0.00022	<0.00010	----	----
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L		0.0108	0.0108	<0.00010	----	----
Beryllium, dissolved	7440-41-7	E421/VA	0.000100	mg/L		<0.000100	<0.000100	<0.000100	----	----
Bismuth, dissolved	7440-69-9	E421/VA	0.000050	mg/L		<0.000050	<0.000050	<0.000050	----	----
Boron, dissolved	7440-42-8	E421/VA	0.010	mg/L		0.019	0.019	<0.010	----	----
Cadmium, dissolved	7440-43-9	E421/VA	0.0000050	mg/L		0.0000054	<0.0000050	<0.0000050	----	----
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L		7.82	7.69	<0.050	----	----
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L		0.000037	0.000033	<0.000010	----	----
Chromium, dissolved	7440-47-3	E421/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	----	----
Cobalt, dissolved	7440-48-4	E421/VA	0.00010	mg/L		0.00013	0.00014	<0.00010	----	----
Copper, dissolved	7440-50-8	E421/VA	0.00020	mg/L		0.00042	0.00040	<0.00020	----	----
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L		0.255	0.246	<0.010	----	----
Lead, dissolved	7439-92-1	E421/VA	0.000050	mg/L		<0.000050	<0.000050	<0.000050	----	----
Lithium, dissolved	7439-93-2	E421/VA	0.0010	mg/L		0.0029	0.0029	<0.0010	----	----
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L		1.29	1.29	<0.0050	----	----
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L		0.0230	0.0222	<0.00010	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SQU US 1	SQU DS 1	Field Blank	----	----
					Client sampling date / time	10-Feb-2025 10:50	10-Feb-2025 12:30	10-Feb-2025 10:09	----	----
						VA25A2875-001	VA25A2875-002	VA25A2875-003	----	----
						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		0.000631	0.000610	<0.000050	----	----
Nickel, dissolved	7440-02-0	E421/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	----	----
Phosphorus, dissolved	7723-14-0	E421/VA	0.050	mg/L		<0.050	<0.050	<0.050	----	----
Potassium, dissolved	7440-09-7	E421/VA	0.050	mg/L		1.25	1.18	<0.050	----	----
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L		0.00177	0.00165	<0.00020	----	----
Selenium, dissolved	7782-49-2	E421/VA	0.000050	mg/L		<0.000050	<0.000050	<0.000050	----	----
Silicon, dissolved	7440-21-3	E421/VA	0.050	mg/L		6.63	6.35	<0.050	----	----
Silver, dissolved	7440-22-4	E421/VA	0.000010	mg/L		<0.000010	<0.000010	<0.000010	----	----
Sodium, dissolved	7440-23-5	E421/VA	0.050	mg/L		6.14	5.92	<0.050	----	----
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L		0.0606	0.0610	<0.00020	----	----
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L		2.84	2.72	<0.50	----	----
Tellurium, dissolved	13494-80-9	E421/VA	0.00020	mg/L		<0.00020	<0.00020	<0.00020	----	----
Thallium, dissolved	7440-28-0	E421/VA	0.000010	mg/L		<0.000010	<0.000010	<0.000010	----	----
Thorium, dissolved	7440-29-1	E421/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Tin, dissolved	7440-31-5	E421/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Titanium, dissolved	7440-32-6	E421/VA	0.00030	mg/L		<0.00030	<0.00030	<0.00030	----	----
Tungsten, dissolved	7440-33-7	E421/VA	0.00010	mg/L		<0.00010	<0.00010	<0.00010	----	----
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L		0.000026	0.000028	<0.000010	----	----
Vanadium, dissolved	7440-62-2	E421/VA	0.00050	mg/L		0.00108	0.00104	<0.00050	----	----
Zinc, dissolved	7440-66-6	E421/VA	0.0010	mg/L		0.0023	0.0021	<0.0010	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

					Client sample ID	SQU US 1	SQU DS 1	Field Blank	----	----
					Client sampling date / time	10-Feb-2025 10:50	10-Feb-2025 12:30	10-Feb-2025 10:09	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A2875-001	VA25A2875-002	VA25A2875-003	----	----
						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	[redacted]	Page	: 1 of 17
Client		Laboratory	[redacted]
Contact		Account Manager	
Address		Address	
Telephone		Telephone	
Project		Date Samples Received	: 10-Feb-2025 16:30
PO		Issue Date	: 18-Feb-2025 16:03
C-O-C number	: ----		
Sampler	: ----		
Site	: Water Analysis		
Quote number	: VA25-TRIT100-001		
No. of samples received	: 3		
No. of samples analysed	: 3		

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

Key

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

Workorder Comments

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

Summary of Outliers

Outliers : Quality Control Samples

- No 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								
Dissolved Metals	QC-1870111-001	----	Manganese, dissolved	7439-96-5	E421	0.00025 B mg/L	0.0001 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) SQU US 1	E298	10-Feb-2025	11-Feb-2025	28 days	1 days	✓	11-Feb-2025	28 days	1 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) Field Blank	E298	10-Feb-2025	11-Feb-2025	28 days	1 days	✓	11-Feb-2025	28 days	2 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) SQU DS 1	E298	10-Feb-2025	11-Feb-2025	28 days	1 days	✓	12-Feb-2025	28 days	2 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE SQU DS 1	E235.Br-L	10-Feb-2025	11-Feb-2025	28 days	0 days	✓	11-Feb-2025	28 days	1 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE Field Blank	E235.Br-L	10-Feb-2025	11-Feb-2025	28 days	1 days	✓	11-Feb-2025	28 days	1 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE SQU US 1	E235.Br-L	10-Feb-2025	11-Feb-2025	28 days	1 days	✓	11-Feb-2025	28 days	1 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE SQU DS 1	E235.Cl	10-Feb-2025	11-Feb-2025	28 days	0 days	✓	11-Feb-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										
Field Blank	E235.Cl	10-Feb-2025	11-Feb-2025	28 days	1 days	✓	11-Feb-2025	28 days	1 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE										
SQU US 1	E235.Cl	10-Feb-2025	11-Feb-2025	28 days	1 days	✓	11-Feb-2025	28 days	1 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
SQU DS 1	E235.F	10-Feb-2025	11-Feb-2025	28 days	0 days	✓	11-Feb-2025	28 days	1 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
Field Blank	E235.F	10-Feb-2025	11-Feb-2025	28 days	1 days	✓	11-Feb-2025	28 days	1 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
SQU US 1	E235.F	10-Feb-2025	11-Feb-2025	28 days	1 days	✓	11-Feb-2025	28 days	1 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE										
SQU DS 1	E235.NO3-L	10-Feb-2025	11-Feb-2025	3 days	0 days	✓	11-Feb-2025	3 days	1 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE										
Field Blank	E235.NO3-L	10-Feb-2025	11-Feb-2025	3 days	1 days	✓	11-Feb-2025	3 days	1 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE										
SQU US 1	E235.NO3-L	10-Feb-2025	11-Feb-2025	3 days	1 days	✓	11-Feb-2025	3 days	1 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
SQU DS 1	E235.NO2-L	10-Feb-2025	11-Feb-2025	3 days	0 days	✓	11-Feb-2025	3 days	1 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
Field Blank	E235.NO2-L	10-Feb-2025	11-Feb-2025	3 days	1 days	✓	11-Feb-2025	3 days	1 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
SQU US 1	E235.NO2-L	10-Feb-2025	11-Feb-2025	3 days	1 days	✓	11-Feb-2025	3 days	1 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
SQU DS 1	E235.SO4	10-Feb-2025	11-Feb-2025	28 days	0 days	✓	11-Feb-2025	28 days	1 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
Field Blank	E235.SO4	10-Feb-2025	11-Feb-2025	28 days	1 days	✓	11-Feb-2025	28 days	1 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
SQU US 1	E235.SO4	10-Feb-2025	11-Feb-2025	28 days	1 days	✓	11-Feb-2025	28 days	1 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid)										
Field Blank	E366	10-Feb-2025	11-Feb-2025	28 days	1 days	✓	12-Feb-2025	28 days	2 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid)										
SQU DS 1	E366	10-Feb-2025	11-Feb-2025	28 days	1 days	✓	12-Feb-2025	28 days	2 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid)										
SQU US 1	E366	10-Feb-2025	11-Feb-2025	28 days	1 days	✓	12-Feb-2025	28 days	2 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
Field Blank	E372-U	10-Feb-2025	11-Feb-2025	28 days	1 days	✓	12-Feb-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
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
SQU DS 1	E372-U	10-Feb-2025	11-Feb-2025	28 days	1 days	✓	12-Feb-2025	28 days	2 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
SQU US 1	E372-U	10-Feb-2025	11-Feb-2025	28 days	1 days	✓	12-Feb-2025	28 days	2 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial - dissolved (lab preserved)										
Field Blank	E509	10-Feb-2025	13-Feb-2025	28 days	3 days	✓	13-Feb-2025	28 days	3 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial - dissolved (lab preserved)										
SQU DS 1	E509	10-Feb-2025	13-Feb-2025	28 days	3 days	✓	13-Feb-2025	28 days	3 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial - dissolved (lab preserved)										
SQU US 1	E509	10-Feb-2025	13-Feb-2025	28 days	3 days	✓	13-Feb-2025	28 days	3 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE - dissolved (lab preserved)										
Field Blank	E421	10-Feb-2025	11-Feb-2025	180 days	1 days	✓	12-Feb-2025	180 days	2 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE - dissolved (lab preserved)										
SQU DS 1	E421	10-Feb-2025	11-Feb-2025	180 days	1 days	✓	12-Feb-2025	180 days	2 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE - dissolved (lab preserved)										
SQU US 1	E421	10-Feb-2025	11-Feb-2025	180 days	1 days	✓	12-Feb-2025	180 days	2 days	✓
Field Tests : Field pH,EC,Salinity, TDS, Cl2,ClO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine										
Glass vial - total (lab preserved)										
SQU DS 1	EF001	10-Feb-2025	----	----	----		12-Feb-2025	----	2 days	

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Field Tests : Field pH,EC,Salinity, TDS, Cl2,ClO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine										
Glass vial - total (lab preserved)										
SQU US 1	EF001	10-Feb-2025	----	----	----		12-Feb-2025	----	2 days	
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
Field Blank	E358-L	10-Feb-2025	11-Feb-2025	28 days	1 days	✓	12-Feb-2025	28 days	2 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
SQU DS 1	E358-L	10-Feb-2025	11-Feb-2025	28 days	1 days	✓	12-Feb-2025	28 days	2 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
SQU US 1	E358-L	10-Feb-2025	11-Feb-2025	28 days	1 days	✓	12-Feb-2025	28 days	2 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
SQU DS 1	E290	10-Feb-2025	11-Feb-2025	14 days	0 days	✓	11-Feb-2025	14 days	1 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
Field Blank	E290	10-Feb-2025	11-Feb-2025	14 days	1 days	✓	11-Feb-2025	14 days	1 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
SQU US 1	E290	10-Feb-2025	11-Feb-2025	14 days	1 days	✓	11-Feb-2025	14 days	1 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
Field Blank	E162	10-Feb-2025	----	----	----		16-Feb-2025	7 days	6 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
SQU DS 1	E162	10-Feb-2025	----	----	----		16-Feb-2025	7 days	6 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : TDS by Gravimetry										
HDPE										
SQU US 1	E162	10-Feb-2025	----	----	----		16-Feb-2025	7 days	6 days	✓
Physical Tests : TSS by Gravimetry										
HDPE										
Field Blank	E160	10-Feb-2025	----	----	----		16-Feb-2025	7 days	6 days	✓
Physical Tests : TSS by Gravimetry										
HDPE										
SQU DS 1	E160	10-Feb-2025	----	----	----		16-Feb-2025	7 days	6 days	✓
Physical Tests : TSS by Gravimetry										
HDPE										
SQU US 1	E160	10-Feb-2025	----	----	----		16-Feb-2025	7 days	6 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide)										
SQU DS 1	E532	10-Feb-2025	----	----	----		11-Feb-2025	28 days	1 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide)										
Field Blank	E532	10-Feb-2025	----	----	----		11-Feb-2025	28 days	2 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide)										
SQU US 1	E532	10-Feb-2025	----	----	----		11-Feb-2025	28 days	2 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial - total (lab preserved)										
Field Blank	E508	10-Feb-2025	12-Feb-2025	28 days	2 days	✓	12-Feb-2025	28 days	2 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial - total (lab preserved)										
SQU DS 1	E508	10-Feb-2025	12-Feb-2025	28 days	2 days	✓	12-Feb-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
Total Metals : Total Mercury in Water by CVAAS										
Glass vial - total (lab preserved)										
SQU US 1	E508	10-Feb-2025	12-Feb-2025	28 days	2 days	✓	12-Feb-2025	28 days	2 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved)										
Field Blank	E420	10-Feb-2025	11-Feb-2025	180 days	1 days	✓	13-Feb-2025	180 days	3 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved)										
SQU DS 1	E420	10-Feb-2025	11-Feb-2025	180 days	1 days	✓	13-Feb-2025	180 days	3 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved)										
SQU US 1	E420	10-Feb-2025	11-Feb-2025	180 days	1 days	✓	13-Feb-2025	180 days	3 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide)										
Field Blank	E395	10-Feb-2025	----	----	----		13-Feb-2025	7 days	3 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide)										
SQU DS 1	E395	10-Feb-2025	----	----	----		13-Feb-2025	7 days	3 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide)										
SQU US 1	E395	10-Feb-2025	----	----	----		13-Feb-2025	7 days	3 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)							
TSS by Gravimetry	E160	1876320	1	11	9.0	5.0	✓
TDS by Gravimetry	E162	1876322	1	6	16.6	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1869547	1	3	33.3	5.0	✓
Chloride in Water by IC	E235.Cl	1869544	1	9	11.1	5.0	✓
Fluoride in Water by IC	E235.F	1869546	1	3	33.3	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1869548	1	7	14.2	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1869545	1	10	10.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1869549	1	3	33.3	5.0	✓
Alkalinity Species by Titration	E290	1869543	1	3	33.3	5.0	✓
Ammonia by Fluorescence	E298	1870231	1	16	6.2	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1870232	1	12	8.3	5.0	✓
Total Nitrogen by Colourimetry	E366	1870234	1	7	14.2	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1870230	1	13	7.6	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1873814	1	10	10.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1870095	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1870111	1	18	5.5	5.0	✓
Total Mercury in Water by CVAAS	E508	1871750	1	13	7.6	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1872928	1	12	8.3	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1871116	1	13	7.6	5.0	✓
Laboratory Control Samples (LCS)							
TSS by Gravimetry	E160	1876320	1	11	9.0	5.0	✓
TDS by Gravimetry	E162	1876322	1	6	16.6	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1869547	1	3	33.3	5.0	✓
Chloride in Water by IC	E235.Cl	1869544	1	9	11.1	5.0	✓
Fluoride in Water by IC	E235.F	1869546	1	3	33.3	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1869548	1	7	14.2	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1869545	1	10	10.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1869549	1	3	33.3	5.0	✓
Alkalinity Species by Titration	E290	1869543	1	3	33.3	5.0	✓
Ammonia by Fluorescence	E298	1870231	1	16	6.2	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1870232	1	12	8.3	5.0	✓
Total Nitrogen by Colourimetry	E366	1870234	1	7	14.2	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1870230	1	13	7.6	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1873814	1	10	10.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1870095	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1870111	1	18	5.5	5.0	✓

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Control Samples (LCS) - Continued							
Total Mercury in Water by CVAAS	E508	1871750	1	13	7.6	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1872928	1	12	8.3	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1871116	1	13	7.6	5.0	✓
Method Blanks (MB)							
TSS by Gravimetry	E160	1876320	1	11	9.0	5.0	✓
TDS by Gravimetry	E162	1876322	1	6	16.6	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1869547	1	3	33.3	5.0	✓
Chloride in Water by IC	E235.Cl	1869544	1	9	11.1	5.0	✓
Fluoride in Water by IC	E235.F	1869546	1	3	33.3	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1869548	1	7	14.2	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1869545	1	10	10.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1869549	1	3	33.3	5.0	✓
Alkalinity Species by Titration	E290	1869543	1	3	33.3	5.0	✓
Ammonia by Fluorescence	E298	1870231	1	16	6.2	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1870232	1	12	8.3	5.0	✓
Total Nitrogen by Colourimetry	E366	1870234	1	7	14.2	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1870230	1	13	7.6	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1873814	1	10	10.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1870095	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1870111	1	18	5.5	5.0	✓
Total Mercury in Water by CVAAS	E508	1871750	1	13	7.6	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1872928	1	12	8.3	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1871116	1	13	7.6	5.0	✓
Matrix Spikes (MS)							
Bromide in Water by IC (Low Level)	E235.Br-L	1869547	1	3	33.3	5.0	✓
Chloride in Water by IC	E235.Cl	1869544	1	9	11.1	5.0	✓
Fluoride in Water by IC	E235.F	1869546	1	3	33.3	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1869548	1	7	14.2	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1869545	1	10	10.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1869549	1	3	33.3	5.0	✓
Ammonia by Fluorescence	E298	1870231	1	16	6.2	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1870232	1	12	8.3	5.0	✓
Total Nitrogen by Colourimetry	E366	1870234	1	7	14.2	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1870230	1	13	7.6	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1873814	1	10	10.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1870095	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1870111	1	18	5.5	5.0	✓
Total Mercury in Water by CVAAS	E508	1871750	1	13	7.6	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1872928	1	12	8.3	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 Hexavalent Chromium (Cr VI) by IC	E532	1871116	1	13	7.6	5.0	✓

Methodology References and Summaries

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

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

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

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

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

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

ALS Canada Ltd.

QUALITY CONTROL REPORT

Work Order	[redacted]	Page	: 1 of 17
Client		Laboratory	
Contact		Account Manager	
Address		Address	[redacted]
Telephone		Telephone	
Project		Date Samples Received	: 10-Feb-2025 16:30
PO		Date Analysis Commenced	: 10-Feb-2025
C-O-C number	: ----	Issue Date	: 18-Feb-2025 16:03
Sampler	: ----		
Site	: Water Analysis		
Quote number	: VA25-TRIT100-001		
No. of samples received	: 3		
No. of samples analysed	: 3		

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Laboratory Department*
[redacted]		Vancouver Inorganics, Burnaby, British Columbia
		Vancouver Metals, Burnaby, British Columbia
		Vancouver Metals, Burnaby, British Columbia
		Vancouver Inorganics, Burnaby, British Columbia
		Vancouver Inorganics, Burnaby, British Columbia
		Vancouver Metals, Burnaby, British Columbia
		Vancouver Administration, Burnaby, British Columbia
		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: 1869543)											
VA25A2875-003	Field Blank	Alkalinity, total (as CaCO3)	----	E290	2.0	mg/L	<2.0	<2.0	0	Diff <2x LOR	----
Physical Tests (QC Lot: 1876320)											
VA25A2850-001	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	<3.0	<3.0	0	Diff <2x LOR	----
Physical Tests (QC Lot: 1876322)											
VA25A2826-001	Anonymous	Solids, total dissolved [TDS]	----	E162	20	mg/L	578	607	4.98%	20%	----
Anions and Nutrients (QC Lot: 1869544)											
VA25A2875-001	SQU US 1	Chloride	16887-00-6	E235.Cl	0.50	mg/L	7.54	7.56	0.342%	20%	----
Anions and Nutrients (QC Lot: 1869545)											
VA25A2875-001	SQU US 1	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0050	mg/L	0.160	0.156	2.36%	20%	----
Anions and Nutrients (QC Lot: 1869546)											
VA25A2875-001	SQU US 1	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.033	0.032	0.001	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1869547)											
VA25A2875-001	SQU US 1	Bromide	24959-67-9	E235.Br-L	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1869548)											
VA25A2875-001	SQU US 1	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L	0.0050	0.0055	0.0006	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1869549)											
VA25A2875-001	SQU US 1	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	8.34	8.33	0.0627%	20%	----
Anions and Nutrients (QC Lot: 1870230)											
FJ2500404-009	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	<0.0020	<0.0020	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1870231)											
FJ2500404-009	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1870234)											
VA25A2774-001	Anonymous	Nitrogen, total	7727-37-9	E366	0.300	mg/L	13.1	13.3	1.40%	20%	----
Organic / Inorganic Carbon (QC Lot: 1870232)											
KS2500433-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	5.57	5.98	7.07%	20%	----
Total Sulfides (QC Lot: 1873814)											
VA25A2875-001	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: 1870095)											
VA25A2858-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0300	0.0274	0.0026	Diff <2x LOR	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	0.00099	0.00098	0.000009	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: 1870095) - continued											
VA25A2858-001	Anonymous	Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.0283	0.0281	0.562%	20%	----
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.0837	0.0841	0.487%	20%	----
		Beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, total	7440-42-8	E420	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.0000050	mg/L	0.0000197	0.0000182	0.0000015	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	48.8	48.9	0.144%	20%	----
		Cesium, total	7440-46-2	E420	0.000010	mg/L	0.000040	0.000040	0.0000003	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, total	7440-48-4	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Copper, total	7440-50-8	E420	0.00050	mg/L	0.00064	0.00063	0.00001	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.010	mg/L	0.030	0.029	0.001	Diff <2x LOR	----
		Lead, total	7439-92-1	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0064	0.0064	0.00004	Diff <2x LOR	----
		Magnesium, total	7439-95-4	E420	0.100	mg/L	23.7	24.1	1.77%	20%	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.00164	0.00174	5.75%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.00354	0.00368	3.73%	20%	----
		Nickel, total	7440-02-0	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.100	mg/L	1.66	1.68	1.04%	20%	----
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00331	0.00333	0.693%	20%	----
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.000553	0.000565	2.24%	20%	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	6.86	6.91	0.642%	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	2.46	2.51	1.91%	20%	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.415	0.419	0.919%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	19.2	19.0	0.722%	20%	----
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.00030	mg/L	0.00132	0.00105	0.00027	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	0.00796	0.00810	1.70%	20%	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Total Metals (QC Lot: 1870095) - continued											
VA25A2858-001	Anonymous	Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	<0.0030	0	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Total Metals (QC Lot: 1871750)											
VA25A2864-002	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1870111)											
VA25A2862-008	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	<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	<0.0010	<0.0010	0	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.100	mg/L	<0.100	<0.100	0	Diff <2x LOR	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.100	mg/L	<0.100	<0.100	0	Diff <2x LOR	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Dissolved Metals (QC Lot: 1870111) - continued											
VA25A2862-008	Anonymous	Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Zirconium, dissolved	7440-67-7	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1872928)											
VA25A2871-004	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000500	mg/L	<0.0000500	<0.0000500	0	Diff <2x LOR	----
Speciated Metals (QC Lot: 1871116)											
KS2500433-001	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: 1869543)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 1876320)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Physical Tests (QCLot: 1876322)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Anions and Nutrients (QCLot: 1869544)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 1869545)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1869546)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 1869547)						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 1869548)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 1869549)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 1870230)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 1870231)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1870234)						
Nitrogen, total	7727-37-9	E366	0.03	mg/L	<0.030	----
Organic / Inorganic Carbon (QCLot: 1870232)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Total Sulfides (QCLot: 1873814)						
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	----
Total Metals (QCLot: 1870095)						
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: 1870095) - 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: 1871750)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Dissolved Metals (QCLot: 1870111)						
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	# 0.00025	B
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: 1870111) - 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: 1872928)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Speciated Metals (QCLot: 1871116)						
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: 1869543)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	104	85.0	115	----
Physical Tests (QCLot: 1876320)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	95.0	85.0	115	----
Physical Tests (QCLot: 1876322)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	104	85.0	115	----
Anions and Nutrients (QCLot: 1869544)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	103	90.0	110	----
Anions and Nutrients (QCLot: 1869545)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	102	90.0	110	----
Anions and Nutrients (QCLot: 1869546)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	98.9	90.0	110	----
Anions and Nutrients (QCLot: 1869547)									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	98.8	85.0	115	----
Anions and Nutrients (QCLot: 1869548)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	100.0	90.0	110	----
Anions and Nutrients (QCLot: 1869549)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	102	90.0	110	----
Anions and Nutrients (QCLot: 1870230)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	97.6	80.0	120	----
Anions and Nutrients (QCLot: 1870231)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	97.1	85.0	115	----
Anions and Nutrients (QCLot: 1870234)									
Nitrogen, total	7727-37-9	E366	0.03	mg/L	0.5 mg/L	94.0	75.0	125	----
Organic / Inorganic Carbon (QCLot: 1870232)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	98.2	80.0	120	----
Total Sulfides (QCLot: 1873814)									
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.08 mg/L	103	80.0	120	----
Total Metals (QCLot: 1870095)									

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: 1870095) - continued									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	107	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	106	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	103	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	104	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	100	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	97.3	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	99.4	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	100	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	99.4	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	105	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	103	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	99.5	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	101	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	93.7	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	97.4	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	99.0	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	100.0	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	108	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	110	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	100	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	108	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	107	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	102	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	101	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	106	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	106	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	82.6	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	101	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	99.0	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	99.7	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	101	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	97.4	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	99.9	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	101	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
Total Metals (QCLot: 1870095) - continued									
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	103	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	102	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	103	80.0	120	----
Total Metals (QCLot: 1871750)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	99.1	80.0	120	----
Dissolved Metals (QCLot: 1870111)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	102	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	98.0	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	1 mg/L	101	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	98.0	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	96.4	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	101	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	91.8	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	96.6	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	95.4	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	99.6	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	97.6	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	97.4	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	98.5	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.5 mg/L	99.3	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.25 mg/L	98.2	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	102	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	97.8	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	98.3	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	97.0	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	104	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	100	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	100.0	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	97.4	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	104	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	94.0	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	106	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.25 mg/L	103	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	93.6	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
Dissolved Metals (QCLot: 1870111) - continued									
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	97.5	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	99.8	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	93.6	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	97.0	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	93.1	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	96.6	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	93.8	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.5 mg/L	99.7	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	98.6	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	96.3	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	99.8	80.0	120	----
Speciated Metals (QCLot: 1871116)									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.25 mg/L	108	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: 1869544)										
VA25A2875-002	SQU DS 1	Chloride	16887-00-6	E235.Cl	106 mg/L	100 mg/L	106	75.0	125	----
Anions and Nutrients (QCLot: 1869545)										
VA25A2875-002	SQU DS 1	Nitrate (as N)	14797-55-8	E235.NO3-L	2.65 mg/L	2.5 mg/L	106	75.0	125	----
Anions and Nutrients (QCLot: 1869546)										
VA25A2875-002	SQU DS 1	Fluoride	16984-48-8	E235.F	1.04 mg/L	1 mg/L	104	75.0	125	----
Anions and Nutrients (QCLot: 1869547)										
VA25A2875-002	SQU DS 1	Bromide	24959-67-9	E235.Br-L	0.546 mg/L	0.5 mg/L	109	75.0	125	----
Anions and Nutrients (QCLot: 1869548)										
VA25A2875-002	SQU DS 1	Nitrite (as N)	14797-65-0	E235.NO2-L	0.508 mg/L	0.5 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 1869549)										
VA25A2875-002	SQU DS 1	Sulfate (as SO4)	14808-79-8	E235.SO4	107 mg/L	100 mg/L	107	75.0	125	----
Anions and Nutrients (QCLot: 1870230)										
KS2500401-005	Anonymous	Phosphorus, total	7723-14-0	E372-U	4.76 mg/L	5 mg/L	95.2	70.0	130	----
Anions and Nutrients (QCLot: 1870231)										
KS2500401-005	Anonymous	Ammonia, total (as N)	7664-41-7	E298	ND mg/L	----	ND	75.0	125	----
Anions and Nutrients (QCLot: 1870234)										
VA25A2787-001	Anonymous	Nitrogen, total	7727-37-9	E366	38.7 mg/L	40 mg/L	96.7	70.0	130	----
Organic / Inorganic Carbon (QCLot: 1870232)										
KS2500433-002	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	ND mg/L	----	ND	70.0	130	----
Total Sulfides (QCLot: 1873814)										
VA25A2875-002	SQU DS 1	Sulfide, total (as S)	18496-25-8	E395	0.245 mg/L	0.2 mg/L	123	75.0	125	----
Total Metals (QCLot: 1870095)										
VA25A2859-001	Anonymous	Aluminum, total	7429-90-5	E420	ND mg/L	----	ND	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0199 mg/L	0.02 mg/L	99.5	70.0	130	----
		Arsenic, total	7440-38-2	E420	ND mg/L	----	ND	70.0	130	----
		Barium, total	7440-39-3	E420	ND mg/L	----	ND	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0375 mg/L	0.04 mg/L	93.8	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.00869 mg/L	0.01 mg/L	86.9	70.0	130	----
		Boron, total	7440-42-8	E420	0.094 mg/L	0.1 mg/L	94.1	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00398 mg/L	0.004 mg/L	99.6	70.0	130	----
		Calcium, total	7440-70-2	E420	ND mg/L	----	ND	70.0	130	----
		Cesium, total	7440-46-2	E420	0.0103 mg/L	0.01 mg/L	103	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0391 mg/L	0.04 mg/L	97.7	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: 1870095) - continued										
VA25A2859-001	Anonymous	Cobalt, total	7440-48-4	E420	0.0186 mg/L	0.02 mg/L	92.8	70.0	130	----
		Copper, total	7440-50-8	E420	0.0186 mg/L	0.02 mg/L	93.2	70.0	130	----
		Iron, total	7439-89-6	E420	ND mg/L	----	ND	70.0	130	----
		Lead, total	7439-92-1	E420	0.0176 mg/L	0.02 mg/L	87.9	70.0	130	----
		Lithium, total	7439-93-2	E420	0.0925 mg/L	0.1 mg/L	92.5	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	0.0212 mg/L	0.02 mg/L	106	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0376 mg/L	0.04 mg/L	94.0	70.0	130	----
		Phosphorus, total	7723-14-0	E420	10.3 mg/L	10 mg/L	103	70.0	130	----
		Potassium, total	7440-09-7	E420	ND mg/L	----	ND	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0198 mg/L	0.02 mg/L	99.1	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0424 mg/L	0.04 mg/L	106	70.0	130	----
		Silicon, total	7440-21-3	E420	ND mg/L	----	ND	70.0	130	----
		Silver, total	7440-22-4	E420	0.00416 mg/L	0.004 mg/L	104	70.0	130	----
		Sodium, total	7440-23-5	E420	ND mg/L	----	ND	70.0	130	----
		Strontium, total	7440-24-6	E420	ND mg/L	----	ND	70.0	130	----
		Sulfur, total	7704-34-9	E420	20.6 mg/L	20 mg/L	103	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0425 mg/L	0.04 mg/L	106	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00360 mg/L	0.004 mg/L	90.0	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0204 mg/L	0.02 mg/L	102	70.0	130	----
		Tin, total	7440-31-5	E420	0.0197 mg/L	0.02 mg/L	98.5	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0395 mg/L	0.04 mg/L	98.7	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0186 mg/L	0.02 mg/L	93.2	70.0	130	----
		Uranium, total	7440-61-1	E420	ND mg/L	----	ND	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.0990 mg/L	0.1 mg/L	99.0	70.0	130	----
		Zinc, total	7440-66-6	E420	0.379 mg/L	0.4 mg/L	94.7	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0427 mg/L	0.04 mg/L	107	70.0	130	----
Total Metals (QCLot: 1871750)										
VA25A2864-003	Anonymous	Mercury, total	7439-97-6	E508	0.000100 mg/L	0 mg/L	100	70.0	130	----
Dissolved Metals (QCLot: 1870111)										
VA25A2875-001	SQU US 1	Aluminum, dissolved	7429-90-5	E421	0.201 mg/L	0.2 mg/L	100	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0193 mg/L	0.02 mg/L	96.4	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0201 mg/L	0.02 mg/L	100	70.0	130	----
		Barium, dissolved	7440-39-3	E421	0.0191 mg/L	0.02 mg/L	95.6	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.0393 mg/L	0.04 mg/L	98.4	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.00959 mg/L	0.01 mg/L	95.9	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.086 mg/L	0.1 mg/L	85.8	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00387 mg/L	0.004 mg/L	96.7	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.0102 mg/L	0.01 mg/L	102	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0398 mg/L	0.04 mg/L	99.4	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0193 mg/L	0.02 mg/L	96.5	70.0	130	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 1870111) - continued										
VA25A2875-001	SQU US 1	Copper, dissolved	7440-50-8	E421	0.0192 mg/L	0.02 mg/L	96.0	70.0	130	----
		Iron, dissolved	7439-89-6	E421	1.92 mg/L	2 mg/L	96.1	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0189 mg/L	0.02 mg/L	94.4	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.0933 mg/L	0.1 mg/L	93.3	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	0.0198 mg/L	0.02 mg/L	99.3	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0385 mg/L	0.04 mg/L	96.2	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	10.0 mg/L	10 mg/L	100	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	3.90 mg/L	4 mg/L	97.5	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.0196 mg/L	0.02 mg/L	98.0	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0386 mg/L	0.04 mg/L	96.4	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	9.54 mg/L	10 mg/L	95.4	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00388 mg/L	0.004 mg/L	96.9	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	20.6 mg/L	20 mg/L	103	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.0415 mg/L	0.04 mg/L	104	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.00373 mg/L	0.004 mg/L	93.3	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0182 mg/L	0.02 mg/L	91.1	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0192 mg/L	0.02 mg/L	96.1	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0373 mg/L	0.04 mg/L	93.4	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0186 mg/L	0.02 mg/L	93.0	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	0.00365 mg/L	0.004 mg/L	91.3	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.0979 mg/L	0.1 mg/L	97.9	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.404 mg/L	0.4 mg/L	101	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0403 mg/L	0.04 mg/L	101	70.0	130	----
Dissolved Metals (QCLot: 1872928)										
VA25A2871-005	Anonymous	Mercury, dissolved	7439-97-6	E509	0.000977 mg/L	0.001 mg/L	97.7	70.0	130	----
Speciated Metals (QCLot: 1871116)										
KS2500433-002	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.283 mg/L	0.25 mg/L	113	70.0	130	----

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Street:		Email 1 or Fax	EMERGENCY	1 Business day [E1 - 100%] ☐
City/Province:		Email 2		Same Day, Weekend or Statutory holiday [E2 -200%] ☐ (Laboratory opening fees may apply)]
Postal Code:		Email 3		Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm
Invoice To		Select Invoice D		For tests that can not be performed according to the service level selected, you will be contacted.
		Email 1 or Fax		
Company:		Email 2		
Contact:				

Project Information		Oil and Gas Required Fields (client use)	
ALS Account # / Quote #:	VA25-TRIT100-001	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):	A2875	ALS Contact:	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 detail	NUMBER OF CONTAINERS
					F	F					P	P			F/P			
	SQU US 1	Feb 10/25	10:50	Water	R	R	R	R	R	R	R	R	R	R	R		N	9
	pH: 6.54 cond: 106 temp: 0.8																	
	SQU DS 1	Feb 10/25	12:30	Water	R	R	R	R	R	R	R	R	R	R	R		N	9
	pH: 6.85 cond: 102 temp: 1.2																	
	Field Blank	Feb 10/25	[redacted]	Water	R	R	R	R	R	R	R	R	R	R	R		N	9

Environmental Division
Vancouver
Work Order Reference
VA25A2875

Telephone : +1 604 253 4188

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

SHIPMENT RELEASE (client use)		IN			FINAL SHIPMENT RECEPTION (lab use only)	
Released by:	Time: 4:30	Received by:	Date:	Time:		Time: 9:30

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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

2025-2-10-Renkers-3E369

Project Component:	Tunnel	**Site Name:**	Receiving Environment - Downstream of Discharge
Inspection Date:	02/10/2025	**Location:**	BC Rail Site
Triton QP:	Stephanie Renkers	**Latitude/Longitude:**	49.725336 -123.165176
Temperature(c):	Low -10 High -1	**Permit:**	AE 111824
Weather Conditions:	Clear	**Ground Conditions:**	Snow

Observations

Time: 12:30:25 **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: SQU DS

Description: Upstream view

Photo: 2

Location: SQU DS

Description: Across view

Photos

Photo: 3

Location: SQU DS

Description: Downstream view

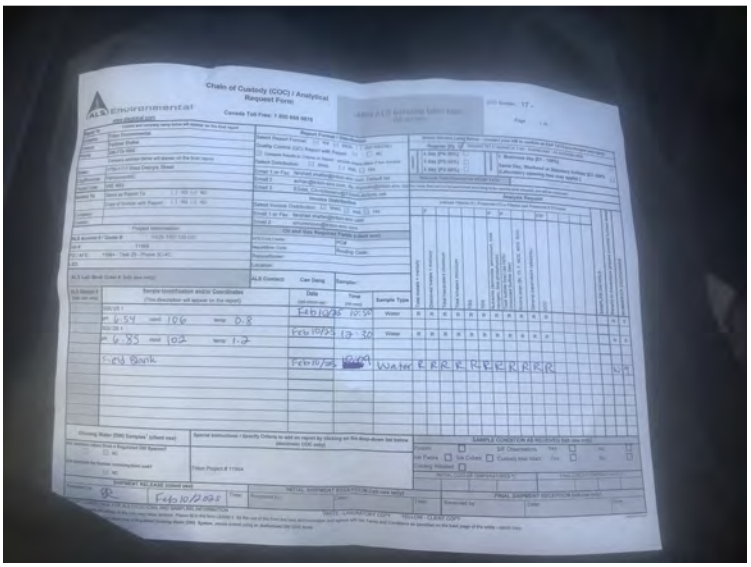


Photo: 4

Location: SQU DS

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

2025-2-10-Renkers-1C0DE

Project Component:	Tunnel	**Site Name:**	Receiving Environment - Upstream of Discharge
Inspection Date:	02/10/2025	**Location:**	BC Rail Site
Triton QP:	Stephanie Renkers	**Latitude/Longitude:**	49.726866 -123.163912
Temperature(c):	Low -10 High -1	**Permit:**	AE 111824
Weather Conditions:	Clear	**Ground Conditions:**	Snow

Observations

Time: 10:50:20 **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?	Yes	**Photo of COC with Lab Signature?**	Yes

Describe Logger Maintenance

Changed out batteries and cable connection to Vulink.

Photos

Photo: 1

Location: SQU US

Description: Upstream view

Photo: 2

Location: SQU US

Description: Across view

Photos

Photo: 3

Location: SQU US

Description: Downstream view

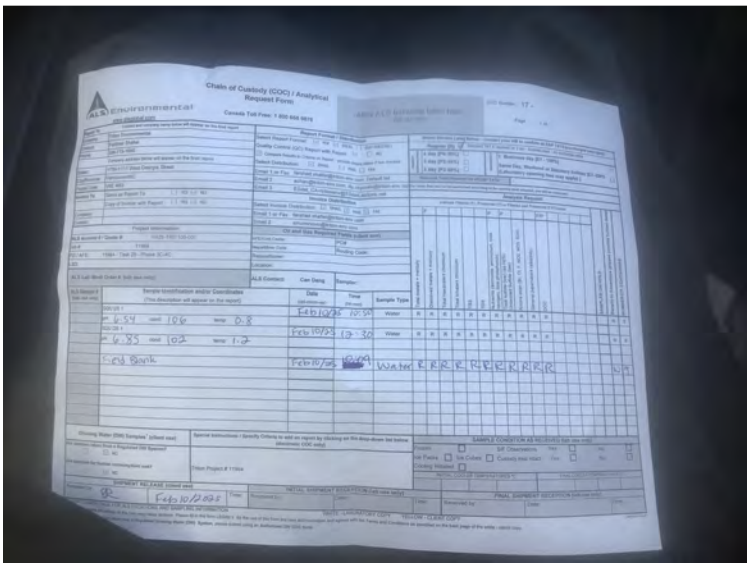


Photo: 4

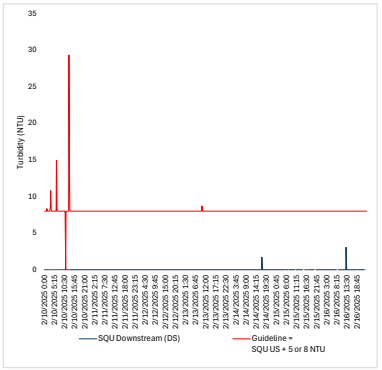
Location: SQU US

Description: Lab COC

Sign Off

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

BCR Plant Site	SQU Downstream (DS)							SQU Upstream (US)						
Date	Temperature (c)	Specific Conductivity (µS/cm)	Salinity PSU	pH	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Date	Temperature (c)	Specific Conductivity (µS/cm)	Salinity PSU	pH	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Guideline = SQU US + 5 or 8 NTU
2/10/2025 0:00	1.3	92.2	0.0	6.9	12.2	0.0	2/10/2025 0:00	1.1	6.4	0.0	7.2	14.4	0.0	8.0
2/10/2025 0:15	1.3	92.3	0.0	6.9	12.3	0.0	2/10/2025 0:15	1.1	6.3	0.0	7.2	14.4	0.0	8.0
2/10/2025 0:30	1.3	92.2	0.0	6.9	12.3	0.0	2/10/2025 0:30	1.1	6.4	0.0	7.2	14.4	0.0	8.0
2/10/2025 0:45	1.3	92.2	0.0	6.9	12.3	0.0	2/10/2025 0:45	1.0	6.4	0.0	7.2	14.4	0.0	8.0
2/10/2025 1:00							2/10/2025 1:00	1.0	6.4	0.0	7.2	14.4	0.0	8.0
2/10/2025 1:15	1.2	92.1	0.0	6.9	12.3	0.0	2/10/2025 1:15	0.9	6.1	0.0	7.2	14.5	0.3	8.3
2/10/2025 1:30	1.2	91.8	0.0	6.9	12.3	0.0	2/10/2025 1:30	0.8	0.0	0.0	7.2	14.5	0.0	8.0
2/10/2025 1:45	1.2	91.8	0.0	6.9	12.3	0.0	2/10/2025 1:45	0.6	0.0	0.0	7.3	14.6	0.0	8.0
2/10/2025 2:00							2/10/2025 2:00	0.5	0.0	0.0	7.2	14.7	0.0	8.0
2/10/2025 2:15	1.1	91.4	0.0	6.9	12.3	0.0	2/10/2025 2:15	0.5	0.0	0.0	7.3	14.7	0.0	8.0
2/10/2025 2:30	1.1	91.3	0.0	6.9	12.3	0.0	2/10/2025 2:30	0.4	0.0	0.0	7.3	14.8	0.0	8.0
2/10/2025 2:45	1.1	91.1	0.0	6.9	12.3	0.0	2/10/2025 2:45	0.3	0.0	0.0	7.3	14.8	0.0	8.0
2/10/2025 3:00							2/10/2025 3:00	0.3	0.0	0.0	7.3	14.9	0.6	8.6
2/10/2025 3:15	1.1	90.7	0.0	6.9	12.3	0.0	2/10/2025 3:15	0.3	0.0	0.0	7.2	14.9	2.8	10.8
2/10/2025 3:30	1.0	90.7	0.0	7.0	12.3	0.0	2/10/2025 3:30	1.6	98.9	0.0	7.0	13.1	0.0	8.0
2/10/2025 3:45	1.0	90.6	0.0	6.9	12.4	0.0	2/10/2025 3:45	1.7	101.7	0.0	7.0	13.0	0.0	8.0
2/10/2025 4:00							2/10/2025 4:00	1.8	100.6	0.0	7.0	13.0	0.0	8.0
2/10/2025 4:15	0.9	89.9	0.0	7.0	12.5	0.0	2/10/2025 4:15	1.8	100.2	0.0	7.0	13.0	0.0	8.0
2/10/2025 4:30	0.9	89.6	0.0	7.0	12.4	0.0	2/10/2025 4:30	1.8	98.6	0.0	7.0	13.0	0.0	8.0
2/10/2025 4:45	0.9	89.3	0.0	7.0	12.5	0.0	2/10/2025 4:45	1.8	97.9	0.0	7.0	13.1	0.0	8.0
2/10/2025 5:00							2/10/2025 5:00	1.8	97.4	0.0	7.1	13.1	0.0	8.0
2/10/2025 5:15	0.8	88.7	0.0	7.0	12.5	0.0	2/10/2025 5:15	1.9	97.0	0.0	7.1	13.1	0.0	8.0
2/10/2025 5:30	0.8	88.4	0.0	7.0	12.5	0.0	2/10/2025 5:30	1.8	97.0	0.0	7.1	13.1	0.0	8.0
2/10/2025 5:45	0.8	88.2	0.0	7.0	12.5	0.0	2/10/2025 5:45	1.8	96.7	0.0	7.1	13.1	0.0	8.0
2/10/2025 6:00							2/10/2025 6:00	1.8	96.7	0.0	7.1	13.1	0.0	8.0
2/10/2025 6:15	0.8	87.2	0.0	7.0	12.5	0.0	2/10/2025 6:15	1.8	97.1	0.0	7.1	13.1	9.9	14.9
2/10/2025 6:30	0.8	87.1	0.0	7.0	12.5	0.0	2/10/2025 6:30	1.8	97.1	0.0	7.1	13.0	0.0	8.0
2/10/2025 6:45	0.7	87.0	0.0	7.0	12.5	0.0	2/10/2025 6:45	1.8	96.0	0.0	7.1	13.1	0.0	8.0
2/10/2025 7:00							2/10/2025 7:00	1.8	95.9	0.0	7.1	13.1	0.0	8.0
2/10/2025 7:15	0.7	85.8	0.0	7.0	12.6	0.0	2/10/2025 7:15	1.9	99.7	0.0	7.1	13.1	0.0	8.0
2/10/2025 7:30	0.8	87.5	0.0	7.0	12.6	0.0	2/10/2025 7:30	1.9	103.2	0.0	7.0	13.0	0.0	8.0
2/10/2025 7:45	0.8	88.9	0.0	7.0	12.5	0.0	2/10/2025 7:45	2.0	106.2	0.0	7.0	12.9	0.0	8.0
2/10/2025 8:00							2/10/2025 8:00	2.0	109.1	0.0	7.0	12.9	0.0	8.0
2/10/2025 8:15	0.8	92.8	0.0	7.0	12.4	0.0	2/10/2025 8:15	1.9	107.9	0.0	7.0	12.8	0.0	8.0
2/10/2025 8:30	0.8	93.4	0.0	7.0	12.4	0.0	2/10/2025 8:30	1.9	106.6	0.0	7.0	12.9	0.0	8.0
2/10/2025 8:45	0.8	93.3	0.0	7.0	12.4	0.0	2/10/2025 8:45	1.9	106.2	0.0	7.0	12.9	0.0	8.0
2/10/2025 9:00							2/10/2025 9:00	1.9	105.5	0.0	7.0	12.9	0.0	8.0
2/10/2025 9:15	0.7	92.7	0.0	7.0	12.5	0.0	2/10/2025 9:15	1.9	105.7	0.0	7.0	13.0	0.0	8.0
2/10/2025 9:30	0.7	92.2	0.0	7.0	12.5	0.0	2/10/2025 9:30	1.9	107.3	0.0	7.0	12.9	0.0	8.0
2/10/2025 9:45	0.7	92.7	0.0	7.0	12.5	0.0	2/10/2025 9:45	1.9	110.5	0.1	7.0	12.9	0.0	8.0
2/10/2025 10:00							2/10/2025 10:00	1.9	113.3	0.1	7.0	12.9	0.0	8.0
2/10/2025 10:15	0.7	96.5	0.1	7.0	12.4	0.0	2/10/2025 10:15	1.9	114.6	0.1	7.0	12.9	0.0	8.0
2/10/2025 10:30	0.8	97.9	0.1	7.0	12.4	0.0	2/10/2025 10:30	1.9	113.7	0.1	7.0	12.9	0.0	8.0
2/10/2025 10:45	0.7	98.0	0.1	7.0	12.4	0.0	2/10/2025 10:45	1.9	110.9	0.1	7.0	12.9	0.0	8.0
2/10/2025 11:00							2/10/2025 11:00	1.9	108.9	0.0	7.0	13.0	0.0	0.0
2/10/2025 11:15	0.7	95.7	0.1	6.9	12.5	0.0	2/10/2025 11:15	1.9	106.3	0.0	7.0	13.1	0.0	8.0
2/10/2025 11:30	0.7	95.0	0.1	7.0	12.6	0.0	2/10/2025 11:30	1.9	105.5	0.0	7.0	13.1	0.0	8.0
2/10/2025 11:45	0.8	93.8	0.0	7.0	12.6	0.0	2/10/2025 11:45	1.9	104.6	0.0	7.0	13.1	0.0	8.0
2/10/2025 12:00							2/10/2025 12:00	1.2	6.1	0.0	7.0	14.3	0.0	8.0
2/10/2025 12:15	0.8	93.0	0.0	7.0	12.7	0.0	2/10/2025 12:15							
2/10/2025 12:30	0.9	92.8	0.0	7.0	12.7	0.0	2/10/2025 12:30	1.6	103.5	0.0	7.1	13.1	0.0	8.0
2/10/2025 12:45	0.9	92.8	0.0	6.9	12.7	0.0	2/10/2025 12:45	1.1	104.8	0.0	6.9	14.5	24.3	29.3
2/10/2025 13:00							2/10/2025 13:00	1.1	104.7	0.0	7.0	14.3	4.2	12.2
2/10/2025 13:15	1.0	92.7	0.0	7.0	12.8	0.0	2/10/2025 13:15	2.1	104.0	0.0	7.0	13.3	0.0	8.0
2/10/2025 13:30	1.1	92.7	0.0	7.0	12.8	0.0	2/10/2025 13:30	2.3	103.3	0.0	7.0	13.4	0.0	8.0
2/10/2025 13:45	1.3	91.8	0.0	7.0	12.8	0.0	2/10/2025 13:45	2.4	102.5	0.0	7.0	13.4	0.0	8.0
2/10/2025 14:00	1.3	91.7	0.0	7.0	12.8	0.0	2/10/2025 14:00	2.4	101.4	0.0	7.0	13.4	0.0	8.0
2/10/2025 14:15	1.3	91.7	0.0	7.0	12.8	0.0	2/10/2025 14:15	2.5	100.0	0.0	7.0	13.5	0.0	8.0
2/10/2025 14:30	1.4	91.0	0.0	7.0	12.9	0.0	2/10/2025 14:30	2.6	99.6	0.0	7.0	13.5	0.0	8.0
2/10/2025 14:45	1.4	90.2	0.0	7.0	12.9	0.0	2/10/2025 14:45	2.6	98.8	0.0	7.1	13.5	0.0	8.0
2/10/2025 15:00	1.5	90.1	0.0	7.0	12.9	0.0	2/10/2025 15:00	2.7	98.3	0.0	7.1	13.5	0.0	8.0
2/10/2025 15:15	1.5	89.7	0.0	7.0	12.9	0.0	2/10/2025 15:15	2.7	97.6	0.0	7.1	13.6	0.0	8.0
2/10/2025 15:30	1.6	89.1	0.0	7.1	13.0	0.0	2/10/2025 15:30	2.8	97.2	0.0	7.1	13.6	0.0	8.0
2/10/2025 15:45	1.7	88.7	0.0	7.1	13.0	0.0	2/10/2025 15:45	2.8	96.9	0.0	7.1	13.6	0.0	8.0
2/10/2025 16:00	1.7	88.4	0.0	7.1	13.0	0.0	2/10/2025 16:00	2.9	96.7	0.0	7.1	13.6	0.0	8.0
2/10/2025 16:15	1.8	88.1	0.0	7.1	13.0	0.0	2/10/2025 16:15	2.9	96.6	0.0	7.1	13.6	0.0	8.0
2/10/2025 16:30	1.8	87.8	0.0	7.1	13.0	0.0	2/10/2025 16:30	3.0	97.3	0.0	7.1	13.6	0.0	8.0
2/10/2025 16:45	1.9	87.7	0.0	7.1	13.0	0.0	2/10/2025 16:45	3.1	101.9	0.0	7.1	13.4	0.0	8.0
2/10/2025 17:00	1.9	87.9	0.0	7.1	13.0	0.0	2/10/2025 17:00	3.1	108.4	0.0	7.1	13.3	0.0	8.0
2/10/2025 17:15	1.9	90.0	0.0	7.1	12.9	0.0	2/10/2025 17:15	3.1	107.1	0.0	7.0	13.3	0.0	8.0
2/10/2025 17:30	1.9	93.5	0.0	7.1	12.8	0.0	2/10/2025 17:30	3.0	111.3	0.1	7.0	13.2	0.0	8.0
2/10/2025 17:45	1.8	97.9	0.1	7.0	12.8	0.0	2/10/2025 17:45	3.1	120.8	0.1	7.0	13.0	0.0	8.0
2/10/2025 18:00	1.8	99.6	0.1	7.0	12.7	0.0	2/10/2025 18:00	3.0	120.5	0.1	6.9	12.9	0.0	8.0
2/10/2025 18:15	1.8	103.7	0.1	7.0	12.6	0.0	2/10/2025 18:15	2.9	116.8	0.1	6.9	12.8	0.0	8.0
2/10/2025 18:30	1.6	101.4	0.1	7.0	12.5	0.0	2/10/2025 18:30	2.8	111.0	0.1	6.9	12.9	0.0	8.0
2/10/2025 18:45	1.5	100.0	0.1	7.0	12.6	0.0	2/10/2025 18:45	2.5	104.5	0.0	6.9	13.0	0.0	8.0
2/10/2025 19:00	1.5	97.0	0.1	7.0	12.5	0.0	2/10/2025 19:00	2.4	103.4	0.0	6.9	13.0	0.0	8.0
2/10/2025 19:15	1.3	94.6	0.1	7.0	12.5	0.0	2/10/2025 19:15	2.4	103.3	0.0	6.9	13.0	0.0	8.0
2/10/2025 19:30	1.3	93.7	0.0	7.0	12.5	0.0	2/10/2025 19:30	2.3	103.0	0.0	6.9	12.9	0.0	8.0
2/10/2025 19:45	1.2	92.6	0.0	7.0	12.5	0.0	2/10/2025 19:45	2.3	103.2	0.0	6.9	13.0	0.0	8.0
2/10/2025 20:00	1.1	92.2	0.0	7.0	12.5	0.0	2/10/2025 20:00	2.2	103.2	0.0	6.9	12.9	0.0	8.0
2/10/2025 20:15	1.1	92.0	0.0	7.0	12.5	0.0	2/10/2025 20:15	2.2	103.5	0.0	6.9	12.9	0.0	8.0
2/10/2025 20:30	1.1	92.1	0.0	7.0	12.5	0.0	2/10/2025 20:30	2.2	104.0	0.0	6.9	12.9	0.0	8.0
2/10/2025 20:45	1.0	92.0	0.0	6.9	12.4	0.0	2/10/2025 20:45	2.2	104.2	0.0	6.9	12.9	0.0	8.0
2/10/2025 21:00	1.0	92.4	0.0	6.9	12.4	0.0	2/10/2025 21:00	2.2	104.4	0.0	6.9	12.9	0.0	8.0
2/10/2025 21:15	1.0	92.6	0.0	6.9	12.4	0.0	2/10/2025 21:15	2.2	104.7	0.0	6.9	12.9	0.0	8.0
2/10/2025 21:30	1.0	92.6	0.0	6.9	12.4	0.0	2/10/2025 21:30	2.2	105.4	0.0	6.9	12.9	0.0	8.0
2/10/2025 21:45	1.0	92.8	0.0	6.9	12.4	0.0	2/10/2025 21:45	2.2	105.5	0.0	6.9	12.9	0.0	8.0
2/10/2025 22:00	1.0	93.2	0.0	6.9	12.4	0.0	2/10/2025 22:00	2.2	105.7	0.0	6.9	12.8	0.0	8.0
2/10/2025 22:15	1.0	93.3	0.0	6.9	12.4	0.0	2/10/2025 22:15	2.1	105.9	0.0	6.9	12.9	0.0	8.0
2/10/2025 22:30	1.0	93.4	0.0	6.9	12.4	0.0	2/10/2025 22:30	2.1	106.0	0.0	6.9	12.8	0.0	8.0
2/10/2025 22:45	1.0	93.5	0.0	6.9	12.4	0.0	2/10/2025 22:45	2.1	106.0	0.0	6.9	12.8	0.0	8.0
2/10/2025 23:00	1.0	93.6	0.0	6.9	12.4	0.0	2/10/2025 23:00	2.1	105.7	0.0	6.9	12.8	0.0	8.0
2/10/2025 23:15	1.0	93.8	0.0	6.9	12.4	0.0	2/10/2025 23:15	2.1	105.8	0.0	6.9	12.8	0.0	8.0
2/10/2025 23:30	1.0	93.6	0.0	6.9	12.2	0.0	2/10/2025 23:30	2.1	105.8	0.0	6.9	12.8	0.0	8.0
2/10/2025 23:45	0.9	93.7	0.0	6.9	12.3	0.0	2/10/2025 23:45	2.1	105.6	0.0	6.9	12.8	0.0	8.0
2/11/2025 0:00	0.9	93.6	0.0	6.9	12.4	0.0	2/11/2025 0:00	2.0	105.5	0.0	6.9	12.9	0.0	8.0
2/11/2025 0:15	0.9	93.6	0.0	6.9	12.4	0.0	2/11/2025 0:15	2.0	105.6	0.0	6.9	12.9	0.0	8.0
2/11/2025 0:30	0.9	93.6	0.0	6.9	12.4	0.0	2/11/2025 0:30	2.0	105.6	0.0	6.9	12.9	0.0	8.0
2/11/2025 0:45	0.9	93.5	0.0	6.9	12.3	0.0	2/11/2025 0:45	2.0	105.2	0.0	6.9	12.9	0.0	8.0
2/11/2025 1:00	0.8	93.4	0.0	6.9	12.4	0.0	2/11/2025 1:00	2.0	105.0	0.0	6.9	12.9	0.0	8.0
2/11/2025 1:15	0.8	93.4	0.0	6.9	12.4	0.0	2/11/2025 1:15	1.9	104.6	0.0	6.9	12.9	0.0	8.0
2/11/2025 1:30	0.8	93.2	0.0	6.9	12.4	0.0	2/11/2025 1:30	1.9	104.2	0.0	6.9	12.9	0.0	8.0
2/11/2025 1:45	0.8	93.0	0.0	6.9	12.4	0.0	2/11/2025 1:45	1.9	104.5	0.0	6.9	12.9	0.0	8.0
2/11/2025 2:00	0.8	92.9	0.0	6.9	12.4	0.0	2/11/2025 2:00	1.9	104.1	0.0	6.9	12.9	0.0	8.0



