



**Eagle Mountain - Woodfibre Gas Pipeline Project  
Waste Discharge Permit PE-110163 Report**

Reporting Week	Dec 9 <sup>th</sup> to Dec 15 <sup>th</sup> , 2024
Report #	38
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# **Eagle Mountain - Woodfibre Gas Pipeline Project**

## **BCER Waste Discharge Permit Weekly Report**



**Eagle Mountain - Woodfibre Gas Pipeline Project  
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Appendix A: BC Rail Point of Discharge from Water Treatment System Documentation

Appendix B: BC Rail Receiving Environment Documentation

Appendix C: Woodfibre Point of Discharge from Water Treatment System Documentation

Appendix D: Woodfibre Receiving Environment Documentation

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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.

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

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

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

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

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

## Summary-BC Rail Site

### Site Activities

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

### Point of Discharge from Water Treatment System Monitoring

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



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**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	2024-12-10 to 2024-12-11	2024-12-10	Yes	N/A-batch	300-450 GPM	339.8 m3	Yes

\*Max discharge is 515 m3/day

### Exceedances

No exceedances this reporting period.

### Receiving Environment Monitoring

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

**Table 4: Upstream Monitoring Information**

Location	Date of Lab Sample	Real Time Monitored	Results
Squamish River Upstream	2024-12-09	Yes *	Full set of lab sample results, photo and documentation are provided in Appendix B.

**Table 5: Downstream Monitoring Information**


Location	Date of Lab Sample	Real Time Monitored	Results
Squamish River Downstream	2023-12-09	Yes *	Full set of lab sample results, photo and documentation are provided in Appendix B.

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

### Receiving Environment Monitoring Details

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

## Summary-Woodfibre

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### Site Activities

- No exceedances this period.
- Weekly upstream, downstream and end of pipe taken by Triton.

### Point of Discharge from Water Treatment System Monitoring

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

**Table 3: Discharges from Water Treatment System**

Location	Date of Discharge	Real Time Monitored and Daily Monitoring	Discharge Volume
Woodfibre	2024-12-09	Yes-Appendix C	364m <sup>3</sup>
Woodfibre	2024-12-10	Yes-Appendix C*lab sample day	381m <sup>3</sup>
Woodfibre	2024-12-11	Yes-Appendix C	404m <sup>3</sup>
Woodfibre	2024-12-12	Yes-Appendix C	418m <sup>3</sup>
Woodfibre	2024-12-13	Yes-Appendix C	396m <sup>3</sup>
Woodfibre	2024-12-14	Yes-Appendix C	409m <sup>3</sup>
Woodfibre	2024-12-15	Yes-Appendix C	374m <sup>3</sup>

\*Max discharge is 1500m<sup>3</sup>/day

### Exceedances

No exceedances this reporting period.

### Receiving Environment Monitoring

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


**Table 4: Upstream Monitoring Information**

Location	Date of Lab Sample	Real Time Monitored	Results
Woodfibre Upstream	2024-12-10	Yes *	Full set of lab sample results, photo and documentation are provided in Appendix D.

**Table 5: Downstream Monitoring Information**


	Date of Lab Sample	Real Time Monitored	Results
Woodfibre Downstream	2024-12-10	Yes *	Full set of lab sample results, photo and documentation are provided in Appendix D.

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

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### Receiving Environment Monitoring Details

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

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






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## BCR Site Batch Sample Analysis

		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>BC Rail Batch Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data</b>	<b>December 12<sup>th</sup>, 2024</b>	<b>Prepared by:</b> <b>Reviewed by:</b> <b>Date:</b>	<b>SD</b> <b>BC1</b> <b>December 16<sup>th</sup>, 2024</b>

**Table of Contents:**

1. Executive Summary and Notes
2. Discharge Lab's results
3. Photos

**Executive Summary and Field Notes:**

On December 10<sup>th</sup>, FKM initiated a new batch discharge at the BC Rail site. The discharge began on December 10<sup>th</sup> at 11:00 PM and concluded on December 12<sup>th</sup> at 03:00 AM. Total volume of discharge water was 339.8 m<sup>3</sup>, with an average flow rate ranging between 300 to 450 GPM.

**Table 1: Discharge details**

Date	Start Time	Flow Rate (GPM)	Volume (m <sup>3</sup> )	Duration
10-Dec-2024	11:00 PM	300-350	83.4	4 Hours and 10 Minutes
11-Dec-2024	02:15 PM	400-450	66	2 Hours and 26 Minutes
11-Dec-2024	08:15 PM	400-450	190.4	7 Hours and 45 Minutes

**Table 2: In-Situ Sample**

Date	Time	pH	Temperature (°C)	DO (mg/L)	NTU	Conductivity (µS/cm)	ORP (mV)	Salinity (ppt)	Visible sheen
11/12/2024	02:10:19 PM	7.15	7.2	10.41	2.01	1390	191.3	0.70	No
11/12/2024	07:23:45 PM	7.55	7.9	10.86	3.49	1330	326.8	0.67	No



**Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope**

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**Discharge Sample results:**

**Table 3: Lab Sample**

Client Sample ID			WTP
Date Sampled			10-Dec-2024
Time Sampled			12:00
ALS Sample ID			VA24D3153-001
Analyte	Lowest Detection Limit	Units	Sub-Matrix: Water
<b>Field Tests (Matrix: Water)</b>			
Temperature, field	0.10	°C	9.00
pH, field	0.10	pH units	7.10
<b>Physical Tests (Matrix: Water)</b>			
Conductivity	2.0	µS/cm	1300
Alkalinity, bicarbonate (as CaCO3)	2.0	mg/L	457
Alkalinity, carbonate (as CaCO3)	2.0	mg/L	<2.0
Alkalinity, hydroxide (as CaCO3)	2.0	mg/L	<2.0
Alkalinity, phenolphthalein (as CaCO3)	2.0	mg/L	<2.0
Alkalinity, total (as CaCO3)	2.0	mg/L	457
Hardness (as CaCO3), dissolved	0.60	mg/L	1.05
Hardness (as CaCO3), from total Ca/Mg	0.60	mg/L	1.10
Oxidation-reduction potential [ORP]	0.10	mV	220
Solids, total dissolved [TDS]	10	mg/L	900
Solids, total suspended [TSS]	3.0	mg/L	<3.0
Turbidity	0.10	NTU	1.07
pH	0.10	pH units	7.64
<b>Anions and Nutrients (Matrix: Water)</b>			
Ammonia, total (as N)	0.0050	mg/L	0.0091
Bromide	0.050	mg/L	0.791
Chloride	0.50	mg/L	65.8
Fluoride	0.020	mg/L	0.108



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Nitrate (as N)	0.0050	mg/L	0.0370
Nitrite (as N)	0.0010	mg/L	<0.0050
Nitrogen, total	0.030	mg/L	1.14
Phosphorus, total	0.0020	mg/L	0.0262
Sulfate (as SO4)	0.30	mg/L	116
Ammonium (as NH4), field	0.0010	mg/L	0.0117
<b>Organic / Inorganic Carbon (Matrix: Water)</b>			
Carbon, dissolved organic [DOC]	0.50	mg/L	20.8
Carbon, total organic [TOC]	0.50	mg/L	21.4
<b>Total Metals (Matrix: Water)</b>			
Aluminum, total	0.0030	mg/L	0.651
Antimony, total	0.00010	mg/L	0.00335
Arsenic, total	0.00010	mg/L	0.00283
Barium, total	0.00010	mg/L	0.00025
Beryllium, total	0.000100	mg/L	<0.000100
Bismuth, total	0.000050	mg/L	<0.000050
Boron, total	0.010	mg/L	0.051
Cadmium, total	0.0000050	mg/L	<0.0000650
Calcium, total	0.050	mg/L	0.387
Cesium, total	0.000010	mg/L	0.00208
Chromium, total	0.00050	mg/L	0.0460
Cobalt, total	0.00010	mg/L	0.00029
Copper, total	0.00050	mg/L	0.00210
Iron, total	0.010	mg/L	0.387
Lead, total	0.000050	mg/L	0.000121
Lithium, total	0.0010	mg/L	0.0189
Magnesium, total	0.0050	mg/L	0.0335
Manganese, total	0.00010	mg/L	0.00141
Mercury, total	0.0000050	mg/L	<0.0000050
Molybdenum, total	0.000050	mg/L	0.245
Nickel, total	0.00050	mg/L	0.00110
Phosphorus, total	0.050	mg/L	0.059
Potassium, total	0.050	mg/L	16.2
Rubidium, total	0.00020	mg/L	0.0490



## Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope

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Selenium, total	0.000050	mg/L	0.00187
Silicon, total	0.10	mg/L	12.2
Silver, total	0.000010	mg/L	<0.000010
Sodium, total	0.050	mg/L	308
Strontium, total	0.00020	mg/L	0.00238
Sulfur, total	0.50	mg/L	50.7
Tellurium, total	0.00020	mg/L	<0.00020
Thallium, total	0.000010	mg/L	<0.000010
Thorium, total	0.00010	mg/L	<0.00010
Tin, total	0.00010	mg/L	0.00020
Titanium, total	0.00030	mg/L	<0.00240
Tungsten, total	0.00010	mg/L	0.00070
Uranium, total	0.000010	mg/L	0.000220
Vanadium, total	0.00050	mg/L	0.00140
Zinc, total	0.0030	mg/L	<0.0030
Zirconium, total	0.00020	mg/L	<0.00080
<b>Dissolved Metals (Matrix: Water)</b>			
Aluminum, dissolved	0.0010	mg/L	0.608
Antimony, dissolved	0.00010	mg/L	0.00319
Arsenic, dissolved	0.00010	mg/L	0.00257
Barium, dissolved	0.00010	mg/L	<0.00020
Beryllium, dissolved	0.000100	mg/L	<0.000100
Bismuth, dissolved	0.000050	mg/L	<0.000100
Boron, dissolved	0.010	mg/L	0.045
Cadmium, dissolved	0.0000050	mg/L	<0.0000500
Calcium, dissolved	0.050	mg/L	0.364
Cesium, dissolved	0.000010	mg/L	0.00181
Chromium, dissolved	0.00050	mg/L	0.0450
Cobalt, dissolved	0.00010	mg/L	0.00026
Copper, dissolved	0.00020	mg/L	0.00191
Iron, dissolved	0.010	mg/L	0.319
Lead, dissolved	0.000050	mg/L	0.000110
Lithium, dissolved	0.0010	mg/L	0.0158
Magnesium, dissolved	0.0050	mg/L	0.0339
Manganese, dissolved	0.00010	mg/L	0.00121



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Mercury, dissolved	0.000050	mg/L	<0.000050
Molybdenum, dissolved	0.000050	mg/L	0.223
Nickel, dissolved	0.00050	mg/L	0.00105
Phosphorus, dissolved	0.050	mg/L	<0.100
Potassium, dissolved	0.050	mg/L	15.4
Rubidium, dissolved	0.00020	mg/L	0.0466
Selenium, dissolved	0.000050	mg/L	0.00181
Silicon, dissolved	0.050	mg/L	11.9
Silver, dissolved	0.000010	mg/L	<0.000020
Sodium, dissolved	0.050	mg/L	296
Strontium, dissolved	0.00020	mg/L	0.00214
Sulfur, dissolved	0.50	mg/L	44.9
Tellurium, dissolved	0.00020	mg/L	<0.00040
Thallium, dissolved	0.000010	mg/L	<0.000020
Thorium, dissolved	0.00010	mg/L	<0.00020
Tin, dissolved	0.00010	mg/L	<0.00020
Titanium, dissolved	0.00030	mg/L	0.00183
Tungsten, dissolved	0.00010	mg/L	0.00067
Uranium, dissolved	0.000010	mg/L	0.000224
Vanadium, dissolved	0.00050	mg/L	0.00137
Zinc, dissolved	0.0010	mg/L	0.0023
Zirconium, dissolved	0.00020	mg/L	0.00072

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**Photo:**

**Photo 1: No visible sheen observed in the WTP water, December 11<sup>th</sup>**



**Photo 1: No visible sheen observed in the WTP water, December 12<sup>th</sup>**





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## BCR Site Batch Sample Lab Documentation



**CERTIFICATE OF ANALYSIS**

<b>Work Order</b>	: <b>VA24D3153</b>	<b>Laboratory</b>	: ALS Environmental - Vancouver
<b>Client</b>	: <b>Frontier-Kemper Michels Joint Venture</b>	<b>Account Manager</b>	: Thomas Chang
<b>Contact</b>	: Sara Derakhshi	<b>Address</b>	: 8081 Lougheed Highway
<b>Address</b>	: 404-850 Harbourside Drive		: Burnaby BC Canada V5A 1W9
	: North Vancouver British Columbia Canada V7P 0A3	<b>Telephone</b>	: +1 604 253 4188
<b>Telephone</b>	: ----	<b>Date Samples Received</b>	: 10-Dec-2024 14:00
<b>Project</b>	: ----	<b>Date Analysis Commenced</b>	: 10-Dec-2024
<b>PO</b>	: ----	<b>Issue Date</b>	: 12-Dec-2024 09:17
<b>C-O-C number</b>	: 20-969580		
<b>Sampler</b>	: ----		
<b>Site</b>	: BCRial		
<b>Quote number</b>	: WTP Discharge		
<b>No. of samples received</b>	: 1		
<b>No. of samples analysed</b>	: 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.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Brooke Miller	Laboratory Analyst	Inorganics, Edmonton, Alberta
Erin Sanchez		Metals, Burnaby, British Columbia
Janice Leung	Supervisor - Organics Instrumentation	Organics, Burnaby, British Columbia
Kate Dimitrova	Supervisor - Inorganic	Inorganics, Burnaby, British Columbia
Maya Urquhart	Lab Analyst	Metals, Burnaby, British Columbia
Paolo Obillo	Account Manager Assistant	Administration, Burnaby, British Columbia
Robin Weeks	Team Leader - Metals	Inorganics, Burnaby, British Columbia
Robin Weeks	Team Leader - Metals	Metals, Burnaby, British Columbia



### General Comments

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

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

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

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

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

Unit	Description
-	no units
°C	degrees celsius
mg/L	milligrams per litre
mV	millivolts
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.

### Sample Comments

Sample	Client Id	Comment
VA24D3153-001	WTP	Water sample(s) for total mercury analysis was not submitted in glass or PTFE container with HCl preservative. Results may be biased low.
VA24D3153-001	WTP	Water sample(s) for dissolved mercury analysis was not submitted in glass or PTFE container with HCl preservative. Results may be biased low.



## Qualifiers

<u>Qualifier</u>	<u>Description</u>
DLA	Detection Limit adjusted for required dilution.
DLDS	Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity.
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).



### Analytical Results

Sub-Matrix: Water  
 (Matrix: Water)

					Client sample ID	WTP	----	----	----	----
					Client sampling date / time	10-Dec-2024 12:00	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3153-001	----	----	----	----	----
						Result	----	----	----	----
<b>Field Tests</b>										
pH, field	----	EF001/VA	0.10	pH units	7.10	----	----	----	----	----
Temperature, field	----	EF001/VA	0.10	°C	9.00	----	----	----	----	----
<b>Physical Tests</b>										
Alkalinity, bicarbonate (as CaCO3)	----	E290/VA	2.0	mg/L	457	----	----	----	----	----
Alkalinity, carbonate (as CaCO3)	----	E290/VA	2.0	mg/L	<2.0	----	----	----	----	----
Alkalinity, hydroxide (as CaCO3)	----	E290/VA	2.0	mg/L	<2.0	----	----	----	----	----
Alkalinity, phenolphthalein (as CaCO3)	----	E290/VA	2.0	mg/L	<2.0	----	----	----	----	----
Alkalinity, total (as CaCO3)	----	E290/VA	2.0	mg/L	457	----	----	----	----	----
Conductivity	----	E100/VA	2.0	µS/cm	1300	----	----	----	----	----
Hardness (as CaCO3), dissolved	----	EC100/VA	0.60	mg/L	1.05	----	----	----	----	----
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L	1.10	----	----	----	----	----
Oxidation-reduction potential [ORP]	----	E125/VA	0.10	mV	220	----	----	----	----	----
pH	----	E108/VA	0.10	pH units	7.64	----	----	----	----	----
Solids, total dissolved [TDS]	----	E162/VA	10	mg/L	900	----	----	----	----	----
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L	<3.0	----	----	----	----	----
Turbidity	----	E121/VA	0.10	NTU	1.07	----	----	----	----	----
<b>Anions and Nutrients</b>										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L	0.0091	----	----	----	----	----
Ammonium (as NH4), field	14798-03-9	EC298A/VA	0.0010	mg/L	0.0117	----	----	----	----	----
Bromide	24959-67-9	E235.Br-L/VA	0.050	mg/L	0.791	----	----	----	----	----
Chloride	16887-00-6	E235.Cl/VA	0.50	mg/L	65.8	----	----	----	----	----



### Analytical Results

Sub-Matrix: Water  
 (Matrix: Water)

					Client sample ID	WTP	----	----	----	----
					Client sampling date / time	10-Dec-2024 12:00	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3153-001	----	----	----	----	
						Result	----	----	----	----
<b>Anions and Nutrients</b>										
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L	0.108	----	----	----	----	
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L	0.0370	----	----	----	----	
Nitrite (as N)	14797-65-0	E235.NO2-L/VA	0.0010	mg/L	<0.0050 <sup>DLS</sup>	----	----	----	----	
Nitrogen, total	7727-37-9	E366/VA	0.030	mg/L	1.14	----	----	----	----	
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L	0.0262	----	----	----	----	
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L	116	----	----	----	----	
<b>Organic / Inorganic Carbon</b>										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L	20.8	----	----	----	----	
Carbon, total organic [TOC]	----	E355-L/VA	0.50	mg/L	21.4	----	----	----	----	
<b>Total Metals</b>										
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L	0.651	----	----	----	----	
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L	0.00335	----	----	----	----	
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L	0.00283	----	----	----	----	
Barium, total	7440-39-3	E420/VA	0.00010	mg/L	0.00025	----	----	----	----	
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	0.051	----	----	----	----	
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L	<0.0000650 <sup>DLM</sup>	----	----	----	----	
Calcium, total	7440-70-2	E420/VA	0.050	mg/L	0.387	----	----	----	----	
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L	0.00208	----	----	----	----	
Chromium, total	7440-47-3	E420/VA	0.00050	mg/L	0.0460	----	----	----	----	



### Analytical Results

Sub-Matrix: Water  
 (Matrix: Water)

					Client sample ID	WTP	----	----	----	----
					Client sampling date / time	10-Dec-2024 12:00	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3153-001	----	----	----	----	----
						Result	----	----	----	----
<b>Total Metals</b>										
Cobalt, total	7440-48-4	E420/VA	0.00010	mg/L	0.00029	----	----	----	----	----
Copper, total	7440-50-8	E420/VA	0.00050	mg/L	0.00210	----	----	----	----	----
Iron, total	7439-89-6	E420/VA	0.010	mg/L	0.387	----	----	----	----	----
Lead, total	7439-92-1	E420/VA	0.000050	mg/L	0.000121	----	----	----	----	----
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L	0.0189	----	----	----	----	----
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L	0.0335	----	----	----	----	----
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L	0.00141	----	----	----	----	----
Mercury, total	7439-97-6	E508/VA	0.0000050	mg/L	<0.0000050	----	----	----	----	----
Molybdenum, total	7439-98-7	E420/VA	0.000050	mg/L	0.245	----	----	----	----	----
Nickel, total	7440-02-0	E420/VA	0.00050	mg/L	0.00110	----	----	----	----	----
Phosphorus, total	7723-14-0	E420/VA	0.050	mg/L	0.059	----	----	----	----	----
Potassium, total	7440-09-7	E420/VA	0.050	mg/L	16.2	----	----	----	----	----
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L	0.0490	----	----	----	----	----
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L	0.00187	----	----	----	----	----
Silicon, total	7440-21-3	E420/VA	0.10	mg/L	12.2	----	----	----	----	----
Silver, total	7440-22-4	E420/VA	0.000010	mg/L	<0.000010	----	----	----	----	----
Sodium, total	7440-23-5	E420/VA	0.050	mg/L	308	----	----	----	----	----
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L	0.00238	----	----	----	----	----
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L	50.7	----	----	----	----	----
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	----	----	----	----	----



### Analytical Results

Sub-Matrix: Water  
 (Matrix: Water)

					Client sample ID	WTP	----	----	----	----
					Client sampling date / time	10-Dec-2024 12:00	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3153-001	----	----	----	----	----
						Result	----	----	----	----
<b>Total Metals</b>										
Thorium, total	7440-29-1	E420/VA	0.00010	mg/L	<0.00010	----	----	----	----	----
Tin, total	7440-31-5	E420/VA	0.00010	mg/L	0.00020	----	----	----	----	----
Titanium, total	7440-32-6	E420/VA	0.00030	mg/L	<0.00240 <sup>DLM</sup>	----	----	----	----	----
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L	0.00070	----	----	----	----	----
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L	0.000220	----	----	----	----	----
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L	0.00140	----	----	----	----	----
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L	<0.0030	----	----	----	----	----
Zirconium, total	7440-67-7	E420/VA	0.00020	mg/L	<0.00080 <sup>DLM</sup>	----	----	----	----	----
<b>Dissolved Metals</b>										
Aluminum, dissolved	7429-90-5	E421/VA	0.0010	mg/L	0.608	----	----	----	----	----
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L	0.00319	----	----	----	----	----
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L	0.00257	----	----	----	----	----
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L	<0.00020 <sup>DLA</sup>	----	----	----	----	----
Beryllium, dissolved	7440-41-7	E421/VA	0.000100	mg/L	<0.000100	----	----	----	----	----
Bismuth, dissolved	7440-69-9	E421/VA	0.000050	mg/L	<0.000100 <sup>DLA</sup>	----	----	----	----	----
Boron, dissolved	7440-42-8	E421/VA	0.010	mg/L	0.045	----	----	----	----	----
Cadmium, dissolved	7440-43-9	E421/VA	0.0000050	mg/L	<0.0000500 <sup>DLM</sup>	----	----	----	----	----
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L	0.364	----	----	----	----	----
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L	0.00181	----	----	----	----	----
Chromium, dissolved	7440-47-3	E421/VA	0.00050	mg/L	0.0450	----	----	----	----	----
Cobalt, dissolved	7440-48-4	E421/VA	0.00010	mg/L	0.00026	----	----	----	----	----



### Analytical Results

Sub-Matrix: Water  
 (Matrix: Water)

					Client sample ID	WTP	----	----	----	----
					Client sampling date / time	10-Dec-2024 12:00	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3153-001	----	----	----	----	----
						Result	----	----	----	----
<b>Dissolved Metals</b>										
Copper, dissolved	7440-50-8	E421/VA	0.00020	mg/L	0.00191	----	----	----	----	----
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L	0.319	----	----	----	----	----
Lead, dissolved	7439-92-1	E421/VA	0.000050	mg/L	0.000110	----	----	----	----	----
Lithium, dissolved	7439-93-2	E421/VA	0.0010	mg/L	0.0158	----	----	----	----	----
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L	0.0339	----	----	----	----	----
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L	0.00121	----	----	----	----	----
Mercury, dissolved	7439-97-6	E509/VA	0.0000050	mg/L	<0.0000050	----	----	----	----	----
Molybdenum, dissolved	7439-98-7	E421/VA	0.000050	mg/L	0.223	----	----	----	----	----
Nickel, dissolved	7440-02-0	E421/VA	0.00050	mg/L	0.00105	----	----	----	----	----
Phosphorus, dissolved	7723-14-0	E421/VA	0.050	mg/L	<0.100 <sup>DLA</sup>	----	----	----	----	----
Potassium, dissolved	7440-09-7	E421/VA	0.050	mg/L	15.4	----	----	----	----	----
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L	0.0466	----	----	----	----	----
Selenium, dissolved	7782-49-2	E421/VA	0.000050	mg/L	0.00181	----	----	----	----	----
Silicon, dissolved	7440-21-3	E421/VA	0.050	mg/L	11.9	----	----	----	----	----
Silver, dissolved	7440-22-4	E421/VA	0.000010	mg/L	<0.000020 <sup>DLA</sup>	----	----	----	----	----
Sodium, dissolved	7440-23-5	E421/VA	0.050	mg/L	296	----	----	----	----	----
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L	0.00214	----	----	----	----	----
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L	44.9	----	----	----	----	----
Tellurium, dissolved	13494-80-9	E421/VA	0.00020	mg/L	<0.00040 <sup>DLA</sup>	----	----	----	----	----
Thallium, dissolved	7440-28-0	E421/VA	0.000010	mg/L	<0.000020 <sup>DLA</sup>	----	----	----	----	----
Thorium, dissolved	7440-29-1	E421/VA	0.00010	mg/L	<0.00020 <sup>DLA</sup>	----	----	----	----	----





## Analytical Results

Sub-Matrix: Water  
 (Matrix: Water)

					Client sample ID	WTP	----	----	----	----
					Client sampling date / time	10-Dec-2024 12:00	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3153-001	----	----	----	----	
						Result	----	----	----	----
<b>Dissolved Metals</b>										
Tin, dissolved	7440-31-5	E421/VA	0.00010	mg/L	<0.00020 <sup>DLA</sup>	----	----	----	----	
Titanium, dissolved	7440-32-6	E421/VA	0.00030	mg/L	0.00183	----	----	----	----	
Tungsten, dissolved	7440-33-7	E421/VA	0.00010	mg/L	0.00067	----	----	----	----	
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L	0.000224	----	----	----	----	
Vanadium, dissolved	7440-62-2	E421/VA	0.00050	mg/L	0.00137	----	----	----	----	
Zinc, dissolved	7440-66-6	E421/VA	0.0010	mg/L	0.0023	----	----	----	----	
Zirconium, dissolved	7440-67-7	E421/VA	0.00020	mg/L	0.00072	----	----	----	----	
Dissolved mercury filtration location	----	EP509/VA	-	-	Field	----	----	----	----	
Dissolved metals filtration location	----	EP421/VA	-	-	Field	----	----	----	----	
<b>Aggregate Organics</b>										
Phenols, total (4AAP)	----	E562/EO	0.0010	mg/L	0.0012	----	----	----	----	
<b>Volatile Organic Compounds</b>										
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	----	----	----	----	



### Analytical Results

Sub-Matrix: Water  
 (Matrix: Water)

					Client sample ID	WTP	----	----	----	----
					Client sampling date / time	10-Dec-2024 12:00	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3153-001	----	----	----	----	
						Result	----	----	----	----
<b>Volatile Organic Compounds</b>										
Tetrachloroethane, 1,1,2,2-	79-34-5	E611CVA	0.20	µg/L	<0.20	----	----	----	----	
Trichloroethane, 1,1,2-	79-00-5	E611CVA	0.50	µg/L	<0.50	----	----	----	----	
Trichlorofluoromethane	75-69-4	E611CVA	0.50	µg/L	<0.50	----	----	----	----	
<b>Volatile Organic Compounds [Drycleaning]</b>										
Carbon tetrachloride	56-23-5	E611CVA	0.50	µg/L	<0.50	----	----	----	----	
Chloroethane	75-00-3	E611CVA	0.50	µg/L	<0.50	----	----	----	----	
Dichloroethane, 1,1-	75-34-3	E611CVA	0.50	µg/L	<0.50	----	----	----	----	
Dichloroethane, 1,2-	107-06-2	E611CVA	0.50	µg/L	6.73	----	----	----	----	
Dichloroethylene, 1,1-	75-35-4	E611CVA	0.50	µg/L	<0.50	----	----	----	----	
Dichloroethylene, cis-1,2-	156-59-2	E611CVA	0.50	µg/L	<0.50	----	----	----	----	
Dichloroethylene, trans-1,2-	156-60-5	E611CVA	0.50	µg/L	<0.50	----	----	----	----	
Dichloromethane	75-09-2	E611CVA	1.0	µg/L	<1.0	----	----	----	----	
Dichloropropylene, trans-1,3-	10061-02-6	E611CVA	0.50	µg/L	<0.50	----	----	----	----	
Tetrachloroethylene	127-18-4	E611CVA	0.50	µg/L	<0.50	----	----	----	----	
Trichloroethane, 1,1,1-	71-55-6	E611CVA	0.50	µg/L	<0.50	----	----	----	----	
Trichloroethylene	79-01-6	E611CVA	0.50	µg/L	<0.50	----	----	----	----	
Vinyl chloride	75-01-4	E611CVA	0.40	µg/L	<0.40	----	----	----	----	
<b>Volatile Organic Compounds [Fuels]</b>										
Benzene	71-43-2	E611CVA	0.50	µg/L	<0.50	----	----	----	----	
Ethylbenzene	100-41-4	E611CVA	0.50	µg/L	<0.50	----	----	----	----	
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611CVA	0.50	µg/L	<0.50	----	----	----	----	



### Analytical Results

Sub-Matrix: Water  
 (Matrix: Water)

					Client sample ID	WTP	----	----	----	----
					Client sampling date / time	10-Dec-2024 12:00	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3153-001	----	----	----	----	----
						Result	----	----	----	----
<b>Volatile Organic Compounds [Fuels]</b>										
Styrene	100-42-5	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
Toluene	108-88-3	E611C/VA	0.40	µg/L	<0.40	----	----	----	----	----
Xylene, m+p-	179601-23-1	E611C/VA	0.40	µg/L	<0.40	----	----	----	----	----
Xylene, o-	95-47-6	E611C/VA	0.30	µg/L	<0.30	----	----	----	----	----
Xylenes, total	1330-20-7	E611C/VA	0.50	µg/L	<0.50	----	----	----	----	----
<b>Volatile Organic Compounds [THMs]</b>										
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	----	----	----	----	----
<b>Hydrocarbons</b>										
EPH (C10-C19)	----	E601A/VA	250	µg/L	<250	----	----	----	----	----
EPH (C19-C32)	----	E601A/VA	250	µg/L	<250	----	----	----	----	----
VHw (C6-C10)	----	E581.VH+F1/V A	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	----	----	----	----	----
<b>Hydrocarbons Surrogates</b>										
Bromobenzotrifluoride, 2- (EPH surrogate)	392-83-6	E601A/VA	1.0	%	94.8	----	----	----	----	----
Dichlorotoluene, 3,4-	95-75-0	E581.VH+F1/V A	1.0	%	91.1	----	----	----	----	----



**Analytical Results**

Sub-Matrix: Water  
 (Matrix: Water)

					Client sample ID	WTP	----	----	----	----
					Client sampling date / time	10-Dec-2024 12:00	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3153-001	----	----	----	----	----
						Result	----	----	----	----
<b>Volatile Organic Compounds Surrogates</b>										
Bromofluorobenzene, 4-	460-00-4	E611C/VA	1.0	%	99.8	----	----	----	----	----
Difluorobenzene, 1,4-	540-36-3	E611C/VA	1.0	%	101	----	----	----	----	----
<b>Polycyclic Aromatic Hydrocarbons</b>										
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	<0.010	----	----	----	----	----
Methylnaphthalene, 2-	91-57-6	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Naphthalene	91-20-3	E641A/VA	0.050	µg/L	<0.050	----	----	----	----	----



### Analytical Results

Sub-Matrix: Water  
 (Matrix: Water)

					Client sample ID	WTP	----	----	----	----
					Client sampling date / time	10-Dec-2024 12:00	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3153-001	----	----	----	----	----
						Result	----	----	----	----
<b>Polycyclic Aromatic Hydrocarbons</b>										
Phenanthrene	85-01-8	E641A/VA	0.020	µg/L	<0.020	----	----	----	----	----
Pyrene	129-00-0	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Quinoline	91-22-5	E641A/VA	0.050	µg/L	<0.050	----	----	----	----	----
<b>Polycyclic Aromatic Hydrocarbons Surrogates</b>										
Chrysene-d12	1719-03-5	E641A/VA	0.1	%	94.6	----	----	----	----	----
Naphthalene-d8	1146-65-2	E641A/VA	0.1	%	112	----	----	----	----	----
Phenanthrene-d10	1517-22-2	E641A/VA	0.1	%	102	----	----	----	----	----
<b>Glycols</b>										
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	----	----	----	----	----
<b>Glycols Surrogates</b>										
Propanediol, 1,3-	504-63-2	E680E/VA	1.0	%	98.9	----	----	----	----	----

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

## QUALITY CONTROL REPORT

<b>Work Order</b>	<b>: VA24D3153</b>	<b>Page</b>	: 1 of 21
<b>Client</b>	: Frontier-Kemper Michels Joint Venture	<b>Laboratory</b>	: ALS Environmental - Vancouver
<b>Contact</b>	: Sara Derakhshi	<b>Account Manager</b>	: Thomas Chang
<b>Address</b>	: 404-850 Harbourside Drive North Vancouver BC Canada V7P 0A3	<b>Address</b>	: 8081 Lougheed Highway Burnaby, British Columbia Canada V5A 1W9
<b>Telephone</b>	: ----	<b>Telephone</b>	: +1 604 253 4188
<b>Project</b>	: ----	<b>Date Samples Received</b>	: 10-Dec-2024 14:00
<b>PO</b>	: ----	<b>Date Analysis Commenced</b>	: 10-Dec-2024
<b>C-O-C number</b>	: 20-969580	<b>Issue Date</b>	: 12-Dec-2024 09:17
<b>Sampler</b>	: ----		
<b>Site</b>	: BCRial		
<b>Quote number</b>	: WTP Discharge		
<b>No. of samples received</b>	: 1		
<b>No. of samples analysed</b>	: 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
- Reference Material (RM) 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.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Brooke Miller	Laboratory Analyst	Edmonton Inorganics, Edmonton, Alberta
Erin Sanchez		Vancouver Metals, Burnaby, British Columbia
Janice Leung	Supervisor - Organics Instrumentation	Vancouver Organics, Burnaby, British Columbia
Kate Dimitrova	Supervisor - Inorganic	Vancouver Inorganics, Burnaby, British Columbia
Maya Urquhart	Lab Analyst	Vancouver Metals, Burnaby, British Columbia
Paolo Obillo	Account Manager Assistant	Vancouver Administration, Burnaby, British Columbia
Robin Weeks	Team Leader - Metals	Vancouver Inorganics, Burnaby, British Columbia
Robin Weeks	Team Leader - Metals	Vancouver Metals, Burnaby, British Columbia

Page : 2 of 21  
Work Order : VA24D3153  
Client : Frontier-Kemper Michels Joint Venture  
Project : ----



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## 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

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

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### 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: <b>Water</b>					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
<b>Physical Tests (QC Lot: 1803713)</b>											
VA24D3153-001	WTP	Oxidation-reduction potential [ORP]	----	E125	0.10	mV	220	221	0.589%	10%	----
<b>Physical Tests (QC Lot: 1803749)</b>											
FJ2403714-001	Anonymous	Turbidity	----	E121	0.10	NTU	1.61	1.55	3.79%	15%	----
<b>Physical Tests (QC Lot: 1803751)</b>											
VA24D3153-001	WTP	pH	----	E108	0.10	pH units	7.64	7.65	0.131%	4%	----
<b>Physical Tests (QC Lot: 1803753)</b>											
VA24D3153-001	WTP	Conductivity	----	E100	2.0	µS/cm	1300	1290	0.924%	10%	----
<b>Physical Tests (QC Lot: 1803912)</b>											
VA24D2834-001	Anonymous	Solids, total dissolved [TDS]	----	E162	20	mg/L	1180	1180	0.380%	20%	----
<b>Physical Tests (QC Lot: 1803917)</b>											
VA24D2834-001	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	<3.0	<3.0	0	Diff <2x LOR	----
<b>Anions and Nutrients (QC Lot: 1803689)</b>											
VA24D3153-001	WTP	Nitrogen, total	7727-37-9	E366	0.150	mg/L	1.14	1.14	0.005	Diff <2x LOR	----
<b>Anions and Nutrients (QC Lot: 1803690)</b>											
VA24D3153-001	WTP	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0262	0.0259	1.08%	20%	----
<b>Anions and Nutrients (QC Lot: 1803691)</b>											
VA24D3153-001	WTP	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.0091	0.0097	0.0006	Diff <2x LOR	----
<b>Anions and Nutrients (QC Lot: 1803754)</b>											
VA24D3153-001	WTP	Fluoride	16984-48-8	E235.F	0.100	mg/L	0.108	0.113	0.005	Diff <2x LOR	----
<b>Anions and Nutrients (QC Lot: 1803755)</b>											
VA24D3153-001	WTP	Chloride	16887-00-6	E235.Cl	2.50	mg/L	65.8	67.7	2.84%	20%	----
<b>Anions and Nutrients (QC Lot: 1803756)</b>											
VA24D3153-001	WTP	Bromide	24959-67-9	E235.Br-L	0.250	mg/L	0.791	0.786	0.004	Diff <2x LOR	----
<b>Anions and Nutrients (QC Lot: 1803757)</b>											
VA24D3153-001	WTP	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0250	mg/L	0.0370	0.0408	0.0038	Diff <2x LOR	----
<b>Anions and Nutrients (QC Lot: 1803758)</b>											
VA24D3153-001	WTP	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
<b>Anions and Nutrients (QC Lot: 1803759)</b>											
VA24D3153-001	WTP	Sulfate (as SO4)	14808-79-8	E235.SO4	1.50	mg/L	116	119	3.23%	20%	----
<b>Organic / Inorganic Carbon (QC Lot: 1803687)</b>											





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
<b>Organic / Inorganic Carbon (QC Lot: 1803687) - continued</b>											
VA24D3153-001	WTP	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	20.8	21.7	4.26%	20%	----
<b>Organic / Inorganic Carbon (QC Lot: 1803688)</b>											
VA24D3153-001	WTP	Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	21.4	22.2	3.78%	20%	----
<b>Total Metals (QC Lot: 1803670)</b>											
VA24D3153-001	WTP	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.651	0.649	0.359%	20%	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	0.00335	0.00340	1.32%	20%	----
		Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00283	0.00281	0.728%	20%	----
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.00025	0.00026	0.000007	Diff <2x LOR	----
		Beryllium, total	7440-41-7	E420	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	----
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, total	7440-42-8	E420	0.010	mg/L	0.051	0.052	0.0007	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.0000650	mg/L	<0.0000650	<0.0000650	0	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	0.387	0.393	0.006	Diff <2x LOR	----
		Cesium, total	7440-46-2	E420	0.000010	mg/L	0.00208	0.00208	0.0611%	20%	----
		Chromium, total	7440-47-3	E420	0.000050	mg/L	0.0460	0.0464	0.851%	20%	----
		Cobalt, total	7440-48-4	E420	0.00010	mg/L	0.00029	0.00030	0.000002	Diff <2x LOR	----
		Copper, total	7440-50-8	E420	0.000050	mg/L	0.00210	0.00220	0.00010	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.010	mg/L	0.387	0.384	0.724%	20%	----
		Lead, total	7439-92-1	E420	0.000050	mg/L	0.000121	0.000124	0.000003	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0189	0.0188	0.396%	20%	----
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	0.0335	0.0345	0.0010	Diff <2x LOR	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.00141	0.00140	0.804%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.245	0.241	1.63%	20%	----
		Nickel, total	7440-02-0	E420	0.000050	mg/L	0.00110	0.00108	0.00003	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	0.059	<0.050	0.009	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.050	mg/L	16.2	16.2	0.256%	20%	----
		Rubidium, total	7440-17-7	E420	0.000020	mg/L	0.0490	0.0490	0.00135%	20%	----
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.00187	0.00188	0.574%	20%	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	12.2	12.0	1.09%	20%	----
		Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, total	7440-23-5	E420	0.050	mg/L	308	308	0.0484%	20%	----
		Strontium, total	7440-24-6	E420	0.000020	mg/L	0.00238	0.00239	0.146%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	50.7	50.7	0.00159%	20%	----
		Tellurium, total	13494-80-9	E420	0.000020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----



