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	2025-02-18	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	2025-02-18	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 measure outside the applicable range is being assessed by the QP for this reporting period.

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	2025-02-17	Yes-Appendix C	1,278m^3
Woodfibre	2025-02-18	Yes-Appendix C	1,173m^3
Woodfibre	2025-02-19	Yes-Appendix C*lab sample day	1,176m^3
Woodfibre	2025-02-20	Yes-Appendix C	1,230m^3
Woodfibre	2025-02-21	Yes-Appendix C	1,339m^3
Woodfibre	2025-02-22	Yes-Appendix C	1,405m^3
Woodfibre	2025-02-23	Yes-Appendix C	1,201m^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	2025-02-19	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	2025-02-19	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

TRITON	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					VA25A3389-001	VA25A3389-002					
	Date Sampled					18-Feb-2025	18-Feb-2025					
	Time Sampled					11:09	10:37					
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	6.73	6.84		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]	-	6.5	5.9		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	-	-	-	-	126	207					
Turbidity (field)	NTU	Varies with background, see note Guideline = 9.49	Varies with background, see note Guideline = 3.60 5-week discrete sampling average = 3.4 (DS)	Varies with background, see note Guideline = 9.49	Varies with background, see note Guideline = 3.60 5-week discrete sampling average = 3.4 (DS)	1.49	3.13		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	13.09	12.57		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	-	-	-	-	29.6	28.1					
Total Dissolved Solids	mg/L	-	-	-	-	82	66					
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	-	-	-	-	1.21	0.53			Long-term (30-day) median within 20% of background median [3]		
Total Alkalinity ($CaCO_3$)	mg/L	-	Categorical	-	-	26.2	24.6			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	-	-	-	-	0.0016	< 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	-	-	-	-	0.0017	< 0.0016					
Anions and Nutrients												
Ammonia	mg/L ammonia-N	Varies with pH and temperature. See note. Guideline = 24.6	Varies with pH and temperature. See note. Guideline = 1.99	Varies with pH and temperature. See note. Guideline = 191	Varies with pH, temperature and salinity. See note. Guideline = 29	0.358	0.132		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	11.3	7.18				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 = 0.845	-	1.5	-	0.039	0.035		Guideline has interim status. Guideline is calculated with the following equation: Guideline = [-51.73 + 92.57 log10 (hardness)] * 0.01			
Nitrate (as N)	mg/L	32.8	3	-	3.7	0.324	0.135					
Nitrite (as N)	mg/L	Varies with chloride. See note. Guideline = 0.60	Varies with chloride. See note. Guideline = 0.10	-	-	0.014	0.0053		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	-	-	-	-	0.839	0.342					
Total Phosphorous	mg/L	-	0.005 to 0.015	-	-	0.136	0.0502			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	-	-	9.74	8.91			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 = 0.046 5-week field average = 0.04 (US), 0.04 (DS)	-	-	0.0359	0.0357			Guideline varies with pH, hardness and Dissolved Organic Carbon (DOC). Guideline is calculated with the following equation: Guideline = (EXP((0.645 * LN(DOC)) + (2.255 * LN(hardness)) + (1.995 * pH) + (-0.284 * (LN(hardness) * pH))-9.898)/3/1000) If hardness or DOC is below the hardness or DOC range, the minimum hardness or DOC will be applied in the calculation.		
Antimony (Sb)-Total	mg/L	0.25	0.074	-	-	< 0.00010	< 0.00010					
Arsenic (As)-Total	mg/L	-	0.005	-	0.0125	0.00021	0.00022					Interim guideline status
Barium (Ba)-Total	mg/L	-	1	-	-	0.0109	0.0113			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	0.03	0.023					
Cadmium (Cd)-Total	mg/L	-	-	-	0.00012	0.0000078	< 0.0000050					Working guideline status
Calcium (Ca)-Total	mg/L	-	-	-	-	9.41	9.14					
Cesium (Cs)-Total	mg/L	-	-	-	-	0.000046	0.000038					
Chromium (Cr) - Total	mg/L	-	-	-	-	< 0.00050	< 0.00050					
Chromium (Cr(III))-Total	mg/L	-	0.0089	-	0.056	< 0.00050	< 0.00050			Working guideline status		Working guideline status
Chromium (Cr(VI))-Total	mg/L	-	0.0025	-	0.0015	< 0.00050	< 0.00050			Working guideline status		Working guideline status
Cobalt (Co)-Total	mg/L	0.11	0.004	-	-	0.00011	0.00013					
Copper (Cu)-Total	mg/L	-	-	0.003	0.0014 5-week field average = 0.00062 (US), 0.00057 (DS)	0.00065	0.00054					
Iron (Fe)-Total	mg/L	1	-	-	-	0.344	0.303					
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	-	-	-	-	0.0032	0.0031					
Magnesium (Mg)-Total	mg/L	-	-	-	-	1.48	1.28					
Manganese (Mn)-Total	mg/L	Varies with hardness Guideline = 0.866	Varies with hardness Guideline = 0.768	-	-	0.0214	0.0199		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	-	-	0.000696	0.000688					
Nickel (Ni)-Total	mg/L	-	-	-	0.0083	< 0.00050	< 0.00050					Working guideline status
Potassium (K)-Total	mg/L	-	-	-	-	1.84	1.3					
Rubidium (Rb)-Total	mg/L	-	-	-	-	0.00231	0.00188					
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
Silicon (Si)-Total	mg/L	-	-	-	-	7.14	6.77					
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	-	-	-	-	9.16	6.12					
Strontium (Sr)-Total	mg/L	-	-	-	-	0.0622	0.0612					
Sulfur (S)-Total	mg/L	-	-	-	-	3.39	2.82					
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	-	-	-	-	0.00074	0.00092					
Tungsten (W)-Total	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Uranium (U)-Total	mg/L	0.0165	0.0075	-	-	0.00003	0.000029			Working guideline status		
Vanadium (V)-Total	mg/L	-	0.06	-	0.005 5-week field average = 0.00152 (US), 0.00142 (DS)	0.0017	0.00163					Working guideline status
Zinc (Zn)-Total	mg/L	-	-	0.055	Guideline = 0.010 5-week field average = 0.00396 (US), 0.00308 (DS)	0.0056	0.003					
Zirconium (Zr)-Total	mg/L	-	-	-	-	< 0.00020	< 0.00020					
Dissolved Metals												
Aluminum (Al)-Dissolved	mg/L	-	-	-	-	0.0105	0.0098					
Antimony (Sb)-Dissolved	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Arsenic (As)-Dissolved	mg/L	-	-	-	-	0.0002	0.00018					
Barium (Ba)-Dissolved	mg/L	-	-	-	-	0.0104	0.011					
Beryllium (Be)-Dissolved	mg/L	-	-	-	-	< 0.000100	< 0.000100					
Bismuth (Bi)-Dissolved	mg/L	-	-	-	-	< 0.000050	< 0.000050					
Boron (B)-Dissolved	mg/L	-	-	-	-	0.026	0.02					
Cadmium (Cd)-Dissolved	mg/L	Varies with hardness, see note Guideline = 0.000168	Varies with hardness, see note Guideline = 0.000080	-	-	< 0.0000050	< 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 guideline is 0.00004. If hardness is below the hardness range, the minimum hardness will be applied in the calculation.		
Calcium (Ca)-Dissolved	mg/L	-	Categorical, see note	-	-	9.17	8.77			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	-	-	-	-	0.000044	0.000039					
Chromium (Cr)-Dissolved	mg/L	-	-	-	-	< 0.00050	< 0.00050					
Cobalt (Co)-Dissolved	mg/L	-	-	-	-	0.00011	0.00011					
Copper (Cu)-Dissolved	mg/L	Guideline varies with other parameters, see note Guideline = 0.0008	Guideline varies with other parameters, see note Guideline = 0.0002 5-week field average = 0.000468 (US), 0.00044 (DS)	-	-	0.00049	0.00042	US and DS Samples in excess of BCWQ guidelines for FAL long-term.	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	-	-	-	0.218	0.19					
Lead (Pb)-Dissolved	mg/L	-	Guideline varies with DOC and hardness Guideline = 0.00163 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	-	-	-	-	0.003	0.0028					
Magnesium (Mg)-Dissolved	mg/L	-	-	-	-	1.46	1.24					
Manganese (Mn)-Dissolved	mg/L	-	-	-	-	0.0213	0.0182					
Mercury (Hg)-Dissolved	mg/L	-	-	-	-	< 0.0000050	< 0.0000050					
Molybdenum (Mo)-Dissolved	mg/L	-	-	-	-	0.000665	0.000682					
Nickel (Ni)-Dissolved	mg/L	Guideline varies with other parameters, see note Guideline = 0.01725	Guideline varies with other parameters, see note Guideline = 0.00103 5-week field average = < 0.0005 (US), < 0.0005 (DS)	0.0003	-	< 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	-	-	-	-	0.107	< 0.050					
Potassium (K)-Dissolved	mg/L	-	-	-	-	1.92	1.32					
Rubidium (Rb)-Dissolved	mg/L	-	-	-	-	0.0026	0.00188					
Selenium (Se)-Dissolved	mg/L	-	-	-	-	< 0.000050	< 0.000050					
Silicon (Si)-Dissolved	mg/L	-	-	-	-	7.26	6.4					
Silver (Ag)-Dissolved	mg/L	-	-	-	-	< 0.000010	< 0.000010					
Sodium (Na)-Dissolved	mg/L	-	-	-	-	8.9	5.89					
Strontium (Sr)-Dissolved	mg/L	-	-	-	-	0.0621	0.0617					
Sulfur (S)-Dissolved	mg/L	-	-	-	-	3.14	2.9					
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	-	-	-	-	0.000025	0.000026					
Vanadium (V)-Dissolved	mg/L	-	-	-	-	0.00142	0.00141					
Zinc (Zn)-Dissolved	mg/L	Varies with DOC and hardness Guideline = 0.015	Varies with pH, DOC, hardness Guideline = 0.004212 5-week field average = 0.003 (US), 0.0023 (DS)	-	-	0.0043	0.0022		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	6.73	6.84
Temperature (field)	°C	Field temperature taken using handheld meters during sampling used in calculations	6.5	5.9
Turbidity (field)	NTU	Field turbidity taken using handheld meters during sampling used in calculations	1.49	3.13
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	29.6	28.1
Dissolved Organic Carbon (DOC)	mg/L	Laboratory tested dissolved organic carbon tested at the lab used in guideline calculations	1.21	0.53
Total Alkalinity ($CaCO_3$)	mg/L	Laboratory tested total alkalinity used in calculations	26.2	24.6
Chloride	mg/L	Laboratory tested chloride taken at each respective sample site on the day of sampling used in guideline calculations	11.3	7.18

BCR Site Receiving Environment Lab Documentation

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CERTIFICATE OF ANALYSIS

Work Order	:		
Client	:	Laboratory	:
Contact	:	Account Manager	:
Address	:	Address	:
Telephone	:	Telephone	:
Project	:	Date Samples Received	: 18-Feb-2025 12:50
PO	:	Date Analysis Commenced	: 19-Feb-2025
C-O-C number	: ----	Issue Date	: 26-Feb-2025 13:16
Sampler	: ----		
Site	: Water Analysis		
Quote number	: VA25-TRIT100-001		
No. of samples received	: 3		
No. of samples analysed	: 3		

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

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

Signatories

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

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

General Comments

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

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

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

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

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

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

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

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

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SQU US 1	SQU DS 1	BCR Trip Blank	----	----
					Client sampling date / time	18-Feb-2025 11:09	18-Feb-2025 10:37	18-Feb-2025 10:00	----	----
						VA25A3389-001	VA25A3389-002	VA25A3389-003	----	----
						Result	Result	Result	----	----
Field Tests										
Conductivity, field	----	EF001/VA	0.10	µS/cm		126.00	207.00	----	----	----
pH, field	----	EF001/VA	0.10	pH units		6.73	6.84	----	----	----
Temperature, field	----	EF001/VA	0.10	°C		6.50	5.90	----	----	----
Physical Tests										
Hardness (as CaCO3), dissolved	----	EC100/VA	0.60	mg/L		28.9	27.0	----	----	----
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L		29.6	28.1	<0.60	----	----
Solids, total dissolved [TDS]	----	E162/VA	10	mg/L		82	66	<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		26.2	24.6	----	----	----
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L		0.358	0.132	<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		11.3	7.18	<0.50	----	----
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L		0.039	0.035	<0.020	----	----
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L		0.324	0.135	<0.0050	----	----
Nitrite (as N)	14797-65-0	E235.NO2-L/VA	0.0010	mg/L		0.0140	0.0053	<0.0010	----	----
Nitrogen, total	7727-37-9	E366/VA	0.030	mg/L		0.839	0.342	<0.030	----	----
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L		0.136	0.0502	<0.0020	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L		9.74	8.91	<0.30	----	----
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L		1.21	0.53	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SQU US 1	SQU DS 1	BCR Trip Blank	----	----
					Client sampling date / time	18-Feb-2025 11:09	18-Feb-2025 10:37	18-Feb-2025 10:00	----	----
						VA25A3389-001	VA25A3389-002	VA25A3389-003	----	----
						Result	Result	Result	----	----
Total Sulfides										
Sulfide, total (as S)	18496-25-8	E395/VA	0.0015	mg/L		0.0016	<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		0.0017	<0.0016	<0.0016	----	----
Total Metals										
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L		0.0359	0.0357	<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		0.00021	0.00022	<0.00010	----	----
Barium, total	7440-39-3	E420/VA	0.00010	mg/L		0.0109	0.0113	<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		0.030	0.023	<0.010	----	----
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L		0.0000078	<0.0000050	<0.0000050	----	----
Calcium, total	7440-70-2	E420/VA	0.050	mg/L		9.41	9.14	<0.050	----	----
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L		0.000046	0.000038	<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		0.00011	0.00013	<0.00010	----	----
Copper, total	7440-50-8	E420/VA	0.00050	mg/L		0.00065	0.00054	<0.00050	----	----
Iron, total	7439-89-6	E420/VA	0.010	mg/L		0.344	0.303	<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		0.0032	0.0031	<0.0010	----	----
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L		1.48	1.28	<0.0050	----	----

Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	SQU US 1	SQU DS 1	BCR Trip Blank	----	----
					Client sampling date / time	18-Feb-2025 11:09	18-Feb-2025 10:37	18-Feb-2025 10:00	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A3389-001	VA25A3389-002	VA25A3389-003	----	----
						Result	Result	Result	----	----
Total Metals										
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L		0.0214	0.0199	<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		0.000696	0.000688	<0.000050	----	----
Nickel, total	7440-02-0	E420/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	----	----
Phosphorus, total	7723-14-0	E420/VA	0.050	mg/L		0.160	0.064	<0.050	----	----
Potassium, total	7440-09-7	E420/VA	0.050	mg/L		1.84	1.30	<0.050	----	----
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L		0.00231	0.00188	<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		7.14	6.77	<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		9.16	6.12	<0.050	----	----
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L		0.0622	0.0612	<0.00020	----	----
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L		3.39	2.82	<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		0.00074	0.00092	<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	0.000029	<0.000010	----	----
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L		0.00170	0.00163	<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	BCR Trip Blank	----	----
					Client sampling date / time	18-Feb-2025 11:09	18-Feb-2025 10:37	18-Feb-2025 10:00	----	----
						VA25A3389-001	VA25A3389-002	VA25A3389-003	----	----
						Result	Result	Result	----	----
Total Metals										
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L		0.0056	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		0.0105	0.0098	----	----	----
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L		0.00020	0.00018	----	----	----
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L		0.0104	0.0110	----	----	----
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		0.026	0.020	----	----	----
Cadmium, dissolved	7440-43-9	E421/VA	0.0000050	mg/L		<0.0000050	<0.0000050	----	----	----
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L		9.17	8.77	----	----	----
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L		0.000044	0.000039	----	----	----
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		0.00011	0.00011	----	----	----
Copper, dissolved	7440-50-8	E421/VA	0.00020	mg/L		0.00049	0.00042	----	----	----
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L		0.218	0.190	----	----	----
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		0.0030	0.0028	----	----	----
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L		1.46	1.24	----	----	----
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L		0.0213	0.0182	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SQU US 1	SQU DS 1	BCR Trip Blank	----	----
					Client sampling date / time	18-Feb-2025 11:09	18-Feb-2025 10:37	18-Feb-2025 10:00	----	----
						VA25A3389-001	VA25A3389-002	VA25A3389-003	----	----
						Result	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		0.000665	0.000682	----	----	----
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		0.107	<0.050	----	----	----
Potassium, dissolved	7440-09-7	E421/VA	0.050	mg/L		1.92	1.32	----	----	----
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L		0.00260	0.00188	----	----	----
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		7.26	6.40	----	----	----
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		8.90	5.89	----	----	----
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L		0.0621	0.0617	----	----	----
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L		3.14	2.90	----	----	----
Tellurium, dissolved	13494-80-9	E421/VA	0.00020	mg/L		<0.00020	<0.00020	----	----	----
Thallium, dissolved	7440-28-0	E421/VA	0.000010	mg/L		<0.000010	<0.000010	----	----	----
Thorium, dissolved	7440-29-1	E421/VA	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Tin, dissolved	7440-31-5	E421/VA	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Titanium, dissolved	7440-32-6	E421/VA	0.00030	mg/L		<0.00030	<0.00030	----	----	----
Tungsten, dissolved	7440-33-7	E421/VA	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L		0.000025	0.000026	----	----	----
Vanadium, dissolved	7440-62-2	E421/VA	0.00050	mg/L		0.00142	0.00141	----	----	----
Zinc, dissolved	7440-66-6	E421/VA	0.0010	mg/L		0.0043	0.0022	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	SQU US 1	SQU DS 1	BCR Trip Blank	----	----
					Client sampling date / time	18-Feb-2025 11:09	18-Feb-2025 10:37	18-Feb-2025 10:00	----	----
						VA25A3389-001	VA25A3389-002	VA25A3389-003	----	----
						Result	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	<0.00050	----	----
Chromium, trivalent [Cr III], total	16065-83-1	EC535/VA	0.00050	mg/L		<0.00050	<0.00050	<0.00050	----	----
Aggregate Organics										
Phenols, total (4AAP)	----	E562/EO	0.0010	mg/L		----	----	<0.0010	----	----

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 16
Client	:	Laboratory	:
Contact	:	Account Manager	:
Address	:	Address	:
Telephone	:	Telephone	:
Project	:	Date Samples Received	: 18-Feb-2025 12:50
PO	:	Issue Date	: 26-Feb-2025 13:16
C-O-C number	: ----		
Sampler	: ----		
Site	: Water Analysis		
Quote number	: VA25-TRIT100-001		
No. of samples received	: 3		
No. of samples analysed	: 3		

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

Key

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

Workorder Comments

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

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- 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 (lab preserved)										
BCR Trip Blank	E562	18-Feb-2025	21-Feb-2025	28 days	3 days	✓	21-Feb-2025	28 days	3 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid)										
SQU DS 1	E298	18-Feb-2025	21-Feb-2025	28 days	3 days	✓	22-Feb-2025	28 days	4 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid)										
SQU US 1	E298	18-Feb-2025	21-Feb-2025	28 days	3 days	✓	22-Feb-2025	28 days	4 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (lab preserved)										
BCR Trip Blank	E298	18-Feb-2025	21-Feb-2025	3 days	3 days	✓	22-Feb-2025	28 days	1 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE										
BCR Trip Blank	E235.Br-L	18-Feb-2025	20-Feb-2025	28 days	2 days	✓	20-Feb-2025	28 days	2 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE										
SQU DS 1	E235.Br-L	18-Feb-2025	20-Feb-2025	28 days	2 days	✓	20-Feb-2025	28 days	2 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE										
SQU US 1	E235.Br-L	18-Feb-2025	20-Feb-2025	28 days	2 days	✓	20-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 : Chloride in Water by IC										
HDPE BCR Trip Blank	E235.Cl	18-Feb-2025	20-Feb-2025	28 days	2 days	✓	20-Feb-2025	28 days	2 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE SQU DS 1	E235.Cl	18-Feb-2025	20-Feb-2025	28 days	2 days	✓	20-Feb-2025	28 days	2 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE SQU US 1	E235.Cl	18-Feb-2025	20-Feb-2025	28 days	2 days	✓	20-Feb-2025	28 days	2 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE BCR Trip Blank	E235.F	18-Feb-2025	20-Feb-2025	28 days	2 days	✓	20-Feb-2025	28 days	2 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE SQU DS 1	E235.F	18-Feb-2025	20-Feb-2025	28 days	2 days	✓	20-Feb-2025	28 days	2 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE SQU US 1	E235.F	18-Feb-2025	20-Feb-2025	28 days	2 days	✓	20-Feb-2025	28 days	2 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE BCR Trip Blank	E235.NO3-L	18-Feb-2025	20-Feb-2025	3 days	2 days	✓	20-Feb-2025	3 days	2 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE SQU DS 1	E235.NO3-L	18-Feb-2025	20-Feb-2025	3 days	2 days	✓	20-Feb-2025	3 days	2 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE SQU US 1	E235.NO3-L	18-Feb-2025	20-Feb-2025	3 days	2 days	✓	20-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		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
BCR Trip Blank	E235.NO2-L	18-Feb-2025	20-Feb-2025	3 days	2 days	✓	20-Feb-2025	3 days	2 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
SQU DS 1	E235.NO2-L	18-Feb-2025	20-Feb-2025	3 days	2 days	✓	20-Feb-2025	3 days	2 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
SQU US 1	E235.NO2-L	18-Feb-2025	20-Feb-2025	3 days	2 days	✓	20-Feb-2025	3 days	2 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
BCR Trip Blank	E235.SO4	18-Feb-2025	20-Feb-2025	28 days	2 days	✓	20-Feb-2025	28 days	2 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
SQU DS 1	E235.SO4	18-Feb-2025	20-Feb-2025	28 days	2 days	✓	20-Feb-2025	28 days	2 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
SQU US 1	E235.SO4	18-Feb-2025	20-Feb-2025	28 days	2 days	✓	20-Feb-2025	28 days	2 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid)										
SQU DS 1	E366	18-Feb-2025	21-Feb-2025	28 days	3 days	✓	24-Feb-2025	28 days	6 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid)										
SQU US 1	E366	18-Feb-2025	21-Feb-2025	28 days	3 days	✓	24-Feb-2025	28 days	6 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (lab preserved)										
BCR Trip Blank	E366	18-Feb-2025	21-Feb-2025	3 days	3 days	✓	24-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)										
SQU DS 1	E372-U	18-Feb-2025	21-Feb-2025	28 days	3 days	✓	22-Feb-2025	28 days	4 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
SQU US 1	E372-U	18-Feb-2025	21-Feb-2025	28 days	3 days	✓	22-Feb-2025	28 days	4 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (lab preserved)										
BCR Trip Blank	E372-U	18-Feb-2025	21-Feb-2025	3 days	3 days	✓	22-Feb-2025	28 days	3 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
SQU DS 1	E509	18-Feb-2025	25-Feb-2025	28 days	7 days	✓	25-Feb-2025	28 days	7 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
SQU US 1	E509	18-Feb-2025	25-Feb-2025	28 days	7 days	✓	25-Feb-2025	28 days	7 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
SQU DS 1	E421	18-Feb-2025	19-Feb-2025	180 days	1 days	✓	21-Feb-2025	180 days	3 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
SQU US 1	E421	18-Feb-2025	19-Feb-2025	180 days	1 days	✓	21-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 dissolved (hydrochloric acid)										
SQU DS 1	EF001	18-Feb-2025	----	----	----		20-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 dissolved (hydrochloric acid)										
SQU US 1	EF001	18-Feb-2025	----	----	----		20-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 Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
SQU DS 1	E358-L	18-Feb-2025	21-Feb-2025	28 days	3 days	✓	21-Feb-2025	28 days	3 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
SQU US 1	E358-L	18-Feb-2025	21-Feb-2025	28 days	3 days	✓	21-Feb-2025	28 days	3 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
SQU DS 1	E290	18-Feb-2025	20-Feb-2025	14 days	2 days	✓	20-Feb-2025	14 days	2 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
SQU US 1	E290	18-Feb-2025	20-Feb-2025	14 days	2 days	✓	20-Feb-2025	14 days	2 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
BCR Trip Blank	E162	18-Feb-2025	----	----	----		24-Feb-2025	7 days	7 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
SQU DS 1	E162	18-Feb-2025	----	----	----		24-Feb-2025	7 days	7 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
SQU US 1	E162	18-Feb-2025	----	----	----		24-Feb-2025	7 days	7 days	✓
Physical Tests : TSS by Gravimetry										
HDPE										
BCR Trip Blank	E160	18-Feb-2025	----	----	----		25-Feb-2025	7 days	7 days	✓
Physical Tests : TSS by Gravimetry										
HDPE										
SQU DS 1	E160	18-Feb-2025	----	----	----		25-Feb-2025	7 days	7 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : TSS by Gravimetry										
HDPE										
SQU US 1	E160	18-Feb-2025	----	----	----		25-Feb-2025	7 days	7 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide)										
BCR Trip Blank	E532	18-Feb-2025	----	----	----		19-Feb-2025	28 days	1 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide)										
SQU DS 1	E532	18-Feb-2025	----	----	----		19-Feb-2025	28 days	1 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide)										
SQU US 1	E532	18-Feb-2025	----	----	----		19-Feb-2025	28 days	1 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial - total (lab preserved)										
BCR Trip Blank	E508	18-Feb-2025	25-Feb-2025	28 days	7 days	✓	25-Feb-2025	28 days	7 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid)										
SQU DS 1	E508	18-Feb-2025	25-Feb-2025	28 days	7 days	✓	25-Feb-2025	28 days	7 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid)										
SQU US 1	E508	18-Feb-2025	25-Feb-2025	28 days	7 days	✓	25-Feb-2025	28 days	7 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid)										
SQU DS 1	E420	18-Feb-2025	19-Feb-2025	180 days	1 days	✓	21-Feb-2025	180 days	3 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid)										
SQU US 1	E420	18-Feb-2025	19-Feb-2025	180 days	1 days	✓	21-Feb-2025	180 days	3 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	*Method*	*Sampling Date*	*Extraction / Preparation*				*Analysis*			
			Preparation Date	*Holding Times*		*Eval*	*Analysis Date*	*Holding Times*		*Eval*
				Rec	*Actual*			*Rec*	*Actual*	
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE - total (lab preserved)										
BCR Trip Blank	E420	18-Feb-2025	20-Feb-2025	180 days	2 days	✓	21-Feb-2025	180 days	3 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide)										
BCR Trip Blank	E395	18-Feb-2025	----	----	----		24-Feb-2025	7 days	6 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide)										
SQU DS 1	E395	18-Feb-2025	----	----	----		24-Feb-2025	7 days	6 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide)										
SQU US 1	E395	18-Feb-2025	----	----	----		24-Feb-2025	7 days	6 days	✓

Legend & Qualifier Definitions

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

Quality Control Parameter Frequency Compliance

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

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
TSS by Gravimetry	E160	1885153	1	13	7.6	5.0	✓
TDS by Gravimetry	E162	1885152	1	3	33.3	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1879755	1	20	5.0	5.0	✓
Chloride in Water by IC	E235.Cl	1879754	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	1879753	1	20	5.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1879757	1	20	5.0	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1879756	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1879758	1	20	5.0	5.0	✓
Alkalinity Species by Titration	E290	1879750	1	19	5.2	5.0	✓
Ammonia by Fluorescence	E298	1881602	1	18	5.5	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1881603	1	7	14.2	5.0	✓
Total Nitrogen by Colourimetry	E366	1881599	1	4	25.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1881600	1	18	5.5	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1884976	1	7	14.2	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1878561	2	32	6.2	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1878571	1	18	5.5	5.0	✓
Total Mercury in Water by CVAAS	E508	1885325	1	6	16.6	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1885190	1	19	5.2	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1879403	1	20	5.0	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1881963	1	20	5.0	5.0	✓
Laboratory Control Samples (LCS)							
TSS by Gravimetry	E160	1885153	1	13	7.6	5.0	✓
TDS by Gravimetry	E162	1885152	1	3	33.3	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1879755	1	20	5.0	5.0	✓
Chloride in Water by IC	E235.Cl	1879754	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	1879753	1	20	5.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1879757	1	20	5.0	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1879756	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1879758	1	20	5.0	5.0	✓
Alkalinity Species by Titration	E290	1879750	1	19	5.2	5.0	✓
Ammonia by Fluorescence	E298	1881602	1	18	5.5	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1881603	1	7	14.2	5.0	✓
Total Nitrogen by Colourimetry	E366	1881599	1	4	25.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1881600	1	18	5.5	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1884976	1	7	14.2	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1878561	2	32	6.2	5.0	✓

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Control Samples (LCS) - Continued							
Dissolved Metals in Water by CRC ICPMS	E421	1878571	1	18	5.5	5.0	✓
Total Mercury in Water by CVAAS	E508	1885325	1	6	16.6	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1885190	1	19	5.2	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1879403	1	20	5.0	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1881963	1	20	5.0	5.0	✓
Method Blanks (MB)							
TSS by Gravimetry	E160	1885153	1	13	7.6	5.0	✓
TDS by Gravimetry	E162	1885152	1	3	33.3	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1879755	1	20	5.0	5.0	✓
Chloride in Water by IC	E235.Cl	1879754	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	1879753	1	20	5.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1879757	1	20	5.0	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1879756	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1879758	1	20	5.0	5.0	✓
Alkalinity Species by Titration	E290	1879750	1	19	5.2	5.0	✓
Ammonia by Fluorescence	E298	1881602	1	18	5.5	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1881603	1	7	14.2	5.0	✓
Total Nitrogen by Colourimetry	E366	1881599	1	4	25.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1881600	1	18	5.5	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1884976	1	7	14.2	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1878561	2	32	6.2	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1878571	1	18	5.5	5.0	✓
Total Mercury in Water by CVAAS	E508	1885325	1	6	16.6	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1885190	1	19	5.2	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1879403	1	20	5.0	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1881963	1	20	5.0	5.0	✓
Matrix Spikes (MS)							
Bromide in Water by IC (Low Level)	E235.Br-L	1879755	1	20	5.0	5.0	✓
Chloride in Water by IC	E235.Cl	1879754	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	1879753	1	20	5.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1879757	1	20	5.0	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1879756	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1879758	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	1881602	1	18	5.5	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1881603	1	7	14.2	5.0	✓
Total Nitrogen by Colourimetry	E366	1881599	1	4	25.0	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1881600	1	18	5.5	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1884976	1	7	14.2	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1878561	3	32	9.3	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							
Dissolved Metals in Water by CRC ICPMS	E421	1878571	1	18	5.5	5.0	✓
Total Mercury in Water by CVAAS	E508	1885325	1	6	16.6	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1885190	1	19	5.2	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1879403	1	20	5.0	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1881963	1	20	5.0	5.0	✓

Methodology References and Summaries

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

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

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

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Total Hexavalent Chromium (Cr VI) by IC	E532 ALS Environmental - Vancouver	Water	APHA 3500-Cr C (Ion Chromatography)	Hexavalent Chromium is measured by Ion chromatography-Post column reaction and UV detection. Results are based on an un-filtered, field-preserved sample.
Phenols (4AAP) in Water by Colorimetry	E562 ALS Environmental - Edmonton	Water	EPA 9066	This automated method is based on the distillation of phenol and subsequent reaction of the distillate with alkaline ferricyanide (K3Fe(CN)6) and 4-amino-antipyrine (4-AAP) to form a red complex which is measured colorimetrically.
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.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Digestion for Total Phosphorus in water	EP372 ALS Environmental - Vancouver	Water	APHA 4500-P E (mod).	Samples are heated with a persulfate digestion reagent.
Dissolved Metals Water Filtration	EP421 ALS Environmental - Vancouver	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO3.
Dissolved Mercury Water Filtration	EP509 ALS Environmental - Vancouver	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HCl.

QUALITY CONTROL REPORT

Work Order	: [redacted]	Page	: 1 of 21
Client	:	Laboratory	: [redacted]
Contact	:	Account Manager	:
Address	:	Address	:
Telephone	:	Telephone	:
Project	:	Date Samples Received	: 18-Feb-2025 12:50
PO	:	Date Analysis Commenced	: 19-Feb-2025
C-O-C number	: ----	Issue Date	: 26-Feb-2025 13:16
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 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
		Edmonton Inorganics, Edmonton, Alberta
		Vancouver Inorganics, 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: 1879750)											
VA25A3506-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	115	115	0.435%	20%	----
Physical Tests (QC Lot: 1885152)											
VA25A3389-001	SQU US 1	Solids, total dissolved [TDS]	----	E162	13	mg/L	82	84	2	Diff <2x LOR	----
Physical Tests (QC Lot: 1885153)											
VA25A3389-001	SQU US 1	Solids, total suspended [TSS]	----	E160	3.0	mg/L	<3.0	<3.0	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1879753)											
VA25A3389-001	SQU US 1	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.039	0.040	0.001	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1879754)											
VA25A3389-001	SQU US 1	Chloride	16887-00-6	E235.Cl	0.50	mg/L	11.3	11.4	0.111%	20%	----
Anions and Nutrients (QC Lot: 1879755)											
VA25A3389-001	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: 1879756)											
VA25A3389-001	SQU US 1	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0050	mg/L	0.324	0.324	0.0368%	20%	----
Anions and Nutrients (QC Lot: 1879757)											
VA25A3389-001	SQU US 1	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L	0.0140	0.0145	3.78%	20%	----
Anions and Nutrients (QC Lot: 1879758)											
VA25A3389-001	SQU US 1	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	9.74	9.73	0.110%	20%	----
Anions and Nutrients (QC Lot: 1881599)											
KS2500446-001	Anonymous	Nitrogen, total	7727-37-9	E366	1.50	mg/L	60.8	60.1	1.18%	20%	----
Anions and Nutrients (QC Lot: 1881600)											
KS2500521-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0228	0.0226	0.837%	20%	----
Anions and Nutrients (QC Lot: 1881602)											
KS2500521-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.0432	0.0438	0.0006	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 1881603)											
VA25A3310-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	1.52	1.61	0.10	Diff <2x LOR	----
Total Sulfides (QC Lot: 1884976)											
VA25A3389-001	SQU US 1	Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.0016	0.0015	0.00005	Diff <2x LOR	----
Total Metals (QC Lot: 1878561)											
VA25A3354-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0150	mg/L	0.113	0.101	0.0115	Diff <2x LOR	----
		Antimony, total	7440-36-0	E420	0.00050	mg/L	0.0260	0.0264	1.55%	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: 1878561) - continued											
VA25A3354-001	Anonymous	Arsenic, total	7440-38-2	E420	0.00050	mg/L	0.279	0.276	1.08%	20%	----
		Barium, total	7440-39-3	E420	0.00050	mg/L	0.101	0.0998	0.783%	20%	----
		Beryllium, total	7440-41-7	E420	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Bismuth, total	7440-69-9	E420	0.000250	mg/L	0.000255	0.000262	0.000007	Diff <2x LOR	----
		Boron, total	7440-42-8	E420	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.0000250	mg/L	0.00887	0.00925	4.13%	20%	----
		Calcium, total	7440-70-2	E420	0.250	mg/L	138	137	0.571%	20%	----
		Cesium, total	7440-46-2	E420	0.000050	mg/L	0.000235	0.000230	0.000005	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420	0.00250	mg/L	<0.00250	<0.00250	0	Diff <2x LOR	----
		Cobalt, total	7440-48-4	E420	0.00050	mg/L	2.02	1.88	7.65%	20%	----
		Copper, total	7440-50-8	E420	0.00250	mg/L	19.6	18.9	3.87%	20%	----
		Iron, total	7439-89-6	E420	0.050	mg/L	1.51	1.48	1.87%	20%	----
		Lead, total	7439-92-1	E420	0.000250	mg/L	0.000419	0.000435	0.000016	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0050	mg/L	0.0413	0.0406	0.0006	Diff <2x LOR	----
		Magnesium, total	7439-95-4	E420	0.100	mg/L	22.4	22.3	0.530%	20%	----
		Manganese, total	7439-96-5	E420	0.00050	mg/L	0.615	0.609	0.958%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000250	mg/L	0.220	0.222	1.10%	20%	----
		Nickel, total	7440-02-0	E420	0.00250	mg/L	5.28	5.24	0.781%	20%	----
		Phosphorus, total	7723-14-0	E420	0.250	mg/L	<0.250	<0.250	0	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.250	mg/L	7.51	7.32	2.54%	20%	----
		Rubidium, total	7440-17-7	E420	0.00100	mg/L	0.00323	0.00382	0.00059	Diff <2x LOR	----
		Selenium, total	7782-49-2	E420	0.000250	mg/L	0.101	0.101	0.684%	20%	----
		Silicon, total	7440-21-3	E420	0.50	mg/L	2.60	2.70	0.10	Diff <2x LOR	----
		Silver, total	7440-22-4	E420	0.000050	mg/L	0.130	0.130	0.112%	20%	----
		Sodium, total	7440-23-5	E420	0.250	mg/L	180	177	1.88%	20%	----
		Strontium, total	7440-24-6	E420	0.00100	mg/L	1.05	1.05	0.187%	20%	----
		Sulfur, total	7704-34-9	E420	2.50	mg/L	179	180	0.739%	20%	----
		Tellurium, total	13494-80-9	E420	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
		Thallium, total	7440-28-0	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Thorium, total	7440-29-1	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.00150	mg/L	0.00244	0.00246	0.00002	Diff <2x LOR	----
		Tungsten, total	7440-33-7	E420	0.00050	mg/L	0.00650	0.00673	3.46%	20%	----
		Uranium, total	7440-61-1	E420	0.000050	mg/L	0.0101	0.0103	1.98%	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: 1878561) - continued											
VA25A3354-001	Anonymous	Vanadium, total	7440-62-2	E420	0.00250	mg/L	<0.00250	<0.00250	0	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0150	mg/L	0.108	0.110	0.0020	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
Total Metals (QC Lot: 1879062)											
VA25A3435-003	Anonymous	Aluminum, total	7429-90-5	E420	0.0060	mg/L	0.376	0.372	1.02%	20%	----
		Antimony, total	7440-36-0	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Arsenic, total	7440-38-2	E420	0.00020	mg/L	0.00067	0.00067	0.000003	Diff <2x LOR	----
		Barium, total	7440-39-3	E420	0.00020	mg/L	0.0251	0.0240	4.55%	20%	----
		Beryllium, total	7440-41-7	E420	0.000040	mg/L	<0.000040	<0.000040	0	Diff <2x LOR	----
		Bismuth, total	7440-69-9	E420	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Boron, total	7440-42-8	E420	0.020	mg/L	0.173	0.171	0.001	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.0000100	mg/L	0.0000183	0.0000132	0.0000051	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.100	mg/L	31.3	32.0	2.14%	20%	----
		Cesium, total	7440-46-2	E420	0.000020	mg/L	0.000037	0.000039	0.000001	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420	0.00100	mg/L	0.00116	<0.00100	0.00016	Diff <2x LOR	----
		Cobalt, total	7440-48-4	E420	0.00020	mg/L	0.00030	0.00030	0.000006	Diff <2x LOR	----
		Copper, total	7440-50-8	E420	0.00100	mg/L	0.00184	0.00176	0.00008	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.020	mg/L	0.587	0.581	1.07%	20%	----
		Lead, total	7439-92-1	E420	0.000100	mg/L	0.00137	0.00137	0.312%	20%	----
		Lithium, total	7439-93-2	E420	0.0020	mg/L	0.0082	0.0080	0.0002	Diff <2x LOR	----
		Magnesium, total	7439-95-4	E420	0.0100	mg/L	55.8	56.2	0.840%	20%	----
		Manganese, total	7439-96-5	E420	0.00020	mg/L	0.0283	0.0287	1.68%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000100	mg/L	0.00138	0.00140	1.12%	20%	----
		Nickel, total	7440-02-0	E420	0.00100	mg/L	0.00180	0.00161	0.00019	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E420	0.100	mg/L	<0.100	<0.100	0	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.100	mg/L	16.9	17.9	5.50%	20%	----
		Rubidium, total	7440-17-7	E420	0.00040	mg/L	0.00527	0.00544	3.21%	20%	----
		Selenium, total	7782-49-2	E420	0.000100	mg/L	0.000101	0.000123	0.000022	Diff <2x LOR	----
		Silicon, total	7440-21-3	E420	0.20	mg/L	4.02	4.19	4.16%	20%	----
		Silver, total	7440-22-4	E420	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Sodium, total	7440-23-5	E420	0.100	mg/L	401	408	1.66%	20%	----
		Strontium, total	7440-24-6	E420	0.00040	mg/L	0.395	0.405	2.39%	20%	----
		Sulfur, total	7704-34-9	E420	1.00	mg/L	42.2	42.3	0.0744%	20%	----
		Tellurium, total	13494-80-9	E420	0.00040	mg/L	<0.00040	<0.00040	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Total Metals (QC Lot: 1879062) - continued											
VA25A3435-003	Anonymous	Thallium, total	7440-28-0	E420	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Thorium, total	7440-29-1	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.00060	mg/L	0.0187	0.0175	6.36%	20%	----
		Tungsten, total	7440-33-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Uranium, total	7440-61-1	E420	0.000020	mg/L	0.000403	0.000417	3.36%	20%	----
		Vanadium, total	7440-62-2	E420	0.00100	mg/L	0.00152	0.00163	0.00011	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0060	mg/L	<0.0060	<0.0060	0	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00040	mg/L	<0.00040	<0.00040	0	Diff <2x LOR	----
Total Metals (QC Lot: 1885325)											
VA25A3348-002	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	0.0000527	0.0000534	1.17%	20%	----
Dissolved Metals (QC Lot: 1878571)											
VA25A3353-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0023	0.0017	0.0005	Diff <2x LOR	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	0.00053	0.00053	0.000008	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00286	0.00289	1.19%	20%	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0564	0.0555	1.57%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.0000274	0.0000276	0.0000002	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	61.0	59.8	2.01%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	0.000017	0.000017	0.0000002	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	0.0243	0.0245	0.940%	20%	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00036	0.00041	0.00005	Diff <2x LOR	----
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.038	0.038	0.00007	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	0.0096	0.0092	0.0003	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.100	mg/L	24.6	24.7	0.188%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.182	0.182	0.237%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000240	0.000244	0.000004	Diff <2x LOR	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.0113	0.0112	0.839%	20%	----
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.100	mg/L	1.66	1.72	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*
Dissolved Metals (QC Lot: 1878571) - continued											
VA25A3353-001	Anonymous	Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00178	0.00185	0.00007	Diff <2x LOR	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000430	0.000515	0.000085	Diff <2x LOR	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	4.71	4.77	1.30%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000010	mg/L	0.000021	0.000020	0.00000008	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.050	mg/L	3.58	3.50	2.18%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.329	0.334	1.38%	20%	----
		Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	37.1	38.5	3.77%	20%	----
		Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.00265	0.00260	1.95%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0037	0.0035	0.0002	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: 1885190)											
VA25A3370-011	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Speciated Metals (QC Lot: 1879403)											
KS2500517-001	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
Aggregate Organics (QC Lot: 1881963)											
VA25A3387-001	Anonymous	Phenols, total (4AAP)	----	E562	0.0010	mg/L	<0.0010	<0.0010	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: 1879750)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 1885152)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Physical Tests (QCLot: 1885153)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Anions and Nutrients (QCLot: 1879753)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 1879754)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 1879755)						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 1879756)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1879757)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 1879758)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 1881599)						
Nitrogen, total	7727-37-9	E366	0.03	mg/L	<0.030	----
Anions and Nutrients (QCLot: 1881600)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Anions and Nutrients (QCLot: 1881602)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Organic / Inorganic Carbon (QCLot: 1881603)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Total Sulfides (QCLot: 1884976)						
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	----
Total Metals (QCLot: 1878561)						
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: 1878561) - 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: 1879062)						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
Barium, total	7440-39-3	E420	0.0001	mg/L	<0.00010	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	<0.000020	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	<0.000050	----
Boron, total	7440-42-8	E420	0.01	mg/L	<0.010	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
Calcium, total	7440-70-2	E420	0.05	mg/L	<0.050	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	<0.000010	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
Copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----
Iron, total	7439-89-6	E420	0.01	mg/L	<0.010	----
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----
Lithium, total	7439-93-2	E420	0.001	mg/L	<0.0010	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	<0.0050	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	<0.00010	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	<0.050	----
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	<0.00020	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silicon, total	7440-21-3	E420	0.1	mg/L	<0.10	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	<0.00020	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	<0.00010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	<0.00010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1879062) - continued						
Uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----
Total Metals (QCLot: 1885325)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Dissolved Metals (QCLot: 1878571)						
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	<0.0010	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	<0.000050	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	<0.050	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	<0.000010	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	<0.010	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	<0.0010	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	<0.0050	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	<0.00010	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	<0.050	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	<0.050	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	<0.00020	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	<0.050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	<0.00020	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 1878571) - continued						
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	<0.50	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	<0.00020	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 1885190)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Speciated Metals (QCLot: 1879403)						
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	<0.00050	----
Aggregate Organics (QCLot: 1881963)						
Phenols, total (4AAP)	----	E562	0.001	mg/L	<0.0010	----

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: 1879750)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	106	85.0	115	----
Physical Tests (QCLot: 1885152)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	106	85.0	115	----
Physical Tests (QCLot: 1885153)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	99.7	85.0	115	----
Anions and Nutrients (QCLot: 1879753)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 1879754)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 1879755)									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	99.1	85.0	115	----
Anions and Nutrients (QCLot: 1879756)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	99.7	90.0	110	----
Anions and Nutrients (QCLot: 1879757)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	99.9	90.0	110	----
Anions and Nutrients (QCLot: 1879758)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 1881599)									
Nitrogen, total	7727-37-9	E366	0.03	mg/L	0.5 mg/L	106	75.0	125	----
Anions and Nutrients (QCLot: 1881600)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	90.8	80.0	120	----
Anions and Nutrients (QCLot: 1881602)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	102	85.0	115	----
Organic / Inorganic Carbon (QCLot: 1881603)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	95.9	80.0	120	----
Total Sulfides (QCLot: 1884976)									
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.08 mg/L	103	80.0	120	----
Total Metals (QCLot: 1878561)									

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: 1878561) - continued									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	106	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	113	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	108	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	105	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	100	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	104	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	105	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	106	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	102	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	108	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	104	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	102	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	110	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	102	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	105	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	107	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	117	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	106	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	106	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	105	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	107	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	94.5	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	107	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	103	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	92.0	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	104	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	102	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	99.3	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	105	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	102	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	102	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	98.4	80.0	120	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Total Metals (QCLot: 1878561) - continued									
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	106	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	103	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	98.3	80.0	120	----
Total Metals (QCLot: 1879062)									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	105	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	104	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	107	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	110	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	96.4	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	103	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	93.2	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	98.7	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	102	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	107	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	104	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	104	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	97.5	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	102	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	99.9	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	106	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	109	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	105	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	107	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	102	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	99.6	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	103	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	94.9	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	99.6	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	100	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	99.3	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	101	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	101	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: 1879062) - continued									
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	103	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	106	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	103	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	106	80.0	120	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	106	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	101	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	98.1	80.0	120	----
Total Metals (QCLot: 1885325)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	91.9	80.0	120	----
Dissolved Metals (QCLot: 1878571)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	104	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	103	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	1 mg/L	109	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	105	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	103	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	93.2	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	100	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	99.9	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	102	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	98.9	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	103	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	98.9	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	100	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	104	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.5 mg/L	99.4	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.25 mg/L	104	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	100	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	101	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	106	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	101	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	109	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	102	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	99.8	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	100	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	102	80.0	120	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 1878571) - continued									
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	93.9	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	102	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	106	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	109	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	99.4	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	94.9	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	102	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	99.9	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	101	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	98.5	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.5 mg/L	103	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	102	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	98.9	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	99.6	80.0	120	----
Speciated Metals (QCLot: 1879403)									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.25 mg/L	101	80.0	120	----
Aggregate Organics (QCLot: 1881963)									
Phenols, total (4AAP)	----	E562	0.001	mg/L	0.02 mg/L	94.2	85.0	115	----

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: 1879753)										
VA25A3389-002	SQU DS 1	Fluoride	16984-48-8	E235.F	1.05 mg/L	1 mg/L	105	75.0	125	----
Anions and Nutrients (QCLot: 1879754)										
VA25A3389-002	SQU DS 1	Chloride	16887-00-6	E235.Cl	102 mg/L	100 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 1879755)										
VA25A3389-002	SQU DS 1	Bromide	24959-67-9	E235.Br-L	0.514 mg/L	0.5 mg/L	103	75.0	125	----
Anions and Nutrients (QCLot: 1879756)										
VA25A3389-002	SQU DS 1	Nitrate (as N)	14797-55-8	E235.NO3-L	2.54 mg/L	2.5 mg/L	101	75.0	125	----
Anions and Nutrients (QCLot: 1879757)										
VA25A3389-002	SQU DS 1	Nitrite (as N)	14797-65-0	E235.NO2-L	0.512 mg/L	0.5 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 1879758)										
VA25A3389-002	SQU DS 1	Sulfate (as SO4)	14808-79-8	E235.SO4	103 mg/L	100 mg/L	103	75.0	125	----
Anions and Nutrients (QCLot: 1881599)										
VA25A3389-001	SQU US 1	Nitrogen, total	7727-37-9	E366	ND mg/L	----	ND	70.0	130	----
Anions and Nutrients (QCLot: 1881600)										
KS2500521-002	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0464 mg/L	0.05 mg/L	92.9	70.0	130	----
Anions and Nutrients (QCLot: 1881602)										
KS2500521-002	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.105 mg/L	0.1 mg/L	105	75.0	125	----
Organic / Inorganic Carbon (QCLot: 1881603)										
VA25A3310-002	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	5.21 mg/L	5 mg/L	104	70.0	130	----
Total Sulfides (QCLot: 1884976)										
VA25A3389-002	SQU DS 1	Sulfide, total (as S)	18496-25-8	E395	0.237 mg/L	0.2 mg/L	118	75.0	125	----
Total Metals (QCLot: 1878561)										
VA25A3389-001	SQU US 1	Aluminum, total	7429-90-5	E420	0.196 mg/L	0.2 mg/L	97.8	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0200 mg/L	0.02 mg/L	99.8	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0207 mg/L	0.02 mg/L	104	70.0	130	----
		Barium, total	7440-39-3	E420	0.0198 mg/L	0.02 mg/L	99.1	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0425 mg/L	0.04 mg/L	106	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.00989 mg/L	0.01 mg/L	98.9	70.0	130	----
		Boron, total	7440-42-8	E420	0.104 mg/L	0.1 mg/L	104	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00386 mg/L	0.004 mg/L	96.6	70.0	130	----
		Calcium, total	7440-70-2	E420	ND mg/L	----	ND	70.0	130	----
		Cesium, total	7440-46-2	E420	0.00978 mg/L	0.01 mg/L	97.8	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0401 mg/L	0.04 mg/L	100	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: 1878561) - continued										
VA25A3389-001	SQU US 1	Cobalt, total	7440-48-4	E420	0.0194 mg/L	0.02 mg/L	97.1	70.0	130	----
		Copper, total	7440-50-8	E420	0.0195 mg/L	0.02 mg/L	97.4	70.0	130	----
		Iron, total	7439-89-6	E420	1.92 mg/L	2 mg/L	96.1	70.0	130	----
		Lead, total	7439-92-1	E420	0.0197 mg/L	0.02 mg/L	98.5	70.0	130	----
		Lithium, total	7439-93-2	E420	0.107 mg/L	0.1 mg/L	107	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	0.0204 mg/L	0.02 mg/L	102	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0393 mg/L	0.04 mg/L	98.2	70.0	130	----
		Phosphorus, total	7723-14-0	E420	10.2 mg/L	10 mg/L	102	70.0	130	----
		Potassium, total	7440-09-7	E420	3.88 mg/L	4 mg/L	96.9	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0195 mg/L	0.02 mg/L	97.7	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0399 mg/L	0.04 mg/L	99.8	70.0	130	----
		Silicon, total	7440-21-3	E420	8.91 mg/L	10 mg/L	89.1	70.0	130	----
		Silver, total	7440-22-4	E420	0.00391 mg/L	0.004 mg/L	97.8	70.0	130	----
		Sodium, total	7440-23-5	E420	ND mg/L	----	ND	70.0	130	----
		Strontium, total	7440-24-6	E420	ND mg/L	----	ND	70.0	130	----
		Sulfur, total	7704-34-9	E420	19.8 mg/L	20 mg/L	99.0	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0405 mg/L	0.04 mg/L	101	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00388 mg/L	0.004 mg/L	97.0	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0197 mg/L	0.02 mg/L	98.6	70.0	130	----
		Tin, total	7440-31-5	E420	0.0192 mg/L	0.02 mg/L	95.8	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0372 mg/L	0.04 mg/L	93.0	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0200 mg/L	0.02 mg/L	100	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00393 mg/L	0.004 mg/L	98.2	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.0978 mg/L	0.1 mg/L	97.8	70.0	130	----
		Zinc, total	7440-66-6	E420	0.390 mg/L	0.4 mg/L	97.6	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0388 mg/L	0.04 mg/L	96.9	70.0	130	----
Total Metals (QCLot: 1879062)										
VA25A3435-005	Anonymous	Chromium, total	7440-47-3	E420	0.0404 mg/L	0.04 mg/L	101	70.0	130	----
		Lead, total	7439-92-1	E420	0.0192 mg/L	0.02 mg/L	96.0	70.0	130	----
		Magnesium, total	7439-95-4	E420	0.975 mg/L	1 mg/L	97.5	70.0	130	----
		Sodium, total	7440-23-5	E420	2.05 mg/L	2 mg/L	102	70.0	130	----
VA25A3435-005	Anonymous	Aluminum, total	7429-90-5	E420	0.190 mg/L	0.2 mg/L	95.2	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0196 mg/L	0.02 mg/L	97.8	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0196 mg/L	0.02 mg/L	98.2	70.0	130	----
		Barium, total	7440-39-3	E420	0.0193 mg/L	0.02 mg/L	96.6	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0373 mg/L	0.04 mg/L	93.2	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.0102 mg/L	0.01 mg/L	102	70.0	130	----
		Boron, total	7440-42-8	E420	0.083 mg/L	0.1 mg/L	83.0	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00396 mg/L	0.004 mg/L	98.9	70.0	130	----
		Calcium, total	7440-70-2	E420	3.61 mg/L	4 mg/L	90.2	70.0	130	----
		Cesium, total	7440-46-2	E420	0.0100 mg/L	0.01 mg/L	100	70.0	130	----
		Cobalt, total	7440-48-4	E420	0.0196 mg/L	0.02 mg/L	98.3	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: 1879062) - continued										
VA25A3435-005	Anonymous	Copper, total	7440-50-8	E420	0.0195 mg/L	0.02 mg/L	97.4	70.0	130	----
		Iron, total	7439-89-6	E420	1.85 mg/L	2 mg/L	92.7	70.0	130	----
		Lithium, total	7439-93-2	E420	0.0926 mg/L	0.1 mg/L	92.6	70.0	130	----
		Manganese, total	7439-96-5	E420	0.0198 mg/L	0.02 mg/L	99.3	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0204 mg/L	0.02 mg/L	102	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0394 mg/L	0.04 mg/L	98.6	70.0	130	----
		Phosphorus, total	7723-14-0	E420	9.30 mg/L	10 mg/L	93.0	70.0	130	----
		Potassium, total	7440-09-7	E420	3.94 mg/L	4 mg/L	98.4	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0184 mg/L	0.02 mg/L	92.1	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0382 mg/L	0.04 mg/L	95.4	70.0	130	----
		Silicon, total	7440-21-3	E420	9.55 mg/L	10 mg/L	95.5	70.0	130	----
		Silver, total	7440-22-4	E420	0.00406 mg/L	0.004 mg/L	101	70.0	130	----
		Strontium, total	7440-24-6	E420	0.0197 mg/L	0.02 mg/L	98.5	70.0	130	----
		Sulfur, total	7704-34-9	E420	18.9 mg/L	20 mg/L	94.7	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0392 mg/L	0.04 mg/L	98.0	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00384 mg/L	0.004 mg/L	96.0	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0196 mg/L	0.02 mg/L	97.8	70.0	130	----
		Tin, total	7440-31-5	E420	0.0189 mg/L	0.02 mg/L	94.7	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0380 mg/L	0.04 mg/L	95.0	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0195 mg/L	0.02 mg/L	97.7	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00401 mg/L	0.004 mg/L	100	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.0967 mg/L	0.1 mg/L	96.7	70.0	130	----
		Zinc, total	7440-66-6	E420	0.396 mg/L	0.4 mg/L	98.9	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0397 mg/L	0.04 mg/L	99.2	70.0	130	----
Total Metals (QCLot: 1885325)										
VA25A3387-001	Anonymous	Mercury, total	7439-97-6	E508	0.0000935 mg/L	0 mg/L	93.5	70.0	130	----
Dissolved Metals (QCLot: 1878571)										
VA25A3353-002	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.194 mg/L	0.2 mg/L	96.8	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0204 mg/L	0.02 mg/L	102	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0204 mg/L	0.02 mg/L	102	70.0	130	----
		Barium, dissolved	7440-39-3	E421	ND mg/L	----	ND	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.0382 mg/L	0.04 mg/L	95.5	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.00813 mg/L	0.01 mg/L	81.3	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.096 mg/L	0.1 mg/L	95.8	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00380 mg/L	0.004 mg/L	95.1	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.00984 mg/L	0.01 mg/L	98.4	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0382 mg/L	0.04 mg/L	95.6	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0185 mg/L	0.02 mg/L	92.3	70.0	130	----
		Copper, dissolved	7440-50-8	E421	0.0178 mg/L	0.02 mg/L	88.8	70.0	130	----
		Iron, dissolved	7439-89-6	E421	1.90 mg/L	2 mg/L	95.3	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0186 mg/L	0.02 mg/L	93.0	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.0975 mg/L	0.1 mg/L	97.5	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: 1878571) - continued										
VA25A3353-002	Anonymous	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	0.0213 mg/L	0.02 mg/L	106	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0364 mg/L	0.04 mg/L	91.1	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	10.2 mg/L	10 mg/L	102	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	3.68 mg/L	4 mg/L	91.9	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.0196 mg/L	0.02 mg/L	98.2	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0396 mg/L	0.04 mg/L	99.0	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	9.47 mg/L	10 mg/L	94.7	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00384 mg/L	0.004 mg/L	96.0	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	0.0432 mg/L	0.04 mg/L	108	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.00377 mg/L	0.004 mg/L	94.4	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0191 mg/L	0.02 mg/L	95.6	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0195 mg/L	0.02 mg/L	97.6	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0395 mg/L	0.04 mg/L	98.8	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0196 mg/L	0.02 mg/L	98.2	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	ND mg/L	----	ND	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	0.356 mg/L	0.4 mg/L	89.1	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0406 mg/L	0.04 mg/L	101	70.0	130	----
Dissolved Metals (QCLot: 1885190)										
VA25A3370-012	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000973 mg/L	0 mg/L	97.3	70.0	130	----
Speciated Metals (QCLot: 1879403)										
KS2500517-002	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.256 mg/L	0.25 mg/L	102	70.0	130	----
Aggregate Organics (QCLot: 1881963)										
VA25A3387-002	Anonymous	Phenols, total (4AAP)	----	E562	0.0195 mg/L	0.02 mg/L	97.6	75.0	125	----

Chain of Custody (COC) / Analytical Request Form

ALS Environmental

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

Affix ALS barcode label here (lab use only)

COC Number: 17 -

Page 1 of 2

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

Report Format / Distribution

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

Quality Control (QC) Report with Report ☑ ☐ NO

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

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

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

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

Date and Time Required for all E&P TATs: Feb 26/2025

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

Project Information

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

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	
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 (F)	Dissolved metals + mercury (F)	Total hexavalent chromium	Total trivalent chromium	TSS	TDS	Nutrients (ammonia, ammonium, total nitrogen, total phosphorus) (P)	Total sulfide (low) (as H2S), Unionized Sulfide (low) (P)	Anions scan (Br, Cl, F, NO2, NO3, SO4)	General parameters (alkalinity)	DOC (F/P)	SAMPLES ON HOLD	Sample is hazardous (please provide further details)	NUMBER OF CONTAINERS
	SQU US 1	Feb 18/25	11:09	Water	R	R	R	R	R	R	R	R	R	R	R		N	9
	pH: 6.73 cond: 126 temp: 6.5																	
	SQU DS 1	Feb 18/25	10:37	Water	R	R	R	R	R	R	R	R	R	R	R		N	9
	pH: 6.89 cond: 207 temp: 5.9																	

Environmental Division Vancouver

Work Order Reference

VA25A3389

Telephone : +1 604 253 4188

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

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

Are samples for human consumption/ use? ☐ ☑ NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

Triton Project # 11964

SAMPLE CONDITIO

Frozen ☐ SIF Observ ☐

Ice Packs ☒ Ice Cubes ☐ Custody sea ☐

Cooling Initiated ☐

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
				8			

SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)	
Released by:	Time:	Received by:	Date:	Time:	Received by:	Time: 1250

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.

Chain of Custody (COC) / Analytical Request Form

COC Number: 20 -

Page 2 of 2

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

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

Reports / Recipients

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

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

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

Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX

Email 1 or Fax

Email 2

Email 3

Select Invoice D

Email 1 or Fax

Email 2

Turnaround Time (TAT) Requested

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

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

Date and Time Required for all E&P TATs: Feb 26/2025 dd-mmm-yy hh:mm am/pm

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

AFFIX ALS BARCODE LABEL HERE (ALS use only)

Project Information

ALS Account # / Quote #:	VA23-TRIT100-012
Job #:	11964
PO / AFE:	11964 - Task 30 - Phase 3C-4C
LSD:	

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Lab Work Order # (ALS use only):

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	Total trivalent chromium	TSS	TDS	Nutrients (ammonia, ammonium, total nitrogen, total phosphorus) (P)	Total sulfide (low) (as H2S); Unionized Sulfide (low) (P)	Anions scan (Br, Cl, F, NO2, NO3, SO4)	General parameters (alkalinity)	DOC (F/P)	Phenols			SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	~~BCR Duplicate~~			~~Water~~	~~9~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~						
	pH: cond: temp:																					
	~~BCR Field Blank~~			~~Water~~	~~9~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~						
	BCR Trip Blank	Feb18/25	10:00	Water	6	R		R	R	R	R	R	R	R		R	R					

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

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

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

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

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

SAMPLE RECEIPT DETAILS (ALS use only)

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

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

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

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
				8			

SHIPMENT RELEASE (client use)

Released by: Time:

INITIAL SHIPMENT RECEPTION (ALS use only)

Received by: Date: Time:

FINAL SHIPMENT RECEPTION (ALS use only)

Received by: Time: 1750

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

ALG 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.