2/11/2025 2:15	0.8	92.8	0.0	6.9	12.4	0.0	2/11/2025 2:15	1.9	104.1	0.0	6.9	12.9	0.0	8.0
2/11/2025 2:30	0.8	92.8	0.0	6.9	12.4	0.0	2/11/2025 2:30	1.9	104.1	0.0	6.9	12.9	0.0	8.0
2/11/2025 2:45	0.7	92.6	0.0	6.9	12.4	0.0	2/11/2025 2:45	1.8	103.7	0.0	6.9	12.9	0.0	8.0
2/11/2025 3:00	0.7	92.5	0.0	6.9	12.4	0.0	2/11/2025 3:00	1.8	103.3	0.0	6.9	12.9	0.0	8.0
2/11/2025 3:15	0.7	92.4	0.0	6.9	12.4	0.0	2/11/2025 3:15	1.8	103.6	0.0	6.9	12.9	0.0	8.0
2/11/2025 3:30	0.7	92.3	0.0	6.9	12.4	0.0	2/11/2025 3:30	1.8	103.5	0.0	6.9	12.9	0.0	8.0
2/11/2025 3:45	0.7	92.3	0.0	6.9	12.4	0.0	2/11/2025 3:45	1.8	103.2	0.0	6.9	12.9	0.0	8.0
2/11/2025 4:00	0.7	92.2	0.0	6.9	12.4	0.0	2/11/2025 4:00	1.8	103.2	0.0	6.9	12.9	0.0	8.0
2/11/2025 4:15	0.7	92.1	0.0	6.9	12.5	0.0	2/11/2025 4:15	1.7	103.2	0.0	6.9	13.0	0.0	8.0
2/11/2025 4:30	0.6	92.1	0.0	7.0	12.5	0.0	2/11/2025 4:30	1.7	102.7	0.0	6.9	13.0	0.0	8.0
2/11/2025 4:45	0.6	91.8	0.0	7.0	12.5	0.0	2/11/2025 4:45	1.6	102.3	0.0	6.9	13.0	0.0	8.0
2/11/2025 5:00	0.6	91.7	0.0	7.0	12.5	0.0	2/11/2025 5:00	1.6	102.1	0.0	7.0	13.1	0.0	8.0
2/11/2025 5:15	0.5	91.5	0.0	7.0	12.5	0.0	2/11/2025 5:15	1.6	100.7	0.0	7.0	13.1	0.0	8.0
2/11/2025 5:30	0.5	91.4	0.0	7.0	12.5	0.0	2/11/2025 5:30	1.6	99.9	0.0	7.0	13.1	0.0	8.0
2/11/2025 5:45	0.5	90.9	0.0	7.0	12.6	0.0	2/11/2025 5:45	1.5	99.6	0.0	7.0	13.1	0.0	8.0
2/11/2025 6:00	0.5	90.5	0.0	7.0	12.6	0.0	2/11/2025 6:00	1.5	99.0	0.0	7.0	13.2	0.0	8.0
2/11/2025 6:15	0.5	90.3	0.0	7.0	12.6	0.0	2/11/2025 6:15	1.5	98.8	0.0	7.0	13.2	0.0	8.0
2/11/2025 6:30	0.4	89.7	0.0	7.0	12.6	0.0	2/11/2025 6:30	1.5	98.6	0.0	7.0	13.2	0.0	8.0
2/11/2025 6:45	0.4	89.4	0.0	7.0	12.6	0.0	2/11/2025 6:45	1.5	98.5	0.0	7.0	13.2	0.0	8.0
2/11/2025 7:00	0.4	88.9	0.0	7.0	12.6	0.0	2/11/2025 7:00	1.5	100.1	0.0	7.0	13.1	0.0	8.0
2/11/2025 7:15	0.4	88.8	0.0	7.0	12.6	0.0	2/11/2025 7:15	1.5	99.1	0.0	7.0	13.1	0.0	8.0
2/11/2025 7:30	0.4	93.8	0.0	7.0	12.6	0.0	2/11/2025 7:30	1.4	97.3	0.0	7.0	13.2	0.0	8.0
2/11/2025 7:45	0.4	88.8	0.0	7.0	12.6	0.0	2/11/2025 7:45	1.4	98.6	0.0	7.0	13.2	0.0	8.0
2/11/2025 8:00	0.3	87.8	0.0	7.0	12.6	0.0	2/11/2025 8:00	1.5	107.4	0.0	7.0	13.0	0.0	8.0
2/11/2025 8:15	0.4	88.8	0.0	7.0	12.6	0.0	2/11/2025 8:15	1.6	110.8	0.1	7.0	12.9	0.0	8.0
2/11/2025 8:30	0.4	91.0	0.0	7.0	12.6	0.0	2/11/2025 8:30	1.6	113.4	0.1	6.9	12.9	0.0	8.0
2/11/2025 8:45	0.4	94.9	0.1	7.0	12.5	0.0	2/11/2025 8:45	1.6	110.2	0.0	6.9	12.9	0.0	8.0
2/11/2025 9:00	0.4	96.8	0.1	6.9	12.5	0.0	2/11/2025 9:00	1.5	106.4	0.0	7.0	13.0	0.0	8.0
2/11/2025 9:15	0.4	95.4	0.1	6.9	12.5	0.0	2/11/2025 9:15	1.5	105.9	0.0	7.0	13.1	0.0	8.0
2/11/2025 9:30	0.4	94.1	0.0	7.0	12.5	0.0	2/11/2025 9:30	1.5	109.9	0.0	7.0	13.0	0.0	8.0
2/11/2025 9:45	0.3	93.9	0.0	7.0	12.5	0.0	2/11/2025 9:45	1.5	112.7	0.1	6.9	13.0	0.0	8.0
2/11/2025 10:00	0.4	95.2	0.1	7.0	12.5	0.0	2/11/2025 10:00	1.6	113.8	0.1	6.9	13.0	0.0	8.0
2/11/2025 10:15	0.4	97.5	0.1	7.0	12.5	0.0	2/11/2025 10:15	1.5	113.6	0.1	6.9	13.0	0.0	8.0
2/11/2025 10:30	0.4	98.2	0.1	6.9	12.5	0.0	2/11/2025 10:30	1.6	117.6	0.1	6.9	13.0	0.0	8.0
2/11/2025 10:45	0.4	99.0	0.1	7.0	12.5	0.0	2/11/2025 10:45	1.6	120.6	0.1	6.9	12.9	0.0	8.0
2/11/2025 11:00	0.5	103.5	0.1	7.0	12.5	0.0	2/11/2025 11:00	1.6	116.7	0.1	6.9	13.0	0.0	8.0
2/11/2025 11:15	0.5	102.5	0.1	6.9	12.5	0.0	2/11/2025 11:15	1.6	110.1	0.0	6.9	13.1	0.0	8.0
2/11/2025 11:30	0.4	101.3	0.1	6.9	12.5	0.0	2/11/2025 11:30	1.6	107.4	0.0	6.9	13.2	0.0	8.0
2/11/2025 11:45	0.4	99.3	0.1	7.0	12.5	0.0	2/11/2025 11:45	1.6	106.1	0.0	6.9	13.2	0.0	8.0
2/11/2025 12:00	0.5	98.3	0.1	7.0	12.5	0.0	2/11/2025 12:00	1.7	105.7	0.0	6.9	13.3	0.0	8.0
2/11/2025 12:15	0.5	97.5	0.1	7.0	12.6	0.0	2/11/2025 12:15	1.7	105.5	0.0	6.9	13.3	0.0	8.0
2/11/2025 12:30	0.5	97.1	0.1	7.0	12.7	0.0	2/11/2025 12:30	1.8	105.8	0.0	6.9	13.3	0.0	8.0
2/11/2025 12:45	0.6	96.4	0.1	7.0	12.7	0.0	2/11/2025 12:45	1.9	105.5	0.0	6.9	13.3	0.0	8.0
2/11/2025 13:00	0.6	96.2	0.1	7.0	12.7	0.0	2/11/2025 13:00	2.0	104.8	0.0	6.9	13.3	0.0	8.0
2/11/2025 13:15	0.7	95.7	0.1	7.0	12.7	0.0	2/11/2025 13:15	2.1	104.9	0.0	6.9	13.3	0.0	8.0
2/11/2025 13:30	0.8	95.0	0.1	6.9	12.7	0.0	2/11/2025 13:30	2.2	105.0	0.0	6.9	13.3	0.0	8.0
2/11/2025 13:45	1.0	94.6	0.1	6.9	12.7	0.0	2/11/2025 13:45	2.2	104.8	0.0	6.9	13.3	0.0	8.0
2/11/2025 14:00	1.0	94.4	0.0	7.0	12.8	0.0	2/11/2025 14:00	2.3	105.1	0.0	6.9	13.3	0.0	8.0
2/11/2025 14:15	1.1	94.3	0.0	7.0	12.8	0.0	2/11/2025 14:15	2.4	105.3	0.0	6.9	13.3	0.0	8.0
2/11/2025 14:30	1.2	94.2	0.0	7.0	12.8	0.0	2/11/2025 14:30	2.4	105.5	0.0	6.9	13.3	0.0	8.0
2/11/2025 14:45	1.3	94.3	0.0	7.0	12.8	0.0	2/11/2025 14:45	2.5	104.4	0.0	6.9	13.4	0.0	8.0
2/11/2025 15:00	1.4	94.3	0.0	7.0	12.8	0.0	2/11/2025 15:00	2.6	102.6	0.0	7.0	13.5	0.0	8.0
2/11/2025 15:15	1.5	93.8	0.0	7.0	12.8	0.0	2/11/2025 15:15	2.6	100.9	0.0	7.0	13.5	0.0	8.0
2/11/2025 15:30	1.5	93.3	0.0	7.0	12.8	0.0	2/11/2025 15:30	2.7	100.5	0.0	7.0	13.5	0.0	8.0
2/11/2025 15:45	1.6	92.2	0.0	7.0	12.9	0.0	2/11/2025 15:45	2.7	99.9	0.0	7.0	13.6	0.0	8.0
2/11/2025 16:00	1.6	91.3	0.0	7.0	13.0	0.0	2/11/2025 16:00	2.7	99.2	0.0	7.0	13.6	0.0	8.0
2/11/2025 16:15	1.6	91.2	0.0	7.0	12.9	0.0	2/11/2025 16:15	2.8	98.4	0.0	7.1	13.6	0.0	8.0
2/11/2025 16:30	1.7	90.8	0.0	7.1	12.9	0.0	2/11/2025 16:30	2.8	97.8	0.0	7.1	13.6	0.0	8.0
2/11/2025 16:45	1.7	90.2	0.0	7.0	12.9	0.0	2/11/2025 16:45	2.8	97.9	0.0	7.1	13.6	0.0	8.0
2/11/2025 17:00	1.7	89.3	0.0	7.0	13.0	0.0	2/11/2025 17:00	2.8	97.9	0.0	7.1	13.5	0.0	8.0
2/11/2025 17:15	1.7	89.3	0.0	7.1	12.9	0.0	2/11/2025 17:15	2.8	97.1	0.0	7.1	13.5	0.0	8.0
2/11/2025 17:30	1.7	89.2	0.0	7.1	12.9	0.0	2/11/2025 17:30	2.8	101.9	0.0	7.1	13.5	0.0	8.0
2/11/2025 17:45	1.7	89.5	0.0	7.1	12.9	0.0	2/11/2025 17:45	2.8	102.8	0.0	7.1	13.4	0.0	8.0
2/11/2025 18:00	1.7	90.9	0.0	7.1	12.9	0.0	2/11/2025 18:00	2.8	102.0	0.0	7.1	13.3	0.0	8.0
2/11/2025 18:15	1.7	91.8	0.0	7.1	12.8	0.0	2/11/2025 18:15	2.7	104.3	0.0	7.0	13.3	0.0	8.0
2/11/2025 18:30	1.6	92.8	0.0	7.1	12.8	0.0	2/11/2025 18:30	2.8	115.0	0.1	7.0	13.0	0.0	8.0
2/11/2025 18:45	1.6	97.3	0.1	7.0	12.7	0.0	2/11/2025 18:45	2.9	126.3	0.1	6.9	12.8	0.0	8.0
2/11/2025 19:00	1.6	106.8	0.1	7.0	12.5	0.0	2/11/2025 19:00	2.9	128.6	0.1	6.9	12.6	0.0	8.0
2/11/2025 19:15	1.6	109.3	0.1	6.9	12.3	0.0	2/11/2025 19:15	2.8	122.0	0.1	6.9	12.6	0.0	8.0
2/11/2025 19:30	1.5	105.9	0.1	6.9	12.3	0.0	2/11/2025 19:30	2.6	115.7	0.1	6.8	12.6	0.0	8.0
2/11/2025 19:45	1.4	102.6	0.1	6.9	12.3	0.0	2/11/2025 19:45	2.4	108.0	0.0	6.8	12.8	0.0	8.0
2/11/2025 20:00	1.3	100.2	0.1	6.9	12.3	0.0	2/11/2025 20:00	2.3	106.0	0.0	6.8	12.8	0.0	8.0
2/11/2025 20:15	1.2	98.1	0.1	6.9	12.3	0.0	2/11/2025 20:15	2.2	105.3	0.0	6.8	12.8	0.0	8.0
2/11/2025 20:30	1.1	97.2	0.1	6.9	12.3	0.0	2/11/2025 20:30	2.2	104.9	0.0	6.8	12.8	0.0	8.0
2/11/2025 20:45	1.1	96.6	0.1	6.9	12.3	0.0	2/11/2025 20:45	2.1	104.1	0.0	6.8	12.8	0.0	8.0
2/11/2025 21:00	1.0	95.1	0.1	6.9	12.3	0.0	2/11/2025 21:00	2.1	104.3	0.0	6.8	12.8	0.0	8.0
2/11/2025 21:15	1.0	94.4	0.0	6.9	12.3	0.0	2/11/2025 21:15	2.1	104.6	0.0	6.8	12.8	0.0	8.0
2/11/2025 21:30	1.0	94.3	0.0	6.9	12.3	0.0	2/11/2025 21:30	2.1	105.1	0.0	6.8	12.8	0.0	8.0
2/11/2025 21:45	0.9	93.9	0.0	6.9	12.3	0.0	2/11/2025 21:45	2.1	105.4	0.0	6.8	12.8	0.0	8.0
2/11/2025 22:00	0.9	93.9	0.0	6.9	12.3	0.0	2/11/2025 22:00	2.0	105.6	0.0	6.8	12.8	0.0	8.0
2/11/2025 22:15	0.9	93.8	0.0	6.9	12.3	0.0	2/11/2025 22:15	2.0	105.8	0.0	6.8	12.8	0.0	8.0
2/11/2025 22:30	0.9	93.9	0.0	6.9	12.3	0.0	2/11/2025 22:30	2.0	105.5	0.0	6.8	12.8	0.0	8.0
2/11/2025 22:45	0.9	93.9	0.0	6.9	12.3	0.0	2/11/2025 22:45	2.0	105.8	0.0	6.8	12.8	0.0	8.0
2/11/2025 23:00	0.9	93.9	0.0	6.9	12.3	0.0	2/11/2025 23:00	2.0	106.0	0.0	6.8	12.8	0.0	8.0
2/11/2025 23:15	0.8	93.9	0.0	6.9	12.2	0.0	2/11/2025 23:15	2.0	106.2	0.0	6.8	12.8	0.0	8.0
2/11/2025 23:30	0.8	94.0	0.0	6.9	12.2	0.0	2/11/2025 23:30	1.9	106.6	0.0	6.8	12.7	0.0	8.0
2/11/2025 23:45	0.8	94.2	0.0	6.9	12.3	0.0	2/11/2025 23:45	1.9	106.7	0.0	6.8	12.7	0.0	8.0
2/12/2025 0:00	0.8	94.2	0.0	6.9	12.3	0.0	2/12/2025 0:00	1.9	106.4	0.0	6.8	12.7	0.0	8.0
2/12/2025 0:15	0.8	94.3	0.0	6.9	12.3	0.0	2/12/2025 0:15	1.9	106.2	0.0	6.8	12.8	0.0	8.0
2/12/2025 0:30	0.7	94.2	0.0	6.9	12.2	0.0	2/12/2025 0:30	1.9	105.8	0.0	6.8	12.8	0.0	8.0
2/12/2025 0:45	0.7	94.1	0.0	6.9	12.2	0.0	2/12/2025 0:45	1.8	105.3	0.0	6.8	12.8	0.0	8.0
2/12/2025 1:00	0.7	94.1	0.0	6.9	12.0	0.0	2/12/2025 1:00	1.8	105.0	0.0	6.9	12.8	0.0	8.0
2/12/2025 1:15	0.7	93.9	0.0	6.9	12.1	0.0	2/12/2025 1:15	1.8	105.1	0.0	6.9	12.8	0.0	8.0
2/12/2025 1:30	0.7	93.8	0.0	6.9	12.2	0.0	2/12/2025 1:30	1.8	105.4	0.0	6.9	12.8	0.0	8.0
2/12/2025 1:45	0.7	93.7	0.0	6.9	12.3	0.0	2/12/2025 1:45	1.8	105.3	0.0	6.9	12.8	0.0	8.0
2/12/2025 2:00	0.7	93.6	0.0	6.9	12.3	0.0	2/12/2025 2:00	1.8	105.5	0.0	6.8	12.8	0.0	8.0
2/12/2025 2:15	0.6	93.7	0.0	6.9	12.3	0.0	2/12/2025 2:15	1.8	105.3	0.0	6.9	12.8	0.0	8.0
2/12/2025 2:30	0.6	93.7	0.0	6.9	12.3	0.0	2/12/2025 2:30	1.7	104.7	0.0	6.9	12.8	0.0	8.0
2/12/2025 2:45	0.6	96.3	0.1	6.9	12.3	0.0	2/12/2025 2:45	1.7	105.0	0.0	6.9	12.8	0.0	8.0
2/12/2025 3:00	0.6	93.6	0.0	6.9	12.3	0.0	2/12/2025 3:00	1.7	105.0	0.0	6.9	12.8	0.0	8.0
2/12/2025 3:15	0.6	93.6	0.0	6.9	12.3	0.0	2/12/2025 3:15	1.7	104.7	0.0	6.9	12.8	0.0	8.0
2/12/2025 3:30	0.6	93.7	0.0	6.9	12.2	0.0	2/12/2025 3:30	1.7	104.5	0.0	6.9	12.8	0.0	8.0
2/12/2025 3:45	0.6	93.6	0.0	6.9	12.2	0.0	2/12/2025 3:45	1.7	104.5	0.0	6.9	12.8	0.0	8.0
2/12/2025 4:00	0.6	93.5	0.0	6.9	12.2	0.0	2/12/2025 4:00	1.7	104.3	0.0	6.9	12.8	0.0	8.0
2/12/2025 4:15	0.6	93.5	0.0	6.9	12.2	0.0	2/12/2025 4:15	1.7	104.2	0.0	6.9	12.8	0.0	8.0
2/12/2025 4:30	0.5	93.5	0.0	6.9	12.3	0.0	2/12/2025 4:30	1.7	104.8	0.0	6.9	12.8	0.0	8.0
2/12/2025 4:45	0.5	93.6	0.0	6.9	12.3	0.0	2/12/2025 4:45	1.6	104.4	0.0	6.9	12.9	0.0	8.0
2/12/2025 5:00	0.5	93.6	0.0	7.0	12.3	0.0	2/12/2025 5:00	1.5	104.2	0.0	6.9	12.9	0.0	8.0
2/12/2025 5:15	0.5	93.4	0.0	6.9	12.4	0.0	2/12/2025 5:15	1.5	104.0	0.0	6.9	12.9	0.0	8.0
2/12/2025 5:30	0.5	93.2	0.0	7.0	12.4	0.0	2/12/2025 5:30	1.5	103.5	0.0	6.9	13.0	0.0	8.0

2/12/2025 5:45	0.5	93.1	0.0	6.9	12.4	0.0	2/12/2025 5:45	1.5	103.1	0.0	6.9	13.0	0.0	8.0
2/12/2025 6:00	0.5	93.0	0.0	7.0	12.4	0.0	2/12/2025 6:00	1.5	101.7	0.0	7.0	13.0	0.0	8.0
2/12/2025 6:15	0.4	93.5	0.0	7.0	12.4	0.0	2/12/2025 6:15	1.5	101.4	0.0	7.0	13.0	0.0	8.0
2/12/2025 6:30	0.4	92.4	0.0	7.0	12.4	0.0	2/12/2025 6:30	1.4	101.3	0.0	7.0	13.0	0.0	8.0
2/12/2025 6:45	0.4	92.2	0.0	7.0	12.4	0.0	2/12/2025 6:45	1.4	101.1	0.0	7.0	13.0	0.0	8.0
2/12/2025 7:00	0.4	92.0	0.0	7.0	12.4	0.0	2/12/2025 7:00	1.4	100.8	0.0	7.0	13.0	0.0	8.0
2/12/2025 7:15	0.4	91.4	0.0	7.0	12.5	0.0	2/12/2025 7:15	1.4	100.5	0.0	7.0	13.0	0.0	8.0
2/12/2025 7:30	0.4	91.3	0.0	7.0	12.4	0.0	2/12/2025 7:30	1.4	100.0	0.0	7.0	13.0	0.0	8.0
2/12/2025 7:45	0.4	91.1	0.0	7.0	12.4	0.0	2/12/2025 7:45	1.4	99.1	0.0	7.0	13.0	0.0	8.0
2/12/2025 8:00	0.3	90.1	0.0	7.0	12.5	0.0	2/12/2025 8:00	1.4	99.5	0.0	7.0	13.1	0.0	8.0
2/12/2025 8:15	0.3	89.6	0.0	7.0	12.5	0.0	2/12/2025 8:15	1.4	101.7	0.0	7.0	13.0	0.0	8.0
2/12/2025 8:30	0.3	89.5	0.0	7.0	12.5	0.0	2/12/2025 8:30	1.5	107.0	0.0	7.0	12.9	0.0	8.0
2/12/2025 8:45	0.4	89.6	0.0	7.0	12.4	0.0	2/12/2025 8:45	1.6	111.6	0.1	6.9	12.8	0.0	8.0
2/12/2025 9:00	0.4	92.3	0.0	7.0	12.4	0.0	2/12/2025 9:00	1.6	112.6	0.1	6.9	12.8	0.0	8.0
2/12/2025 9:15	0.4	93.5	0.0	7.0	12.4	0.0	2/12/2025 9:15	1.6	110.8	0.1	6.9	12.8	0.0	8.0
2/12/2025 9:30	0.4	95.8	0.1	7.0	12.3	0.0	2/12/2025 9:30	1.6	110.5	0.0	6.9	12.8	0.0	8.0
2/12/2025 9:45	0.4	96.8	0.1	7.0	12.3	0.0	2/12/2025 9:45	1.5	107.9	0.0	6.9	12.9	0.0	8.0
2/12/2025 10:00	0.4	96.2	0.1	7.0	12.4	0.0	2/12/2025 10:00	1.5	108.7	0.0	6.9	13.0	0.0	8.0
2/12/2025 10:15	0.4	95.5	0.1	7.0	12.5	0.0	2/12/2025 10:15	1.6	111.7	0.1	6.9	13.0	0.0	8.0
2/12/2025 10:30	0.4	96.3	0.1	6.9	12.5	0.0	2/12/2025 10:30	1.6	115.8	0.1	6.9	12.9	0.0	8.0
2/12/2025 10:45	0.5	98.8	0.1	6.9	12.5	0.0	2/12/2025 10:45	1.7	119.2	0.1	6.9	12.9	0.0	8.0
2/12/2025 11:00	0.5	100.8	0.1	7.0	12.4	0.0	2/12/2025 11:00	1.7	118.7	0.1	6.9	12.9	0.0	8.0
2/12/2025 11:15	0.6	102.8	0.1	6.9	12.4	0.0	2/12/2025 11:15	1.7	117.9	0.1	6.9	12.9	0.0	8.0
2/12/2025 11:30	0.6	102.5	0.1	7.0	12.5	0.0	2/12/2025 11:30	1.7	114.4	0.1	6.9	13.0	0.0	8.0
2/12/2025 11:45	0.6	101.8	0.1	6.9	12.4	0.0	2/12/2025 11:45	1.7	108.9	0.0	6.9	13.1	0.0	8.0
2/12/2025 12:00	0.6	101.3	0.1	6.9	12.4	0.0	2/12/2025 12:00	1.8	107.1	0.0	6.9	13.2	0.0	8.0
2/12/2025 12:15	0.6	98.5	0.1	7.0	12.5	0.0	2/12/2025 12:15	1.8	105.7	0.0	6.9	13.2	0.0	8.0
2/12/2025 12:30	0.7	97.0	0.1	7.0	12.5	0.0	2/12/2025 12:30	1.9	105.5	0.0	6.9	13.2	0.0	8.0
2/12/2025 12:45	0.7	96.9	0.1	7.0	12.6	0.0	2/12/2025 12:45	2.0	105.4	0.0	6.9	13.2	0.0	8.0
2/12/2025 13:00	0.8	96.4	0.1	7.0	12.6	0.0	2/12/2025 13:00	2.1	105.2	0.0	6.9	13.2	0.0	8.0
2/12/2025 13:15	0.9	95.9	0.1	7.0	12.6	0.0	2/12/2025 13:15	2.2	105.2	0.0	6.9	13.2	0.0	8.0
2/12/2025 13:30	0.9	95.6	0.1	7.0	12.6	0.0	2/12/2025 13:30	2.3	105.4	0.0	6.9	13.2	0.0	8.0
2/12/2025 13:45	1.0	95.1	0.1	7.0	12.6	0.0	2/12/2025 13:45	2.4	105.1	0.0	6.9	13.2	0.0	8.0
2/12/2025 14:00	1.1	95.2	0.1	6.9	12.6	0.0	2/12/2025 14:00	2.5	105.2	0.0	6.9	13.2	0.0	8.0
2/12/2025 14:15	1.2	94.9	0.1	6.9	12.6	0.0	2/12/2025 14:15	2.6	105.1	0.0	6.9	13.2	0.0	8.0
2/12/2025 14:30	1.3	94.9	0.1	7.0	12.6	0.0	2/12/2025 14:30	2.6	104.8	0.0	6.9	13.3	0.0	8.0
2/12/2025 14:45	1.5	94.5	0.1	7.0	12.6	0.0	2/12/2025 14:45	2.7	104.7	0.0	6.9	13.2	0.0	8.0
2/12/2025 15:00	1.6	94.4	0.1	7.0	12.6	0.0	2/12/2025 15:00	2.8	104.7	0.0	6.9	13.2	0.0	8.0
2/12/2025 15:15	1.7	94.4	0.1	7.0	12.7	0.0	2/12/2025 15:15	2.8	104.5	0.0	6.9	13.2	0.0	8.0
2/12/2025 15:30	1.7	94.1	0.0	7.0	12.7	0.0	2/12/2025 15:30	2.9	103.8	0.0	6.9	13.2	0.0	8.0
2/12/2025 15:45	1.8	93.7	0.0	7.0	12.7	0.0	2/12/2025 15:45	2.9	101.8	0.0	7.0	13.3	0.0	8.0
2/12/2025 16:00	1.9	93.0	0.0	7.0	12.7	0.0	2/12/2025 16:00	3.0	100.6	0.0	7.0	13.4	0.0	8.0
2/12/2025 16:15	1.9	92.1	0.0	7.0	12.8	0.0	2/12/2025 16:15	3.0	99.8	0.0	7.0	13.4	0.0	8.0
2/12/2025 16:30	1.9	91.7	0.0	7.0	12.8	0.0	2/12/2025 16:30	2.9	99.1	0.0	7.0	13.4	0.0	8.0
2/12/2025 16:45	1.9	91.3	0.0	7.1	12.7	0.0	2/12/2025 16:45	2.9	98.5	0.0	7.0	13.4	0.0	8.0
2/12/2025 17:00	1.9	91.0	0.0	7.1	12.8	0.0	2/12/2025 17:00	2.9	98.0	0.0	7.1	13.4	0.0	8.0
2/12/2025 17:15	1.9	90.4	0.0	7.1	12.8	0.0	2/12/2025 17:15	2.9	97.6	0.0	7.1	13.4	0.0	8.0
2/12/2025 17:30	1.9	90.2	0.0	7.1	12.8	0.0	2/12/2025 17:30	2.8	97.2	0.0	7.1	13.4	0.0	8.0
2/12/2025 17:45	1.8	89.9	0.0	7.1	12.8	0.0	2/12/2025 17:45	2.8	98.3	0.0	7.1	13.4	0.0	8.0
2/12/2025 18:00	1.8	89.4	0.0	7.1	12.7	0.0	2/12/2025 18:00	2.8	100.9	0.0	7.1	13.2	0.0	8.0
2/12/2025 18:15	1.7	89.8	0.0	7.1	12.7	0.0	2/12/2025 18:15	2.8	101.8	0.0	7.0	13.2	0.0	8.0
2/12/2025 18:30	1.7	90.1	0.0	7.1	12.7	0.0	2/12/2025 18:30	2.7	100.0	0.0	7.0	13.2	0.0	8.0
2/12/2025 18:45	1.7	91.1	0.0	7.1	12.6	0.0	2/12/2025 18:45	2.7	101.6	0.0	7.0	13.1	0.0	8.0
2/12/2025 19:00	1.6	90.7	0.0	7.1	12.6	0.0	2/12/2025 19:00	2.7	106.1	0.0	7.0	13.0	0.0	8.0
2/12/2025 19:15	1.6	91.3	0.0	7.1	12.6	0.0	2/12/2025 19:15	2.7	112.5	0.1	7.0	12.8	0.0	8.0
2/12/2025 19:30	1.6	93.8	0.0	7.1	12.5	0.0	2/12/2025 19:30	2.7	114.9	0.1	6.9	12.7	0.0	8.0
2/12/2025 19:45	1.5	99.0	0.1	7.0	12.3	0.0	2/12/2025 19:45	2.7	118.6	0.1	6.9	12.7	0.0	8.0
2/12/2025 20:00	1.5	101.4	0.1	7.0	12.2	0.0	2/12/2025 20:00	2.8	128.0	0.1	6.9	12.4	0.0	8.0
2/12/2025 20:15	1.5	111.0	0.1	6.9	12.1	0.0	2/12/2025 20:15	2.7	123.5	0.1	6.8	12.4	0.0	8.0
2/12/2025 20:30	1.5	107.1	0.1	6.9	12.0	0.0	2/12/2025 20:30	2.5	114.4	0.1	6.8	12.4	0.0	8.0
2/12/2025 20:45	1.4	103.6	0.1	6.9	12.0	0.0	2/12/2025 20:45	2.4	106.2	0.0	6.8	12.6	0.0	8.0
2/12/2025 21:00	1.3	99.9	0.1	6.9	12.0	0.0	2/12/2025 21:00	2.3	104.9	0.0	6.8	12.6	0.0	8.0
2/12/2025 21:15	1.2	97.4	0.1	6.9	12.0	0.0	2/12/2025 21:15	2.3	104.1	0.0	6.8	12.6	0.0	8.0
2/12/2025 21:30	1.2	95.2	0.1	6.9	12.0	0.0	2/12/2025 21:30	2.2	104.4	0.0	6.8	12.6	0.0	8.0
2/12/2025 21:45	1.1	94.3	0.0			0.0	2/12/2025 21:45	2.2	104.4	0.0	6.8	12.6	0.0	8.0
2/12/2025 22:00	1.1	94.1	0.0		12.0	0.0	2/12/2025 22:00	2.2	104.4	0.0	6.8	12.6	0.0	8.0
2/12/2025 22:15	1.1	93.8	0.0	6.9	12.0	0.0	2/12/2025 22:15	2.2	104.7	0.0	6.8	12.6	0.0	8.0
2/12/2025 22:30	1.1	93.7	0.0	6.9	12.0	0.0	2/12/2025 22:30	2.2	104.7	0.0	6.8	12.6	0.0	8.0
2/12/2025 22:45	1.0	93.7	0.0	6.9	12.0	0.0	2/12/2025 22:45	2.2	104.8	0.0	6.8	12.6	0.0	8.0
2/12/2025 23:00	1.0	93.6	0.0	6.9	12.0	0.0	2/12/2025 23:00	2.1	104.8	0.0	6.8	12.6	0.0	8.0
2/12/2025 23:15	1.0	93.5	0.0	6.9	12.0	0.0	2/12/2025 23:15	2.1	105.1	0.0	6.8	12.5	0.0	8.0
2/12/2025 23:30	1.0	93.6	0.0	6.9	12.0	0.0	2/12/2025 23:30	2.1	105.2	0.0	6.8	12.6	0.0	8.0
2/12/2025 23:45	1.0	93.6	0.0	6.9	12.0	0.0	2/12/2025 23:45	2.1	105.0	0.0	6.8	12.6	0.0	8.0
2/13/2025 0:00	1.0	93.6	0.0	6.9	12.0	0.0	2/13/2025 0:00	2.1	105.2	0.0	6.8	12.6	0.0	8.0
2/13/2025 0:15	1.0	93.7	0.0	6.9	11.9	0.0	2/13/2025 0:15	2.1	105.3	0.0	6.8	12.6	0.0	8.0
2/13/2025 0:30	0.9	93.8	0.0	6.9	11.9	0.0	2/13/2025 0:30	2.0	105.5	0.0	6.8	12.5	0.0	8.0
2/13/2025 0:45	0.9	94.1	0.0	6.9	11.9	0.0	2/13/2025 0:45	2.0	105.2	0.0	6.8	12.6	0.0	8.0
2/13/2025 1:00	0.9	94.0	0.0	6.9	12.0	0.0	2/13/2025 1:00	2.0	105.1	0.0	6.8	12.5	0.0	8.0
2/13/2025 1:15	0.9	93.7	0.0	6.9	12.0	0.0	2/13/2025 1:15	2.0	105.1	0.0	6.8	12.6	0.0	8.0
2/13/2025 1:30	0.9	94.0	0.0	6.9	11.9	0.0	2/13/2025 1:30	2.0	105.0	0.0	6.8	12.6	0.0	8.0
2/13/2025 1:45	0.9	93.6	0.0	6.9	11.9	0.0	2/13/2025 1:45	1.9	104.7	0.0	6.8	12.6	0.0	8.0
2/13/2025 2:00	0.8	93.5	0.0	6.9	11.9	0.0	2/13/2025 2:00	1.9	104.5	0.0	6.8	12.6	0.0	8.0
2/13/2025 2:15	0.8	93.4	0.0	6.9	12.0	0.0	2/13/2025 2:15	1.9	104.7	0.0	6.8	12.6	0.0	8.0
2/13/2025 2:30	0.8	93.3	0.0	6.9	12.0	0.0	2/13/2025 2:30	1.9	104.2	0.0	6.8	12.6	0.0	8.0
2/13/2025 2:45	0.8	93.5	0.0	6.9	12.0	0.0	2/13/2025 2:45	1.9	104.2	0.0	6.8	12.6	0.0	8.0
2/13/2025 3:00	0.8	93.4	0.0	6.9	12.0	0.0	2/13/2025 3:00	1.9	104.3	0.0	6.8	12.6	0.0	8.0
2/13/2025 3:15	0.8	93.5	0.0	6.9	12.0	0.0	2/13/2025 3:15	1.9	103.8	0.0	6.8	12.6	0.0	8.0
2/13/2025 3:30	0.8	93.4	0.0	6.9	12.0	0.0	2/13/2025 3:30	1.9	103.5	0.0	6.9	12.6	0.0	8.0
2/13/2025 3:45	0.8	93.3	0.0	6.9	12.0	0.0	2/13/2025 3:45	1.9	103.9	0.0	6.9	12.6	0.0	8.0
2/13/2025 4:00	0.8	93.3	0.0	6.9	12.1	0.0	2/13/2025 4:00	1.9	103.7	0.0	6.9	12.6	0.0	8.0
2/13/2025 4:15	0.8	93.3	0.0	6.9	12.0	0.0	2/13/2025 4:15	1.8	103.1	0.0	6.9	12.6	0.0	8.0
2/13/2025 4:30	0.7	93.2	0.0	6.9	12.0	0.0	2/13/2025 4:30	1.8	103.1	0.0	6.9	12.6	0.0	8.0
2/13/2025 4:45	0.7	93.2	0.0	6.9	11.9	0.0	2/13/2025 4:45	1.8	103.8	0.0	6.9	12.6	0.0	8.0
2/13/2025 5:00	0.7	93.2	0.0	6.9	12.0	0.0	2/13/2025 5:00	1.8	103.5	0.0	6.9	12.6	0.0	8.0
2/13/2025 5:15	0.7	93.2	0.0	6.9	12.1	0.0	2/13/2025 5:15	1.7	102.9	0.0	6.9	12.7	0.0	8.0
2/13/2025 5:30	0.7	92.8	0.0	7.0	12.2	0.0	2/13/2025 5:30	1.7	102.6	0.0	6.9	12.7	0.0	8.0
2/13/2025 5:45	0.7	92.7	0.0	7.0	12.2	0.0	2/13/2025 5:45	1.7	102.3	0.0	6.9	12.7	0.0	8.0
2/13/2025 6:00	0.7	92.7	0.0	7.0	12.2	0.0	2/13/2025 6:00	1.7	100.8	0.0	6.9	12.8	0.0	8.0
2/13/2025 6:15	0.6	92.1	0.0	6.9	12.2	0.0	2/13/2025 6:15	1.7	100.6	0.0	7.0	12.8	0.0	8.0
2/13/2025 6:30	0.6	92.2	0.0	7.0	12.2	0.0	2/13/2025 6:30	1.7	100.0	0.0	7.0	12.8	0.0	8.0
2/13/2025 6:45	0.6	91.7	0.0	7.0	12.2	0.0	2/13/2025 6:45	1.6	100.0	0.0	7.0	12.8	0.0	8.0
2/13/2025 7:00	0.6	91.4	0.0	7.0	12.2	0.0	2/13/2025 7:00	1.6	99.7	0.0	7.0	12.8	0.0	8.0
2/13/2025 7:15	0.6	91.2	0.0	7.0	12.2	0.0	2/13/2025 7:15	1.6	99.8	0.0	7.0	12.8	0.0	8.0
2/13/2025 7:30	0.6	90.6	0.0	7.0	12.2	0.0	2/13/2025 7:30	1.6	100.0	0.0	7.0	12.8	0.0	8.0
2/13/2025 7:45	0.6	90.4	0.0	7.0	12.2	0.0	2/13/2025 7:45	1.6	100.6	0.0	7.0	12.8	0.0	8.0
2/13/2025 8:00	0.6	90.4	0.0	7.0	12.2	0.0	2/13/2025 8:00	1.6	99.5	0.0	7.0	12.8	0.0	8.0
2/13/2025 8:15	0.6	90.3	0.0	7.0	12.2	0.0	2/13/2025 8:15	1.6	98.4	0.0	7.0	12.8	0.0	8.0
2/13/2025 8:30	0.6	89.7	0.0	7.0	12.2	0.0	2/13/2025 8:30	1.6	99.4	0.0	7.0	12.8	0.0	8.0
2/13/2025 8:45	0.5	89.2	0.0	7.0	12.2	0.0	2/13/2025 8:45	1.6	101.1	0.0	7.0	12.7	0.0	8.0
2/13/2025 9:00	0.6	89.3	0.0	7.0	12.2	0.0	2/13/2025 9:00	1.7	105.1	0.0	6.9	12.7	0.0	8.0

2/13/2025 9:15	0.6	90.3	0.0	7.0	12.2	0.0	2/13/2025 9:15	1.7	107.8	0.0	6.9	12.6	0.0	8.0
2/13/2025 9:30	0.6	92.7	0.0	7.0	12.1	0.0	2/13/2025 9:30	1.8	111.9	0.1	6.9	12.5	0.0	8.0
2/13/2025 9:45	0.7	94.2	0.0	7.0	12.1	0.0	2/13/2025 9:45	1.8	113.8	0.1	6.9	12.5	0.0	8.0
2/13/2025 10:00	0.7	94.3	0.0	7.0	12.1	0.0	2/13/2025 10:00	1.8	114.5	0.1	6.9	12.5	0.7	8.7
2/13/2025 10:15	0.7	96.7	0.1	7.0	12.1	0.0	2/13/2025 10:15	1.8	110.6	0.1	6.9	12.6	0.0	8.0
2/13/2025 10:30	0.7	97.5	0.1	6.9	12.0	0.0	2/13/2025 10:30	1.8	109.6	0.0	6.9	12.7	0.0	8.0
2/13/2025 10:45	0.7	96.4	0.1	7.0	12.2	0.0	2/13/2025 10:45	1.9	111.4	0.1	6.9	12.8	0.0	8.0
2/13/2025 11:00	0.8	96.3	0.1	7.0	12.2	0.0	2/13/2025 11:00	2.0	113.1	0.1	6.9	12.8	0.0	8.0
2/13/2025 11:15	0.8	96.7	0.1	7.0	12.3	0.0	2/13/2025 11:15	2.0	112.3	0.1	6.9	12.9	0.0	8.0
2/13/2025 11:30	0.9	97.4	0.1	7.0	12.3	0.0	2/13/2025 11:30	2.1	114.8	0.1	6.9	12.9	0.0	8.0
2/13/2025 11:45	0.9	98.5	0.1	7.0	12.2	0.0	2/13/2025 11:45	2.2	117.0	0.1	6.9	12.8	0.0	8.0
2/13/2025 12:00	1.0	98.6	0.1	7.0	12.3	0.0	2/13/2025 12:00	2.2	113.3	0.1	6.9	12.8	0.0	8.0
2/13/2025 12:15	1.0	99.1	0.1	7.0	12.3	0.0	2/13/2025 12:15	2.2	107.3	0.0	6.9	12.9	0.0	8.0
2/13/2025 12:30	1.1	99.5	0.1	7.0	12.3	0.0	2/13/2025 12:30	2.3	104.7	0.0	6.9	13.0	0.0	8.0
2/13/2025 12:45	1.1	99.6	0.1	7.0	12.3	0.0	2/13/2025 12:45	2.4	103.8	0.0	6.9	13.0	0.0	8.0
2/13/2025 13:00	1.1	99.6	0.1	6.9	12.2	0.0	2/13/2025 13:00	2.5	103.7	0.0	6.9	13.0	0.0	8.0
2/13/2025 13:15	1.2	98.6	0.1	6.9	12.2	0.0	2/13/2025 13:15	2.6	104.2	0.0	6.9	12.9	0.0	8.0
2/13/2025 13:30	1.4	96.1	0.1	6.9	12.0	0.0	2/13/2025 13:30	2.7	103.9	0.0	6.9	12.9	0.0	8.0
2/13/2025 13:45	1.4	96.2	0.1	7.0	12.1	0.0	2/13/2025 13:45	2.8	103.8	0.0	6.9	12.9	0.0	8.0
2/13/2025 14:00	1.6	96.3	0.1	7.0	12.2	0.0	2/13/2025 14:00	2.9	103.7	0.0	6.9	13.0	0.0	8.0
2/13/2025 14:15	1.6	94.3	0.0	7.0	12.2	0.0	2/13/2025 14:15	2.9	103.5	0.0	6.9	13.0	0.0	8.0
2/13/2025 14:30	1.7	94.3	0.0	7.0	12.1	0.0	2/13/2025 14:30	3.0	103.1	0.0	6.9	13.0	0.0	8.0
2/13/2025 14:45	1.8	94.2	0.0	7.0	12.1	0.0	2/13/2025 14:45	3.1	103.2	0.0	6.9	13.0	0.0	8.0
2/13/2025 15:00	1.9	94.1	0.0	7.0	12.1	0.0	2/13/2025 15:00	3.2	103.2	0.0	6.9	13.0	0.0	8.0
2/13/2025 15:15	2.0	94.0	0.0	7.0	12.1	0.0	2/13/2025 15:15	3.2	103.4	0.0	6.9	13.0	0.0	8.0
2/13/2025 15:30	2.0	93.9	0.0	7.0	12.2	0.0	2/13/2025 15:30	3.3	103.2	0.0	6.9	13.0	0.0	8.0
2/13/2025 15:45	2.1	93.9	0.0	7.0	12.3	0.0	2/13/2025 15:45	3.3	103.1	0.0	7.0	13.0	0.0	8.0
2/13/2025 16:00	2.2	93.7	0.0	7.0	12.4	0.0	2/13/2025 16:00	3.3	101.3	0.0	7.0	13.1	0.0	8.0
2/13/2025 16:15	2.2	93.1	0.0	7.0	12.5	0.0	2/13/2025 16:15	3.3	99.6	0.0	7.0	13.1	0.0	8.0
2/13/2025 16:30	2.3	92.1	0.0	7.0	12.5	0.0	2/13/2025 16:30	3.3	99.2	0.0	7.0	13.1	0.0	8.0
2/13/2025 16:45	2.3	91.5	0.0	7.1	12.5	0.0	2/13/2025 16:45	3.3	98.6	0.0	7.0	13.1	0.0	8.0
2/13/2025 17:00	2.3	91.5	0.0	7.1	12.5	0.0	2/13/2025 17:00	3.3	98.1	0.0	7.1	13.1	0.0	8.0
2/13/2025 17:15	2.3	90.7	0.0	7.1	12.5	0.0	2/13/2025 17:15	3.3	97.8	0.0	7.1	13.1	0.0	8.0
2/13/2025 17:30	2.3	90.6	0.0	7.1	12.5	0.0	2/13/2025 17:30	3.2	97.5	0.0	7.1	13.1	0.0	8.0
2/13/2025 17:45	2.2	90.3	0.0	7.1	12.4	0.0	2/13/2025 17:45	3.2	97.3	0.0	7.1	13.1	0.0	8.0
2/13/2025 18:00	2.2	90.0	0.0	7.1	12.4	0.0	2/13/2025 18:00	3.1	96.9	0.0	7.1	13.1	0.0	8.0
2/13/2025 18:15	2.1	89.8	0.0	7.1	12.4	0.0	2/13/2025 18:15	3.2	99.1	0.0	7.1	13.1	0.0	8.0
2/13/2025 18:30	2.1	89.3	0.0	7.1	12.4	0.0	2/13/2025 18:30	3.2	100.7	0.0	7.1	13.0	0.0	8.0
2/13/2025 18:45	2.1	89.5	0.0	7.1	12.4	0.0	2/13/2025 18:45	3.2	101.1	0.0	7.0	12.9	0.0	8.0
2/13/2025 19:00	2.1	90.0	0.0	7.1	12.4	0.0	2/13/2025 19:00	3.2	100.9	0.0	7.0	12.9	0.0	8.0
2/13/2025 19:15	2.1	90.5	0.0	7.1	12.4	0.0	2/13/2025 19:15	3.1	99.8	0.0	7.1	12.9	0.0	8.0
2/13/2025 19:30	2.1	90.2	0.0	7.1	12.3	0.0	2/13/2025 19:30	3.1	103.2	0.0	7.0	12.8	0.0	8.0
2/13/2025 19:45	2.0	90.3	0.0	7.1	12.3	0.0	2/13/2025 19:45	3.1	104.5	0.0	7.0	12.7	0.0	8.0
2/13/2025 20:00	2.0	92.0	0.0	7.0	12.2	0.0	2/13/2025 20:00	3.1	106.7	0.0	7.0	12.6	0.0	8.0
2/13/2025 20:15	2.0	92.9	0.0	7.1	12.2	0.0	2/13/2025 20:15	3.1	111.2	0.1	7.0	12.5	0.0	8.0
2/13/2025 20:30	2.0	93.6	0.0	7.1	12.1	0.0	2/13/2025 20:30	3.2	120.3	0.1	6.9	12.3	0.0	8.0
2/13/2025 20:45	1.9	98.0	0.1	7.0	12.0	0.0	2/13/2025 20:45	3.2	127.6	0.1	6.9	12.1	0.0	8.0
2/13/2025 21:00	2.0	104.6	0.1	7.0	11.9	0.0	2/13/2025 21:00	3.2	127.5	0.1	6.8	12.1	0.0	8.0
2/13/2025 21:15	2.0	107.1	0.1	6.9	11.8	0.0	2/13/2025 21:15	3.1	122.2	0.1	6.8	12.1	0.0	8.0
2/13/2025 21:30	1.9	105.5	0.1	6.9	11.7	0.0	2/13/2025 21:30	3.0	114.0	0.1	6.8	12.1	0.0	8.0
2/13/2025 21:45	1.9	104.6	0.1	6.9	11.7	0.0	2/13/2025 21:45	2.8	107.0	0.0	6.8	12.2	0.0	8.0
2/13/2025 22:00	1.8	102.0	0.1	6.9	11.7	0.0	2/13/2025 22:00	2.7	104.9	0.0	6.8	12.2	0.0	8.0
2/13/2025 22:15	1.7	99.8	0.1	6.9	11.7	0.0	2/13/2025 22:15	2.7	104.8	0.0	6.8	12.2	0.0	8.0
2/13/2025 22:30	1.6	97.2	0.1	6.9	11.7	0.0	2/13/2025 22:30	2.6	104.4	0.0	6.8	12.2	0.0	8.0
2/13/2025 22:45	1.6	96.3	0.1	6.9	11.7	0.0	2/13/2025 22:45	2.6	104.6	0.0	6.8	12.2	0.0	8.0
2/13/2025 23:00	1.6	95.3	0.1	6.9	11.7	0.0	2/13/2025 23:00	2.6	104.2	0.0	6.8	12.2	0.0	8.0
2/13/2025 23:15	1.5	94.8	0.1	6.9	11.7	0.0	2/13/2025 23:15	2.6	104.5	0.0	6.8	12.3	0.0	8.0
2/13/2025 23:30	1.5	94.4	0.1	6.9	11.7	0.0	2/13/2025 23:30	2.6	105.0	0.0	6.8	12.3	0.0	8.0
2/13/2025 23:45	1.5	94.2	0.0	6.9	11.7	0.0	2/13/2025 23:45	2.6	104.9	0.0	6.8	12.2	0.0	8.0
2/14/2025 0:00	1.5	94.2	0.0	6.9	11.7	0.0	2/14/2025 0:00	2.6	105.2	0.0	6.8	12.2	0.0	8.0
2/14/2025 0:15	1.5	94.2	0.0	6.9	11.7	0.0	2/14/2025 0:15	2.6	104.8	0.0	6.8	12.3	0.0	8.0
2/14/2025 0:30	1.5	94.2	0.0	6.9	11.7	0.0	2/14/2025 0:30	2.6	104.9	0.0	6.8	12.2	0.0	8.0
2/14/2025 0:45	1.5	94.2	0.0	6.9	11.7	0.0	2/14/2025 0:45	2.6	105.0	0.0	6.8	12.3	0.0	8.0
2/14/2025 1:00	1.5	94.2	0.0	6.9	11.7	0.0	2/14/2025 1:00	2.6	104.9	0.0	6.8	12.3	0.0	8.0
2/14/2025 1:15	1.5	94.2	0.0	6.9	11.7	0.0	2/14/2025 1:15	2.6	104.8	0.0	6.8	12.3	0.0	8.0
2/14/2025 1:30	1.5	94.1	0.0	6.9	11.7	0.0	2/14/2025 1:30	2.6	104.3	0.0	6.8	12.3	0.0	8.0
2/14/2025 1:45	1.5	94.0	0.0	6.9	11.8	0.0	2/14/2025 1:45	2.6	104.3	0.0	6.8	12.3	0.0	8.0
2/14/2025 2:00	1.5	93.9	0.0	6.9	11.8	0.0	2/14/2025 2:00	2.6	104.4	0.0	6.8	12.3	0.0	8.0
2/14/2025 2:15	1.5	93.9	0.0	6.9	11.8	0.0	2/14/2025 2:15	2.6	103.6	0.0	6.8	12.3	0.0	8.0
2/14/2025 2:30	1.4	91.9	0.0	6.9	11.8	0.0	2/14/2025 2:30	2.5	103.7	0.0	6.8	12.3	0.0	8.0
2/14/2025 2:45	1.4	93.5	0.0	6.9	11.8	0.0	2/14/2025 2:45	2.5	103.6	0.0	6.8	12.3	0.0	8.0
2/14/2025 3:00	1.4	93.4	0.0	6.9	11.8	0.0	2/14/2025 3:00	2.5	103.1	0.0	6.8	12.3	0.0	8.0
2/14/2025 3:15	1.4	93.3	0.0	6.9	11.8	0.0	2/14/2025 3:15	2.5	103.2	0.0	6.8	12.3	0.0	8.0
2/14/2025 3:30	1.4	93.1	0.0	6.9	11.8	0.0	2/14/2025 3:30	2.5	102.8	0.0	6.8	12.3	0.0	8.0
2/14/2025 3:45	1.4	92.9	0.0	7.0	11.8	0.0	2/14/2025 3:45	2.5	102.5	0.0	6.8	12.3	0.0	8.0
2/14/2025 4:00	1.4	92.7	0.0	7.0	11.8	0.0	2/14/2025 4:00	2.5	102.4	0.0	6.8	12.3	0.0	8.0
2/14/2025 4:15	1.4	92.6	0.0	7.0	11.8	0.0	2/14/2025 4:15	2.5	102.5	0.0	6.8	12.3	0.0	8.0
2/14/2025 4:30	1.4	92.5	0.0	7.0	11.8	0.0	2/14/2025 4:30	2.5	102.3	0.0	6.8	12.4	0.0	8.0
2/14/2025 4:45	1.4	92.4	0.0	7.0	11.8	0.0	2/14/2025 4:45	2.5	102.0	0.0	6.8	12.4	0.0	8.0
2/14/2025 5:00	1.4	92.3	0.0	6.9	11.8	0.0	2/14/2025 5:00	2.5	102.2	0.0	6.8	12.4	0.0	8.0
2/14/2025 5:15	1.4	92.2	0.0	7.0	11.8	0.0	2/14/2025 5:15	2.5	102.0	0.0	6.8	12.4	0.0	8.0
2/14/2025 5:30	1.4	92.1	0.0	7.0	11.8	0.0	2/14/2025 5:30	2.4	101.3	0.0	6.9	12.4	0.0	8.0
2/14/2025 5:45	1.4	92.0	0.0	7.0	11.8	0.0	2/14/2025 5:45	2.4	101.2	0.0	6.9	12.5	0.0	8.0
2/14/2025 6:00	1.4	91.8	0.0	7.0	11.9	0.0	2/14/2025 6:00	2.4	100.6	0.0	6.9	12.5	0.0	8.0
2/14/2025 6:15	1.3	91.7	0.0	7.0	11.9	0.0	2/14/2025 6:15	2.4	99.2	0.0	6.9	12.5	0.0	8.0
2/14/2025 6:30	1.3	91.6	0.0	7.0	11.7	0.0	2/14/2025 6:30	2.3	98.8	0.0	6.9	12.6	0.0	8.0
2/14/2025 6:45	1.3	91.0	0.0	7.0	11.9	0.0	2/14/2025 6:45	2.3	98.7	0.0	7.0	12.6	0.0	8.0
2/14/2025 7:00	1.3	90.6	0.0	7.0	11.9	0.0	2/14/2025 7:00	2.3	98.6	0.0	7.0	12.6	0.0	8.0
2/14/2025 7:15	1.3	90.1	0.0	7.0	11.9	0.0	2/14/2025 7:15	2.3	98.4	0.0	7.0	12.6	0.0	8.0
2/14/2025 7:30	1.3	89.8	0.0	7.0	11.8	0.0	2/14/2025 7:30	2.3	98.2	0.0	7.0	12.6	0.0	8.0
2/14/2025 7:45	1.3	89.4	0.0	7.0	12.0	0.0	2/14/2025 7:45	2.3	100.0	0.0	6.9	12.5	0.0	8.0
2/14/2025 8:00	1.3	89.3	0.0	7.0	12.0	0.0	2/14/2025 8:00	2.3	99.3	0.0	6.9	12.5	0.0	8.0
2/14/2025 8:15	1.2	89.2	0.0	7.0	11.9	0.0	2/14/2025 8:15	2.3	98.7	0.0	6.9	12.6	0.0	8.0
2/14/2025 8:30	1.2	89.4	0.0	7.0	12.0	0.0	2/14/2025 8:30	2.3	97.9	0.0	7.0	12.6	0.0	8.0
2/14/2025 8:45	1.2	88.8	0.0	7.0	12.0	0.0	2/14/2025 8:45	2.3	97.3	0.0	7.0	12.6	0.0	8.0
2/14/2025 9:00	1.2	87.5	0.0	7.0	12.0	0.0	2/14/2025 9:00	2.3	102.5	0.0	6.9	12.5	0.0	8.0
2/14/2025 9:15	1.2	87.9	0.0	7.0	12.0	0.0	2/14/2025 9:15	2.3	103.6	0.0	6.9	12.4	0.0	8.0
2/14/2025 9:30	1.3	91.1	0.0	7.0	12.0	0.0	2/14/2025 9:30	2.3	106.6	0.0	6.9	12.4	0.0	8.0
2/14/2025 9:45	1.3	92.9	0.0	7.0	12.0	0.0	2/14/2025 9:45	2.3	103.8	0.0	6.9	12.5	0.0	8.0
2/14/2025 10:00	1.3	92.7	0.0	7.0	12.0	0.0	2/14/2025 10:00	2.4	110.5	0.1	6.9	12.4	0.0	8.0
2/14/2025 10:15	1.3	93.2	0.0	7.0	12.0	0.0	2/14/2025 10:15	2.5	113.1	0.1	6.9	12.4	0.0	8.0
2/14/2025 10:30	1.3	93.7	0.0		12.0	0.0	2/14/2025 10:30	2.5	112.8	0.1	6.9	12.5	0.0	8.0
2/14/2025 10:45	1.4	97.1	0.1	7.0	12.0	0.0	2/14/2025 10:45	2.5	107.4	0.0	6.9	12.7	0.0	8.0
2/14/2025 11:00	1.4	96.4	0.1	7.0	12.1	0.0	2/14/2025 11:00	2.5	110.0	0.0	6.9	12.7	0.0	8.0
2/14/2025 11:15	1.4	95.3	0.1	7.0	12.2	0.0	2/14/2025 11:15	2.6	115.7	0.1	6.9	12.7	0.0	8.0
2/14/2025 11:30	1.4	96.2	0.1	7.0	12.2	0.0	2/14/2025 11:30	2.6	113.8	0.1	6.9	12.7	0.0	8.0
2/14/2025 11:45	1.5	98.8	0.1		12.2	0.0	2/14/2025 11:45	2.7	115.4	0.1	6.9	12.7	0.0	8.0
2/14/2025 12:00	1.6	99.3	0.1	7.0	12.2	0.0	2/14/2025 12:00	2.8	112.6	0.1	6.9	12.8	0.0	8.0
2/14/2025 12:15	1.6	99.4	0.1	7.0	12.2	0.0	2/14/2025 12:15	2.8	109.9	0.0	6.9	12.8	0.0	8.0
2/14/2025 12:30	1.6	99.0	0.1	7.0	12.2	0.0	2/14/2025 12:30	2.8	103.3	0.0	6.9	12.9	0.0	8.0

2/14/2025 12:45	1.7	98.1	0.1	7.0	12.2	0.0	2/14/2025 12:45	2.8	102.3	0.0	6.9	12.9	0.0	8.0
2/14/2025 13:00	1.7	97.1	0.1	7.0	12.2	0.0	2/14/2025 13:00	2.9	102.0	0.0	6.9	12.9	0.0	8.0
2/14/2025 13:15	1.7	95.1	0.1	7.0	12.2	0.0	2/14/2025 13:15	3.0	102.2	0.0	6.9	12.9	0.0	8.0
2/14/2025 13:30	1.8	94.5	0.1	7.0	12.2	0.0	2/14/2025 13:30	3.1	102.4	0.0	6.9	12.9	0.0	8.0
2/14/2025 13:45	1.9	93.8	0.0	7.0	12.2	0.0	2/14/2025 13:45	3.2	102.6	0.0	6.9	12.9	0.0	8.0
2/14/2025 14:00	1.9	93.2	0.0	6.9	12.2	0.0	2/14/2025 14:00	3.3	102.5	0.0	6.9	12.9	0.0	8.0
2/14/2025 14:15	2.0	93.0	0.0	7.0	12.2	0.0	2/14/2025 14:15	3.3	102.2	0.0	6.9	12.9	0.0	8.0
2/14/2025 14:30	2.1	92.9	0.0	6.9	12.2	0.0	2/14/2025 14:30	3.4	102.2	0.0	6.9	12.9	0.0	8.0
2/14/2025 14:45	2.2	92.9	0.0		12.2	0.0	2/14/2025 14:45	3.5	102.2	0.0	6.9	12.9	0.0	8.0
2/14/2025 15:00	2.2	92.7	0.0	6.9	12.2	0.0	2/14/2025 15:00	3.6	102.1	0.0	6.9	13.0	0.0	8.0
2/14/2025 15:15	2.3	92.6	0.0	6.9	12.2	0.0	2/14/2025 15:15	3.7	102.0	0.0	6.9	13.0	0.0	8.0
2/14/2025 15:30	2.5	92.4	0.0	6.9	12.2	0.0	2/14/2025 15:30	3.7	102.4	0.0	6.9	12.9	0.0	8.0
2/14/2025 15:45	2.6	92.5	0.0		12.3	0.0	2/14/2025 15:45	3.8	102.4	0.0	6.9	12.9	0.0	8.0
2/14/2025 16:00	2.7	92.5	0.0	6.9	12.3	0.0	2/14/2025 16:00	3.8	102.3	0.0	6.9	12.9	0.0	8.0
2/14/2025 16:15	2.7	92.6	0.0		12.3	0.0	2/14/2025 16:15	3.8	102.4	0.0	6.9	12.9	0.0	8.0
2/14/2025 16:30	2.8	92.6	0.0		12.3	0.0	2/14/2025 16:30	3.8	102.6	0.0	6.9	12.9	0.0	8.0
2/14/2025 16:45	2.8	92.5	0.0		12.3	0.0	2/14/2025 16:45	3.8	102.4	0.0	6.9	12.9	0.0	8.0
2/14/2025 17:00	2.8	92.6	0.0		12.4	0.0	2/14/2025 17:00	3.7	102.2	0.0	6.9	12.9	0.0	8.0
2/14/2025 17:15	2.7	92.4	0.0		12.4	1.7	2/14/2025 17:15	3.7	102.5	0.0	6.9	12.9	0.0	8.0
2/14/2025 17:30	2.7	92.4	0.0		12.4	0.0	2/14/2025 17:30	3.6	102.5	0.0	6.9	12.9	0.0	8.0
2/14/2025 17:45	2.6	92.4	0.0	7.0	12.4	0.0	2/14/2025 17:45	3.5	101.9	0.0	7.0	12.9	0.0	8.0
2/14/2025 18:00	2.6	92.4	0.0		12.4	0.0	2/14/2025 18:00	3.5	99.1	0.0	7.0	13.0	0.0	8.0
2/14/2025 18:15	2.5	92.3	0.0		12.3	0.0	2/14/2025 18:15	3.4	98.2	0.0	7.0	13.0	0.0	8.0
2/14/2025 18:30	2.5	91.6	0.0		12.3	0.0	2/14/2025 18:30	3.4	98.2	0.0	7.0	13.0	0.0	8.0
2/14/2025 18:45	2.5	91.5	0.0		12.3	0.0	2/14/2025 18:45	3.3	98.0	0.0	7.0	12.9	0.0	8.0
2/14/2025 19:00	2.3	90.3	0.0		12.3	0.0	2/14/2025 19:00	3.2	97.2	0.0	7.0	12.9	0.0	8.0
2/14/2025 19:15	2.3	89.8	0.0		12.4	0.0	2/14/2025 19:15	3.2	97.0	0.0	7.0	12.9	0.0	8.0
2/14/2025 19:30	2.2	89.4	0.0		12.3	0.0	2/14/2025 19:30	3.2	97.1	0.0	7.0	12.9	0.0	8.0
2/14/2025 19:45	2.2	89.2	0.0		12.3	0.0	2/14/2025 19:45	3.2	98.3	0.0	7.0	12.8	0.0	8.0
2/14/2025 20:00	2.1	88.9	0.0		12.3	0.0	2/14/2025 20:00	3.1	98.0	0.0	7.0	12.8	0.0	8.0
2/14/2025 20:15	2.1	89.0	0.0		12.3	0.0	2/14/2025 20:15	3.1	97.6	0.0	7.0	12.7	0.0	8.0
2/14/2025 20:30	2.1	89.0	0.0		12.2	0.0	2/14/2025 20:30	3.1	101.0	0.0	7.0	12.7	0.0	8.0
2/14/2025 20:45	2.1	89.8	0.0		12.2	0.0	2/14/2025 20:45	3.4	120.0	0.1	6.9	12.3	0.0	8.0
2/14/2025 21:00	2.2	99.5	0.1		12.1	0.0	2/14/2025 21:00	3.4	126.0	0.1	6.9	12.2	0.0	8.0
2/14/2025 21:15	2.2	101.2	0.1		11.9	0.0	2/14/2025 21:15	3.5	128.5	0.1	6.8	12.1	0.0	8.0
2/14/2025 21:30	2.2	105.4	0.1		11.8	0.0	2/14/2025 21:30	3.4	122.5	0.1	6.8	12.2	0.0	8.0
2/14/2025 21:45	2.2	106.4	0.1		11.8	0.0	2/14/2025 21:45	3.3	116.8	0.1	6.8	12.2	0.0	8.0
2/14/2025 22:00	2.1	105.3	0.1		11.7	0.0	2/14/2025 22:00	3.1	109.8	0.0	6.8	12.3	0.0	8.0
2/14/2025 22:15	2.1	104.2	0.1		11.7	0.0	2/14/2025 22:15	3.1	107.4	0.0	6.8	12.3	0.0	8.0
2/14/2025 22:30	2.0	102.4	0.1		11.7	0.0	2/14/2025 22:30	3.0	105.6	0.0	6.8	12.4	0.0	8.0
2/14/2025 22:45	2.0	100.6	0.1	6.9	11.7	0.0	2/14/2025 22:45	3.0	105.5	0.0	6.8	12.4	0.0	8.0
2/14/2025 23:00	1.9	98.2	0.1	6.9	11.7	0.0	2/14/2025 23:00	3.0	105.3	0.0	6.8	12.4	0.0	8.0
2/14/2025 23:15	1.9	97.1	0.1		11.8	0.0	2/14/2025 23:15	2.9	105.0	0.0	6.8	12.4	0.0	8.0
2/14/2025 23:30	1.9	96.4	0.1	6.9	11.8	0.0	2/14/2025 23:30	2.9	105.0	0.0	6.8	12.4	0.0	8.0
2/14/2025 23:45	1.8	96.2	0.1		11.7	0.0	2/14/2025 23:45	2.9	104.9	0.0	6.8	12.4	0.0	8.0
2/15/2025 0:00	1.8	96.2	0.1	6.9	11.7	0.0	2/15/2025 0:00	2.9	104.4	0.0	6.8	12.4	0.0	8.0
2/15/2025 0:15	1.8	95.7	0.1	6.9	11.7	0.0	2/15/2025 0:15	2.9	104.2	0.0	6.8	12.4	0.0	8.0
2/15/2025 0:30	1.8	95.4	0.1	6.9	11.7	0.0	2/15/2025 0:30	2.9	104.5	0.0	6.8	12.4	0.0	8.0
2/15/2025 0:45	1.8	95.0	0.1	6.9	11.8	0.0	2/15/2025 0:45	2.9	104.7	0.0	6.8	12.4	0.0	8.0
2/15/2025 1:00	1.8	94.9	0.1	6.9	11.8	0.0	2/15/2025 1:00	2.8	104.6	0.0	6.8	12.5	0.0	8.0
2/15/2025 1:15	1.8	94.7	0.1	6.9	11.8	0.0	2/15/2025 1:15	2.8	104.2	0.0	6.8	12.5	0.0	8.0
2/15/2025 1:30	1.7	94.6	0.1	6.9	11.7	0.0	2/15/2025 1:30	2.8	104.3	0.0	6.8	12.5	0.0	8.0
2/15/2025 1:45	1.7	94.4	0.1	6.9	11.7	0.0	2/15/2025 1:45	2.8	103.8	0.0	6.8	12.5	0.0	8.0
2/15/2025 2:00	1.7	94.3	0.0	6.9	11.8	0.0	2/15/2025 2:00	2.8	103.5	0.0	6.8	12.5	0.0	8.0
2/15/2025 2:15	1.7	94.2	0.0	6.9	11.7	0.0	2/15/2025 2:15	2.8	103.5	0.0	6.8	12.5	0.0	8.0
2/15/2025 2:30	1.7	94.0	0.0	6.9	11.7	0.0	2/15/2025 2:30	2.8	103.0	0.0	6.8	12.5	0.0	8.0
2/15/2025 2:45	1.7	93.9	0.0	6.9	11.6	0.0	2/15/2025 2:45	2.8	102.9	0.0	6.8	12.5	0.0	8.0
2/15/2025 3:00	1.7	93.8	0.0			0.0	2/15/2025 3:00	2.8	102.9	0.0	6.8	12.5	0.0	8.0
2/15/2025 3:15	1.7	93.8	0.0		11.7	0.0	2/15/2025 3:15	2.8	102.7	0.0	6.8	12.5	0.0	8.0
2/15/2025 3:30	1.7	93.6	0.0			0.0	2/15/2025 3:30	2.7	102.7	0.0	6.8	12.5	0.0	8.0
2/15/2025 3:45	1.7	93.5	0.0		11.7	0.0	2/15/2025 3:45	2.7	102.9	0.0	6.8	12.5	0.0	8.0
2/15/2025 4:00	1.7	93.4	0.0	6.9	11.8	0.0	2/15/2025 4:00	2.7	102.4	0.0	6.8	12.5	0.0	8.0
2/15/2025 4:15	1.7	93.3	0.0	6.9	11.7	0.0	2/15/2025 4:15	2.7	102.1	0.0	6.8	12.6	0.0	8.0
2/15/2025 4:30	1.6	92.5	0.0		11.9	0.0	2/15/2025 4:30	2.7	102.6	0.0	6.8	12.5	0.0	8.0
2/15/2025 4:45	1.6	92.4	0.0			0.0	2/15/2025 4:45	2.7	102.5	0.0	6.8	12.6	0.0	8.0
2/15/2025 5:00	1.6		0.0			0.0	2/15/2025 5:00	2.7	102.1	0.0	6.8	12.6	0.0	8.0
2/15/2025 5:15	1.6						2/15/2025 5:15	2.7	101.8	0.0	6.8	12.6	0.0	8.0
2/15/2025 5:30	1.6		0.0			0.0	2/15/2025 5:30	2.7	102.2	0.0	6.8	12.6	0.0	8.0
2/15/2025 5:45	1.6	92.0	0.0			0.0	2/15/2025 5:45	2.7	102.0	0.0	6.8	12.6	0.0	8.0
2/15/2025 6:00	1.6		0.0			0.0	2/15/2025 6:00	2.7	101.4	0.0	6.8	12.6	0.0	8.0
2/15/2025 6:15	1.6		0.0			0.0	2/15/2025 6:15	2.7	100.7	0.0	6.9	12.7	0.0	8.0
2/15/2025 6:30	1.6	91.3	0.0			0.0	2/15/2025 6:30	2.6	100.7	0.0	6.9	12.7	0.0	8.0
2/15/2025 6:45	1.6	91.7	0.0			0.0	2/15/2025 6:45	2.6	100.1	0.0	6.9	12.7	0.0	8.0
2/15/2025 7:00	1.6						2/15/2025 7:00	2.6	99.2	0.0	6.9	12.7	0.0	8.0
2/15/2025 7:15	1.6	90.9	0.0		12.1	0.0	2/15/2025 7:15	2.6	98.3	0.0	6.9	12.8	0.0	8.0
2/15/2025 7:30	1.6	90.4	0.0		12.1	0.0	2/15/2025 7:30	2.6	98.1	0.0	6.9	12.8	0.0	8.0
2/15/2025 7:45	1.6	90.2	0.0			0.0	2/15/2025 7:45	2.6	98.0	0.0	6.9	12.8	0.0	8.0
2/15/2025 8:00	1.6	89.6	0.0			0.0	2/15/2025 8:00	2.6	97.8	0.0	6.9	12.8	0.0	8.0
2/15/2025 8:15	1.6	89.3	0.0			0.0	2/15/2025 8:15	2.6	99.1	0.0	6.9	12.7	0.0	8.0
2/15/2025 8:30	1.6		0.0			0.0	2/15/2025 8:30	2.6	100.1	0.0	6.9	12.7	0.0	8.0
2/15/2025 8:45	1.6	89.1	0.0			0.0	2/15/2025 8:45	2.7	99.5	0.0	6.9	12.7	0.0	8.0
2/15/2025 9:00	1.6		0.0			0.0	2/15/2025 9:00	2.6	97.6	0.0	6.9	12.7	0.0	8.0
2/15/2025 9:15	1.6		0.0			0.0	2/15/2025 9:15	2.7	95.8	0.0	6.9	12.8	0.0	8.0
2/15/2025 9:30	1.6	87.7	0.0			0.0	2/15/2025 9:30	2.8	102.2	0.0	6.9	12.7	0.0	8.0
2/15/2025 9:45	1.6	87.6	0.0			0.0	2/15/2025 9:45	2.9	110.8	0.1	6.9	12.5	0.0	8.0
2/15/2025 10:00	1.7	89.3	0.0		12.2	0.0	2/15/2025 10:00	2.9	111.6	0.1	6.9	12.5	0.0	8.0
2/15/2025 10:15	1.8	94.7	0.1			0.0	2/15/2025 10:15	3.0	110.6	0.1	6.9	12.6	0.0	8.0
2/15/2025 10:30	1.9						2/15/2025 10:30	3.0	109.9	0.0	6.9	12.6	0.0	8.0
2/15/2025 10:45							2/15/2025 10:45	3.0	108.4	0.0	6.9	12.7	0.0	8.0
2/15/2025 11:00	1.9					0.0	2/15/2025 11:00	3.0	110.6	0.1	6.9	12.8	0.0	8.0
2/15/2025 11:15	1.9		0.1			0.0	2/15/2025 11:15	3.0	111.7	0.1	6.9	12.8	0.0	8.0
2/15/2025 11:30	1.9	96.9	0.1			0.0	2/15/2025 11:30	3.2	120.1	0.1	6.9	12.7	0.0	8.0
2/15/2025 11:45	2.0	100.7	0.1		12.2	0.0	2/15/2025 11:45	3.2	120.7	0.1	6.8	12.6	0.0	8.0
2/15/2025 12:00	2.0	102.8	0.1		12.2	0.0	2/15/2025 12:00	3.2	114.5	0.1	6.9	12.8	0.0	8.0
2/15/2025 12:15	2.1	102.7	0.1			0.0	2/15/2025 12:15	3.1	108.0	0.0	6.9	12.9	0.0	8.0
2/15/2025 12:30	2.1	102.4	0.1			0.0	2/15/2025 12:30	3.1	104.3	0.0	6.9	13.0	0.0	8.0
2/15/2025 12:45	2.1	100.4	0.1			0.0	2/15/2025 12:45	3.1	103.0	0.0	6.9	13.0	0.0	8.0
2/15/2025 13:00	2.0		0.1			0.0	2/15/2025 13:00	3.1	102.7	0.0	6.9	13.0	0.0	8.0
2/15/2025 13:15	2.0	95.8	0.1			0.0	2/15/2025 13:15	3.1	102.8	0.0	6.9	13.0	0.0	8.0
2/15/2025 13:30	2.0	95.0	0.1			0.0	2/15/2025 13:30	3.1	103.1	0.0	6.9	13.0	0.0	8.0
2/15/2025 13:45	2.1	94.4	0.1		12.3	0.0	2/15/2025 13:45	3.2	103.2	0.0	6.8	13.0	0.0	8.0
2/15/2025 14:00	2.1	94.0	0.0			0.0	2/15/2025 14:00	3.2	103.3	0.0	6.9	13.0	0.0	8.0
2/15/2025 14:15	2.1	93.7	0.0			0.0	2/15/2025 14:15	3.2	103.1	0.0	6.9	13.0	0.0	8.0
2/15/2025 14:30							2/15/2025 14:30	3.3	103.3	0.0	6.9	13.0	0.0	8.0
2/15/2025 14:45							2/15/2025 14:45	3.3	103.2	0.0	6.9	13.0	0.0	8.0
2/15/2025 15:00	2.2	93.1	0.0		12.4	0.0	2/15/2025 15:00	3.3	103.2	0.0	6.9	13.0	0.0	8.0
2/15/2025 15:15							2/15/2025 15:15	3.3	103.0	0.0	6.9	13.0	0.0	8.0
2/15/2025 15:30	2.2	93.0	0.0			0.0	2/15/2025 15:30	3.3	103.0	0.0	6.9	13.0	0.0	8.0
2/15/2025 15:45	2.2	92.9	0.0			0.0	2/15/2025 15:45	3.3	103.0	0.0	6.9	13.0	0.0	8.0
2/15/2025 16:00	2.2	92.8	0.0		12.4	0.0	2/15/2025 16:00	3.3	103.2	0.0	6.9	13.0	0.0	8.0