Sub-Matrix: Water					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Total Metals (QC Lot: 1803670) - continued</b>											
VA24D3153-001	WTP	Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	---
		Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	---
		Tin, total	7440-31-5	E420	0.00010	mg/L	0.00020	0.00020	0.000006	Diff <2x LOR	---
		Titanium, total	7440-32-6	E420	0.00240	mg/L	<0.00240	<0.00240	0	Diff <2x LOR	---
		Tungsten, total	7440-33-7	E420	0.00010	mg/L	0.00070	0.00070	0.000008	Diff <2x LOR	---
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.000220	0.000230	4.56%	20%	---
		Vanadium, total	7440-62-2	E420	0.00050	mg/L	0.00140	0.00136	0.00004	Diff <2x LOR	---
		Zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	<0.0030	0	Diff <2x LOR	---
Zirconium, total	7440-67-7	E420	0.00080	mg/L	<0.00080	<0.00080	0	Diff <2x LOR	---		
<b>Total Metals (QC Lot: 1803903)</b>											
VA24D2853-001	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	---
<b>Dissolved Metals (QC Lot: 1803671)</b>											
VA24D3153-001	WTP	Aluminum, dissolved	7429-90-5	E421	0.0020	mg/L	0.608	0.630	3.58%	20%	---
		Antimony, dissolved	7440-36-0	E421	0.00020	mg/L	0.00319	0.00323	1.20%	20%	---
		Arsenic, dissolved	7440-38-2	E421	0.00020	mg/L	0.00257	0.00285	10.4%	20%	---
		Barium, dissolved	7440-39-3	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	---
		Beryllium, dissolved	7440-41-7	E421	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	---
		Bismuth, dissolved	7440-69-9	E421	0.000100	mg/L	<0.000100	<0.000100	0	Diff <2x LOR	---
		Boron, dissolved	7440-42-8	E421	0.020	mg/L	0.045	0.047	0.002	Diff <2x LOR	---
		Cadmium, dissolved	7440-43-9	E421	0.0000500	mg/L	<0.0000500	<0.0000500	0	Diff <2x LOR	---
		Calcium, dissolved	7440-70-2	E421	0.100	mg/L	0.364	0.383	0.020	Diff <2x LOR	---
		Cesium, dissolved	7440-46-2	E421	0.000020	mg/L	0.00181	0.00190	4.75%	20%	---
		Chromium, dissolved	7440-47-3	E421	0.00100	mg/L	0.0450	0.0462	2.63%	20%	---
		Cobalt, dissolved	7440-48-4	E421	0.00020	mg/L	0.00026	0.00029	0.00002	Diff <2x LOR	---
		Copper, dissolved	7440-50-8	E421	0.00040	mg/L	0.00191	0.00198	0.00007	Diff <2x LOR	---
		Iron, dissolved	7439-89-6	E421	0.020	mg/L	0.319	0.328	2.88%	20%	---
		Lead, dissolved	7439-92-1	E421	0.000100	mg/L	0.000110	0.000107	0.000003	Diff <2x LOR	---
		Lithium, dissolved	7439-93-2	E421	0.0020	mg/L	0.0158	0.0169	0.0011	Diff <2x LOR	---
		Magnesium, dissolved	7439-95-4	E421	0.0100	mg/L	0.0339	0.0326	0.0013	Diff <2x LOR	---
		Manganese, dissolved	7439-96-5	E421	0.00020	mg/L	0.00121	0.00125	0.00004	Diff <2x LOR	---
		Molybdenum, dissolved	7439-98-7	E421	0.000100	mg/L	0.223	0.226	1.32%	20%	---
		Nickel, dissolved	7440-02-0	E421	0.00100	mg/L	0.00105	0.00108	0.00002	Diff <2x LOR	---
Phosphorus, dissolved	7723-14-0	E421	0.100	mg/L	<0.100	<0.100	0	Diff <2x LOR	---		
Potassium, dissolved	7440-09-7	E421	0.100	mg/L	15.4	16.2	5.61%	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
<b>Dissolved Metals (QC Lot: 1803671) - continued</b>											
VA24D3153-001	WTP	Rubidium, dissolved	7440-17-7	E421	0.00040	mg/L	0.0466	0.0473	1.58%	20%	---
		Selenium, dissolved	7782-49-2	E421	0.000100	mg/L	0.00181	0.00185	2.02%	20%	---
		Silicon, dissolved	7440-21-3	E421	0.100	mg/L	11.9	12.0	0.844%	20%	---
		Silver, dissolved	7440-22-4	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	---
		Sodium, dissolved	7440-23-5	E421	0.100	mg/L	296	305	3.16%	20%	---
		Strontium, dissolved	7440-24-6	E421	0.00040	mg/L	0.00214	0.00227	0.00012	Diff <2x LOR	---
		Sulfur, dissolved	7704-34-9	E421	1.00	mg/L	44.9	44.7	0.341%	20%	---
		Tellurium, dissolved	13494-80-9	E421	0.00040	mg/L	<0.00040	<0.00040	0	Diff <2x LOR	---
		Thallium, dissolved	7440-28-0	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	---
		Thorium, dissolved	7440-29-1	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	---
		Tin, dissolved	7440-31-5	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	---
		Titanium, dissolved	7440-32-6	E421	0.00060	mg/L	0.00183	0.00197	0.00015	Diff <2x LOR	---
		Tungsten, dissolved	7440-33-7	E421	0.00020	mg/L	0.00067	0.00066	0.000002	Diff <2x LOR	---
		Uranium, dissolved	7440-61-1	E421	0.000020	mg/L	0.000224	0.000221	1.52%	20%	---
		Vanadium, dissolved	7440-62-2	E421	0.00100	mg/L	0.00137	0.00136	0.000006	Diff <2x LOR	---
Zinc, dissolved	7440-66-6	E421	0.0020	mg/L	0.0023	0.0023	0.00007	Diff <2x LOR	---		
Zirconium, dissolved	7440-67-7	E421	0.00040	mg/L	0.00072	0.00074	0.00002	Diff <2x LOR	---		
<b>Dissolved Metals (QC Lot: 1803902)</b>											
VA24D2853-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	---
<b>Aggregate Organics (QC Lot: 1804634)</b>											
VA24D3096-001	Anonymous	Phenols, total (4AAP)	---	E562	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	---
<b>Volatile Organic Compounds (QC Lot: 1803915)</b>											
VA24D3153-001	WTP	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	---



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
<b>Volatile Organic Compounds (QC Lot: 1803915) - continued</b>											
VA24D3153-001	WTP	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	6.73	6.48	3.78%	30%	---
		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	---
		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, 1,1,1,2,2-	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	---		
<b>Hydrocarbons (QC Lot: 1803914)</b>											
VA24D3153-001	WTP	VHw (C6-C10)	----	E581.VH+F1	100	µg/L	<100	<100	0.0%	30%	---
<b>Glycols (QC Lot: 1803993)</b>											
VA24D3153-001	WTP	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
<b>Physical Tests (QCLot: 1803749)</b>						
Turbidity	---	E121	0.1	NTU	<0.10	---
<b>Physical Tests (QCLot: 1803752)</b>						
Alkalinity, bicarbonate (as CaCO3)	---	E290	1	mg/L	<1.0	---
Alkalinity, carbonate (as CaCO3)	---	E290	1	mg/L	<1.0	---
Alkalinity, hydroxide (as CaCO3)	---	E290	1	mg/L	<1.0	---
Alkalinity, phenolphthalein (as CaCO3)	---	E290	1	mg/L	<1.0	---
Alkalinity, total (as CaCO3)	---	E290	1	mg/L	<1.0	---
<b>Physical Tests (QCLot: 1803753)</b>						
Conductivity	---	E100	1	µS/cm	1.3	---
<b>Physical Tests (QCLot: 1803912)</b>						
Solids, total dissolved [TDS]	---	E162	10	mg/L	<10	---
<b>Physical Tests (QCLot: 1803917)</b>						
Solids, total suspended [TSS]	---	E160	3	mg/L	<3.0	---
<b>Anions and Nutrients (QCLot: 1803689)</b>						
Nitrogen, total	7727-37-9	E366	0.03	mg/L	<0.030	---
<b>Anions and Nutrients (QCLot: 1803690)</b>						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	---
<b>Anions and Nutrients (QCLot: 1803691)</b>						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	---
<b>Anions and Nutrients (QCLot: 1803754)</b>						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	---
<b>Anions and Nutrients (QCLot: 1803755)</b>						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	---
<b>Anions and Nutrients (QCLot: 1803756)</b>						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	---
<b>Anions and Nutrients (QCLot: 1803757)</b>						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	---
<b>Anions and Nutrients (QCLot: 1803758)</b>						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	---
<b>Anions and Nutrients (QCLot: 1803759)</b>						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	---
<b>Organic / Inorganic Carbon (QCLot: 1803687)</b>						



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Organic / Inorganic Carbon (QCLot: 1803687) - continued</b>						
Carbon, dissolved organic [DOC]	---	E358-L	0.5	mg/L	<0.50	---
<b>Organic / Inorganic Carbon (QCLot: 1803688)</b>						
Carbon, total organic [TOC]	---	E355-L	0.5	mg/L	<0.50	---
<b>Total Metals (QCLot: 1803670)</b>						
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	---



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Total Metals (QCLot: 1803670) - continued</b>						
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	---
<b>Total Metals (QCLot: 1803903)</b>						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	---
<b>Dissolved Metals (QCLot: 1803671)</b>						
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	---



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Dissolved Metals (QCLot: 1803671) - continued</b>						
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	---
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	---
<b>Dissolved Metals (QCLot: 1803902)</b>						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	---
<b>Aggregate Organics (QCLot: 1804634)</b>						
Phenols, total (4AAP)	---	E562	0.001	mg/L	<0.0010	---
<b>Volatile Organic Compounds (QCLot: 1803915)</b>						
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	---





Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Volatile Organic Compounds (QCLot: 1803915) - continued</b>						
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	---
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	---
<b>Hydrocarbons (QCLot: 1803914)</b>						
VHw (C6-C10)	---	E581.VH+F1	100	µg/L	<100	---
<b>Hydrocarbons (QCLot: 1804075)</b>						
EPH (C10-C19)	---	E601A	250	µg/L	<250	---
EPH (C19-C32)	---	E601A	250	µg/L	<250	---
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 1804076)</b>						
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	---



Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 1804076) - continued</b>						
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	----
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	----
<b>Glycols (QCLot: 1803993)</b>						
Diethylene glycol	111-46-6	E680E	5	mg/L	<5.0	----
Ethylene glycol	107-21-1	E680E	5	mg/L	<5.0	----
Propylene glycol, 1,2-	57-55-6	E680E	5	mg/L	<5.0	----
Triethylene glycol	112-27-6	E680E	5	mg/L	<5.0	----



## Laboratory Control Sample (LCS) Report

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

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
<b>Physical Tests (QCLot: 1803749)</b>									
Turbidity	---	E121	0.1	NTU	200 NTU	99.5	85.0	115	---
<b>Physical Tests (QCLot: 1803751)</b>									
pH	---	E108	---	pH units	7 pH units	100	98.0	102	---
<b>Physical Tests (QCLot: 1803752)</b>									
Alkalinity, phenolphthalein (as CaCO3)	---	E290	1	mg/L	229 mg/L	91.8	75.0	125	---
Alkalinity, total (as CaCO3)	---	E290	1	mg/L	500 mg/L	106	85.0	115	---
<b>Physical Tests (QCLot: 1803753)</b>									
Conductivity	---	E100	1	µS/cm	147 µS/cm	99.6	90.0	110	---
<b>Physical Tests (QCLot: 1803912)</b>									
Solids, total dissolved [TDS]	---	E162	10	mg/L	1000 mg/L	107	85.0	115	---
<b>Physical Tests (QCLot: 1803917)</b>									
Solids, total suspended [TSS]	---	E160	3	mg/L	150 mg/L	97.2	85.0	115	---
<b>Anions and Nutrients (QCLot: 1803689)</b>									
Nitrogen, total	7727-37-9	E366	0.03	mg/L	0.5 mg/L	100	75.0	125	---
<b>Anions and Nutrients (QCLot: 1803690)</b>									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	93.1	80.0	120	---
<b>Anions and Nutrients (QCLot: 1803691)</b>									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	93.3	85.0	115	---
<b>Anions and Nutrients (QCLot: 1803754)</b>									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	91.9	90.0	110	---
<b>Anions and Nutrients (QCLot: 1803755)</b>									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	94.5	90.0	110	---
<b>Anions and Nutrients (QCLot: 1803756)</b>									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	97.9	85.0	115	---
<b>Anions and Nutrients (QCLot: 1803757)</b>									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	94.8	90.0	110	---
<b>Anions and Nutrients (QCLot: 1803758)</b>									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	91.5	90.0	110	---
<b>Anions and Nutrients (QCLot: 1803759)</b>									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	95.6	90.0	110	---



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
<b>Organic / Inorganic Carbon (QCLot: 1803687)</b>									
Carbon, dissolved organic [DOC]	---	E358-L	0.5	mg/L	8.57 mg/L	104	80.0	120	---
<b>Organic / Inorganic Carbon (QCLot: 1803688)</b>									
Carbon, total organic [TOC]	---	E355-L	0.5	mg/L	8.57 mg/L	104	80.0	120	---
<b>Total Metals (QCLot: 1803670)</b>									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	102	80.0	120	---
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	105	80.0	120	---
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	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	103	80.0	120	---
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	99.5	80.0	120	---
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	100	80.0	120	---
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	98.9	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	107	80.0	120	---
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	100	80.0	120	---
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	99.3	80.0	120	---
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	103	80.0	120	---
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	103	80.0	120	---
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	103	80.0	120	---
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	103	80.0	120	---
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	97.3	80.0	120	---
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	101	80.0	120	---
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	105	80.0	120	---
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	97.8	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	105	80.0	120	---
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	103	80.0	120	---
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	102	80.0	120	---
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	105	80.0	120	---
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	101	80.0	120	---
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	98.5	80.0	120	---
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	107	80.0	120	---
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	93.9	80.0	120	---
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	105	80.0	120	---
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	104	80.0	120	---



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
<b>Total Metals (QCLot: 1803670) - continued</b>									
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	100	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	99.4	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	94.9	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	97.9	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	104	80.0	120	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	102	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	105	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	105	80.0	120	----
<b>Total Metals (QCLot: 1803903)</b>									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	98.3	80.0	120	----
<b>Dissolved Metals (QCLot: 1803671)</b>									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	102	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	105	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	1 mg/L	105	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	102	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	97.1	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	106	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	91.9	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	101	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	97.1	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	98.0	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	101	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	99.4	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	98.3	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	90.7	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.5 mg/L	102	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.25 mg/L	93.3	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	103	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	99.0	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	97.9	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	95.1	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	96.7	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	103	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	102	80.0	120	----



Sub-Matrix: **Water**

Laboratory Control Sample (LCS) Report

Analyte	CAS Number	Method	LOR	Unit	Recovery (%)				Qualifier
					Spike Target Concentration	LCS	Low	High	
<b>Dissolved Metals (QCLot: 1803671) - continued</b>									
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	110	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	95.3	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	102	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.25 mg/L	104	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	95.1	80.0	120	----
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	103	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	101	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	98.4	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	104	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	95.8	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	99.4	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	100	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.5 mg/L	101	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	100	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	101	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	98.2	80.0	120	----
<b>Aggregate Organics (QCLot: 1804634)</b>									
Phenols, total (4AAP)	----	E562	0.001	mg/L	0.02 mg/L	94.6	85.0	115	----
<b>Volatile Organic Compounds (QCLot: 1803915)</b>									
Benzene	71-43-2	E611C	0.5	µg/L	100 µg/L	93.4	70.0	130	----
Bromodichloromethane	75-27-4	E611C	0.5	µg/L	100 µg/L	91.2	70.0	130	----
Bromoform	75-25-2	E611C	0.5	µg/L	100 µg/L	99.4	70.0	130	----
Carbon tetrachloride	56-23-5	E611C	0.5	µg/L	100 µg/L	98.6	70.0	130	----
Chlorobenzene	108-90-7	E611C	0.5	µg/L	100 µg/L	98.6	70.0	130	----
Chloroethane	75-00-3	E611C	0.5	µg/L	100 µg/L	105	60.0	140	----
Chloroform	67-66-3	E611C	0.5	µg/L	100 µg/L	94.2	70.0	130	----
Chloromethane	74-87-3	E611C	5	µg/L	100 µg/L	93.6	60.0	140	----
Dibromochloromethane	124-48-1	E611C	0.5	µg/L	100 µg/L	95.5	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611C	0.5	µg/L	100 µg/L	100	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611C	0.5	µg/L	100 µg/L	102	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	97.1	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611C	0.5	µg/L	100 µg/L	92.3	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611C	0.5	µg/L	100 µg/L	94.6	70.0	130	----



Sub-Matrix: **Water**

Laboratory Control Sample (LCS) Report

Analyte	CAS Number	Method	LOR	Unit	Recovery (%)				Qualifier
					Spike Target Concentration	LCS	Low	High	
<b>Volatile Organic Compounds (QCLot: 1803915) - continued</b>									
Dichloroethylene, cis-1,2-	156-59-2	E611C	0.5	µg/L	100 µg/L	94.0	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611C	0.5	µg/L	100 µg/L	96.2	70.0	130	----
Dichloromethane	75-09-2	E611C	1	µg/L	100 µg/L	91.6	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611C	0.5	µg/L	100 µg/L	95.5	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611C	0.5	µg/L	100 µg/L	97.6	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611C	0.5	µg/L	100 µg/L	100	70.0	130	----
Ethylbenzene	100-41-4	E611C	0.5	µg/L	100 µg/L	100.0	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	0.5	µg/L	100 µg/L	97.4	70.0	130	----
Styrene	100-42-5	E611C	0.5	µg/L	100 µg/L	100	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	0.5	µg/L	100 µg/L	100	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	0.2	µg/L	100 µg/L	92.5	70.0	130	----
Tetrachloroethylene	127-18-4	E611C	0.5	µg/L	100 µg/L	100	70.0	130	----
Toluene	108-88-3	E611C	0.4	µg/L	100 µg/L	97.0	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611C	0.5	µg/L	100 µg/L	101	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611C	0.5	µg/L	100 µg/L	92.4	70.0	130	----
Trichloroethylene	79-01-6	E611C	0.5	µg/L	100 µg/L	98.1	70.0	130	----
Trichlorofluoromethane	75-69-4	E611C	0.5	µg/L	100 µg/L	92.3	60.0	140	----
Vinyl chloride	75-01-4	E611C	0.4	µg/L	100 µg/L	96.1	60.0	140	----
Xylene, m+p-	179601-23-1	E611C	0.4	µg/L	200 µg/L	95.0	70.0	130	----
Xylene, o-	95-47-6	E611C	0.3	µg/L	100 µg/L	98.4	70.0	130	----
<b>Hydrocarbons (QCLot: 1803914)</b>									
VHw (C6-C10)	---	E581.VH+F1	100	µg/L	6310 µg/L	71.7	70.0	130	----
<b>Hydrocarbons (QCLot: 1804075)</b>									
EPH (C10-C19)	---	E601A	250	µg/L	6490 µg/L	109	70.0	130	----
EPH (C19-C32)	---	E601A	250	µg/L	3360 µg/L	114	70.0	130	----
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 1804076)</b>									
Acenaphthene	83-32-9	E641A	0.01	µg/L	0.5 µg/L	119	60.0	130	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	0.5 µg/L	129	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	122	60.0	130	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	0.5 µg/L	97.1	60.0	130	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	0.5 µg/L	113	60.0	130	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	0.5 µg/L	129	60.0	130	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	0.5 µg/L	129	60.0	130	----



Sub-Matrix: <b>Water</b>					Laboratory Control Sample (LCS) Report				
					<i>Spike</i>	<i>Recovery (%)</i>	<i>Recovery Limits (%)</i>		
<i>Analyte</i>	<i>CAS Number</i>	<i>Method</i>	<i>LOR</i>	<i>Unit</i>	<i>Target Concentration</i>	<i>LCS</i>	<i>Low</i>	<i>High</i>	<i>Qualifier</i>
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 1804076) - continued</b>									
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	0.5 µg/L	125	60.0	130	----
Chrysene	218-01-9	E641A	0.01	µg/L	0.5 µg/L	111	60.0	130	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	0.5 µg/L	129	60.0	130	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	0.5 µg/L	124	60.0	130	----
Fluorene	86-73-7	E641A	0.01	µg/L	0.5 µg/L	119	60.0	130	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	0.5 µg/L	123	60.0	130	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	0.5 µg/L	113	60.0	130	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	0.5 µg/L	121	60.0	130	----
Naphthalene	91-20-3	E641A	0.05	µg/L	0.5 µg/L	121	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	118	60.0	130	----
Quinoline	91-22-5	E641A	0.05	µg/L	0.5 µg/L	114	60.0	130	----
<b>Glycols (QCLot: 1803993)</b>									
Diethylene glycol	111-46-6	E680E	5	mg/L	25 mg/L	99.7	70.0	130	----
Ethylene glycol	107-21-1	E680E	5	mg/L	25 mg/L	102	70.0	130	----
Propylene glycol, 1,2-	57-55-6	E680E	5	mg/L	25 mg/L	100	70.0	130	----
Triethylene glycol	112-27-6	E680E	5	mg/L	25 mg/L	99.3	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
<b>Total Metals (QCLot: 1803903)</b>										
VA24D3153-001	WTP	Mercury, total	7439-97-6	E508	0.0000933 mg/L	0 mg/L	93.3	70.0	130	----
<b>Dissolved Metals (QCLot: 1803902)</b>										
VA24D3153-001	WTP	Mercury, dissolved	7439-97-6	E509	0.0000972 mg/L	0 mg/L	97.2	70.0	130	----
<b>Aggregate Organics (QCLot: 1804634)</b>										
VA24D3096-002	Anonymous	Phenols, total (4AAP)	----	E562	0.0201 mg/L	0.02 mg/L	100	75.0	125	----
<b>Volatile Organic Compounds (QCLot: 1803915)</b>										
VA24D3153-001	WTP	Benzene	71-43-2	E611C	91.7 µg/L	100 µg/L	91.7	60.0	140	----
		Bromodichloromethane	75-27-4	E611C	93.3 µg/L	100 µg/L	93.3	60.0	140	----
		Bromoform	75-25-2	E611C	101 µg/L	100 µg/L	101	60.0	140	----
		Carbon tetrachloride	56-23-5	E611C	91.7 µg/L	100 µg/L	91.7	60.0	140	----
		Chlorobenzene	108-90-7	E611C	97.1 µg/L	100 µg/L	97.1	60.0	140	----
		Chloroethane	75-00-3	E611C	98.0 µg/L	100 µg/L	98.0	50.0	150	----
		Chloroform	67-66-3	E611C	93.2 µg/L	100 µg/L	93.2	60.0	140	----
		Chloromethane	74-87-3	E611C	84.7 µg/L	100 µg/L	84.7	50.0	150	----
		Dibromochloromethane	124-48-1	E611C	97.5 µg/L	100 µg/L	97.5	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611C	99.0 µg/L	100 µg/L	99.0	60.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611C	98.2 µg/L	100 µg/L	98.2	60.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611C	100.0 µg/L	100 µg/L	100.0	60.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611C	94.3 µg/L	100 µg/L	94.3	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611C	95.0 µg/L	100 µg/L	95.0	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611C	87.6 µg/L	100 µg/L	87.6	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611C	93.0 µg/L	100 µg/L	93.0	60.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611C	89.1 µg/L	100 µg/L	89.1	60.0	140	----
		Dichloromethane	75-09-2	E611C	90.7 µg/L	100 µg/L	90.7	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611C	98.0 µg/L	100 µg/L	98.0	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611C	98.8 µg/L	100 µg/L	98.8	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611C	101 µg/L	100 µg/L	101	60.0	140	----
		Ethylbenzene	100-41-4	E611C	96.5 µg/L	100 µg/L	96.5	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	95.7 µg/L	100 µg/L	95.7	60.0	140	----
		Styrene	100-42-5	E611C	99.4 µg/L	100 µg/L	99.4	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	100 µg/L	100 µg/L	100	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	97.6 µg/L	100 µg/L	97.6	60.0	140	----
		Tetrachloroethylene	127-18-4	E611C	93.2 µg/L	100 µg/L	93.2	60.0	140	----
		Toluene	108-88-3	E611C	94.1 µg/L	100 µg/L	94.1	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611C	96.2 µg/L	100 µg/L	96.2	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611C	97.0 µg/L	100 µg/L	97.0	60.0	140	----
		Trichloroethylene	79-01-6	E611C	93.6 µg/L	100 µg/L	93.6	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611C	89.1 µg/L	100 µg/L	89.1	50.0	150	----



Sub-Matrix: **Water**

					<i>Matrix Spike (MS) Report</i>					
					<i>Spike</i>		<i>Recovery (%)</i>	<i>Recovery Limits (%)</i>		
<i>Laboratory sample ID</i>	<i>Client sample ID</i>	<i>Analyte</i>	<i>CAS Number</i>	<i>Method</i>	<i>Concentration</i>	<i>Target</i>	<i>MS</i>	<i>Low</i>	<i>High</i>	<i>Qualifier</i>
<b>Volatile Organic Compounds (QCLot: 1803915) - continued</b>										
VA24D3153-001	WTP	Vinyl chloride	75-01-4	E611C	86.2 µg/L	100 µg/L	86.2	50.0	150	----
		Xylene, m+p-	179601-23-1	E611C	183 µg/L	200 µg/L	91.7	60.0	140	----
		Xylene, o-	95-47-6	E611C	96.7 µg/L	100 µg/L	96.7	60.0	140	----
<b>Hydrocarbons (QCLot: 1803914)</b>										
VA24D3157-001	Anonymous	VHw (C6-C10)	----	E581.VH+F1	4100 µg/L	6310 µg/L	65.0	60.0	140	----

### Reference Material (RM) Report

A Reference Material (RM) is a homogenous material with known and well-established analyte concentrations. RMs are processed in an identical manner to test samples, and are used to monitor and control the accuracy and precision of a test method for a typical sample matrix. RM results are expressed as percent recovery of the target analyte concentration. RM targets may be certified target concentrations provided by the RM supplier, or may be ALS long-term mean values (for empirical test methods).

Sub-Matrix:

					<i>Reference Material (RM) Report</i>				
					<i>RM Target</i>	<i>Recovery (%)</i>	<i>Recovery Limits (%)</i>		
<i>Laboratory sample ID</i>	<i>Reference Material ID</i>	<i>Analyte</i>	<i>CAS Number</i>	<i>Method</i>	<i>Concentration</i>	<i>RM</i>	<i>Low</i>	<i>High</i>	<i>Qualifier</i>
<b>Physical Tests (QCLot: 1803713)</b>									
QC-1803713-001	RM	Oxidation-reduction potential [ORP]	----	E125	220 mV	102	95.0	105	----

## QUALITY CONTROL INTERPRETIVE REPORT

<p><b>Work Order</b> : <b>VA24D3153</b></p> <p><b>Client</b> : <b>Frontier-Kemper Michels Joint Venture</b></p> <p><b>Contact</b> : Sara Derakhshi</p> <p><b>Address</b> : 404-850 Harbourside Drive North Vancouver BC Canada V7P 0A3</p> <p><b>Telephone</b> : ----</p> <p><b>Project</b> : ----</p> <p><b>PO</b> : ----</p> <p><b>C-O-C number</b> : 20-969580</p> <p><b>Sampler</b> : ----</p> <p><b>Site</b> : BCRial</p> <p><b>Quote number</b> : WTP Discharge</p> <p><b>No. of samples received</b> : 1</p> <p><b>No. of samples analysed</b> : 1</p>	<p><b>Page</b> : 1 of 14</p> <p><b>Laboratory</b> : ALS Environmental - Vancouver</p> <p><b>Account Manager</b> : Thomas Chang</p> <p><b>Address</b> : 8081 Lougheed Highway Burnaby, British Columbia Canada V5A 1W9</p> <p><b>Telephone</b> : +1 604 253 4188</p> <p><b>Date Samples Received</b> : 10-Dec-2024 14:00</p> <p><b>Issue Date</b> : 12-Dec-2024 09:17</p>
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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)***

- Analysis Holding Time Outliers exist - please see following pages for full details.

### ***Outliers : Frequency of Quality Control Samples***

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



## Analysis Holding Time Compliance

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

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

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

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

Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Aggregate Organics : Phenols (4AAP) in Water by Colorimetry</b>											
Amber glass total (sulfuric acid) WTP	E562	10-Dec-2024	11-Dec-2024	28 days	1 days	✔	11-Dec-2024	28 days	1 days	✔	
<b>Anions and Nutrients : Ammonia by Fluorescence</b>											
Amber glass total (sulfuric acid) WTP	E298	10-Dec-2024	10-Dec-2024	28 days	0 days	✔	10-Dec-2024	28 days	0 days	✔	
<b>Anions and Nutrients : Bromide in Water by IC (Low Level)</b>											
HDPE WTP	E235.Br-L	10-Dec-2024	10-Dec-2024	28 days	0 days	✔	10-Dec-2024	28 days	0 days	✔	
<b>Anions and Nutrients : Chloride in Water by IC</b>											
HDPE WTP	E235.Cl	10-Dec-2024	10-Dec-2024	28 days	0 days	✔	10-Dec-2024	28 days	0 days	✔	
<b>Anions and Nutrients : Fluoride in Water by IC</b>											
HDPE WTP	E235.F	10-Dec-2024	10-Dec-2024	28 days	0 days	✔	10-Dec-2024	28 days	0 days	✔	
<b>Anions and Nutrients : Nitrate in Water by IC (Low Level)</b>											
HDPE WTP	E235.NO3-L	10-Dec-2024	10-Dec-2024	3 days	0 days	✔	10-Dec-2024	3 days	0 days	✔	
<b>Anions and Nutrients : Nitrite in Water by IC (Low Level)</b>											
HDPE WTP	E235.NO2-L	10-Dec-2024	10-Dec-2024	3 days	0 days	✔	10-Dec-2024	3 days	0 days	✔	



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Anions and Nutrients : Sulfate in Water by IC</b>										
HDPE WTP	E235.SO4	10-Dec-2024	10-Dec-2024	28 days	0 days	✓	10-Dec-2024	28 days	0 days	✓
<b>Anions and Nutrients : Total Nitrogen by Colourimetry</b>										
Amber glass total (sulfuric acid) WTP	E366	10-Dec-2024	10-Dec-2024	28 days	0 days	✓	11-Dec-2024	28 days	1 days	✓
<b>Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)</b>										
Amber glass total (sulfuric acid) WTP	E372-U	10-Dec-2024	10-Dec-2024	28 days	0 days	✓	11-Dec-2024	28 days	1 days	✓
<b>Dissolved Metals : Dissolved Mercury in Water by CVAAS</b>										
HDPE dissolved (nitric acid) WTP	E509	10-Dec-2024	10-Dec-2024	0 hrs	5 hrs	* UCP	10-Dec-2024	0 hrs	5 hrs	* UCP
<b>Dissolved Metals : Dissolved Metals in Water by CRC ICPMS</b>										
HDPE dissolved (nitric acid) WTP	E421	10-Dec-2024	10-Dec-2024	180 days	0 days	✓	10-Dec-2024	180 days	0 days	✓
<b>Field Tests : Field pH,EC,Salinity, TDS, Cl2,CIO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine</b>										
HDPE total (nitric acid) WTP	EF001	10-Dec-2024	----	----	----		11-Dec-2024	----	1 days	
<b>Glycols : Glycols (4 analytes) by GC-FID</b>										
Glass vial (sodium bisulfate) WTP	E680E	10-Dec-2024	10-Dec-2024	14 days	0 days	✓	11-Dec-2024	40 days	1 days	✓
<b>Hydrocarbons : BC PHCs - EPH by GC-FID</b>										
Amber glass/Teflon lined cap (sodium bisulfate) WTP	E601A	10-Dec-2024	11-Dec-2024	14 days	1 days	✓	11-Dec-2024	40 days	0 days	✓
<b>Hydrocarbons : VH and F1 by Headspace GC-FID</b>										
Glass vial (sodium bisulfate) WTP	E581.VH+F1	10-Dec-2024	10-Dec-2024	14 days	0 days	✓	11-Dec-2024	14 days	1 days	✓



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)</b>											
HDPE WTP	E358-L	10-Dec-2024	10-Dec-2024	3 days	0 days	✓	10-Dec-2024	28 days	0 days	✓	
<b>Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)</b>											
Amber glass total (sulfuric acid) WTP	E355-L	10-Dec-2024	10-Dec-2024	28 days	0 days	✓	10-Dec-2024	28 days	0 days	✓	
<b>Physical Tests : Alkalinity Species by Titration</b>											
HDPE WTP	E290	10-Dec-2024	10-Dec-2024	14 days	0 days	✓	10-Dec-2024	14 days	0 days	✓	
<b>Physical Tests : Conductivity in Water</b>											
HDPE WTP	E100	10-Dec-2024	10-Dec-2024	28 days	0 days	✓	10-Dec-2024	28 days	0 days	✓	
<b>Physical Tests : ORP by Electrode</b>											
HDPE WTP	E125	10-Dec-2024	----	----	----		10-Dec-2024	0.25 hrs	2 hrs	* EHTR-FM	
<b>Physical Tests : pH by Meter</b>											
HDPE WTP	E108	10-Dec-2024	10-Dec-2024	0.25 hrs	4 hrs	* EHTR-FM	10-Dec-2024	0.25 hrs	4 hrs	* EHTR-FM	
<b>Physical Tests : TDS by Gravimetry</b>											
HDPE WTP	E162	10-Dec-2024	----	----	----		10-Dec-2024	7 days	0 days	✓	
<b>Physical Tests : TSS by Gravimetry</b>											
HDPE WTP	E160	10-Dec-2024	----	----	----		10-Dec-2024	7 days	0 days	✓	
<b>Physical Tests : Turbidity by Nephelometry</b>											
HDPE WTP	E121	10-Dec-2024	----	----	----		10-Dec-2024	3 days	0 days	✓	



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS</b>										
Amber glass/Teflon lined cap (sodium bisulfate) WTP	E641A	10-Dec-2024	11-Dec-2024	14 days	1 days	✓	11-Dec-2024	40 days	0 days	✓
<b>Total Metals : Total Mercury in Water by CVAAS</b>										
HDPE total (nitric acid) WTP	E508	10-Dec-2024	10-Dec-2024	0 hrs	5 hrs	* UCP	10-Dec-2024	0 hrs	5 hrs	* UCP
<b>Total Metals : Total Metals in Water by CRC ICPMS</b>										
HDPE total (nitric acid) WTP	E420	10-Dec-2024	10-Dec-2024	180 days	0 days	✓	10-Dec-2024	180 days	0 days	✓
<b>Volatile Organic Compounds : VOCs (BC List) by Headspace GC-MS</b>										
Glass vial (sodium bisulfate) WTP	E611C	10-Dec-2024	10-Dec-2024	14 days	0 days	✓	11-Dec-2024	14 days	1 days	✓

**Legend & Qualifier Definitions**

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended

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

UCP: Unsuitable Container and/or Preservative used (invalidates standard hold time). Maximum hold time of zero applied. Test results may be biased low / unreliable, and may not meet regulatory requirements.