BCR Site Receiving Environment Field Notes and Logs

FortisBC Eagle Mountain-Woodfibre Gas Pipeline

Water Discharge Authorization Water Quality Monitoring

2025-2-18-Renkers-92F59

Project Component:	Tunnel	**Site Name:**	Receiving Environment - Downstream of Discharge
Inspection Date:	02/18/2025	**Location:**	BC Rail Site
Triton QP:	Stephanie Renkers	**Latitude/Longitude:**	49.725286 -123.165034
Temperature(c):	Low 1 High 7	**Permit:**	AE 111824
Weather Conditions:	Overcast	**Ground Conditions:**	Damp

Observations

Time: 10:37:37 **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

Re-calibrated pH sensor

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

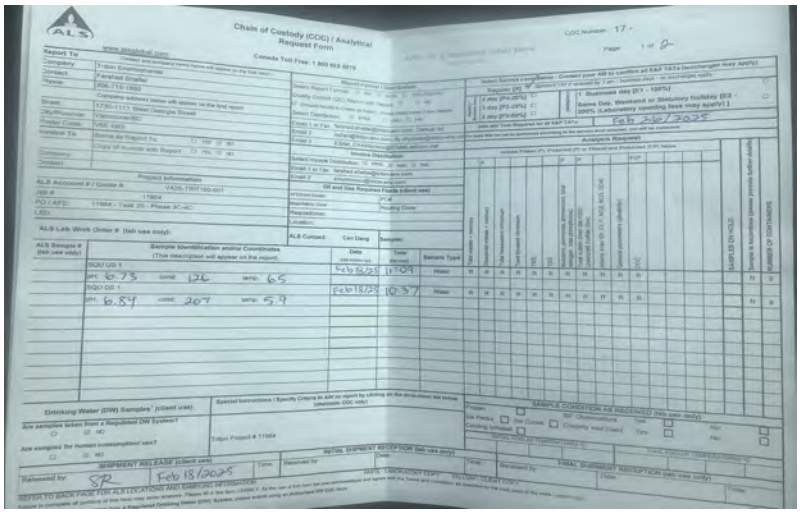


Photo: 4

Location: SQU DS

Description: Lab COC DS

2025-2-18-Renkers-92F59

Photos

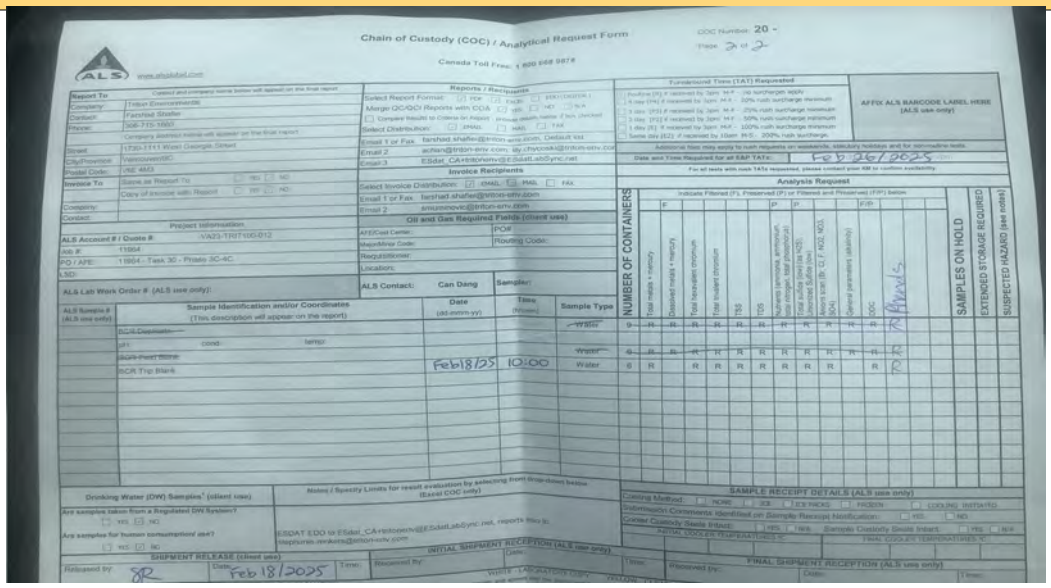


Photo: 5

Location: SQU DS

Description: Lab COC Trip blank

Sign Off

Report Prepared By:	Stephanie Renkers	**Report Reviewed:**	Yes
Report Reviewer:	Farshad Shafiei	**Professional(s) of Record:**	N/A
Name:			
Designation:			
Designation Number:			

FortisBC Eagle Mountain-Woodfibre Gas Pipeline

Water Discharge Authorization Water Quality Monitoring

2025-2-18-Renkers-59988

Project Component:	Tunnel	**Site Name:**	Receiving Environment - Upstream of Discharge
Inspection Date:	02/18/2025	**Location:**	BC Rail Site
Triton QP:	Stephanie Renkers	**Latitude/Longitude:**	49.726866 -123.163912
Temperature(c):	Low 1 High 7	**Permit:**	AE 111824
Weather Conditions:	Overcast	**Ground Conditions:**	Damp

Observations

Time: 11:09:24 **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	Sonde stuck in the rocks but reading properly.	
TSS	Yes	**Anions**	Yes		
TDS	Yes	**Total Trivalent Chromium**	Yes	**QA Samples:**	Yes
Nutrients	Yes	**VOC/VPH**	No	Sonde stuck in the rocks but reading properly.	
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 US

Description: Upstream view

Photo: 2

Location: SQU US

Description: Across view

Photos

Photo: 3

Location: SQU US

Description: Downstream view

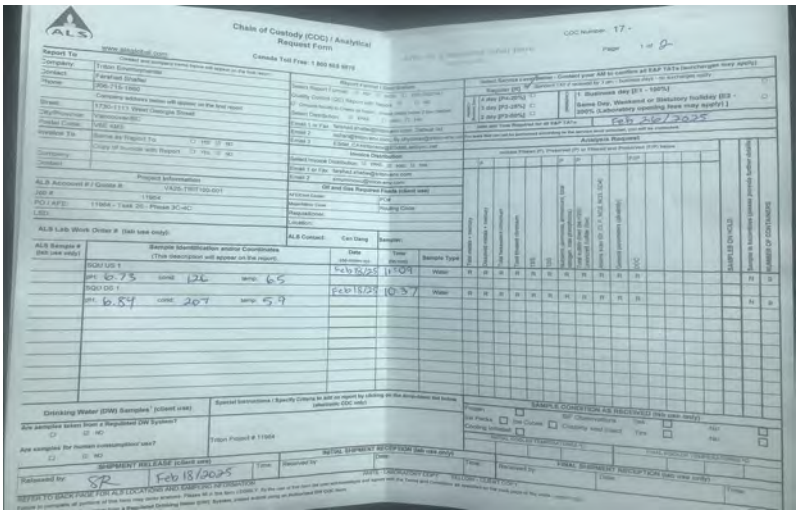


Photo: 4

Location: SQU US

Description: Lab COC

Photos

Photo: 5

Location: SQU DS

Description: Lab COC

Sign Off

Report Prepared By: Stephanie Renkers

Report Reviewer: Farshad Shafiei

Name:

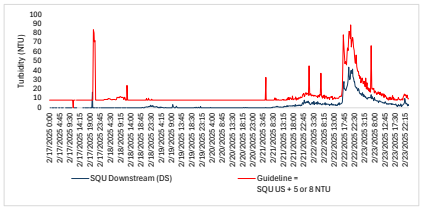
Designation:

Designation Number:

Report Reviewed: Yes

Professional(s) of Record:

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
2/17/2025 0:00	2.8							2/17/2025 0:00	3.8	107.1	0.0	6.8	12.0	0.0	8.0
2/17/2025 0:15	2.8	100.6	0.1			0.0		2/17/2025 0:15	3.8	105.7	0.0	6.8	12.1	0.0	8.0
2/17/2025 0:30	2.7	99.4	0.1			0.0		2/17/2025 0:30	3.8	105.1	0.0	6.8	12.1	0.0	8.0
2/17/2025 0:45	2.7							2/17/2025 0:45	3.8	104.3	0.0	6.8	12.1	0.0	8.0
2/17/2025 1:00	2.7		0.1			0.0		2/17/2025 1:00	3.8	103.8	0.0	6.8	12.1	0.0	8.0
2/17/2025 1:15	2.7		0.1			0.0		2/17/2025 1:15	3.8	104.0	0.0	6.8	12.1	0.0	8.0
2/17/2025 1:30	2.7	96.1	0.1		11.3	0.0		2/17/2025 1:30	3.8	103.5	0.0	6.8	12.1	0.0	8.0
2/17/2025 1:45	2.7	95.7	0.1			0.0		2/17/2025 1:45	3.8	103.3	0.0	6.8	12.1	0.0	8.0
2/17/2025 2:00	2.7	95.1	0.1			0.0		2/17/2025 2:00	3.7	103.1	0.0	6.8	12.1	0.0	8.0
2/17/2025 2:15	2.7	94.8	0.1			0.0		2/17/2025 2:15	3.7	103.2	0.0	6.8	12.1	0.0	8.0
2/17/2025 2:30								2/17/2025 2:30	3.7	102.8	0.0	6.8	12.1	0.0	8.0
2/17/2025 2:45	2.7		0.0			0.0		2/17/2025 2:45	3.7	102.1	0.0	6.8	12.1	0.0	8.0
2/17/2025 3:00	2.7	94.1	0.0			0.0		2/17/2025 3:00	3.7	102.4	0.0	6.8	12.1	0.0	8.0
2/17/2025 3:15	2.7		0.0			0.0		2/17/2025 3:15	3.7	102.2	0.0	6.8	12.1	0.0	8.0
2/17/2025 3:30	2.7	93.8	0.0		11.5	0.0		2/17/2025 3:30	3.7	101.5	0.0	6.8	12.2	0.0	8.0
2/17/2025 3:45								2/17/2025 3:45	3.7	101.8	0.0	6.8	12.2	0.0	8.0
2/17/2025 4:00								2/17/2025 4:00	3.7	101.8	0.0	6.8	12.1	0.0	8.0
2/17/2025 4:15	2.7		0.0			0.0		2/17/2025 4:15	3.7	101.4	0.0	6.8	12.2	0.0	8.0
2/17/2025 4:30	2.7		0.0			0.0		2/17/2025 4:30	3.7	101.3	0.0	6.8	12.1	0.0	8.0
2/17/2025 4:45	2.7		0.0			0.0		2/17/2025 4:45	3.7	101.7	0.0	6.8	12.1	0.0	8.0
2/17/2025 5:00	2.7					0.0		2/17/2025 5:00	3.7	101.3	0.0	6.8	12.1	0.0	8.0
2/17/2025 5:15	2.7							2/17/2025 5:15	3.7	100.9	0.0	6.8	12.2	0.0	8.0
2/17/2025 5:30	2.7		0.0			0.0		2/17/2025 5:30	3.7	101.0	0.0	6.8	12.2	0.0	8.0
2/17/2025 5:45	2.7		0.0			0.0		2/17/2025 5:45	3.7	101.6	0.0	6.8	12.2	0.0	8.0
2/17/2025 6:00	2.6		0.0			0.0		2/17/2025 6:00	3.7	101.1	0.0	6.8	12.2	0.0	8.0
2/17/2025 6:15	2.6	91.9	0.0			0.0		2/17/2025 6:15	3.6	100.3	0.0	6.8	12.2	0.0	8.0
2/17/2025 6:30	2.6	91.8	0.0		11.4	0.0		2/17/2025 6:30	3.6	100.4	0.0	6.9	12.2	0.0	8.0
2/17/2025 6:45	2.6							2/17/2025 6:45	3.6	99.5	0.0	6.9	12.3	0.0	8.0
2/17/2025 7:00	2.6	91.2	0.0			0.0		2/17/2025 7:00	3.6	98.4	0.0	6.9	12.3	0.0	8.0
2/17/2025 7:15								2/17/2025 7:15	3.6	97.5	0.0	6.9	12.3	0.0	8.0
2/17/2025 7:30	2.6	90.8	0.0			0.0		2/17/2025 7:30	3.6	97.4	0.0	6.9	12.3	0.0	8.0
2/17/2025 7:45	2.6	90.5	0.0			0.0		2/17/2025 7:45	3.6	97.3	0.0	6.9	12.3	0.0	8.0
2/17/2025 8:00	2.6		0.0			0.0		2/17/2025 8:00	3.6	97.1	0.0	6.9	12.3	0.0	8.0
2/17/2025 8:15	2.6	90.0	0.0			0.0		2/17/2025 8:15	3.6	96.8	0.0	6.9	12.3	0.0	8.0
2/17/2025 8:30	2.6		0.0			0.0		2/17/2025 8:30	3.6	96.7	0.0	6.9	12.3	0.0	8.0
2/17/2025 8:45	2.6	88.8	0.0			0.0		2/17/2025 8:45	3.6	97.7	0.0	6.9	12.3	0.0	8.0
2/17/2025 9:00	2.6	88.7	0.0			0.0		2/17/2025 9:00	3.6	100.5	0.0	6.9	12.3	0.0	8.0
2/17/2025 9:15	2.6	88.5	0.0			0.0		2/17/2025 9:15	3.6	99.7	0.0	6.9	12.3	0.0	8.0
2/17/2025 9:30	2.6	89.1	0.0		11.7	0.0		2/17/2025 9:30	3.6	97.8	0.0	6.9	12.3	0.0	8.0
2/17/2025 9:45	2.6		0.0			0.0		2/17/2025 9:45	3.6	96.0	0.0	6.9	12.4	0.0	8.0
2/17/2025 10:00	2.6	89.8	0.0			0.0		2/17/2025 10:00	3.6	96.9	0.0	6.9	12.4	0.0	8.0
2/17/2025 10:15	2.6	88.7	0.0			0.0		2/17/2025 10:15	3.7	103.3	0.0	6.9	12.3	0.0	8.0
2/17/2025 10:30	2.6	87.6	0.0			0.0		2/17/2025 10:30	3.7	106.1	0.0	6.9	12.2	0.0	8.0
2/17/2025 10:45	2.7							2/17/2025 10:45	3.8	105.6	0.0	6.9	12.3	0.0	8.0
2/17/2025 11:00								2/17/2025 11:00	3.8	109.5	0.1	6.9	12.4	0.0	0.0
2/17/2025 11:15								2/17/2025 11:15	3.9	114.8	0.1	6.9	12.3	0.0	8.0
2/17/2025 11:30	2.8		0.1			0.0		2/17/2025 11:30	4.0	113.2	0.1	6.8	12.4	0.0	8.0
2/17/2025 11:45	2.9					0.0		2/17/2025 11:45	4.0	110.2	0.1	6.9	12.6	0.0	8.0
2/17/2025 12:00	2.9		0.1			0.0		2/17/2025 12:00	4.1	111.7	0.1	6.9	12.6	0.0	8.0
2/17/2025 12:15	3.0		0.1			0.0		2/17/2025 12:15	4.3	120.2	0.1	6.9	12.5	0.0	
2/17/2025 12:30	3.1		0.1		12.1	0.0		2/17/2025 12:30	4.4	123.5	0.1	6.8	12.4	0.0	8.0
2/17/2025 12:45	3.2	100.0	0.1			0.0		2/17/2025 12:45	4.5	120.1	0.1	6.8	12.5	0.0	8.0
2/17/2025 13:00	3.3							2/17/2025 13:00	4.5	111.5	0.1	6.9	12.6	0.0	8.0
2/17/2025 13:15	3.4		0.1			0.0		2/17/2025 13:15	4.5	104.8	0.0	6.9	12.7	0.0	8.0
2/17/2025 13:30								2/17/2025 13:30	4.6	102.8	0.0	6.9	12.7	0.0	8.0
2/17/2025 13:45								2/17/2025 13:45	4.7	102.2	0.0	6.9	12.7	0.0	8.0
2/17/2025 14:00	3.5	101.7	0.1		11.9	0.0		2/17/2025 14:00	4.8	102.5	0.0	6.8	12.7	0.0	8.0
2/17/2025 14:15	3.5	98.3						2/17/2025 14:15	4.8	102.3	0.0	6.8	12.7	0.0	8.0
2/17/2025 14:30	3.6		0.1			0.0		2/17/2025 14:30	4.9	102.5	0.0	6.8	12.7	0.0	8.0
2/17/2025 14:45								2/17/2025 14:45	4.9	102.3	0.0	6.8	12.7	0.0	8.0
2/17/2025 15:00	3.7							2/17/2025 15:00	4.9	102.5	0.0	6.8	12.7	0.0	8.0
2/17/2025 15:15	3.8							2/17/2025 15:15	4.9	102.8	0.0	6.8	12.7	0.0	8.0
2/17/2025 15:30	3.9					0.0		2/17/2025 15:30	5.0	102.7	0.0	6.8	12.7	0.0	8.0
2/17/2025 15:45	3.9					0.0		2/17/2025 15:45	5.1	102.7	0.0	6.9	12.7	0.0	8.0
2/17/2025 16:00	4.0		0.1			0.0		2/17/2025 16:00	5.1	102.7	0.0	6.9	12.7	0.0	8.0
2/17/2025 16:15	4.0							2/17/2025 16:15	5.2	102.7	0.0	6.9	12.7	0.0	8.0
2/17/2025 16:30	4.1		0.0			0.0		2/17/2025 16:30	5.2	102.5	0.0	6.9	12.7	0.0	8.0
2/17/2025 16:45	4.1		0.0			0.0		2/17/2025 16:45	5.1	102.7	0.0	6.9	12.6	0.0	8.0
2/17/2025 17:00	4.1		0.0		11.7	0.0		2/17/2025 17:00	5.0	102.5	0.0	6.9	12.6	0.0	8.0
2/17/2025 17:15	4.1	93.5	0.0			0.0		2/17/2025 17:15	5.0	102.6	0.0	6.9	12.6	0.0	8.0
2/17/2025 17:30	4.0		0.0			0.0		2/17/2025 17:30	4.9	102.7	0.0	6.9	12.6	0.0	8.0
2/17/2025 17:45	4.0					0.0		2/17/2025 17:45	4.8	103.0	0.0	6.9	12.5	0.0	8.0
2/17/2025 18:00	4.0					0.0		2/17/2025 18:00	4.8	103.0	0.0	6.9	12.5	0.0	8.0
2/17/2025 18:15	3.9		0.0			0.0		2/17/2025 18:15	4.7	102.7	0.0	6.9	12.5	0.0	8.0
2/17/2025 18:30	3.8							2/17/2025 18:30	4.6	103.1	0.0	6.9	12.5	0.0	8.0
2/17/2025 18:45	3.7		0.0			0.0		2/17/2025 18:45	4.5	103.4	0.0	6.9	12.4	0.0	8.0
2/17/2025 19:00	3.7		0.0			0.0		2/17/2025 19:00	4.5	103.7	0.0	6.9	12.3	0.0	8.0
2/17/2025 19:15	3.7	93.1	0.0			0.0		2/17/2025 19:15	4.4	104.0	0.0	6.8	12.3	0.0	8.0
2/17/2025 19:30	3.6		0.0			0.0		2/17/2025 19:30	4.4	103.9	0.0	6.8	12.3	0.0	8.0
2/17/2025 19:45	3.5		0.0			0.0		2/17/2025 19:45	4.4	104.2	0.0	6.8	12.3	0.0	8.0
2/17/2025 20:00	3.4	93.2	0.0			16.7		2/17/2025 20:00	4.3	104.1	0.0	6.8	12.2	0.0	8.0
2/17/2025 20:15	3.3		0.0			0.0		2/17/2025 20:15	4.3	104.2	0.0	6.8	12.2	0.1	8.1
2/17/2025 20:30	3.3		0.0			0.0		2/17/2025 20:30	4.3	105.2	0.0	6.8	12.2	78.4	83.4
2/17/2025 20:45	3.3		0.0			0.0		2/17/2025 20:45	4.3	105.4	0.0	6.9	12.2	75.0	80.0
2/17/2025 21:00	3.2	93.9	0.0			0.0		2/17/2025 21:00	4.2	105.6	0.0	6.9	12.2	65.2	70.2
2/17/2025 21:15	3.2	94.1	0.1			0.0		2/17/2025 21:15	4.2	103.9	0.0	6.9	12.2	66.7	71.7
2/17/2025 21:30								2/17/2025 21:30	4.2	100.6	0.0	6.9	12.3	0.0	8.0
2/17/2025 21:45	3.2	94.5	0.0			0.0		2/17/2025 21:45	4.2	100.3	0.0	6.9	12.2	0.0	8.0
2/17/2025 22:00	3.2		0.0			0.0		2/17/2025 22:00	4.2	103.3	0.0	6.9	12.2	0.0	8.0
2/17/2025 22:15	3.2	92.2				0.0		2/17/2025 22:15	4.2	102.0	0.0	6.9	12.2	0.0	8.0
2/17/2025 22:30	3.2					0.0		2/17/2025 22:30	4.1	100.1	0.0	6.9	12.2	0.0	8.0
2/17/2025 22:45	3.1							2/17/2025 22:45	4.2	103.1	0.0	6.9	12.1	0.0	8.0
2/17/2025 23:00	3.1		0.0			0.0		2/17/2025 23:00	4.4	117.4	0.1	6.8	11.9	0.0	8.0
2/17/2025 23:15	3.2					0.0		2/17/2025 23:15	4.3	113.2	0.1	6.8	11.9	0.0	8.0
2/17/2025 23:30	3.2		0.1			0.0		2/17/2025 23:30	4.3	110.0	0.1	6.8	12.0	0.0	8.0
2/17/2025 23:45	3.2	99.2						2/17/2025 23:45	4.4	118.9	0.1	6.8	11.8	0.0	8.0
2/18/2025 0:00	3.3					0.0		2/18/2025 0:00	4.4	118.4	0.1	6.8	11.8	0.0	8.0
2/18/2025 0:15	3.3					0.0		2/18/2025 0:15	4.3	112.4	0.1	6.8	11.9	0.0	8.0
2/18/2025 0:30	3.3		0.1			0.0		2/18/2025 0:30	4.3	108.5	0.0	6.8	11.9	0.0	8.0
2/18/2025 0:45	3.2		0.1			0.0		2/18/2025 0:45	4.2	106.9	0.0	6.8	12.0	0.0	8.0
2/18/2025 1:00	3.2		0.1			0.0		2/18/2025 1:00	4.2	106.1	0.0	6.8	12.0	0.0	8.0
2/18/2025 1:15	3.2		0.1			0.0		2/18/2025 1:15	4.2	104.8	0.0	6.8	12.0	0.0	8.0
2/18/2025 1:30	3.2	96.5	0.1			0.0		2/18/2025 1:30	4.2	104.7	0.0	6.7	12.0	0.8	8.8
2/18/2025 1:45	3.2	95.9	0.1			0.0		2/18/2025 1:45	4.2	103.8	0.0	6.7	12.0	0.8	8.8



2/18/2025 2:00	3.2		0.1			0.0	2/18/2025 2:00	4.2	103.7	0.0	6.8	12.0	0.8	8.8
2/18/2025 2:15	3.2		0.1			0.0	2/18/2025 2:15	4.2	103.5	0.0	6.8	12.0	0.7	8.7
2/18/2025 2:30	3.2	95.0	0.1		11.0	0.0	2/18/2025 2:30	4.1	103.2	0.0	6.8	12.0	0.6	8.6
2/18/2025 2:45	3.2	94.6	0.1			0.0	2/18/2025 2:45	4.1	103.1	0.0	6.8	12.1	0.8	8.8
2/18/2025 3:00	3.2		0.0			0.0	2/18/2025 3:00	4.1	102.6	0.0	6.8	12.1	0.9	8.9
2/18/2025 3:15	3.2	94.2	0.0			0.0	2/18/2025 3:15	4.1	102.2	0.0	6.8	12.1	0.7	8.7
2/18/2025 3:30	3.2	94.0	0.0			0.0	2/18/2025 3:30	4.1	102.2	0.0	6.8	12.1	1.5	9.5
2/18/2025 3:45	3.2	93.9	0.0			0.0	2/18/2025 3:45	4.1	102.0	0.0	6.8	12.1	1.7	9.7
2/18/2025 4:00	3.2		0.0			0.0	2/18/2025 4:00	4.1	101.7	0.0	6.8	12.1	1.4	9.4
2/18/2025 4:15	3.2		0.0			0.0	2/18/2025 4:15	4.1	102.1	0.0	6.8	12.1	1.4	9.4
2/18/2025 4:30	3.2	93.3	0.0			0.0	2/18/2025 4:30	4.1	102.0	0.0	6.8	12.1	0.5	8.5
2/18/2025 4:45	3.2	93.1	0.0			0.0	2/18/2025 4:45	4.1	101.7	0.0	6.8	12.1	0.5	8.5
2/18/2025 5:00	3.2	92.9	0.0			0.0	2/18/2025 5:00	4.0	101.6	0.0	6.8	12.1	0.5	8.5
2/18/2025 5:15	3.2		0.0			0.0	2/18/2025 5:15	4.1	102.1	0.0	6.8	12.1	0.2	8.2
2/18/2025 5:30	3.2	92.7	0.0			0.0	2/18/2025 5:30	4.0	101.6	0.0	6.8	12.1	0.5	8.5
2/18/2025 5:45	3.1	92.4	0.0			0.0	2/18/2025 5:45	4.0	101.1	0.0	6.8	12.1	0.8	8.8
2/18/2025 6:00	3.1		0.0			0.0	2/18/2025 6:00	4.0	101.1	0.0	6.8	12.1	0.8	8.8
2/18/2025 6:15	3.0						2/18/2025 6:15	4.0	101.2	0.0	6.8	12.1	0.7	8.7
2/18/2025 6:30	3.0					0.0	2/18/2025 6:30	4.0	101.1	0.0	6.8	12.2	0.6	8.6
2/18/2025 6:45	3.0		0.0			0.0	2/18/2025 6:45	4.0	100.9	0.0	6.8	12.2	0.3	8.3
2/18/2025 7:00	3.0					0.0	2/18/2025 7:00	4.0	100.0	0.0	6.9	12.2	0.2	8.2
2/18/2025 7:15	3.0		0.0			0.0	2/18/2025 7:15	4.0	98.6	0.0	6.9	12.3	0.6	8.6
2/18/2025 7:30	3.0		0.0		11.6	0.0	2/18/2025 7:30	4.0	98.1	0.0	6.9	12.2	2.9	10.9
2/18/2025 7:45	3.0	91.1	0.0			0.0	2/18/2025 7:45	4.0	97.9	0.0	6.9	12.3	2.8	10.8
2/18/2025 8:00	3.0	91.0	0.0			0.0	2/18/2025 8:00	4.0	97.8	0.0	6.9	12.3	2.8	10.8
2/18/2025 8:15	3.0	90.5	0.0			0.0	2/18/2025 8:15	3.9	97.3	0.0	6.9	12.3	3.0	11.0
2/18/2025 8:30	3.0		0.0			0.0	2/18/2025 8:30	3.9	97.0	0.0	6.9	12.3	2.4	10.4
2/18/2025 8:45	3.0					0.0	2/18/2025 8:45	3.9	96.6	0.0	6.9	12.3	3.4	11.4
2/18/2025 9:00	3.0		0.0			0.0	2/18/2025 9:00	4.0	97.2	0.0	6.9	12.3	3.8	11.8
2/18/2025 9:15	3.0		0.0			0.0	2/18/2025 9:15	4.0	98.6	0.0	6.9	12.3	3.6	11.6
2/18/2025 9:30	3.0	89.2	0.0			0.0	2/18/2025 9:30	4.1	103.2	0.0	6.9	12.2	2.6	10.6
2/18/2025 9:45							2/18/2025 9:45	4.1	104.5	0.0	6.9	12.2	3.1	11.1
2/18/2025 10:00	3.0	89.0	0.0			0.0	2/18/2025 10:00	4.1	101.3	0.0	6.9	12.3	2.7	10.7
2/18/2025 10:15	3.1	91.4	0.0			0.0	2/18/2025 10:15	4.1	99.3	0.0	6.9	12.4	3.0	11.0
2/18/2025 10:30	3.1	91.8	0.0			0.0	2/18/2025 10:30	4.1	99.1	0.0	6.9	12.4	1.9	9.9
2/18/2025 10:45	3.1	90.9				0.0	2/18/2025 10:45	4.2	102.6	0.0	6.9	12.4	0.7	8.7
2/18/2025 11:00	3.1		0.0			0.0	2/18/2025 11:00	4.3	106.2	0.0	6.9	12.4	3.1	11.1
2/18/2025 11:15	3.1		0.0			0.0	2/18/2025 11:15	4.3	107.4	0.0	6.9	12.5	2.2	10.2
2/18/2025 11:30	3.2		0.0			0.0	2/18/2025 11:30	4.4	111.2	0.1	6.9	12.5	0.0	8.0
2/18/2025 11:45	3.3	93.6	0.1			0.0	2/18/2025 11:45	4.5	116.7	0.1	6.8	12.5	0.0	8.0
2/18/2025 12:00							2/18/2025 12:00	4.7	120.9	0.1	6.8	12.5	0.0	8.0
2/18/2025 12:15	3.7		0.1	7.8	12.0	0.0	2/18/2025 12:15	4.8	125.0	0.1	6.8	12.4	18.8	23.8
2/18/2025 12:30	3.7	119.4	0.1	7.5	12.0	0.0	2/18/2025 12:30	4.8	121.8	0.1	6.8	12.5	0.0	8.0
2/18/2025 12:45	3.7	115.5	0.1	7.4	12.0	0.0	2/18/2025 12:45	4.8	119.4	0.1	6.8	12.5	0.0	8.0
2/18/2025 13:00	3.7	111.2	0.1	7.3	12.1	0.0	2/18/2025 13:00	4.8	111.2	0.1	6.8	12.6	0.0	8.0
2/18/2025 13:15	3.7	108.7	0.1	7.3	12.1	0.0	2/18/2025 13:15	4.7	104.6	0.0	6.9	12.7	0.0	8.0
2/18/2025 13:30	3.7	102.5	0.1	7.2	12.2	0.0	2/18/2025 13:30	4.7	103.1	0.0	6.8	12.7	0.0	8.0
2/18/2025 13:45	3.7	96.6	0.0	7.2	12.2	0.0	2/18/2025 13:45	4.8	102.3	0.0	6.8	12.7	0.0	8.0
2/18/2025 14:00	3.7	93.9	0.0	7.2	12.2	0.0	2/18/2025 14:00	4.8	102.1	0.0	6.8	12.7	0.0	8.0
2/18/2025 14:15	3.8	92.7	0.0	7.2	12.2	0.0	2/18/2025 14:15	4.9	102.2	0.0	6.8	12.7	0.0	8.0
2/18/2025 14:30	3.8	91.9	0.0	7.2	12.2	0.0	2/18/2025 14:30	4.9	102.0	0.0	6.8	12.8	0.0	8.0
2/18/2025 14:45	3.9	91.6	0.0	7.2	12.2	0.0	2/18/2025 14:45	5.0	101.9	0.0	6.8	12.8	0.0	8.0
2/18/2025 15:00	4.0	91.2	0.0	7.2	12.2	0.0	2/18/2025 15:00	5.1	101.8	0.0	6.8	12.8	0.0	8.0
2/18/2025 15:15	4.0	91.0	0.0	7.2	12.3	0.0	2/18/2025 15:15	5.2	101.8	0.0	6.8	12.8	0.0	8.0
2/18/2025 15:30	4.1	90.9	0.0	7.2	12.3	0.0	2/18/2025 15:30	5.2	102.0	0.0	6.8	12.8	0.0	8.0
2/18/2025 15:45	4.1	90.9	0.0	7.2	12.2	0.0	2/18/2025 15:45	5.3	101.9	0.0	6.8	12.8	0.0	8.0
2/18/2025 16:00	4.2	91.2	0.0	7.2	12.2	0.0	2/18/2025 16:00	5.3	101.8	0.0	6.9	12.8	0.0	8.0
2/18/2025 16:15	4.2	91.0	0.0	7.2	12.3	0.0	2/18/2025 16:15	5.3	101.3	0.0	6.9	12.8	0.0	8.0
2/18/2025 16:30	4.3	90.7	0.0	7.2	12.3	0.0	2/18/2025 16:30	5.3	100.4	0.0	6.9	12.8	0.0	8.0
2/18/2025 16:45	4.3	90.4	0.0	7.2	12.3	0.0	2/18/2025 16:45	5.3	98.8	0.0	6.9	12.8	0.0	8.0
2/18/2025 17:00	4.3	89.3	0.0	7.2	12.3	0.0	2/18/2025 17:00	5.3	97.9	0.0	6.9	12.8	0.0	8.0
2/18/2025 17:15	4.2	88.5	0.0	7.2	12.3	0.0	2/18/2025 17:15	5.2	97.0	0.0	6.9	12.8	0.0	8.0
2/18/2025 17:30	4.2	87.5	0.0	7.2	12.2	0.0	2/18/2025 17:30	5.2	95.9	0.0	6.9	12.7	0.0	8.0
2/18/2025 17:45	4.2	86.7	0.0	7.2	12.2	0.0	2/18/2025 17:45	5.2	95.4	0.0	6.9	12.7	0.0	8.0
2/18/2025 18:00	4.1	85.7	0.0	7.2	12.2	0.0	2/18/2025 18:00	5.1	94.5	0.0	6.9	12.7	0.0	8.0
2/18/2025 18:15	4.0	85.2	0.0	7.2	12.1	0.0	2/18/2025 18:15	5.1	94.0	0.0	6.9	12.6	0.0	8.0
2/18/2025 18:30	4.0	84.5	0.0	7.2	12.1	0.0	2/18/2025 18:30	5.0	93.5	0.0	6.9	12.6	0.0	8.0
2/18/2025 18:45	3.9	84.1	0.0	7.2	12.0	0.0	2/18/2025 18:45	4.9	93.0	0.0	6.9	12.5	0.0	8.0
2/18/2025 19:00	3.8	83.3	0.0	7.2	12.0	0.0	2/18/2025 19:00	4.8	92.9	0.0	6.9	12.4	0.0	8.0
2/18/2025 19:15	3.7	82.9	0.0	7.2	11.9	0.2	2/18/2025 19:15	4.7	92.8	0.0	6.9	12.4	0.0	8.0
2/18/2025 19:30	3.7	82.3	0.0	7.2	11.9	0.0	2/18/2025 19:30	4.7	93.1	0.0	6.9	12.4	0.0	8.0
2/18/2025 19:45	3.6	82.6	0.0	7.2	11.9	0.0	2/18/2025 19:45	4.6	93.1	0.0	6.9	12.3	0.0	8.0
2/18/2025 20:00	3.5	82.3	0.0	7.2	11.8	0.0	2/18/2025 20:00	4.6	93.5	0.0	6.8	12.3	0.0	8.0
2/18/2025 20:15	3.5	82.1	0.0	7.1	11.8	0.0	2/18/2025 20:15	4.5	93.2	0.0	6.8	12.3	0.0	8.0
2/18/2025 20:30	3.4	82.3	0.0	7.1	11.8	0.5	2/18/2025 20:30	4.5	93.4	0.0	6.8	12.3	0.0	8.0
2/18/2025 20:45	3.4	82.4	0.0	7.1	11.8	0.5	2/18/2025 20:45	4.4	93.0	0.0	6.8	12.3	0.0	8.0
2/18/2025 21:00	3.3	81.9	0.0	7.1	11.8	0.4	2/18/2025 21:00	4.4	93.9	0.0	6.8	12.3	0.0	8.0
2/18/2025 21:15	3.3	82.1	0.0	7.1	11.8	0.7	2/18/2025 21:15	4.3	93.8	0.0	6.8	12.3	1.5	9.5
2/18/2025 21:30	3.2	82.5	0.0	7.1	11.8	0.8	2/18/2025 21:30	4.3	93.7	0.0	6.8	12.3	0.0	8.0
2/18/2025 21:45	3.2	82.1	0.0	7.1	11.8	0.4	2/18/2025 21:45	4.2	93.2	0.0	6.8	12.3	0.0	8.0
2/18/2025 22:00	3.1	82.3	0.0	7.1	11.9	0.9	2/18/2025 22:00	4.2	92.5	0.0	6.9	12.4	0.1	8.1
2/18/2025 22:15	3.1	81.9	0.0	7.1	11.9	0.9	2/18/2025 22:15	4.1	91.8	0.0	6.9	12.4	2.0	10.0
2/18/2025 22:30	3.0	81.6	0.0	7.1	11.9	0.8	2/18/2025 22:30	4.1	91.4	0.0	6.9	12.4	0.3	8.3
2/18/2025 22:45	3.0	81.0	0.0	7.2	11.9	1.4	2/18/2025 22:45	4.0	91.4	0.0	6.9	12.5	0.0	8.0
2/18/2025 23:00	3.0	80.9	0.0	7.1	12.0	1.3	2/18/2025 23:00	4.1	93.5	0.0	6.9	12.5	0.1	8.1
2/18/2025 23:15	3.0	81.4	0.0	7.2	11.9	2.5	2/18/2025 23:15	4.1	95.5	0.0	6.9	12.4	0.0	8.0
2/18/2025 23:30	3.1	83.3	0.0	7.2	11.9	1.1	2/18/2025 23:30	4.2	100.0	0.0	6.9	12.4	0.0	8.0
2/18/2025 23:45	3.1	85.5	0.0	7.2	11.9	1.6	2/18/2025 23:45	4.2	102.6	0.0	6.9	12.4	0.9	8.9
2/19/2025 0:00	3.2	89.3	0.0	7.2	11.9	1.3	2/19/2025 0:00	4.3	107.9	0.0	6.9	12.3	0.0	8.0
2/19/2025 0:15	3.3	92.5	0.1	7.2	11.8	2.1	2/19/2025 0:15	4.4	113.1	0.1	6.9	12.2	0.0	8.0
2/19/2025 0:30	3.4	98.2	0.1	7.2	11.8	0.6	2/19/2025 0:30	4.5	118.2	0.1	6.9	12.2	0.0	8.0
2/19/2025 0:45	3.5	101.7	0.1	7.2	11.7	0.7	2/19/2025 0:45	4.5	117.2	0.1	6.9	12.2	0.0	8.0
2/19/2025 1:00	3.5	105.0	0.1	7.2	11.7	0.8	2/19/2025 1:00	4.6	117.6	0.1	6.9	12.2	0.1	8.1
2/19/2025 1:15	3.6	105.5	0.1	7.2	11.7	0.3	2/19/2025 1:15	4.6	118.9	0.1	6.9	12.2	0.0	8.0
2/19/2025 1:30	3.6	106.2	0.1	7.2	11.7	0.9	2/19/2025 1:30	4.7	119.8	0.1	6.9	12.1	0.0	8.0
2/19/2025 1:45	3.6	107.0	0.1	7.2	11.7	0.7	2/19/2025 1:45	4.6	117.3	0.1	6.9	12.2	0.0	8.0
2/19/2025 2:00	3.6	107.0	0.1	7.2	11.7	0.9	2/19/2025 2:00	4.6	115.3	0.1	6.9	12.2	0.0	8.0
2/19/2025 2:15	3.6	105.0	0.1	7.2	11.7	0.6	2/19/2025 2:15	4.6	114.2	0.1	6.9	12.2	0.0	8.0
2/19/2025 2:30	3.6	103.6	0.1	7.2	11.7	0.2	2/19/2025 2:30	4.6	112.8	0.1	6.9	12.2	0.0	8.0
2/19/2025 2:45	3.6	102.4	0.1	7.2	11.7	0.4	2/19/2025 2:45	4.6	109.5	0.1	6.9	12.2	0.0	8.0
2/19/2025 3:00	3.6	100.4	0.1	7.2	11.8	0.0	2/19/2025 3:00	4.6	107.1	0.0	6.9	12.2	0.0	8.0
2/19/2025 3:15	3.6	98.1	0.1	7.2	11.8	0.0	2/19/2025 3:15	4.6	105.7	0.0	6.9	12.2	0.0	8.0
2/19/2025 3:30	3.5	95.8	0.0	7.2	11.8	0.5	2/19/2025 3:30	4.6	104.2	0.0	6.9	12.2	0.0	8.0
2/19/2025 3:45	3.5	94.1	0.0	7.2	11.8	0.0	2/19/2025 3:45	4.5	102.6	0.0	6.9	12.2	0.0	8.0
2/19/2025 4:00	3.5	92.8	0.0	7.2	11.8	0.7	2/19/2025 4:00	4.5	101.6	0.0	6.9	12.2	0.0	8.0
2/19/2025 4:15	3.5	91.3	0.0	7.2	11.8	0.2	2/19/2025 4:15	4.5	100.7	0.0	6.9	12.3	0.0	8.0
2/19/2025 4:30	3.5	90.4	0.0	7.2	11.8	0.0	2/19/2025 4:30	4.5	99.1	0.0	6.9	12.3	0.0	8.0
2/19/2025 4:45	3.4	89.1	0.0	7.2	11.8	0.2	2/19/2025 4:45	4.4	98.0	0.0	6.9	12.3	0.0	8.0

2/19/2025 5:00	3.4	87.9	0.0	7.3	11.8	0.0	2/19/2025 5:00	4.4	97.6	0.0	6.9	12.3	0.0	8.0
2/19/2025 5:15	3.4	87.3	0.0	7.2	11.9	0.0	2/19/2025 5:15	4.4	96.9	0.0	6.9	12.3	0.0	8.0
2/19/2025 5:30	3.4	86.9	0.0	7.3	11.9	0.0	2/19/2025 5:30	4.4	95.9	0.0	6.9	12.3	0.0	8.0
2/19/2025 5:45	3.3	86.0	0.0	7.2	11.9	0.0	2/19/2025 5:45	4.3	95.4	0.0	6.9	12.4	0.0	8.0
2/19/2025 6:00	3.3	85.4	0.0	7.3	11.9	0.0	2/19/2025 6:00	4.3	95.1	0.0	6.9	12.4	0.0	8.0
2/19/2025 6:15	3.3	85.0	0.0	7.3	11.9	0.2	2/19/2025 6:15	4.3	94.5	0.0	7.0	12.4	0.0	8.0
2/19/2025 6:30	3.3	84.7	0.0	7.3	11.9	0.0	2/19/2025 6:30	4.3	93.1	0.0	7.0	12.4	0.0	8.0
2/19/2025 6:45	3.3	84.1	0.0	7.3	11.9	0.0	2/19/2025 6:45	4.2	92.2	0.0	7.0	12.4	0.0	8.0
2/19/2025 7:00	3.3	83.6	0.0	7.3	11.9	0.0	2/19/2025 7:00	4.2	91.6	0.0	7.0	12.4	0.0	8.0
2/19/2025 7:15	3.2	83.1	0.0	7.3	11.9	0.0	2/19/2025 7:15	4.2	91.3	0.0	7.0	12.5	0.0	8.0
2/19/2025 7:30	3.2	82.7	0.0	7.3	11.9	0.0	2/19/2025 7:30	4.2	91.2	0.0	7.0	12.5	0.0	8.0
2/19/2025 7:45	3.2	82.5	0.0	7.3	11.9	0.0	2/19/2025 7:45	4.2	91.0	0.0	7.0	12.5	0.0	8.0
2/19/2025 8:00	3.2	82.5	0.0	7.3	11.9	0.0	2/19/2025 8:00	4.2	91.1	0.0	7.0	12.5	0.0	8.0
2/19/2025 8:15	3.2	82.6	0.0	7.3	11.9	0.0	2/19/2025 8:15	4.2	91.2	0.0	7.0	12.5	0.0	8.0
2/19/2025 8:30	3.2	82.5	0.0	7.3	11.9	0.0	2/19/2025 8:30	4.2	92.2	0.0	7.0	12.4	0.0	8.0
2/19/2025 8:45	3.2	82.7	0.0	7.3	11.9	0.0	2/19/2025 8:45	4.2	94.1	0.0	7.0	12.4	0.0	8.0
2/19/2025 9:00	3.2	83.0	0.0	7.3	11.9	0.0	2/19/2025 9:00	4.3	99.7	0.0	7.0	12.2	0.0	8.0
2/19/2025 9:15	3.2	83.9	0.0	7.3	11.9	0.0	2/19/2025 9:15	4.3	101.3	0.0	6.9	12.2	0.0	8.0
2/19/2025 9:30	3.2	85.2	0.0	7.3	11.8	3.2	2/19/2025 9:30	4.3	97.5	0.0	6.9	12.3	0.0	8.0
2/19/2025 9:45	3.2	88.8	0.0	7.3	11.8	1.3	2/19/2025 9:45	4.2	95.7	0.0	7.0	12.3	0.0	8.0
2/19/2025 10:00	3.2	88.3	0.0	7.3	11.8	0.5	2/19/2025 10:00	4.2	93.4	0.0	7.0	12.3	0.0	8.0
2/19/2025 10:15	3.2	86.7	0.0	7.3	11.8	0.0	2/19/2025 10:15	4.2	92.7	0.0	7.0	12.4	0.0	8.0
2/19/2025 10:30	3.2	84.9	0.0	7.3	11.9	0.0	2/19/2025 10:30	4.3	95.8	0.0	7.0	12.4	0.0	8.0
2/19/2025 10:45	3.2	84.0	0.0	7.3	11.9	0.0	2/19/2025 10:45	4.3	102.0	0.0	6.9	12.2	0.0	8.0
2/19/2025 11:00	3.3	83.5	0.0	7.3	11.8	0.5	2/19/2025 11:00	4.4	102.6	0.0	6.9	12.2	0.0	8.0
2/19/2025 11:15	3.3	87.2	0.0	7.3	11.8	1.3	2/19/2025 11:15	4.3	101.0	0.0	6.9	12.3	0.0	8.0
2/19/2025 11:30	3.3	90.2	0.0	7.3	11.8	0.4	2/19/2025 11:30	4.4	107.4	0.0	6.9	12.3	0.0	8.0
2/19/2025 11:45	3.3	88.9	0.0	7.3	11.8	0.0	2/19/2025 11:45	4.6	117.8	0.1	6.9	12.1	0.0	8.0
2/19/2025 12:00	3.4	90.5	0.1	7.2	11.8	0.0	2/19/2025 12:00	4.6	114.1	0.1	6.9	12.2	0.0	8.0
2/19/2025 12:15	3.5	95.5	0.1	7.2	11.8	0.0	2/19/2025 12:15	4.6	110.5	0.1	6.9	12.3	0.0	8.0
2/19/2025 12:30	3.5	98.0	0.1	7.2	11.9	0.0	2/19/2025 12:30	4.6	110.9	0.1	6.9	12.4	0.0	8.0
2/19/2025 12:45	3.5	96.1	0.1	7.2	11.9	0.0	2/19/2025 12:45	4.7	114.6	0.1	6.9	12.4	0.0	8.0
2/19/2025 13:00	3.6	95.1	0.1	7.2	11.9	0.0	2/19/2025 13:00	4.8	120.8	0.1	6.9	12.4	0.0	8.0
2/19/2025 13:15	3.6	97.4	0.1	7.2	11.9	0.0	2/19/2025 13:15	4.9	124.7	0.1	6.8	12.2	0.0	8.0
2/19/2025 13:30	3.7	100.6	0.1	7.2	11.9	0.0	2/19/2025 13:30	4.8	119.0	0.1	6.8	12.3	0.0	8.0
2/19/2025 13:45	3.7	103.6	0.1	7.2	11.9	0.0	2/19/2025 13:45	4.7	109.2	0.1	6.9	12.5	0.0	8.0
2/19/2025 14:00	3.6	99.9	0.1	7.2	12.0	0.0	2/19/2025 14:00	4.7	103.6	0.0	6.9	12.6	0.0	8.0
2/19/2025 14:15	3.6	94.6	0.0	7.3	12.1	0.0	2/19/2025 14:15	4.6	100.6	0.0	6.9	12.6	0.0	8.0
2/19/2025 14:30	3.6	91.9	0.0	7.3	12.1	0.0	2/19/2025 14:30	4.6	99.2	0.0	6.9	12.6	0.0	8.0
2/19/2025 14:45	3.6	90.4	0.0	7.2	12.1	0.0	2/19/2025 14:45	4.7	98.3	0.0	6.9	12.7	0.0	8.0
2/19/2025 15:00	3.6	87.9	0.0	7.2	12.1	0.0	2/19/2025 15:00	4.7	98.4	0.0	6.9	12.7	0.0	8.0
2/19/2025 15:15	3.6	87.4	0.0	7.3	12.1	0.0	2/19/2025 15:15	4.7	98.5	0.0	6.9	12.7	0.0	8.0
2/19/2025 15:30	3.6	87.2	0.0	7.3	12.2	0.0	2/19/2025 15:30	4.7	98.2	0.0	6.9	12.6	0.0	8.0
2/19/2025 15:45	3.6	87.2	0.0	7.3	12.2	0.0	2/19/2025 15:45	4.7	98.3	0.0	6.9	12.6	0.0	8.0
2/19/2025 16:00	3.6	87.0	0.0	7.3	12.1	0.0	2/19/2025 16:00	4.7	98.4	0.0	6.9	12.6	0.0	8.0
2/19/2025 16:15	3.6	87.0	0.0	7.3	12.1	0.0	2/19/2025 16:15	4.7	98.3	0.0	6.9	12.6	0.0	8.0
2/19/2025 16:30	3.6	86.9	0.0	7.3	12.1	0.0	2/19/2025 16:30	4.7	98.6	0.0	6.9	12.5	0.0	8.0
2/19/2025 16:45	3.6	86.9	0.0	7.3	12.0	0.0	2/19/2025 16:45	4.7	98.1	0.0	6.9	12.5	0.0	8.0
2/19/2025 17:00	3.6	86.9	0.0	7.3	12.0	0.0	2/19/2025 17:00	4.6	98.0	0.0	6.9	12.5	0.0	8.0
2/19/2025 17:15	3.6	86.6	0.0	7.2	12.0	0.0	2/19/2025 17:15	4.6	98.0	0.0	6.9	12.5	0.0	8.0
2/19/2025 17:30	3.6	87.1	0.0	7.2	12.0	0.0	2/19/2025 17:30	4.6	98.8	0.0	6.9	12.4	0.0	8.0
2/19/2025 17:45	3.6	87.0	0.0	7.2	12.0	0.0	2/19/2025 17:45	4.6	98.6	0.0	6.9	12.4	0.0	8.0
2/19/2025 18:00	3.6	87.1	0.0	7.2	12.0	0.0	2/19/2025 18:00	4.6	98.0	0.0	6.9	12.4	0.0	8.0
2/19/2025 18:15	3.6	86.8	0.0	7.2	11.9	0.0	2/19/2025 18:15	4.6	98.0	0.0	6.9	12.4	0.0	8.0
2/19/2025 18:30	3.6	86.4	0.0	7.2	11.9	0.0	2/19/2025 18:30	4.6	97.9	0.0	6.9	12.4	0.0	8.0
2/19/2025 18:45	3.6	86.7	0.0	7.3	11.9	0.0	2/19/2025 18:45	4.6	98.1	0.0	6.9	12.3	0.0	8.0
2/19/2025 19:00	3.6	86.6	0.0	7.3	11.9	0.0	2/19/2025 19:00	4.6	98.3	0.0	6.9	12.3	0.0	8.0
2/19/2025 19:15	3.5	86.7	0.0	7.2	11.8	0.0	2/19/2025 19:15	4.6	98.3	0.0	6.9	12.3	0.0	8.0
2/19/2025 19:30	3.5	86.8	0.0	7.2	11.8	0.0	2/19/2025 19:30	4.6	98.4	0.0	6.9	12.2	0.0	8.0
2/19/2025 19:45	3.5	86.9	0.0	7.2	11.8	0.2	2/19/2025 19:45	4.6	99.1	0.0	6.8	12.2	0.0	8.0
2/19/2025 20:00	3.5	86.9	0.0	7.2	11.8	0.0	2/19/2025 20:00	4.5	98.6	0.0	6.8	12.2	0.0	8.0
2/19/2025 20:15	3.5	87.1	0.0	7.2	11.8	0.0	2/19/2025 20:15	4.5	98.8	0.0	6.8	12.2	0.0	8.0
2/19/2025 20:30	3.5	87.1	0.0	7.2	11.7	0.4	2/19/2025 20:30	4.5	99.1	0.0	6.8	12.2	0.0	8.0
2/19/2025 20:45	3.5	87.2	0.0	7.2	11.7	0.0	2/19/2025 20:45	4.5	98.8	0.0	6.8	12.2	0.0	8.0
2/19/2025 21:00	3.5	87.1	0.0	7.2	11.7	0.0	2/19/2025 21:00	4.5	99.0	0.0	6.8	12.2	0.0	8.0
2/19/2025 21:15	3.5	86.9	0.0	7.2	11.7	0.0	2/19/2025 21:15	4.5	99.0	0.0	6.8	12.2	0.0	8.0
2/19/2025 21:30	3.5	86.7	0.0	7.2	11.7	0.3	2/19/2025 21:30	4.5	98.5	0.0	6.8	12.2	0.0	8.0
2/19/2025 21:45	3.4	86.8	0.0	7.2	11.7	0.0	2/19/2025 21:45	4.4	98.2	0.0	6.8	12.2	0.0	8.0
2/19/2025 22:00	3.4	86.6	0.0	7.2	11.7	0.0	2/19/2025 22:00	4.4	98.4	0.0	6.8	12.2	0.0	8.0
2/19/2025 22:15	3.4	86.4	0.0	7.2	11.7	0.0	2/19/2025 22:15	4.4	98.0	0.0	6.8	12.2	0.0	8.0
2/19/2025 22:30	3.4	86.5	0.0	7.2	11.7	1.0	2/19/2025 22:30	4.4	97.1	0.0	6.9	12.2	0.0	8.0
2/19/2025 22:45	3.4	86.2	0.0	7.2	11.7	0.0	2/19/2025 22:45	4.3	96.5	0.0	6.9	12.3	0.0	8.0
2/19/2025 23:00	3.3	85.5	0.0	7.2	11.8	0.0	2/19/2025 23:00	4.3	95.2	0.0	6.9	12.3	0.0	8.0
2/19/2025 23:15	3.3	85.0	0.0	7.2	11.8	0.0	2/19/2025 23:15	4.3	94.9	0.0	6.9	12.3	0.0	8.0
2/19/2025 23:30	3.3	84.3	0.0	7.2	11.8	0.0	2/19/2025 23:30	4.2	93.4	0.0	6.9	12.3	0.0	8.0
2/19/2025 23:45	3.3	83.9	0.0	7.2	11.8	0.0	2/19/2025 23:45	4.2	91.8	0.0	6.9	12.4	0.0	8.0
2/20/2025 0:00	3.2	82.9	0.0	7.2	11.8	0.0	2/20/2025 0:00	4.2	91.7	0.0	6.9	12.4	0.0	8.0
2/20/2025 0:15	3.2	81.9	0.0	7.2	11.8	0.0	2/20/2025 0:15	4.2	92.1	0.0	6.9	12.4	0.0	8.0
2/20/2025 0:30	3.2	81.6	0.0	7.2	11.8	0.0	2/20/2025 0:30	4.2	91.4	0.0	6.9	12.4	0.0	8.0
2/20/2025 0:45	3.2	81.7	0.0	7.2	11.8	0.0	2/20/2025 0:45	4.1	91.7	0.0	6.9	12.4	0.0	8.0
2/20/2025 1:00	3.2	81.4	0.0	7.2	11.8	0.0	2/20/2025 1:00	4.1	92.6	0.0	6.9	12.4	0.0	8.0
2/20/2025 1:15	3.2	81.2	0.0	7.2	11.8	0.0	2/20/2025 1:15	4.2	98.5	0.0	6.9	12.3	0.0	8.0
2/20/2025 1:30	3.2	81.8	0.0	7.2	11.8	0.0	2/20/2025 1:30	4.2	96.5	0.0	6.9	12.3	0.0	8.0
2/20/2025 1:45	3.2	84.9	0.0	7.2	11.8	0.0	2/20/2025 1:45	4.2	97.0	0.0	6.9	12.3	0.0	8.0
2/20/2025 2:00	3.2	84.6	0.0	7.2	11.8	0.0	2/20/2025 2:00	4.2	96.1	0.0	6.9	12.3	0.0	8.0
2/20/2025 2:15	3.2	84.3	0.0	7.2	11.8	0.0	2/20/2025 2:15	4.2	101.2	0.0	6.8	12.2	0.0	8.0
2/20/2025 2:30	3.2	84.1	0.0	7.2	11.8	0.0	2/20/2025 2:30	4.2	96.2	0.0	6.8	12.3	0.0	8.0
2/20/2025 2:45	3.2	86.1	0.0	7.2	11.8	0.0	2/20/2025 2:45	4.1	95.5	0.0	6.9	12.3	0.0	8.0
2/20/2025 3:00	3.1	84.3	0.0	7.2	11.8	0.0	2/20/2025 3:00	4.1	96.4	0.0	6.8	12.3	0.0	8.0
2/20/2025 3:15	3.1	83.5	0.0	7.2	11.8	0.2	2/20/2025 3:15	4.2	97.6	0.0	6.8	12.3	0.0	8.0
2/20/2025 3:30	3.1	83.7	0.0	7.2	11.8	0.0	2/20/2025 3:30	4.1	96.4	0.0	6.8	12.3	0.0	8.0
2/20/2025 3:45	3.1	84.4	0.0	7.2	11.8	0.0	2/20/2025 3:45	4.1	93.9	0.0	6.8	12.3	0.0	8.0
2/20/2025 4:00	3.1	84.0	0.0	7.2	11.8	0.0	2/20/2025 4:00	4.1	92.8	0.0	6.8	12.3	0.0	8.0
2/20/2025 4:15	3.1	82.2	0.0	7.2	11.8	0.0	2/20/2025 4:15	4.1	93.2	0.0	6.8	12.3	0.0	8.0
2/20/2025 4:30	3.1	81.5	0.0	7.2	11.8	0.0	2/20/2025 4:30	4.1	92.7	0.0	6.8	12.3	0.0	8.0
2/20/2025 4:45	3.1	81.5	0.0	7.2	11.8	0.0	2/20/2025 4:45	4.1	92.2	0.0	6.8	12.3	0.0	8.0
2/20/2025 5:00	3.1	81.3	0.0	7.1	11.8	0.0	2/20/2025 5:00	4.1	91.7	0.0	6.8	12.4	0.0	8.0
2/20/2025 5:15	3.1	81.1	0.0	7.2	11.9	0.0	2/20/2025 5:15	4.1	90.9	0.0	6.8	12.4	0.0	8.0
2/20/2025 5:30	3.1	80.6	0.0	7.2	11.9	0.0	2/20/2025 5:30	4.1	90.4	0.0	6.8	12.4	0.0	8.0
2/20/2025 5:45	3.1	80.2	0.0	7.1	11.9	0.0	2/20/2025 5:45	4.0	89.9	0.0	6.8	12.4	0.0	8.0
2/20/2025 6:00	3.1	79.8	0.0	7.2	11.9	0.0	2/20/2025 6:00	4.0	89.7	0.0	6.8	12.4	0.0	8.0
2/20/2025 6:15	3.1	79.5	0.0	7.2	11.9	0.0	2/20/2025 6:15	4.0	89.7	0.0	6.8	12.4	0.0	8.0
2/20/2025 6:30	3.1	79.4	0.0	7.1	11.9	0.0	2/20/2025 6:30	4.0	89.0	0.0	6.8	12.4	0.0	8.0
2/20/2025 6:45	3.0	79.3	0.0	7.2	11.9	0.0	2/20/2025 6:45	4.0	88.1	0.0	6.9	12.5	0.0	8.0
2/20/2025 7:00	3.0	78.8	0.0	7.2	11.9	0.0	2/20/2025 7:00	4.0	87.1	0.0	6.9	12.5	0.0	8.0
2/20/2025 7:15	3.0	78.3	0.0	7.2	11.9	0.0	2/20/2025 7:15	4.0	86.6	0.0	6.9	12.5	0.0	8.0
2/20/2025 7:30	3.0	77.6	0.0	7.2	12.0	0.0	2/20/2025 7:30	3.9	85.8	0.0	6.9	12.5	0.0	8.0
2/20/2025 7:45	3.0	77.2	0.0	7.2	12.0	0.0	2/20/2025 7:45	3.9	84.8	0.0	6.9	12.6	0.0	8.0

2/20/2025 8:00	3.0	76.6	0.0	7.2	12.0	0.0
2/20/2025 8:15	3.0	76.0	0.0	7.2	12.0	0.0
2/20/2025 8:30	3.0	75.5	0.0	7.2	12.0	0.0
2/20/2025 8:45	2.9	75.3	0.0	7.2	12.0	0.0
2/20/2025 9:00	2.9	74.8	0.0	7.2	12.1	0.0
2/20/2025 9:15	2.9	74.5	0.0	7.2	12.1	0.0
2/20/2025 9:30	2.9	74.4	0.0	7.2	12.1	0.0
2/20/2025 9:45	2.9	74.4	0.0	7.2	12.1	0.0
2/20/2025 10:00	2.9	74.4	0.0	7.2	12.1	0.0
2/20/2025 10:15	2.9	74.6	0.0	7.2	12.1	0.0
2/20/2025 10:30	2.9	75.2	0.0	7.2	12.2	0.0
2/20/2025 10:45	2.9	75.2	0.0	7.2	12.2	0.0
2/20/2025 11:00	3.0	75.2	0.0	7.2	12.3	0.0
2/20/2025 11:15	3.0	75.1	0.0	7.2	12.3	0.0
2/20/2025 11:30	3.0	76.0	0.0	7.2	12.3	0.0
2/20/2025 11:45	3.1	78.1	0.0	7.2	12.3	0.0
2/20/2025 12:00	3.2	79.8	0.0	7.2	12.3	0.0
2/20/2025 12:15	3.3	82.7	0.0	7.2	12.3	0.0
2/20/2025 12:30	3.3	84.8	0.0	7.2	12.3	0.0
2/20/2025 12:45	3.4	87.2	0.0	7.2	12.2	0.0
2/20/2025 13:00	3.5	90.6	0.0	7.2	12.2	0.0
2/20/2025 13:15	3.5	89.4	0.0	7.2	12.3	0.0
2/20/2025 13:30	3.5	87.0	0.0	7.2	12.3	0.0
2/20/2025 13:45	3.5	85.8	0.0	7.2	12.3	0.0
2/20/2025 14:00	3.5	82.4	0.0	7.2	12.4	0.0
2/20/2025 14:15	3.5	80.9	0.0	7.2	12.4	0.0
2/20/2025 14:30	3.5	80.0	0.0	7.2	12.4	0.0
2/20/2025 14:45	3.5	79.0	0.0	7.2	12.4	0.0
2/20/2025 15:00	3.6	78.5	0.0	7.2	12.4	0.0
2/20/2025 15:15	3.6	78.2	0.0	7.2	12.4	0.0
2/20/2025 15:30	3.7	78.1	0.0	7.2	12.5	0.0
2/20/2025 15:45	3.7	78.1	0.0	7.2	12.5	0.0
2/20/2025 16:00	3.7	78.1	0.0	7.2	12.4	0.0
2/20/2025 16:15	3.8	78.2	0.0	7.2	12.4	0.0
2/20/2025 16:30	3.8	78.2	0.0	7.2	12.4	0.0
2/20/2025 16:45	3.8	78.0	0.0	7.2	12.4	0.0
2/20/2025 17:00	3.8	77.5	0.0	7.2	12.4	0.0
2/20/2025 17:15	3.8	77.7	0.0	7.2	12.4	0.0
2/20/2025 17:30	3.8	77.8	0.0	7.2	12.4	0.0
2/20/2025 17:45	3.8	77.9	0.0	7.2	12.3	0.0
2/20/2025 18:00	3.8	78.1	0.0	7.2	12.3	0.0
2/20/2025 18:15	3.8	78.2	0.0	7.2	12.2	0.0
2/20/2025 18:30	3.7	78.0	0.0	7.2	12.2	0.0
2/20/2025 18:45	3.7	78.0	0.0	7.2	12.2	0.0
2/20/2025 19:00	3.7	78.1	0.0	7.2	12.1	0.0
2/20/2025 19:15	3.7	78.3	0.0	7.2	12.1	0.0
2/20/2025 19:30	3.7	78.1	0.0	7.2	12.0	0.1
2/20/2025 19:45	3.6	78.4	0.0	7.2	12.0	0.0
2/20/2025 20:00	3.6	78.4	0.0	7.2	12.0	0.0
2/20/2025 20:15	3.6	78.7	0.0	7.1	11.9	0.2
2/20/2025 20:30	3.6	78.9	0.0	7.2	11.9	0.0
2/20/2025 20:45	3.6	78.7	0.0	7.1	11.9	0.0
2/20/2025 21:00	3.6	78.7	0.0	7.1	11.9	0.0
2/20/2025 21:15	3.6	78.9	0.0	7.1	11.8	0.0
2/20/2025 21:30	3.6	78.9	0.0	7.1	11.8	0.0
2/20/2025 21:45	3.6	78.9	0.0	7.1	11.8	0.0
2/20/2025 22:00	3.5	79.1	0.0	7.1	11.8	0.0
2/20/2025 22:15	3.5	79.0	0.0	7.1	11.8	0.0
2/20/2025 22:30	3.5	78.9	0.0	7.1	11.8	0.0
2/20/2025 22:45	3.5	79.1	0.0	7.1	11.8	0.0
2/20/2025 23:00	3.5	79.0	0.0	7.1	11.8	0.0
2/20/2025 23:15	3.5	79.1	0.0	7.1	11.8	0.0
2/20/2025 23:30	3.5	79.3	0.0	7.1	11.8	0.0
2/20/2025 23:45	3.5	79.2	0.0	7.1	11.8	0.0
2/21/2025 0:00	3.5	78.9	0.0	7.1	11.8	0.0
2/21/2025 0:15	3.5	78.7	0.0	7.1	11.8	0.0
2/21/2025 0:30	3.5	78.7	0.0	7.1	11.8	0.0
2/21/2025 0:45	3.5	78.0	0.0	7.1	11.8	0.0
2/21/2025 1:00	3.4	77.1	0.0	7.1	11.8	0.0
2/21/2025 1:15	3.4	76.3	0.0	7.1	11.9	0.0
2/21/2025 1:30	3.4	75.4	0.0	7.2	11.9	0.0
2/21/2025 1:45	3.4	75.9	0.0	7.2	11.8	0.0
2/21/2025 2:00	3.4	76.2	0.0	7.2	11.9	0.0
2/21/2025 2:15	3.4	75.2	0.0	7.2	11.9	0.0
2/21/2025 2:30	3.4	73.9	0.0	7.2	11.9	0.0
2/21/2025 2:45	3.4	74.2	0.0	7.2	11.8	0.0
2/21/2025 3:00	3.4	76.6	0.0	7.2	11.8	0.0
2/21/2025 3:15	3.4	75.7	0.0	7.2	11.9	0.0
2/21/2025 3:30	3.4	74.0	0.0	7.2	11.9	0.0
2/21/2025 3:45	3.4	75.2	0.0	7.2	11.8	0.0
2/21/2025 4:00	3.4	76.8	0.0	7.1	11.8	0.0
2/21/2025 4:15	3.3	76.1	0.0	7.2	11.9	0.0
2/21/2025 4:30	3.4	73.9	0.0	7.2	11.9	0.0
2/21/2025 4:45	3.4	74.9	0.0	7.2	11.8	0.0
2/21/2025 5:00	3.4	78.0	0.0	7.1	11.8	0.1
2/21/2025 5:15	3.4	78.4	0.0	7.1	11.8	0.0
2/21/2025 5:30	3.4	75.9	0.0	7.1	11.9	0.0
2/21/2025 5:45	3.4	74.7	0.0	7.1	11.8	0.0
2/21/2025 6:00	3.4	76.4	0.0	7.1	11.8	0.0
2/21/2025 6:15	3.4	79.3	0.0	7.1	11.8	0.0
2/21/2025 6:30	3.4	79.5	0.0	7.1	11.8	0.0
2/21/2025 6:45	3.3	76.5	0.0	7.1	11.9	0.0
2/21/2025 7:00	3.3	74.0	0.0	7.1	11.9	0.0
2/21/2025 7:15	3.4	73.9	0.0	7.1	11.8	0.0
2/21/2025 7:30	3.4	76.3	0.0	7.1	11.8	0.0
2/21/2025 7:45	3.3	77.1	0.0	7.1	11.9	0.1
2/21/2025 8:00	3.3	74.6	0.0	7.2	11.9	0.0
2/21/2025 8:15	3.3	72.9	0.0	7.2	11.9	0.4
2/21/2025 8:30	3.3	72.6	0.0	7.2	11.9	0.3
2/21/2025 8:45	3.3	74.0	0.0	7.2	11.9	0.4
2/21/2025 9:00	3.3	74.3	0.0	7.2	11.9	0.5
2/21/2025 9:15	3.3	73.2	0.0	7.2	11.9	0.5
2/21/2025 9:30	3.3	72.2	0.0	7.2	11.9	0.7
2/21/2025 9:45	3.3	72.7	0.0	7.2	11.9	0.6
2/21/2025 10:00	3.3	75.1	0.0	7.2	11.9	0.8
2/21/2025 10:15	3.3	74.7	0.0	7.1	11.9	1.3
2/21/2025 10:30	3.3	72.5	0.0	7.2	12.0	0.7
2/21/2025 10:45	3.3	72.1	0.0	7.2	12.0	0.7