2/15/2025 16:15	2.2		0.0		0.0	2/15/2025 16:15	3.3	103.2	0.0	6.9	13.1	0.0	8.0
2/15/2025 16:30						2/15/2025 16:30	3.3	103.5	0.0	6.9	13.1	0.0	8.0
2/15/2025 16:45	2.3		0.0		0.0	2/15/2025 16:45	3.3	103.0	0.0	6.9	13.1	0.0	8.0
2/15/2025 17:00	2.3	92.8	0.0		0.0	2/15/2025 17:00	3.3	102.7	0.0	6.9	13.1	0.0	8.0
2/15/2025 17:15	2.3	92.8	0.0		0.0	2/15/2025 17:15	3.3	102.7	0.0	6.9	13.0	0.0	8.0
2/15/2025 17:30	2.3					2/15/2025 17:30	3.3	103.0	0.0	6.9	13.0	0.0	8.0
2/15/2025 17:45	2.3	92.7	0.0		0.0	2/15/2025 17:45	3.3	103.3	0.0	6.9	12.9	0.0	8.0
2/15/2025 18:00	2.3	92.9	0.0		0.0	2/15/2025 18:00	3.3	103.6	0.0	6.9	12.9	0.0	8.0
2/15/2025 18:15	2.3	93.2	0.0	12.4	0.0	2/15/2025 18:15	3.3	103.4	0.0	6.9	12.9	0.0	8.0
2/15/2025 18:30	2.3	93.3	0.0	12.3	0.0	2/15/2025 18:30	3.3	104.0	0.0	6.9	12.9	0.0	8.0
2/15/2025 18:45	2.2	93.5	0.0		0.0	2/15/2025 18:45	3.3	103.4	0.0	6.9	12.9	0.0	8.0
2/15/2025 19:00	2.2	93.5	0.0		0.0	2/15/2025 19:00	3.3	103.6	0.0	6.9	12.9	0.0	8.0
2/15/2025 19:15	2.2	93.2	0.0		0.0	2/15/2025 19:15	3.3	105.1	0.0	6.9	12.8	0.0	8.0
2/15/2025 19:30	2.2	93.1	0.0		0.0	2/15/2025 19:30	3.2	103.9	0.0	6.9	12.8	0.0	8.0
2/15/2025 19:45	2.2	93.4	0.0		0.0	2/15/2025 19:45	3.2	101.0	0.0	6.9	12.8	0.0	8.0
2/15/2025 20:00	2.2	92.5	0.0		0.0	2/15/2025 20:00	3.1	98.2	0.0	7.0	12.9	0.0	8.0
2/15/2025 20:15	2.1	91.1	0.0		0.0	2/15/2025 20:15	3.1	98.0	0.0	7.0	12.8	0.0	8.0
2/15/2025 20:30						2/15/2025 20:30	3.2	103.4	0.0	7.0	12.7	0.0	8.0
2/15/2025 20:45	2.1	89.5	0.0	12.2	0.0	2/15/2025 20:45	3.2	103.0	0.0	6.9	12.7	0.0	8.0
2/15/2025 21:00						2/15/2025 21:00	3.2	99.4	0.0	7.0	12.7	0.0	8.0
2/15/2025 21:15	2.1		0.0		0.0	2/15/2025 21:15	3.2	99.6	0.0	7.0	12.7	0.0	8.0
2/15/2025 21:30	2.1	90.2	0.0		0.0	2/15/2025 21:30	3.4	121.4	0.1	6.9	12.3	0.0	8.0
2/15/2025 21:45	2.2	91.3	0.0	12.1	0.0	2/15/2025 21:45	3.6	124.9	0.1	6.8	12.2	0.0	8.0
2/15/2025 22:00	2.3	97.2	0.1	12.0	0.0	2/15/2025 22:00	3.5	117.8	0.1	6.8	12.3	0.0	8.0
2/15/2025 22:15	2.3		0.1		0.0	2/15/2025 22:15	3.4	112.7	0.1	6.8	12.4	0.0	8.0
2/15/2025 22:30	2.3				0.0	2/15/2025 22:30	3.4	113.8	0.1	6.8	12.3	0.0	8.0
2/15/2025 22:45	2.3	100.1	0.1	11.9	0.0	2/15/2025 22:45	3.3	109.1	0.0	6.8	12.3	0.0	8.0
2/15/2025 23:00	2.2		0.1		0.0	2/15/2025 23:00	3.3	106.5	0.0	6.8	12.3	0.0	8.0
2/15/2025 23:15	2.2	98.4	0.1		0.0	2/15/2025 23:15	3.2	105.5	0.0	6.8	12.4	0.0	8.0
2/15/2025 23:30	2.2	98.0	0.1	11.8	0.0	2/15/2025 23:30	3.2	105.1	0.0	6.8	12.4	0.0	8.0
2/15/2025 23:45	2.2				0.0	2/15/2025 23:45	3.2	105.0	0.0	6.8	12.4	0.0	8.0
2/16/2025 0:00	2.2	96.0	0.1	11.8	0.0	2/16/2025 0:00	3.2	104.6	0.0	6.8	12.4	0.0	8.0
2/16/2025 0:15	2.1	95.7	0.1		0.0	2/16/2025 0:15	3.2	104.5	0.0	6.8	12.4	0.0	8.0
2/16/2025 0:30	2.1	95.4	0.1		0.0	2/16/2025 0:30	3.2	104.6	0.0	6.8	12.4	0.0	8.0
2/16/2025 0:45	2.1	94.9	0.1	11.8	0.0	2/16/2025 0:45	3.2	104.4	0.0	6.8	12.4	0.0	8.0
2/16/2025 1:00	2.1	94.5	0.1		0.0	2/16/2025 1:00	3.2	104.1	0.0	6.8	12.4	0.0	8.0
2/16/2025 1:15	2.1	94.5	0.1		0.0	2/16/2025 1:15	3.2	103.6	0.0	6.8	12.4	0.0	8.0
2/16/2025 1:30	2.1	94.1	0.0		0.0	2/16/2025 1:30	3.2	103.6	0.0	6.8	12.4	0.0	8.0
2/16/2025 1:45	2.1	94.0	0.0	11.8	0.0	2/16/2025 1:45	3.2	103.5	0.0	6.8	12.4	0.0	8.0
2/16/2025 2:00	2.1	94.0	0.0	11.8	0.0	2/16/2025 2:00	3.2	103.1	0.0	6.8	12.4	0.0	8.0
2/16/2025 2:15	2.1	93.9	0.0	11.8	0.0	2/16/2025 2:15	3.2	103.1	0.0	6.8	12.4	0.0	8.0
2/16/2025 2:30	2.1	93.7	0.0		0.0	2/16/2025 2:30	3.2	102.7	0.0	6.8	12.4	0.0	8.0
2/16/2025 2:45	2.1	93.5	0.0		0.0	2/16/2025 2:45	3.2	102.9	0.0	6.8	12.4	0.0	8.0
2/16/2025 3:00	2.1		0.0		0.0	2/16/2025 3:00	3.1	102.4	0.0	6.8	12.4	0.0	8.0
2/16/2025 3:15	2.1	93.1	0.0		0.0	2/16/2025 3:15	3.1	102.2	0.0	6.8	12.4	0.0	8.0
2/16/2025 3:30	2.1	93.0	0.0		0.0	2/16/2025 3:30	3.1	102.1	0.0	6.8	12.4	0.0	8.0
2/16/2025 3:45	2.0	92.8	0.0		0.0	2/16/2025 3:45	3.1	101.7	0.0	6.8	12.4	0.0	8.0
2/16/2025 4:00	2.0	92.7	0.0		0.0	2/16/2025 4:00	3.1	101.3	0.0	6.8	12.4	0.0	8.0
2/16/2025 4:15	2.0	92.6	0.0		0.0	2/16/2025 4:15	3.1	101.7	0.0	6.8	12.4	0.0	8.0
2/16/2025 4:30	2.0		0.0		0.0	2/16/2025 4:30	3.1	101.6	0.0	6.8	12.3	0.0	8.0
2/16/2025 4:45	2.0	92.4	0.0		0.0	2/16/2025 4:45	3.1	101.3	0.0	6.8	12.4	0.0	8.0
2/16/2025 5:00	2.0	92.3	0.0	11.6	0.0	2/16/2025 5:00	3.1	101.5	0.0	6.8	12.4	0.0	8.0
2/16/2025 5:15	2.0	92.3	0.0	11.7	0.0	2/16/2025 5:15	3.1	101.9	0.0	6.8	12.4	0.0	8.0
2/16/2025 5:30	2.0		0.0		0.0	2/16/2025 5:30	3.1	101.7	0.0	6.8	12.4	0.0	8.0
2/16/2025 5:45	2.0	92.2	0.0		0.0	2/16/2025 5:45	3.1	101.5	0.0	6.8	12.4	0.0	8.0
2/16/2025 6:00	2.0	92.1	0.0		0.0	2/16/2025 6:00	3.1	100.9	0.0	6.8	12.4	0.0	8.0
2/16/2025 6:15	2.0				0.0	2/16/2025 6:15	3.1	100.7	0.0	6.9	12.5	0.0	8.0
2/16/2025 6:30	2.0				0.0	2/16/2025 6:30	3.0	100.8	0.0	6.9	12.5	0.0	8.0
2/16/2025 6:45	2.0				0.0	2/16/2025 6:45	3.0	99.5	0.0	6.9	12.5	0.0	8.0
2/16/2025 7:00	2.0		0.0		0.0	2/16/2025 7:00	3.0	98.5	0.0	6.9	12.6	0.0	8.0
2/16/2025 7:15	2.0	91.4	0.0		0.0	2/16/2025 7:15	3.0	98.3	0.0	6.9	12.5	0.0	8.0
2/16/2025 7:30	2.0		0.0		0.0	2/16/2025 7:30	3.0	98.0	0.0	6.9	12.6	0.0	8.0
2/16/2025 7:45	2.0	90.9	0.0		0.0	2/16/2025 7:45	3.0	97.8	0.0	6.9	12.6	0.0	8.0
2/16/2025 8:00	2.0				0.0	2/16/2025 8:00	3.0	97.7	0.0	6.9	12.6	0.0	8.0
2/16/2025 8:15	2.0					2/16/2025 8:15	3.0	97.5	0.0	6.9	12.6	0.0	8.0
2/16/2025 8:30	2.0	89.9	0.0		0.0	2/16/2025 8:30	3.0	97.8	0.0	6.9	12.6	0.0	8.0
2/16/2025 8:45						2/16/2025 8:45	3.0	99.1	0.0	6.9	12.5	0.0	8.0
2/16/2025 9:00	2.0				0.0	2/16/2025 9:00	3.0	99.1	0.0	6.9	12.5	0.0	8.0
2/16/2025 9:15	2.0	90.6	0.0		0.0	2/16/2025 9:15	3.0	97.4	0.0	6.9	12.5	0.0	8.0
2/16/2025 9:30	2.0	90.8	0.0	12.0	0.0	2/16/2025 9:30	3.0	96.3	0.0	6.9	12.6	0.0	8.0
2/16/2025 9:45	2.0	89.5	0.0		0.0	2/16/2025 9:45	3.1	100.0	0.0	6.9	12.5	0.0	8.0
2/16/2025 10:00	2.0	89.1	0.0		0.0	2/16/2025 10:00	3.2	102.2	0.0	6.9	12.5	0.0	8.0
2/16/2025 10:15	2.1	91.8	0.0	12.0	0.0	2/16/2025 10:15	3.3	107.4	0.0	6.9	12.4	0.0	8.0
2/16/2025 10:30	2.2	93.8	0.0		0.0	2/16/2025 10:30	3.3	106.8	0.0	6.9	12.4	0.0	8.0
2/16/2025 10:45	2.2		0.1		0.0	2/16/2025 10:45	3.4	113.1	0.1	6.9	12.4	0.0	8.0
2/16/2025 11:00	2.3	96.2	0.1		0.0	2/16/2025 11:00	3.5	116.0	0.1	6.9	12.4	0.0	8.0
2/16/2025 11:15	2.3	98.4	0.1		0.0	2/16/2025 11:15	3.5	111.1	0.1	6.9	12.5	0.0	8.0
2/16/2025 11:30	2.4	100.0	0.1		0.0	2/16/2025 11:30	3.5	106.3	0.0	6.9	12.7	0.0	8.0
2/16/2025 11:45	2.4	99.1	0.1	12.0	0.0	2/16/2025 11:45	3.5	107.1	0.0	6.9	12.8	0.0	8.0
2/16/2025 12:00	2.4	96.4	0.1		0.0	2/16/2025 12:00	3.7	117.2	0.1	6.9	12.6	0.0	8.0
2/16/2025 12:15	2.5	98.1	0.1		0.0	2/16/2025 12:15	3.8	122.1	0.1	6.9	12.6	0.0	8.0
2/16/2025 12:30	2.6	100.5	0.1		0.0	2/16/2025 12:30	3.8	116.7	0.1	6.9	12.7	0.0	8.0
2/16/2025 12:45	2.7	103.4	0.1		0.0	2/16/2025 12:45	3.7	110.3	0.1	6.9	12.7	0.0	8.0
2/16/2025 13:00	2.7	103.3	0.1		3.1	2/16/2025 13:00	3.7	104.5	0.0	6.9	12.9	0.0	8.0
2/16/2025 13:15	2.7				0.0	2/16/2025 13:15	3.7	102.5	0.0	6.9	12.9	0.0	8.0
2/16/2025 13:30	2.7	100.9	0.1		0.0	2/16/2025 13:30	3.7	102.3	0.0	6.9	12.9	0.0	8.0
2/16/2025 13:45	2.7	99.9	0.1		0.0	2/16/2025 13:45	3.7	102.6	0.0	6.9	12.9	0.0	8.0
2/16/2025 14:00	2.7	99.1	0.1	12.1	0.0	2/16/2025 14:00	3.8	102.7	0.0	6.9	12.9	0.0	8.0
2/16/2025 14:15	2.7		0.1		0.0	2/16/2025 14:15	3.8	102.7	0.0	6.9	12.9	0.0	8.0
2/16/2025 14:30	2.8	97.2	0.1		0.0	2/16/2025 14:30	3.9	102.5	0.0	6.9	12.9	0.0	8.0
2/16/2025 14:45	2.8	96.8	0.1		0.0	2/16/2025 14:45	3.9	102.9	0.0	6.8	12.9	0.0	8.0
2/16/2025 15:00	2.9	96.5	0.1		0.0	2/16/2025 15:00	4.0	102.9	0.0	6.9	12.9	0.0	8.0
2/16/2025 15:15	2.9	96.1	0.1		0.0	2/16/2025 15:15	4.0	102.7	0.0	6.9	12.9	0.0	8.0
2/16/2025 15:30	2.9	95.7	0.1		0.0	2/16/2025 15:30	4.1	103.3	0.0	6.9	12.9	0.0	8.0
2/16/2025 15:45	3.0		0.1		0.0	2/16/2025 15:45	4.1	103.4	0.0	6.9	12.9	0.0	8.0
2/16/2025 16:00	3.0		0.1		0.0	2/16/2025 16:00	4.1	103.0	0.0	6.9	12.9	0.0	8.0
2/16/2025 16:15	3.1	95.1	0.1		0.0	2/16/2025 16:15	4.2	103.1	0.0	6.9	12.9	0.0	8.0
2/16/2025 16:30	3.1	95.0	0.1		0.0	2/16/2025 16:30	4.2	103.0	0.0	6.9	12.9	0.0	8.0
2/16/2025 16:45	3.2	94.7	0.1		0.0	2/16/2025 16:45	4.2	103.1	0.0	6.9	12.9	0.0	8.0
2/16/2025 17:00	3.2				0.0	2/16/2025 17:00	4.2	103.3	0.0	6.9	12.9	0.0	8.0
2/16/2025 17:15	3.2	94.3	0.0		0.0	2/16/2025 17:15	4.2	103.4	0.0	6.9	12.8	0.0	8.0
2/16/2025 17:30	3.2		0.0		0.0	2/16/2025 17:30	4.2	103.3	0.0	6.9	12.8	0.0	8.0
2/16/2025 17:45	3.2	94.1	0.0	12.0	0.0	2/16/2025 17:45	4.2	103.8	0.0	6.9	12.8	0.0	8.0
2/16/2025 18:00	3.2		0.0		0.0	2/16/2025 18:00	4.2	103.6	0.0	6.9	12.8	0.0	8.0
2/16/2025 18:15	3.2				0.0	2/16/2025 18:15	4.2	104.0	0.0	6.9	12.7	0.0	8.0
2/16/2025 18:30	3.2	93.7	0.0		0.0	2/16/2025 18:30	4.1	103.6	0.0	6.9	12.7	0.0	8.0
2/16/2025 18:45	3.2					2/16/2025 18:45	4.1	103.7	0.0	6.9	12.6	0.0	8.0
2/16/2025 19:00	3.1	93.7	0.0		0.0	2/16/2025 19:00	4.1	103.6	0.0	6.9	12.6	0.0	8.0
2/16/2025 19:15	3.0				0.0	2/16/2025 19:15	4.1	103.9	0.0	6.9	12.5	0.0	8.0
2/16/2025 19:30	3.0		0.0		0.0	2/16/2025 19:30	4.0	104.4	0.0	6.9	12.5	0.0	8.0

2/16/2025 19:45	3.0	93.9	0.0			0.0	2/16/2025 19:45	4.0	104.2	0.0	6.9	12.5	0.0	8.0
2/16/2025 20:00	2.9	93.9	0.0			0.0	2/16/2025 20:00	3.9	101.2	0.0	6.9	12.5	0.0	8.0
2/16/2025 20:15	2.9	93.3	0.0		11.9	0.0	2/16/2025 20:15	3.8	99.8	0.0	6.9	12.5	0.0	8.0
2/16/2025 20:30	2.9	92.3	0.0			0.0	2/16/2025 20:30	3.8	99.1	0.0	7.0	12.5	0.0	8.0
2/16/2025 20:45	2.8					0.0	2/16/2025 20:45	3.8	99.0	0.0	7.0	12.5	0.0	8.0
2/16/2025 21:00	2.8	91.6	0.0		11.9	0.0	2/16/2025 21:00	3.7	98.1	0.0	7.0	12.5	0.0	8.0
2/16/2025 21:15	2.7	90.3	0.0			0.0	2/16/2025 21:15	3.7	97.7	0.0	7.0	12.5	0.0	8.0
2/16/2025 21:30	2.7					0.0	2/16/2025 21:30	3.7	97.6	0.0	7.0	12.5	0.0	8.0
2/16/2025 21:45	2.7	89.9	0.0			0.0	2/16/2025 21:45	3.7	99.2	0.0	7.0	12.4	0.0	8.0
2/16/2025 22:00	2.7	89.8	0.0			0.0	2/16/2025 22:00	3.7	97.8	0.0	7.0	12.4	0.0	8.0
2/16/2025 22:15	2.7					0.0	2/16/2025 22:15	3.7	102.8	0.0	6.9	12.3	0.0	8.0
2/16/2025 22:30	2.7	90.5	0.0		11.8	0.0	2/16/2025 22:30	4.0	125.1	0.1	6.8	12.0	0.0	8.0
2/16/2025 22:45							2/16/2025 22:45	4.1	126.5	0.1	6.8	11.9	0.0	8.0
2/16/2025 23:00	2.9						2/16/2025 23:00	4.0	125.0	0.1	6.8	11.9	0.0	8.0
2/16/2025 23:15							2/16/2025 23:15	4.0	121.5	0.1	6.8	11.9	0.0	8.0
2/16/2025 23:30	2.9					0.0	2/16/2025 23:30	4.0	117.6	0.1	6.8	11.9	0.0	8.0
2/16/2025 23:45	2.8						2/16/2025 23:45	3.9	111.9	0.1	6.8	11.9	0.0	8.0

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			VA25A3044-001			
	Date Sampled			11-Feb-2025			
	Time Sampled			10:20:00 AM			
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	7.2		If natural pH < 6.5, no statisticaly significant decrease from background. No restriction in increase except in areas with unique flora or fauna. Unrestricted change permitted within range of 6.5 to 9.0. If natural pH > 9.0, no statistically significant increase from background. Refer to BC Water Quality Guidelines for more information.	Unrestricted change within this range (for protection of mollusc embryo development).
Temperature (field)	°C	Multiple guidelines dependent on water use and species, see notes: Short-term daily temperature = 15°C, or Max +/- 1°C from optimum temperature range for most sensitive salmonid species present, or Short-term daily temperature is 19°C, or Max +/- from BKG 1°C	Max +/- from BKG 1°C	9		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	-	-	148			
Turbidity (field)	NTU	Varies with background, see note Guideline = 8.00	Varies with background, see note Guideline = 9.5	0.00		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	-	-	54.5			
Total Dissolved Solids	mg/L	-	-	84			
Total Suspended Solids	mg/L	Varies with background, see note Guideline = 28.0	Varies with background, see note Guideline = 30.2	< 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	-	-	0.66			
Total Phenols	mg/L	0.05	-	< 0.0010		Interim guideline	Interim guideline
Total Alkalinity ($CaCO_3$)	mg/L	-	-	52.1			
Total Sulfide (as S)	mg/L	-	-	< 0.0015			
Total Sulfide (un-ionized as H_2S)	mg/L	-	-	< 0.0015			
Total Sulfide (as H_2S)	mg/L	-	-	< 0.0016			
Anions and Nutrients							
Ammonia	mg/L ammonia-N	Varies with pH and temperature. See note. Guideline = 17.8	Varies with pH and temperature. See note. Guideline = 83	0.008		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	6.79			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 = 1.090	1.5	0.193		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	-	0.0177			
Nitrite (as N)	mg/L	Varies with chloride. Table 27B, see note. Guideline = 0.08	-	< 0.0010		Varies with chloride. Refer to Table 27B in BC WQG for guideline values.	
Total Nitrogen	mg/L	-	-	0.101			
Total Phosphorous	mg/L	-	-	0.0241			
Sulfate (as SO_4)	mg/L	-	-	5.68			
Total Metals							
Aluminum (Al)-Total	mg/L	-	-	0.0283			
Antimony (Sb)-Total	mg/L	0.25	-	< 0.00010			
Arsenic (As)-Total	mg/L	-	-	0.0007			
Barium (Ba)-Total	mg/L	-	-	0.00361			
Beryllium (Be)-Total	mg/L	-	-	< 0.000100			
Bismuth (Bi)-Total	mg/L	-	-	< 0.000050			
Boron (B)-Total	mg/L	-	-	0.016			
Cadmium (Cd)-Total	mg/L	-	-	< 0.0000200			
Calcium (Ca)-Total	mg/L	-	-	20.3			
Cesium (Cs)-Total	mg/L	-	-	0.000012			
Chromium (Cr) - Total	mg/L	-	-	< 0.00050			
Chromium (Cr(III))-Total	mg/L	-	-	< 0.00050			
Chromium (Cr(VI))-Total	mg/L	-	-	< 0.00050			
Cobalt (Co)-Total	mg/L	0.11	-	< 0.00010			
Copper (Cu)-Total	mg/L	-	0.003	< 0.00050			
Iron (Fe)-Total	mg/L	1	-	< 0.010			
Lead (Pb)-Total	mg/L		0.14	0.000076			
Lithium (Li)-Total	mg/L	-	-	0.0027			
Magnesium (Mg)-Total	mg/L	-	-	0.924			
Manganese (Mn)-Total	mg/L	Varies with hardness Guideline = 1.141	-	0.00664		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	-	0.021			
Nickel (Ni)-Total	mg/L	-	-	< 0.00050			
Potassium (K)-Total	mg/L	-	-	1.37			
Rubidium (Rb)-Total	mg/L	-	-	0.00178			
Selenium (Se)-Total	mg/L	-	-	0.000066			
Silicon (Si)-Total	mg/L	-	-	5.09			
Silver (Ag)-Total	mg/L	Varies with hardness, see note Guideline = 0.0001	0.003	0.000027		Varies with hardness Guideline ranges: Hardness ≤ 100: 0.0001 Hardness > 100: 0.003	
Sodium (Na)-Total	mg/L	-	-	4.66			
Strontium (Sr)-Total	mg/L	-	-	0.0402			
Sulfur (S)-Total	mg/L	-	-	1.79			
Tellurium (Te)-Total	mg/L	-	-	< 0.00020			
Thallium (Tl)-Total	mg/L	-	-	< 0.000010			
Thorium (Th)-Total	mg/L	-	-	< 0.00010			
Tin (Sn)-Total	mg/L	-	-	< 0.00010			
Titanium (Ti)-Total	mg/L	-	-	< 0.00030			
Tungsten (W)-Total	mg/L	-	-	0.00024			
Uranium (U)-Total	mg/L	0.0165	-	0.000654			
Vanadium (V)-Total	mg/L	-	-	< 0.00050			
Zinc (Zn)-Total	mg/L	-	0.055	0.0075			
Zirconium (Zr)-Total	mg/L	-	-	< 0.00020			
Dissolved Metals							
Aluminum (Al)-Dissolved	mg/L	-	-	0.0274			
Antimony (Sb)-Dissolved	mg/L	-	-	< 0.00010			
Arsenic (As)-Dissolved	mg/L	-	-	0.0007			
Barium (Ba)-Dissolved	mg/L	-	-	0.00364			
Beryllium (Be)-Dissolved	mg/L	-	-	< 0.000100			
Bismuth (Bi)-Dissolved	mg/L	-	-	< 0.000050			
Boron (B)-Dissolved	mg/L	-	-	0.015			
Cadmium (Cd)-Dissolved	mg/L	Varies with hardness, see note Guideline = 0.000315	-	0.0000116		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	-	-	20.4			
Cesium (Cs)-Dissolved	mg/L	-	-	0.000013			
Chromium (Cr)-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 = 0.0009	-	0.00045		Guideline varies with other parameters and is calculated using BC BLM software. Simplified model: Temperature, pH, DOC and hardness Detailed model: Temperature, pH, DOC, humic acid content, total calcium, total magnesium, total sodium, total potassium, sulphate, chloride, and alkalinity Guideline calculated using values for parameters above taken at the specific site on each sampling date	
Iron (Fe)-Dissolved	mg/L	0.35	-	< 0.010			
Lead (Pb)-Dissolved	mg/L	-	-	0.000066			
Lithium (Li)-Dissolved	mg/L	-	-	0.0027			
Magnesium (Mg)-Dissolved	mg/L	-	-	0.948			
Manganese (Mn)-Dissolved	mg/L	-	-	0.0067			
Mercury (Hg)-Dissolved	mg/L	-	-	< 0.000005			
Molybdenum (Mo)-Dissolved	mg/L	-	-	0.0201			
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	-	-	0.394			
Potassium (K)-Dissolved	mg/L	-	-	1.29		0.0187	
Rubidium (Rb)-Dissolved	mg/L	-	-	0.00183			
Selenium (Se)-Dissolved	mg/L	-	-	< 0.000050			
Silicon (Si)-Dissolved	mg/L	-	-	5.07			
Silver (Ag)-Dissolved	mg/L	-	-	0.000018			
Sodium (Na)-Dissolved	mg/L	-	-	5.01			
Strontium (Sr)-Dissolved	mg/L	-	-	0.0396			
Sulfur (S)-Dissolved	mg/L	-	-	1.39			
Tellurium (Te)-Dissolved	mg/L	-	-	< 0.00020			
Thallium (Tl)-Dissolved	mg/L	-	-	< 0.000010			
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	-	-	0.00023			
Uranium (U)-Dissolved	mg/L	-	-	0.000682			
Vanadium (V)-Dissolved	mg/L	-	-	< 0.00050			
Zinc (Zn)-Dissolved	mg/L	Varies with DOC and hardness Guideline = 0.021	-	0.0068		Guideline varies with DOC and hardness. Guideline is calculated using the following formula: Guideline = (EXP((0.833 * (LN(hardness))) + (0.24 * (LN(DOC))) + 0.526)/2/1000) If hardness or DOC is below the hardness or DOC range, the minimum hardness or DOC will be applied in the calculation.	
Zirconium (Zr)-Dissolved	mg/L	-	-	< 0.00020			
Volatile Organic Compounds							
Chlorobenzene	µg/L	-	-	< 0.50			
Chloromethane	µg/L	-	-	< 5.0			
Dichlorobenzene, 1,2-	µg/L	-	-	< 0.50			
Dichlorobenzene, 1,3-	µg/L	-	-	< 0.50			
Dichlorobenzene, 1,4-	µg/L	-	-	< 0.50			
Dichloropropane, 1,2-	µg/L	-	-	< 0.50			
Dichloropropylene, cis+trans-1,3-	µg/L	-	-	< 0.75			
Dichloropropylene, cis-1,3-	µg/L	-	-	< 0.50			
Tetrachloroethane, 1,1,1,2-	µg/L	-	-	< 0.50			
Tetrachloroethane, 1,1,2,2-	µg/L	-	-	< 0.20			
Trichloroethane, 1,1,2-	µg/L	-	-	< 0.50			
Trichlorofluoromethane	µg/L	-	-	< 0.50			
Carbon tetrachloride	µg/L	-	-	< 0.50			
Chloroethane	µg/L	-	-	< 0.50			
Dichloroethane, 1,1-	µg/L	-	-	< 0.50			
Dichloroethane, 1,2-	µg/L	-	-	< 0.50			
Dichloroethylene, 1,1-	µg/L	-	-	< 0.50			
Dichloroethylene, cis-1,2-	µg/L	-	-	< 0.50			
Dichloroethylene, trans-1,2-	µg/L	-	-	< 0.50			
Dichloromethane	µg/L	-	-	< 1.0			
Dichloropropylene, trans-1,3-	µg/L	-	-	< 0.50			
Tetrachloroethylene	µg/L	-	-	< 0.50			
Trichloroethane, 1,1,1-	µg/L	-	-	< 0.50			
Trichloroethylene	µg/L	-	-	< 0.50			
Vinyl chloride	µg/L	-	-	< 0.40			
Benzene	µg/L	-	-	< 0.50			
Ethylbenzene	µg/L	-	-	< 0.50			
Methyl-tert-butyl ether [MTBE]	µg/L	3400	440	< 0.50			
Styrene	µg/L	-	-	< 0.50			
Toluene	µg/L	-	-	< 0.40			
Xylene, m+p-	µg/L	-	-	< 0.40			
Xylene, o-	µg/L	-	-	< 0.30			
Xylenes, total	µg/L	-	-	< 0.50			
Bromodichloromethane	µg/L	-	-	< 0.50			
Bromoform	µg/L	-	-	< 0.50			
Chloroform	µg/L	-	-	< 0.50			
Dibromochloromethane	µg/L	-	-	< 0.50			
Hydrocarbons							
EPH (C10-C19)	µg/L	-	-	< 250			
EPH (C19-C32)	µg/L	-	-	< 250			
VHw (C6-C10)	µg/L	-	-	< 100			
LEPHw	µg/L	-	-	< 250			
VPHw	µg/L	-	-	< 100			
HEPHw	µg/L	-	-	< 250			
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	µg/L	-	-	< 0.010			
Acenaphthylene	µg/L	-	-	< 0.010			
Acridine	µg/L	-	-	< 0.010			
Anthracene	µg/L	0.1	-	< 0.010			
Benz(a)anthracene	µg/L	0.1	-	< 0.010			
Benzo(a)pyrene	µg/L	-	-	< 0.0050			
Benzo(b+j)fluoranthene	µg/L	-	-	< 0.010			
Benzo(b+j+k)fluoranthene	µg/L	-	-	< 0.015			
Benzo(g,h,i)perylene	µg/L	-	-	< 0.010			
Benzo(k)fluoranthene	µg/L	-	-	< 0.010			
Chrysene	µg/L	-	-	< 0.010			
Dibenz(a,h)anthracene	µg/L	-	-	< 0.0050			
Fluoranthene	µg/L	0.2	-	< 0.010		Guideline is for phototoxic effects	
Fluorene	µg/L	-	-	< 0.010			
Indeno(1,2,3-c,d)pyrene	µg/L	-	-	< 0.010			
Methylnaphthalene, 1-	µg/L	-	-	0.012			
Methylnaphthalene, 2-	µg/L	-	-	0.011			
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	7.2	7.2
Temperature (field)	°C	Field temperature taken using handheld meters during sampling used in calculations	9	9
Turbidity (field)	NTU	Field turbidity taken using handheld meters during sampling used in calculations	0.00	0.00
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	54.5	54.5
Dissolved Organic Carbon (DOC)	mg/L	Laboratory tested dissolved organic carbon tested at the lab used in guideline calculations	0.66	0.66
Total Alkalinity ($CaCO_3$)	mg/L	Laboratory tested total alkalinity used in calculations	52.1	52.1
Chloride	mg/L	Laboratory tested chloride taken at each respective sample site on the day of sampling used in guideline calculations	6.79	6.79
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	:			
Client	:		Laboratory	:
Contact	:		Account Manager	:
Address	:		Address	:
Telephone	:		Telephone	:
Project	:		Date Samples Received	: 11-Feb-2025 17:30
PO	:		Date Analysis Commenced	: 12-Feb-2025
C-O-C number	:	----	Issue Date	: 21-Feb-2025 09:46
Sampler	:	----		
Site	:	Water Analysis		
Quote number	:	VA25-TRIT100-001		
No. of samples received	:	1		
No. of samples analysed	:	1		

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

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

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)					Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	11-Feb-2025 10:20	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A3044-001	----	----	----	----
						Result	----	----	----	----
Field Tests										
Conductivity, field	----	EF001/VA	0.10	µS/cm		148.00	----	----	----	----
pH, field	----	EF001/VA	0.10	pH units		7.20	----	----	----	----
Temperature, field	----	EF001/VA	0.10	°C		9.00	----	----	----	----
Physical Tests										
Hardness (as CaCO3), dissolved	----	EC100/VA	0.60	mg/L		54.8	----	----	----	----
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L		54.5	----	----	----	----
Solids, total dissolved [TDS]	----	E162/VA	10	mg/L		84	----	----	----	----
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L		<3.0	----	----	----	----
Alkalinity, total (as CaCO3)	----	E290/VA	2.0	mg/L		52.1	----	----	----	----
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L		0.0080	----	----	----	----
Bromide	24959-67-9	E235.Br-L/VA	0.050	mg/L		<0.050	----	----	----	----
Chloride	16887-00-6	E235.Cl/VA	0.50	mg/L		6.79	----	----	----	----
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L		0.193	----	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L		0.0177	----	----	----	----
Nitrite (as N)	14797-65-0	E235.NO2-L/VA	0.0010	mg/L		<0.0010	----	----	----	----
Nitrogen, total	7727-37-9	E366/VA	0.030	mg/L		0.101	----	----	----	----
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L		0.0241	----	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L		5.68	----	----	----	----
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L		0.66	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: WLNG EOP	----	----	----	----
					Client sampling date / time: 11-Feb-2025 10:20	----	----	----	----
					VA25A3044-001	----	----	----	----
					Result	----	----	----	----
Total Sulfides									
Sulfide, total (as S)	18496-25-8	E395/VA	0.0015	mg/L	<0.0015	----	----	----	----
Sulfide, un-ionized (as H2S), from total	7783-06-4	EC395/VA	0.0015	mg/L	<0.0015	----	----	----	----
Sulfide, total (as H2S)	7783-06-4	E395/VA	0.0016	mg/L	<0.0016	----	----	----	----
Total Metals									
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L	0.0283	----	----	----	----
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L	<0.00010	----	----	----	----
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L	0.00070	----	----	----	----
Barium, total	7440-39-3	E420/VA	0.00010	mg/L	0.00361	----	----	----	----
Beryllium, total	7440-41-7	E420/VA	0.000100	mg/L	<0.000100	----	----	----	----
Bismuth, total	7440-69-9	E420/VA	0.000050	mg/L	<0.000050	----	----	----	----
Boron, total	7440-42-8	E420/VA	0.010	mg/L	0.016	----	----	----	----
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L	<0.0000200 DLM	----	----	----	----
Calcium, total	7440-70-2	E420/VA	0.050	mg/L	20.3	----	----	----	----
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L	0.000012	----	----	----	----
Chromium, total	7440-47-3	E420/VA	0.00050	mg/L	<0.00050	----	----	----	----
Cobalt, total	7440-48-4	E420/VA	0.00010	mg/L	<0.00010	----	----	----	----
Copper, total	7440-50-8	E420/VA	0.00050	mg/L	<0.00050	----	----	----	----
Iron, total	7439-89-6	E420/VA	0.010	mg/L	<0.010	----	----	----	----
Lead, total	7439-92-1	E420/VA	0.000050	mg/L	0.000076	----	----	----	----
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L	0.0027	----	----	----	----
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L	0.924	----	----	----	----

Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	11-Feb-2025 10:20	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A3044-001	----	----	----	----
						Result	----	----	----	----
Total Metals										
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L		0.00664	----	----	----	----
Mercury, total	7439-97-6	E508/VA	0.0000050	mg/L		<0.0000050	----	----	----	----
Molybdenum, total	7439-98-7	E420/VA	0.000050	mg/L		0.0210	----	----	----	----
Nickel, total	7440-02-0	E420/VA	0.00050	mg/L		<0.00050	----	----	----	----
Phosphorus, total	7723-14-0	E420/VA	0.050	mg/L		0.352	----	----	----	----
Potassium, total	7440-09-7	E420/VA	0.050	mg/L		1.37	----	----	----	----
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L		0.00178	----	----	----	----
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L		0.000066	----	----	----	----
Silicon, total	7440-21-3	E420/VA	0.10	mg/L		5.09	----	----	----	----
Silver, total	7440-22-4	E420/VA	0.000010	mg/L		0.000027	----	----	----	----
Sodium, total	7440-23-5	E420/VA	0.050	mg/L		4.66	----	----	----	----
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L		0.0402	----	----	----	----
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L		1.79	----	----	----	----
Tellurium, total	13494-80-9	E420/VA	0.00020	mg/L		<0.00020	----	----	----	----
Thallium, total	7440-28-0	E420/VA	0.000010	mg/L		<0.000010	----	----	----	----
Thorium, total	7440-29-1	E420/VA	0.00010	mg/L		<0.00010	----	----	----	----
Tin, total	7440-31-5	E420/VA	0.00010	mg/L		<0.00010	----	----	----	----
Titanium, total	7440-32-6	E420/VA	0.00030	mg/L		<0.00030	----	----	----	----
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L		0.00024	----	----	----	----
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L		0.000654	----	----	----	----
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L		<0.00050	----	----	----	----

Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	11-Feb-2025 10:20	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A3044-001	----	----	----	----
						Result	----	----	----	----
Total Metals										
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L		0.0075	----	----	----	----
Zirconium, total	7440-67-7	E420/VA	0.00020	mg/L		<0.00020	----	----	----	----
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/VA	0.0010	mg/L		0.0274	----	----	----	----
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L		<0.00010	----	----	----	----
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L		0.00070	----	----	----	----
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L		0.00364	----	----	----	----
Beryllium, dissolved	7440-41-7	E421/VA	0.000100	mg/L		<0.000100	----	----	----	----
Bismuth, dissolved	7440-69-9	E421/VA	0.000050	mg/L		<0.000050	----	----	----	----
Boron, dissolved	7440-42-8	E421/VA	0.010	mg/L		0.015	----	----	----	----
Cadmium, dissolved	7440-43-9	E421/VA	0.0000050	mg/L		0.0000116	----	----	----	----
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L		20.4	----	----	----	----
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L		0.000013	----	----	----	----
Chromium, dissolved	7440-47-3	E421/VA	0.00050	mg/L		<0.00050	----	----	----	----
Cobalt, dissolved	7440-48-4	E421/VA	0.00010	mg/L		<0.00010	----	----	----	----
Copper, dissolved	7440-50-8	E421/VA	0.00020	mg/L		0.00045	----	----	----	----
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L		<0.010	----	----	----	----
Lead, dissolved	7439-92-1	E421/VA	0.000050	mg/L		0.000066	----	----	----	----
Lithium, dissolved	7439-93-2	E421/VA	0.0010	mg/L		0.0027	----	----	----	----
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L		0.948	----	----	----	----
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L		0.00670	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	11-Feb-2025 10:20	----	----	----	----
						VA25A3044-001	----	----	----	----
						Result	----	----	----	----
Dissolved Metals										
Mercury, dissolved	7439-97-6	E509/VA	0.0000050	mg/L		<0.0000050	----	----	----	----
Molybdenum, dissolved	7439-98-7	E421/VA	0.000050	mg/L		0.0201	----	----	----	----
Nickel, dissolved	7440-02-0	E421/VA	0.00050	mg/L		<0.00050	----	----	----	----
Phosphorus, dissolved	7723-14-0	E421/VA	0.050	mg/L		0.394	----	----	----	----
Potassium, dissolved	7440-09-7	E421/VA	0.050	mg/L		1.29	----	----	----	----
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L		0.00183	----	----	----	----
Selenium, dissolved	7782-49-2	E421/VA	0.000050	mg/L		<0.000050	----	----	----	----
Silicon, dissolved	7440-21-3	E421/VA	0.050	mg/L		5.07	----	----	----	----
Silver, dissolved	7440-22-4	E421/VA	0.000010	mg/L		0.000018	----	----	----	----
Sodium, dissolved	7440-23-5	E421/VA	0.050	mg/L		5.01	----	----	----	----
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L		0.0396	----	----	----	----
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L		1.39	----	----	----	----
Tellurium, dissolved	13494-80-9	E421/VA	0.00020	mg/L		<0.00020	----	----	----	----
Thallium, dissolved	7440-28-0	E421/VA	0.000010	mg/L		<0.000010	----	----	----	----
Thorium, dissolved	7440-29-1	E421/VA	0.00010	mg/L		<0.00010	----	----	----	----
Tin, dissolved	7440-31-5	E421/VA	0.00010	mg/L		<0.00010	----	----	----	----
Titanium, dissolved	7440-32-6	E421/VA	0.00030	mg/L		<0.00030	----	----	----	----
Tungsten, dissolved	7440-33-7	E421/VA	0.00010	mg/L		0.00023	----	----	----	----
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L		0.000682	----	----	----	----
Vanadium, dissolved	7440-62-2	E421/VA	0.00050	mg/L		<0.00050	----	----	----	----
Zinc, dissolved	7440-66-6	E421/VA	0.0010	mg/L		0.0068	----	----	----	----

Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	11-Feb-2025 10:20	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A3044-001	----	----	----	----
						Result	----	----	----	----
Dissolved Metals										
Zirconium, dissolved	7440-67-7	E421/VA	0.00020	mg/L		<0.00020	----	----	----	----
Dissolved mercury filtration location	----	EP509/VA	-	-		Field	----	----	----	----
Dissolved metals filtration location	----	EP421/VA	-	-		Field	----	----	----	----
Speciated Metals										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532/VA	0.00050	mg/L		<0.00050	----	----	----	----
Chromium, trivalent [Cr III], total	16065-83-1	EC535/VA	0.00050	mg/L		<0.00050	----	----	----	----
Aggregate Organics										
Phenols, total (4AAP)	----	E562/EO	0.0010	mg/L		<0.0010	----	----	----	----
Volatile Organic Compounds										
Chlorobenzene	108-90-7	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Chloromethane	74-87-3	E611C/VA	5.0	µg/L		<5.0	----	----	----	----
Dichlorobenzene, 1,2-	95-50-1	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Dichlorobenzene, 1,3-	541-73-1	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Dichlorobenzene, 1,4-	106-46-7	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Dichloropropane, 1,2-	78-87-5	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Dichloropropylene, cis-1,3-	10061-01-5	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Dichloropropylene, cis+trans-1,3-	542-75-6	E611C/VA	0.75	µg/L		<0.75	----	----	----	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611C/VA	0.20	µg/L		<0.20	----	----	----	----
Trichloroethane, 1,1,2-	79-00-5	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Trichlorofluoromethane	75-69-4	E611C/VA	0.50	µg/L		<0.50	----	----	----	----

Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	11-Feb-2025 10:20	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A3044-001	----	----	----	----
						Result	----	----	----	----
Volatile Organic Compounds [Drycleaning]										
Carbon tetrachloride	56-23-5	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Chloroethane	75-00-3	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Dichloroethane, 1,1-	75-34-3	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Dichloroethane, 1,2-	107-06-2	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Dichloroethylene, 1,1-	75-35-4	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Dichloroethylene, cis-1,2-	156-59-2	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Dichloroethylene, trans-1,2-	156-60-5	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Dichloromethane	75-09-2	E611C/VA	1.0	µg/L		<1.0	----	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Tetrachloroethylene	127-18-4	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Trichloroethane, 1,1,1-	71-55-6	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Trichloroethylene	79-01-6	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Vinyl chloride	75-01-4	E611C/VA	0.40	µg/L		<0.40	----	----	----	----
Volatile Organic Compounds [Fuels]										
Benzene	71-43-2	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Ethylbenzene	100-41-4	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Styrene	100-42-5	E611C/VA	0.50	µg/L		<0.50	----	----	----	----
Toluene	108-88-3	E611C/VA	0.40	µg/L		<0.40	----	----	----	----
Xylene, m+p-	179601-23-1	E611C/VA	0.40	µg/L		<0.40	----	----	----	----
Xylene, o-	95-47-6	E611C/VA	0.30	µg/L		<0.30	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	WLNG EOP	----	----	----	----
Client sample ID					WLNG EOP	----	----	----	----
Client sampling date / time					11-Feb-2025 10:20	----	----	----	----
					VA25A3044-001	----	----	----	----
					Result	----	----	----	----
Volatile Organic Compounds [Fuels]									
Xylenes, total	1330-20-7	E611C/VA	0.50	µg/L	<0.50	----	----	----	----
Volatile Organic Compounds [THMs]									
Bromodichloromethane	75-27-4	E611C/VA	0.50	µg/L	<0.50	----	----	----	----
Bromoform	75-25-2	E611C/VA	0.50	µg/L	<0.50	----	----	----	----
Chloroform	67-66-3	E611C/VA	0.50	µg/L	<0.50	----	----	----	----
Dibromochloromethane	124-48-1	E611C/VA	0.50	µg/L	<0.50	----	----	----	----
Hydrocarbons									
EPH (C10-C19)	----	E601A/VA	250	µg/L	<250	----	----	----	----
EPH (C19-C32)	----	E601A/VA	250	µg/L	<250	----	----	----	----
VHw (C6-C10)	----	E581.VH+F1/VA	100	µg/L	<100	----	----	----	----
HEPHw	----	EC600A/VA	250	µg/L	<250	----	----	----	----
LEPHw	----	EC600A/VA	250	µg/L	<250	----	----	----	----
VPHw	----	EC580A/VA	100	µg/L	<100	----	----	----	----
Hydrocarbons Surrogates									
Bromobenzotrifluoride, 2- (EPH surrogate)	392-83-6	E601A/VA	1.0	%	93.6	----	----	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.VH+F1/VA	1.0	%	87.3	----	----	----	----
Volatile Organic Compounds Surrogates									
Bromofluorobenzene, 4-	460-00-4	E611C/VA	1.0	%	95.1	----	----	----	----
Difluorobenzene, 1,4-	540-36-3	E611C/VA	1.0	%	100.0	----	----	----	----
Polycyclic Aromatic Hydrocarbons									
Acenaphthene	83-32-9	E641A/VA	0.010	µg/L	<0.010	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

					Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	11-Feb-2025 10:20	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A3044-001	----	----	----	----
						Result	----	----	----	----
Polycyclic Aromatic Hydrocarbons										
Acenaphthylene	208-96-8	E641A/VA	0.010	µg/L		<0.010	----	----	----	----
Acridine	260-94-6	E641A/VA	0.010	µg/L		<0.010	----	----	----	----
Anthracene	120-12-7	E641A/VA	0.010	µg/L		<0.010	----	----	----	----
Benz(a)anthracene	56-55-3	E641A/VA	0.010	µg/L		<0.010	----	----	----	----
Benzo(a)pyrene	50-32-8	E641A/VA	0.0050	µg/L		<0.0050	----	----	----	----
Benzo(b+j)fluoranthene	n/a	E641A/VA	0.010	µg/L		<0.010	----	----	----	----
Benzo(b+j+k)fluoranthene	n/a	E641A/VA	0.015	µg/L		<0.015	----	----	----	----
Benzo(g,h,i)perylene	191-24-2	E641A/VA	0.010	µg/L		<0.010	----	----	----	----
Benzo(k)fluoranthene	207-08-9	E641A/VA	0.010	µg/L		<0.010	----	----	----	----
Chrysene	218-01-9	E641A/VA	0.010	µg/L		<0.010	----	----	----	----
Dibenz(a,h)anthracene	53-70-3	E641A/VA	0.0050	µg/L		<0.0050	----	----	----	----
Fluoranthene	206-44-0	E641A/VA	0.010	µg/L		<0.010	----	----	----	----
Fluorene	86-73-7	E641A/VA	0.010	µg/L		<0.010	----	----	----	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/VA	0.010	µg/L		<0.010	----	----	----	----
Methylnaphthalene, 1-	90-12-0	E641A/VA	0.010	µg/L		0.012	----	----	----	----
Methylnaphthalene, 2-	91-57-6	E641A/VA	0.010	µg/L		0.011	----	----	----	----
Naphthalene	91-20-3	E641A/VA	0.050	µg/L		<0.050	----	----	----	----
Phenanthrene	85-01-8	E641A/VA	0.020	µg/L		<0.020	----	----	----	----
Pyrene	129-00-0	E641A/VA	0.010	µg/L		<0.010	----	----	----	----
Quinoline	91-22-5	E641A/VA	0.050	µg/L		<0.050	----	----	----	----

Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	11-Feb-2025 10:20	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A3044-001	----	----	----	----
						Result	----	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A/VA	0.1	%		87.9	----	----	----	----
Naphthalene-d8	1146-65-2	E641A/VA	0.1	%		89.4	----	----	----	----
Phenanthrene-d10	1517-22-2	E641A/VA	0.1	%		92.3	----	----	----	----
Glycols										
Diethylene glycol	111-46-6	E680E/VA	5.0	mg/L		<5.0	----	----	----	----
Ethylene glycol	107-21-1	E680E/VA	5.0	mg/L		<5.0	----	----	----	----
Propylene glycol, 1,2-	57-55-6	E680E/VA	5.0	mg/L		<5.0	----	----	----	----
Triethylene glycol	112-27-6	E680E/VA	5.0	mg/L		<5.0	----	----	----	----
Glycols, total (EG+DEG+PG)	----	E680E/VA	10	mg/L		<10	----	----	----	----
Glycols Surrogates										
Propanediol, 1,3-	504-63-2	E680E/VA	1.0	%		104	----	----	----	----

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

ALS Canada Ltd.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: [redacted]	Page	: 1 of 14
Client	: [redacted]	Laboratory	: [redacted]
Contact	: [redacted]	Account Manager	: [redacted]
Address	: [redacted]	Address	: [redacted]
Telephone	: [redacted]	Telephone	: [redacted]
Project	: [redacted]	Date Samples Received	: 11-Feb-2025 17:30
PO	: [redacted]	Issue Date	: 21-Feb-2025 09:44
C-O-C number	: ----		
Sampler	: ----		
Site	: Water Analysis		
Quote number	: VA25-TRIT100-001		
No. of samples received	: 1		
No. of samples analysed	: 1		

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

Key

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

Workorder Comments

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

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Analysis Holding Time Compliance

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

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

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

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

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Aggregate Organics : Phenols (4AAP) in Water by Colorimetry										
Amber glass total (sulfuric acid) WLNG EOP	E562	11-Feb-2025	16-Feb-2025	28 days	5 days	✓	16-Feb-2025	28 days	5 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WLNG EOP	E298	11-Feb-2025	13-Feb-2025	28 days	2 days	✓	13-Feb-2025	28 days	2 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE WLNG EOP	E235.Br-L	11-Feb-2025	12-Feb-2025	28 days	1 days	✓	12-Feb-2025	28 days	2 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE WLNG EOP	E235.Cl	11-Feb-2025	12-Feb-2025	28 days	1 days	✓	12-Feb-2025	28 days	2 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE WLNG EOP	E235.F	11-Feb-2025	12-Feb-2025	28 days	1 days	✓	12-Feb-2025	28 days	2 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE WLNG EOP	E235.NO3-L	11-Feb-2025	12-Feb-2025	3 days	1 days	✓	12-Feb-2025	3 days	2 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE WLNG EOP	E235.NO2-L	11-Feb-2025	12-Feb-2025	3 days	1 days	✓	12-Feb-2025	3 days	2 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
WLNG EOP	E235.SO4	11-Feb-2025	12-Feb-2025	28 days	1 days	✓	12-Feb-2025	28 days	2 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid)										
WLNG EOP	E366	11-Feb-2025	13-Feb-2025	28 days	2 days	✓	14-Feb-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	11-Feb-2025	14-Feb-2025	28 days	3 days	✓	19-Feb-2025	28 days	8 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
WLNG EOP	E509	11-Feb-2025	15-Feb-2025	28 days	4 days	✓	15-Feb-2025	28 days	4 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
WLNG EOP	E421	11-Feb-2025	13-Feb-2025	180 days	2 days	✓	14-Feb-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 (sodium bisulfate)										
WLNG EOP	EF001	11-Feb-2025	----	----	----		13-Feb-2025	----	2 days	
Glycols : Glycols (4 analytes) by GC-FID										
Glass vial										
WLNG EOP	E680E	11-Feb-2025	16-Feb-2025	7 days	5 days	✓	18-Feb-2025	40 days	2 days	✓
Hydrocarbons : BC PHCs - EPH by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
WLNG EOP	E601A	11-Feb-2025	20-Feb-2025	14 days	9 days	✓	20-Feb-2025	40 days	0 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate)										
WLNG EOP	E581.VH+F1	11-Feb-2025	20-Feb-2025	14 days	9 days	✓	20-Feb-2025	14 days	9 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid) WLNG EOP	E358-L	11-Feb-2025	13-Feb-2025	28 days	2 days	✓	13-Feb-2025	28 days	2 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE WLNG EOP	E290	11-Feb-2025	12-Feb-2025	14 days	1 days	✓	13-Feb-2025	14 days	2 days	✓
Physical Tests : TDS by Gravimetry										
HDPE WLNG EOP	E162	11-Feb-2025	----	----	----		18-Feb-2025	7 days	7 days	✓
Physical Tests : TSS by Gravimetry										
HDPE WLNG EOP	E160	11-Feb-2025	----	----	----		18-Feb-2025	7 days	7 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate) WLNG EOP	E641A	11-Feb-2025	20-Feb-2025	14 days	9 days	✓	20-Feb-2025	40 days	0 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide) WLNG EOP	E532	11-Feb-2025	----	----	----		12-Feb-2025	28 days	2 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) WLNG EOP	E508	11-Feb-2025	14-Feb-2025	28 days	3 days	✓	14-Feb-2025	28 days	3 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid) WLNG EOP	E420	11-Feb-2025	13-Feb-2025	180 days	2 days	✓	14-Feb-2025	180 days	3 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide) WLNG EOP	E395	11-Feb-2025	----	----	----		13-Feb-2025	7 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
Volatile Organic Compounds : VOCs (BC List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
WLNG EOP	E611C	11-Feb-2025	20-Feb-2025	14 days	9 days	✓	20-Feb-2025	14 days	9 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)							
TSS by Gravimetry	E160	1877369	1	20	5.0	5.0	✓
TDS by Gravimetry	E162	1877380	1	20	5.0	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1872629	1	13	7.6	5.0	✓
Chloride in Water by IC	E235.Cl	1872628	1	13	7.6	5.0	✓
Fluoride in Water by IC	E235.F	1872626	1	13	7.6	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1872630	1	13	7.6	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1872625	1	16	6.2	5.0	✓
Sulfate in Water by IC	E235.SO4	1872627	1	13	7.6	5.0	✓
Alkalinity Species by Titration	E290	1872632	1	9	11.1	5.0	✓
Ammonia by Fluorescence	E298	1873242	1	5	20.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1873237	1	8	12.5	5.0	✓
Total Nitrogen by Colourimetry	E366	1873238	1	6	16.6	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1874087	1	20	5.0	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1873815	1	8	12.5	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1873160	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1873177	1	20	5.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1875603	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1876009	1	10	10.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1872687	1	20	5.0	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1876416	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1879743	1	2	50.0	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1879741	1	3	33.3	5.0	✓
Glycols (4 analytes) by GC-FID	E680E	1876343	1	16	6.2	5.0	✓
Laboratory Control Samples (LCS)							
TSS by Gravimetry	E160	1877369	1	20	5.0	5.0	✓
TDS by Gravimetry	E162	1877380	1	20	5.0	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1872629	1	13	7.6	5.0	✓
Chloride in Water by IC	E235.Cl	1872628	1	13	7.6	5.0	✓
Fluoride in Water by IC	E235.F	1872626	1	13	7.6	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1872630	1	13	7.6	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1872625	1	16	6.2	5.0	✓
Sulfate in Water by IC	E235.SO4	1872627	1	13	7.6	5.0	✓
Alkalinity Species by Titration	E290	1872632	1	9	11.1	5.0	✓
Ammonia by Fluorescence	E298	1873242	1	5	20.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1873237	1	8	12.5	5.0	✓
Total Nitrogen by Colourimetry	E366	1873238	1	6	16.6	5.0	✓

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Control Samples (LCS) - Continued							
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1874087	1	20	5.0	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1873815	1	8	12.5	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1873160	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1873177	1	20	5.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1875603	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1876009	1	10	10.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1872687	1	20	5.0	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1876416	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1879743	1	2	50.0	5.0	✓
BC PHCs - EPH by GC-FID	E601A	1879691	1	7	14.2	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1879741	1	3	33.3	5.0	✓
PAHs in Water by Hexane LVI GC-MS	E641A	1879690	1	18	5.5	5.0	✓
Glycols (4 analytes) by GC-FID	E680E	1876343	1	16	6.2	5.0	✓
Method Blanks (MB)							
TSS by Gravimetry	E160	1877369	1	20	5.0	5.0	✓
TDS by Gravimetry	E162	1877380	1	20	5.0	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1872629	1	13	7.6	5.0	✓
Chloride in Water by IC	E235.Cl	1872628	1	13	7.6	5.0	✓
Fluoride in Water by IC	E235.F	1872626	1	13	7.6	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1872630	1	13	7.6	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1872625	1	16	6.2	5.0	✓
Sulfate in Water by IC	E235.SO4	1872627	1	13	7.6	5.0	✓
Alkalinity Species by Titration	E290	1872632	1	9	11.1	5.0	✓
Ammonia by Fluorescence	E298	1873242	1	5	20.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1873237	1	8	12.5	5.0	✓
Total Nitrogen by Colourimetry	E366	1873238	1	6	16.6	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1874087	1	20	5.0	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1873815	1	8	12.5	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1873160	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1873177	1	20	5.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1875603	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1876009	1	10	10.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1872687	1	20	5.0	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1876416	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1879743	1	2	50.0	5.0	✓
BC PHCs - EPH by GC-FID	E601A	1879691	1	7	14.2	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1879741	1	3	33.3	5.0	✓
PAHs in Water by Hexane LVI GC-MS	E641A	1879690	1	18	5.5	5.0	✓
Glycols (4 analytes) by GC-FID	E680E	1876343	1	16	6.2	5.0	✓

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Matrix Spikes (MS)							
Bromide in Water by IC (Low Level)	E235.Br-L	1872629	1	13	7.6	5.0	✓
Chloride in Water by IC	E235.Cl	1872628	1	13	7.6	5.0	✓
Fluoride in Water by IC	E235.F	1872626	1	13	7.6	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1872630	1	13	7.6	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1872625	1	16	6.2	5.0	✓
Sulfate in Water by IC	E235.SO4	1872627	1	13	7.6	5.0	✓
Ammonia by Fluorescence	E298	1873242	1	5	20.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1873237	1	8	12.5	5.0	✓
Total Nitrogen by Colourimetry	E366	1873238	1	6	16.6	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1874087	1	20	5.0	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1873815	1	8	12.5	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1873160	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1873177	1	20	5.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1875603	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1876009	1	10	10.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1872687	1	20	5.0	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1876416	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1879743	1	2	50.0	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1879741	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.
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 (K3Fe(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 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.

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

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

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

ALS Canada Ltd.