## 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	Method	QC Lot #	Count		Frequency (%)		Evaluation
			QC	Regular	Actual	Expected	
<b>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
Alkalinity Species by Titration	E290	1803752	0	1	0.0	5.0	✖
Ammonia by Fluorescence	E298	1803691	1	1	100.0	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1803756	1	1	100.0	5.0	✔
Chloride in Water by IC	E235.Cl	1803755	1	1	100.0	5.0	✔
Conductivity in Water	E100	1803753	1	1	100.0	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1803902	1	2	50.0	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1803671	1	1	100.0	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1803687	1	1	100.0	5.0	✔
Fluoride in Water by IC	E235.F	1803754	1	1	100.0	5.0	✔
Glycols (4 analytes) by GC-FID	E680E	1803993	1	1	100.0	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1803757	1	1	100.0	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1803758	1	1	100.0	5.0	✔
ORP by Electrode	E125	1803713	1	1	100.0	5.0	✔
pH by Meter	E108	1803751	1	2	50.0	5.0	✔
Phenols (4AAP) in Water by Colorimetry	E562	1804634	1	20	5.0	5.0	✔
Sulfate in Water by IC	E235.SO4	1803759	1	1	100.0	5.0	✔
TDS by Gravimetry	E162	1803912	1	8	12.5	5.0	✔
Total Mercury in Water by CVAAS	E508	1803903	1	2	50.0	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1803670	1	1	100.0	5.0	✔
Total Nitrogen by Colourimetry	E366	1803689	1	1	100.0	5.0	✔
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	1803688	1	1	100.0	5.0	✔
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1803690	1	1	100.0	5.0	✔
TSS by Gravimetry	E160	1803917	1	8	12.5	5.0	✔
Turbidity by Nephelometry	E121	1803749	1	11	9.0	5.0	✔
VH and F1 by Headspace GC-FID	E581.VH+F1	1803914	1	4	25.0	5.0	✔
VOCs (BC List) by Headspace GC-MS	E611C	1803915	1	1	100.0	5.0	✔
<b>Laboratory Control Samples (LCS)</b>							
Alkalinity Species by Titration	E290	1803752	1	1	100.0	5.0	✔
Ammonia by Fluorescence	E298	1803691	1	1	100.0	5.0	✔
BC PHCs - EPH by GC-FID	E601A	1804075	1	12	8.3	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1803756	1	1	100.0	5.0	✔
Chloride in Water by IC	E235.Cl	1803755	1	1	100.0	5.0	✔
Conductivity in Water	E100	1803753	1	1	100.0	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1803902	1	2	50.0	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1803671	1	1	100.0	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1803687	1	1	100.0	5.0	✔



Matrix: **Water**

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<i>Analytical Methods</i>							
<b>Laboratory Control Samples (LCS) - Continued</b>							
Fluoride in Water by IC	E235.F	1803754	1	1	100.0	5.0	✔
Glycols (4 analytes) by GC-FID	E680E	1803993	1	1	100.0	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1803757	1	1	100.0	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1803758	1	1	100.0	5.0	✔
ORP by Electrode	E125	1803713	1	1	100.0	5.0	✔
PAHs in Water by Hexane LVI GC-MS	E641A	1804076	1	15	6.6	5.0	✔
pH by Meter	E108	1803751	1	2	50.0	5.0	✔
Phenols (4AAP) in Water by Colorimetry	E562	1804634	1	20	5.0	5.0	✔
Sulfate in Water by IC	E235.SO4	1803759	1	1	100.0	5.0	✔
TDS by Gravimetry	E162	1803912	1	8	12.5	5.0	✔
Total Mercury in Water by CVAAS	E508	1803903	1	2	50.0	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1803670	1	1	100.0	5.0	✔
Total Nitrogen by Colourimetry	E366	1803689	1	1	100.0	5.0	✔
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	1803688	1	1	100.0	5.0	✔
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1803690	1	1	100.0	5.0	✔
TSS by Gravimetry	E160	1803917	1	8	12.5	5.0	✔
Turbidity by Nephelometry	E121	1803749	1	11	9.0	5.0	✔
VH and F1 by Headspace GC-FID	E581.VH+F1	1803914	1	4	25.0	5.0	✔
VOCs (BC List) by Headspace GC-MS	E611C	1803915	1	1	100.0	5.0	✔
<b>Method Blanks (MB)</b>							
Alkalinity Species by Titration	E290	1803752	1	1	100.0	5.0	✔
Ammonia by Fluorescence	E298	1803691	1	1	100.0	5.0	✔
BC PHCs - EPH by GC-FID	E601A	1804075	1	12	8.3	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1803756	1	1	100.0	5.0	✔
Chloride in Water by IC	E235.Cl	1803755	1	1	100.0	5.0	✔
Conductivity in Water	E100	1803753	1	1	100.0	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1803902	1	2	50.0	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1803671	1	1	100.0	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1803687	1	1	100.0	5.0	✔
Fluoride in Water by IC	E235.F	1803754	1	1	100.0	5.0	✔
Glycols (4 analytes) by GC-FID	E680E	1803993	1	1	100.0	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1803757	1	1	100.0	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1803758	1	1	100.0	5.0	✔
PAHs in Water by Hexane LVI GC-MS	E641A	1804076	1	15	6.6	5.0	✔
Phenols (4AAP) in Water by Colorimetry	E562	1804634	1	20	5.0	5.0	✔
Sulfate in Water by IC	E235.SO4	1803759	1	1	100.0	5.0	✔
TDS by Gravimetry	E162	1803912	1	8	12.5	5.0	✔
Total Mercury in Water by CVAAS	E508	1803903	1	2	50.0	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1803670	1	1	100.0	5.0	✔



Matrix: **Water** Evaluation: ✘ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<b>Analytical Methods</b>							
<b>Method Blanks (MB) - Continued</b>							
Total Nitrogen by Colourimetry	E366	1803689	1	1	100.0	5.0	✔
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	1803688	1	1	100.0	5.0	✔
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1803690	1	1	100.0	5.0	✔
TSS by Gravimetry	E160	1803917	1	8	12.5	5.0	✔
Turbidity by Nephelometry	E121	1803749	1	11	9.0	5.0	✔
VH and F1 by Headspace GC-FID	E581.VH+F1	1803914	1	4	25.0	5.0	✔
VOCs (BC List) by Headspace GC-MS	E611C	1803915	1	1	100.0	5.0	✔
<b>Matrix Spikes (MS)</b>							
Ammonia by Fluorescence	E298	1803691	0	1	0.0	5.0	✘
Bromide in Water by IC (Low Level)	E235.Br-L	1803756	0	1	0.0	5.0	✘
Chloride in Water by IC	E235.Cl	1803755	0	1	0.0	5.0	✘
Dissolved Mercury in Water by CVAAS	E509	1803902	1	2	50.0	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1803671	0	1	0.0	5.0	✘
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1803687	0	1	0.0	5.0	✘
Fluoride in Water by IC	E235.F	1803754	0	1	0.0	5.0	✘
Nitrate in Water by IC (Low Level)	E235.NO3-L	1803757	0	1	0.0	5.0	✘
Nitrite in Water by IC (Low Level)	E235.NO2-L	1803758	0	1	0.0	5.0	✘
Phenols (4AAP) in Water by Colorimetry	E562	1804634	1	20	5.0	5.0	✔
Sulfate in Water by IC	E235.SO4	1803759	0	1	0.0	5.0	✘
Total Mercury in Water by CVAAS	E508	1803903	1	2	50.0	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1803670	0	1	0.0	5.0	✘
Total Nitrogen by Colourimetry	E366	1803689	0	1	0.0	5.0	✘
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	1803688	0	1	0.0	5.0	✘
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1803690	0	1	0.0	5.0	✘
VH and F1 by Headspace GC-FID	E581.VH+F1	1803914	1	4	25.0	5.0	✔
VOCs (BC List) by Headspace GC-MS	E611C	1803915	1	1	100.0	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
Conductivity in Water	E100 ALS Environmental - Vancouver	Water	APHA 2510 (mod)	Conductivity, also known as Electrical Conductivity (EC) or Specific Conductance, is measured by immersion of a conductivity cell with platinum electrodes into a water sample. Conductivity measurements are temperature-compensated to 25°C.
pH by Meter	E108 ALS Environmental - Vancouver	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.
Turbidity by Nephelometry	E121 ALS Environmental - Vancouver	Water	APHA 2130 B (mod)	Turbidity is measured by the nephelometric method, by measuring the intensity of light scatter under defined conditions.
ORP by Electrode	E125 ALS Environmental - Vancouver	Water	ASTM D1498 (mod)	Oxidation reduction potential is reported as the oxidation-reduction potential of the platinum metal-reference electrode employed, measured in mV. For high accuracy test results, it is recommended that this analysis be conducted in the field.
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.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
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.
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)
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L ALS Environmental - Vancouver	Water	APHA 5310 B (mod)	Total Organic Carbon (Non-Purgeable), also known as NPOC (total), is a direct measurement of TOC after an acidified sample has been 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 total carbon (TC) is comprised of IC (which is common), this method is more accurate and more reliable than the TOC by subtraction method (i.e. TC minus TIC).
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.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
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.
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 <sub>3</sub> Fe(CN) <sub>6</sub> ) 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.



Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
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 <sub>3</sub> ), dissolved" is calculated from the sum of dissolved Calcium and Magnesium concentrations, expressed in CaCO <sub>3</sub> 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 CaCO <sub>3</sub> ), from total Ca/Mg" is calculated from the sum of total Calcium and Magnesium concentrations, expressed in CaCO <sub>3</sub> 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 and Ionized Ammonia (Calculation) (Field Temperature and pH)	EC298A ALS Environmental - Vancouver	Water	CCME CWQG Ammonia	Un-ionized ammonia is calculated from test results for total ammonia, field temperature and pH, and is expressed in units of mg/L "as N".
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, Cl <sub>2</sub> ,ClO <sub>2</sub> ,ORP,DO, Turbidity,T,T-P,o-PO <sub>4</sub> ,NH <sub>3</sub> ,Chloramine	EF001 ALS Environmental - Vancouver	Water	Field Measurement (Client Supplied)	Field pH,EC,Salinity, TDS, Cl <sub>2</sub> ,ClO <sub>2</sub> ,ORP,DO, Turbidity,T,T-P,o-PO <sub>4</sub> ,NH <sub>3</sub> 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.





<i>Preparation Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
Preparation for Total Organic Carbon by Combustion	EP355 ALS Environmental - Vancouver	Water		Preparation for Total Organic Carbon by Combustion
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.
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 organic solvent.








**Eagle Mountain - Woodfibre Gas Pipeline Project  
Waste Discharge Permit PE-110163 Report**


Reporting Week	Dec 9 <sup>th</sup> to Dec 15 <sup>th</sup> , 2024
Report #	38
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## Appendix B: BCR Site Receiving Environment Documentation

 <b>Eagle Mountain - Woodfibre Gas Pipeline Project Waste Discharge Permit PE-110163 Report</b>	Reporting Week	Dec 9 <sup>th</sup> to Dec 15 <sup>th</sup> , 2024
	Report #	38
	Appendix B	B-2

## BCR Site Receiving Environment Sample Analysis



 <b>Eagle Mountain - Woodfibre Gas Pipeline Project Waste Discharge Permit PE-110163 Report</b>	Reporting Week	Dec 9 <sup>th</sup> to Dec 15 <sup>th</sup> , 2024
	Report #	38
	Appendix B	B-3

## BCR Site Receiving Environment Lab Documentation



**CERTIFICATE OF ANALYSIS**

**Work Order** : **VA24D3094**  
**Client** : **Triton Environmental Consultants Ltd.**  
**Contact** :  
**Address** :  
**Telephone** :  
**Project** : 11964  
**PO** : 11964-Task 20-Phase 3C-4C  
**C-O-C number** : ----  
**Sampler** : AR+SR  
**Site** : Water Analysis  
**Quote number** : VA23-TRIT100-012  
**No. of samples received** : 2  
**No. of samples analysed** : 2

**Laboratory** : ALS Environmental - Vancouver  
**Account Manager** :  
**Address** :  
**Telephone** :  
**Date Samples Received** : 09-Dec-2024 13:45  
**Date Analysis Commenced** : 10-Dec-2024  
**Issue Date** : 16-Dec-2024 16:50

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.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
		Metals, Burnaby, British Columbia
		Metals, Burnaby, British Columbia
		Inorganics, Burnaby, British Columbia
		Metals, Burnaby, British Columbia
		Administration, Burnaby, British Columbia



## General Comments

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

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

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

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

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

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

<: less than.

>: greater than.

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

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.



## Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	SQU US 1	SQU DS 1	----	----	----
Client sampling date / time					09-Dec-2024 12:00	09-Dec-2024 11:18	----	----	----	
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3094-001	VA24D3094-002	----	----	----	
					Result	Result	----	----	----	
<b>Field Tests</b>										
Conductivity, field	----	EF001/VA	0.10	µS/cm	42.000	40.000	----	----	----	
pH, field	----	EF001/VA	0.10	pH units	6.82	6.81	----	----	----	
Temperature, field	----	EF001/VA	0.10	°C	4.10	4.10	----	----	----	
<b>Physical Tests</b>										
Hardness (as CaCO3), dissolved	----	EC100/VA	0.60	mg/L	16.3	14.9	----	----	----	
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L	16.8	16.0	----	----	----	
Solids, total dissolved [TDS]	----	E162/VA	10	mg/L	35	34	----	----	----	
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L	<3.0	3.2	----	----	----	
Alkalinity, total (as CaCO3)	----	E290/VA	2.0	mg/L	13.5	12.7	----	----	----	
<b>Anions and Nutrients</b>										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L	0.0227	0.0136	----	----	----	
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	1.47	1.40	----	----	----	
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L	<0.020	<0.020	----	----	----	
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L	0.0764	0.0621	----	----	----	
Nitrite (as N)	14797-65-0	E235.NO2-L/VA	0.0010	mg/L	0.0011	<0.0010	----	----	----	
Nitrogen, total	7727-37-9	E366/VA	0.030	mg/L	0.168	0.143	----	----	----	
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L	0.0133	0.0111	----	----	----	
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L	4.09	3.90	----	----	----	
<b>Organic / Inorganic Carbon</b>										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L	2.14	2.22	----	----	----	





## Analytical Results

Sub-Matrix: Water  
 (Matrix: Water)

					Client sample ID	SQU US 1	SQU DS 1	----	----	----
					Client sampling date / time	09-Dec-2024 12:00	09-Dec-2024 11:18	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3094-001	VA24D3094-002	----	----	----	
					Result	Result	----	----	----	
<b>Total Sulfides</b>										
Sulfide, total (as S)	18496-25-8	E395/VA	0.0015	mg/L	<0.0015	<0.0015	----	----	----	
Sulfide, un-ionized (as H2S), from total	7783-06-4	EC395/VA	0.0015	mg/L	<0.0015	<0.0015	----	----	----	
Sulfide, total (as H2S)	7783-06-4	E395/VA	0.0016	mg/L	<0.0016	<0.0016	----	----	----	
<b>Total Metals</b>										
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L	0.160	0.184	----	----	----	
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L	<0.00010	<0.00010	----	----	----	
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L	0.00013	0.00015	----	----	----	
Barium, total	7440-39-3	E420/VA	0.00010	mg/L	0.00773	0.00824	----	----	----	
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	0.000328	0.0000071	----	----	----	
Calcium, total	7440-70-2	E420/VA	0.050	mg/L	5.70	5.42	----	----	----	
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L	0.000016	0.000014	----	----	----	
Chromium, total	7440-47-3	E420/VA	0.00050	mg/L	<0.00050	<0.00050	----	----	----	
Cobalt, total	7440-48-4	E420/VA	0.00010	mg/L	<0.00010	<0.00010	----	----	----	
Copper, total	7440-50-8	E420/VA	0.00050	mg/L	0.00091	0.00098	----	----	----	
Iron, total	7439-89-6	E420/VA	0.010	mg/L	0.144	0.173	----	----	----	
Lead, total	7439-92-1	E420/VA	0.000050	mg/L	<0.000050	<0.000050	----	----	----	
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L	<0.0010	<0.0010	----	----	----	
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L	0.612	0.588	----	----	----	



## Analytical Results

Sub-Matrix: Water  
 (Matrix: Water)

					Client sample ID	SQU US 1	SQU DS 1	----	----	----
					Client sampling date / time	09-Dec-2024 12:00	09-Dec-2024 11:18	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3094-001	VA24D3094-002	----	----	----	
					Result	Result	----	----	----	
<b>Total Metals</b>										
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L	0.00535	0.00662	----	----	----	
Mercury, total	7439-97-6	E508/VA	0.0000050	mg/L	<0.0000050	<0.0000050	----	----	----	
Molybdenum, total	7439-98-7	E420/VA	0.000050	mg/L	0.000533	0.000526	----	----	----	
Nickel, total	7440-02-0	E420/VA	0.00050	mg/L	<0.00050	<0.00050	----	----	----	
Phosphorus, total	7723-14-0	E420/VA	0.050	mg/L	<0.050	<0.050	----	----	----	
Potassium, total	7440-09-7	E420/VA	0.050	mg/L	0.510	0.517	----	----	----	
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L	0.00075	0.00069	----	----	----	
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L	<0.000050	<0.000050	----	----	----	
Silicon, total	7440-21-3	E420/VA	0.10	mg/L	4.36	4.10	----	----	----	
Silver, total	7440-22-4	E420/VA	0.000010	mg/L	<0.000010	<0.000010	----	----	----	
Sodium, total	7440-23-5	E420/VA	0.050	mg/L	1.93	1.77	----	----	----	
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L	0.0351	0.0349	----	----	----	
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L	1.38	1.48	----	----	----	
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	0.00434	0.00524	----	----	----	
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L	<0.00010	<0.00010	----	----	----	
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L	0.000042	0.000041	----	----	----	
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L	0.00127	0.00116	----	----	----	



## Analytical Results

Sub-Matrix: Water  
 (Matrix: Water)

					Client sample ID	SQU US 1	SQU DS 1	----	----	----
					Client sampling date / time	09-Dec-2024 12:00	09-Dec-2024 11:18	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3094-001	VA24D3094-002	----	----	----	
					Result	Result	----	----	----	
<b>Total Metals</b>										
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L	<0.0030	<0.0030	----	----	----	
Zirconium, total	7440-67-7	E420/VA	0.00020	mg/L	<0.00020	<0.00020	----	----	----	
<b>Dissolved Metals</b>										
Aluminum, dissolved	7429-90-5	E421/VA	0.0010	mg/L	0.0572	0.0578	----	----	----	
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L	<0.00010	<0.00010	----	----	----	
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L	<0.00010	<0.00010	----	----	----	
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L	0.00742	0.00744	----	----	----	
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	0.0000070	0.0000057	----	----	----	
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L	5.60	5.07	----	----	----	
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L	0.000012	0.000012	----	----	----	
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	0.00064	0.00066	----	----	----	
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L	0.052	0.059	----	----	----	
Lead, dissolved	7439-92-1	E421/VA	0.000050	mg/L	<0.000050	<0.000050	----	----	----	
Lithium, dissolved	7439-93-2	E421/VA	0.0010	mg/L	<0.0010	<0.0010	----	----	----	
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L	0.559	0.536	----	----	----	
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L	0.00386	0.00422	----	----	----	



## Analytical Results

Sub-Matrix: Water  
 (Matrix: Water)

					Client sample ID	SQU US 1	SQU DS 1	----	----	----
					Client sampling date / time	09-Dec-2024 12:00	09-Dec-2024 11:18	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3094-001	VA24D3094-002	----	----	----	
					Result	Result	----	----	----	
<b>Dissolved Metals</b>										
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	0.000511	0.000492	----	----	----	
Nickel, dissolved	7440-02-0	E421/VA	0.00050	mg/L	<0.00050	<0.00050	----	----	----	
Phosphorus, dissolved	7723-14-0	E421/VA	0.050	mg/L	<0.050	<0.050	----	----	----	
Potassium, dissolved	7440-09-7	E421/VA	0.050	mg/L	0.511	0.513	----	----	----	
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L	0.00080	0.00075	----	----	----	
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	4.05	3.67	----	----	----	
Silver, dissolved	7440-22-4	E421/VA	0.000010	mg/L	<0.000010	<0.000010	----	----	----	
Sodium, dissolved	7440-23-5	E421/VA	0.050	mg/L	1.84	1.74	----	----	----	
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L	0.0352	0.0337	----	----	----	
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L	1.40	1.28	----	----	----	
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	0.00064	0.00060	----	----	----	
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	0.000033	0.000036	----	----	----	
Vanadium, dissolved	7440-62-2	E421/VA	0.00050	mg/L	0.00094	0.00079	----	----	----	
Zinc, dissolved	7440-66-6	E421/VA	0.0010	mg/L	<0.0010	<0.0010	----	----	----	



**Analytical Results**

**Sub-Matrix: Water**  
**(Matrix: Water)**

					Client sample ID	SQU US 1	SQU DS 1	----	----	----
					Client sampling date / time	09-Dec-2024 12:00	09-Dec-2024 11:18	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3094-001	VA24D3094-002	----	----	----	
					Result	Result	----	----	----	
<b>Dissolved Metals</b>										
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	----	----	----	
<b>Speciated Metals</b>										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532/VA	0.00050	mg/L	<0.00050	<0.00050	----	----	----	
Chromium, trivalent [Cr III], total	16065-83-1	EC535/VA	0.00050	mg/L	<0.00050	<0.00050	----	----	----	

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

## QUALITY CONTROL INTERPRETIVE REPORT

<p><b>Work Order</b> : VA24D3094</p> <p><b>Client</b> : Triton Environmental Consultants Ltd.</p> <p><b>Contact</b> : [REDACTED]</p> <p><b>Address</b> : [REDACTED]</p> <p><b>Telephone</b> : ----</p> <p><b>Project</b> : 11964</p> <p><b>PO</b> : 11964-Task 20-Phase 3C-4C</p> <p><b>C-O-C number</b> : ----</p> <p><b>Sampler</b> : AR+SR</p> <p><b>Site</b> : Water Analysis</p> <p><b>Quote number</b> : VA23-TRIT100-012_V2</p> <p><b>No. of samples received</b> : 2</p> <p><b>No. of samples analysed</b> : 2</p>	<p><b>Page</b> : 1 of 14</p> <p><b>Laboratory</b> : ALS Environmental - Vancouver</p> <p><b>Account Manager</b> : [REDACTED]</p> <p><b>Address</b> : [REDACTED]</p> <p><b>Telephone</b> : [REDACTED]</p> <p><b>Date Samples Received</b> : 09-Dec-2024 13:45</p> <p><b>Issue Date</b> : 16-Dec-2024 16:50</p>
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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		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Anions and Nutrients : Ammonia by Fluorescence</b>											
Amber glass total (sulfuric acid) SQU DS 1	E298	09-Dec-2024	10-Dec-2024	28 days	1 days	✔	12-Dec-2024	28 days	3 days	✔	
<b>Anions and Nutrients : Ammonia by Fluorescence</b>											
Amber glass total (sulfuric acid) SQU US 1	E298	09-Dec-2024	10-Dec-2024	28 days	1 days	✔	12-Dec-2024	28 days	3 days	✔	
<b>Anions and Nutrients : Bromide in Water by IC (Low Level)</b>											
HDPE SQU DS 1	E235.Br-L	09-Dec-2024	10-Dec-2024	28 days	1 days	✔	10-Dec-2024	28 days	1 days	✔	
<b>Anions and Nutrients : Bromide in Water by IC (Low Level)</b>											
HDPE SQU US 1	E235.Br-L	09-Dec-2024	10-Dec-2024	28 days	1 days	✔	10-Dec-2024	28 days	1 days	✔	
<b>Anions and Nutrients : Chloride in Water by IC</b>											
HDPE SQU DS 1	E235.Cl	09-Dec-2024	10-Dec-2024	28 days	1 days	✔	10-Dec-2024	28 days	1 days	✔	
<b>Anions and Nutrients : Chloride in Water by IC</b>											
HDPE SQU US 1	E235.Cl	09-Dec-2024	10-Dec-2024	28 days	1 days	✔	10-Dec-2024	28 days	1 days	✔	
<b>Anions and Nutrients : Fluoride in Water by IC</b>											
HDPE SQU DS 1	E235.F	09-Dec-2024	10-Dec-2024	28 days	1 days	✔	10-Dec-2024	28 days	1 days	✔	





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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Anions and Nutrients : Fluoride in Water by IC</b>											
HDPE SQU US 1	E235.F	09-Dec-2024	10-Dec-2024	28 days	1 days	✓	10-Dec-2024	28 days	1 days	✓	
<b>Anions and Nutrients : Nitrate in Water by IC (Low Level)</b>											
HDPE SQU DS 1	E235.NO3-L	09-Dec-2024	10-Dec-2024	3 days	1 days	✓	10-Dec-2024	3 days	1 days	✓	
<b>Anions and Nutrients : Nitrate in Water by IC (Low Level)</b>											
HDPE SQU US 1	E235.NO3-L	09-Dec-2024	10-Dec-2024	3 days	1 days	✓	10-Dec-2024	3 days	1 days	✓	
<b>Anions and Nutrients : Nitrite in Water by IC (Low Level)</b>											
HDPE SQU DS 1	E235.NO2-L	09-Dec-2024	10-Dec-2024	3 days	1 days	✓	10-Dec-2024	3 days	1 days	✓	
<b>Anions and Nutrients : Nitrite in Water by IC (Low Level)</b>											
HDPE SQU US 1	E235.NO2-L	09-Dec-2024	10-Dec-2024	3 days	1 days	✓	10-Dec-2024	3 days	1 days	✓	
<b>Anions and Nutrients : Sulfate in Water by IC</b>											
HDPE SQU DS 1	E235.SO4	09-Dec-2024	10-Dec-2024	28 days	1 days	✓	10-Dec-2024	28 days	1 days	✓	
<b>Anions and Nutrients : Sulfate in Water by IC</b>											
HDPE SQU US 1	E235.SO4	09-Dec-2024	10-Dec-2024	28 days	1 days	✓	10-Dec-2024	28 days	1 days	✓	
<b>Anions and Nutrients : Total Nitrogen by Colourimetry</b>											
Amber glass total (sulfuric acid) SQU DS 1	E366	09-Dec-2024	10-Dec-2024	28 days	1 days	✓	11-Dec-2024	28 days	2 days	✓	
<b>Anions and Nutrients : Total Nitrogen by Colourimetry</b>											
Amber glass total (sulfuric acid) SQU US 1	E366	09-Dec-2024	10-Dec-2024	28 days	1 days	✓	11-Dec-2024	28 days	2 days	✓	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)</b>										
Amber glass total (sulfuric acid) SQU DS 1	E372-U	09-Dec-2024	10-Dec-2024	28 days	1 days	✔	10-Dec-2024	28 days	1 days	✔
<b>Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)</b>										
Amber glass total (sulfuric acid) SQU US 1	E372-U	09-Dec-2024	10-Dec-2024	28 days	1 days	✔	10-Dec-2024	28 days	1 days	✔
<b>Dissolved Metals : Dissolved Mercury in Water by CVAAS</b>										
Glass vial dissolved (hydrochloric acid) SQU DS 1	E509	09-Dec-2024	14-Dec-2024	28 days	5 days	✔	14-Dec-2024	28 days	5 days	✔
<b>Dissolved Metals : Dissolved Mercury in Water by CVAAS</b>										
Glass vial dissolved (hydrochloric acid) SQU US 1	E509	09-Dec-2024	14-Dec-2024	28 days	5 days	✔	14-Dec-2024	28 days	5 days	✔
<b>Dissolved Metals : Dissolved Metals in Water by CRC ICPMS</b>										
HDPE dissolved (nitric acid) SQU DS 1	E421	09-Dec-2024	10-Dec-2024	180 days	1 days	✔	11-Dec-2024	180 days	2 days	✔
<b>Dissolved Metals : Dissolved Metals in Water by CRC ICPMS</b>										
HDPE dissolved (nitric acid) SQU US 1	E421	09-Dec-2024	10-Dec-2024	180 days	1 days	✔	11-Dec-2024	180 days	2 days	✔
<b>Field Tests : Field pH,EC,Salinity, TDS, Cl2,CIO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine</b>										
Glass vial dissolved (hydrochloric acid) SQU DS 1	EF001	09-Dec-2024	----	----	----		11-Dec-2024	----	2 days	
<b>Field Tests : Field pH,EC,Salinity, TDS, Cl2,CIO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine</b>										
Glass vial dissolved (hydrochloric acid) SQU US 1	EF001	09-Dec-2024	----	----	----		11-Dec-2024	----	2 days	
<b>Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)</b>										
Amber glass dissolved (sulfuric acid) SQU DS 1	E358-L	09-Dec-2024	10-Dec-2024	28 days	1 days	✔	10-Dec-2024	28 days	1 days	✔



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)</b>											
<b>Amber glass dissolved (sulfuric acid)</b> SQU US 1	E358-L	09-Dec-2024	10-Dec-2024	28 days	1 days	✓	10-Dec-2024	28 days	1 days	✓	
<b>Physical Tests : Alkalinity Species by Titration</b>											
<b>HDPE</b> SQU DS 1	E290	09-Dec-2024	10-Dec-2024	14 days	1 days	✓	10-Dec-2024	14 days	1 days	✓	
<b>Physical Tests : Alkalinity Species by Titration</b>											
<b>HDPE</b> SQU US 1	E290	09-Dec-2024	10-Dec-2024	14 days	1 days	✓	10-Dec-2024	14 days	1 days	✓	
<b>Physical Tests : TDS by Gravimetry</b>											
<b>HDPE</b> SQU US 1	E162	09-Dec-2024	----	----	----		13-Dec-2024	7 days	4 days	✓	
<b>Physical Tests : TDS by Gravimetry</b>											
<b>HDPE</b> SQU DS 1	E162	09-Dec-2024	----	----	----		13-Dec-2024	7 days	5 days	✓	
<b>Physical Tests : TSS by Gravimetry</b>											
<b>HDPE</b> SQU DS 1	E160	09-Dec-2024	----	----	----		14-Dec-2024	7 days	5 days	✓	
<b>Physical Tests : TSS by Gravimetry</b>											
<b>HDPE</b> SQU US 1	E160	09-Dec-2024	----	----	----		14-Dec-2024	7 days	5 days	✓	
<b>Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC</b>											
<b>Opaque HDPE - total (sodium hydroxide)</b> SQU DS 1	E532	09-Dec-2024	----	----	----		11-Dec-2024	28 days	2 days	✓	
<b>Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC</b>											
<b>Opaque HDPE - total (sodium hydroxide)</b> SQU US 1	E532	09-Dec-2024	----	----	----		11-Dec-2024	28 days	2 days	✓	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Total Metals : Total Mercury in Water by CVAAS</b>										
Glass vial total (hydrochloric acid) SQU DS 1	E508	09-Dec-2024	13-Dec-2024	28 days	4 days	✔	13-Dec-2024	28 days	4 days	✔
<b>Total Metals : Total Mercury in Water by CVAAS</b>										
Glass vial total (hydrochloric acid) SQU US 1	E508	09-Dec-2024	13-Dec-2024	28 days	4 days	✔	13-Dec-2024	28 days	4 days	✔
<b>Total Metals : Total Metals in Water by CRC ICPMS</b>										
HDPE total (nitric acid) SQU DS 1	E420	09-Dec-2024	10-Dec-2024	180 days	1 days	✔	11-Dec-2024	180 days	2 days	✔
<b>Total Metals : Total Metals in Water by CRC ICPMS</b>										
HDPE total (nitric acid) SQU US 1	E420	09-Dec-2024	10-Dec-2024	180 days	1 days	✔	11-Dec-2024	180 days	2 days	✔
<b>Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)</b>										
HDPE total (zinc acetate+sodium hydroxide) SQU DS 1	E395	09-Dec-2024	----	----	----		10-Dec-2024	7 days	1 days	✔
<b>Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)</b>										
HDPE total (zinc acetate+sodium hydroxide) SQU US 1	E395	09-Dec-2024	----	----	----		10-Dec-2024	7 days	1 days	✔

Legend & Qualifier Definitions

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



## Quality Control Parameter Frequency Compliance

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

Matrix: **Water** Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		Evaluation
			QC	Regular	Actual	Expected	
<b>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
Alkalinity Species by Titration	E290	1802980	1	18	5.5	5.0	✔
Ammonia by Fluorescence	E298	1802354	1	19	5.2	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1802987	1	18	5.5	5.0	✔
Chloride in Water by IC	E235.Cl	1802986	1	18	5.5	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1809425	1	20	5.0	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1802925	1	18	5.5	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1802355	1	17	5.8	5.0	✔
Fluoride in Water by IC	E235.F	1802985	1	18	5.5	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1802983	1	18	5.5	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1802984	1	18	5.5	5.0	✔
Sulfate in Water by IC	E235.SO4	1802982	1	18	5.5	5.0	✔
TDS by Gravimetry	E162	1809398	1	20	5.0	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1805814	1	20	5.0	5.0	✔
Total Mercury in Water by CVAAS	E508	1807948	1	20	5.0	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1802859	1	20	5.0	5.0	✔
Total Nitrogen by Colourimetry	E366	1802352	1	19	5.2	5.0	✔
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1802353	1	19	5.2	5.0	✔
Total Sulfide by Colourimetry (Automated Flow)	E395	1803187	1	3	33.3	5.0	✔
TSS by Gravimetry	E160	1809402	1	20	5.0	5.0	✔
<b>Laboratory Control Samples (LCS)</b>							
Alkalinity Species by Titration	E290	1802980	1	18	5.5	5.0	✔
Ammonia by Fluorescence	E298	1802354	1	19	5.2	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1802987	1	18	5.5	5.0	✔
Chloride in Water by IC	E235.Cl	1802986	1	18	5.5	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1809425	1	20	5.0	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1802925	1	18	5.5	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1802355	1	17	5.8	5.0	✔
Fluoride in Water by IC	E235.F	1802985	1	18	5.5	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1802983	1	18	5.5	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1802984	1	18	5.5	5.0	✔
Sulfate in Water by IC	E235.SO4	1802982	1	18	5.5	5.0	✔
TDS by Gravimetry	E162	1809398	1	20	5.0	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1805814	1	20	5.0	5.0	✔
Total Mercury in Water by CVAAS	E508	1807948	1	20	5.0	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1802859	1	20	5.0	5.0	✔
Total Nitrogen by Colourimetry	E366	1802352	1	19	5.2	5.0	✔



Matrix: **Water**

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<b>Analytical Methods</b>							
<b>Laboratory Control Samples (LCS) - Continued</b>							
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1802353	1	19	5.2	5.0	✔
Total Sulfide by Colourimetry (Automated Flow)	E395	1803187	1	3	33.3	5.0	✔
TSS by Gravimetry	E160	1809402	1	20	5.0	5.0	✔
<b>Method Blanks (MB)</b>							
Alkalinity Species by Titration	E290	1802980	1	18	5.5	5.0	✔
Ammonia by Fluorescence	E298	1802354	1	19	5.2	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1802987	1	18	5.5	5.0	✔
Chloride in Water by IC	E235.Cl	1802986	1	18	5.5	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1809425	1	20	5.0	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1802925	1	18	5.5	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1802355	1	17	5.8	5.0	✔
Fluoride in Water by IC	E235.F	1802985	1	18	5.5	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1802983	1	18	5.5	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1802984	1	18	5.5	5.0	✔
Sulfate in Water by IC	E235.SO4	1802982	1	18	5.5	5.0	✔
TDS by Gravimetry	E162	1809398	1	20	5.0	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1805814	1	20	5.0	5.0	✔
Total Mercury in Water by CVAAS	E508	1807948	1	20	5.0	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1802859	1	20	5.0	5.0	✔
Total Nitrogen by Colourimetry	E366	1802352	1	19	5.2	5.0	✔
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1802353	1	19	5.2	5.0	✔
Total Sulfide by Colourimetry (Automated Flow)	E395	1803187	1	3	33.3	5.0	✔
TSS by Gravimetry	E160	1809402	1	20	5.0	5.0	✔
<b>Matrix Spikes (MS)</b>							
Ammonia by Fluorescence	E298	1802354	1	19	5.2	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1802987	1	18	5.5	5.0	✔
Chloride in Water by IC	E235.Cl	1802986	1	18	5.5	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1809425	1	20	5.0	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1802925	1	18	5.5	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1802355	1	17	5.8	5.0	✔
Fluoride in Water by IC	E235.F	1802985	1	18	5.5	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1802983	1	18	5.5	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1802984	1	18	5.5	5.0	✔
Sulfate in Water by IC	E235.SO4	1802982	1	18	5.5	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1805814	1	20	5.0	5.0	✔
Total Mercury in Water by CVAAS	E508	1807948	1	20	5.0	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1802859	1	20	5.0	5.0	✔
Total Nitrogen by Colourimetry	E366	1802352	1	19	5.2	5.0	✔
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1802353	1	19	5.2	5.0	✔



Matrix: **Water** Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<i>Analytical Methods</i>							
<b>Matrix Spikes (MS) - Continued</b>							
Total Sulfide by Colourimetry (Automated Flow)	E395	1803187	1	3	33.3	5.0	✔



## Methodology References and Summaries

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

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
TSS by Gravimetry	E160 ALS Environmental - Vancouver	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at $104 \pm 1^\circ\text{C}$ , 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 $180 \pm 2^\circ\text{C}$ 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 CO <sub>2</sub> . 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 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 methylene blue colourimetric method. Results expressed "as H <sub>2</sub> S" if reported represent the maximum possible H <sub>2</sub> S concentration based on the total sulfide concentration in the sample. The H <sub>2</sub> S calculation converts Total Sulphide as (S <sub>2</sub> <sup>-</sup> ) and reports it as Total Sulphide as (H <sub>2</sub> S)
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 CaCO <sub>3</sub> ), dissolved" is calculated from the sum of dissolved Calcium and Magnesium concentrations, expressed in CaCO <sub>3</sub> 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 CaCO <sub>3</sub> ), from total Ca/Mg" is calculated from the sum of total Calcium and Magnesium concentrations, expressed in CaCO <sub>3</sub> 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, Cl <sub>2</sub> ,ClO <sub>2</sub> ,ORP,DO, Turbidity,T,T-P,o-PO <sub>4</sub> ,NH <sub>3</sub> ,Chloramine	EF001 ALS Environmental - Vancouver	Water	Field Measurement (Client Supplied)	Field pH,EC,Salinity, TDS, Cl <sub>2</sub> ,ClO <sub>2</sub> ,ORP,DO, Turbidity,T,T-P,o-PO <sub>4</sub> ,NH <sub>3</sub> 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.