2/20/2025 8:00	3.9	84.2	0.0	6.9	12.6	0.0	8.0
2/20/2025 8:15	3.9	84.1	0.0	6.9	12.6	0.0	8.0
2/20/2025 8:30	3.9	83.5	0.0	6.9	12.6	0.0	8.0
2/20/2025 8:45	3.9	83.3	0.0	6.9	12.6	0.0	8.0
2/20/2025 9:00	3.9	83.5	0.0	6.9	12.6	0.0	8.0
2/20/2025 9:15	3.9	83.7	0.0	6.9	12.6	0.0	8.0
2/20/2025 9:30	3.9	83.6	0.0	6.9	12.7	0.0	8.0
2/20/2025 9:45	3.9	84.2	0.0	6.9	12.7	0.0	8.0
2/20/2025 10:00	3.9	85.6	0.0	6.9	12.7	0.0	8.0
2/20/2025 10:15	3.9	85.3	0.0	6.9	12.8	0.0	8.0
2/20/2025 10:30	3.9	85.1	0.0	6.9	12.8	0.0	8.0
2/20/2025 10:45	3.9	85.0	0.0	6.9	12.9	0.0	8.0
2/20/2025 11:00	4.0	87.2	0.0	6.9	12.9	0.0	8.0
2/20/2025 11:15	4.1	91.4	0.0	6.9	12.9	0.0	8.0
2/20/2025 11:30	4.1	93.2	0.0	6.9	12.9	0.0	8.0
2/20/2025 11:45	4.2	97.6	0.0	6.9	12.8	0.0	8.0
2/20/2025 12:00	4.3	101.3	0.0	6.9	12.8	0.0	8.0
2/20/2025 12:15	4.4	103.6	0.0	6.8	12.8	0.0	8.0
2/20/2025 12:30	4.5	108.6	0.0	6.8	12.6	0.0	8.0
2/20/2025 12:45	4.5	105.9	0.0	6.8	12.7	0.0	8.0
2/20/2025 13:00	4.6	103.1	0.0	6.8	12.8	0.0	8.0
2/20/2025 13:15	4.6	100.1	0.0	6.8	12.8	0.0	8.0
2/20/2025 13:30	4.5	95.4	0.0	6.8	12.9	0.0	8.0
2/20/2025 13:45	4.5	93.1	0.0	6.8	12.9	0.0	8.0
2/20/2025 14:00	4.5	91.6	0.0	6.8	12.9	0.0	8.0
2/20/2025 14:15	4.5	90.2	0.0	6.8	12.9	0.0	8.0
2/20/2025 14:30	4.5	89.4	0.0	6.8	12.9	0.0	8.0
2/20/2025 14:45	4.6	89.2	0.0	6.8	13.0	0.0	8.0
2/20/2025 15:00	4.6	88.8	0.0	6.8	12.9	0.0	8.0
2/20/2025 15:15	4.7	89.1	0.0	6.8	13.0	0.0	8.0
2/20/2025 15:30	4.7	88.6	0.0	6.8	13.0	0.0	8.0
2/20/2025 15:45	4.8	88.5	0.0	6.8	13.0	0.0	8.0
2/20/2025 16:00	4.8	89.1	0.0	6.8	13.0	0.0	8.0
2/20/2025 16:15	4.8	88.2	0.0	6.8	13.0	0.0	8.0
2/20/2025 16:30	4.8	87.8	0.0	6.8	13.0	0.0	8.0
2/20/2025 16:45	4.8	88.4	0.0	6.8	13.0	0.0	8.0
2/20/2025 17:00	4.8	88.4	0.0	6.8	12.9	0.0	8.0
2/20/2025 17:15	4.8	88.7	0.0	6.8	12.9	0.0	8.0
2/20/2025 17:30	4.8	89.0	0.0	6.8	12.9	0.0	8.0
2/20/2025 17:45	4.8	88.9	0.0	6.8	12.8	0.0	8.0
2/20/2025 18:00	4.8	89.0	0.0	6.8	12.7	0.0	8.0
2/20/2025 18:15	4.8	88.9	0.0	6.8	12.7	0.0	8.0
2/20/2025 18:30	4.7	89.0	0.0	6.8	12.6	0.0	8.0
2/20/2025 18:45	4.7	89.6	0.0	6.8	12.6	0.0	8.0
2/20/2025 19:00	4.7	89.4	0.0	6.8	12.5	0.0	8.0
2/20/2025 19:15	4.7	89.2	0.0	6.8	12.5	0.0	8.0
2/20/2025 19:30	4.7	89.5	0.0	6.8	12.5	0.0	8.0
2/20/2025 19:45	4.6	89.6	0.0	6.8	12.4	0.0	8.0
2/20/2025 20:00	4.6	89.9	0.0	6.8	12.4	0.0	8.0
2/20/2025 20:15	4.6	90.1	0.0	6.8	12.4	0.0	8.0
2/20/2025 20:30	4.6	90.1	0.0	6.8	12.4	0.0	8.0
2/20/2025 20:45	4.6	90.1	0.0	6.8	12.3	0.0	8.0
2/20/2025 21:00	4.6	90.2	0.0	6.8	12.3	0.0	8.0
2/20/2025 21:15	4.6	90.1	0.0	6.8	12.3	0.0	8.0
2/20/2025 21:30	4.6	90.4	0.0	6.7	12.3	0.0	8.0
2/20/2025 21:45	4.6	90.3	0.0	6.8	12.3	0.0	8.0
2/20/2025 22:00	4.6	90.4	0.0	6.7	12.3	0.0	8.0
2/20/2025 22:15	4.5	90.4	0.0	6.7	12.3	0.0	8.0
2/20/2025 22:30	4.5	90.7	0.0	6.7	12.2	0.0	8.0
2/20/2025 22:45	4.5	90.2	0.0	6.7	12.3	0.0	8.0
2/20/2025 23:00	4.5	90.2	0.0	6.7	12.3	0.0	8.0
2/20/2025 23:15	4.5	90.5	0.0	6.7	12.3	0.0	8.0
2/20/2025 23:30	4.5	89.8	0.0	6.7	12.3	0.0	8.0
2/20/2025 23:45	4.5	89.8	0.0	6.8	12.3	0.0	8.0
2/21/2025 0:00	4.5	89.8	0.0	6.8	12.3	0.0	8.0
2/21/2025 0:15	4.5	88.4	0.0	6.8	12.3	0.0	8.0
2/21/2025 0:30	4.4	87.4	0.0	6.8	12.4	0.0	8.0
2/21/2025 0:45	4.4	85.8	0.0	6.8	12.4	0.0	8.0
2/21/2025 1:00	4.4	84.8	0.0	6.8	12.4	0.0	8.0
2/21/2025 1:15	4.4	86.0	0.0	6.8	12.4	0.0	8.0
2/21/2025 1:30	4.4	86.8	0.0	6.8	12.4	0.0	8.0
2/21/2025 1:45	4.4	84.1	0.0	6.9	12.4	0.0	8.0
2/21/2025 2:00	4.3	82.5	0.0	6.9	12.5	0.0	8.0
2/21/2025 2:15	4.3	84.6	0.0	6.9	12.4	0.0	8.0
2/21/2025 2:30	4.4	89.2	0.0	6.8	12.3	0.0	8.0
2/21/2025 2:45	4.4	84.5	0.0	6.9	12.4	0.0	8.0
2/21/2025 3:00	4.3	82.8	0.0	6.9	12.4	0.0	8.0
2/21/2025 3:15	4.4	87.8	0.0	6.8	12.4	0.0	8.0
2/21/2025 3:30	4.4	90.3	0.0	6.8	12.3	0.0	8.0
2/21/2025 3:45	4.4	85.3	0.0	6.8	12.4	0.0	8.0
2/21/2025 4:00	4.3	82.8	0.0	6.9	12.4	0.0	8.0
2/21/2025 4:15	4.4	87.3	0.0	6.8	12.4	0.0	8.0
2/21/2025 4:30	4.4	91.6	0.0	6.8	12.3	0.0	8.0
2/21/2025 4:45	4.4	90.5	0.0	6.8	12.3	0.0	8.0
2/21/2025 5:00	4.4	85.8	0.0	6.8	12.4	27.5	32.5
2/21/2025 5:15	4.3	84.5	0.0	6.8	12.4	0.0	8.0
2/21/2025 5:30	4.4	89.8	0.0	6.8	12.3	0.0	8.0
2/21/2025 5:45	4.5	94.8	0.0	6.8	12.2	0.0	8.0
2/21/2025 6:00	4.4	91.6	0.0	6.8	12.3	0.0	8.0
2/21/2025 6:15	4.4	85.7	0.0	6.8	12.4	0.0	8.0
2/21/2025 6:30	4.3	83.0	0.0	6.8	12.4	0.0	8.0
2/21/2025 6:45	4.3	84.1	0.0	6.8	12.4	0.0	8.0
2/21/2025 7:00	4.4	89.9	0.0	6.8	12.3	0.0	8.0
2/21/2025 7:15	4.4	88.5	0.0	6.8	12.3	0.0	8.0
2/21/2025 7:30	4.3	83.5	0.0	6.8	12.4	0.0	8.0
2/21/2025 7:45	4.3	81.8	0.0	6.9	12.5	0.0	8.0
2/21/2025 8:00	4.3	82.2	0.0	6.9	12.5	0.0	8.0
2/21/2025 8:15	4.3	85.6	0.0	6.8	12.4	0.0	8.0
2/21/2025 8:30	4.3	84.5	0.0	6.8	12.4	0.0	8.0
2/21/2025 8:45	4.3	82.3	0.0	6.9	12.4	0.0	8.0
2/21/2025 9:00	4.2	81.5	0.0	6.9	12.5	0.0	8.0
2/21/2025 9:15	4.2	84.2	0.0	6.9	12.4	2.3	10.3
2/21/2025 9:30	4.3	87.9	0.0	6.8	12.3	0.0	8.0
2/21/2025 9:45	4.3	85.1	0.0	6.8	12.4	2.0	10.0
2/21/2025 10:00	4.2	82.2	0.0	6.9	12.5	0.0	8.0
2/21/2025 10:15	4.2	82.0	0.0	6.9	12.5	0.0	8.0
2/21/2025 10:30	4.2	84.0	0.0	6.9	12.5	0.0	8.0
2/21/2025 10:45	4.2	84.2	0.0	6.9	12.5	0.6	8.6

2/21/2025 11:00	3.3	73.0	0.0	7.2	12.0	0.9
2/21/2025 11:15	3.3	73.2	0.0	7.2	12.0	0.5
2/21/2025 11:30	3.3	72.4	0.0	7.2	12.1	0.5
2/21/2025 11:45	3.3	71.9	0.0	7.2	12.1	0.7
2/21/2025 12:00	3.4	72.7	0.0	7.2	12.0	0.4
2/21/2025 12:15	3.4	79.4	0.0	7.2	12.0	0.3
2/21/2025 12:30	3.4	81.3	0.0	7.2	12.0	0.6
2/21/2025 12:45	3.4	78.6	0.0	7.2	12.1	0.5
2/21/2025 13:00	3.5	78.2	0.0	7.1	12.0	0.6
2/21/2025 13:15	3.5	83.6	0.0	7.1	11.9	0.7
2/21/2025 13:30	3.5	83.7	0.0	7.1	12.0	0.5
2/21/2025 13:45	3.4	81.1	0.0	7.1	12.0	1.6
2/21/2025 14:00	3.4	79.6	0.0	7.1	12.0	1.1
2/21/2025 14:15	3.4	78.1	0.0	7.1	12.1	1.0
2/21/2025 14:30	3.4	75.9	0.0	7.1	12.1	0.8
2/21/2025 14:45	3.4	74.2	0.0	7.1	12.1	1.3
2/21/2025 15:00	3.4	73.8	0.0	7.1	12.1	2.1
2/21/2025 15:15	3.3	72.9	0.0	7.1	12.1	1.2
2/21/2025 15:30	3.3	72.2	0.0	7.2	12.2	1.9
2/21/2025 15:45	3.3	71.7	0.0	7.2	12.2	1.4
2/21/2025 16:00	3.3	71.4	0.0	7.2	12.2	1.9
2/21/2025 16:15	3.3	71.0	0.0	7.1	12.2	1.7
2/21/2025 16:30	3.3	70.7	0.0	7.2	12.2	1.7
2/21/2025 16:45	3.3	70.5	0.0	7.2	12.2	1.6
2/21/2025 17:00	3.3	70.2	0.0	7.2	12.2	1.8
2/21/2025 17:15	3.3	69.7	0.0	7.2	12.2	1.7
2/21/2025 17:30	3.3	69.4	0.0	7.2	12.1	1.6
2/21/2025 17:45	3.2	69.0	0.0	7.2	12.1	2.0
2/21/2025 18:00	3.2	68.4	0.0	7.2	12.1	2.0
2/21/2025 18:15	3.2	67.9	0.0	7.2	12.1	1.5
2/21/2025 18:30	3.2	67.5	0.0	7.2	12.1	1.4
2/21/2025 18:45	3.2	67.3	0.0	7.1	12.1	3.3
2/21/2025 19:00	3.1	66.9	0.0	7.2	12.1	1.5
2/21/2025 19:15	3.1	66.9	0.0	7.2	12.1	1.8
2/21/2025 19:30	3.1	66.3	0.0	7.2	12.1	2.4
2/21/2025 19:45	3.1	66.4	0.0	7.2	12.1	2.3
2/21/2025 20:00	3.1	65.8	0.0	7.2	12.1	1.9
2/21/2025 20:15	3.0	65.9	0.0	7.2	12.1	2.4
2/21/2025 20:30	3.0	65.1	0.0	7.2	12.1	2.7
2/21/2025 20:45	3.0	65.2	0.0	7.1	12.1	2.1
2/21/2025 21:00	3.0	64.8	0.0	7.2	12.1	2.7
2/21/2025 21:15	3.0	65.0	0.0	7.2	12.1	1.8
2/21/2025 21:30	2.9	64.3	0.0	7.2	12.1	2.5
2/21/2025 21:45	2.9	64.0	0.0	7.2	12.1	2.3
2/21/2025 22:00	2.9	64.2	0.0	7.1	12.1	4.0
2/21/2025 22:15	2.9	64.1	0.0	7.1	12.1	5.1
2/21/2025 22:30	2.9	64.4	0.0	7.2	12.1	3.4
2/21/2025 22:45	2.9	63.9	0.0	7.1	12.1	4.2
2/21/2025 23:00	2.9	63.0	0.0	7.2	12.1	8.1
2/21/2025 23:15	2.9	63.3	0.0	7.2	12.2	4.8
2/21/2025 23:30	2.8	62.3	0.0	7.2	12.2	4.6
2/21/2025 23:45	2.8	61.5	0.0	7.2	12.2	5.6
2/22/2025 0:00	2.8	61.7	0.0	7.2	12.2	6.2
2/22/2025 0:15	2.8	60.7	0.0	7.1	12.2	5.3
2/22/2025 0:30	2.8	61.1	0.0	7.2	12.3	5.7
2/22/2025 0:45	2.7	59.5	0.0	7.2	12.3	6.8
2/22/2025 1:00	2.7	58.7	0.0	7.2	12.3	4.8
2/22/2025 1:15	2.6	57.2	0.0	7.1	12.3	5.6
2/22/2025 1:30	2.6	57.1	0.0	7.2	12.4	4.3
2/22/2025 1:45	2.6	57.7	0.0	7.2	12.4	3.2
2/22/2025 2:00	2.5	55.4	0.0	7.2	12.5	3.1
2/22/2025 2:15	2.5	55.5	0.0	7.2	12.4	4.1
2/22/2025 2:30	2.5	55.8	0.0	7.2	12.5	4.7
2/22/2025 2:45	2.4	53.9	0.0	7.1	12.5	5.7
2/22/2025 3:00	2.4	51.8	0.0	7.2	12.6	3.7
2/22/2025 3:15	2.4	56.4	0.0	7.2	12.5	3.5
2/22/2025 3:30	2.4	58.8	0.0	7.1	12.6	6.6
2/22/2025 3:45	2.3	58.8	0.0	7.2	12.6	3.3
2/22/2025 4:00	2.4	48.8	0.0	7.2	12.6	4.5
2/22/2025 4:15	2.4	48.9	0.0	7.2	12.6	4.9
2/22/2025 4:30	2.3	48.0	0.0	7.1	12.6	4.1
2/22/2025 4:45	2.3	47.9	0.0	7.2	12.6	5.6
2/22/2025 5:00	2.3	46.9	0.0	7.1	12.6	3.6
2/22/2025 5:15	2.3	65.7	0.0	7.2	12.6	6.4
2/22/2025 5:30	2.3	64.4	0.0	7.2	12.6	4.0
2/22/2025 5:45	2.3	47.8	0.0	7.1	12.6	4.8
2/22/2025 6:00	2.3	47.7	0.0	7.1	12.6	4.0
2/22/2025 6:15	2.2	48.4	0.0	7.2	12.6	4.0
2/22/2025 6:30	2.2	47.0	0.0	7.1	12.6	4.4
2/22/2025 6:45	2.3	46.9	0.0	7.2	12.6	3.6
2/22/2025 7:00	2.3	47.8	0.0	7.2	12.6	3.1
2/22/2025 7:15	2.3	48.0	0.0	7.1	12.6	2.9
2/22/2025 7:30	2.2	46.6	0.0	7.2	12.6	4.2
2/22/2025 7:45	2.3	45.7	0.0	7.1	12.6	3.9
2/22/2025 8:00	2.3	46.1	0.0	7.2	12.6	3.9
2/22/2025 8:15	2.3	47.4	0.0	7.2	12.6	3.5
2/22/2025 8:30	2.3	46.8	0.0	7.1	12.6	3.4
2/22/2025 8:45	2.3	45.8	0.0	7.2	12.6	5.3
2/22/2025 9:00	2.3	45.4	0.0	7.2	12.6	2.8
2/22/2025 9:15	2.3	45.6	0.0	7.2	12.6	3.9
2/22/2025 9:30	2.3	44.0	0.0	7.2	12.6	4.3
2/22/2025 9:45	2.3	43.7	0.0	7.1	12.6	3.5
2/22/2025 10:00	2.3	43.6	0.0	7.2	12.6	3.6
2/22/2025 10:15	2.3	43.0	0.0	7.1	12.6	3.5
2/22/2025 10:30	2.4	42.8	0.0	7.2	12.6	3.5
2/22/2025 10:45	2.4	43.2	0.0	7.1	12.6	2.2
2/22/2025 11:00	2.4	44.0	0.0	7.2	12.6	2.9
2/22/2025 11:15	2.4	43.7	0.0	7.2	12.6	3.1
2/22/2025 11:30	2.4	43.4	0.0	7.2	12.6	3.3
2/22/2025 11:45	2.4	43.8	0.0	7.1	12.6	4.6
2/22/2025 12:00	2.5	44.8	0.0	7.2	12.6	2.5
2/22/2025 12:15	2.5	44.3	0.0	7.2	12.6	3.6
2/22/2025 12:30	2.5	44.2	0.0	7.1	12.6	3.3
2/22/2025 12:45	2.5	44.5	0.0	7.2	12.6	2.3
2/22/2025 13:00	2.5	45.2	0.0	7.2	12.6	2.8
2/22/2025 13:15	2.6	45.2	0.0	7.2	12.6	2.7
2/22/2025 13:30	2.6	45.1	0.0	7.2	12.5	3.0
2/22/2025 13:45	2.6	45.4	0.0	7.1	12.5	2.3

2/21/2025 11:00	4.2	82.4	0.0	6.9	12.6	0.0	8.0
2/21/2025 11:15	4.2	81.9	0.0	6.9	12.6	0.0	8.0
2/21/2025 11:30	4.2	83.2	0.0	6.9	12.6	0.0	8.0
2/21/2025 11:45	4.4	95.9	0.0	6.8	12.5	0.0	8.0
2/21/2025 12:00	4.5	97.2	0.0	6.8	12.4	0.0	8.0
2/21/2025 12:15	4.4	91.5	0.0	6.8	12.5	0.0	8.0
2/21/2025 12:30	4.4	91.6	0.0	6.8	12.6	0.0	8.0
2/21/2025 12:45	4.6	102.6	0.0	6.8	12.4	0.4	8.4
2/21/2025 13:00	4.6	100.9	0.0	6.8	12.4	0.7	8.7
2/21/2025 13:15	4.5	97.5	0.0	6.8	12.4	0.0	8.0
2/21/2025 13:30	4.5	93.9	0.0	6.8	12.5	0.7	8.7
2/21/2025 13:45	4.5	93.8	0.0	6.8	12.5	0.0	8.0
2/21/2025 14:00	4.4	89.3	0.0	6.8	12.6	0.0	8.0
2/21/2025 14:15	4.4	87.7	0.0	6.8	12.6	0.0	8.0
2/21/2025 14:30	4.4	86.2	0.0	6.8	12.6	0.0	8.0
2/21/2025 14:45	4.4	85.5	0.0	6.7	12.6	1.0	9.0
2/21/2025 15:00	4.4	84.7	0.0	6.7	12.6	0.0	8.0
2/21/2025 15:15	4.3	83.4	0.0	6.8	12.7	2.5	10.5
2/21/2025 15:30	4.4	83.3	0.0	6.8	12.7	0.5	8.5
2/21/2025 15:45	4.3	82.2	0.0	6.8	12.7	2.6	10.6
2/21/2025 16:00	4.3	81.9	0.0	6.8	12.7	0.3	8.3
2/21/2025 16:15	4.3	81.8	0.0	6.8	12.7	2.8	10.8
2/21/2025 16:30	4.3	81.1	0.0	6.8	12.7	2.2	10.2
2/21/2025 16:45	4.3	81.0	0.0	6.8	12.7	1.8	9.8
2/21/2025 17:00	4.3	80.9	0.0	6.8	12.7	0.8	8.8
2/21/2025 17:15	4.3	80.2	0.0	6.8	12.7	1.5	9.5
2/21/2025 17:30	4.2	80.0	0.0	6.8	12.7	4.3	12.3
2/21/2025 17:45	4.2	78.8	0.0	6.8	12.7	0.4	8.4
2/21/2025 18:00	4.2	79.4	0.0	6.8	12.6	0.9	8.9
2/21/2025 18:15	4.2	77.9	0.0	6.8	12.7	0.9	8.9
2/21/2025 18:30	4.1	78.3	0.0	6.8	12.6	1.4	9.4
2/21/2025 18:45	4.1	78.3	0.0	6.8	12.6	1.3	9.3
2/21/2025 19:00	4.1	77.2	0.0	6.8	12.6	3.5	11.5
2/21/2025 19:15	4.1	78.2	0.0	6.8	12.6	0.0	8.0
2/21/2025 19:30	4.1	77.6	0.0	6.8	12.6	1.9	9.9
2/21/2025 19:45	4.0	77.0	0.0	6.8	12.6	1.6	9.6
2/21/2025 20:00	4.0	77.1	0.0	6.8	12.6	0.6	8.6
2/21/2025 20:15	4.0	76.5	0.0	6.8	12.6	1.7	9.7
2/21/2025 20:30	4.0	76.0	0.0	6.8	12.6	2.7	10.7
2/21/2025 20:45	4.0	76.5	0.0	6.8	12.6	2.0	10.0
2/21/2025 21:00	4.0	76.3	0.0	6.8	12.6	1.9	9.9
2/21/2025 21:15	3.9	75.4	0.0	6.8	12.6	3.4	11.4
2/21/2025 21:30	3.9	75.7	0.0	6.8	12.6	2.5	10.5
2/21/2025 21:45	3.9	76.0	0.0	6.8	12.6	2.7	10.7
2/21/2025 22:00	3.9	76.6	0.0	6.8	12.6	2.9	10.9
2/21/2025 22:15	3.9	77.0	0.0	6.8	12.6	5.7	13.7
2/21/2025 22:30	3.9	75.9	0.0	6.8	12.6	6.4	14.4
2/21/2025 22:45	3.9	75.7	0.0	6.8	12.7	7.2	15.2
2/21/2025 23:00	3.9	75.6	0.0	6.8	12.7	3.6	11.6
2/21/2025 23:15	3.9	76.0	0.0	6.8	12.7	4.8	12.8
2/21/2025 23:30	3.9	76.1	0.0	6.8	12.7	7.0	15.0
2/21/2025 23:45	3.9	74.3	0.0	6.8	12.7	10.9	15.9
2/22/2025 0:00	3.8	73.5	0.0	6.8	12.7	6.2	14.2
2/22/2025 0:15	3.8	72.7	0.0	6.8	12.8	7.5	15.5
2/22/2025 0:30	3.7	71.0	0.0	6.8	12.8	6.8	14.8
2/22/2025 0:45	3.7	70.1	0.0	6.8	12.9	9.6	14.6
2/22/2025 1:00	3.7	69.3	0.0	6.8	12.9	5.2	13.2
2/22/2025 1:15	3.6	69.2	0.0	6.8	12.9	39.6	44.6
2/22/2025 1:30	3.6	69.4	0.0	6.8	12.9	5.3	13.3
2/22/2025 1:45	3.5	66.8	0.0	6.9	13.0	5.1	13.1
2/22/2025 2:00	3.6	70.1	0.0	6.8	12.9	6.7	14.7
2/22/2025 2:15	3.5	64.5	0.0	6.9	13.0	8.4	13.4
2/22/2025 2:30	3.5	64.1	0.0	6.9	13.1	4.3	12.3
2/22/2025 2:45	3.4	61.2	0.0	6.9	13.1	5.0	13.0
2/22/2025 3:00	3.4	62.6	0.0	6.9	13.1	5.5	13.5
2/22/2025 3:15	3.4	63.8	0.0	6.9	13.1	4.6	12.6
2/22/2025 3:30	3.3	59.2	0.0	6.9	13.2	4.0	12.0
2/22/2025 3:45	3.4	65.2	0.0	6.9	13.1	5.0	13.0
2/22/2025 4:00	3.4	62.7	0.0	6.9	13.1	4.7	12.7
2/22/2025 4:15	3.3	61.4	0.0	6.9	13.1	4.6	12.6
2/22/2025 4:30	3.3	59.8	0.0	6.9	13.2	4.2	12.2
2/22/2025 4:45	3.3	59.1	0.0	6.9	13.2	4.0	12.0
2/22/2025 5:00	3.3	61.7	0.0	6.9	13.1	4.0	12.0
2/22/2025 5:15	3.3	59.5	0.0	6.9	13.2	2.9	10.9
2/22/2025 5:30	3.2	58.9	0.0	6.9	13.2	5.2	13.2
2/22/2025 5:45	3.2	58.1	0.0	6.9	13.2	4.6	12.6
2/22/2025 6:00	3.2	58.3	0.0	6.9	13.2	3.5	11.5
2/22/2025 6:15	3.2	58.2	0.0	6.9	13.2	5.7	13.7
2/22/2025 6:30	3.2	58.3	0.0	6.9	13.2	5.3	13.3
2/22/2025 6:45	3.3	59.8	0.0	6.8	13.2	31.9	36.9
2/22/2025 7:00	3.2	58.4	0.0	6.8	13.2	4.3	12.3
2/22/2025 7:15	3.2	56.4	0.0	6.9	13.2	3.9	11.9
2/22/2025 7:30	3.2	56.0	0.0	6.9	13.2	2.1	10.1
2/22/2025 7:45	3.3	59.5	0.0	6.8	13.1	4.7	12.7
2/22/2025 8:00	3.3	58.4	0.0	6.8	13.2	3.1	11.1
2/22/2025 8:15	3.3	57.6	0.0	6.8	13.2	5.4	13.4
2/22/2025 8:30	3.3	56.2	0.0	6.9	13.2	1.8	9.8
2/22/2025 8:45	3.2	55.3	0.0	6.9	13.2	2.8	10.8
2/22/2025 9:00	3.3	57.8	0.0	6.8	13.2	4.5	12.5
2/22/2025 9:15	3.3	57.5	0.0	6.8	13.2	4.2	12.2
2/22/2025 9:30	3.3	56.8	0.0	6.8	13.2	2.6	10.6
2/22/2025 9:45	3.3	56.4	0.0	6.9	13.2	1.3	9.3
2/22/2025 10:00	3.3	56.3	0.0	6.9	13.2	3.1	11.1
2/22/2025 10:15	3.3	57.2	0.0	6.9	13.2	2.4	10.4
2/22/2025 10:30	3.4	57.7	0.0	6.9	13.2	2.6	10.6
2/22/2025 10:45	3.4	58.0	0.0	6.8	13.2	0.5	8.5
2/22/2025 11:00	3.4	57.7	0.0	6.9	13.2	2.7	10.7
2/22/2025 11:15	3.4	56.8	0.0	6.9	13.2	3.3	11.3
2/22/2025 11:30	3.4	58.2	0.0	6.8	13.2	3.3	11.3
2/22/2025 11:45	3.5	59.6	0.0	6.8	13.1	2.6	10.6
2/22/2025 12:00	3.5	58.2	0.0	6.8	13.2	3.9	11.9
2/22/2025 12:15	3.5	57.4	0.0	6.9	13.2	0.5	8.5
2/22/2025 12:30	3.5	59.3	0.0	6.8	13.1	1.8	9.8
2/22/2025 12:45	3.5	59.5	0.0	6.8	13.1	1.4	9.4
2/22/2025 13:00	3.5	57.9	0.0	6.8	13.2	2.7	10.7
2/22/2025 13:15	3.6	59.3	0.0	6.8	13.1	2.9	10.9
2/22/2025 13:30	3.6	58.6	0.0	6.8	13.1	1.3	9.3
2/22/2025 13:45	3.6	59.8	0.0	6.8	13.1	1.9	9.9

2/22/2025 14:00	2.6	45.1	0.0	7.2	12.5	2.7
2/22/2025 14:15	2.6	45.2	0.0	7.2	12.5	2.3
2/22/2025 14:30	2.6	44.6	0.0	7.2	12.5	2.6
2/22/2025 14:45	2.6	44.6	0.0	7.0	12.4	3.9
2/22/2025 15:00	2.7	44.7	0.0	7.1	12.4	3.2
2/22/2025 15:15	2.7	44.9	0.0	7.1	12.4	5.3
2/22/2025 15:30	2.7	44.6	0.0	7.1	12.4	2.7
2/22/2025 15:45	2.7	44.4	0.0	7.1	12.3	3.7
2/22/2025 16:00	2.7	44.6	0.0	7.1	12.3	3.9
2/22/2025 16:15	2.7	44.4	0.0	7.1	12.3	4.2
2/22/2025 16:30	2.8	44.9	0.0	7.1	12.3	4.4
2/22/2025 16:45	2.8	44.9	0.0	7.1	12.3	6.0
2/22/2025 17:00	2.8	44.9	0.0	7.1	12.3	12.2
2/22/2025 17:15	2.8	44.5	0.0	7.1	12.3	24.1
2/22/2025 17:30	2.8	45.4	0.0	7.1	12.3	28.0
2/22/2025 17:45	2.8	45.2	0.0	7.0	12.3	19.8
2/22/2025 18:00	2.8	45.2	0.0	7.1	12.3	20.1
2/22/2025 18:15	2.9	44.8	0.0	7.1	12.4	18.6
2/22/2025 18:30	2.9	43.7	0.0	7.1	12.4	18.1
2/22/2025 18:45	2.9	43.2	0.0	7.1	12.5	21.0
2/22/2025 19:00	2.9	41.5	0.0	7.1	12.6	23.2
2/22/2025 19:15	2.8	40.6	0.0	7.1	12.6	24.0
2/22/2025 19:30	2.8	40.0	0.0	7.1	12.7	29.4
2/22/2025 19:45	2.8	39.6	0.0	7.0	12.8	43.4
2/22/2025 20:00	2.7	38.7	0.0	7.1	12.9	35.4
2/22/2025 20:15	2.7	37.7	0.0	7.1	12.9	30.0
2/22/2025 20:30	2.6	37.4	0.0	7.1	13.0	31.2
2/22/2025 20:45	2.5	35.8	0.0	7.0	13.1	39.0
2/22/2025 21:00	2.4	35.0	0.0	7.1	13.2	39.9
2/22/2025 21:15	2.4	34.4	0.0	7.1	13.2	36.3
2/22/2025 21:30	2.3	34.0	0.0	7.1	13.3	41.3
2/22/2025 21:45	2.2	33.0	0.0	7.0	13.3	33.3
2/22/2025 22:00	2.2	32.3	0.0	7.0	13.3	31.3
2/22/2025 22:15	2.2	31.9	0.0	7.0	13.3	27.6
2/22/2025 22:30	2.2	31.9	0.0	7.0	13.3	27.9
2/22/2025 22:45	2.2	31.3	0.0	7.1	13.3	22.7
2/22/2025 23:00	2.2	31.0	0.0	7.0	13.3	22.0
2/22/2025 23:15	2.3	30.8	0.0	7.0	13.3	21.1
2/22/2025 23:30	2.3	30.8	0.0	7.0	13.2	21.4
2/22/2025 23:45	2.3	31.4	0.0	6.9	13.2	19.3
2/23/2025 0:00	2.3	31.4	0.0	7.0	13.2	18.0
2/23/2025 0:15	2.3	31.3	0.0	7.0	13.2	20.3
2/23/2025 0:30	2.3	30.1	0.0	7.0	13.1	19.0
2/23/2025 0:45	2.4	31.0	0.0	7.0	13.1	16.3
2/23/2025 1:00	2.4	29.8	0.0	6.9	13.1	14.8
2/23/2025 1:15	2.4	29.8	0.0	6.9	13.1	14.4
2/23/2025 1:30	2.4	30.6	0.0	6.9	13.1	15.3
2/23/2025 1:45	2.4	30.8	0.0	7.0	13.0	13.0
2/23/2025 2:00	2.4	31.1	0.0	6.9	13.0	14.3
2/23/2025 2:15	2.4	31.1	0.0	7.0	13.0	15.9
2/23/2025 2:30	2.4	31.1	0.0	7.0	13.0	12.3
2/23/2025 2:45	2.4	30.7	0.0	6.9	13.0	13.9
2/23/2025 3:00	2.4	30.6	0.0	6.9	13.0	11.7
2/23/2025 3:15	2.5	31.4	0.0	6.9	13.0	12.6
2/23/2025 3:30	2.5	32.7	0.0	7.0	13.0	10.7
2/23/2025 3:45	2.5	31.2	0.0	7.0	13.0	11.5
2/23/2025 4:00	2.5	31.5	0.0	6.9	13.0	10.0
2/23/2025 4:15	2.5	30.5	0.0	7.0	12.9	9.5
2/23/2025 4:30	2.5	30.6	0.0	7.0	12.9	9.2
2/23/2025 4:45	2.5	30.6	0.0	6.9	12.9	10.8
2/23/2025 5:00	2.5	30.9	0.0	6.9	12.9	10.3
2/23/2025 5:15	2.5	34.4	0.0	7.0	12.9	10.9
2/23/2025 5:30	2.5	31.3	0.0	7.0	12.9	10.9
2/23/2025 5:45	2.5	31.6	0.0	6.9	12.9	10.3
2/23/2025 6:00	2.5	31.7	0.0	7.0	12.9	10.4
2/23/2025 6:15	2.6	32.1	0.0	7.0	12.9	13.8
2/23/2025 6:30	2.6	31.8	0.0	7.0	12.8	9.5
2/23/2025 6:45	2.6	32.0	0.0	7.0	12.8	11.6
2/23/2025 7:00	2.6	32.0	0.0	7.0	12.8	9.3
2/23/2025 7:15	2.6	32.1	0.0	6.9	12.8	9.4
2/23/2025 7:30	2.6	32.5	0.0	6.9	12.8	7.2
2/23/2025 7:45	2.6	31.0	0.0	7.0	12.8	10.8
2/23/2025 8:00	2.6	32.5	0.0	7.0	12.8	8.2
2/23/2025 8:15	2.6	32.9	0.0	7.0	12.8	8.0
2/23/2025 8:30	2.6	33.0	0.0	7.0	12.7	7.7
2/23/2025 8:45	2.6	33.1	0.0	7.0	12.7	7.2
2/23/2025 9:00	2.6	33.3	0.0	7.0	12.7	6.9
2/23/2025 9:15	2.6	33.4	0.0	6.9	12.7	7.3
2/23/2025 9:30	2.6	33.5	0.0	6.9	12.7	6.4
2/23/2025 9:45	2.7	33.7	0.0	7.0	12.7	5.3
2/23/2025 10:00	2.7	33.9	0.0	7.0	12.7	7.3
2/23/2025 10:15	2.7	34.3	0.0	6.9	12.7	7.1
2/23/2025 10:30	2.8	34.4	0.0	7.1	12.6	7.1
2/23/2025 10:45	2.8	35.7	0.0	7.0	12.6	6.4
2/23/2025 11:00	2.9	35.0	0.0	7.0	12.6	6.0
2/23/2025 11:15	2.9	35.0	0.0	7.0	12.6	5.8
2/23/2025 11:30	3.0	35.5	0.0	7.0	12.6	5.7
2/23/2025 11:45	3.0	35.6	0.0	6.9	12.6	5.0
2/23/2025 12:00	3.0	36.8	0.0	7.0	12.6	5.3
2/23/2025 12:15	3.1	36.7	0.0	6.9	12.6	5.0
2/23/2025 12:30	3.1	36.4	0.0	7.0	12.6	4.6
2/23/2025 12:45	3.2	36.4	0.0	7.0	12.5	6.2
2/23/2025 13:00	3.2	36.5	0.0	7.1	12.5	5.2
2/23/2025 13:15	3.3	37.1	0.0	7.0	12.5	4.4
2/23/2025 13:30	3.3	36.7	0.0	7.0	12.5	3.5
2/23/2025 13:45	3.4	37.0	0.0	7.0	12.5	4.1
2/23/2025 14:00	3.4	38.0	0.0	7.0	12.5	3.8
2/23/2025 14:15	3.4	37.0	0.0	7.0	12.4	3.5
2/23/2025 14:30	3.4	37.7	0.0	7.0	12.4	4.2
2/23/2025 14:45	3.5	38.5	0.0	7.0	12.4	3.7
2/23/2025 15:00	3.5	38.4	0.0	7.1	12.4	4.1
2/23/2025 15:15	3.5	37.8	0.0	7.0	12.4	3.8
2/23/2025 15:30	3.5	38.1	0.0	7.1	12.3	4.1
2/23/2025 15:45	3.5	38.2	0.0	7.0	12.3	3.3
2/23/2025 16:00	3.5	38.4	0.0	7.1	12.3	4.2
2/23/2025 16:15	3.5	38.5	0.0	7.0	12.3	3.7
2/23/2025 16:30	3.6	37.5	0.0	7.1	12.3	3.4
2/23/2025 16:45	3.6	38.4	0.0	7.1	12.2	3.6

2/22/2025 14:00	3.6	58.6	0.0	6.8	13.1	2.2	10.2
2/22/2025 14:15	3.6	57.9	0.0	6.8	13.1	2.0	10.0
2/22/2025 14:30	3.6	59.0	0.0	6.8	13.0	2.0	10.0
2/22/2025 14:45	3.6	58.5	0.0	6.8	13.0	1.7	9.7
2/22/2025 15:00	3.6	58.6	0.0	6.8	13.0	2.0	10.0
2/22/2025 15:15	3.6	58.3	0.0	6.8	13.0	3.2	11.2
2/22/2025 15:30	3.7	58.7	0.0	6.8	12.9	3.7	11.7
2/22/2025 15:45	3.7	58.5	0.0	6.8	12.9	4.2	12.2
2/22/2025 16:00	3.7	59.6	0.0	6.8	12.9	4.1	12.1
2/22/2025 16:15	3.7	59.4	0.0	6.8	12.9	3.8	11.8
2/22/2025 16:30	3.8	60.2	0.0	6.8	12.8	8.8	13.8
2/22/2025 16:45	3.8	59.9	0.0	6.8	12.8	16.3	21.3
2/22/2025 17:00	3.8	60.0	0.0	6.8	12.8	33.3	38.3
2/22/2025 17:15	3.8	59.8	0.0	6.8	12.8	73.0	78.0
2/22/2025 17:30	3.8	60.6	0.0	6.8	12.8	59.7	64.7
2/22/2025 17:45	3.8	59.5	0.0	6.8	12.8	53.9	58.9
2/22/2025 18:00	3.8	58.8	0.0	6.8	12.9	42.1	47.1
2/22/2025 18:15	3.9	57.8	0.0	6.8	12.9	44.1	49.1
2/22/2025 18:30	3.9	57.3	0.0	6.7	13.0	43.2	48.2
2/22/2025 18:45	3.9	54.8	0.0	6.7	13.0	40.8	45.8
2/22/2025 19:00	3.9	54.5	0.0	6.7	13.1	54.4	59.4
2/22/2025 19:15	3.8	53.7	0.0	6.7	13.1	58.8	63.8
2/22/2025 19:30	3.8	52.8	0.0	6.8	13.2	56.3	61.3
2/22/2025 19:45	3.8	52.3	0.0	6.8	13.3	72.7	77.7
2/22/2025 20:00	3.7	51.0	0.0	6.8	13.4	76.8	81.8
2/22/2025 20:15	3.7	49.7	0.0	6.8	13.5	75.3	80.3
2/22/2025 20:30	3.6	49.0	0.0	6.6	13.6	68.9	73.9
2/22/2025 20:45	3.5	47.5	0.0	6.5	13.7	83.6	88.6
2/22/2025 21:00	3.4	46.4	0.0	6.5	13.8	60.0	65.0
2/22/2025 21:15	3.4	46.0	0.0	6.5	13.8	66.4	71.4
2/22/2025 21:30	3.3	45.2	0.0	6.6	13.9	70.1	75.1
2/22/2025 21:45	3.2	44.5	0.0	6.7	13.8	68.6	73.6
2/22/2025 22:00	3.2	44.2	0.0	6.7	13.9	59.6	64.6
2/22/2025 22:15	3.2	43.5	0.0	6.7	13.7	56.3	61.3
2/22/2025 22:30	3.2	42.9	0.0	6.5	13.9	50.4	55.4
2/22/2025 22:45	3.2	42.2	0.0	6.5	13.9	42.6	47.6
2/22/2025 23:00	3.2	42.3	0.0	6.5	13.9	42.5	47.5
2/22/2025 23:15	3.2	42.0	0.0	6.5	13.9	51.2	56.2
2/22/2025 23:30	3.2	41.4	0.0	6.7	13.5	39.1	44.1
2/22/2025 23:45	3.3	41.6	0.0	6.7	13.7	35.2	40.2
2/23/2025 0:00	3.3	41.1	0.0	6.7	13.7	33.9	38.9
2/23/2025 0:15	3.3	40.9	0.0	6.7	13.5	33.8	38.8
2/23/2025 0:30	3.3	40.6	0.0	6.5	13.7	29.0	34.0
2/23/2025 0:45	3.3	40.5	0.0	6.5	13.7	29.4	34.4
2/23/2025 1:00	3.3	40.6	0.0	6.5	13.7	25.8	30.8
2/23/2025 1:15	3.4	40.3	0.0	6.5	13.7	27.9	32.9
2/23/2025 1:30	3.4	41.0	0.0	6.7	12.1	21.4	26.4
2/23/2025 1:45	3.4	40.8	0.0	6.7	12.2	25.0	30.0
2/23/2025 2:00	3.4	40.7	0.0	6.7	12.1	26.5	31.5
2/23/2025 2:15	3.4	40.7	0.0	6.7	11.8	25.0	30.0
2/23/2025 2:30	3.4	40.9	0.0	6.5	13.6	20.3	25.3
2/23/2025 2:45	3.4	40.5	0.0	6.5	13.6	21.6	26.6
2/23/2025 3:00	3.4	40.4	0.0	6.4	13.6	23.3	28.3
2/23/2025 3:15	3.4	40.8	0.0	6.4	13.6	17.6	22.6
2/23/2025 3:30	3.4	40.6	0.0	6.7	13.3	17.4	22.4
2/23/2025 3:45	3.4	40.5	0.0	6.7	13.3	26.6	31.6
2/23/2025 4:00	3.5	40.6	0.0	6.7	13.1	14.9	19.9
2/23/2025 4:15	3.5	40.7	0.0	6.7	13.4	21.5	26.5
2/23/2025 4:30	3.5	40.6	0.0	6.5	13.6	14.6	19.6
2/23/2025 4:45	3.5	41.0	0.0	6.5	13.6	16.5	21.5
2/23/2025 5:00	3.5	41.3	0.0	6.5	13.5	12.8	17.8
2/23/2025 5:15	3.5	41.2	0.0	6.4	13.5	15.6	20.6
2/23/2025 5:30	3.5	41.5	0.0	6.6	13.1	11.8	16.8
2/23/2025 5:45	3.5	41.4	0.0	6.7	13.2	15.0	20.0
2/23/2025 6:00	3.5	42.0	0.0	6.7	13.0	11.5	16.5
2/23/2025 6:15	3.5	42.0	0.0	6.7	12.8	61.4	66.4
2/23/2025 6:30	3.6	42.2	0.0	6.6	13.4	15.8	20.8
2/23/2025 6:45	3.6	42.3	0.0	6.5	13.4	14.7	19.7
2/23/2025 7:00	3.6	42.0	0.0	6.5	13.4	15.5	20.5
2/23/2025 7:15	3.6	42.4	0.0	6.5	13.4	14.3	19.3
2/23/2025 7:30	3.5	42.5	0.0	6.7	13.3	15.6	20.6
2/23/2025 7:45	3.5	42.7	0.0	6.7	13.2	10.6	15.6
2/23/2025 8:00	3.5	42.9	0.0	6.7	13.3	12.8	17.8
2/23/2025 8:15	3.5	42.9	0.0	6.7	13.3	12.0	17.0
2/23/2025 8:30	3.6	43.0	0.0	6.6	13.3	11.3	16.3
2/23/2025 8:45	3.6	43.2	0.0	6.6	13.3	9.1	14.1
2/23/2025 9:00	3.6	43.5	0.0	6.6	13.3	10.4	15.4
2/23/2025 9:15	3.6	43.4	0.0	6.6	13.3	9.5	14.5
2/23/2025 9:30	3.6	43.6	0.0	6.7	13.3	11.8	16.8
2/23/2025 9:45	3.7	44.1	0.0	6.7	13.2	10.2	15.2
2/23/2025 10:00	3.7	44.5	0.0	6.7	13.2	10.9	15.9
2/23/2025 10:15	3.7	44.5	0.0	6.7	13.2	5.9	13.9
2/23/2025 10:30	3.8	45.3	0.0	6.6	13.2	11.4	16.4
2/23/2025 10:45	3.8	45.1	0.0	6.6	13.2	8.3	13.3
2/23/2025 11:00	3.9	45.7	0.0	6.6	13.2	7.0	15.0
2/23/2025 11:15	3.9	46.1	0.0	6.6	13.2	4.3	12.3
2/23/2025 11:30	4.0	45.6	0.0	6.7	13.2	6.5	14.5
2/23/2025 11:45	4.0	46.3	0.0	6.7	13.2	6.8	14.8
2/23/2025 12:00	4.0	46.7	0.0	6.7	13.1	3.1	11.1
2/23/2025 12:15	4.1	47.3	0.0	6.7	13.1	9.4	14.4
2/23/2025 12:30	4.2	47.0	0.0	6.6	13.1	3.1	11.1
2/23/2025 12:45	4.2	47.1	0.0	6.6	13.1	5.1	13.1
2/23/2025 13:00	4.2	47.3	0.0	6.6	13.1	4.3	12.3
2/23/2025 13:15	4.3	47.6	0.0	6.6	13.1	3.3	11.3
2/23/2025 13:30	4.3	47.8	0.0	6.7	13.1	1.3	9.3
2/23/2025 13:45	4.4	47.7	0.0	6.7	13.1	2.3	10.3
2/23/2025 14:00	4.4	47.1	0.0	6.8	13.0	0.5	8.5
2/23/2025 14:15	4.4	47.9	0.0	6.8	13.0	0.0	8.0
2/23/2025 14:30	4.4	48.3	0.0	6.7	13.0	2.4	10.4
2/23/2025 14:45	4.5	48.4	0.0	6.7	13.0	3.2	11.2
2/23/2025 15:00	4.5	48.3	0.0	6.7	12.9	0.1	8.1
2/23/2025 15:15	4.5	48.2	0.0	6.7	12.9	3.1	11.1
2/23/2025 15:30	4.5	48.9	0.0	6.7	12.9	1.6	9.6
2/23/2025 15:45	4.5	48.8	0.0	6.8	12.9	0.6	8.6
2/23/2025 16:00	4.5	49.1	0.0	6.8	12.8	2.4	10.4
2/23/2025 16:15	4.6	48.5	0.0	6.8	12.8	4.7	12.7
2/23/2025 16:30	4.6	49.2	0.0	6.7	12.8	0.2	8.2
2/23/2025 16:45	4.6	49.3	0.0	6.7	12.8	2.7	10.7

2/23/2025 17:00	3.6	38.8	0.0	7.1	12.2	3.3	2/23/2025 17:00	4.6	49.4	0.0	6.7	12.8	0.0	8.0
2/23/2025 17:15	3.6	38.9	0.0	7.1	12.2	3.3	2/23/2025 17:15	4.6	49.7	0.0	6.7	12.7	1.5	9.5
2/23/2025 17:30	3.6	39.2	0.0	7.1	12.2	3.0	2/23/2025 17:30	4.6	49.4	0.0	6.8	12.7	0.5	8.5
2/23/2025 17:45	3.6	39.4	0.0	7.0	12.2	3.8	2/23/2025 17:45	4.6	49.4	0.0	6.8	12.7	0.0	8.0
2/23/2025 18:00	3.6	39.3	0.0	7.0	12.1	1.9	2/23/2025 18:00	4.6	49.9	0.0	6.8	12.7	0.0	8.0
2/23/2025 18:15	3.6	39.5	0.0	7.1	12.1	2.4	2/23/2025 18:15	4.6	50.2	0.0	6.8	12.6	0.8	8.8
2/23/2025 18:30	3.6	39.8	0.0	7.0	12.1	1.0	2/23/2025 18:30	4.6	50.5	0.0	6.7	12.6	0.0	8.0
2/23/2025 18:45	3.6	39.8	0.0	7.1	12.1	1.7	2/23/2025 18:45	4.6	50.6	0.0	6.7	12.6	1.5	9.5
2/23/2025 19:00	3.6	40.0	0.0	7.1	12.1	3.2	2/23/2025 19:00	4.6	50.8	0.0	6.7	12.6	2.8	10.8
2/23/2025 19:15	3.6	40.2	0.0	7.0	12.0	2.2	2/23/2025 19:15	4.6	50.6	0.0	6.7	12.6	1.0	9.0
2/23/2025 19:30	3.7	40.5	0.0	7.0	12.0	2.1	2/23/2025 19:30	4.6	50.6	0.0	6.7	12.5	0.3	8.3
2/23/2025 19:45	3.7	40.3	0.0	7.1	12.0	1.6	2/23/2025 19:45	4.7	51.2	0.0	6.8	12.5	0.5	8.5
2/23/2025 20:00	3.7	40.4	0.0	7.1	12.0	3.8	2/23/2025 20:00	4.7	51.3	0.0	6.8	12.5	0.0	8.0
2/23/2025 20:15	3.7	40.6	0.0	7.1	12.0	3.1	2/23/2025 20:15	4.7	51.3	0.0	6.8	12.5	0.5	8.5
2/23/2025 20:30	3.7	40.7	0.0	7.0	12.0	1.2	2/23/2025 20:30	4.7	52.3	0.0	6.7	12.5	0.9	8.9
2/23/2025 20:45	3.7	41.1	0.0	7.0	12.0	2.1	2/23/2025 20:45	4.7	52.0	0.0	6.7	12.5	1.2	9.2
2/23/2025 21:00	3.7	41.2	0.0	7.1	12.0	3.0	2/23/2025 21:00	4.7	52.3	0.0	6.7	12.5	0.0	8.0
2/23/2025 21:15	3.7	41.5	0.0	7.0	12.0	3.0	2/23/2025 21:15	4.7	52.5	0.0	6.7	12.5	3.2	11.2
2/23/2025 21:30	3.7	41.6	0.0	7.1	12.0	3.8	2/23/2025 21:30	4.7	52.7	0.0	6.7	12.5	4.9	12.9
2/23/2025 21:45	3.7	42.1	0.0	7.1	11.9	5.3	2/23/2025 21:45	4.7	52.6	0.0	6.7	12.5	6.6	14.6
2/23/2025 22:00	3.8	42.2	0.0	7.0	11.9	9.6	2/23/2025 22:00	4.7	53.0	0.0	6.7	12.4	5.1	13.1
2/23/2025 22:15	3.8	42.3	0.0	7.0	11.9	6.4	2/23/2025 22:15	4.7	53.1	0.0	6.8	12.4	8.8	13.8
2/23/2025 22:30	3.8	42.5	0.0	7.0	11.9	3.9	2/23/2025 22:30	4.7	53.6	0.0	6.6	12.5	4.6	12.6
2/23/2025 22:45	3.8	42.4	0.0	7.0	12.0	4.5	2/23/2025 22:45	4.7	53.1	0.0	6.6	12.5	2.7	10.7
2/23/2025 23:00	3.8	42.2	0.0	7.1	11.9	4.0	2/23/2025 23:00	4.7	53.5	0.0	6.6	12.5	5.6	13.6
2/23/2025 23:15	3.8	42.3	0.0	7.1	12.0	1.9	2/23/2025 23:15	4.7	53.5	0.0	6.6	12.5	2.7	10.7
2/23/2025 23:30	3.8	42.3	0.0	7.1	12.0	3.6	2/23/2025 23:30	4.8	54.0	0.0	6.7	12.5	1.5	9.5
2/23/2025 23:45	3.8	42.6	0.0	7.1	12.0	2.1	2/23/2025 23:45	4.8	53.8	0.0	6.7	12.5	1.3	9.3

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

Woodfibre Site Sample Analysis

TRITON	Sample ID	Reviewed and signed off by: Farshad Shafiei Ph.D., R.P.Bio.	COLLEGE OF APPLIED BIOLOGISTS Farshad Shafiei RPBio 3781 CAB	WLNG EOP	Sample or value notes	BCWQ FAL - Short Term	BCWQ MAL - Short Term
	LAB ID			VA25A3545-001			
	Date Sampled			19-Feb-2025			
	Time Sampled			10:40			
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	6.6		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	9.5		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 salmoid 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	-	-	290			
Turbidity (field)	NTU	Varies with background, see note Guideline = 8.9	Varies with background, see note Guideline = 8.9	0.9		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	-	-	117			
Total Dissolved Solids	mg/L	-	-	206			
Total Suspended Solids	mg/L	Varies with background, see note Guideline = 28.0	Varies with background, see note Guideline = 28.0	< 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 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	-	-	20.6			
Total Phenols	mg/L	0.05	-	< 0.0010		Interim guideline	Interim guideline
Total Alkalinity ($CaCO_3$)	mg/L	-	-	98.7			
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 = 24.7	Varies with pH and temperature. See note. Guideline = 131	0.0051		Guideline for ammonia as N and is pH and temperature dependent. Refer to Table 27D in BC WQG for guideline values.	Guideline for ammonia as N. Guideline is pH, temperature and salinity dependent. Refer to Table 27F in BC WQG for guideline values.
Bromide	mg/L	-	-	< 0.050			
Chloride	mg/L	600	+/- 10% from BKG	7.87			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 = 1.397	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	-	< 0.0050			
Nitrite (as N)	mg/L	Varies with chloride. Table 27B, see note. Guideline = 0.60	-	< 0.0010		Varies with chloride. Refer to Table 27B in BC WQG for guideline values.	
Total Nitrogen	mg/L	-	-	0.295			
Total Phosphorous	mg/L	-	-	0.0329			
Sulfate (as SO_4)	mg/L	-	-	9.98			
Total Metals							
Aluminum (Al)-Total	mg/L	-	-	0.576			
Antimony (Sb)-Total	mg/L	0.25	-	0.0003			
Arsenic (As)-Total	mg/L	-	-	0.00201			
Barium (Ba)-Total	mg/L	-	-	0.013			
Beryllium (Be)-Total	mg/L	-	-	< 0.000100			
Bismuth (Bi)-Total	mg/L	-	-	< 0.000050			
Boron (B)-Total	mg/L	-	-	0.02			
Cadmium (Cd)-Total	mg/L	-	-	< 0.0000200			
Calcium (Ca)-Total	mg/L	-	-	44.2			
Cesium (Cs)-Total	mg/L	-	-	0.000276			
Chromium (Cr) - Total	mg/L	-	-	0.00569			
Chromium (Cr(III))-Total	mg/L	-	-	0.00137			
Chromium (Cr(VI))-Total	mg/L	-	-	0.00432			
Cobalt (Co)-Total	mg/L	0.11	-	< 0.00010			
Copper (Cu)-Total	mg/L	-	0.003	0.00113			
Iron (Fe)-Total	mg/L	1	-	0.072			
Lead (Pb)-Total	mg/L		0.14	0.000235			
Lithium (Li)-Total	mg/L	-	-	0.0032			
Magnesium (Mg)-Total	mg/L	-	-	1.6			
Manganese (Mn)-Total	mg/L	Varies with hardness Guideline = 1.829	-	0.0035		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	-	0.0222			
Nickel (Ni)-Total	mg/L	-	-	< 0.00050			
Potassium (K)-Total	mg/L	-	-	2.4			
Rubidium (Rb)-Total	mg/L	-	-	0.00953			
Selenium (Se)-Total	mg/L	-	-	0.000064			
Silicon (Si)-Total	mg/L	-	-	9.64			
Silver (Ag)-Total	mg/L	Varies with hardness, see note Guideline = 0.0003	0.003	< 0.000010		Varies with hardness Guideline ranges: Hardness ≤ 100: 0.0001 Hardness > 100: 0.003	
Sodium (Na)-Total	mg/L	-	-	5.12			
Strontium (Sr)-Total	mg/L	-	-	0.0835			
Sulfur (S)-Total	mg/L	-	-	3.34			
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	-	-	0.00174			
Tungsten (W)-Total	mg/L	-	-	0.0004			
Uranium (U)-Total	mg/L	0.0165	-	0.00661			
Vanadium (V)-Total	mg/L	-	-	0.0059			
Zinc (Zn)-Total	mg/L	-	0.055	0.0067			
Zirconium (Zr)-Total	mg/L	-	-	< 0.00020			
Dissolved Metals							
Aluminum (Al)-Dissolved	mg/L	-	-	0.33			
Antimony (Sb)-Dissolved	mg/L	-	-	0.0003			
Arsenic (As)-Dissolved	mg/L	-	-	0.00184			
Barium (Ba)-Dissolved	mg/L	-	-	0.0107			
Beryllium (Be)-Dissolved	mg/L	-	-	< 0.000100			
Bismuth (Bi)-Dissolved	mg/L	-	-	< 0.000050			
Boron (B)-Dissolved	mg/L	-	-	0.019			
Cadmium (Cd)-Dissolved	mg/L	Varies with hardness, see note Guideline = 0.000691	-	< 0.0000150		Guideline is hardness dependent. Guideline is appilcable to water hardness between 7.0 and 455 mg/L. Guideline is calculated with the following formula: Guideline = (EXP(1.03 * (LN(hardness)) - 5.274)/1000) Lowest value for guideline is 0.000018 mg/L. If hardness is below the hardness range, the minimum hardness will be applied in the calculation.	
Calcium (Ca)-Dissolved	mg/L	-	-	36.5			
Cesium (Cs)-Dissolved	mg/L	-	-	0.000255			
Chromium (Cr)-Dissolved	mg/L	-	-	0.00535			
Cobalt (Co)-Dissolved	mg/L	-	-	< 0.00010			
Copper (Cu)-Dissolved	mg/L	Guideline varies with other parameters, see note Guideline = 0.0123	-	0.00121		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	-	0.056			
Lead (Pb)-Dissolved	mg/L	-	-	0.000118			
Lithium (Li)-Dissolved	mg/L	-	-	0.0026			
Magnesium (Mg)-Dissolved	mg/L	-	-	1.35			
Manganese (Mn)-Dissolved	mg/L	-	-	0.00342			
Mercury (Hg)-Dissolved	mg/L	-	-	< 0.000005			
Molybdenum (Mo)-Dissolved	mg/L	-	-	0.0219			
Nickel (Ni)-Dissolved	mg/L	Guideline varies with pH, temperature, DOC, and hardness Guideline: 0.0850	-	< 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	-	-	< 0.0500			
Potassium (K)-Dissolved	mg/L	-	-	3.14		0.0908	
Rubidium (Rb)-Dissolved	mg/L	-	-	0.00907			
Selenium (Se)-Dissolved	mg/L	-	-	0.000056			
Silicon (Si)-Dissolved	mg/L	-	-	9.44			
Silver (Ag)-Dissolved	mg/L	-	-	< 0.000010			
Sodium (Na)-Dissolved	mg/L	-	-	5.19			
Strontium (Sr)-Dissolved	mg/L	-	-	0.0669			
Sulfur (S)-Dissolved	mg/L	-	-	3.27			
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	-	-	0.00108			
Tungsten (W)-Dissolved	mg/L	-	-	0.00048			
Uranium (U)-Dissolved	mg/L	-	-	0.00527			
Vanadium (V)-Dissolved	mg/L	-	-	0.00651			
Zinc (Zn)-Dissolved	mg/L	Varies with DOC and hardness Guideline = 0.088	-	0.0138		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	-	-	< 0.018			
Methylnaphthalene, 2-	µg/L	-	-	0.018			
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	6.6	6.6
Temperature (field)	°C	Field temperature taken using handheld meters during sampling used in calculations	9.5	9.5
Turbidity (field)	NTU	Field turbidity taken using handheld meters during sampling used in calculations	0.90	0.90
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	117	117
Dissolved Organic Carbon (DOC)	mg/L	Laboratory tested dissolved organic carbon tested at the lab used in guideline calculations	20.6	20.6
Total Alkalinity ($CaCO_3$)	mg/L	Laboratory tested total alkalinity used in calculations	98.7	98.7
Chloride	mg/L	Laboratory tested chloride taken at each respective sample site on the day of sampling used in guideline calculations	7.87	7.87
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	:	**VA25A3545**		
Client	:	**Triton Environmental Consultants Ltd.**	Laboratory	: ALS Environmental - Vancouver
Contact	:		Account Manager	:
Address	:		Address	:
Telephone	:	----	Telephone	:
Project	:	11964	Date Samples Received	: 19-Feb-2025 17:45
PO	:	11964 - Task 40 - Phase 3C-4C	Date Analysis Commenced	: 20-Feb-2025
C-O-C number	:	----	Issue Date	: 03-Mar-2025 22:08
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*
		Inorganics, Burnaby, British Columbia
		Metals, Burnaby, British Columbia
		Metals, Burnaby, British Columbia
		Organics, Burnaby, British Columbia
		Metals, Burnaby, British Columbia
		Inorganics, Burnaby, British Columbia
		Inorganics, Burnaby, British Columbia
		Inorganics, Burnaby, British Columbia
		Metals, Burnaby, British Columbia
		Administration, Burnaby, British Columbia
		Organics, 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
NTU	nephelometric turbidity units
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).
DLQ	Detection Limit raised due to co-eluting interference. Mass Spectrometry qualifier ion ratio did not meet acceptance criteria.
DTC	Dissolved concentration exceeds total. Results were confirmed by re-analysis.
HTDC	Hold time exceeded for dilution or re-analysis. Reported results are consistent with initial results (tested within hold time), and are valid and defensible.