QUALITY CONTROL REPORT

Work Order	: [redacted]	Page	: 1 of 23
Client	:	Laboratory	:
Contact	:	Account Manager	:
Address	:	Address	: [redacted]
Telephone	:	Telephone	:
Project	:	Date Samples Received	: 11-Feb-2025 17:30
PO	:	Date Analysis Commenced	: 12-Feb-2025
C-O-C number	: ----	Issue Date	: 21-Feb-2025 09:45
Sampler	: ----		
Site	: Water Analysis		
Quote number	: VA25-TRIT100-001		
No. of samples received	: 1		
No. of samples analysed	: 1		

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

This Quality Control Report contains the following information:

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

Signatories

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

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

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: 1872632)											
VA25A3030-003	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	<1.0	<1.0	0	Diff <2x LOR	----
Physical Tests (QC Lot: 1877369)											
FJ2500440-001	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	42.0	43.0	2.35%	20%	----
Physical Tests (QC Lot: 1877380)											
FJ2500440-001	Anonymous	Solids, total dissolved [TDS]	----	E162	13	mg/L	132	134	1.51%	20%	----
Anions and Nutrients (QC Lot: 1872625)											
VA25A2978-052	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0250	mg/L	1.73	1.73	0.222%	20%	----
Anions and Nutrients (QC Lot: 1872626)											
VA25A2978-052	Anonymous	Fluoride	16984-48-8	E235.F	0.100	mg/L	0.186	0.190	0.003	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1872627)											
VA25A2978-052	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	1.50	mg/L	16.0	16.0	0.108%	20%	----
Anions and Nutrients (QC Lot: 1872628)											
VA25A2978-052	Anonymous	Chloride	16887-00-6	E235.Cl	2.50	mg/L	233	234	0.537%	20%	----
Anions and Nutrients (QC Lot: 1872629)											
VA25A2978-052	Anonymous	Bromide	24959-67-9	E235.Br-L	0.250	mg/L	0.598	0.609	0.010	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1872630)											
VA25A2978-052	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0050	mg/L	0.0057	0.0053	0.0005	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1873238)											
VA25A2908-001	Anonymous	Nitrogen, total	7727-37-9	E366	0.030	mg/L	0.148	0.151	0.003	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1873242)											
VA25A2957-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1874087)											
VA25A2901-010	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0232	0.0227	1.96%	20%	----
Organic / Inorganic Carbon (QC Lot: 1873237)											
VA25A2908-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	2.38	2.61	0.23	Diff <2x LOR	----
Total Sulfides (QC Lot: 1873815)											
VA25A3042-001	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: 1873160)											
VA25A3007-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.752	0.718	4.62%	20%	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	0.00048	0.00047	0.00001	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Total Metals (QC Lot: 1873160) - continued											
VA25A3007-001	Anonymous	Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00103	0.00100	2.97%	20%	----
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.0413	0.0417	0.860%	20%	----
		Beryllium, total	7440-41-7	E420	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, total	7440-42-8	E420	0.010	mg/L	0.135	0.134	0.419%	20%	----
		Cadmium, total	7440-43-9	E420	0.000195	mg/L	<0.000195	<0.000195	0	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	240	241	0.306%	20%	----
		Cesium, total	7440-46-2	E420	0.000010	mg/L	0.000127	0.000131	2.82%	20%	----
		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	0.00015	0.00013	0.00001	Diff <2x LOR	----
		Copper, total	7440-50-8	E420	0.00050	mg/L	0.00955	0.00938	1.70%	20%	----
		Iron, total	7439-89-6	E420	0.030	mg/L	0.039	0.034	0.004	Diff <2x LOR	----
		Lead, total	7439-92-1	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0093	0.0092	0.0001	Diff <2x LOR	----
		Magnesium, total	7439-95-4	E420	0.100	mg/L	35.1	34.5	1.65%	20%	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.0703	0.0698	0.782%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.258	0.248	3.79%	20%	----
		Nickel, total	7440-02-0	E420	0.00050	mg/L	0.00055	<0.00050	0.00005	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.050	mg/L	6.82	6.65	2.56%	20%	----
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00438	0.00410	6.46%	20%	----
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.0352	0.0366	3.96%	20%	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	6.68	6.66	0.381%	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	52.0	51.3	1.28%	20%	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	3.76	3.79	1.00%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	269	268	0.510%	20%	----
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	0.00066	0.00071	0.00005	Diff <2x LOR	----
		Thallium, total	7440-28-0	E420	0.000010	mg/L	0.000011	0.000010	0.0000007	Diff <2x LOR	----
		Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.0100	mg/L	<0.0100	<0.0100	0	Diff <2x LOR	----
		Tungsten, total	7440-33-7	E420	0.00010	mg/L	0.00017	0.00017	0.0000005	Diff <2x LOR	----
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.00319	0.00308	3.63%	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: 1873160) - continued											
VA25A3007-001	Anonymous	Vanadium, total	7440-62-2	E420	0.00050	mg/L	0.00073	0.00065	0.00008	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0030	mg/L	0.0163	0.0159	0.0004	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: 1875603)											
KS2500474-001	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1873177)											
VA25A3007-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0030	mg/L	0.171	0.158	7.87%	20%	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	0.00047	0.00047	0.000002	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00073	0.00072	0.00001	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0416	0.0401	3.69%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	0.121	0.122	0.932%	20%	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.000141	0.000171	19.3%	20%	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	233	240	2.56%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	0.000127	0.000129	1.24%	20%	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	0.00013	0.00012	0.000010	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00050	mg/L	0.00618	0.00586	5.32%	20%	----
		Iron, dissolved	7439-89-6	E421	0.030	mg/L	<0.030	<0.030	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	0.0094	0.0093	0.00004	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.100	mg/L	38.4	36.6	4.55%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.0678	0.0646	4.83%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.242	0.245	1.49%	20%	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	<0.00050	<0.00050	0	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	6.49	6.11	5.93%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00406	0.00368	9.73%	20%	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.0381	0.0387	1.67%	20%	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	6.47	6.44	0.536%	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	58.4	54.8	6.29%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	3.68	3.67	0.280%	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: 1873177) - continued											
VA25A3007-001	Anonymous	Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	245	243	0.877%	20%	----
		Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.0100	mg/L	<0.0100	<0.0100	0	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	0.00016	0.00016	0.000001	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.00325	0.00317	2.35%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	0.00057	0.00055	0.00002	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0030	mg/L	0.0135	0.0130	0.0005	Diff <2x LOR	----
		Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1876009)											
KS2500474-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Speciated Metals (QC Lot: 1872687)											
VA25A2883-010	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	0.00110	0.00109	0.000006	Diff <2x LOR	----
Aggregate Organics (QC Lot: 1876416)											
CG2501652-001	Anonymous	Phenols, total (4AAP)	----	E562	0.0010	mg/L	0.0011	0.0014	0.0004	Diff <2x LOR	----
Volatile Organic Compounds (QC Lot: 1879741)											
VA25A2958-010	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: 1879741) - continued											
VA25A2958-010	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: 1879743)											
VA25A3044-001	WLNG EOP	VHw (C6-C10)	----	E581.VH+F1	100	µg/L	<100	<100	0.0%	30%	----
Glycols (QC Lot: 1876343)											
KS2500450-004	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: 1872632)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 1877369)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Physical Tests (QCLot: 1877380)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Anions and Nutrients (QCLot: 1872625)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1872626)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 1872627)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 1872628)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 1872629)						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 1872630)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 1873238)						
Nitrogen, total	7727-37-9	E366	0.03	mg/L	<0.030	----
Anions and Nutrients (QCLot: 1873242)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1874087)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Organic / Inorganic Carbon (QCLot: 1873237)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Total Sulfides (QCLot: 1873815)						
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	----
Total Metals (QCLot: 1873160)						
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: 1873160) - 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: 1875603)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Dissolved Metals (QCLot: 1873177)						
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: 1873177) - 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: 1876009)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Speciated Metals (QCLot: 1872687)						
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	<0.00050	----
Aggregate Organics (QCLot: 1876416)						
Phenols, total (4AAP)	----	E562	0.001	mg/L	<0.0010	----
Volatile Organic Compounds (QCLot: 1879741)						
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: 1879741) - 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: 1879691)						
EPH (C10-C19)	----	E601A	250	µg/L	<250	----
EPH (C19-C32)	----	E601A	250	µg/L	<250	----
Hydrocarbons (QCLot: 1879743)						
VHw (C6-C10)	----	E581.VH+F1	100	µg/L	<100	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1879690)						
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: 1879690) - 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: 1876343)						
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: 1872632)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	102	85.0	115	----
Physical Tests (QCLot: 1877369)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	104	85.0	115	----
Physical Tests (QCLot: 1877380)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	109	85.0	115	----
Anions and Nutrients (QCLot: 1872625)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	102	90.0	110	----
Anions and Nutrients (QCLot: 1872626)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 1872627)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	104	90.0	110	----
Anions and Nutrients (QCLot: 1872628)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	103	90.0	110	----
Anions and Nutrients (QCLot: 1872629)									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	97.0	85.0	115	----
Anions and Nutrients (QCLot: 1872630)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	102	90.0	110	----
Anions and Nutrients (QCLot: 1873238)									
Nitrogen, total	7727-37-9	E366	0.03	mg/L	0.5 mg/L	99.7	75.0	125	----
Anions and Nutrients (QCLot: 1873242)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	98.7	85.0	115	----
Anions and Nutrients (QCLot: 1874087)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	90.2	80.0	120	----
Organic / Inorganic Carbon (QCLot: 1873237)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	97.2	80.0	120	----
Total Sulfides (QCLot: 1873815)									
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.08 mg/L	106	80.0	120	----
Total Metals (QCLot: 1873160)									

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: 1873160) - continued									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	108	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	103	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	110	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	106	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	101	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	106	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	102	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	103	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	103	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	104	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	106	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	106	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	104	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	102	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	106	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	104	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	103	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	107	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	108	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	107	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	99.4	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	95.8	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	107	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	96.8	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	105	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	100	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	96.9	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	101	80.0	120	----
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	97.7	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	98.7	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: 1873160) - 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	105	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	101	80.0	120	----
Total Metals (QCLot: 1875603)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	104	80.0	120	----
Dissolved Metals (QCLot: 1873177)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	98.3	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	101	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	1 mg/L	100	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	97.6	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	97.7	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	101	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	95.2	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	95.9	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	95.5	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	105	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	96.5	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	96.8	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	96.5	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	92.9	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.5 mg/L	98.3	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.25 mg/L	101	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	97.3	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	96.1	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	99.4	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	94.9	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	106	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	92.4	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	93.4	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	98.2	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	96.0	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	110	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	85.8	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: 1873177) - continued									
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	102	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	98.7	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	91.5	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	97.7	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	98.9	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	94.1	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	102	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.5 mg/L	96.2	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	93.7	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	97.1	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	97.6	80.0	120	----
Speciated Metals (QCLot: 1872687)									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.25 mg/L	100	80.0	120	----
Aggregate Organics (QCLot: 1876416)									
Phenols, total (4AAP)	----	E562	0.001	mg/L	0.02 mg/L	90.4	85.0	115	----
Volatile Organic Compounds (QCLot: 1879741)									
Benzene	71-43-2	E611C	0.5	µg/L	100 µg/L	94.4	70.0	130	----
Bromodichloromethane	75-27-4	E611C	0.5	µg/L	100 µg/L	91.0	70.0	130	----
Bromoform	75-25-2	E611C	0.5	µg/L	100 µg/L	102	70.0	130	----
Carbon tetrachloride	56-23-5	E611C	0.5	µg/L	100 µg/L	99.7	70.0	130	----
Chlorobenzene	108-90-7	E611C	0.5	µg/L	100 µg/L	99.0	70.0	130	----
Chloroethane	75-00-3	E611C	0.5	µg/L	100 µg/L	104	60.0	140	----
Chloroform	67-66-3	E611C	0.5	µg/L	100 µg/L	94.5	70.0	130	----
Chloromethane	74-87-3	E611C	5	µg/L	100 µg/L	113	60.0	140	----
Dibromochloromethane	124-48-1	E611C	0.5	µg/L	100 µg/L	94.7	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611C	0.5	µg/L	100 µg/L	99.4	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611C	0.5	µg/L	100 µg/L	102	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611C	0.5	µg/L	100 µg/L	102	70.0	130	----
Dichloroethane, 1,1-	75-34-3	E611C	0.5	µg/L	100 µg/L	95.9	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611C	0.5	µg/L	100 µg/L	89.8	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611C	0.5	µg/L	100 µg/L	98.1	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611C	0.5	µg/L	100 µg/L	92.5	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611C	0.5	µg/L	100 µg/L	94.9	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: 1879741) - continued									
Dichloromethane	75-09-2	E611C	1	µg/L	100 µg/L	92.9	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611C	0.5	µg/L	100 µg/L	94.8	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611C	0.5	µg/L	100 µg/L	95.2	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611C	0.5	µg/L	100 µg/L	94.7	70.0	130	----
Ethylbenzene	100-41-4	E611C	0.5	µg/L	100 µg/L	99.7	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	0.5	µg/L	100 µg/L	98.9	70.0	130	----
Styrene	100-42-5	E611C	0.5	µg/L	100 µg/L	95.0	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	0.5	µg/L	100 µg/L	99.1	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	0.2	µg/L	100 µg/L	91.1	70.0	130	----
Tetrachloroethylene	127-18-4	E611C	0.5	µg/L	100 µg/L	104	70.0	130	----
Toluene	108-88-3	E611C	0.4	µg/L	100 µg/L	97.5	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611C	0.5	µg/L	100 µg/L	99.7	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611C	0.5	µg/L	100 µg/L	91.8	70.0	130	----
Trichloroethylene	79-01-6	E611C	0.5	µg/L	100 µg/L	101	70.0	130	----
Trichlorofluoromethane	75-69-4	E611C	0.5	µg/L	100 µg/L	106	60.0	140	----
Vinyl chloride	75-01-4	E611C	0.4	µg/L	100 µg/L	110	60.0	140	----
Xylene, m+p-	179601-23-1	E611C	0.4	µg/L	200 µg/L	104	70.0	130	----
Xylene, o-	95-47-6	E611C	0.3	µg/L	100 µg/L	99.8	70.0	130	----
Hydrocarbons (QCLot: 1879691)									
EPH (C10-C19)	----	E601A	250	µg/L	6490 µg/L	104	70.0	130	----
EPH (C19-C32)	----	E601A	250	µg/L	3360 µg/L	104	70.0	130	----
Hydrocarbons (QCLot: 1879743)									
VHw (C6-C10)	----	E581.VH+F1	100	µg/L	6310 µg/L	92.7	70.0	130	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1879690)									
Acenaphthene	83-32-9	E641A	0.01	µg/L	0.5 µg/L	113	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	97.4	60.0	130	----
Anthracene	120-12-7	E641A	0.01	µg/L	0.5 µg/L	116	60.0	130	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	0.5 µg/L	113	60.0	130	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	0.5 µg/L	112	60.0	130	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	0.5 µg/L	103	60.0	130	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	0.5 µg/L	117	60.0	130	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	0.5 µg/L	112	60.0	130	----
Chrysene	218-01-9	E641A	0.01	µg/L	0.5 µg/L	121	60.0	130	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
					Target Concentration	LCS	Low	High	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 1879690) - continued									
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	0.5 µg/L	110	60.0	130	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	0.5 µg/L	107	60.0	130	----
Fluorene	86-73-7	E641A	0.01	µg/L	0.5 µg/L	102	60.0	130	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	0.5 µg/L	109	60.0	130	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	0.5 µg/L	101	60.0	130	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	0.5 µg/L	108	60.0	130	----
Naphthalene	91-20-3	E641A	0.05	µg/L	0.5 µg/L	102	50.0	130	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	0.5 µg/L	120	60.0	130	----
Pyrene	129-00-0	E641A	0.01	µg/L	0.5 µg/L	110	60.0	130	----
Quinoline	91-22-5	E641A	0.05	µg/L	0.5 µg/L	110	60.0	130	----
Glycols (QCLot: 1876343)									
Diethylene glycol	111-46-6	E680E	5	mg/L	25 mg/L	98.1	70.0	130	----
Ethylene glycol	107-21-1	E680E	5	mg/L	25 mg/L	97.4	70.0	130	----
Propylene glycol, 1,2-	57-55-6	E680E	5	mg/L	25 mg/L	94.8	70.0	130	----
Triethylene glycol	112-27-6	E680E	5	mg/L	25 mg/L	92.8	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: 1872625)										
VA25A2978-053	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	12.8 mg/L	12.5 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 1872626)										
VA25A2978-053	Anonymous	Fluoride	16984-48-8	E235.F	5.28 mg/L	5 mg/L	106	75.0	125	----
Anions and Nutrients (QCLot: 1872627)										
VA25A2978-053	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	517 mg/L	500 mg/L	103	75.0	125	----
Anions and Nutrients (QCLot: 1872628)										
VA25A2978-053	Anonymous	Chloride	16887-00-6	E235.Cl	515 mg/L	500 mg/L	103	75.0	125	----
Anions and Nutrients (QCLot: 1872629)										
VA25A2978-053	Anonymous	Bromide	24959-67-9	E235.Br-L	2.50 mg/L	2.5 mg/L	100.0	75.0	125	----
Anions and Nutrients (QCLot: 1872630)										
VA25A2978-053	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	2.47 mg/L	2.5 mg/L	98.6	75.0	125	----
Anions and Nutrients (QCLot: 1873238)										
VA25A2963-001	Anonymous	Nitrogen, total	7727-37-9	E366	2.05 mg/L	2 mg/L	102	70.0	130	----
Anions and Nutrients (QCLot: 1873242)										
VA25A2963-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.105 mg/L	0.1 mg/L	105	75.0	125	----
Anions and Nutrients (QCLot: 1874087)										
VA25A2901-011	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0479 mg/L	0.05 mg/L	95.8	70.0	130	----
Organic / Inorganic Carbon (QCLot: 1873237)										
VA25A2915-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	5.02 mg/L	5 mg/L	100	70.0	130	----
Total Sulfides (QCLot: 1873815)										
VA25A3042-002	Anonymous	Sulfide, total (as S)	18496-25-8	E395	0.217 mg/L	0.2 mg/L	108	75.0	125	----
Total Metals (QCLot: 1873160)										
VA25A3007-002	Anonymous	Aluminum, total	7429-90-5	E420	0.201 mg/L	0.2 mg/L	100	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0191 mg/L	0.02 mg/L	95.6	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0216 mg/L	0.02 mg/L	108	70.0	130	----
		Barium, total	7440-39-3	E420	ND mg/L	----	ND	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0377 mg/L	0.04 mg/L	94.3	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.00909 mg/L	0.01 mg/L	90.9	70.0	130	----
		Boron, total	7440-42-8	E420	ND mg/L	----	ND	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00371 mg/L	0.004 mg/L	92.8	70.0	130	----
		Calcium, total	7440-70-2	E420	ND mg/L	----	ND	70.0	130	----
		Cesium, total	7440-46-2	E420	0.00950 mg/L	0.01 mg/L	95.0	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0396 mg/L	0.04 mg/L	98.9	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: 1873160) - continued										
VA25A3007-002	Anonymous	Cobalt, total	7440-48-4	E420	0.0193 mg/L	0.02 mg/L	96.5	70.0	130	----
		Copper, total	7440-50-8	E420	0.0179 mg/L	0.02 mg/L	89.4	70.0	130	----
		Iron, total	7439-89-6	E420	1.95 mg/L	2 mg/L	97.5	70.0	130	----
		Lead, total	7439-92-1	E420	0.0181 mg/L	0.02 mg/L	90.7	70.0	130	----
		Lithium, total	7439-93-2	E420	0.0995 mg/L	0.1 mg/L	99.5	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	ND mg/L	----	ND	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0366 mg/L	0.04 mg/L	91.4	70.0	130	----
		Phosphorus, total	7723-14-0	E420	9.96 mg/L	10 mg/L	99.6	70.0	130	----
		Potassium, total	7440-09-7	E420	ND mg/L	----	ND	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0202 mg/L	0.02 mg/L	101	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0418 mg/L	0.04 mg/L	104	70.0	130	----
		Silicon, total	7440-21-3	E420	9.17 mg/L	10 mg/L	91.7	70.0	130	----
		Silver, total	7440-22-4	E420	0.00362 mg/L	0.004 mg/L	90.6	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	0.0402 mg/L	0.04 mg/L	100	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00358 mg/L	0.004 mg/L	89.6	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0186 mg/L	0.02 mg/L	93.2	70.0	130	----
		Tin, total	7440-31-5	E420	0.0189 mg/L	0.02 mg/L	94.6	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0406 mg/L	0.04 mg/L	101	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0187 mg/L	0.02 mg/L	93.5	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00361 mg/L	0.004 mg/L	90.4	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.0997 mg/L	0.1 mg/L	99.7	70.0	130	----
		Zinc, total	7440-66-6	E420	0.362 mg/L	0.4 mg/L	90.4	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0394 mg/L	0.04 mg/L	98.6	70.0	130	----
Total Metals (QCLot: 1875603)										
KS2500475-001	Anonymous	Mercury, total	7439-97-6	E508	0.000102 mg/L	0 mg/L	102	70.0	130	----
Dissolved Metals (QCLot: 1873177)										
VA25A3007-002	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.205 mg/L	0.2 mg/L	102	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0197 mg/L	0.02 mg/L	98.4	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0211 mg/L	0.02 mg/L	106	70.0	130	----
		Barium, dissolved	7440-39-3	E421	ND mg/L	----	ND	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.0376 mg/L	0.04 mg/L	94.0	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.00875 mg/L	0.01 mg/L	87.5	70.0	130	----
		Boron, dissolved	7440-42-8	E421	ND mg/L	----	ND	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00366 mg/L	0.004 mg/L	91.4	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.0100 mg/L	0.01 mg/L	100	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0387 mg/L	0.04 mg/L	96.7	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0189 mg/L	0.02 mg/L	94.5	70.0	130	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 1873177) - continued										
VA25A3007-002	Anonymous	Copper, dissolved	7440-50-8	E421	0.0180 mg/L	0.02 mg/L	89.9	70.0	130	----
		Iron, dissolved	7439-89-6	E421	1.86 mg/L	2 mg/L	93.1	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0182 mg/L	0.02 mg/L	91.2	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.0931 mg/L	0.1 mg/L	93.1	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	ND mg/L	----	ND	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0368 mg/L	0.04 mg/L	91.9	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	10.5 mg/L	10 mg/L	105	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	ND mg/L	----	ND	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.0189 mg/L	0.02 mg/L	94.5	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	ND mg/L	----	ND	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	8.99 mg/L	10 mg/L	89.9	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00376 mg/L	0.004 mg/L	94.0	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	0.0412 mg/L	0.04 mg/L	103	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.00351 mg/L	0.004 mg/L	87.8	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0207 mg/L	0.02 mg/L	103	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0190 mg/L	0.02 mg/L	94.8	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0392 mg/L	0.04 mg/L	98.1	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0185 mg/L	0.02 mg/L	92.4	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	0.00404 mg/L	0.004 mg/L	101	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.0982 mg/L	0.1 mg/L	98.2	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.370 mg/L	0.4 mg/L	92.5	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0396 mg/L	0.04 mg/L	99.0	70.0	130	----
Dissolved Metals (QCLot: 1876009)										
KS2500475-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000966 mg/L	0 mg/L	96.6	70.0	130	----
Speciated Metals (QCLot: 1872687)										
VA25A2883-011	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.264 mg/L	0.25 mg/L	105	70.0	130	----
Aggregate Organics (QCLot: 1876416)										
CG2501652-001	Anonymous	Phenols, total (4AAP)	----	E562	0.0209 mg/L	0.02 mg/L	105	75.0	125	----
Volatile Organic Compounds (QCLot: 1879741)										
VA25A2958-010	Anonymous	Benzene	71-43-2	E611C	100 µg/L	100 µg/L	100	60.0	140	----
		Bromodichloromethane	75-27-4	E611C	97.0 µg/L	100 µg/L	97.0	60.0	140	----
		Bromoform	75-25-2	E611C	106 µg/L	100 µg/L	106	60.0	140	----
		Carbon tetrachloride	56-23-5	E611C	104 µg/L	100 µg/L	104	60.0	140	----
		Chlorobenzene	108-90-7	E611C	104 µg/L	100 µg/L	104	60.0	140	----
		Chloroethane	75-00-3	E611C	107 µg/L	100 µg/L	107	50.0	150	----
		Chloroform	67-66-3	E611C	100 µg/L	100 µg/L	100	60.0	140	----
		Chloromethane	74-87-3	E611C	126 µg/L	100 µg/L	126	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: 1879741) - continued										
VA25A2958-010	Anonymous	Dibromochloromethane	124-48-1	E611C	100 µg/L	100 µg/L	100	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611C	105 µg/L	100 µg/L	105	60.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611C	107 µg/L	100 µg/L	107	60.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611C	108 µg/L	100 µg/L	108	60.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611C	101 µg/L	100 µg/L	101	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611C	98.2 µg/L	100 µg/L	98.2	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611C	102 µg/L	100 µg/L	102	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611C	98.2 µg/L	100 µg/L	98.2	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	99.5 µg/L	100 µg/L	99.5	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611C	101 µg/L	100 µg/L	101	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611C	101 µg/L	100 µg/L	101	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611C	101 µg/L	100 µg/L	101	60.0	140	----
		Ethylbenzene	100-41-4	E611C	104 µg/L	100 µg/L	104	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	104 µg/L	100 µg/L	104	60.0	140	----
		Styrene	100-42-5	E611C	95.5 µg/L	100 µg/L	95.5	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	105 µg/L	100 µg/L	105	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	95.6 µg/L	100 µg/L	95.6	60.0	140	----
		Tetrachloroethylene	127-18-4	E611C	108 µg/L	100 µg/L	108	60.0	140	----
		Toluene	108-88-3	E611C	102 µg/L	100 µg/L	102	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611C	104 µg/L	100 µg/L	104	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611C	98.4 µg/L	100 µg/L	98.4	60.0	140	----
		Trichloroethylene	79-01-6	E611C	104 µg/L	100 µg/L	104	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611C	108 µg/L	100 µg/L	108	50.0	150	----
		Vinyl chloride	75-01-4	E611C	111 µg/L	100 µg/L	111	50.0	150	----
		Xylene, m+p-	179601-23-1	E611C	219 µg/L	200 µg/L	109	60.0	140	----
		Xylene, o-	95-47-6	E611C	105 µg/L	100 µg/L	105	60.0	140	----
Hydrocarbons (QCLot: 1879743)										
VA25A3046-001	Anonymous	VHw (C6-C10)	----	E581.VH+F1	5520 µg/L	6310 µg/L	87.5	60.0	140	----

Chain of Custody (COC) / Analytical Request Form

COC Number: 20 -

Page of

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Canada Toll Free: 1 800 668 9878

Report To	Contact and company name below will appear on the final report	Reports / Recipients	Turnaround Time (TAT) Requested
Company:		Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)	☑ Routine [R] if received by 3pm M-F - no surcharges apply
Contact:		Merge QC/QCI Reports with COA ☑ YES ☐ NO ☐ N/A	☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum
Phone:		☐ Compare Results to Criteria on Report - provide details below if box checked	☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum
		Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum
Street:		Email 1 or Fax	☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum
City/Province:		Email 2	☐ Same day [E2] if received by 10am M-S - 200% rush surcharge.
Postal Code:		Email 3	Additional fees may apply to rush requests on weekends, statutory holidays and for non-routine tests.
Invoice To	Same as Report To ☐ YES ☑ NO		Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm am/pm
	Copy of Invoice with Report ☐ YES ☑ NO	Select Invoice D	For all tests with rush TATs requested, please contact your AM to confirm availability.
Company:		Email 1 or Fax	
Contact:		Email 2	

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Project Information		Oil and Gas Required Fields (client use)	
ALS Account # / Quote #:	VA25-TRIT100-001	AFE/Cost Center:	PO#
Job #:	11964	Major/Minor Code:	Routing Code:
PO / AFE:	11964 - Task 40 - Phase 3C-4C	Requisitioner:	
LSD:		Location:	
ALS Lab Work Order # (ALS use only):	3044	ALS Contact:	Sampler:

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 (F)	Dissolved metals + mercury (F)	Total hexavalent chromium (F)	Total trivalent chromium (F)	TSS, TDS, T-Alkalinity, Anions scan (Br, Cl, F, NO2, NO3, SO4) (P)	Total sulfide (low) (as H2S), Unionized Sulfide (low) (P)	Nutrients (ammonia, ammonium, total nitrogen, total phosphorus) (P)	VOC/VPH (P)	EPH, PAH, LEPH/HEPH (P)	DOC (F/P)	Glycols	General parameters (alkalinity)	Phenols	SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	WLNG EOP			Water	16	R	R	R	R	R	R	R	R	R	R	R	R	R			
	pH: 7.2 cond: 148 temp: 9	11-Feb-25	10:20																		
	Turbidity: 0																				

Environmental Division
Vancouver
Work Order Reference
VA25A3044

Telephone : +1 604 253 4188

Drinking Water (DW) Samples[1] (client use)	Notes / Specify Limits for result evaluation b (Excel COC o
Are samples taken from a Regulated DW System? ☐ YES ☑ NO	
Are samples for human consumption/ use? ☐ YES ☑ NO	ESDAT EDD to ESdat_CA+tritonenv@ESdatLabSync.net

SAMPLE RECEIPT DETAILS (ALS use only)

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

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

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

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
				5			

SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (ALS use only)			FINAL SHIPMENT RECEPTION (ALS use only)	
	Time: 17:20	Received by:	Date:	Time:	Received by:	Time: 5:30

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

ALS 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

2025-2-11-Shafiei-D6563

Project Component:	Tunnel	**Site Name:**	WLNG Treatment Discharge
Inspection Date:	02/11/2025	**Location:**	WLNG
Triton QP:	Farshad Shafiei	**Latitude/Longitude:**	49.668904 -123.252311
Temperature(c):	Low -13 High -2	**Permit:**	PE 110136
Weather Conditions:	Clear	**Ground Conditions:**	Frozen

Observations

Time: 10:19:02 **Flow Volume (visual):** moderate

Notes:

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

Samples Collected - Parameters

Total Metals + Mercury	Yes	**General Parameters (Alkalinity)**	Yes	**Other Sample:**	
Dissolved Metals + Mercury	Yes	**Total Sulfide, Unionized Sulfide**	Yes		
TSS	Yes	**Anions**	Yes		
TDS	Yes	**Total Trivalent Chromium**	Yes	**QA Samples:**	Yes
Nutrients	Yes	**VOC/VPH**	Yes		
DOC	Yes	**EPH, PAH, LEPH/HEPH**	Yes		
		Trout LC50	Yes		

Logger Maintenance

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

Describe Logger Maintenance

Photos

Photo: 1

Location: EOP and LC50

Description:

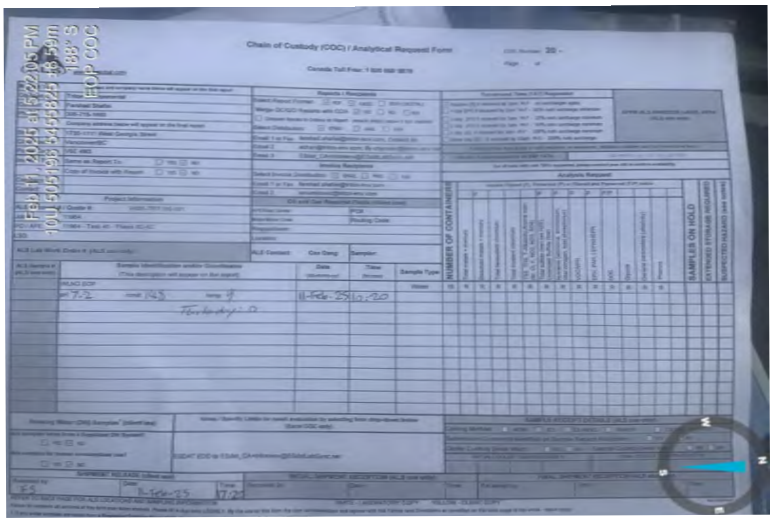

Photo: 2

Location: EOP COC

Description:

Photos

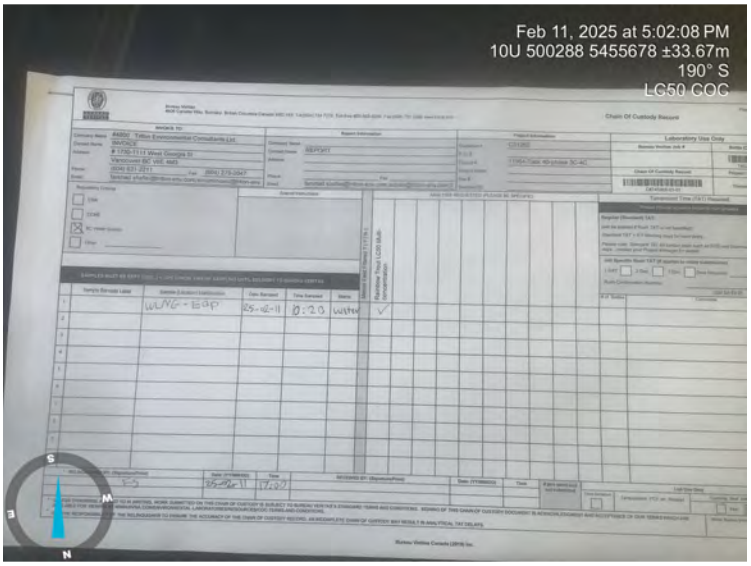

Photo: 3

Location: LC50 coc

Description:

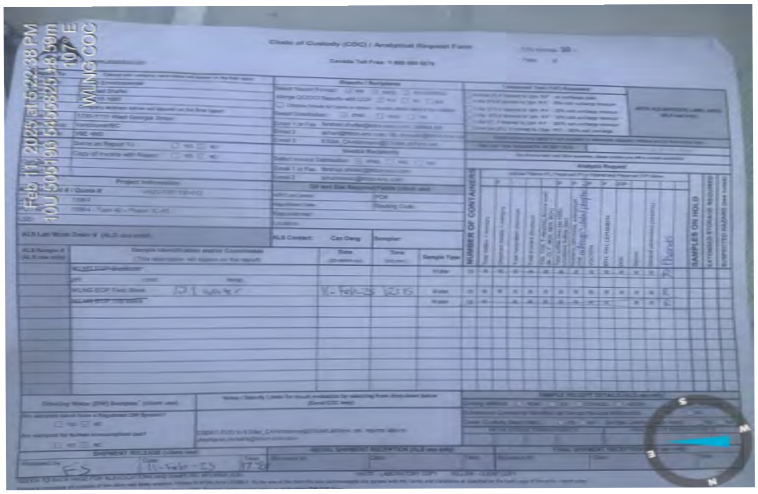

Photo: 4

Location: Field blank

Description:

Sign Off

Report Prepared By:	**Report Reviewed:**
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	**February 10, 2025 to February 16, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC1** **February 27, 2025**

Table of Contents:

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

Appendices:

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

1. Executive Summary and Field Notes:

- Feb 8-10: Increased seepage observed at the tunnel face; TBM advancement postponed. Packers and steel plates installed to reduce seepage.
- Feb 11-12: CO2 and citric acid prepared for pressure grouting; CO2 injection used at WTP to control pH.
- Feb 12-15: CO2 system commissioning faced issues (faulty solenoid, frozen hoses/regulators), causing pH exceedances; pressure grouting postponed on Feb 15.
- Mitigations: Added a pH meter, an extra CO2 injection port, and citric acid/water solution for better pH control.
- Monitoring & Results: pH discrepancies corrected with probe replacement; key parameters monitored; no visible sheen on discharged water; total discharge up to Feb 16 was 76,650m³.

Daily Volume Summary:

Table 1: Discharge Volumes Daily Summary

Date	Location	Volume (m3)	Comments
February 10	Woodfibre (WF)	1710	Exceeds 1500m^3/ day discharge volume due to increased tunnel seepage rate
February 11	WF	1672	Exceeds 1500m^3/ day discharge volume due to increased tunnel seepage rate
February 12	WF	1584	Exceeds 1500m^3/ day discharge volume due to increased tunnel seepage rate
February 13	WF	1197	None

Date	Location	Volume (m3)	Comments
February 14	WF	1394	None
February 15	WF	1386	None
February 16	WF	1287	None
Total		10230	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)
2/10/2025	0:00:00	7	1.750	0.4	67,520	9.4	112
2/10/2025	0:15:00	7	1.429	0.6	67,545	9.3	111
2/10/2025	0:30:00	7	0.737	0.5	67,559	9.6	113
2/10/2025	0:45:00	7.1	1.875	0.7	67,583	9.3	111
2/10/2025	1:00:00	7.1	0.881	0.9	67,608	9.3	111
2/10/2025	1:30:00	7	0.174	1.3	67,613	10.3	268
2/10/2025	1:45:00	7.1	1.920	1	67,632	9.3	111
2/10/2025	2:00:00	7.1	1.841	0.6	67,659	9.3	111
2/10/2025	2:15:00	7.1	1.882	0.7	67,687	9.3	111
2/10/2025	2:30:00	7.1	1.550	1.3	67,712	9.3	112
2/10/2025	2:45:00	7	0.896	0	67,731	9.6	115
2/10/2025	3:00:00	7.1	0.132	0.3	67,738	9.4	114
2/10/2025	3:15:00	7.1	1.735	0.7	67,757	9.3	113
2/10/2025	3:30:00	7.1	1.663	0.5	67,783	9.3	111
2/10/2025	4:00:00	7	0.000	0.6	67,806	9.4	273
2/10/2025	4:15:00	7.1	1.486	0.3	67,819	9.2	113
2/10/2025	4:30:00	7.1	1.501	0.1	67,841	9.4	116
2/10/2025	4:45:00	7.1	1.452	0	67,863	9.5	116
2/10/2025	5:00:00	7.1	1.478	0.1	67,886	9.4	114
2/10/2025	5:15:00	7.1	0.144	0.1	67,901	9.4	114
2/10/2025	5:30:00	7.1	1.421	0	67,922	9.5	116

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/10/2025	5:45:00	7	1.349	0	67,944	9.8	117
2/10/2025	6:00:00	7	1.240	0	67,961	10.6	269
2/10/2025	6:15:00	**6.9**	1.221	0	67,979	11.4	269
2/10/2025	6:30:00	**6.9**	1.187	0	67,997	12.2	268
2/10/2025	6:45:00	**6.9**	1.168	0	68,015	12.8	267
2/10/2025	7:00:00	7.1	1.599	0.1	68,038	9.5	114
2/10/2025	7:15:00	7.1	1.561	0.1	68,062	9.5	116
2/10/2025	7:30:00	7.1	0.881	0	68,081	10.6	119
2/10/2025	7:45:00	7	0.000	0.3	68,092	9.9	269
2/10/2025	8:15:00	7	0.979	1	68,101	9.5	269
2/10/2025	8:30:00	7.1	1.576	0	68,121	9.2	116
2/10/2025	8:45:00	7.1	1.523	0.2	68,145	9.2	114
2/10/2025	9:00:00	7	0.000	0.5	68,164	9.2	114
2/10/2025	9:15:00	**6.9**	1.380	1.7	68,164	9.4	271
2/10/2025	9:30:00	7	1.644	0.2	68,183	9.1	114
2/10/2025	9:45:00	7	1.512	0.1	68,206	9.2	114
2/10/2025	10:00:00	7	1.066	0.1	68,226	9.5	114
2/10/2025	10:15:00	7.1	1.750	0.5	68,246	9.4	114
2/10/2025	10:30:00	7.1	1.652	0.8	68,272	9.4	114
2/10/2025	10:45:00	7	0.000	0.4	68,278	9.7	116
2/10/2025	11:00:00	7.1	1.414	0.5	68,295	9.4	116
2/10/2025	11:15:00	7	1.376	2.4	68,318	9.8	116
2/10/2025	12:00:00	7.1	1.875	2.7	68,337	9.6	114
2/10/2025	12:15:00	7.1	1.867	0.1	68,364	9.6	116
2/10/2025	12:30:00	7.1	1.811	0	68,391	9.7	117

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
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Data Date Range	**February 10, 2025 to February 16, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC1** **February 27, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/10/2025	12:45:00	7.2	0.000	0.5	68,417	9.8	117
2/10/2025	13:00:00	7.1	1.610	0.8	68,427	9.8	116
2/10/2025	13:15:00	7.2	1.399	0	68,450	9.7	116
2/10/2025	13:30:00	7.2	1.040	0	68,468	10	114
2/10/2025	13:45:00	7.2	1.727	0.1	68,492	9.7	114
2/10/2025	14:15:00	7.2	1.164	0	68,516	10.1	116
2/10/2025	15:00:00	7.2	1.773	0	68,556	9.8	116
2/10/2025	15:15:00	7.2	1.807	0.1	68,583	9.9	116
2/10/2025	15:30:00	7.2	1.724	0.2	68,609	9.9	114
2/10/2025	15:45:00	7.2	1.610	0	68,635	10.1	116
2/10/2025	16:15:00	7.2	1.467	0	68,653	10.5	118
2/10/2025	16:30:00	7.1	0.507	0	68,672	11.2	117
2/10/2025	17:00:00	7.2	1.886	0.2	68,697	9.7	114
2/10/2025	17:15:00	7.3	1.319	0.2	68,721	9.8	113
2/10/2025	17:45:00	7.2	1.841	0	68,747	10.1	117
2/10/2025	18:00:00	7.3	1.796	0.1	68,774	9.6	114
2/10/2025	18:45:00	7.2	1.750	0.4	68,803	9.2	111
2/10/2025	19:00:00	7.3	1.799	0.4	68,829	9.3	111
2/10/2025	19:15:00	7.3	1.709	0.1	68,855	9.4	114
2/10/2025	19:30:00	7.3	1.686	0	68,881	9.5	116
2/10/2025	19:45:00	7.3	1.641	0.1	68,907	9.6	114
2/10/2025	20:30:00	7.3	1.610	0.2	68,945	9.4	114
2/10/2025	20:45:00	7.3	1.482	0.5	68,968	9.3	112
2/10/2025	21:00:00	7.3	1.542	0.4	68,991	9.3	112
2/10/2025	21:15:00	7.3	1.512	0.2	69,014	9.4	114

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/10/2025	21:30:00	7.3	1.493	0	69,036	9.6	117
2/10/2025	21:45:00	7.3	0.677	0	69,053	9.5	115
2/10/2025	22:00:00	7.3	1.542	0.2	69,075	9.4	113
2/10/2025	22:15:00	7.3	1.527	0.2	69,098	9.4	113
2/10/2025	22:30:00	7.3	1.452	0	69,120	9.6	116
2/10/2025	22:45:00	7.3	1.486	0	69,143	9.7	117
2/10/2025	23:00:00	7.3	1.470	0	69,165	9.7	117
2/10/2025	23:15:00	7.3	1.395	0	69,186	9.8	117
2/10/2025	23:30:00	7.3	1.436	0	69,207	10.1	118
2/11/2025	0:00:00	7.2	0.000	0	69,227	11.7	117
2/11/2025	0:15:00	7.3	1.251	0.4	69,235	11.4	114
2/11/2025	0:30:00	7.3	1.671	0.1	69,253	9.2	113
2/11/2025	0:45:00	7.3	1.603	0.4	69,277	9.2	111
2/11/2025	1:00:00	7.3	1.569	0.4	69,302	9.2	110
2/11/2025	1:15:00	7.3	1.032	0.4	69,325	9.2	113
2/11/2025	2:00:00	7.2	1.565	0.2	69,353	9.2	114
2/11/2025	2:45:00	7.2	1.569	0	69,391	9.2	117
2/11/2025	3:00:00	7.1	1.852	0.2	69,418	9.6	274
2/11/2025	3:15:00	7	1.641	0	69,443	11	278
2/11/2025	3:30:00	7.1	1.497	0	69,466	9.4	272
2/11/2025	3:45:00	7.1	1.671	0	69,487	9.5	117
2/11/2025	4:00:00	7.1	1.482	0	69,510	9.5	117
2/11/2025	4:15:00	7.2	1.467	0	69,532	9.6	118
2/11/2025	4:30:00	7.2	1.550	0	69,555	9.6	117
2/11/2025	4:45:00	7.2	1.066	0	69,577	9.6	117

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Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/11/2025	5:00:00	7.2	0.000	0	69,583	10	117
2/11/2025	5:15:00	7.2	1.557	0	69,590	9.5	117
2/11/2025	5:30:00	7.2	1.523	0	69,613	9.4	117
2/11/2025	5:45:00	7.2	1.474	0	69,636	9.4	117
2/11/2025	6:00:00	7.2	1.448	0	69,656	9.6	119
2/11/2025	6:15:00	7.3	1.569	0	69,679	9.5	118
2/11/2025	6:30:00	7.2	0.888	0	69,695	10.7	119
2/11/2025	6:45:00	7.2	0.782	0	69,707	9.7	118
2/11/2025	7:00:00	7.3	1.603	0	69,726	9.2	117
2/11/2025	7:15:00	7.3	1.697	0	69,748	9.4	119
2/11/2025	7:30:00	7.3	1.659	0	69,773	9.4	117
2/11/2025	7:45:00	7.3	0.215	0	69,796	9.5	118
2/11/2025	8:00:00	7.2	0.000	0	69,796	10.3	117
2/11/2025	8:15:00	7.3	1.153	0.2	69,812	9.1	114
2/11/2025	8:30:00	7.3	0.178	0.2	69,830	9.1	114
2/11/2025	8:45:00	7.2	0.000	0.4	69,830	10.7	112
2/11/2025	9:00:00	7.2	0.000	0.2	69,830	10.9	113
2/11/2025	9:15:00	7.3	1.720	0.5	69,849	9	113
2/11/2025	9:30:00	7.3	1.735	0.7	69,875	9	111
2/11/2025	9:45:00	7.3	1.637	0.4	69,897	9.1	113
2/11/2025	10:00:00	7.3	0.000	0.4	69,906	9.2	112
2/11/2025	10:15:00	7.3	1.667	0.4	69,918	9	112
2/11/2025	10:30:00	7.3	1.565	0.2	69,943	9.1	114
2/11/2025	10:45:00	7.3	1.618	0.1	69,967	9.2	116
2/11/2025	11:00:00	7.3	1.572	0.1	69,991	9.2	116

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/11/2025	11:15:00	7.3	1.535	0.3	70,015	9.2	113
2/11/2025	11:30:00	7.3	1.572	0.4	70,033	9.3	112
2/11/2025	11:45:00	7.2	0.000	0.5	70,037	9.5	112
2/11/2025	12:00:00	7.3	1.387	1.8	70,037	9.8	112
2/11/2025	12:15:00	7.3	1.716	0.5	70,065	9.3	112
2/11/2025	12:30:00	7.2	0.000	0.3	70,065	9.7	114
2/11/2025	12:45:00	7.3	1.867	0	70,092	9.6	116
2/11/2025	13:00:00	7.3	1.852	0	70,119	9.7	116
2/11/2025	13:15:00	7.3	1.830	0.1	70,146	9.7	117
2/11/2025	13:30:00	7.3	1.780	0.2	70,173	9.6	114
2/11/2025	13:45:00	7.3	1.693	0.1	70,199	9.7	114
2/11/2025	14:00:00	7.3	1.527	0.2	70,211	9.9	114
2/11/2025	14:15:00	7.3	1.440	0.2	70,228	9.7	114
2/11/2025	14:30:00	7.3	1.353	0	70,249	9.9	115
2/11/2025	14:45:00	7.3	0.000	0	70,262	10.2	116
2/11/2025	15:00:00	7.3	1.448	0.1	70,263	10.9	114
2/11/2025	15:15:00	7.3	1.051	0.3	70,283	9.8	113
2/11/2025	15:30:00	7.2	1.399	0.3	70,304	10.2	113
2/11/2025	15:45:00	7.2	1.349	0.2	70,324	10.6	114
2/11/2025	16:00:00	7.3	1.705	0	70,346	9.8	114
2/11/2025	16:15:00	7.3	1.724	0	70,372	9.7	117
2/11/2025	16:30:00	7.4	0.000	0	70,389	9.8	116
2/11/2025	16:45:00	7.2	0.000	0.1	70,389	10.2	116
2/11/2025	17:00:00	7.3	1.905	0.2	70,409	9.4	114
2/11/2025	17:15:00	7.3	1.837	0.1	70,437	9.5	115

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/11/2025	17:30:00	7.3	1.780	0.2	70,465	9.4	113
2/11/2025	17:45:00	7.4	0.813	0.4	70,486	9.5	114
2/11/2025	18:00:00	7.3	1.826	0.3	70,509	9.4	113
2/11/2025	18:15:00	7.3	0.000	0.4	70,515	9.5	112
2/11/2025	18:30:00	7.3	1.096	0.4	70,527	9.6	113
2/11/2025	18:45:00	7.3	1.641	0.4	70,550	9.3	112
2/11/2025	19:00:00	7.4	0.212	0.5	70,575	9.3	112
2/11/2025	19:15:00	7.2	0.000	0.1	70,575	9.8	116
2/11/2025	19:30:00	7.3	1.837	0	70,593	9.5	117
2/11/2025	19:45:00	7.3	1.867	0	70,621	9.4	114
2/11/2025	20:00:00	7.3	1.769	0.1	70,649	9.4	114
2/11/2025	20:15:00	7.3	1.777	0	70,676	9.5	117
2/11/2025	20:30:00	7.3	0.000	0	70,682	9.9	116
2/11/2025	20:45:00	7.3	1.845	0	70,698	9.6	117
2/11/2025	21:00:00	7.3	1.780	0	70,725	9.7	118
2/11/2025	21:15:00	7.4	1.731	0	70,751	9.7	117
2/11/2025	21:30:00	7.4	0.336	0	70,777	9.7	117
2/11/2025	21:45:00	7.3	0.000	0	70,777	10.5	118
2/11/2025	22:00:00	7.4	1.157	0	70,789	9.8	119
2/11/2025	22:15:00	7.4	1.618	0	70,811	9.7	119
2/11/2025	22:30:00	7.4	1.637	0	70,836	9.7	119
2/11/2025	22:45:00	7.3	0.000	0	70,839	10.3	117
2/11/2025	23:00:00	7.4	1.671	0	70,849	9.7	118
2/11/2025	23:15:00	7.4	1.622	0	70,870	9.9	119
2/11/2025	23:30:00	7.4	1.693	0	70,894	9.8	119

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/11/2025	23:45:00	7.3	0.000	0	70,897	10.4	118
2/12/2025	0:00:00	7.4	1.565	0	70,917	9.7	118
2/12/2025	0:15:00	7.4	1.678	0	70,942	9.7	117
2/12/2025	0:30:00	7.4	1.625	0	70,962	9.7	119
2/12/2025	0:45:00	7.4	0.219	0	70,985	9.6	114
2/12/2025	1:00:00	7.3	0.000	0	70,985	10.1	116
2/12/2025	1:15:00	7.3	1.614	0	71,007	9.5	117
2/12/2025	1:30:00	7.3	1.077	0	71,029	9.7	119
2/12/2025	1:45:00	7.2	1.644	0	71,051	9.6	118
2/12/2025	2:00:00	7.1	1.554	0	71,075	9.7	117
2/12/2025	2:15:00	7.1	0.000	0	71,079	9.9	114
2/12/2025	2:30:00	7.1	1.610	0	71,092	9.4	116
2/12/2025	2:45:00	7.1	1.433	0	71,112	9.5	116
2/12/2025	3:00:00	7.1	1.569	0	71,135	9.4	117
2/12/2025	3:15:00	7.1	1.512	0	71,158	9.5	117
2/12/2025	3:30:00	7.2	1.516	0	71,181	9.5	119
2/12/2025	3:45:00	7.2	0.000	0	71,198	9.6	117
2/12/2025	4:00:00	7.1	0.000	0	71,198	10.6	119
2/12/2025	4:15:00	7.2	1.508	0	71,218	9.4	119
2/12/2025	4:30:00	7.3	1.512	0	71,241	9.5	117
2/12/2025	4:45:00	7.3	1.531	0	71,264	9.4	116
2/12/2025	5:00:00	7.3	1.040	0	71,285	9.7	117
2/12/2025	5:15:00	7.3	0.000	0	71,296	9.6	117
2/12/2025	5:30:00	7.3	1.607	0	71,301	9.6	119
2/12/2025	5:45:00	7.3	1.622	0	71,324	9.3	117

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/12/2025	6:00:00	7.3	1.565	0	71,348	9.3	117
2/12/2025	6:15:00	7.3	0.325	0	71,367	9.5	117
2/12/2025	6:30:00	7.2	0.000	0	71,368	9.7	114
2/12/2025	6:45:00	7.3	1.557	0.3	71,381	9	114
2/12/2025	7:00:00	7.3	1.482	0.2	71,404	9.1	113
2/12/2025	7:15:00	7.3	1.527	0	71,427	9.3	116
2/12/2025	7:30:00	7.3	0.000	0	71,433	10	117
2/12/2025	7:45:00	7.3	1.504	0	71,440	9.4	117
2/12/2025	8:00:00	7.3	1.520	0	71,463	9.3	117
2/12/2025	8:15:00	7.4	1.429	0	71,486	9.3	116
2/12/2025	8:30:00	7.3	0.000	0	71,488	10	117
2/12/2025	8:45:00	7.3	1.486	0	71,494	9.4	117
2/12/2025	9:00:00	7.4	1.357	0.1	71,517	9.3	114
2/12/2025	9:15:00	7.4	1.777	0.2	71,542	9.2	114
2/12/2025	9:30:00	7.4	0.000	0.3	71,564	9.2	114
2/12/2025	9:45:00	7.4	0.000	0.3	71,567	9.5	114
2/12/2025	10:00:00	7.3	0.000	0.5	71,571	9.6	116
2/12/2025	10:15:00	7.4	1.769	0	71,589	9.4	117
2/12/2025	10:30:00	7.4	1.754	0	71,615	9.5	116
2/12/2025	10:45:00	7.4	0.696	0.2	71,637	9.5	114
2/12/2025	11:00:00	7.4	1.799	0	71,657	9.5	116
2/12/2025	11:15:00	7.3	0.000	0.1	71,663	9.9	116
2/12/2025	11:30:00	7.3	1.629	0.1	71,678	9.4	114
2/12/2025	11:45:00	7.4	1.240	0	71,703	9.5	116
2/12/2025	12:00:00	7.4	1.682	0.3	71,712	9.5	114

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/12/2025	12:15:00	7.4	1.580	0.3	71,736	9.5	113
2/12/2025	12:30:00	7.4	1.777	0.4	71,760	9.5	114
2/12/2025	12:45:00	7.4	0.000	0.1	71,770	9.7	117
2/12/2025	13:00:00	7.3	1.546	0.3	71,776	9.6	114
2/12/2025	13:15:00	7.4	1.576	0.3	71,799	9.6	114
2/12/2025	13:30:00	7.6	1.149	0.3	71,819	9.7	269
2/12/2025	13:45:00	7.3	1.580	0.2	71,843	9.7	313
2/12/2025	14:00:00	7.6	1.542	0.2	71,862	9.7	310
2/12/2025	14:15:00	7.7	1.489	0.3	71,884	9.7	291
2/12/2025	14:30:00	7.7	0.665	0.4	71,902	10	339
2/12/2025	14:45:00	7.9	0.000	0.2	71,912	10	362
2/12/2025	15:00:00	8.2	1.486	0.2	71,917	9.8	378
2/12/2025	15:15:00	8.5	0.000	0.2	71,924	10	377
2/12/2025	15:30:00	8.1	1.512	0.1	71,945	9.8	488
2/12/2025	15:45:00	7.6	0.000	0	71,964	9.9	563
2/12/2025	16:00:00	7.6	0.000	0.1	71,964	10.3	569
2/12/2025	16:15:00	**6.8**	1.478	0	71,977	9.8	581
2/12/2025	16:45:00	7.1	1.119	0	72,020	10.5	525
2/12/2025	17:00:00	9	1.561	0	72,042	9.8	314
2/12/2025	17:15:00	9	0.000	0	72,045	10.1	312
2/12/2025	17:30:00	8.6	0.000	0	72,049	10	334
2/12/2025	17:45:00	**9.4**	1.607	0.1	72,068	9.6	294
2/12/2025	18:00:00	**9.6**	1.607	0.1	72,089	9.7	301
2/12/2025	18:15:00	**9.8**	1.678	0.1	72,114	9.5	304
2/12/2025	18:30:00	**9.7**	1.565	0	72,137	9.7	307

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/12/2025	18:45:00	**9.4**	0.000	0.2	72,149	9.8	311
2/12/2025	19:00:00	**8.8**	1.467	0.3	72,153	9.7	406
2/12/2025	19:15:00	**6.8**	1.663	0	72,179	9.6	410
2/12/2025	19:30:00	**6.7**	1.622	0	72,205	9.7	366
2/12/2025	19:45:00	**6.9**	1.682	0	72,228	9.7	308
2/12/2025	20:15:00	7.6	1.761	0	72,255	9.5	283
2/12/2025	20:30:00	7.4	1.470	0	72,278	9.5	310
2/12/2025	20:45:00	7.5	1.429	0	72,300	9.5	288
2/12/2025	21:00:00	7.4	1.005	0	72,320	9.8	300
2/12/2025	21:30:00	7.6	1.523	0	72,333	9.7	292
2/12/2025	21:45:00	7.4	1.440	0	72,356	9.6	318
2/12/2025	22:00:00	7.4	1.365	0	72,377	9.6	303
2/12/2025	22:15:00	7.6	1.380	0.1	72,395	9.7	271
2/12/2025	22:30:00	7.4	1.266	0.4	72,414	9.5	284
2/12/2025	22:45:00	7.5	1.459	0.5	72,435	9.4	279
2/12/2025	23:00:00	7.4	1.421	0.5	72,457	9.4	284
2/12/2025	23:30:00	7.4	1.402	0	72,479	9.8	282
2/12/2025	23:45:00	7.4	1.421	0	72,500	9.6	281
2/13/2025	0:00:00	7.4	1.410	0	72,521	9.7	281
2/13/2025	0:15:00	7.4	1.383	0.2	72,542	9.5	281
2/13/2025	0:45:00	7.4	1.580	0.1	72,555	9.5	283
2/13/2025	1:00:00	7.4	1.452	0	72,577	9.5	285
2/13/2025	1:15:00	7.4	1.550	0	72,600	9.7	284
2/13/2025	1:30:00	7.4	1.463	0.2	72,622	9.5	284
2/13/2025	2:00:00	7.3	1.406	0.2	72,641	10	288

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/13/2025	2:15:00	7.3	1.508	0.1	72,664	9.4	293
2/13/2025	2:30:00	7.3	1.614	0.1	72,688	9.4	293
2/13/2025	2:45:00	7.3	1.486	0.3	72,712	9.3	294
2/13/2025	3:15:00	8.2	1.538	0.4	72,738	9.3	348
2/13/2025	3:30:00	8.7	1.531	0.4	72,762	9.3	397
2/13/2025	7:00:00	8.7	1.641	0.9	72,799	9.3	486
2/13/2025	7:15:00	8.9	1.591	1	72,823	9.3	424
2/13/2025	7:45:00	8.6	1.622	1	72,835	9.2	431
2/13/2025	8:00:00	7.9	1.081	1.7	72,856	9.2	459
2/13/2025	8:15:00	7.1	1.489	1.2	72,878	9.2	467
2/13/2025	8:30:00	7	0.000	2.4	72,900	9.2	461
2/13/2025	8:45:00	7.3	1.546	1.1	72,909	9.2	392
2/13/2025	9:00:00	7.2	0.000	1.2	72,925	9.2	389
2/13/2025	9:15:00	7.2	0.000	1.2	72,925	9.3	390
2/13/2025	9:30:00	7.6	1.588	1.3	72,942	9.1	351
2/13/2025	9:45:00	7.6	0.000	1.2	72,962	9.2	368
2/13/2025	10:00:00	7.4	0.000	1.2	72,962	9.3	371
2/13/2025	10:15:00	7.7	1.486	1.2	72,965	9.3	396
2/13/2025	10:30:00	8.7	1.497	1.3	72,988	9.3	366
2/13/2025	10:45:00	8.9	1.542	1.2	73,001	9.4	399
2/13/2025	11:00:00	**9.5**	1.138	1.2	73,024	9.4	421
2/13/2025	11:15:00	**9.3**	0.000	1.2	73,024	9.6	419
2/13/2025	11:30:00	**9.1**	1.319	1.5	73,026	9.7	421
2/13/2025	11:45:00	7.8	1.338	1	73,043	9.6	461
2/13/2025	12:00:00	4.3	0.000	1	73,051	9.8	459

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/13/2025	12:15:00	8.5	1.501	1.2	73,065	10	461
2/13/2025	12:30:00	8.3	0.000	1.1	73,082	10.2	457
2/13/2025	12:45:00	8.2	1.686	1	73,103	10.5	457
2/13/2025	13:00:00	8.2	1.527	1.1	73,127	10.7	460
2/13/2025	13:15:00	8.2	1.508	1	73,149	10.9	460
2/13/2025	13:30:00	8.2	1.319	1	73,170	11.1	456
2/13/2025	13:45:00	8.2	0.000	1	73,185	11.4	458
2/13/2025	14:00:00	8.2	0.000	1	73,185	11.5	458
2/13/2025	14:15:00	8.2	1.202	5.2	73,194	11.7	456
2/13/2025	14:30:00	8.2	0.953	5	73,211	11.9	455
2/13/2025	14:45:00	8.2	1.047	3.3	73,229	12.1	455
2/13/2025	15:00:00	8.5	0.000	3.4	73,232	12.8	461
2/13/2025	15:15:00	7.5	1.724	0.8	73,254	10.1	543
2/13/2025	15:30:00	7.5	0.000	0.7	73,260	10.3	539
2/13/2025	15:45:00	7.5	0.000	0.7	73,260	10.6	542
2/13/2025	16:00:00	7.7	0.000	0.7	73,267	10.2	481
2/13/2025	16:15:00	7.6	0.000	0.8	73,267	10.6	476
2/13/2025	16:30:00	7.6	0.000	0.8	73,267	10.9	473
2/13/2025	16:45:00	7.6	1.463	0.8	73,275	10	455
2/13/2025	17:00:00	7.5	1.436	0.8	73,297	9.9	400
2/13/2025	17:15:00	7	1.418	0.9	73,318	9.9	481
2/13/2025	17:30:00	7.3	0.922	0.9	73,336	10.1	355
2/13/2025	17:45:00	7.1	0.000	0.9	73,350	10	478
2/13/2025	18:00:00	7.6	1.463	0.9	73,363	9.9	345
2/13/2025	18:15:00	8.9	1.523	1	73,386	9.8	281

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/13/2025	18:30:00	7.2	0.903	1	73,404	10	396
2/13/2025	18:45:00	6.9	0.000	0.9	73,418	9.8	403
2/13/2025	19:00:00	**6.8**	0.189	0.9	73,418	10.1	400
2/13/2025	19:15:00	**6.9**	1.380	0.9	73,439	9.7	305
2/13/2025	19:30:00	7.1	1.346	0.9	73,460	9.7	289
2/13/2025	19:45:00	7.2	1.304	0.8	73,480	9.7	294
2/13/2025	20:00:00	**6.9**	0.000	0.9	73,489	9.8	284
2/13/2025	20:15:00	**6.9**	1.070	4.5	73,489	10	287
2/13/2025	20:30:00	7.3	1.297	0.9	73,508	9.6	282
2/13/2025	20:45:00	7.1	1.263	0.9	73,527	9.6	308
2/13/2025	21:00:00	7.1	1.255	1	73,546	9.6	276
2/13/2025	21:15:00	7	1.221	0.9	73,564	9.6	303
2/13/2025	21:30:00	7.1	1.176	1	73,582	9.6	272
2/13/2025	21:45:00	6.9	0.000	0.9	73,589	9.7	307
2/13/2025	22:00:00	7	1.172	0.9	73,590	9.9	320
2/13/2025	22:15:00	7.2	1.281	1.3	73,604	9.5	286
2/13/2025	22:30:00	**6.9**	1.255	1	73,624	9.5	318
2/13/2025	22:45:00	7.2	1.247	0.9	73,642	9.5	284
2/13/2025	23:00:00	**6.9**	1.202	0.9	73,661	9.5	318
2/13/2025	23:15:00	7.2	1.194	0.9	73,679	9.5	287
2/13/2025	23:30:00	7.1	1.436	1	73,694	9.5	327
2/13/2025	23:45:00	7.4	1.523	0.9	73,717	9.7	313
2/14/2025	0:00:00	**6.4**	0.983	1.2	73,737	9.9	292
2/14/2025	0:15:00	7.8	1.678	5.1	73,745	9.8	406
2/14/2025	0:30:00	9	1.633	0.9	73,770	9.6	302

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/14/2025	1:00:00	7.1	1.285	0.9	73,793	9.6	492
2/14/2025	1:15:00	7.4	1.331	1	73,808	9.6	323
2/14/2025	1:30:00	7.1	1.327	0.9	73,829	9.6	371
2/14/2025	1:45:00	7.2	1.297	1	73,848	9.6	310
2/14/2025	2:00:00	7	1.251	1	73,867	9.6	274
2/14/2025	2:15:00	7.1	0.816	0.9	73,886	9.6	297
2/14/2025	2:30:00	7	1.372	1	73,902	9.6	279
2/14/2025	2:45:00	7.1	1.353	1.1	73,922	9.6	310
2/14/2025	3:00:00	7.2	1.247	1.1	73,941	9.6	310
2/14/2025	3:15:00	7.1	1.244	1	73,961	9.6	279
2/14/2025	4:00:00	7.1	1.281	1.1	73,980	9.6	320
2/14/2025	4:15:00	7.1	1.368	1	73,999	9.5	305
2/14/2025	4:30:00	7	1.297	1	74,019	9.6	296
2/14/2025	4:45:00	7.2	1.285	1	74,035	9.6	109
2/14/2025	5:00:00	7.1	1.323	1	74,055	9.6	279
2/14/2025	5:15:00	7	1.293	1	74,075	9.6	267
2/14/2025	5:30:00	7.2	1.304	1.1	74,094	9.5	109
2/14/2025	5:45:00	**6.9**	0.794	1	74,113	9.5	291
2/14/2025	6:00:00	7.2	1.331	1	74,129	9.5	109
2/14/2025	6:15:00	7.3	0.000	1	74,137	9.6	109
2/14/2025	6:45:00	**6.7**	1.467	0.8	74,154	9.4	291
2/14/2025	7:00:00	**6.8**	0.983	1	74,174	9.5	271
2/14/2025	7:15:00	7	1.580	0.9	74,195	9.4	271
2/14/2025	7:30:00	7.2	1.538	0.9	74,218	9.4	271
2/14/2025	7:45:00	7.2	1.546	1	74,241	9.4	271

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/14/2025	8:00:00	**6.9**	0.000	1	74,256	9.5	314
2/14/2025	8:15:00	**6.9**	0.000	1.1	74,256	9.6	317
2/14/2025	8:30:00	**6.8**	0.000	1	74,256	9.6	317
2/14/2025	8:45:00	7.1	1.860	1.1	74,270	9.3	274
2/14/2025	9:00:00	6.7	0.000	1.1	74,279	9.4	108
2/14/2025	9:15:00	7	1.848	1	74,305	9.4	278
2/14/2025	9:30:00	7	1.682	1	74,331	9.4	108
2/14/2025	9:45:00	7.2	1.641	0.9	74,356	9.5	109
2/14/2025	10:00:00	**6.9**	1.603	0.9	74,381	9.6	109
2/14/2025	10:15:00	7.1	0.000	0.9	74,387	9.7	269
2/14/2025	10:30:00	7.1	1.746	0.9	74,394	9.6	109
2/14/2025	10:45:00	**6.9**	1.089	0.9	74,416	9.7	296
2/14/2025	11:00:00	7.2	0.299	0.9	74,439	9.6	272
2/14/2025	11:15:00	7.2	0.000	0.8	74,439	9.8	274
2/14/2025	11:30:00	7.1	1.780	0.9	74,443	9.7	282
2/14/2025	11:45:00	7.2	1.727	0.7	74,469	9.6	271
2/14/2025	12:00:00	7.2	1.746	0.9	74,494	9.7	109
2/14/2025	12:15:00	7.3	0.000	0.8	74,509	9.8	109
2/14/2025	12:30:00	7.2	0.000	0.9	74,509	10	109
2/14/2025	12:45:00	7.1	0.000	0.9	74,509	10.2	109
2/14/2025	13:00:00	7.1	0.000	0.8	74,509	10.4	109
2/14/2025	13:15:00	7.4	1.754	0.9	74,525	9.8	109
2/14/2025	13:30:00	7.2	1.731	0.9	74,551	9.8	109
2/14/2025	15:00:00	7	1.622	0.7	74,591	10	294
2/14/2025	15:15:00	7.1	1.584	0.7	74,615	10	109

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/14/2025	15:30:00	7.3	1.603	0.6	74,639	10	111
2/14/2025	15:45:00	7.7	1.538	0.8	74,663	10	112
2/14/2025	16:45:00	8	1.108	3.2	74,679	10.1	109
2/14/2025	17:00:00	8.7	1.599	0.9	74,700	9.9	109
2/14/2025	17:15:00	8.8	0.227	0.7	74,722	9.9	109
2/14/2025	17:30:00	8.5	1.497	0.9	74,743	9.9	109
2/14/2025	17:45:00	**6.3**	1.440	0.9	74,764	9.8	416
2/14/2025	18:00:00	**6**	0.382	1	74,786	9.7	409
2/14/2025	18:15:00	**6**	0.000	1	74,786	9.8	421
2/14/2025	18:30:00	**6.1**	1.406	1.1	74,790	9.7	467
2/14/2025	18:45:00	**6.1**	1.501	1.1	74,812	9.6	356
2/14/2025	19:00:00	**6.2**	1.486	1	74,834	9.5	317
2/14/2025	19:15:00	**6.3**	1.497	1	74,856	9.6	310
2/14/2025	19:30:00	**6.5**	1.463	1.1	74,879	9.6	310
2/14/2025	19:45:00	**6.7**	0.000	1	74,894	9.6	305
2/14/2025	20:00:00	**6.6**	1.452	0.9	74,897	9.7	313
2/14/2025	20:15:00	**6.8**	1.421	1	74,918	9.5	277
2/14/2025	20:30:00	**6.9**	1.410	1.1	74,940	9.5	109
2/14/2025	20:45:00	7.5	1.418	1.8	74,951	9.5	108
2/14/2025	21:00:00	7.1	1.418	1.2	74,973	9.4	285
2/14/2025	21:15:00	7.7	1.440	1.2	74,990	9.5	284
2/14/2025	21:30:00	7.1	0.000	1.2	75,004	9.5	421
2/14/2025	21:45:00	7.1	1.421	1.2	75,006	9.6	417
2/14/2025	22:00:00	7.3	1.448	1.2	75,028	9.4	426
2/14/2025	22:15:00	7.2	0.930	2.9	75,049	9.5	503

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/14/2025	22:30:00	7.7	0.000	1.2	75,057	9.5	492
2/14/2025	22:45:00	7.9	1.372	1.1	75,057	9.6	465
2/14/2025	23:00:00	**9.2**	1.482	1.2	75,077	9.5	351
2/14/2025	23:30:00	8.9	1.489	1.2	75,108	9.4	341
2/14/2025	23:45:00	8	1.452	1.2	75,130	9.4	505
2/15/2025	0:00:00	7.5	1.455	1.4	75,151	9.4	524
2/15/2025	0:15:00	7.3	0.000	1.2	75,153	9.5	524
2/15/2025	0:30:00	7.9	1.244	1.2	75,164	9.4	507
2/15/2025	0:45:00	7.4	1.183	1.2	75,183	9.4	374
2/15/2025	1:00:00	8	1.361	1.3	75,201	9.4	442
2/15/2025	1:30:00	8	1.183	1.1	75,230	9.4	458
2/15/2025	1:45:00	8.3	1.274	1.2	75,244	9.5	480
2/15/2025	2:00:00	7.8	1.281	0.9	75,263	9.5	469
2/15/2025	2:15:00	7.5	1.285	1	75,283	9.6	524
2/15/2025	2:30:00	7.3	1.251	1.2	75,302	9.6	537
2/15/2025	2:45:00	7.4	0.000	1.1	75,319	9.5	502
2/15/2025	3:00:00	7.3	0.000	1	75,319	9.6	504
2/15/2025	3:15:00	8.5	1.493	1.1	75,329	9.5	399
2/15/2025	3:30:00	8.8	1.244	1	75,346	9.5	338
2/15/2025	3:45:00	8.8	1.266	1.1	75,361	9.7	350
2/15/2025	4:30:00	8.9	0.915	1	75,401	9.6	322
2/15/2025	4:45:00	8.5	0.491	1	75,414	9.6	374
2/15/2025	5:00:00	8.5	0.862	1.3	75,424	9.6	335
2/15/2025	5:15:00	8.5	1.501	1.3	75,443	9.6	322
2/15/2025	5:30:00	**9.1**	1.213	1.7	75,453	9.8	320