<i>Preparation Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
Dissolved Metals Water Filtration	EP421 ALS Environmental - Vancouver	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO <sub>3</sub> .
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** : **VA24D3094**  
**Client** : Triton Environmental Consultants Ltd.  
**Contact** :   
**Address** :   
  
**Telephone** : ----  
**Project** : 11964  
**PO** : 11964-Task 20-Phase 3C-4C  
**C-O-C number** : ----  
**Sampler** : AR+SR  
**Site** : Water Analysis  
**Quote number** : VA23-TRIT100-012\_V2  
**No. of samples received** : 2  
**No. of samples analysed** : 2

**Page** : 1 of 17  
**Laboratory** : ALS Environmental - Vancouver  
**Account Manager** :   
**Address** :   
  
**Telephone** :   
**Date Samples Received** : 09-Dec-2024 13:45  
**Date Analysis Commenced** : 10-Dec-2024  
**Issue Date** : 16-Dec-2024 16:50

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

This Quality Control Report contains the following information:

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

### Signatories

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

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

Page : 2 of 17  
Work Order : VA24D3094  
Client : Triton Environmental Consultants Ltd.  
Project : 11964



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## 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

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

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### 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: <b>Water</b>					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
<b>Physical Tests (QC Lot: 1802980)</b>											
VA24D3073-023	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	36.7	36.8	0.272%	20%	----
<b>Physical Tests (QC Lot: 1809398)</b>											
FJ2403744-002	Anonymous	Solids, total dissolved [TDS]	----	E162	20	mg/L	206	205	0.730%	20%	----
<b>Physical Tests (QC Lot: 1809402)</b>											
FJ2403744-002	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	9.8	10.0	0.2	Diff <2x LOR	----
<b>Anions and Nutrients (QC Lot: 1802352)</b>											
VA24D2854-002	Anonymous	Nitrogen, total	7727-37-9	E366	3.00	mg/L	114	112	1.42%	20%	----
<b>Anions and Nutrients (QC Lot: 1802353)</b>											
VA24D2854-002	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0074	0.0077	0.0003	Diff <2x LOR	----
<b>Anions and Nutrients (QC Lot: 1802354)</b>											
VA24D2854-002	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.100	mg/L	9.80	9.85	0.517%	20%	----
<b>Anions and Nutrients (QC Lot: 1802982)</b>											
VA24D3073-021	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	17.5	17.8	1.98%	20%	----
<b>Anions and Nutrients (QC Lot: 1802983)</b>											
VA24D3073-021	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0050	mg/L	0.0123	0.0122	0.00006	Diff <2x LOR	----
<b>Anions and Nutrients (QC Lot: 1802984)</b>											
VA24D3073-021	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
<b>Anions and Nutrients (QC Lot: 1802985)</b>											
VA24D3073-021	Anonymous	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.027	0.027	0.0003	Diff <2x LOR	----
<b>Anions and Nutrients (QC Lot: 1802986)</b>											
VA24D3073-021	Anonymous	Chloride	16887-00-6	E235.Cl	0.50	mg/L	<0.50	<0.50	0	Diff <2x LOR	----
<b>Anions and Nutrients (QC Lot: 1802987)</b>											
VA24D3073-021	Anonymous	Bromide	24959-67-9	E235.Br-L	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
<b>Organic / Inorganic Carbon (QC Lot: 1802355)</b>											
VA24D2854-002	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	51.9	54.3	4.44%	20%	----
<b>Total Sulfides (QC Lot: 1803187)</b>											
VA24D3094-001	SQU US 1	Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	<0.0015	0	Diff <2x LOR	----
<b>Total Metals (QC Lot: 1802859)</b>											
VA24D3026-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0042	0.0039	0.0003	Diff <2x LOR	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	0.00076	0.00079	0.00003	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
<b>Total Metals (QC Lot: 1802859) - continued</b>											
VA24D3026-001	Anonymous	Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.0502	0.0494	1.60%	20%	----
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.0339	0.0331	2.49%	20%	----
		Beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, total	7440-42-8	E420	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.0000050	mg/L	0.0000154	0.0000147	0.0000007	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	102	105	3.37%	20%	----
		Cesium, total	7440-46-2	E420	0.000010	mg/L	0.000053	0.000056	0.000003	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Cobalt, total	7440-48-4	E420	0.00010	mg/L	0.00072	0.00069	0.00003	Diff <2x LOR	----
		Copper, total	7440-50-8	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.010	mg/L	0.068	0.068	0.0001	Diff <2x LOR	----
		Lead, total	7439-92-1	E420	0.000050	mg/L	<0.000050	0.000080	0.000030	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0096	0.0099	0.0003	Diff <2x LOR	----
		Magnesium, total	7439-95-4	E420	0.100	mg/L	16.8	16.4	2.71%	20%	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.175	0.173	1.42%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.00407	0.00405	0.447%	20%	----
		Nickel, total	7440-02-0	E420	0.00050	mg/L	0.00200	0.00206	0.00006	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.100	mg/L	2.38	2.30	3.26%	20%	----
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00338	0.00346	2.23%	20%	----
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.00112	0.00111	0.717%	20%	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	6.39	6.35	0.602%	20%	----
		Silver, total	7440-22-4	E420	0.000010	mg/L	0.000014	0.000015	0.0000002	Diff <2x LOR	----
		Sodium, total	7440-23-5	E420	0.050	mg/L	13.1	12.8	2.49%	20%	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.943	0.952	0.960%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	52.2	52.5	0.645%	20%	----
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	0.00022	0.00002	Diff <2x LOR	----
		Thallium, total	7440-28-0	E420	0.000010	mg/L	0.000016	0.000016	0.0000005	Diff <2x LOR	----
		Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
		Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.0257	0.0257	0.203%	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
<b>Total Metals (QC Lot: 1802859) - continued</b>											
VA24D3026-001	Anonymous	Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0030	mg/L	0.199	0.196	1.40%	20%	----
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
<b>Total Metals (QC Lot: 1807948)</b>											
VA24D2849-001	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
<b>Dissolved Metals (QC Lot: 1802925)</b>											
VA24D3073-021	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0040	0.0037	0.0004	Diff <2x LOR	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00010	<0.00010	0.000002	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0334	0.0349	4.24%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	19.0	19.4	2.12%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	8.06	8.50	5.41%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.00074	0.00071	0.00003	Diff <2x LOR	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000585	0.000575	1.68%	20%	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.050	mg/L	0.138	0.153	0.015	Diff <2x LOR	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000696	0.000606	13.9%	20%	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	0.850	0.814	4.34%	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	0.773	0.791	2.31%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.0726	0.0745	2.60%	20%	----





Sub-Matrix: <b>Water</b>					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
<b>Dissolved Metals (QC Lot: 1802925) - continued</b>											
VA24D3073-021	Anonymous	Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	6.07	5.91	2.60%	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	0.00110	0.00110	0.130%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
<b>Dissolved Metals (QC Lot: 1809425)</b>											
VA24D3046-003	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
<b>Speciated Metals (QC Lot: 1805814)</b>											
KS2405135-001	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----



## Method Blank (MB) Report

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

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Physical Tests (QCLot: 1802980)</b>						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
<b>Physical Tests (QCLot: 1809398)</b>						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
<b>Physical Tests (QCLot: 1809402)</b>						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
<b>Anions and Nutrients (QCLot: 1802352)</b>						
Nitrogen, total	7727-37-9	E366	0.03	mg/L	<0.030	----
<b>Anions and Nutrients (QCLot: 1802353)</b>						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
<b>Anions and Nutrients (QCLot: 1802354)</b>						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
<b>Anions and Nutrients (QCLot: 1802982)</b>						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
<b>Anions and Nutrients (QCLot: 1802983)</b>						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
<b>Anions and Nutrients (QCLot: 1802984)</b>						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
<b>Anions and Nutrients (QCLot: 1802985)</b>						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
<b>Anions and Nutrients (QCLot: 1802986)</b>						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
<b>Anions and Nutrients (QCLot: 1802987)</b>						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	----
<b>Organic / Inorganic Carbon (QCLot: 1802355)</b>						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
<b>Total Sulfides (QCLot: 1803187)</b>						
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	----
<b>Total Metals (QCLot: 1802859)</b>						
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
<b>Total Metals (QCLot: 1802859) - continued</b>						
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
<b>Total Metals (QCLot: 1807948)</b>						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
<b>Dissolved Metals (QCLot: 1802925)</b>						
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**

<i>Analyte</i>	<i>CAS Number</i>	<i>Method</i>	<i>LOR</i>	<i>Unit</i>	<i>Result</i>	<i>Qualifier</i>
<b>Dissolved Metals (QCLot: 1802925) - continued</b>						
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	----
<b>Dissolved Metals (QCLot: 1809425)</b>						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
<b>Speciated Metals (QCLot: 1805814)</b>						
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
<b>Physical Tests (QCLot: 1802980)</b>									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	104	85.0	115	----
<b>Physical Tests (QCLot: 1809398)</b>									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	102	85.0	115	----
<b>Physical Tests (QCLot: 1809402)</b>									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	90.1	85.0	115	----
<b>Anions and Nutrients (QCLot: 1802352)</b>									
Nitrogen, total	7727-37-9	E366	0.03	mg/L	0.5 mg/L	107	75.0	125	----
<b>Anions and Nutrients (QCLot: 1802353)</b>									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	91.1	80.0	120	----
<b>Anions and Nutrients (QCLot: 1802354)</b>									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	99.6	85.0	115	----
<b>Anions and Nutrients (QCLot: 1802982)</b>									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	97.1	90.0	110	----
<b>Anions and Nutrients (QCLot: 1802983)</b>									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	96.4	90.0	110	----
<b>Anions and Nutrients (QCLot: 1802984)</b>									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	94.4	90.0	110	----
<b>Anions and Nutrients (QCLot: 1802985)</b>									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	93.5	90.0	110	----
<b>Anions and Nutrients (QCLot: 1802986)</b>									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	96.8	90.0	110	----
<b>Anions and Nutrients (QCLot: 1802987)</b>									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	101	85.0	115	----
<b>Organic / Inorganic Carbon (QCLot: 1802355)</b>									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	96.6	80.0	120	----
<b>Total Sulfides (QCLot: 1803187)</b>									
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.08 mg/L	105	80.0	120	----
<b>Total Metals (QCLot: 1802859)</b>									



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
<b>Total Metals (QCLot: 1802859) - continued</b>									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	99.4	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	103	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	100	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	97.4	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	103	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	99.8	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	96.0	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	99.9	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	97.2	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	96.7	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	95.4	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	103	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	103	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	99.6	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	97.2	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	103	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	97.7	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	104	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	102	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	97.1	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	101	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	97.4	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	97.4	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	98.8	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	102	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	102	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	103	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	95.0	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	98.0	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	90.6	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	101	80.0	120	----



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
<b>Total Metals (QCLot: 1802859) - continued</b>									
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	99.5	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	96.5	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	98.9	80.0	120	----
<b>Total Metals (QCLot: 1807948)</b>									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	93.5	80.0	120	----
<b>Dissolved Metals (QCLot: 1802925)</b>									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	103	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	97.7	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	1 mg/L	102	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	102	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	100	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	97.0	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	101	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	100	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	99.9	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	96.9	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	99.4	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	101	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.5 mg/L	101	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.25 mg/L	104	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	96.8	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	100	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	99.1	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	97.3	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	105	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	95.6	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	98.1	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	99.3	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	95.6	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	97.8	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.25 mg/L	102	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	96.0	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
<b>Dissolved Metals (QCLot: 1802925) - continued</b>									
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	93.3	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	101	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	99.1	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	101	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	98.0	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	95.5	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	99.4	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.5 mg/L	101	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	108	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	101	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	92.2	80.0	120	----
<b>Speciated Metals (QCLot: 1805814)</b>									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.25 mg/L	99.5	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
<b>Anions and Nutrients (QCLot: 1802352)</b>										
VA24D2854-003	Anonymous	Nitrogen, total	7727-37-9	E366	ND mg/L	----	ND	70.0	130	----
<b>Anions and Nutrients (QCLot: 1802353)</b>										
VA24D2854-003	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0423 mg/L	0.05 mg/L	84.6	70.0	130	----
<b>Anions and Nutrients (QCLot: 1802354)</b>										
VA24D2854-003	Anonymous	Ammonia, total (as N)	7664-41-7	E298	ND mg/L	----	ND	75.0	125	----
<b>Anions and Nutrients (QCLot: 1802982)</b>										
VA24D3073-022	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	96.8 mg/L	100 mg/L	96.8	75.0	125	----
<b>Anions and Nutrients (QCLot: 1802983)</b>										
VA24D3073-022	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	2.46 mg/L	2.5 mg/L	98.4	75.0	125	----
<b>Anions and Nutrients (QCLot: 1802984)</b>										
VA24D3073-022	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.471 mg/L	0.5 mg/L	94.2	75.0	125	----
<b>Anions and Nutrients (QCLot: 1802985)</b>										
VA24D3073-022	Anonymous	Fluoride	16984-48-8	E235.F	0.889 mg/L	1 mg/L	88.9	75.0	125	----
<b>Anions and Nutrients (QCLot: 1802986)</b>										
VA24D3073-022	Anonymous	Chloride	16887-00-6	E235.Cl	97.0 mg/L	100 mg/L	97.0	75.0	125	----
<b>Anions and Nutrients (QCLot: 1802987)</b>										
VA24D3073-022	Anonymous	Bromide	24959-67-9	E235.Br-L	0.511 mg/L	0.5 mg/L	102	75.0	125	----
<b>Organic / Inorganic Carbon (QCLot: 1802355)</b>										
VA24D2854-003	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	ND mg/L	----	ND	70.0	130	----
<b>Total Sulfides (QCLot: 1803187)</b>										
VA24D3094-002	SQU DS 1	Sulfide, total (as S)	18496-25-8	E395	0.232 mg/L	0.2 mg/L	116	75.0	125	----
<b>Total Metals (QCLot: 1802859)</b>										
VA24D3026-002	Anonymous	Aluminum, total	7429-90-5	E420	0.174 mg/L	0.2 mg/L	86.8	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0187 mg/L	0.02 mg/L	93.4	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0182 mg/L	0.02 mg/L	91.2	70.0	130	----
		Barium, total	7440-39-3	E420	0.0178 mg/L	0.02 mg/L	88.8	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0388 mg/L	0.04 mg/L	96.9	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.00950 mg/L	0.01 mg/L	95.0	70.0	130	----
		Boron, total	7440-42-8	E420	0.097 mg/L	0.1 mg/L	97.0	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00374 mg/L	0.004 mg/L	93.4	70.0	130	----
		Calcium, total	7440-70-2	E420	3.81 mg/L	4 mg/L	95.2	70.0	130	----
		Cesium, total	7440-46-2	E420	0.00949 mg/L	0.01 mg/L	94.9	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0358 mg/L	0.04 mg/L	89.5	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
<b>Total Metals (QCLot: 1802859) - continued</b>										
VA24D3026-002	Anonymous	Cobalt, total	7440-48-4	E420	0.0181 mg/L	0.02 mg/L	90.7	70.0	130	----
		Copper, total	7440-50-8	E420	0.0178 mg/L	0.02 mg/L	89.0	70.0	130	----
		Iron, total	7439-89-6	E420	1.80 mg/L	2 mg/L	90.0	70.0	130	----
		Lead, total	7439-92-1	E420	0.0187 mg/L	0.02 mg/L	93.7	70.0	130	----
		Lithium, total	7439-93-2	E420	0.0917 mg/L	0.1 mg/L	91.7	70.0	130	----
		Magnesium, total	7439-95-4	E420	0.909 mg/L	1 mg/L	90.9	70.0	130	----
		Manganese, total	7439-96-5	E420	0.0176 mg/L	0.02 mg/L	88.0	70.0	130	----
		Molybdenum, total	7439-98-7	E420	0.0190 mg/L	0.02 mg/L	95.0	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0360 mg/L	0.04 mg/L	90.1	70.0	130	----
		Phosphorus, total	7723-14-0	E420	8.28 mg/L	10 mg/L	82.8	70.0	130	----
		Potassium, total	7440-09-7	E420	3.70 mg/L	4 mg/L	92.5	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0172 mg/L	0.02 mg/L	86.1	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0374 mg/L	0.04 mg/L	93.6	70.0	130	----
		Silicon, total	7440-21-3	E420	9.21 mg/L	10 mg/L	92.1	70.0	130	----
		Silver, total	7440-22-4	E420	0.00387 mg/L	0.004 mg/L	96.7	70.0	130	----
		Sodium, total	7440-23-5	E420	1.79 mg/L	2 mg/L	89.5	70.0	130	----
		Strontium, total	7440-24-6	E420	0.0188 mg/L	0.02 mg/L	94.2	70.0	130	----
		Sulfur, total	7704-34-9	E420	17.8 mg/L	20 mg/L	88.9	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0396 mg/L	0.04 mg/L	99.1	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00370 mg/L	0.004 mg/L	92.4	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0216 mg/L	0.02 mg/L	108	70.0	130	----
		Tin, total	7440-31-5	E420	0.0184 mg/L	0.02 mg/L	91.8	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0349 mg/L	0.04 mg/L	87.3	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0182 mg/L	0.02 mg/L	91.2	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00372 mg/L	0.004 mg/L	93.1	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.0908 mg/L	0.1 mg/L	90.8	70.0	130	----
		Zinc, total	7440-66-6	E420	0.369 mg/L	0.4 mg/L	92.3	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0379 mg/L	0.04 mg/L	94.8	70.0	130	----
<b>Total Metals (QCLot: 1807948)</b>										
VA24D2849-002	Anonymous	Mercury, total	7439-97-6	E508	0.0000866 mg/L	0 mg/L	86.6	70.0	130	----
<b>Dissolved Metals (QCLot: 1802925)</b>										
VA24D3073-022	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.193 mg/L	0.2 mg/L	96.6	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0196 mg/L	0.02 mg/L	97.8	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0202 mg/L	0.02 mg/L	101	70.0	130	----
		Barium, dissolved	7440-39-3	E421	ND mg/L	----	ND	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.0416 mg/L	0.04 mg/L	104	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.00898 mg/L	0.01 mg/L	89.8	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.103 mg/L	0.1 mg/L	103	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00394 mg/L	0.004 mg/L	98.6	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.0100 mg/L	0.01 mg/L	100	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0379 mg/L	0.04 mg/L	94.9	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0192 mg/L	0.02 mg/L	95.9	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
<b>Dissolved Metals (QCLot: 1802925) - continued</b>										
VA24D3073-022	Anonymous	Copper, dissolved	7440-50-8	E421	0.0194 mg/L	0.02 mg/L	96.9	70.0	130	----
		Iron, dissolved	7439-89-6	E421	1.86 mg/L	2 mg/L	93.1	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0201 mg/L	0.02 mg/L	100	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.103 mg/L	0.1 mg/L	103	70.0	130	----
		Magnesium, dissolved	7439-95-4	E421	ND mg/L	----	ND	70.0	130	----
		Manganese, dissolved	7439-96-5	E421	0.0195 mg/L	0.02 mg/L	97.4	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.0203 mg/L	0.02 mg/L	101	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0383 mg/L	0.04 mg/L	95.8	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	9.50 mg/L	10 mg/L	95.0	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	4.10 mg/L	4 mg/L	102	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.0196 mg/L	0.02 mg/L	98.1	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0392 mg/L	0.04 mg/L	98.0	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	9.36 mg/L	10 mg/L	93.6	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00413 mg/L	0.004 mg/L	103	70.0	130	----
		Sodium, dissolved	7440-23-5	E421	1.90 mg/L	2 mg/L	95.0	70.0	130	----
		Strontium, dissolved	7440-24-6	E421	ND mg/L	----	ND	70.0	130	----
		Sulfur, dissolved	7704-34-9	E421	19.9 mg/L	20 mg/L	99.5	70.0	130	----
		Tellurium, dissolved	13494-80-9	E421	0.0404 mg/L	0.04 mg/L	101	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.00399 mg/L	0.004 mg/L	99.7	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0168 mg/L	0.02 mg/L	84.2	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0197 mg/L	0.02 mg/L	98.3	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0378 mg/L	0.04 mg/L	94.4	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0190 mg/L	0.02 mg/L	95.0	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	0.00397 mg/L	0.004 mg/L	99.2	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.0980 mg/L	0.1 mg/L	98.0	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.434 mg/L	0.4 mg/L	109	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0402 mg/L	0.04 mg/L	100	70.0	130	----
<b>Dissolved Metals (QCLot: 1809425)</b>										
VA24D3050-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000924 mg/L	0 mg/L	92.4	70.0	130	----
<b>Speciated Metals (QCLot: 1805814)</b>										
KS2405135-002	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.256 mg/L	0.25 mg/L	102	70.0	130	----



 <b>Eagle Mountain - Woodfibre Gas Pipeline Project Waste Discharge Permit PE-110163 Report</b>	Reporting Week	Dec 9 <sup>th</sup> to Dec 15 <sup>th</sup> , 2024
	Report #	38
	Appendix B	B-4

## BCR Site Receiving Environment Field Notes and Logs



# FortisBC Eagle Mountain-Woodfibre Gas Pipeline

## Water Discharge Authorization Water Quality Monitoring

2024-12-9-Rysdale-5BB83

<b>Project Component:</b>	Tunnel	<b>Site Name:</b>	Receiving Environment - Downstream of Discharge
<b>Inspection Date:</b>	12/09/2024	<b>Location:</b>	BC Rail Site
<b>Triton QP:</b>	Aaron Rysdale	<b>Latitude/Longitude:</b>	49.72534 -123.165196
<b>Temperature(c):</b> Low 4 High 5		<b>Permit:</b>	AE 111824
<b>Weather Conditions:</b>	Overcast	<b>Ground Conditions:</b>	Damp

### Observations

**Time:** 11:18:00      **Flow Volume (visual):** moderate

**Notes:** Dissolved oxygen 18.5 mg/L

**Odour Detected?:** No      **Notes:**

**Unusual Colour?:** No      **Notes:**

**Unusual Observations?:** No      **Notes:**

**Sheen on Water?:** No      **Notes:**

### Samples Collected - Parameters

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

### Logger Maintenance

<b>Logger Maintenance Performed?</b>	Yes	<b>Photo of COC with Lab Signature?</b>	Yes
--------------------------------------	-----	---	-----

#### Describe Logger Maintenance

Vulink batteries replaced and pH sensor calibrated at 4, 7 and 10



Photos



**Photo:** 1  
**Location:** SQU DS1  
**Description:** Facing downstream



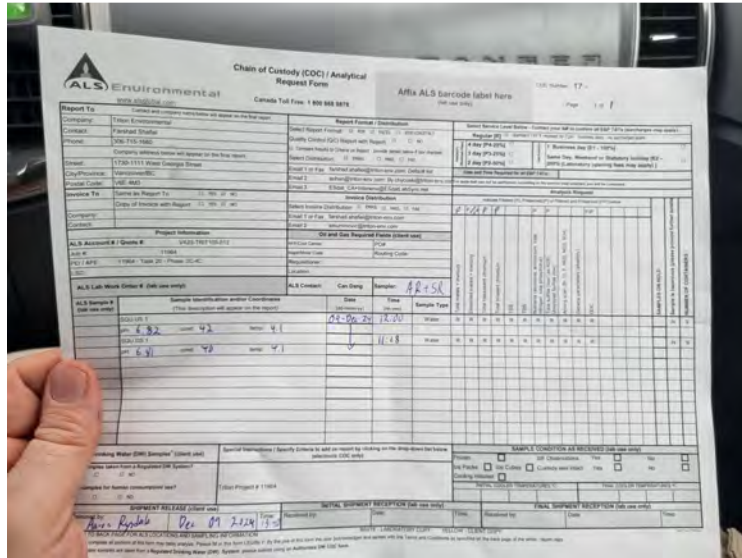
**Photo:** 2  
**Location:** SQU DS1  
**Description:** Sampling and sonde location



Photos



**Photo:** 3  
**Location:** SQU DS1  
**Description:** Facing upstream



**Photo:** 4  
**Location:**  
**Description:** ALS COC



2024-12-9-Rysdale-5BB83

**Sign Off**

**Report Prepared By:** Aaron Rysdale

**Report Reviewed:** Yes

**Report Reviewer:**

**Professional(s) of Record:**

**Name:**

**Designation:**

**Designation Number:**



# FortisBC Eagle Mountain-Woodfibre Gas Pipeline

## Water Discharge Authorization Water Quality Monitoring

2024-12-9-Renkers-EF8B3

<b>Project Component:</b>	Tunnel	<b>Site Name:</b>	Receiving Environment - Upstream of Discharge
<b>Inspection Date:</b>	12/09/2024	<b>Location:</b>	BC Rail Site
<b>Triton QP:</b>	Stephanie Renkers	<b>Latitude/Longitude:</b>	49.726866      -123.163912
<b>Temperature(c):</b> Low 4                      High 5		<b>Permit:</b>	AE 111824
<b>Weather Conditions:</b>	Overcast	<b>Ground Conditions:</b>	Damp

### Observations

**Time:** 12:00:00      **Flow Volume (visual):** moderate  
**Notes:** Dissolved oxygen: 21.0 mg/L  
**Odour Detected?:** No      **Notes:**  
**Unusual Colour?** No      **Notes:**  
**Unusual Observations?** No      **Notes:**  
**Sheen on Water?** No      **Notes:**

### Samples Collected - Parameters

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

### Logger Maintenance

<b>Logger Maintenance Performed?</b>	Yes	<b>Photo of COC with Lab Signature?</b>	Yes
--------------------------------------	-----	---	-----

**Describe Logger Maintenance**  
 Vulink batteries changed

Photos



**Photo:** 1  
**Location:** SQU US1  
**Description:** Facing downstream



**Photo:** 2  
**Location:** SQU US1  
**Description:** Sampling and sonde location



Photos



**Photo:** 3  
**Location:** SQU US1  
**Description:** Facing upstream

**Photo:** 4  
**Location:** ALS COC  
**Description:** ALS COC



**Sign Off**

**Report Prepared By:** Aaron Rysdale

**Report Reviewed:** Yes

**Report Reviewer:**

**Professional(s) of Record:**

**Name:**

**Designation:**

**Designation Number:**

BCR Plant Site	SQU Downstream (DS)						SQU Upstream (US)						Guideline = SQU US + 5 or 8 NTU	
	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)
12/09/2024 0:00	4.3	29.1	0.0	7.4	11.9	2.6	12/09/2024 0:00	5.4	49.3	0.0	6.7	12.4	12.1	17.1
12/09/2024 0:15	4.3	29.3	0.0	7.4	11.9	1.6	12/09/2024 0:15	5.7	49.2	0.0	6.7	12.4	0.0	8.0
12/09/2024 0:30	4.3	29.2	0.0	7.4	11.9	3.0	12/09/2024 0:30	5.4	49.0	0.0	6.7	12.4	0.0	8.0
12/09/2024 0:45	4.3	29.4	0.0	7.4	11.9	1.2	12/09/2024 0:45	5.4	49.3	0.0	6.7	12.4	0.0	8.0
12/09/2024 1:00	4.3	29.6	0.0	7.4	11.9	3.3	12/09/2024 1:00	5.3	49.4	0.0	6.7	12.4	11.3	16.3
12/09/2024 1:15	4.3	29.3	0.0	7.4	11.9	2.2	12/09/2024 1:15	5.3	49.1	0.0	6.7	12.4	0.0	8.0
12/09/2024 1:30	4.3	29.4	0.0	7.4	11.9	3.9	12/09/2024 1:30	5.2	49.2	0.0	6.7	12.4	0.0	8.0
12/09/2024 1:45	4.3	29.4	0.0	7.4	11.9	3.1	12/09/2024 1:45	5.3	48.9	0.0	6.7	12.4	0.9	8.0
12/09/2024 2:00	4.2	29.5	0.0	7.4	11.9	2.2	12/09/2024 2:00	5.3	49.1	0.0	6.7	12.4	10.4	15.4
12/09/2024 2:15	4.2	29.5	0.0	7.4	11.9	2.8	12/09/2024 2:15	5.3	49.1	0.0	6.7	12.4	0.0	8.0
12/09/2024 2:30	4.2	29.6	0.0	7.4	11.9	2.0	12/09/2024 2:30	5.3	49.0	0.0	6.7	12.4	0.0	8.0
12/09/2024 2:45	4.2	29.6	0.0	7.4	11.9	2.1	12/09/2024 2:45	5.3	48.9	0.0	6.7	12.4	0.0	8.0
12/09/2024 3:00	4.2	29.5	0.0	7.4	12.0	1.3	12/09/2024 3:00	5.3	49.4	0.0	6.7	12.4	1.0	9.0
12/09/2024 3:15	4.2	29.7	0.0	7.4	11.9	1.9	12/09/2024 3:15	5.2	49.1	0.0	6.7	12.4	0.0	8.0
12/09/2024 3:30	4.2	29.8	0.0	7.4	11.9	2.2	12/09/2024 3:30	5.2	49.3	0.0	6.7	12.4	0.0	8.0
12/09/2024 3:45	4.2	29.9	0.0	7.4	12.0	2.5	12/09/2024 3:45	5.2	49.5	0.0	6.7	12.4	0.0	8.0
12/09/2024 4:00	4.2	29.8	0.0	7.4	12.0	4.2	12/09/2024 4:00	5.2	49.6	0.0	6.7	12.4	1.3	9.3
12/09/2024 4:15	4.1	29.6	0.0	7.4	12.0	2.1	12/09/2024 4:15	5.2	49.0	0.0	6.7	12.4	0.0	8.0
12/09/2024 4:30	4.1	29.8	0.0	7.4	11.9	2.1	12/09/2024 4:30	5.2	49.6	0.0	6.7	12.4	0.0	8.0
12/09/2024 4:45	4.1	30.0	0.0	7.4	12.0	2.0	12/09/2024 4:45	5.2	49.8	0.0	6.7	12.4	0.0	8.0
12/09/2024 5:00	4.1	30.0	0.0	7.4	12.0	4.7	12/09/2024 5:00	5.2	49.5	0.0	6.7	12.4	0.0	8.0
12/09/2024 5:15	4.1	30.0	0.0	7.3	12.0	2.9	12/09/2024 5:15	5.2	49.7	0.0	6.7	12.5	0.0	8.0
12/09/2024 5:30	4.1	30.0	0.0	7.4	12.0	1.7	12/09/2024 5:30	5.2	49.2	0.0	6.7	12.5	0.0	8.0
12/09/2024 5:45	4.1	29.9	0.0	7.4	12.0	1.4	12/09/2024 5:45	5.2	49.6	0.0	6.7	12.5	0.0	8.0
12/09/2024 6:00	4.1	29.9	0.0	7.4	12.0	1.2	12/09/2024 6:00	5.2	49.4	0.0	6.7	12.4	0.0	8.0
12/09/2024 6:15	4.1	29.9	0.0	7.4	12.0	1.5	12/09/2024 6:15	5.1	49.3	0.0	6.7	12.5	0.0	8.0
12/09/2024 6:30	4.1	29.9	0.0	7.4	12.0	3.0	12/09/2024 6:30	5.1	49.7	0.0	6.7	12.5	0.0	8.0
12/09/2024 6:45	4.1	30.3	0.0	7.4	12.0	1.8	12/09/2024 6:45	5.1	49.6	0.0	6.7	12.5	0.0	8.0
12/09/2024 7:00	4.1	30.2	0.0	7.3	12.0	1.0	12/09/2024 7:00	5.1	49.8	0.0	6.7	12.5	3.7	11.7
12/09/2024 7:15	4.1	30.6	0.0	7.4	12.0	1.0	12/09/2024 7:15	5.1	50.3	0.0	6.7	12.5	0.0	8.0
12/09/2024 7:30	4.0	30.5	0.0	7.4	12.0	1.1	12/09/2024 7:30	5.1	50.7	0.0	6.7	12.5	0.0	8.0
12/09/2024 7:45	4.1	31.1	0.0	7.4	12.0	0.9	12/09/2024 7:45	5.1	51.1	0.0	6.7	12.5	0.0	8.0
12/09/2024 8:00	4.0	30.9	0.0	7.3	12.0	1.4	12/09/2024 8:00	5.1	51.1	0.0	6.7	12.5	0.0	8.0
12/09/2024 8:15	4.0	30.9	0.0	7.4	12.0	1.2	12/09/2024 8:15	5.1	50.8	0.0	6.7	12.5	0.0	8.0
12/09/2024 8:30	4.0	31.1	0.0	7.4	12.0	0.7	12/09/2024 8:30	5.1	51.7	0.0	6.7	12.5	0.0	8.0
12/09/2024 8:45	4.0	31.4	0.0	7.3	12.0	0.8	12/09/2024 8:45	5.1	51.7	0.0	6.7	12.5	0.0	8.0
12/09/2024 9:00	4.0	31.5	0.0	7.4	12.0	2.3	12/09/2024 9:00	5.1	51.8	0.0	6.7	12.5	0.0	8.0
12/09/2024 9:15	4.0	31.3	0.0	7.3	12.0	1.3	12/09/2024 9:15	5.1	51.5	0.0	6.7	12.5	0.0	8.0
12/09/2024 9:30	4.0	31.3	0.0	7.3	12.0	1.6	12/09/2024 9:30	5.1	51.4	0.0	6.7	12.5	0.0	8.0
12/09/2024 9:45	4.0	31.3	0.0	7.4	12.0	0.5	12/09/2024 9:45	5.1	51.5	0.0	6.7	12.5	0.0	8.0
12/09/2024 10:00	4.0	31.5	0.0	7.4	12.0	0.4	12/09/2024 10:00	5.1	51.6	0.0	6.7	12.5	0.0	8.0
12/09/2024 10:15	4.0	31.5	0.0	7.3	12.0	1.3	12/09/2024 10:15	5.1	51.8	0.0	6.7	12.5	0.0	8.0
12/09/2024 10:30	4.0	31.7	0.0	7.4	12.0	1.4	12/09/2024 10:30	5.1	51.7	0.0	6.7	12.5	0.0	8.0
12/09/2024 10:45	4.0	31.7	0.0	7.4	12.0	1.0	12/09/2024 10:45	5.1	52.4	0.0	6.7	12.5	0.0	8.0
12/09/2024 11:00	4.0	31.9	0.0	7.4	12.1	0.9	12/09/2024 11:00	5.1	52.5	0.0	6.7	12.5	2.4	10.4
12/09/2024 11:15	4.0	31.9	0.0	7.4	12.1	1.5	12/09/2024 11:15	5.1	52.0	0.0	6.7	12.6	0.0	8.0
12/09/2024 11:30	4.0	31.7	0.0	7.4	12.1	0.7	12/09/2024 11:30	5.1	51.5	0.0	6.7	12.6	0.0	8.0
12/09/2024 11:45	4.0	31.2	0.0	7.4	12.1	1.0	12/09/2024 11:45	5.1	50.8	0.0	6.7	12.6	0.0	8.0
12/09/2024 12:00	4.0	31.1	0.0	7.4	12.1	0.9	12/09/2024 12:00	5.1	50.4	0.0	6.8	12.7	2.7	10.7
12/09/2024 12:15	4.0	31.0	0.0	7.4	12.1	0.5	12/09/2024 12:15	5.1	50.4	0.0	6.8	12.7	0.0	8.0
12/09/2024 12:30	4.1	31.2	0.0	7.4	12.1	0.0	12/09/2024 12:30	5.1	50.6	0.0	6.8	12.7	0.0	8.0
12/09/2024 12:45	4.2	31.1	0.0	7.8	12.4	0.0	12/09/2024 12:45	5.1	50.3	0.0	6.8	12.7	0.0	8.0
12/09/2024 13:00	4.1	31.2	0.0	7.6	12.2	0.0	12/09/2024 13:00	5.2	51.2	0.0	6.8	12.7	0.0	8.0
12/09/2024 13:15	4.1	33.3	0.0	7.6	12.2	0.0	12/09/2024 13:15	5.2	51.4	0.0	6.8	12.7	0.0	8.0
12/09/2024 13:30	4.1	34.8	0.0	7.5	12.2	0.0	12/09/2024 13:30	5.2	51.9	0.0	6.8	12.7	0.0	8.0
12/09/2024 13:45	4.2	34.9	0.0	7.4	12.2	0.0	12/09/2024 13:45	5.2	52.7	0.0	6.8	12.7	0.0	8.0
12/09/2024 14:00	4.2	35.2	0.0	7.4	12.1	0.0	12/09/2024 14:00	5.1	56.1	0.0	6.8	12.7	0.0	8.0
12/09/2024 14:15	4.2	37.8	0.0	7.4	12.1	0.0	12/09/2024 14:15	5.4	56.6	0.0	6.8	12.5	0.0	8.0
12/09/2024 14:30	4.3	36.8	0.0	7.4	12.1	0.0	12/09/2024 14:30	5.4	59.2	0.0	6.7	12.5	0.0	8.0
12/09/2024 14:45	4.3	37.4	0.0	7.4	12.1	0.0	12/09/2024 14:45	5.4	59.1	0.0	6.7	12.5	0.0	8.0
12/09/2024 15:00	4.3	36.0	0.0	7.3	12.1	0.0	12/09/2024 15:00	5.4	57.6	0.0	6.7	12.5	0.0	8.0
12/09/2024 15:15	4.3	36.5	0.0	7.3	12.1	0.0	12/09/2024 15:15	5.4	56.8	0.0	6.7	12.5	0.0	8.0
12/09/2024 15:30	4.3	37.1	0.0	7.3	12.0	0.0	12/09/2024 15:30	5.4	56.7	0.0	6.7	12.5	0.0	8.0
12/09/2024 15:45	4.3	35.2	0.0	7.3	12.0	0.0	12/09/2024 15:45	5.4	55.8	0.0	6.7	12.5	0.0	8.0
12/09/2024 16:00	4.3	34.7	0.0	7.2	12.0	0.0	12/09/2024 16:00	5.4	55.8	0.0	6.7	12.5	0.0	8.0
12/09/2024 16:15	4.2	34.8	0.0	7.1	12.0	0.0	12/09/2024 16:15	5.4	55.5	0.0	6.7	12.5	0.0	8.0
12/09/2024 16:30	4.2	34.3	0.0	7.1	12.0	0.0	12/09/2024 16:30	5.4	55.3	0.0	6.7	12.4	0.0	8.0
12/09/2024 16:45	4.2	34.5	0.0	7.1	12.0	0.0	12/09/2024 16:45	5.3	55.2	0.0	6.6	12.4	0.0	8.0
12/09/2024 17:00	4.2	34.1	0.0	7.1	12.0	0.1	12/09/2024 17:00	5.3	55.4	0.0	6.5	12.3	0.0	8.0
12/09/2024 17:15	4.1	34.0	0.0	7.1	12.0	0.2	12/09/2024 17:15	5.3	55.5	0.0	6.5	12.3	0.0	8.0
12/09/2024 17:30	4.1	34.1	0.0	7.1	12.0	0.0	12/09/2024 17:30	5.3	55.1	0.0	6.5	12.3	0.0	8.0
12/09/2024 17:45	4.1	34.1	0.0	7.0	12.0	0.0	12/09/2024 17:45	5.3	55.6	0.0	6.4	12.2	0.0	8.0
12/09/2024 18:00	4.1	34.1	0.0	7.0	12.0	0.0	12/09/2024 18:00	5.3	55.7	0.0	6.4	12.2	0.0	8.0
12/09/2024 18:15	4.1	34.0	0.0	7.1	12.0	0.0	12/09/2024 18:15	5.3	56.0	0.0	6.4	12.2	0.0	8.0
12/09/2024 18:30	4.0	34.2	0.0	7.1	12.0	0.0	12/09/2024 18:30	5.3	55.8	0.0	6.4	12.2	0.0	8.0
12/09/2024 18:45	4.0	34.2	0.0	7.1	12.0	0.0	12/09/2024 18:45	5.2	55.8	0.0	6.4	12.2	0.0	8.0
12/09/2024 19:00	4.0	34.3	0.0	7.0	12.0	0.0	12/09/2024 19:00	5.2	56.2	0.0	6.4	12.2	0.0	8.0
12/09/2024 19:15	4.0	34.5	0.0	7.1	11.9	0.0	12/09/2024 19:15	5.2	56.1	0.0	6.5	12.2	0.0	8.0
12/09/2024 19:30	4.0	34.4	0.0	7.0	12.0	0.0	12/09/2024 19:30	5.2	56					