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	19-Feb-2025 10:40	----	----	----	----
						VA25A3545-001	----	----	----	----
						Result	----	----	----	----
Field Tests										
Conductivity, field	----	EF001/VA	0.10	µS/cm		290.00	----	----	----	----
pH, field	----	EF001/VA	0.10	pH units		6.60	----	----	----	----
Temperature, field	----	EF001/VA	0.10	°C		9.50	----	----	----	----
Turbidity, field	----	EF001/VA	0.01	NTU		0.9	----	----	----	----
Physical Tests										
Hardness (as CaCO3), dissolved	----	EC100/VA	0.60	mg/L		96.7	----	----	----	----
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L		117	----	----	----	----
Solids, total dissolved [TDS]	----	E162/VA	10	mg/L		206	----	----	----	----
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L		<3.0	----	----	----	----
Alkalinity, total (as CaCO3)	----	E290/VA	2.0	mg/L		98.7	----	----	----	----
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L		0.0051	----	----	----	----
Bromide	24959-67-9	E235.Br-L/VA	0.050	mg/L		<0.050	----	----	----	----
Chloride	16887-00-6	E235.Cl/VA	0.50	mg/L		7.87	----	----	----	----
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		<0.0050 HTDC	----	----	----	----
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		0.295	----	----	----	----
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L		0.0329	----	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L		9.98	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: WLNG EOP	----	----	----	----
					Client sampling date / time: 19-Feb-2025 10:40	----	----	----	----
					VA25A3545-001	----	----	----	----
					Result	----	----	----	----
Organic / Inorganic Carbon									
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L	20.6	----	----	----	----
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	0.576	----	----	----	----
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L	0.00030	----	----	----	----
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L	0.00201	----	----	----	----
Barium, total	7440-39-3	E420/VA	0.00010	mg/L	0.0130	----	----	----	----
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	0.020	----	----	----	----
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	44.2	----	----	----	----
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L	0.000276	----	----	----	----
Chromium, total	7440-47-3	E420/VA	0.00050	mg/L	0.00569	----	----	----	----
Cobalt, total	7440-48-4	E420/VA	0.00010	mg/L	<0.00010	----	----	----	----
Copper, total	7440-50-8	E420/VA	0.00050	mg/L	0.00113	----	----	----	----
Iron, total	7439-89-6	E420/VA	0.010	mg/L	0.072	----	----	----	----
Lead, total	7439-92-1	E420/VA	0.000050	mg/L	0.000235	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: WLNG EOP	----	----	----	----
					Client sampling date / time: 19-Feb-2025 10:40	----	----	----	----
					VA25A3545-001	----	----	----	----
					Result	----	----	----	----
Total Metals									
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L	0.0032	----	----	----	----
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L	1.60	----	----	----	----
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L	0.00350	----	----	----	----
Mercury, total	7439-97-6	E508/VA	0.0000050	mg/L	<0.0000050	----	----	----	----
Molybdenum, total	7439-98-7	E420/VA	0.000050	mg/L	0.0222	----	----	----	----
Nickel, total	7440-02-0	E420/VA	0.00050	mg/L	<0.00050	----	----	----	----
Phosphorus, total	7723-14-0	E420/VA	0.050	mg/L	<0.050	----	----	----	----
Potassium, total	7440-09-7	E420/VA	0.050	mg/L	2.40	----	----	----	----
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L	0.00953	----	----	----	----
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L	0.000064	----	----	----	----
Silicon, total	7440-21-3	E420/VA	0.10	mg/L	9.64	----	----	----	----
Silver, total	7440-22-4	E420/VA	0.000010	mg/L	<0.000010	----	----	----	----
Sodium, total	7440-23-5	E420/VA	0.050	mg/L	5.12	----	----	----	----
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L	0.0835	----	----	----	----
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L	3.34	----	----	----	----
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	0.00174	----	----	----	----
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L	0.00040	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: WLNG EOP	----	----	----	----
					Client sampling date / time: 19-Feb-2025 10:40	----	----	----	----
					VA25A3545-001	----	----	----	----
					Result	----	----	----	----
Total Metals									
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L	0.00661	----	----	----	----
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L	0.00590	----	----	----	----
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L	0.0067	----	----	----	----
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	0.330	----	----	----	----
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L	0.00030	----	----	----	----
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L	0.00184	----	----	----	----
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L	0.0107	----	----	----	----
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	0.019	----	----	----	----
Cadmium, dissolved	7440-43-9	E421/VA	0.0000050	mg/L	<0.0000150 DLM	----	----	----	----
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L	36.5	----	----	----	----
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L	0.000255	----	----	----	----
Chromium, dissolved	7440-47-3	E421/VA	0.00050	mg/L	0.00535	----	----	----	----
Cobalt, dissolved	7440-48-4	E421/VA	0.00010	mg/L	<0.00010	----	----	----	----
Copper, dissolved	7440-50-8	E421/VA	0.00020	mg/L	0.00121	----	----	----	----
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L	0.056	----	----	----	----
Lead, dissolved	7439-92-1	E421/VA	0.000050	mg/L	0.000118	----	----	----	----
Lithium, dissolved	7439-93-2	E421/VA	0.0010	mg/L	0.0026	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	19-Feb-2025 10:40	----	----	----	----
						VA25A3545-001	----	----	----	----
						Result	----	----	----	----
Dissolved Metals										
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L		1.35	----	----	----	----
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L		0.00342	----	----	----	----
Mercury, dissolved	7439-97-6	E509/VA	0.0000050	mg/L		<0.0000050	----	----	----	----
Molybdenum, dissolved	7439-98-7	E421/VA	0.000050	mg/L		0.0219	----	----	----	----
Nickel, dissolved	7440-02-0	E421/VA	0.00050	mg/L		<0.00050	----	----	----	----
Phosphorus, dissolved	7723-14-0	E421/VA	0.050	mg/L		<0.050	----	----	----	----
Potassium, dissolved	7440-09-7	E421/VA	0.050	mg/L		3.14	----	----	----	----
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L		0.00907	----	----	----	----
Selenium, dissolved	7782-49-2	E421/VA	0.000050	mg/L		0.000056	----	----	----	----
Silicon, dissolved	7440-21-3	E421/VA	0.050	mg/L		9.44	----	----	----	----
Silver, dissolved	7440-22-4	E421/VA	0.000010	mg/L		<0.000010	----	----	----	----
Sodium, dissolved	7440-23-5	E421/VA	0.050	mg/L		5.19	----	----	----	----
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L		0.0669	----	----	----	----
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L		3.27	----	----	----	----
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		0.00108	----	----	----	----
Tungsten, dissolved	7440-33-7	E421/VA	0.00010	mg/L		0.00048	----	----	----	----
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L		0.00527	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	19-Feb-2025 10:40	----	----	----	----
					VA25A3545-001	----	----	----	----	----
					Result	----	----	----	----	----
Dissolved Metals										
Vanadium, dissolved	7440-62-2	E421/VA	0.00050	mg/L		0.00651	----	----	----	----
Zinc, dissolved	7440-66-6	E421/VA	0.0010	mg/L		0.0138 DTC	----	----	----	----
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		0.00432	----	----	----	----
Chromium, trivalent [Cr III], total	16065-83-1	EC535/VA	0.00050	mg/L		0.00137	----	----	----	----
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	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	19-Feb-2025 10:40	----	----	----	----
					VA25A3545-001	----	----	----	----	----
					Result	----	----	----	----	----
Volatile Organic Compounds										
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	----	----	----	----
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	----	----	----	----

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					19-Feb-2025 10:40	----	----	----	----
					VA25A3545-001	----	----	----	----
					Result	----	----	----	----
Volatile Organic Compounds [Fuels]									
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	----	----	----	----
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	%	86.9	----	----	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.VH+F1/VA	1.0	%	92.6	----	----	----	----
Volatile Organic Compounds Surrogates									
Bromofluorobenzene, 4-	460-00-4	E611C/VA	1.0	%	106	----	----	----	----

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: WLNG EOP	----	----	----	----
					Client sampling date / time: 19-Feb-2025 10:40	----	----	----	----
					VA25A3545-001	----	----	----	----
					Result	----	----	----	----
Volatile Organic Compounds Surrogates									
Difluorobenzene, 1,4-	540-36-3	E611C/VA	1.0	%	103	----	----	----	----
Polycyclic Aromatic Hydrocarbons									
Acenaphthene	83-32-9	E641A/VA	0.010	µg/L	<0.010	----	----	----	----
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	<0.018 DLQ	----	----	----	----
Methylnaphthalene, 2-	91-57-6	E641A/VA	0.010	µg/L	0.018	----	----	----	----
Naphthalene	91-20-3	E641A/VA	0.050	µg/L	<0.050	----	----	----	----
Phenanthrene	85-01-8	E641A/VA	0.020	µg/L	<0.020	----	----	----	----

Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	19-Feb-2025 10:40	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A3545-001	----	----	----	----
						Result	----	----	----	----
Polycyclic Aromatic Hydrocarbons										
Pyrene	129-00-0	E641A/VA	0.010	µg/L		<0.010	----	----	----	----
Quinoline	91-22-5	E641A/VA	0.050	µg/L		<0.050	----	----	----	----
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A/VA	0.1	%		82.4	----	----	----	----
Naphthalene-d8	1146-65-2	E641A/VA	0.1	%		85.1	----	----	----	----
Phenanthrene-d10	1517-22-2	E641A/VA	0.1	%		102	----	----	----	----
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	%		106	----	----	----	----

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

ALS Canada Ltd.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **VA25A3545**	Page	: 1 of 15
Client	: **Triton Environmental Consultants Ltd.**	Laboratory	: ALS Environmental - Vancouver
Contact		Account Manager	
Address		Address	
Telephone	: ----	Telephone	
Project	: 11964	Date Samples Received	: 19-Feb-2025 17:45
PO	: 11964 - Task 40 - Phase 3C-4C	Issue Date	: 03-Mar-2025 22:07
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 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								
Anions and Nutrients	QC-MRG8-1880296001	----	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0013 B mg/L	0.001 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
Aggregate Organics : Phenols (4AAP) in Water by Colorimetry										
Amber glass total (sulfuric acid) WLNG EOP	E562	19-Feb-2025	25-Feb-2025	28 days	6 days	✓	25-Feb-2025	28 days	6 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WLNG EOP	E298	19-Feb-2025	25-Feb-2025	28 days	6 days	✓	27-Feb-2025	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE WLNG EOP	E235.Br-L	19-Feb-2025	20-Feb-2025	28 days	1 days	✓	20-Feb-2025	28 days	1 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE WLNG EOP	E235.Cl	19-Feb-2025	20-Feb-2025	28 days	1 days	✓	20-Feb-2025	28 days	1 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE WLNG EOP	E235.F	19-Feb-2025	20-Feb-2025	28 days	1 days	✓	20-Feb-2025	28 days	1 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE WLNG EOP	E235.NO3-L	19-Feb-2025	20-Feb-2025	3 days	1 days	✓	20-Feb-2025	3 days	1 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE WLNG EOP	E235.NO2-L	19-Feb-2025	20-Feb-2025	3 days	1 days	✓	20-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 : Sulfate in Water by IC										
HDPE WLNG EOP	E235.SO4	19-Feb-2025	20-Feb-2025	28 days	1 days	✓	20-Feb-2025	28 days	1 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid) WLNG EOP	E366	19-Feb-2025	25-Feb-2025	28 days	6 days	✓	27-Feb-2025	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid) WLNG EOP	E372-U	19-Feb-2025	25-Feb-2025	28 days	6 days	✓	27-Feb-2025	28 days	8 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid) WLNG EOP	E509	19-Feb-2025	26-Feb-2025	28 days	7 days	✓	26-Feb-2025	28 days	7 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) WLNG EOP	E421	19-Feb-2025	20-Feb-2025	180 days	1 days	✓	22-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 EOP	EF001	19-Feb-2025	----	----	----		24-Feb-2025	----	5 days	
Glycols : Glycols (4 analytes) by GC-FID										
Glass vial WLNG EOP	E680E	19-Feb-2025	23-Feb-2025	7 days	4 days	✓	24-Feb-2025	40 days	1 days	✓
Hydrocarbons : BC PHCs - EPH by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) WLNG EOP	E601A	19-Feb-2025	26-Feb-2025	14 days	7 days	✓	03-Mar-2025	40 days	6 days	✓
Hydrocarbons : VH and F1 by Headspace GC-FID										
Glass vial (sodium bisulfate) WLNG EOP	E581.VH+F1	19-Feb-2025	26-Feb-2025	14 days	8 days	✓	27-Feb-2025	14 days	8 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	19-Feb-2025	25-Feb-2025	28 days	6 days	✓	25-Feb-2025	28 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE WLNG EOP	E290	19-Feb-2025	20-Feb-2025	14 days	1 days	✓	20-Feb-2025	14 days	1 days	✓
Physical Tests : TDS by Gravimetry										
HDPE WLNG EOP	E162	19-Feb-2025	----	----	----		25-Feb-2025	7 days	7 days	✓
Physical Tests : TSS by Gravimetry										
HDPE WLNG EOP	E160	19-Feb-2025	----	----	----		26-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	19-Feb-2025	26-Feb-2025	14 days	7 days	✓	26-Feb-2025	40 days	0 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide) WLNG EOP	E532	19-Feb-2025	----	----	----		25-Feb-2025	28 days	6 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) WLNG EOP	E508	19-Feb-2025	25-Feb-2025	28 days	6 days	✓	25-Feb-2025	28 days	6 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid) WLNG EOP	E420	19-Feb-2025	20-Feb-2025	180 days	1 days	✓	21-Feb-2025	180 days	2 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide) WLNG EOP	E395	19-Feb-2025	----	----	----		24-Feb-2025	7 days	5 days	✓

Matrix: **Water**

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

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
Volatile Organic Compounds : VOCs (BC List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
WLNG EOP	E611C	19-Feb-2025	26-Feb-2025	14 days	8 days	✓	27-Feb-2025	14 days	8 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	1886802	1	20	5.0	5.0	✓
TDS by Gravimetry	E162	1886809	1	20	5.0	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1880297	1	4	25.0	5.0	✓
Chloride in Water by IC	E235.Cl	1880300	1	5	20.0	5.0	✓
Fluoride in Water by IC	E235.F	1880299	1	5	20.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1880301	1	12	8.3	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1880298	1	10	10.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1880296	1	6	16.6	5.0	✓
Alkalinity Species by Titration	E290	1880306	1	5	20.0	5.0	✓
Ammonia by Fluorescence	E298	1886596	1	14	7.1	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1886592	1	15	6.6	5.0	✓
Total Nitrogen by Colourimetry	E366	1886593	1	9	11.1	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1886601	1	8	12.5	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1884976	1	7	14.2	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1880200	2	18	11.1	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1880181	1	20	5.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1886577	1	19	5.2	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1886876	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1886724	1	11	9.0	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1886126	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1888450	1	16	6.2	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1888451	1	20	5.0	5.0	✓
Glycols (4 analytes) by GC-FID	E680E	1883581	1	9	11.1	5.0	✓
Laboratory Control Samples (LCS)							
TSS by Gravimetry	E160	1886802	1	20	5.0	5.0	✓
TDS by Gravimetry	E162	1886809	1	20	5.0	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1880297	1	4	25.0	5.0	✓
Chloride in Water by IC	E235.Cl	1880300	1	5	20.0	5.0	✓
Fluoride in Water by IC	E235.F	1880299	1	5	20.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1880301	1	12	8.3	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1880298	1	10	10.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1880296	1	6	16.6	5.0	✓
Alkalinity Species by Titration	E290	1880306	1	5	20.0	5.0	✓
Ammonia by Fluorescence	E298	1886596	1	14	7.1	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1886592	1	15	6.6	5.0	✓
Total Nitrogen by Colourimetry	E366	1886593	1	9	11.1	5.0	✓

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Control Samples (LCS) - Continued							
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1886601	1	8	12.5	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1884976	1	7	14.2	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1880200	1	18	5.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1880181	1	20	5.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1886577	1	19	5.2	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1886876	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1886724	1	11	9.0	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1886126	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1888450	1	16	6.2	5.0	✓
BC PHCs - EPH by GC-FID	E601A	1886879	1	16	6.2	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1888451	1	20	5.0	5.0	✓
PAHs in Water by Hexane LVI GC-MS	E641A	1886880	1	9	11.1	5.0	✓
Glycols (4 analytes) by GC-FID	E680E	1883581	1	9	11.1	5.0	✓
Method Blanks (MB)							
TSS by Gravimetry	E160	1886802	1	20	5.0	5.0	✓
TDS by Gravimetry	E162	1886809	1	20	5.0	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1880297	1	4	25.0	5.0	✓
Chloride in Water by IC	E235.Cl	1880300	1	5	20.0	5.0	✓
Fluoride in Water by IC	E235.F	1880299	1	5	20.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1880301	1	12	8.3	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1880298	1	10	10.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1880296	1	6	16.6	5.0	✓
Alkalinity Species by Titration	E290	1880306	1	5	20.0	5.0	✓
Ammonia by Fluorescence	E298	1886596	1	14	7.1	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1886592	1	15	6.6	5.0	✓
Total Nitrogen by Colourimetry	E366	1886593	1	9	11.1	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1886601	1	8	12.5	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1884976	1	7	14.2	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1880200	1	18	5.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1880181	1	20	5.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1886577	1	19	5.2	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1886876	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1886724	1	11	9.0	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1886126	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1888450	1	16	6.2	5.0	✓
BC PHCs - EPH by GC-FID	E601A	1886879	1	16	6.2	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1888451	1	20	5.0	5.0	✓
PAHs in Water by Hexane LVI GC-MS	E641A	1886880	1	9	11.1	5.0	✓
Glycols (4 analytes) by GC-FID	E680E	1883581	1	9	11.1	5.0	✓

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Matrix Spikes (MS)							
Bromide in Water by IC (Low Level)	E235.Br-L	1880297	1	4	25.0	5.0	✓
Chloride in Water by IC	E235.Cl	1880300	1	5	20.0	5.0	✓
Fluoride in Water by IC	E235.F	1880299	1	5	20.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1880301	1	12	8.3	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1880298	1	10	10.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1880296	1	6	16.6	5.0	✓
Ammonia by Fluorescence	E298	1886596	1	14	7.1	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1886592	1	15	6.6	5.0	✓
Total Nitrogen by Colourimetry	E366	1886593	1	9	11.1	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1886601	1	8	12.5	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1884976	1	7	14.2	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1880200	1	18	5.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1880181	1	20	5.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1886577	1	19	5.2	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1886876	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1886724	1	11	9.0	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1886126	1	20	5.0	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1888450	1	16	6.2	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1888451	1	20	5.0	5.0	✓

Methodology References and Summaries

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

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

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

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

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

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

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

ALS Canada Ltd.

QUALITY CONTROL REPORT

Work Order	: **VA25A3545**	Page	: 1 of 23
Client	: Triton Environmental Consultants Ltd.	Laboratory	: ALS Environmental - Vancouver
Contact		Account Manager	
Address		Address	
Telephone	: ----	Telephone	
Project	: 11964	Date Samples Received	: 19-Feb-2025 17:45
PO	: 11964 - Task 40 - Phase 3C-4C	Date Analysis Commenced	: 20-Feb-2025
C-O-C number	: ----	Issue Date	: 03-Mar-2025 22:07
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*
		Vancouver Inorganics, Burnaby, British Columbia
		Vancouver Metals, Burnaby, British Columbia
		Vancouver Metals, Burnaby, British Columbia
		Vancouver Organics, Burnaby, British Columbia
		Vancouver Metals, Burnaby, British Columbia
		Vancouver Inorganics, Burnaby, British Columbia
		Vancouver Inorganics, Burnaby, British Columbia
		Vancouver Inorganics, Burnaby, British Columbia
		Vancouver Metals, Burnaby, British Columbia
		Vancouver Administration, Burnaby, British Columbia
		Vancouver Organics, Burnaby, British Columbia
		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: 1880306)											
VA25A3469-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	129	130	1.08%	20%	----
Physical Tests (QC Lot: 1886802)											
KS2500594-001	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	452	471	4.20%	20%	----
Physical Tests (QC Lot: 1886809)											
VA25A3544-002	Anonymous	Solids, total dissolved [TDS]	----	E162	13	mg/L	64	67	2	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1880296)											
VA25A3545-001	WLNG EOP	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	9.98	9.84	1.41%	20%	----
Anions and Nutrients (QC Lot: 1880297)											
VA25A3545-001	WLNG EOP	Bromide	24959-67-9	E235.Br-L	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1880298)											
VA25A3545-001	WLNG EOP	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1880299)											
VA25A3545-001	WLNG EOP	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.193	0.186	0.007	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1880300)											
VA25A3545-001	WLNG EOP	Chloride	16887-00-6	E235.Cl	0.50	mg/L	7.87	7.76	1.42%	20%	----
Anions and Nutrients (QC Lot: 1880301)											
VA25A3545-001	WLNG EOP	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1886593)											
KS2500601-001	Anonymous	Nitrogen, total	7727-37-9	E366	0.030	mg/L	0.203	0.223	0.020	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1886596)											
KS2500601-001	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: 1886601)											
VA25A3355-003	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0044	0.0044	0.00002	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 1886592)											
KS2500601-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	1.95	1.93	0.02	Diff <2x LOR	----
Total Sulfides (QC Lot: 1884976)											
VA25A3389-001	Anonymous	Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.0016	0.0015	0.00005	Diff <2x LOR	----
Total Metals (QC Lot: 1880200)											
VA25A3553-001	Anonymous	Selenium, total	7782-49-2	E420	0.000100	mg/L	0.000167	0.000111	0.000056	Diff <2x LOR	----
VA25A3553-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0060	mg/L	0.249	0.229	8.27%	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: 1880200) - continued											
VA25A3553-001	Anonymous	Antimony, total	7440-36-0	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Arsenic, total	7440-38-2	E420	0.00020	mg/L	0.00070	0.00059	0.00011	Diff <2x LOR	----
		Barium, total	7440-39-3	E420	0.00020	mg/L	0.0216	0.0200	7.45%	20%	----
		Beryllium, total	7440-41-7	E420	0.000040	mg/L	<0.000040	<0.000040	0	Diff <2x LOR	----
		Bismuth, total	7440-69-9	E420	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Boron, total	7440-42-8	E420	0.020	mg/L	0.184	0.183	0.001	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.0000100	mg/L	0.0000201	0.0000197	0.0000004	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.100	mg/L	34.0	33.6	0.998%	20%	----
		Cesium, total	7440-46-2	E420	0.000020	mg/L	0.000025	0.000028	0.000003	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
		Cobalt, total	7440-48-4	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Copper, total	7440-50-8	E420	0.00100	mg/L	0.00140	0.00132	0.00008	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.020	mg/L	0.381	0.372	2.24%	20%	----
		Lead, total	7439-92-1	E420	0.000100	mg/L	0.000628	0.000632	0.000004	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0020	mg/L	0.0078	0.0078	0.00004	Diff <2x LOR	----
		Magnesium, total	7439-95-4	E420	0.0100	mg/L	52.2	49.6	5.11%	20%	----
		Manganese, total	7439-96-5	E420	0.00020	mg/L	0.0194	0.0183	5.66%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000100	mg/L	0.00137	0.00134	2.20%	20%	----
		Nickel, total	7440-02-0	E420	0.00100	mg/L	0.00106	0.00107	0.000007	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E420	0.100	mg/L	<0.100	<0.100	0	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.100	mg/L	16.4	15.0	8.65%	20%	----
		Rubidium, total	7440-17-7	E420	0.00040	mg/L	0.00588	0.00529	10.5%	20%	----
		Silicon, total	7440-21-3	E420	0.20	mg/L	3.89	3.90	0.345%	20%	----
		Silver, total	7440-22-4	E420	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Sodium, total	7440-23-5	E420	0.100	mg/L	418	396	5.41%	20%	----
		Strontium, total	7440-24-6	E420	0.00040	mg/L	0.390	0.378	3.14%	20%	----
		Sulfur, total	7704-34-9	E420	1.00	mg/L	39.8	39.7	0.158%	20%	----
		Tellurium, total	13494-80-9	E420	0.00040	mg/L	<0.00040	<0.00040	0	Diff <2x LOR	----
		Thallium, total	7440-28-0	E420	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Thorium, total	7440-29-1	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.00060	mg/L	0.0120	0.0102	15.8%	20%	----
		Tungsten, total	7440-33-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Uranium, total	7440-61-1	E420	0.000020	mg/L	0.000376	0.000364	3.27%	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: 1880200) - continued											
VA25A3553-001	Anonymous	Vanadium, total	7440-62-2	E420	0.00100	mg/L	0.00102	<0.00100	0.00002	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0060	mg/L	<0.0060	<0.0060	0	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00040	mg/L	<0.00040	<0.00040	0	Diff <2x LOR	----
Total Metals (QC Lot: 1886577)											
VA25A3507-007	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1880181)											
VA25A3500-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0023	0.0022	0.00005	Diff <2x LOR	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	0.00078	0.00076	0.00002	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00025	0.00024	0.000009	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0476	0.0487	2.35%	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	0.027	0.027	0.0004	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.0000063	0.0000062	0.00000008	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	114	112	1.72%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	0.00117	0.00117	0.263%	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	0.00879	0.00886	0.857%	20%	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00021	0.00022	0.000008	Diff <2x LOR	----
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.030	0.031	0.0008	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	0.0055	0.0052	0.0002	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	80.6	81.2	0.721%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	1.14	1.14	0.818%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.00169	0.00166	1.73%	20%	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.0306	0.0306	0.0315%	20%	----
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.050	mg/L	3.74	3.85	2.79%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00582	0.00598	2.67%	20%	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000133	0.000124	0.000009	Diff <2x LOR	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	2.28	2.20	3.53%	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	26.0	26.2	0.624%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.590	0.586	0.645%	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: 1880181) - continued											
VA25A3500-001	Anonymous	Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	171	167	2.73%	20%	----
		Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	0.00212	0.00206	3.18%	20%	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.00304	0.00296	2.53%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0051	0.0053	0.0002	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: 1886876)											
VA25A3486-003	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	0.0000627	0.0000613	2.31%	20%	----
Speciated Metals (QC Lot: 1886724)											
VA25A3544-001	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
Aggregate Organics (QC Lot: 1886126)											
VA25A3754-001	Anonymous	Phenols, total (4AAP)	----	E562	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
Volatile Organic Compounds (QC Lot: 1888451)											
VA25A3545-001	WLNG EOP	Benzene	71-43-2	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromodichloromethane	75-27-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromoform	75-25-2	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Carbon tetrachloride	56-23-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chlorobenzene	108-90-7	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroethane	75-00-3	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroform	67-66-3	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloromethane	74-87-3	E611C	5.0	µg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Dibromochloromethane	124-48-1	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,2-	95-50-1	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,3-	541-73-1	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,4-	106-46-7	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,1-	75-34-3	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,2-	107-06-2	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, 1,1-	75-35-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, cis-1,2-	156-59-2	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Volatile Organic Compounds (QC Lot: 1888451) - continued											
VA25A3545-001	WLNG EOP	Dichloroethylene, trans-1,2-	156-60-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloromethane	75-09-2	E611C	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Dichloropropane, 1,2-	78-87-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Styrene	100-42-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Tetrachloroethylene	127-18-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Toluene	108-88-3	E611C	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Trichloroethane, 1,1,1-	71-55-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,2-	79-00-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichlorofluoromethane	75-69-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Vinyl chloride	75-01-4	E611C	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611C	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611C	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 1888450)											
VA25A3545-001	WLNG EOP	VHw (C6-C10)	----	E581.VH+F1	100	µg/L	<100	<100	0.0%	30%	----
Glycols (QC Lot: 1883581)											
VA25A3545-001	WLNG EOP	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: 1880306)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 1886802)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Physical Tests (QCLot: 1886809)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Anions and Nutrients (QCLot: 1880296)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 1880297)						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 1880298)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1880299)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 1880300)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 1880301)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	# 0.0013	B
Anions and Nutrients (QCLot: 1886593)						
Nitrogen, total	7727-37-9	E366	0.03	mg/L	<0.030	----
Anions and Nutrients (QCLot: 1886596)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1886601)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Organic / Inorganic Carbon (QCLot: 1886592)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Total Sulfides (QCLot: 1884976)						
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	----
Total Metals (QCLot: 1880200)						
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: 1880200) - 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: 1886577)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Dissolved Metals (QCLot: 1880181)						
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: 1880181) - 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: 1886876)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Speciated Metals (QCLot: 1886724)						
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	<0.00050	----
Aggregate Organics (QCLot: 1886126)						
Phenols, total (4AAP)	----	E562	0.001	mg/L	<0.0010	----
Volatile Organic Compounds (QCLot: 1888451)						
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: 1888451) - 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: 1886879)						
EPH (C10-C19)	----	E601A	250	µg/L	<250	----
EPH (C19-C32)	----	E601A	250	µg/L	<250	----
Hydrocarbons (QCLot: 1888450)						
VHw (C6-C10)	----	E581.VH+F1	100	µg/L	<100	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1886880)						
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: 1886880) - 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: 1883581)						
Diethylene glycol	111-46-6	E680E	5	mg/L	<5.0	----
Ethylene glycol	107-21-1	E680E	5	mg/L	<5.0	----
Propylene glycol, 1,2-	57-55-6	E680E	5	mg/L	<5.0	----
Triethylene glycol	112-27-6	E680E	5	mg/L	<5.0	----

Qualifiers

Qualifier	Description
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: 1880306)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	103	85.0	115	----
Physical Tests (QCLot: 1886802)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	93.9	85.0	115	----
Physical Tests (QCLot: 1886809)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	107	85.0	115	----
Anions and Nutrients (QCLot: 1880296)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 1880297)									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	96.2	85.0	115	----
Anions and Nutrients (QCLot: 1880298)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 1880299)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	99.6	90.0	110	----
Anions and Nutrients (QCLot: 1880300)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 1880301)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 1886593)									
Nitrogen, total	7727-37-9	E366	0.03	mg/L	0.5 mg/L	100	75.0	125	----
Anions and Nutrients (QCLot: 1886596)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	103	85.0	115	----
Anions and Nutrients (QCLot: 1886601)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	95.9	80.0	120	----
Organic / Inorganic Carbon (QCLot: 1886592)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	92.8	80.0	120	----
Total Sulfides (QCLot: 1884976)									
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.08 mg/L	103	80.0	120	----
Total Metals (QCLot: 1880200)									

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: 1880200) - continued									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	98.8	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	102	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	106	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	105	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	100	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	97.9	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	100	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	97.5	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	101	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	100	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	100	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	104	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	99.8	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	98.3	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	98.2	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	102	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	98.9	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	112	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	100	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	98.3	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	103	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	92.7	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	100	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	100	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	110	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	102	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	101	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	96.2	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	93.7	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	101	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	98.6	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
Total Metals (QCLot: 1880200) - continued									
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	102	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	98.0	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	97.2	80.0	120	----
Total Metals (QCLot: 1886577)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	96.6	80.0	120	----
Dissolved Metals (QCLot: 1880181)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	107	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	97.4	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	1 mg/L	111	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	109	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	99.5	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	95.7	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	97.3	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	106	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	96.1	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	96.8	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	110	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	106	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	104	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	102	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.5 mg/L	96.1	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	108	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	108	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	100	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	105	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	118	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	113	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	109	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	104	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	109	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	91.8	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	116	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.25 mg/L	95.4	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	99.2	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: 1880181) - continued									
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	96.6	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	95.7	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	92.1	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	97.1	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	102	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	94.0	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	95.6	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.5 mg/L	108	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	110	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	98.0	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	94.1	80.0	120	----
Speciated Metals (QCLot: 1886724)									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.25 mg/L	99.2	80.0	120	----
Aggregate Organics (QCLot: 1886126)									
Phenols, total (4AAP)	----	E562	0.001	mg/L	0.02 mg/L	91.9	85.0	115	----
Volatile Organic Compounds (QCLot: 1888451)									
Benzene	71-43-2	E611C	0.5	µg/L	100 µg/L	94.2	70.0	130	----
Bromodichloromethane	75-27-4	E611C	0.5	µg/L	100 µg/L	92.3	70.0	130	----
Bromoform	75-25-2	E611C	0.5	µg/L	100 µg/L	75.3	70.0	130	----
Carbon tetrachloride	56-23-5	E611C	0.5	µg/L	100 µg/L	102	70.0	130	----
Chlorobenzene	108-90-7	E611C	0.5	µg/L	100 µg/L	100	70.0	130	----
Chloroethane	75-00-3	E611C	0.5	µg/L	100 µg/L	109	60.0	140	----
Chloroform	67-66-3	E611C	0.5	µg/L	100 µg/L	99.1	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	88.2	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611C	0.5	µg/L	100 µg/L	98.7	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611C	0.5	µg/L	100 µg/L	104	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611C	0.5	µg/L	100 µg/L	104	70.0	130	----
Dichloroethane, 1,1-	75-34-3	E611C	0.5	µg/L	100 µg/L	92.9	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611C	0.5	µg/L	100 µg/L	90.2	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611C	0.5	µg/L	100 µg/L	101	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611C	0.5	µg/L	100 µg/L	92.9	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611C	0.5	µg/L	100 µg/L	87.2	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: 1888451) - continued									
Dichloromethane	75-09-2	E611C	1	µg/L	100 µg/L	98.0	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611C	0.5	µg/L	100 µg/L	88.9	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611C	0.5	µg/L	100 µg/L	89.0	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611C	0.5	µg/L	100 µg/L	85.6	70.0	130	----
Ethylbenzene	100-41-4	E611C	0.5	µg/L	100 µg/L	97.4	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	0.5	µg/L	100 µg/L	99.1	70.0	130	----
Styrene	100-42-5	E611C	0.5	µg/L	100 µg/L	91.9	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	0.5	µg/L	100 µg/L	96.2	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	0.2	µg/L	100 µg/L	78.6	70.0	130	----
Tetrachloroethylene	127-18-4	E611C	0.5	µg/L	100 µg/L	106	70.0	130	----
Toluene	108-88-3	E611C	0.4	µg/L	100 µg/L	96.6	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611C	0.5	µg/L	100 µg/L	106	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611C	0.5	µg/L	100 µg/L	90.9	70.0	130	----
Trichloroethylene	79-01-6	E611C	0.5	µg/L	100 µg/L	105	70.0	130	----
Trichlorofluoromethane	75-69-4	E611C	0.5	µg/L	100 µg/L	122	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	99.0	70.0	130	----
Xylene, o-	95-47-6	E611C	0.3	µg/L	100 µg/L	95.4	70.0	130	----
Hydrocarbons (QCLot: 1886879)									
EPH (C10-C19)	----	E601A	250	µg/L	6490 µg/L	114	70.0	130	----
EPH (C19-C32)	----	E601A	250	µg/L	3360 µg/L	112	70.0	130	----
Hydrocarbons (QCLot: 1888450)									
VHw (C6-C10)	----	E581.VH+F1	100	µg/L	6310 µg/L	81.0	70.0	130	----
Polycyclic Aromatic Hydrocarbons (QCLot: 1886880)									
Acenaphthene	83-32-9	E641A	0.01	µg/L	0.5 µg/L	124	60.0	130	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	0.5 µg/L	112	60.0	130	----
Acridine	260-94-6	E641A	0.01	µg/L	0.5 µg/L	117	60.0	130	----
Anthracene	120-12-7	E641A	0.01	µg/L	0.5 µg/L	128	60.0	130	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	0.5 µg/L	109	60.0	130	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	0.5 µg/L	119	60.0	130	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	0.5 µg/L	123	60.0	130	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	0.5 µg/L	130	60.0	130	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	0.5 µg/L	123	60.0	130	----
Chrysene	218-01-9	E641A	0.01	µg/L	0.5 µg/L	114	60.0	130	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Polycyclic Aromatic Hydrocarbons (QCLot: 1886880) - continued									
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	0.5 µg/L	120	60.0	130	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	0.5 µg/L	118	60.0	130	----
Fluorene	86-73-7	E641A	0.01	µg/L	0.5 µg/L	112	60.0	130	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	0.5 µg/L	122	60.0	130	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	0.5 µg/L	111	60.0	130	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	0.5 µg/L	124	60.0	130	----
Naphthalene	91-20-3	E641A	0.05	µg/L	0.5 µg/L	124	50.0	130	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	0.5 µg/L	124	60.0	130	----
Pyrene	129-00-0	E641A	0.01	µg/L	0.5 µg/L	120	60.0	130	----
Quinoline	91-22-5	E641A	0.05	µg/L	0.5 µg/L	119	60.0	130	----
Glycols (QCLot: 1883581)									
Diethylene glycol	111-46-6	E680E	5	mg/L	25 mg/L	106	70.0	130	----
Ethylene glycol	107-21-1	E680E	5	mg/L	25 mg/L	104	70.0	130	----
Propylene glycol, 1,2-	57-55-6	E680E	5	mg/L	25 mg/L	101	70.0	130	----
Triethylene glycol	112-27-6	E680E	5	mg/L	25 mg/L	104	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: 1880296)										
VA25A3477-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	103 mg/L	100 mg/L	103	75.0	125	----
Anions and Nutrients (QCLot: 1880297)										
VA25A3545-001	WLNG EOP	Bromide	24959-67-9	E235.Br-L	0.521 mg/L	0.5 mg/L	104	75.0	125	----
Anions and Nutrients (QCLot: 1880298)										
VA25A3545-001	WLNG EOP	Nitrate (as N)	14797-55-8	E235.NO3-L	2.38 mg/L	2.5 mg/L	95.0	75.0	125	----
Anions and Nutrients (QCLot: 1880299)										
VA25A3477-001	Anonymous	Fluoride	16984-48-8	E235.F	1.05 mg/L	1 mg/L	105	75.0	125	----
Anions and Nutrients (QCLot: 1880300)										
VA25A3477-001	Anonymous	Chloride	16887-00-6	E235.Cl	104 mg/L	100 mg/L	104	75.0	125	----
Anions and Nutrients (QCLot: 1880301)										
VA25A3477-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.518 mg/L	0.5 mg/L	104	75.0	125	----
Anions and Nutrients (QCLot: 1886593)										
VA25A3355-003	Anonymous	Nitrogen, total	7727-37-9	E366	ND mg/L	----	ND	70.0	130	----
Anions and Nutrients (QCLot: 1886596)										
VA25A3355-003	Anonymous	Ammonia, total (as N)	7664-41-7	E298	ND mg/L	----	ND	75.0	125	----
Anions and Nutrients (QCLot: 1886601)										
VA25A3355-005	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0614 mg/L	0.05 mg/L	123	70.0	130	----
Organic / Inorganic Carbon (QCLot: 1886592)										
VA25A3355-003	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	ND mg/L	----	ND	70.0	130	----
Total Sulfides (QCLot: 1884976)										
VA25A3389-002	Anonymous	Sulfide, total (as S)	18496-25-8	E395	0.237 mg/L	0.2 mg/L	118	75.0	125	----
Total Metals (QCLot: 1880200)										
VA25A3553-002	Anonymous	Aluminum, total	7429-90-5	E420	0.392 mg/L	0.4 mg/L	97.9	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0402 mg/L	0.04 mg/L	100	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0420 mg/L	0.04 mg/L	105	70.0	130	----
		Barium, total	7440-39-3	E420	0.0403 mg/L	0.04 mg/L	101	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0803 mg/L	0.08 mg/L	100	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.0185 mg/L	0.02 mg/L	92.4	70.0	130	----
		Boron, total	7440-42-8	E420	0.193 mg/L	0.2 mg/L	96.5	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00762 mg/L	0.008 mg/L	95.2	70.0	130	----
		Calcium, total	7440-70-2	E420	ND mg/L	----	ND	70.0	130	----
		Cesium, total	7440-46-2	E420	0.0193 mg/L	0.02 mg/L	96.6	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0804 mg/L	0.08 mg/L	100	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: 1880200) - continued										
VA25A3553-002	Anonymous	Cobalt, total	7440-48-4	E420	0.0380 mg/L	0.04 mg/L	95.1	70.0	130	----
		Copper, total	7440-50-8	E420	0.0364 mg/L	0.04 mg/L	91.0	70.0	130	----
		Iron, total	7439-89-6	E420	3.77 mg/L	4 mg/L	94.3	70.0	130	----
		Lead, total	7439-92-1	E420	0.0370 mg/L	0.04 mg/L	92.6	70.0	130	----
		Lithium, total	7439-93-2	E420	0.195 mg/L	0.2 mg/L	97.6	70.0	130	----
		Magnesium, total	7439-95-4	E420	ND mg/L	----	ND	70.0	130	----
		Manganese, total	7439-96-5	E420	0.0375 mg/L	0.04 mg/L	93.8	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0421 mg/L	0.04 mg/L	105	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0734 mg/L	0.08 mg/L	91.8	70.0	130	----
		Phosphorus, total	7723-14-0	E420	21.4 mg/L	20 mg/L	107	70.0	130	----
		Potassium, total	7440-09-7	E420	ND mg/L	----	ND	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0416 mg/L	0.04 mg/L	104	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0828 mg/L	0.08 mg/L	103	70.0	130	----
		Silicon, total	7440-21-3	E420	19.8 mg/L	20 mg/L	99.2	70.0	130	----
		Silver, total	7440-22-4	E420	0.00758 mg/L	0.008 mg/L	94.7	70.0	130	----
		Sodium, total	7440-23-5	E420	ND mg/L	----	ND	70.0	130	----
		Strontium, total	7440-24-6	E420	ND mg/L	----	ND	70.0	130	----
		Sulfur, total	7704-34-9	E420	41.3 mg/L	40 mg/L	103	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0791 mg/L	0.08 mg/L	98.8	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00730 mg/L	0.008 mg/L	91.3	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0382 mg/L	0.04 mg/L	95.5	70.0	130	----
		Tin, total	7440-31-5	E420	0.0397 mg/L	0.04 mg/L	99.2	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0779 mg/L	0.08 mg/L	97.3	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0398 mg/L	0.04 mg/L	99.5	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00772 mg/L	0.008 mg/L	96.5	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.202 mg/L	0.2 mg/L	101	70.0	130	----
		Zinc, total	7440-66-6	E420	0.705 mg/L	0.8 mg/L	88.1	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0819 mg/L	0.08 mg/L	102	70.0	130	----
Total Metals (QCLot: 1886577)										
VA25A3516-001	Anonymous	Mercury, total	7439-97-6	E508	0.0000968 mg/L	0 mg/L	96.8	70.0	130	----
Dissolved Metals (QCLot: 1880181)										
VA25A3507-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.187 mg/L	0.2 mg/L	93.4	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0186 mg/L	0.02 mg/L	93.0	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0196 mg/L	0.02 mg/L	98.0	70.0	130	----
		Barium, dissolved	7440-39-3	E421	0.0194 mg/L	0.02 mg/L	96.8	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.0400 mg/L	0.04 mg/L	100	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.00900 mg/L	0.01 mg/L	90.0	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.100 mg/L	0.1 mg/L	100	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00379 mg/L	0.004 mg/L	94.7	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.00953 mg/L	0.01 mg/L	95.3	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0396 mg/L	0.04 mg/L	98.9	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0190 mg/L	0.02 mg/L	94.9	70.0	130	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 1880181) - continued										
VA25A3507-001	Anonymous	Copper, dissolved	7440-50-8	E421	0.0186 mg/L	0.02 mg/L	92.8	70.0	130	----
		Iron, dissolved	7439-89-6	E421	1.90 mg/L	2 mg/L	95.2	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0183 mg/L	0.02 mg/L	91.5	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.0952 mg/L	0.1 mg/L	95.2	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	0.0199 mg/L	0.02 mg/L	99.6	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0373 mg/L	0.04 mg/L	93.4	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	10.3 mg/L	10 mg/L	103	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	3.94 mg/L	4 mg/L	98.5	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.0188 mg/L	0.02 mg/L	94.2	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0411 mg/L	0.04 mg/L	103	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	9.22 mg/L	10 mg/L	92.2	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00381 mg/L	0.004 mg/L	95.3	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	19.6 mg/L	20 mg/L	98.0	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.0375 mg/L	0.04 mg/L	93.8	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.00359 mg/L	0.004 mg/L	89.8	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0191 mg/L	0.02 mg/L	95.4	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0186 mg/L	0.02 mg/L	93.3	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0372 mg/L	0.04 mg/L	93.0	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0183 mg/L	0.02 mg/L	91.4	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	0.00359 mg/L	0.004 mg/L	89.7	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.0975 mg/L	0.1 mg/L	97.5	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.385 mg/L	0.4 mg/L	96.2	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0392 mg/L	0.04 mg/L	97.9	70.0	130	----
Dissolved Metals (QCLot: 1886876)										
VA25A3486-004	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000945 mg/L	0 mg/L	94.5	70.0	130	----
Speciated Metals (QCLot: 1886724)										
VA25A3544-002	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.255 mg/L	0.25 mg/L	102	70.0	130	----
Aggregate Organics (QCLot: 1886126)										
VA25A3545-001	WLNG EOP	Phenols, total (4AAP)	----	E562	0.0186 mg/L	0.02 mg/L	93.1	75.0	125	----
Volatile Organic Compounds (QCLot: 1888451)										
VA25A3569-002	Anonymous	Benzene	71-43-2	E611C	98.8 µg/L	100 µg/L	98.8	60.0	140	----
		Bromodichloromethane	75-27-4	E611C	99.0 µg/L	100 µg/L	99.0	60.0	140	----
		Bromoform	75-25-2	E611C	78.0 µg/L	100 µg/L	78.0	60.0	140	----
		Carbon tetrachloride	56-23-5	E611C	107 µg/L	100 µg/L	107	60.0	140	----
		Chlorobenzene	108-90-7	E611C	107 µg/L	100 µg/L	107	60.0	140	----
		Chloroethane	75-00-3	E611C	107 µg/L	100 µg/L	107	50.0	150	----
		Chloroform	67-66-3	E611C	105 µg/L	100 µg/L	105	60.0	140	----
		Chloromethane	74-87-3	E611C	108 µg/L	100 µg/L	108	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: 1888451) - continued										
VA25A3569-002	Anonymous	Dibromochloromethane	124-48-1	E611C	94.0 µg/L	100 µg/L	94.0	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611C	104 µg/L	100 µg/L	104	60.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611C	109 µg/L	100 µg/L	109	60.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611C	109 µg/L	100 µg/L	109	60.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611C	77.7 µg/L	100 µg/L	77.7	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611C	95.9 µg/L	100 µg/L	95.9	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	97.5 µg/L	100 µg/L	97.5	60.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611C	89.8 µg/L	100 µg/L	89.8	60.0	140	----
		Dichloromethane	75-09-2	E611C	101 µg/L	100 µg/L	101	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611C	94.2 µg/L	100 µg/L	94.2	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611C	94.9 µg/L	100 µg/L	94.9	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611C	90.2 µg/L	100 µg/L	90.2	60.0	140	----
		Ethylbenzene	100-41-4	E611C	103 µg/L	100 µg/L	103	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	105 µg/L	100 µg/L	105	60.0	140	----
		Styrene	100-42-5	E611C	98.4 µg/L	100 µg/L	98.4	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	103 µg/L	100 µg/L	103	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	83.1 µg/L	100 µg/L	83.1	60.0	140	----
		Tetrachloroethylene	127-18-4	E611C	111 µg/L	100 µg/L	111	60.0	140	----
		Toluene	108-88-3	E611C	100 µg/L	100 µg/L	100	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611C	112 µg/L	100 µg/L	112	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611C	96.7 µg/L	100 µg/L	96.7	60.0	140	----
		Trichloroethylene	79-01-6	E611C	112 µg/L	100 µg/L	112	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611C	122 µg/L	100 µg/L	122	50.0	150	----
		Vinyl chloride	75-01-4	E611C	105 µg/L	100 µg/L	105	50.0	150	----
		Xylene, m+p-	179601-23-1	E611C	211 µg/L	200 µg/L	106	60.0	140	----
		Xylene, o-	95-47-6	E611C	102 µg/L	100 µg/L	102	60.0	140	----
Hydrocarbons (QCLot: 1888450)										
VA25A3569-001	Anonymous	VHw (C6-C10)	----	E581.VH+F1	4800 µg/L	6310 µg/L	76.1	60.0	140	----

Chain of Custody (COC) / Analytical Request Form

COC Number: 20 -

Page of

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

Environmental Division Vancouver

Work Order Reference

VA25A3545

Telephone : +1 604 253 4188

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

Reports / Recipients	
Select Report Format:	☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)
Merge QC/QCI Reports with COA	☑ YES ☐ NO ☐ N/A
☐ Compare Results to Criteria on Report - provide details below if box checked	
Select Distribution:	☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax	
Email 2	
Email 3	
Select Invoice	
Email 1 or Fax	
Email 2	

Turnaround Time (TAT) Requested
☑ Routine [R] if received by 3pm M-F - no surcharges apply
☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum
☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum
☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum
☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum
☐ Same day [E2] if received by 10am M-S - 200% rush surcharge.
Additional fees may apply to rush requests on weekends, st...
Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm am/pm
For all tests with rush TATs requested, please contact your AM to confirm availability.

Project Information		
ALS Account # / Quote #:	VA25-TRIT100-001	AFE/Cost Center:
Job #:	11964	Major/Minor Code
PO / AFE:	11964 - Task 40 - Phase 3C-4C	Requisitioner:
LSD:		Location:
ALS Lab Work Order # (ALS use only):	A3545	ALS Contact:

Analysis Request

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

ALS Sample # (ALS use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	Total metals + mercury	Dissolved metals + mercury	Total hexavalent chromium	Total trivalent chromium	TSS, TDS, T-Alkalinity, Anions scan (Br, Cl, F, NO2, NO3, SO4)	Total sulfide (low) (as H2S), Unionized Sulfide (low)	Nutrients (ammonia, ammonium, total nitrogen, total phosphorus)	VOC/VPH	EPH, PAH, LEPH/HEPH	DOC	Glycols	General parameters (alkalinity)	Phenols		SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
						F					P	P	P	P	F/P							
	WLNG EOP	19-Feb-25	10:40	Water	16	R	R	R	R	R	R	R	R	R	R	R	R	R				
	pH: 6.6 cond: 290 temp: 9.5 Turbidity: 0.9																					

Drinking Water (DW) Samples[1] (client use)	Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)
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)

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

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

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

INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C			
				9			

SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (ALS use only)			FINAL SHIPMENT RECEPTION (ALS use only)		
Date: 19-Feb-25	Time: 17:00	Received by:	Date:	Time:	Received by:	Date: Feb 19	Time: 5:45 pm

ONS AND SAMPLING INFORMATION WHITE - LABORATORY COPY YELLOW - CLIENT COPY AUG 2020 FRONT

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

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

Woodfibre Site WTP Discharge Field Notes and Logs

FortisBC Eagle Mountain-Woodfibre Gas Pipeline

Water Discharge Authorization Water Quality Monitoring

2025-2-19-Shafiei-6BB6C

Project Component:	Tunnel	**Site Name:**	WLNG Treatment Discharge
Inspection Date:	02/19/2025	**Location:**	WLNG
Triton QP:	Farshad Shafiei	**Latitude/Longitude:**	49.669464 -123.249771
Temperature(c):	Low 4 High 7	**Permit:**	PE 110136
Weather Conditions:	Heavy Rain	**Ground Conditions:**	Wet

Observations

Time: 10:40:00 **Flow Volume (visual):** low

Notes: Water slightly turbid due to rain

Odour Detected?:	Yes	**Notes:**	Either from grouting or centrifuge
Unusual Colour?	No	**Notes:**	
Unusual Observations?	No	**Notes:**	
Sheen on Water?	No	**Notes:**	

Samples Collected - Parameters

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

Logger Maintenance

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

Describe Logger Maintenance

Photos

Photo: 1

Location: EOP

Description: Spigot from water treatment discharge

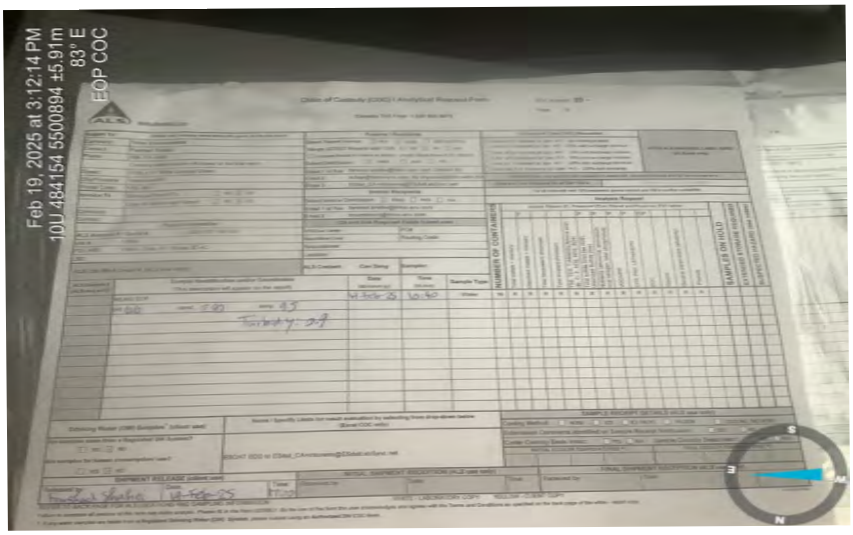


Photo: 2

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

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 17, 2025 to February 23, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **March 6, 2025**

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

Appendices:

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

1. Executive Summary and Field Notes:

The discharged water consistently remained within regulatory guidelines. The key parameters, including temperature, pH, NTU, salinity, conductivity, and oxidation-reduction potential (ORP), were monitored throughout the discharge process and remained within the prescribed limits. The low pH and negative pH readings at certain moments were due to probe calibration, meaning the probe was out of service at that time. No visible sheen observed on top of the WTP tanks and discharged water. All relevant parameters were measured using YSI instruments and WTP probes. The total discharge volume up to February 17 was 77,845 m^3.

Daily Volume Summary:

Table 1: Discharge Volumes Daily Summary

Date	Location	Volume (m3)	Comments
February 17	Woodfibre (WF)	1,278	None
February 18	WF	1,173	None
February 19	WF	1,176	None
February 20	WF	1,230	None
February 21	WF	1,339	None
February 22	WF	1,405	None
February 23	WF	1,201	None
Total		8,802	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)
2/17/2025	0:00:00	7	0.998	0.8	77,845	9.8	534
2/17/2025	0:45:00	7.1	0.798	1.4	77,869	9.6	515
2/17/2025	1:00:00	7.2	1.433	1.4	77,888	9.7	538
2/17/2025	1:15:00	7.1	1.376	1.4	77,903	9.8	578
2/17/2025	1:30:00	7.3	1.418	3	77,924	9.7	569
2/17/2025	2:15:00	7.1	1.236	3.4	77,946	9.7	559
2/17/2025	2:30:00	6.9	1.402	1.1	77,967	9.7	522
2/17/2025	2:45:00	7	1.376	1	77,988	9.7	484
2/17/2025	3:00:00	7.1	0.249	1	78,008	9.7	477
2/17/2025	3:15:00	7.1	0.000	1	78,008	9.8	479
2/17/2025	3:30:00	6.8	1.538	3.7	78,011	9.7	547
2/17/2025	4:00:00	7.2	1.516	1.2	78,030	9.7	481
2/17/2025	4:15:00	7.1	1.599	1	78,053	9.6	489
2/17/2025	4:30:00	7.1	1.221	1.3	78,075	9.7	509
2/17/2025	4:45:00	7	1.493	1	78,095	9.7	502
2/17/2025	5:15:00	6.8	1.497	0.9	78,107	9.6	501
2/17/2025	5:30:00	6.8	1.440	0.9	78,129	9.6	449
2/17/2025	5:45:00	6.8	1.444	1.1	78,147	9.6	432
2/17/2025	6:00:00	6.8	1.365	0.9	78,168	9.7	416
2/17/2025	6:15:00	6.9	1.342	0.9	78,189	9.7	401
2/17/2025	6:30:00	6.9	0.155	1	78,200	9.7	406

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Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/17/2025	6:45:00	7	1.561	1	78,210	9.7	389
2/17/2025	7:15:00	7.1	1.482	0.9	78,232	9.7	387
2/17/2025	7:30:00	7	0.964	0.8	78,253	9.7	409
2/17/2025	7:45:00	7	1.474	1.7	78,272	9.8	404
2/17/2025	8:15:00	7.1	0.930	2.3	78,279	9.9	395
2/17/2025	8:30:00	7.2	1.002	3.6	78,297	9.8	436
2/17/2025	9:30:00	6.9	0.049	9.6	78,310	11.9	109
2/17/2025	10:00:00	7	1.523	0.7	78,319	9.9	386
2/17/2025	10:15:00	6.9	1.520	0.8	78,341	10	391
2/17/2025	10:30:00	7	1.444	0.8	78,363	10	386
2/17/2025	10:45:00	7	1.395	0.9	78,385	10.1	383
2/17/2025	11:00:00	7.1	1.319	0.9	78,405	10.1	370
2/17/2025	11:15:00	7	0.000	0.9	78,417	10.2	360
2/17/2025	11:30:00	7.1	1.383	0.7	78,422	10.2	370
2/17/2025	11:45:00	7.1	1.349	0.8	78,442	10.2	335
2/17/2025	12:00:00	6.9	1.285	0.7	78,462	10.2	330
2/17/2025	12:15:00	6.9	1.051	0.6	78,481	10.3	330
2/17/2025	12:45:00	7	1.402	1.2	78,497	10.4	367
2/17/2025	13:00:00	6.9	0.000	0.9	78,507	10.6	339
2/17/2025	13:15:00	7	1.402	0.7	78,517	10.5	344
2/17/2025	13:30:00	7.2	0.919	1	78,534	10.6	348
2/17/2025	13:45:00	7	1.376	0.6	78,554	10.5	355
2/17/2025	14:00:00	6.9	1.297	1.2	78,574	10.5	334
2/17/2025	14:15:00	7.1	1.319	1.4	78,593	10.6	339
2/17/2025	14:30:00	7	1.331	1.1	78,609	11	371

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
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Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/17/2025	14:45:00	7.1	0.000	2.8	78,610	11.5	368
2/17/2025	15:00:00	7.2	0.000	1.8	78,617	10.7	344
2/17/2025	15:15:00	7	1.595	2.6	78,625	10.7	349
2/17/2025	15:30:00	7.2	1.527	3.9	78,648	10.6	348
2/17/2025	15:45:00	7	1.508	3.7	78,670	10.6	363
2/17/2025	16:00:00	7.5	1.463	3.6	78,692	10.6	336
2/17/2025	16:15:00	7.2	0.926	4.3	78,709	10.7	374
2/17/2025	16:30:00	7.3	0.000	2	78,717	10.8	392
2/17/2025	16:45:00	7.3	1.421	6.3	78,718	11.3	392
2/17/2025	17:00:00	7.3	1.459	2.7	78,736	10.6	379
2/17/2025	17:15:00	7.2	0.000	3	78,749	10.7	382
2/17/2025	17:30:00	6.7	1.580	2.1	78,753	10.7	417
2/17/2025	17:45:00	7.8	1.561	3.6	78,776	10.5	305
2/17/2025	18:00:00	7	1.489	1.7	78,799	10.5	370
2/17/2025	18:15:00	7.1	0.968	2	78,820	10.5	326
2/17/2025	18:30:00	7.2	0.000	2.1	78,830	10.6	308
2/17/2025	18:45:00	7.1	0.000	2.5	78,830	11	312
2/17/2025	19:00:00	7.2	1.523	3.2	78,853	10.4	313
2/17/2025	19:15:00	7.1	0.983	3.8	78,862	10.4	311
2/17/2025	19:30:00	7.1	1.508	2.5	78,882	10.3	339
2/17/2025	19:45:00	7.2	1.497	2.3	78,905	10.3	329
2/17/2025	20:00:00	7.1	1.436	2	78,923	10.3	326
2/17/2025	20:15:00	7.2	1.402	1.5	78,944	10.2	354
2/17/2025	20:30:00	7	0.000	1.6	78,958	10.4	327
2/17/2025	20:45:00	7	0.000	1.5	78,958	10.6	330

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Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/17/2025	21:00:00	7.1	1.459	12.7	78,964	10.2	337
2/17/2025	21:15:00	6.9	1.455	1.2	78,987	10.1	330
2/17/2025	21:30:00	7.2	1.418	3.4	79,009	10.1	314
2/17/2025	21:45:00	7	1.387	0.9	79,030	10.1	329
2/17/2025	22:00:00	7	0.000	0.9	79,032	10.3	327
2/17/2025	22:15:00	7.1	1.402	1.1	79,040	10.1	310
2/17/2025	22:30:00	7	0.000	1.5	79,060	10.1	307
2/17/2025	22:45:00	6.8	1.595	1.2	79,071	10.1	309
2/17/2025	23:00:00	6.8	0.000	1.4	79,086	10.1	314
2/17/2025	23:15:00	7.1	0.000	1	79,098	10.2	322
2/17/2025	23:30:00	7.4	1.478	1.9	79,101	10.2	333
2/17/2025	23:45:00	8.2	1.459	1.4	79,123	10.1	464
2/18/2025	0:00:00	7.2	0.960	2	79,144	10.2	573
2/18/2025	0:15:00	7.4	1.418	13.5	79,152	10.4	648
2/18/2025	0:30:00	8.6	1.478	1.8	79,174	10.2	581
2/18/2025	1:15:00	8.4	0.945	1.8	79,202	10.5	666
2/18/2025	1:30:00	8	1.486	1.8	79,221	10.3	754
2/18/2025	1:45:00	8.1	0.299	2.6	79,242	10.3	835
2/18/2025	2:00:00	8.1	1.421	2.6	79,246	10.4	822
2/18/2025	2:15:00	8.4	1.387	2.9	79,257	10.4	764
2/18/2025	2:30:00	8.4	1.429	4.1	79,271	10.3	704
2/18/2025	2:45:00	8.3	0.215	3.6	79,285	10.3	822
2/18/2025	3:00:00	8.3	0.000	3.5	79,285	10.4	816
2/18/2025	4:00:00	8.4	1.516	6.7	79,338	10.2	955
2/18/2025	4:15:00	8.6	1.459	4.7	79,354	10.2	902

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/18/2025	4:30:00	8.4	1.512	3.5	79,364	10.2	887
2/18/2025	4:45:00	8.2	0.238	3.2	79,381	10.2	109
2/18/2025	5:00:00	8.2	1.523	4.7	79,382	10.7	832
2/18/2025	5:15:00	7.6	0.215	2.1	79,404	10.1	772
2/18/2025	5:30:00	7.1	1.538	2.3	79,416	10	736
2/18/2025	5:45:00	7.2	1.497	2.8	79,439	10	584
2/18/2025	6:00:00	7.4	1.467	2.6	79,445	10.1	611
2/18/2025	6:15:00	7.3	1.459	1.2	79,467	10	539
2/18/2025	6:30:00	7.2	1.383	2.2	79,475	10.2	547
2/18/2025	6:45:00	7.1	1.391	0.9	79,493	9.9	489
2/18/2025	7:00:00	7.1	0.885	1.1	79,511	10	463
2/18/2025	7:15:00	6.9	0.000	1	79,523	9.9	484
2/18/2025	7:30:00	7	0.000	1.1	79,523	10	483
2/18/2025	7:45:00	7.7	0.000	1	79,523	10.4	108
2/18/2025	8:00:00	7	0.499	1.5	79,534	9.8	465
2/18/2025	8:15:00	7.2	0.828	1	79,546	9.8	396
2/18/2025	8:30:00	7.2	0.219	2	79,566	9.8	396
2/18/2025	8:45:00	7.1	0.000	1.2	79,566	9.9	396
2/18/2025	9:00:00	7	1.383	1.2	79,574	9.8	387
2/18/2025	9:15:00	7.4	1.353	1.3	79,595	9.8	394
2/18/2025	9:30:00	7.2	1.349	2.1	79,615	9.8	396
2/18/2025	9:45:00	7.2	0.000	1.5	79,626	9.9	427
2/18/2025	10:00:00	7.2	0.000	1.4	79,626	10.4	436
2/18/2025	10:15:00	8	1.425	1.5	79,636	9.9	561
2/18/2025	10:30:00	8.5	1.455	3.4	79,654	10	592

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 17, 2025 to February 23, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **March 6, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/18/2025	10:45:00	8.4	1.429	1	79,676	10	664
2/18/2025	11:00:00	8.3	0.000	1	79,688	10.1	684
2/18/2025	11:15:00	8.3	0.000	1.1	79,688	10.4	109
2/18/2025	11:30:00	7.8	1.448	2	79,706	10.1	755
2/18/2025	11:45:00	8.2	0.937	2.5	79,725	10.2	754
2/18/2025	12:00:00	7.2	1.444	1.6	79,746	10.2	802
2/18/2025	12:15:00	7.1	0.000	1.6	79,753	10.3	809
2/18/2025	12:30:00	7.1	0.000	1.6	79,753	10.4	807
2/18/2025	12:45:00	7	0.000	1.5	79,753	10.5	807
2/18/2025	13:00:00	**9**	1.024	2.5	79,763	10.3	635
2/18/2025	13:15:00	8.4	1.497	1.8	79,783	10.3	664
2/18/2025	13:30:00	6.2	1.512	1.5	79,806	10.3	802
2/18/2025	13:45:00	6.2	0.000	1.2	79,815	10.4	752
2/18/2025	14:00:00	6.4	0.000	1.1	79,815	10.6	756
2/18/2025	14:15:00	6.8	1.058	1.6	79,831	10.4	686
2/18/2025	14:30:00	8.5	1.527	2.9	79,853	10.4	613
2/18/2025	14:45:00	6.2	1.501	1.7	79,875	10.4	731
2/18/2025	15:00:00	6.6	1.489	2.2	79,894	10.4	655
2/18/2025	15:15:00	6.8	0.000	1.6	79,899	10.5	648
2/18/2025	15:30:00	6.8	0.000	2.1	79,899	10.6	653
2/18/2025	15:45:00	7.3	1.520	1.4	79,911	10.4	581
2/18/2025	16:00:00	7.3	1.493	1.6	79,933	10.3	553
2/18/2025	16:15:00	7.2	0.000	1.2	79,941	10.5	551
2/18/2025	16:30:00	7.1	0.000	1.7	79,941	10.7	551
2/18/2025	16:45:00	7	1.452	1.2	79,948	10.4	564

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 17, 2025 to February 23, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **March 6, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/18/2025	17:00:00	8	0.960	2.2	79,967	10.4	613
2/18/2025	17:15:00	7.2	1.436	2.3	79,988	10.4	739
2/18/2025	17:30:00	7.3	0.571	2.9	80,010	10.4	781
2/18/2025	17:45:00	7.2	0.000	2	80,011	10.6	786
2/18/2025	18:00:00	9.1	1.425	1	80,028	9	421
2/18/2025	18:15:00	8.5	0.000	3.8	80,036	9.6	109
2/18/2025	18:30:00	8.8	1.538	1.9	80,053	10.1	616
2/18/2025	18:45:00	6.4	1.538	1.3	80,076	10.2	679
2/18/2025	19:00:00	5.9	0.000	1.5	80,081	10.3	792
2/18/2025	19:15:00	6	0.000	1.5	80,081	10.5	797
2/18/2025	19:30:00	5.9	1.538	1	80,103	10.1	621
2/18/2025	19:45:00	6	1.516	1.1	80,126	10.1	568
2/18/2025	20:00:00	6.4	1.470	1.1	80,148	10	533
2/18/2025	20:15:00	7.1	1.486	1	80,167	10.1	459
2/18/2025	20:30:00	7.2	0.000	1	80,173	10.2	446
2/18/2025	20:45:00	7.5	1.493	1.4	80,182	10	416
2/18/2025	21:00:00	8.2	1.463	1.8	80,204	10	411
2/18/2025	21:15:00	8.3	0.953	5.4	80,223	10	414
2/18/2025	21:30:00	8.6	1.467	5.3	80,231	10.1	449
2/18/2025	21:45:00	**9.6**	1.433	5	80,253	10	514
2/18/2025	22:00:00	**9.6**	0.000	4.6	80,255	10.1	520
2/18/2025	22:15:00	**9.5**	0.000	4.2	80,255	10.1	520
2/18/2025	22:30:00	8.7	1.467	6.3	80,265	10.1	686
2/18/2025	23:15:00	8	1.497	4.1	80,305	10.1	884
2/18/2025	23:30:00	7	0.000	2.9	80,317	10.2	928

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/18/2025	23:45:00	7	0.000	2.7	80,317	10.2	932
2/19/2025	0:00:00	7.9	1.448	4.9	80,333	10.1	850
2/19/2025	0:15:00	8	1.455	1.6	80,355	10.1	865
2/19/2025	0:30:00	7.5	0.000	1.2	80,362	10.1	872
2/19/2025	0:45:00	7.4	0.000	1.4	80,362	10.2	874
2/19/2025	1:00:00	7.5	1.482	1.9	80,373	10.1	843
2/19/2025	1:15:00	7.3	1.486	3	80,395	10	814
2/19/2025	1:30:00	7.4	0.000	3.2	80,410	10.1	814
2/19/2025	1:45:00	7.4	0.000	2.6	80,410	10.2	814
2/19/2025	2:00:00	7.6	1.474	3.5	80,418	10	709
2/19/2025	2:15:00	7.1	1.474	3.4	80,436	10.1	706
2/19/2025	2:30:00	7.2	1.436	7.9	80,458	10.1	645
2/19/2025	2:45:00	6.9	0.000	6.5	80,472	10.2	648
2/19/2025	3:00:00	6.9	0.000	4.8	80,472	10.4	648
2/19/2025	3:15:00	6.9	0.000	2.9	80,472	10.7	651
2/19/2025	3:30:00	6.8	1.433	0.7	80,490	10.1	556
2/19/2025	3:45:00	6.6	1.406	0.4	80,511	10.1	542
2/19/2025	4:00:00	7	1.368	1	80,532	10.6	527
2/19/2025	4:15:00	6.9	0.858	0.2	80,552	10.1	471
2/19/2025	4:30:00	7.1	0.000	0.4	80,558	10.5	468
2/19/2025	4:45:00	7.1	0.000	0.6	80,558	10.9	464
2/19/2025	5:00:00	7.1	1.436	1	80,572	10.1	392
2/19/2025	5:15:00	7.1	0.000	0.9	80,591	10.1	386
2/19/2025	5:30:00	7.1	0.000	0.7	80,591	10.4	391
2/19/2025	5:45:00	6.6	1.561	0.3	80,613	10	417

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/19/2025	6:00:00	6.2	1.520	0.2	80,636	10	423
2/19/2025	6:15:00	6.7	1.467	0.9	80,658	10	407
2/19/2025	6:30:00	6.9	0.000	0.1	80,659	10.4	414
2/19/2025	6:45:00	6.9	0.000	0	80,659	10.8	419
2/19/2025	7:00:00	7.3	1.520	0.1	80,674	10	355
2/19/2025	7:15:00	7.6	1.489	0	80,697	10	323
2/19/2025	7:30:00	7.5	0.000	0	80,705	10.4	334
2/19/2025	7:45:00	7.4	0.000	0	80,705	11.2	337
2/19/2025	8:00:00	8.1	0.998	0	80,726	10.1	301
2/19/2025	8:15:00	7.1	0.336	0.2	80,742	10.6	114
2/19/2025	8:30:00	6.8	0.000	0.4	80,747	10.8	319
2/19/2025	8:45:00	6.8	0.000	0.4	80,747	11.2	320
2/19/2025	9:00:00	7.2	0.000	3.3	80,747	12.8	114
2/19/2025	9:45:00	6.9	1.591	0.6	80,778	9.8	314
2/19/2025	10:00:00	7	0.733	0.5	80,801	10	326
2/19/2025	10:15:00	7.1	0.000	0.4	80,811	10.1	304
2/19/2025	10:30:00	7.1	0.000	0.5	80,811	10.5	307
2/19/2025	10:45:00	7.4	1.580	0.4	80,821	9.9	328
2/19/2025	11:00:00	7	1.569	0.5	80,845	9.9	309
2/19/2025	11:15:00	7.1	0.185	0.6	80,863	10.1	309
2/19/2025	11:30:00	7.2	1.561	0.5	80,871	9.9	322
2/19/2025	11:45:00	7.1	0.000	0.3	80,893	9.9	325
2/19/2025	12:00:00	7.1	0.000	0.3	80,893	10.3	335
2/19/2025	12:15:00	7.1	0.000	0.6	80,893	10.6	338
2/19/2025	12:30:00	7.1	0.000	0.4	80,893	10.9	340

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
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Data Date Range	**February 17, 2025 to February 23, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **March 6, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/19/2025	12:45:00	7.5	1.554	0.3	80,915	10	314
2/19/2025	13:00:00	7	1.538	0.2	80,938	10	325
2/19/2025	13:15:00	7.3	0.000	0.1	80,956	10.1	344
2/19/2025	13:30:00	7.3	0.000	0	80,956	10.7	345
2/19/2025	13:45:00	7.3	1.580	0.7	80,967	10.2	334
2/19/2025	14:00:00	7.4	1.554	0.3	80,990	10.1	311
2/19/2025	14:15:00	7.2	0.000	0.2	81,005	10.3	328
2/19/2025	14:30:00	7.2	0.000	0.2	81,005	10.7	326
2/19/2025	14:45:00	7.1	1.557	0.3	81,017	10.3	298
2/19/2025	15:00:00	7.2	1.538	0.3	81,040	10.2	284
2/19/2025	15:15:00	7.4	1.508	0.3	81,063	10.2	282
2/19/2025	15:30:00	7.3	0.000	0.2	81,081	10.4	294
2/19/2025	15:45:00	7.3	0.000	0.2	81,081	10.8	294
2/19/2025	16:00:00	7.3	0.000	0.4	81,081	11.2	294
2/19/2025	16:15:00	7.4	0.956	0.4	81,089	10.4	289
2/19/2025	16:30:00	7.4	0.136	0.5	81,105	10.3	284
2/19/2025	16:45:00	6.9	1.644	0.5	81,120	10.3	323
2/19/2025	17:00:00	6.9	1.607	0.6	81,144	10.3	281
2/19/2025	17:15:00	6.9	1.576	0.4	81,168	10.3	287
2/19/2025	17:30:00	7.3	0.000	0.9	81,183	10.5	279
2/19/2025	17:45:00	7.4	0.000	1.1	81,183	10.8	281
2/19/2025	18:00:00	7.4	0.000	1.2	81,183	11.2	284
2/19/2025	18:15:00	7.2	1.512	0.2	81,193	10.3	299
2/19/2025	18:30:00	7.2	1.508	0.4	81,216	10.2	293
2/19/2025	18:45:00	7.4	1.508	0.3	81,235	10.2	279

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/19/2025	19:00:00	7.1	1.501	0.6	81,257	10.1	281
2/19/2025	19:15:00	7.3	0.117	0.9	81,273	10.4	289
2/19/2025	19:30:00	6.9	1.523	1.1	81,287	10	322
2/19/2025	19:45:00	7.1	0.242	1.2	81,308	10	310
2/19/2025	20:00:00	7.1	0.000	1	81,308	10.6	314
2/19/2025	20:15:00	6.7	0.934	0.7	81,324	9.9	340
2/19/2025	20:30:00	6.7	1.546	0.5	81,343	9.8	339
2/19/2025	20:45:00	6.8	1.478	0.7	81,366	9.7	333
2/19/2025	21:00:00	7	0.813	1.3	81,387	9.7	326
2/19/2025	21:15:00	7	0.000	0.7	81,404	9.6	323
2/19/2025	21:30:00	7	0.000	0.9	81,405	9.9	324
2/19/2025	21:45:00	6.9	1.546	1.1	81,412	9.6	337
2/19/2025	22:00:00	6.8	1.467	1	81,435	9.6	362
2/19/2025	22:15:00	6.8	0.000	0.9	81,445	10	375
2/19/2025	22:30:00	6.8	0.000	0.2	81,445	10.5	381
2/19/2025	22:45:00	7.1	1.584	0.2	81,458	10	401
2/19/2025	23:00:00	7.3	1.535	0.2	81,481	10.1	395
2/19/2025	23:15:00	7.6	0.662	2.5	81,497	10.1	395
2/19/2025	23:30:00	7.1	0.000	1	81,509	10.3	410
2/19/2025	23:45:00	7.2	0.000	0.7	81,509	11	410
2/21/2025	0:00:00	7.2	1.478	1.2	82,776	10.2	320
2/21/2025	0:15:00	7.1	1.448	1.4	82,798	10.2	327
2/21/2025	0:30:00	6.8	0.000	1	82,816	10.4	337
2/21/2025	0:45:00	6.8	0.000	1.1	82,816	10.6	342
2/21/2025	1:00:00	7.2	1.591	1.1	82,828	10.7	345