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/15/2025	5:45:00	**9**	1.009	1.2	75,470	9.5	291
2/15/2025	6:00:00	8.8	0.631	1.1	75,483	9.6	300
2/15/2025	6:15:00	7.1	1.331	1.5	75,501	9.6	406
2/15/2025	6:30:00	7	1.361	1.2	75,521	9.5	345
2/15/2025	6:45:00	7.1	1.334	1.6	75,541	9.5	345
2/15/2025	7:00:00	7	0.000	0.9	75,552	9.6	303
2/15/2025	7:15:00	7.1	1.535	0.9	75,560	9.5	333
2/15/2025	7:30:00	7.1	1.516	1.5	75,583	9.5	322
2/15/2025	7:45:00	7.1	0.987	1	75,604	9.6	320
2/15/2025	8:00:00	7.2	0.000	0.9	75,613	9.6	287
2/15/2025	8:15:00	7.1	0.000	0.9	75,613	9.8	289
2/15/2025	8:30:00	7.1	0.000	0.8	75,613	9.9	291
2/15/2025	8:45:00	**6.9**	1.588	1	75,631	9.4	312
2/15/2025	9:00:00	7.1	1.066	0.9	75,651	9.5	296
2/15/2025	9:15:00	7.3	1.546	0.9	75,674	9.5	282
2/15/2025	9:30:00	7.3	0.000	1.1	75,676	9.7	279
2/15/2025	9:45:00	7.4	1.535	0.9	75,681	9.6	286
2/15/2025	10:00:00	7.2	1.535	0.9	75,704	9.5	300
2/15/2025	10:15:00	7.2	1.501	0.9	75,727	9.6	286
2/15/2025	10:30:00	7.1	0.998	1	75,749	9.6	282
2/15/2025	11:15:00	7.2	1.436	1.3	75,768	9.6	310
2/15/2025	11:30:00	7.4	1.444	1.1	75,790	9.6	365
2/15/2025	11:45:00	7.2	1.497	0.8	75,809	8.8	356
2/15/2025	12:00:00	7.4	1.523	0.8	75,831	8.1	389
2/15/2025	12:15:00	7.5	1.493	0.8	75,854	8.6	414

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/15/2025	12:30:00	7.4	0.000	0.7	75,856	8.8	407
2/15/2025	12:45:00	**9.8**	0.215	1	75,869	9.1	345
2/15/2025	13:00:00	**9.6**	1.436	1.2	75,877	9.2	346
2/15/2025	13:15:00	8.9	1.777	1.3	75,901	9.5	422
2/15/2025	13:30:00	8.8	1.542	4.2	75,924	9.5	409
2/15/2025	13:45:00	**9.6**	1.508	0.9	75,938	9.6	361
2/15/2025	14:00:00	8.9	1.470	0.9	75,961	9.7	432
2/15/2025	14:15:00	**10.2**	1.444	1	75,982	9.6	401
2/15/2025	14:30:00	**10.2**	1.501	3.6	75,990	9.8	429
2/15/2025	14:45:00	**9.9**	1.516	6	75,992	9.9	404
2/15/2025	15:00:00	**9.6**	0.998	2.3	76,011	9.7	399
2/15/2025	15:15:00	8.8	1.557	1	76,034	9.7	494
2/15/2025	15:30:00	8.4	1.508	1.2	76,057	9.8	497
2/15/2025	15:45:00	8.1	0.000	1	76,064	9.9	507
2/15/2025	16:00:00	7.9	1.486	1	76,080	9.8	509
2/15/2025	16:15:00	7.1	0.212	1	76,101	9.8	544
2/15/2025	16:30:00	7.1	0.000	0.9	76,101	9.9	541
2/15/2025	16:45:00	8	1.444	1	76,110	9.7	375
2/15/2025	17:00:00	8.4	1.436	1.3	76,132	9.7	314
2/15/2025	17:15:00	7	1.406	0.8	76,153	9.7	461
2/15/2025	17:30:00	8.2	1.470	3.2	76,171	9.8	328
2/15/2025	17:45:00	8.7	0.000	0.9	76,187	9.8	278
2/15/2025	18:00:00	8.1	1.436	0.8	76,191	9.9	287
2/15/2025	18:15:00	7.4	0.956	1	76,210	9.9	408
2/15/2025	18:30:00	8.2	1.436	0.9	76,230	9.8	277

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/15/2025	18:45:00	8.1	0.000	0.7	76,246	9.9	281
2/15/2025	19:00:00	7.4	1.542	1	76,261	9.8	312
2/15/2025	19:15:00	7.2	1.512	0.9	76,284	9.8	320
2/15/2025	19:30:00	7.4	0.000	2	76,294	9.9	346
2/15/2025	19:45:00	7.3	1.538	0.9	76,301	9.8	297
2/15/2025	20:00:00	7.4	1.032	1	76,321	9.8	305
2/15/2025	20:15:00	7.2	1.508	0.9	76,343	9.8	291
2/15/2025	20:30:00	7.2	0.000	0.9	76,352	9.9	297
2/15/2025	20:45:00	7.5	1.542	0.8	76,370	9.8	310
2/15/2025	21:00:00	7.3	0.000	0.9	76,382	9.9	307
2/15/2025	21:15:00	7.4	1.493	1	76,397	9.8	294
2/15/2025	21:30:00	7.1	0.000	0.9	76,412	9.8	281
2/15/2025	21:45:00	7.1	0.000	0.9	76,412	10	284
2/15/2025	22:00:00	7.2	1.459	0.9	76,422	9.7	300
2/15/2025	22:15:00	7.1	0.990	0.9	76,444	9.7	276
2/15/2025	22:30:00	7.2	1.448	0.9	76,462	9.7	284
2/15/2025	22:45:00	7.3	0.000	1	76,480	9.7	296
2/15/2025	23:00:00	7.2	0.000	0.9	76,489	9.7	279
2/15/2025	23:15:00	7	1.599	0.9	76,503	9.6	307
2/15/2025	23:30:00	7.3	1.089	1.2	76,524	9.6	292
2/16/2025	0:00:00	7.2	1.580	1.1	76,541	9.6	303
2/16/2025	0:15:00	7.1	1.554	0.9	76,564	9.4	318
2/16/2025	0:30:00	7.1	1.497	1.1	76,587	9.5	328
2/16/2025	1:15:00	7.3	1.489	1.1	76,619	9.4	305
2/16/2025	1:30:00	7.2	1.452	1.3	76,641	9.4	305

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/16/2025	2:00:00	7.2	1.489	1.2	76,672	9.4	307
2/16/2025	2:15:00	7.1	1.470	1.1	76,694	9.4	303
2/16/2025	3:00:00	7.2	1.463	1.1	76,711	9.4	313
2/16/2025	3:15:00	7.2	1.436	1.1	76,733	9.3	290
2/16/2025	3:30:00	7.3	1.406	1.3	76,754	9.4	284
2/16/2025	3:45:00	7.1	1.383	1.2	76,775	9.4	307
2/16/2025	4:30:00	7.3	1.399	0.9	76,804	9.4	276
2/16/2025	4:45:00	7.3	1.383	1	76,825	9.4	272
2/16/2025	5:00:00	7.2	1.486	1.3	76,842	9.6	274
2/16/2025	5:45:00	7.5	1.478	0.9	76,874	9.4	109
2/16/2025	6:00:00	7.5	1.452	1.1	76,896	9.4	109
2/16/2025	6:30:00	7.6	1.554	2.3	76,910	9.5	109
2/16/2025	6:45:00	7.2	1.047	1	76,932	9.4	289
2/16/2025	7:15:00	7.2	1.554	1.2	76,946	9.4	277
2/16/2025	7:30:00	7.4	1.542	1	76,970	9.3	273
2/16/2025	7:45:00	7.3	1.512	1.1	76,993	9.3	274
2/16/2025	8:00:00	7.2	1.017	1.2	77,011	9.4	298
2/16/2025	8:30:00	7.3	1.520	1	77,019	9.4	276
2/16/2025	8:45:00	7.3	0.000	1.2	77,032	9.4	286
2/16/2025	9:15:00	7	0.847	1.2	77,032	9.4	310
2/16/2025	9:45:00	7.3	1.572	1.2	77,055	9.4	277
2/16/2025	10:00:00	7.2	1.576	1.2	77,074	9.5	289
2/16/2025	10:15:00	7	1.580	1.2	77,098	9.5	297
2/16/2025	10:30:00	7	1.535	1.2	77,121	9.6	297
2/16/2025	10:45:00	7	1.482	1.2	77,144	9.6	315

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/16/2025	11:00:00	7	0.000	1.1	77,154	9.8	320
2/16/2025	11:15:00	7	1.036	1	77,161	9.7	335
2/16/2025	11:30:00	7.4	1.629	1.7	77,171	9.7	343
2/16/2025	11:45:00	7.7	1.618	1.1	77,196	9.7	392
2/16/2025	12:00:00	7.9	0.000	1.1	77,207	9.9	406
2/16/2025	12:15:00	7.7	0.000	1.1	77,207	10.1	407
2/16/2025	12:30:00	8.7	1.565	1.4	77,221	9.8	424
2/16/2025	12:45:00	8.9	1.523	1	77,244	9.9	479
2/16/2025	13:00:00	7.9	1.244	15.1	77,264	9.9	686
2/16/2025	13:15:00	**9.1**	1.474	1	77,282	10	529
2/16/2025	13:30:00	8.6	0.000	2.2	77,293	10.5	109
2/16/2025	13:45:00	8.6	0.000	1.6	77,293	11.3	109
2/16/2025	14:00:00	9.2	1.542	1.5	77,294	11.8	109
2/16/2025	14:30:00	7.6	1.542	2.3	77,317	10.2	759
2/16/2025	14:45:00	7.4	1.523	2	77,339	10.1	758
2/16/2025	15:00:00	7.5	0.987	1.7	77,360	10.2	754
2/16/2025	15:15:00	7.8	0.000	1.7	77,376	10.2	699
2/16/2025	15:30:00	7.8	1.482	2.5	77,379	10.3	708
2/16/2025	15:45:00	8.2	0.000	1.7	77,390	10.2	640
2/16/2025	16:00:00	7.6	1.531	5.2	77,393	10.4	786
2/16/2025	16:15:00	8.2	1.504	3.3	77,411	10.2	708
2/16/2025	16:30:00	8.7	0.000	1.3	77,424	10.2	613
2/16/2025	16:45:00	8.9	0.964	2.6	77,431	10.2	597
2/16/2025	17:30:00	8.1	1.512	1	77,462	10.1	771
2/16/2025	17:45:00	8.4	1.497	1	77,485	10	706

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/16/2025	18:00:00	8.6	0.934	2.7	77,500	10.1	663
2/16/2025	18:15:00	8.7	0.956	1.7	77,513	10	618
2/16/2025	18:30:00	8.6	0.000	1	77,524	10	650
2/16/2025	18:45:00	8.4	1.429	34.9	77,525	10.2	109
2/16/2025	19:00:00	8.3	0.000	1	77,537	9.9	706
2/16/2025	19:15:00	8.6	1.433	1.1	77,555	9.8	637
2/16/2025	19:30:00	8.4	0.000	1.1	77,565	9.9	686
2/16/2025	19:45:00	7.5	1.584	1.6	77,573	9.8	790
2/16/2025	20:00:00	7	1.569	1.1	77,597	9.7	763
2/16/2025	20:15:00	7.1	0.238	1.4	77,619	9.7	109
2/16/2025	20:30:00	7.8	1.527	1.7	77,638	9.8	591
2/16/2025	20:45:00	7.2	1.512	2.7	77,655	9.8	597
2/16/2025	21:00:00	7.2	1.501	2	77,678	9.8	594
2/16/2025	21:15:00	7.2	1.523	6	77,688	9.9	634
2/16/2025	21:45:00	7	1.588	1.2	77,712	9.8	576
2/16/2025	22:15:00	7	1.580	1	77,727	9.8	525
2/16/2025	22:30:00	7	1.595	0.9	77,751	9.7	489
2/16/2025	22:45:00	**6.9**	1.017	1.1	77,773	9.6	476
2/16/2025	23:00:00	7	1.523	1.1	77,792	9.6	464
2/16/2025	23:45:00	7.2	1.501	0.8	77,826	9.6	505

Table 3. In-Situ Parameters

Date	Time	Temperature °C	DO mg/L	Conductivity SPC-uS/cm	SAL-ppt	pH	ORP (mV)	NTU
02/10/2025	08:44:44AM	9.4	12.28	147.4	0.07	7.30	91.1	4.71
02/11/2025	01:57:53PM	9.8	11.73	132.4	0.06	7.31	156.9	0.35
02/12/2025	01:48:54PM	9.5	11.70	174.0	0.08	7.50	136.9	0.39
02/13/2025	00:24:23AM	9.0	11.64	356.4	0.17	7.96	139.6	025
02/14/2025	07:42:06PM	10.9	10.93	148.4	0.07	6.90	167.7	2.60
02/15/2025	05:20:02PM	9.9	11.64	166.3	0.07	7.89	121.9	0.54
02/16/2025	08:47:55AM	9.5	11.82	178.1	0.08	7.97	125.5	0.52

3. Calibration Log:

Table 4. Calibration Log

Date	Unit	pH	Conductivity/Temp.	Salinity	NTU
2/14/2025	YSI	✓	✓	✓	✓
2/13/2025	WTP	✓	N/A	N/A	✓

APPENDIX A: WTP Log

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
Title	**WoodFibre Weekly Water Discharge Report**	**Revision:**	**0**
Data Date Range	**February 10, 2025 to February 16, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC1** **February 27, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/10/2025	0:00:00	7	1.750	0.4	67,520	Open	9.4	112
2/10/2025	0:15:00	7	1.429	0.6	67,545	Open	9.3	111
2/10/2025	0:30:00	7	0.737	0.5	67,559	Open	9.6	113
2/10/2025	0:45:00	7.1	1.875	0.7	67,583	Open	9.3	111
2/10/2025	1:00:00	7.1	0.881	0.9	67,608	Open	9.3	111
2/10/2025	1:15:00	7	0.000	1.7	67,609	Closed	9.7	271
2/10/2025	1:30:00	7	0.174	1.3	67,613	Open	10.3	268
2/10/2025	1:45:00	7.1	1.920	1	67,632	Open	9.3	111
2/10/2025	2:00:00	7.1	1.841	0.6	67,659	Open	9.3	111
2/10/2025	2:15:00	7.1	1.882	0.7	67,687	Open	9.3	111
2/10/2025	2:30:00	7.1	1.550	1.3	67,712	Open	9.3	112
2/10/2025	2:45:00	7	0.896	0	67,731	Open	9.6	115
2/10/2025	3:00:00	7.1	0.132	0.3	67,738	Open	9.4	114
2/10/2025	3:15:00	7.1	1.735	0.7	67,757	Open	9.3	113
2/10/2025	3:30:00	7.1	1.663	0.5	67,783	Open	9.3	111
2/10/2025	3:45:00	7.1	0.000	0.6	67,806	Closed	9.3	272
2/10/2025	4:00:00	7	0.000	0.6	67,806	Open	9.4	273
2/10/2025	4:15:00	7.1	1.486	0.3	67,819	Open	9.2	113
2/10/2025	4:30:00	7.1	1.501	0.1	67,841	Open	9.4	116
2/10/2025	4:45:00	7.1	1.452	0	67,863	Open	9.5	116
2/10/2025	5:00:00	7.1	1.478	0.1	67,886	Open	9.4	114
2/10/2025	5:15:00	7.1	0.144	0.1	67,901	Open	9.4	114
2/10/2025	5:30:00	7.1	1.421	0	67,922	Open	9.5	116

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/10/2025	5:45:00	7	1.349	0	67,944	Open	9.8	117
2/10/2025	6:00:00	7	1.240	0	67,961	Open	10.6	269
2/10/2025	6:15:00	6.9	1.221	0	67,979	Open	11.4	269
2/10/2025	6:30:00	6.9	1.187	0	67,997	Open	12.2	268
2/10/2025	6:45:00	6.9	1.168	0	68,015	Open	12.8	267
2/10/2025	7:00:00	7.1	1.599	0.1	68,038	Open	9.5	114
2/10/2025	7:15:00	7.1	1.561	0.1	68,062	Open	9.5	116
2/10/2025	7:30:00	7.1	0.881	0	68,081	Open	10.6	119
2/10/2025	7:45:00	7	0.000	0.3	68,092	Open	9.9	269
2/10/2025	8:00:00	7	0.000	0.4	68,094	Closed	10.6	268
2/10/2025	8:15:00	7	0.979	1	68,101	Open	9.5	269
2/10/2025	8:30:00	7.1	1.576	0	68,121	Open	9.2	116
2/10/2025	8:45:00	7.1	1.523	0.2	68,145	Open	9.2	114
2/10/2025	9:00:00	7	0.000	0.5	68,164	Open	9.2	114
2/10/2025	9:15:00	6.9	1.380	1.7	68,164	Open	9.4	271
2/10/2025	9:30:00	7	1.644	0.2	68,183	Open	9.1	114
2/10/2025	9:45:00	7	1.512	0.1	68,206	Open	9.2	114
2/10/2025	10:00:00	7	1.066	0.1	68,226	Open	9.5	114
2/10/2025	10:15:00	7.1	1.750	0.5	68,246	Open	9.4	114
2/10/2025	10:30:00	7.1	1.652	0.8	68,272	Open	9.4	114
2/10/2025	10:45:00	7	0.000	0.4	68,278	Open	9.7	116
2/10/2025	11:00:00	7.1	1.414	0.5	68,295	Open	9.4	116
2/10/2025	11:15:00	7	1.376	2.4	68,318	Open	9.8	116
2/10/2025	11:30:00	7	0.000	1	68,322	Closed	10.1	269
2/10/2025	11:45:00	6.9	0.000	0.8	68,322	Closed	10.3	279

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
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Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/10/2025	12:00:00	7.1	1.875	2.7	68,337	Open	9.6	114
2/10/2025	12:15:00	7.1	1.867	0.1	68,364	Open	9.6	116
2/10/2025	12:30:00	7.1	1.811	0	68,391	Open	9.7	117
2/10/2025	12:45:00	7.2	0.000	0.5	68,417	Open	9.8	117
2/10/2025	13:00:00	7.1	1.610	0.8	68,427	Open	9.8	116
2/10/2025	13:15:00	7.2	1.399	0	68,450	Open	9.7	116
2/10/2025	13:30:00	7.2	1.040	0	68,468	Open	10	114
2/10/2025	13:45:00	7.2	1.727	0.1	68,492	Open	9.7	114
2/10/2025	14:00:00	7.2	0.000	0.1	68,510	Closed	9.8	116
2/10/2025	14:15:00	7.2	1.164	0	68,516	Open	10.1	116
2/10/2025	14:30:00	7.2	0.000	0	68,532	Closed	9.9	116
2/10/2025	14:45:00	7.1	0.000	0.1	68,532	Closed	10.2	114
2/10/2025	15:00:00	7.2	1.773	0	68,556	Open	9.8	116
2/10/2025	15:15:00	7.2	1.807	0.1	68,583	Open	9.9	116
2/10/2025	15:30:00	7.2	1.724	0.2	68,609	Open	9.9	114
2/10/2025	15:45:00	7.2	1.610	0	68,635	Open	10.1	116
2/10/2025	16:00:00	7.2	0.000	0	68,638	Closed	10.7	117
2/10/2025	16:15:00	7.2	1.467	0	68,653	Open	10.5	118
2/10/2025	16:30:00	7.1	0.507	0	68,672	Open	11.2	117
2/10/2025	16:45:00	7.1	1.047	3.6	68,674	Closed	11.8	116
2/10/2025	17:00:00	7.2	1.886	0.2	68,697	Open	9.7	114
2/10/2025	17:15:00	7.3	1.319	0.2	68,721	Open	9.8	113
2/10/2025	17:30:00	7.3	0.000	0	68,743	Closed	9.7	117
2/10/2025	17:45:00	7.2	1.841	0	68,747	Open	10.1	117
2/10/2025	18:00:00	7.3	1.796	0.1	68,774	Open	9.6	114

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/10/2025	18:15:00	7.3	0.000	0.2	68,782	Closed	9.7	112
2/10/2025	18:30:00	7.2	0.000	0.4	68,782	Closed	9.9	111
2/10/2025	18:45:00	7.2	1.750	0.4	68,803	Open	9.2	111
2/10/2025	19:00:00	7.3	1.799	0.4	68,829	Open	9.3	111
2/10/2025	19:15:00	7.3	1.709	0.1	68,855	Open	9.4	114
2/10/2025	19:30:00	7.3	1.686	0	68,881	Open	9.5	116
2/10/2025	19:45:00	7.3	1.641	0.1	68,907	Open	9.6	114
2/10/2025	20:00:00	7.3	0.000	0.2	68,930	Closed	9.5	113
2/10/2025	20:15:00	7.2	0.000	0.3	68,930	Closed	9.9	114
2/10/2025	20:30:00	7.3	1.610	0.2	68,945	Open	9.4	114
2/10/2025	20:45:00	7.3	1.482	0.5	68,968	Open	9.3	112
2/10/2025	21:00:00	7.3	1.542	0.4	68,991	Open	9.3	112
2/10/2025	21:15:00	7.3	1.512	0.2	69,014	Open	9.4	114
2/10/2025	21:30:00	7.3	1.493	0	69,036	Open	9.6	117
2/10/2025	21:45:00	7.3	0.677	0	69,053	Open	9.5	115
2/10/2025	22:00:00	7.3	1.542	0.2	69,075	Open	9.4	113
2/10/2025	22:15:00	7.3	1.527	0.2	69,098	Open	9.4	113
2/10/2025	22:30:00	7.3	1.452	0	69,120	Open	9.6	116
2/10/2025	22:45:00	7.3	1.486	0	69,143	Open	9.7	117
2/10/2025	23:00:00	7.3	1.470	0	69,165	Open	9.7	117
2/10/2025	23:15:00	7.3	1.395	0	69,186	Open	9.8	117
2/10/2025	23:30:00	7.3	1.436	0	69,207	Open	10.1	118
2/10/2025	23:45:00	7.2	1.281	0	69,227	Closed	10.9	117
2/11/2025	0:00:00	7.2	0.000	0	69,227	Open	11.7	117
2/11/2025	0:15:00	7.3	1.251	0.4	69,235	Open	11.4	114

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Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/11/2025	0:30:00	7.3	1.671	0.1	69,253	Open	9.2	113
2/11/2025	0:45:00	7.3	1.603	0.4	69,277	Open	9.2	111
2/11/2025	1:00:00	7.3	1.569	0.4	69,302	Open	9.2	110
2/11/2025	1:15:00	7.3	1.032	0.4	69,325	Open	9.2	113
2/11/2025	1:30:00	7.3	0.000	0.1	69,340	Closed	9.4	114
2/11/2025	1:45:00	7.2	0.000	0	69,340	Closed	10.2	266
2/11/2025	2:00:00	7.2	1.565	0.2	69,353	Open	9.2	114
2/11/2025	2:15:00	7.2	0.000	0	69,375	Closed	9.3	116
2/11/2025	2:30:00	7.1	0.000	0	69,375	Closed	9.9	270
2/11/2025	2:45:00	7.2	1.569	0	69,391	Open	9.2	117
2/11/2025	3:00:00	7.1	1.852	0.2	69,418	Open	9.6	274
2/11/2025	3:15:00	7	1.641	0	69,443	Open	11	278
2/11/2025	3:30:00	7.1	1.497	0	69,466	Open	9.4	272
2/11/2025	3:45:00	7.1	1.671	0	69,487	Open	9.5	117
2/11/2025	4:00:00	7.1	1.482	0	69,510	Open	9.5	117
2/11/2025	4:15:00	7.2	1.467	0	69,532	Open	9.6	118
2/11/2025	4:30:00	7.2	1.550	0	69,555	Open	9.6	117
2/11/2025	4:45:00	7.2	1.066	0	69,577	Open	9.6	117
2/11/2025	5:00:00	7.2	0.000	0	69,583	Open	10	117
2/11/2025	5:15:00	7.2	1.557	0	69,590	Open	9.5	117
2/11/2025	5:30:00	7.2	1.523	0	69,613	Open	9.4	117
2/11/2025	5:45:00	7.2	1.474	0	69,636	Open	9.4	117
2/11/2025	6:00:00	7.2	1.448	0	69,656	Open	9.6	119
2/11/2025	6:15:00	7.3	1.569	0	69,679	Open	9.5	118
2/11/2025	6:30:00	7.2	0.888	0	69,695	Open	10.7	119

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2/11/2025	6:45:00	7.2	0.782	0	69,707	Open	9.7	118
2/11/2025	7:00:00	7.3	1.603	0	69,726	Open	9.2	117
2/11/2025	7:15:00	7.3	1.697	0	69,748	Open	9.4	119
2/11/2025	7:30:00	7.3	1.659	0	69,773	Open	9.4	117
2/11/2025	7:45:00	7.3	0.215	0	69,796	Open	9.5	118
2/11/2025	8:00:00	7.2	0.000	0	69,796	Open	10.3	117
2/11/2025	8:15:00	7.3	1.153	0.2	69,812	Open	9.1	114
2/11/2025	8:30:00	7.3	0.178	0.2	69,830	Open	9.1	114
2/11/2025	8:45:00	7.2	0.000	0.4	69,830	Open	10.7	112
2/11/2025	9:00:00	7.2	0.000	0.2	69,830	Open	10.9	113
2/11/2025	9:15:00	7.3	1.720	0.5	69,849	Open	9	113
2/11/2025	9:30:00	7.3	1.735	0.7	69,875	Open	9	111
2/11/2025	9:45:00	7.3	1.637	0.4	69,897	Open	9.1	113
2/11/2025	10:00:00	7.3	0.000	0.4	69,906	Open	9.2	112
2/11/2025	10:15:00	7.3	1.667	0.4	69,918	Open	9	112
2/11/2025	10:30:00	7.3	1.565	0.2	69,943	Open	9.1	114
2/11/2025	10:45:00	7.3	1.618	0.1	69,967	Open	9.2	116
2/11/2025	11:00:00	7.3	1.572	0.1	69,991	Open	9.2	116
2/11/2025	11:15:00	7.3	1.535	0.3	70,015	Open	9.2	113
2/11/2025	11:30:00	7.3	1.572	0.4	70,033	Open	9.3	112
2/11/2025	11:45:00	7.2	0.000	0.5	70,037	Open	9.5	112
2/11/2025	12:00:00	7.3	1.387	1.8	70,037	Open	9.8	112
2/11/2025	12:15:00	7.3	1.716	0.5	70,065	Open	9.3	112
2/11/2025	12:30:00	7.2	0.000	0.3	70,065	Open	9.7	114
2/11/2025	12:45:00	7.3	1.867	0	70,092	Open	9.6	116

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2/11/2025	13:00:00	7.3	1.852	0	70,119	Open	9.7	116
2/11/2025	13:15:00	7.3	1.830	0.1	70,146	Open	9.7	117
2/11/2025	13:30:00	7.3	1.780	0.2	70,173	Open	9.6	114
2/11/2025	13:45:00	7.3	1.693	0.1	70,199	Open	9.7	114
2/11/2025	14:00:00	7.3	1.527	0.2	70,211	Open	9.9	114
2/11/2025	14:15:00	7.3	1.440	0.2	70,228	Open	9.7	114
2/11/2025	14:30:00	7.3	1.353	0	70,249	Open	9.9	115
2/11/2025	14:45:00	7.3	0.000	0	70,262	Open	10.2	116
2/11/2025	15:00:00	7.3	1.448	0.1	70,263	Open	10.9	114
2/11/2025	15:15:00	7.3	1.051	0.3	70,283	Open	9.8	113
2/11/2025	15:30:00	7.2	1.399	0.3	70,304	Open	10.2	113
2/11/2025	15:45:00	7.2	1.349	0.2	70,324	Open	10.6	114
2/11/2025	16:00:00	7.3	1.705	0	70,346	Open	9.8	114
2/11/2025	16:15:00	7.3	1.724	0	70,372	Open	9.7	117
2/11/2025	16:30:00	7.4	0.000	0	70,389	Open	9.8	116
2/11/2025	16:45:00	7.2	0.000	0.1	70,389	Open	10.2	116
2/11/2025	17:00:00	7.3	1.905	0.2	70,409	Open	9.4	114
2/11/2025	17:15:00	7.3	1.837	0.1	70,437	Open	9.5	115
2/11/2025	17:30:00	7.3	1.780	0.2	70,465	Open	9.4	113
2/11/2025	17:45:00	7.4	0.813	0.4	70,486	Open	9.5	114
2/11/2025	18:00:00	7.3	1.826	0.3	70,509	Open	9.4	113
2/11/2025	18:15:00	7.3	0.000	0.4	70,515	Open	9.5	112
2/11/2025	18:30:00	7.3	1.096	0.4	70,527	Open	9.6	113
2/11/2025	18:45:00	7.3	1.641	0.4	70,550	Open	9.3	112
2/11/2025	19:00:00	7.4	0.212	0.5	70,575	Open	9.3	112

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/11/2025	19:15:00	7.2	0.000	0.1	70,575	Open	9.8	116
2/11/2025	19:30:00	7.3	1.837	0	70,593	Open	9.5	117
2/11/2025	19:45:00	7.3	1.867	0	70,621	Open	9.4	114
2/11/2025	20:00:00	7.3	1.769	0.1	70,649	Open	9.4	114
2/11/2025	20:15:00	7.3	1.777	0	70,676	Open	9.5	117
2/11/2025	20:30:00	7.3	0.000	0	70,682	Open	9.9	116
2/11/2025	20:45:00	7.3	1.845	0	70,698	Open	9.6	117
2/11/2025	21:00:00	7.3	1.780	0	70,725	Open	9.7	118
2/11/2025	21:15:00	7.4	1.731	0	70,751	Open	9.7	117
2/11/2025	21:30:00	7.4	0.336	0	70,777	Open	9.7	117
2/11/2025	21:45:00	7.3	0.000	0	70,777	Open	10.5	118
2/11/2025	22:00:00	7.4	1.157	0	70,789	Open	9.8	119
2/11/2025	22:15:00	7.4	1.618	0	70,811	Open	9.7	119
2/11/2025	22:30:00	7.4	1.637	0	70,836	Open	9.7	119
2/11/2025	22:45:00	7.3	0.000	0	70,839	Open	10.3	117
2/11/2025	23:00:00	7.4	1.671	0	70,849	Open	9.7	118
2/11/2025	23:15:00	7.4	1.622	0	70,870	Open	9.9	119
2/11/2025	23:30:00	7.4	1.693	0	70,894	Open	9.8	119
2/11/2025	23:45:00	7.3	0.000	0	70,897	Open	10.4	118
2/12/2025	0:00:00	7.4	1.565	0	70,917	Open	9.7	118
2/12/2025	0:15:00	7.4	1.678	0	70,942	Open	9.7	117
2/12/2025	0:30:00	7.4	1.625	0	70,962	Open	9.7	119
2/12/2025	0:45:00	7.4	0.219	0	70,985	Open	9.6	114
2/12/2025	1:00:00	7.3	0.000	0	70,985	Open	10.1	116
2/12/2025	1:15:00	7.3	1.614	0	71,007	Open	9.5	117

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/12/2025	1:30:00	7.3	1.077	0	71,029	Open	9.7	119
2/12/2025	1:45:00	7.2	1.644	0	71,051	Open	9.6	118
2/12/2025	2:00:00	7.1	1.554	0	71,075	Open	9.7	117
2/12/2025	2:15:00	7.1	0.000	0	71,079	Open	9.9	114
2/12/2025	2:30:00	7.1	1.610	0	71,092	Open	9.4	116
2/12/2025	2:45:00	7.1	1.433	0	71,112	Open	9.5	116
2/12/2025	3:00:00	7.1	1.569	0	71,135	Open	9.4	117
2/12/2025	3:15:00	7.1	1.512	0	71,158	Open	9.5	117
2/12/2025	3:30:00	7.2	1.516	0	71,181	Open	9.5	119
2/12/2025	3:45:00	7.2	0.000	0	71,198	Open	9.6	117
2/12/2025	4:00:00	7.1	0.000	0	71,198	Open	10.6	119
2/12/2025	4:15:00	7.2	1.508	0	71,218	Open	9.4	119
2/12/2025	4:30:00	7.3	1.512	0	71,241	Open	9.5	117
2/12/2025	4:45:00	7.3	1.531	0	71,264	Open	9.4	116
2/12/2025	5:00:00	7.3	1.040	0	71,285	Open	9.7	117
2/12/2025	5:15:00	7.3	0.000	0	71,296	Open	9.6	117
2/12/2025	5:30:00	7.3	1.607	0	71,301	Open	9.6	119
2/12/2025	5:45:00	7.3	1.622	0	71,324	Open	9.3	117
2/12/2025	6:00:00	7.3	1.565	0	71,348	Open	9.3	117
2/12/2025	6:15:00	7.3	0.325	0	71,367	Open	9.5	117
2/12/2025	6:30:00	7.2	0.000	0	71,368	Open	9.7	114
2/12/2025	6:45:00	7.3	1.557	0.3	71,381	Open	9	114
2/12/2025	7:00:00	7.3	1.482	0.2	71,404	Open	9.1	113
2/12/2025	7:15:00	7.3	1.527	0	71,427	Open	9.3	116
2/12/2025	7:30:00	7.3	0.000	0	71,433	Open	10	117

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/12/2025	7:45:00	7.3	1.504	0	71,440	Open	9.4	117
2/12/2025	8:00:00	7.3	1.520	0	71,463	Open	9.3	117
2/12/2025	8:15:00	7.4	1.429	0	71,486	Open	9.3	116
2/12/2025	8:30:00	7.3	0.000	0	71,488	Open	10	117
2/12/2025	8:45:00	7.3	1.486	0	71,494	Open	9.4	117
2/12/2025	9:00:00	7.4	1.357	0.1	71,517	Open	9.3	114
2/12/2025	9:15:00	7.4	1.777	0.2	71,542	Open	9.2	114
2/12/2025	9:30:00	7.4	0.000	0.3	71,564	Open	9.2	114
2/12/2025	9:45:00	7.4	0.000	0.3	71,567	Open	9.5	114
2/12/2025	10:00:00	7.3	0.000	0.5	71,571	Open	9.6	116
2/12/2025	10:15:00	7.4	1.769	0	71,589	Open	9.4	117
2/12/2025	10:30:00	7.4	1.754	0	71,615	Open	9.5	116
2/12/2025	10:45:00	7.4	0.696	0.2	71,637	Open	9.5	114
2/12/2025	11:00:00	7.4	1.799	0	71,657	Open	9.5	116
2/12/2025	11:15:00	7.3	0.000	0.1	71,663	Open	9.9	116
2/12/2025	11:30:00	7.3	1.629	0.1	71,678	Open	9.4	114
2/12/2025	11:45:00	7.4	1.240	0	71,703	Open	9.5	116
2/12/2025	12:00:00	7.4	1.682	0.3	71,712	Open	9.5	114
2/12/2025	12:15:00	7.4	1.580	0.3	71,736	Open	9.5	113
2/12/2025	12:30:00	7.4	1.777	0.4	71,760	Open	9.5	114
2/12/2025	12:45:00	7.4	0.000	0.1	71,770	Open	9.7	117
2/12/2025	13:00:00	7.3	1.546	0.3	71,776	Open	9.6	114
2/12/2025	13:15:00	7.4	1.576	0.3	71,799	Open	9.6	114
2/12/2025	13:30:00	7.6	1.149	0.3	71,819	Open	9.7	269
2/12/2025	13:45:00	7.3	1.580	0.2	71,843	Open	9.7	313

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
Title	**WoodFibre Weekly Water Discharge Report**	**Revision:**	**0**
Data Date Range	**February 10, 2025 to February 16, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC1** **February 27, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/12/2025	14:00:00	7.6	1.542	0.2	71,862	Open	9.7	310
2/12/2025	14:15:00	7.7	1.489	0.3	71,884	Open	9.7	291
2/12/2025	14:30:00	7.7	0.665	0.4	71,902	Open	10	339
2/12/2025	14:45:00	7.9	0.000	0.2	71,912	Open	10	362
2/12/2025	15:00:00	8.2	1.486	0.2	71,917	Open	9.8	378
2/12/2025	15:15:00	8.5	0.000	0.2	71,924	Open	10	377
2/12/2025	15:30:00	8.1	1.512	0.1	71,945	Open	9.8	488
2/12/2025	15:45:00	7.6	0.000	0	71,964	Open	9.9	563
2/12/2025	16:00:00	7.6	0.000	0.1	71,964	Open	10.3	569
2/12/2025	16:15:00	6.8	1.478	0	71,977	Open	9.8	581
2/12/2025	16:45:00	7.1	1.119	0	72,020	Open	10.5	525
2/12/2025	17:00:00	9	1.561	0	72,042	Open	9.8	314
2/12/2025	17:15:00	9	0.000	0	72,045	Open	10.1	312
2/12/2025	17:30:00	8.6	0.000	0	72,049	Open	10	334
2/12/2025	17:45:00	9.4	1.607	0.1	72,068	Open	9.6	294
2/12/2025	18:00:00	9.6	1.607	0.1	72,089	Open	9.7	301
2/12/2025	18:15:00	9.8	1.678	0.1	72,114	Open	9.5	304
2/12/2025	18:30:00	9.7	1.565	0	72,137	Open	9.7	307
2/12/2025	18:45:00	9.4	0.000	0.2	72,149	Open	9.8	311
2/12/2025	19:00:00	8.8	1.467	0.3	72,153	Open	9.7	406
2/12/2025	19:15:00	6.8	1.663	0	72,179	Open	9.6	410
2/12/2025	19:30:00	6.7	1.622	0	72,205	Open	9.7	366
2/12/2025	19:45:00	6.9	1.682	0	72,228	Open	9.7	308
2/12/2025	20:00:00	7.1	0.000	0.1	72,240	Closed	9.7	281
2/12/2025	20:15:00	7.6	1.761	0	72,255	Open	9.5	283

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/12/2025	20:30:00	7.4	1.470	0	72,278	Open	9.5	310
2/12/2025	20:45:00	7.5	1.429	0	72,300	Open	9.5	288
2/12/2025	21:00:00	7.4	1.005	0	72,320	Open	9.8	300
2/12/2025	21:15:00	7.4	0.000	0	72,324	Closed	10.2	312
2/12/2025	21:30:00	7.6	1.523	0	72,333	Open	9.7	292
2/12/2025	21:45:00	7.4	1.440	0	72,356	Open	9.6	318
2/12/2025	22:00:00	7.4	1.365	0	72,377	Open	9.6	303
2/12/2025	22:15:00	7.6	1.380	0.1	72,395	Open	9.7	271
2/12/2025	22:30:00	7.4	1.266	0.4	72,414	Open	9.5	284
2/12/2025	22:45:00	7.5	1.459	0.5	72,435	Open	9.4	279
2/12/2025	23:00:00	7.4	1.421	0.5	72,457	Open	9.4	284
2/12/2025	23:15:00	7.5	0.000	0	72,474	Closed	9.7	286
2/12/2025	23:30:00	7.4	1.402	0	72,479	Open	9.8	282
2/12/2025	23:45:00	7.4	1.421	0	72,500	Open	9.6	281
2/13/2025	0:00:00	7.4	1.410	0	72,521	Open	9.7	281
2/13/2025	0:15:00	7.4	1.383	0.2	72,542	Open	9.5	281
2/13/2025	0:30:00	7.4	0.000	0.2	72,549	Closed	9.7	285
2/13/2025	0:45:00	7.4	1.580	0.1	72,555	Open	9.5	283
2/13/2025	1:00:00	7.4	1.452	0	72,577	Open	9.5	285
2/13/2025	1:15:00	7.4	1.550	0	72,600	Open	9.7	284
2/13/2025	1:30:00	7.4	1.463	0.2	72,622	Open	9.5	284
2/13/2025	1:45:00	7.4	0.000	0.4	72,640	Closed	9.4	289
2/13/2025	2:00:00	7.3	1.406	0.2	72,641	Open	10	288
2/13/2025	2:15:00	7.3	1.508	0.1	72,664	Open	9.4	293
2/13/2025	2:30:00	7.3	1.614	0.1	72,688	Open	9.4	293

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
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Data Date Range	**February 10, 2025 to February 16, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC1** **February 27, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/13/2025	2:45:00	7.3	1.486	0.3	72,712	Open	9.3	294
2/13/2025	3:00:00	7.5	0.000	0.4	72,722	Closed	9.4	305
2/13/2025	3:15:00	8.2	1.538	0.4	72,738	Open	9.3	348
2/13/2025	3:30:00	8.7	1.531	0.4	72,762	Open	9.3	397
2/13/2025	3:45:00	9	1.206	0.5	72,763	Closed	9.3	409
2/13/2025	4:00:00	9.1	0.748	0.7	72,766	Closed	9.4	392
2/13/2025	4:15:00	9.1	0.000	4	72,769	Closed	9.8	420
2/13/2025	4:30:00	9.2	1.225	0.8	72,769	Closed	9.5	430
2/13/2025	4:45:00	1.3	1.164	0.8	72,772	Closed	9.3	478
2/13/2025	5:00:00	9.7	1.153	0.7	72,772	Closed	9.3	525
2/13/2025	5:15:00	10	1.349	0.6	72,772	Closed	9.4	478
2/13/2025	5:30:00	10	1.523	0.8	72,774	Closed	9.5	469
2/13/2025	5:45:00	10.1	1.410	0.2	72,774	Closed	9.7	450
2/13/2025	6:00:00	10.1	0.000	0.5	72,774	Closed	9.7	440
2/13/2025	6:15:00	9.5	0.858	0.3	72,774	Closed	9.5	477
2/13/2025	6:30:00	9.3	0.858	0.9	72,774	Closed	10.1	442
2/13/2025	6:45:00	8.9	1.682	1	72,774	Closed	9.4	508
2/13/2025	7:00:00	8.7	1.641	0.9	72,799	Open	9.3	486
2/13/2025	7:15:00	8.9	1.591	1	72,823	Open	9.3	424
2/13/2025	7:30:00	8.8	0.000	1.1	72,826	Closed	9.3	419
2/13/2025	7:45:00	8.6	1.622	1	72,835	Open	9.2	431
2/13/2025	8:00:00	7.9	1.081	1.7	72,856	Open	9.2	459
2/13/2025	8:15:00	7.1	1.489	1.2	72,878	Open	9.2	467
2/13/2025	8:30:00	7	0.000	2.4	72,900	Open	9.2	461
2/13/2025	8:45:00	7.3	1.546	1.1	72,909	Open	9.2	392

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
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Data Date Range	**February 10, 2025 to February 16, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC1** **February 27, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/13/2025	9:00:00	7.2	0.000	1.2	72,925	Open	9.2	389
2/13/2025	9:15:00	7.2	0.000	1.2	72,925	Open	9.3	390
2/13/2025	9:30:00	7.6	1.588	1.3	72,942	Open	9.1	351
2/13/2025	9:45:00	7.6	0.000	1.2	72,962	Open	9.2	368
2/13/2025	10:00:00	7.4	0.000	1.2	72,962	Open	9.3	371
2/13/2025	10:15:00	7.7	1.486	1.2	72,965	Open	9.3	396
2/13/2025	10:30:00	8.7	1.497	1.3	72,988	Open	9.3	366
2/13/2025	10:45:00	8.9	1.542	1.2	73,001	Open	9.4	399
2/13/2025	11:00:00	9.5	1.138	1.2	73,024	Open	9.4	421
2/13/2025	11:15:00	9.3	0.000	1.2	73,024	Open	9.6	419
2/13/2025	11:30:00	9.1	1.319	1.5	73,026	Open	9.7	421
2/13/2025	11:45:00	7.8	1.338	1	73,043	Open	9.6	461
2/13/2025	12:00:00	4.3	0.000	1	73,051	Open	9.8	459
2/13/2025	12:15:00	8.5	1.501	1.2	73,065	Open	10	461
2/13/2025	12:30:00	8.3	0.000	1.1	73,082	Open	10.2	457
2/13/2025	12:45:00	8.2	1.686	1	73,103	Open	10.5	457
2/13/2025	13:00:00	8.2	1.527	1.1	73,127	Open	10.7	460
2/13/2025	13:15:00	8.2	1.508	1	73,149	Open	10.9	460
2/13/2025	13:30:00	8.2	1.319	1	73,170	Open	11.1	456
2/13/2025	13:45:00	8.2	0.000	1	73,185	Open	11.4	458
2/13/2025	14:00:00	8.2	0.000	1	73,185	Open	11.5	458
2/13/2025	14:15:00	8.2	1.202	5.2	73,194	Open	11.7	456
2/13/2025	14:30:00	8.2	0.953	5	73,211	Open	11.9	455
2/13/2025	14:45:00	8.2	1.047	3.3	73,229	Open	12.1	455
2/13/2025	15:00:00	8.5	0.000	3.4	73,232	Open	12.8	461

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Title	**WoodFibre Weekly Water Discharge Report**	**Revision:**	**0**
Data Date Range	**February 10, 2025 to February 16, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC1** **February 27, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/13/2025	15:15:00	7.5	1.724	0.8	73,254	Open	10.1	543
2/13/2025	15:30:00	7.5	0.000	0.7	73,260	Open	10.3	539
2/13/2025	15:45:00	7.5	0.000	0.7	73,260	Open	10.6	542
2/13/2025	16:00:00	7.7	0.000	0.7	73,267	Open	10.2	481
2/13/2025	16:15:00	7.6	0.000	0.8	73,267	Open	10.6	476
2/13/2025	16:30:00	7.6	0.000	0.8	73,267	Open	10.9	473
2/13/2025	16:45:00	7.6	1.463	0.8	73,275	Open	10	455
2/13/2025	17:00:00	7.5	1.436	0.8	73,297	Open	9.9	400
2/13/2025	17:15:00	7	1.418	0.9	73,318	Open	9.9	481
2/13/2025	17:30:00	7.3	0.922	0.9	73,336	Open	10.1	355
2/13/2025	17:45:00	7.1	0.000	0.9	73,350	Open	10	478
2/13/2025	18:00:00	7.6	1.463	0.9	73,363	Open	9.9	345
2/13/2025	18:15:00	8.9	1.523	1	73,386	Open	9.8	281
2/13/2025	18:30:00	7.2	0.903	1	73,404	Open	10	396
2/13/2025	18:45:00	6.9	0.000	0.9	73,418	Open	9.8	403
2/13/2025	19:00:00	6.8	0.189	0.9	73,418	Open	10.1	400
2/13/2025	19:15:00	6.9	1.380	0.9	73,439	Open	9.7	305
2/13/2025	19:30:00	7.1	1.346	0.9	73,460	Open	9.7	289
2/13/2025	19:45:00	7.2	1.304	0.8	73,480	Open	9.7	294
2/13/2025	20:00:00	6.9	0.000	0.9	73,489	Open	9.8	284
2/13/2025	20:15:00	6.9	1.070	4.5	73,489	Open	10	287
2/13/2025	20:30:00	7.3	1.297	0.9	73,508	Open	9.6	282
2/13/2025	20:45:00	7.1	1.263	0.9	73,527	Open	9.6	308
2/13/2025	21:00:00	7.1	1.255	1	73,546	Open	9.6	276
2/13/2025	21:15:00	7	1.221	0.9	73,564	Open	9.6	303

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
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Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/13/2025	21:30:00	7.1	1.176	1	73,582	Open	9.6	272
2/13/2025	21:45:00	6.9	0.000	0.9	73,589	Open	9.7	307
2/13/2025	22:00:00	7	1.172	0.9	73,590	Open	9.9	320
2/13/2025	22:15:00	7.2	1.281	1.3	73,604	Open	9.5	286
2/13/2025	22:30:00	6.9	1.255	1	73,624	Open	9.5	318
2/13/2025	22:45:00	7.2	1.247	0.9	73,642	Open	9.5	284
2/13/2025	23:00:00	6.9	1.202	0.9	73,661	Open	9.5	318
2/13/2025	23:15:00	7.2	1.194	0.9	73,679	Open	9.5	287
2/13/2025	23:30:00	7.1	1.436	1	73,694	Open	9.5	327
2/13/2025	23:45:00	7.4	1.523	0.9	73,717	Open	9.7	313
2/14/2025	0:00:00	6.4	0.983	1.2	73,737	Open	9.9	292
2/14/2025	0:15:00	7.8	1.678	5.1	73,745	Open	9.8	406
2/14/2025	0:30:00	9	1.633	0.9	73,770	Open	9.6	302
2/14/2025	0:45:00	8.8	1.251	1.2	73,774	Closed	9.6	325
2/14/2025	1:00:00	7.1	1.285	0.9	73,793	Open	9.6	492
2/14/2025	1:15:00	7.4	1.331	1	73,808	Open	9.6	323
2/14/2025	1:30:00	7.1	1.327	0.9	73,829	Open	9.6	371
2/14/2025	1:45:00	7.2	1.297	1	73,848	Open	9.6	310
2/14/2025	2:00:00	7	1.251	1	73,867	Open	9.6	274
2/14/2025	2:15:00	7.1	0.816	0.9	73,886	Open	9.6	297
2/14/2025	2:30:00	7	1.372	1	73,902	Open	9.6	279
2/14/2025	2:45:00	7.1	1.353	1.1	73,922	Open	9.6	310
2/14/2025	3:00:00	7.2	1.247	1.1	73,941	Open	9.6	310
2/14/2025	3:15:00	7.1	1.244	1	73,961	Open	9.6	279
2/14/2025	3:30:00	7	0.000	0.9	73,975	Closed	9.7	296

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Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/14/2025	3:45:00	7	0.000	1.3	73,975	Closed	9.8	296
2/14/2025	4:00:00	7.1	1.281	1.1	73,980	Open	9.6	320
2/14/2025	4:15:00	7.1	1.368	1	73,999	Open	9.5	305
2/14/2025	4:30:00	7	1.297	1	74,019	Open	9.6	296
2/14/2025	4:45:00	7.2	1.285	1	74,035	Open	9.6	109
2/14/2025	5:00:00	7.1	1.323	1	74,055	Open	9.6	279
2/14/2025	5:15:00	7	1.293	1	74,075	Open	9.6	267
2/14/2025	5:30:00	7.2	1.304	1.1	74,094	Open	9.5	109
2/14/2025	5:45:00	6.9	0.794	1	74,113	Open	9.5	291
2/14/2025	6:00:00	7.2	1.331	1	74,129	Open	9.5	109
2/14/2025	6:15:00	7.3	0.000	1	74,137	Open	9.6	109
2/14/2025	6:30:00	7.2	0.000	0.9	74,137	Closed	9.8	109
2/14/2025	6:45:00	6.7	1.467	0.8	74,154	Open	9.4	291
2/14/2025	7:00:00	6.8	0.983	1	74,174	Open	9.5	271
2/14/2025	7:15:00	7	1.580	0.9	74,195	Open	9.4	271
2/14/2025	7:30:00	7.2	1.538	0.9	74,218	Open	9.4	271
2/14/2025	7:45:00	7.2	1.546	1	74,241	Open	9.4	271
2/14/2025	8:00:00	6.9	0.000	1	74,256	Open	9.5	314
2/14/2025	8:15:00	6.9	0.000	1.1	74,256	Open	9.6	317
2/14/2025	8:30:00	6.8	0.000	1	74,256	Open	9.6	317
2/14/2025	8:45:00	7.1	1.860	1.1	74,270	Open	9.3	274
2/14/2025	9:00:00	6.7	0.000	1.1	74,279	Open	9.4	108
2/14/2025	9:15:00	7	1.848	1	74,305	Open	9.4	278
2/14/2025	9:30:00	7	1.682	1	74,331	Open	9.4	108
2/14/2025	9:45:00	7.2	1.641	0.9	74,356	Open	9.5	109

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/14/2025	10:00:00	6.9	1.603	0.9	74,381	Open	9.6	109
2/14/2025	10:15:00	7.1	0.000	0.9	74,387	Open	9.7	269
2/14/2025	10:30:00	7.1	1.746	0.9	74,394	Open	9.6	109
2/14/2025	10:45:00	6.9	1.089	0.9	74,416	Open	9.7	296
2/14/2025	11:00:00	7.2	0.299	0.9	74,439	Open	9.6	272
2/14/2025	11:15:00	7.2	0.000	0.8	74,439	Open	9.8	274
2/14/2025	11:30:00	7.1	1.780	0.9	74,443	Open	9.7	282
2/14/2025	11:45:00	7.2	1.727	0.7	74,469	Open	9.6	271
2/14/2025	12:00:00	7.2	1.746	0.9	74,494	Open	9.7	109
2/14/2025	12:15:00	7.3	0.000	0.8	74,509	Open	9.8	109
2/14/2025	12:30:00	7.2	0.000	0.9	74,509	Open	10	109
2/14/2025	12:45:00	7.1	0.000	0.9	74,509	Open	10.2	109
2/14/2025	13:00:00	7.1	0.000	0.8	74,509	Open	10.4	109
2/14/2025	13:15:00	7.4	1.754	0.9	74,525	Open	9.8	109
2/14/2025	13:30:00	7.2	1.731	0.9	74,551	Open	9.8	109
2/14/2025	13:45:00	6.9	1.705	0.9	74,571	Closed	10.1	268
2/14/2025	14:00:00	7.1	0.680	0.8	74,571	Closed	9.9	276
2/14/2025	14:15:00	7.2	0.609	0.7	74,571	Closed	10	109
2/14/2025	14:30:00	7.3	0.643	0.8	74,571	Closed	10	109
2/14/2025	14:45:00	7.3	0.643	0.7	74,571	Closed	10	109
2/14/2025	15:00:00	7	1.622	0.7	74,591	Open	10	294
2/14/2025	15:15:00	7.1	1.584	0.7	74,615	Open	10	109
2/14/2025	15:30:00	7.3	1.603	0.6	74,639	Open	10	111
2/14/2025	15:45:00	7.7	1.538	0.8	74,663	Open	10	112
2/14/2025	16:00:00	7.9	0.662	0.6	74,673	Closed	10	111

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Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/14/2025	16:15:00	8	0.680	0.8	74,673	Closed	10	109
2/14/2025	16:30:00	8	0.650	0.8	74,673	Closed	10	109
2/14/2025	16:45:00	8	1.108	3.2	74,679	Open	10.1	109
2/14/2025	17:00:00	8.7	1.599	0.9	74,700	Open	9.9	109
2/14/2025	17:15:00	8.8	0.227	0.7	74,722	Open	9.9	109
2/14/2025	17:30:00	8.5	1.497	0.9	74,743	Open	9.9	109
2/14/2025	17:45:00	6.3	1.440	0.9	74,764	Open	9.8	416
2/14/2025	18:00:00	6	0.382	1	74,786	Open	9.7	409
2/14/2025	18:15:00	6	0.000	1	74,786	Open	9.8	421
2/14/2025	18:30:00	6.1	1.406	1.1	74,790	Open	9.7	467
2/14/2025	18:45:00	6.1	1.501	1.1	74,812	Open	9.6	356
2/14/2025	19:00:00	6.2	1.486	1	74,834	Open	9.5	317
2/14/2025	19:15:00	6.3	1.497	1	74,856	Open	9.6	310
2/14/2025	19:30:00	6.5	1.463	1.1	74,879	Open	9.6	310
2/14/2025	19:45:00	6.7	0.000	1	74,894	Open	9.6	305
2/14/2025	20:00:00	6.6	1.452	0.9	74,897	Open	9.7	313
2/14/2025	20:15:00	6.8	1.421	1	74,918	Open	9.5	277
2/14/2025	20:30:00	6.9	1.410	1.1	74,940	Open	9.5	109
2/14/2025	20:45:00	7.5	1.418	1.8	74,951	Open	9.5	108
2/14/2025	21:00:00	7.1	1.418	1.2	74,973	Open	9.4	285
2/14/2025	21:15:00	7.7	1.440	1.2	74,990	Open	9.5	284
2/14/2025	21:30:00	7.1	0.000	1.2	75,004	Open	9.5	421
2/14/2025	21:45:00	7.1	1.421	1.2	75,006	Open	9.6	417
2/14/2025	22:00:00	7.3	1.448	1.2	75,028	Open	9.4	426
2/14/2025	22:15:00	7.2	0.930	2.9	75,049	Open	9.5	503

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/14/2025	22:30:00	7.7	0.000	1.2	75,057	Open	9.5	492
2/14/2025	22:45:00	7.9	1.372	1.1	75,057	Open	9.6	465
2/14/2025	23:00:00	9.2	1.482	1.2	75,077	Open	9.5	351
2/14/2025	23:15:00	9.4	0.624	1.2	75,094	Closed	9.5	341
2/14/2025	23:30:00	8.9	1.489	1.2	75,108	Open	9.4	341
2/14/2025	23:45:00	8	1.452	1.2	75,130	Open	9.4	505
2/15/2025	0:00:00	7.5	1.455	1.4	75,151	Open	9.4	524
2/15/2025	0:15:00	7.3	0.000	1.2	75,153	Open	9.5	524
2/15/2025	0:30:00	7.9	1.244	1.2	75,164	Open	9.4	507
2/15/2025	0:45:00	7.4	1.183	1.2	75,183	Open	9.4	374
2/15/2025	1:00:00	8	1.361	1.3	75,201	Open	9.4	442
2/15/2025	1:15:00	9	1.092	1.2	75,217	Closed	9.4	319
2/15/2025	1:30:00	8	1.183	1.1	75,230	Open	9.4	458
2/15/2025	1:45:00	8.3	1.274	1.2	75,244	Open	9.5	480
2/15/2025	2:00:00	7.8	1.281	0.9	75,263	Open	9.5	469
2/15/2025	2:15:00	7.5	1.285	1	75,283	Open	9.6	524
2/15/2025	2:30:00	7.3	1.251	1.2	75,302	Open	9.6	537
2/15/2025	2:45:00	7.4	0.000	1.1	75,319	Open	9.5	502
2/15/2025	3:00:00	7.3	0.000	1	75,319	Open	9.6	504
2/15/2025	3:15:00	8.5	1.493	1.1	75,329	Open	9.5	399
2/15/2025	3:30:00	8.8	1.244	1	75,346	Open	9.5	338
2/15/2025	3:45:00	8.8	1.266	1.1	75,361	Open	9.7	350
2/15/2025	4:00:00	9	1.164	1.1	75,374	Closed	9.7	315
2/15/2025	4:15:00	8.9	0.680	1.1	75,388	Closed	9.8	318
2/15/2025	4:30:00	8.9	0.915	1	75,401	Open	9.6	322

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Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/15/2025	4:45:00	8.5	0.491	1	75,414	Open	9.6	374
2/15/2025	5:00:00	8.5	0.862	1.3	75,424	Open	9.6	335
2/15/2025	5:15:00	8.5	1.501	1.3	75,443	Open	9.6	322
2/15/2025	5:30:00	9.1	1.213	1.7	75,453	Open	9.8	320
2/15/2025	5:45:00	9	1.009	1.2	75,470	Open	9.5	291
2/15/2025	6:00:00	8.8	0.631	1.1	75,483	Open	9.6	300
2/15/2025	6:15:00	7.1	1.331	1.5	75,501	Open	9.6	406
2/15/2025	6:30:00	7	1.361	1.2	75,521	Open	9.5	345
2/15/2025	6:45:00	7.1	1.334	1.6	75,541	Open	9.5	345
2/15/2025	7:00:00	7	0.000	0.9	75,552	Open	9.6	303
2/15/2025	7:15:00	7.1	1.535	0.9	75,560	Open	9.5	333
2/15/2025	7:30:00	7.1	1.516	1.5	75,583	Open	9.5	322
2/15/2025	7:45:00	7.1	0.987	1	75,604	Open	9.6	320
2/15/2025	8:00:00	7.2	0.000	0.9	75,613	Open	9.6	287
2/15/2025	8:15:00	7.1	0.000	0.9	75,613	Open	9.8	289
2/15/2025	8:30:00	7.1	0.000	0.8	75,613	Open	9.9	291
2/15/2025	8:45:00	6.9	1.588	1	75,631	Open	9.4	312
2/15/2025	9:00:00	7.1	1.066	0.9	75,651	Open	9.5	296
2/15/2025	9:15:00	7.3	1.546	0.9	75,674	Open	9.5	282
2/15/2025	9:30:00	7.3	0.000	1.1	75,676	Open	9.7	279
2/15/2025	9:45:00	7.4	1.535	0.9	75,681	Open	9.6	286
2/15/2025	10:00:00	7.2	1.535	0.9	75,704	Open	9.5	300
2/15/2025	10:15:00	7.2	1.501	0.9	75,727	Open	9.6	286
2/15/2025	10:30:00	7.1	0.998	1	75,749	Open	9.6	282
2/15/2025	10:45:00	7.1	0.714	1.1	75,763	Closed	9.6	289

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Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/15/2025	11:00:00	7.2	0.692	0.9	75,763	Closed	9.6	317
2/15/2025	11:15:00	7.2	1.436	1.3	75,768	Open	9.6	310
2/15/2025	11:30:00	7.4	1.444	1.1	75,790	Open	9.6	365
2/15/2025	11:45:00	7.2	1.497	0.8	75,809	Open	8.8	356
2/15/2025	12:00:00	7.4	1.523	0.8	75,831	Open	8.1	389
2/15/2025	12:15:00	7.5	1.493	0.8	75,854	Open	8.6	414
2/15/2025	12:30:00	7.4	0.000	0.7	75,856	Open	8.8	407
2/15/2025	12:45:00	9.8	0.215	1	75,869	Open	9.1	345
2/15/2025	13:00:00	9.6	1.436	1.2	75,877	Open	9.2	346
2/15/2025	13:15:00	8.9	1.777	1.3	75,901	Open	9.5	422
2/15/2025	13:30:00	8.8	1.542	4.2	75,924	Open	9.5	409
2/15/2025	13:45:00	9.6	1.508	0.9	75,938	Open	9.6	361
2/15/2025	14:00:00	8.9	1.470	0.9	75,961	Open	9.7	432
2/15/2025	14:15:00	10.2	1.444	1	75,982	Open	9.6	401
2/15/2025	14:30:00	10.2	1.501	3.6	75,990	Open	9.8	429
2/15/2025	14:45:00	9.9	1.516	6	75,992	Open	9.9	404
2/15/2025	15:00:00	9.6	0.998	2.3	76,011	Open	9.7	399
2/15/2025	15:15:00	8.8	1.557	1	76,034	Open	9.7	494
2/15/2025	15:30:00	8.4	1.508	1.2	76,057	Open	9.8	497
2/15/2025	15:45:00	8.1	0.000	1	76,064	Open	9.9	507
2/15/2025	16:00:00	7.9	1.486	1	76,080	Open	9.8	509
2/15/2025	16:15:00	7.1	0.212	1	76,101	Open	9.8	544
2/15/2025	16:30:00	7.1	0.000	0.9	76,101	Open	9.9	541
2/15/2025	16:45:00	8	1.444	1	76,110	Open	9.7	375
2/15/2025	17:00:00	8.4	1.436	1.3	76,132	Open	9.7	314

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
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Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/15/2025	17:15:00	7	1.406	0.8	76,153	Open	9.7	461
2/15/2025	17:30:00	8.2	1.470	3.2	76,171	Open	9.8	328
2/15/2025	17:45:00	8.7	0.000	0.9	76,187	Open	9.8	278
2/15/2025	18:00:00	8.1	1.436	0.8	76,191	Open	9.9	287
2/15/2025	18:15:00	7.4	0.956	1	76,210	Open	9.9	408
2/15/2025	18:30:00	8.2	1.436	0.9	76,230	Open	9.8	277
2/15/2025	18:45:00	8.1	0.000	0.7	76,246	Open	9.9	281
2/15/2025	19:00:00	7.4	1.542	1	76,261	Open	9.8	312
2/15/2025	19:15:00	7.2	1.512	0.9	76,284	Open	9.8	320
2/15/2025	19:30:00	7.4	0.000	2	76,294	Open	9.9	346
2/15/2025	19:45:00	7.3	1.538	0.9	76,301	Open	9.8	297
2/15/2025	20:00:00	7.4	1.032	1	76,321	Open	9.8	305
2/15/2025	20:15:00	7.2	1.508	0.9	76,343	Open	9.8	291
2/15/2025	20:30:00	7.2	0.000	0.9	76,352	Open	9.9	297
2/15/2025	20:45:00	7.5	1.542	0.8	76,370	Open	9.8	310
2/15/2025	21:00:00	7.3	0.000	0.9	76,382	Open	9.9	307
2/15/2025	21:15:00	7.4	1.493	1	76,397	Open	9.8	294
2/15/2025	21:30:00	7.1	0.000	0.9	76,412	Open	9.8	281
2/15/2025	21:45:00	7.1	0.000	0.9	76,412	Open	10	284
2/15/2025	22:00:00	7.2	1.459	0.9	76,422	Open	9.7	300
2/15/2025	22:15:00	7.1	0.990	0.9	76,444	Open	9.7	276
2/15/2025	22:30:00	7.2	1.448	0.9	76,462	Open	9.7	284
2/15/2025	22:45:00	7.3	0.000	1	76,480	Open	9.7	296
2/15/2025	23:00:00	7.2	0.000	0.9	76,489	Open	9.7	279
2/15/2025	23:15:00	7	1.599	0.9	76,503	Open	9.6	307

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/15/2025	23:30:00	7.3	1.089	1.2	76,524	Open	9.6	292
2/15/2025	23:45:00	7.2	0.000	1.1	76,535	Closed	9.7	315
2/16/2025	0:00:00	7.2	1.580	1.1	76,541	Open	9.6	303
2/16/2025	0:15:00	7.1	1.554	0.9	76,564	Open	9.4	318
2/16/2025	0:30:00	7.1	1.497	1.1	76,587	Open	9.5	328
2/16/2025	0:45:00	7.3	0.000	1	76,598	Closed	9.5	307
2/16/2025	1:00:00	7.2	0.000	1.1	76,598	Closed	9.6	305
2/16/2025	1:15:00	7.3	1.489	1.1	76,619	Open	9.4	305
2/16/2025	1:30:00	7.2	1.452	1.3	76,641	Open	9.4	305
2/16/2025	1:45:00	7.2	0.000	1.1	76,658	Closed	9.5	305
2/16/2025	2:00:00	7.2	1.489	1.2	76,672	Open	9.4	307
2/16/2025	2:15:00	7.1	1.470	1.1	76,694	Open	9.4	303
2/16/2025	2:30:00	7.1	0.000	1.1	76,706	Closed	9.4	108
2/16/2025	2:45:00	7.1	0.000	1.1	76,706	Closed	9.9	108
2/16/2025	3:00:00	7.2	1.463	1.1	76,711	Open	9.4	313
2/16/2025	3:15:00	7.2	1.436	1.1	76,733	Open	9.3	290
2/16/2025	3:30:00	7.3	1.406	1.3	76,754	Open	9.4	284
2/16/2025	3:45:00	7.1	1.383	1.2	76,775	Open	9.4	307
2/16/2025	4:00:00	7.3	0.000	1	76,791	Closed	9.4	109
2/16/2025	4:15:00	7.3	0.000	1	76,791	Closed	9.5	271
2/16/2025	4:30:00	7.3	1.399	0.9	76,804	Open	9.4	276
2/16/2025	4:45:00	7.3	1.383	1	76,825	Open	9.4	272
2/16/2025	5:00:00	7.2	1.486	1.3	76,842	Open	9.6	274
2/16/2025	5:15:00	7.4	0.000	0.9	76,859	Closed	9.5	109
2/16/2025	5:30:00	7.3	0.000	1	76,859	Closed	9.6	271