12/10/2024 11:15	3.1	37.0	0.0	7.0	12.3	0.0	12/10/2024 11:00	4.2	59.2	0.0	6.7	12.7	0.0	8.0
12/10/2024 11:30	3.1	36.5	0.0	7.1	12.3	0.0	12/10/2024 11:15	4.2	58.8	0.0	6.7	12.7	0.0	8.0
12/10/2024 11:45	3.1	36.2	0.0	7.1	12.3	0.0	12/10/2024 11:30	4.2	58.0	0.0	6.7	12.7	0.0	8.0
12/10/2024 12:00	3.1	35.8	0.0	7.1	12.4	0.0	12/10/2024 11:45	4.2	56.9	0.0	6.8	12.8	0.0	8.0
12/10/2024 12:15	3.2	35.9	0.0	7.1	12.4	0.0	12/10/2024 12:00	4.2	56.4	0.0	6.8	12.8	0.0	8.0
12/10/2024 12:30	3.2	36.3	0.0	7.1	12.3	0.0	12/10/2024 12:15	4.3	57.4	0.0	6.8	12.8	0.0	8.0
12/10/2024 12:45	3.2	36.6	0.0	7.1	12.4	0.0	12/10/2024 12:30	4.3	57.8	0.0	6.8	12.8	0.0	8.0
12/10/2024 13:00	3.3	36.8	0.0	7.1	12.4	0.0	12/10/2024 12:45	4.3	58.1	0.0	6.8	12.8	0.0	8.0
12/10/2024 13:15	3.2	36.8	0.0	7.1	12.4	0.0	12/10/2024 13:00	4.3	58.2	0.0	6.8	12.8	0.0	8.0
12/10/2024 13:30	3.3	36.9	0.0	7.1	12.4	0.0	12/10/2024 13:15	4.4	58.5	0.0	6.8	12.8	0.0	8.0
12/10/2024 13:45	3.3	36.6	0.0	7.1	12.4	0.0	12/10/2024 13:30	4.4	57.7	0.0	6.8	12.8	0.0	8.0
12/10/2024 14:00	3.3	36.5	0.0	7.2	12.4	0.0	12/10/2024 13:45	4.4	57.1	0.0	6.8	12.9	0.0	8.0
12/10/2024 14:15	3.3	36.7	0.0	7.2	12.4	0.0	12/10/2024 14:00	4.4	58.0	0.0	6.8	12.9	0.0	8.0
12/10/2024 14:30	3.4	39.0	0.0	7.2	12.3	0.0	12/10/2024 14:15	4.5	62.5	0.0	6.8	12.8	0.0	8.0
12/10/2024 14:45	3.4	39.5	0.0	7.1	12.3	0.0	12/10/2024 14:30	4.5	64.3	0.0	6.8	12.7	0.0	8.0
12/10/2024 15:00	3.4	39.5	0.0	7.1	12.3	0.0	12/10/2024 14:45	4.5	63.9	0.0	6.8	12.7	0.0	8.0
12/10/2024 15:15	3.4	39.5	0.0	7.2	12.3	0.0	12/10/2024 15:00	4.6	64.3	0.0	6.8	12.7	0.0	8.0
12/10/2024 15:30	3.4	39.4	0.0	7.1	12.3	0.0	12/10/2024 15:15	4.6	63.5	0.0	6.8	12.7	0.0	8.0
12/10/2024 15:45	3.4	39.0	0.0	7.2	12.3	0.0	12/10/2024 15:30	4.6	63.0	0.0	6.8	12.7	0.0	8.0
12/10/2024 16:00	3.4	39.6	0.0	7.1	12.2	0.0	12/10/2024 15:45	4.6	63.1	0.0	6.8	12.7	0.0	8.0
12/10/2024 16:15	3.4	39.4	0.0	7.1	12.2	0.0	12/10/2024 16:00	4.6	62.9	0.0	6.8	12.6	0.0	8.0
12/10/2024 16:30	3.4	39.2	0.0	7.1	12.2	0.0	12/10/2024 16:15	4.6	62.9	0.0	6.7	12.6	0.0	8.0
12/10/2024 16:45	3.4	39.1	0.0	7.1	12.2	0.0	12/10/2024 16:30	4.6	62.0	0.0	6.7	12.6	0.0	8.0
12/10/2024 17:00	3.4	39.1	0.0	7.0	12.1	0.0	12/10/2024 16:45	4.6	61.8	0.0	6.6	12.5	0.0	8.0
12/10/2024 17:15	3.4	39.0	0.0	7.0	12.1	0.0	12/10/2024 17:00	4.8	63.8	0.0	6.4	12.2	0.0	8.0
12/10/2024 17:30	3.4	39.0	0.0	7.0	12.0	0.8	12/10/2024 17:15	4.9	64.0	0.0	6.2	11.8	0.0	8.0
12/10/2024 17:45	3.4	39.3	0.0	7.0	12.0	0.8	12/10/2024 17:30	4.9	67.5	0.0	6.2	11.9	0.0	8.0
12/10/2024 18:00	3.4	39.3	0.0	6.9	12.0	1.9	12/10/2024 17:45	4.7	3.9	0.0	6.6	12.8	0.0	8.0
12/10/2024 18:15	3.4	39.4	0.0	6.9	11.9	4.0	12/10/2024 18:00	4.6	5.2	0.0	6.8	12.9	0.0	8.0
12/10/2024 18:30	3.5	39.6	0.0	6.9	11.9	61.9	12/10/2024 18:15	4.5	5.6	0.0	6.7	13.0	0.0	8.0
12/10/2024 18:45	3.5	39.8	0.0	6.9	11.9	3.4	12/10/2024 18:30	4.4	6.7	0.0	6.6	13.1	0.0	8.0
12/10/2024 19:00	3.5	39.6	0.0	6.9	11.9	0.0	12/10/2024 18:45	4.3	5.7	0.0	6.6	13.1	0.0	8.0
12/10/2024 19:15	3.4	39.3	0.0	6.8	12.0	0.0	12/10/2024 19:00	4.3	5.5	0.0	6.9	13.1	0.0	8.0
12/10/2024 19:30	3.5	39.4	0.0	6.9	11.9	0.0	12/10/2024 19:15	4.3	5.8	0.0	6.8	13.1	0.0	8.0
12/10/2024 19:45	3.5	39.6	0.0	6.9	11.9	0.0	12/10/2024 19:30	4.2	5.9	0.0	6.7	13.1	0.0	8.0
12/10/2024 20:00	3.5	40.1	0.0	6.9	11.9	0.0	12/10/2024 19:45	4.2	5.9	0.0	6.7	13.1	0.0	8.0
12/10/2024 20:15	3.5	40.1	0.0	6.9	11.9	0.0	12/10/2024 20:00	4.2	5.5	0.0	6.8	13.1	0.0	8.0
12/10/2024 20:30	3.5	40.1	0.0	6.9	11.9	0.0	12/10/2024 20:15	4.2	5.9	0.0	6.6	13.1	0.0	8.0
12/10/2024 20:45	3.5	40.5	0.0	6.8	11.9	0.0	12/10/2024 20:30	4.1	6.0	0.0	6.6	13.1	0.0	8.0
12/10/2024 21:00	3.5	39.8	0.0	6.9	11.9	0.0	12/10/2024 20:45	4.1	6.0	0.0	6.6	13.1	0.0	8.0
12/10/2024 21:15	3.5	39.4	0.0	6.9	11.9	0.0	12/10/2024 21:00	4.1	5.9	0.0	6.8	13.1	0.0	8.0
12/10/2024 21:30	3.6	40.4	0.0	6.8	11.9	0.0	12/10/2024 21:15	4.1	6.1	0.0	6.8	13.1	0.0	8.0
12/10/2024 21:45	3.5	40.1	0.0	6.8	11.9	2.2	12/10/2024 21:30	4.2	6.2	0.0	6.7	13.1	0.0	8.0
12/10/2024 22:00	3.6	40.4	0.0	6.9	11.9	0.0	12/10/2024 21:45	4.2	6.1	0.0	6.7	13.1	0.0	8.0
12/10/2024 22:15	3.6	40.5	0.0	6.9	11.9	0.0	12/10/2024 22:00	4.2	5.5	0.0	6.8	13.1	0.0	8.0
12/10/2024 22:30	3.6	40.4	0.0	6.9	11.9	0.0	12/10/2024 22:15	4.2	6.1	0.0	6.7	13.1	0.0	8.0
12/10/2024 22:45	3.6	40.5	0.0	6.9	11.9	0.0	12/10/2024 22:30	4.2	6.3	0.0	6.7	13.0	0.0	8.0
12/10/2024 23:00	3.6	40.3	0.0	6.8	11.9	0.0	12/10/2024 22:45	4.3	6.2	0.0	6.7	13.0	0.0	8.0
12/10/2024 23:15	3.6	40.6	0.0	6.8	11.9	0.0	12/10/2024 23:00	4.3	6.8	0.0	6.8	13.0	0.0	8.0
12/10/2024 23:30	3.6	40.3	0.0	6.9	11.9	0.0	12/10/2024 23:15	4.3	6.1	0.0	6.7	13.0	0.0	8.0
12/10/2024 23:45	3.6	40.7	0.0	6.9	11.8	0.0	12/10/2024 23:30	4.3	6.2	0.0	6.7	13.0	0.0	8.0
12/11/2024 00:00	3.6	40.7	0.0	6.8	11.8	0.0	12/10/2024 23:45	4.3	6.1	0.0	6.7	13.0	0.0	8.0
12/11/2024 00:15	3.6	40.2	0.0	6.9	11.9	0.0	12/11/2024 00:00	4.3	5.7	0.0	6.8	13.0	0.0	8.0
12/11/2024 00:30	3.7	41.3	0.0	6.8	11.8	0.0	12/11/2024 00:15	4.3	6.0	0.0	6.7	13.0	0.0	8.0
12/11/2024 00:45	3.6	40.4	0.0	6.9	11.9	0.0	12/11/2024 00:30	4.3	6.1	0.0	6.7	13.0	0.0	8.0
12/11/2024 01:00	3.6	40.8	0.0	6.9	11.8	0.0	12/11/2024 00:45	4.3	6.1	0.0	6.6	13.0	0.0	8.0
12/11/2024 01:15	3.6	40.4	0.0	6.8	11.9	0.0	12/11/2024 01:00	4.4	5.8	0.0	6.8	13.0	0.0	8.0
12/11/2024 01:30	3.6	42.8	0.0	6.9	11.9	0.0	12/11/2024 01:15	4.4	6.0	0.0	6.7	13.0	0.0	8.0
12/11/2024 01:45	3.6	42.0	0.0	6.9	11.9	0.0	12/11/2024 01:30	4.4	6.0	0.0	6.7	13.0	0.0	8.0
12/11/2024 02:00	3.6	41.6	0.0	6.9	11.9	0.0	12/11/2024 01:45	4.5	5.7	0.0	6.7	13.0	0.0	8.0
12/11/2024 02:15	3.6	41.3	0.0	6.9	12.0	0.0	12/11/2024 02:00	4.8	49.1	0.0	6.6	12.1	0.0	8.0
12/11/2024 02:30	3.6	41.5	0.0	7.0	12.0	0.0	12/11/2024 02:15	4.8	62.9	0.0	6.4	12.1	0.0	8.0
12/11/2024 02:45	3.5	40.4	0.0	6.9	12.0	0.0	12/11/2024 02:30	4.8	61.3	0.0	6.4	12.1	0.0	8.0
12/11/2024 03:00	3.5	39.8	0.0	7.0	12.0	0.0	12/11/2024 02:45	4.8	62.5	0.0	6.4	12.1	0.0	8.0
12/11/2024 03:15	3.6	39.7	0.0	7.0	12.0	0.0	12/11/2024 03:00	4.7	62.0	0.0	6.6	12.3	0.0	8.0
12/11/2024 03:30	3.6	39.2	0.0	7.0	12.0	0.0	12/11/2024 03:15	4.7	62.1	0.0	6.6	12.3	0.0	8.0
12/11/2024 03:45	3.6	39.2	0.0	7.0	12.0	0.0	12/11/2024 03:30	4.7	61.1	0.0	6.6	12.4	0.0	8.0
12/11/2024 04:00	3.6	39.3	0.0	7.0	12.0	0.0	12/11/2024 03:45	4.7	61.5	0.0	6.7	12.4	0.0	8.0
12/11/2024 04:15	3.6	39.7	0.0	7.0	12.0	0.0	12/11/2024 04:00	4.7	62.1	0.0	6.7	12.3	0.0	8.0
12/11/2024 04:30	3.6	39.4	0.0	7.0	11.9	0.0	12/11/2024 04:15	4.7	62.3	0.0	6.6	12.3	0.0	8.0
12/11/2024 04:45	3.6	39.3	0.0	7.0	12.0	0.0	12/11/2024 04:30	4.7	61.9	0.0	6.6	12.3	0.0	8.0
12/11/2024 05:00	3.6	39.3	0.0	7.0	12.0	0.0	12/11/2024 04:45	4.7	61.6	0.0	6.6	12.3	0.0	8.0
12/11/2024 05:15	3.6	39.4	0.0	7.0	11.9	0.0	12/11/2024 05:00	4.7	61.9	0.0	6.6	12.3	0.0	8.0
12/11/2024 05:30	3.6	39.4	0.0	7.0	11.9	0.0	12/11/2024 05:15	4.8	62.5	0.0	6.5	12.2	0.0	8.0
12/11/2024 05:45	3.6	39.3	0.0	7.0	11.9	0.0	12/11/2024 05:30	4.9	63.1	0.0	6.4	12.0	0.0	8.0
12/11/2024 06:00	3.6	39.5	0.0	7.0	11.9	0.0	12/11/2024 05:45	5.0	63.7	0.0	6.5	11.8	0.0	8.0
12/11/2024 06:15	3.6	39.6	0.0	7.0	11.9	0.0	12/11/2024 06:00	5.0	63.7	0.0	6.3	11.9	0.0	8.0
12/11/2024 06:30	3.6	39.5	0.0	7.0	11.9	0.0	12/11/2024 06:15	5.0	63.2	0.0	6.3	11.9	0.0	8.0
12/11/2024 06:45	3.6	40.3	0.0	7.0	11.8	0.0	12/11/2024 06:30	4.9	7.2	0.0	6.5	12.3	0.0	8.0
12/11/2024 07:00	3.6	39.9	0.0	6.9	11.9	0.0	12/11/2024 06:45	4.7	5.2	0.0	6.6	12.8		




12/11/2024 23:30	4.2	45.9	0.0	6.7	11.3	0.0	12/11/2024 23:15	3.6	5.9	0.0	6.7	13.1	0.0	8.0
12/11/2024 23:45	4.2	45.9	0.0	6.7	11.3	37.9	12/11/2024 23:30	3.5	5.9	0.0	6.7	13.1	0.0	8.0
12/12/2024 0:00	4.1	44.7	0.0	6.7	11.3	0.0	12/11/2024 23:45	3.5	5.9	0.0	6.7	13.1	0.0	8.0
12/12/2024 0:15	4.1	46.0	0.0	6.7	11.3	0.0	12/12/2024 0:00	3.5	5.6	0.0	6.9	13.2	0.0	8.0
12/12/2024 0:30	4.1	45.5	0.0	6.7	11.4	0.0	12/12/2024 0:15	3.4	5.9	0.0	6.8	13.2	0.0	8.0
12/12/2024 0:45	4.1	44.3	0.0	6.8	11.5	15.6	12/12/2024 0:30	3.3	6.0	0.0	6.7	13.2	0.0	8.0
12/12/2024 1:00	4.1	48.2	0.0	6.7	11.4	0.0	12/12/2024 0:45	3.3	6.0	0.0	6.7	13.2	0.0	8.0
12/12/2024 1:15	4.0	47.6	0.0	6.8	11.4	0.0	12/12/2024 1:00	3.2	6.0	0.0	6.8	13.2	0.0	8.0
12/12/2024 1:30	4.0	46.9	0.0	6.8	11.4	38.0	12/12/2024 1:15	3.2	6.0	0.0	6.8	13.2	0.0	8.0
12/12/2024 1:45	4.0	47.0	0.0	6.7	11.5	0.0	12/12/2024 1:30	3.2	5.8	0.0	6.8	13.2	0.0	8.0
12/12/2024 2:00	3.9	44.9	0.0	6.7	11.5	0.0	12/12/2024 1:45	3.1	5.8	0.0	6.8	13.3	0.0	8.0
12/12/2024 2:15	3.8	43.3	0.0	6.8	11.6	0.0	12/12/2024 2:00	3.0	5.6	0.0	6.9	13.3	0.0	8.0
12/12/2024 2:30	3.7	42.3	0.0	6.8	11.7	0.0	12/12/2024 2:15	2.9	5.7	0.0	6.8	13.3	0.0	8.0
12/12/2024 2:45	3.7	42.1	0.0	6.9	11.7	0.0	12/12/2024 2:30	3.0	5.8	0.0	6.6	13.4	0.0	8.0
12/12/2024 3:00	3.7	41.7	0.0	6.9	11.8	0.0	12/12/2024 2:45	4.8	65.6	0.0	6.5	12.0	0.0	8.0
12/12/2024 3:15	3.6	41.5	0.0	6.9	11.8	0.0	12/12/2024 3:00	4.7	64.8	0.0	6.6	12.1	0.0	8.0
12/12/2024 3:30	3.6	41.4	0.0	6.9	11.8	0.0	12/12/2024 3:15	4.7	64.3	0.0	6.7	12.2	0.0	8.0
12/12/2024 3:45	3.6	41.2	0.0	7.0	11.8	0.0	12/12/2024 3:30	4.7	63.7	0.0	6.8	12.2	0.0	8.0
12/12/2024 4:00	3.6	41.3	0.0	7.0	11.8	0.0	12/12/2024 3:45	4.6	63.7	0.0	6.8	12.2	0.0	8.0
12/12/2024 4:15	3.6	41.9	0.0	7.1	11.8	0.0	12/12/2024 4:00	4.6	64.1	0.0	6.8	12.2	0.0	8.0
12/12/2024 4:30	3.6	41.8	0.0	7.1	11.8	0.0	12/12/2024 4:15	4.6	65.3	0.0	6.8	12.2	0.0	8.0
12/12/2024 4:45	3.6	41.5	0.0	7.0	11.8	0.0	12/12/2024 4:30	4.6	64.7	0.0	6.8	12.2	0.0	8.0
12/12/2024 5:00	3.6	41.5	0.0	7.0	11.8	0.0	12/12/2024 4:45	4.6	64.2	0.0	6.8	12.2	0.0	8.0
12/12/2024 5:15	3.5	41.2	0.0	7.0	11.8	0.0	12/12/2024 5:00	4.6	64.1	0.0	6.8	12.2	0.0	8.0
12/12/2024 5:30	3.5	46.8	0.0	7.1	11.8	0.0	12/12/2024 5:15	4.6	63.8	0.0	6.8	12.2	0.0	8.0
12/12/2024 5:45	3.5	49.3	0.0	7.1	11.8	0.0	12/12/2024 5:30	4.6	66.1	0.0	6.8	12.2	0.0	8.0
12/12/2024 6:00	3.5	49.2	0.0	7.0	11.8	0.0	12/12/2024 5:45	4.6	66.2	0.0	6.8	12.2	0.0	8.0
12/12/2024 6:15	3.5	47.8	0.0	7.1	11.8	0.0	12/12/2024 6:00	4.6	66.3	0.0	6.8	12.2	0.0	8.0
12/12/2024 6:30	3.5	44.6	0.0	7.1	11.8	0.0	12/12/2024 6:15	4.6	65.8	0.0	6.8	12.2	0.0	8.0
12/12/2024 6:45	3.5	45.9	0.0	7.0	11.8	0.0	12/12/2024 6:30	4.5	66.5	0.0	6.8	12.2	0.0	8.0
12/12/2024 7:00	3.5	45.1	0.0	7.1	11.8	0.0	12/12/2024 6:45	4.6	67.4	0.0	6.8	12.2	0.0	8.0
12/12/2024 7:15	3.5	43.6	0.0	7.1	11.8	0.0	12/12/2024 7:00	4.6	67.2	0.0	6.8	12.2	0.0	8.0
12/12/2024 7:30	3.5	46.6	0.0	7.0	11.7	0.0	12/12/2024 7:15	4.5	66.8	0.0	6.8	12.2	0.0	8.0
12/12/2024 7:45	3.5	45.6	0.0	7.0	11.7	0.0	12/12/2024 7:30	4.6	66.5	0.0	6.8	12.1	0.0	8.0
12/12/2024 8:00	3.5	42.7	0.0	7.1	11.8	0.0	12/12/2024 7:45	4.6	66.3	0.0	6.7	12.1	0.0	8.0
12/12/2024 8:15	3.5	43.0	0.0	7.0	11.8	0.0	12/12/2024 8:00	4.6	66.5	0.0	6.7	12.1	0.0	8.0
12/12/2024 8:30	3.5	42.4	0.0	7.0	11.8	0.0	12/12/2024 8:15	4.6	65.4	0.0	6.6	12.0	0.0	8.0
12/12/2024 8:45	3.5	42.6	0.0	7.0	11.7	0.0	12/12/2024 8:30	4.6	65.7	0.0	6.5	12.0	0.0	8.0
12/12/2024 9:00	3.4	42.4	0.0	6.9	11.8	0.0	12/12/2024 8:45	4.8	66.6	0.0	6.4	11.7	0.0	8.0
12/12/2024 9:15	3.4	42.2	0.0	7.0	11.7	0.0	12/12/2024 9:00	4.9	66.9	0.0	6.3	11.5	0.0	8.0
12/12/2024 9:30	3.4	42.4	0.0	6.9	11.7	0.0	12/12/2024 9:15	4.9	66.9	0.0	6.2	11.5	0.0	8.0
12/12/2024 9:45	3.4	42.7	0.0	7.0	11.7	0.0	12/12/2024 9:30	4.9	66.9	0.0	6.2	11.5	0.0	8.0
12/12/2024 10:00	3.4	42.2	0.0	7.0	11.8	0.0	12/12/2024 9:45	4.9	67.1	0.0	6.2	11.5	0.0	8.0
12/12/2024 10:15	3.4	42.2	0.0	7.0	11.8	0.0	12/12/2024 10:00	4.8	67.1	0.0	6.2	11.6	0.0	8.0
12/12/2024 10:30	3.4	42.5	0.0	7.0	11.8	0.0	12/12/2024 10:15	4.8	67.3	0.0	6.3	11.7	0.0	8.0
12/12/2024 10:45	3.4	42.5	0.0	6.9	11.8	0.0	12/12/2024 10:30	4.8	67.2	0.0	6.3	11.8	0.0	8.0
12/12/2024 11:00	3.5	42.7	0.0	7.0	11.8	0.0	12/12/2024 10:45	4.7	66.5	0.0	6.5	12.0	0.0	8.0
12/12/2024 11:15	3.5	42.8	0.0	7.0	11.8	0.0	12/12/2024 11:00	4.6	66.6	0.0	6.5	12.1	0.0	8.0
12/12/2024 11:30	3.5	42.5	0.0	7.0	11.9	0.0	12/12/2024 11:15	4.6	66.4	0.0	6.6	12.2	0.0	8.0
12/12/2024 11:45	3.5	42.7	0.0	7.0	11.9	0.0	12/12/2024 11:30	4.5	65.8	0.0	6.7	12.3	0.0	8.0
12/12/2024 12:00	3.5	42.2	0.0	7.0	11.9	0.0	12/12/2024 11:45	4.5	66.3	0.0	6.7	12.3	0.0	8.0
12/12/2024 12:15	3.5	42.2	0.0	7.1	11.9	0.0	12/12/2024 12:00	4.5	65.2	0.0	6.8	12.3	0.0	8.0
12/12/2024 12:30	3.5	42.5	0.0	7.1	11.9	0.0	12/12/2024 12:15	4.6	65.7	0.0	6.8	12.4	0.0	8.0
12/12/2024 12:45	3.5	42.2	0.0	7.1	11.9	0.0	12/12/2024 12:30	4.6	65.8	0.0	6.8	12.4	0.0	8.0
12/12/2024 13:00	3.5	41.8	0.0	7.1	12.0	0.0	12/12/2024 12:45	4.6	64.3	0.0	6.8	12.4	0.0	8.0
12/12/2024 13:15	3.5	41.8	0.0	7.2	12.0	0.0	12/12/2024 13:00	4.6	63.9	0.0	6.8	12.4	0.0	8.0
12/12/2024 13:30	3.6	41.3	0.0	7.1	12.0	0.0	12/12/2024 13:15	4.6	63.4	0.0	6.8	12.4	0.0	8.0
12/12/2024 13:45	3.6	41.5	0.0	7.1	12.0	0.0	12/12/2024 13:30	4.7	63.8	0.0	6.8	12.5	0.0	8.0
12/12/2024 14:00	3.6	41.6	0.0	7.1	12.0	0.0	12/12/2024 13:45	4.7	63.8	0.0	6.9	12.5	0.0	8.0
12/12/2024 14:15	3.6	41.7	0.0	7.2	12.0	0.0	12/12/2024 14:00	4.7	64.2	0.0	6.9	12.5	0.0	8.0
12/12/2024 14:30	3.7	41.6	0.0	7.2	12.0	0.0	12/12/2024 14:15	4.8	63.9	0.0	6.9	12.5	0.0	8.0
12/12/2024 14:45	3.7	41.8	0.0	7.2	12.0	0.0	12/12/2024 14:30	4.8	64.0	0.0	6.9	12.5	0.0	8.0
12/12/2024 15:00	3.7	42.5	0.0	7.2	12.0	0.0	12/12/2024 14:45	4.8	64.9	0.0	6.9	12.5	0.0	8.0
12/12/2024 15:15	3.7	42.4	0.0	7.2	12.0	0.0	12/12/2024 15:00	4.8	65.8	0.0	6.9	12.5	0.0	8.0
12/12/2024 15:30	3.8	42.6	0.0	7.2	12.0	0.0	12/12/2024 15:15	4.9	65.5	0.0	6.9	12.5	0.0	8.0
12/12/2024 15:45	3.8	43.5	0.0	7.2	12.0	0.0	12/12/2024 15:30	4.9	67.7	0.0	6.9	12.5	0.0	8.0
12/12/2024 16:00	3.8	44.9	0.0	7.2	11.9	0.0	12/12/2024 15:45	4.9	70.2	0.0	6.9	12.4	0.0	8.0
12/12/2024 16:15	3.9	45.0	0.0	7.2	11.9	0.0	12/12/2024 16:00	5.0	73.3	0.0	6.9	12.3	0.0	8.0
12/12/2024 16:30	3.8	45.1	0.0	7.1	11.9	0.0	12/12/2024 16:15	5.0	71.5	0.0	6.8	12.3	0.0	8.0
12/12/2024 16:45	3.8	45.8	0.0	7.2	11.9	0.0	12/12/2024 16:30	5.0	72.4	0.0	6.8	12.3	0.0	8.0
12/12/2024 17:00	3.8	45.9	0.0	7.2	11.9	0.0	12/12/2024 16:45	5.0	72.9	0.0	6.8	12.3	0.0	8.0
12/12/2024 17:15	3.8	46.1	0.0	7.2	11.8	0.0	12/12/2024 17:00	5.0	72.7	0.0	6.8	12.3	0.0	8.0
12/12/2024 17:30	3.8	45.2	0.0	7.2	11.8	0.0	12/12/2024 17:15	5.0	72.3	0.0	6.8	12.2	0.0	8.0
12/12/2024 17:45	3.8	44.4	0.0	7.0	11.8	0.0	12/12/2024 17:30	4.9	70.3	0.0	6.8	12.2	0.0	8.0
12/12/2024 18:00	3.8	44.0	0.0	7.0	11.8	0.0	12/12/2024 17:45	4.9	68.8	0.0	6.8	12.2	0.0	8.0
12/12/2024 18:15	3.7	43.6	0.0	7.1	11.8	0.0	12/12/2024 18:00	5.0	69.0	0.0	6.7	12.1	0.0	8.0
12/12/2024 18:30	3.7	43.1	0.0	7.0	11.8	0.0	12/12/2024 18:15	5.1	66.7	0.0	6.5	11.9	0.0	8.0
12/12/2024 18:45	3.7	42.6	0.0	7.1	11.7	0.0	12/12/2024 18:30	5.3	67.0	0.0	6.2	11.5	0.0	8.0
12/12/2024 19:00	3.8	42.6	0.0	7.0	11.7	0.0	12/12/2024 18:45	5.1	8.6	0.0	6.5	12.1	0.0	8.0
12/12/2024 19:15	3.8	43.1	0.0	7.0	11.6	0.0	12/12/2024 19:00	5.2	4.9	0.0	6.8	12.5	0.0	8.0
12/12/2024 19:30	3.8	42.9												

12/13/2024 11:45	4.1	48.0	0.0	7.0	11.5	0.0	12/13/2024 11:30	5.2	72.7	0.0	6.7	11.9	0.0	8.0
12/13/2024 12:00	4.1	47.8	0.0	7.0	11.5	0.0	12/13/2024 11:45	5.2	72.3	0.0	6.7	11.9	0.0	8.0
12/13/2024 12:15	4.1	47.9	0.0	7.0	11.5	0.0	12/13/2024 12:00	5.2	71.9	0.0	6.7	11.9	0.0	8.0
12/13/2024 12:30	4.1	48.2	0.0	7.1	11.5	0.0	12/13/2024 12:15	5.2	72.5	0.0	6.7	11.9	0.0	8.0
12/13/2024 12:45	4.1	47.5	0.0	7.1	11.6	0.0	12/13/2024 12:30	5.2	72.7	0.0	6.7	11.9	0.0	8.0
12/13/2024 13:00	4.1	47.3	0.0	7.1	11.6	0.0	12/13/2024 12:45	5.2	71.3	0.0	6.7	11.9	0.0	8.0
12/13/2024 13:15	4.1	47.3	0.0	7.1	11.6	0.0	12/13/2024 13:00	5.2	71.7	0.0	6.8	12.0	0.0	8.0
12/13/2024 13:30	4.1	47.0	0.0	7.1	11.6	0.0	12/13/2024 13:15	5.2	70.1	0.0	6.8	12.1	0.0	8.0
12/13/2024 13:45	4.1	46.3	0.0	7.1	11.6	0.0	12/13/2024 13:30	5.2	69.1	0.0	6.8	12.1	0.0	8.0
12/13/2024 14:00	4.1	45.8	0.0	7.1	11.6	0.0	12/13/2024 13:45	5.1	68.5	0.0	6.8	12.1	0.0	8.0
12/13/2024 14:15	4.1	46.1	0.0	7.1	11.6	0.0	12/13/2024 14:00	5.2	69.9	0.0	6.8	12.1	0.0	8.0
12/13/2024 14:30	4.1	46.1	0.0	7.1	11.6	0.0	12/13/2024 14:15	5.2	69.4	0.0	6.8	12.1	0.0	8.0
12/13/2024 14:45	4.1	45.2	0.0	7.1	11.7	0.0	12/13/2024 14:30	5.2	68.0	0.0	6.8	12.2	0.0	8.0
12/13/2024 15:00	4.1	44.6	0.0	7.1	11.7	0.0	12/13/2024 14:45	5.2	67.0	0.0	6.8	12.2	0.0	8.0
12/13/2024 15:15	4.1	44.9	0.0	7.1	11.7	0.0	12/13/2024 15:00	5.2	68.1	0.0	6.9	12.2	0.0	8.0
12/13/2024 15:30	4.2	45.1	0.0	7.2	11.7	0.0	12/13/2024 15:15	5.2	69.0	0.0	6.9	12.2	0.0	8.0
12/13/2024 15:45	4.2	45.1	0.0	7.2	11.7	0.0	12/13/2024 15:30	5.2	68.8	0.0	6.9	12.2	0.0	8.0
12/13/2024 16:00	4.2	45.1	0.0	7.1	11.7	0.0	12/13/2024 15:45	5.2	69.0	0.0	6.9	12.2	0.0	8.0
12/13/2024 16:15	4.2	45.9	0.0	7.2	11.7	0.0	12/13/2024 16:00	5.3	71.1	0.0	6.9	12.2	0.0	8.0
12/13/2024 16:30	4.2	45.8	0.0	7.1	11.7	0.0	12/13/2024 16:15	5.3	70.6	0.0	6.9	12.2	0.0	8.0
12/13/2024 16:45	4.2	46.2	0.0	7.2	11.7	0.0	12/13/2024 16:30	5.3	71.0	0.0	6.9	12.2	0.0	8.0
12/13/2024 17:00	4.2	47.8	0.0	7.1	11.7	0.0	12/13/2024 16:45	5.3	74.6	0.0	6.8	12.1	0.0	8.0
12/13/2024 17:15	4.2	48.8	0.0	7.1	11.6	0.0	12/13/2024 17:00	5.4	77.3	0.0	6.8	12.0	0.0	8.0
12/13/2024 17:30	4.3	49.4	0.0	7.2	11.6	0.0	12/13/2024 17:15	5.4	78.8	0.0	6.8	11.9	0.0	8.0
12/13/2024 17:45	4.3	49.8	0.0	7.1	11.5	0.0	12/13/2024 17:30	5.4	79.6	0.0	6.8	11.9	0.0	8.0
12/13/2024 18:00	4.2	49.6	0.0	7.1	11.5	0.0	12/13/2024 17:45	5.4	79.2	0.0	6.7	11.9	0.0	8.0
12/13/2024 18:15	4.2	48.9	0.0	7.0	11.5	0.0	12/13/2024 18:00	5.4	77.8	0.0	6.8	11.8	0.0	8.0
12/13/2024 18:30	4.2	47.3	0.0	7.0	11.5	0.0	12/13/2024 18:15	5.4	75.2	0.0	6.7	11.8	0.0	8.0
12/13/2024 18:45	4.2	45.9	0.0	7.0	11.5	0.0	12/13/2024 18:30	5.4	72.8	0.0	6.7	11.7	0.0	8.0
12/13/2024 19:00	4.2	46.0	0.0	7.0	11.4	1.8	12/13/2024 18:45	5.6	68.4	0.0	6.4	11.5	2.0	10.0
12/13/2024 19:15	4.3	45.7	0.0	6.9	11.3	8.7	12/13/2024 19:00	5.7	67.7	0.0	6.7	12.3	0.0	8.0
12/13/2024 19:30	4.3	0.1	0.0	7.2	11.9	0.0	12/13/2024 19:15	5.5	5.0	0.0	6.7	12.3	0.0	8.0
12/13/2024 19:45	4.5	0.1	0.0	7.2	11.8	0.0	12/13/2024 19:30	5.5	5.1	0.0	6.7	12.3	0.0	8.0
12/13/2024 20:00	4.5	0.1	0.0	7.2	11.8	0.0	12/13/2024 19:45	5.5	5.2	0.0	6.7	12.3	0.0	8.0
12/13/2024 20:15	4.5	0.1	0.0	7.2	11.8	0.0	12/13/2024 20:00	5.5	4.9	0.0	6.8	12.3	0.0	8.0
12/13/2024 20:30	4.6	0.1	0.0	7.1	11.8	0.0	12/13/2024 20:15	5.5	5.1	0.0	6.8	12.3	0.0	8.0
12/13/2024 20:45	4.6	0.1	0.0	7.1	11.8	0.0	12/13/2024 20:30	5.5	5.2	0.0	6.7	12.3	0.0	8.0
12/13/2024 21:00	4.6	0.1	0.0	7.0	11.8	0.0	12/13/2024 20:45	5.6	5.2	0.0	6.7	12.3	0.0	8.0
12/13/2024 21:15	4.6	0.1	0.0	6.9	11.8	0.0	12/13/2024 21:00	5.5	5.1	0.0	6.8	12.3	0.0	8.0
12/13/2024 21:30	4.6	0.1	0.0	6.9	11.8	0.0	12/13/2024 21:15	5.5	5.2	0.0	6.7	12.3	0.0	8.0
12/13/2024 21:45	4.6	0.1	0.0	6.8	11.8	0.0	12/13/2024 21:30	5.5	5.2	0.0	6.7	12.3	0.0	8.0
12/13/2024 22:00	4.6	0.1	0.0	6.8	11.8	0.0	12/13/2024 21:45	5.5	5.3	0.0	6.7	12.3	0.0	8.0
12/13/2024 22:15	4.6	0.1	0.0	6.7	11.8	0.0	12/13/2024 22:00	5.5	5.0	0.0	6.9	12.3	0.0	8.0
12/13/2024 22:30	4.5	0.1	0.0	6.7	11.8	0.0	12/13/2024 22:15	5.5	5.1	0.0	6.9	12.3	0.0	8.0
12/13/2024 22:45	4.5	0.1	0.0	6.7	11.8	0.0	12/13/2024 22:30	5.5	5.2	0.0	6.8	12.3	0.0	8.0
12/13/2024 23:00	4.5	0.1	0.0	6.7	11.8	0.0	12/13/2024 22:45	5.4	5.2	0.0	6.7	12.3	0.0	8.0
12/13/2024 23:15	4.5	0.1	0.0	6.7	11.8	0.0	12/13/2024 23:00	5.4	5.3	0.0	6.8	12.3	0.0	8.0
12/13/2024 23:30	4.4	0.1	0.0	6.7	11.8	0.0	12/13/2024 23:15	5.4	5.0	0.0	6.8	12.3	0.0	8.0
12/13/2024 23:45	4.4	0.1	0.0	6.7	11.8	0.0	12/13/2024 23:30	5.4	5.1	0.0	6.8	12.3	0.0	8.0
12/14/2024 0:00	4.5	0.1	0.0	7.0	11.8	0.0	12/14/2024 23:45	5.4	5.0	0.0	6.8	12.3	0.0	8.0
12/14/2024 0:15	4.4	0.1	0.0	7.1	11.9	0.0	12/14/2024 0:00	5.4	5.0	0.0	6.9	12.3	0.0	8.0
12/14/2024 0:30	4.5	0.7	0.0	7.3	11.8	0.0	12/14/2024 0:15	5.4	5.0	0.0	6.8	12.3	0.0	8.0
12/14/2024 0:45	4.4	0.3	0.0	7.0	11.8	0.0	12/14/2024 0:30	5.4	5.1	0.0	6.8	12.3	0.0	8.0
12/14/2024 1:00	4.4	0.5	0.0	7.2	11.9	0.0	12/14/2024 0:45	5.4	5.2	0.0	6.8	12.3	0.0	8.0
12/14/2024 1:15	4.4	0.6	0.0	7.4	11.8	0.0	12/14/2024 1:00	5.5	5.1	0.0	6.9	12.3	0.0	8.0
12/14/2024 1:30	4.5	6.5	0.0	7.4	11.8	0.0	12/14/2024 1:15	5.5	5.2	0.0	6.8	12.3	0.0	8.0
12/14/2024 1:45	4.4	1.8	0.0	7.3	11.8	0.0	12/14/2024 1:30	5.4	5.3	0.0	6.8	12.3	0.0	8.0
12/14/2024 2:00	4.4	25.4	0.0	7.2	11.8	0.0	12/14/2024 1:45	5.4	5.3	0.0	6.8	12.3	0.0	8.0
12/14/2024 2:15	4.4	40.7	0.0	7.0	11.8	0.0	12/14/2024 2:00	5.4	5.0	0.0	6.9	12.3	0.0	8.0
12/14/2024 2:30	4.4	45.6	0.0	6.9	11.8	0.0	12/14/2024 2:15	5.4	5.1	0.0	6.9	12.4	0.0	8.0
12/14/2024 2:45	4.3	45.7	0.0	6.9	11.8	0.0	12/14/2024 2:30	5.4	5.2	0.0	6.8	12.4	0.0	8.0
12/14/2024 3:00	4.5	48.3	0.0	6.8	11.3	0.0	12/14/2024 2:45	5.4	5.2	0.0	6.8	12.4	0.0	8.0
12/14/2024 3:15	4.2	45.9	0.0	6.8	11.4	0.0	12/14/2024 3:00	5.4	5.3	0.0	6.8	12.3	0.0	8.0
12/14/2024 3:30	4.2	45.0	0.0	6.9	11.5	0.0	12/14/2024 3:15	5.4	5.3	0.0	6.8	12.3	0.0	8.0
12/14/2024 3:45	4.1	44.2	0.0	7.0	11.5	0.0	12/14/2024 3:30	5.3	5.3	0.0	6.8	12.4	0.0	8.0
12/14/2024 4:00	4.1	43.7	0.0	7.0	11.6	0.0	12/14/2024 3:45	5.3	68.2	0.0	6.6	11.8	0.0	8.0
12/14/2024 4:15	4.1	43.4	0.0	7.1	11.6	0.0	12/14/2024 4:00	5.3	67.4	0.0	6.7	12.0	0.0	8.0
12/14/2024 4:30	4.1	43.2	0.0	7.1	11.6	0.0	12/14/2024 4:15	5.2	66.3	0.0	6.8	12.0	0.0	8.0
12/14/2024 4:45	4.1	42.8	0.0	7.1	11.6	0.0	12/14/2024 4:30	5.2	65.7	0.0	6.9	12.0	0.0	8.0
12/14/2024 5:00	4.1	42.5	0.0	7.1	11.6	0.0	12/14/2024 4:45	5.2	64.3	0.0	6.8	12.0	0.0	8.0
12/14/2024 5:15	4.1	41.4	0.0	7.1	11.6	0.0	12/14/2024 5:00	5.1	63.1	0.0	6.9	12.1	0.0	8.0
12/14/2024 5:30	4.1	41.1	0.0	7.2	11.7	0.0	12/14/2024 5:15	5.1	62.1	0.0	6.9	12.1	0.0	8.0
12/14/2024 5:45	4.1	41.1	0.0	7.2	11.7	0.0	12/14/2024 5:30	5.1	62.4	0.0	6.9	12.1	0.0	8.0
12/14/2024 6:00	4.1	41.0	0.0	7.1	11.7	0.0	12/14/2024 5:45	5.1	62.6	0.0	6.9	12.1	0.0	8.0
12/14/2024 6:15	4.1	40.7	0.0	7.2	11.7	0.0	12/14/2024 6:00	5.1	62.0	0.0	6.9	12.1	0.0	8.0
12/14/2024 6:30	4.1	40.7	0.0	7.2	11.7	0.0	12/14/2024 6:15	5.1	61.9	0.0	6.9	12.2	0.0	8.0
12/14/2024 6:45	4.1	40.8	0.0	7.2	11.7	0.0	12/14/2024 6:30	5.1	62.3	0.0	6.9	12.2	0.0	8.0
12/14/2024 7:00	4.1	40.6	0.0	7.2	11.7	0.0	12/14/2024 6:45	5.1	61.8	0.0	6.9	12.2	0.0	8.0
12/14/2024 7:15	4.1	40.3	0.0	7.2	11.7	0.0	12/14/2024 7:00	5.1	61.4	0.0	7.0	12.2	0.0	8.0
12/14/2024 7:30	4.1	40.2	0.0	7.2	11.7	0.0	12/14/2024 7:15	5.1	61.5	0.0	6.9	12.2	0.0	8.0
12/14/2024 7:45	4.1	40.9	0.0	7.3	11.7									