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/21/2025	1:15:00	7	1.523	0.9	82,851	10.4	339
2/21/2025	1:30:00	7.1	0.000	0.8	82,870	10.7	342
2/21/2025	1:45:00	7.1	0.000	0.9	82,870	10.9	339
2/21/2025	2:00:00	7.2	1.005	1	82,881	10.8	327
2/21/2025	2:15:00	6.9	1.569	1.3	82,896	10.3	406
2/21/2025	2:30:00	6.9	1.557	3.9	82,920	10.3	509
2/21/2025	2:45:00	7	0.000	2.7	82,921	10.5	536
2/21/2025	3:00:00	7.3	1.595	4	82,925	10.6	546
2/21/2025	3:15:00	7.1	1.036	2.1	82,945	10.6	665
2/21/2025	3:30:00	6.7	1.557	1.9	82,967	10.4	699
2/21/2025	3:45:00	7	0.000	2.3	82,979	10.5	653
2/21/2025	4:00:00	7	0.000	2.1	82,979	10.6	656
2/21/2025	4:15:00	7.1	1.576	1.7	82,999	10.4	618
2/21/2025	4:30:00	7.2	0.170	1.9	83,013	10.4	597
2/21/2025	4:45:00	7.2	0.155	0.7	83,014	10.9	604
2/21/2025	5:00:00	7	1.599	4.1	83,031	10.6	550
2/21/2025	5:15:00	7	1.565	0.3	83,055	10.8	554
2/21/2025	5:30:00	6.8	0.983	0.1	83,077	11.3	548
2/21/2025	5:45:00	6.8	0.000	0	83,079	11.8	535
2/21/2025	6:00:00	6.9	1.531	0	83,100	11.8	532
2/21/2025	6:15:00	6.9	1.516	0	83,123	12.7	537
2/21/2025	6:30:00	6.8	1.470	0	83,145	13.4	535
2/21/2025	6:45:00	6.8	0.000	0	83,159	14.2	539
2/21/2025	7:00:00	6.8	1.478	0.1	83,161	15.6	537
2/21/2025	7:15:00	6.7	0.529	0.3	83,176	10.4	413

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/21/2025	7:30:00	6.7	0.000	0	83,188	10.7	403
2/21/2025	7:45:00	6.7	0.000	0	83,188	11.5	402
2/21/2025	8:00:00	6.7	0.000	0	83,188	12.3	412
2/21/2025	8:15:00	6.7	0.000	0.3	83,188	12.8	416
2/21/2025	8:30:00	6.6	0.578	0.2	83,200	10.1	395
2/21/2025	8:45:00	6.6	1.066	0.4	83,209	9.9	393
2/21/2025	9:00:00	6.9	1.584	0.4	83,220	10	376
2/21/2025	9:15:00	7.2	1.550	0.7	83,244	10	344
2/21/2025	9:30:00	7.5	0.151	0.6	83,251	10.2	338
2/21/2025	9:45:00	7	1.531	1.1	83,272	10	338
2/21/2025	10:00:00	6.8	1.493	0.6	83,295	10	348
2/21/2025	10:15:00	7	0.000	0.8	83,299	10.3	344
2/21/2025	10:30:00	6.8	1.546	0.4	83,317	10	332
2/21/2025	10:45:00	6.8	1.527	0.9	83,340	10	332
2/21/2025	11:00:00	6.8	1.489	0.5	83,362	10	337
2/21/2025	11:15:00	7.5	1.542	2	83,381	10.2	325
2/21/2025	11:30:00	7.3	0.000	1.6	83,401	10.1	336
2/21/2025	11:45:00	7.3	0.000	0.4	83,401	10.4	333
2/21/2025	12:00:00	6.9	1.463	0	83,418	10.2	324
2/21/2025	12:15:00	6.9	0.922	0.2	83,439	10.2	330
2/21/2025	12:30:00	7	0.000	0	83,446	11.7	351
2/21/2025	12:45:00	7	0.000	1	83,446	12.2	355
2/21/2025	13:00:00	7.1	1.561	0	83,463	10.2	341
2/21/2025	13:15:00	7.7	1.603	0.2	83,483	10.5	325
2/21/2025	13:30:00	7.1	1.546	0.4	83,506	10	335

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 17, 2025 to February 23, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **March 6, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/21/2025	13:45:00	6.9	1.489	0.2	83,529	10	334
2/21/2025	14:00:00	6.9	1.440	0	83,550	10.2	330
2/21/2025	14:15:00	7	0.907	0.2	83,572	10.1	332
2/21/2025	14:30:00	6.9	0.000	0.2	83,573	10.3	333
2/21/2025	14:45:00	7	1.440	0.7	83,578	10	351
2/21/2025	15:00:00	6.8	1.406	0.2	83,599	9.9	341
2/21/2025	15:15:00	7.1	0.166	0.2	83,608	10.2	346
2/21/2025	15:30:00	6.9	1.047	1.6	83,616	10.2	328
2/21/2025	15:45:00	6.8	1.531	0.6	83,639	9.7	338
2/21/2025	16:00:00	6.9	1.501	0.9	83,662	9.6	341
2/21/2025	16:15:00	6.8	1.410	0.7	83,684	9.6	337
2/21/2025	16:30:00	7.4	0.159	1.1	83,703	9.7	322
2/21/2025	16:45:00	7.4	0.000	0.3	83,704	10.1	322
2/21/2025	17:00:00	7	1.342	0	83,713	10	329
2/21/2025	17:15:00	7.3	1.342	0	83,733	10.2	313
2/21/2025	17:30:00	6.8	0.457	1.9	83,751	10.3	327
2/21/2025	17:45:00	7.2	1.455	0	83,767	10	313
2/21/2025	18:00:00	6.8	1.391	0.4	83,788	10	313
2/21/2025	18:15:00	6.8	0.000	0.7	83,792	10.2	338
2/21/2025	18:30:00	6.8	0.000	0.6	83,792	10.6	343
2/21/2025	18:45:00	7.2	1.486	0.4	83,808	10.2	322
2/21/2025	19:00:00	7.3	1.399	0.2	83,830	9.9	307
2/21/2025	19:15:00	6.9	1.304	0	83,850	10.2	326
2/21/2025	19:30:00	7.1	0.000	0.2	83,856	10.6	336
2/21/2025	19:45:00	7.1	1.331	7.5	83,857	11.4	327

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/21/2025	20:00:00	7.3	1.591	2.3	83,873	10	310
2/21/2025	20:15:00	6.5	1.546	1.1	83,883	9.8	356
2/21/2025	20:30:00	6.5	1.482	0.3	83,906	12.6	368
2/21/2025	20:45:00	6.5	1.463	0.5	83,928	13.3	373
2/21/2025	21:00:00	6.5	0.095	0.4	83,933	13.7	378
2/21/2025	21:15:00	7.1	0.741	7.3	83,949	12.3	345
2/21/2025	21:30:00	7.2	1.482	2.6	83,969	12.7	347
2/21/2025	21:45:00	7.1	1.463	1.7	83,977	13.5	337
2/21/2025	22:00:00	7.1	1.482	3.1	83,999	13.6	338
2/21/2025	22:15:00	6.7	1.478	2.8	84,010	10	308
2/21/2025	22:30:00	6.7	1.467	0.8	84,032	10.4	323
2/21/2025	22:45:00	7.2	1.629	1.3	84,046	10.1	326
2/21/2025	23:00:00	7.2	1.032	0.8	84,069	10.8	321
2/21/2025	23:15:00	7.2	1.497	0.8	84,090	11.6	319
2/21/2025	23:30:00	7.3	1.512	1	84,106	10.1	308
2/21/2025	23:45:00	7.3	0.000	0.8	84,115	10.5	312
2/22/2025	0:00:00	7.3	0.000	0.6	84,115	11	310
2/22/2025	0:15:00	7.3	1.538	2.6	84,125	10.4	307
2/22/2025	0:30:00	7.3	0.234	2.6	84,141	11	309
2/22/2025	0:45:00	7.4	1.504	3	84,158	10.3	306
2/22/2025	1:00:00	7.4	1.448	1.1	84,181	10.4	307
2/22/2025	1:15:00	6.4	0.000	1.7	84,194	9.8	350
2/22/2025	1:30:00	6.6	1.433	0.2	84,213	10.1	370
2/22/2025	1:45:00	7.1	0.000	0	84,225	10.6	351
2/22/2025	2:00:00	7.2	0.000	0	84,231	10.2	315

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/22/2025	2:15:00	7.3	1.380	0	84,236	10.3	314
2/22/2025	2:30:00	7.3	1.489	0	84,252	11.7	313
2/22/2025	2:45:00	7.3	1.440	0.2	84,274	11.3	313
2/22/2025	3:00:00	7	0.983	0.4	84,290	12.3	315
2/22/2025	3:15:00	6.8	0.049	0	84,306	13.1	312
2/22/2025	3:30:00	6.8	0.000	2.1	84,317	10.3	324
2/22/2025	3:45:00	6.8	0.000	0.7	84,317	10.7	325
2/22/2025	4:00:00	6.8	0.144	0.5	84,332	11.2	327
2/22/2025	4:15:00	6.8	1.561	1.9	84,337	12.7	327
2/22/2025	4:30:00	7.1	0.000	0.1	84,358	11.2	304
2/22/2025	4:45:00	7.2	1.478	0	84,376	10.6	302
2/22/2025	5:00:00	7.3	0.000	0	84,378	11.3	303
2/22/2025	5:15:00	7.3	1.463	0	84,398	10.7	295
2/22/2025	5:30:00	7.3	1.425	0	84,420	10.8	294
2/22/2025	5:45:00	7.3	1.489	0	84,434	10.6	291
2/22/2025	6:00:00	7.3	0.000	0	84,450	11.6	295
2/22/2025	6:15:00	7.3	0.000	0	84,450	12.8	295
2/22/2025	6:30:00	7.3	0.000	4.1	84,463	10.8	287
2/22/2025	6:45:00	7.2	1.542	0.5	84,480	10.9	292
2/22/2025	7:00:00	7.2	1.459	0.3	84,502	11.9	294
2/22/2025	7:15:00	7.2	0.000	0.9	84,517	12.5	297
2/22/2025	7:30:00	7.2	0.000	0.2	84,517	13.1	298
2/22/2025	7:45:00	7.2	1.463	1.7	84,533	15.6	298
2/22/2025	8:00:00	7.2	1.406	1	84,555	15.8	299
2/22/2025	8:15:00	7.3	0.499	0.3	84,567	10.2	291

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 17, 2025 to February 23, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **March 6, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/22/2025	8:30:00	7.3	1.266	0.2	84,586	10.3	292
2/22/2025	8:45:00	7.3	0.975	0.1	84,604	10.6	293
2/22/2025	9:00:00	7.3	0.000	0.8	84,605	11	292
2/22/2025	9:15:00	7.3	0.000	0.4	84,605	11.6	297
2/22/2025	9:30:00	7.4	1.040	0.6	84,615	10.3	299
2/22/2025	9:45:00	7.1	1.395	0.4	84,632	10.3	317
2/22/2025	10:00:00	6.8	1.365	0.4	84,653	10.2	327
2/22/2025	10:15:00	7.4	1.353	0.4	84,673	10.3	304
2/22/2025	10:30:00	6.8	0.843	0.4	84,689	11.1	332
2/22/2025	10:45:00	7.3	1.349	0.1	84,710	10.4	306
2/22/2025	11:00:00	6.8	1.312	0.1	84,730	10.8	309
2/22/2025	11:15:00	7.1	0.000	0	84,740	10.8	322
2/22/2025	11:30:00	7.1	0.000	0	84,740	11.5	318
2/22/2025	11:45:00	7.3	1.470	0.3	84,749	10.7	302
2/22/2025	12:00:00	7.1	0.624	0.1	84,771	10.5	322
2/22/2025	12:15:00	7.1	0.000	0.1	84,771	11	327
2/22/2025	12:30:00	7.2	1.425	0.1	84,776	10.6	316
2/22/2025	12:45:00	7.4	0.847	0	84,796	10.9	310
2/22/2025	13:00:00	7.5	1.425	0	84,815	10.5	310
2/22/2025	13:15:00	7	1.418	0	84,836	10.6	337
2/22/2025	13:30:00	7.3	1.346	0	84,857	10.6	318
2/22/2025	13:45:00	7.4	1.323	0	84,877	10.7	312
2/22/2025	14:00:00	7.4	0.000	0	84,881	11.1	312
2/22/2025	14:15:00	7.4	0.000	0	84,881	11.8	313
2/22/2025	14:30:00	7.2	1.270	0	84,899	10.5	325

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/22/2025	14:45:00	7.2	0.824	0	84,916	11	329
2/22/2025	15:00:00	7.2	1.346	0	84,935	10.5	341
2/22/2025	15:15:00	7.1	1.297	0.1	84,954	10.5	354
2/22/2025	15:30:00	7.3	1.263	0.5	84,974	10.5	359
2/22/2025	15:45:00	8	1.300	1.1	84,993	10.4	358
2/22/2025	16:00:00	7.5	1.255	0.8	85,012	10.4	414
2/22/2025	16:15:00	7	1.240	0.3	85,030	10.5	415
2/22/2025	16:30:00	7.8	1.210	0.9	85,048	10.8	408
2/22/2025	16:45:00	7.2	0.000	1.3	85,059	10.6	457
2/22/2025	17:00:00	7.2	0.174	2.7	85,059	11	469
2/22/2025	17:15:00	7.8	1.527	2.1	85,080	10.9	436
2/22/2025	17:30:00	7.8	1.493	1.7	85,102	11.3	414
2/22/2025	17:45:00	7.8	1.455	1.5	85,125	11.7	414
2/22/2025	18:00:00	6.7	0.903	1.9	85,143	14.3	411
2/22/2025	18:15:00	6.2	1.486	1.2	85,165	12	411
2/22/2025	18:30:00	6.2	1.474	0.9	85,187	12.3	416
2/22/2025	18:45:00	6.2	1.436	0.8	85,208	12.7	419
2/22/2025	19:00:00	6.2	0.000	0.3	85,213	14.4	417
2/22/2025	19:15:00	6.5	1.580	7.6	85,231	14.4	462
2/22/2025	19:30:00	6.6	1.501	3.4	85,254	14.8	475
2/22/2025	19:45:00	6.5	1.474	2.3	85,276	15.1	484
2/22/2025	20:00:00	6.5	1.425	1.6	85,298	15.3	489
2/22/2025	20:15:00	7.4	1.395	1.6	85,310	10.7	314
2/22/2025	20:30:00	7.3	1.418	1	85,331	11	324
2/22/2025	20:45:00	7.3	1.391	0.9	85,353	11.7	317

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 17, 2025 to February 23, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **March 6, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/22/2025	21:00:00	7.4	1.399	0.5	85,374	12.3	318
2/22/2025	21:15:00	7.1	0.907	0.3	85,393	14.6	314
2/22/2025	21:30:00	6.9	0.166	0.5	85,398	15	317
2/22/2025	21:45:00	7	0.885	0.6	85,414	15.8	315
2/22/2025	22:00:00	6.7	0.000	1.2	85,421	10	329
2/22/2025	22:15:00	6.7	1.402	3.3	85,422	10.1	330
2/22/2025	22:30:00	6.7	1.429	2.7	85,444	11.4	337
2/22/2025	22:45:00	6.7	1.482	1.2	85,466	11.9	340
2/22/2025	23:00:00	8.3	0.000	2.8	85,474	10.1	321
2/22/2025	23:15:00	6.5	1.523	9.4	85,477	10.1	325
2/22/2025	23:30:00	7	1.467	0	85,499	10.2	344
2/22/2025	23:45:00	6.7	1.425	0.7	85,521	10.2	360
2/23/2025	0:00:00	6.4	0.000	0.6	85,531	10.4	400
2/23/2025	0:15:00	4.5	1.531	7	85,542	11.8	117
2/23/2025	0:30:00	-0.4	1.391	0.8	85,564	10.6	404
2/23/2025	0:45:00	4.5	0.000	9.1	85,579	11.9	113
2/23/2025	1:00:00	1.6	1.323	0.7	85,592	10.6	438
2/23/2025	1:15:00	6.8	1.470	1.5	85,609	10.4	382
2/23/2025	1:30:00	6.8	1.372	0.5	85,630	10.8	386
2/23/2025	1:45:00	6.8	0.000	0.6	85,641	11.4	384
2/23/2025	2:00:00	4.2	0.000	12.8	85,643	10.4	402
2/23/2025	2:15:00	6.8	0.204	1.3	85,649	10.6	412
2/23/2025	2:30:00	6.8	1.482	17.1	85,658	10.5	362
2/23/2025	2:45:00	6.8	1.455	15.2	85,680	11	362
2/23/2025	3:00:00	7.1	0.000	1.3	85,693	10.6	397

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/23/2025	3:15:00	6.4	1.414	1.4	85,712	10.9	431
2/23/2025	3:30:00	7.2	0.000	7.6	85,731	11.5	387
2/23/2025	3:45:00	6.7	0.215	5.2	85,749	10.7	383
2/23/2025	4:00:00	6.9	0.000	5.2	85,757	11.2	388
2/23/2025	4:15:00	7	1.414	3.5	85,762	11.4	388
2/23/2025	4:30:00	7	0.151	2.5	85,778	11.6	386
2/23/2025	4:45:00	6.6	0.000	1.8	85,784	10.3	445
2/23/2025	5:00:00	6.7	0.000	5.8	85,788	10.4	414
2/23/2025	5:15:00	5.9	1.535	1.1	85,799	10.2	451
2/23/2025	5:30:00	6.5	1.501	1	85,822	10.6	464
2/23/2025	5:45:00	6.6	0.000	1	85,836	10.7	469
2/23/2025	6:00:00	6.6	1.470	0.6	85,844	12.4	473
2/23/2025	6:15:00	6.6	1.455	0.4	85,864	12.7	472
2/23/2025	6:30:00	6.7	0.170	0.3	85,869	13.3	476
2/23/2025	6:45:00	6.2	1.535	0.3	85,881	14.9	477
2/23/2025	7:00:00	6.8	0.000	0.3	85,899	11	385
2/23/2025	7:15:00	6.5	0.000	4.1	85,912	10.5	359
2/23/2025	7:30:00	6.7	0.000	0.6	85,922	10.8	364
2/23/2025	7:45:00	6.8	1.478	0.5	85,934	10.6	356
2/23/2025	8:00:00	7	1.467	0.4	85,956	10.8	341
2/23/2025	8:15:00	7	1.440	0.8	85,978	12	338
2/23/2025	8:30:00	6.9	1.418	1.2	85,994	12.3	332
2/23/2025	8:45:00	6.9	0.000	1.2	85,999	11.6	333
2/23/2025	9:00:00	6.9	0.000	0.8	85,999	11.8	333
2/23/2025	9:15:00	7.1	1.391	0.8	86,020	10.6	341

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/23/2025	9:30:00	7.3	1.353	0.4	86,040	11.1	335
2/23/2025	9:45:00	7.3	0.000	0.2	86,048	12.2	330
2/23/2025	10:00:00	7.3	0.000	0.3	86,048	12.4	332
2/23/2025	10:15:00	7.3	0.000	0.5	86,048	12.6	333
2/23/2025	10:30:00	7	1.349	0.5	86,058	10.5	341
2/23/2025	10:45:00	7	0.869	3.1	86,065	10.4	348
2/23/2025	11:00:00	7.1	0.174	0.4	86,075	10.5	338
2/23/2025	11:15:00	7.3	1.448	0.3	86,093	10.7	325
2/23/2025	11:30:00	7.8	1.418	0.3	86,114	10.8	312
2/23/2025	11:45:00	7	1.383	0.5	86,136	10.9	340
2/23/2025	12:00:00	7.3	1.342	0.8	86,156	11.1	329
2/23/2025	12:15:00	7.4	0.000	0.8	86,163	11.2	314
2/23/2025	12:30:00	7.4	0.000	0.4	86,163	11.7	312
2/23/2025	12:45:00	7.2	0.907	1.3	86,169	12.4	310
2/23/2025	13:00:00	8.6	1.361	1.1	86,189	11.2	315
2/23/2025	13:15:00	8.8	0.000	4.7	86,198	11.4	316
2/23/2025	13:30:00	8.8	0.000	2.2	86,198	11.9	316
2/23/2025	13:45:00	6.6	1.331	0	86,217	11.6	367
2/23/2025	14:00:00	6.4	1.293	0	86,237	12.3	403
2/23/2025	14:15:00	6.5	1.263	0	86,256	12.9	419
2/23/2025	14:30:00	6.5	1.221	0	86,275	13.7	422
2/23/2025	14:45:00	6.5	0.000	0	86,282	14.8	432
2/23/2025	15:00:00	6.5	0.000	0	86,282	15.2	432
2/23/2025	15:15:00	6.9	1.240	0.6	86,287	12.8	392
2/23/2025	15:30:00	7	1.206	0.7	86,305	13	392

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/23/2025	15:45:00	7	0.000	0.6	86,318	13.5	392
2/23/2025	16:00:00	6.5	1.145	0.3	86,320	14.2	371
2/23/2025	16:15:00	6.5	1.142	0.4	86,338	12.5	471
2/23/2025	16:30:00	6.5	0.733	0	86,355	13.4	481
2/23/2025	16:45:00	8.9	0.110	0.9	86,362	11.2	408
2/23/2025	17:00:00	6.8	1.440	0.6	86,372	10.9	544
2/23/2025	17:15:00	6.7	1.433	1.6	86,394	10.8	491
2/23/2025	17:30:00	6.6	1.387	0.9	86,414	10.9	431
2/23/2025	17:45:00	6.5	0.000	0.1	86,432	11	407
2/23/2025	18:00:00	6.5	0.000	0	86,432	11.8	416
2/23/2025	18:15:00	6.6	0.000	0.1	86,432	12.7	421
2/23/2025	18:30:00	6.8	1.349	0.5	86,444	11.7	440
2/23/2025	18:45:00	7.1	0.000	0.8	86,456	11.3	369
2/23/2025	19:00:00	7.1	1.425	3.7	86,460	11.4	352
2/23/2025	19:15:00	8.2	1.387	0.1	86,481	11.3	353
2/23/2025	19:30:00	8.5	1.353	0	86,501	11.5	341
2/23/2025	19:45:00	8.2	1.331	0.2	86,522	11.5	455
2/23/2025	20:00:00	8.6	0.000	31.1	86,527	10.7	514
2/23/2025	20:15:00	8.8	0.000	51.6	86,527	11.1	488
2/23/2025	20:30:00	7.7	1.463	10.1	86,541	11.2	491
2/23/2025	20:45:00	7.6	1.433	8.2	86,556	13.9	496
2/23/2025	21:00:00	7.9	0.000	7.1	86,574	14.5	471
2/23/2025	21:15:00	7	1.523	3.9	86,582	11.5	496
2/23/2025	21:30:00	6.7	1.452	2.6	86,591	11.7	511
2/23/2025	21:45:00	2.9	1.418	2.8	86,607	13.1	114

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/23/2025	22:00:00	8.5	1.406	7.8	86,629	14.4	114
2/23/2025	22:15:00	-0.4	0.919	0.5	86,648	12.3	461
2/23/2025	22:30:00	-0.4	0.000	0.9	86,659	12.9	460
2/23/2025	22:45:00	-0.4	0.000	1.5	86,659	15.9	116
2/23/2025	23:00:00	-0.4	1.436	1.7	86,673	16.1	116
2/23/2025	23:15:00	6.9	1.399	1.1	86,690	16.2	114
2/23/2025	23:30:00	6.9	1.399	1	86,711	16.3	114
2/23/2025	23:45:00	6.9	1.410	0.6	86,732	16.4	116

Table 3. In-Situ Parameters

Date	Time	Temperature °C	DO mg/L	Conductivity SPC-uS/cm	SAL-ppt	pH	ORP (mV)	NTU
02/17/2025	10:11:12AM	9.9	11.49	282.2	0.14	8.67	36.1	0.56
02/18/2025	01:56:11PM	9.8	10.25	187.3	0.08	7.99	156.9	0.35
02/19/2025	09:48:54AM	9.9	10.64	200.9	0.10	6.85	181.5	0.39
02/20/2025	12:40:02PM	10.1	10.43	245.6	0.12	8.49	92.6	0.25
02/21/2025	10:41:55AM	9.8	10.73	194.2	0.09	8.03	89.2	0.83
02/22/2025	03:40:04PM	10.1	10.23	187.3	0.07	7.92	122.3	0.33
02/23/2025	09:23:51AM	9.7	10.12	166.4	0.08	8.43	127.1	1.98

3. Calibration Log:

Table 4. Calibration Log

Date	Unit	pH	Conductivity/Temp.	Salinity	NTU
2/20/2025	YSI	✓	✓	✓	✓
2/20/2025	WTP	✓	N/A	N/A	✓

APPENDIX A: WTP Log

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/17/2025	0:00:00	7	0.998	0.8	77,845	Open	9.8	534
2/17/2025	0:15:00	7.1	0.000	0.8	77,852	Closed	9.7	496
2/17/2025	0:30:00	7.1	0.000	0.8	77,852	Closed	9.9	499
2/17/2025	0:45:00	7.1	0.798	1.4	77,869	Open	9.6	515
2/17/2025	1:00:00	7.2	1.433	1.4	77,888	Open	9.7	538
2/17/2025	1:15:00	7.1	1.376	1.4	77,903	Open	9.8	578
2/17/2025	1:30:00	7.3	1.418	3	77,924	Open	9.7	569
2/17/2025	1:45:00	7	0.000	3	77,938	Closed	9.8	603
2/17/2025	2:00:00	7	0.000	1.7	77,938	Closed	10	605
2/17/2025	2:15:00	7.1	1.236	3.4	77,946	Open	9.7	559
2/17/2025	2:30:00	6.9	1.402	1.1	77,967	Open	9.7	522
2/17/2025	2:45:00	7	1.376	1	77,988	Open	9.7	484
2/17/2025	3:00:00	7.1	0.249	1	78,008	Open	9.7	477
2/17/2025	3:15:00	7.1	0.000	1	78,008	Open	9.8	479
2/17/2025	3:30:00	6.8	1.538	3.7	78,011	Open	9.7	547
2/17/2025	3:45:00	7	0.000	1	78,019	Closed	9.7	494
2/17/2025	4:00:00	7.2	1.516	1.2	78,030	Open	9.7	481
2/17/2025	4:15:00	7.1	1.599	1	78,053	Open	9.6	489
2/17/2025	4:30:00	7.1	1.221	1.3	78,075	Open	9.7	509
2/17/2025	4:45:00	7	1.493	1	78,095	Open	9.7	502
2/17/2025	5:00:00	7.1	0.000	4.4	78,097	Closed	10.3	108
2/17/2025	5:15:00	6.8	1.497	0.9	78,107	Open	9.6	501
2/17/2025	5:30:00	6.8	1.440	0.9	78,129	Open	9.6	449
2/17/2025	5:45:00	6.8	1.444	1.1	78,147	Open	9.6	432
2/17/2025	6:00:00	6.8	1.365	0.9	78,168	Open	9.7	416

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
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Data Date Range	**February 17, 2025 to February 23, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **March 6, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/17/2025	6:15:00	6.9	1.342	0.9	78,189	Open	9.7	401
2/17/2025	6:30:00	6.9	0.155	1	78,200	Open	9.7	406
2/17/2025	6:45:00	7	1.561	1	78,210	Open	9.7	389
2/17/2025	7:00:00	7	0.000	1.1	78,212	Closed	10.1	387
2/17/2025	7:15:00	7.1	1.482	0.9	78,232	Open	9.7	387
2/17/2025	7:30:00	7	0.964	0.8	78,253	Open	9.7	409
2/17/2025	7:45:00	7	1.474	1.7	78,272	Open	9.8	404
2/17/2025	8:00:00	7.1	0.000	1.5	78,277	Closed	9.9	401
2/17/2025	8:15:00	7.1	0.930	2.3	78,279	Open	9.9	395
2/17/2025	8:30:00	7.2	1.002	3.6	78,297	Open	9.8	436
2/17/2025	8:45:00	7.1	0.000	1.3	78,308	Closed	9.9	449
2/17/2025	9:00:00	7.1	0.000	1.3	78,310	Closed	10.8	109
2/17/2025	9:15:00	7	0.000	1	78,310	Closed	11.4	109
2/17/2025	9:30:00	6.9	0.049	9.6	78,310	Open	11.9	109
2/17/2025	9:45:00	6.6	0.000	1	78,310	Closed	10.4	459
2/17/2025	10:00:00	7	1.523	0.7	78,319	Open	9.9	386
2/17/2025	10:15:00	6.9	1.520	0.8	78,341	Open	10	391
2/17/2025	10:30:00	7	1.444	0.8	78,363	Open	10	386
2/17/2025	10:45:00	7	1.395	0.9	78,385	Open	10.1	383
2/17/2025	11:00:00	7.1	1.319	0.9	78,405	Open	10.1	370
2/17/2025	11:15:00	7	0.000	0.9	78,417	Open	10.2	360
2/17/2025	11:30:00	7.1	1.383	0.7	78,422	Open	10.2	370
2/17/2025	11:45:00	7.1	1.349	0.8	78,442	Open	10.2	335
2/17/2025	12:00:00	6.9	1.285	0.7	78,462	Open	10.2	330
2/17/2025	12:15:00	6.9	1.051	0.6	78,481	Open	10.3	330
2/17/2025	12:30:00	7	0.662	0.7	78,488	Closed	10.3	338

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/17/2025	12:45:00	7	1.402	1.2	78,497	Open	10.4	367
2/17/2025	13:00:00	6.9	0.000	0.9	78,507	Open	10.6	339
2/17/2025	13:15:00	7	1.402	0.7	78,517	Open	10.5	344
2/17/2025	13:30:00	7.2	0.919	1	78,534	Open	10.6	348
2/17/2025	13:45:00	7	1.376	0.6	78,554	Open	10.5	355
2/17/2025	14:00:00	6.9	1.297	1.2	78,574	Open	10.5	334
2/17/2025	14:15:00	7.1	1.319	1.4	78,593	Open	10.6	339
2/17/2025	14:30:00	7	1.331	1.1	78,609	Open	11	371
2/17/2025	14:45:00	7.1	0.000	2.8	78,610	Open	11.5	368
2/17/2025	15:00:00	7.2	0.000	1.8	78,617	Open	10.7	344
2/17/2025	15:15:00	7	1.595	2.6	78,625	Open	10.7	349
2/17/2025	15:30:00	7.2	1.527	3.9	78,648	Open	10.6	348
2/17/2025	15:45:00	7	1.508	3.7	78,670	Open	10.6	363
2/17/2025	16:00:00	7.5	1.463	3.6	78,692	Open	10.6	336
2/17/2025	16:15:00	7.2	0.926	4.3	78,709	Open	10.7	374
2/17/2025	16:30:00	7.3	0.000	2	78,717	Open	10.8	392
2/17/2025	16:45:00	7.3	1.421	6.3	78,718	Open	11.3	392
2/17/2025	17:00:00	7.3	1.459	2.7	78,736	Open	10.6	379
2/17/2025	17:15:00	7.2	0.000	3	78,749	Open	10.7	382
2/17/2025	17:30:00	6.7	1.580	2.1	78,753	Open	10.7	417
2/17/2025	17:45:00	7.8	1.561	3.6	78,776	Open	10.5	305
2/17/2025	18:00:00	7	1.489	1.7	78,799	Open	10.5	370
2/17/2025	18:15:00	7.1	0.968	2	78,820	Open	10.5	326
2/17/2025	18:30:00	7.2	0.000	2.1	78,830	Open	10.6	308
2/17/2025	18:45:00	7.1	0.000	2.5	78,830	Open	11	312
2/17/2025	19:00:00	7.2	1.523	3.2	78,853	Open	10.4	313

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)
2/17/2025	19:15:00	7.1	0.983	3.8	78,862	Open	10.4	311
2/17/2025	19:30:00	7.1	1.508	2.5	78,882	Open	10.3	339
2/17/2025	19:45:00	7.2	1.497	2.3	78,905	Open	10.3	329
2/17/2025	20:00:00	7.1	1.436	2	78,923	Open	10.3	326
2/17/2025	20:15:00	7.2	1.402	1.5	78,944	Open	10.2	354
2/17/2025	20:30:00	7	0.000	1.6	78,958	Open	10.4	327
2/17/2025	20:45:00	7	0.000	1.5	78,958	Open	10.6	330
2/17/2025	21:00:00	7.1	1.459	12.7	78,964	Open	10.2	337
2/17/2025	21:15:00	6.9	1.455	1.2	78,987	Open	10.1	330
2/17/2025	21:30:00	7.2	1.418	3.4	79,009	Open	10.1	314
2/17/2025	21:45:00	7	1.387	0.9	79,030	Open	10.1	329
2/17/2025	22:00:00	7	0.000	0.9	79,032	Open	10.3	327
2/17/2025	22:15:00	7.1	1.402	1.1	79,040	Open	10.1	310
2/17/2025	22:30:00	7	0.000	1.5	79,060	Open	10.1	307
2/17/2025	22:45:00	6.8	1.595	1.2	79,071	Open	10.1	309
2/17/2025	23:00:00	6.8	0.000	1.4	79,086	Open	10.1	314
2/17/2025	23:15:00	7.1	0.000	1	79,098	Open	10.2	322
2/17/2025	23:30:00	7.4	1.478	1.9	79,101	Open	10.2	333
2/17/2025	23:45:00	8.2	1.459	1.4	79,123	Open	10.1	464
2/18/2025	0:00:00	7.2	0.960	2	79,144	Open	10.2	573
2/18/2025	0:15:00	7.4	1.418	13.5	79,152	Open	10.4	648
2/18/2025	0:30:00	8.6	1.478	1.8	79,174	Open	10.2	581
2/18/2025	1:15:00	8.4	0.945	1.8	79,202	Open	10.5	666
2/18/2025	1:30:00	8	1.486	1.8	79,221	Open	10.3	754
2/18/2025	1:45:00	8.1	0.299	2.6	79,242	Open	10.3	835
2/18/2025	2:00:00	8.1	1.421	2.6	79,246	Open	10.4	822

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/18/2025	2:15:00	8.4	1.387	2.9	79,257	Open	10.4	764
2/18/2025	2:30:00	8.4	1.429	4.1	79,271	Open	10.3	704
2/18/2025	2:45:00	8.3	0.215	3.6	79,285	Open	10.3	822
2/18/2025	3:00:00	8.3	0.000	3.5	79,285	Open	10.4	816
2/18/2025	4:00:00	8.4	1.516	6.7	79,338	Open	10.2	955
2/18/2025	4:15:00	8.6	1.459	4.7	79,354	Open	10.2	902
2/18/2025	4:30:00	8.4	1.512	3.5	79,364	Open	10.2	887
2/18/2025	4:45:00	8.2	0.238	3.2	79,381	Open	10.2	109
2/18/2025	5:00:00	8.2	1.523	4.7	79,382	Open	10.7	832
2/18/2025	5:15:00	7.6	0.215	2.1	79,404	Open	10.1	772
2/18/2025	5:30:00	7.1	1.538	2.3	79,416	Open	10	736
2/18/2025	5:45:00	7.2	1.497	2.8	79,439	Open	10	584
2/18/2025	6:00:00	7.4	1.467	2.6	79,445	Open	10.1	611
2/18/2025	6:15:00	7.3	1.459	1.2	79,467	Open	10	539
2/18/2025	6:30:00	7.2	1.383	2.2	79,475	Open	10.2	547
2/18/2025	6:45:00	7.1	1.391	0.9	79,493	Open	9.9	489
2/18/2025	7:00:00	7.1	0.885	1.1	79,511	Open	10	463
2/18/2025	7:15:00	6.9	0.000	1	79,523	Open	9.9	484
2/18/2025	7:30:00	7	0.000	1.1	79,523	Open	10	483
2/18/2025	7:45:00	7.7	0.000	1	79,523	Open	10.4	108
2/18/2025	8:00:00	7	0.499	1.5	79,534	Open	9.8	465
2/18/2025	8:15:00	7.2	0.828	1	79,546	Open	9.8	396
2/18/2025	8:30:00	7.2	0.219	2	79,566	Open	9.8	396
2/18/2025	8:45:00	7.1	0.000	1.2	79,566	Open	9.9	396
2/18/2025	9:00:00	7	1.383	1.2	79,574	Open	9.8	387
2/18/2025	9:15:00	7.4	1.353	1.3	79,595	Open	9.8	394

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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)
2/18/2025	9:30:00	7.2	1.349	2.1	79,615	Open	9.8	396
2/18/2025	9:45:00	7.2	0.000	1.5	79,626	Open	9.9	427
2/18/2025	10:00:00	7.2	0.000	1.4	79,626	Open	10.4	436
2/18/2025	10:15:00	8	1.425	1.5	79,636	Open	9.9	561
2/18/2025	10:30:00	8.5	1.455	3.4	79,654	Open	10	592
2/18/2025	10:45:00	8.4	1.429	1	79,676	Open	10	664
2/18/2025	11:00:00	8.3	0.000	1	79,688	Open	10.1	684
2/18/2025	11:15:00	8.3	0.000	1.1	79,688	Open	10.4	109
2/18/2025	11:30:00	7.8	1.448	2	79,706	Open	10.1	755
2/18/2025	11:45:00	8.2	0.937	2.5	79,725	Open	10.2	754
2/18/2025	12:00:00	7.2	1.444	1.6	79,746	Open	10.2	802
2/18/2025	12:15:00	7.1	0.000	1.6	79,753	Open	10.3	809
2/18/2025	12:30:00	7.1	0.000	1.6	79,753	Open	10.4	807
2/18/2025	12:45:00	7	0.000	1.5	79,753	Open	10.5	807
2/18/2025	13:00:00	9	1.024	2.5	79,763	Open	10.3	635
2/18/2025	13:15:00	8.4	1.497	1.8	79,783	Open	10.3	664
2/18/2025	13:30:00	6.2	1.512	1.5	79,806	Open	10.3	802
2/18/2025	13:45:00	6.2	0.000	1.2	79,815	Open	10.4	752
2/18/2025	14:00:00	6.4	0.000	1.1	79,815	Open	10.6	756
2/18/2025	14:15:00	6.8	1.058	1.6	79,831	Open	10.4	686
2/18/2025	14:30:00	8.5	1.527	2.9	79,853	Open	10.4	613
2/18/2025	14:45:00	6.2	1.501	1.7	79,875	Open	10.4	731
2/18/2025	15:00:00	6.6	1.489	2.2	79,894	Open	10.4	655
2/18/2025	15:15:00	6.8	0.000	1.6	79,899	Open	10.5	648
2/18/2025	15:30:00	6.8	0.000	2.1	79,899	Open	10.6	653
2/18/2025	15:45:00	7.3	1.520	1.4	79,911	Open	10.4	581

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/18/2025	16:00:00	7.3	1.493	1.6	79,933	Open	10.3	553
2/18/2025	16:15:00	7.2	0.000	1.2	79,941	Open	10.5	551
2/18/2025	16:30:00	7.1	0.000	1.7	79,941	Open	10.7	551
2/18/2025	16:45:00	7	1.452	1.2	79,948	Open	10.4	564
2/18/2025	17:00:00	8	0.960	2.2	79,967	Open	10.4	613
2/18/2025	17:15:00	7.2	1.436	2.3	79,988	Open	10.4	739
2/18/2025	17:30:00	7.3	0.571	2.9	80,010	Open	10.4	781
2/18/2025	17:45:00	7.2	0.000	2	80,011	Open	10.6	786
2/18/2025	18:00:00	9.1	1.425	1	80,028	Open	9	421
2/18/2025	18:15:00	8.5	0.000	3.8	80,036	Open	9.6	109
2/18/2025	18:30:00	8.8	1.538	1.9	80,053	Open	10.1	616
2/18/2025	18:45:00	6.4	1.538	1.3	80,076	Open	10.2	679
2/18/2025	19:00:00	5.9	0.000	1.5	80,081	Open	10.3	792
2/18/2025	19:15:00	6	0.000	1.5	80,081	Open	10.5	797
2/18/2025	19:30:00	5.9	1.538	1	80,103	Open	10.1	621
2/18/2025	19:45:00	6	1.516	1.1	80,126	Open	10.1	568
2/18/2025	20:00:00	6.4	1.470	1.1	80,148	Open	10	533
2/18/2025	20:15:00	7.1	1.486	1	80,167	Open	10.1	459
2/18/2025	20:30:00	7.2	0.000	1	80,173	Open	10.2	446
2/18/2025	20:45:00	7.5	1.493	1.4	80,182	Open	10	416
2/18/2025	21:00:00	8.2	1.463	1.8	80,204	Open	10	411
2/18/2025	21:15:00	8.3	0.953	5.4	80,223	Open	10	414
2/18/2025	21:30:00	8.6	1.467	5.3	80,231	Open	10.1	449
2/18/2025	21:45:00	9.6	1.433	5	80,253	Open	10	514
2/18/2025	22:00:00	9.6	0.000	4.6	80,255	Open	10.1	520
2/18/2025	22:15:00	9.5	0.000	4.2	80,255	Open	10.1	520

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 17, 2025 to February 23, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **March 6, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/18/2025	22:30:00	8.7	1.467	6.3	80,265	Open	10.1	686
2/18/2025	23:15:00	8	1.497	4.1	80,305	Open	10.1	884
2/18/2025	23:30:00	7	0.000	2.9	80,317	Open	10.2	928
2/18/2025	23:45:00	7	0.000	2.7	80,317	Open	10.2	932
2/19/2025	0:00:00	7.9	1.448	4.9	80,333	Open	10.1	850
2/19/2025	0:15:00	8	1.455	1.6	80,355	Open	10.1	865
2/19/2025	0:30:00	7.5	0.000	1.2	80,362	Open	10.1	872
2/19/2025	0:45:00	7.4	0.000	1.4	80,362	Open	10.2	874
2/19/2025	1:00:00	7.5	1.482	1.9	80,373	Open	10.1	843
2/19/2025	1:15:00	7.3	1.486	3	80,395	Open	10	814
2/19/2025	1:30:00	7.4	0.000	3.2	80,410	Open	10.1	814
2/19/2025	1:45:00	7.4	0.000	2.6	80,410	Open	10.2	814
2/19/2025	2:00:00	7.6	1.474	3.5	80,418	Open	10	709
2/19/2025	2:15:00	7.1	1.474	3.4	80,436	Open	10.1	706
2/19/2025	2:30:00	7.2	1.436	7.9	80,458	Open	10.1	645
2/19/2025	2:45:00	6.9	0.000	6.5	80,472	Open	10.2	648
2/19/2025	3:00:00	6.9	0.000	4.8	80,472	Open	10.4	648
2/19/2025	3:15:00	6.9	0.000	2.9	80,472	Open	10.7	651
2/19/2025	3:30:00	6.8	1.433	0.7	80,490	Open	10.1	556
2/19/2025	3:45:00	6.6	1.406	0.4	80,511	Open	10.1	542
2/19/2025	4:00:00	7	1.368	1	80,532	Open	10.6	527
2/19/2025	4:15:00	6.9	0.858	0.2	80,552	Open	10.1	471
2/19/2025	4:30:00	7.1	0.000	0.4	80,558	Open	10.5	468
2/19/2025	4:45:00	7.1	0.000	0.6	80,558	Open	10.9	464
2/19/2025	5:00:00	7.1	1.436	1	80,572	Open	10.1	392
2/19/2025	5:15:00	7.1	0.000	0.9	80,591	Open	10.1	386

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 17, 2025 to February 23, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **March 6, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/19/2025	5:30:00	7.1	0.000	0.7	80,591	Open	10.4	391
2/19/2025	5:45:00	6.6	1.561	0.3	80,613	Open	10	417
2/19/2025	6:00:00	6.2	1.520	0.2	80,636	Open	10	423
2/19/2025	6:15:00	6.7	1.467	0.9	80,658	Open	10	407
2/19/2025	6:30:00	6.9	0.000	0.1	80,659	Open	10.4	414
2/19/2025	6:45:00	6.9	0.000	0	80,659	Open	10.8	419
2/19/2025	7:00:00	7.3	1.520	0.1	80,674	Open	10	355
2/19/2025	7:15:00	7.6	1.489	0	80,697	Open	10	323
2/19/2025	7:30:00	7.5	0.000	0	80,705	Open	10.4	334
2/19/2025	7:45:00	7.4	0.000	0	80,705	Open	11.2	337
2/19/2025	8:00:00	8.1	0.998	0	80,726	Open	10.1	301
2/19/2025	8:15:00	7.1	0.336	0.2	80,742	Open	10.6	114
2/19/2025	8:30:00	6.8	0.000	0.4	80,747	Open	10.8	319
2/19/2025	8:45:00	6.8	0.000	0.4	80,747	Open	11.2	320
2/19/2025	9:00:00	7.2	0.000	3.3	80,747	Open	12.8	114
2/19/2025	9:45:00	6.9	1.591	0.6	80,778	Open	9.8	314
2/19/2025	10:00:00	7	0.733	0.5	80,801	Open	10	326
2/19/2025	10:15:00	7.1	0.000	0.4	80,811	Open	10.1	304
2/19/2025	10:30:00	7.1	0.000	0.5	80,811	Open	10.5	307
2/19/2025	10:45:00	7.4	1.580	0.4	80,821	Open	9.9	328
2/19/2025	11:00:00	7	1.569	0.5	80,845	Open	9.9	309
2/19/2025	11:15:00	7.1	0.185	0.6	80,863	Open	10.1	309
2/19/2025	11:30:00	7.2	1.561	0.5	80,871	Open	9.9	322
2/19/2025	11:45:00	7.1	0.000	0.3	80,893	Open	9.9	325
2/19/2025	12:00:00	7.1	0.000	0.3	80,893	Open	10.3	335
2/19/2025	12:15:00	7.1	0.000	0.6	80,893	Open	10.6	338

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/19/2025	12:30:00	7.1	0.000	0.4	80,893	Open	10.9	340
2/19/2025	12:45:00	7.5	1.554	0.3	80,915	Open	10	314
2/19/2025	13:00:00	7	1.538	0.2	80,938	Open	10	325
2/19/2025	13:15:00	7.3	0.000	0.1	80,956	Open	10.1	344
2/19/2025	13:30:00	7.3	0.000	0	80,956	Open	10.7	345
2/19/2025	13:45:00	7.3	1.580	0.7	80,967	Open	10.2	334
2/19/2025	14:00:00	7.4	1.554	0.3	80,990	Open	10.1	311
2/19/2025	14:15:00	7.2	0.000	0.2	81,005	Open	10.3	328
2/19/2025	14:30:00	7.2	0.000	0.2	81,005	Open	10.7	326
2/19/2025	14:45:00	7.1	1.557	0.3	81,017	Open	10.3	298
2/19/2025	15:00:00	7.2	1.538	0.3	81,040	Open	10.2	284
2/19/2025	15:15:00	7.4	1.508	0.3	81,063	Open	10.2	282
2/19/2025	15:30:00	7.3	0.000	0.2	81,081	Open	10.4	294
2/19/2025	15:45:00	7.3	0.000	0.2	81,081	Open	10.8	294
2/19/2025	16:00:00	7.3	0.000	0.4	81,081	Open	11.2	294
2/19/2025	16:15:00	7.4	0.956	0.4	81,089	Open	10.4	289
2/19/2025	16:30:00	7.4	0.136	0.5	81,105	Open	10.3	284
2/19/2025	16:45:00	6.9	1.644	0.5	81,120	Open	10.3	323
2/19/2025	17:00:00	6.9	1.607	0.6	81,144	Open	10.3	281
2/19/2025	17:15:00	6.9	1.576	0.4	81,168	Open	10.3	287
2/19/2025	17:30:00	7.3	0.000	0.9	81,183	Open	10.5	279
2/19/2025	17:45:00	7.4	0.000	1.1	81,183	Open	10.8	281
2/19/2025	18:00:00	7.4	0.000	1.2	81,183	Open	11.2	284
2/19/2025	18:15:00	7.2	1.512	0.2	81,193	Open	10.3	299
2/19/2025	18:30:00	7.2	1.508	0.4	81,216	Open	10.2	293
2/19/2025	18:45:00	7.4	1.508	0.3	81,235	Open	10.2	279

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/19/2025	19:00:00	7.1	1.501	0.6	81,257	Open	10.1	281
2/19/2025	19:15:00	7.3	0.117	0.9	81,273	Open	10.4	289
2/19/2025	19:30:00	6.9	1.523	1.1	81,287	Open	10	322
2/19/2025	19:45:00	7.1	0.242	1.2	81,308	Open	10	310
2/19/2025	20:00:00	7.1	0.000	1	81,308	Open	10.6	314
2/19/2025	20:15:00	6.7	0.934	0.7	81,324	Open	9.9	340
2/19/2025	20:30:00	6.7	1.546	0.5	81,343	Open	9.8	339
2/19/2025	20:45:00	6.8	1.478	0.7	81,366	Open	9.7	333
2/19/2025	21:00:00	7	0.813	1.3	81,387	Open	9.7	326
2/19/2025	21:15:00	7	0.000	0.7	81,404	Open	9.6	323
2/19/2025	21:30:00	7	0.000	0.9	81,405	Open	9.9	324
2/19/2025	21:45:00	6.9	1.546	1.1	81,412	Open	9.6	337
2/19/2025	22:00:00	6.8	1.467	1	81,435	Open	9.6	362
2/19/2025	22:15:00	6.8	0.000	0.9	81,445	Open	10	375
2/19/2025	22:30:00	6.8	0.000	0.2	81,445	Open	10.5	381
2/19/2025	22:45:00	7.1	1.584	0.2	81,458	Open	10	401
2/19/2025	23:00:00	7.3	1.535	0.2	81,481	Open	10.1	395
2/19/2025	23:15:00	7.6	0.662	2.5	81,497	Open	10.1	395
2/19/2025	23:30:00	7.1	0.000	1	81,509	Open	10.3	410
2/19/2025	23:45:00	7.2	0.000	0.7	81,509	Open	11	410
2/20/2025	0:00:00	7.2	0.994	0	81,643	Open	10.3	399
2/20/2025	0:15:00	7.2	1.550	0	81,662	Open	10.3	455
2/20/2025	0:30:00	7.4	1.538	0.1	81,685	Open	10.4	546
2/20/2025	0:45:00	7.9	0.000	0	81,703	Open	10.6	576
2/20/2025	1:00:00	8	0.000	0.2	81,703	Open	11	574
2/20/2025	1:15:00	6.6	1.028	4.6	81,712	Open	11	674

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
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Data Date Range	**February 17, 2025 to February 23, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **March 6, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/20/2025	1:30:00	8.7	1.648	0.3	81,736	Open	10.4	591
2/20/2025	1:45:00	8.7	0.000	0.3	81,757	Open	10.4	601
2/20/2025	2:00:00	7.9	0.000	0.4	81,761	Open	10.5	612
2/20/2025	2:15:00	7.3	0.953	0.5	81,767	Open	10.3	679
2/20/2025	2:30:00	7.4	0.000	0	81,775	Open	10.6	682
2/20/2025	2:45:00	7.9	1.610	0.4	81,779	Open	10.7	693
2/20/2025	3:00:00	8.3	1.603	0.2	81,803	Open	10.3	717
2/20/2025	3:15:00	7.7	0.922	2	81,823	Open	10.3	668
2/20/2025	3:30:00	7.5	0.000	0.6	81,824	Open	10.5	672
2/20/2025	3:45:00	8.7	1.599	0.2	81,836	Open	10.2	641
2/20/2025	4:00:00	7.6	1.561	0.3	81,860	Open	10.2	734
2/20/2025	4:15:00	7.8	1.569	1.2	81,883	Open	10.2	698
2/20/2025	4:30:00	7.7	0.000	0.6	81,889	Open	10.7	737
2/20/2025	4:45:00	7.7	1.591	1	81,895	Open	10.4	722
2/20/2025	5:00:00	8.2	1.591	0.3	81,919	Open	10.2	676
2/20/2025	5:15:00	7.5	0.000	0.2	81,926	Open	10.4	704
2/20/2025	5:30:00	7.5	1.062	0.7	81,946	Open	10.5	596
2/20/2025	5:45:00	7.4	1.565	0	81,968	Open	10.2	546
2/20/2025	6:00:00	7.4	0.000	0	81,981	Open	10.4	532
2/20/2025	6:15:00	7.2	0.000	0.2	81,990	Open	10.5	541
2/20/2025	6:30:00	7.3	1.523	0	82,000	Open	10.2	483
2/20/2025	6:45:00	7.2	0.136	0.1	82,015	Open	10.3	448
2/20/2025	7:00:00	8.3	0.000	1.3	82,018	Open	10.6	415
2/20/2025	7:15:00	7.3	1.663	0.6	82,022	Open	10.3	412
2/20/2025	7:30:00	7.2	1.607	0.5	82,047	Open	10.1	365
2/20/2025	7:45:00	7.4	1.081	0.4	82,070	Open	10.1	345

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
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Data Date Range	**February 17, 2025 to February 23, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **March 6, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/20/2025	8:00:00	7.4	0.000	0.1	82,074	Open	10.4	346
2/20/2025	8:15:00	7.4	1.644	14.5	82,075	Open	13.2	340
2/20/2025	8:30:00	7.2	1.179	0.6	82,096	Open	10.2	325
2/20/2025	8:45:00	7.2	0.000	1.4	82,101	Open	10.4	351
2/20/2025	9:00:00	7.2	0.000	0.6	82,101	Open	11.2	359
2/20/2025	9:15:00	6.9	1.641	0.6	82,112	Open	10.1	399
2/20/2025	9:30:00	7	1.202	0.7	82,136	Open	10.1	420
2/20/2025	9:45:00	6.9	1.603	0.9	82,157	Open	10.1	395
2/20/2025	10:00:00	6.6	1.546	1.1	82,181	Open	10.1	413
2/20/2025	10:15:00	6.7	0.000	1	82,188	Open	10.3	418
2/20/2025	10:30:00	6.6	0.000	0.9	82,188	Open	10.5	426
2/20/2025	10:45:00	6.9	1.142	0.9	82,203	Open	10.2	397
2/20/2025	11:00:00	7.1	0.212	1.3	82,222	Open	10.2	364
2/20/2025	11:15:00	7.2	1.077	1.2	82,231	Open	10.2	354
2/20/2025	11:30:00	7.4	1.520	0.8	82,254	Open	10.3	337
2/20/2025	11:45:00	7.2	0.000	0.8	82,272	Open	10.3	342
2/20/2025	12:00:00	7.2	0.000	0.7	82,272	Open	10.6	345
2/20/2025	12:15:00	7.2	0.000	0.7	82,272	Open	10.8	348
2/20/2025	12:30:00	7.4	1.489	0.8	82,281	Open	10.4	338
2/20/2025	12:45:00	7.2	1.470	0.9	82,303	Open	10.3	339
2/20/2025	13:00:00	7.3	0.000	0.8	82,322	Open	10.3	332
2/20/2025	13:15:00	7.3	0.000	0.8	82,322	Open	10.6	335
2/20/2025	13:30:00	7.3	1.414	0.8	82,331	Open	10.3	339
2/20/2025	13:45:00	6.9	0.941	0.7	82,351	Open	10.3	362
2/20/2025	14:00:00	7.1	1.452	0.7	82,370	Open	10.3	329
2/20/2025	14:15:00	7.2	0.000	0.7	82,385	Open	10.4	350

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/20/2025	14:30:00	7.2	0.000	0.7	82,385	Open	10.7	350
2/20/2025	14:45:00	7.2	1.482	0.9	82,389	Open	10.5	359
2/20/2025	15:00:00	7	0.129	0.8	82,406	Open	10.4	391
2/20/2025	15:15:00	7	0.000	0.6	82,408	Open	10.7	392
2/20/2025	15:30:00	7.2	1.561	0.8	82,426	Open	10.4	391
2/20/2025	15:45:00	7.1	1.542	0.7	82,450	Open	10.4	389
2/20/2025	16:00:00	6.8	1.493	0.7	82,473	Open	10.4	392
2/20/2025	16:15:00	7	1.508	0.9	82,495	Open	10.4	395
2/20/2025	16:30:00	7.5	1.013	1.3	82,514	Open	10.5	385
2/20/2025	16:45:00	7.2	0.000	0.9	82,517	Open	10.6	364
2/20/2025	17:00:00	7.6	0.000	2.9	82,517	Open	11.7	111
2/20/2025	17:15:00	7.2	1.542	0.8	82,530	Open	10.4	359
2/20/2025	17:30:00	7.6	1.433	0.7	82,552	Open	10.4	382
2/20/2025	17:45:00	7.2	0.159	0.8	82,561	Open	10.6	374
2/20/2025	18:00:00	7.2	0.000	0.7	82,562	Open	10.9	380
2/20/2025	18:15:00	7.1	1.111	0.7	82,573	Open	10.5	455
2/20/2025	18:30:00	7.5	1.554	0.4	82,596	Open	10.4	421
2/20/2025	18:45:00	7.4	1.516	1	82,619	Open	10.4	414
2/20/2025	19:00:00	7.3	1.448	0.6	82,642	Open	10.4	403
2/20/2025	19:15:00	7.1	0.000	0.2	82,651	Open	10.5	391
2/20/2025	19:30:00	7.3	1.489	0.3	82,668	Open	10.3	355
2/20/2025	19:45:00	7	1.372	0.1	82,690	Open	10.2	337
2/20/2025	20:00:00	7.1	0.000	0.1	82,698	Open	10.4	359
2/20/2025	20:15:00	7.1	0.000	0.4	82,698	Open	11.1	356
2/20/2025	20:30:00	6.9	1.504	0.3	82,708	Open	10.2	344
2/20/2025	20:45:00	6.9	1.512	0.4	82,724	Open	10.1	323

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/20/2025	21:00:00	7.3	0.000	0.6	82,738	Open	10.1	326
2/20/2025	21:15:00	7.3	0.000	0.6	82,738	Open	10.5	329
2/20/2025	21:30:00	6.9	1.062	1.8	82,757	Open	10.5	380
2/20/2025	21:45:00	7	1.489	0.6	82,780	Open	10.1	345
2/20/2025	22:00:00	6.8	0.771	1.1	82,800	Open	10.2	334
2/20/2025	22:15:00	6.9	0.000	0.7	82,802	Open	10.4	352
2/20/2025	22:30:00	7.2	0.609	1.7	82,815	Open	10.2	331
2/20/2025	22:45:00	6.8	1.508	1	82,827	Open	10.2	313
2/20/2025	23:00:00	7.3	1.474	0.9	82,849	Open	10.2	315
2/20/2025	23:15:00	6.8	0.163	1	82,865	Open	10.6	339
2/20/2025	23:30:00	7.2	0.000	3.6	82,868	Open	10.8	344
2/20/2025	23:45:00	7.3	0.000	1.6	82,876	Open	10.5	327
2/21/2025	0:00:00	7.2	1.478	1.2	82,776	Open	10.2	320
2/21/2025	0:15:00	7.1	1.448	1.4	82,798	Open	10.2	327
2/21/2025	0:30:00	6.8	0.000	1	82,816	Open	10.4	337
2/21/2025	0:45:00	6.8	0.000	1.1	82,816	Open	10.6	342
2/21/2025	1:00:00	7.2	1.591	1.1	82,828	Open	10.7	345
2/21/2025	1:15:00	7	1.523	0.9	82,851	Open	10.4	339
2/21/2025	1:30:00	7.1	0.000	0.8	82,870	Open	10.7	342
2/21/2025	1:45:00	7.1	0.000	0.9	82,870	Open	10.9	339
2/21/2025	2:00:00	7.2	1.005	1	82,881	Open	10.8	327
2/21/2025	2:15:00	6.9	1.569	1.3	82,896	Open	10.3	406
2/21/2025	2:30:00	6.9	1.557	3.9	82,920	Open	10.3	509
2/21/2025	2:45:00	7	0.000	2.7	82,921	Open	10.5	536
2/21/2025	3:00:00	7.3	1.595	4	82,925	Open	10.6	546
2/21/2025	3:15:00	7.1	1.036	2.1	82,945	Open	10.6	665

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 17, 2025 to February 23, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **March 6, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/21/2025	3:30:00	6.7	1.557	1.9	82,967	Open	10.4	699
2/21/2025	3:45:00	7	0.000	2.3	82,979	Open	10.5	653
2/21/2025	4:00:00	7	0.000	2.1	82,979	Open	10.6	656
2/21/2025	4:15:00	7.1	1.576	1.7	82,999	Open	10.4	618
2/21/2025	4:30:00	7.2	0.170	1.9	83,013	Open	10.4	597
2/21/2025	4:45:00	7.2	0.155	0.7	83,014	Open	10.9	604
2/21/2025	5:00:00	7	1.599	4.1	83,031	Open	10.6	550
2/21/2025	5:15:00	7	1.565	0.3	83,055	Open	10.8	554
2/21/2025	5:30:00	6.8	0.983	0.1	83,077	Open	11.3	548
2/21/2025	5:45:00	6.8	0.000	0	83,079	Open	11.8	535
2/21/2025	6:00:00	6.9	1.531	0	83,100	Open	11.8	532
2/21/2025	6:15:00	6.9	1.516	0	83,123	Open	12.7	537
2/21/2025	6:30:00	6.8	1.470	0	83,145	Open	13.4	535
2/21/2025	6:45:00	6.8	0.000	0	83,159	Open	14.2	539
2/21/2025	7:00:00	6.8	1.478	0.1	83,161	Open	15.6	537
2/21/2025	7:15:00	6.7	0.529	0.3	83,176	Open	10.4	413
2/21/2025	7:30:00	6.7	0.000	0	83,188	Open	10.7	403
2/21/2025	7:45:00	6.7	0.000	0	83,188	Open	11.5	402
2/21/2025	8:00:00	6.7	0.000	0	83,188	Open	12.3	412
2/21/2025	8:15:00	6.7	0.000	0.3	83,188	Open	12.8	416
2/21/2025	8:30:00	6.6	0.578	0.2	83,200	Open	10.1	395
2/21/2025	8:45:00	6.6	1.066	0.4	83,209	Closed	9.9	393
2/21/2025	9:00:00	6.9	1.584	0.4	83,220	Open	10	376
2/21/2025	9:15:00	7.2	1.550	0.7	83,244	Open	10	344
2/21/2025	9:30:00	7.5	0.151	0.6	83,251	Open	10.2	338
2/21/2025	9:45:00	7	1.531	1.1	83,272	Open	10	338

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
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Data Date Range	**February 17, 2025 to February 23, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **March 6, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/21/2025	10:00:00	6.8	1.493	0.6	83,295	Open	10	348
2/21/2025	10:15:00	7	0.000	0.8	83,299	Open	10.3	344
2/21/2025	10:30:00	6.8	1.546	0.4	83,317	Open	10	332
2/21/2025	10:45:00	6.8	1.527	0.9	83,340	Open	10	332
2/21/2025	11:00:00	6.8	1.489	0.5	83,362	Open	10	337
2/21/2025	11:15:00	7.5	1.542	2	83,381	Open	10.2	325
2/21/2025	11:30:00	7.3	0.000	1.6	83,401	Open	10.1	336
2/21/2025	11:45:00	7.3	0.000	0.4	83,401	Open	10.4	333
2/21/2025	12:00:00	6.9	1.463	0	83,418	Open	10.2	324
2/21/2025	12:15:00	6.9	0.922	0.2	83,439	Open	10.2	330
2/21/2025	12:30:00	7	0.000	0	83,446	Open	11.7	351
2/21/2025	12:45:00	7	0.000	1	83,446	Open	12.2	355
2/21/2025	13:00:00	7.1	1.561	0	83,463	Open	10.2	341
2/21/2025	13:15:00	7.7	1.603	0.2	83,483	Open	10.5	325
2/21/2025	13:30:00	7.1	1.546	0.4	83,506	Open	10	335
2/21/2025	13:45:00	6.9	1.489	0.2	83,529	Open	10	334
2/21/2025	14:00:00	6.9	1.440	0	83,550	Open	10.2	330
2/21/2025	14:15:00	7	0.907	0.2	83,572	Open	10.1	332
2/21/2025	14:30:00	6.9	0.000	0.2	83,573	Open	10.3	333
2/21/2025	14:45:00	7	1.440	0.7	83,578	Open	10	351
2/21/2025	15:00:00	6.8	1.406	0.2	83,599	Open	9.9	341
2/21/2025	15:15:00	7.1	0.166	0.2	83,608	Open	10.2	346
2/21/2025	15:30:00	6.9	1.047	1.6	83,616	Open	10.2	328
2/21/2025	15:45:00	6.8	1.531	0.6	83,639	Open	9.7	338
2/21/2025	16:00:00	6.9	1.501	0.9	83,662	Open	9.6	341
2/21/2025	16:15:00	6.8	1.410	0.7	83,684	Open	9.6	337

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
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Data Date Range	**February 17, 2025 to February 23, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **March 6, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/21/2025	16:30:00	7.4	0.159	1.1	83,703	Open	9.7	322
2/21/2025	16:45:00	7.4	0.000	0.3	83,704	Open	10.1	322
2/21/2025	17:00:00	7	1.342	0	83,713	Open	10	329
2/21/2025	17:15:00	7.3	1.342	0	83,733	Open	10.2	313
2/21/2025	17:30:00	6.8	0.457	1.9	83,751	Open	10.3	327
2/21/2025	17:45:00	7.2	1.455	0	83,767	Open	10	313
2/21/2025	18:00:00	6.8	1.391	0.4	83,788	Open	10	313
2/21/2025	18:15:00	6.8	0.000	0.7	83,792	Open	10.2	338
2/21/2025	18:30:00	6.8	0.000	0.6	83,792	Open	10.6	343
2/21/2025	18:45:00	7.2	1.486	0.4	83,808	Open	10.2	322
2/21/2025	19:00:00	7.3	1.399	0.2	83,830	Open	9.9	307
2/21/2025	19:15:00	6.9	1.304	0	83,850	Open	10.2	326
2/21/2025	19:30:00	7.1	0.000	0.2	83,856	Open	10.6	336
2/21/2025	19:45:00	7.1	1.331	7.5	83,857	Open	11.4	327
2/21/2025	20:00:00	7.3	1.591	2.3	83,873	Open	10	310
2/21/2025	20:15:00	6.5	1.546	1.1	83,883	Open	9.8	356
2/21/2025	20:30:00	6.5	1.482	0.3	83,906	Open	12.6	368
2/21/2025	20:45:00	6.5	1.463	0.5	83,928	Open	13.3	373
2/21/2025	21:00:00	6.5	0.095	0.4	83,933	Open	13.7	378
2/21/2025	21:15:00	7.1	0.741	7.3	83,949	Open	12.3	345
2/21/2025	21:30:00	7.2	1.482	2.6	83,969	Open	12.7	347
2/21/2025	21:45:00	7.1	1.463	1.7	83,977	Open	13.5	337
2/21/2025	22:00:00	7.1	1.482	3.1	83,999	Open	13.6	338
2/21/2025	22:15:00	6.7	1.478	2.8	84,010	Open	10	308
2/21/2025	22:30:00	6.7	1.467	0.8	84,032	Open	10.4	323
2/21/2025	22:45:00	7.2	1.629	1.3	84,046	Open	10.1	326

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
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Data Date Range	**February 17, 2025 to February 23, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **March 6, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/21/2025	23:00:00	7.2	1.032	0.8	84,069	Open	10.8	321
2/21/2025	23:15:00	7.2	1.497	0.8	84,090	Open	11.6	319
2/21/2025	23:30:00	7.3	1.512	1	84,106	Open	10.1	308
2/21/2025	23:45:00	7.3	0.000	0.8	84,115	Open	10.5	312
2/22/2025	0:00:00	7.3	0.000	0.6	84,115	Open	11	310
2/22/2025	0:15:00	7.3	1.538	2.6	84,125	Open	10.4	307
2/22/2025	0:30:00	7.3	0.234	2.6	84,141	Open	11	309
2/22/2025	0:45:00	7.4	1.504	3	84,158	Open	10.3	306
2/22/2025	1:00:00	7.4	1.448	1.1	84,181	Open	10.4	307
2/22/2025	1:15:00	6.4	0.000	1.7	84,194	Open	9.8	350
2/22/2025	1:30:00	6.6	1.433	0.2	84,213	Open	10.1	370
2/22/2025	1:45:00	7.1	0.000	0	84,225	Open	10.6	351
2/22/2025	2:00:00	7.2	0.000	0	84,231	Open	10.2	315
2/22/2025	2:15:00	7.3	1.380	0	84,236	Open	10.3	314
2/22/2025	2:30:00	7.3	1.489	0	84,252	Open	11.7	313
2/22/2025	2:45:00	7.3	1.440	0.2	84,274	Open	11.3	313
2/22/2025	3:00:00	7	0.983	0.4	84,290	Open	12.3	315
2/22/2025	3:15:00	6.8	0.049	0	84,306	Open	13.1	312
2/22/2025	3:30:00	6.8	0.000	2.1	84,317	Open	10.3	324
2/22/2025	3:45:00	6.8	0.000	0.7	84,317	Open	10.7	325
2/22/2025	4:00:00	6.8	0.144	0.5	84,332	Open	11.2	327
2/22/2025	4:15:00	6.8	1.561	1.9	84,337	Open	12.7	327
2/22/2025	4:30:00	7.1	0.000	0.1	84,358	Open	11.2	304
2/22/2025	4:45:00	7.2	1.478	0	84,376	Open	10.6	302
2/22/2025	5:00:00	7.3	0.000	0	84,378	Open	11.3	303
2/22/2025	5:15:00	7.3	1.463	0	84,398	Open	10.7	295