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Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/16/2025	5:45:00	7.5	1.478	0.9	76,874	Open	9.4	109
2/16/2025	6:00:00	7.5	1.452	1.1	76,896	Open	9.4	109
2/16/2025	6:15:00	7.5	0.000	2.1	76,907	Closed	9.5	109
2/16/2025	6:30:00	7.6	1.554	2.3	76,910	Open	9.5	109
2/16/2025	6:45:00	7.2	1.047	1	76,932	Open	9.4	289
2/16/2025	7:00:00	7.3	0.000	1.1	76,938	Closed	9.5	286
2/16/2025	7:15:00	7.2	1.554	1.2	76,946	Open	9.4	277
2/16/2025	7:30:00	7.4	1.542	1	76,970	Open	9.3	273
2/16/2025	7:45:00	7.3	1.512	1.1	76,993	Open	9.3	274
2/16/2025	8:00:00	7.2	1.017	1.2	77,011	Open	9.4	298
2/16/2025	8:15:00	7.2	0.000	1.1	77,012	Closed	9.6	298
2/16/2025	8:30:00	7.3	1.520	1	77,019	Open	9.4	276
2/16/2025	8:45:00	7.3	0.000	1.2	77,032	Open	9.4	286
2/16/2025	9:00:00	7.1	0.798	6.8	77,032	Closed	9.7	281
2/16/2025	9:15:00	7	0.847	1.2	77,032	Open	9.4	310
2/16/2025	9:30:00	7.3	0.801	1.3	77,054	Closed	9.4	276
2/16/2025	9:45:00	7.3	1.572	1.2	77,055	Open	9.4	277
2/16/2025	10:00:00	7.2	1.576	1.2	77,074	Open	9.5	289
2/16/2025	10:15:00	7	1.580	1.2	77,098	Open	9.5	297
2/16/2025	10:30:00	7	1.535	1.2	77,121	Open	9.6	297
2/16/2025	10:45:00	7	1.482	1.2	77,144	Open	9.6	315
2/16/2025	11:00:00	7	0.000	1.1	77,154	Open	9.8	320
2/16/2025	11:15:00	7	1.036	1	77,161	Open	9.7	335
2/16/2025	11:30:00	7.4	1.629	1.7	77,171	Open	9.7	343
2/16/2025	11:45:00	7.7	1.618	1.1	77,196	Open	9.7	392

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Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/16/2025	12:00:00	7.9	0.000	1.1	77,207	Open	9.9	406
2/16/2025	12:15:00	7.7	0.000	1.1	77,207	Open	10.1	407
2/16/2025	12:30:00	8.7	1.565	1.4	77,221	Open	9.8	424
2/16/2025	12:45:00	8.9	1.523	1	77,244	Open	9.9	479
2/16/2025	13:00:00	7.9	1.244	15.1	77,264	Open	9.9	686
2/16/2025	13:15:00	9.1	1.474	1	77,282	Open	10	529
2/16/2025	13:30:00	8.6	0.000	2.2	77,293	Open	10.5	109
2/16/2025	13:45:00	8.6	0.000	1.6	77,293	Open	11.3	109
2/16/2025	14:00:00	9.2	1.542	1.5	77,294	Open	11.8	109
2/16/2025	14:15:00	8.6	0.718	1.2	77,295	Closed	10.2	684
2/16/2025	14:30:00	7.6	1.542	2.3	77,317	Open	10.2	759
2/16/2025	14:45:00	7.4	1.523	2	77,339	Open	10.1	758
2/16/2025	15:00:00	7.5	0.987	1.7	77,360	Open	10.2	754
2/16/2025	15:15:00	7.8	0.000	1.7	77,376	Open	10.2	699
2/16/2025	15:30:00	7.8	1.482	2.5	77,379	Open	10.3	708
2/16/2025	15:45:00	8.2	0.000	1.7	77,390	Open	10.2	640
2/16/2025	16:00:00	7.6	1.531	5.2	77,393	Open	10.4	786
2/16/2025	16:15:00	8.2	1.504	3.3	77,411	Open	10.2	708
2/16/2025	16:30:00	8.7	0.000	1.3	77,424	Open	10.2	613
2/16/2025	16:45:00	8.9	0.964	2.6	77,431	Open	10.2	597
2/16/2025	17:00:00	9.2	0.684	1	77,442	Closed	10.1	595
2/16/2025	17:15:00	8.8	0.745	1.1	77,443	Closed	10.1	662
2/16/2025	17:30:00	8.1	1.512	1	77,462	Open	10.1	771
2/16/2025	17:45:00	8.4	1.497	1	77,485	Open	10	706
2/16/2025	18:00:00	8.6	0.934	2.7	77,500	Open	10.1	663

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Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/16/2025	18:15:00	8.7	0.956	1.7	77,513	Open	10	618
2/16/2025	18:30:00	8.6	0.000	1	77,524	Open	10	650
2/16/2025	18:45:00	8.4	1.429	34.9	77,525	Open	10.2	109
2/16/2025	19:00:00	8.3	0.000	1	77,537	Open	9.9	706
2/16/2025	19:15:00	8.6	1.433	1.1	77,555	Open	9.8	637
2/16/2025	19:30:00	8.4	0.000	1.1	77,565	Open	9.9	686
2/16/2025	19:45:00	7.5	1.584	1.6	77,573	Open	9.8	790
2/16/2025	20:00:00	7	1.569	1.1	77,597	Open	9.7	763
2/16/2025	20:15:00	7.1	0.238	1.4	77,619	Open	9.7	109
2/16/2025	20:30:00	7.8	1.527	1.7	77,638	Open	9.8	591
2/16/2025	20:45:00	7.2	1.512	2.7	77,655	Open	9.8	597
2/16/2025	21:00:00	7.2	1.501	2	77,678	Open	9.8	594
2/16/2025	21:15:00	7.2	1.523	6	77,688	Open	9.9	634
2/16/2025	21:30:00	7	0.000	1.7	77,701	Closed	10.1	109
2/16/2025	21:45:00	7	1.588	1.2	77,712	Open	9.8	576
2/16/2025	22:00:00	7	0.000	1	77,719	Closed	9.8	553
2/16/2025	22:15:00	7	1.580	1	77,727	Open	9.8	525
2/16/2025	22:30:00	7	1.595	0.9	77,751	Open	9.7	489
2/16/2025	22:45:00	6.9	1.017	1.1	77,773	Open	9.6	476
2/16/2025	23:00:00	7	1.523	1.1	77,792	Open	9.6	464
2/16/2025	23:15:00	7.2	0.000	0.9	77,807	Closed	9.7	462
2/16/2025	23:30:00	7.1	0.000	0.9	77,807	Closed	9.8	466
2/16/2025	23:45:00	7.2	1.501	0.8	77,826	Open	9.6	505

Appendix B: Photos

Photo 1: No visible sheen observed in the WTP water, February 10

Photo 2: No visible sheen observed in the WTP water, February 11

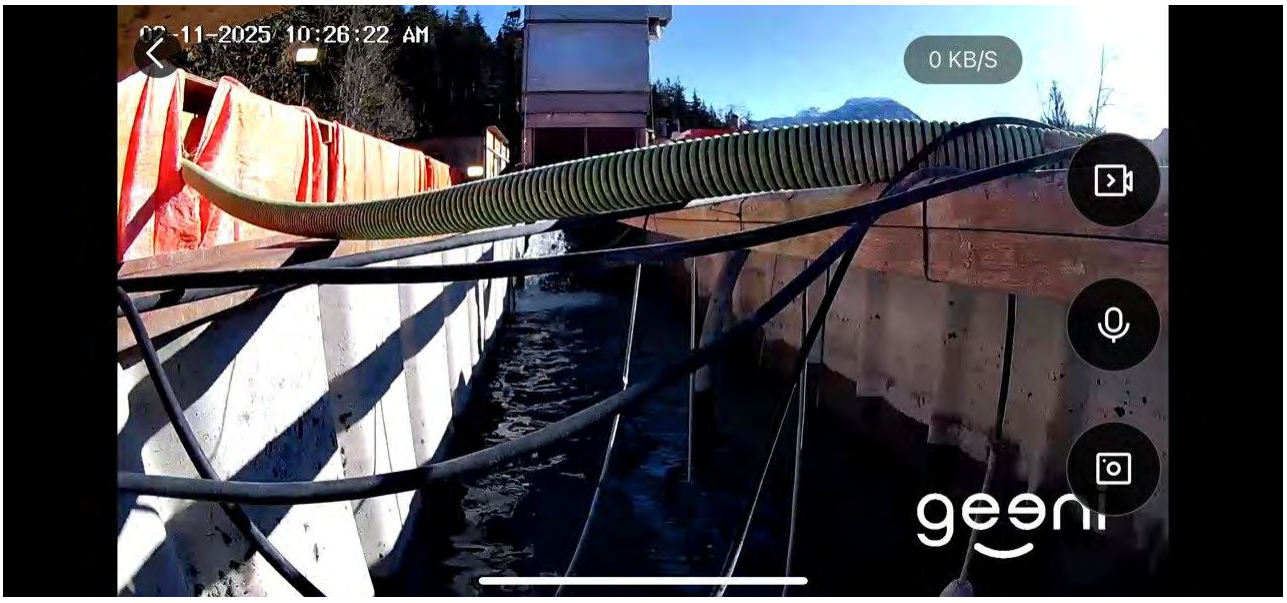


Photo 3: No visible sheen observed in the WTP water, February 13

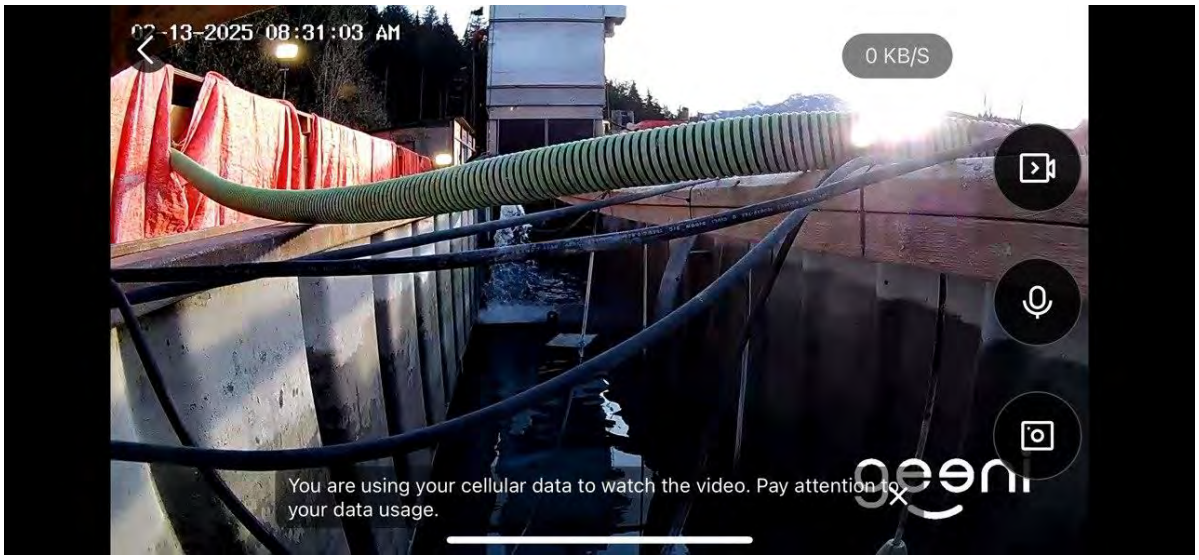



Photo 4: No visible sheen observed in the WTP water, February 14


Photo 5: No visible sheen observed in the WTP water, February 15

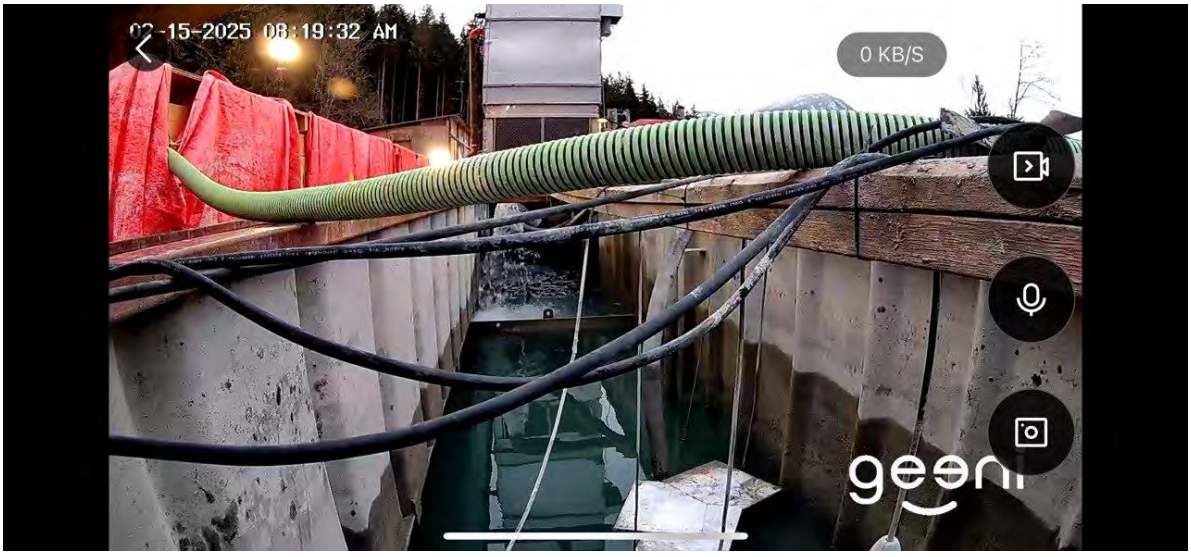
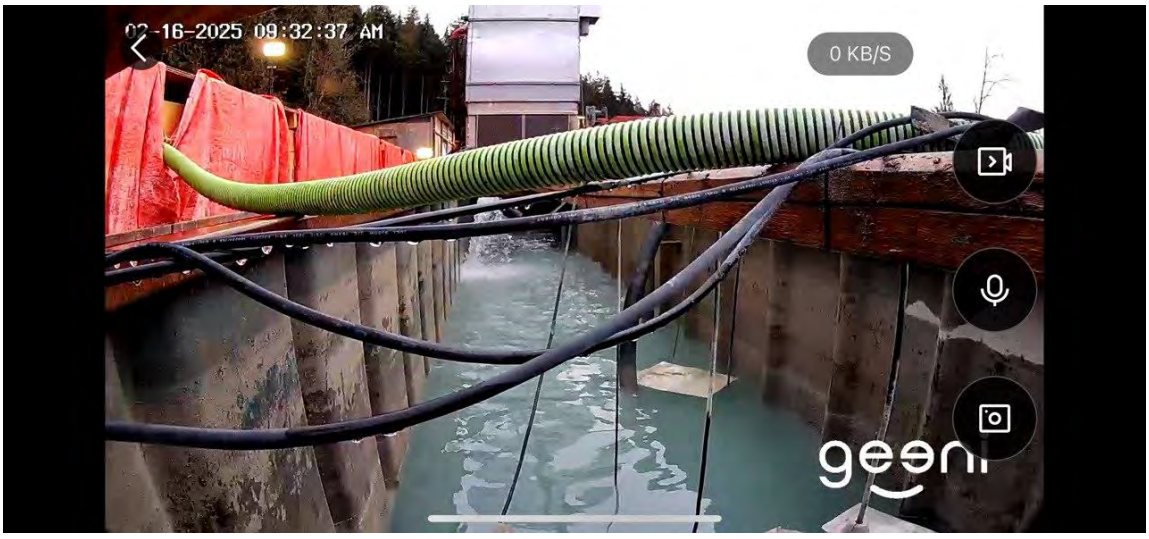



Photo 6: No visible sheen observed in the WTP water, February 16


Appendix D: Woodfibre Site Receiving Environment Documentation

Woodfibre Site Receiving Environment Sample Analysis

TRITON Environmental Consultants	Sample ID	Reviewed and signed off by:			Farshad Shafiei Ph.D., R.P.Bio.	EAS US1 (Upstream)	EAS DS 1 (Downstream)	Sample or value notes	BCWQ FAL - Short Term	BCWQ FAL - Long Term	BCWQ MAL - Short Term	BCWQ MAL - Long Term
	LAB ID					VA25A3042-001	VA25A3042-002					
	Date Sampled					11-Feb-2025	11-Feb-2025					
	Time Sampled					11:50	11:25					
Analyte	**Units**	**FAL-ST [1,2]**	**FAL-LT [1,2]**	**MAL-ST [1]**	**MAL-LT [1,2]**	Water	Water		Guideline notes			
						N/A	N/A					
In Situ Parameters												
pH (field)	pH units	6.5-9.0	6.5-9.0	7.0-8.7	7.0-8.7	7.4	7.7		If natural pH < 6.5, no statisticaly significant decrease from background. No restriction in increase except in areas with unique flora or fauna. Unrestricted change permitted within range of 6.5 to 9.0. If natural pH > 9.0, no statistically significant increase from background. Refer to BC Water Quality Guidelines for more information.		Unrestricted change within this range (for protection of mollusc embryo development).	
Temperature (field)	°C	Short-term daily temperature guideline is 19°C for streams with unknown fish distribution Max +/- from BKG 1°C [4]	-	Short-term daily temperature guideline is 19°C for streams with unknown fish distribution Max +/- from BKG 1°C [4]	-	1.4	5.7		Guideline is species-dependent. Short-term daily temperature guideline is 19°C for streams with unknown fish distribution. Refer to footnote 4 for background temperature range for East Creek. Refer to BC Water Quality Guidelines for more information Hourly rate of change not to exceed 1°C. Calculation: US value +/- 1 = guideline range		Guideline for marine waters are based on natural ambient conditions. Max and min. 1°C change from natural condition. Natural temperature cycle characteristic of the site should not be altered in amplitude or frequency by human activities. Max rate of any human-induced temperature change not to exceed 0.5°C hourly. treams with unknown fish distribution. Refer to footnote 4 for background temperature range for East Creek. Calculation: US value +/- 1 = guideline range	
Conductivity (field)	µS/cm	-	-	-	-	37	87					
Turbidity (field)	NTU	Varies with background, see note Guideline = 8.0	Varies with background, see note Guideline = 3.35 5-week discrete sampling average = 1.29 (DS)	Varies with background, see note Guideline = 8.0	Varies with background, see note Guideline = 3.35 5-week discrete sampling average = 1.29 (DS)	0	0		Change from background of 8 NTU at any one time for a duration of 24 h in all waters during clear flows or in clear waters. Calculation: US value + 8 = DS guideline Change from background of 5 NTU at any time when background is 8 - 50 NTU during high flows or in turbid waters. Calculation: US value + 5 = DS guideline Change from background of 10% when background is > 50 NTU at any time during high flows or in turbid waters. Calculation: US value + (US value*0.1) = DS guideline	Change from background of 2 NTU at any one time for 30 days in clear flows. Note that a rolling average of US values over a 30-day period is required to properly calculate this guideline. Guideline calculated in this spreadsheet using US concentration at the time of sampling.	Change from background of 8 NTU at any one time for a duration of 24 h in all waters during clear flows or in clear waters. Calculation: US value + 8 = DS guideline Change from background of 5 NTU at any time when background is 8 - 50 NTU during high flows or in turbid waters. Calculation: US value + 5 = DS guideline Change from background of 10% when background is > 50 NTU at any time during high flows or in turbid waters. Calculation: US value + (US value*0.1) = DS guideline	Change from background of 2 NTU at any one time for 30 days in clear flows. Note that a rolling average of US values over a 30-day period is required to properly calculate this guideline. Guideline calculated in this spreadsheet using US concentration at the time of sampling.
Dissolved Oxygen (field)	mg/L	Varies with life stage, see note	Varies with life stage, see note	Varies with life stage, see note	Varies with life stage, see note	13.07	11.80		Buried embryo/alevin minimum 9 mg/L, all other life stages 5 mg/L. Refer to BC Water Quality Guidelines for more information.	Buried embryo/alevin minimum 11 mg/L, all other life stages 8 mg/L. Refer to BC Water Quality Guidelines for more information.	Buried embryo/alevin minimum 9 mg/L, all other life stages 5 mg/L. Refer to BC Water Quality Guidelines for more information.	Buried embryo/alevin minimum 11 mg/L, all other life stages 8 mg/L. Refer to BC Water Quality Guidelines for more information.
General Parameters												
Hardness (as $CaCO_3$) (total)	mg/L	-	-	-	-	5.78	37.6					
Total Dissolved Solids	mg/L	-	-	-	-	24	63					
Total Suspended Solids	mg/L	Varies with background, see note Guideline = 28	Varies with background, see note Guideline = 8.00 5-week discrete sampling average = 3.0 (DS)	Varies with background, see note Guideline = 28	Varies with background, see note Guideline = 8.00 5-week discrete sampling average = 3.0 (DS)	< 3.0	< 3.0		Change from background of 25 mg/L at any one time for duration of 24 h in all waters during clear flows or in clear waters. Calculation: US value + 25 = DS guideline Change from background of 10 mg/L at any one time when background 25-100 mg/L during high flows or turbid waters. Calculation: US value + 10 = DS guideline Change from background of 10% when background is > 100 mg/L at any time during high flows or turbid waters. Calculation: US value + (US value*0.1) = DS guideline	Change from background of 5 mg/L @ one time for a druation of 30 days in clear flow. Note that a rolling average of US values over a 30-day period is required to properly calculate this guideline. Guideline calculated in this spreadsheet using US concentration at the time of sampling.	Change from background of 25 mg/L at any one time for duration of 24 h in all waters during clear flows or in clear waters. Calculation: US value + 25 = DS guideline Change from background of 10 mg/L at any one time when background 25-100 mg/L during high flows or turbid waters. Calculation: US value + 10 = DS guideline Change from background of 10% when background is > 100 mg/L at any time during high flows or turbid waters. Calculation: US value + (US value*0.1) = DS guideline	Change from background of 5 mg/L @ one time for a druation of 30 days in clear flow. Note that a rolling average of US values over a 30-day period is required to properly calculate this guideline. Guideline calculated in this spreadsheet using US concentration at the time of sampling.
Dissolved Organic Carbon (DOC)	mg/L	-	-	-	-	1.94	0.69			Long-term (30-day) median within 20% of background median [3]		
Total Alkalinity ($CaCO_3$)	mg/L	-	Categorical	-	-	4.4	37.3			Guideline is for alkalinity (as CaCO3) and categorizes the sensitivity of a water body to acid inputs. Alkalinity < 10 mg/L is considered highly sensitive to acid inputs; 10 - 20 mg/L is considered moderately sensitive to acid inputs; > 20 mg/L is considered low sensitivity.		
Total Sulfide (as S)	mg/L	-	-	-	-	< 0.0015	< 0.0015					
Total Sulfide (un-ionized as 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 = 16	Varies with pH and temperature. See note. Guideline = 1.97	Varies with pH and temperature. See note. Guideline = 110	Varies with pH, temperature and salinity. See note. Guideline = 12	0.0733	0.125		Guideline for ammonia as N and is pH and temperature dependent. Refer to Table 27D in BC WQG for guideline values.	Guideline for ammonia as N and is pH and temperature dependent. Refer to Table 27C in BC WQG for guideline values.	Guideline for ammonia as N. Guideline is pH, temperature and salinity dependent. Refer to Table 27F in BC WQG for guideline values.	Guideline for ammonia as N. Guideline is pH, temperature and salinity dependent. Refer to Table 27E in BC WQG for guideline values.
Bromide	mg/L	-	-	-	-	< 0.050	< 0.050					
Chloride	mg/L	600	150	> 110% of background	< 90% of background	0.7	4.73				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 = 0.188	-	1.5	-	0.021	0.136		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	0.0404	0.0329					
Nitrite (as N)	mg/L	Varies with chloride. Table 27B, see note. Guideline = 0.06	Varies with chloride. Table 27B, see note. Guideline = 0.02	-	-	< 0.0010	< 0.0010		Varies with chloride. Refer to Table 27B in BC WQG for guideline values.	Varies with chloride. Refer to Table 27B in BC WQG for guideline values.		
Total Nitrogen	mg/L	-	-	-	-	0.074	0.08					
Total Phosphorous	mg/L	-	0.005 to 0.015	-	-	0.0395	0.003			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	-	-	2.78	4.74			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 = 0.112 5-week field average = 0.078 (US), 0.115 (DS)	-	-	0.0733	0.125			Guideline varies with pH, hardness and Dissolved Organic Carbon (DOC). Guideline is calculated with the following equation: Guideline = (EXP((0.645 * LN(DOC)) + (2.255 * LN(hardness)) + (1.995 * pH) + (-0.284 * (LN(hardness) * pH))-9.898)/3/1000) If hardness or DOC is below the hardness range, the minimum hardness or DOC will be applied in the calculation.		
Antimony (Sb)-Total	mg/L	0.25	0.074	-	-	< 0.00010	< 0.00010					
Arsenic (As)-Total	mg/L	-	0.005	-	0.0125	< 0.00010	0.00048					Interim guideline status
Barium (Ba)-Total	mg/L	-	1	-	-	0.00302	0.00425			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	0.01					
Cadmium (Cd)-Total	mg/L	-	-	-	0.00012	0.000005	0.0000152					Working guideline status
Calcium (Ca)-Total	mg/L	-	-	-	-	1.94	13.9					
Cesium (Cs)-Total	mg/L	-	-	-	-	< 0.000010	0.000012					
Chromium (Cr) - Total	mg/L	-	-	-	-	< 0.00050	< 0.00050					
Chromium (Cr(III))-Total	mg/L	-	0.0089	-	0.056	< 0.00050	< 0.00050			Working guideline status		Working guideline status
Chromium (Cr(VI))-Total	mg/L	-	0.0025	-	0.0015	< 0.00050	< 0.00050			Working guideline status		Working guideline status
Cobalt (Co)-Total	mg/L	0.11	0.004	-	-	< 0.00010	< 0.00010					
Copper (Cu)-Total	mg/L	-	-	0.003	0.003 5-week field averages = 0.000574 (US), 0.00051 (DS)	0.00051	< 0.00050					
Iron (Fe)-Total	mg/L	1	-	-	-	0.031	0.062					
Lead (Pb)-Total	mg/L	-	-	0.14	0.002 5-week field averages = 0.00005 (US), 0.000053 (DS)	< 0.00005	0.000050		Guideline varies with hardness, refer to BC Water Quality Guidelines for more information. Guideline is 0.003 where hardness ≤8mg/L. Guideline uses equation EXP[1.273*on(hardness)-1.460] where hardness is 8-360 mg/L. Lowest value for guideline is 0.003 mg/L.	Guideline varies with hardness, refer to BC Water Quality Guidelines for more information. Guideline equation EXP[1.273*on(hardness)-4.704] applies to samples with hardness 8-360 mg/L.		
Lithium (Li)-Total	mg/L	-	-	-	-	< 0.0010	0.0017					
Magnesium (Mg)-Total	mg/L	-	-	-	-	0.228	0.71					
Manganese (Mn)-Total	mg/L	Varies with hardness Guideline = 0.82	Varies with hardness Guideline = 0.77	-	-	0.00152	0.00574		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	-	-	0.000319	0.0135					
Nickel (Ni)-Total	mg/L	-	-	-	0.0083	< 0.00050	< 0.00050			Working guideline status. Guideline varies with hardness. Refer to BC Water Quality Guidelines for more information. Hardness 0 ≤ 60: 0.025 Hardness > 60 ≤ 180: Guideline = (EXP((0.76 * (LN(hardness)) + 1.06))/1000) Hardness ≥ 180: 0.15		Working guideline status
Potassium (K)-Total	mg/L	-	-	-	-	0.191	0.726					
Rubidium (Rb)-Total	mg/L	-	-	-	-	0.00027	0.0013					
Selenium (Se)-Total	mg/L	-	0.002	-	0.002	< 0.000050	< 0.000050			Guideline for freshwater aquatic life (water column). Alert concentration is 0.001 mg/L, with separate guideliens for sediment, invertebrate and fish tissue. Refer to BC Water Quality Guidelines for more information on guideliens and sampling guidance.		Guideline for marine aquatic life (water column). Alert concentration is 0.001 mg/L, with separate guideliens for sediment, invertebrate and fish tissue. Refer to BC Water Quality Guidelines for more information on guideliens and sampling guidance.
Silicon (Si)-Total	mg/L	-	-	-	-	3.64	4.65					
Silver (Ag)-Total	mg/L	Varies with hardness, see note Guideline = 0.0001	Varies with hardness, see note Guideline = 0.00005	0.003	0.0015	< 0.000010	< 0.000010		Varies with hardness Guideline ranges: Hardness ≤ 100: 0.0001 Hardness > 100: 0.003	Varies with hardness Guideline ranges: Hardness ≤ 100: 0.00005 Hardness > 100: 0.0015		Guideline applies to open coast and estuaries. Guideline is applicable to the EGP site.
Sodium (Na)-Total	mg/L	-	-	-	-	1.28	3.24					
Strontium (Sr)-Total	mg/L	-	-	-	-	0.0102	0.0303					
Sulfur (S)-Total	mg/L	-	-	-	-	0.61	1.45					
Tellurium (Te)-Total	mg/L	-	-	-	-	< 0.00020	< 0.00020					
Thallium (Tl)-Total	mg/L	-	0.00003 5-week field average = <0.000010 (US), <0.000010 (DS)	-	-	< 0.000010	< 0.000010			30-day average, site-specific objective for the lower Columbia River, BC. Guideline is for reference only and does not apply to the EGP site.		
Thorium (Th)-Total	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Tin (Sn)-Total	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Titanium (Ti)-Total	mg/L	-	-	-	-	0.00074	0.00283					
Tungsten (W)-Total	mg/L	-	-	-	-	< 0.00010	0.00017					
Uranium (U)-Total	mg/L	0.0165	0.0075	-	-	0.000072	0.000567			Working guideline status		
Vanadium (V)-Total	mg/L	-	0.06	-	0.005	< 0.00050	< 0.00050					Working guideline status
Zinc (Zn)-Total	mg/L	-	-	0.055	0.010 5-week field average = 0.0032 (US), 0.0040 (DS)	< 0.0030	0.0052					
Zirconium (Zr)-Total	mg/L	-	-	-	-	< 0.00020	< 0.00020					
Dissolved Metals												
Aluminum (Al)-Dissolved	mg/L	-	-	-	-	0.059	0.0626					
Antimony (Sb)-Dissolved	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Arsenic (As)-Dissolved	mg/L	-	-	-	-	< 0.00010	0.00047					
Barium (Ba)-Dissolved	mg/L	-	-	-	-	0.00289	0.00388					
Beryllium (Be)-Dissolved	mg/L	-	-	-	-	< 0.000100	< 0.000100					
Bismuth (Bi)-Dissolved	mg/L	-	-	-	-	< 0.000050	< 0.000050					
Boron (B)-Dissolved	mg/L	-	-	-	-	< 0.010	0.01					
Cadmium (Cd)-Dissolved	mg/L	Varies with hardness, see note Guideline = 0.000038	Varies with hardness, see note Guideline = 0.000026	-	-	< 0.0000050	0.0000128		Guideline is hardness dependent. Guideline is appilcable to water hardness between 7.0 and 455 mg/L. Guideline is calculated with the following formula: Guideline = (EXP(1.03 * (LN(hardness)) - 5.274)/1000) Lowest value for guideline is 0.000018 mg/L. If hardness is below the hardness range, the minimum hardness will be applied in the calculation.	Guideline is hardness dependent. Guideline is applicable to hardness between 3.4 and 285 mg/L. Guideline is calculated with the following formula: Guideline = (EXP(0.736 * (LN(hardness)) - 4.943)/1000) Lowest value for guiedeline is 0.00004. If hardness is below the hardness range, the minimum hardness will be applied in the calculation.		
Calcium (Ca)-Dissolved	mg/L	-	Categorical, see note	-	-	1.9	13.7			Guideline categorizes the sensitivity of a water body to acid inputs (i.e. buffering capacity). Standard is 4 mg/L dissolved Ca for the most sensitive waterbodies,5 - 8 mg/L for waterbodies with moderate sensitivity to acid inputs. Waterbodies with dissolved calcium > 8mg/L are considered to have low sensitivity to acid inputs.		
Cesium (Cs)-Dissolved	mg/L	-	-	-	-	< 0.000010	< 0.000010					
Chromium (Cr)-Dissolved	mg/L	-	-	-	-	< 0.00050	< 0.00050					
Cobalt (Co)-Dissolved	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Copper (Cu)-Dissolved	mg/L	Guideline varies with other parameters, see note Guideline = 0.0024	Guideline varies with other parameters, see note Guideline = 0.0005 5-week field average = 0.00050 (US), 0.00031 (DS)	-	-	0.00047	< 0.00020		Guideline varies with other parameters and is calculated using BC BLM software. Simplified model: Temperature, pH, DOC and hardness Detailed model: Temperature, pH, DOC, humic acid content, total calcium, total magnesium, total sodium, total potassium, sulphate, chloride, and alkalinity Guideline calculated using values for parameters above taken at the specific site on each sampling date	Guideline varies with other parameters and is calculated using BC BLM software. Simplified model: Temperature, pH, DOC and hardness Detailed model: Temperature, pH, DOC, humic acid content, total calcium, total magnesium, total sodium, total potassium, sulphate, chloride, and alkalinity Guideline calculated using values for parameters above taken at the specific site on each sampling date		
Iron (Fe)-Dissolved	mg/L	0.35	-	-	-	0.016	0.012					
Lead (Pb)-Dissolved	mg/L	-	Guideline varies with DOC and hardness Guideline: 0.00147 5-week field average = <0.000050 (US), <0.000050 (DS)	-	-	< 0.000050	< 0.000050			Guideline varies with DOC and hardness, refer to BC Water Quality Guidelines for more information. Guideline uses equation (EXP((0.514*LN(DOC))+(0.214*(LN(Hardness)))+0.4354))/2/1000 where DOC range is 0.5-31.5 mg/L and hardness range is 4.7-511 mg/L.		
Lithium (Li)-Dissolved	mg/L	-	-	-	-	< 0.0010	0.0018					
Magnesium (Mg)-Dissolved	mg/L	-	-	-	-	0.23	0.734					
Manganese (Mn)-Dissolved	mg/L	-	-	-	-	0.00092	0.00475					
Mercury (Hg)-Dissolved	mg/L	-	-	-	-	< 0.0000050	< 0.0000050					
Molybdenum (Mo)-Dissolved	mg/L	-	-	-	-	0.000267	0.0138					
Nickel (Ni)-Dissolved	mg/L	Guideline varies with pH, temperature, DOC, and hardness Guideline: 0.0180	Guideline varies with pH, temperature, DOC, and hardness Guideline: 0.00134 5-week field average = 0.00125 < 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	-	-	-	-	0.178	0.69					
Rubidium (Rb)-Dissolved	mg/L	-	-	-	-	0.00029	0.00128					
Selenium (Se)-Dissolved	mg/L	-	-	-	-	< 0.00005	< 0.00005					
Silicon (Si)-Dissolved	mg/L	-	-	-	-	3.67	4.63					
Silver (Ag)-Dissolved	mg/L	-	-	-	-	< 0.000010	< 0.000010					
Sodium (Na)-Dissolved	mg/L	-	-	-	-	1.36	3.64					
Strontium (Sr)-Dissolved	mg/L	-	-	-	-	0.0101	0.0303					
Sulfur (S)-Dissolved	mg/L	-	-	-	-	0.64	1.18					
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	0.0004					
Tungsten (W)-Dissolved	mg/L	-	-	-	-	< 0.00010	0.00017					
Uranium (U)-Dissolved	mg/L	-	-	-	-	0.000072	0.000588					
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 = 0.002803 5-week field average = 0.0020 (US), 0.0032 (DS)	-	-	0.0014	0.0044		Guideline varies with DOC and hardness. Guideline is calculated using the following formula: Guideline = (EXP((0.833 * (LN(hardness))) + (0.24 * (LN(DOC))) + 0.526)/2/1000) If hardness or DOC is below the hardness or DOC range, the minimum hardness or DOC will be applied in the calculation.	Guideline varies with pH, hardness and Dissolved Organic Carbon (DOC). Guideline is calculated using the following formula: Guideline = (EXP((0.974 * (LN(hardness))) - (0.815 * pH) + (0.398 * (LN(DOC))) + 4.625)/2/1000) Guideline only applies to water with pH between 6.5 and 8.13, DOC between 0.3 and 22.9 mg/L, anmd hardness between 23.4 and 399 mg/L. If hardness or DOC is below the hardness or DOC range, the minimum hardness or DOC will be applied in the calculation.		
Zirconium (Zr)-Dissolved	mg/L	-	-	-	-	< 0.00020	< 0.00020					
Applied Guideline:		**British Columbia Approved and Working Water Quality Guidelines (NOV 2023) for Freshwater Aquatic Life (FAL) & Marine Aquatic Life (MAL) Short-Term (ST) & Long-Term (LT)**										

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

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

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

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

Parameters Used to Calculate Guidelines

Analyte	Units	Measurement method	Values: EAS US1 (Upstream)	Values: EAS DS 1 (Downstream)
pH (field)	pH units	Field pH taken using handheld meters during sampling used in calculations	7.4	7.7
Temperature (field)	°C	Field temperature taken using handheld meters during sampling used in calculations	1.4	5.7
Turbidity (field)	NTU	Field turbidity taken using handheld meters during sampling used in calculations	0.00	0.00
Hardness (as CaCO3) (total)	mg/L	Laboratory tested total hardness taken at each respective sample site on the day of sampling used in guideline calculations	5.78	37.6
Dissolved Organic Carbon (DOC)	mg/L	Laboratory tested dissolved organic carbon tested at the lab used in guideline calculations	1.94	0.69
Total Alkalinity ($CaCO_3$)	mg/L	Laboratory tested total alkalinity used in calculations	4.4	37.3
Chloride	mg/L	Laboratory tested chloride taken at each respective sample site on the day of sampling used in guideline calculations	0.7	4.73

Woodfibre Site Receiving Environment Lab Documentation

CERTIFICATE OF ANALYSIS

Work Order	:			
Client	:		Laboratory	:
Contact	:		Account Manager	:
Address	:		Address	:
Telephone	:		Telephone	:
Project	:		Date Samples Received	: 11-Feb-2025 17:30
PO	:		Date Analysis Commenced	: 12-Feb-2025
C-O-C number	:	----	Issue Date	: 20-Feb-2025 15:05
Sampler	:	----		
Site	:	Water Analysis		
Quote number	:	VA25-TRIT100-001		
No. of samples received	:	2		
No. of samples analysed	:	2		

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

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

Signatories

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

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

General Comments

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

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

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

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

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

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

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

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

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG US 1	WLNG DS 1	----	----	----
					Client sampling date / time	11-Feb-2025 11:50	11-Feb-2025 11:25	----	----	----
						VA25A3042-001	VA25A3042-002	----	----	----
						Result	Result	----	----	----
Field Tests										
Conductivity, field	----	EF001/VA	0.10	µS/cm		37.000	87.000	----	----	----
pH, field	----	EF001/VA	0.10	pH units		7.40	7.70	----	----	----
Temperature, field	----	EF001/VA	0.10	°C		1.40	5.70	----	----	----
Physical Tests										
Hardness (as CaCO3), dissolved	----	EC100/VA	0.60	mg/L		5.69	37.2	----	----	----
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L		5.78	37.6	----	----	----
Solids, total dissolved [TDS]	----	E162/VA	10	mg/L		24	63	----	----	----
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L		<3.0	<3.0	----	----	----
Alkalinity, total (as CaCO3)	----	E290/VA	2.0	mg/L		4.4	37.3	----	----	----
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L		<0.0050	0.0055	----	----	----
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		0.70	4.73	----	----	----
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L		0.021	0.136	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L		0.0404	0.0329	----	----	----
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		0.074	0.080	----	----	----
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L		0.0395	0.0030	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L		2.78	4.74	----	----	----
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L		1.94	0.69	----	----	----

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	11-Feb-2025 11:50	11-Feb-2025 11:25	----	----	----
						VA25A3042-001	VA25A3042-002	----	----	----
						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		0.0733	0.125	----	----	----
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		<0.00010	0.00048	----	----	----
Barium, total	7440-39-3	E420/VA	0.00010	mg/L		0.00302	0.00425	----	----	----
Beryllium, total	7440-41-7	E420/VA	0.000100	mg/L		<0.000100	<0.000100	----	----	----
Bismuth, total	7440-69-9	E420/VA	0.000050	mg/L		<0.000050	<0.000050	----	----	----
Boron, total	7440-42-8	E420/VA	0.010	mg/L		<0.010	0.010	----	----	----
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L		<0.0000050	0.0000152	----	----	----
Calcium, total	7440-70-2	E420/VA	0.050	mg/L		1.94	13.9	----	----	----
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L		<0.000010	0.000012	----	----	----
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		0.00051	<0.00050	----	----	----
Iron, total	7439-89-6	E420/VA	0.010	mg/L		0.031	0.062	----	----	----
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	0.0017	----	----	----
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L		0.228	0.710	----	----	----

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	11-Feb-2025 11:50	11-Feb-2025 11:25	----	----	----
						VA25A3042-001	VA25A3042-002	----	----	----
						Result	Result	----	----	----
Total Metals										
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L		0.00152	0.00574	----	----	----
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		0.000319	0.0135	----	----	----
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		0.059	<0.050	----	----	----
Potassium, total	7440-09-7	E420/VA	0.050	mg/L		0.191	0.726	----	----	----
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L		0.00027	0.00130	----	----	----
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		3.64	4.65	----	----	----
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		1.28	3.24	----	----	----
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L		0.0102	0.0303	----	----	----
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L		0.61	1.45	----	----	----
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		0.00074	0.00283	----	----	----
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L		<0.00010	0.00017	----	----	----
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L		0.000072	0.000567	----	----	----
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	11-Feb-2025 11:50	11-Feb-2025 11:25	----	----	----
						VA25A3042-001	VA25A3042-002	----	----	----
						Result	Result	----	----	----
Total Metals										
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L		<0.0030	0.0052	----	----	----
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		0.0590	0.0626	----	----	----
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L		<0.00010	0.00047	----	----	----
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L		0.00289	0.00388	----	----	----
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	0.0000128	----	----	----
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L		1.90	13.7	----	----	----
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		0.00047	<0.00020	----	----	----
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L		0.016	0.012	----	----	----
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	0.0018	----	----	----
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L		0.230	0.734	----	----	----
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L		0.00092	0.00475	----	----	----

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	11-Feb-2025 11:50	11-Feb-2025 11:25	----	----	----
						VA25A3042-001	VA25A3042-002	----	----	----
						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		0.000267	0.0138	----	----	----
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		0.178	0.690	----	----	----
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L		0.00029	0.00128	----	----	----
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		3.67	4.63	----	----	----
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		1.36	3.64	----	----	----
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L		0.0101	0.0303	----	----	----
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L		0.64	1.18	----	----	----
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	0.00040	----	----	----
Tungsten, dissolved	7440-33-7	E421/VA	0.00010	mg/L		<0.00010	0.00017	----	----	----
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L		0.000072	0.000588	----	----	----
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		0.0014	0.0044	----	----	----

Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	WLNG US 1	WLNG DS 1	----	----	----
					Client sampling date / time	11-Feb-2025 11:50	11-Feb-2025 11:25	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A3042-001	VA25A3042-002	----	----	----
						Result	Result	----	----	----
Dissolved Metals										
Zirconium, dissolved	7440-67-7	E421/VA	0.00020	mg/L		<0.00020	<0.00020	----	----	----
Dissolved mercury filtration location	----	EP509/VA	-	-		Field	Field	----	----	----
Dissolved metals filtration location	----	EP421/VA	-	-		Field	Field	----	----	----
Speciated Metals										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532/VA	0.00050	mg/L		<0.00050	<0.00050	----	----	----
Chromium, trivalent [Cr III], total	16065-83-1	EC535/VA	0.00050	mg/L		<0.00050	<0.00050	----	----	----

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

ALS Canada Ltd.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: [redacted]	Page	: 1 of 14
Client	: [redacted]	Laboratory	: [redacted]
Contact	: [redacted]	Account Manager	: [redacted]
Address	: [redacted]	Address	: [redacted]
Telephone	: [redacted]	Telephone	: [redacted]
Project	: [redacted]	Date Samples Received	: 11-Feb-2025 17:30
PO	: [redacted]	Issue Date	: 20-Feb-2025 15:05
C-O-C number	: ----		
Sampler	: ----		
Site	: Water Analysis		
Quote number	: VA25-TRIT100-001		
No. of samples received	: 2		
No. of samples analysed	: 2		

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

Key

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

Workorder Comments

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

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Analysis Holding Time Compliance

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

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

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

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

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WLNG DS 1	E298	11-Feb-2025	13-Feb-2025	28 days	2 days	✓	13-Feb-2025	28 days	2 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WLNG US 1	E298	11-Feb-2025	13-Feb-2025	28 days	2 days	✓	13-Feb-2025	28 days	2 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE WLNG DS 1	E235.Br-L	11-Feb-2025	12-Feb-2025	28 days	1 days	✓	12-Feb-2025	28 days	2 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE WLNG US 1	E235.Br-L	11-Feb-2025	12-Feb-2025	28 days	1 days	✓	12-Feb-2025	28 days	2 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE WLNG DS 1	E235.Cl	11-Feb-2025	12-Feb-2025	28 days	1 days	✓	12-Feb-2025	28 days	2 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE WLNG US 1	E235.Cl	11-Feb-2025	12-Feb-2025	28 days	1 days	✓	12-Feb-2025	28 days	2 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE WLNG DS 1	E235.F	11-Feb-2025	12-Feb-2025	28 days	1 days	✓	12-Feb-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
Anions and Nutrients : Fluoride in Water by IC										
HDPE WLNG US 1	E235.F	11-Feb-2025	12-Feb-2025	28 days	1 days	✓	12-Feb-2025	28 days	2 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE WLNG DS 1	E235.NO3-L	11-Feb-2025	12-Feb-2025	3 days	1 days	✓	12-Feb-2025	3 days	2 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE WLNG US 1	E235.NO3-L	11-Feb-2025	12-Feb-2025	3 days	1 days	✓	12-Feb-2025	3 days	2 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE WLNG DS 1	E235.NO2-L	11-Feb-2025	12-Feb-2025	3 days	1 days	✓	12-Feb-2025	3 days	2 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE WLNG US 1	E235.NO2-L	11-Feb-2025	12-Feb-2025	3 days	1 days	✓	12-Feb-2025	3 days	2 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE WLNG DS 1	E235.SO4	11-Feb-2025	12-Feb-2025	28 days	1 days	✓	12-Feb-2025	28 days	2 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE WLNG US 1	E235.SO4	11-Feb-2025	12-Feb-2025	28 days	1 days	✓	12-Feb-2025	28 days	2 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) WLNG DS 1	E366	11-Feb-2025	13-Feb-2025	28 days	2 days	✓	14-Feb-2025	28 days	3 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) WLNG US 1	E366	11-Feb-2025	13-Feb-2025	28 days	2 days	✓	14-Feb-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 DS 1	E372-U	11-Feb-2025	13-Feb-2025	28 days	2 days	✓	14-Feb-2025	28 days	3 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
WLNG US 1	E372-U	11-Feb-2025	13-Feb-2025	28 days	2 days	✓	14-Feb-2025	28 days	3 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
WLNG DS 1	E509	11-Feb-2025	15-Feb-2025	28 days	4 days	✓	15-Feb-2025	28 days	4 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
WLNG US 1	E509	11-Feb-2025	15-Feb-2025	28 days	4 days	✓	15-Feb-2025	28 days	4 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
WLNG DS 1	E421	11-Feb-2025	13-Feb-2025	180 days	2 days	✓	14-Feb-2025	180 days	3 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
WLNG US 1	E421	11-Feb-2025	13-Feb-2025	180 days	2 days	✓	14-Feb-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	11-Feb-2025	----	----	----		13-Feb-2025	----	2 days	
Field Tests : Field pH,EC,Salinity, TDS, Cl2,ClO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine										
Glass vial total (hydrochloric acid)										
WLNG US 1	EF001	11-Feb-2025	----	----	----		13-Feb-2025	----	2 days	
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
WLNG DS 1	E358-L	11-Feb-2025	13-Feb-2025	28 days	2 days	✓	13-Feb-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 (field filtered/sulfuric acid)										
WLNG US 1	E358-L	11-Feb-2025	13-Feb-2025	28 days	2 days	✓	13-Feb-2025	28 days	2 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
WLNG DS 1	E290	11-Feb-2025	12-Feb-2025	14 days	1 days	✓	13-Feb-2025	14 days	2 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
WLNG US 1	E290	11-Feb-2025	12-Feb-2025	14 days	1 days	✓	13-Feb-2025	14 days	2 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
WLNG DS 1	E162	11-Feb-2025	----	----	----		18-Feb-2025	7 days	7 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
WLNG US 1	E162	11-Feb-2025	----	----	----		18-Feb-2025	7 days	7 days	✓
Physical Tests : TSS by Gravimetry										
HDPE										
WLNG DS 1	E160	11-Feb-2025	----	----	----		18-Feb-2025	7 days	7 days	✓
Physical Tests : TSS by Gravimetry										
HDPE										
WLNG US 1	E160	11-Feb-2025	----	----	----		18-Feb-2025	7 days	7 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide)										
WLNG DS 1	E532	11-Feb-2025	----	----	----		12-Feb-2025	28 days	1 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide)										
WLNG US 1	E532	11-Feb-2025	----	----	----		12-Feb-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	11-Feb-2025	14-Feb-2025	28 days	3 days	✓	14-Feb-2025	28 days	3 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid)										
WLNG US 1	E508	11-Feb-2025	14-Feb-2025	28 days	3 days	✓	14-Feb-2025	28 days	3 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid)										
WLNG DS 1	E420	11-Feb-2025	13-Feb-2025	180 days	2 days	✓	14-Feb-2025	180 days	3 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid)										
WLNG US 1	E420	11-Feb-2025	13-Feb-2025	180 days	2 days	✓	14-Feb-2025	180 days	3 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide)										
WLNG DS 1	E395	11-Feb-2025	----	----	----		13-Feb-2025	7 days	2 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide)										
WLNG US 1	E395	11-Feb-2025	----	----	----		13-Feb-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)							
TSS by Gravimetry	E160	1877369	1	20	5.0	5.0	✓
TDS by Gravimetry	E162	1877380	1	20	5.0	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1872629	1	13	7.6	5.0	✓
Chloride in Water by IC	E235.Cl	1872628	1	13	7.6	5.0	✓
Fluoride in Water by IC	E235.F	1872626	1	13	7.6	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1872630	1	13	7.6	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1872625	1	16	6.2	5.0	✓
Sulfate in Water by IC	E235.SO4	1872627	1	13	7.6	5.0	✓
Alkalinity Species by Titration	E290	1872632	1	9	11.1	5.0	✓
Ammonia by Fluorescence	E298	1872857	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1872854	1	19	5.2	5.0	✓
Total Nitrogen by Colourimetry	E366	1872858	1	3	33.3	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1872856	1	20	5.0	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1873815	1	8	12.5	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1873160	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1873177	1	20	5.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1875603	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1876009	1	10	10.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1872687	1	20	5.0	5.0	✓
Laboratory Control Samples (LCS)							
TSS by Gravimetry	E160	1877369	1	20	5.0	5.0	✓
TDS by Gravimetry	E162	1877380	1	20	5.0	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1872629	1	13	7.6	5.0	✓
Chloride in Water by IC	E235.Cl	1872628	1	13	7.6	5.0	✓
Fluoride in Water by IC	E235.F	1872626	1	13	7.6	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1872630	1	13	7.6	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1872625	1	16	6.2	5.0	✓
Sulfate in Water by IC	E235.SO4	1872627	1	13	7.6	5.0	✓
Alkalinity Species by Titration	E290	1872632	1	9	11.1	5.0	✓
Ammonia by Fluorescence	E298	1872857	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1872854	1	19	5.2	5.0	✓
Total Nitrogen by Colourimetry	E366	1872858	1	3	33.3	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1872856	1	20	5.0	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1873815	1	8	12.5	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1873160	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1873177	1	20	5.0	5.0	✓

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Control Samples (LCS) - Continued							
Total Mercury in Water by CVAAS	E508	1875603	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1876009	1	10	10.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1872687	1	20	5.0	5.0	✓
Method Blanks (MB)							
TSS by Gravimetry	E160	1877369	1	20	5.0	5.0	✓
TDS by Gravimetry	E162	1877380	1	20	5.0	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1872629	1	13	7.6	5.0	✓
Chloride in Water by IC	E235.Cl	1872628	1	13	7.6	5.0	✓
Fluoride in Water by IC	E235.F	1872626	1	13	7.6	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1872630	1	13	7.6	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1872625	1	16	6.2	5.0	✓
Sulfate in Water by IC	E235.SO4	1872627	1	13	7.6	5.0	✓
Alkalinity Species by Titration	E290	1872632	1	9	11.1	5.0	✓
Ammonia by Fluorescence	E298	1872857	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1872854	1	19	5.2	5.0	✓
Total Nitrogen by Colourimetry	E366	1872858	1	3	33.3	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1872856	1	20	5.0	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1873815	1	8	12.5	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1873160	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1873177	1	20	5.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1875603	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1876009	1	10	10.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1872687	1	20	5.0	5.0	✓
Matrix Spikes (MS)							
Bromide in Water by IC (Low Level)	E235.Br-L	1872629	1	13	7.6	5.0	✓
Chloride in Water by IC	E235.Cl	1872628	1	13	7.6	5.0	✓
Fluoride in Water by IC	E235.F	1872626	1	13	7.6	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1872630	1	13	7.6	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1872625	1	16	6.2	5.0	✓
Sulfate in Water by IC	E235.SO4	1872627	1	13	7.6	5.0	✓
Ammonia by Fluorescence	E298	1872857	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1872854	1	19	5.2	5.0	✓
Total Nitrogen by Colourimetry	E366	1872858	1	3	33.3	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1872856	1	20	5.0	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1873815	1	8	12.5	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1873160	1	20	5.0	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1873177	1	20	5.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1875603	1	20	5.0	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1876009	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 Hexavalent Chromium (Cr VI) by IC	E532	1872687	1	20	5.0	5.0	✓

Methodology References and Summaries

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

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

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

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

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

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

ALS Canada Ltd.

QUALITY CONTROL REPORT

Work Order	: [redacted]	Page	: 1 of 17
Client	:	Laboratory	:
Contact	:	Account Manager	:
Address	:	Address	:
Telephone	:	Telephone	:
Project	:	Date Samples Received	: 11-Feb-2025 17:30
PO	:	Date Analysis Commenced	: 12-Feb-2025
C-O-C number	: ----	Issue Date	: 20-Feb-2025 15:05
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 Inorganics, Burnaby, British Columbia
		Vancouver Metals, Burnaby, British Columbia
		Vancouver Inorganics, Burnaby, British Columbia
		Vancouver Administration, Burnaby, British Columbia

General Comments

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

Key :

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

Workorder Comments

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Physical Tests (QC Lot: 1872632)											
VA25A3030-003	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	<1.0	<1.0	0	Diff <2x LOR	----
Physical Tests (QC Lot: 1877369)											
FJ2500440-001	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	42.0	43.0	2.35%	20%	----
Physical Tests (QC Lot: 1877380)											
FJ2500440-001	Anonymous	Solids, total dissolved [TDS]	----	E162	13	mg/L	132	134	1.51%	20%	----
Anions and Nutrients (QC Lot: 1872625)											
VA25A2978-052	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0250	mg/L	1.73	1.73	0.222%	20%	----
Anions and Nutrients (QC Lot: 1872626)											
VA25A2978-052	Anonymous	Fluoride	16984-48-8	E235.F	0.100	mg/L	0.186	0.190	0.003	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1872627)											
VA25A2978-052	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	1.50	mg/L	16.0	16.0	0.108%	20%	----
Anions and Nutrients (QC Lot: 1872628)											
VA25A2978-052	Anonymous	Chloride	16887-00-6	E235.Cl	2.50	mg/L	233	234	0.537%	20%	----
Anions and Nutrients (QC Lot: 1872629)											
VA25A2978-052	Anonymous	Bromide	24959-67-9	E235.Br-L	0.250	mg/L	0.598	0.609	0.010	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1872630)											
VA25A2978-052	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0050	mg/L	0.0057	0.0053	0.0005	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1872856)											
VA25A2836-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.200	mg/L	<0.200	<0.200	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1872857)											
VA25A2836-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.957	0.954	0.221%	20%	----
Anions and Nutrients (QC Lot: 1872858)											
VA25A2953-001	Anonymous	Nitrogen, total	7727-37-9	E366	0.030	mg/L	<0.030	<0.030	0	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 1872854)											
VA25A2836-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	1.62	1.75	0.12	Diff <2x LOR	----
Total Sulfides (QC Lot: 1873815)											
VA25A3042-001	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: 1873160)											
VA25A3007-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.752	0.718	4.62%	20%	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	0.00048	0.00047	0.00001	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Total Metals (QC Lot: 1873160) - continued											
VA25A3007-001	Anonymous	Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00103	0.00100	2.97%	20%	----
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.0413	0.0417	0.860%	20%	----
		Beryllium, total	7440-41-7	E420	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, total	7440-42-8	E420	0.010	mg/L	0.135	0.134	0.419%	20%	----
		Cadmium, total	7440-43-9	E420	0.000195	mg/L	<0.000195	<0.000195	0	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	240	241	0.306%	20%	----
		Cesium, total	7440-46-2	E420	0.000010	mg/L	0.000127	0.000131	2.82%	20%	----
		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	0.00015	0.00013	0.00001	Diff <2x LOR	----
		Copper, total	7440-50-8	E420	0.00050	mg/L	0.00955	0.00938	1.70%	20%	----
		Iron, total	7439-89-6	E420	0.030	mg/L	0.039	0.034	0.004	Diff <2x LOR	----
		Lead, total	7439-92-1	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0093	0.0092	0.0001	Diff <2x LOR	----
		Magnesium, total	7439-95-4	E420	0.100	mg/L	35.1	34.5	1.65%	20%	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.0703	0.0698	0.782%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.258	0.248	3.79%	20%	----
		Nickel, total	7440-02-0	E420	0.00050	mg/L	0.00055	<0.00050	0.00005	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.050	mg/L	6.82	6.65	2.56%	20%	----
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00438	0.00410	6.46%	20%	----
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.0352	0.0366	3.96%	20%	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	6.68	6.66	0.381%	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	52.0	51.3	1.28%	20%	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	3.76	3.79	1.00%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	269	268	0.510%	20%	----
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	0.00066	0.00071	0.00005	Diff <2x LOR	----
		Thallium, total	7440-28-0	E420	0.000010	mg/L	0.000011	0.000010	0.0000007	Diff <2x LOR	----
		Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.0100	mg/L	<0.0100	<0.0100	0	Diff <2x LOR	----
		Tungsten, total	7440-33-7	E420	0.00010	mg/L	0.00017	0.00017	0.0000005	Diff <2x LOR	----
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.00319	0.00308	3.63%	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: 1873160) - continued											
VA25A3007-001	Anonymous	Vanadium, total	7440-62-2	E420	0.00050	mg/L	0.00073	0.00065	0.00008	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0030	mg/L	0.0163	0.0159	0.0004	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: 1875603)											
KS2500474-001	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1873177)											
VA25A3007-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0030	mg/L	0.171	0.158	7.87%	20%	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	0.00047	0.00047	0.000002	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00073	0.00072	0.00001	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0416	0.0401	3.69%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	0.121	0.122	0.932%	20%	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.000141	0.000171	19.3%	20%	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	233	240	2.56%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	0.000127	0.000129	1.24%	20%	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	0.00013	0.00012	0.000010	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00050	mg/L	0.00618	0.00586	5.32%	20%	----
		Iron, dissolved	7439-89-6	E421	0.030	mg/L	<0.030	<0.030	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	0.0094	0.0093	0.00004	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.100	mg/L	38.4	36.6	4.55%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.0678	0.0646	4.83%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.242	0.245	1.49%	20%	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	<0.00050	<0.00050	0	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	6.49	6.11	5.93%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00406	0.00368	9.73%	20%	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.0381	0.0387	1.67%	20%	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	6.47	6.44	0.536%	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	58.4	54.8	6.29%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	3.68	3.67	0.280%	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: 1873177) - continued											
VA25A3007-001	Anonymous	Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	245	243	0.877%	20%	----
		Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.0100	mg/L	<0.0100	<0.0100	0	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	0.00016	0.00016	0.000001	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.00325	0.00317	2.35%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	0.00057	0.00055	0.00002	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0030	mg/L	0.0135	0.0130	0.0005	Diff <2x LOR	----
		Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1876009)											
KS2500474-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Speciated Metals (QC Lot: 1872687)											
VA25A2883-010	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	0.00110	0.00109	0.000006	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: 1872632)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 1877369)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Physical Tests (QCLot: 1877380)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Anions and Nutrients (QCLot: 1872625)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1872626)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 1872627)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 1872628)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 1872629)						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 1872630)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 1872856)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 1872857)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1872858)						
Nitrogen, total	7727-37-9	E366	0.03	mg/L	<0.030	----
Organic / Inorganic Carbon (QCLot: 1872854)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Total Sulfides (QCLot: 1873815)						
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	----
Total Metals (QCLot: 1873160)						
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: 1873160) - 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: 1875603)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Dissolved Metals (QCLot: 1873177)						
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: 1873177) - 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: 1876009)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Speciated Metals (QCLot: 1872687)						
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: 1872632)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	102	85.0	115	----
Physical Tests (QCLot: 1877369)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	104	85.0	115	----
Physical Tests (QCLot: 1877380)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	109	85.0	115	----
Anions and Nutrients (QCLot: 1872625)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	102	90.0	110	----
Anions and Nutrients (QCLot: 1872626)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 1872627)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	104	90.0	110	----
Anions and Nutrients (QCLot: 1872628)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	103	90.0	110	----
Anions and Nutrients (QCLot: 1872629)									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	97.0	85.0	115	----
Anions and Nutrients (QCLot: 1872630)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	102	90.0	110	----
Anions and Nutrients (QCLot: 1872856)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	88.2	80.0	120	----
Anions and Nutrients (QCLot: 1872857)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	105	85.0	115	----
Anions and Nutrients (QCLot: 1872858)									
Nitrogen, total	7727-37-9	E366	0.03	mg/L	0.5 mg/L	99.7	75.0	125	----
Organic / Inorganic Carbon (QCLot: 1872854)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	94.3	80.0	120	----
Total Sulfides (QCLot: 1873815)									
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.08 mg/L	106	80.0	120	----
Total Metals (QCLot: 1873160)									