12/15/2024 0:00	4.5	29.7	0.0	7.2	11.9	1.4	12/14/2024 23:45	5.6	49.0	0.0	6.7	12.4	0.0	8.0
12/15/2024 0:15	4.5	29.2	0.0	7.1	11.9	1.7	12/15/2024 0:00	5.6	49.1	0.0	6.8	12.4	0.0	8.0
12/15/2024 0:30	4.5	28.9	0.0	7.1	11.9	0.6	12/15/2024 0:15	5.5	47.7	0.0	6.7	12.4	0.0	8.0
12/15/2024 0:45	4.5	29.0	0.0	7.1	11.9	1.9	12/15/2024 0:30	5.5	46.1	0.0	6.7	12.4	0.0	8.0
12/15/2024 1:00	4.5	28.3	0.0	7.1	11.9	0.2	12/15/2024 0:45	5.5	47.9	0.0	6.7	12.4	0.0	8.0
12/15/2024 1:15	4.5	28.8	0.0	7.1	11.9	1.5	12/15/2024 1:00	5.5	47.1	0.0	6.8	12.4	0.0	8.0
12/15/2024 1:30	4.5	28.5	0.0	7.1	11.9	0.0	12/15/2024 1:15	5.5	47.4	0.0	6.7	12.4	0.0	8.0
12/15/2024 1:45	4.5	28.8	0.0	7.1	11.9	1.6	12/15/2024 1:30	5.5	47.1	0.0	6.7	12.3	0.0	8.0
12/15/2024 2:00	4.5	28.9	0.0	7.1	11.9	0.2	12/15/2024 1:45	5.5	47.4	0.0	6.7	12.3	0.0	8.0
12/15/2024 2:15	4.5	28.7	0.0	7.1	11.9	0.6	12/15/2024 2:00	5.5	46.9	0.0	6.7	12.3	0.0	8.0
12/15/2024 2:30	4.5	28.7	0.0	7.1	11.9	0.1	12/15/2024 2:15	5.5	47.6	0.0	6.7	12.3	0.0	8.0
12/15/2024 2:45	4.5	28.6	0.0	7.1	11.9	0.3	12/15/2024 2:30	5.5	46.5	0.0	6.7	12.3	0.0	8.0
12/15/2024 3:00	4.5	29.0	0.0	7.1	11.8	0.3	12/15/2024 2:45	5.5	47.1	0.0	6.7	12.3	0.0	8.0
12/15/2024 3:15	4.5	28.7	0.0	7.1	11.8	0.0	12/15/2024 3:00	5.5	47.9	0.0	6.7	12.3	0.0	8.0
12/15/2024 3:30	4.4	29.0	0.0	7.1	11.8	0.0	12/15/2024 3:15	5.5	47.1	0.0	6.7	12.3	0.0	8.0
12/15/2024 3:45	4.4	28.6	0.0	7.1	11.8	0.5	12/15/2024 3:30	5.5	47.7	0.0	6.7	12.3	0.0	8.0
12/15/2024 4:00	4.4	28.3	0.0	7.1	11.8	0.1	12/15/2024 3:45	5.5	46.4	0.0	6.7	12.3	0.0	8.0
12/15/2024 4:15	4.4	28.9	0.0	7.1	11.8	0.0	12/15/2024 4:00	5.5	46.7	0.0	6.7	12.3	0.0	8.0
12/15/2024 4:30	4.4	28.3	0.0	7.1	11.8	0.0	12/15/2024 4:15	5.5	47.4	0.0	6.7	12.3	0.0	8.0
12/15/2024 4:45	4.4	28.5	0.0	7.1	11.8	0.0	12/15/2024 4:30	5.5	45.9	0.0	6.7	12.3	0.0	8.0
12/15/2024 5:00	4.4	28.5	0.0	7.1	11.9	0.0	12/15/2024 4:45	5.5	47.4	0.0	6.7	12.3	0.0	8.0
12/15/2024 5:15	4.4	28.4	0.0	7.1	11.9	0.0	12/15/2024 5:00	5.4	46.1	0.0	6.8	12.3	0.0	8.0
12/15/2024 5:30	4.4	29.1	0.0	7.1	11.8	1.7	12/15/2024 5:15	5.4	46.8	0.0	6.8	12.3	0.0	8.0
12/15/2024 5:45	4.4	28.2	0.0	7.1	11.9	0.0	12/15/2024 5:30	5.4	46.7	0.0	6.8	12.3	0.0	8.0
12/15/2024 6:00	4.4	27.5	0.0	7.2	11.9	0.1	12/15/2024 5:45	5.4	44.2	0.0	6.8	12.4	0.0	8.0
12/15/2024 6:15	4.3	27.4	0.0	7.1	11.9	0.0	12/15/2024 6:00	5.4	43.7	0.0	6.8	12.4	0.0	8.0
12/15/2024 6:30	4.3	27.4	0.0	7.2	11.9	0.0	12/15/2024 6:15	5.4	43.6	0.0	6.8	12.4	0.0	8.0
12/15/2024 6:45	4.3	27.3	0.0	7.2	11.9	0.0	12/15/2024 6:30	5.4	43.4	0.0	6.8	12.4	0.0	8.0
12/15/2024 7:00	4.3	27.6	0.0	7.2	11.9	0.0	12/15/2024 6:45	5.3	43.6	0.0	6.8	12.4	0.0	8.0
12/15/2024 7:15	4.3	28.3	0.0	7.2	11.9	0.0	12/15/2024 7:00	5.3	45.0	0.0	6.8	12.4	0.0	8.0
12/15/2024 7:30	4.3	29.2	0.0	7.2	11.9	0.0	12/15/2024 7:15	5.4	46.1	0.0	6.8	12.4	0.0	8.0
12/15/2024 7:45	4.3	29.1	0.0	7.2	11.9	0.0	12/15/2024 7:30	5.4	47.4	0.0	6.8	12.4	0.0	8.0
12/15/2024 8:00	4.3	29.6	0.0	7.1	11.9	0.0	12/15/2024 7:45	5.4	47.0	0.0	6.8	12.4	0.0	8.0
12/15/2024 8:15	4.3	30.3	0.0	7.2	11.9	0.0	12/15/2024 8:00	5.4	49.1	0.0	6.8	12.4	0.0	8.0
12/15/2024 8:30	4.3	31.1	0.0	7.2	11.9	0.0	12/15/2024 8:15	5.4	49.4	0.0	6.8	12.4	0.0	8.0
12/15/2024 8:45	4.3	32.0	0.0	7.1	11.9	0.0	12/15/2024 8:30	5.4	51.7	0.0	6.8	12.4	0.0	8.0
12/15/2024 9:00	4.3	32.0	0.0	7.1	11.9	0.0	12/15/2024 8:45	5.4	52.8	0.0	6.8	12.4	0.0	8.0
12/15/2024 9:15	4.3	31.5	0.0	7.2	11.9	0.0	12/15/2024 9:00	5.4	51.7	0.0	6.8	12.4	0.0	8.0
12/15/2024 9:30	4.3	31.6	0.0	7.2	11.9	0.0	12/15/2024 9:15	5.4	51.0	0.0	6.8	12.3	0.0	8.0
12/15/2024 9:45	4.3	32.8	0.0	7.2	11.9	0.0	12/15/2024 9:30	5.4	53.8	0.0	6.8	12.3	0.0	8.0
12/15/2024 10:00	4.3	33.3	0.0	7.2	11.9	0.0	12/15/2024 9:45	5.4	55.0	0.0	6.8	12.3	0.0	8.0
12/15/2024 10:15	4.4	33.8	0.0	7.1	11.8	0.0	12/15/2024 10:00	5.4	55.3	0.0	6.8	12.3	0.0	8.0
12/15/2024 10:30	4.4	34.0	0.0	7.2	11.8	0.0	12/15/2024 10:15	5.4	57.4	0.0	6.7	12.1	0.0	8.0
12/15/2024 10:45	4.4	33.4	0.0	7.1	11.8	0.0	12/15/2024 10:30	5.5	56.5	0.0	6.7	12.2	0.0	8.0
12/15/2024 11:00	4.3	33.1	0.0	7.1	11.9	0.0	12/15/2024 10:45	5.4	55.7	0.0	6.7	12.2	0.0	8.0
12/15/2024 11:15	4.3	33.1	0.0	7.1	11.9	0.0	12/15/2024 11:00	5.4	54.5	0.0	6.7	12.3	0.0	8.0
12/15/2024 11:30	4.3	33.1	0.0	7.2	11.9	0.0	12/15/2024 11:15	5.4	54.0	0.0	6.7	12.3	0.0	8.0
12/15/2024 11:45	4.3	33.1	0.0	7.1	11.9	0.0	12/15/2024 11:30	5.4	54.8	0.0	6.7	12.3	0.0	8.0
12/15/2024 12:00	4.4	33.9	0.0	7.1	11.9	0.0	12/15/2024 11:45	5.4	53.1	0.0	6.7	12.3	0.0	8.0
12/15/2024 12:15	4.4	33.3	0.0	7.1	11.9	0.0	12/15/2024 12:00	5.4	53.8	0.0	6.8	12.3	0.0	8.0
12/15/2024 12:30	4.4	33.7	0.0	7.2	11.9	0.0	12/15/2024 12:15	5.4	54.1	0.0	6.7	12.3	0.0	8.0
12/15/2024 12:45	4.4	33.5	0.0	7.1	11.9	0.0	12/15/2024 12:30	5.4	54.4	0.0	6.7	12.3	0.0	8.0
12/15/2024 13:00	4.4	33.8	0.0	7.1	11.9	0.0	12/15/2024 12:45	5.4	55.1	0.0	6.7	12.3	0.0	8.0
12/15/2024 13:15	4.4	34.1	0.0	7.1	11.9	0.0	12/15/2024 13:00	5.4	55.3	0.0	6.8	12.3	0.0	8.0
12/15/2024 13:30	4.4	33.7	0.0	7.2	11.9	0.0	12/15/2024 13:15	5.4	54.5	0.0	6.7	12.3	0.0	8.0
12/15/2024 13:45	4.4	33.9	0.0	7.1	11.9	0.0	12/15/2024 13:30	5.5	55.5	0.0	6.7	12.3	0.0	8.0
12/15/2024 14:00	4.5	34.2	0.0	7.1	11.9	0.0	12/15/2024 13:45	5.5	55.7	0.0	6.7	12.3	0.0	8.0
12/15/2024 14:15	4.6	34.5	0.0	7.0	11.9	0.0	12/15/2024 14:00	5.6	56.1	0.0	6.7	12.3	0.0	8.0
12/15/2024 14:30	4.6	34.8	0.0	7.2	11.9	0.0	12/15/2024 14:15	5.7	57.0	0.0	6.7	12.3	0.0	8.0
12/15/2024 14:45	4.6	34.5	0.0	7.1	11.9	0.0	12/15/2024 14:30	5.7	56.4	0.0	6.7	12.3	0.0	8.0
12/15/2024 15:00	4.6	34.7	0.0	7.1	11.9	0.0	12/15/2024 14:45	5.7	56.0	0.0	6.7	12.4	0.0	8.0
12/15/2024 15:15	4.6	34.6	0.0	7.2	11.9	0.0	12/15/2024 15:00	5.7	56.7	0.0	6.8	12.3	0.0	8.0
12/15/2024 15:30	4.6	34.9	0.0	7.2	11.9	0.0	12/15/2024 15:15	5.7	55.6	0.0	6.8	12.4	0.0	8.0
12/15/2024 15:45	4.6	35.2	0.0	7.2	11.9	0.0	12/15/2024 15:30	5.7	57.2	0.0	6.8	12.4	0.0	8.0
12/15/2024 16:00	4.6	34.4	0.0	7.1	11.9	0.0	12/15/2024 15:45	5.7	55.8	0.0	6.8	12.4	0.0	8.0
12/15/2024 16:15	4.6	35.3	0.0	7.2	11.9	0.0	12/15/2024 16:00	5.6	56.7	0.0	6.8	12.4	0.0	8.0
12/15/2024 16:30	4.5	35.1	0.0	7.2	11.9	0.0	12/15/2024 16:15	5.6	56.2	0.0	6.8	12.4	0.0	8.0
12/15/2024 16:45	4.5	35.0	0.0	7.1	11.9	0.0	12/15/2024 16:30	5.6	55.9	0.0	6.8	12.4	0.0	8.0
12/15/2024 17:00	4.5	34.4	0.0	7.2	11.9	0.0	12/15/2024 16:45	5.5	54.8	0.0	6.8	12.4	0.0	8.0
12/15/2024 17:15	4.5	35.6	0.0	7.1	11.9	0.0	12/15/2024 17:00	5.5	56.4	0.0	6.8	12.4	0.0	8.0
12/15/2024 17:30	4.5	36.9	0.0	7.2	11.9	0.0	12/15/2024 17:15	5.5	59.6	0.0	6.8	12.4	0.0	8.0
12/15/2024 17:45	4.4	38.0	0.0	7.1	11.9	0.0	12/15/2024 17:30	5.5	61.4	0.0	6.8	12.3	0.0	8.0
12/15/2024 18:00	4.4	39.0	0.0	7.1	11.8	0.0	12/15/2024 17:45	5.5	65.6	0.0	6.7	12.2	0.0	8.0
12/15/2024 18:15	4.4	38.8	0.0	7.2	11.8	0.0	12/15/2024 18:00	5.5	64.1	0.0	6.7	12.2	0.0	8.0
12/15/2024 18:30	4.4	38.7	0.0	7.2	11.8	0.0	12/15/2024 18:15	5.5	63.9	0.0	6.7	12.2	0.0	8.0
12/15/2024 18:45	4.4	39.4	0.0	7.1	11.8	0.0	12/15/2024 18:30	5.5	63.5	0.0	6.7	12.2	0.0	8.0
12/15/2024 19:00	4.4	40.2	0.0	7.1	11.7	0.0	12/15/2024 18:45	5.5	66.7	0.0	6.7	12.2	0.0	8.0
12/15/2024 19:15	4.4	39.1	0.0	7.1	11.7	0.0	12/15/2024 19:00	5.5	64.8	0.0	6.7	12.1	0.0	8.0
12/15/2024 19:30	4.4	39.1	0.0	7.1	11.7	0.0	12/15/2024 19:15	5.4	63.5	0.0	6.7	12.2	0.0	8.0
12/15/2024 19:45	4.3	38.8	0.0	7.1	11.7	0.0	12/15/2024 19:30	5.5	62.7	0.0	6.6	12.1	0.0	8.0
12/15/2024 20:00	4													


 <b>Eagle Mountain - Woodfibre Gas Pipeline Project Waste Discharge Permit PE-110163 Report</b>	Reporting Week	Dec 9 <sup>th</sup> to Dec 15 <sup>th</sup> , 2024
	Report #	38
	Appendix C	C-1

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

 <b>Eagle Mountain - Woodfibre Gas Pipeline Project Waste Discharge Permit PE-110163 Report</b>	Reporting Week	Dec 9 <sup>th</sup> to Dec 15 <sup>th</sup> , 2024
	Report #	38
	Appendix C	C-2

## Woodfibre Site Sample Analysis



 <b>Eagle Mountain - Woodfibre Gas Pipeline Project Waste Discharge Permit PE-110163 Report</b>	Reporting Week	Dec 9 <sup>th</sup> to Dec 15 <sup>th</sup> , 2024
	Report #	38
	Appendix C	C-3

## Woodfibre Site Sample Lab Documentation

**CERTIFICATE OF ANALYSIS**

<b>Work Order</b>	: <b>VA24D3207</b>	<b>Laboratory</b>	: ALS Environmental - Vancouver
<b>Client</b>	: <b>Triton Environmental Consultants Ltd.</b>	<b>Account Manager</b>	: [Redacted]
<b>Contact</b>	: [Redacted]	<b>Address</b>	: [Redacted]
<b>Address</b>	: [Redacted]	<b>Telephone</b>	: [Redacted]
<b>Telephone</b>	: [Redacted]	<b>Date Samples Received</b>	: 10-Dec-2024 17:30
<b>Project</b>	: 11964	<b>Date Analysis Commenced</b>	: 11-Dec-2024
<b>PO</b>	: 11964 - Task 40 - Phase 3C-4C	<b>Issue Date</b>	: 18-Dec-2024 08:17
<b>C-O-C number</b>	: ----		
<b>Sampler</b>	: ----		
<b>Site</b>	: Water Analysis		
<b>Quote number</b>	: VA23-TRIT100-012		
<b>No. of samples received</b>	: 1		
<b>No. of samples analysed</b>	: 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.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
[Redacted]		Metals, Burnaby, British Columbia
[Redacted]		Metals, Burnaby, British Columbia
[Redacted]		Inorganics, Edmonton, Alberta
[Redacted]		Organics, Burnaby, British Columbia
[Redacted]		Metals, Burnaby, British Columbia
[Redacted]		Inorganics, Burnaby, British Columbia
[Redacted]		Administration, Burnaby, British Columbia
[Redacted]		Metals, Burnaby, British Columbia





## General Comments

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

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

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

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

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

<i>Unit</i>	<i>Description</i>
-	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

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



## Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	10-Dec-2024 10:17	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3207-001	----	----	----	----	----
					Result	----	----	----	----	----
<b>Field Tests</b>										
Conductivity, field	----	EF001/VA	0.10	µS/cm	189.00	----	----	----	----	----
pH, field	----	EF001/VA	0.10	pH units	6.67	----	----	----	----	----
Temperature, field	----	EF001/VA	0.10	°C	9.30	----	----	----	----	----
Turbidity, field	----	EF001/VA	0.01	NTU	0.0	----	----	----	----	----
<b>Physical Tests</b>										
Hardness (as CaCO <sub>3</sub> ), dissolved	----	EC100/VA	0.60	mg/L	57.2	----	----	----	----	----
Hardness (as CaCO <sub>3</sub> ), from total Ca/Mg	----	EC100A/VA	0.60	mg/L	57.3	----	----	----	----	----
Solids, total dissolved [TDS]	----	E162/VA	10	mg/L	86	----	----	----	----	----
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L	<3.0	----	----	----	----	----
Alkalinity, total (as CaCO <sub>3</sub> )	----	E290/VA	2.0	mg/L	62.3	----	----	----	----	----
<b>Anions and Nutrients</b>										
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	0.80	----	----	----	----	----
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L	0.201	----	----	----	----	----
Nitrate (as N)	14797-55-8	E235.NO <sub>3</sub> -L/VA	0.0050	mg/L	0.0118	----	----	----	----	----
Nitrite (as N)	14797-65-0	E235.NO <sub>2</sub> -L/VA	0.0010	mg/L	<0.0010	----	----	----	----	----
Nitrogen, total	7727-37-9	E366/VA	0.030	mg/L	0.086	----	----	----	----	----
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L	0.0036	----	----	----	----	----
Sulfate (as SO <sub>4</sub> )	14808-79-8	E235.SO <sub>4</sub> /VA	0.30	mg/L	4.76	----	----	----	----	----



## Analytical Results

Sub-Matrix: Water  
 (Matrix: Water)

					Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	10-Dec-2024 10:17	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3207-001	----	----	----	----	----
						Result	----	----	----	----
<b>Organic / Inorganic Carbon</b>										
Carbon, dissolved organic [DOC]	----	E358-LVA	0.50	mg/L	<0.50	----	----	----	----	----
<b>Total Sulfides</b>										
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	----	----	----	----	----
<b>Total Metals</b>										
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L	0.0071	----	----	----	----	----
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L	<0.00010	----	----	----	----	----
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L	0.00197	----	----	----	----	----
Barium, total	7440-39-3	E420/VA	0.00010	mg/L	0.00353	----	----	----	----	----
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	0.011	----	----	----	----	----
Cadmium, total	7440-43-9	E420/VA	0.0000050	mg/L	<0.0000100 <sup>DLM</sup>	----	----	----	----	----
Calcium, total	7440-70-2	E420/VA	0.050	mg/L	21.2	----	----	----	----	----
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L	<0.000010	----	----	----	----	----
Chromium, total	7440-47-3	E420/VA	0.00050	mg/L	<0.00050	----	----	----	----	----
Cobalt, total	7440-48-4	E420/VA	0.00010	mg/L	<0.00010	----	----	----	----	----
Copper, total	7440-50-8	E420/VA	0.00050	mg/L	0.00206	----	----	----	----	----
Iron, total	7439-89-6	E420/VA	0.010	mg/L	<0.010	----	----	----	----	----
Lead, total	7439-92-1	E420/VA	0.000050	mg/L	0.000422	----	----	----	----	----



## Analytical Results

Sub-Matrix: Water  
 (Matrix: Water)

					Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	10-Dec-2024 10:17	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3207-001	----	----	----	----	
						Result	----	----	----	----
<b>Total Metals</b>										
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L	0.0023	----	----	----	----	
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L	1.05	----	----	----	----	
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L	0.00092	----	----	----	----	
Mercury, total	7439-97-6	E508/VA	0.0000050	mg/L	<0.0000050	----	----	----	----	
Molybdenum, total	7439-98-7	E420/VA	0.000050	mg/L	0.0193	----	----	----	----	
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	0.871	----	----	----	----	
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L	0.00142	----	----	----	----	
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L	0.000057	----	----	----	----	
Silicon, total	7440-21-3	E420/VA	0.10	mg/L	6.66	----	----	----	----	
Silver, total	7440-22-4	E420/VA	0.000010	mg/L	<0.000010	----	----	----	----	
Sodium, total	7440-23-5	E420/VA	0.050	mg/L	3.18	----	----	----	----	
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L	0.0423	----	----	----	----	
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L	1.65	----	----	----	----	
Tellurium, total	13494-80-9	E420/VA	0.00020	mg/L	<0.00020	----	----	----	----	
Thallium, total	7440-28-0	E420/VA	0.000010	mg/L	<0.000010	----	----	----	----	
Thorium, total	7440-29-1	E420/VA	0.00010	mg/L	<0.00010	----	----	----	----	
Tin, total	7440-31-5	E420/VA	0.00010	mg/L	<0.00010	----	----	----	----	
Titanium, total	7440-32-6	E420/VA	0.00030	mg/L	<0.00030	----	----	----	----	
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L	0.00028	----	----	----	----	



## Analytical Results

Sub-Matrix: Water  
 (Matrix: Water)

					Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	10-Dec-2024 10:17	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3207-001	----	----	----	----	
						Result	----	----	----	----
<b>Total Metals</b>										
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L	0.00839	----	----	----	----	
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L	<0.00050	----	----	----	----	
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L	0.0130	----	----	----	----	
Zirconium, total	7440-67-7	E420/VA	0.00020	mg/L	<0.00020	----	----	----	----	
<b>Dissolved Metals</b>										
Aluminum, dissolved	7429-90-5	E421/VA	0.0010	mg/L	0.0037	----	----	----	----	
Antimony, dissolved	7440-36-0	E421/VA	0.00010	mg/L	<0.00010	----	----	----	----	
Arsenic, dissolved	7440-38-2	E421/VA	0.00010	mg/L	0.00178	----	----	----	----	
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L	0.00299	----	----	----	----	
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	0.010	----	----	----	----	
Cadmium, dissolved	7440-43-9	E421/VA	0.0000050	mg/L	0.0000080	----	----	----	----	
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L	21.2	----	----	----	----	
Cesium, dissolved	7440-46-2	E421/VA	0.000010	mg/L	<0.000010	----	----	----	----	
Chromium, dissolved	7440-47-3	E421/VA	0.00050	mg/L	<0.00050	----	----	----	----	
Cobalt, dissolved	7440-48-4	E421/VA	0.00010	mg/L	<0.00010	----	----	----	----	
Copper, dissolved	7440-50-8	E421/VA	0.00020	mg/L	0.00120	----	----	----	----	
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L	<0.010	----	----	----	----	
Lead, dissolved	7439-92-1	E421/VA	0.000050	mg/L	0.000283	----	----	----	----	
Lithium, dissolved	7439-93-2	E421/VA	0.0010	mg/L	0.0023	----	----	----	----	



## Analytical Results

Sub-Matrix: Water  
 (Matrix: Water)

					Client sample ID	WLNQ EOP	---	---	---	---
					Client sampling date / time	10-Dec-2024 10:17	---	---	---	---
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3207-001	---	---	---	---	
						Result	---	---	---	---
<b>Dissolved Metals</b>										
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L	1.04	---	---	---	---	
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L	0.00090	---	---	---	---	
Mercury, dissolved	7439-97-6	E509/VA	0.0000050	mg/L	<0.0000050	---	---	---	---	
Molybdenum, dissolved	7439-98-7	E421/VA	0.000050	mg/L	0.0179	---	---	---	---	
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	0.912	---	---	---	---	
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L	0.00139	---	---	---	---	
Selenium, dissolved	7782-49-2	E421/VA	0.000050	mg/L	0.000104	---	---	---	---	
Silicon, dissolved	7440-21-3	E421/VA	0.050	mg/L	6.22	---	---	---	---	
Silver, dissolved	7440-22-4	E421/VA	0.000010	mg/L	<0.000010	---	---	---	---	
Sodium, dissolved	7440-23-5	E421/VA	0.050	mg/L	3.37	---	---	---	---	
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L	0.0403	---	---	---	---	
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L	1.57	---	---	---	---	
Tellurium, dissolved	13494-80-9	E421/VA	0.00020	mg/L	<0.00020	---	---	---	---	
Thallium, dissolved	7440-28-0	E421/VA	0.000010	mg/L	<0.000010	---	---	---	---	
Thorium, dissolved	7440-29-1	E421/VA	0.00010	mg/L	<0.00010	---	---	---	---	
Tin, dissolved	7440-31-5	E421/VA	0.00010	mg/L	<0.00010	---	---	---	---	
Titanium, dissolved	7440-32-6	E421/VA	0.00030	mg/L	<0.00030	---	---	---	---	
Tungsten, dissolved	7440-33-7	E421/VA	0.00010	mg/L	0.00024	---	---	---	---	
Uranium, dissolved	7440-61-1	E421/VA	0.000010	mg/L	0.00769	---	---	---	---	



## Analytical Results

Sub-Matrix: Water  
 (Matrix: Water)

					Client sample ID	WLNQ EOP	----	----	----	----
					Client sampling date / time	10-Dec-2024 10:17	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3207-001	----	----	----	----	----
						Result	----	----	----	----
<b>Dissolved Metals</b>										
Vanadium, dissolved	7440-62-2	E421/VA	0.00050	mg/L	<0.00050	----	----	----	----	----
Zinc, dissolved	7440-66-6	E421/VA	0.0010	mg/L	0.0124	----	----	----	----	----
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	----	----	----	----	----
<b>Speciated Metals</b>										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532/VA	0.00050	mg/L	<0.00050	----	----	----	----	----
Chromium, trivalent [Cr III], total	16065-83-1	EC535/VA	0.00050	mg/L	<0.00050	----	----	----	----	----
<b>Aggregate Organics</b>										
Phenols, total (4AAP)	----	E562/EO	0.0010	mg/L	<0.0010	----	----	----	----	----
<b>Volatile Organic Compounds</b>										
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)

					Client sample ID	WLNQ EOP	----	----	----	----
					Client sampling date / time	10-Dec-2024 10:17	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3207-001	----	----	----	----	----
						Result	----	----	----	----
<b>Volatile Organic Compounds</b>										
Trichloroethane, 1,1,2-	79-00-5	E611CVA	0.50	µg/L	<0.50	----	----	----	----	----
Trichlorofluoromethane	75-69-4	E611CVA	0.50	µg/L	<0.50	----	----	----	----	----
<b>Volatile Organic Compounds [Drycleaning]</b>										
Carbon tetrachloride	56-23-5	E611CVA	0.50	µg/L	<0.50	----	----	----	----	----
Chloroethane	75-00-3	E611CVA	0.50	µg/L	<0.50	----	----	----	----	----
Dichloroethane, 1,1-	75-34-3	E611CVA	0.50	µg/L	<0.50	----	----	----	----	----
Dichloroethane, 1,2-	107-06-2	E611CVA	0.50	µg/L	<0.50	----	----	----	----	----
Dichloroethylene, 1,1-	75-35-4	E611CVA	0.50	µg/L	<0.50	----	----	----	----	----
Dichloroethylene, cis-1,2-	156-59-2	E611CVA	0.50	µg/L	<0.50	----	----	----	----	----
Dichloroethylene, trans-1,2-	156-60-5	E611CVA	0.50	µg/L	<0.50	----	----	----	----	----
Dichloromethane	75-09-2	E611CVA	1.0	µg/L	<1.0	----	----	----	----	----
Dichloropropylene, trans-1,3-	10061-02-6	E611CVA	0.50	µg/L	<0.50	----	----	----	----	----
Tetrachloroethylene	127-18-4	E611CVA	0.50	µg/L	<0.50	----	----	----	----	----
Trichloroethane, 1,1,1-	71-55-6	E611CVA	0.50	µg/L	<0.50	----	----	----	----	----
Trichloroethylene	79-01-6	E611CVA	0.50	µg/L	<0.50	----	----	----	----	----
Vinyl chloride	75-01-4	E611CVA	0.40	µg/L	<0.40	----	----	----	----	----
<b>Volatile Organic Compounds [Fuels]</b>										
Benzene	71-43-2	E611CVA	0.50	µg/L	<0.50	----	----	----	----	----
Ethylbenzene	100-41-4	E611CVA	0.50	µg/L	<0.50	----	----	----	----	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611CVA	0.50	µg/L	<0.50	----	----	----	----	----
Styrene	100-42-5	E611CVA	0.50	µg/L	<0.50	----	----	----	----	----





## Analytical Results

Sub-Matrix: Water  
 (Matrix: Water)

					Client sample ID	WLNQ EOP	---	---	---	---
					Client sampling date / time	10-Dec-2024 10:17	---	---	---	---
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3207-001	---	---	---	---	
Result						---	---	---	---	
<b>Volatile Organic Compounds [Fuels]</b>										
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	---	---	---	---	
<b>Volatile Organic Compounds [THMs]</b>										
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	---	---	---	---	
<b>Hydrocarbons</b>										
EPH (C10-C19)	---	E601A/VA	250	µg/L	<250	---	---	---	---	
EPH (C19-C32)	---	E601A/VA	250	µg/L	<250	---	---	---	---	
VHw (C6-C10)	---	E581.VH+F1/V A	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	---	---	---	---	
<b>Hydrocarbons Surrogates</b>										
Bromobenzotrifluoride, 2- (EPH surrogate)	392-83-6	E601A/VA	1.0	%	88.2	---	---	---	---	
Dichlorotoluene, 3,4-	95-75-0	E581.VH+F1/V A	1.0	%	89.5	---	---	---	---	
<b>Volatile Organic Compounds Surrogates</b>										
Bromofluorobenzene, 4-	460-00-4	E611C/VA	1.0	%	97.9	---	---	---	---	



## Analytical Results

Sub-Matrix: Water  
 (Matrix: Water)

					Client sample ID	WLNG EOP	----	----	----	----
					Client sampling date / time	10-Dec-2024 10:17	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3207-001	----	----	----	----	
						Result	----	----	----	----
<b>Volatile Organic Compounds Surrogates</b>										
Difluorobenzene, 1,4-	540-36-3	E611CVA	1.0	%	101	----	----	----	----	
<b>Polycyclic Aromatic Hydrocarbons</b>										
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	<0.010	----	----	----	----	
Methylnaphthalene, 2-	91-57-6	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	
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	10-Dec-2024 10:17	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3207-001	----	----	----	----	----
						Result	----	----	----	----
<b>Polycyclic Aromatic Hydrocarbons</b>										
Pyrene	129-00-0	E641A/VA	0.010	µg/L	<0.010	----	----	----	----	----
Quinoline	91-22-5	E641A/VA	0.050	µg/L	<0.050	----	----	----	----	----
<b>Polycyclic Aromatic Hydrocarbons Surrogates</b>										
Chrysene-d12	1719-03-5	E641A/VA	0.1	%	79.5	----	----	----	----	----
Naphthalene-d8	1146-65-2	E641A/VA	0.1	%	78.9	----	----	----	----	----
Phenanthrene-d10	1517-22-2	E641A/VA	0.1	%	82.4	----	----	----	----	----
<b>Glycols</b>										
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	----	----	----	----	----
<b>Glycols Surrogates</b>										
Propanediol, 1,3-	504-63-2	E680E/VA	1.0	%	93.1	----	----	----	----	----

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

## QUALITY CONTROL INTERPRETIVE REPORT

<p><b>Work Order</b> : VA24D3207</p> <p><b>Client</b> : Triton Environmental Consultants Ltd.</p> <p><b>Contact</b> : [Redacted]</p> <p><b>Address</b> : [Redacted]</p> <p><b>Telephone</b> : [Redacted]</p> <p><b>Project</b> : 11964</p> <p><b>PO</b> : 11964 - Task 40 - Phase 3C-4C</p> <p><b>C-O-C number</b> : ----</p> <p><b>Sampler</b> : ----</p> <p><b>Site</b> : Water Analysis</p> <p><b>Quote number</b> : VA23-TRIT100-012_V2</p> <p><b>No. of samples received</b> : 1</p> <p><b>No. of samples analysed</b> : 1</p>	<p><b>Page</b> : 1 of 14</p> <p><b>Laboratory</b> : ALS Environmental - Vancouver</p> <p><b>Account Manager</b> : [Redacted]</p> <p><b>Address</b> : [Redacted]</p> <p><b>Telephone</b> : [Redacted]</p> <p><b>Date Samples Received</b> : 10-Dec-2024 17:30</p> <p><b>Issue Date</b> : 18-Dec-2024 08:17</p>
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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 Actual		Eval	Analysis Date	Holding Times Rec Actual		Eval	
<b>Aggregate Organics : Phenols (4AAP) in Water by Colorimetry</b>											
Amber glass total (sulfuric acid) WLNG EOP	E562	10-Dec-2024	13-Dec-2024	28 days	3 days	✔	13-Dec-2024	28 days	3 days	✔	
<b>Anions and Nutrients : Ammonia by Fluorescence</b>											
Amber glass total (sulfuric acid) WLNG EOP	E298	10-Dec-2024	11-Dec-2024	28 days	1 days	✔	11-Dec-2024	28 days	1 days	✔	
<b>Anions and Nutrients : Bromide in Water by IC (Low Level)</b>											
HDPE WLNG EOP	E235.Br-L	10-Dec-2024	11-Dec-2024	28 days	1 days	✔	11-Dec-2024	28 days	1 days	✔	
<b>Anions and Nutrients : Chloride in Water by IC</b>											
HDPE WLNG EOP	E235.Cl	10-Dec-2024	11-Dec-2024	28 days	1 days	✔	11-Dec-2024	28 days	1 days	✔	
<b>Anions and Nutrients : Fluoride in Water by IC</b>											
HDPE WLNG EOP	E235.F	10-Dec-2024	11-Dec-2024	28 days	1 days	✔	11-Dec-2024	28 days	1 days	✔	
<b>Anions and Nutrients : Nitrate in Water by IC (Low Level)</b>											
HDPE WLNG EOP	E235.NO3-L	10-Dec-2024	11-Dec-2024	3 days	1 days	✔	11-Dec-2024	3 days	1 days	✔	
<b>Anions and Nutrients : Nitrite in Water by IC (Low Level)</b>											
HDPE WLNG EOP	E235.NO2-L	10-Dec-2024	11-Dec-2024	3 days	1 days	✔	11-Dec-2024	3 days	1 days	✔	



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

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Anions and Nutrients : Sulfate in Water by IC</b>										
HDPE WLNG EOP	E235.SO4	10-Dec-2024	11-Dec-2024	28 days	1 days	✓	11-Dec-2024	28 days	1 days	✓
<b>Anions and Nutrients : Total Nitrogen by Colourimetry</b>										
Amber glass total (sulfuric acid) WLNG EOP	E366	10-Dec-2024	11-Dec-2024	28 days	1 days	✓	12-Dec-2024	28 days	2 days	✓
<b>Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)</b>										
Amber glass total (sulfuric acid) WLNG EOP	E372-U	10-Dec-2024	11-Dec-2024	28 days	1 days	✓	12-Dec-2024	28 days	2 days	✓
<b>Dissolved Metals : Dissolved Mercury in Water by CVAAS</b>										
Glass vial dissolved (hydrochloric acid) WLNG EOP	E509	10-Dec-2024	15-Dec-2024	28 days	5 days	✓	15-Dec-2024	28 days	5 days	✓
<b>Dissolved Metals : Dissolved Metals in Water by CRC ICPMS</b>										
HDPE dissolved (nitric acid) WLNG EOP	E421	10-Dec-2024	11-Dec-2024	180 days	1 days	✓	12-Dec-2024	180 days	2 days	✓
<b>Field Tests : Field pH,EC,Salinity, TDS, Cl2,CIO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine</b>										
Glass vial dissolved (hydrochloric acid) WLNG EOP	EF001	10-Dec-2024	----	----	----		11-Dec-2024	----	1 days	
<b>Glycols : Glycols (4 analytes) by GC-FID</b>										
Glass vial WLNG EOP	E680E	10-Dec-2024	12-Dec-2024	7 days	2 days	✓	12-Dec-2024	40 days	0 days	✓
<b>Hydrocarbons : BC PHCs - EPH by GC-FID</b>										
Amber glass/Teflon lined cap (sodium bisulfate) WLNG EOP	E601A	10-Dec-2024	17-Dec-2024	14 days	7 days	✓	17-Dec-2024	40 days	0 days	✓
<b>Hydrocarbons : VH and F1 by Headspace GC-FID</b>										
Glass vial (sodium bisulfate) WLNG EOP	E581.VH+F1	10-Dec-2024	13-Dec-2024	14 days	3 days	✓	13-Dec-2024	14 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		
<b>Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)</b>											
Amber glass dissolved (sulfuric acid) WLNG EOP	E358-L	10-Dec-2024	11-Dec-2024	28 days	1 days	✔	11-Dec-2024	28 days	1 days	✔	
<b>Physical Tests : Alkalinity Species by Titration</b>											
HDPE WLNG EOP	E290	10-Dec-2024	11-Dec-2024	14 days	1 days	✔	11-Dec-2024	14 days	1 days	✔	
<b>Physical Tests : TDS by Gravimetry</b>											
HDPE WLNG EOP	E162	10-Dec-2024	----	----	----		11-Dec-2024	7 days	1 days	✔	
<b>Physical Tests : TSS by Gravimetry</b>											
HDPE WLNG EOP	E160	10-Dec-2024	----	----	----		11-Dec-2024	7 days	1 days	✔	
<b>Polycyclic Aromatic Hydrocarbons : PAHs in Water by Hexane LVI GC-MS</b>											
Amber glass/Teflon lined cap (sodium bisulfate) WLNG EOP	E641A	10-Dec-2024	17-Dec-2024	14 days	7 days	✔	17-Dec-2024	40 days	0 days	✔	
<b>Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC</b>											
Opaque HDPE - total (sodium hydroxide) WLNG EOP	E532	10-Dec-2024	----	----	----		11-Dec-2024	28 days	1 days	✔	
<b>Total Metals : Total Mercury in Water by CVAAS</b>											
Glass vial - total (lab preserved hydrochloric acid) WLNG EOP	E508	10-Dec-2024	13-Dec-2024	28 days	3 days	✔	13-Dec-2024	28 days	3 days	✔	
<b>Total Metals : Total Metals in Water by CRC ICPMS</b>											
HDPE total (nitric acid) WLNG EOP	E420	10-Dec-2024	12-Dec-2024	180 days	2 days	✔	13-Dec-2024	180 days	3 days	✔	
<b>Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)</b>											
HDPE total (zinc acetate+sodium hydroxide) WLNG EOP	E395	10-Dec-2024	----	----	----		11-Dec-2024	7 days	1 days	✔	





Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Volatile Organic Compounds : VOCs (BC List) by Headspace GC-MS</b>										
<b>Glass vial (sodium bisulfate)</b> W LNG EOP	E611C	10-Dec-2024	13-Dec-2024	14 days	3 days	✔	13-Dec-2024	14 days	3 days	✔