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Data Date Range	**February 17, 2025 to February 23, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **March 6, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/22/2025	5:30:00	7.3	1.425	0	84,420	Open	10.8	294
2/22/2025	5:45:00	7.3	1.489	0	84,434	Open	10.6	291
2/22/2025	6:00:00	7.3	0.000	0	84,450	Open	11.6	295
2/22/2025	6:15:00	7.3	0.000	0	84,450	Open	12.8	295
2/22/2025	6:30:00	7.3	0.000	4.1	84,463	Open	10.8	287
2/22/2025	6:45:00	7.2	1.542	0.5	84,480	Open	10.9	292
2/22/2025	7:00:00	7.2	1.459	0.3	84,502	Open	11.9	294
2/22/2025	7:15:00	7.2	0.000	0.9	84,517	Open	12.5	297
2/22/2025	7:30:00	7.2	0.000	0.2	84,517	Open	13.1	298
2/22/2025	7:45:00	7.2	1.463	1.7	84,533	Open	15.6	298
2/22/2025	8:00:00	7.2	1.406	1	84,555	Open	15.8	299
2/22/2025	8:15:00	7.3	0.499	0.3	84,567	Open	10.2	291
2/22/2025	8:30:00	7.3	1.266	0.2	84,586	Open	10.3	292
2/22/2025	8:45:00	7.3	0.975	0.1	84,604	Open	10.6	293
2/22/2025	9:00:00	7.3	0.000	0.8	84,605	Open	11	292
2/22/2025	9:15:00	7.3	0.000	0.4	84,605	Open	11.6	297
2/22/2025	9:30:00	7.4	1.040	0.6	84,615	Open	10.3	299
2/22/2025	9:45:00	7.1	1.395	0.4	84,632	Open	10.3	317
2/22/2025	10:00:00	6.8	1.365	0.4	84,653	Open	10.2	327
2/22/2025	10:15:00	7.4	1.353	0.4	84,673	Open	10.3	304
2/22/2025	10:30:00	6.8	0.843	0.4	84,689	Open	11.1	332
2/22/2025	10:45:00	7.3	1.349	0.1	84,710	Open	10.4	306
2/22/2025	11:00:00	6.8	1.312	0.1	84,730	Open	10.8	309
2/22/2025	11:15:00	7.1	0.000	0	84,740	Open	10.8	322
2/22/2025	11:30:00	7.1	0.000	0	84,740	Open	11.5	318
2/22/2025	11:45:00	7.3	1.470	0.3	84,749	Open	10.7	302

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/22/2025	12:00:00	7.1	0.624	0.1	84,771	Open	10.5	322
2/22/2025	12:15:00	7.1	0.000	0.1	84,771	Open	11	327
2/22/2025	12:30:00	7.2	1.425	0.1	84,776	Open	10.6	316
2/22/2025	12:45:00	7.4	0.847	0	84,796	Open	10.9	310
2/22/2025	13:00:00	7.5	1.425	0	84,815	Open	10.5	310
2/22/2025	13:15:00	7	1.418	0	84,836	Open	10.6	337
2/22/2025	13:30:00	7.3	1.346	0	84,857	Open	10.6	318
2/22/2025	13:45:00	7.4	1.323	0	84,877	Open	10.7	312
2/22/2025	14:00:00	7.4	0.000	0	84,881	Open	11.1	312
2/22/2025	14:15:00	7.4	0.000	0	84,881	Open	11.8	313
2/22/2025	14:30:00	7.2	1.270	0	84,899	Open	10.5	325
2/22/2025	14:45:00	7.2	0.824	0	84,916	Open	11	329
2/22/2025	15:00:00	7.2	1.346	0	84,935	Open	10.5	341
2/22/2025	15:15:00	7.1	1.297	0.1	84,954	Open	10.5	354
2/22/2025	15:30:00	7.3	1.263	0.5	84,974	Open	10.5	359
2/22/2025	15:45:00	8	1.300	1.1	84,993	Open	10.4	358
2/22/2025	16:00:00	7.5	1.255	0.8	85,012	Open	10.4	414
2/22/2025	16:15:00	7	1.240	0.3	85,030	Open	10.5	415
2/22/2025	16:30:00	7.8	1.210	0.9	85,048	Open	10.8	408
2/22/2025	16:45:00	7.2	0.000	1.3	85,059	Open	10.6	457
2/22/2025	17:00:00	7.2	0.174	2.7	85,059	Open	11	469
2/22/2025	17:15:00	7.8	1.527	2.1	85,080	Open	10.9	436
2/22/2025	17:30:00	7.8	1.493	1.7	85,102	Open	11.3	414
2/22/2025	17:45:00	7.8	1.455	1.5	85,125	Open	11.7	414
2/22/2025	18:00:00	6.7	0.903	1.9	85,143	Open	14.3	411
2/22/2025	18:15:00	6.2	1.486	1.2	85,165	Open	12	411

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
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Data Date Range	**February 17, 2025 to February 23, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **March 6, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/22/2025	18:30:00	6.2	1.474	0.9	85,187	Open	12.3	416
2/22/2025	18:45:00	6.2	1.436	0.8	85,208	Open	12.7	419
2/22/2025	19:00:00	6.2	0.000	0.3	85,213	Open	14.4	417
2/22/2025	19:15:00	6.5	1.580	7.6	85,231	Open	14.4	462
2/22/2025	19:30:00	6.6	1.501	3.4	85,254	Open	14.8	475
2/22/2025	19:45:00	6.5	1.474	2.3	85,276	Open	15.1	484
2/22/2025	20:00:00	6.5	1.425	1.6	85,298	Open	15.3	489
2/22/2025	20:15:00	7.4	1.395	1.6	85,310	Open	10.7	314
2/22/2025	20:30:00	7.3	1.418	1	85,331	Open	11	324
2/22/2025	20:45:00	7.3	1.391	0.9	85,353	Open	11.7	317
2/22/2025	21:00:00	7.4	1.399	0.5	85,374	Open	12.3	318
2/22/2025	21:15:00	7.1	0.907	0.3	85,393	Open	14.6	314
2/22/2025	21:30:00	6.9	0.166	0.5	85,398	Open	15	317
2/22/2025	21:45:00	7	0.885	0.6	85,414	Open	15.8	315
2/22/2025	22:00:00	6.7	0.000	1.2	85,421	Open	10	329
2/22/2025	22:15:00	6.7	1.402	3.3	85,422	Open	10.1	330
2/22/2025	22:30:00	6.7	1.429	2.7	85,444	Open	11.4	337
2/22/2025	22:45:00	6.7	1.482	1.2	85,466	Open	11.9	340
2/22/2025	23:00:00	8.3	0.000	2.8	85,474	Open	10.1	321
2/22/2025	23:15:00	6.5	1.523	9.4	85,477	Open	10.1	325
2/22/2025	23:30:00	7	1.467	0	85,499	Open	10.2	344
2/22/2025	23:45:00	6.7	1.425	0.7	85,521	Open	10.2	360
2/23/2025	0:00:00	6.4	0.000	0.6	85,531	Open	10.4	400
2/23/2025	0:15:00	4.5	1.531	7	85,542	Open	11.8	117
2/23/2025	0:30:00	-0.4	1.391	0.8	85,564	Open	10.6	404
2/23/2025	0:45:00	4.5	0.000	9.1	85,579	Open	11.9	113

FRONTIER-KEMPER MICHELS® joint venture		Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope	
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Data Date Range	**February 17, 2025 to February 23, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **March 6, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/23/2025	1:00:00	1.6	1.323	0.7	85,592	Open	10.6	438
2/23/2025	1:15:00	6.8	1.470	1.5	85,609	Open	10.4	382
2/23/2025	1:30:00	6.8	1.372	0.5	85,630	Open	10.8	386
2/23/2025	1:45:00	6.8	0.000	0.6	85,641	Open	11.4	384
2/23/2025	2:00:00	4.2	0.000	12.8	85,643	Open	10.4	402
2/23/2025	2:15:00	6.8	0.204	1.3	85,649	Open	10.6	412
2/23/2025	2:30:00	6.8	1.482	17.1	85,658	Open	10.5	362
2/23/2025	2:45:00	6.8	1.455	15.2	85,680	Open	11	362
2/23/2025	3:00:00	7.1	0.000	1.3	85,693	Open	10.6	397
2/23/2025	3:15:00	6.4	1.414	1.4	85,712	Open	10.9	431
2/23/2025	3:30:00	7.2	0.000	7.6	85,731	Open	11.5	387
2/23/2025	3:45:00	6.7	0.215	5.2	85,749	Open	10.7	383
2/23/2025	4:00:00	6.9	0.000	5.2	85,757	Open	11.2	388
2/23/2025	4:15:00	7	1.414	3.5	85,762	Open	11.4	388
2/23/2025	4:30:00	7	0.151	2.5	85,778	Open	11.6	386
2/23/2025	4:45:00	6.6	0.000	1.8	85,784	Open	10.3	445
2/23/2025	5:00:00	6.7	0.000	5.8	85,788	Open	10.4	414
2/23/2025	5:15:00	5.9	1.535	1.1	85,799	Open	10.2	451
2/23/2025	5:30:00	6.5	1.501	1	85,822	Open	10.6	464
2/23/2025	5:45:00	6.6	0.000	1	85,836	Open	10.7	469
2/23/2025	6:00:00	6.6	1.470	0.6	85,844	Open	12.4	473
2/23/2025	6:15:00	6.6	1.455	0.4	85,864	Open	12.7	472
2/23/2025	6:30:00	6.7	0.170	0.3	85,869	Open	13.3	476
2/23/2025	6:45:00	6.2	1.535	0.3	85,881	Open	14.9	477
2/23/2025	7:00:00	6.8	0.000	0.3	85,899	Open	11	385
2/23/2025	7:15:00	6.5	0.000	4.1	85,912	Open	10.5	359

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Data Date Range	**February 17, 2025 to February 23, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **March 6, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/23/2025	7:30:00	6.7	0.000	0.6	85,922	Open	10.8	364
2/23/2025	7:45:00	6.8	1.478	0.5	85,934	Open	10.6	356
2/23/2025	8:00:00	7	1.467	0.4	85,956	Open	10.8	341
2/23/2025	8:15:00	7	1.440	0.8	85,978	Open	12	338
2/23/2025	8:30:00	6.9	1.418	1.2	85,994	Open	12.3	332
2/23/2025	8:45:00	6.9	0.000	1.2	85,999	Open	11.6	333
2/23/2025	9:00:00	6.9	0.000	0.8	85,999	Open	11.8	333
2/23/2025	9:15:00	7.1	1.391	0.8	86,020	Open	10.6	341
2/23/2025	9:30:00	7.3	1.353	0.4	86,040	Open	11.1	335
2/23/2025	9:45:00	7.3	0.000	0.2	86,048	Open	12.2	330
2/23/2025	10:00:00	7.3	0.000	0.3	86,048	Open	12.4	332
2/23/2025	10:15:00	7.3	0.000	0.5	86,048	Open	12.6	333
2/23/2025	10:30:00	7	1.349	0.5	86,058	Open	10.5	341
2/23/2025	10:45:00	7	0.869	3.1	86,065	Open	10.4	348
2/23/2025	11:00:00	7.1	0.174	0.4	86,075	Open	10.5	338
2/23/2025	11:15:00	7.3	1.448	0.3	86,093	Open	10.7	325
2/23/2025	11:30:00	7.8	1.418	0.3	86,114	Open	10.8	312
2/23/2025	11:45:00	7	1.383	0.5	86,136	Open	10.9	340
2/23/2025	12:00:00	7.3	1.342	0.8	86,156	Open	11.1	329
2/23/2025	12:15:00	7.4	0.000	0.8	86,163	Open	11.2	314
2/23/2025	12:30:00	7.4	0.000	0.4	86,163	Open	11.7	312
2/23/2025	12:45:00	7.2	0.907	1.3	86,169	Open	12.4	310
2/23/2025	13:00:00	8.6	1.361	1.1	86,189	Open	11.2	315
2/23/2025	13:15:00	8.8	0.000	4.7	86,198	Open	11.4	316
2/23/2025	13:30:00	8.8	0.000	2.2	86,198	Open	11.9	316
2/23/2025	13:45:00	6.6	1.331	0	86,217	Open	11.6	367

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Data Date Range	**February 17, 2025 to February 23, 2025**	**Prepared by:** **Approved by:** **Date:**	**SD** **BC2** **March 6, 2025**

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/23/2025	14:00:00	6.4	1.293	0	86,237	Open	12.3	403
2/23/2025	14:15:00	6.5	1.263	0	86,256	Open	12.9	419
2/23/2025	14:30:00	6.5	1.221	0	86,275	Open	13.7	422
2/23/2025	14:45:00	6.5	0.000	0	86,282	Open	14.8	432
2/23/2025	15:00:00	6.5	0.000	0	86,282	Open	15.2	432
2/23/2025	15:15:00	6.9	1.240	0.6	86,287	Open	12.8	392
2/23/2025	15:30:00	7	1.206	0.7	86,305	Open	13	392
2/23/2025	15:45:00	7	0.000	0.6	86,318	Open	13.5	392
2/23/2025	16:00:00	6.5	1.145	0.3	86,320	Open	14.2	371
2/23/2025	16:15:00	6.5	1.142	0.4	86,338	Open	12.5	471
2/23/2025	16:30:00	6.5	0.733	0	86,355	Open	13.4	481
2/23/2025	16:45:00	8.9	0.110	0.9	86,362	Open	11.2	408
2/23/2025	17:00:00	6.8	1.440	0.6	86,372	Open	10.9	544
2/23/2025	17:15:00	6.7	1.433	1.6	86,394	Open	10.8	491
2/23/2025	17:30:00	6.6	1.387	0.9	86,414	Open	10.9	431
2/23/2025	17:45:00	6.5	0.000	0.1	86,432	Open	11	407
2/23/2025	18:00:00	6.5	0.000	0	86,432	Open	11.8	416
2/23/2025	18:15:00	6.6	0.000	0.1	86,432	Open	12.7	421
2/23/2025	18:30:00	6.8	1.349	0.5	86,444	Open	11.7	440
2/23/2025	18:45:00	7.1	0.000	0.8	86,456	Open	11.3	369
2/23/2025	19:00:00	7.1	1.425	3.7	86,460	Open	11.4	352
2/23/2025	19:15:00	8.2	1.387	0.1	86,481	Open	11.3	353
2/23/2025	19:30:00	8.5	1.353	0	86,501	Open	11.5	341
2/23/2025	19:45:00	8.2	1.331	0.2	86,522	Open	11.5	455
2/23/2025	20:00:00	8.6	0.000	31.1	86,527	Open	10.7	514
2/23/2025	20:15:00	8.8	0.000	51.6	86,527	Open	11.1	488

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
2/23/2025	20:30:00	7.7	1.463	10.1	86,541	Open	11.2	491
2/23/2025	20:45:00	7.6	1.433	8.2	86,556	Open	13.9	496
2/23/2025	21:00:00	7.9	0.000	7.1	86,574	Open	14.5	471
2/23/2025	21:15:00	7	1.523	3.9	86,582	Open	11.5	496
2/23/2025	21:30:00	6.7	1.452	2.6	86,591	Open	11.7	511
2/23/2025	21:45:00	2.9	1.418	2.8	86,607	Open	13.1	114
2/23/2025	22:00:00	8.5	1.406	7.8	86,629	Open	14.4	114
2/23/2025	22:15:00	-0.4	0.919	0.5	86,648	Open	12.3	461
2/23/2025	22:30:00	-0.4	0.000	0.9	86,659	Open	12.9	460
2/23/2025	22:45:00	-0.4	0.000	1.5	86,659	Open	15.9	116
2/23/2025	23:00:00	-0.4	1.436	1.7	86,673	Open	16.1	116
2/23/2025	23:15:00	6.9	1.399	1.1	86,690	Open	16.2	114
2/23/2025	23:30:00	6.9	1.399	1	86,711	Open	16.3	114
2/23/2025	23:45:00	6.9	1.410	0.6	86,732	Open	16.4	116

Appendix B: Photos

Photo 1: No visible sheen observed in the WTP water, February 17

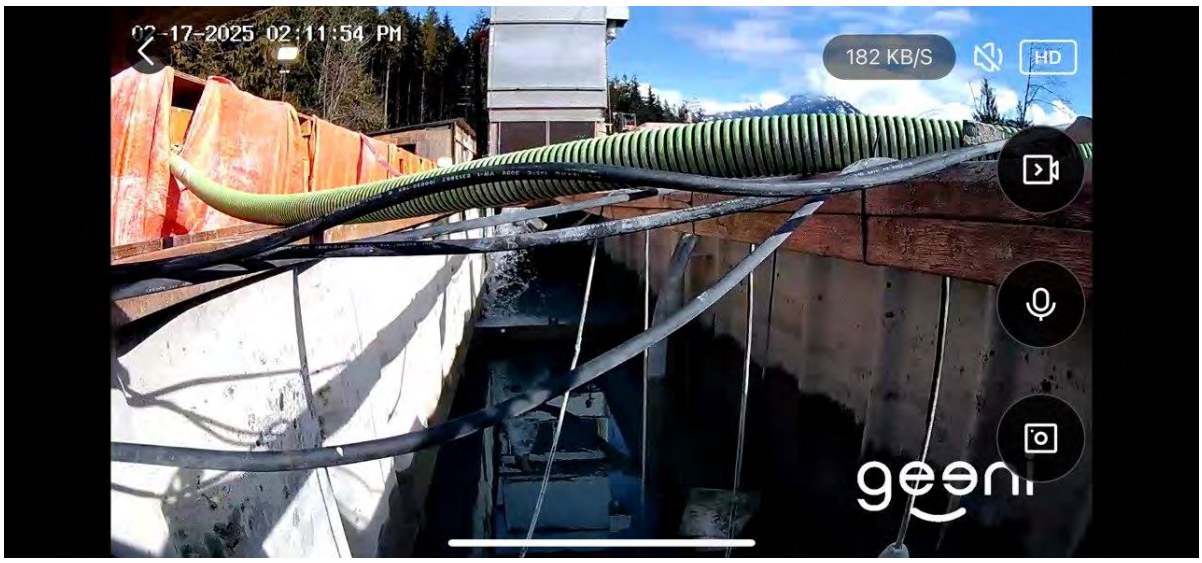

Photo 2: No visible sheen observed in the WTP water, February 18

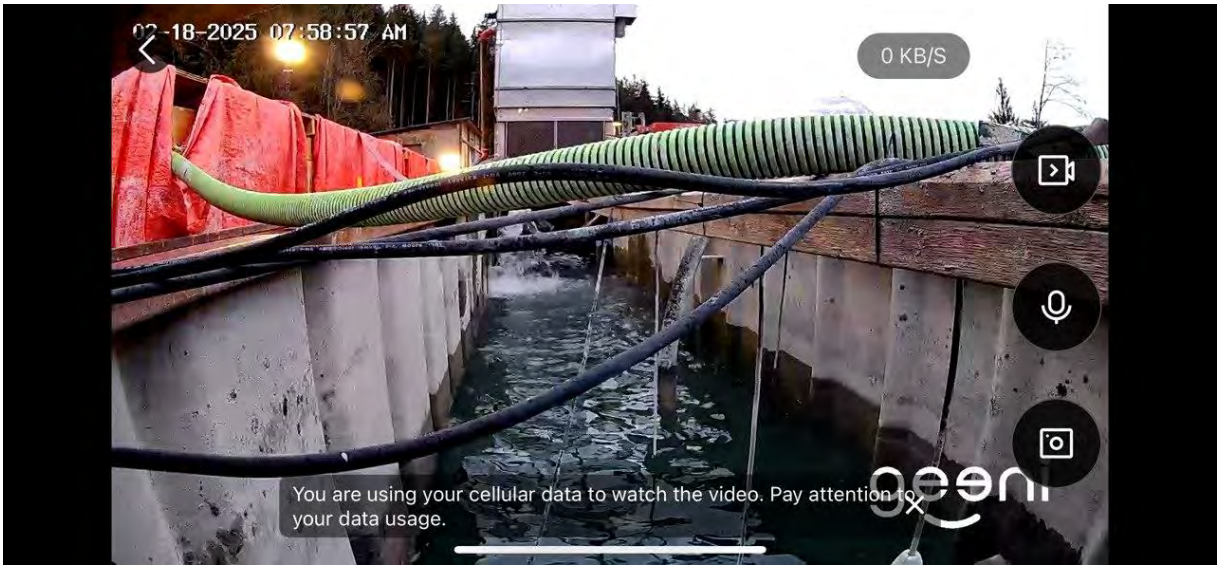

Photo 3: No visible sheen observed in the WTP water, February 19

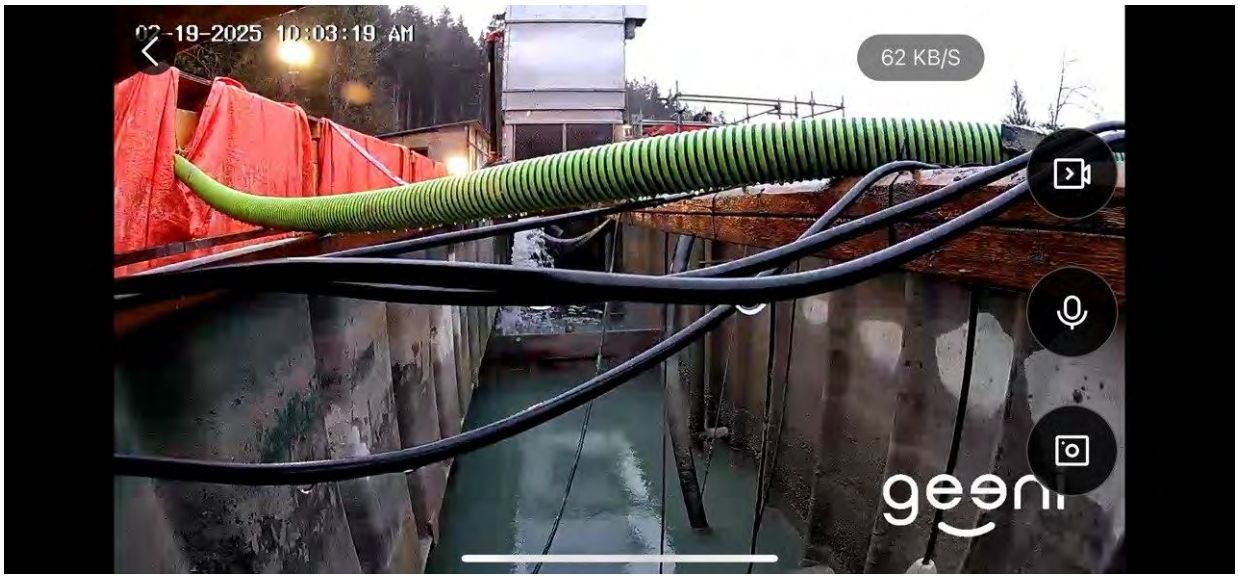

Photo 4: No visible sheen observed in the WTP water, February 20

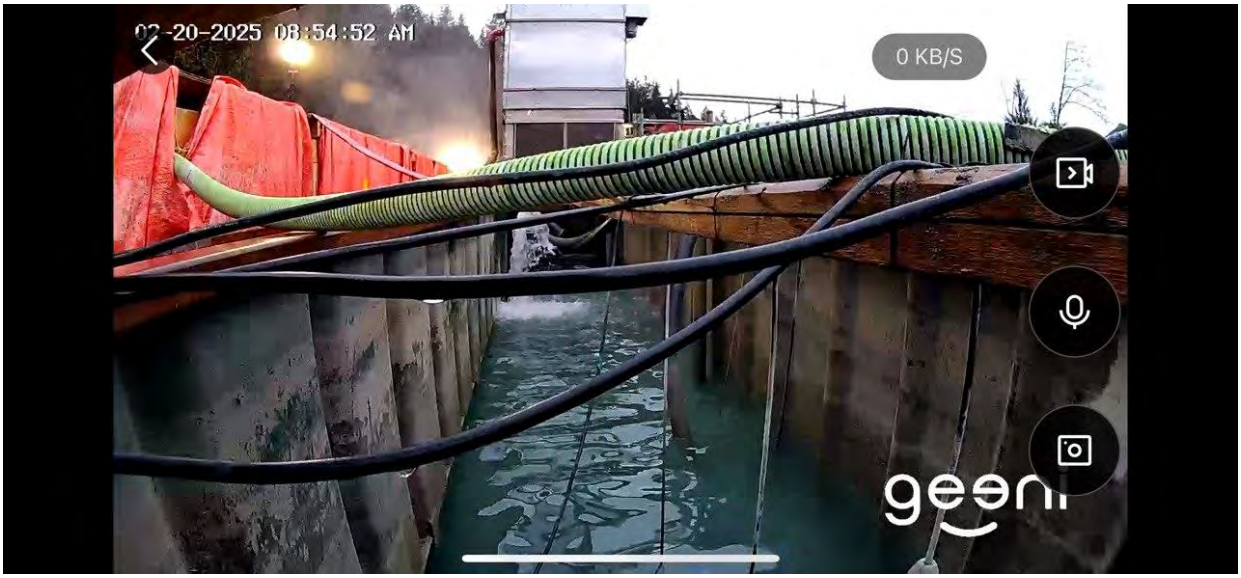

Photo 5: No visible sheen observed in the WTP water, February 21
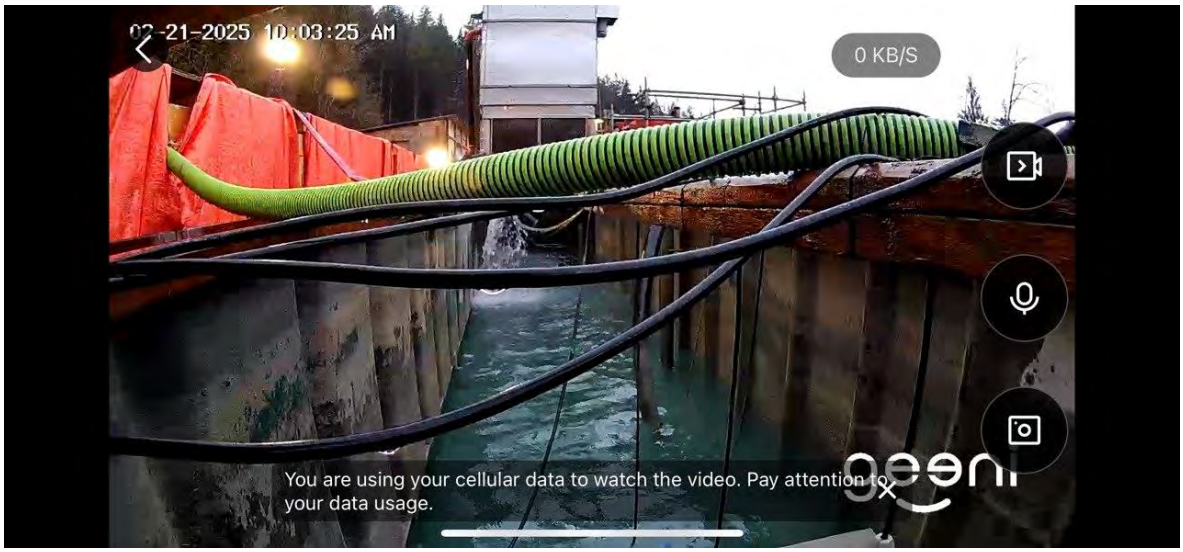
Photo 6: No visible sheen observed in the WTP water, February 23


Appendix D: Woodfibre Site Receiving Environment Documentation

Woodfibre Site Receiving Environment Sample Analysis

TRITON Environmental Consultants	Sample ID	Reviewed and signed off by:	College of Applied Biologists Farshad Shafiei RPBio 3781 CAB		Farshad Shafiei Ph.D., R.P.Bio.	EAS US1 (Upstream)	EAS DS 1 (Downstream)	Sample or value notes	BCWQ FAL - Short Term	BCWQ FAL - Long Term	BCWQ MAL - Short Term	BCWQ MAL - Long Term
	LAB ID					VA25A3544-001	VA25A3544-002					
	Date Sampled					19-Feb-2025	19-Feb-2025					
	Time Sampled					11:54	11:16					
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	6.7	6.7		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]	-	4.2	4.2		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 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	-	-	-	-	70	50					
Turbidity (field)	NTU	Varies with background, see note Guideline = 18.4	Varies with background, see note Guideline = 4.45 5-week discrete sampling average = 2.45 (DS)	Varies with background, see note Guideline = 18.4	Varies with background, see note Guideline = 4.45 5-week discrete sampling average = 2.45 (DS)	10.4	10.2		Change from background of 8 NTU at any one time for a duration of 24 h in all waters during clear flows or in clear waters. Calculation: US value + 8 = DS guideline Change from background of 5 NTU at any time when background is 8 - 50 NTU during high flows or in turbid waters. Calculation: US value + 5 = DS guideline Change from background of 10% when background is > 50 NTU at any time during high flows or in turbid waters. Calculation: US value + (US value*0.1) = DS guideline	Change from background of 2 NTU at any one time for 30 days in clear flows. Note that a rolling average of US values over a 30-day period is required to properly calculate this guideline. Guideline calculated in this spreadsheet using US concentration at the time of sampling.	Change from background of 8 NTU at any one time for a duration of 24 h in all waters during clear flows or in clear waters. Calculation: US value + 8 = DS guideline Change from background of 5 NTU at any time when background is 8 - 50 NTU during high flows or in turbid waters. Calculation: US value + 5 = DS guideline Change from background of 10% when background is > 50 NTU at any time during high flows or in turbid waters. Calculation: US value + (US value*0.1) = DS guideline	Change from background of 2 NTU at any one time for 30 days in clear flows. Note that a rolling average of US values over a 30-day period is required to properly calculate this guideline. Guideline calculated in this spreadsheet using US concentration at the time of sampling.
Dissolved Oxygen (field)	mg/L	Varies with life stage, see note	Varies with life stage, see note	Varies with life stage, see note	Varies with life stage, see note	12.01	11.59		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	-	-	-	-	16.1	15.8					
Total Dissolved Solids	mg/L	-	-	-	-	42	64					
Total Suspended Solids	mg/L	Varies with background, see note Guideline = 31.7	Varies with background, see note Guideline = 8.74 5-week discrete sampling average = 4.06 (DS)	Varies with background, see note Guideline = 31.7	Varies with background, see note Guideline = 8.74 5-week discrete sampling average = 4.06 (DS)	6.7	8.3		Change from background of 25 mg/L at any one time for duration of 24 h in all waters during clear flows or in clear waters. 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	-	-	-	-	4.83	4.62			Long-term (30-day) median within 20% of background median [3]		
Total Alkalinity ($CaCO_3$)	mg/L	-	Categorical	-	-	8.9	25.9			Guideline is for alkalinity (as CaCO3) and categorizes the sensitivity of a water body to acid inputs. Alkalinity < 10 mg/L is considered highly sensitive to acid inputs; 10 - 20 mg/L is considered moderately sensitive to acid inputs; > 20 mg/L is considered low sensitivity.		
Total Sulfide (as S)	mg/L	-	-	-	-	0.0016	< 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	-	-	-	-	0.0017	< 0.0016					
Anions and Nutrients												
Ammonia	mg/L ammonia-N	Varies with pH and temperature. See note. Guideline = 25.2	Varies with pH and temperature. See note. Guideline = 1.99	Varies with pH and temperature. See note. Guideline = 191	Varies with pH, temperature and salinity. See note. Guideline = 18	0.0064	0.0058		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	0.99	1.97				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 = 0.600	-	1.5	-	0.02	0.048		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	0.436	0.0834					
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	0.0088		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	-	-	-	-	0.775	0.568					
Total Phosphorous	mg/L	-	0.005 to 0.015	-	-	0.327	0.244			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	-	-	5.41	5.79			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 = 0.088 5-week field average = 0.191 (US), 0.208 (DS)	-	-	0.658	0.543			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	-	-	0.00015	0.00013					
Arsenic (As)-Total	mg/L	-	0.005	-	0.0125	0.00076	0.00057					Interim guideline status
Barium (Ba)-Total	mg/L	-	1	-	-	0.00869	0.00823			Working guideline status		
Beryllium (Be)-Total	mg/L	-	0.00013	-	0.100	< 0.000100	< 0.000100			Working guideline status		Working guideline status
Bismuth (Bi)-Total	mg/L	-	-	-	-	< 0.000050	< 0.000050					
Boron (B)-Total	mg/L	-	1.2	-	1.2	< 0.010	< 0.010					
Cadmium (Cd)-Total	mg/L	-	-	-	0.00012	0.0000187	0.0000132					Working guideline status
Calcium (Ca)-Total	mg/L	-	-	-	-	4.48	4.74					
Cesium (Cs)-Total	mg/L	-	-	-	-	0.000045	0.000042					
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	0.00083			Working guideline status		Working guideline status
Cobalt (Co)-Total	mg/L	0.11	0.004	-	-	0.00024	0.00018					
Copper (Cu)-Total	mg/L	-	-	0.003	0.003 5-week field averages = 0.001156 (US), 0.000934 DS)	0.00354	0.00262					
Iron (Fe)-Total	mg/L	1	-	-	-	0.464	0.358					
Lead (Pb)-Total	mg/L	-	-	0.14	0.002 5-week field averages = 0.0001034(US), 0.000092 DS)	0.000317	0.000244		Guideline varies with hardness, refer to BC Water Quality Guidelines for more information. Guideline is 0.003 where hardness ≤8mg/L. Guideline uses equation EXP[1.273*on(hardness)-1.460] where hardness is 8-360 mg/L. Lowest value for guideline is 0.003 mg/L.	Guideline varies with hardness, refer to BC Water Quality Guidelines for more information. Guideline equation EXP[1.273*on(hardness)-4.704] applies to samples with hardness 8-360 mg/L.		
Lithium (Li)-Total	mg/L	-	-	-	-	< 0.0010	< 0.0010					
Magnesium (Mg)-Total	mg/L	-	-	-	-	1.19	0.96					
Manganese (Mn)-Total	mg/L	Varies with hardness Guideline = 0.82	Varies with hardness Guideline = 0.77	-	-	0.0148	0.011		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	-	-	0.0000052	< 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	-	-	0.000785	0.00115					
Nickel (Ni)-Total	mg/L	-	-	-	0.0083	0.00092	0.00085			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	-	-	-	-	1.01	0.805					
Rubidium (Rb)-Total	mg/L	-	-	-	-	0.00103	0.00111					
Selenium (Se)-Total	mg/L	-	0.002	-	0.002	< 0.000050	0.000082			Guideline for freshwater aquatic life (water column). Alert concentration is 0.001 mg/L, with separate guidelens 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	-	-	-	-	4.19	4.15					
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	0.000011	< 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	-	-	-	-	2.14	2.04					
Strontium (Sr)-Total	mg/L	-	-	-	-	0.0148	0.0148					
Sulfur (S)-Total	mg/L	-	-	-	-	1.87	1.71					
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	-	-	-	-	0.0203	0.0156					
Tungsten (W)-Total	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Uranium (U)-Total	mg/L	0.0165	0.0075	-	-	0.00018	0.000314			Working guideline status		
Vanadium (V)-Total	mg/L	-	0.06	-	0.005	0.00109	0.00108					Working guideline status
Zinc (Zn)-Total	mg/L	-	-	0.055	0.010 5-week field average = 0.0039 (US), 0.0048 (DS)	0.0067	0.0069					
Zirconium (Zr)-Total	mg/L	-	-	-	-	< 0.00020	< 0.00020					
Dissolved Metals												
Aluminum (Al)-Dissolved	mg/L	-	-	-	-	0.147	0.126					
Antimony (Sb)-Dissolved	mg/L	-	-	-	-	0.00011	< 0.00010					
Arsenic (As)-Dissolved	mg/L	-	-	-	-	0.00064	0.00048					
Barium (Ba)-Dissolved	mg/L	-	-	-	-	0.00349	0.00352					
Beryllium (Be)-Dissolved	mg/L	-	-	-	-	< 0.000100	< 0.000100					
Bismuth (Bi)-Dissolved	mg/L	-	-	-	-	< 0.000050	< 0.000050					
Boron (B)-Dissolved	mg/L	-	-	-	-	< 0.010	< 0.010					
Cadmium (Cd)-Dissolved	mg/L	Varies with hardness, see note Guideline = 0.000090	Varies with hardness, see note Guideline = 0.000033	-	-	0.000011	0.0000094		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	-	-	4.12	4.42			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	-	-	-	-	0.0001	< 0.00010					
Copper (Cu)-Dissolved	mg/L	Guideline varies with other parameters, see note Guideline = 0.0021	Guideline varies with other parameters, see note Guideline = 0.0004 5-week field average = 0.00089 (US), 0.00061 (DS)	-	-	0.00252	0.00194		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	-	-	-	0.05	0.034					
Lead (Pb)-Dissolved	mg/L	-	Guideline varies with DOC and hardness Guideline: 0.00184 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	-	-	-	-	1.09	0.89					
Manganese (Mn)-Dissolved	mg/L	-	-	-	-	0.00326	0.00242					
Mercury (Hg)-Dissolved	mg/L	-	-	-	-	< 0.0000050	< 0.0000050					
Molybdenum (Mo)-Dissolved	mg/L	-	-	-	-	0.000701	0.00104					
Nickel (Ni)-Dissolved	mg/L	Guideline varies with pH, temperature, DOC, and hardness Guideline: 0.0208	Guideline varies with pH, temperature, DOC, and hardness Guideline: 0.00125 5-week field average = 0.00125 0.00056 (US), 0.00053 (DS)	-	-	0.00081	0.00067		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	-	-	-	-	0.311	0.236					
Potassium (K)-Dissolved	mg/L	-	-	-	-	0.945	0.762					
Rubidium (Rb)-Dissolved	mg/L	-	-	-	-	0.0005	0.00063					
Selenium (Se)-Dissolved	mg/L	-	-	-	-	< 0.00005	< 0.00005					
Silicon (Si)-Dissolved	mg/L	-	-	-	-	3.27	3.38					
Silver (Ag)-Dissolved	mg/L	-	-	-	-	< 0.000010	< 0.000010					
Sodium (Na)-Dissolved	mg/L	-	-	-	-	2.22	2.04					
Strontium (Sr)-Dissolved	mg/L	-	-	-	-	0.0134	0.0131					
Sulfur (S)-Dissolved	mg/L	-	-	-	-	1.8	1.68					
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	-	-	-	-	0.00138	0.00082					
Tungsten (W)-Dissolved	mg/L	-	-	-	-	< 0.00010	< 0.00010					
Uranium (U)-Dissolved	mg/L	-	-	-	-	0.000117	0.000245					
Vanadium (V)-Dissolved	mg/L	-	-	-	-	< 0.00050	0.00052					
Zinc (Zn)-Dissolved	mg/L	Varies with DOC and hardness Guideline = 0.012	Varies with pH, DOC, hardness Guideline = 0.003733 5-week field average = 0.0025 (US), 0.0035 (DS)	-	-	0.0059	0.0036		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	6.7	6.7
Temperature (field)	°C	Field temperature taken using handheld meters during sampling used in calculations	4.2	4.2
Turbidity (field)	NTU	Field turbidity taken using handheld meters during sampling used in calculations	10.40	10.20
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	16.1	15.8
Dissolved Organic Carbon (DOC)	mg/L	Laboratory tested dissolved organic carbon tested at the lab used in guideline calculations	4.83	4.62
Total Alkalinity ($CaCO_3$)	mg/L	Laboratory tested total alkalinity used in calculations	8.9	25.9
Chloride	mg/L	Laboratory tested chloride taken at each respective sample site on the day of sampling used in guideline calculations	0.99	1.97

Woodfibre Site Receiving Environment Lab Documentation

ALS Canada Ltd.

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CERTIFICATE OF ANALYSIS

Work Order	:			
Client	:		Laboratory	: ALS Environmental - Vancouver
Contact	:		Account Manager	:
Address	:		Address	:
Telephone	:		Telephone	:
Project	:		Date Samples Received	: 19-Feb-2025 17:45
PO	:		Date Analysis Commenced	: 20-Feb-2025
C-O-C number	:	----	Issue Date	: 28-Feb-2025 09:18
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
		Metals, Burnaby, British Columbia
		Administration, Burnaby, British Columbia
		Inorganics, 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
NTU	nephelometric turbidity units
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	19-Feb-2025 11:54	19-Feb-2025 11:16	----	----	----
						VA25A3544-001	VA25A3544-002	----	----	----
						Result	Result	----	----	----
Field Tests										
Conductivity, field	----	EF001/VA	0.10	µS/cm		70.000	50.000	----	----	----
pH, field	----	EF001/VA	0.10	pH units		6.70	6.70	----	----	----
Temperature, field	----	EF001/VA	0.10	°C		4.20	4.20	----	----	----
Turbidity, field	----	EF001/VA	0.01	NTU		10.4	10.2	----	----	----
Physical Tests										
Hardness (as CaCO3), dissolved	----	EC100/VA	0.60	mg/L		14.8	14.7	----	----	----
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L		16.1	15.8	----	----	----
Solids, total dissolved [TDS]	----	E162/VA	10	mg/L		42	64	----	----	----
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L		6.7	8.3	----	----	----
Alkalinity, total (as CaCO3)	----	E290/VA	2.0	mg/L		8.9	25.9	----	----	----
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L		0.0064	0.0058	----	----	----
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		0.99	1.97	----	----	----
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L		0.020	0.048	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L		0.436	0.0834	----	----	----
Nitrite (as N)	14797-65-0	E235.NO2-L/VA	0.0010	mg/L		<0.0010	0.0088	----	----	----
Nitrogen, total	7727-37-9	E366/VA	0.030	mg/L		0.775	0.568	----	----	----
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L		0.327	0.244	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L		5.41	5.79	----	----	----

Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	WLNG US 1	WLNG DS 1	----	----	----
					Client sampling date / time	19-Feb-2025 11:54	19-Feb-2025 11:16	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		VA25A3544-001	VA25A3544-002	----	----	----
						Result	Result	----	----	----
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L		4.83	4.62	----	----	----
Total Sulfides										
Sulfide, total (as S)	18496-25-8	E395/VA	0.0015	mg/L		0.0016	<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		0.0017	<0.0016	----	----	----
Total Metals										
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L		0.658	0.543	----	----	----
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L		0.00015	0.00013	----	----	----
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L		0.00076	0.00057	----	----	----
Barium, total	7440-39-3	E420/VA	0.00010	mg/L		0.00869	0.00823	----	----	----
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		0.0000187	0.0000132	----	----	----
Calcium, total	7440-70-2	E420/VA	0.050	mg/L		4.48	4.74	----	----	----
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L		0.000045	0.000042	----	----	----
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		0.00024	0.00018	----	----	----
Copper, total	7440-50-8	E420/VA	0.00050	mg/L		0.00354	0.00262	----	----	----
Iron, total	7439-89-6	E420/VA	0.010	mg/L		0.464	0.358	----	----	----
Lead, total	7439-92-1	E420/VA	0.000050	mg/L		0.000317	0.000244	----	----	----

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	19-Feb-2025 11:54	19-Feb-2025 11:16	----	----	----
						VA25A3544-001	VA25A3544-002	----	----	----
						Result	Result	----	----	----
Total Metals										
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L		<0.0010	<0.0010	----	----	----
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L		1.19	0.960	----	----	----
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L		0.0148	0.0110	----	----	----
Mercury, total	7439-97-6	E508/VA	0.0000050	mg/L		0.0000052	<0.0000050	----	----	----
Molybdenum, total	7439-98-7	E420/VA	0.000050	mg/L		0.000785	0.00115	----	----	----
Nickel, total	7440-02-0	E420/VA	0.00050	mg/L		0.00092	0.00085	----	----	----
Phosphorus, total	7723-14-0	E420/VA	0.050	mg/L		0.340	0.256	----	----	----
Potassium, total	7440-09-7	E420/VA	0.050	mg/L		1.01	0.805	----	----	----
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L		0.00103	0.00111	----	----	----
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L		<0.000050	0.000082	----	----	----
Silicon, total	7440-21-3	E420/VA	0.10	mg/L		4.19	4.15	----	----	----
Silver, total	7440-22-4	E420/VA	0.000010	mg/L		0.000011	<0.000010	----	----	----
Sodium, total	7440-23-5	E420/VA	0.050	mg/L		2.14	2.04	----	----	----
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L		0.0148	0.0148	----	----	----
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L		1.87	1.71	----	----	----
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		0.0203	0.0156	----	----	----
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L		<0.00010	<0.00010	----	----	----

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	19-Feb-2025 11:54	19-Feb-2025 11:16	----	----	----
						VA25A3544-001	VA25A3544-002	----	----	----
						Result	Result	----	----	----
Total Metals										
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L		0.000180	0.000314	----	----	----
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L		0.00109	0.00108	----	----	----
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L		0.0067	0.0069	----	----	----
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		0.147	0.126	----	----	----
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L		0.00011	<0.00010	----	----	----
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L		0.00064	0.00048	----	----	----
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L		0.00349	0.00352	----	----	----
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		0.0000110	0.0000094	----	----	----
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L		4.12	4.42	----	----	----
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		0.00252	0.00194	----	----	----
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L		0.050	0.034	----	----	----
Lead, dissolved	7439-92-1	E421/VA	0.000050	mg/L		<0.000050	<0.000050	----	----	----
Lithium, dissolved	7439-93-2	E421/VA	0.0010	mg/L		<0.0010	<0.0010	----	----	----

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	19-Feb-2025 11:54	19-Feb-2025 11:16	----	----	----
						VA25A3544-001	VA25A3544-002	----	----	----
						Result	Result	----	----	----
Dissolved Metals										
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L		1.09	0.890	----	----	----
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L		0.00326	0.00242	----	----	----
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		0.000701	0.00104	----	----	----
Nickel, dissolved	7440-02-0	E421/VA	0.00050	mg/L		0.00081	0.00067	----	----	----
Phosphorus, dissolved	7723-14-0	E421/VA	0.050	mg/L		0.311	0.236	----	----	----
Potassium, dissolved	7440-09-7	E421/VA	0.050	mg/L		0.945	0.762	----	----	----
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L		0.00050	0.00063	----	----	----
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		3.27	3.38	----	----	----
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		2.22	2.04	----	----	----
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L		0.0134	0.0131	----	----	----
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L		1.80	1.68	----	----	----
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		0.00138	0.00082	----	----	----
Tungsten, dissolved	7440-33-7	E421/VA	0.00010	mg/L		<0.00010	<0.00010	----	----	----
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L		0.000117	0.000245	----	----	----

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	19-Feb-2025 11:54	19-Feb-2025 11:16	----	----	----
						VA25A3544-001	VA25A3544-002	----	----	----
						Result	Result	----	----	----
Dissolved Metals										
Vanadium, dissolved	7440-62-2	E421/VA	0.00050	mg/L		<0.00050	0.00052	----	----	----
Zinc, dissolved	7440-66-6	E421/VA	0.0010	mg/L		0.0059	0.0036	----	----	----
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	0.00083	----	----	----
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	: ALS Environmental - Vancouver
Contact	: [redacted]	Account Manager	: [redacted]
Address	: [redacted]	Address	: [redacted]
Telephone	: [redacted]	Telephone	: [redacted]
Project	: 11964	Date Samples Received	: 19-Feb-2025 17:45
PO	: 11964 - Task 20 - Phase 3C-4C	Issue Date	: 28-Feb-2025 09:18
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	19-Feb-2025	25-Feb-2025	28 days	6 days	✓	27-Feb-2025	28 days	8 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) WLNG US 1	E298	19-Feb-2025	25-Feb-2025	28 days	6 days	✓	27-Feb-2025	28 days	8 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE WLNG DS 1	E235.Br-L	19-Feb-2025	20-Feb-2025	28 days	1 days	✓	20-Feb-2025	28 days	1 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE WLNG US 1	E235.Br-L	19-Feb-2025	20-Feb-2025	28 days	1 days	✓	20-Feb-2025	28 days	1 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE WLNG DS 1	E235.Cl	19-Feb-2025	20-Feb-2025	28 days	1 days	✓	20-Feb-2025	28 days	1 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE WLNG US 1	E235.Cl	19-Feb-2025	20-Feb-2025	28 days	1 days	✓	20-Feb-2025	28 days	1 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE WLNG DS 1	E235.F	19-Feb-2025	20-Feb-2025	28 days	1 days	✓	20-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 : Fluoride in Water by IC										
HDPE										
WLNG US 1	E235.F	19-Feb-2025	20-Feb-2025	28 days	1 days	✓	20-Feb-2025	28 days	1 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE										
WLNG DS 1	E235.NO3-L	19-Feb-2025	20-Feb-2025	3 days	1 days	✓	20-Feb-2025	3 days	1 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE										
WLNG US 1	E235.NO3-L	19-Feb-2025	20-Feb-2025	3 days	1 days	✓	20-Feb-2025	3 days	1 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
WLNG DS 1	E235.NO2-L	19-Feb-2025	20-Feb-2025	3 days	1 days	✓	20-Feb-2025	3 days	1 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
WLNG US 1	E235.NO2-L	19-Feb-2025	20-Feb-2025	3 days	1 days	✓	20-Feb-2025	3 days	1 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
WLNG DS 1	E235.SO4	19-Feb-2025	20-Feb-2025	28 days	1 days	✓	20-Feb-2025	28 days	1 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
WLNG US 1	E235.SO4	19-Feb-2025	20-Feb-2025	28 days	1 days	✓	20-Feb-2025	28 days	1 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid)										
WLNG DS 1	E366	19-Feb-2025	25-Feb-2025	28 days	6 days	✓	27-Feb-2025	28 days	8 days	✓
Anions and Nutrients : Total Nitrogen by Colourimetry										
Amber glass total (sulfuric acid)										
WLNG US 1	E366	19-Feb-2025	25-Feb-2025	28 days	6 days	✓	27-Feb-2025	28 days	8 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	19-Feb-2025	25-Feb-2025	28 days	6 days	✓	27-Feb-2025	28 days	8 days	✓
Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)										
Amber glass total (sulfuric acid)										
WLNG US 1	E372-U	19-Feb-2025	25-Feb-2025	28 days	6 days	✓	27-Feb-2025	28 days	8 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
WLNG DS 1	E509	19-Feb-2025	26-Feb-2025	28 days	7 days	✓	26-Feb-2025	28 days	7 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid)										
WLNG US 1	E509	19-Feb-2025	26-Feb-2025	28 days	7 days	✓	26-Feb-2025	28 days	7 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
WLNG DS 1	E421	19-Feb-2025	20-Feb-2025	180 days	1 days	✓	22-Feb-2025	180 days	3 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid)										
WLNG US 1	E421	19-Feb-2025	20-Feb-2025	180 days	1 days	✓	22-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	19-Feb-2025	----	----	----		24-Feb-2025	----	5 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	19-Feb-2025	----	----	----		24-Feb-2025	----	5 days	
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
WLNG DS 1	E358-L	19-Feb-2025	25-Feb-2025	28 days	6 days	✓	25-Feb-2025	28 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
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
WLNG US 1	E358-L	19-Feb-2025	25-Feb-2025	28 days	6 days	✓	25-Feb-2025	28 days	6 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
WLNG DS 1	E290	19-Feb-2025	20-Feb-2025	14 days	1 days	✓	20-Feb-2025	14 days	1 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
WLNG US 1	E290	19-Feb-2025	20-Feb-2025	14 days	1 days	✓	20-Feb-2025	14 days	1 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
WLNG US 1	E162	19-Feb-2025	----	----	----		25-Feb-2025	7 days	6 days	✓
Physical Tests : TDS by Gravimetry										
HDPE										
WLNG DS 1	E162	19-Feb-2025	----	----	----		25-Feb-2025	7 days	7 days	✓
Physical Tests : TSS by Gravimetry										
HDPE										
WLNG DS 1	E160	19-Feb-2025	----	----	----		26-Feb-2025	7 days	7 days	✓
Physical Tests : TSS by Gravimetry										
HDPE										
WLNG US 1	E160	19-Feb-2025	----	----	----		26-Feb-2025	7 days	7 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide)										
WLNG DS 1	E532	19-Feb-2025	----	----	----		25-Feb-2025	28 days	6 days	✓
Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC										
Opaque HDPE - total (sodium hydroxide)										
WLNG US 1	E532	19-Feb-2025	----	----	----		25-Feb-2025	28 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*
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) WLNG DS 1	E508	19-Feb-2025	25-Feb-2025	28 days	6 days	✓	25-Feb-2025	28 days	6 days	✓
Total Metals : Total Mercury in Water by CVAAS										
Glass vial total (hydrochloric acid) WLNG US 1	E508	19-Feb-2025	25-Feb-2025	28 days	6 days	✓	25-Feb-2025	28 days	6 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid) WLNG DS 1	E420	19-Feb-2025	20-Feb-2025	180 days	1 days	✓	21-Feb-2025	180 days	2 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid) WLNG US 1	E420	19-Feb-2025	20-Feb-2025	180 days	1 days	✓	21-Feb-2025	180 days	2 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide) WLNG DS 1	E395	19-Feb-2025	----	----	----		24-Feb-2025	7 days	5 days	✓
Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)										
HDPE total (zinc acetate+sodium hydroxide) WLNG US 1	E395	19-Feb-2025	----	----	----		24-Feb-2025	7 days	5 days	✓

Legend & Qualifier Definitions

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

Quality Control Parameter Frequency Compliance

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

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
TSS by Gravimetry	E160	1886802	1	20	5.0	5.0	✓
TDS by Gravimetry	E162	1886808	2	40	5.0	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1879755	1	20	5.0	5.0	✓
Chloride in Water by IC	E235.Cl	1879754	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	1879753	1	20	5.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1879757	1	20	5.0	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1879756	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1879758	1	20	5.0	5.0	✓
Alkalinity Species by Titration	E290	1879750	1	19	5.2	5.0	✓
Ammonia by Fluorescence	E298	1886596	1	14	7.1	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1886592	1	15	6.6	5.0	✓
Total Nitrogen by Colourimetry	E366	1886593	1	9	11.1	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1886601	1	8	12.5	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1884976	1	7	14.2	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1880200	2	18	11.1	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1880181	1	20	5.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1886577	1	19	5.2	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1886876	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1886724	1	11	9.0	5.0	✓
Laboratory Control Samples (LCS)							
TSS by Gravimetry	E160	1886802	1	20	5.0	5.0	✓
TDS by Gravimetry	E162	1886808	2	40	5.0	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1879755	1	20	5.0	5.0	✓
Chloride in Water by IC	E235.Cl	1879754	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	1879753	1	20	5.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1879757	1	20	5.0	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1879756	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1879758	1	20	5.0	5.0	✓
Alkalinity Species by Titration	E290	1879750	1	19	5.2	5.0	✓
Ammonia by Fluorescence	E298	1886596	1	14	7.1	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1886592	1	15	6.6	5.0	✓
Total Nitrogen by Colourimetry	E366	1886593	1	9	11.1	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1886601	1	8	12.5	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1884976	1	7	14.2	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1880200	1	18	5.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1880181	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	1886577	1	19	5.2	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1886876	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1886724	1	11	9.0	5.0	✓
Method Blanks (MB)							
TSS by Gravimetry	E160	1886802	1	20	5.0	5.0	✓
TDS by Gravimetry	E162	1886808	2	40	5.0	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1879755	1	20	5.0	5.0	✓
Chloride in Water by IC	E235.Cl	1879754	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	1879753	1	20	5.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1879757	1	20	5.0	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1879756	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1879758	1	20	5.0	5.0	✓
Alkalinity Species by Titration	E290	1879750	1	19	5.2	5.0	✓
Ammonia by Fluorescence	E298	1886596	1	14	7.1	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1886592	1	15	6.6	5.0	✓
Total Nitrogen by Colourimetry	E366	1886593	1	9	11.1	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1886601	1	8	12.5	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1884976	1	7	14.2	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1880200	1	18	5.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1880181	1	20	5.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1886577	1	19	5.2	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1886876	1	20	5.0	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1886724	1	11	9.0	5.0	✓
Matrix Spikes (MS)							
Bromide in Water by IC (Low Level)	E235.Br-L	1879755	1	20	5.0	5.0	✓
Chloride in Water by IC	E235.Cl	1879754	1	20	5.0	5.0	✓
Fluoride in Water by IC	E235.F	1879753	1	20	5.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1879757	1	20	5.0	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1879756	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1879758	1	20	5.0	5.0	✓
Ammonia by Fluorescence	E298	1886596	1	14	7.1	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1886592	1	15	6.6	5.0	✓
Total Nitrogen by Colourimetry	E366	1886593	1	9	11.1	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1886601	1	8	12.5	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1884976	1	7	14.2	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1880200	1	18	5.5	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1880181	1	20	5.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1886577	1	19	5.2	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1886876	1	20	5.0	5.0	✓

Matrix: **Water**

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

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Matrix Spikes (MS) - Continued							
Total Hexavalent Chromium (Cr VI) by IC	E532	1886724	1	11	9.0	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	: ALS Environmental - Vancouver
Contact	:	Account Manager	:
Address	:	Address	:
Telephone	:	Telephone	:
Project	:	Date Samples Received	: 19-Feb-2025 17:45
PO	:	Date Analysis Commenced	: 20-Feb-2025
C-O-C number	: ----	Issue Date	: 28-Feb-2025 09:19
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 Metals, Burnaby, British Columbia
		Vancouver Administration, Burnaby, British Columbia
		Vancouver Inorganics, 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: 1879750)											
VA25A3506-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	115	115	0.435%	20%	----
Physical Tests (QC Lot: 1886802)											
KS2500594-001	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	452	471	4.20%	20%	----
Physical Tests (QC Lot: 1886808)											
FJ2500534-001	Anonymous	Solids, total dissolved [TDS]	----	E162	20	mg/L	2090	2080	0.480%	20%	----
Physical Tests (QC Lot: 1886809)											
VA25A3544-002	WLNG DS 1	Solids, total dissolved [TDS]	----	E162	13	mg/L	64	67	2	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1879753)											
VA25A3389-001	Anonymous	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.039	0.040	0.001	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1879754)											
VA25A3389-001	Anonymous	Chloride	16887-00-6	E235.Cl	0.50	mg/L	11.3	11.4	0.111%	20%	----
Anions and Nutrients (QC Lot: 1879755)											
VA25A3389-001	Anonymous	Bromide	24959-67-9	E235.Br-L	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1879756)											
VA25A3389-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0050	mg/L	0.324	0.324	0.0368%	20%	----
Anions and Nutrients (QC Lot: 1879757)											
VA25A3389-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L	0.0140	0.0145	3.78%	20%	----
Anions and Nutrients (QC Lot: 1879758)											
VA25A3389-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	9.74	9.73	0.110%	20%	----
Anions and Nutrients (QC Lot: 1886593)											
KS2500601-001	Anonymous	Nitrogen, total	7727-37-9	E366	0.030	mg/L	0.203	0.223	0.020	Diff <2x LOR	----
Anions and Nutrients (QC Lot: 1886596)											
KS2500601-001	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: 1886601)											
VA25A3355-003	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0044	0.0044	0.00002	Diff <2x LOR	----
Organic / Inorganic Carbon (QC Lot: 1886592)											
KS2500601-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	1.95	1.93	0.02	Diff <2x LOR	----
Total Sulfides (QC Lot: 1884976)											
VA25A3389-001	Anonymous	Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.0016	0.0015	0.00005	Diff <2x LOR	----
Total Metals (QC Lot: 1880200)											

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: 1880200) - continued											
VA25A3553-001	Anonymous	Selenium, total	7782-49-2	E420	0.000100	mg/L	0.000167	0.000111	0.000056	Diff <2x LOR	----
VA25A3553-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0060	mg/L	0.249	0.229	8.27%	20%	----
		Antimony, total	7440-36-0	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Arsenic, total	7440-38-2	E420	0.00020	mg/L	0.00070	0.00059	0.00011	Diff <2x LOR	----
		Barium, total	7440-39-3	E420	0.00020	mg/L	0.0216	0.0200	7.45%	20%	----
		Beryllium, total	7440-41-7	E420	0.000040	mg/L	<0.000040	<0.000040	0	Diff <2x LOR	----
		Bismuth, total	7440-69-9	E420	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Boron, total	7440-42-8	E420	0.020	mg/L	0.184	0.183	0.001	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.0000100	mg/L	0.0000201	0.0000197	0.0000004	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.100	mg/L	34.0	33.6	0.998%	20%	----
		Cesium, total	7440-46-2	E420	0.000020	mg/L	0.000025	0.000028	0.000003	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420	0.00100	mg/L	<0.00100	<0.00100	0	Diff <2x LOR	----
		Cobalt, total	7440-48-4	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Copper, total	7440-50-8	E420	0.00100	mg/L	0.00140	0.00132	0.00008	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.020	mg/L	0.381	0.372	2.24%	20%	----
		Lead, total	7439-92-1	E420	0.000100	mg/L	0.000628	0.000632	0.000004	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0020	mg/L	0.0078	0.0078	0.00004	Diff <2x LOR	----
		Magnesium, total	7439-95-4	E420	0.0100	mg/L	52.2	49.6	5.11%	20%	----
		Manganese, total	7439-96-5	E420	0.00020	mg/L	0.0194	0.0183	5.66%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000100	mg/L	0.00137	0.00134	2.20%	20%	----
		Nickel, total	7440-02-0	E420	0.00100	mg/L	0.00106	0.00107	0.000007	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E420	0.100	mg/L	<0.100	<0.100	0	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.100	mg/L	16.4	15.0	8.65%	20%	----
		Rubidium, total	7440-17-7	E420	0.00040	mg/L	0.00588	0.00529	10.5%	20%	----
		Silicon, total	7440-21-3	E420	0.20	mg/L	3.89	3.90	0.345%	20%	----
		Silver, total	7440-22-4	E420	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Sodium, total	7440-23-5	E420	0.100	mg/L	418	396	5.41%	20%	----
		Strontium, total	7440-24-6	E420	0.00040	mg/L	0.390	0.378	3.14%	20%	----
		Sulfur, total	7704-34-9	E420	1.00	mg/L	39.8	39.7	0.158%	20%	----
		Tellurium, total	13494-80-9	E420	0.00040	mg/L	<0.00040	<0.00040	0	Diff <2x LOR	----
		Thallium, total	7440-28-0	E420	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Thorium, total	7440-29-1	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.00060	mg/L	0.0120	0.0102	15.8%	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: 1880200) - continued											
VA25A3553-001	Anonymous	Tungsten, total	7440-33-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Uranium, total	7440-61-1	E420	0.000020	mg/L	0.000376	0.000364	3.27%	20%	----
		Vanadium, total	7440-62-2	E420	0.00100	mg/L	0.00102	<0.00100	0.00002	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0060	mg/L	<0.0060	<0.0060	0	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00040	mg/L	<0.00040	<0.00040	0	Diff <2x LOR	----
Total Metals (QC Lot: 1886577)											
VA25A3507-007	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 1880181)											
VA25A3500-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0023	0.0022	0.00005	Diff <2x LOR	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	0.00078	0.00076	0.00002	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00025	0.00024	0.000009	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0476	0.0487	2.35%	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	0.027	0.027	0.0004	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.0000063	0.0000062	0.00000008	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	114	112	1.72%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	0.00117	0.00117	0.263%	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	0.00879	0.00886	0.857%	20%	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00021	0.00022	0.000008	Diff <2x LOR	----
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.030	0.031	0.0008	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	0.0055	0.0052	0.0002	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	80.6	81.2	0.721%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	1.14	1.14	0.818%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.00169	0.00166	1.73%	20%	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.0306	0.0306	0.0315%	20%	----
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.050	mg/L	3.74	3.85	2.79%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00582	0.00598	2.67%	20%	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000133	0.000124	0.000009	Diff <2x LOR	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	2.28	2.20	3.53%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Dissolved Metals (QC Lot: 1880181) - continued											
VA25A3500-001	Anonymous	Sodium, dissolved	7440-23-5	E421	0.050	mg/L	26.0	26.2	0.624%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.590	0.586	0.645%	20%	----
		Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	171	167	2.73%	20%	----
		Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
		Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	0.00212	0.00206	3.18%	20%	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.00304	0.00296	2.53%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0051	0.0053	0.0002	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: 1886876)											
VA25A3486-003	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	0.0000627	0.0000613	2.31%	20%	----
Speciated Metals (QC Lot: 1886724)											
VA25A3544-001	WLNG US 1	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: 1879750)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 1886802)						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
Physical Tests (QCLot: 1886808)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Physical Tests (QCLot: 1886809)						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
Anions and Nutrients (QCLot: 1879753)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 1879754)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Anions and Nutrients (QCLot: 1879755)						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 1879756)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1879757)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 1879758)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 1886593)						
Nitrogen, total	7727-37-9	E366	0.03	mg/L	<0.030	----
Anions and Nutrients (QCLot: 1886596)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 1886601)						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
Organic / Inorganic Carbon (QCLot: 1886592)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Total Sulfides (QCLot: 1884976)						
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	----
Total Metals (QCLot: 1880200)						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1880200) - continued						
Arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
Barium, total	7440-39-3	E420	0.0001	mg/L	<0.00010	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	<0.000020	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	<0.000050	----
Boron, total	7440-42-8	E420	0.01	mg/L	<0.010	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
Calcium, total	7440-70-2	E420	0.05	mg/L	<0.050	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	<0.000010	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
Copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----
Iron, total	7439-89-6	E420	0.01	mg/L	<0.010	----
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----
Lithium, total	7439-93-2	E420	0.001	mg/L	<0.0010	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	<0.0050	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	<0.00010	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	<0.050	----
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	<0.00020	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silicon, total	7440-21-3	E420	0.1	mg/L	<0.10	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	<0.00020	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	<0.00010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	<0.00010	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 1880200) - continued						
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----
Total Metals (QCLot: 1886577)						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
Dissolved Metals (QCLot: 1880181)						
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	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Dissolved Metals (QCLot: 1880181) - continued						
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	<0.00010	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	<0.00010	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	<0.00030	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	<0.00010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	<0.00020	----
Dissolved Metals (QCLot: 1886876)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Speciated Metals (QCLot: 1886724)						
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: 1879750)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	106	85.0	115	----
Physical Tests (QCLot: 1886802)									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	93.9	85.0	115	----
Physical Tests (QCLot: 1886808)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	114	85.0	115	----
Physical Tests (QCLot: 1886809)									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	107	85.0	115	----
Anions and Nutrients (QCLot: 1879753)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 1879754)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 1879755)									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	99.1	85.0	115	----
Anions and Nutrients (QCLot: 1879756)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	99.7	90.0	110	----
Anions and Nutrients (QCLot: 1879757)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	99.9	90.0	110	----
Anions and Nutrients (QCLot: 1879758)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	101	90.0	110	----
Anions and Nutrients (QCLot: 1886593)									
Nitrogen, total	7727-37-9	E366	0.03	mg/L	0.5 mg/L	100	75.0	125	----
Anions and Nutrients (QCLot: 1886596)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	103	85.0	115	----
Anions and Nutrients (QCLot: 1886601)									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	95.9	80.0	120	----
Organic / Inorganic Carbon (QCLot: 1886592)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	92.8	80.0	120	----
Total Sulfides (QCLot: 1884976)									
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.08 mg/L	103	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: 1880200)									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	98.8	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	102	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	106	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	105	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	100	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	97.9	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	100	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	97.5	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	101	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	100	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	100	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	104	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	99.8	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	98.3	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	98.2	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	102	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	98.9	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	112	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	100	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	98.3	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	103	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	92.7	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	100	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	100	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	110	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	102	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	101	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	96.2	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	93.7	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	101	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: 1880200) - continued									
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	98.6	80.0	120	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	102	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	98.0	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	97.2	80.0	120	----
Total Metals (QCLot: 1886577)									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	96.6	80.0	120	----
Dissolved Metals (QCLot: 1880181)									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	107	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	97.4	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	1 mg/L	111	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	109	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	99.5	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	95.7	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	97.3	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	106	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	96.1	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	96.8	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	110	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	106	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	104	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	102	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.5 mg/L	96.1	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	108	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	108	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	100	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	105	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	118	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	113	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	109	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	104	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	109	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	91.8	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	116	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.25 mg/L	95.4	80.0	120	----