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: 1873160) - continued									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	108	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	103	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	110	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	106	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	101	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	106	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	102	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	103	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	103	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	104	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	106	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	106	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	104	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	102	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	106	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	104	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	103	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	107	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	108	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	107	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	99.4	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	95.8	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	107	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	96.8	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	105	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	100	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	96.9	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	101	80.0	120	----
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	97.7	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	98.7	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: 1873160) - 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	105	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	101	80.0	120	----
Total Metals (QCLot: 1875603)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	104	80.0	120	----
Dissolved Metals (QCLot: 1873177)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	98.3	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	101	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	1 mg/L	100	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	97.6	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	97.7	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	101	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	95.2	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	95.9	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	95.5	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	105	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	96.5	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	96.8	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	96.5	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	92.9	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.5 mg/L	98.3	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.25 mg/L	101	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	97.3	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	96.1	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	99.4	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	94.9	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	106	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	92.4	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	93.4	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	98.2	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	96.0	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	110	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	85.8	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: 1873177) - continued									
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	102	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	98.7	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	91.5	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	97.7	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	98.9	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	94.1	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	102	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.5 mg/L	96.2	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	93.7	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	97.1	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	97.6	80.0	120	----
Speciated Metals (QCLot: 1872687)									
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: 1872625)										
VA25A2978-053	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	12.8 mg/L	12.5 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 1872626)										
VA25A2978-053	Anonymous	Fluoride	16984-48-8	E235.F	5.28 mg/L	5 mg/L	106	75.0	125	----
Anions and Nutrients (QCLot: 1872627)										
VA25A2978-053	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	517 mg/L	500 mg/L	103	75.0	125	----
Anions and Nutrients (QCLot: 1872628)										
VA25A2978-053	Anonymous	Chloride	16887-00-6	E235.Cl	515 mg/L	500 mg/L	103	75.0	125	----
Anions and Nutrients (QCLot: 1872629)										
VA25A2978-053	Anonymous	Bromide	24959-67-9	E235.Br-L	2.50 mg/L	2.5 mg/L	100.0	75.0	125	----
Anions and Nutrients (QCLot: 1872630)										
VA25A2978-053	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	2.47 mg/L	2.5 mg/L	98.6	75.0	125	----
Anions and Nutrients (QCLot: 1872856)										
VA25A2836-002	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0539 mg/L	0.05 mg/L	108	70.0	130	----
Anions and Nutrients (QCLot: 1872857)										
VA25A2836-002	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.109 mg/L	0.1 mg/L	109	75.0	125	----
Anions and Nutrients (QCLot: 1872858)										
VA25A3042-001	WLNG US 1	Nitrogen, total	7727-37-9	E366	0.395 mg/L	0.4 mg/L	98.8	70.0	130	----
Organic / Inorganic Carbon (QCLot: 1872854)										
VA25A2836-002	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	5.29 mg/L	5 mg/L	106	70.0	130	----
Total Sulfides (QCLot: 1873815)										
VA25A3042-002	WLNG DS 1	Sulfide, total (as S)	18496-25-8	E395	0.217 mg/L	0.2 mg/L	108	75.0	125	----
Total Metals (QCLot: 1873160)										
VA25A3007-002	Anonymous	Aluminum, total	7429-90-5	E420	0.201 mg/L	0.2 mg/L	100	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0191 mg/L	0.02 mg/L	95.6	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0216 mg/L	0.02 mg/L	108	70.0	130	----
		Barium, total	7440-39-3	E420	ND mg/L	----	ND	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0377 mg/L	0.04 mg/L	94.3	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.00909 mg/L	0.01 mg/L	90.9	70.0	130	----
		Boron, total	7440-42-8	E420	ND mg/L	----	ND	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00371 mg/L	0.004 mg/L	92.8	70.0	130	----
		Calcium, total	7440-70-2	E420	ND mg/L	----	ND	70.0	130	----
		Cesium, total	7440-46-2	E420	0.00950 mg/L	0.01 mg/L	95.0	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0396 mg/L	0.04 mg/L	98.9	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: 1873160) - continued										
VA25A3007-002	Anonymous	Cobalt, total	7440-48-4	E420	0.0193 mg/L	0.02 mg/L	96.5	70.0	130	----
		Copper, total	7440-50-8	E420	0.0179 mg/L	0.02 mg/L	89.4	70.0	130	----
		Iron, total	7439-89-6	E420	1.95 mg/L	2 mg/L	97.5	70.0	130	----
		Lead, total	7439-92-1	E420	0.0181 mg/L	0.02 mg/L	90.7	70.0	130	----
		Lithium, total	7439-93-2	E420	0.0995 mg/L	0.1 mg/L	99.5	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	ND mg/L	----	ND	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0366 mg/L	0.04 mg/L	91.4	70.0	130	----
		Phosphorus, total	7723-14-0	E420	9.96 mg/L	10 mg/L	99.6	70.0	130	----
		Potassium, total	7440-09-7	E420	ND mg/L	----	ND	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0202 mg/L	0.02 mg/L	101	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0418 mg/L	0.04 mg/L	104	70.0	130	----
		Silicon, total	7440-21-3	E420	9.17 mg/L	10 mg/L	91.7	70.0	130	----
		Silver, total	7440-22-4	E420	0.00362 mg/L	0.004 mg/L	90.6	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	0.0402 mg/L	0.04 mg/L	100	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00358 mg/L	0.004 mg/L	89.6	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0186 mg/L	0.02 mg/L	93.2	70.0	130	----
		Tin, total	7440-31-5	E420	0.0189 mg/L	0.02 mg/L	94.6	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0406 mg/L	0.04 mg/L	101	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0187 mg/L	0.02 mg/L	93.5	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00361 mg/L	0.004 mg/L	90.4	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.0997 mg/L	0.1 mg/L	99.7	70.0	130	----
		Zinc, total	7440-66-6	E420	0.362 mg/L	0.4 mg/L	90.4	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0394 mg/L	0.04 mg/L	98.6	70.0	130	----
Total Metals (QCLot: 1875603)										
KS2500475-001	Anonymous	Mercury, total	7439-97-6	E508	0.000102 mg/L	0 mg/L	102	70.0	130	----
Dissolved Metals (QCLot: 1873177)										
VA25A3007-002	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.205 mg/L	0.2 mg/L	102	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0197 mg/L	0.02 mg/L	98.4	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0211 mg/L	0.02 mg/L	106	70.0	130	----
		Barium, dissolved	7440-39-3	E421	ND mg/L	----	ND	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.0376 mg/L	0.04 mg/L	94.0	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.00875 mg/L	0.01 mg/L	87.5	70.0	130	----
		Boron, dissolved	7440-42-8	E421	ND mg/L	----	ND	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00366 mg/L	0.004 mg/L	91.4	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.0100 mg/L	0.01 mg/L	100	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0387 mg/L	0.04 mg/L	96.7	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0189 mg/L	0.02 mg/L	94.5	70.0	130	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 1873177) - continued										
VA25A3007-002	Anonymous	Copper, dissolved	7440-50-8	E421	0.0180 mg/L	0.02 mg/L	89.9	70.0	130	----
		Iron, dissolved	7439-89-6	E421	1.86 mg/L	2 mg/L	93.1	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0182 mg/L	0.02 mg/L	91.2	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.0931 mg/L	0.1 mg/L	93.1	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	ND mg/L	----	ND	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0368 mg/L	0.04 mg/L	91.9	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	10.5 mg/L	10 mg/L	105	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	ND mg/L	----	ND	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.0189 mg/L	0.02 mg/L	94.5	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	ND mg/L	----	ND	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	8.99 mg/L	10 mg/L	89.9	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00376 mg/L	0.004 mg/L	94.0	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	0.0412 mg/L	0.04 mg/L	103	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.00351 mg/L	0.004 mg/L	87.8	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0207 mg/L	0.02 mg/L	103	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0190 mg/L	0.02 mg/L	94.8	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0392 mg/L	0.04 mg/L	98.1	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0185 mg/L	0.02 mg/L	92.4	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	0.00404 mg/L	0.004 mg/L	101	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.0982 mg/L	0.1 mg/L	98.2	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.370 mg/L	0.4 mg/L	92.5	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0396 mg/L	0.04 mg/L	99.0	70.0	130	----
Dissolved Metals (QCLot: 1876009)										
KS2500475-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000966 mg/L	0 mg/L	96.6	70.0	130	----
Speciated Metals (QCLot: 1872687)										
VA25A2883-011	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.264 mg/L	0.25 mg/L	105	70.0	130	----

Chain of Custody (COC) / Analytical Request Form

ALS Environmental
www.alsglobal.com

Canada Toll Free: 1 800 668 9878

Affix ALS barcode label here
(lab use only)

COC Number: 17 -

Page 1 of

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[1]
	Copy of Invoice with Report ☐ YES ☑ NO[1]
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[1]	
Select Distribution:	☑ EMAIL ☐ MAIL ☑ FAX
Email 1 or Fax	
Email 2	
Email 3	
Select Invoice D	
Email 1 or Fax	
Email 2	

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

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

PRIORITY (Business Days)		EMERGENCY	
	4 day [P4-20%] ☐		1 Business day [E1 - 100%] ☐
	3 day [P3-25%] ☐		Same Day, Weekend or Statutory holiday [E2 - 200% (Laboratory opening fees may apply)] ☐
	2 day [P2-50%] ☐		

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 #:	VA25-TRIT100-001	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):	3042	ALS Contact:	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						
	WLNG US 1		50	Water	R	R	R	R	R	R	R	R	R	R	R					N	9
	pH: 7.4 cond: 37 temp: 1.4 Turbo	11-Feb-25	11:[illegible]																		
	WLNG DS 1			Water	R	R	R	R	R	R	R	R	R	R	R					N	9
	pH: 7.7 cond: 87 temp: 5.7 Turbo	"	11:25																		

Environmental Division
Vancouver
Work Order Reference
VA25A3042

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			
				5.0			

SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)	
Released by:	Time: 17:20	Received by:	Date:	Time:	Received by:	Time: 5:30

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION WHITE - LABORATORY COPY YELLOW - CLIENT COPY SEPT 2017 FRONT

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

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

Woodfibre Site Receiving Environment Field Notes and Logs

FortisBC Eagle Mountain-Woodfibre Gas Pipeline

Water Discharge Authorization Water Quality Monitoring

2025-2-11-Shafiei-C47E6

Project Component:	Tunnel	**Site Name:**	Receiving Environment - Downstream of Discharge
Inspection Date:	02/11/2025	**Location:**	WLNG
Triton QP:	Farshad Shafiei	**Latitude/Longitude:**	49.669149 -123.248249
Temperature(c):	Low -13 High -2	**Permit:**	PE 110136
Weather Conditions:	Clear	**Ground Conditions:**	Frozen

Observations

Time: 11:20:53 **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	N/A		

Logger Maintenance

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

Describe Logger Maintenance

Checked

Photos

Photo: 1

Location: EAS DS

Description: Upstream view

Photo: 2

Location: EAS DS

Description: Downstream view

Photos

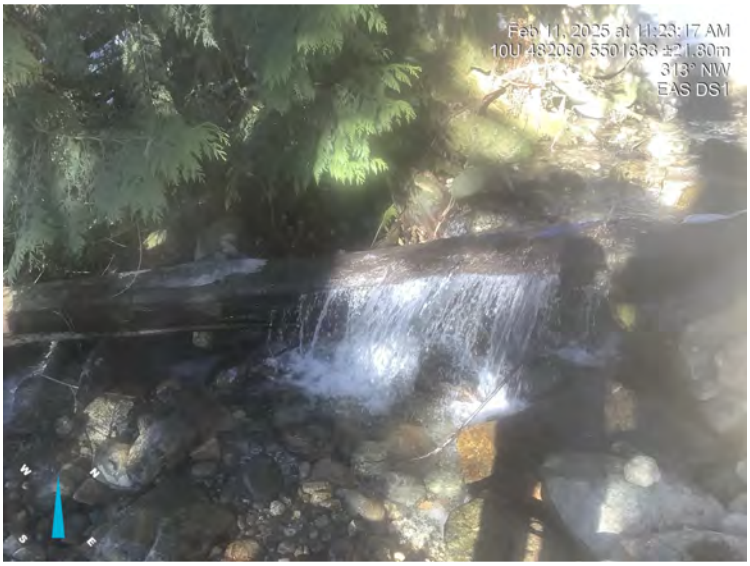


Photo: 3

Location: EAS DS

Description: Across view

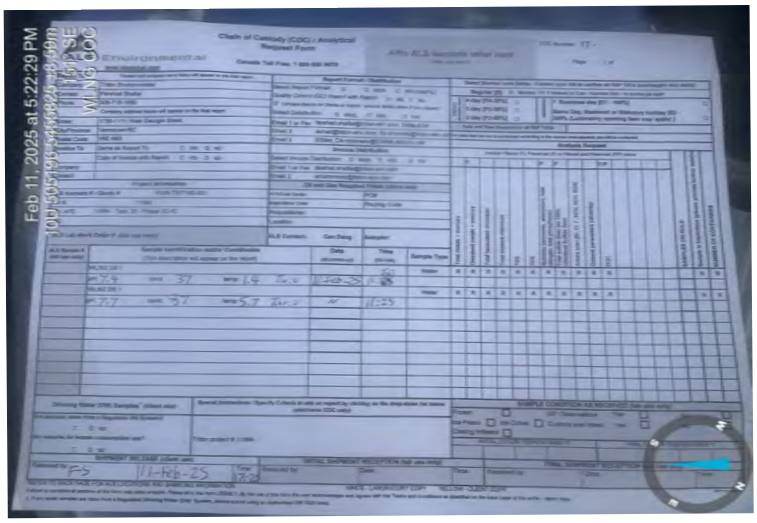


Photo: 4

Location: COC

Description:

Sign Off

Report Prepared By:

Report Reviewer: Farshad Shafiei

Name:

Designation:

Designation Number:

Report Reviewed: Yes

Professional(s) of Record: N/A

FortisBC Eagle Mountain-Woodfibre Gas Pipeline

Water Discharge Authorization Water Quality Monitoring

2025-2-11-Shafiei-CEFE5

Project Component:	Tunnel	**Site Name:**	Receiving Environment - Upstream of Discharge
Inspection Date:	02/11/2025	**Location:**	WLNG
Triton QP:	Farshad Shafiei	**Latitude/Longitude:**	49.669455 -123.25087
Temperature(c):	Low -13 High -2	**Permit:**	PE 110136
Weather Conditions:	Clear	**Ground Conditions:**	Frozen

Observations

Time: 11:50:53 **Flow Volume (visual):** moderate

Notes:

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

Samples Collected - Parameters

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

Logger Maintenance

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

Describe Logger Maintenance

Checked

Photos

Photo: 1

Location: EAS US

Description: Upstream view

Photo: 2

Location: EAS US

Description: Across view

Photos

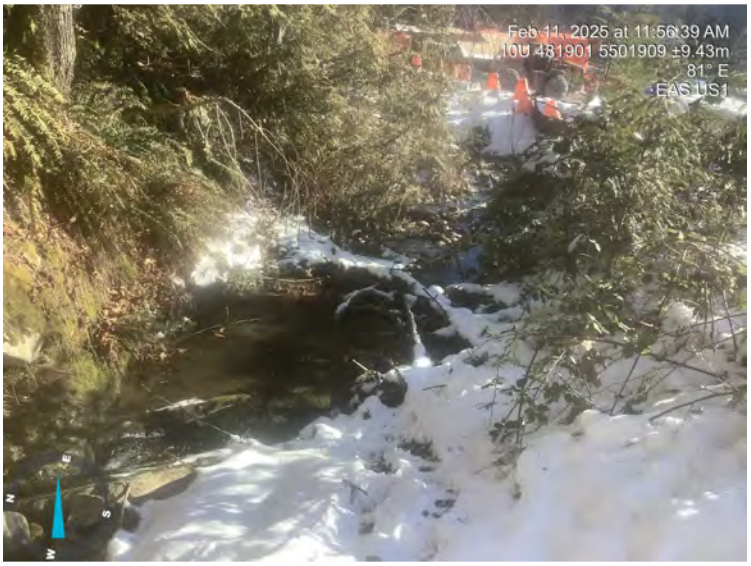


Photo: 3

Location: EAS US

Description: Downstream view

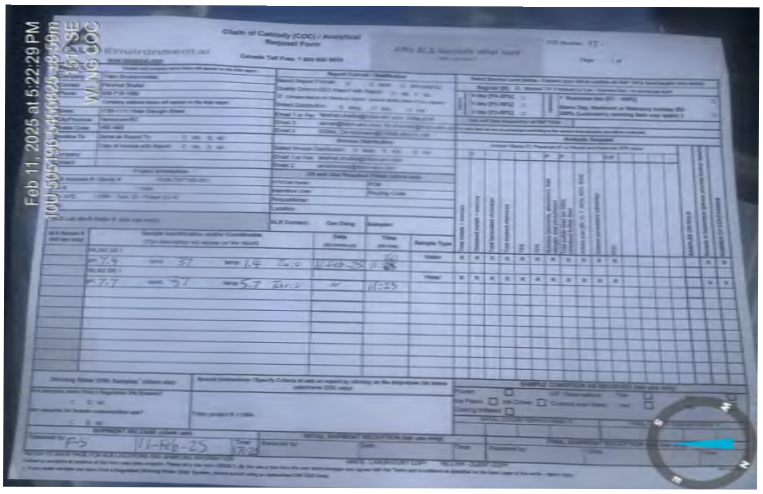


Photo: 4

Location: COC

Description:

Sign Off

Report Prepared By:

Report Reviewer: Farshad Shafiei

Name:

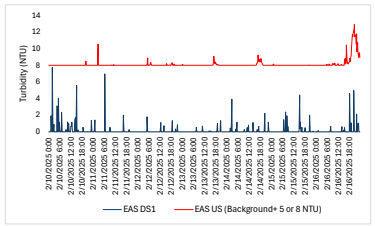
Designation:

Designation Number:

Report Reviewed: Yes

Professional(s) of Record: N/A

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)
2/10/2025 0:00	6.7	125.7	0.1	7.5	11.5	0.0	2/10/2025 0:00		14.3	0.0	7.0	12.8	0.0	8.0
2/10/2025 0:15	6.6	124.4	0.1	7.5	11.5	0.0	2/10/2025 0:15	1.5	15.4	0.0	7.0	12.8	0.0	8.0
2/10/2025 0:30	6.0	115.0	0.1	7.5	11.7	0.0	2/10/2025 0:30	1.4	15.2	0.0	6.9	12.9	0.0	8.0
2/10/2025 0:45	5.5	111.0	0.1	7.4	11.9	0.0	2/10/2025 0:45	1.4	13.6	0.0	7.0	12.9	0.0	8.0
2/10/2025 1:00	4.7	90.0	0.0	7.3	12.2	0.1	2/10/2025 1:00	1.4	15.1	0.0	6.9	12.9	0.0	8.0
2/10/2025 1:15	6.7	128.8	0.1	7.5	11.5	1.9	2/10/2025 1:15	1.4	15.1	0.0	7.0	12.9	0.0	8.0
2/10/2025 1:30	4.0	50.7	0.0	7.3	12.3	0.0	2/10/2025 1:30	1.3	15.1	0.0	7.0	12.9	0.0	8.0
2/10/2025 1:45	6.3	125.2	0.1	7.5	11.6	0.0	2/10/2025 1:45	1.3	15.0	0.0	7.0	12.9	0.0	8.0
2/10/2025 2:00	6.6	127.2	0.1	7.5	11.5	7.7	2/10/2025 2:00	1.3	15.1	0.0	7.0	12.9	0.0	8.0
2/10/2025 2:15	6.6	123.9	0.1	7.5	11.5	0.0	2/10/2025 2:15	1.2	14.9	0.0	7.0	12.9	0.0	8.0
2/10/2025 2:30	5.7	106.0	0.0	7.5	11.8	0.0	2/10/2025 2:30	1.2	15.0	0.0	7.0	12.9	0.0	8.0
2/10/2025 2:45	6.5	126.4	0.1	7.5	11.6	0.9	2/10/2025 2:45	1.2	14.9	0.0	7.0	12.9	0.0	8.0
2/10/2025 3:00	6.5	124.7	0.1	7.5	11.5	0.0	2/10/2025 3:00	1.2	13.8	0.0	7.0	12.9	0.0	8.0
2/10/2025 3:15	3.6	45.1	0.0	7.2	12.4	0.0	2/10/2025 3:15	1.1	14.8	0.0	6.9	13.0	0.0	8.0
2/10/2025 3:30	4.0	86.0	0.0	7.2	12.4	0.0	2/10/2025 3:30	1.1	14.8	0.0	7.0	13.0	0.0	8.0
2/10/2025 3:45	6.1	126.8	0.1	7.5	11.7	0.0	2/10/2025 3:45	1.1	13.5	0.0	7.0	13.0	0.0	8.0
2/10/2025 4:00	6.5	127.9	0.1	7.5	11.5	0.0	2/10/2025 4:00	1.0	14.8	0.0	6.9	13.0	0.0	8.0
2/10/2025 4:15	6.6	127.7	0.1	7.5	11.6	0.0	2/10/2025 4:15	1.0	14.6	0.0	7.0	13.0	0.0	8.0
2/10/2025 4:30	6.5	125.7	0.1	7.5	11.6	3.1	2/10/2025 4:30	1.0	14.0	0.0	7.0	13.0	0.0	8.0
2/10/2025 4:45	6.0	115.0	0.1	7.5	11.7	0.0	2/10/2025 4:45	1.0	14.9	0.0	7.1	13.0	0.0	8.0
2/10/2025 5:00	5.1	92.2	0.0	7.4	11.9	0.0	2/10/2025 5:00	1.0	14.8	0.0	6.9	13.0	0.0	8.0
2/10/2025 5:15	6.0	123.0	0.1	7.5	11.7	4.0	2/10/2025 5:15	1.0	13.4	0.0	7.0	13.0	0.0	8.0
2/10/2025 5:30	6.5	128.0	0.1	7.5	11.6	0.0	2/10/2025 5:30	0.9	14.7	0.0	6.9	13.0	0.0	8.0
2/10/2025 5:45	6.5	127.1	0.1	7.5	11.6	1.1	2/10/2025 5:45	0.9	14.6	0.0	6.9	13.0	0.0	8.0
2/10/2025 6:00	3.3	43.6	0.0	7.2	12.6	0.0	2/10/2025 6:00	0.9	13.9	0.0	7.0	13.1	0.0	8.0
2/10/2025 6:15	5.3	118.6	0.1	7.4	12.0	0.0	2/10/2025 6:15	0.9	14.7	0.0	7.0	13.1	0.0	8.0
2/10/2025 6:30	6.1	123.1	0.1	7.5	11.7	0.0	2/10/2025 6:30	0.9	14.7	0.0	7.0	13.0	0.0	8.0
2/10/2025 6:45	6.2	123.2	0.1	7.5	11.7	0.0	2/10/2025 6:45	0.9	14.5	0.0	6.9	13.0	0.0	8.0
2/10/2025 7:00	6.3	125.2	0.1	7.5	11.6	2.3	2/10/2025 7:00	0.8	13.7	0.0	7.0	13.1	0.0	8.0
2/10/2025 7:15	5.5	105.1	0.0	7.5	11.8	0.0	2/10/2025 7:15	0.8	14.8	0.0	7.1	13.1	0.0	8.0
2/10/2025 7:30	6.1	123.2	0.1	7.5	11.7	0.0	2/10/2025 7:30	0.8	14.7	0.0	7.0	13.1	0.0	8.0
2/10/2025 7:45	6.1	123.3	0.1	7.5	11.7	0.0	2/10/2025 7:45	0.7	14.7	0.0	7.0	13.1	0.0	8.0
2/10/2025 8:00	5.6	111.4	0.1	7.5	11.8	0.0	2/10/2025 8:00	0.7	14.6	0.0	6.9	13.1	0.0	8.0
2/10/2025 8:15	5.9	118.6	0.1	7.5	11.7	0.0	2/10/2025 8:15	0.7	14.6	0.0	7.0	13.1	0.0	8.0
2/10/2025 8:30	5.8	118.0	0.1	7.5	11.7	0.0	2/10/2025 8:30	0.7	14.6	0.0	7.0	13.1	0.0	8.0
2/10/2025 8:45	5.8	117.6	0.1	7.5	11.7	0.0	2/10/2025 8:45	0.6	13.0	0.0	6.9	13.1	0.0	8.0
2/10/2025 9:00	6.2	125.7	0.1	7.5	11.6	0.0	2/10/2025 9:00	0.6	14.4	0.0	6.9	13.2	0.0	8.0
2/10/2025 9:15	6.2	125.6	0.1	7.5	11.6	0.2	2/10/2025 9:15	0.6	14.6	0.0	7.0	13.2	0.0	8.0
2/10/2025 9:30	5.8	115.2	0.1	7.5	11.8	0.0	2/10/2025 9:30	0.6	14.4	0.0	6.8	13.1	0.0	8.0
2/10/2025 9:45	5.5	108.2	0.0	7.5	11.8	0.1	2/10/2025 9:45	0.5	13.0	0.0	7.0	13.2	0.0	8.0
2/10/2025 10:00	3.0	66.5	0.0	7.1	12.8	0.0	2/10/2025 10:00	0.5	14.4	0.0	6.8	13.2	0.0	8.0
2/10/2025 10:15	3.4	85.3	0.0	7.0	12.9	1.2	2/10/2025 10:15	0.5	14.2	0.0	7.0	13.2	0.0	8.0
2/10/2025 10:30	5.8	124.7	0.1	7.5	11.8	0.0	2/10/2025 10:30	0.5	13.4	0.0	7.0	13.2	0.0	8.0
2/10/2025 10:45	6.0	124.7	0.1	7.5	11.7	0.9	2/10/2025 10:45	0.6	14.3	0.0	7.0	13.3	0.0	8.0
2/10/2025 11:00	6.1	123.9	0.1	7.5	11.7	0.0	2/10/2025 11:00	0.7	14.3	0.0	7.0	13.2	0.0	8.0
2/10/2025 11:15	2.7	38.4	0.0	7.1	12.8	0.0	2/10/2025 11:15	0.7	14.3	0.0	7.0	13.2	0.0	8.0
2/10/2025 11:30	5.3	113.4	0.1	7.5	11.9	0.0	2/10/2025 11:30	0.8	14.3	0.0	7.0	13.2	0.0	8.0
2/10/2025 11:45	6.1	123.9	0.1	7.5	11.7	0.0	2/10/2025 11:45	0.8	14.2	0.0	7.0	13.2	0.0	8.0
2/10/2025 12:00	5.9	118.5	0.1	7.5	11.7	0.7	2/10/2025 12:00	0.9	13.1	0.0	7.0	13.2	0.0	8.0
2/10/2025 12:15	6.2	125.4	0.1	7.5	11.7	0.6	2/10/2025 12:15	1.0	12.4	0.0	7.1	13.2	0.0	8.0
2/10/2025 12:30	6.5	126.0	0.1	7.5	11.6	1.1	2/10/2025 12:30	1.1	14.2	0.0	7.0	13.1	0.0	8.0
2/10/2025 12:45	4.5	68.2	0.0	7.4	12.1	0.0	2/10/2025 12:45	1.1	14.2	0.0	7.1	13.1	0.0	8.0
2/10/2025 13:00	5.7	114.8	0.1	7.5	11.8	0.0	2/10/2025 13:00	1.2	13.4	0.0	7.0	13.1	0.0	8.0
2/10/2025 13:15	6.4	123.2	0.1	7.5	11.6	0.0	2/10/2025 13:15	1.3	14.2	0.0	7.0	13.1	0.0	8.0
2/10/2025 13:30	4.2	56.0	0.0	7.3	12.2	0.0	2/10/2025 13:30	1.3	13.3	0.0	7.0	13.0	0.0	8.0
2/10/2025 13:45	2.7	30.3	0.0	6.9	12.8	0.0	2/10/2025 13:45	1.4	14.3	0.0	6.9	13.0	0.0	8.0
2/10/2025 14:00	5.9	122.3	0.1	7.4	11.8	1.3	2/10/2025 14:00	1.5	14.5	0.0	7.0	13.0	0.0	8.0
2/10/2025 14:15	6.8	121.4	0.1	7.6	11.5	1.7	2/10/2025 14:15	1.5	14.4	0.0	7.0	13.0	0.0	8.0
2/10/2025 14:30	6.9	120.3	0.1	7.6	11.4	0.0	2/10/2025 14:30	1.6	14.5	0.0	7.0	12.9	0.0	8.0
2/10/2025 14:45	7.0	119.5	0.1	7.6	11.4	0.0	2/10/2025 14:45	1.6	14.6	0.0	7.0	12.9	0.0	8.0
2/10/2025 15:00	5.4	92.7	0.0	7.4	12.0	5.5	2/10/2025 15:00	1.6	14.7	0.0	7.0	12.9	0.0	8.0
2/10/2025 15:15	6.7	114.2	0.1	7.6	11.5	0.0	2/10/2025 15:15	1.7	14.7	0.0	6.9	12.8	0.0	8.0
2/10/2025 15:30	6.4	106.1	0.0	7.6	11.5	0.0	2/10/2025 15:30	1.7	13.4	0.0	7.0	12.9	0.0	8.0
2/10/2025 15:45	6.9	115.7	0.1	7.6	11.4	0.2	2/10/2025 15:45	1.7	15.0	0.0	7.0	12.8	0.0	8.0
2/10/2025 16:00	6.8	111.1	0.1	7.6	11.4	0.0	2/10/2025 16:00	1.7	15.5	0.0	7.0	12.8	0.0	8.0
2/10/2025 16:15	4.6	71.7	0.0	7.2	12.3	0.0	2/10/2025 16:15	1.8	15.7	0.0	7.0	12.8	0.0	8.0
2/10/2025 16:30	6.7	113.4	0.1	7.6	11.4	0.0	2/10/2025 16:30	1.7	15.8	0.0	7.0	12.8	0.0	8.0
2/10/2025 16:45	3.6	35.2	0.0	7.0	12.4	0.0	2/10/2025 16:45	1.7	15.8	0.0	7.0	12.8	0.0	8.0
2/10/2025 17:00	6.7	115.1	0.1	7.6	11.5	0.0	2/10/2025 17:00	1.7	14.9	0.0	7.0	12.8	0.0	8.0
2/10/2025 17:15	6.9	115.8	0.1	7.6	11.4	0.0	2/10/2025 17:15	1.7	14.3	0.0	7.1	12.8	0.0	8.0
2/10/2025 17:30	6.9	115.2	0.1	7.6	11.4	0.0	2/10/2025 17:30	1.6	17.0	0.0	7.0	12.8	0.0	8.0
2/10/2025 17:45	6.9	114.2	0.1	7.6	11.4	0.0	2/10/2025 17:45	1.6	17.5	0.0	7.0	12.8	0.0	8.0
2/10/2025 18:00	4.3	48.1	0.0	7.3	12.2	0.0	2/10/2025 18:00	1.5	18.3	0.0	7.0	12.9	0.0	8.0
2/10/2025 18:15	6.1	108.8	0.1	7.5	11.7	0.0	2/10/2025 18:15	1.4	18.6	0.0	7.0	12.8	0.0	8.0
2/10/2025 18:30	6.4	108.3	0.0	7.6	11.6	0.5	2/10/2025 18:30	1.4	18.7	0.0	7.1	12.9	0.0	8.0
2/10/2025 18:45	4.1	51.8	0.0	7.3	12.2	0.0	2/10/2025 18:45	1.4	18.7	0.0	7.0	12.9	0.0	8.0
2/10/2025 19:00	6.4	114.2	0.1	7.6	11.6	0.0	2/10/2025 19:00	1.3	18.5	0.0	7.1	12.9	0.0	8.0
2/10/2025 19:15	6.4	109.6	0.1	7.6	11.6	0.0	2/10/2025 19:15	1.3	18.2	0.0	7.0	12.9	0.0	8.0
2/10/2025 19:30	6.7	116.0	0.1	7.6	11.5	0.0	2/10/2025 19:30	1.3	17.7	0.0	7.0	12.9	0.0	8.0
2/10/2025 19:45	3.3	39.0	0.0	7.1	12.5	0.0	2/10/2025 19:45	1.2	17.4	0.0	7.0	12.9	0.0	8.0
2/10/2025 20:00	6.5	115.1	0.1	7.6		0.0	2/10/2025 20:00	1.2	15.5	0.0	7.0	12.9	0.5	8.5
2/10/2025 20:15	4.7	65.2	0.0	7.4	12.0	0.0	2/10/2025 20:15	1.1	16.8	0.0	6.9	12.9	0.0	8.0
2/10/2025 20:30	2.5	32.0	0.0	7.0	12.8	0.0	2/10/2025 20:30	1.1	16.4	0.0	7.0	12.9	0.0	8.0
2/10/2025 20:45	6.0	112.8	0.1	7.6	11.7	0.0	2/10/2025 20:45	1.1	16.4	0.0	7.0	13.0	0.0	8.0
2/10/2025 21:00	6.4	114.0	0.1	7.6	11.5	0.0	2/10/2025 21:00	1.1	16.1	0.0	7.0	13.0	0.0	8.0
2/10/2025 21:15	6.5	114.0	0.1	7.6	11.5	0.0	2/10/2025 21:15	1.0	14.9	0.0	7.0	13.0	0.0	8.0
2/10/2025 21:30	6.5	113.6	0.1	7.6	11.5	0.0	2/10/2025 21:30	1.0	15.9	0.0	6.9	13.0	0.0	8.0
2/10/2025 21:45	6.5	113.0	0.1	7.6	11.5	0.0	2/10/2025 21:45	1.0	15.7	0.0	7.0	13.0	0.0	8.0
2/10/2025 22:00	6.5	112.4	0.1	7.6	11.5	0.0	2/10/2025 22:00	1.0	15.8	0.0	7.0	13.0	0.0	8.0
2/10/2025 22:15	3.4	41.6	0.0	7.2	12.5	0.0	2/10/2025 22:15	1.0	15.4	0.0	7.0	13.0	0.0	8.0
2/10/2025 22:30	5.7	110.3	0.1	7.5	11.8	0.0	2/10/2025 22:30	0.9	15.6	0.0	7.0	13.0	0.0	8.0
2/10/2025 22:45	6.3	114.2	0.1	7.6	11.6	0.0	2/10/2025 22:45	0.9	15.4	0.0	7.0	13.0	0.0	8.0
2/10/2025 23:00	6.3	114.3	0.1	7.6	11.6	1.4	2/10/2025 23:00	0.9	15.3	0.0	7.0	13.0	0.0	8.0
2/10/2025 23:15	6.3	114.0	0.1	7.6	11.6	0.0	2/10/2025 23:15	0.8	15.0	0.0	7.0	13.0	0.0	8.0
2/10/2025 23:30	6.3	114.0	0.1	7.6	11.6	0.0	2/10/2025 23:30	0.8	15.2	0.0	7.0	13.0	0.0	8.0
2/10/2025 23:45	5.7	99.7	0.0	7.6	11.7	0.0	2/10/2025 23:45	0.8	15.2	0.0	7.0	13.0	0.0	8.0
2/11/2025 0:00	6.3	114.5	0.1	7.6	11.6	0.0	2/11/2025 0:00	0.8	15.1	0.0	7.0	13.1	0.0	8.0
2/11/2025 0:15	6.3	114.6	0.1	7.6	11.6	0.0	2/11/2025 0:15	0.7	14.9	0.0	7.0	13.1	0.0	8.0
2/11/2025 0:30	6.3	114.2	0.1	7.6	11.6	0.0	2/11/2025 0:30	0.7	15.0	0.0	7.0	13.1	0.0	8.0
2/11/2025 0:45	6.3	114.4	0.1	7.6	11.6	1.4	2/11/2025 0:45	0.7	14.9	0.0	7.0	13.1	0.0	8.0
2/11/2025 1:00	6.2	113.7	0.1	7.6	11.6	0.0	2/11/2025 1:00	0.7	13.4	0.0	7.0	13.1	0.0	8.0
2/11/2025 1:15	6.2	112.8	0.1	7.6	11.6	0.0	2/11/2025 1:15	0.6	14.8	0.0	6.9	13.1	0.0	8.0
2/11/2025 1:30	6.2	113.0	0.1	7.6	11.6	0.0	2/11/2025 1:30	0.6	14.6	0.0	7.0	13.1	0.0	8.0
2/11/2025 1:45	6.1	111.1	0.1	7.6	11.7	0.0	2/11/2025 1:45	0.6	13.8	0.0	7.0	13.1	0.0	8.0
2/11/2025 2:00	3.3	44.0	0.0	7.2	12.5	0.0	2/11/2025 2:00	0.5	14.6	0.0	7.0	13.1	0.0	8.0
2/11/2025 2:15	3.5	79.9	0.0	7.1	12.7	0.0	2/11/2025 2:15	0.5	13.7	0.0	7.0	13.2	0.0	8.0
2/11/2025 2:30	5.4	104.7	0.0	7.5	12.0	0.0	2/11/2025 2:30	0.5	14.6	0.0	7.1	13.2	2.5	10.5
2/11/2025 2:45	6.2	115.6	0.1	7.6	11.6	0.0	2/11/2025 2:45	0.5	14.6	0.0	7.0	13.2	0.0	8.0
2/11/2025 3:00	6.2	116.7	0.1	7.6	11.6	0.0	2/11/2025 3:00	0.5	14.6	0.0	7.0	13.2	0.0	8.0
2/11/2025 3:15	6.2	119.3	0.1	7.6	11.6	0.0	2/11/2025 3:15	0.4	13.1	0.0	7.0	13.2	0.0	8.0
2/11/2025 3:30	6.0	118.5	0.1	7.6	11.6	0.0	2/11/2025 3:30	0.4	14.4	0.0	6.9	13.2	0.0	8.0
2/11/2025 3:45	2.6	37.2	0.0	7.1	12.8	0.0	2/11/2025 3:45	0.4	14.5	0.0	7.1	13.2	0.0	8.0
2/11/2025 4:00	5.0	115.5	0.1	7.5	12.1	0.0	2/11/2025 4:00	0.4	14.4	0.0	7.0	13.2	0.0	8.0
2/11/2025 4:15	5.9	124.0	0.1	7.6	11.7	0.0	2/11/2025 4:15	0.4	14.5	0.0	7.0	13.2	0.0	8.0
2/11/2025 4:30	2.8	42.1	0.0	7.2	12.7	0.0	2/11/2025 4:30	0.4	14.3	0.0	7.0	13.2	0.0	8.0
2/11/2025 4:45	5.3	123.1	0.1	7.5	11.9	0.0	2/11/2025 4:45	0.4	14.2	0.0	7.0	13.2	0.0	8.0
2/11/2025 5:00	6.1	139.3	0.1	7.5	11.6	0.0	2/11/2025 5:00	0.4	14.3	0.0	7.0	13.2	0.0	8.0
2/11/2025 5:15	5.9	132.4	0.1	7.5	11.7	0.0	2/11/2025 5:15	0.4	14.3	0.0	7.0	13.2	0.0	8.0
2/11/2025 5:30	6.0	129.2	0.1	7.5	11.6	0.0	2/11/2025 5:30	0.4	14.2	0.0	6.8	13.2	0.0	8.0
2/11/2025 5:45	5.9	123.8	0.1	7.5	11.7	0.0	2/11/2025 5:45	0.4	12.8	0.0	7.0	13.2	0.0	8.0
2/11/2025 6:00	6.1	120.1	0.1	7.6	11.6	0.0	2/11/2025 6:00	0.3	14.2	0.0	6.8	13.2	0.0	8.0
2/11/2025 6:15	6.1	117.9	0.1	7.6	11.6	6.9	2/11/2025 6:15	0.3	14.2	0.0	7.0	13.2	0.0	8.0
2/11/2025 6:30	6.1	117.0	0.1	7.6	11.6	0.0	2/11/2025 6:30	0.3	14.1	0.0	6.9	13.2	0.0	8.0
2/11/2025 6:45	6.1	117.0	0.1	7.6	11.6	0.0	2/11/2025 6:45	0.3	14.0	0.0	7.0	13.2	0.0	8.0
2/11/2025 7:00	4.5	76.3	0.0	7.5	12.1	0.0	2/11/2025 7:00	0.3	14.0	0.0	7.0	13.2	0.0	8.0
2/11/2025 7:15	3.3	77.2	0.0	7.1	12.8	0.0	2/11/2025 7:15	0.3	14.1	0.0	7.0	13.2	0.0	8.0
2/11/2025 7:30	5.8	118.4	0.1	7.6	11.7	0.0	2/11/2025 7:30	0.3	14.0	0.0	7.0	13.2	0.0	8.0
2/11/2025 7:45	5.9	118.6	0.1	7.6	11.7	0.0	2/11/2025 7:45	0.3	13.2	0.0	7.0	13.2	0.0	8.0
2/11/2025 8:00	5.7	112.7	0.1	7.6	11.7	0.0	2/11/2025 8:00	0.3	13.8	0.0	7.0	13.2	0.0	8.0
2/11/2025 8:15	6.0	116.6	0.1	7.6	11.7	0.0	2/11/2025 8:15	0.2	12.8	0.0	7.0	13.2	0.0	8.0
2/11/2025 8:30	5.5	106.7	0.0	7.6	11.8	0.0	2/11/2025 8:30	0.2	13.9	0.0	6.8	13.2	0.0	8.0
2/11/2025 8:45	5.0	98.8	0.0	7.5	12.0	0.0	2/11/2025 8:45	0.2	13.8	0.0	7.0	13.2	0.0	8.0
2/11/2025 9:00	5.8	116.4	0.1	7.6	11.7	0.5	2/11/2025 9:00	0.2	13.9	0.0	7.0	13.2	0.0	8.0
2/11/2025 9:15	5.9	115.8	0.1	7.6	11.7	0.0	2/11/2025 9:15	0.2	13.8	0.0	7.0	13.2	0.0	8.0
2/11/2025 9:30	6.1	116.5	0.1	7.6	11.6	0.0	2/11/2025 9:30	0.2	12.9	0.0	6.9	13.2	0.0	8.0
2/11/2025 9:45	6.1	116.3	0.1	7.6	11.6	0.0	2/11/2025 9:45	0.2	13.9	0.0	7.1	13.2	0.0	8.0



2/11/2025 10:00	3.0	48.6	0.0	7.3	12.5	0.0	2/11/2025 10:00	0.2	13.8	0.0	7.0	13.3	0.0	8.0
2/11/2025 10:15	5.5	114.7	0.1	7.6	11.8	0.0	2/11/2025 10:15	0.2	13.8	0.0	7.0	13.3	0.0	8.0
2/11/2025 10:30	5.5	108.5	0.0	7.6	11.8	0.0	2/11/2025 10:30	0.3	13.0	0.0	7.0	13.3	0.0	8.0
2/11/2025 10:45	2.8	45.9	0.0	7.2	12.7	0.0	2/11/2025 10:45	0.3	13.7	0.0	7.0	13.3	0.0	8.0
2/11/2025 11:00	1.6	30.1	0.0	7.0		0.0	2/11/2025 11:00	0.4	13.8	0.0	7.0	13.3	0.1	8.1
2/11/2025 11:15	5.5	113.2	0.1	7.6	11.8	0.0	2/11/2025 11:15	0.4	13.7	0.0	7.0	13.2	0.0	8.0
2/11/2025 11:30	6.0	114.6	0.1	7.6	11.6	0.0	2/11/2025 11:30	0.5	12.9	0.0	7.0	13.2	0.0	8.0
2/11/2025 11:45	5.7	109.2	0.1	7.6	11.7	0.0	2/11/2025 11:45	0.6	13.6	0.0	7.0	13.2	0.0	8.0
2/11/2025 12:00	4.7	78.4	0.0	7.5	11.9	0.0	2/11/2025 12:00	0.6	12.8	0.0	7.0	13.2	0.0	8.0
2/11/2025 12:15	5.2	108.9	0.0	7.5	12.0	0.0	2/11/2025 12:15	0.7	13.6	0.0	7.0	13.2	0.0	8.0
2/11/2025 12:30	6.1	113.8	0.1	7.6	11.6	0.0	2/11/2025 12:30	0.7	12.6	0.0	7.0	13.1	0.0	8.0
2/11/2025 12:45	6.2	113.7	0.1	7.6	11.6	0.0	2/11/2025 12:45	0.8	13.6	0.0	7.1	13.1	0.0	8.0
2/11/2025 13:00	6.3	113.4	0.1	7.6	11.5	0.0	2/11/2025 13:00	0.8	13.5	0.0	6.9	13.1	0.0	8.0
2/11/2025 13:15	6.3	113.0	0.1	7.6	11.6	0.0	2/11/2025 13:15	0.9	13.5	0.0	7.0	13.1	0.0	8.0
2/11/2025 13:30	5.9	104.8	0.0	7.6	11.7	0.0	2/11/2025 13:30	0.9	13.5	0.0	7.0	13.1	0.0	8.0
2/11/2025 13:45	4.2	55.6	0.0	7.4	12.1	0.0	2/11/2025 13:45	0.9	13.5	0.0	7.0	13.1	0.0	8.0
2/11/2025 14:00	2.4	29.9	0.0	7.0	12.8	0.0	2/11/2025 14:00	1.0	13.4	0.0	7.1	13.1	0.0	8.0
2/11/2025 14:15	6.3	115.5	0.1	7.6	11.6	0.0	2/11/2025 14:15	1.0	13.5	0.0	7.0	13.1	0.0	8.0
2/11/2025 14:30	3.6	43.6	0.0	7.3	12.3	0.0	2/11/2025 14:30	1.0	13.3	0.0	7.0	13.0	0.0	8.0
2/11/2025 14:45	6.5	115.3	0.1	7.6	11.5	0.0	2/11/2025 14:45	1.0	12.4	0.0	7.0	13.0	0.0	8.0
2/11/2025 15:00	6.7	116.1	0.1	7.6	11.4	0.0	2/11/2025 15:00	1.1	13.4	0.0	6.9	13.0	0.0	8.0
2/11/2025 15:15	6.8	115.7	0.1	7.6	11.4	0.0	2/11/2025 15:15	1.1	13.4	0.0	7.0	13.0	0.0	8.0
2/11/2025 15:30	6.9	115.0	0.1	7.6	11.3	0.0	2/11/2025 15:30	1.1	12.2	0.0	7.0	13.0	0.0	8.0
2/11/2025 15:45	6.8	114.8	0.1	7.6	11.3	0.0	2/11/2025 15:45	1.1	11.7	0.0	7.0	13.0	0.0	8.0
2/11/2025 16:00	5.3	74.4	0.0	7.5	11.7	0.0	2/11/2025 16:00	1.1	13.4	0.0	7.0	13.0	0.0	8.0
2/11/2025 16:15	6.0	101.3	0.0	7.6	11.6	2.0	2/11/2025 16:15	1.1	13.5	0.0	7.0	12.9	0.0	8.0
2/11/2025 16:30	6.5	109.6	0.1	7.6	11.4	0.0	2/11/2025 16:30	1.1	12.8	0.0	7.0	12.9	0.0	8.0
2/11/2025 16:45	6.2	100.2	0.0	7.6	11.5	0.0	2/11/2025 16:45	1.1	14.0	0.0	7.0	12.9	0.0	8.0
2/11/2025 17:00	3.3	38.1	0.0	7.1	12.4	0.0	2/11/2025 17:00	1.2	14.5	0.0	6.9	12.9	0.0	8.0
2/11/2025 17:15	6.2	106.9	0.0	7.6	11.5	0.0	2/11/2025 17:15	1.2	14.3	0.0	7.0	12.9	0.0	8.0
2/11/2025 17:30	6.4	110.2	0.1	7.6	11.5	0.0	2/11/2025 17:30	1.1	16.6	0.0	6.9	12.9	0.0	8.0
2/11/2025 17:45	6.4	109.4	0.1	7.6	11.5	0.0	2/11/2025 17:45	1.1	17.2	0.0	7.0	12.9	0.0	8.0
2/11/2025 18:00	6.6	115.5	0.1	7.7	11.4	0.0	2/11/2025 18:00	1.1	17.0	0.0	7.0	12.9	0.0	8.0
2/11/2025 18:15	6.7	116.1	0.1	7.6	11.4	0.0	2/11/2025 18:15	1.0	18.2	0.0	7.0	12.9	0.0	8.0
2/11/2025 18:30	6.3	107.2	0.0	7.6	11.4	0.0	2/11/2025 18:30	1.0	18.4	0.0	7.0	12.9	0.0	8.0
2/11/2025 18:45	3.0	36.6	0.0	7.1	12.5	0.0	2/11/2025 18:45	1.0	18.0	0.0	7.0	12.9	0.0	8.0
2/11/2025 19:00	6.2	117.6	0.1	7.6	11.5	0.0	2/11/2025 19:00	1.0	17.7	0.0	7.0	12.9	0.0	8.0
2/11/2025 19:15	6.6	118.9	0.1	7.6	11.4	0.3	2/11/2025 19:15	1.0	17.3	0.0	7.1	12.9	0.0	8.0
2/11/2025 19:30	6.6	119.1	0.1	7.7	11.4	0.0	2/11/2025 19:30	1.0	15.8	0.0	7.0	12.9	0.0	8.0
2/11/2025 19:45	6.2	109.5	0.1	7.6	11.5	0.0	2/11/2025 19:45	1.0	16.9	0.0	7.0	12.9	0.0	8.0
2/11/2025 20:00	6.5	118.6	0.1	7.6	11.4	0.0	2/11/2025 20:00	1.0	16.4	0.0	7.0	12.9	0.0	8.0
2/11/2025 20:15	4.6	64.8	0.0	7.4	11.9	0.0	2/11/2025 20:15	0.9	16.2	0.0	7.0	12.9	0.0	8.0
2/11/2025 20:30	5.6	109.6	0.1	7.6	11.7	0.0	2/11/2025 20:30	0.9	15.8	0.0	6.9	12.9	0.0	8.0
2/11/2025 20:45	6.3	116.5	0.1	7.6	11.5	0.0	2/11/2025 20:45	0.9	14.6	0.0	7.0	12.9	0.0	8.0
2/11/2025 21:00	6.5	118.2	0.1	7.6	11.4	0.0	2/11/2025 21:00	0.9	15.5	0.0	7.1	12.9	0.0	8.0
2/11/2025 21:15	3.5	44.7	0.0	7.2	12.3	0.0	2/11/2025 21:15	0.9	15.2	0.0	7.0	12.9	0.0	8.0
2/11/2025 21:30	6.0	116.7	0.1	7.6	11.6	0.0	2/11/2025 21:30	0.9	15.1	0.0	7.0	12.9	0.0	8.0
2/11/2025 21:45	6.5	118.6	0.1	7.6	11.4	0.0	2/11/2025 21:45	0.9	14.9	0.0	6.9	12.9	0.0	8.0
2/11/2025 22:00	6.6	119.0	0.1	7.6	11.4	0.0	2/11/2025 22:00	0.8	13.9	0.0	7.0	12.9	0.0	8.0
2/11/2025 22:15	6.6	118.8	0.1	7.6	11.4	0.0	2/11/2025 22:15	0.8	14.7	0.0	6.9	12.9	0.0	8.0
2/11/2025 22:30	4.5	63.9	0.0	7.4	12.0	0.0	2/11/2025 22:30	0.8	14.8	0.0	7.0	12.9	0.0	8.0
2/11/2025 22:45	5.9	116.1	0.1	7.6	11.6	0.0	2/11/2025 22:45	0.8	13.2	0.0	7.0	12.9	0.0	8.0
2/11/2025 23:00	6.4	117.8	0.1	7.6	11.4	0.0	2/11/2025 23:00	0.8	14.6	0.0	7.0	12.9	0.0	8.0
2/11/2025 23:15	6.5	117.0	0.1	7.6	11.4	0.0	2/11/2025 23:15	0.8	14.6	0.0	7.0	12.9	0.0	8.0
2/11/2025 23:30	6.5	115.1	0.1	7.7	11.4	0.0	2/11/2025 23:30	0.8	14.6	0.0	7.0	12.9	0.0	8.0
2/11/2025 23:45	3.6	45.3	0.0	7.3	12.3	0.0	2/11/2025 23:45	0.8	14.5	0.0	7.0	12.9	0.0	8.0
2/12/2025 0:00	5.5	108.2	0.0	7.6	11.8	0.0	2/12/2025 0:00	0.7	14.5	0.0	7.0	13.0	0.0	8.0
2/12/2025 0:15	6.2	111.2	0.1	7.6	11.5	0.0	2/12/2025 0:15	0.7	13.7	0.0	7.0	13.0	0.0	8.0
2/12/2025 0:30	6.4	111.3	0.1	7.7	11.4	0.0	2/12/2025 0:30	0.7	12.5	0.0	7.1	13.0	0.0	8.0
2/12/2025 0:45	3.9	52.7	0.0	7.3	12.1	0.0	2/12/2025 0:45	0.7	14.4	0.0	7.0	12.9	0.0	8.0
2/12/2025 1:00	4.9	101.2	0.0	7.5	12.1	0.0	2/12/2025 1:00	0.7	14.3	0.0	7.0	13.0	0.0	8.0
2/12/2025 1:15	5.8	104.3	0.0	7.6	11.6	0.0	2/12/2025 1:15	0.7	13.2	0.0	7.0	13.0	0.0	8.0
2/12/2025 1:30	6.3	111.9	0.1	7.7	11.4	0.0	2/12/2025 1:30	0.7	14.2	0.0	6.9	13.0	0.0	8.0
2/12/2025 1:45	3.9	54.5	0.0	7.4	12.1	0.0	2/12/2025 1:45	0.7	14.1	0.0	7.0	13.0	0.0	8.0
2/12/2025 2:00	6.1	111.6	0.1	7.6	11.5	0.0	2/12/2025 2:00	0.7	14.1	0.0	7.0	13.0	0.0	8.0
2/12/2025 2:15	6.3	113.2	0.1	7.6	11.5	0.0	2/12/2025 2:15	0.6	14.1	0.0	7.0	13.0	0.0	8.0
2/12/2025 2:30	6.2	112.7	0.1	7.6	11.5	0.0	2/12/2025 2:30	0.6	14.0	0.0	7.0	13.0	0.0	8.0
2/12/2025 2:45	6.4	113.9	0.1	7.6	11.4	0.0	2/12/2025 2:45	0.6	14.0	0.0	7.0	13.0	0.0	8.0
2/12/2025 3:00	3.5	49.5	0.0	7.3	12.3	0.0	2/12/2025 3:00	0.6	14.1	0.0	7.0	13.0	0.0	8.0
2/12/2025 3:15	6.0	113.7	0.1	7.6	11.5	0.0	2/12/2025 3:15	0.5	13.9	0.0	6.9	13.0	0.0	8.0
2/12/2025 3:30	6.2	114.4	0.1	7.7	11.5	0.0	2/12/2025 3:30	0.5	13.9	0.0	7.0	13.0	0.0	8.0
2/12/2025 3:45	6.3	117.2	0.1	7.6	11.5	0.0	2/12/2025 3:45	0.5	13.8	0.0	7.0	13.0	0.0	8.0
2/12/2025 4:00	6.3	117.5	0.1	7.6	11.5	0.0	2/12/2025 4:00	0.5	12.9	0.0	7.0	13.0	0.0	8.0
2/12/2025 4:15	4.2	61.2	0.0	7.4	12.0	0.0	2/12/2025 4:15	0.5	11.9	0.0	7.1	13.0	0.0	8.0
2/12/2025 4:30	5.4	113.4	0.1	7.5	11.8	0.0	2/12/2025 4:30	0.5	13.8	0.0	7.0	13.0	0.0	8.0
2/12/2025 4:45	5.7	108.9	0.1	7.6	11.6	0.0	2/12/2025 4:45	0.5	13.6	0.0	7.0	13.0	0.0	8.0
2/12/2025 5:00	6.2	116.1	0.1	7.6	11.5	1.8	2/12/2025 5:00	0.5	12.6	0.0	7.0	13.0	0.0	8.0
2/12/2025 5:15	6.2	115.0	0.1	7.6	11.5	0.0	2/12/2025 5:15	0.4	13.8	0.0	7.1	13.0	0.9	8.9
2/12/2025 5:30	6.2	114.2	0.1	7.6	11.5	0.0	2/12/2025 5:30	0.4	13.7	0.0	6.9	13.1	0.0	8.0
2/12/2025 5:45	6.1	111.5	0.1	7.6	11.5	0.0	2/12/2025 5:45	0.4	13.6	0.0	7.0	13.0	0.0	8.0
2/12/2025 6:00	2.9	42.0	0.0	7.2	12.6	0.0	2/12/2025 6:00	0.4	12.4	0.0	7.0	13.0	0.0	8.0
2/12/2025 6:15	5.8	113.9	0.1	7.6	11.6	0.0	2/12/2025 6:15	0.4	12.0	0.0	7.0	13.0	0.0	8.0
2/12/2025 6:30	6.0	116.0	0.1	7.6	11.5	0.0	2/12/2025 6:30	0.4	12.4	0.0	6.9	13.0	0.0	8.0
2/12/2025 6:45	6.1	117.4	0.1	7.6	11.5	0.0	2/12/2025 6:45	0.4	13.6	0.0	6.8	13.0	0.3	8.3
2/12/2025 7:00	6.0	116.5	0.1	7.6	11.5	0.0	2/12/2025 7:00		13.6	0.0	7.1	13.1	0.3	8.3
2/12/2025 7:15	5.5	104.0	0.0	7.6	11.6	0.0	2/12/2025 7:15	0.4	13.7	0.0	7.0	13.0	0.0	8.0
2/12/2025 7:30	2.6	45.3	0.0	7.2	12.6	0.0	2/12/2025 7:30	0.4	13.7	0.0	7.0	13.0	0.0	8.0
2/12/2025 7:45	5.9	117.2	0.1	7.6	11.6	0.0	2/12/2025 7:45	0.4	12.5	0.0	6.9	13.0	0.0	8.0
2/12/2025 8:00	6.0	116.5	0.1	7.7	11.5	0.0	2/12/2025 8:00	0.4	11.7	0.0	7.1	13.1	0.0	8.0
2/12/2025 8:15	5.7	109.0	0.1	7.6	11.6	0.0	2/12/2025 8:15	0.3	13.6	0.0	7.0	13.1	0.0	8.0
2/12/2025 8:30	3.2	47.4	0.0	7.3	12.4	0.0	2/12/2025 8:30	0.3	13.6	0.0	7.0	13.1	0.0	8.0
2/12/2025 8:45	5.3	112.7	0.1	7.6	11.8	0.0	2/12/2025 8:45	0.3	13.6	0.0	7.0	13.1	0.0	8.0
2/12/2025 9:00	5.9	113.5	0.1	7.6	11.5	0.0	2/12/2025 9:00	0.3	13.6	0.0	7.0	13.0	0.0	8.0
2/12/2025 9:15	6.0	112.3	0.1	7.6	11.5	0.0	2/12/2025 9:15	0.3	12.7	0.0	7.0	13.1	0.0	8.0
2/12/2025 9:30	4.3	68.9	0.0	7.5	12.0	0.0	2/12/2025 9:30	0.3	13.2	0.0	7.1	13.1	0.0	8.0
2/12/2025 9:45	3.7	83.5	0.0	7.3	12.5	0.0	2/12/2025 9:45	0.3	13.6	0.0	7.0	13.1	0.0	8.0
2/12/2025 10:00	5.9	110.1	0.1	7.6	11.5	0.0	2/12/2025 10:00	0.3	13.6	0.0	7.1	13.1	0.0	8.0
2/12/2025 10:15	6.0	110.0	0.1	7.6	11.5	0.0	2/12/2025 10:15	0.3	13.6	0.0	6.8	13.1	0.0	8.0
2/12/2025 10:30	3.7	54.2	0.0	7.4	12.2	0.0	2/12/2025 10:30	0.4	12.6	0.0	7.0	13.1	0.0	8.0
2/12/2025 10:45	2.6	55.1	0.0	7.1	12.9	0.0	2/12/2025 10:45	0.4	13.5	0.0	6.8	13.1	0.0	8.0
2/12/2025 11:00	5.9	111.0	0.1	7.6	11.6	0.0	2/12/2025 11:00	0.5	13.6	0.0	7.0	13.1	0.0	8.0
2/12/2025 11:15	6.2	113.4	0.1	7.6	11.5	0.0	2/12/2025 11:15	0.6	13.5	0.0	6.9	13.1	0.0	8.0
2/12/2025 11:30	6.3	113.9	0.1	7.7	11.4	0.0	2/12/2025 11:30	0.6	13.5	0.0	7.0	13.1	0.0	8.0
2/12/2025 11:45	4.5	78.8	0.0	7.5	11.9	0.0	2/12/2025 11:45	0.7	13.4	0.0	7.0	13.0	0.0	8.0
2/12/2025 12:00	3.7	64.9	0.0	7.4	12.2	0.0	2/12/2025 12:00	0.8	12.0	0.0	7.0	13.0	0.0	8.0
2/12/2025 12:15	5.8	111.9	0.1	7.6	11.6	1.1	2/12/2025 12:15	0.8	13.4	0.0	6.9	13.0	0.0	8.0
2/12/2025 12:30	6.3	112.9	0.1	7.7	11.4	0.0	2/12/2025 12:30	0.9	13.3	0.0	7.0	13.0	0.0	8.0
2/12/2025 12:45	6.4	112.2	0.1	7.7	11.4	0.0	2/12/2025 12:45	0.9	13.5	0.0	7.0	13.0	0.0	8.0
2/12/2025 13:00	6.4	112.8	0.1	7.7	11.4	0.0	2/12/2025 13:00	1.0	13.4	0.0	7.0	12.9	0.0	8.0
2/12/2025 13:15	4.8	65.9	0.0	7.5	11.8	0.0	2/12/2025 13:15	1.0	13.4	0.0	7.0	12.9	0.0	8.0
2/12/2025 13:30	6.1	112.4	0.1	7.6	11.5	0.0	2/12/2025 13:30	1.1	13.3	0.0	7.0	12.9	0.0	8.0
2/12/2025 13:45	6.6	114.6	0.1	7.7	11.3	0.0	2/12/2025 13:45	1.1	13.4	0.0	7.0	12.9	0.0	8.0
2/12/2025 14:00	5.2	89.6	0.0	7.5	11.9	0.7	2/12/2025 14:00	1.2	13.4	0.0	7.0	12.9	0.0	8.0
2/12/2025 14:15	6.7	113.6	0.1	7.7	11.3	0.0	2/12/2025 14:15	1.3	12.0	0.0	7.0	12.8	0.0	8.0
2/12/2025 14:30	6.8	113.8	0.1	7.7	11.3	0.0	2/12/2025 14:30	1.3	13.4	0.0	6.9	12.8	0.0	8.0
2/12/2025 14:45	6.0	89.5	0.0	7.6	11.4	0.0	2/12/2025 14:45	1.4	13.3	0.0	7.0	12.8	0.0	8.0
2/12/2025 15:00	3.7	48.9	0.0	7.2	12.3	0.0	2/12/2025 15:00	1.4	12.3	0.0	7.0	12.8	0.0	8.0
2/12/2025 15:15	6.8	116.0	0.1	7.7	11.3	0.0	2/12/2025 15:15	1.4	11.6	0.0	7.1	12.7	0.0	8.0
2/12/2025 15:30	6.6	122.1	0.1	7.7	11.3	0.0	2/12/2025 15:30	1.4	13.4	0.0	7.0	12.7	0.2	8.2
2/12/2025 15:45	7.0	170.0	0.1	7.8	11.2	0.0	2/12/2025 15:45	1.5	13.4	0.0	7.0	12.7	0.0	8.0
2/12/2025 16:00	6.9	134.5	0.1	7.7	11.2	0.0	2/12/2025 16:00	1.5	13.4	0.0	6.9	12.7	0.0	8.0
2/12/2025 16:15	7.0	178.5	0.1	7.8	11.2	0.0	2/12/2025 16:15	1.5	12.4	0.0	7.0	12.7	0.0	8.0
2/12/2025 16:30	6.6	173.0	0.1	7.8	11.3	0.0	2/12/2025 16:30	1.5	13.8	0.0	7.1	12.7	0.0	8.0
2/12/2025 16:45	6.2	184.3	0.1	7.9	11.3	0.0	2/12/2025 16:45	1.5	15.4	0.0	7.0	12.7	0.0	8.0
2/12/2025 17:00	3.7	61.5	0.0	7.2	12.3	0.0	2/12/2025 17:00	1.5	17.1	0.0	7.0	12.6	0.0	8.0
2/12/2025 17:15	5.1	128.9	0.1	7.8	11.7	0.0	2/12/2025 17:15	1.5	18.3	0.0	7.0	12.7	0.0	8.0
2/12/2025 17:30	6.8	335.2	0.2	8.0	11.2	0.0	2/12/2025 17:30	1.5	19.1	0.0	7.0	12.6	0.0	8.0
2/12/2025 17:45	6.9	415.0	0.2	8.0	11.2	0.0	2/12/2025 17:45	1.4	19.6	0.0	7.0	12.6	0.0	8.0
2/12/2025 18:00	4.0	126.9	0.1	7.7	12.1	0.0	2/12/2025 18:00	1.4	18.4	0.0	7.1	12.6	0.1	8.1
2/12/2025 18:15	6.1	406.2	0.2	7.8	11.5	0.0	2/12/2025 18:15	1.4	20.3	0.0	7.0	12.6	0.2	8.2
2/12/2025 18:30	6.7	205.9	0.1	7.9	11.3	1.3	2/12/2025 18:30	1.3	20.0	0.0	7.1	12.7	0.3	8.3
2/12/2025 18:45	6.6	354.7	0.2	7.9	11.3	0.0	2/12/2025 18:45	1.3	19.3	0.0	7.1	12.7	0.0	8.0
2/12/2025 19:00	6.8	187.7	0.1	8.3	11.2	0.0	2/12/2025 19:00	1.3	18.7	0.0	7.1	12.7	0.0	8.0
2/12/2025 19:15	4.5	88.8	0.0	7.6	11.9	0.0	2/12/2025 19:15	1.3	16.3	0.0	7.0	12.7	0.0	8.0
2/12/2025 19:30	4.7	130.6	0.1	7.8	11.8	0.0	2/12/2025 19:30	1.3	17.0	0.0	7.0	12.7	0.1	8.1
2/12/2025 19:45	6.3	157.2	0.1	8.9	11.4	0.0	2/12/2025 19:45	1.2	15.5	0.0	7.0	12.7	0.0	8.0
2/12/2025 20:00	6.3	150.7	0.1	9.3	11.4	0.0	2/12/2025 20:00	1.2	13.9	0.0	7.1	12.7	0.0	8.0
2/12/2025 20:15	6.7	163.6	0.1	9.6	11.3	0.3	2/12/2025 20:15	1.2	15.9	0.0	7.0	12.7	0.0	8.0
2/12/2025 20:30	6.7	162.7	0.1	9.6	11.3	0.0	2/12/2025 20:30	1.2	15.7	0.0	7.0	12.6	0.0	8.0
2/12/2025 20:45	5.8	151.4	0.1	9.3	11.5	0.0	2/12/2025 20:45	1.2	14.8	0.0	7.0	12.7	0.0	8.0
2/12/2025 21:00	3.3	61.2	0.0	8.0	12.2	0.0	2/12/2025 21:00	1.2	15.4	0.0	7.0	12.7	0.0	8.0