**Legend & Qualifier Definitions**

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



## Quality Control Parameter Frequency Compliance

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

Matrix: **Water** Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<b>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
Alkalinity Species by Titration	E290	1804796	1	18	5.5	5.0	✔
Ammonia by Fluorescence	E298	1804612	1	7	14.2	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1804800	1	7	14.2	5.0	✔
Chloride in Water by IC	E235.Cl	1804799	1	17	5.8	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1810272	1	19	5.2	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1804776	1	6	16.6	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1804613	1	7	14.2	5.0	✔
Fluoride in Water by IC	E235.F	1804798	1	16	6.2	5.0	✔
Glycols (4 analytes) by GC-FID	E680E	1806562	1	3	33.3	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1804801	1	10	10.0	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1804802	1	10	10.0	5.0	✔
Phenols (4AAP) in Water by Colorimetry	E562	1808567	1	20	5.0	5.0	✔
Sulfate in Water by IC	E235.SO4	1804803	1	19	5.2	5.0	✔
TDS by Gravimetry	E162	1804950	1	19	5.2	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1805814	1	20	5.0	5.0	✔
Total Mercury in Water by CVAAS	E508	1808438	1	18	5.5	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1805208	1	20	5.0	5.0	✔
Total Nitrogen by Colourimetry	E366	1804610	1	6	16.6	5.0	✔
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1804611	1	6	16.6	5.0	✔
Total Sulfide by Colourimetry (Automated Flow)	E395	1804890	1	5	20.0	5.0	✔
TSS by Gravimetry	E160	1804915	1	19	5.2	5.0	✔
VH and F1 by Headspace GC-FID	E581.VH+F1	1807951	1	13	7.6	5.0	✔
VOCs (BC List) by Headspace GC-MS	E611C	1807953	1	9	11.1	5.0	✔
<b>Laboratory Control Samples (LCS)</b>							
Alkalinity Species by Titration	E290	1804796	1	18	5.5	5.0	✔
Ammonia by Fluorescence	E298	1804612	1	7	14.2	5.0	✔
BC PHCs - EPH by GC-FID	E601A	1812653	1	8	12.5	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1804800	1	7	14.2	5.0	✔
Chloride in Water by IC	E235.Cl	1804799	1	17	5.8	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1810272	1	19	5.2	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1804776	1	6	16.6	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1804613	1	7	14.2	5.0	✔
Fluoride in Water by IC	E235.F	1804798	1	16	6.2	5.0	✔
Glycols (4 analytes) by GC-FID	E680E	1806562	1	3	33.3	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1804801	1	10	10.0	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1804802	1	10	10.0	5.0	✔



Matrix: **Water**

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

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<b>Analytical Methods</b>							
<b>Laboratory Control Samples (LCS) - Continued</b>							
PAHs in Water by Hexane LVI GC-MS	E641A	1812652	1	16	6.2	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1808567	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1804803	1	19	5.2	5.0	✓
TDS by Gravimetry	E162	1804950	1	19	5.2	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1805814	1	20	5.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1808438	1	18	5.5	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1805208	1	20	5.0	5.0	✓
Total Nitrogen by Colourimetry	E366	1804610	1	6	16.6	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1804611	1	6	16.6	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1804890	1	5	20.0	5.0	✓
TSS by Gravimetry	E160	1804915	1	19	5.2	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1807951	1	13	7.6	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1807953	1	9	11.1	5.0	✓
<b>Method Blanks (MB)</b>							
Alkalinity Species by Titration	E290	1804796	1	18	5.5	5.0	✓
Ammonia by Fluorescence	E298	1804612	1	7	14.2	5.0	✓
BC PHCs - EPH by GC-FID	E601A	1812653	1	8	12.5	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	1804800	1	7	14.2	5.0	✓
Chloride in Water by IC	E235.Cl	1804799	1	17	5.8	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	1810272	1	19	5.2	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	1804776	1	6	16.6	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1804613	1	7	14.2	5.0	✓
Fluoride in Water by IC	E235.F	1804798	1	16	6.2	5.0	✓
Glycols (4 analytes) by GC-FID	E680E	1806562	1	3	33.3	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	1804801	1	10	10.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	1804802	1	10	10.0	5.0	✓
PAHs in Water by Hexane LVI GC-MS	E641A	1812652	1	16	6.2	5.0	✓
Phenols (4AAP) in Water by Colorimetry	E562	1808567	1	20	5.0	5.0	✓
Sulfate in Water by IC	E235.SO4	1804803	1	19	5.2	5.0	✓
TDS by Gravimetry	E162	1804950	1	19	5.2	5.0	✓
Total Hexavalent Chromium (Cr VI) by IC	E532	1805814	1	20	5.0	5.0	✓
Total Mercury in Water by CVAAS	E508	1808438	1	18	5.5	5.0	✓
Total Metals in Water by CRC ICPMS	E420	1805208	1	20	5.0	5.0	✓
Total Nitrogen by Colourimetry	E366	1804610	1	6	16.6	5.0	✓
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1804611	1	6	16.6	5.0	✓
Total Sulfide by Colourimetry (Automated Flow)	E395	1804890	1	5	20.0	5.0	✓
TSS by Gravimetry	E160	1804915	1	19	5.2	5.0	✓
VH and F1 by Headspace GC-FID	E581.VH+F1	1807951	1	13	7.6	5.0	✓
VOCs (BC List) by Headspace GC-MS	E611C	1807953	1	9	11.1	5.0	✓



Matrix: **Water**

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<i>Analytical Methods</i>							
<b>Matrix Spikes (MS)</b>							
Ammonia by Fluorescence	E298	1804612	1	7	14.2	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1804800	1	7	14.2	5.0	✔
Chloride in Water by IC	E235.Cl	1804799	1	17	5.8	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1810272	1	19	5.2	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1804776	1	6	16.6	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1804613	1	7	14.2	5.0	✔
Fluoride in Water by IC	E235.F	1804798	1	16	6.2	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1804801	1	10	10.0	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1804802	1	10	10.0	5.0	✔
Phenols (4AAP) in Water by Colorimetry	E562	1808567	1	20	5.0	5.0	✔
Sulfate in Water by IC	E235.SO4	1804803	1	19	5.2	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1805814	1	20	5.0	5.0	✔
Total Mercury in Water by CVAAS	E508	1808438	1	18	5.5	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1805208	1	20	5.0	5.0	✔
Total Nitrogen by Colourimetry	E366	1804610	1	6	16.6	5.0	✔
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1804611	1	6	16.6	5.0	✔
Total Sulfide by Colourimetry (Automated Flow)	E395	1804890	1	5	20.0	5.0	✔
VH and F1 by Headspace GC-FID	E581.VH+F1	1807951	1	13	7.6	5.0	✔
VOCs (BC List) by Headspace GC-MS	E611C	1807953	1	9	11.1	5.0	✔



## Methodology References and Summaries

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

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
TSS by Gravimetry	E160 ALS Environmental - Vancouver	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at $104 \pm 1^\circ\text{C}$ , 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 $180 \pm 2^\circ\text{C}$ 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 CO <sub>2</sub> . 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 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 methylene blue colourimetric method. Results expressed "as H <sub>2</sub> S" if reported represent the maximum possible H <sub>2</sub> S concentration based on the total sulfide concentration in the sample. The H <sub>2</sub> S calculation converts Total Sulphide as (S <sub>2</sub> <sup>-</sup> ) and reports it as Total Sulphide as (H <sub>2</sub> S)
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 <sub>3</sub> Fe(CN) <sub>6</sub> ) 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 <sub>3</sub> ), dissolved" is calculated from the sum of dissolved Calcium and Magnesium concentrations, expressed in CaCO <sub>3</sub> 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 CaCO <sub>3</sub> ), from total Ca/Mg" is calculated from the sum of total Calcium and Magnesium concentrations, expressed in CaCO <sub>3</sub> 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, Cl <sub>2</sub> ,ClO <sub>2</sub> ,ORP,DO, Turbidity,T,T-P,o-PO <sub>4</sub> ,NH <sub>3</sub> ,Chloramine	EF001 ALS Environmental - Vancouver	Water	Field Measurement (Client Supplied)	Field pH,EC,Salinity, TDS, Cl <sub>2</sub> ,ClO <sub>2</sub> ,ORP,DO, Turbidity,T,T-P,o-PO <sub>4</sub> ,NH <sub>3</sub> 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.





<i>Preparation Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
Dissolved Metals Water Filtration	EP421 ALS Environmental - Vancouver	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO <sub>3</sub> .
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 organic solvent.

## QUALITY CONTROL REPORT

**Work Order** : **VA24D3207**  
**Client** : Triton Environmental Consultants Ltd.  
**Contact** : [Redacted]  
**Address** : [Redacted]  
**Telephone** : [Redacted]  
**Project** : 11964  
**PO** : 11964 - Task 40 - Phase 3C-4C  
**C-O-C number** : ----  
**Sampler** : ----  
**Site** : Water Analysis  
**Quote number** : VA23-TRIT100-012\_V2  
**No. of samples received** : 1  
**No. of samples analysed** : 1

**Page** : 1 of 23  
**Laboratory** : ALS Environmental - Vancouver  
**Account Manager** : [Redacted]  
**Address** : [Redacted]  
**Telephone** : [Redacted]  
**Date Samples Received** : 10-Dec-2024 17:30  
**Date Analysis Commenced** : 11-Dec-2024  
**Issue Date** : 18-Dec-2024 08:17

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]	[Redacted]	Vancouver Metals, Burnaby, British Columbia
[Redacted]	[Redacted]	Vancouver Metals, Burnaby, British Columbia
[Redacted]	[Redacted]	Edmonton Inorganics, Edmonton, Alberta
[Redacted]	[Redacted]	Vancouver Organics, Burnaby, British Columbia
[Redacted]	[Redacted]	Vancouver Metals, Burnaby, British Columbia
[Redacted]	[Redacted]	Vancouver Inorganics, Burnaby, British Columbia
[Redacted]	[Redacted]	Vancouver Administration, Burnaby, British Columbia
[Redacted]	[Redacted]	Vancouver Metals, Burnaby, British Columbia



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## 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.

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## Workorder Comments

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

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### 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: <b>Water</b>					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
<b>Physical Tests (QC Lot: 1804796)</b>											
KS2405158-003	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	390	390	0.102%	20%	----
<b>Physical Tests (QC Lot: 1804915)</b>											
VA24D3207-001	WLNG EOP	Solids, total suspended [TSS]	----	E160	3.0	mg/L	<3.0	<3.0	0	Diff <2x LOR	----
<b>Physical Tests (QC Lot: 1804950)</b>											
VA24D3207-001	WLNG EOP	Solids, total dissolved [TDS]	----	E162	13	mg/L	86	79	6	Diff <2x LOR	----
<b>Anions and Nutrients (QC Lot: 1804610)</b>											
VA24D3203-001	Anonymous	Nitrogen, total	7727-37-9	E366	0.030	mg/L	0.118	0.116	0.002	Diff <2x LOR	----
<b>Anions and Nutrients (QC Lot: 1804611)</b>											
VA24D3203-001	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0229	0.0228	0.437%	20%	----
<b>Anions and Nutrients (QC Lot: 1804612)</b>											
VA24D3203-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
<b>Anions and Nutrients (QC Lot: 1804798)</b>											
KS2405158-001	Anonymous	Fluoride	16984-48-8	E235.F	0.400	mg/L	<0.400	<0.400	0	Diff <2x LOR	----
<b>Anions and Nutrients (QC Lot: 1804799)</b>											
KS2405158-001	Anonymous	Chloride	16887-00-6	E235.Cl	10.0	mg/L	102	108	5.40%	20%	----
<b>Anions and Nutrients (QC Lot: 1804800)</b>											
KS2405158-001	Anonymous	Bromide	24959-67-9	E235.Br-L	1.00	mg/L	1.16	1.17	0.011	Diff <2x LOR	----
<b>Anions and Nutrients (QC Lot: 1804801)</b>											
KS2405158-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	0.100	mg/L	38.9	41.2	5.79%	20%	----
<b>Anions and Nutrients (QC Lot: 1804802)</b>											
KS2405158-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0200	mg/L	<0.0200	<0.0200	0	Diff <2x LOR	----
<b>Anions and Nutrients (QC Lot: 1804803)</b>											
KS2405158-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	6.00	mg/L	727	769	5.56%	20%	----
<b>Organic / Inorganic Carbon (QC Lot: 1804613)</b>											
VA24D3203-001	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	2.05	2.33	0.28	Diff <2x LOR	----
<b>Total Sulfides (QC Lot: 1804890)</b>											
VA24D3194-001	Anonymous	Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.0067	0.0073	0.0005	Diff <2x LOR	----
<b>Total Metals (QC Lot: 1805208)</b>											
KS2405158-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.192	0.191	0.208%	20%	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	0.00026	0.00023	0.00003	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
<b>Total Metals (QC Lot: 1805208) - continued</b>											
KS2405158-001	Anonymous	Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00379	0.00380	0.294%	20%	----
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.0241	0.0236	2.16%	20%	----
		Beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, total	7440-42-8	E420	0.010	mg/L	0.095	0.093	0.002	Diff <2x LOR	----
		Cadmium, total	7440-43-9	E420	0.0000950	mg/L	<0.0000950	<0.0000950	0	Diff <2x LOR	----
		Calcium, total	7440-70-2	E420	0.050	mg/L	138	134	2.81%	20%	----
		Cesium, total	7440-46-2	E420	0.000010	mg/L	0.000020	0.000019	0.0000010	Diff <2x LOR	----
		Chromium, total	7440-47-3	E420	0.000050	mg/L	0.00467	0.00461	0.00006	Diff <2x LOR	----
		Cobalt, total	7440-48-4	E420	0.00010	mg/L	0.00031	0.00031	0.000002	Diff <2x LOR	----
		Copper, total	7440-50-8	E420	0.00050	mg/L	0.00448	0.00438	0.00010	Diff <2x LOR	----
		Iron, total	7439-89-6	E420	0.010	mg/L	0.269	0.265	1.53%	20%	----
		Lead, total	7439-92-1	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0091	0.0088	0.0003	Diff <2x LOR	----
		Magnesium, total	7439-95-4	E420	0.100	mg/L	200	202	0.682%	20%	----
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.00598	0.00615	2.88%	20%	----
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.443	0.432	2.53%	20%	----
		Nickel, total	7440-02-0	E420	0.00050	mg/L	0.00173	0.00172	0.000006	Diff <2x LOR	----
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	0.065	0.066	0.0004	Diff <2x LOR	----
		Potassium, total	7440-09-7	E420	0.100	mg/L	33.0	32.9	0.132%	20%	----
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00415	0.00402	3.28%	20%	----
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.0326	0.0323	0.938%	20%	----
		Silicon, total	7440-21-3	E420	0.10	mg/L	11.1	10.7	4.09%	20%	----
		Silver, total	7440-22-4	E420	0.000010	mg/L	0.000722	0.000725	0.542%	20%	----
		Sodium, total	7440-23-5	E420	0.050	mg/L	95.9	96.7	0.868%	20%	----
		Strontium, total	7440-24-6	E420	0.00020	mg/L	1.76	1.76	0.103%	20%	----
		Sulfur, total	7704-34-9	E420	0.50	mg/L	281	273	2.98%	20%	----
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	0.00039	0.00027	0.00012	Diff <2x LOR	----
		Thallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Titanium, total	7440-32-6	E420	0.0117	mg/L	<0.0117	<0.0117	0	Diff <2x LOR	----
		Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.0102	0.0103	1.08%	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
<b>Total Metals (QC Lot: 1805208) - continued</b>											
KS2405158-001	Anonymous	Vanadium, total	7440-62-2	E420	0.00050	mg/L	0.00454	0.00455	0.000009	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	<0.0030	0	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
<b>Total Metals (QC Lot: 1808438)</b>											
VA24D3135-001	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	0.0000056	0.0000006	Diff <2x LOR	----
<b>Dissolved Metals (QC Lot: 1804776)</b>											
FJ2403714-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0041	0.0041	0.00002	Diff <2x LOR	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	0.00011	0.00010	0.000003	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00014	0.00013	0.000005	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.205	0.208	1.39%	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	0.016	0.016	0.0003	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.0000195	0.0000190	0.0000005	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	61.5	63.4	3.02%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00051	0.00060	0.00009	Diff <2x LOR	----
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	0.137	0.142	3.76%	20%	----
		Lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0105	0.0108	2.26%	20%	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	12.8	13.5	5.27%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.0191	0.0199	4.00%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000302	0.000312	0.000009	Diff <2x LOR	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.00094	0.00098	0.00004	Diff <2x LOR	----
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.050	mg/L	0.586	0.619	5.46%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00026	0.00026	0.000002	Diff <2x LOR	----
		Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.00118	0.00128	7.48%	20%	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	2.06	2.09	1.16%	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	6.43	6.59	2.52%	20%	----		
Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.178	0.179	0.175%	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
<b>Dissolved Metals (QC Lot: 1804776) - continued</b>											
FJ2403714-001	Anonymous	Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	20.0	20.3	1.17%	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	0.000256	0.000252	1.51%	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	0.0029	0.0034	0.0004	Diff <2x LOR	----
		Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
<b>Dissolved Metals (QC Lot: 1810272)</b>											
VA24D3207-001	WLNG EOP	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
<b>Speciated Metals (QC Lot: 1805814)</b>											
KS2405135-001	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
<b>Aggregate Organics (QC Lot: 1808567)</b>											
CG2418083-014	Anonymous	Phenols, total (4AAP)	----	E562	0.0010	mg/L	0.0095	0.0101	0.0006	Diff <2x LOR	----
<b>Volatile Organic Compounds (QC Lot: 1807953)</b>											
VA24D3099-001	Anonymous	Benzene	71-43-2	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromodichloromethane	75-27-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromoform	75-25-2	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Carbon tetrachloride	56-23-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chlorobenzene	108-90-7	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroethane	75-00-3	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroform	67-66-3	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloromethane	74-87-3	E611C	5.0	µg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Dibromochloromethane	124-48-1	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,2-	95-50-1	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,3-	541-73-1	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,4-	106-46-7	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,1-	75-34-3	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,2-	107-06-2	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, 1,1-	75-35-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, cis-1,2-	156-59-2	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----



Sub-Matrix: **Water**

Laboratory Duplicate (DUP) Report

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate Result	RPD(%) or Difference	Duplicate Limits	Qualifier
<b>Volatile Organic Compounds (QC Lot: 1807953) - continued</b>											
VA24D3099-001	Anonymous	Dichloroethylene, trans-1,2-	156-60-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloromethane	75-09-2	E611C	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Dichloropropane, 1,2-	78-87-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Styrene	100-42-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Tetrachloroethylene	127-18-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Toluene	108-88-3	E611C	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Trichloroethane, 1,1,1-	71-55-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,2-	79-00-5	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichlorofluoromethane	75-69-4	E611C	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Vinyl chloride	75-01-4	E611C	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611C	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611C	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
<b>Hydrocarbons (QC Lot: 1807951)</b>											
VA24D2927-001	Anonymous	VHw (C6-C10)	----	E581.VH+F1	100	µg/L	<100	<100	0.0%	30%	----
<b>Glycols (QC Lot: 1806562)</b>											
VA24D3167-001	Anonymous	Diethylene glycol	111-46-6	E680E	5.0	mg/L	<5.0	<5.0	0	Diff <2x LOR	----
		Ethylene glycol	107-21-1	E680E	5.0	mg/L	42.5	41.2	2.92%	30%	----
		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
<b>Physical Tests (QCLot: 1804796)</b>						
Alkalinity, total (as CaCO3)	---	E290	1	mg/L	<1.0	---
<b>Physical Tests (QCLot: 1804915)</b>						
Solids, total suspended [TSS]	---	E160	3	mg/L	<3.0	---
<b>Physical Tests (QCLot: 1804950)</b>						
Solids, total dissolved [TDS]	---	E162	10	mg/L	<10	---
<b>Anions and Nutrients (QCLot: 1804610)</b>						
Nitrogen, total	7727-37-9	E366	0.03	mg/L	<0.030	---
<b>Anions and Nutrients (QCLot: 1804611)</b>						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	---
<b>Anions and Nutrients (QCLot: 1804612)</b>						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	---
<b>Anions and Nutrients (QCLot: 1804798)</b>						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	---
<b>Anions and Nutrients (QCLot: 1804799)</b>						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	---
<b>Anions and Nutrients (QCLot: 1804800)</b>						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	---
<b>Anions and Nutrients (QCLot: 1804801)</b>						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	---
<b>Anions and Nutrients (QCLot: 1804802)</b>						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	---
<b>Anions and Nutrients (QCLot: 1804803)</b>						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	---
<b>Organic / Inorganic Carbon (QCLot: 1804613)</b>						
Carbon, dissolved organic [DOC]	---	E358-L	0.5	mg/L	<0.50	---
<b>Total Sulfides (QCLot: 1804890)</b>						
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	---
<b>Total Metals (QCLot: 1805208)</b>						
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
<b>Total Metals (QCLot: 1805208) - continued</b>						
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
<b>Total Metals (QCLot: 1808438)</b>						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
<b>Dissolved Metals (QCLot: 1804776)</b>						
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
<b>Dissolved Metals (QCLot: 1804776) - continued</b>						
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	----
<b>Dissolved Metals (QCLot: 1810272)</b>						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
<b>Speciated Metals (QCLot: 1805814)</b>						
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	<0.00050	----
<b>Aggregate Organics (QCLot: 1808567)</b>						
Phenols, total (4AAP)	----	E562	0.001	mg/L	<0.0010	----
<b>Volatile Organic Compounds (QCLot: 1807953)</b>						
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
<b>Volatile Organic Compounds (QCLot: 1807953) - continued</b>						
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	---
<b>Hydrocarbons (QCLot: 1807951)</b>						
VHw (C6-C10)	---	E581.VH+F1	100	µg/L	<100	---
<b>Hydrocarbons (QCLot: 1812653)</b>						
EPH (C10-C19)	---	E601A	250	µg/L	<250	---
EPH (C19-C32)	---	E601A	250	µg/L	<250	---
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 1812652)</b>						
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	---
Benzo(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**

<i>Analyte</i>	<i>CAS Number</i>	<i>Method</i>	<i>LOR</i>	<i>Unit</i>	<i>Result</i>	<i>Qualifier</i>
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 1812652) - continued</b>						
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	----
<b>Glycols (QCLot: 1806562)</b>						
Diethylene glycol	111-46-6	E680E	5	mg/L	<5.0	----
Ethylene glycol	107-21-1	E680E	5	mg/L	<5.0	----
Propylene glycol, 1,2-	57-55-6	E680E	5	mg/L	<5.0	----
Triethylene glycol	112-27-6	E680E	5	mg/L	<5.0	----



## Laboratory Control Sample (LCS) Report

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

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
<b>Physical Tests (QCLot: 1804796)</b>									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	104	85.0	115	----
<b>Physical Tests (QCLot: 1804915)</b>									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	99.5	85.0	115	----
<b>Physical Tests (QCLot: 1804950)</b>									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	108	85.0	115	----
<b>Anions and Nutrients (QCLot: 1804610)</b>									
Nitrogen, total	7727-37-9	E366	0.03	mg/L	0.5 mg/L	103	75.0	125	----
<b>Anions and Nutrients (QCLot: 1804611)</b>									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	86.5	80.0	120	----
<b>Anions and Nutrients (QCLot: 1804612)</b>									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	105	85.0	115	----
<b>Anions and Nutrients (QCLot: 1804798)</b>									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	101	90.0	110	----
<b>Anions and Nutrients (QCLot: 1804799)</b>									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	103	90.0	110	----
<b>Anions and Nutrients (QCLot: 1804800)</b>									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	107	85.0	115	----
<b>Anions and Nutrients (QCLot: 1804801)</b>									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	102	90.0	110	----
<b>Anions and Nutrients (QCLot: 1804802)</b>									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	101	90.0	110	----
<b>Anions and Nutrients (QCLot: 1804803)</b>									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	104	90.0	110	----
<b>Organic / Inorganic Carbon (QCLot: 1804613)</b>									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	98.1	80.0	120	----
<b>Total Sulfides (QCLot: 1804890)</b>									
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.08 mg/L	105	80.0	120	----
<b>Total Metals (QCLot: 1805208)</b>									



Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
<b>Total Metals (QCLot: 1805208) - continued</b>									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	98.5	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	99.5	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	98.3	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	99.6	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	96.6	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	102	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	99.9	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	97.3	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	102	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	98.2	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	107	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	101	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	100	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	101	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	105	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	101	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	95.4	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	98.3	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	108	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	96.8	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	101	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	103	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	91.9	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	94.5	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	104	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	103	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	105	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	98.8	80.0	120	----





Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
<b>Total Metals (QCLot: 1805208) - continued</b>									
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	101	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	102	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	103	80.0	120	----
<b>Total Metals (QCLot: 1808438)</b>									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	93.6	80.0	120	----
<b>Dissolved Metals (QCLot: 1804776)</b>									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	111	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	100	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	1 mg/L	106	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	102	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	102	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	93.0	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	102	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	106	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	101	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	101	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	102	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	101	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	107	80.0	120	----
Iron, dissolved	7439-89-6	E421	0.01	mg/L	1 mg/L	105	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.5 mg/L	101	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.25 mg/L	106	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	104	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	103	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.25 mg/L	101	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.5 mg/L	102	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	113	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	109	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	105	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	110	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	104	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	96.9	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	108	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.25 mg/L	100	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	99.0	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
<b>Dissolved Metals (QCLot: 1804776) - continued</b>									
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	114	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	105	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	89.2	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	98.9	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	98.8	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	101	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.5 mg/L	106	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	107	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	98.8	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	93.0	80.0	120	----
<b>Speciated Metals (QCLot: 1805814)</b>									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.25 mg/L	99.5	80.0	120	----
<b>Aggregate Organics (QCLot: 1808567)</b>									
Phenols, total (4AAP)	----	E562	0.001	mg/L	0.02 mg/L	99.7	85.0	115	----
<b>Volatile Organic Compounds (QCLot: 1807953)</b>									
Benzene	71-43-2	E611C	0.5	µg/L	100 µg/L	102	70.0	130	----
Bromodichloromethane	75-27-4	E611C	0.5	µg/L	100 µg/L	96.8	70.0	130	----
Bromoform	75-25-2	E611C	0.5	µg/L	100 µg/L	97.2	70.0	130	----
Carbon tetrachloride	56-23-5	E611C	0.5	µg/L	100 µg/L	107	70.0	130	----
Chlorobenzene	108-90-7	E611C	0.5	µg/L	100 µg/L	103	70.0	130	----
Chloroethane	75-00-3	E611C	0.5	µg/L	100 µg/L	116	60.0	140	----
Chloroform	67-66-3	E611C	0.5	µg/L	100 µg/L	102	70.0	130	----
Chloromethane	74-87-3	E611C	5	µg/L	100 µg/L	104	60.0	140	----
Dibromochloromethane	124-48-1	E611C	0.5	µg/L	100 µg/L	95.8	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611C	0.5	µg/L	100 µg/L	104	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611C	0.5	µg/L	100 µg/L	108	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611C	0.5	µg/L	100 µg/L	108	70.0	130	----
Dichloroethane, 1,1-	75-34-3	E611C	0.5	µg/L	100 µg/L	105	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611C	0.5	µg/L	100 µg/L	99.0	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611C	0.5	µg/L	100 µg/L	105	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611C	0.5	µg/L	100 µg/L	101	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611C	0.5	µg/L	100 µg/L	106	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
<b>Volatile Organic Compounds (QCLot: 1807953) - continued</b>									
Dichloromethane	75-09-2	E611C	1	µg/L	100 µg/L	98.5	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611C	0.5	µg/L	100 µg/L	100	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611C	0.5	µg/L	100 µg/L	93.0	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611C	0.5	µg/L	100 µg/L	88.9	70.0	130	----
Ethylbenzene	100-41-4	E611C	0.5	µg/L	100 µg/L	104	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	0.5	µg/L	100 µg/L	97.0	70.0	130	----
Styrene	100-42-5	E611C	0.5	µg/L	100 µg/L	103	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	0.5	µg/L	100 µg/L	102	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	0.2	µg/L	100 µg/L	87.7	70.0	130	----
Tetrachloroethylene	127-18-4	E611C	0.5	µg/L	100 µg/L	110	70.0	130	----
Toluene	108-88-3	E611C	0.4	µg/L	100 µg/L	102	70.0	130	----
Trichloroethane, 1,1,1-	71-55-6	E611C	0.5	µg/L	100 µg/L	104	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611C	0.5	µg/L	100 µg/L	93.3	70.0	130	----
Trichloroethylene	79-01-6	E611C	0.5	µg/L	100 µg/L	107	70.0	130	----
Trichlorofluoromethane	75-69-4	E611C	0.5	µg/L	100 µg/L	111	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	108	70.0	130	----
Xylene, o-	95-47-6	E611C	0.3	µg/L	100 µg/L	104	70.0	130	----
<b>Hydrocarbons (QCLot: 1807951)</b>									
VHw (C6-C10)	---	E581.VH+F1	100	µg/L	6310 µg/L	76.3	70.0	130	----
<b>Hydrocarbons (QCLot: 1812653)</b>									
EPH (C10-C19)	---	E601A	250	µg/L	6490 µg/L	101	70.0	130	----
EPH (C19-C32)	---	E601A	250	µg/L	3360 µg/L	103	70.0	130	----
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 1812652)</b>									
Acenaphthene	83-32-9	E641A	0.01	µg/L	0.5 µg/L	98.8	60.0	130	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	0.5 µg/L	101	60.0	130	----
Acridine	260-94-6	E641A	0.01	µg/L	0.5 µg/L	107	60.0	130	----
Anthracene	120-12-7	E641A	0.01	µg/L	0.5 µg/L	100	60.0	130	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	0.5 µg/L	97.4	60.0	130	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	0.5 µg/L	101	60.0	130	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	0.5 µg/L	100	60.0	130	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	0.5 µg/L	101	60.0	130	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	0.5 µg/L	93.8	60.0	130	----
Chrysene	218-01-9	E641A	0.01	µg/L	0.5 µg/L	104	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
<b>Polycyclic Aromatic Hydrocarbons (QCLot: 1812652) - continued</b>									
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	0.5 µg/L	105	60.0	130	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	0.5 µg/L	92.9	60.0	130	----
Fluorene	86-73-7	E641A	0.01	µg/L	0.5 µg/L	88.4	60.0	130	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	0.5 µg/L	97.0	60.0	130	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	0.5 µg/L	89.6	60.0	130	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	0.5 µg/L	105	60.0	130	----
Naphthalene	91-20-3	E641A	0.05	µg/L	0.5 µg/L	103	50.0	130	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	0.5 µg/L	102	60.0	130	----
Pyrene	129-00-0	E641A	0.01	µg/L	0.5 µg/L	71.2	60.0	130	----
Quinoline	91-22-5	E641A	0.05	µg/L	0.5 µg/L	118	60.0	130	----
<b>Glycols (QCLot: 1806562)</b>									
Diethylene glycol	111-46-6	E680E	5	mg/L	25 mg/L	100	70.0	130	----
Ethylene glycol	107-21-1	E680E	5	mg/L	25 mg/L	98.6	70.0	130	----
Propylene glycol, 1,2-	57-55-6	E680E	5	mg/L	25 mg/L	91.4	70.0	130	----
Triethylene glycol	112-27-6	E680E	5	mg/L	25 mg/L	95.5	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
<b>Anions and Nutrients (QCLot: 1804610)</b>										
VA24D3203-002	Anonymous	Nitrogen, total	7727-37-9	E366	0.409 mg/L	0.4 mg/L	102	70.0	130	----
<b>Anions and Nutrients (QCLot: 1804611)</b>										
VA24D3203-002	Anonymous	Phosphorus, total	7723-14-0	E372-U	0.0468 mg/L	0.05 mg/L	93.7	70.0	130	----
<b>Anions and Nutrients (QCLot: 1804612)</b>										
VA24D3203-002	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.101 mg/L	0.1 mg/L	101	75.0	125	----
<b>Anions and Nutrients (QCLot: 1804798)</b>										
KS2405158-002	Anonymous	Fluoride	16984-48-8	E235.F	4.98 mg/L	5 mg/L	99.6	75.0	125	----
<b>Anions and Nutrients (QCLot: 1804799)</b>										
KS2405158-002	Anonymous	Chloride	16887-00-6	E235.Cl	507 mg/L	500 mg/L	101	75.0	125	----
<b>Anions and Nutrients (QCLot: 1804800)</b>										
KS2405158-002	Anonymous	Bromide	24959-67-9	E235.Br-L	2.69 mg/L	2.5 mg/L	108	75.0	125	----
<b>Anions and Nutrients (QCLot: 1804801)</b>										
KS2405158-002	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	12.6 mg/L	12.5 mg/L	101	75.0	125	----
<b>Anions and Nutrients (QCLot: 1804802)</b>										
KS2405158-002	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	2.54 mg/L	2.5 mg/L	102	75.0	125	----
<b>Anions and Nutrients (QCLot: 1804803)</b>										
KS2405158-002	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	506 mg/L	500 mg/L	101	75.0	125	----
<b>Organic / Inorganic Carbon (QCLot: 1804613)</b>										
VA24D3203-002	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	5.30 mg/L	5 mg/L	106	70.0	130	----
<b>Total Sulfides (QCLot: 1804890)</b>										
VA24D3203-001	Anonymous	Sulfide, total (as S)	18496-25-8	E395	0.202 mg/L	0.2 mg/L	101	75.0	125	----
<b>Total Metals (QCLot: 1805208)</b>										
KS2405158-002	Anonymous	Aluminum, total	7429-90-5	E420	ND mg/L	----	ND	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0204 mg/L	0.02 mg/L	102	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0213 mg/L	0.02 mg/L	106	70.0	130	----
		Barium, total	7440-39-3	E420	0.0186 mg/L	0.02 mg/L	93.0	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0390 mg/L	0.04 mg/L	97.6	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.00939 mg/L	0.01 mg/L	93.9	70.0	130	----
		Boron, total	7440-42-8	E420	0.100 mg/L	0.1 mg/L	100	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00373 mg/L	0.004 mg/L	93.2	70.0	130	----
		Calcium, total	7440-70-2	E420	ND mg/L	----	ND	70.0	130	----
		Cesium, total	7440-46-2	E420	0.00960 mg/L	0.01 mg/L	96.0	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0385 mg/L	0.04 mg/L	96.3	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
<b>Total Metals (QCLot: 1805208) - continued</b>										
KS2405158-002	Anonymous	Cobalt, total	7440-48-4	E420	0.0193 mg/L	0.02 mg/L	96.3	70.0	130	----
		Copper, total	7440-50-8	E420	0.0179 mg/L	0.02 mg/L	89.7	70.0	130	----
		Iron, total	7439-89-6	E420	1.91 mg/L	2 mg/L	95.6	70.0	130	----
		Lead, total	7439-92-1	E420	0.0188 mg/L	0.02 mg/L	94.1	70.0	130	----
		Lithium, total	7439-93-2	E420	0.0956 mg/L	0.1 mg/L	95.6	70.0	130	----
		Magnesium, total	7439-95-4	E420	ND mg/L	----	ND	70.0	130	----
		Manganese, total	7439-96-5	E420	ND mg/L	----	ND	70.0	130	----
		Molybdenum, total	7439-98-7	E420	ND mg/L	----	ND	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0376 mg/L	0.04 mg/L	93.9	70.0	130	----
		Phosphorus, total	7723-14-0	E420	10.4 mg/L	10 mg/L	104	70.0	130	----
		Potassium, total	7440-09-7	E420	ND mg/L	----	ND	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0198 mg/L	0.02 mg/L	99.1	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0424 mg/L	0.04 mg/L	106	70.0	130	----
		Silicon, total	7440-21-3	E420	ND mg/L	----	ND	70.0	130	----
		Silver, total	7440-22-4	E420	0.00384 mg/L	0.004 mg/L	96.0	70.0	130	----
		Sodium, total	7440-23-5	E420	ND mg/L	----	ND	70.0	130	----
		Strontium, total	7440-24-6	E420	ND mg/L	----	ND	70.0	130	----
		Sulfur, total	7704-34-9	E420	ND mg/L	----	ND	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0422 mg/L	0.04 mg/L	106	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00376 mg/L	0.004 mg/L	94.1	70.0	130	----
		Tin, total	7440-31-5	E420	0.0198 mg/L	0.02 mg/L	98.9	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0408 mg/L	0.04 mg/L	102	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0208 mg/L	0.02 mg/L	104	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00392 mg/L	0.004 mg/L	98.1	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.0997 mg/L	0.1 mg/L	99.7	70.0	130	----
		Zinc, total	7440-66-6	E420	0.391 mg/L	0.4 mg/L	97.7	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0410 mg/L	0.04 mg/L	102	70.0	130	----
<b>Total Metals (QCLot: 1808438)</b>										
VA24D3136-001	Anonymous	Mercury, total	7439-97-6	E508	0.0000945 mg/L	0 mg/L	94.5	70.0	130	----
<b>Dissolved Metals (QCLot: 1804776)</b>										
FJ2403714-002	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.215 mg/L	0.2 mg/L	107	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0200 mg/L	0.02 mg/L	100	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0214 mg/L	0.02 mg/L	107	70.0	130	----
		Barium, dissolved	7440-39-3	E421	ND mg/L	----	ND	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.0401 mg/L	0.04 mg/L	100	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.00890 mg/L	0.01 mg/L	89.0	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.099 mg/L	0.1 mg/L	98.8	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00409 mg/L	0.004 mg/L	102	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.00994 mg/L	0.01 mg/L	99.4	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0405 mg/L	0.04 mg/L	101	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0195 mg/L	0.02 mg/L	97.3	70.0	130	----
		Copper, dissolved	7440-50-8	E421	0.0193 mg/L	0.02 mg/L	96.4	70.0	130	----



Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Dissolved Metals (QCLot: 1804776) - continued</b>										
FJ2403714-002	Anonymous	Iron, dissolved	7439-89-6	E421	1.94 mg/L	2 mg/L	96.9	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0195 mg/L	0.02 mg/L	97.7	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.101 mg/L	0.1 mg/L	101	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	0.0204 mg/L	0.02 mg/L	102	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0385 mg/L	0.04 mg/L	96.4	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	11.3 mg/L	10 mg/L	113	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	4.25 mg/L	4 mg/L	106	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.0208 mg/L	0.02 mg/L	104	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0434 mg/L	0.04 mg/L	108	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	9.56 mg/L	10 mg/L	95.6	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00409 mg/L	0.004 mg/L	102	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	0.00400 mg/L	0.004 mg/L	99.9	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0171 mg/L	0.02 mg/L	85.7	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0203 mg/L	0.02 mg/L	101	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0409 mg/L	0.04 mg/L	102	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0197 mg/L	0.02 mg/L	98.3	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	0.00400 mg/L	0.004 mg/L	100	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.104 mg/L	0.1 mg/L	104	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.392 mg/L	0.4 mg/L	98.1	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0421 mg/L	0.04 mg/L	105	70.0	130	----
<b>Dissolved Metals (QCLot: 1810272)</b>										
VA24D3208-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000954 mg/L	0 mg/L	95.4	70.0	130	----
<b>Speciated Metals (QCLot: 1805814)</b>										
KS2405135-002	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.256 mg/L	0.25 mg/L	102	70.0	130	----
<b>Aggregate Organics (QCLot: 1808567)</b>										
EQ2411000-008	Anonymous	Phenols, total (4AAP)	----	E562	0.0201 mg/L	0.02 mg/L	100	75.0	125	----
<b>Volatile Organic Compounds (QCLot: 1807953)</b>										
VA24D3099-002	Anonymous	Benzene	71-43-2	E611C	102 µg/L	100 µg/L	102	60.0	140	----
		Bromodichloromethane	75-27-4	E611C	99.9 µg/L	100 µg/L	99.9	60.0	140	----
		Bromoform	75-25-2	E611C	105 µg/L	100 µg/L	105	60.0	140	----
		Carbon tetrachloride	56-23-5	E611C	104 µg/L	100 µg/L	104	60.0	140	----
		Chlorobenzene	108-90-7	E611C	102 µg/L	100 µg/L	102	60.0	140	----
		Chloroethane	75-00-3	E611C	111 µg/L	100 µg/L	111	50.0	150	----
		Chloroform	67-66-3	E611C	103 µg/L	100 µg/L	103	60.0	140	----
		Chloromethane	74-87-3	E611C	90.1 µg/L	100 µg/L	90.1	50.0	150	----
		Dibromochloromethane	124-48-1	E611C	101 µg/L	100 µg/L	101	60.0	140	----