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Dissolved Metals (QCLot: 1880181) - continued									
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	99.2	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	96.6	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	95.7	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	92.1	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	97.1	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	102	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	94.0	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	95.6	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.5 mg/L	108	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	110	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	98.0	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	94.1	80.0	120	----
Speciated Metals (QCLot: 1886724)									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.25 mg/L	99.2	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: 1879753)										
VA25A3389-002	Anonymous	Fluoride	16984-48-8	E235.F	1.05 mg/L	1 mg/L	105	75.0	125	----
Anions and Nutrients (QCLot: 1879754)										
VA25A3389-002	Anonymous	Chloride	16887-00-6	E235.Cl	102 mg/L	100 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 1879755)										
VA25A3389-002	Anonymous	Bromide	24959-67-9	E235.Br-L	0.514 mg/L	0.5 mg/L	103	75.0	125	----
Anions and Nutrients (QCLot: 1879756)										
VA25A3389-002	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	2.54 mg/L	2.5 mg/L	101	75.0	125	----
Anions and Nutrients (QCLot: 1879757)										
VA25A3389-002	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.512 mg/L	0.5 mg/L	102	75.0	125	----
Anions and Nutrients (QCLot: 1879758)										
VA25A3389-002	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	103 mg/L	100 mg/L	103	75.0	125	----
Anions and Nutrients (QCLot: 1886593)										
VA25A3355-003	Anonymous	Nitrogen, total	7727-37-9	E366	ND mg/L	----	ND	70.0	130	----
Anions and Nutrients (QCLot: 1886596)										
VA25A3355-003	Anonymous	Ammonia, total (as N)	7664-41-7	E298	ND mg/L	----	ND	75.0	125	----
Anions and Nutrients (QCLot: 1886601)										
VA25A3355-005	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0614 mg/L	0.05 mg/L	123	70.0	130	----
Organic / Inorganic Carbon (QCLot: 1886592)										
VA25A3355-003	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	ND mg/L	----	ND	70.0	130	----
Total Sulfides (QCLot: 1884976)										
VA25A3389-002	Anonymous	Sulfide, total (as S)	18496-25-8	E395	0.237 mg/L	0.2 mg/L	118	75.0	125	----
Total Metals (QCLot: 1880200)										
VA25A3553-002	Anonymous	Aluminum, total	7429-90-5	E420	0.392 mg/L	0.4 mg/L	97.9	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0402 mg/L	0.04 mg/L	100	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0420 mg/L	0.04 mg/L	105	70.0	130	----
		Barium, total	7440-39-3	E420	0.0403 mg/L	0.04 mg/L	101	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0803 mg/L	0.08 mg/L	100	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.0185 mg/L	0.02 mg/L	92.4	70.0	130	----
		Boron, total	7440-42-8	E420	0.193 mg/L	0.2 mg/L	96.5	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00762 mg/L	0.008 mg/L	95.2	70.0	130	----
		Calcium, total	7440-70-2	E420	ND mg/L	----	ND	70.0	130	----
		Cesium, total	7440-46-2	E420	0.0193 mg/L	0.02 mg/L	96.6	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0804 mg/L	0.08 mg/L	100	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: 1880200) - continued										
VA25A3553-002	Anonymous	Cobalt, total	7440-48-4	E420	0.0380 mg/L	0.04 mg/L	95.1	70.0	130	----
		Copper, total	7440-50-8	E420	0.0364 mg/L	0.04 mg/L	91.0	70.0	130	----
		Iron, total	7439-89-6	E420	3.77 mg/L	4 mg/L	94.3	70.0	130	----
		Lead, total	7439-92-1	E420	0.0370 mg/L	0.04 mg/L	92.6	70.0	130	----
		Lithium, total	7439-93-2	E420	0.195 mg/L	0.2 mg/L	97.6	70.0	130	----
		Magnesium, total	7439-95-4	E420	ND mg/L	----	ND	70.0	130	----
		Manganese, total	7439-96-5	E420	0.0375 mg/L	0.04 mg/L	93.8	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0421 mg/L	0.04 mg/L	105	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0734 mg/L	0.08 mg/L	91.8	70.0	130	----
		Phosphorus, total	7723-14-0	E420	21.4 mg/L	20 mg/L	107	70.0	130	----
		Potassium, total	7440-09-7	E420	ND mg/L	----	ND	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0416 mg/L	0.04 mg/L	104	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0828 mg/L	0.08 mg/L	103	70.0	130	----
		Silicon, total	7440-21-3	E420	19.8 mg/L	20 mg/L	99.2	70.0	130	----
		Silver, total	7440-22-4	E420	0.00758 mg/L	0.008 mg/L	94.7	70.0	130	----
		Sodium, total	7440-23-5	E420	ND mg/L	----	ND	70.0	130	----
		Strontium, total	7440-24-6	E420	ND mg/L	----	ND	70.0	130	----
		Sulfur, total	7704-34-9	E420	41.3 mg/L	40 mg/L	103	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0791 mg/L	0.08 mg/L	98.8	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00730 mg/L	0.008 mg/L	91.3	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0382 mg/L	0.04 mg/L	95.5	70.0	130	----
		Tin, total	7440-31-5	E420	0.0397 mg/L	0.04 mg/L	99.2	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0779 mg/L	0.08 mg/L	97.3	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0398 mg/L	0.04 mg/L	99.5	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00772 mg/L	0.008 mg/L	96.5	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.202 mg/L	0.2 mg/L	101	70.0	130	----
		Zinc, total	7440-66-6	E420	0.705 mg/L	0.8 mg/L	88.1	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0819 mg/L	0.08 mg/L	102	70.0	130	----
Total Metals (QCLot: 1886577)										
VA25A3516-001	Anonymous	Mercury, total	7439-97-6	E508	0.0000968 mg/L	0 mg/L	96.8	70.0	130	----
Dissolved Metals (QCLot: 1880181)										
VA25A3507-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.187 mg/L	0.2 mg/L	93.4	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0186 mg/L	0.02 mg/L	93.0	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0196 mg/L	0.02 mg/L	98.0	70.0	130	----
		Barium, dissolved	7440-39-3	E421	0.0194 mg/L	0.02 mg/L	96.8	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.0400 mg/L	0.04 mg/L	100	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.00900 mg/L	0.01 mg/L	90.0	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.100 mg/L	0.1 mg/L	100	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00379 mg/L	0.004 mg/L	94.7	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.00953 mg/L	0.01 mg/L	95.3	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0396 mg/L	0.04 mg/L	98.9	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0190 mg/L	0.02 mg/L	94.9	70.0	130	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Dissolved Metals (QCLot: 1880181) - continued										
VA25A3507-001	Anonymous	Copper, dissolved	7440-50-8	E421	0.0186 mg/L	0.02 mg/L	92.8	70.0	130	----
		Iron, dissolved	7439-89-6	E421	1.90 mg/L	2 mg/L	95.2	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0183 mg/L	0.02 mg/L	91.5	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.0952 mg/L	0.1 mg/L	95.2	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	0.0199 mg/L	0.02 mg/L	99.6	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0373 mg/L	0.04 mg/L	93.4	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	10.3 mg/L	10 mg/L	103	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	3.94 mg/L	4 mg/L	98.5	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.0188 mg/L	0.02 mg/L	94.2	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0411 mg/L	0.04 mg/L	103	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	9.22 mg/L	10 mg/L	92.2	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00381 mg/L	0.004 mg/L	95.3	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	19.6 mg/L	20 mg/L	98.0	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.0375 mg/L	0.04 mg/L	93.8	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.00359 mg/L	0.004 mg/L	89.8	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0191 mg/L	0.02 mg/L	95.4	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0186 mg/L	0.02 mg/L	93.3	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0372 mg/L	0.04 mg/L	93.0	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0183 mg/L	0.02 mg/L	91.4	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	0.00359 mg/L	0.004 mg/L	89.7	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.0975 mg/L	0.1 mg/L	97.5	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.385 mg/L	0.4 mg/L	96.2	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0392 mg/L	0.04 mg/L	97.9	70.0	130	----
Dissolved Metals (QCLot: 1886876)										
VA25A3486-004	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000945 mg/L	0 mg/L	94.5	70.0	130	----
Speciated Metals (QCLot: 1886724)										
VA25A3544-002	WLNG DS 1	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.255 mg/L	0.25 mg/L	102	70.0	130	----

ALS Environmental
www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

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	
Company:	
Contact:	

Report Format / Distribution

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

Email 1 or Fax	
Email 2	
Email 3	
Select Invoice D	
Email 1 or Fax	
Email 2	

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

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

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

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

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

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

Project Information

ALS Account # / Quote #:	VA25-TRIT100-001
Job #:	11964
PO / AFE:	11964 - Task 20 - Phase 3C-4C
LSD:	
ALS Lab Work Order # (lab use only):	VA3544

Oil and Gas Required Fields (client use)

AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	
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					P	P			F/P							
	WLNG US 1	19-Feb-25	11:54	Water	R	R	R	R	R	R	R	R	R	R	R						N	9
	pH: 6.7 cond: 70 temp: 4.2 Tur: 16.4																					
	WLNG DS 1			Water	R	R	R	R	R	R	R	R	R	R	R						N	9
	pH: 6.7 cond: 50 temp: 4.2 Tur: 16.2	19-Feb-25	11:16																			

Environmental Division
Vancouver
Work Order Reference
VA25A3544

Telephone : +1 604 253 4188

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

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

Are samples for human consumption/ use?
☐ ☑ NO

Special Instructions / Specify Criteria to add (electr

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		
			9		

SHIPMENT RELEASE (client use)

Time: 7:00

INITIAL SHIPMENT RECEPTION (lab use only)

Received by: Date: Time:

FINAL SHIPMENT RECEPTION (lab use only)

Received by: Time: 5:45 pm

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

2025-2-19-Shafiei-0A8FC

Project Component:	Tunnel	**Site Name:**	Receiving Environment - Downstream of Discharge
Inspection Date:	02/19/2025	**Location:**	WLNG
Triton QP:	Farshad Shafiei	**Latitude/Longitude:**	49.669151 -123.248267
Temperature(c):	Low 4 High 7	**Permit:**	PE 110136
Weather Conditions:	Heavy Rain	**Ground Conditions:**	Wet

Observations

Time: 11:16:12 **Flow Volume (visual):** high

Notes: Water slightly turbid due to rain

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

Samples Collected - Parameters

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

Logger Maintenance

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

Describe Logger Maintenance

Checked and downloaded data manually to see if the gap in data can be filled in

Photos

Photo: 1

Location: EAS DS

Description: Upstream

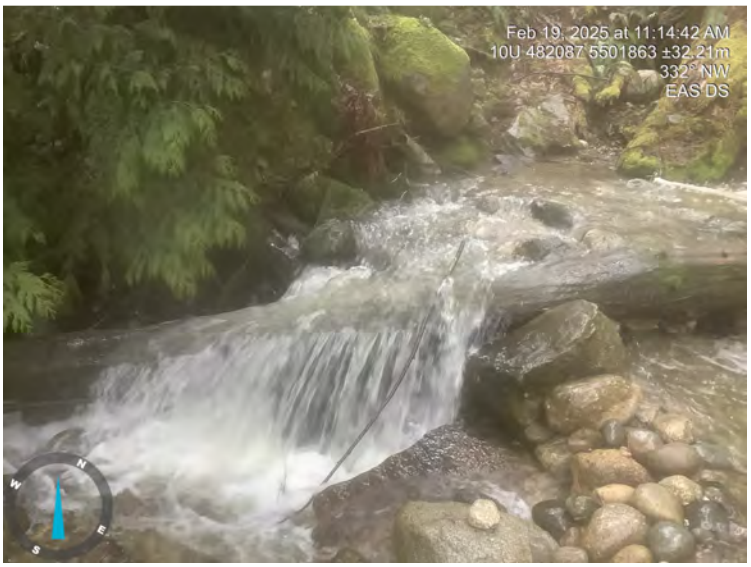


Photo: 2

Location: EAS DS

Description: Across view

Photos

Photo: 3

Location: EAS DS

Description: Downstream

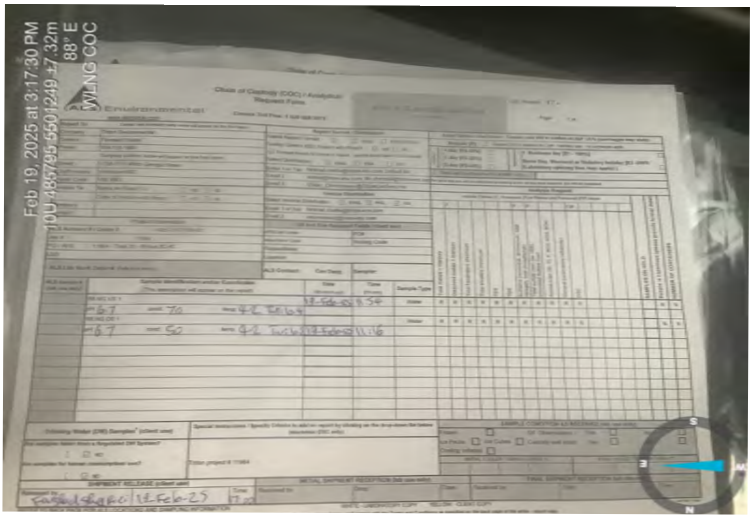


Photo: 4

Location: COC

Description:

Sign Off

Report Prepared By: Farshad Shafiei

Report Reviewer: Farshad Shafiei

Name:

Designation:

Designation Number:

Report Reviewed:

Professional(s) of Record: N/A

FortisBC Eagle Mountain-Woodfibre Gas Pipeline

Water Discharge Authorization Water Quality Monitoring

2025-2-19-Shafiei-2B75C

Project Component:	Tunnel	**Site Name:**	Receiving Environment - Upstream of Discharge
Inspection Date:	02/19/2025	**Location:**	WLNG
Triton QP:	Farshad Shafiei	**Latitude/Longitude:**	49.669455 -123.25087
Temperature(c):	Low 4 High 7	**Permit:**	PE 110136
Weather Conditions:	Heavy Rain	**Ground Conditions:**	Wet

Observations

Time: 11:54:11 **Flow Volume (visual):** high

Notes: Water slightly turbid due to rain

Odour Detected?:	Yes	**Notes:**	Maybe from Grout and centrifuge
Unusual Colour?	No	**Notes:**	
Unusual Observations?	No	**Notes:**	
Sheen on Water?	No	**Notes:**	

Samples Collected - Parameters

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

Logger Maintenance

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

Describe Logger Maintenance

Checked and cleaned

Photos

Photo: 1

Location: EAS US

Description: Upstream

Photo: 2

Location: EAS US

Description: Across view

Photos

Photo: 3

Location: EAS US

Description: Downstream

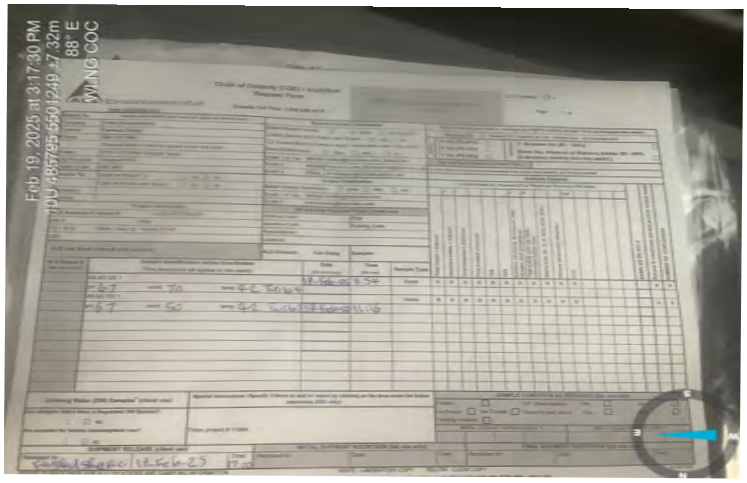


Photo: 4

Location: Coc

Description:

Sign Off

Report Prepared By:

Report Reviewer: Farshad Shafiei

Name:

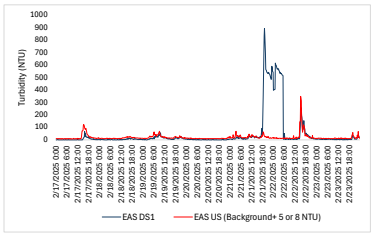
Designation:

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)
2/17/2025 0:00	6.9	299.9	0.1	7.7	11.2	0.0	2/17/2025 0:00	2.5	32.4	0.0	7.2	12.3	0.1	8.1
2/17/2025 0:15	6.7	270.8	0.1	7.7	11.2	0.0	2/17/2025 0:15	2.5	35.8	0.0	7.2	12.3	0.2	8.2
2/17/2025 0:30	3.9	76.4	0.0	7.3	12.1	0.0	2/17/2025 0:30	2.5	35.2	0.0	7.2	12.3	0.8	8.8
2/17/2025 0:45	6.6	339.8	0.2	7.8	11.2	0.8	2/17/2025 0:45	2.5	35.4	0.0	7.2	12.3	0.3	8.3
2/17/2025 1:00	6.6	325.5	0.2	7.8	11.2	1.1	2/17/2025 1:00	2.5	35.3	0.0	7.2	12.2	0.0	8.0
2/17/2025 1:15	5.3	170.0	0.1	7.6	11.5	0.0	2/17/2025 1:15	2.6	32.1	0.0	7.2	12.3	0.2	8.2
2/17/2025 1:30	3.6	66.9	0.0	7.2	12.2	0.0	2/17/2025 1:30	2.6	35.4	0.0	7.2	12.3	0.1	8.1
2/17/2025 1:45	6.4	321.3	0.2	7.7	11.3	0.0	2/17/2025 1:45	2.6	35.5	0.0	7.2	12.2	0.6	8.6
2/17/2025 2:00	6.8	358.0	0.2	7.8	11.2	0.0	2/17/2025 2:00	2.6	34.4	0.0	7.2	12.3	0.6	8.6
2/17/2025 2:15	6.1	286.0	0.1	7.8	11.2	0.0	2/17/2025 2:15	2.6	31.0	0.0	7.2	12.2	0.0	8.0
2/17/2025 2:30	6.9	402.2	0.2	7.8	11.1	0.0	2/17/2025 2:30	2.6	34.8	0.0	7.2	12.2	0.1	8.1
2/17/2025 2:45	6.6	357.4	0.2	7.8	11.2	0.0	2/17/2025 2:45	2.6	34.6	0.0	7.2	12.3	0.0	8.0
2/17/2025 3:00	3.9	82.2	0.0	7.4	12.1	0.0	2/17/2025 3:00	2.6	34.2	0.0	7.2	12.2	1.1	9.1
2/17/2025 3:15	5.5	324.8	0.2	7.8	11.6	0.0	2/17/2025 3:15	2.6	30.9	0.0	7.2	12.2	0.0	8.0
2/17/2025 3:30	6.8	333.0	0.2	7.7	11.2	0.0	2/17/2025 3:30	2.6	34.5	0.0	7.2	12.2	0.0	8.0
2/17/2025 3:45	6.9	315.8	0.1	7.7	11.2	0.0	2/17/2025 3:45	2.6	34.0	0.0	7.1	12.2	0.2	8.2
2/17/2025 4:00	6.9	305.9	0.1	7.7	11.2	0.8	2/17/2025 4:00	2.6	32.1	0.0	7.2	12.3	0.0	8.0
2/17/2025 4:15	4.6	129.4	0.1	7.5	11.9	0.0	2/17/2025 4:15	2.6	30.3	0.0	7.3	12.2	0.0	8.0
2/17/2025 4:30	4.0	128.0	0.1	7.4	12.0	0.0	2/17/2025 4:30	2.6	33.8	0.0	7.2	12.2	0.7	8.7
2/17/2025 4:45	5.0	166.5	0.1	7.6	11.6	0.0	2/17/2025 4:45	2.6	33.3	0.0	7.2	12.3	0.2	8.2
2/17/2025 5:00	5.9	296.6	0.1	7.7	11.6	0.0	2/17/2025 5:00	2.6	33.8	0.0	7.2	12.3	0.0	8.0
2/17/2025 5:15	6.9	328.9	0.2	7.8	11.2	0.3	2/17/2025 5:15	2.6	33.0	0.0	7.2	12.2	0.1	8.1
2/17/2025 5:30	6.9	328.8	0.2	7.8	11.1	0.0	2/17/2025 5:30	2.6	33.8	0.0	7.2	12.2	0.0	8.0
2/17/2025 5:45	7.0	350.3	0.2	7.8	11.1	0.0	2/17/2025 5:45	2.6	32.8	0.0	7.2	12.2	0.0	8.0
2/17/2025 6:00	4.5	110.1	0.1	7.5	11.8	0.0	2/17/2025 6:00		30.8	0.0	7.2	12.2	0.2	8.2
2/17/2025 6:15	5.7	310.4	0.1	7.7	11.6	0.0	2/17/2025 6:15	2.6	30.3	0.0	7.2	12.3	0.0	8.0
2/17/2025 6:30	6.8	283.3	0.1	7.6	11.2	0.0	2/17/2025 6:30	2.6	33.0	0.0	7.2	12.3	0.3	8.3
2/17/2025 6:45	6.5	250.2	0.1	7.6	11.3	1.0	2/17/2025 6:45	2.6	32.6	0.0	7.2	12.2	0.3	8.3
2/17/2025 7:00	6.9	257.7	0.1	7.6	11.2	0.0	2/17/2025 7:00	2.6	32.7	0.0	7.2	12.3	0.1	8.1
2/17/2025 7:15	6.9	243.8	0.1	7.6	11.2	0.0	2/17/2025 7:15	2.6	32.1	0.0	7.2	12.3	0.2	8.2
2/17/2025 7:30	5.7	176.5	0.1	7.5	11.5	0.0	2/17/2025 7:30	2.6	30.9	0.0	7.2	12.2	0.0	8.0
2/17/2025 7:45	6.1	215.3	0.1	7.5	11.5	0.0	2/17/2025 7:45	2.6	31.6	0.0	7.2	12.2	0.2	8.2
2/17/2025 8:00	4.6	89.4	0.0	7.3	11.8	0.0	2/17/2025 8:00	2.6	31.9	0.0	7.2	12.3	0.0	8.0
2/17/2025 8:15	6.7	230.5	0.1	7.6	11.2	0.0	2/17/2025 8:15	2.6	31.3	0.0	7.2	12.2	0.1	8.1
2/17/2025 8:30	6.9	246.3	0.1	7.6	11.2	0.0	2/17/2025 8:30	2.6	31.7	0.0	7.2	12.2	0.0	8.0
2/17/2025 8:45	7.0	221.2	0.1	7.6	11.2	0.0	2/17/2025 8:45	2.6	31.7	0.0	7.2	12.2	0.0	8.0
2/17/2025 9:00	5.0	104.9	0.0	7.5	11.7	0.0	2/17/2025 9:00	2.6	31.7	0.0	7.1	12.2	0.0	8.0
2/17/2025 9:15	3.6	55.5	0.0	7.1	12.2	0.0	2/17/2025 9:15	2.7	27.9	0.0	7.2	12.3	0.0	8.0
2/17/2025 9:30	6.7	254.1	0.1	7.7	11.2	0.0	2/17/2025 9:30	2.7	31.4	0.0	7.1	12.3	0.2	8.2
2/17/2025 9:45	6.6	245.3	0.1	7.8	11.2	0.0	2/17/2025 9:45	2.7	30.9	0.0	7.1	12.3	3.4	11.4
2/17/2025 10:00	4.5	132.0	0.1	7.4	12.0	0.0	2/17/2025 10:00	2.7	31.1	0.0	7.2	12.3	0.0	8.0
2/17/2025 10:15	3.5	52.9	0.0	7.1	12.2	0.0	2/17/2025 10:15	2.8	31.1	0.0	7.2	12.3	0.0	8.0
2/17/2025 10:30	3.3	47.5	0.0	7.0	12.3	0.0	2/17/2025 10:30	2.8	31.0	0.0	7.1	12.3	0.0	8.0
2/17/2025 10:45	3.9	95.1	0.0	7.3	12.1	0.0	2/17/2025 10:45	3.0	31.0	0.0	7.2	12.3	0.2	8.2
2/17/2025 11:00	5.2	190.4	0.1	7.3	12.0	0.0	2/17/2025 11:00	3.1	31.1	0.0	7.2	12.3	0.1	8.1
2/17/2025 11:15	7.1	211.4	0.1	7.5	11.1	0.0	2/17/2025 11:15	3.2	30.1	0.0	7.2	12.2	0.0	8.0
2/17/2025 11:30	7.3	207.1	0.1	7.6	11.1	0.0	2/17/2025 11:30	3.3	31.3	0.0	7.2	12.2	0.2	8.2
2/17/2025 11:45	7.4	215.5	0.1	7.6	11.1	2.5	2/17/2025 11:45	3.3	31.8	0.0	7.2	12.2	0.0	8.0
2/17/2025 12:00	7.4	213.8	0.1	7.7	11.0	0.0	2/17/2025 12:00	3.4	34.7	0.0	7.2	12.2	1.9	9.9
2/17/2025 12:15	7.0	177.2	0.1	7.6	11.2	0.0	2/17/2025 12:15	3.4	36.1	0.0	7.3	12.1	0.0	8.0
2/17/2025 12:30	5.0	77.7	0.0	7.3	11.8	0.0	2/17/2025 12:30	3.5	40.1	0.0	7.3	12.1	0.0	8.0
2/17/2025 12:45	7.5	197.2	0.1	7.7	11.0	0.0	2/17/2025 12:45	3.6	44.3	0.0	7.3	12.1	0.0	8.0
2/17/2025 13:00	7.6	186.8	0.1	7.7	11.0	0.0	2/17/2025 13:00	3.7	46.2	0.0	7.3	12.1	1.4	9.4
2/17/2025 13:15	7.7	177.5	0.1	7.6	11.0	0.0	2/17/2025 13:15	3.9	50.7	0.0	7.4	12.0	0.8	8.8
2/17/2025 13:30	7.0	145.6	0.1	7.6	11.1	0.0	2/17/2025 13:30	3.9	53.1	0.0	7.4	12.0	1.6	9.6
2/17/2025 13:45	6.9	177.5	0.1	7.5	11.3	0.0	2/17/2025 13:45	3.9	59.3	0.0	7.4	12.0	1.0	9.0
2/17/2025 14:00	6.7	134.1	0.1	7.5	11.2	0.0	2/17/2025 14:00	3.7	63.8	0.0	7.5	12.0	16.2	21.2
2/17/2025 14:15	7.0	193.6	0.1	7.6	11.2	0.0	2/17/2025 14:15	3.7	60.7	0.0	7.5	12.1	65.5	70.5
2/17/2025 14:30	7.4	177.3	0.1	7.6	11.1	0.0	2/17/2025 14:30	3.7	66.7	0.0	7.5	12.0	64.9	69.9
2/17/2025 14:45	7.7	173.6	0.1	7.6	11.0	6.3	2/17/2025 14:45	3.8	66.9	0.0	7.5	12.0	70.7	75.7
2/17/2025 15:00	7.7	180.4	0.1	7.6	11.0	13.5	2/17/2025 15:00	3.8	69.0	0.0	7.6	12.0	108.3	113.3
2/17/2025 15:15	7.7	189.7	0.1	7.6	11.0	13.3	2/17/2025 15:15	3.8	72.0	0.0	7.6	12.0	116.7	121.7
2/17/2025 15:30	7.3	185.1	0.1	7.6	11.1	22.8	2/17/2025 15:30	3.7	71.5	0.0	7.6	12.0	107.3	112.3
2/17/2025 15:45	5.4	87.7	0.0	7.4	11.6	65.9	2/17/2025 15:45	3.7	63.2	0.0	7.6	12.0	88.6	93.6
2/17/2025 16:00	6.8	184.1	0.1	7.6	11.3	27.1	2/17/2025 16:00	3.7	74.2	0.0	7.6	12.0	77.9	82.9
2/17/2025 16:15	6.5	162.3	0.1	7.6	11.5	45.9	2/17/2025 16:15	3.7	73.7	0.0	7.6	12.0	83.8	88.8
2/17/2025 16:30	7.6	202.9	0.1	7.6	11.0	23.6	2/17/2025 16:30	3.6	78.8	0.0	7.6	12.1	85.8	90.8
2/17/2025 16:45	7.6	205.5	0.1	7.6	11.0	19.3	2/17/2025 16:45	3.5	78.3	0.0	7.7	12.1	63.8	68.8
2/17/2025 17:00	7.5	186.3	0.1	7.6	11.0	20.5	2/17/2025 17:00	3.5	81.5	0.0	7.6	12.1	45.9	50.9
2/17/2025 17:15	7.1	194.3	0.1	7.6	11.2	20.0	2/17/2025 17:15	3.4	83.5	0.0	7.7	12.1	35.5	40.5
2/17/2025 17:30	6.7	197.7	0.1	7.7	11.2	15.7	2/17/2025 17:30	3.4	87.0	0.0	7.6	12.1	32.0	37.0
2/17/2025 17:45	4.6	104.1	0.0	7.4	11.9	24.4	2/17/2025 17:45	3.3	88.7	0.0	7.7	12.1	25.6	30.6
2/17/2025 18:00	6.6	209.6	0.1	7.7	11.3	11.7	2/17/2025 18:00	3.2	94.0	0.0	7.6	12.2	23.9	28.9
2/17/2025 18:15	6.4	179.0	0.1	7.7	11.3	12.7	2/17/2025 18:15	3.2	96.7	0.1	7.7	12.2	16.2	21.2
2/17/2025 18:30	4.5	115.1	0.1	7.4	11.9	16.4	2/17/2025 18:30	3.1	98.9	0.1	7.7	12.2	15.6	20.6
2/17/2025 18:45	7.1	174.2	0.1	7.7	11.2	8.1	2/17/2025 18:45	3.1	96.4	0.1	7.7	12.2	18.1	23.1
2/17/2025 19:00	7.1	183.8	0.1	7.7	11.2	5.6	2/17/2025 19:00	3.1	96.0	0.1	7.7	12.2	13.6	18.6
2/17/2025 19:15	7.0	169.7	0.1	7.6	11.2	5.6	2/17/2025 19:15	3.1	92.7	0.0	7.7	12.2	15.4	20.4
2/17/2025 19:30	6.1	144.0	0.1	7.6	11.4	3.8	2/17/2025 19:30	3.1	81.3	0.0	7.6	12.2	10.1	15.1
2/17/2025 19:45	4.4	110.5	0.1	7.4	12.0	5.8	2/17/2025 19:45	3.1	88.7	0.0	7.6	12.2	11.6	16.6
2/17/2025 20:00	6.9	181.6	0.1	7.7	11.2	3.7	2/17/2025 20:00	3.1	86.4	0.0	7.7	12.2	10.0	15.0
2/17/2025 20:15	6.3	160.3	0.1	7.6	11.5	3.1	2/17/2025 20:15	3.1	86.0	0.0	7.6	12.2	10.2	15.2
2/17/2025 20:30	7.0	169.0	0.1	7.6	11.2	7.9	2/17/2025 20:30	3.1	84.0	0.0	7.6	12.2	7.2	15.2
2/17/2025 20:45	7.0	193.3	0.1	7.7	11.2	2.8	2/17/2025 20:45	3.1	79.1	0.0	7.6	12.2	5.7	13.7
2/17/2025 21:00	6.8	186.1	0.1	7.7	11.3	1.8	2/17/2025 21:00	3.1	83.4	0.0	7.6	12.2	8.3	13.3
2/17/2025 21:15	7.0	187.9	0.1	7.7	11.2	1.3	2/17/2025 21:15	3.1	82.9	0.0	7.6	12.2	4.1	12.1
2/17/2025 21:30	6.4	165.2	0.1	7.6	11.4	0.4	2/17/2025 21:30	3.1	81.2	0.0	7.6	12.2	4.6	12.6
2/17/2025 21:45	4.1	96.6	0.0	7.3	12.1	0.9	2/17/2025 21:45	3.1	80.3	0.0	7.6	12.2	2.5	10.5
2/17/2025 22:00	5.4	156.6	0.1	7.5	11.7	0.0	2/17/2025 22:00	3.1	76.2	0.0	7.6	12.2	3.4	11.4
2/17/2025 22:15	6.9	166.4	0.1	7.6	11.3	1.9	2/17/2025 22:15	3.1	68.5	0.0	7.6	12.2	1.7	9.7
2/17/2025 22:30	6.9	165.8	0.1	7.6	11.2	2.0	2/17/2025 22:30	3.1	75.2	0.0	7.6	12.2	2.2	10.2
2/17/2025 22:45	6.9	169.4	0.1	7.6	11.3	0.8	2/17/2025 22:45	3.1	66.7	0.0	7.5	12.2	3.3	11.3
2/17/2025 23:00	4.5	93.1	0.0	7.3	11.9	0.0	2/17/2025 23:00	3.1	73.0	0.0	7.6	12.2	3.9	11.9
2/17/2025 23:15	5.8	157.6	0.1	7.5	11.7	0.7	2/17/2025 23:15	3.1	72.6	0.0	7.6	12.2	7.5	15.5
2/17/2025 23:30	6.8	156.1	0.1	7.5	11.3	1.9	2/17/2025 23:30	3.1	71.3	0.0	7.5	12.2	2.2	10.2
2/17/2025 23:45	6.5	157.0	0.1	7.4	11.4	1.5	2/17/2025 23:45	3.1	63.8	0.0	7.5	12.2	2.9	10.9
2/18/2025 0:00	6.4	148.4	0.1	7.4	11.4	0.1	2/18/2025 0:00	3.1	69.8	0.0	7.5	12.2	2.6	10.6
2/18/2025 0:15	6.4	150.3	0.1	7.5	11.3	0.0	2/18/2025 0:15	3.1	69.4	0.0	7.5	12.2	1.1	9.1
2/18/2025 0:30	4.1	87.2	0.0	7.2	12.1	0.0	2/18/2025 0:30	3.1	69.7	0.0	7.5	12.3	1.6	9.6
2/18/2025 0:45	6.9	262.3	0.1	8.1	11.3	2.8	2/18/2025 0:45	3.1	68.5	0.0	7.6	12.2	2.8	10.8
2/18/2025 1:00	7.0	332.6	0.2	8.2	11.2	0.2	2/18/2025 1:00	3.1	68.0	0.0	7.5	12.2	2.5	10.5
2/18/2025 1:15	5.5	232.3	0.1	7.8	11.6	1.1	2/18/2025 1:15	3.0	68.2	0.0	7.5	12.2	3.1	11.1
2/18/2025 1:30	6.9	377.3	0.2	8.6	11.2	0.3	2/18/2025 1:30	3.1	66.5	0.0	7.5	12.2	3.4	11.4
2/18/2025 1:45	6.9	434.2	0.2	8.5	11.3	0.3	2/18/2025 1:45	3.1	66.7	0.0	7.5	12.2	1.3	9.3
2/18/2025 2:00	4.0	98.9	0.0	7.5	12.1	0.0	2/18/2025 2:00	3.1	64.7	0.0	7.5	12.2	0.8	8.8
2/18/2025 2:15	6.3	397.0	0.2	8.6	11.4	0.2	2/18/2025 2:15	3.1	65.8	0.0	7.5	12.2	1.4	9.4
2/18/2025 2:30	6.6	449.4	0.2	8.8	11.4	0.2	2/18/2025 2:30	3.1	63.5	0.0	7.5	12.2	0.6	8.6
2/18/2025 2:45	7.0	583.7	0.3	8.2	11.2	0.0	2/18/2025 2:45	3.1	57.1	0.0	7.5	12.2	0.9	8.9
2/18/2025 3:00	4.2	122.7	0.1	7.7	12.0	0.0	2/18/2025 3:00	3.1	63.1	0.0	7.5	12.2	1.2	9.2
2/18/2025 3:15	5.0	226.4	0.1	8.3	11.6	0.0	2/18/2025 3:15	3.1	63.9	0.0	7.5	12.2	1.6	9.6
2/18/2025 3:30	5.5	293.4	0.1	8.8	11.6	0.0	2/18/2025 3:30	3.1	61.4	0.0	7.5	12.2	0.7	8.7
2/18/2025 3:45	6.5	540.8	0.3	8.4	11.4	0.0	2/18/2025 3:45	3.1	62.4	0.0	7.5	12.2	2.3	10.3
2/18/2025 4:00	4.1	134.4	0.1	7.7	12.1	0.0	2/18/2025 4:00	3.1	60.5	0.0	7.5	12.2	2.3	10.3
2/18/2025 4:15	6.7	538.7	0.3	8.9	11.3	0.0	2/18/2025 4:15	3.1	60.7	0.0	7.5	12.2	0.6	8.6
2/18/2025 4:30	6.5	564.9	0.3	8.9	11.3	2.7	2/18/2025 4:30	3.1	59.4	0.0	7.5	12.2	4.2	12.2
2/18/2025 4:45	5.2	385.9	0.2	8.5	11.7	0.0	2/18/2025 4:45	3.1	59.1	0.0	7.4	12.2	0.5	8.5
2/18/2025 5:00	6.9	704.8	0.3	8.5	11.2	1.1	2/18/2025 5:00	3.1	58.5	0.0	7.5	12.2	1.5	9.5
2/18/2025 5:15	6.8	667.2	0.3	8.7	11.3	0.6	2/18/2025 5:15	3.1	58.3	0.0	7.5	12.2	2.5	10.5
2/18/2025 5:30	5.7	491.5	0.2	8.7	11.8	0.9	2/18/2025 5:30	3.1	57.7	0.0	7.5	12.2	1.2	9.2
2/18/2025 5:45	6.3	525.8	0.3	8.4	11.4	0.0	2/18/2025 5:45	3.1	58.3	0.0	7.5	12.2	2.8	10.8
2/18/2025 6:00	4.1	124.4	0.1	7.8	12.1	0.0	2/18/2025 6:00	3.1	56.4	0.0	7.5	12.2	1.1	9.1
2/18/2025 6:15	6.9	535.5	0.3	8.2	11.2	1.0	2/18/2025 6:15	3.1	49.7	0.0	7.5	12.2	0.6	8.6
2/18/2025 6:30	6.6	524.7	0.3	8.0	11.3	0.5	2/18/2025 6:30	3.1	55.5	0.0	7.4	12.2	0.5	8.5
2/18/2025 6:45	6.9	413.8	0.2	7.8	11.3	4.2	2/18/2025 6:45	3.1	49.7	0.0	7.4	12.2	1.5	9.5
2/18/2025 7:00	4.7	142.0	0.1	7.6	11.8	0.0	2/18/2025 7:00	3.1	55.2	0.0	7.4	12.2	1.2	9.2
2/18/2025 7:15	6.8	356.9	0.2	7.8	11.3	0.0	2/18/2025 7:15	3.1	54.9	0.0	7.4	12.2	0.5	8.5
2/18/2025 7:30	4.8	137.8	0.1	7.6	11.7	0.0	2/18/2025 7:30	3.1	54.4	0.0	7.4	12.2	2.8	10.8
2/18/2025 7:45	6.6	308.3	0.1	7.7	11.4	0.0	2/18/2025 7:45	3.1	48.5	0.0	7.4	12.2	2.1	10.1
2/18/2025 8:00	6.4	245.7	0.1	7.6	11.4	0.0	2/18/2025 8:00	3.1	53.8	0.0	7.4	12.2	1.2	9.2
2/18/2025 8:15	6.2	235.3	0.1	7.7	11.4	1.0	2/18/2025 8:15	3.1	52.7	0.0	7.4	12.2	2.1	10.1
2/18/2025 8:30	3.8	79.2	0.0	7.3	12.2	0.0	2/18/2025 8:30	3.1	53.7	0.0	7.4	12.2	1.9	9.9
2/18/2025 8:45	3.8	93.4	0.0	7.3	12.2	0.0	2/18/2025 8:45	3.1	52.5	0.0	7.4	12.2	0.6	8.6
2/18/2025 9:00	6.1	248.0	0.1	7.6	11.5	0.0	2/18/2025 9:00	3.1	49.1	0.0	7.4	12.2	0.2	8.2
2/18/2025 9:15	6.0	204.8	0.1	7.6	11.5	0.0	2/18/2025 9:15	3.2	52.5	0.0	7.4	12.2	0.7	8.7
2/18/2025 9:30	6.8	230.2	0.1	7.7	11.3	0.0	2/18/2025 9:30	3.2	52.0	0.0	7.4	12.2	0.5	8.5
2/18/2025 9:45	4.2	84.1	0.0	7.3	12.1	0.0	2/18/2025 9:45	3.2	44.7	0.0	7.4	12.2	0.7	8.7



2/18/2025 10:00	5.7	210.2	0.1	7.6	11.7	3.1	2/18/2025 10:00	3.2	52.0	0.0	7.4	12.2	1.0	9.0
2/18/2025 10:15	6.7	217.5	0.1	7.7	11.3	0.0	2/18/2025 10:15	3.3	47.7	0.0	7.4	12.2	1.2	9.2
2/18/2025 10:30	6.8	210.3	0.1	7.7	11.3	0.0	2/18/2025 10:30	3.3	55.3	0.0	7.5	12.2	1.6	9.6
2/18/2025 10:45	5.9	168.1	0.1	7.7	11.5	0.0	2/18/2025 10:45	3.4	57.9	0.0	7.4	12.2	3.0	11.0
2/18/2025 11:00	4.4	96.1	0.0	7.4	12.0	0.0	2/18/2025 11:00	3.4	57.7	0.0	7.5	12.2	1.7	9.7
2/18/2025 11:15	6.4	374.7	0.2	7.9	11.5	4.1	2/18/2025 11:15	3.4	61.0	0.0	7.5	12.2	1.7	9.7
2/18/2025 11:30	6.6	334.3	0.2	8.5	11.4	0.0	2/18/2025 11:30	3.5	62.9	0.0	7.5	12.2	1.2	9.2
2/18/2025 11:45	7.1	430.9	0.2	8.7	11.2	0.2	2/18/2025 11:45	3.5	57.3	0.0	7.5	12.2	2.9	10.9
2/18/2025 12:00	6.2	310.3	0.1	8.5	11.4	0.0	2/18/2025 12:00	3.5	68.5	0.0	7.5	12.2	1.6	9.6
2/18/2025 12:15	4.5	128.2	0.1	7.6	12.0	0.0	2/18/2025 12:15	3.5	70.4	0.0	7.6	12.2	3.9	11.9
2/18/2025 12:30	7.0	496.1	0.2	8.1	11.2	0.0	2/18/2025 12:30	3.6	74.7	0.0	7.6	12.2	5.2	13.2
2/18/2025 12:45	6.8	453.5	0.2	8.3	11.3	0.3	2/18/2025 12:45	3.6	76.4	0.0	7.6	12.2	7.3	15.3
2/18/2025 13:00	7.2	494.8	0.2	8.6	11.2	1.3	2/18/2025 13:00		69.7	0.0	7.6	12.2	5.7	13.7
2/18/2025 13:15	5.5	199.1	0.1	7.7	11.6	0.0	2/18/2025 13:15	3.7	81.9	0.0	7.6	12.1	5.1	13.1
2/18/2025 13:30	4.5	106.6	0.0	7.4	12.0	1.6	2/18/2025 13:30	3.8	83.2	0.0	7.7	12.1	7.1	15.1
2/18/2025 13:45	4.8	179.1	0.1	7.6	11.9	1.9	2/18/2025 13:45	3.8	90.1	0.0	7.7	12.1	9.7	14.7
2/18/2025 14:00	6.3	344.8	0.2	9.1	11.5	1.2	2/18/2025 14:00	3.9	91.4	0.0	7.7	12.1	10.5	15.5
2/18/2025 14:15	7.2	434.3	0.2	8.9	11.2	2.1	2/18/2025 14:15	3.8	97.9	0.1	7.7	12.1	14.8	19.8
2/18/2025 14:30	7.4	529.4	0.3	7.5	11.1	0.2	2/18/2025 14:30	3.9	97.4	0.1	7.7	12.1	12.6	17.6
2/18/2025 14:45	6.0	251.8	0.1	7.5	11.4	4.7	2/18/2025 14:45	3.9	100.2	0.1	7.8	12.1	17.6	22.6
2/18/2025 15:00	4.9	151.4	0.1	7.4	11.9	5.7	2/18/2025 15:00	4.0	100.2	0.1	7.8	12.1	13.4	18.4
2/18/2025 15:15	6.9	402.7	0.2	7.6	11.2	2.7	2/18/2025 15:15	4.0	101.7	0.1	7.8	12.1	19.9	24.9
2/18/2025 15:30	7.3	414.8	0.2	8.2	11.1	7.9	2/18/2025 15:30	4.0	99.7	0.1	7.8	12.0	14.7	19.7
2/18/2025 15:45	7.3	464.6	0.2	7.6	11.1	4.1	2/18/2025 15:45	4.0	101.7	0.1	7.8	12.0	18.4	23.4
2/18/2025 16:00	6.9	388.0	0.2	7.5	11.2	6.9	2/18/2025 16:00	4.0	99.3	0.1	7.8	12.0	16.3	21.3
2/18/2025 16:15	5.2	157.4	0.1	7.5	11.7	12.1	2/18/2025 16:15	4.0	87.6	0.0	7.8	12.0	16.4	21.4
2/18/2025 16:30	4.5	122.1	0.1	7.4	11.9	12.9	2/18/2025 16:30	4.0	95.8	0.1	7.7	12.0	16.6	21.6
2/18/2025 16:45	6.8	400.7	0.2	7.7	11.3	8.8	2/18/2025 16:45	4.0	94.5	0.1	7.8	12.0	20.4	25.4
2/18/2025 17:00	7.2	350.3	0.2	7.8	11.2	4.0	2/18/2025 17:00	4.0	83.8	0.0	7.7	12.0	16.6	21.6
2/18/2025 17:15	6.0	215.5	0.1	7.7	11.4	7.3	2/18/2025 17:15	4.0	91.5	0.0	7.7	12.0	13.1	18.1
2/18/2025 17:30	4.6	120.2	0.1	7.4	11.9	9.3	2/18/2025 17:30	4.0	90.1	0.0	7.8	12.0	13.9	18.9
2/18/2025 17:45	5.8	276.4	0.1	7.6	11.8	9.6	2/18/2025 17:45	4.0	88.8	0.0	7.7	12.0	14.8	19.8
2/18/2025 18:00	6.8	349.6	0.2	7.9	11.2	5.4	2/18/2025 18:00	3.9	78.8	0.0	7.7	12.0	8.9	13.9
2/18/2025 18:15	7.1	467.5	0.2	7.8	11.2	7.1	2/18/2025 18:15	3.9	85.3	0.0	7.7	12.0	12.2	17.2
2/18/2025 18:30	7.2	512.0	0.2	7.6	11.1	3.7	2/18/2025 18:30	3.9	83.6	0.0	7.7	12.0	14.3	19.3
2/18/2025 18:45	4.8	174.5	0.1	7.5	11.9	4.6	2/18/2025 18:45	3.8	82.8	0.0	7.7	12.0	9.8	14.8
2/18/2025 19:00	6.6	299.9	0.1	8.7	11.3	2.0	2/18/2025 19:00	3.8	81.9	0.0	7.7	12.0	13.1	18.1
2/18/2025 19:15	5.0	128.9	0.1	8.3	11.7	8.8	2/18/2025 19:15	3.8	79.3	0.0	7.7	12.0	10.8	15.8
2/18/2025 19:30	6.8	389.9	0.2	9.1	11.3	8.1	2/18/2025 19:30	3.8	74.9	0.0	7.7	12.0	11.6	16.6
2/18/2025 19:45	7.1	429.8	0.2	8.0	11.2	2.3	2/18/2025 19:45	3.7	76.2	0.0	7.7	12.0	8.8	13.8
2/18/2025 20:00	4.9	143.0	0.1	7.5	11.8	6.3	2/18/2025 20:00	3.7	75.3	0.0	7.7	12.0	9.5	14.5
2/18/2025 20:15	4.4	152.9	0.1	7.3	11.9	4.0	2/18/2025 20:15	3.7	73.0	0.0	7.7	12.0	6.2	14.2
2/18/2025 20:30	6.9	421.5	0.2	7.2	11.2	2.3	2/18/2025 20:30	3.7	72.9	0.0	7.7	12.0	6.9	14.9
2/18/2025 20:45	7.0	360.4	0.2	7.2	11.2	2.1	2/18/2025 20:45	3.7	70.6	0.0	7.6	12.0	4.8	12.8
2/18/2025 21:00	7.0	329.7	0.2	7.4	11.2	2.0	2/18/2025 21:00	3.7	62.8	0.0	7.6	12.0	5.2	13.2
2/18/2025 21:15	6.9	283.4	0.1	7.6	11.2	1.6	2/18/2025 21:15	3.7	67.9	0.0	7.6	12.0	5.0	13.0
2/18/2025 21:30	5.0	118.7	0.1	7.5	11.7	1.3	2/18/2025 21:30	3.7	66.8	0.0	7.6	12.0	3.8	11.8
2/18/2025 21:45	6.2	243.5	0.1	7.6	11.5	1.6	2/18/2025 21:45	3.7	67.0	0.0	7.6	12.0	4.0	12.0
2/18/2025 22:00	6.9	233.4	0.1	7.9	11.2	3.1	2/18/2025 22:00		65.1	0.0	7.6	12.0	3.1	11.1
2/18/2025 22:15	6.8	222.4	0.1	8.0	11.2	1.0	2/18/2025 22:15	3.7	64.6	0.0	7.6	12.0	4.7	12.7
2/18/2025 22:30	5.1	139.1	0.1	7.6	11.9	9.1	2/18/2025 22:30	3.7	62.8	0.0	7.6	12.0	2.8	10.8
2/18/2025 22:45	6.9	296.0	0.1	9.3	11.2	1.9	2/18/2025 22:45	3.7	63.8	0.0	7.6	12.0	3.4	11.4
2/18/2025 23:00	4.6	96.3	0.0	7.9	11.8	0.4	2/18/2025 23:00	3.7	61.8	0.0	7.6	12.0	2.4	10.4
2/18/2025 23:15	4.1	76.3	0.0	7.4	12.0	0.9	2/18/2025 23:15	3.7	62.9	0.0	7.6	12.0	2.2	10.2
2/18/2025 23:30	5.9	295.1	0.1	8.9	11.4	2.9	2/18/2025 23:30	3.7	60.4	0.0	7.6	12.0	2.3	10.3
2/18/2025 23:45	6.9	592.4	0.3	8.0	11.2	0.0	2/18/2025 23:45	3.7	61.1	0.0	7.5	12.0	3.9	11.9
2/19/2025 0:00	4.3	102.6	0.0	7.5	11.9	0.7	2/19/2025 0:00	3.7	58.7	0.0	7.6	12.0	4.1	12.1
2/19/2025 0:15	6.9	548.6	0.3	8.4	11.2	0.7	2/19/2025 0:15	3.7	58.8	0.0	7.5	12.0	1.7	9.7
2/19/2025 0:30	5.9	371.2	0.2	7.9	11.4	0.0	2/19/2025 0:30	3.7	57.0	0.0	7.5	12.0	1.7	9.7
2/19/2025 0:45	4.4	140.7	0.1	7.5	11.9	0.0	2/19/2025 0:45	3.7	56.9	0.0	7.5	12.0	2.4	10.4
2/19/2025 1:00	6.3	489.0	0.2	7.9	11.3	4.1	2/19/2025 1:00	3.7	56.0	0.0	7.5	12.0	2.4	10.4
2/19/2025 1:15	6.9	569.6	0.3	8.3	11.1	0.3	2/19/2025 1:15	3.7	56.3	0.0	7.5	12.0	3.8	11.8
2/19/2025 1:30	5.0	184.8	0.1	7.8	11.6	0.0	2/19/2025 1:30	3.7	55.4	0.0	7.5	12.0	1.5	9.5
2/19/2025 1:45	4.3	121.9	0.1	7.5	11.9	0.0	2/19/2025 1:45	3.7	55.8	0.0	7.5	12.0	1.2	9.2
2/19/2025 2:00	6.3	567.0	0.3	7.8	11.4	0.0	2/19/2025 2:00	3.7	55.0	0.0	7.5	12.0	2.4	10.4
2/19/2025 2:15	6.9	518.4	0.2	7.9	11.2	0.0	2/19/2025 2:15	3.7	51.2	0.0	7.5	12.0	2.6	10.6
2/19/2025 2:30	6.4	428.9	0.2	7.9	11.3	0.1	2/19/2025 2:30	3.7	61.1	0.0	7.6	12.0	3.3	11.3
2/19/2025 2:45	4.3	118.0	0.1	7.5	11.9	0.4	2/19/2025 2:45	3.6	66.7	0.0	7.6	12.0	9.4	14.4
2/19/2025 3:00	5.7	411.2	0.2	7.9	11.6	2.6	2/19/2025 3:00	3.6	68.5	0.0	7.6	12.0	8.2	13.2
2/19/2025 3:15	6.5	423.1	0.2	7.9	11.3	4.0	2/19/2025 3:15	3.6	71.9	0.0	7.6	12.0	14.7	19.7
2/19/2025 3:30	6.7	401.2	0.2	7.8	11.2	4.7	2/19/2025 3:30	3.6	73.5	0.0	7.7	12.0	20.4	25.4
2/19/2025 3:45	5.8	257.8	0.1	7.8	11.4	4.0	2/19/2025 3:45	3.6	75.2	0.0	7.7	12.0	23.8	28.8
2/19/2025 4:00	4.2	104.9	0.0	7.5	12.0	10.0	2/19/2025 4:00	3.6	74.2	0.0	7.7	12.0	19.4	24.4
2/19/2025 4:15	4.1	119.2	0.1	7.5	12.0	11.8	2/19/2025 4:15	3.5	68.0	0.0	7.7	12.0	17.1	22.1
2/19/2025 4:30	6.4	324.8	0.2	7.7	11.3	7.3	2/19/2025 4:30	3.5	73.8	0.0	7.6	12.0	22.7	27.7
2/19/2025 4:45	6.5	307.7	0.1	7.6	11.3	9.8	2/19/2025 4:45	3.5	72.7	0.0	7.7	12.0	15.8	20.8
2/19/2025 5:00	6.5	287.8	0.1	7.6	11.3	7.2	2/19/2025 5:00	3.5	64.1	0.0	7.7	12.0	21.2	26.2
2/19/2025 5:15	6.4	256.0	0.1	7.7	11.3	5.7	2/19/2025 5:15	3.5	71.1	0.0	7.6	12.0	18.7	23.7
2/19/2025 5:30	4.7	115.8	0.1	7.5	11.7	10.5	2/19/2025 5:30	3.5	72.2	0.0	7.7	11.9	21.9	26.9
2/19/2025 5:45	4.0	90.5	0.0	7.3	12.0	16.9	2/19/2025 5:45	3.5	67.6	0.0	7.7	12.0	38.1	43.1
2/19/2025 6:00	5.9	204.6	0.1	7.7	11.4	7.0	2/19/2025 6:00	3.4	77.7	0.0	7.7	12.0	58.1	63.1
2/19/2025 6:15	6.1	189.2	0.1	7.7	11.4	14.1	2/19/2025 6:15	3.4	70.0	0.0	7.7	12.0	36.3	41.3
2/19/2025 6:30	4.1	98.9	0.0	7.4	12.0	29.6	2/19/2025 6:30	3.4	77.1	0.0	7.7	12.0	37.2	42.2
2/19/2025 6:45	6.0	207.9	0.1	7.6	11.4	20.1	2/19/2025 6:45	3.4	68.7	0.0	7.7	11.9	28.5	33.5
2/19/2025 7:00	6.0	210.7	0.1	7.5	11.4	17.9	2/19/2025 7:00	3.4	76.2	0.0	7.7	12.0	37.2	42.2
2/19/2025 7:15	6.0	197.6	0.1	7.5	11.4	20.4	2/19/2025 7:15	3.4	67.6	0.0	7.7	12.0	22.0	27.0
2/19/2025 7:30	3.9	86.8	0.0	7.3	12.1	29.2	2/19/2025 7:30	3.4	73.8	0.0	7.7	12.0	33.7	38.7
2/19/2025 7:45	3.8	91.6	0.0	7.3	12.1	26.1	2/19/2025 7:45	3.4	73.0	0.0	7.7	12.0	31.6	36.6
2/19/2025 8:00	5.3	162.6	0.1	7.6	11.6	22.0	2/19/2025 8:00	3.4	70.9	0.0	7.7	12.0	32.1	37.1
2/19/2025 8:15	5.6	137.9	0.1	7.6	11.5	18.1	2/19/2025 8:15	3.3	64.2	0.0	7.7	12.0	35.4	40.4
2/19/2025 8:30	3.9	81.1	0.0	7.3	12.1	33.2	2/19/2025 8:30	3.3	68.8	0.0	7.8	12.0	44.4	49.4
2/19/2025 8:45	3.6	79.7	0.0	7.3	12.2	41.9	2/19/2025 8:45	3.3	67.6	0.0	7.7	12.0	52.7	57.7
2/19/2025 9:00	5.2	116.1	0.1	7.6	11.7	33.9	2/19/2025 9:00	3.3	65.9	0.0	7.7	12.1	62.6	67.6
2/19/2025 9:15	4.8	103.6	0.0	7.5	11.8	35.6	2/19/2025 9:15	3.2	57.5	0.0	7.7	12.1	42.7	47.7
2/19/2025 9:30	3.6	72.4	0.0	7.2	12.2	55.4	2/19/2025 9:30	3.3	61.0	0.0	7.6	12.1	29.6	34.6
2/19/2025 9:45	3.5	74.6	0.0	7.2	12.2	35.9	2/19/2025 9:45	3.3	56.9	0.0	7.6	12.1	18.7	23.7
2/19/2025 10:00	3.6	73.3	0.0	7.2	12.2	24.7	2/19/2025 10:00	3.3	49.0	0.0	7.6	12.1	16.6	21.6
2/19/2025 10:15	4.8	112.8	0.1	7.2	11.8	21.6	2/19/2025 10:15	3.3	52.8	0.0	7.6	12.1	19.5	24.5
2/19/2025 10:30	3.5	59.7	0.0	7.1	12.2	21.5	2/19/2025 10:30	3.3	50.5	0.0	7.6	12.0	19.9	24.9
2/19/2025 10:45	4.8	95.8	0.0	7.3	11.8	19.0	2/19/2025 10:45	3.4	48.4	0.0	7.6	12.1	21.2	26.2
2/19/2025 11:00	4.8	99.5	0.0	7.3	11.8	16.3	2/19/2025 11:00	3.4	41.3	0.0	7.6	12.1	13.3	18.3
2/19/2025 11:15	3.9	60.3	0.0	7.2	12.0	14.3	2/19/2025 11:15	3.4	42.0	0.0	7.6	12.1	17.0	22.0
2/19/2025 11:30	3.5	49.8	0.0	7.1	12.2	13.0	2/19/2025 11:30	3.5	41.0	0.0	7.4	12.0	11.5	16.5
2/19/2025 11:45	4.7	97.6	0.0	7.4	11.8	14.9	2/19/2025 11:45	3.5	39.4	0.0	7.5	12.0	18.1	23.1
2/19/2025 12:00	4.8	79.8	0.0	7.3	11.8	12.7	2/19/2025 12:00	3.5	33.9	0.0	7.5	12.0	15.6	20.6
2/19/2025 12:15	4.5	74.4	0.0	7.3	11.9	13.8	2/19/2025 12:15	3.6	36.1	0.0	7.3	12.1	12.3	17.3
2/19/2025 12:30	4.6	84.4	0.0	7.3	11.9	18.3	2/19/2025 12:30	3.6	34.6	0.0	7.4	12.0	12.7	17.7
2/19/2025 12:45	4.8	79.8	0.0	7.3	11.9	12.6	2/19/2025 12:45	3.7	29.9	0.0	7.3	12.0	8.4	13.4
2/19/2025 13:00	3.8	42.0	0.0	7.1	12.2	9.1	2/19/2025 13:00	3.7	31.3	0.0	7.3	12.0	12.1	17.1
2/19/2025 13:15	3.7	36.4	0.0	6.9	12.2	10.9	2/19/2025 13:15	3.8	29.9	0.0	7.2	12.0	9.2	14.2
2/19/2025 13:30	3.8	37.5	0.0	7.0	12.2	7.2	2/19/2025 13:30	3.8	28.4	0.0	7.3	12.0	6.1	14.1
2/19/2025 13:45	4.9	76.0	0.0	7.3	11.8	2.4	2/19/2025 13:45	3.8	25.6	0.0	7.3	11.9	5.0	13.0
2/19/2025 14:00	4.9	72.9	0.0	7.3	11.8	4.9	2/19/2025 14:00	3.9	26.9	0.0	7.3	11.9	5.6	13.6
2/19/2025 14:15	4.5	56.2	0.0	7.3	11.9	8.9	2/19/2025 14:15	3.9	26.8	0.0	7.2	11.9	4.6	12.6
2/19/2025 14:30	4.0	32.7	0.0	6.9	12.2	10.6	2/19/2025 14:30	4.0	25.9	0.0	7.3	11.9	3.0	11.0
2/19/2025 14:45	4.7	64.3	0.0	7.2	11.9	2.2	2/19/2025 14:45	4.0	25.8	0.0	7.1	11.8	5.7	13.7
2/19/2025 15:00	5.1	71.8	0.0	7.3	11.8	2.7	2/19/2025 15:00	4.1	25.2	0.0	7.2	11.9	3.7	11.7
2/19/2025 15:15	4.5	38.7	0.0	7.1	11.9	3.3	2/19/2025 15:15	4.1	25.9	0.0	7.2	11.8	2.8	10.8
2/19/2025 15:30	4.2	31.8	0.0	6.9	12.1	5.8	2/19/2025 15:30	4.2	25.2	0.0	7.2	11.8	5.1	13.1
2/19/2025 15:45	5.2	66.8	0.0	7.2	11.8	1.5	2/19/2025 15:45	4.2	25.2	0.0	7.2	11.8	5.0	13.0
2/19/2025 16:00	5.3	62.9	0.0	7.3	11.7	2.3	2/19/2025 16:00	4.2	24.6	0.0	7.2	11.8	5.6	13.6
2/19/2025 16:15	5.4	61.8	0.0	7.3	11.7	1.3	2/19/2025 16:15	4.2	21.9	0.0	7.2	11.8	2.1	10.1
2/19/2025 16:30	4.9	46.0	0.0	7.3	11.8	5.6	2/19/2025 16:30	4.2	24.2	0.0	7.1	11.8	3.7	11.7
2/19/2025 16:45	4.3	28.6	0.0	6.8	12.0	4.3	2/19/2025 16:45	4.3	25.2	0.0	7.2	11.8	3.8	11.8
2/19/2025 17:00	4.4	30.3	0.0	6.8	12.1	1.7	2/19/2025 17:00	4.4	28.2	0.0	7.2	11.7	14.0	19.0
2/19/2025 17:15	5.3	62.8	0.0	7.2	11.8	7.2	2/19/2025 17:15	4.4	31.2	0.0	7.3	11.8	13.8	18.8
2/19/2025 17:30	5.1	50.3	0.0	7.2	11.7	9.7	2/19/2025 17:30	4.4	34.4	0.0	7.3	11.8	17.7	22.7
2/19/2025 17:45	5.4	77.9	0.0	7.2	11.7	12.0	2/19/2025 17:45	4.4	34.2	0.0	7.4	11.8	18.5	23.5
2/19/2025 18:00	5.4	65.3	0.0	7.2	11.7	17.7	2/19/2025 18:00	4.4	31.3	0.0	7.4	11.7	22.0	27.0
2/19/2025 18:15	5.4	67.5	0.0	7.2	11.7	12.6	2/19/2025 18:15	4.4	34.1	0.0	7.4	11.8	16.7	21.7
2/19/2025 18:30	4.7	41.3	0.0	7.1	11.9	14.6	2/19/2025 18:30	4.4	34.5	0.0	7.3	11.8	13.3	18.3
2/19/2025 18:45	4.4	35.6	0.0	6.9	12.0	11.5	2/19/2025 18:45	4.4	32.2	0.0	7.3	11.8	11.4	16.4
2/19/2025 19:00	4.4	35.6	0.0	6.9	12.1	9.8	2/19/2025 19:00	4.4	28.5	0.0	7.3	11.7	14.1	19.1
2/19/2025 19:15	5.2	65.9	0.0	7.2	11.8	6.1	2/19/2025 19:15	4.4	32.9	0.0	7.3	11.8	13.4	18.4
2/19/2025 19:30	5.3	63.8	0.0	7.2	11.8	7.7	2/19/2025 19:30	4.4	32.4	0.0	7.4	11.8	11.5	16.5
2/19/2025 19:45	5.2	59.8	0.0	7.2	11.8	12.2	2/19/2025 19:45	4.3	31.9	0.0	7.3	11.8	12.1	17.1
2/19/2025 20:00	5.2	57.3	0.0	7.2	11.8	13.1	2/19/2025 20:00	4.3	29.0	0.0	7.3	11.8	16.3	21.3
2/19/2025 20:15	4.6	39.4	0.0	7.0	12.0	15.4	2/19/2025 20:15	4.3	31.9	0.0	7.3	11.8	25.7	30.7
2/19/2025 20:30	5.1	63.1	0.0	7.1	11.9	16.0	2/19/2025 20:30	4.3	27.9	0.0	7.4	11.8	18.2	23.2
2/19/2025 20:45	4.9	52.3	0.0	7.1	11.9	17.4	2/19/2025 20:45	4.3	29.9	0.0	7.2	11.9	14.2	19.2
2/19/2025 21:00	4.4	33.6	0.0	6.9	12.1	23.0	2/19/2025 21:00	4.3	29.3	0.0	7.3	11.8	19.6	24.6