2/12/2025 21:15	6.6	319.4	0.2	7.7	11.3	0.8	2/12/2025 21:15	1.2	15.3	0.0	7.0	12.7	0.0	8.0
2/12/2025 21:30	6.7	218.5	0.1	7.7	11.2	0.0	2/12/2025 21:30	1.2	15.0	0.0	7.0	12.7	0.0	8.0
2/12/2025 21:45	6.3	193.1	0.1	7.6	11.3	0.0	2/12/2025 21:45	1.2	15.0	0.0	7.0	12.7	0.0	8.0
2/12/2025 22:00	6.1	137.0	0.1	7.6	11.3	0.0	2/12/2025 22:00	1.1	14.9	0.0	7.1	12.7	0.0	8.0
2/12/2025 22:15	6.1	137.8	0.1	7.5	11.4	0.0	2/12/2025 22:15	1.1	14.9	0.0	7.0	12.7	0.0	8.0
2/12/2025 22:30	6.5	165.8	0.1	7.7	11.3	0.0	2/12/2025 22:30	1.1	14.8	0.0	7.0	12.7	0.0	8.0
2/12/2025 22:45	6.5	148.1	0.1	7.7	11.3	0.0	2/12/2025 22:45	1.1	14.7	0.0	7.0	12.7	0.0	8.0
2/12/2025 23:00	6.4	147.2	0.1	7.7	11.3	0.0	2/12/2025 23:00	1.1	14.6	0.0	7.0	12.7	0.0	8.0
2/12/2025 23:15	4.5	82.7	0.0	7.5	11.8	0.0	2/12/2025 23:15	1.1	14.5	0.0	7.0	12.7	0.0	8.0
2/12/2025 23:30	4.8	138.5	0.1	7.5	12.0	0.0	2/12/2025 23:30	1.1	14.4	0.0	7.0	12.7	0.0	8.0
2/12/2025 23:45	6.3	163.3	0.1	7.7	11.3	0.0	2/12/2025 23:45	1.1	13.3	0.0	7.0	12.7	0.0	8.0
2/13/2025 0:00	6.4	139.7	0.1	7.7	11.3	0.0	2/13/2025 0:00	1.0	14.2	0.0	7.1	12.7	0.1	8.1
2/13/2025 0:15	6.0	129.4	0.1	7.7	11.4	0.0	2/13/2025 0:15	1.0	13.0	0.0	7.1	12.7	0.0	8.0
2/13/2025 0:30	6.3	152.5	0.1	7.7	11.3	0.0	2/13/2025 0:30	1.0	14.3	0.0	6.8	12.7	0.0	8.0
2/13/2025 0:45	6.5	132.5	0.1	7.7	11.3	0.0	2/13/2025 0:45	1.0	14.2	0.0	7.0	12.7	0.0	8.0
2/13/2025 1:00	6.5	133.9	0.1	7.7	11.2	0.0	2/13/2025 1:00	1.0	12.9	0.0	7.0	12.7	0.0	8.0
2/13/2025 1:15	6.5	142.0	0.1	7.7	11.3	0.0	2/13/2025 1:15	1.0	14.2	0.0	6.9	12.7	0.0	8.0
2/13/2025 1:30	3.3	47.6	0.0	7.3	12.2	0.0	2/13/2025 1:30	1.0	14.3	0.0	7.0	12.7	0.0	8.0
2/13/2025 1:45	6.3	138.3	0.1	7.7	11.3	0.0	2/13/2025 1:45	1.0	14.2	0.0	7.0	12.7	0.0	8.0
2/13/2025 2:00	6.4	137.6	0.1	7.7	11.3	0.0	2/13/2025 2:00	0.9	14.2	0.0	7.0	12.7	0.0	8.0
2/13/2025 2:15	6.4	138.2	0.1	7.7	11.3	0.0	2/13/2025 2:15	0.9	14.1	0.0	7.0	12.7	0.0	8.0
2/13/2025 2:30	5.1	93.4	0.0	7.6	11.5	0.0	2/13/2025 2:30	0.9	14.1	0.0	7.0	12.7	0.0	8.0
2/13/2025 2:45	2.9	52.6	0.0	7.2	12.4	0.0	2/13/2025 2:45	0.9	13.9	0.0	6.9	12.7	0.0	8.0
2/13/2025 3:00	6.3	142.2	0.1	7.7	11.3	0.0	2/13/2025 3:00	0.9	14.0	0.0	7.0	12.7	0.0	8.0
2/13/2025 3:15	6.4	143.0	0.1	7.7	11.3	0.0	2/13/2025 3:15	0.9	13.9	0.0	7.0	12.7	0.0	8.0
2/13/2025 3:30	6.5	143.7	0.1	7.7	11.2	0.0	2/13/2025 3:30	0.9	13.9	0.0	7.0	12.7	0.0	8.0
2/13/2025 3:45	6.0	133.8	0.1	7.7	11.4	0.0	2/13/2025 3:45	0.9	13.9	0.0	7.0	12.7	0.0	8.0
2/13/2025 4:00	3.6	54.3	0.0	7.4	12.1	0.0	2/13/2025 4:00	0.9	13.8	0.0	7.0	12.7	0.0	8.0
2/13/2025 4:15	6.2	150.6	0.1	7.7	11.3	0.0	2/13/2025 4:15	0.9	13.5	0.0	7.0	12.7	0.0	8.0
2/13/2025 4:30	6.4	150.3	0.1	7.7	11.2	0.0	2/13/2025 4:30	0.9	13.7	0.0	7.0	12.7	0.0	8.0
2/13/2025 4:45	6.5	151.1	0.1	7.7	11.2	0.0	2/13/2025 4:45	0.9	13.6	0.0	7.0	12.7	0.0	8.0
2/13/2025 5:00	5.2	119.9	0.1	7.6	11.6	0.0	2/13/2025 5:00	0.9	13.7	0.0	7.0	12.7	0.0	8.0
2/13/2025 5:15	6.1	192.6	0.1	7.8	11.4	0.0	2/13/2025 5:15	0.8	13.6	0.0	7.0	12.7	0.0	8.0
2/13/2025 5:30	6.4	269.4	0.1	8.3	11.2	0.0	2/13/2025 5:30	0.8	12.8	0.0	7.0	12.7	0.0	8.0
2/13/2025 5:45	5.6	207.5	0.1	8.7	11.4	0.0	2/13/2025 5:45	0.8	13.5	0.0	7.0	12.7	0.0	8.0
2/13/2025 6:00	5.9	223.8	0.1	9.0	11.3	0.0	2/13/2025 6:00	0.8	13.6	0.0	7.0	12.7	0.0	8.0
2/13/2025 6:15	4.8	179.8	0.1	9.1	11.6	0.0	2/13/2025 6:15	0.8	13.5	0.0	7.0	12.7	0.0	8.0
2/13/2025 6:30	2.8	59.1	0.0	7.7	12.3	0.0	2/13/2025 6:30	0.8	13.6	0.0	7.0	12.7	0.0	8.0
2/13/2025 6:45	5.5	254.0	0.1	9.4	11.4	0.0	2/13/2025 6:45	0.8	13.5	0.0	7.0	12.7	0.0	8.0
2/13/2025 7:00	4.7	223.1	0.1	9.3	11.6	0.0	2/13/2025 7:00	0.8	13.6	0.0	7.0	12.7	0.0	8.0
2/13/2025 7:15	5.7	314.5	0.1	9.2	11.4	0.0	2/13/2025 7:15	0.8	13.5	0.0	7.0	12.7	0.0	8.0
2/13/2025 7:30	6.5	335.3	0.2	9.7	11.2	0.5	2/13/2025 7:30	0.7	12.2	0.0	7.0	12.7	0.0	8.0
2/13/2025 7:45	6.5	315.1	0.1	9.6	11.2	0.0	2/13/2025 7:45	0.7	13.5	0.0	6.9	12.7	0.0	8.0
2/13/2025 8:00	5.8	243.8	0.1	9.5	11.3	0.0	2/13/2025 8:00	0.7	13.5	0.0	7.0	12.7	0.0	8.0
2/13/2025 8:15	2.7	61.5	0.0	7.9	12.4	0.0	2/13/2025 8:15	0.7	12.6	0.0	7.0	12.7	0.0	8.0
2/13/2025 8:30	1.9	43.9	0.0	7.4	12.7	0.0	2/13/2025 8:30	0.7	13.5	0.0	7.0	12.7	0.0	8.0
2/13/2025 8:45	6.0	395.3	0.2	8.7	11.3	0.0	2/13/2025 8:45	0.7	13.5	0.0	7.0	12.7	0.0	8.0
2/13/2025 9:00	6.5	333.8	0.2	8.6	11.2	0.0	2/13/2025 9:00	0.7	13.4	0.0	7.0	12.7	0.0	8.0
2/13/2025 9:15	6.6	292.2	0.1	8.6	11.2	0.0	2/13/2025 9:15	0.7	13.5	0.0	7.0	12.7	0.0	8.0
2/13/2025 9:30	4.2	130.3	0.1	7.9	11.8	0.0	2/13/2025 9:30	0.7	13.4	0.0	7.0	12.7	0.0	8.0
2/13/2025 9:45	4.3	227.8	0.1	8.4	12.1	0.0	2/13/2025 9:45	0.7	12.2	0.0	7.0	12.7	0.0	8.0
2/13/2025 10:00	6.1	286.4	0.1	8.0	11.3	0.0	2/13/2025 10:00	0.7	13.5	0.0	6.8	12.7	0.0	8.0
2/13/2025 10:15	6.4	312.3	0.1	7.9	11.2	0.0	2/13/2025 10:15	0.7	13.5	0.0	7.0	12.7	0.0	8.0
2/13/2025 10:30	6.4	310.8	0.1	7.8	11.2	0.0	2/13/2025 10:30	0.7	13.5	0.0	7.0	12.7	0.0	8.0
2/13/2025 10:45	5.4	220.3	0.1	7.8	11.6	0.7	2/13/2025 10:45	0.7	13.4	0.0	7.0	12.7	0.0	8.0
2/13/2025 11:00	6.2	235.3	0.1	7.8	11.2	0.0	2/13/2025 11:00	0.8	12.3	0.0	7.0	12.7	0.0	8.0
2/13/2025 11:15	3.0	63.4	0.0	7.4	12.3	0.0	2/13/2025 11:15	0.8	13.3	0.0	6.9	12.7	0.0	8.0
2/13/2025 11:30	5.7	202.5	0.1	7.8	11.4	0.0	2/13/2025 11:30	1.0	13.3	0.0	7.0	12.7	0.0	8.0
2/13/2025 11:45	6.5	211.2	0.1	7.8	11.2	0.0	2/13/2025 11:45	1.1	13.4	0.0	7.0	12.7	0.0	8.0
2/13/2025 12:00	3.3	63.3	0.0	7.4	12.1	0.0	2/13/2025 12:00	1.2	13.3	0.0	7.0	12.7	0.0	8.0
2/13/2025 12:15	2.3	42.8	0.0	7.1	12.5	0.0	2/13/2025 12:15	1.3	12.5	0.0	7.0	12.6	0.0	8.0
2/13/2025 12:30	6.4	221.4	0.1	7.8	11.2	0.0	2/13/2025 12:30	1.4	13.3	0.0	6.9	12.6	0.0	8.0
2/13/2025 12:45	5.8	196.3	0.1	7.8	11.3	0.0	2/13/2025 12:45	1.5	13.4	0.0	7.0	12.5	0.0	8.0
2/13/2025 13:00	6.8	273.2	0.1	8.8	11.1	0.0	2/13/2025 13:00	1.6	13.4	0.0	7.0	12.5	0.0	8.0
2/13/2025 13:15	4.4	101.4	0.0	7.6	11.7	0.0	2/13/2025 13:15	1.6	13.4	0.0	7.0	12.5	0.0	8.0
2/13/2025 13:30	3.5	90.7	0.0	7.3	12.1	0.0	2/13/2025 13:30	1.7	13.4	0.0	7.0	12.5	0.0	8.0
2/13/2025 13:45	6.5	295.2	0.1	8.7	11.2	0.0	2/13/2025 13:45	1.8	13.3	0.0	7.1	12.5	0.0	8.0
2/13/2025 14:00	5.8	286.2	0.1	8.4	11.3	0.0	2/13/2025 14:00	1.8	12.6	0.0	7.0	12.4	0.0	8.0
2/13/2025 14:15	6.7	390.7	0.2	8.4	11.1	0.1	2/13/2025 14:15	1.9	13.3	0.0	7.0	12.4	0.0	8.0
2/13/2025 14:30	7.1	353.8	0.2	8.5	11.0	0.0	2/13/2025 14:30	2.0	12.6	0.0	7.0	12.4	0.0	8.0
2/13/2025 14:45	7.3	437.6	0.2	8.4	10.9	0.0	2/13/2025 14:45	2.0	13.0	0.0	7.0	12.4	0.0	8.0
2/13/2025 15:00	7.4	367.2	0.2	8.7	10.9	0.0	2/13/2025 15:00	2.0	13.4	0.0	7.0	12.3	0.0	8.0
2/13/2025 15:15	7.5	347.6	0.2	8.9	10.9	0.1	2/13/2025 15:15	2.1	13.2	0.0	7.0	12.3	0.0	8.0
2/13/2025 15:30	7.4	354.2	0.2	8.9	10.9	0.0	2/13/2025 15:30	2.1	13.8	0.0	7.0	12.3	0.0	8.0
2/13/2025 15:45	7.3	336.6	0.2	8.8	10.9	0.0	2/13/2025 15:45	2.1	15.3	0.0	7.0	12.3	0.0	8.0
2/13/2025 16:00	4.5	86.7	0.0	7.6	11.7	0.0	2/13/2025 16:00	2.1	17.3	0.0	7.0	12.3	0.0	8.0
2/13/2025 16:15	6.1	295.3	0.1	8.6	11.3	0.0	2/13/2025 16:15	2.1	18.9	0.0	7.1	12.3	0.0	8.0
2/13/2025 16:30	7.0	255.9	0.1	8.8	11.0	0.0	2/13/2025 16:30	2.1	20.5	0.0	7.1	12.3	0.1	8.1
2/13/2025 16:45	7.2	263.9	0.1	8.9	10.9	0.0	2/13/2025 16:45	2.1	19.8	0.0	7.2	12.3	1.0	9.0
2/13/2025 17:00	5.4	135.3	0.1	8.1	11.4	0.0	2/13/2025 17:00	2.1	21.7	0.0	7.1	12.3	1.0	9.0
2/13/2025 17:15	7.3	460.0	0.2	8.0	10.9	0.0	2/13/2025 17:15	2.1	21.7	0.0	7.1	12.3	0.3	8.3
2/13/2025 17:30	5.7	205.3	0.1	7.9	11.3	0.0	2/13/2025 17:30	2.1	22.0	0.0	7.1	12.3	0.2	8.2
2/13/2025 17:45	4.1	120.4	0.1	7.6	11.9	0.0	2/13/2025 17:45	2.0	22.0	0.0	7.1	12.3	0.4	8.4
2/13/2025 18:00	5.5	207.0	0.1	7.9	11.3	0.0	2/13/2025 18:00	2.0	22.5	0.0	7.1	12.3	0.2	8.2
2/13/2025 18:15	3.4	56.2	0.0	7.3	12.1	0.0	2/13/2025 18:15	2.0	22.0	0.0	7.1	12.3	0.0	8.0
2/13/2025 18:30	2.9	45.7	0.0	7.1	12.3	0.0	2/13/2025 18:30	1.9	20.3	0.0	7.1	12.3	0.1	8.1
2/13/2025 18:45	3.9	184.0	0.1	7.5	12.2	1.0	2/13/2025 18:45	1.9	21.0	0.0	7.1	12.3	0.0	8.0
2/13/2025 19:00	6.9	303.9	0.1	7.9	11.0	0.0	2/13/2025 19:00	1.9	20.3	0.0	7.1	12.3	0.1	8.1
2/13/2025 19:15	7.0	286.8	0.1	7.9	11.0	0.0	2/13/2025 19:15	1.8	19.6	0.0	7.1	12.3	0.0	8.0
2/13/2025 19:30	6.7	200.7	0.1	7.8	11.0	0.0	2/13/2025 19:30	1.8	18.9	0.0	7.1	12.3	0.0	8.0
2/13/2025 19:45	6.7	287.0	0.1	8.0	11.0	0.0	2/13/2025 19:45	1.8	18.2	0.0	7.1	12.3	0.0	8.0
2/13/2025 20:00							2/13/2025 20:00	1.8	16.8	0.0	7.1	12.3	0.0	8.0
2/13/2025 20:15	6.6	308.5	0.1	7.8	11.1	0.0	2/13/2025 20:15	1.8	17.4	0.0	7.1	12.3	0.0	8.0
2/13/2025 20:30	7.0	145.1	0.1	8.6	11.0	1.3	2/13/2025 20:30	1.7	17.1	0.0	7.0	12.3	0.0	8.0
2/13/2025 20:45	6.7	234.5	0.1	7.9	11.0	0.0	2/13/2025 20:45	1.7	16.3	0.0	7.1	12.3	0.0	8.0
2/13/2025 21:00							2/13/2025 21:00	1.7	16.5	0.0	7.0	12.3	0.0	8.0
2/13/2025 21:15	6.7	234.5	0.1	7.8	11.0	0.0	2/13/2025 21:15	1.7	16.1	0.0	7.1	12.3	0.0	8.0
2/13/2025 21:30	6.7	165.3	0.1	7.7	11.1	0.0	2/13/2025 21:30	1.7	16.1	0.0	7.0	12.3	0.0	8.0
2/13/2025 21:45	6.8	158.9	0.1	7.7	11.0	0.0	2/13/2025 21:45	1.7	15.8	0.0	7.0	12.3	0.0	8.0
2/13/2025 22:00	6.8	172.3	0.1	7.8	11.0	0.0	2/13/2025 22:00	1.7	14.6	0.0	7.0	12.3	0.0	8.0
2/13/2025 22:15	3.4	51.1	0.0	7.2	12.1	0.0	2/13/2025 22:15	1.7	15.5	0.0	6.9	12.3	0.0	8.0
2/13/2025 22:30	6.4	152.6	0.1	7.7	11.2	0.0	2/13/2025 22:30	1.7	15.1	0.0	7.0	12.3	0.0	8.0
2/13/2025 22:45	6.6	174.3	0.1	7.7	11.1	0.0	2/13/2025 22:45	1.7	15.3	0.0	7.0	12.4	0.0	8.0
2/13/2025 23:00	6.6	131.5	0.1	7.7	11.1	0.0	2/13/2025 23:00	1.7	15.0	0.0	7.0	12.3	0.0	8.0
2/13/2025 23:15	6.6	167.7	0.1	7.8	11.1	0.0	2/13/2025 23:15	1.7	15.1	0.0	7.0	12.4	0.0	8.0
2/13/2025 23:30	6.6	127.6	0.1	7.7	11.1	0.0	2/13/2025 23:30	1.7	14.8	0.0	7.0	12.3	0.0	8.0
2/13/2025 23:45	5.6	110.3	0.1	7.6	11.4	0.0	2/13/2025 23:45	1.7	14.9	0.0	7.0	12.4	0.0	8.0
2/14/2025 0:00	3.3	47.4	0.0	7.2	12.2	0.0	2/14/2025 0:00	1.7	14.8	0.0	7.0	12.4	0.0	8.0
2/14/2025 0:15	5.9	132.0	0.1	7.7	11.3	0.0	2/14/2025 0:15	1.7	14.8	0.0	7.0	12.4	0.0	8.0
2/14/2025 0:30	6.6	147.5	0.1	7.7	11.1	0.0	2/14/2025 0:30	1.7	14.6	0.0	7.0	12.4	0.0	8.0
2/14/2025 0:45	6.6	138.6	0.1	7.7	11.1	0.0	2/14/2025 0:45	1.7	14.6	0.0	7.0	12.4	0.0	8.0
2/14/2025 1:00	6.7	136.0	0.1	7.7	11.1	0.0	2/14/2025 1:00	1.7	14.5	0.0	7.0	12.4	0.0	8.0
2/14/2025 1:15	6.6	144.2	0.1	7.7	11.1	0.0	2/14/2025 1:15	1.7	14.5	0.0	7.0	12.4	0.0	8.0
2/14/2025 1:30	6.3	141.9	0.1	7.7	11.3	0.0	2/14/2025 1:30	1.7	14.3	0.0	7.0	12.4	0.0	8.0
2/14/2025 1:45	7.0	220.4	0.1	7.7	11.0	0.5	2/14/2025 1:45	1.7	13.5	0.0	7.0	12.4	0.0	8.0
2/14/2025 2:00	6.8	293.1	0.1	7.6	11.1	0.0	2/14/2025 2:00	1.7	14.2	0.0	7.0	12.4	0.0	8.0
2/14/2025 2:15	5.6	174.5	0.1	7.7	11.3	0.0	2/14/2025 2:15	1.7	14.4	0.0	7.0	12.4	0.0	8.0
2/14/2025 2:30	6.9	164.6	0.1	8.5	11.0	3.9	2/14/2025 2:30	1.7	14.2	0.0	7.0	12.4	0.0	8.0
2/14/2025 2:45	4.9	83.1	0.0	7.8	11.6	0.0	2/14/2025 2:45	1.7	14.4	0.0	7.0	12.4	0.0	8.0
2/14/2025 3:00	6.5	276.0	0.1	8.0		0.0	2/14/2025 3:00	1.7	14.2	0.0	7.1	12.4	0.0	8.0
2/14/2025 3:15	6.3	247.6	0.1	7.9	11.3	0.0	2/14/2025 3:15	1.7	14.3	0.0	7.0	12.4	0.0	8.0
2/14/2025 3:30	6.8	203.2	0.1	7.8	11.1	0.0	2/14/2025 3:30	1.7	14.1	0.0	7.0	12.4	0.0	8.0
2/14/2025 3:45	6.8	174.7	0.1	7.7	11.1	0.0	2/14/2025 3:45	1.7	14.3	0.0	7.0	12.4	0.0	8.0
2/14/2025 4:00	6.8	157.7	0.1	7.7	11.1	0.0	2/14/2025 4:00	1.7	14.2	0.0	7.0	12.4	0.0	8.0
2/14/2025 4:15	6.8	134.2	0.1	7.7	11.1	0.0	2/14/2025 4:15	1.6	14.3	0.0	7.0	12.4	0.0	8.0
2/14/2025 4:30	6.6	136.4	0.1	7.7	11.2	0.0	2/14/2025 4:30	1.6	14.0	0.0	7.0	12.4	0.0	8.0
2/14/2025 4:45	6.8	135.2	0.1	7.7	11.1	0.3	2/14/2025 4:45	1.6	14.2	0.0	7.0	12.4	0.0	8.0
2/14/2025 5:00	6.8	147.7	0.1	7.7	11.1	0.0	2/14/2025 5:00	1.6	14.1	0.0	7.0	12.4	0.0	8.0
2/14/2025 5:15	6.8	165.9	0.1	7.8	11.1	1.1	2/14/2025 5:15	1.6	14.2	0.0	7.0	12.4	0.0	8.0
2/14/2025 5:30	6.5	143.3	0.1	7.7	11.2	0.0	2/14/2025 5:30	1.6	14.1	0.0	7.1	12.4	0.0	8.0
2/14/2025 5:45	3.8	49.3	0.0	7.3	12.0	0.0	2/14/2025 5:45	1.6	14.1	0.0	7.0	12.5	0.0	8.0
2/14/2025 6:00	2.8	36.6	0.0	7.1	12.4	0.0	2/14/2025 6:00	1.6	14.0	0.0	7.0	12.5	0.0	8.0
2/14/2025 6:15	6.5	124.4	0.1	7.6	11.2	0.0	2/14/2025 6:15	1.6	14.1	0.0	7.0	12.5	0.0	8.0
2/14/2025 6:30	6.7	117.1	0.1	7.6	11.2	0.0	2/14/2025 6:30	1.6	13.9	0.0	7.0	12.5	0.0	8.0
2/14/2025 6:45	6.2	114.6	0.1	7.6	11.3	0.0	2/14/2025 6:45	1.6	14.0	0.0	7.0	12.5	0.0	8.0
2/14/2025 7:00	6.7	148.6	0.1	7.7	11.2	0.0	2/14/2025 7:00	1.6	14.0	0.0	7.0	12.5	0.0	8.0
2/14/2025 7:15	6.7	115.4	0.1	7.7	11.2	0.0	2/14/2025 7:15	1.6	14.0	0.0	7.0	12.5	0.0	8.0
2/14/2025 7:30	6.7	129.5	0.1	7.7	11.2	0.0	2/14/2025 7:30	1.5	13.7	0.0	7.0	12.5	0.0	8.0
2/14/2025 7:45	6.7	118.1	0.1	7.6	11.2	0.0	2/14/2025 7:45	1.5	13.9	0.0	7.0	12.5	0.0	8.0
2/14/2025 8:00	6.5	132.6	0.1	7.7	11.3	0.0	2/14/2025 8:00	1.5	13.9	0.0	7.0	12.5	0.0	8.0
2/14/2025 8:15	5.7	88.4	0.0	7.6	11.4	0.0	2/14/2025 8:15	1.5	13.9	0.0	7.0	12.5	0.0	8.0

2/14/2025 8:30	3.4	44.8	0.0	7.2	12.2	0.0	2/14/2025 8:30	1.5	13.6	0.0	7.0	12.5	0.0	8.0
2/14/2025 8:45	6.1	189.2	0.1	7.6	11.4	0.0	2/14/2025 8:45	1.4	13.8	0.0	7.0	12.5	0.0	8.0
2/14/2025 9:00	6.3	121.8	0.1	7.6	11.3	0.0	2/14/2025 9:00	1.4	13.7	0.0	7.0	12.5	0.0	8.0
2/14/2025 9:15	6.7	127.8	0.1	7.7	11.2	0.2	2/14/2025 9:15	1.4	13.7	0.0	7.0	12.5	0.0	8.0
2/14/2025 9:30	6.7	129.0	0.1	7.7	11.2	0.0	2/14/2025 9:30	1.4	13.5	0.0	7.0	12.6	0.0	8.0
2/14/2025 9:45	6.7	127.6	0.1	7.7	11.2	0.0	2/14/2025 9:45	1.4	13.7	0.0	7.0	12.6	0.0	8.0
2/14/2025 10:00	6.4	138.5	0.1	7.7	11.3	0.0	2/14/2025 10:00	1.4	13.6	0.0	7.0	12.6	0.0	8.0
2/14/2025 10:15	3.9	50.6	0.0	7.3	12.1	0.0	2/14/2025 10:15	1.5	13.6	0.0	7.0	12.6	0.0	8.0
2/14/2025 10:30	2.8	33.6	0.0	7.1	12.5	0.0	2/14/2025 10:30	1.5	13.6	0.0	7.0	12.6	0.0	8.0
2/14/2025 10:45	6.0	151.0	0.1	7.7	11.5	0.5	2/14/2025 10:45	1.5	13.6	0.0	7.0	12.6	0.0	8.0
2/14/2025 11:00	5.2	83.1	0.0	7.6	11.6	0.0	2/14/2025 11:00	1.6	13.3	0.0	7.0	12.6	0.0	8.0
2/14/2025 11:15	6.8	157.5	0.1	7.7	11.2	0.0	2/14/2025 11:15	1.6	13.6	0.0	7.0	12.6	0.0	8.0
2/14/2025 11:30	7.0	116.0	0.1	7.7	11.2	0.8	2/14/2025 11:30	1.8	13.6	0.0	7.0	12.6	0.0	8.0
2/14/2025 11:45	7.0	125.4	0.1	7.7	11.2	0.0	2/14/2025 11:45	1.9	13.5	0.0	7.0	12.6	0.0	8.0
2/14/2025 12:00	7.1	157.5	0.1	7.7	11.1	0.0	2/14/2025 12:00	2.0	13.6	0.0	7.0	12.6	0.0	8.0
2/14/2025 12:15	5.5	78.4	0.0	7.5	11.5	0.0	2/14/2025 12:15	2.0	13.2	0.0	7.0	12.6	0.0	8.0
2/14/2025 12:30	4.6	78.0	0.0	7.3	12.1	0.0	2/14/2025 12:30	2.1	13.6	0.0	7.0	12.6	0.0	8.0
2/14/2025 12:45	6.8	147.9	0.1	7.7	11.2	0.0	2/14/2025 12:45	2.1	13.3	0.0	7.0	12.5	0.0	8.0
2/14/2025 13:00	7.2	132.7	0.1	7.7	11.1	0.0	2/14/2025 13:00	2.2	13.5	0.0	7.0	12.5	0.0	8.0
2/14/2025 13:15	4.8	54.6	0.0	7.4	11.8	0.0	2/14/2025 13:15	2.2	13.3	0.0	7.0	12.5	0.0	8.0
2/14/2025 13:30	4.0	52.1	0.0	7.2	12.1	0.0	2/14/2025 13:30	2.3	13.6	0.0	7.0	12.5	0.0	8.0
2/14/2025 13:45	7.2	129.4	0.1	7.7	11.2	0.0	2/14/2025 13:45	2.4	13.3	0.0	7.0	12.5	0.0	8.0
2/14/2025 14:00	7.3	140.2	0.1	7.8	11.1	1.1	2/14/2025 14:00	2.4	13.5	0.0	7.0	12.4	0.0	8.0
2/14/2025 14:15	6.9	106.6	0.0	7.7	11.1	0.0	2/14/2025 14:15	2.5	13.4	0.0	7.0	12.4	0.0	8.0
2/14/2025 14:30	4.5	41.4	0.0	7.2	11.9	0.0	2/14/2025 14:30	2.6	14.6	0.0	7.0	12.4	0.0	8.0
2/14/2025 14:45	3.9	34.6	0.0	7.1	12.2	0.0	2/14/2025 14:45	2.6	15.8	0.0	7.1	12.4	0.0	8.0
2/14/2025 15:00	3.8	35.7	0.0	7.0	12.2	0.0	2/14/2025 15:00	2.6	17.6	0.0	7.0	12.4	0.0	8.0
2/14/2025 15:15	6.9	116.2	0.1	7.6	11.2	0.0	2/14/2025 15:15	2.7	19.3	0.0	7.1	12.3	0.0	8.0
2/14/2025 15:30	7.4	136.9	0.1	7.7	11.1	0.0	2/14/2025 15:30	2.7	21.2	0.0	7.1	12.3	0.0	8.0
2/14/2025 15:45	7.2	113.3	0.1	7.7	11.2	0.0	2/14/2025 15:45	2.7	22.7	0.0	7.1	12.3	0.0	8.0
2/14/2025 16:00	5.1	53.2	0.0	7.4	11.7	0.0	2/14/2025 16:00	2.7	21.7	0.0	7.1	12.3	0.2	8.2
2/14/2025 16:15	4.0	34.8	0.0	7.0	12.1	0.3	2/14/2025 16:15	2.6	24.9	0.0	7.0	12.3	0.2	8.2
2/14/2025 16:30	3.7	33.0	0.0	7.0	12.2	0.0	2/14/2025 16:30	2.6	25.6	0.0	7.2	12.3	0.6	8.6
2/14/2025 16:45	3.5	32.8	0.0	6.9	12.3	0.0	2/14/2025 16:45	2.6	26.3	0.0	7.2	12.3	1.2	9.2
2/14/2025 17:00	7.2	131.7	0.1	7.7	11.2	0.6	2/14/2025 17:00	2.6	26.2	0.0	7.2	12.4	0.4	8.4
2/14/2025 17:15	7.5	117.9	0.1	7.7	11.1	0.0	2/14/2025 17:15	2.6	26.7	0.0	7.2	12.4	0.6	8.6
2/14/2025 17:30	7.6	127.0	0.1	7.7	11.1	0.0	2/14/2025 17:30	2.6	26.8	0.0	7.2	12.4	0.7	8.7
2/14/2025 17:45	7.6	112.7	0.1	7.7	11.1	0.0	2/14/2025 17:45	2.6	26.3	0.0	7.1	12.3	0.4	8.4
2/14/2025 18:00	6.7	86.0	0.0	7.6	11.3	0.0	2/14/2025 18:00	2.4	25.9	0.0	7.2	12.3	0.5	8.5
2/14/2025 18:15	4.1	41.2	0.0	7.1	12.1	0.0	2/14/2025 18:15	2.4	24.9	0.0	7.2	12.4	0.8	8.8
2/14/2025 18:30	3.5	37.1	0.0	7.0	12.3	0.0	2/14/2025 18:30	2.4	24.4	0.0	7.1	12.4	0.4	8.4
2/14/2025 18:45	4.4	67.6	0.0	7.1	12.3	0.0	2/14/2025 18:45	2.3	23.0	0.0	7.2	12.4	0.3	8.3
2/14/2025 19:00	7.1	94.8	0.0	8.1	11.2	0.0	2/14/2025 19:00	2.3	22.2	0.0	7.1	12.4	0.2	8.2
2/14/2025 19:15	7.3	97.7	0.0	8.4	11.2	0.0	2/14/2025 19:15	2.2	20.6	0.0	7.1	12.4	0.0	8.0
2/14/2025 19:30	7.2	114.9	0.1	8.4	11.2	0.0	2/14/2025 19:30	2.2	20.1	0.0	7.1	12.4	0.0	8.0
2/14/2025 19:45	7.2	237.9	0.1	7.7	11.2	0.0	2/14/2025 19:45	2.2	19.2	0.0	7.1	12.5	0.0	8.0
2/14/2025 20:00	7.1	261.3	0.1	7.5	11.2	0.0	2/14/2025 20:00	2.1	18.8	0.0	7.1	12.4	0.0	8.0
2/14/2025 20:15	4.8	102.6	0.0	7.5	11.9	2.2	2/14/2025 20:15	2.1	18.1	0.0	7.1	12.5	0.0	8.0
2/14/2025 20:30	3.6	56.4	0.0	7.3	12.3	0.0	2/14/2025 20:30	2.1	17.7	0.0	7.1	12.5	0.0	8.0
2/14/2025 20:45	6.9	258.6	0.1	7.4	11.3	0.0	2/14/2025 20:45	2.1	17.4	0.0	7.1	12.5	0.0	8.0
2/14/2025 21:00	7.0	175.1	0.1	7.5	11.2	0.0	2/14/2025 21:00	2.1	17.6	0.0	7.0	12.5	0.0	8.0
2/14/2025 21:15	7.0	166.8	0.1	7.5	11.2	0.0	2/14/2025 21:15	2.1	17.4	0.0	7.1	12.5	0.0	8.0
2/14/2025 21:30	7.1	162.7	0.1	7.6	11.2	0.0	2/14/2025 21:30	2.1	17.3	0.0	7.0	12.5	0.0	8.0
2/14/2025 21:45	6.9	151.8	0.1	7.7	11.3	0.0	2/14/2025 21:45	2.0	16.9	0.0	7.1	12.5	0.0	8.0
2/14/2025 22:00	4.2	62.8	0.0	7.4	12.1	0.0	2/14/2025 22:00		17.1	0.0	7.0	12.5	0.0	8.0
2/14/2025 22:15	6.8	139.4	0.1	7.6	11.3	1.2	2/14/2025 22:15	2.0	16.8	0.0	7.1	12.5	0.0	8.0
2/14/2025 22:30	6.9	124.9	0.1	7.6	11.3	0.0	2/14/2025 22:30	2.0	16.9	0.0	7.0	12.5	0.0	8.0
2/14/2025 22:45	5.4	79.2	0.0	7.5	11.6	0.0	2/14/2025 22:45	2.0	16.5	0.0	7.1	12.5	0.0	8.0
2/14/2025 23:00	6.9	175.1	0.1	7.7	11.3	0.0	2/14/2025 23:00	2.0	16.7	0.0	7.0	12.5	0.0	8.0
2/14/2025 23:15	6.5	127.3	0.1	7.6	11.4	0.0	2/14/2025 23:15	2.0	16.5	0.0	7.0	12.5	0.0	8.0
2/14/2025 23:30	6.7	225.2	0.1	7.8	11.3	0.0	2/14/2025 23:30	2.0	16.4	0.0	7.0	12.6	0.0	8.0
2/14/2025 23:45	4.0	77.5	0.0	7.4	12.2	0.0	2/14/2025 23:45	2.0	16.2	0.0	7.1	12.6	0.0	8.0
2/15/2025 0:00	6.7	225.3	0.1	7.8	11.4	0.0	2/15/2025 0:00	1.9	16.3	0.0	7.0	12.5	0.0	8.0
2/15/2025 0:15	6.9	328.6	0.2	7.9	11.3	0.0	2/15/2025 0:15	1.9	16.1	0.0	7.0	12.6	0.0	8.0
2/15/2025 0:30	6.1	250.9	0.1	7.9	11.5	0.0	2/15/2025 0:30	1.9	16.2	0.0	7.0	12.6	0.0	8.0
2/15/2025 0:45	3.8	87.8	0.0	7.5	12.3	0.0	2/15/2025 0:45	1.9	15.8	0.0	7.0	12.6	0.0	8.0
2/15/2025 1:00	6.3	171.4	0.1	9.2	11.5	0.0	2/15/2025 1:00	1.9	15.9	0.0	7.0	12.6	0.1	8.1
2/15/2025 1:15	6.7	181.9	0.1	9.5	11.4	0.0	2/15/2025 1:15	1.9	15.7	0.0	7.0	12.6	0.0	8.0
2/15/2025 1:30	6.6	289.9	0.1	9.0	11.4	0.0	2/15/2025 1:30	1.9	15.7	0.0	7.0	12.6	0.0	8.0
2/15/2025 1:45	6.9	339.6	0.2	8.4	11.3	0.0	2/15/2025 1:45	1.9	15.5	0.0	7.0	12.6	0.0	8.0
2/15/2025 2:00	6.9	362.0	0.2	8.1	11.3	0.0	2/15/2025 2:00	1.8	15.6	0.0	7.0	12.6	0.0	8.0
2/15/2025 2:15	4.8	151.4	0.1	7.8	11.9	0.0	2/15/2025 2:15	1.8	15.3	0.0	7.0	12.6	0.0	8.0
2/15/2025 2:30	5.9	273.3	0.1	8.1	11.6	0.0	2/15/2025 2:30	1.9	15.4	0.0	7.0	12.6	0.0	8.0
2/15/2025 2:45	6.6	233.9	0.1	8.0	11.4	0.0	2/15/2025 2:45	1.9	15.2	0.0	7.0	12.6	0.0	8.0
2/15/2025 3:00	6.7	317.0	0.1	7.9	11.4	0.0	2/15/2025 3:00	1.9	15.4	0.0	7.0	12.6	0.0	8.0
2/15/2025 3:15	6.7	162.7	0.1	8.8	11.4	0.0	2/15/2025 3:15	1.9	15.0	0.0	7.1	12.6	0.0	8.0
2/15/2025 3:30	6.5	247.4	0.1	8.4	11.5	0.0	2/15/2025 3:30	1.9	15.2	0.0	7.0	12.6	0.0	8.0
2/15/2025 3:45	6.3	294.6	0.1	8.3	11.6	0.0	2/15/2025 3:45	1.9	15.1	0.0	7.1	12.6	0.0	8.0
2/15/2025 4:00	6.8	306.4	0.1	8.2	11.4	0.0	2/15/2025 4:00	1.9	15.2	0.0	7.0	12.6	0.0	8.0
2/15/2025 4:15	6.8	365.1	0.2	8.0	11.4	0.0	2/15/2025 4:15	1.9	14.9	0.0	7.0	12.6	0.0	8.0
2/15/2025 4:30	6.8	372.3	0.2	8.0	11.3	0.0	2/15/2025 4:30	1.9	15.1	0.0	7.0	12.6	0.0	8.0
2/15/2025 4:45	7.0	354.2	0.2	8.0	11.3	0.0	2/15/2025 4:45	1.8	14.8	0.0	7.0	12.6	0.0	8.0
2/15/2025 5:00	4.2	103.1	0.0	7.6	12.2	0.0	2/15/2025 5:00	1.8	15.0	0.0	7.0	12.6	0.0	8.0
2/15/2025 5:15	6.0	296.7	0.1	8.1	11.7	0.0	2/15/2025 5:15	1.9	14.9	0.0	7.0	12.6	0.0	8.0
2/15/2025 5:30	6.3	179.6	0.1	8.8	11.5	0.0	2/15/2025 5:30	1.9	14.9	0.0	7.0	12.6	0.0	8.0
2/15/2025 5:45	6.1	182.4	0.1	8.6	11.6	0.0	2/15/2025 5:45	1.9	14.7	0.0	7.0	12.6	0.0	8.0
2/15/2025 6:00	6.7	167.5	0.1	8.9	11.4	0.0	2/15/2025 6:00	1.9	14.8	0.0	7.0	12.6	0.0	8.0
2/15/2025 6:15	6.4	149.3	0.1	9.0	11.5	0.0	2/15/2025 6:15	1.9	14.6	0.0	7.0	12.6	0.0	8.0
2/15/2025 6:30	6.3	173.2	0.1	8.8	11.5	1.4	2/15/2025 6:30	1.9	14.8	0.0	7.0	12.6	0.0	8.0
2/15/2025 6:45	6.3	209.0	0.1	8.6	11.5	0.0	2/15/2025 6:45	1.9	14.6	0.0	7.0	12.6	0.0	8.0
2/15/2025 7:00	6.0	183.5	0.1	8.5	11.6	0.0	2/15/2025 7:00	1.9	14.7	0.0	7.0	12.6	0.0	8.0
2/15/2025 7:15	6.9	153.8	0.1	8.9	11.4	0.0	2/15/2025 7:15	1.9	14.4	0.0	7.0	12.6	0.0	8.0
2/15/2025 7:30	5.2	96.8	0.0	9.4	11.9	2.4	2/15/2025 7:30	1.9	14.6	0.0	7.0	12.6	0.0	8.0
2/15/2025 7:45	6.6	138.9	0.1	9.1	11.5	0.0	2/15/2025 7:45	1.9	14.5	0.0	7.0	12.6	0.0	8.0
2/15/2025 8:00	6.4	141.4	0.1	8.8	11.5	0.0	2/15/2025 8:00	2.0	14.6	0.0	7.0	12.6	0.0	8.0
2/15/2025 8:15	6.9	249.1	0.1	8.0	11.4	1.9	2/15/2025 8:15	1.9	14.4	0.0	7.0	12.6	0.0	8.0
2/15/2025 8:30	6.9	192.0	0.1	7.9	11.3	0.0	2/15/2025 8:30	2.0	14.5	0.0	7.0	12.6	0.0	8.0
2/15/2025 8:45	7.0	171.2	0.1	7.8	11.4	0.6	2/15/2025 8:45	2.0	14.4	0.0	7.0	12.6	0.0	8.0
2/15/2025 9:00	6.4	140.9	0.1	7.8	11.4	0.0	2/15/2025 9:00	2.0	14.5	0.0	7.0	12.6	0.0	8.0
2/15/2025 9:15	5.6	156.0	0.1	7.7	11.8	0.0	2/15/2025 9:15	2.0	14.3	0.0	7.0	12.6	0.0	8.0
2/15/2025 9:30	7.0	160.4	0.1	7.8	11.3	0.0	2/15/2025 9:30	1.9	14.4	0.0	7.0	12.6	0.0	8.0
2/15/2025 9:45	7.0	160.3	0.1	7.8	11.3	0.0	2/15/2025 9:45	2.0	14.3	0.0	7.0	12.6	0.0	8.0
2/15/2025 10:00	6.4	127.3	0.1	7.7	11.4	0.0	2/15/2025 10:00	2.0	14.4	0.0	7.0	12.6	0.0	8.0
2/15/2025 10:15	4.3	75.7	0.0	7.4	12.1	0.0	2/15/2025 10:15	2.0	14.2	0.0	7.0	12.6	0.0	8.0
2/15/2025 10:30	3.3	49.6	0.0	7.2	12.5	0.0	2/15/2025 10:30	2.0	14.4	0.0	7.0	12.6	0.0	8.0
2/15/2025 10:45	6.6	206.9	0.1	7.8	11.4	0.0	2/15/2025 10:45	2.0	14.3	0.0	7.0	12.6	0.0	8.0
2/15/2025 11:00	6.6	145.5	0.1	7.8	11.4	0.0	2/15/2025 11:00	2.0	14.4	0.0	7.0	12.6	0.0	8.0
2/15/2025 11:15	7.1	144.4	0.1	7.8	11.3	0.0	2/15/2025 11:15	2.1	14.3	0.0	7.0	12.6	0.0	8.0
2/15/2025 11:30	5.0	68.7	0.0	7.5	11.9	0.0	2/15/2025 11:30	2.1	14.4	0.0	7.0	12.6	0.0	8.0
2/15/2025 11:45	3.8	56.7	0.0	7.3	12.3	0.0	2/15/2025 11:45	2.1	14.3	0.0	7.0	12.6	0.0	8.0
2/15/2025 12:00	7.0	153.4	0.1	7.8	11.3	0.0	2/15/2025 12:00	2.1	14.4	0.0	7.0	12.6	0.0	8.0
2/15/2025 12:15	7.1	159.8	0.1	7.8	11.3	0.0	2/15/2025 12:15	2.1	14.3	0.0	7.1	12.6	0.0	8.0
2/15/2025 12:30	7.1	158.4	0.1	7.8	11.3	0.0	2/15/2025 12:30	2.1	14.3	0.0	7.0	12.6	0.0	8.0
2/15/2025 12:45	7.0	143.1	0.1	7.7	11.3	0.0	2/15/2025 12:45	2.1	14.2	0.0	7.1	12.6	0.0	8.0
2/15/2025 13:00	4.3	49.2	0.0	7.3	12.2	0.0	2/15/2025 13:00	2.1	14.2	0.0	7.0	12.6	0.0	8.0
2/15/2025 13:15	3.3	35.1	0.0	7.1	12.5	0.0	2/15/2025 13:15	2.1	14.2	0.0	7.0	12.6	0.0	8.0
2/15/2025 13:30	6.9	191.8	0.1	7.8	11.4	0.0	2/15/2025 13:30	2.1	14.2	0.0	7.0	12.6	0.0	8.0
2/15/2025 13:45	6.8	210.3	0.1	7.8	11.4	0.0	2/15/2025 13:45	2.1	14.0	0.0	7.1	12.6	0.0	8.0
2/15/2025 14:00	6.1	208.0	0.1	7.8	11.6	0.0	2/15/2025 14:00	2.1	14.1	0.0	7.0	12.6	0.0	8.0
2/15/2025 14:15	6.4	263.2	0.1	7.9	11.5	0.0	2/15/2025 14:15	2.2	14.0	0.0	7.1	12.6	0.0	8.0
2/15/2025 14:30	4.8	118.4	0.1	7.7	11.9	0.0	2/15/2025 14:30	2.2	13.4	0.0	7.0	12.6	0.0	8.0
2/15/2025 14:45	6.5	205.4	0.1	9.6	11.5	0.0	2/15/2025 14:45	2.2	14.1	0.0	7.1	12.6	0.0	8.0
2/15/2025 15:00	4.8	107.8	0.0	9.3	12.0	4.4	2/15/2025 15:00	2.3	14.2	0.0	7.0	12.6	0.0	8.0
2/15/2025 15:15	7.2	275.4	0.1	9.3	11.3	0.4	2/15/2025 15:15	2.2	14.1	0.0	7.1	12.6	0.0	8.0
2/15/2025 15:30	7.0	267.6	0.1	8.9	11.3	1.1	2/15/2025 15:30	2.2	14.4	0.0	7.0	12.6	0.0	8.0
2/15/2025 15:45	6.7	212.5	0.1	9.3	11.5	0.0	2/15/2025 15:45	2.2	14.3	0.0	7.0	12.6	0.0	8.0
2/15/2025 16:00	7.2	257.4	0.1	9.3	11.2	0.0	2/15/2025 16:00	2.2	14.5	0.0	7.0	12.6	0.0	8.0
2/15/2025 16:15	7.2	234.4	0.1	9.7	11.3	0.5	2/15/2025 16:15	2.2	14.4	0.0	7.1	12.6	0.0	8.0
2/15/2025 16:30	5.6	145.2	0.1	9.6	11.7	0.0	2/15/2025 16:30	2.2	14.7	0.0	7.0	12.5	0.0	8.0
2/15/2025 16:45	4.6	105.1	0.0	9.3	12.0	0.0	2/15/2025 16:45	2.1	14.6	0.0	7.0	12.6	0.0	8.0
2/15/2025 17:00	6.7	237.3	0.1	9.6		0.0	2/15/2025 17:00	2.2	14.7	0.0	7.0	12.5	0.0	8.0
2/15/2025 17:15	7.3	287.9	0.1	9.3	11.2	0.0	2/15/2025 17:15	2.2	14.7	0.0	7.0	12.5	0.0	8.0
2/15/2025 17:30	7.3	386.4	0.2	8.6	11.2	0.0	2/15/2025 17:30	2.3	14.7	0.0	7.0	12.5	0.0	8.0
2/15/2025 17:45	6.1	221.4	0.1	8.3	11.5	0.0	2/15/2025 17:45	2.3	14.6	0.0	7.0	12.5	0.0	8.0
2/15/2025 18:00	7.0	375.5	0.2	8.3	11.3	0.5	2/15/2025 18:00	2.3	13.4	0.0	7.0	12.5	0.0	8.0
2/15/2025 18:15	7.3	393.4	0.2	7.9	11.2	0.0	2/15/2025 18:15	2.3	14.8	0.0	7.0	12.5	0.0	8.0
2/15/2025 18:30	4.7	118.9	0.1	7.8	11.9	0.0	2/15/2025 18:30	2.3	15.1	0.0	7.0	12.4	0.0	8.0
2/15/2025 18:45	6.0	285.6	0.1	8.0	11.7	0.0	2/15/2025 18:45	2.3	14.9	0.0	7.0	12.5	0.0	8.0
2/15/2025 19:00	7.1	180.4	0.1	8.1	11.2	0.0	2/15/2025 19:00	2.3	13.8	0.0	7.0	12.4	0.0	8.0
2/15/2025 19:15	7.2	264.3	0.1	7.9	11.2	0.0	2/15/2025 19:15	2.3	15.2	0.0	7.0	12.4	0.0	8.0
2/15/2025 19:30	6.9	189.2	0.1	7.9	11.3	0.0	2/15/2025 19:30	2.3	13.7	0.0	7.0	12.4	0.0	8.0

2/15/2025 19:45	7.2	139.4	0.1	8.2	11.2	0.0
2/15/2025 20:00	4.5	68.5	0.0	7.4	12.0	0.0
2/15/2025 20:15	6.9	238.6	0.1	7.9	11.2	0.0
2/15/2025 20:30	7.2	140.5	0.1	7.9	11.2	2.0
2/15/2025 20:45	7.2	139.9	0.1	7.9	11.2	0.0
2/15/2025 21:00	7.1	230.5	0.1	7.9	11.2	0.0
2/15/2025 21:15	7.3	190.3	0.1	7.9	11.2	0.0
2/15/2025 21:30	6.5	157.9	0.1	7.8	11.3	0.0
2/15/2025 21:45	4.8	105.0	0.0	7.5	12.1	0.0
2/15/2025 22:00	7.0	158.8	0.1	7.8	11.2	0.0
2/15/2025 22:15	7.3	175.4	0.1	7.8	11.2	0.1
2/15/2025 22:30	6.3	118.2	0.1	7.7	11.3	0.0
2/15/2025 22:45	7.1	160.9	0.1	7.8	11.2	0.0
2/15/2025 23:00	6.7	139.7	0.1	7.8	11.3	0.0
2/15/2025 23:15	6.6	143.4	0.1	7.8	11.3	0.0
2/15/2025 23:30	6.9	137.9	0.1	7.8	11.2	0.0
2/15/2025 23:45	4.3	57.4	0.0	7.4	12.0	0.0
2/16/2025 0:00	6.1	158.0	0.1	7.7	11.6	0.0
2/16/2025 0:15	7.1	152.1	0.1	7.8	11.2	0.0
2/16/2025 0:30	7.0	141.5	0.1	7.8	11.2	0.0
2/16/2025 0:45	7.1	146.0	0.1	7.7	11.2	0.0
2/16/2025 1:00	6.7	126.3	0.1	7.7	11.3	0.2
2/16/2025 1:15	6.8	126.1	0.1	7.7	11.3	0.0
2/16/2025 1:30	6.9	131.0	0.1	7.7	11.2	0.0
2/16/2025 1:45	6.6	139.7	0.1	7.8	11.2	0.0
2/16/2025 2:00	3.8	44.2	0.0	7.3	12.2	0.0
2/16/2025 2:15	7.0	153.4	0.1	7.8	11.2	0.0
2/16/2025 2:30	7.1	157.5	0.1	7.8	11.2	0.0
2/16/2025 2:45	6.4	131.8	0.1	7.8	11.3	0.0
2/16/2025 3:00	3.8	45.0	0.0	7.3	12.2	0.0
2/16/2025 3:15	6.7	157.3	0.1	7.8	11.3	0.0
2/16/2025 3:30	6.9	158.9	0.1	7.8	11.2	0.0
2/16/2025 3:45	6.9	159.0	0.1	7.8	11.2	0.0
2/16/2025 4:00	6.5	157.3	0.1	7.8	11.4	0.0
2/16/2025 4:15	6.9	157.4	0.1	7.8	11.2	0.0
2/16/2025 4:30	6.4	132.8	0.1	7.8	11.3	0.0
2/16/2025 4:45	3.6	45.1	0.0	7.2	12.2	0.0
2/16/2025 5:00	3.0	45.2	0.0	7.1	12.5	0.0
2/16/2025 5:15	6.7	147.7	0.1	7.7	11.3	0.0
2/16/2025 5:30	6.8	139.4	0.1	7.7	11.2	0.0
2/16/2025 5:45	6.8	134.6	0.1	7.7	11.2	0.0
2/16/2025 6:00	6.8	125.9	0.1	7.7	11.2	0.0
2/16/2025 6:15	3.9	45.5	0.0	7.3	12.1	0.0
2/16/2025 6:30	6.2	134.2	0.1	7.7	11.4	0.0
2/16/2025 6:45	6.7	140.7	0.1	7.7	11.3	0.0
2/16/2025 7:00	6.4	127.6	0.1	7.7	11.3	0.0
2/16/2025 7:15	6.8	123.2	0.1	7.7	11.2	0.0
2/16/2025 7:30	3.9	44.6	0.0	7.2	12.1	0.0
2/16/2025 7:45	6.4	120.3	0.1	7.7	11.4	0.7
2/16/2025 8:00	6.7	119.6	0.1	7.7	11.3	0.0
2/16/2025 8:15	6.4	114.2	0.1	7.7	11.4	0.0
2/16/2025 8:30	4.1	57.8	0.0	7.3	12.1	0.0
2/16/2025 8:45	6.7	147.1	0.1	7.7	11.3	0.0
2/16/2025 9:00	5.1	76.4	0.0	7.5	11.6	0.0
2/16/2025 9:15	4.9	103.6	0.0	7.4	12.1	0.0
2/16/2025 9:30	6.7	134.9	0.1	7.7	11.3	0.0
2/16/2025 9:45	6.8	138.7	0.1	7.7	11.3	0.0
2/16/2025 10:00	6.5	134.4	0.1	7.7	11.3	0.0
2/16/2025 10:15	4.3	55.1	0.0	7.3	12.0	0.0
2/16/2025 10:30	3.9	73.2	0.0	7.2	12.4	0.0
2/16/2025 10:45	6.3	129.8	0.1	7.7	11.4	0.0
2/16/2025 11:00	4.2	63.1	0.0	7.3	12.0	0.0
2/16/2025 11:15	3.3	41.1	0.0	7.0	12.4	0.0
2/16/2025 11:30	6.7	131.9	0.1	7.7	11.3	0.0
2/16/2025 11:45	4.2	51.3	0.0	7.3	12.0	0.0
2/16/2025 12:00	6.4	130.6	0.1	7.7	11.3	0.0
2/16/2025 12:15	7.0	151.3	0.1	7.7	11.2	0.0
2/16/2025 12:30	7.1	147.5	0.1	7.7	11.1	0.0
2/16/2025 12:45	7.1	161.4	0.1	7.7	11.2	0.0
2/16/2025 13:00	6.4	137.5	0.1	7.7	11.3	0.0
2/16/2025 13:15	5.8	148.1	0.1	7.6	11.6	0.0
2/16/2025 13:30	5.4	107.6	0.0	7.6	11.5	0.0
2/16/2025 13:45	7.2	220.8	0.1	7.8	11.1	0.6
2/16/2025 14:00	6.5	194.9	0.1	7.8	11.3	0.0
2/16/2025 14:15	4.2	70.7	0.0	7.2	12.0	0.0
2/16/2025 14:30	6.7	249.4	0.1	8.1	11.3	0.0
2/16/2025 14:45	7.2	303.3	0.1	8.8	11.1	0.1
2/16/2025 15:00	7.3	483.8	0.2	8.2	11.1	0.0
2/16/2025 15:15	7.2	394.7	0.2	8.7	11.1	0.5
2/16/2025 15:30	6.7	302.6	0.1	9.2	11.2	0.0
2/16/2025 15:45	4.3	81.4	0.0	7.5	12.0	0.0
2/16/2025 16:00	4.4	130.1	0.1	8.4	11.9	0.0
2/16/2025 16:15	4.2	81.9	0.0	8.2	12.0	0.0
2/16/2025 16:30	7.2	569.3	0.3	8.1	11.1	0.0
2/16/2025 16:45	7.4	561.0	0.3	8.0	11.0	0.0
2/16/2025 17:00	7.4	548.2	0.3	8.0	11.0	0.0
2/16/2025 17:15	7.4	510.8	0.2	8.1	11.0	0.0
2/16/2025 17:30	4.8	160.2	0.1	7.7	11.8	0.0
2/16/2025 17:45	6.2	320.2	0.2	8.1	11.3	0.0
2/16/2025 18:00	4.6	177.8	0.1	7.8	11.9	4.6
2/16/2025 18:15	6.8	493.1	0.2	8.2	11.2	0.2
2/16/2025 18:30	6.5	350.7	0.2	8.6	11.2	0.0
2/16/2025 18:45	6.2	393.0	0.2	8.6	11.4	1.1
2/16/2025 19:00	6.5	339.3	0.2	9.1	11.2	0.0
2/16/2025 19:15	4.8	210.7	0.1	8.7	11.8	0.0
2/16/2025 19:30	7.0	595.4	0.3	8.2	11.1	0.0
2/16/2025 19:45	7.1	532.2	0.3	8.5	11.1	0.0
2/16/2025 20:00	6.6	441.5	0.2	8.6	11.2	0.0
2/16/2025 20:15	6.2	369.2	0.2	8.7	11.4	4.9
2/16/2025 20:30	5.7	289.7	0.1	8.6	11.4	0.3
2/16/2025 20:45	4.1	144.9	0.1	7.7	12.0	0.0
2/16/2025 21:00	6.0	397.7	0.2	8.3	11.3	0.0
2/16/2025 21:15	6.7	424.5	0.2	8.8	11.2	0.0
2/16/2025 21:30	5.9	356.8	0.2	8.5	11.4	0.0
2/16/2025 21:45	5.4	431.7	0.2	7.9	11.8	2.1
2/16/2025 22:00	6.9	559.7	0.3	7.9	11.1	0.0
2/16/2025 22:15	7.0	519.5	0.2	7.9	11.1	0.0
2/16/2025 22:30	7.0	459.6	0.2	7.9	11.2	1.0
2/16/2025 22:45	6.3	337.0	0.2	8.0	11.5	1.0
2/16/2025 23:00	7.0	409.5	0.2	7.9	11.1	0.0
2/16/2025 23:15	5.5	240.2	0.1	7.8	11.5	0.0
2/16/2025 23:30	6.2	323.5	0.2	7.9	11.3	0.0

2/15/2025 19:45	2.3	15.2	0.0	7.0	12.4	0.0	8.0
2/15/2025 20:00	2.3	13.8	0.0	7.0	12.4	0.0	8.0
2/15/2025 20:15	2.3	15.3	0.0	7.0	12.4	0.0	8.0
2/15/2025 20:30	2.3	13.9	0.0	7.0	12.4	0.0	8.0
2/15/2025 20:45	2.3	15.2	0.0	6.9	12.4	0.0	8.0
2/15/2025 21:00	2.3	15.1	0.0	6.9	12.4	0.0	8.0
2/15/2025 21:15	2.3	15.0	0.0	7.0	12.4	0.0	8.0
2/15/2025 21:30	2.3	15.0	0.0	7.0	12.4	0.0	8.0
2/15/2025 21:45	2.2	15.0	0.0	7.1	12.4	0.0	8.0
2/15/2025 22:00		13.5	0.0	7.0	12.4	0.0	8.0
2/15/2025 22:15	2.3	15.0	0.0	6.9	12.4	0.0	8.0
2/15/2025 22:30	2.3	14.9	0.0	7.0	12.4	0.0	8.0
2/15/2025 22:45	2.3	15.1	0.0	7.0	12.4	0.0	8.0
2/15/2025 23:00	2.3	15.0	0.0	7.0	12.4	0.0	8.0
2/15/2025 23:15	2.3	13.8	0.0	7.0	12.4	0.0	8.0
2/15/2025 23:30	2.3	15.4	0.0	7.0	12.4	0.0	8.0
2/15/2025 23:45	2.3	15.6	0.0	7.0	12.4	0.0	8.0
2/16/2025 0:00		15.5	0.0	7.0	12.4	0.0	8.0
2/16/2025 0:15	2.3	14.3	0.0	7.0	12.4	0.0	8.0
2/16/2025 0:30	2.2	15.9	0.0	7.0	12.4	0.0	8.0
2/16/2025 0:45	2.2	16.2	0.0	7.0	12.4	0.0	8.0
2/16/2025 1:00	2.2	15.9	0.0	7.0	12.4	0.0	8.0
2/16/2025 1:15	2.1	14.7	0.0	7.0	12.4	0.0	8.0
2/16/2025 1:30	2.1	17.2	0.0	6.9	12.4	0.0	8.0
2/16/2025 1:45	2.1	18.1	0.0	7.1	12.4	0.0	8.0
2/16/2025 2:00	2.1	16.7	0.0	7.0	12.4	0.0	8.0
2/16/2025 2:15	2.1	18.6	0.0	6.9	12.4	0.0	8.0
2/16/2025 2:30	2.1	18.6	0.0	7.0	12.4	0.0	8.0
2/16/2025 2:45	2.2	17.2	0.0	7.0	12.4	0.0	8.0
2/16/2025 3:00	2.2	19.2	0.0	7.0	12.4	0.0	8.0
2/16/2025 3:15	2.2	19.5	0.0	7.1	12.4	0.0	8.0
2/16/2025 3:30	2.0	19.7	0.0	7.1	12.4	0.0	8.0
2/16/2025 3:45	1.9	19.8	0.0	7.0	12.4	0.0	8.0
2/16/2025 4:00	1.8	19.8	0.0	7.1	12.5	0.0	8.0
2/16/2025 4:15	1.9	19.4	0.0	7.1	12.5	0.0	8.0
2/16/2025 4:30	1.9	18.8	0.0	7.1	12.4	0.0	8.0
2/16/2025 4:45	1.9	18.5	0.0	7.0	12.4	0.0	8.0
2/16/2025 5:00	1.9	18.5	0.0	7.1	12.5	0.0	8.0
2/16/2025 5:15	2.0	18.9	0.0	7.0	12.4	0.0	8.0
2/16/2025 5:30	2.0	19.2	0.0	7.1	12.4	0.0	8.0
2/16/2025 5:45	2.0	19.6	0.0	7.0	12.4	0.1	8.1
2/16/2025 6:00	2.1	19.8	0.0	7.1	12.4	0.0	8.0
2/16/2025 6:15	2.1	18.2	0.0	7.1	12.4	0.0	8.0
2/16/2025 6:30	2.1	20.5	0.0	7.0	12.4	0.0	8.0
2/16/2025 6:45	2.1	20.6	0.0	7.1	12.4	0.0	8.0
2/16/2025 7:00	2.1	19.1	0.0	7.1	12.4	0.1	8.1
2/16/2025 7:15	2.1	21.2	0.0	7.1	12.4	0.0	8.0
2/16/2025 7:30	2.1	21.5	0.0	7.1	12.4	0.0	8.0
2/16/2025 7:45	2.1	21.4	0.0	7.1	12.4	0.0	8.0
2/16/2025 8:00	2.1	22.0	0.0	7.1	12.4	0.0	8.0
2/16/2025 8:15	2.1	21.8	0.0	7.1	12.4	0.0	8.0
2/16/2025 8:30	2.1	20.6	0.0	7.1	12.4	0.0	8.0
2/16/2025 8:45	2.1	23.4	0.0	7.1	12.4	0.2	8.2
2/16/2025 9:00	2.1	24.3	0.0	7.1	12.4	0.0	8.0
2/16/2025 9:15	2.2	25.1	0.0	7.1	12.4	0.1	8.1
2/16/2025 9:30	2.2	25.7	0.0	7.2	12.4	0.2	8.2
2/16/2025 9:45	2.2	27.8	0.0	7.2	12.4	0.0	8.0
2/16/2025 10:00	2.2	28.2	0.0	7.1	12.4	0.2	8.2
2/16/2025 10:15	2.2	27.8	0.0	7.2	12.4	0.0	8.0
2/16/2025 10:30	2.2	25.0	0.0	7.2	12.4	0.0	8.0
2/16/2025 10:45	2.3	27.2	0.0	7.1	12.4	0.0	8.0
2/16/2025 11:00	2.3	26.8	0.0	7.2	12.4	0.0	8.0
2/16/2025 11:15	2.4	26.9	0.0	7.2	12.4	0.0	8.0
2/16/2025 11:30	2.4	26.6	0.0	7.2	12.4	0.1	8.1
2/16/2025 11:45	2.4	27.1	0.0	7.2	12.4	0.2	8.2
2/16/2025 12:00	2.5	26.9	0.0	7.2	12.4	0.0	8.0
2/16/2025 12:15	2.5	27.4	0.0	7.2	12.4	0.0	8.0
2/16/2025 12:30	2.5	27.2	0.0	7.2	12.4	0.0	8.0
2/16/2025 12:45	2.5	26.1	0.0	7.2	12.3	0.0	8.0
2/16/2025 13:00	2.6	27.7	0.0	7.2	12.4	0.0	8.0
2/16/2025 13:15	2.6	28.3	0.0	7.2	12.3	0.0	8.0
2/16/2025 13:30	2.6	28.6	0.0	7.2	12.3	0.1	8.1
2/16/2025 13:45	2.6	29.5	0.0	7.2	12.3	0.0	8.0
2/16/2025 14:00	2.6	29.9	0.0	7.2	12.3	0.0	8.0
2/16/2025 14:15	2.6	31.0	0.0	7.2	12.3	0.0	8.0
2/16/2025 14:30	2.7	31.0	0.0	7.3	12.3	0.0	8.0
2/16/2025 14:45	2.7	30.4	0.0	7.3	12.3	0.0	8.0
2/16/2025 15:00	2.8	32.6	0.0	7.2	12.3	0.0	8.0
2/16/2025 15:15	2.9	34.1	0.0	7.3	12.3	0.5	8.5
2/16/2025 15:30	2.9	35.0	0.0	7.3	12.3	0.8	8.8
2/16/2025 15:45	2.9	36.7	0.0	7.3	12.3	0.1	8.1
2/16/2025 16:00	2.9	37.4	0.0	7.3	12.2	0.3	8.3
2/16/2025 16:15	3.0	34.7	0.0	7.3	12.2	2.4	10.4
2/16/2025 16:30	2.9	39.0	0.0	7.3	12.2	0.6	8.6
2/16/2025 16:45	2.9	39.2	0.0	7.4	12.2	0.3	8.3
2/16/2025 17:00	2.9	40.1	0.0	7.4	12.2	0.3	8.3
2/16/2025 17:15	2.9	40.1	0.0	7.4	12.2	0.1	8.1
2/16/2025 17:30	2.9	40.6	0.0	7.3	12.2	0.3	8.3
2/16/2025 17:45	2.8	40.3	0.0	7.4	12.2	0.4	8.4
2/16/2025 18:00	2.8	41.8	0.0	7.4	12.2	0.8	8.8
2/16/2025 18:15	2.8	41.9	0.0	7.4	12.2	0.5	8.5
2/16/2025 18:30	2.7	42.6	0.0	7.3	12.2	0.8	8.8
2/16/2025 18:45	2.7	42.7	0.0	7.4	12.2	1.2	9.2
2/16/2025 19:00	2.7	38.2	0.0	7.3	12.2	2.0	10.0
2/16/2025 19:15	2.7	41.4	0.0	7.3	12.2	3.3	11.3
2/16/2025 19:30	2.7	36.7	0.0	7.3	12.2	3.7	11.7
2/16/2025 19:45	2.6	40.3	0.0	7.3	12.2	3.4	11.4
2/16/2025 20:00	2.6	40.3	0.0	7.3	12.2	4.1	12.1
2/16/2025 20:15	2.6	39.5	0.0	7.3	12.2	3.9	11.9
2/16/2025 20:30	2.5	35.7	0.0	7.3	12.2	4.9	12.9
2/16/2025 20:45	2.5	39.3	0.0	7.3	12.3	3.4	11.4
2/16/2025 21:00	2.5	39.0	0.0	7.3	12.2	3.6	11.6
2/16/2025 21:15	2.5	35.0	0.0	7.3	12.3	3.5	11.5
2/16/2025 21:30	2.5	38.8	0.0	7.2	12.3	2.5	10.5
2/16/2025 21:45	2.5	38.3	0.0	7.2	12.3	3.8	11.8
2/16/2025 22:00		37.9	0.0	7.2	12.2	1.6	9.6
2/16/2025 22:15	2.5	33.3	0.0	7.3	12.3	2.8	10.8
2/16/2025 22:30	2.5	37.5	0.0	7.3	12.3	1.7	9.7
2/16/2025 22:45	2.5	33.2	0.0	7.3	12.3	0.9	8.9
2/16/2025 23:00	2.5	36.9	0.0	7.2	12.3	1.3	9.3
2/16/2025 23:15	2.5	37.3	0.0	7.2	12.3	1.5	9.5
2/16/2025 23:30	2.5	36.6	0.0	7.3	12.3	0.9	8.9