2/19/2025 21:15	5.0	62.4	0.0	7.1	11.9	14.3	2/19/2025 21:15	4.3	25.7	0.0	7.3	11.8	10.3	15.3
2/19/2025 21:30	5.0	61.4	0.0	7.1	11.9	10.6	2/19/2025 21:30	4.3	26.9	0.0	7.2	11.9	12.1	17.1
2/19/2025 21:45	5.0	57.9	0.0	7.1	11.9	14.3	2/19/2025 21:45	4.3	23.5	0.0	7.3	11.8	6.5	14.5
2/19/2025 22:00	5.0	55.1	0.0	7.1	11.9	10.2	2/19/2025 22:00	4.3	24.8	0.0	7.2	11.9	5.9	13.9
2/19/2025 22:15	5.0	54.0	0.0	7.1	11.9	6.1	2/19/2025 22:15	4.3	21.5	0.0	7.2	11.8	5.2	13.2
2/19/2025 22:30	4.4	27.4	0.0	6.8	12.1	6.6	2/19/2025 22:30	4.3	23.5	0.0	7.2	11.8	7.4	15.4
2/19/2025 22:45	5.0	55.4	0.0	7.0	12.0	9.0	2/19/2025 22:45	4.4	20.9	0.0	7.2	11.8	3.9	11.9
2/19/2025 23:00	5.0	62.1	0.0	7.0	11.9	5.4	2/19/2025 23:00	4.4	22.8	0.0	7.1	11.9	11.9	16.9
2/19/2025 23:15	4.5	29.2	0.0	6.9	12.1	4.5	2/19/2025 23:15	4.4	20.1	0.0	7.2	11.8	4.3	12.3
2/19/2025 23:30	4.5	27.4	0.0	6.8	12.1	5.7	2/19/2025 23:30	4.4	22.1	0.0	7.2	11.9	6.2	14.2
2/19/2025 23:45	5.1	73.4	0.0	7.0	11.9	4.6	2/19/2025 23:45	4.4	21.9	0.0	7.1	11.8	6.6	14.6
2/20/2025 0:00	5.1	72.9	0.0	7.1	11.9	5.4	2/20/2025 0:00	4.4	20.9	0.0	7.1	11.9	4.3	12.3
2/20/2025 0:15	4.8	49.4	0.0	7.0	12.0	2.5	2/20/2025 0:15	4.4	21.1	0.0	7.1	11.8	3.6	11.6
2/20/2025 0:30	4.5	25.5	0.0	6.8	12.1	2.2	2/20/2025 0:30	4.4	20.1	0.0	7.0	11.8	4.8	12.8
2/20/2025 0:45	4.5	26.2	0.0	6.8	12.1	0.6	2/20/2025 0:45	4.4	20.2	0.0	7.0	11.8	2.0	10.0
2/20/2025 1:00	5.2	73.6	0.0	7.2	11.9	10.7	2/20/2025 1:00	4.4	19.5	0.0	7.1	11.8	2.2	10.2
2/20/2025 1:15	5.2	82.0	0.0	7.2	11.9	3.5	2/20/2025 1:15	4.4	17.3	0.0	7.1	11.8	2.7	10.7
2/20/2025 1:30	5.3	107.5	0.0	7.4	11.9	1.3	2/20/2025 1:30	4.4	18.9	0.0	6.9	11.8	2.7	10.7
2/20/2025 1:45	4.9	58.3	0.0	7.3	11.9	1.1	2/20/2025 1:45	4.4	18.7	0.0	7.1	11.9	2.0	10.0
2/20/2025 2:00	4.5	26.6	0.0	6.8	12.1	0.5	2/20/2025 2:00	4.4	17.0	0.0	7.0	11.8	8.3	13.3
2/20/2025 2:15	4.7	38.9	0.0	7.0	12.0	3.0	2/20/2025 2:15	4.4	18.2	0.0	7.1	11.9	1.8	9.8
2/20/2025 2:30	5.4	131.0	0.1	8.4	11.8	1.6	2/20/2025 2:30	4.5	18.3	0.0	7.0	11.8	5.4	13.4
2/20/2025 2:45	5.3	129.9	0.1	8.5	11.8	3.4	2/20/2025 2:45	4.5	17.8	0.0	7.0	11.9	0.9	8.9
2/20/2025 3:00	4.8	56.4	0.0	7.3		3.5	2/20/2025 3:00	4.5	16.2	0.0	7.0	11.8	1.7	9.7
2/20/2025 3:15	5.0	97.8	0.0	7.3	11.9	1.8	2/20/2025 3:15	4.5	17.7	0.0	7.0	11.8	0.7	8.7
2/20/2025 3:30	4.6	27.5	0.0	7.0	12.1	0.0	2/20/2025 3:30	4.5	15.8	0.0	7.0	11.8	0.9	8.9
2/20/2025 3:45	4.8	55.8	0.0	6.9	12.1	2.1	2/20/2025 3:45	4.5	17.6	0.0	7.0	11.8	1.7	9.7
2/20/2025 4:00	5.4	170.7	0.1	8.3	11.8	0.0	2/20/2025 4:00	4.5	15.7	0.0	7.0	11.8	1.0	9.0
2/20/2025 4:15	5.2	122.4	0.1	7.3	11.9	0.4	2/20/2025 4:15	4.5	17.4	0.0	7.0	11.8	1.2	9.2
2/20/2025 4:30	4.6	28.0	0.0	6.9	12.1	0.4	2/20/2025 4:30	4.5	15.8	0.0	7.0	11.8	0.4	8.4
2/20/2025 4:45	5.5	162.3	0.1	7.9	11.8	1.2	2/20/2025 4:45	4.5	17.4	0.0	6.9	11.8	1.5	9.5
2/20/2025 5:00	5.5	182.5	0.1	8.1	11.8	0.0	2/20/2025 5:00	4.5	17.4	0.0	7.0	11.8	3.3	11.3
2/20/2025 5:15	5.6	172.4	0.1	7.5	11.7	1.8	2/20/2025 5:15	4.5	15.6	0.0	7.0	11.8	0.6	8.6
2/20/2025 5:30	4.7	26.9	0.0	6.9	12.0	0.0	2/20/2025 5:30	4.6	17.3	0.0	7.0	11.8	1.7	9.7
2/20/2025 5:45	5.2	150.8	0.1	7.2	12.0	0.0	2/20/2025 5:45	4.6	17.7	0.0	6.9	11.8	0.3	8.3
2/20/2025 6:00	5.6	176.9	0.1	8.2	11.7	2.8	2/20/2025 6:00	4.6	17.0	0.0	7.0	11.8	1.0	9.0
2/20/2025 6:15	4.8	36.0	0.0	7.0	12.0	0.0	2/20/2025 6:15	4.6	17.4	0.0	7.0	11.8	0.5	8.5
2/20/2025 6:30	5.4	121.2	0.1	7.4	11.8	0.6	2/20/2025 6:30	4.6	16.9	0.0	7.0	11.9	0.9	8.9
2/20/2025 6:45	5.6	139.8	0.1	7.5	11.7	0.0	2/20/2025 6:45	4.6	16.4	0.0	7.0	11.8	0.5	8.5
2/20/2025 7:00	4.9	35.4	0.0	7.2	11.9	0.2	2/20/2025 7:00	4.6	17.2	0.0	6.9	11.8	2.3	10.3
2/20/2025 7:15	4.8	29.9	0.0	7.0	12.0	0.0	2/20/2025 7:15	4.6	17.2	0.0	7.0	11.8	0.9	8.9
2/20/2025 7:30	5.5	125.7	0.1	7.4	11.8	0.0	2/20/2025 7:30	4.6	15.5	0.0	7.0	11.8	0.3	8.3
2/20/2025 7:45	5.4	85.4	0.0	7.3	11.8	0.0	2/20/2025 7:45	4.6	17.3	0.0	7.0	11.8	0.6	8.6
2/20/2025 8:00	4.8	26.1	0.0	6.9	12.0	0.0	2/20/2025 8:00	4.6	15.5	0.0	7.0	11.8	0.2	8.2
2/20/2025 8:15	4.9	42.4	0.0	6.8	12.0	0.0	2/20/2025 8:15	4.6	17.3	0.0	6.9	11.8	0.4	8.4
2/20/2025 8:30	5.7	90.7	0.0	7.2	11.7	0.0	2/20/2025 8:30	4.6	17.3	0.0	7.0	11.8	0.2	8.2
2/20/2025 8:45	5.8	82.6	0.0	7.2	11.7	0.2	2/20/2025 8:45	4.6	17.4	0.0	7.0	11.8	0.1	8.1
2/20/2025 9:00	4.8	25.3	0.0	6.8	12.0	0.5	2/20/2025 9:00	4.6	17.2	0.0	7.0	11.8	0.2	8.2
2/20/2025 9:15	4.8	27.6	0.0	6.8	12.0	0.0	2/20/2025 9:15	4.7	15.7	0.0	7.0	11.8	0.3	8.3
2/20/2025 9:30	5.6	64.1	0.0	7.2	11.8	0.1	2/20/2025 9:30	4.7	17.3	0.0	7.0	11.8	0.1	8.1
2/20/2025 9:45	4.9	30.4	0.0	6.9	12.0	0.0	2/20/2025 9:45	4.7	15.6	0.0	7.0	11.8	0.0	8.0
2/20/2025 10:00	4.8	25.8	0.0	6.8	12.0	1.1	2/20/2025 10:00	4.7	17.3	0.0	7.0	11.8	0.1	8.1
2/20/2025 10:15	5.8	80.7	0.0	7.3	11.7	0.0	2/20/2025 10:15	4.7	15.7	0.0	7.0	11.8	0.7	8.7
2/20/2025 10:30	6.0	107.1	0.0	7.4	11.7	3.1	2/20/2025 10:30	4.7	17.3	0.0	7.0	11.8	0.3	8.3
2/20/2025 10:45	6.0	103.1	0.0	7.4	11.6	0.0	2/20/2025 10:45	4.8	15.7	0.0	7.1	11.8	0.0	8.0
2/20/2025 11:00	6.0	108.2	0.0	7.3	11.6	0.0	2/20/2025 11:00	4.8	17.2	0.0	7.0	11.8	0.5	8.5
2/20/2025 11:15	5.0	24.6	0.0	6.9	11.9	0.0	2/20/2025 11:15	4.8	17.4	0.0	7.0	11.8	0.0	8.0
2/20/2025 11:30	5.0	27.4	0.0	6.8	12.0	0.0	2/20/2025 11:30	4.8	17.3	0.0	7.1	11.8	0.0	8.0
2/20/2025 11:45	5.8	88.2	0.0	7.3	11.7	0.0	2/20/2025 11:45	4.9	15.8	0.0	7.1	11.8	0.3	8.3
2/20/2025 12:00	5.9	78.1	0.0	7.3	11.6	3.4	2/20/2025 12:00	4.9	17.4	0.0	7.1	11.8	0.1	8.1
2/20/2025 12:15	5.8	74.1	0.0	7.3	11.7	0.0	2/20/2025 12:15	4.9	17.4	0.0	7.1	11.8	0.5	8.5
2/20/2025 12:30	6.2	89.2	0.0	7.4	11.6	0.0	2/20/2025 12:30	4.9	17.4	0.0	7.1	11.8	0.0	8.0
2/20/2025 12:45	6.0	68.0	0.0	7.4	11.6	0.0	2/20/2025 12:45	4.9	15.8	0.0	7.0	11.8	0.0	8.0
2/20/2025 13:00	5.1	23.0	0.0	6.8	11.9	0.0	2/20/2025 13:00	5.0	17.5	0.0	7.0	11.7	1.2	9.2
2/20/2025 13:15	5.1	24.8	0.0	6.8	11.9	0.0	2/20/2025 13:15	5.0	15.9	0.0	7.1	11.7	0.2	8.2
2/20/2025 13:30	6.1	86.8	0.0	7.2	11.7	0.9	2/20/2025 13:30	5.0	17.9	0.0	7.0	11.7	0.1	8.1
2/20/2025 13:45	6.3	88.3	0.0	7.3	11.6	0.0	2/20/2025 13:45	5.0	17.8	0.0	7.1	11.7	0.1	8.1
2/20/2025 14:00	6.3	80.5	0.0	7.3	11.6	0.0	2/20/2025 14:00	5.0	16.2	0.0	7.1	11.7	0.0	8.0
2/20/2025 14:15	5.2	24.2	0.0	6.8	11.9	0.1	2/20/2025 14:15	5.0	17.9	0.0	7.1	11.7	0.1	8.1
2/20/2025 14:30	6.1	83.6	0.0	7.2	11.7	0.0	2/20/2025 14:30	5.1	16.3	0.0	7.1	11.7	0.1	8.1
2/20/2025 14:45	6.3	86.3	0.0	7.3	11.5	0.0	2/20/2025 14:45	5.1	18.2	0.0	7.1	11.7	0.1	8.1
2/20/2025 15:00	6.5	83.7	0.0	7.3	11.5	0.2	2/20/2025 15:00	5.2	16.5	0.0	7.1	11.7	0.5	8.5
2/20/2025 15:15	6.3	88.2	0.0	7.3	11.6	0.0	2/20/2025 15:15	5.2	18.2	0.0	7.1	11.7	0.4	8.4
2/20/2025 15:30	5.3	24.2	0.0	6.8	11.9	0.0	2/20/2025 15:30	5.2	16.5	0.0	7.1	11.7	0.0	8.0
2/20/2025 15:45	5.4	33.3	0.0	6.8	11.9	0.0	2/20/2025 15:45	5.2	18.4	0.0	7.1	11.7	0.1	8.1
2/20/2025 16:00	6.2	75.8	0.0	7.4	11.5	0.0	2/20/2025 16:00	5.2	16.6	0.0	7.1	11.7	0.5	8.5
2/20/2025 16:15	5.5	34.8	0.0	7.0	11.8	0.5	2/20/2025 16:15	5.2	18.4	0.0	7.1	11.7	0.1	8.1
2/20/2025 16:30	6.5	123.9	0.1	7.4	11.5	0.0	2/20/2025 16:30	5.2	16.5	0.0	7.1	11.7	0.0	8.0
2/20/2025 16:45	6.6	118.1	0.1	7.4	11.4	0.0	2/20/2025 16:45	5.2	18.3	0.0	7.0	11.7	0.1	8.1
2/20/2025 17:00	6.6	106.9	0.0	7.4	11.4	0.0	2/20/2025 17:00	5.2	18.3	0.0	7.1	11.7	0.3	8.3
2/20/2025 17:15	6.6	109.4	0.1	7.4	11.4	0.0	2/20/2025 17:15	5.2	16.5	0.0	7.1	11.6	0.0	8.0
2/20/2025 17:30	6.3	98.2	0.0	7.4	11.5	0.0	2/20/2025 17:30	5.2	18.4	0.0	7.1	11.6	0.2	8.2
2/20/2025 17:45	5.3	25.3	0.0	6.9	11.9	0.0	2/20/2025 17:45	5.1	16.7	0.0	7.1	11.6	0.2	8.2
2/20/2025 18:00	5.3	27.3	0.0	6.9	11.9	0.0	2/20/2025 18:00	5.1	18.5	0.0	7.1	11.6	0.0	8.0
2/20/2025 18:15	6.4	118.9	0.1	7.5	11.5	0.0	2/20/2025 18:15	5.1	18.7	0.0	7.1	11.6	0.1	8.1
2/20/2025 18:30	6.5	112.9	0.1	7.4	11.5	0.0	2/20/2025 18:30	5.1	19.0	0.0	7.1	11.6	0.1	8.1
2/20/2025 18:45	5.4	38.1	0.0	7.2	11.8	0.0	2/20/2025 18:45	5.1	19.3	0.0	7.1	11.7	0.1	8.1
2/20/2025 19:00	5.2	29.9	0.0	7.0	11.9	0.0	2/20/2025 19:00	5.1	19.8	0.0	7.1	11.7	0.1	8.1
2/20/2025 19:15	6.1	114.8	0.1	7.5	11.6	0.0	2/20/2025 19:15	5.0	20.5	0.0	7.0	11.7	2.9	10.9
2/20/2025 19:30	6.5	152.8	0.1	7.5	11.4	0.0	2/20/2025 19:30	5.0	20.7	0.0	7.1	11.7	2.6	10.6
2/20/2025 19:45	6.5	136.5	0.1	7.6	11.4	2.5	2/20/2025 19:45	5.0	20.4	0.0	7.1	11.7	2.1	10.1
2/20/2025 20:00	6.5	132.3	0.1	7.6	11.5	5.6	2/20/2025 20:00	5.0	21.0	0.0	7.1	11.7	0.5	8.5
2/20/2025 20:15	5.3	32.1	0.0	7.2	11.8	0.0	2/20/2025 20:15	5.0	20.9	0.0	7.1	11.7	2.0	10.0
2/20/2025 20:30	6.2	105.3	0.0	7.5	11.6	1.1	2/20/2025 20:30	5.0	21.0	0.0	7.1	11.7	0.3	8.3
2/20/2025 20:45	6.4	99.5	0.0	7.5	11.5	0.0	2/20/2025 20:45	5.0	21.1	0.0	7.2	11.7	0.2	8.2
2/20/2025 21:00	5.3	31.2	0.0	7.1	11.8	0.0	2/20/2025 21:00	4.9	21.3	0.0	7.1	11.7	0.3	8.3
2/20/2025 21:15	5.1	29.6	0.0	6.9	11.9	0.0	2/20/2025 21:15	4.9	21.1	0.0	7.2	11.7	0.1	8.1
2/20/2025 21:30	6.0	83.0	0.0	7.3	11.6	0.0	2/20/2025 21:30	4.9	19.4	0.0	7.1	11.7	0.2	8.2
2/20/2025 21:45	6.3	95.0	0.0	7.4	11.6	0.0	2/20/2025 21:45	4.9	21.7	0.0	7.1	11.7	1.1	9.1
2/20/2025 22:00	5.6	45.3	0.0	7.3	11.7	0.0	2/20/2025 22:00	4.9	19.7	0.0	7.2	11.7	0.7	8.7
2/20/2025 22:15	5.1	32.6	0.0	6.9	11.9	1.1	2/20/2025 22:15	4.9	22.1	0.0	7.2	11.7	5.8	13.8
2/20/2025 22:30	6.1	89.0	0.0	7.3	11.6	3.8	2/20/2025 22:30	4.9	20.5	0.0	7.2	11.7	4.2	12.2
2/20/2025 22:45	6.4	106.3	0.0	7.3	11.5	0.4	2/20/2025 22:45	4.9	24.4	0.0	7.2	11.7	6.9	14.9
2/20/2025 23:00	6.2	87.1	0.0	7.3	11.5	1.6	2/20/2025 23:00	4.9	26.2	0.0	7.2	11.7	17.2	22.2
2/20/2025 23:15	5.1	32.2	0.0	6.9	11.9	5.6	2/20/2025 23:15	4.9	27.5	0.0	7.3	11.7	14.8	19.8
2/20/2025 23:30	6.2	91.9	0.0	7.3	11.5	3.7	2/20/2025 23:30	4.9	25.2	0.0	7.3	11.7	9.4	14.4
2/20/2025 23:45	6.2	87.6	0.0	7.3	11.6	4.0	2/20/2025 23:45	4.8	28.9	0.0	7.3	11.7	8.2	13.2
2/21/2025 0:00	6.4	89.5	0.0	7.4	11.5	3.5	2/21/2025 0:00	4.8	30.5	0.0	7.3	11.7	22.1	27.1
2/21/2025 0:15	5.8	60.3	0.0	7.3	11.6	6.0	2/21/2025 0:15	4.8	30.8	0.0	7.3	11.7	10.8	15.8
2/21/2025 0:30	5.1	36.7	0.0	7.0	11.9	6.5	2/21/2025 0:30	4.8	28.2	0.0	7.3	11.7	9.9	14.9
2/21/2025 0:45	5.9	77.5	0.0	7.2	11.6	4.1	2/21/2025 0:45	4.8	31.7	0.0	7.3	11.7	9.3	14.3
2/21/2025 1:00	6.3	99.4	0.0	7.4	11.5	1.2	2/21/2025 1:00		32.9	0.0	7.3	11.7	10.5	15.5
2/21/2025 1:15	6.4	100.3	0.0	7.4	11.5	1.5	2/21/2025 1:15	4.8	31.2	0.0	7.4	11.7	9.4	14.4
2/21/2025 1:30	6.3	96.3	0.0	7.4	11.5	6.4	2/21/2025 1:30	4.8	35.8	0.0	7.4	11.7	18.6	23.6
2/21/2025 1:45	5.0	35.9	0.0	6.9	11.9	7.3	2/21/2025 1:45	4.8	33.8	0.0	7.4	11.7	33.4	38.4
2/21/2025 2:00	5.9	81.8	0.0	7.3	11.7	8.3	2/21/2025 2:00	4.8	37.6	0.0	7.4	11.7	13.0	18.0
2/21/2025 2:15	6.4	104.5	0.0	7.4	11.5	3.7	2/21/2025 2:15	4.8	34.3	0.0	7.4	11.7	8.5	13.5
2/21/2025 2:30	6.1	76.4	0.0	7.4	11.5	7.0	2/21/2025 2:30	4.7	38.6	0.0	7.4	11.7	9.6	14.6
2/21/2025 2:45	5.0	38.6	0.0	7.0	12.0	6.0	2/21/2025 2:45	4.7	36.3	0.0	7.4	11.7	11.9	16.9
2/21/2025 3:00	6.1	88.5	0.0	7.3	11.6	5.9	2/21/2025 3:00	4.7	42.1	0.0	7.4	11.7	31.4	36.4
2/21/2025 3:15	6.2	142.1	0.1	7.5	11.6	8.1	2/21/2025 3:15	4.7	40.3	0.0	7.5	11.7	62.9	67.9
2/21/2025 3:30	6.3	185.3	0.1	7.4	11.5	17.5	2/21/2025 3:30	4.7	45.5	0.0	7.5	11.7	34.4	39.4
2/21/2025 3:45	4.9	44.5	0.0	7.1	11.9	23.7	2/21/2025 3:45	4.7	40.9	0.0	7.5	11.7	23.8	28.8
2/21/2025 4:00	4.9	50.1	0.0	7.0	12.0	19.1	2/21/2025 4:00	4.7	46.4	0.0	7.5	11.7	25.0	30.0
2/21/2025 4:15	5.9	202.6	0.1	7.7	11.6	11.6	2/21/2025 4:15	4.7	42.1	0.0	7.5	11.7	28.9	33.9
2/21/2025 4:30	6.1	235.0	0.1	7.6	11.5	21.5	2/21/2025 4:30	4.7	46.3	0.0	7.5	11.8	16.7	21.7
2/21/2025 4:45	5.0	59.2	0.0	7.3	11.8	9.0	2/21/2025 4:45	4.6	46.1	0.0	7.5	11.8	21.9	26.9
2/21/2025 5:00	4.8	52.8	0.0	7.1	11.9	12.3	2/21/2025 5:00	4.6	45.6	0.0	7.5	11.8	16.7	21.7
2/21/2025 5:15	6.0	195.4	0.1	7.6	11.6	10.0	2/21/2025 5:15	4.6	41.1	0.0	7.5	11.8	26.6	31.6
2/21/2025 5:30	5.5	132.4	0.1	7.5	11.8	17.5	2/21/2025 5:30	4.6	45.1	0.0	7.5	11.8	32.6	37.6
2/21/2025 5:45	4.9	58.1	0.0	7.4	11.9	21.8	2/21/2025 5:45	4.6	39.9	0.0	7.5	11.8	31.0	36.0
2/21/2025 6:00	5.8	166.2	0.1	7.5		13.9	2/21/2025 6:00	4.6	43.2	0.0	7.4	11.8	17.8	22.8
2/21/2025 6:15	5.8	153.6	0.1	7.6	11.6	8.0	2/21/2025 6:15	4.6	37.6	0.0	7.5	11.8	10.5	15.5
2/21/2025 6:30	5.8	142.6	0.1	7.5	11.7	5.6	2/21/2025 6:30	4.6	39.9	0.0	7.4	11.8	11.8	16.8
2/21/2025 6:45	4.8	48.6	0.0	7.1	12.0	10.6	2/21/2025 6:45	4.6	37.6	0.0	7.5	11.8	8.6	13.6
2/21/2025 7:00	5.7	122.5	0.1	7.4	11.7	3.9	2/21/2025 7:00	4.6	36.8	0.0	7.4	11.8	7.8	15.8
2/21/2025 7:15	5.6	108.4	0.0	7.3	11.7	7.4	2/21/2025 7:15	4.6	35.5	0.0	7.4	11.9	8.3	13.3
2/21/2025 7:30	5.6	100.0	0.0	7.3	11.7	4.3	2/21/2025 7:30	4.6	32.2	0.0	7.4	11.8	10.3	15.3
2/21/2025 7:45	5.0	50.3	0.0	7.2	11.9	10.3	2/21/2025 7:45	4.5	34.3	0.0	7.4	11.8	10.3	15.3
2/21/2025 8:00	4.7	39.9	0.0	7.0	12.0	7.6	2/21/2025 8:00	4.5	34.0	0.0	7.4	11.8	12.2	17.2
2/21/2025 8:15	4.9	47.8	0.0	7.1	12.0	4.4	2/21/2025 8:15	4.5	32.3	0.0	7.4	11.8	5.8	13.8

2/21/2025 8:30	4.8	37.3	0.0	7.1	12.0	3.7	2/21/2025 8:30	4.5	28.0	0.0	7.4	11.8	14.9	19.9
2/21/2025 8:45	4.7	33.0	0.0	6.9	12.0	8.3	2/21/2025 8:45	4.5	31.2	0.0	7.4	11.8	12.0	17.0
2/21/2025 9:00	4.6	32.6	0.0	6.9	12.1	7.1	2/21/2025 9:00	4.5	28.0	0.0	7.4	11.8	8.4	13.4
2/21/2025 9:15	4.6	32.6	0.0	6.9	12.1	5.9	2/21/2025 9:15	4.5	30.9	0.0	7.3	11.9	6.8	14.8
2/21/2025 9:30	5.0	55.8	0.0	7.1	11.9	5.7	2/21/2025 9:30	4.5	27.9	0.0	7.4	11.9	12.2	17.2
2/21/2025 9:45	4.7	33.1	0.0	6.9	12.0	8.2	2/21/2025 9:45	4.5	30.5	0.0	7.3	11.8	20.8	25.8
2/21/2025 10:00	5.3	75.1	0.0	7.2	11.8	12.8	2/21/2025 10:00	4.5	29.8	0.0	7.4	11.9	13.0	18.0
2/21/2025 10:15	5.3	67.0	0.0	7.2	11.9	13.7	2/21/2025 10:15	4.5	31.1	0.0	7.3	11.8	31.0	36.0
2/21/2025 10:30	4.7	35.6	0.0	7.0	12.0	23.9	2/21/2025 10:30	4.5	29.8	0.0	7.4	11.8	39.7	44.7
2/21/2025 10:45	5.3	63.5	0.0	7.1	11.9	32.5	2/21/2025 10:45	4.5	26.5	0.0	7.4	11.8	32.7	37.7
2/21/2025 11:00	5.2	61.1	0.0	7.1	11.9	25.8	2/21/2025 11:00	4.5	28.8	0.0	7.3	11.8	21.6	26.6
2/21/2025 11:15	4.6	30.5	0.0	6.8	12.1	21.6	2/21/2025 11:15	4.5	28.4	0.0	7.3	11.8	19.9	24.9
2/21/2025 11:30	5.2	53.3	0.0	7.1	11.9	18.4	2/21/2025 11:30	4.5	26.8	0.0	7.3	11.9	15.0	20.0
2/21/2025 11:45	5.2	53.0	0.0	7.1	11.9	19.9	2/21/2025 11:45	4.5	27.2	0.0	7.2	11.8	23.3	28.3
2/21/2025 12:00	5.1	52.1	0.0	7.0	11.9	16.1	2/21/2025 12:00	4.5	26.4	0.0	7.3	11.8	35.0	40.0
2/21/2025 12:15	5.1	49.7	0.0	7.1	12.0	32.6	2/21/2025 12:15	4.5	26.8	0.0	7.2	11.8	34.4	39.4
2/21/2025 12:30	5.0	43.1	0.0	7.1	11.9	32.1	2/21/2025 12:30	4.5	25.8	0.0	7.4	11.9	27.2	32.2
2/21/2025 12:45	4.6	28.2	0.0	6.8	12.1	24.6	2/21/2025 12:45	4.5	26.0	0.0	7.3	11.8	27.1	32.1
2/21/2025 13:00	5.1	49.7	0.0	7.0	11.9	27.2	2/21/2025 13:00	4.5	24.9	0.0	7.3	11.8	20.5	25.5
2/21/2025 13:15	5.0	50.3	0.0	7.1	11.9	24.2	2/21/2025 13:15	4.6	21.9	0.0	7.3	11.8	21.4	26.4
2/21/2025 13:30	4.6	26.4	0.0	6.8	12.0	14.2	2/21/2025 13:30	4.6	23.6	0.0	7.2	11.8	14.0	19.0
2/21/2025 13:45	4.7	26.1	0.0	6.7	12.0	15.0	2/21/2025 13:45	4.6	23.1	0.0	7.2	11.8	15.3	20.3
2/21/2025 14:00	5.0	44.3	0.0	7.0	11.9	20.2	2/21/2025 14:00	4.6	23.5	0.0	7.2	11.8	19.1	24.1
2/21/2025 14:15	5.0	36.3	0.0	7.0	11.9	21.9	2/21/2025 14:15	4.6	23.0	0.0	7.2	11.8	23.1	28.1
2/21/2025 14:30	5.0	35.2	0.0	7.0	11.9	27.9	2/21/2025 14:30	4.6	23.6	0.0	7.1	11.8	16.0	21.0
2/21/2025 14:45	5.0	33.1	0.0	7.0	11.9	16.1	2/21/2025 14:45	4.6	22.5	0.0	7.2	11.8	15.9	20.9
2/21/2025 15:00	5.0	25.6	0.0	7.0	11.9	17.9	2/21/2025 15:00	4.6	20.5	0.0	7.2	11.8	16.0	21.0
2/21/2025 15:15	5.1	21.6	0.0	7.0	11.9	16.4	2/21/2025 15:15	4.7	21.6	0.0	7.2	11.8	11.3	16.3
2/21/2025 15:30	4.8	13.7	0.0	6.9	12.0	13.6	2/21/2025 15:30	4.7	19.4	0.0	7.1	11.8	8.6	13.6
2/21/2025 15:45	4.9	17.8	0.0	6.9	11.9	15.1	2/21/2025 15:45	4.7	20.7	0.0	7.2	11.8	9.6	14.6
2/21/2025 16:00	5.1	19.5	0.0	6.9	11.9	18.3	2/21/2025 16:00	4.7	17.8	0.0	7.1	11.7	9.8	14.8
2/21/2025 16:15	4.8	12.2	0.0	6.9	11.9	14.3	2/21/2025 16:15	4.7	20.0	0.0	7.2	11.8	4.0	12.0
2/21/2025 16:30	5.0	14.2	0.0	6.9	11.9	24.3	2/21/2025 16:30	4.7	18.3	0.0	7.2	11.7	5.9	13.9
2/21/2025 16:45	5.1	16.3	0.0	6.9	11.8	25.3	2/21/2025 16:45	4.7	20.8	0.0	7.1	11.8	14.1	19.1
2/21/2025 17:00	5.1	15.8	0.0	7.0	11.8	17.9	2/21/2025 17:00	4.7	19.4	0.0	7.2	11.7	7.9	15.9
2/21/2025 17:15	5.1	15.4	0.0	7.0	11.9	41.1	2/21/2025 17:15	4.7	21.7	0.0	7.1	11.8	14.1	19.1
2/21/2025 17:30	5.1	14.3	0.0	7.0	11.9	90.5	2/21/2025 17:30	4.7	22.1	0.0	7.2	11.8	29.4	34.4
2/21/2025 17:45	4.8	9.6	0.0	7.0	12.0	42.1	2/21/2025 17:45	4.7	20.3	0.0	7.2	11.8	22.4	27.4
2/21/2025 18:00	5.1	14.3	0.0	6.9	11.9	87.5	2/21/2025 18:00	4.7	22.7	0.0	7.1	11.7	27.5	32.5
2/21/2025 18:15	5.1	13.5	0.0	6.9	11.9	348.8	2/21/2025 18:15	4.7	20.8	0.0	7.2	11.7	58.4	63.4
2/21/2025 18:30	5.1	13.6	0.0	7.0	11.9	509.1	2/21/2025 18:30	4.7	22.7	0.0	7.2	11.7	51.6	56.6
2/21/2025 18:45	5.1	13.6	0.0	6.9	11.9	830.0	2/21/2025 18:45	4.7	22.2	0.0	7.0	11.7	28.9	33.9
2/21/2025 19:00	5.1	12.9	0.0	6.9	11.9	894.5	2/21/2025 19:00	4.7	21.5	0.0	7.1	11.7	21.7	26.7
2/21/2025 19:15	4.8	9.1	0.0	6.9	12.0	839.3	2/21/2025 19:15	4.7	19.1	0.0	7.2	11.7	18.3	23.3
2/21/2025 19:30	4.8	8.9	0.0	6.9	11.9	694.2	2/21/2025 19:30	4.7	20.6	0.0	7.1	11.7	17.2	22.2
2/21/2025 19:45	5.0	11.5	0.0	6.9	11.9	563.3	2/21/2025 19:45	4.7	14.5	0.0	7.1	11.7	21.1	26.1
2/21/2025 20:00	5.1	12.2	0.0	6.9	11.9	556.3	2/21/2025 20:00	4.8	20.3	0.0	7.2	11.7	16.6	21.6
2/21/2025 20:15	5.1	12.3	0.0	6.9	11.8	544.2	2/21/2025 20:15	4.8	17.5	0.0	7.1	11.7	10.9	15.9
2/21/2025 20:30	4.9	9.4	0.0	6.8	11.9	541.2	2/21/2025 20:30	4.8	20.0	0.0	7.1	11.7	13.5	18.5
2/21/2025 20:45	4.9	8.8	0.0	6.8	11.9	535.3	2/21/2025 20:45	4.8	16.7	0.0	7.1	11.7	12.3	17.3
2/21/2025 21:00	5.0	11.6	0.0	6.8	11.9	529.1	2/21/2025 21:00	4.8	19.0	0.0	7.0	11.7	21.4	26.4
2/21/2025 21:15	5.0	11.9	0.0	6.8	11.9	541.2	2/21/2025 21:15	4.8	16.7	0.0	7.0	11.7	7.8	15.8
2/21/2025 21:30	5.1	12.2	0.0	6.8	11.8	532.4	2/21/2025 21:30	4.8	18.8	0.0	7.0	11.7	6.5	14.5
2/21/2025 21:45	5.1	12.1	0.0	6.8	11.8	524.1	2/21/2025 21:45	4.8	18.1	0.0	7.1	11.7	4.0	12.0
2/21/2025 22:00	4.9	8.6	0.0	6.8	11.9	521.3	2/21/2025 22:00	4.8	16.1	0.0	7.1	11.7	4.2	12.2
2/21/2025 22:15	5.1	10.3	0.0	6.8	11.8	510.4	2/21/2025 22:15	4.8	17.8	0.0	7.0	11.7	12.0	17.0
2/21/2025 22:30	5.2	12.2	0.0	6.9	11.8	497.8	2/21/2025 22:30	4.9	17.6	0.0	6.9	11.7	8.1	13.1
2/21/2025 22:45	4.9	8.2	0.0	6.7	11.9	484.1	2/21/2025 22:45	4.9	17.1	0.0	7.1	11.7	4.0	12.0
2/21/2025 23:00	5.2	12.1	0.0	6.8	11.8	588.3	2/21/2025 23:00	4.9	14.8	0.0	7.1	11.7	3.0	11.0
2/21/2025 23:15	5.2	12.0	0.0	6.8	11.8	581.5	2/21/2025 23:15	4.9	17.9	0.0	7.0	11.7	5.8	13.8
2/21/2025 23:30	5.2	12.5	0.0	6.9	11.8	550.2	2/21/2025 23:30	4.9	18.9	0.0	7.1	11.7	7.9	15.9
2/21/2025 23:45	5.3	13.1	0.0	6.9	11.8	541.4	2/21/2025 23:45	4.9	19.3	0.0	7.2	11.7	12.2	17.2
2/22/2025 0:00	5.3	12.3	0.0	6.9	11.7	397.4	2/22/2025 0:00	4.9	17.4	0.0	7.1	11.7	4.0	12.0
2/22/2025 0:15	5.3	13.1	0.0	6.9	11.7	401.6	2/22/2025 0:15	4.9	19.6	0.0	7.2	11.7	11.0	16.0
2/22/2025 0:30	5.3	13.2	0.0	6.9	11.7	401.0	2/22/2025 0:30	4.9	18.2	0.0	7.1	11.7	3.9	11.9
2/22/2025 0:45	5.0	8.5	0.0	6.8	11.8	405.6	2/22/2025 0:45	4.9	19.9	0.0	7.2	11.7	9.5	14.5
2/22/2025 1:00	5.0	8.4	0.0	6.8	11.9	616.1	2/22/2025 1:00	4.9	18.3	0.0	7.1	11.7	3.7	11.7
2/22/2025 1:15	5.1	10.1	0.0	6.8	11.8	601.8	2/22/2025 1:15	4.9	20.3	0.0	7.2	11.7	6.4	14.4
2/22/2025 1:30	5.1	9.5	0.0	6.9	11.8	594.6	2/22/2025 1:30	4.9	18.5	0.0	7.2	11.7	4.2	12.2
2/22/2025 1:45	5.3	13.3	0.0	6.9	11.7	581.2	2/22/2025 1:45	4.9	20.2	0.0	7.0	11.7	7.0	15.0
2/22/2025 2:00	5.3	13.2	0.0	6.9	11.7	566.9	2/22/2025 2:00	4.9	19.9	0.0	7.2	11.7	1.7	9.7
2/22/2025 2:15	5.3	14.5	0.0	6.9	11.7	571.4	2/22/2025 2:15	4.9	17.7	0.0	7.2	11.7	1.9	9.9
2/22/2025 2:30	5.3	14.1	0.0	6.9	11.7	565.3	2/22/2025 2:30	4.9	19.0	0.0	7.0	11.7	3.7	11.7
2/22/2025 2:45	5.1	8.6	0.0	6.9	11.8	568.4	2/22/2025 2:45	4.9	18.5	0.0	7.1	11.7	0.8	8.8
2/22/2025 3:00	5.2	10.4	0.0	6.8	11.8	554.4	2/22/2025 3:00	4.9	18.4	0.0	7.1	11.7	3.1	11.1
2/22/2025 3:15	5.2	12.5	0.0	6.8	11.8	551.6	2/22/2025 3:15	4.9	17.9	0.0	7.1	11.7	2.6	10.6
2/22/2025 3:30	5.3	13.5	0.0	6.8	11.8	533.2	2/22/2025 3:30	4.9	17.9	0.0	7.1	11.6	2.5	10.5
2/22/2025 3:45	5.4	16.8	0.0	6.8	11.7	539.1	2/22/2025 3:45	5.0	17.5	0.0	7.2	11.7	2.3	10.3
2/22/2025 4:00	5.3	15.0	0.0	6.8	11.7	530.0	2/22/2025 4:00	5.0	15.7	0.0	7.1	11.6	0.9	8.9
2/22/2025 4:15	5.4	14.0	0.0	6.9	11.6	532.6	2/22/2025 4:15	5.0	17.2	0.0	7.1	11.6	4.1	12.1
2/22/2025 4:30	5.4	12.1	0.0	6.9	11.7	524.7	2/22/2025 4:30	5.0	17.2	0.0	7.1	11.7	1.2	9.2
2/22/2025 4:45	5.0	8.1	0.0	6.8	11.8	520.1	2/22/2025 4:45	5.0	16.9	0.0	7.1	11.6	3.1	11.1
2/22/2025 5:00	5.4	14.6	0.0	6.9	11.7	516.5	2/22/2025 5:00	5.0	17.8	0.0	7.1	11.6	3.5	11.5
2/22/2025 5:15	5.1	8.8	0.0	6.8	11.8	513.4	2/22/2025 5:15	5.0	18.1	0.0	7.2	11.7	4.1	12.1
2/22/2025 5:30	5.4	36.4	0.0	6.9	11.7	3.8	2/22/2025 5:30	5.0	18.7	0.0	7.1	11.6	5.9	13.9
2/22/2025 5:45	5.5	40.5	0.0	6.9	11.7	3.5	2/22/2025 5:45	5.0	19.1	0.0	7.2	11.6	1.7	9.7
2/22/2025 6:00	5.1	22.4	0.0	6.7	11.8	50.6	2/22/2025 6:00	5.0	17.9	0.0	7.2	11.6	4.7	12.7
2/22/2025 6:15	5.5	41.3	0.0	7.0	11.7	2.5	2/22/2025 6:15	5.0	19.8	0.0	7.0	11.7	5.3	13.3
2/22/2025 6:30	5.5	41.0	0.0	7.0	11.7	1.0	2/22/2025 6:30	5.0	17.8	0.0	7.3	11.7	0.8	8.8
2/22/2025 6:45	5.3	30.1	0.0	6.7	11.8	2.1	2/22/2025 6:45	5.0	20.2	0.0	7.1	11.6	3.6	11.6
2/22/2025 7:00	5.2	26.9	0.0	6.8	11.7	2.5	2/22/2025 7:00	5.0	20.3	0.0	7.2	11.6	1.7	9.7
2/22/2025 7:15	5.1	22.1	0.0	6.6	11.8	8.8	2/22/2025 7:15	5.1	18.8	0.0	7.2	11.6	5.0	13.0
2/22/2025 7:30	5.3	26.5	0.0	6.9	11.7	4.6	2/22/2025 7:30	5.1	21.1	0.0	7.1	11.6	5.6	13.6
2/22/2025 7:45	5.6	42.4	0.0	7.0	11.6	6.8	2/22/2025 7:45	5.1	21.7	0.0	7.2	11.6	3.0	11.0
2/22/2025 8:00	5.6	41.8	0.0	7.0	11.6	2.9	2/22/2025 8:00	5.1	19.2	0.0	7.2	11.6	2.1	10.1
2/22/2025 8:15	5.2	24.7	0.0	6.8	11.7	1.8	2/22/2025 8:15	5.1	20.9	0.0	7.2	11.6	3.7	11.7
2/22/2025 8:30	5.1	22.7	0.0	6.7	11.8	2.5	2/22/2025 8:30	5.1	18.8	0.0	7.2	11.6	0.7	8.7
2/22/2025 8:45	5.5	35.6	0.0	6.9	11.7	13.7	2/22/2025 8:45	5.1	20.2	0.0	7.1	11.6	3.6	11.6
2/22/2025 9:00	5.6	40.8	0.0	7.0	11.6	2.5	2/22/2025 9:00	5.1	18.1	0.0	7.2	11.6	1.8	9.8
2/22/2025 9:15	5.3	27.2	0.0	6.8	11.7	0.8	2/22/2025 9:15	5.1	19.2	0.0	7.1	11.6	2.9	10.9
2/22/2025 9:30	5.6	39.1	0.0	6.9	11.6	6.0	2/22/2025 9:30	5.1	17.4	0.0	7.2	11.6	0.7	8.7
2/22/2025 9:45	5.6	35.8	0.0	6.9	11.6	7.1	2/22/2025 9:45	5.2	18.5	0.0	7.0	11.6	2.0	10.0
2/22/2025 10:00	5.2	22.5	0.0	6.7	11.7	3.3	2/22/2025 10:00		18.3	0.0	7.2	11.6	1.8	9.8
2/22/2025 10:15	5.2	22.3	0.0	6.7	11.7	4.3	2/22/2025 10:15	5.2	18.2	0.0	7.1	11.5	0.7	8.7
2/22/2025 10:30	5.7	41.5	0.0	7.0	11.6	3.8	2/22/2025 10:30	5.2	17.7	0.0	7.1	11.6	0.7	8.7
2/22/2025 10:45	5.7	45.8	0.0	7.0	11.6	4.1	2/22/2025 10:45	5.2	16.1	0.0	7.1	11.5	0.5	8.5
2/22/2025 11:00	5.7	47.1	0.0	7.0	11.6	0.9	2/22/2025 11:00	5.2	17.8	0.0	7.1	11.6	26.5	31.5
2/22/2025 11:15	5.7	41.3	0.0	7.0	11.6	1.8	2/22/2025 11:15	5.2	16.2	0.0	7.1	11.6	3.8	11.8
2/22/2025 11:30	5.5	38.0	0.0	6.9	11.6	3.4	2/22/2025 11:30	5.2	17.6	0.0	7.1	11.6	2.2	10.2
2/22/2025 11:45	5.7	42.0	0.0	7.0	11.6	3.8	2/22/2025 11:45	5.2	15.9	0.0	7.1	11.5	1.0	9.0
2/22/2025 12:00	5.7	47.7	0.0	7.0	11.5	2.1	2/22/2025 12:00	5.2	18.0	0.0	7.1	11.5	2.4	10.4
2/22/2025 12:15	5.3	21.1	0.0	6.7	11.7	7.3	2/22/2025 12:15	5.2	16.7	0.0	7.1	11.5	2.4	10.4
2/22/2025 12:30	5.3	22.9	0.0	6.7	11.7	2.7	2/22/2025 12:30	5.2	18.8	0.0	7.2	11.5	15.9	20.9
2/22/2025 12:45	5.8	45.0	0.0	7.0	11.5	1.5	2/22/2025 12:45	5.2	18.0	0.0	7.2	11.5	2.5	10.5
2/22/2025 13:00	5.8	49.8	0.0	7.1	11.5	7.3	2/22/2025 13:00	5.2	19.8	0.0	7.1	11.5	3.2	11.2
2/22/2025 13:15	5.3	22.8	0.0	6.7	11.7	4.3	2/22/2025 13:15	5.3	18.7	0.0	7.2	11.5	2.7	10.7
2/22/2025 13:30	5.7	45.5	0.0	6.9	11.6	4.8	2/22/2025 13:30	5.3	22.2	0.0	7.2	11.5	13.3	18.3
2/22/2025 13:45	5.7	41.5	0.0	7.0	11.5	15.2	2/22/2025 13:45	5.3	21.8	0.0	7.3	11.5	17.4	22.4
2/22/2025 14:00	5.8	49.5	0.0	7.1	11.5	13.6	2/22/2025 14:00	5.3	24.3	0.0	7.2	11.5	7.1	15.1
2/22/2025 14:15	5.8	53.4	0.0	7.1	11.5	5.7	2/22/2025 14:15	5.3	24.8	0.0	7.3	11.5	10.5	15.5
2/22/2025 14:30	5.7	47.4	0.0	7.1	11.5	13.2	2/22/2025 14:30	5.3	25.6	0.0	7.4	11.5	133.7	138.7
2/22/2025 14:45	5.7	47.4	0.0	7.1	11.5	105.3	2/22/2025 14:45	5.3	30.1	0.0	7.4	11.5	147.3	152.3
2/22/2025 15:00	5.4	31.5	0.0	6.9	11.6	190.9	2/22/2025 15:00	5.4	29.8	0.0	7.6	11.4	344.4	349.4
2/22/2025 15:15	5.4	33.3	0.0	7.0	11.6	255.5	2/22/2025 15:15	5.4	31.5	0.0	7.6	11.5	307.8	312.8
2/22/2025 15:30	5.7	45.5	0.0	7.1	11.5	193.7	2/22/2025 15:30	5.4	25.9	0.0	7.5	11.4	186.4	191.4
2/22/2025 15:45	5.6	38.4	0.0	7.0	11.5	177.7	2/22/2025 15:45	5.4	26.4	0.0	7.3	11.4	110.7	115.7
2/22/2025 16:00	5.7	41.5	0.0	7.0	11.6	130.1	2/22/2025 16:00	5.4	24.1	0.0	7.3	11.4	55.9	60.9
2/22/2025 16:15	5.6	39.1	0.0	6.9	11.6	81.0	2/22/2025 16:15	5.4	20.6	0.0	7.1	11.4	71.5	76.5
2/22/2025 16:30	5.6	37.0	0.0	6.9	11.6	118.7	2/22/2025 16:30	5.4	22.2	0.0	7.3	11.4	115.1	120.1
2/22/2025 16:45	5.6	34.4	0.0	6.9	11.6	153.1	2/22/2025 16:45	5.4	17.2	0.0	7.2	11.4	109.7	114.7
2/22/2025 17:00	5.6	34.8	0.0	6.9	11.6	87.9	2/22/2025 17:00	5.4	20.2	0.0	7.2	11.4	91.2	96.2
2/22/2025 17:15	5.6	35.8	0.0	6.9	11.6	89.1	2/22/2025 17:15	5.4	11.8	0.0	7.1	11.4	50.8	55.8
2/22/2025 17:30	5.6	30.1	0.0	6.8	11.6	45.9	2/22/2025 17:30	5.4	17.6	0.0	6.9	11.4	23.6	28.6
2/22/2025 17:45	5.5	22.1	0.0	6.7	11.6	42.9	2/22/2025 17:45	5.4	10.6	0.0	7.0	11.4	35.9	40.9
2/22/2025 18:00	5.5	21.4	0.0	6.7	11.6	52.8	2/22/2025 18:00	5.4	16.5	0.0	7.0	11.4	31.3	36.3
2/22/2025 18:15	5.6	32.3	0.0	6.9	11.6	42.0	2/22/2025 18:15	5.4	15.7	0.0	6.9	11.4	24.8	29.8
2/22/2025 18:30	5.6	35.9	0.0	6.7	11.6	42.0	2/22/2025 18:30	5.4	17.8	0.0	6.9	11.4	20.3	25.3
2/22/2025 18:45	5.6	35.1	0.0	6.7	11.6	40.8	2/22/2025 18:45	5.4	17.8	0.0	6.9	11.4	30.6	35.6
2/22/2025 19:00	5.5	28.7	0.0	6.6	11.6	36.9	2/22/2025 19:00	5.4	12.2	0.0	6.9	11.4	19.4	24.4
2/22/2025 19:15	5.6	31.1	0.0	6.7	11.6	31.2	2/22/2025 19:15	5.4	15.2	0.0	7.0	11.4	19.1	24.1
2/22/2025 19:30	5.6	29.7	0.0	6.7	11.6	28.0	2/22/2025 19:30	5.4	13.3	0.0	6.9	11.4	13.6	18.6

2/22/2025 19:45	5.6	28.5	0.0	6.7	11.6	21.6
2/22/2025 20:00	5.5	18.5	0.0	6.5	11.6	25.5
2/22/2025 20:15	5.6	27.4	0.0	6.7	11.6	15.3
2/22/2025 20:30	5.6	25.8	0.0	6.7	11.6	13.1
2/22/2025 20:45	5.7	25.0	0.0	6.8	11.6	14.4
2/22/2025 21:00	5.7	24.7	0.0	6.8	11.5	9.7
2/22/2025 21:15	5.7	26.4	0.0	6.7	11.5	13.5
2/22/2025 21:30	5.8	29.1	0.0	6.6	11.5	12.6
2/22/2025 21:45	5.8	28.4	0.0	6.6	11.5	11.8
2/22/2025 22:00	5.8	28.1	0.0	6.6	11.5	7.0
2/22/2025 22:15	5.8	25.0	0.0	6.7	11.5	9.6
2/22/2025 22:30	5.7	18.4	0.0	6.5	11.6	4.9
2/22/2025 22:45	5.8	26.8	0.0	6.6	11.5	6.2
2/22/2025 23:00	5.7	17.3	0.0	6.5	11.5	5.7
2/22/2025 23:15	5.7	18.0	0.0	6.5	11.5	4.2
2/22/2025 23:30	6.0	30.8	0.0	6.8	11.5	3.6
2/22/2025 23:45	6.0	31.0	0.0	6.8	11.5	6.5
2/23/2025 0:00	5.8	17.2	0.0	6.5	11.5	3.3
2/23/2025 0:15	5.8	17.1	0.0	6.5	11.5	4.5
2/23/2025 0:30	6.0	36.8	0.0	6.8	11.4	5.4
2/23/2025 0:45	6.1	40.2	0.0	6.8	11.4	4.7
2/23/2025 1:00	5.9	29.7	0.0	6.7	11.5	5.6
2/23/2025 1:15	6.0	36.4	0.0	6.6	11.5	3.1
2/23/2025 1:30	6.1	48.2	0.0	6.9	11.4	3.3
2/23/2025 1:45	5.9	21.2	0.0	6.7	11.5	4.2
2/23/2025 2:00	6.1	49.9	0.0	6.9	11.4	3.4
2/23/2025 2:15	5.9	23.2	0.0	6.7	11.5	1.9
2/23/2025 2:30	6.2	44.1	0.0	6.9	11.4	4.1
2/23/2025 2:45	5.9	18.0	0.0	6.6	11.5	2.9
2/23/2025 3:00	5.9	23.1	0.0	6.7	11.5	1.5
2/23/2025 3:15	5.9	21.5	0.0	6.7	11.5	3.4
2/23/2025 3:30	6.2	48.9	0.0	7.0	11.4	3.4
2/23/2025 3:45	6.2	58.0	0.0	6.9	11.4	3.6
2/23/2025 4:00	5.9	22.4	0.0	6.7	11.5	2.1
2/23/2025 4:15	6.2	51.9	0.0	7.0	11.4	3.1
2/23/2025 4:30	6.1	44.9	0.0	6.9	11.4	5.3
2/23/2025 4:45	6.2	48.4	0.0	7.0	11.4	1.6
2/23/2025 5:00	5.9	24.3	0.0	6.7	11.5	0.7
2/23/2025 5:15	6.1	47.3	0.0	6.9	11.4	4.6
2/23/2025 5:30	5.9	33.5	0.0	6.8	11.4	1.1
2/23/2025 5:45	6.0	43.9	0.0	6.8	11.4	2.8
2/23/2025 6:00	5.8	29.2	0.0	6.6	11.6	4.0
2/23/2025 6:15	6.1	70.8	0.0	7.0	11.4	2.6
2/23/2025 6:30	6.1	54.6	0.0	7.0	11.4	6.4
2/23/2025 6:45	5.7	24.0	0.0	6.7	11.5	2.4
2/23/2025 7:00	6.1	56.9	0.0	6.9	11.4	5.7
2/23/2025 7:15	6.0	42.5	0.0	6.9	11.5	2.2
2/23/2025 7:30	5.6	19.8	0.0	6.6	11.6	1.3
2/23/2025 7:45	6.1	67.3	0.0	6.9	11.4	2.2
2/23/2025 8:00	5.8	30.6	0.0	6.9	11.5	2.1
2/23/2025 8:15	6.0	44.5	0.0	7.0	11.4	2.6
2/23/2025 8:30	5.9	36.0	0.0	7.0	11.5	2.0
2/23/2025 8:45	6.1	51.3	0.0	7.0	11.4	0.0
2/23/2025 9:00	6.1	49.7	0.0	7.0	11.4	1.0
2/23/2025 9:15	6.1	48.8	0.0	7.0	11.4	1.8
2/23/2025 9:30	6.0	41.3	0.0	6.9	11.5	1.1
2/23/2025 9:45	5.6	18.1	0.0	6.6	11.6	1.8
2/23/2025 10:00	5.6	19.7	0.0	6.6	11.6	0.0
2/23/2025 10:15	6.2	53.1	0.0	7.0	11.4	2.7
2/23/2025 10:30	6.2	55.2	0.0	7.1	11.4	1.2
2/23/2025 10:45	5.7	18.6	0.0	6.7	11.5	2.6
2/23/2025 11:00	5.8	19.6	0.0	6.7	11.5	0.0
2/23/2025 11:15	5.8	19.6	0.0	6.7	11.5	2.1
2/23/2025 11:30	6.4	56.1	0.0	7.1	11.3	2.9
2/23/2025 11:45	6.3	43.2	0.0	7.0	11.4	1.7
2/23/2025 12:00	6.2	23.9	0.0	6.9	11.4	3.9
2/23/2025 12:15	6.8	54.1	0.0	7.2	11.2	1.2
2/23/2025 12:30	6.8	50.5	0.0	7.2	11.2	0.0
2/23/2025 12:45	6.8	56.6	0.0	7.2	11.2	0.3
2/23/2025 13:00	6.8	49.4	0.0	7.1	11.2	1.2
2/23/2025 13:15	6.3	18.4	0.0	6.7	11.4	0.3
2/23/2025 13:30	6.4	19.2	0.0	6.7	11.3	0.2
2/23/2025 13:45	6.8	44.0	0.0	7.0	11.2	3.1
2/23/2025 14:00	7.0	55.3	0.0	7.3	11.1	1.8
2/23/2025 14:15	6.4	19.1	0.0	6.8	11.3	0.0
2/23/2025 14:30	6.4	20.3	0.0	6.7	11.3	0.0
2/23/2025 14:45	7.0	81.5	0.0	7.1	11.1	0.4
2/23/2025 15:00	7.0	74.2	0.0	7.1	11.1	2.1
2/23/2025 15:15	7.0	63.7	0.0	7.1	11.1	0.0
2/23/2025 15:30	7.0	58.0	0.0	7.1	11.1	0.5
2/23/2025 15:45	6.4	19.2	0.0	6.8	11.3	0.8
2/23/2025 16:00	6.4	19.6	0.0	6.7	11.3	0.0
2/23/2025 16:15	6.8	55.8	0.0	7.0	11.2	1.2
2/23/2025 16:30	7.0	75.2	0.0	7.1	11.1	2.7
2/23/2025 16:45	6.6	40.6	0.0	7.1	11.2	1.4
2/23/2025 17:00	6.4	21.6	0.0	6.7	11.3	0.0
2/23/2025 17:15	6.9	73.5	0.0	7.3	11.1	1.8
2/23/2025 17:30	6.9	73.0	0.0	8.6	11.1	2.1
2/23/2025 17:45	6.4	33.5	0.0	7.2	11.2	0.2
2/23/2025 18:00	6.9	126.9	0.1	7.4	11.1	4.1
2/23/2025 18:15	7.0	115.4	0.1	7.2	11.1	1.6
2/23/2025 18:30	6.9	92.3	0.0	7.2	11.1	0.3
2/23/2025 18:45	6.9	80.5	0.0	7.2	11.1	0.6
2/23/2025 19:00	6.3	19.8	0.0	6.8	11.3	0.3
2/23/2025 19:15	6.3	23.7	0.0	6.8	11.3	2.3
2/23/2025 19:30	6.7	61.3	0.0	7.2	11.2	23.9
2/23/2025 19:45	6.4	30.0	0.0	7.0	11.3	35.0
2/23/2025 20:00	6.6	48.1	0.0	7.0	11.3	23.3
2/23/2025 20:15	6.8	60.3	0.0	7.3	11.2	18.3
2/23/2025 20:30	6.7	69.0	0.0	7.7	11.2	14.3
2/23/2025 20:45	6.7	104.0	0.0	7.9	11.2	4.6
2/23/2025 21:00	6.2	32.7	0.0	7.0	11.4	6.5
2/23/2025 21:15	6.1	28.6	0.0	6.9	11.4	6.0
2/23/2025 21:30	6.7	116.8	0.1	7.5	11.2	2.2
2/23/2025 21:45	6.3	55.0	0.0	7.1	11.3	3.9
2/23/2025 22:00	6.6	98.0	0.0	7.3	11.2	4.9
2/23/2025 22:15	6.3	47.2	0.0	7.0	11.4	14.2
2/23/2025 22:30	6.6	110.7	0.1	7.2	11.3	30.8
2/23/2025 22:45	6.2	37.7	0.0	6.9	11.4	19.7
2/23/2025 23:00	6.7	87.3	0.0	7.1	11.3	34.4
2/23/2025 23:15	6.7	73.3	0.0	7.1	11.2	17.1
2/23/2025 23:30	6.3	30.7	0.0	6.9	11.4	5.6
2/23/2025 23:45	6.3	27.1	0.0	6.9	11.4	5.1

2/22/2025 19:45	5.4	11.9	0.0	7.0	11.4	9.6	14.6
2/22/2025 20:00	5.5	15.0	0.0	6.9	11.4	7.5	15.5
2/22/2025 20:15	5.4	9.2	0.0	6.8	11.4	9.5	14.5
2/22/2025 20:30	5.5	15.7	0.0	6.9	11.4	11.8	16.8
2/22/2025 20:45	5.5	8.0	0.0	6.9	11.4	6.0	14.0
2/22/2025 21:00	5.5	14.0	0.0	6.9	11.4	6.8	14.8
2/22/2025 21:15	5.6	9.6	0.0	7.0	11.4	7.5	15.5
2/22/2025 21:30	5.6	15.8	0.0	7.0	11.4	29.1	34.1
2/22/2025 21:45	5.6	14.0	0.0	6.9	11.4	3.1	11.1
2/22/2025 22:00	5.6	14.1	0.0	7.0	11.4	5.4	13.4
2/22/2025 22:15	5.6	15.7	0.0	6.9	11.3	5.6	13.6
2/22/2025 22:30	5.7	15.3	0.0	6.9	11.3	2.7	10.7
2/22/2025 22:45	5.7	15.1	0.0	7.0	11.3	3.1	11.1
2/22/2025 23:00	5.7	15.2	0.0	7.0	11.3	1.8	9.8
2/22/2025 23:15	5.7	13.0	0.0	7.0	11.3	2.9	10.9
2/22/2025 23:30	5.7	15.2	0.0	7.0	11.3	1.8	9.8
2/22/2025 23:45	5.8	15.6	0.0	7.1	11.3	3.3	11.3
2/23/2025 0:00	5.8	15.0	0.0	7.0	11.4	1.0	9.0
2/23/2025 0:15	5.8	15.6	0.0	7.1	11.4	2.0	10.0
2/23/2025 0:30	5.8	15.2	0.0	7.0	11.4	3.7	11.7
2/23/2025 0:45	5.8	15.9	0.0	7.1	11.4	4.0	12.0
2/23/2025 1:00	5.8	15.4	0.0	7.1	11.4	4.7	12.7
2/23/2025 1:15	5.8	15.7	0.0	7.1	11.4	2.6	10.6
2/23/2025 1:30	5.8	15.6	0.0	7.1	11.4	2.3	10.3
2/23/2025 1:45	5.9	15.7	0.0	7.1	11.3	2.0	10.0
2/23/2025 2:00	5.9	16.0	0.0	7.1	11.3	2.0	10.0
2/23/2025 2:15	5.9	14.1	0.0	7.1	11.3	6.7	14.7
2/23/2025 2:30	5.9	15.6	0.0	7.1	11.3	1.5	9.5
2/23/2025 2:45	5.9	14.0	0.0	7.1	11.3	1.4	9.4
2/23/2025 3:00	5.9	15.5	0.0	7.1	11.3	1.4	9.4
2/23/2025 3:15	5.9	14.1	0.0	7.1	11.3	1.0	9.0
2/23/2025 3:30	5.9	15.5	0.0	7.1	11.3	3.4	11.4
2/23/2025 3:45	5.8	14.1	0.0	7.1	11.3	2.6	10.6
2/23/2025 4:00	5.8	15.4	0.0	7.1	11.3	1.5	9.5
2/23/2025 4:15	5.8	13.8	0.0	7.1	11.3	0.3	8.3
2/23/2025 4:30	5.8	15.2	0.0	7.1	11.3	0.7	8.7
2/23/2025 4:45	5.8	15.4	0.0	7.1	11.3	0.6	8.6
2/23/2025 5:00	5.8	15.2	0.0	7.0	11.3	1.9	9.9
2/23/2025 5:15	5.8	13.7	0.0	7.1	11.3	0.9	8.9
2/23/2025 5:30	5.7	15.3	0.0	7.1	11.3	1.6	9.6
2/23/2025 5:45	5.7	13.7	0.0	7.1	11.3	0.6	8.6
2/23/2025 6:00	5.7	15.1	0.0	6.9	11.4	1.7	9.7
2/23/2025 6:15	5.7	14.8	0.0	7.1	11.3	2.0	10.0
2/23/2025 6:30	5.6	13.4	0.0	7.1	11.4	0.5	8.5
2/23/2025 6:45	5.7	15.1	0.0	7.1	11.4	0.8	8.8
2/23/2025 7:00	5.6	13.5	0.0	7.0	11.4	0.3	8.3
2/23/2025 7:15	5.6	14.9	0.0	7.0	11.4	0.9	8.9
2/23/2025 7:30	5.6	14.8	0.0	7.1	11.4	1.2	9.2
2/23/2025 7:45	5.6	13.4	0.0	7.1	11.4	0.2	8.2
2/23/2025 8:00	5.6	15.0	0.0	6.9	11.4	1.0	9.0
2/23/2025 8:15	5.6	14.9	0.0	7.0	11.4	1.5	9.5
2/23/2025 8:30	5.6	14.8	0.0	6.9	11.4	0.6	8.6
2/23/2025 8:45	5.6	13.1	0.0	7.1	11.4	0.8	8.8
2/23/2025 9:00	5.6	14.8	0.0	7.1	11.4	0.9	8.9
2/23/2025 9:15	5.6	14.8	0.0	7.0	11.4	0.9	8.9
2/23/2025 9:30	5.6	14.4	0.0	7.0	11.4	0.6	8.6
2/23/2025 9:45	5.6	13.1	0.0	7.1	11.4	5.0	13.0
2/23/2025 10:00	5.6	14.7	0.0	7.1	11.4	6.3	14.3
2/23/2025 10:15	5.7	14.8	0.0	7.0	11.4	2.8	10.8
2/23/2025 10:30	5.7	14.6	0.0	7.1	11.4	1.0	9.0
2/23/2025 10:45	5.7	14.7	0.0	7.1	11.4	4.0	12.0
2/23/2025 11:00	5.8	14.6	0.0	7.0	11.4	0.8	8.8
2/23/2025 11:15	5.8	15.0	0.0	7.1	11.4	1.0	9.0
2/23/2025 11:30	5.9	14.8	0.0	7.1	11.4	0.7	8.7
2/23/2025 11:45	6.0	14.6	0.0	7.0	11.3	4.0	12.0
2/23/2025 12:00	6.1	14.4	0.0	6.9	11.3	4.5	12.5
2/23/2025 12:15	6.2	13.0	0.0	7.0	11.3	0.7	8.7
2/23/2025 12:30	6.2	14.7	0.0	7.1	11.3	1.2	9.2
2/23/2025 12:45	6.2	12.9	0.0	7.0	11.2	0.5	8.5
2/23/2025 13:00	6.2	14.4	0.0	7.0	11.3	6.5	14.5
2/23/2025 13:15	6.3	14.6	0.0	7.1	11.2	1.2	9.2
2/23/2025 13:30	6.4	14.3	0.0	7.0	11.2	4.7	12.7
2/23/2025 13:45	6.4	13.1	0.0	7.0	11.1	0.3	8.3
2/23/2025 14:00	6.4	14.5	0.0	7.0	11.2	3.9	11.9
2/23/2025 14:15	6.4	14.6	0.0	7.1	11.2	1.0	9.0
2/23/2025 14:30	6.4	13.0	0.0	7.0	11.2	1.0	9.0
2/23/2025 14:45	6.4	14.4	0.0	7.0	11.2	4.3	12.3
2/23/2025 15:00	6.4	14.3	0.0	7.1	11.1	0.3	8.3
2/23/2025 15:15	6.4	13.1	0.0	7.1	11.1	0.5	8.5
2/23/2025 15:30	6.4	14.5	0.0	7.1	11.1	4.4	12.4
2/23/2025 15:45	6.4	13.0	0.0	7.1	11.1	0.6	8.6
2/23/2025 16:00	6.4	14.3	0.0	7.0	11.1	2.8	10.8
2/23/2025 16:15	6.4	13.1	0.0	7.1	11.1	1.5	9.5
2/23/2025 16:30	6.4	14.4	0.0	7.1	11.1	0.3	8.3
2/23/2025 16:45	6.4	12.8	0.0	7.1	11.1	1.1	9.1
2/23/2025 17:00	6.4	14.4	0.0	7.1	11.1	0.8	8.8
2/23/2025 17:15	6.4	12.8	0.0	7.0	11.1	1.7	9.7
2/23/2025 17:30	6.3	14.3	0.0	7.1	11.1	1.0	9.0
2/23/2025 17:45	6.3	12.8	0.0	7.1	11.1	0.2	8.2
2/23/2025 18:00	6.3	14.4	0.0	6.9	11.1	1.8	9.8
2/23/2025 18:15	6.3	14.3	0.0	7.0	11.1	0.9	8.9
2/23/2025 18:30	6.3	13.5	0.0	7.0	11.1	2.1	10.1
2/23/2025 18:45	6.3	15.0	0.0	7.1	11.1	0.6	8.6
2/23/2025 19:00	6.3	15.1	0.0	7.1	11.1	4.5	12.5
2/23/2025 19:15	6.4	19.7	0.0	7.2	11.1	25.8	30.8
2/23/2025 19:30	6.5	22.2	0.0	7.4	11.1	40.6	45.6
2/23/2025 19:45	6.5	21.6	0.0	7.3	11.1	52.3	57.3
2/23/2025 20:00	6.4	25.8	0.0	7.4	11.1	29.1	34.1
2/23/2025 20:15	6.4	26.3	0.0	7.4	11.1	21.0	26.0
2/23/2025 20:30	6.3	28.6	0.0	7.4	11.2	16.7	21.7
2/23/2025 20:45	6.3	23.7	0.0	7.3	11.1	8.1	13.1
2/23/2025 21:00	6.2	25.8	0.0	7.4	11.2	2.9	10.9
2/23/2025 21:15	6.2	21.9	0.0	7.3	11.2	2.2	10.2
2/23/2025 21:30	6.2	23.5	0.0	7.3	11.2	7.8	15.8
2/23/2025 21:45	6.2	20.1	0.0	7.2	11.2	2.6	10.6
2/23/2025 22:00	6.2	22.3	0.0	7.3	11.2	8.3	13.3
2/23/2025 22:15	6.2	23.0	0.0	7.3	11.2	31.5	36.5
2/23/2025 22:30	6.2	21.6	0.0	7.3	11.2	13.6	18.6
2/23/2025 22:45	6.2	21.8	0.0	7.4	11.2	60.2	65.2
2/23/2025 23:00	6.3	23.5	0.0	7.4	11.2	27.5	32.5
2/23/2025 23:15	6.3	19.8	0.0	7.3	11.2	7.5	15.5
2/23/2025 23:30	6.3	21.0	0.0	7.3	11.2	3.1	11.1
2/23/2025 23:45	6.3	17.8	0.0	7.2	11.2	2.9	10.9