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
<b>Volatile Organic Compounds (QCLot: 1807953) - continued</b>										
VA24D3099-002	Anonymous	Dichlorobenzene, 1,2-	95-50-1	E611C	103 µg/L	100 µg/L	103	60.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611C	102 µg/L	100 µg/L	102	60.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611C	103 µg/L	100 µg/L	103	60.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611C	105 µg/L	100 µg/L	105	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611C	104 µg/L	100 µg/L	104	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611C	98.3 µg/L	100 µg/L	98.3	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611C	101 µg/L	100 µg/L	101	60.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611C	100 µg/L	100 µg/L	100	60.0	140	----
		Dichloromethane	75-09-2	E611C	99.6 µg/L	100 µg/L	99.6	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611C	103 µg/L	100 µg/L	103	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611C	89.9 µg/L	100 µg/L	89.9	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611C	85.3 µg/L	100 µg/L	85.3	60.0	140	----
		Ethylbenzene	100-41-4	E611C	100 µg/L	100 µg/L	100	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611C	97.8 µg/L	100 µg/L	97.8	60.0	140	----
		Styrene	100-42-5	E611C	102 µg/L	100 µg/L	102	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611C	104 µg/L	100 µg/L	104	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611C	95.4 µg/L	100 µg/L	95.4	60.0	140	----
		Tetrachloroethylene	127-18-4	E611C	104 µg/L	100 µg/L	104	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	100 µg/L	100 µg/L	100	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611C	99.4 µg/L	100 µg/L	99.4	60.0	140	----
		Trichloroethylene	79-01-6	E611C	104 µg/L	100 µg/L	104	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611C	102 µg/L	100 µg/L	102	50.0	150	----
		Vinyl chloride	75-01-4	E611C	93.2 µg/L	100 µg/L	93.2	50.0	150	----
		Xylene, m+p-	179601-23-1	E611C	207 µg/L	200 µg/L	104	60.0	140	----
		Xylene, o-	95-47-6	E611C	102 µg/L	100 µg/L	102	60.0	140	----
<b>Hydrocarbons (QCLot: 1807951)</b>										
VA24D2927-002	Anonymous	VHw (C6-C10)	----	E581.VH+F1	4250 µg/L	6310 µg/L	67.4	60.0	140	----





 <b>Eagle Mountain - Woodfibre Gas Pipeline Project Waste Discharge Permit PE-110163 Report</b>	Reporting Week	Dec 9 <sup>th</sup> to Dec 15 <sup>th</sup> , 2024
	Report #	38
	Appendix C	C-4

## Woodfibre Site WTP Discharge Field Notes and Logs



# FortisBC Eagle Mountain-Woodfibre Gas Pipeline

## Water Discharge Authorization Water Quality Monitoring

2024-12-10-Shafiei-71816

<b>Project Component:</b>	Tunnel	<b>Site Name:</b>	WLNG Treatment Discharge
<b>Inspection Date:</b>	12/10/2024	<b>Location:</b>	WLNG
<b>Triton QP:</b>	Farshad Shafiei	<b>Latitude/Longitude:</b>	49.669515      -123.249821
<b>Temperature(c):</b> Low -3      High 7		<b>Permit:</b>	PE 110136
<b>Weather Conditions:</b>	Clear	<b>Ground Conditions:</b>	Wet

### Observations

**Time:** 10:16:19      **Flow Volume (visual):** N/A

**Notes:**

**Odour Detected?:** No      **Notes:**

**Unusual Colour?:** No      **Notes:**

**Unusual Observations?:** No      **Notes:**

**Sheen on Water?:** No      **Notes:**

### Samples Collected - Parameters

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

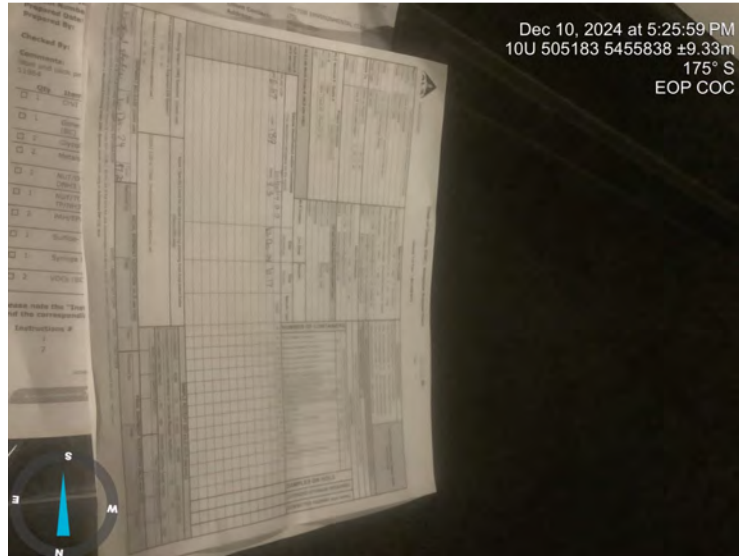
### Logger Maintenance

<b>Logger Maintenance Performed?</b>	No	<b>Photo of COC with Lab Signature?</b>	Yes
<b>Describe Logger Maintenance</b>			

Photos



**Photo:** 1  
**Location:** WLNG EOP  
**Description:**



**Photo:** 2  
**Location:** EOP COC  
**Description:**



2024-12-10-Shafiei-71816

**Sign Off**

**Report Prepared By:** Farshad Shafiei

**Report Reviewed:** Yes


**Report Reviewer:**

**Professional(s) of Record:** N/A

**Name:**

**Designation:**

**Designation Number:**

		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>

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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. 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 December 9<sup>th</sup> was 33,594 m<sup>3</sup>.



**Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope**

<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>

**Daily Volume Summary:**

**Table 1: Discharge Volumes Daily Summary**

<b>Date</b>	<b>Location</b>	<b>Volume (m3)</b>	<b>Comments</b>
December 9	WoodFibre (WF)	364	None
December 10	WF	381	None
December 11	WF	404	None
December 12	WF	418	None
December 13	WF	396	None
December 14	WF	409	None
December 15	WF	374	None
<b>Total</b>		<b>2,746</b>	<b>None</b>

<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>

**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)
12/9/2024	1:45:00	7.7	0.790	0	33,603	10.7	119
12/9/2024	2:00:00	7.7	0.798	0	33,615	10.6	116
12/9/2024	2:15:00	7.7	0.805	0	33,627	10.5	114
12/9/2024	2:30:00	7.7	0.820	0	33,639	10.4	113
12/9/2024	5:00:00	7.7	0.760	0	33,654	10.4	116
12/9/2024	5:15:00	7.7	0.794	0	33,666	10.5	118
12/9/2024	5:30:00	7.7	0.786	0	33,677	10.5	118
12/9/2024	5:45:00	7.7	0.764	0	33,689	10.4	115
12/9/2024	6:00:00	7.7	0.775	0	33,701	10.3	114
12/9/2024	8:15:00	7.7	0.779	0	33,708	10.3	117
12/9/2024	8:30:00	7.7	0.790	0	33,720	10.3	114
12/9/2024	8:45:00	7.7	0.809	0	33,732	10.3	115
12/9/2024	9:00:00	7.7	0.786	0	33,744	10.3	116
12/9/2024	11:30:00	7.7	0.786	0	33,759	10.7	119
12/9/2024	11:45:00	7.7	0.782	0	33,770	10.5	116
12/9/2024	12:00:00	7.7	0.779	0	33,782	10.4	114
12/9/2024	12:15:00	7.7	0.775	0	33,794	10.3	113
12/9/2024	13:15:00	7.7	0.764	0	33,807	10.3	116
12/9/2024	14:15:00	7.7	0.767	0	33,811	10.9	118



<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/9/2024	14:30:00	7.7	0.794	0	33,822	10.6	118
12/9/2024	14:45:00	7.7	0.318	0	33,831	10.9	116
12/9/2024	15:45:00	7.7	0.714	0	33,843	10.3	113
12/9/2024	16:00:00	7.8	0.624	0	33,853	10.2	112
12/9/2024	19:00:00	7.7	0.692	2.1	33,873	10.4	119
12/9/2024	19:15:00	7.8	0.684	1	33,883	10.4	118
12/9/2024	19:30:00	7.8	0.688	1	33,894	10.4	119
12/9/2024	19:45:00	7.8	0.677	0	33,904	10.4	119
12/9/2024	22:00:00	7.7	0.677	0	33,917	10.3	119
12/9/2024	22:15:00	7.8	0.665	0	33,927	10.3	118
12/9/2024	22:30:00	7.8	0.696	0	33,937	10.3	118
12/9/2024	22:45:00	7.8	0.673	0	33,947	10.3	119
12/9/2024	23:00:00	7.8	0.662	0	33,957	10.2	117
12/10/2024	1:15:00	7.7	0.665	0	33,964	10.1	116
12/10/2024	1:30:00	7.8	0.673	0	33,974	9.8	114
12/10/2024	1:45:00	7.8	0.673	0	33,984	9.7	114
12/10/2024	2:00:00	7.8	0.650	0	33,994	9.7	113
12/10/2024	2:15:00	7.8	0.816	0	34,001	9.7	113
12/10/2024	2:30:00	7.8	0.858	0	34,014	9.6	116
12/10/2024	2:45:00	7.8	0.843	0	34,027	9.6	116
12/10/2024	5:00:00	7.7	0.832	0	34,037	9.6	117
12/10/2024	5:15:00	7.8	0.805	0	34,049	9.6	116
12/10/2024	5:30:00	7.8	0.813	0	34,062	9.5	114
12/10/2024	7:45:00	7.7	0.801	0	34,077	9.1	115
12/10/2024	8:00:00	7.8	0.813	0	34,090	9.5	116

<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/10/2024	8:15:00	7.8	0.408	0	34,102	9.5	116
12/10/2024	8:30:00	7.8	0.832	0	34,107	10	116
12/10/2024	8:45:00	7.8	0.805	0	34,119	9.5	116
12/10/2024	9:00:00	7.8	0.828	0	34,131	9.5	116
12/10/2024	11:15:00	7.7	0.790	0	34,140	9.3	116
12/10/2024	11:30:00	7.8	0.839	0	34,152	9.7	117
12/10/2024	11:45:00	7.8	0.805	0	34,164	9.7	118
12/10/2024	12:00:00	7.8	0.798	0	34,176	9.7	117
12/10/2024	14:15:00	7.8	0.805	0	34,190	9.9	117
12/10/2024	15:15:00	7.7	0.276	28.4	34,192	13.5	119
12/10/2024	15:30:00	7.8	0.786	0.4	34,204	10.2	119
12/10/2024	15:45:00	7.8	0.786	12.4	34,216	10.2	118
12/10/2024	16:00:00	7.8	0.828	0	34,228	10.2	119
12/10/2024	18:00:00	7.7	0.431	13.4	34,236	16.6	119
12/10/2024	18:15:00	7.7	0.605	38	34,242	10.5	119
12/10/2024	18:30:00	7.7	0.873	0	34,255	10.3	119
12/10/2024	18:45:00	7.8	0.892	0	34,268	10.2	119
12/10/2024	19:00:00	7.8	0.911	0	34,281	10.2	119
12/10/2024	21:30:00	7.8	0.892	0	34,305	9.9	116
12/10/2024	21:45:00	7.7	0.881	0	34,318	9.9	116
12/10/2024	22:00:00	7.8	0.877	0	34,331	9.9	116
12/11/2024	0:30:00	7.8	0.877	0	34,344	10.2	118
12/11/2024	0:45:00	7.8	0.903	0	34,357	10.1	116
12/11/2024	1:00:00	7.8	0.873	0	34,370	10	114
12/11/2024	1:15:00	7.8	0.881	0	34,384	10	114

<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/11/2024	2:00:00	7.8	0.847	0	34,397	10	115
12/11/2024	2:15:00	7.8	0.858	0	34,410	10	114
12/11/2024	5:00:00	7.7	0.896	0	34,422	10	114
12/11/2024	5:15:00	7.8	0.869	0	34,435	9.9	114
12/11/2024	5:30:00	7.8	0.862	0	34,448	10	116
12/11/2024	5:45:00	7.8	0.873	0	34,460	10	114
12/11/2024	8:00:00	7.7	0.866	0	34,468	10.1	119
12/11/2024	8:15:00	7.8	0.873	0	34,481	10.1	116
12/11/2024	8:30:00	7.7	0.438	0	34,491	10.3	114
12/11/2024	8:45:00	7.8	0.832	0	34,498	9.9	114
12/11/2024	9:00:00	7.8	0.862	0	34,511	9.8	112
12/11/2024	9:15:00	7.8	0.877	0	34,524	9.7	111
12/11/2024	11:45:00	7.7	0.881	0	34,545	10.2	118
12/11/2024	12:00:00	7.8	0.851	0	34,558	10.1	118
12/11/2024	12:15:00	7.8	0.862	0	34,571	10.1	116
12/11/2024	12:30:00	7.8	0.824	0	34,584	10.1	116
12/11/2024	14:45:00	7.7	0.858	0	34,596	10.3	113
12/11/2024	15:00:00	7.7	0.881	0	34,609	10.3	114
12/11/2024	15:15:00	7.7	0.881	0	34,622	10.4	115
12/11/2024	15:45:00	7.7	0.877	0	34,638	10.5	113
12/11/2024	18:15:00	7.7	0.847	0	34,653	10.8	119
12/11/2024	18:30:00	7.8	0.869	0	34,666	10.7	118
12/11/2024	18:45:00	7.8	0.900	0	34,679	10.7	119
12/11/2024	19:00:00	7.8	0.866	0	34,692	10.7	119
12/11/2024	21:15:00	7.7	0.858	0	34,695	11.3	119

<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/11/2024	21:30:00	7.7	0.858	0	34,708	10.6	119
12/11/2024	21:45:00	7.8	0.858	0	34,721	10.4	118
12/11/2024	22:00:00	7.8	0.877	0	34,734	10.4	118
12/12/2024	0:30:00	7.7	0.892	0	34,754	10.1	116
12/12/2024	0:45:00	7.7	0.888	0	34,767	10.1	117
12/12/2024	1:00:00	7.8	0.869	0	34,780	10.1	117
12/12/2024	1:15:00	7.8	0.881	0	34,793	10.2	117
12/12/2024	3:30:00	7.7	0.869	0	34,807	10.1	116
12/12/2024	3:45:00	7.7	0.854	0	34,816	10	116
12/12/2024	4:00:00	7.8	0.851	0	34,829	9.9	116
12/12/2024	4:15:00	7.8	0.862	0	34,842	9.9	117
12/12/2024	4:30:00	7.8	0.835	0	34,855	9.9	118
12/12/2024	6:45:00	7.7	0.835	0	34,857	12	117
12/12/2024	7:00:00	7.7	0.881	0	34,870	9.9	118
12/12/2024	7:15:00	7.8	0.881	0	34,883	9.9	118
12/12/2024	7:30:00	7.8	0.885	0	34,896	9.8	115
12/12/2024	9:45:00	7.7	0.847	0	34,908	10.2	119
12/12/2024	10:00:00	7.7	0.843	0	34,921	10	119
12/12/2024	10:15:00	7.7	0.457	0	34,932	10.4	118
12/12/2024	10:30:00	7.8	0.869	0	34,940	10.1	118
12/12/2024	13:00:00	7.7	0.903	4.1	34,957	10.1	115
12/12/2024	13:15:00	7.8	0.873	1.1	34,970	10	113
12/12/2024	13:30:00	7.8	0.881	0.3	34,983	9.9	113
12/12/2024	13:45:00	7.8	0.869	0	34,996	9.9	113
12/12/2024	16:00:00	7.7	0.881	0	35,005	10.1	116

<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/12/2024	16:15:00	7.7	0.843	0	35,018	10.2	116
12/12/2024	16:30:00	7.8	0.900	0	35,032	10.3	117
12/12/2024	16:45:00	7.7	0.877	0	35,041	10.5	116
12/12/2024	17:00:00	7.8	0.888	0	35,054	10.3	116
12/12/2024	19:15:00	7.7	0.866	0	35,071	10.3	119
12/12/2024	19:30:00	7.7	0.873	0	35,084	10.3	118
12/12/2024	19:45:00	7.8	0.869	0	35,097	10.3	119
12/12/2024	20:00:00	7.8	0.866	0	35,110	10.3	119
12/12/2024	22:15:00	7.7	0.858	0	35,122	10.3	118
12/12/2024	22:30:00	7.7	0.862	0	35,135	10.3	118
12/12/2024	22:45:00	7.7	0.866	0	35,148	10.3	118
12/12/2024	23:00:00	7.8	0.843	0	35,161	10.3	119
12/13/2024	1:15:00	7.6	0.862	0	35,163	11.6	118
12/13/2024	1:30:00	7.7	0.885	0	35,176	10.3	116
12/13/2024	1:45:00	7.7	0.888	0	35,189	10.2	117
12/13/2024	2:00:00	7.8	0.858	0	35,202	10.1	114
12/13/2024	4:30:00	7.7	0.835	0	35,220	9.9	115
12/13/2024	4:45:00	7.7	0.873	0	35,233	10.1	117
12/13/2024	5:00:00	7.7	0.873	0	35,246	10.1	116
12/13/2024	5:15:00	7.8	0.881	0	35,259	10.2	116
12/13/2024	7:45:00	7.7	0.896	0	35,277	10	115
12/13/2024	8:00:00	7.7	0.885	0	35,290	10.1	117
12/13/2024	8:15:00	7.7	0.858	0	35,303	10.1	116
12/13/2024	8:30:00	7.8	0.888	0	35,316	10.1	116
12/13/2024	9:45:00	7.7	0.420	0	35,326	10.4	119

<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
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Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/13/2024	10:00:00	7.7	0.839	0	35,337	10.3	118
12/13/2024	10:15:00	7.7	0.854	0	35,349	10.3	119
12/13/2024	13:00:00	7.7	0.839	0	35,363	10.1	119
12/13/2024	13:15:00	7.7	0.851	0	35,376	10.3	119
12/13/2024	13:30:00	7.7	0.858	0	35,389	10.2	118
12/13/2024	13:45:00	7.8	0.873	0	35,402	10.2	118
12/13/2024	16:15:00	7.7	0.843	0.3	35,422	10.2	116
12/13/2024	16:30:00	7.7	0.858	0	35,434	10.1	114
12/13/2024	16:45:00	7.7	0.450	0	35,446	10.2	114
12/13/2024	19:15:00	7.7	0.907	0	35,467	10.4	119
12/13/2024	19:30:00	7.7	0.877	0	35,481	10.3	119
12/13/2024	19:45:00	7.7	0.922	0	35,494	10.3	119
12/13/2024	22:15:00	7.7	0.869	0	35,515	10	116
12/13/2024	22:30:00	7.7	0.896	0	35,528	10.1	118
12/13/2024	22:45:00	7.7	0.922	0	35,542	10.2	116
12/13/2024	23:00:00	7.8	0.926	0	35,556	10.2	117
12/14/2024	0:45:00	7.7	0.798	0	35,565	9.8	112
12/14/2024	1:00:00	7.7	0.786	0	35,577	9.8	114
12/14/2024	1:15:00	7.7	0.816	0	35,590	9.8	113
12/14/2024	1:30:00	7.8	0.801	0	35,602	9.8	114
12/14/2024	4:00:00	7.7	0.801	0	35,619	9.9	116
12/14/2024	4:15:00	7.7	0.798	0	35,632	10	117
12/14/2024	4:30:00	7.7	0.801	0	35,644	10.1	116
12/14/2024	6:15:00	7.6	0.805	0	35,654	11.1	116
12/14/2024	6:30:00	7.7	0.801	0	35,666	9.9	115

<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/14/2024	6:45:00	7.7	0.798	0	35,678	9.8	114
12/14/2024	7:00:00	7.7	0.805	0	35,690	9.9	117
12/14/2024	8:45:00	7.5	0.801	0	35,695	14.3	115
12/14/2024	9:00:00	7.6	0.786	0.1	35,707	10	113
12/14/2024	9:15:00	7.6	0.786	0	35,715	10.6	114
12/14/2024	9:30:00	7.7	0.854	0.4	35,722	9.7	114
12/14/2024	9:45:00	7.7	0.877	0	35,735	9.7	116
12/14/2024	10:00:00	7.7	0.858	0	35,748	9.8	117
12/14/2024	12:15:00	7.7	0.835	0	35,759	10.1	119
12/14/2024	12:30:00	7.7	0.877	0	35,772	10.1	119
12/14/2024	12:45:00	7.7	0.873	0	35,785	10.1	118
12/14/2024	15:00:00	7.7	0.847	0	35,800	10.4	119
12/14/2024	15:15:00	7.7	0.858	0.4	35,813	10.2	119
12/14/2024	15:30:00	7.7	0.858	1	35,826	10.1	119
12/14/2024	15:45:00	7.7	0.854	0.9	35,839	10.2	119
12/14/2024	17:45:00	7.6	0.431	0.2	35,849	10.7	119
12/14/2024	18:00:00	7.7	0.862	1.7	35,860	10.2	119
12/14/2024	18:15:00	7.7	0.854	1.5	35,873	10.2	119
12/14/2024	18:30:00	7.7	0.854	1.7	35,886	10.1	119
12/14/2024	18:45:00	7.7	0.851	1.6	35,899	10.1	119
12/14/2024	21:00:00	7.7	0.892	1.4	35,907	10	115
12/14/2024	21:15:00	7.7	0.892	1.1	35,921	10	114
12/14/2024	22:30:00	7.7	0.903	0.5	35,932	10.1	117
12/14/2024	22:45:00	7.7	0.888	0.1	35,946	10.2	117
12/14/2024	23:00:00	7.7	0.888	0	35,959	10.3	116

<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
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Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/15/2024	1:15:00	7.6	0.873	0	35,968	11.2	118
12/15/2024	1:30:00	7.7	0.873	0	35,981	10.5	119
12/15/2024	1:45:00	7.7	0.888	0	35,995	10.5	118
12/15/2024	2:00:00	7.7	0.903	0	36,008	10.4	118
12/15/2024	4:15:00	7.7	0.858	8.8	36,025	10.2	116
12/15/2024	4:30:00	7.7	0.877	5.3	36,038	10.1	116
12/15/2024	4:45:00	7.7	0.858	3	36,051	10.1	116
12/15/2024	5:00:00	7.7	0.854	0	36,064	10.1	116
12/15/2024	7:00:00	7.6	0.854	0	36,066	12.6	119
12/15/2024	7:15:00	7.7	0.881	0	36,079	10.2	117
12/15/2024	7:30:00	7.7	0.862	0	36,092	10	116
12/15/2024	7:45:00	7.7	0.866	0	36,105	10.1	117
12/15/2024	10:15:00	7.6	0.416	8.6	36,119	10.4	119
12/15/2024	10:30:00	7.7	0.820	4.7	36,126	10.6	117
12/15/2024	10:45:00	7.7	0.881	0	36,139	10.1	116
12/15/2024	11:00:00	7.7	0.892	0	36,152	10.2	119
12/15/2024	11:15:00	7.7	0.843	0	36,166	10.2	118
12/15/2024	13:00:00	7.6	0.457	0	36,170	11.8	121
12/15/2024	13:15:00	7.6	0.537	0	36,177	11	119
12/15/2024	13:30:00	7.7	0.862	0	36,189	10.4	119
12/15/2024	13:45:00	7.7	0.873	0	36,202	10.4	116
12/15/2024	16:00:00	7.7	0.877	13	36,216	10.7	118
12/15/2024	16:15:00	7.7	0.877	8.8	36,229	10.7	119
12/15/2024	16:30:00	7.7	0.877	5.6	36,242	10.6	117
12/15/2024	16:45:00	7.7	0.847	3.2	36,255	10.5	116





**Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope**

<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/15/2024	19:00:00	7.6	0.824	0	36,261	10.9	119
12/15/2024	19:15:00	7.7	0.847	0	36,274	10.5	119
12/15/2024	20:45:00	7.5	0.677	0	36,283	14.8	116
12/15/2024	21:00:00	7.7	0.828	0	36,295	10.1	113
12/15/2024	21:15:00	7.7	0.820	0	36,307	10	112
12/15/2024	21:30:00	7.7	0.820	0	36,320	10	114
12/15/2024	23:30:00	7.7	0.820	7.7	36,330	10.1	118
12/15/2024	23:45:00	7.7	0.820	0	36,340	10.4	119

<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>


**Table 3. In-Situ Parameters**

Date	Time	Temperature °C	DO mg/L	Conductivity SPC-uS/cm	SAL-ppt	pH	ORP (mV)	NTU
12/9/2024	05:21:07PM	11.2	10.60	122.3	0.06	7.25	175.8	1.30
12/10/2024	03:02:44PM	10.7	12.82	128.7	0.06	7.62	127.1	3.58
12/11/2024	08:18:12AM	9.9	11.82	128.0	0.06	7.76	125.9	0.29
12/12/2024	09:37:44AM	10.6	11.48	129.6	0.06	7.78	123.6	0.93
12/13/2024	08:37:23AM	10.4	10.47	131.0	0.06	8.16	140.3	1.38
12/14/2024	08:16:24AM	10.1	11.81	122.4	0.06	8.28	119.8	1.95
12/15/2024	09:35:25AM	10.5	11.43	127.6	0.06	8.26	129.2	0.68


**3. Calibration Log:**

**Table 4. Calibration Log**


Date	Unit	pH	Conductivity/Temp.	Salinity	NTU
12/9/2024	YSI	✓	✓	✓	✓
12/10/2024	WTP	✓	N/A	N/A	✓

		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>


## APPENDIX A: WTP Log

		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>


Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/9/2024	0:00:00	7.7	0.000	0	33,594	Closed	10.7	113
12/9/2024	0:15:00	7.6	0.000	0	33,594	Closed	11.3	116
12/9/2024	0:30:00	7.6	0.000	0	33,594	Closed	11.9	116
12/9/2024	0:45:00	7.6	0.000	0	33,594	Closed	12.5	117
12/9/2024	1:00:00	7.6	0.000	0	33,594	Closed	13.1	118
12/9/2024	1:15:00	7.6	0.000	0	33,594	Closed	13.7	118
12/9/2024	1:30:00	7.5	0.000	0	33,594	Closed	14.3	119
12/9/2024	1:45:00	7.7	0.790	0	33,603	Open	10.7	119
12/9/2024	2:00:00	7.7	0.798	0	33,615	Open	10.6	116
12/9/2024	2:15:00	7.7	0.805	0	33,627	Open	10.5	114
12/9/2024	2:30:00	7.7	0.820	0	33,639	Open	10.4	113
12/9/2024	2:45:00	7.7	0.000	0	33,645	Closed	10.7	114
12/9/2024	3:00:00	7.7	0.000	0	33,645	Closed	11.1	113
12/9/2024	3:15:00	7.6	0.000	0	33,645	Closed	11.3	113

		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>


Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/9/2024	3:30:00	7.6	0.000	0	33,645	Closed	11.5	111
12/9/2024	3:45:00	7.6	0.000	0	33,645	Closed	11.7	112
12/9/2024	4:00:00	7.6	0.000	0	33,645	Closed	11.9	113
12/9/2024	4:15:00	7.5	0.000	0	33,645	Closed	12.2	114
12/9/2024	4:30:00	7.5	0.000	0	33,645	Closed	12.6	116
12/9/2024	4:45:00	7.5	0.000	0	33,645	Closed	12.9	116
12/9/2024	5:00:00	7.7	0.760	0	33,654	Open	10.4	116
12/9/2024	5:15:00	7.7	0.794	0	33,666	Open	10.5	118
12/9/2024	5:30:00	7.7	0.786	0	33,677	Open	10.5	118
12/9/2024	5:45:00	7.7	0.764	0	33,689	Open	10.4	115
12/9/2024	6:00:00	7.7	0.775	0	33,701	Open	10.3	114
12/9/2024	6:15:00	7.7	0.000	0	33,701	Closed	10.7	114
12/9/2024	6:30:00	7.7	0.000	0	33,701	Closed	11.1	113
12/9/2024	6:45:00	7.6	0.000	0	33,701	Closed	11.6	115
12/9/2024	7:00:00	7.6	0.000	0	33,701	Closed	12.3	117

		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/9/2024	7:15:00	7.6	0.000	0	33,702	Closed	11.2	114
12/9/2024	7:30:00	7.6	0.000	0	33,702	Closed	11.5	116
12/9/2024	7:45:00	7.6	0.000	0	33,702	Closed	12.1	117
12/9/2024	8:00:00	7.6	0.000	0	33,702	Closed	12.8	118
12/9/2024	8:15:00	7.7	0.779	0	33,708	Open	10.3	117
12/9/2024	8:30:00	7.7	0.790	0	33,720	Open	10.3	114
12/9/2024	8:45:00	7.7	0.809	0	33,732	Open	10.3	115
12/9/2024	9:00:00	7.7	0.786	0	33,744	Open	10.3	116
12/9/2024	9:15:00	7.7	0.000	0	33,751	Closed	10.6	117
12/9/2024	9:30:00	7.7	0.000	0	33,751	Closed	11.4	117
12/9/2024	9:45:00	7.6	0.000	0	33,751	Closed	12.1	118
12/9/2024	10:00:00	7.6	0.000	0	33,751	Closed	13	119
12/9/2024	10:15:00	7.6	0.000	0	33,751	Closed	13.7	119
12/9/2024	10:30:00	7.6	0.000	0	33,751	Closed	14.5	119
12/9/2024	10:45:00	7.6	0.000	0	33,751	Closed	15.1	120


		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/9/2024	11:00:00	7.5	0.000	0	33,751	Closed	15.6	120
12/9/2024	11:15:00	7.5	0.000	0	33,751	Closed	16.2	242
12/9/2024	11:30:00	7.7	0.786	0	33,759	Open	10.7	119
12/9/2024	11:45:00	7.7	0.782	0	33,770	Open	10.5	116
12/9/2024	12:00:00	7.7	0.779	0	33,782	Open	10.4	114
12/9/2024	12:15:00	7.7	0.775	0	33,794	Open	10.3	113
12/9/2024	12:30:00	7.7	0.000	0	33,801	Closed	10.4	111
12/9/2024	12:45:00	7.7	0.000	0	33,801	Closed	10.8	114
12/9/2024	13:00:00	7.6	0.000	0	33,801	Closed	11.4	116
12/9/2024	13:15:00	7.7	0.764	0	33,807	Open	10.3	116
12/9/2024	13:30:00	7.7	0.000	0	33,809	Closed	10.9	116
12/9/2024	13:45:00	7.6	0.000	0	33,809	Closed	11.6	117
12/9/2024	14:00:00	7.6	0.000	0	33,809	Closed	12.3	118
12/9/2024	14:15:00	7.7	0.767	0	33,811	Open	10.9	118
12/9/2024	14:30:00	7.7	0.794	0	33,822	Open	10.6	118


		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/9/2024	14:45:00	7.7	0.318	0	33,831	Open	10.9	116
12/9/2024	15:00:00	7.7	0.000	0	33,835	Open	10.8	116
12/9/2024	15:15:00	7.7	0.000	0	33,835	Closed	11.4	116
12/9/2024	15:30:00	7.6	0.000	0	33,835	Closed	11.8	114
12/9/2024	15:45:00	7.7	0.714	0	33,843	Open	10.3	113
12/9/2024	16:00:00	7.8	0.624	0	33,853	Open	10.2	112
12/9/2024	16:15:00	7.8	0.000	0	33,862	Closed	10.4	115
12/9/2024	16:30:00	7.7	0.000	0	33,862	Closed	11	117
12/9/2024	16:45:00	7.7	0.000	0	33,862	Closed	11.7	117
12/9/2024	17:00:00	7.6	0.000	0	33,862	Closed	12.4	118
12/9/2024	17:15:00	7.6	0.000	0	33,862	Closed	13.1	119
12/9/2024	17:30:00	7.6	0.000	0	33,862	Closed	13.8	118
12/9/2024	17:45:00	7.6	0.000	6.1	33,862	Closed	13.9	116
12/9/2024	18:00:00	7.6	0.000	8	33,862	Closed	14.3	118
12/9/2024	18:15:00	7.5	0.000	10.2	33,862	Closed	14.7	118




		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>


Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/9/2024	18:30:00	7.7	0.000	6	33,865	Closed	11	118
12/9/2024	18:45:00	7.6	0.000	6.3	33,865	Closed	11.8	118
12/9/2024	19:00:00	7.7	0.692	2.1	33,873	Open	10.4	119
12/9/2024	19:15:00	7.8	0.684	1	33,883	Open	10.4	118
12/9/2024	19:30:00	7.8	0.688	1	33,894	Open	10.4	119
12/9/2024	19:45:00	7.8	0.677	0	33,904	Open	10.4	119
12/9/2024	20:00:00	7.8	0.000	0	33,912	Closed	10.6	118
12/9/2024	20:15:00	7.7	0.000	0	33,912	Closed	11.4	119
12/9/2024	20:30:00	7.7	0.000	0	33,912	Closed	12.3	119
12/9/2024	20:45:00	7.7	0.000	0	33,912	Closed	13.1	119
12/9/2024	21:00:00	7.6	0.000	0	33,912	Closed	13.9	119
12/9/2024	21:15:00	7.6	0.000	0	33,912	Closed	14.5	119
12/9/2024	21:30:00	7.6	0.000	0	33,912	Closed	15.1	120
12/9/2024	21:45:00	7.6	0.000	0	33,912	Closed	15.7	243
12/9/2024	22:00:00	7.7	0.677	0	33,917	Open	10.3	119

		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>


Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/9/2024	22:15:00	7.8	0.665	0	33,927	Open	10.3	118
12/9/2024	22:30:00	7.8	0.696	0	33,937	Open	10.3	118
12/9/2024	22:45:00	7.8	0.673	0	33,947	Open	10.3	119
12/9/2024	23:00:00	7.8	0.662	0	33,957	Open	10.2	117
12/9/2024	23:15:00	7.7	0.000	0	33,958	Closed	10.7	116
12/9/2024	23:30:00	7.7	0.000	0	33,958	Closed	11.4	116
12/9/2024	23:45:00	7.7	0.000	0	33,958	Closed	12	118
12/10/2024	0:00:00	7.6	0.000	0	33,958	Closed	12.5	117
12/10/2024	0:15:00	7.6	0.000	0	33,958	Closed	13.2	118
12/10/2024	0:30:00	7.6	0.000	0	33,958	Closed	13.6	117
12/10/2024	0:45:00	7.6	0.000	0	33,958	Closed	14.1	118
12/10/2024	1:00:00	7.6	0.000	0	33,958	Closed	14.5	119
12/10/2024	1:15:00	7.7	0.665	0	33,964	Open	10.1	116
12/10/2024	1:30:00	7.8	0.673	0	33,974	Open	9.8	114
12/10/2024	1:45:00	7.8	0.673	0	33,984	Open	9.7	114

		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>


Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/10/2024	2:00:00	7.8	0.650	0	33,994	Open	9.7	113
12/10/2024	2:15:00	7.8	0.816	0	34,001	Open	9.7	113
12/10/2024	2:30:00	7.8	0.858	0	34,014	Open	9.6	116
12/10/2024	2:45:00	7.8	0.843	0	34,027	Open	9.6	116
12/10/2024	3:00:00	7.7	0.000	0	34,027	Closed	10.3	118
12/10/2024	3:15:00	7.7	0.000	0	34,027	Closed	11.2	116
12/10/2024	3:30:00	7.7	0.000	0	34,027	Closed	11.6	116
12/10/2024	3:45:00	7.7	0.000	0	34,027	Closed	12.1	116
12/10/2024	4:00:00	7.6	0.000	0	34,027	Closed	12.3	113
12/10/2024	4:15:00	7.6	0.000	0	34,027	Closed	12.5	115
12/10/2024	4:30:00	7.6	0.000	0	34,027	Closed	12.8	115
12/10/2024	4:45:00	7.6	0.000	0	34,027	Closed	13.1	117
12/10/2024	5:00:00	7.7	0.832	0	34,037	Open	9.6	117
12/10/2024	5:15:00	7.8	0.805	0	34,049	Open	9.6	116
12/10/2024	5:30:00	7.8	0.813	0	34,062	Open	9.5	114

		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
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<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>


Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/10/2024	5:45:00	7.8	0.000	0	34,072	Closed	9.5	113
12/10/2024	6:00:00	7.7	0.000	0	34,072	Closed	9.8	112
12/10/2024	6:15:00	7.7	0.000	0	34,072	Closed	10.1	111
12/10/2024	6:30:00	7.6	0.000	0	34,072	Closed	10.2	111
12/10/2024	6:45:00	7.6	0.000	0	34,072	Closed	10.4	112
12/10/2024	7:00:00	7.6	0.000	0	34,072	Closed	10.6	111
12/10/2024	7:15:00	7.6	0.000	0	34,072	Closed	10.7	111
12/10/2024	7:30:00	7.6	0.000	0	34,072	Closed	10.9	113
12/10/2024	7:45:00	7.7	0.801	0	34,077	Open	9.1	115
12/10/2024	8:00:00	7.8	0.813	0	34,090	Open	9.5	116
12/10/2024	8:15:00	7.8	0.408	0	34,102	Open	9.5	116
12/10/2024	8:30:00	7.8	0.832	0	34,107	Open	10	116
12/10/2024	8:45:00	7.8	0.805	0	34,119	Open	9.5	116
12/10/2024	9:00:00	7.8	0.828	0	34,131	Open	9.5	116
12/10/2024	9:15:00	7.7	0.000	0	34,132	Open	9.9	116

		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
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<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>


Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/10/2024	9:30:00	7.7	0.000	0	34,132	Open	10.5	114
12/10/2024	9:45:00	7.7	0.000	0	34,133	Open	9.5	112
12/10/2024	10:00:00	7.7	0.000	0	34,133	Open	9.7	114
12/10/2024	10:15:00	7.7	0.000	0	34,133	Open	10.3	115
12/10/2024	10:30:00	7.6	0.000	0	34,133	Open	10.9	116
12/10/2024	10:45:00	7.6	0.000	0	34,133	Open	11.2	116
12/10/2024	11:00:00	7.6	0.000	0	34,133	Open	11.6	115
12/10/2024	11:15:00	7.7	0.790	0	34,140	Open	9.3	116
12/10/2024	11:30:00	7.8	0.839	0	34,152	Open	9.7	117
12/10/2024	11:45:00	7.8	0.805	0	34,164	Open	9.7	118
12/10/2024	12:00:00	7.8	0.798	0	34,176	Open	9.7	117
12/10/2024	12:15:00	7.7	0.000	0	34,177	Open	10.4	116
12/10/2024	12:30:00	7.7	0.000	0	34,177	Open	11.2	118
12/10/2024	12:45:00	7.7	0.000	0	34,177	Open	12	118
12/10/2024	13:00:00	7.6	0.000	0	34,177	Open	12.9	119

		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/10/2024	13:15:00	7.7	0.000	0	34,180	Open	10	117
12/10/2024	13:30:00	7.7	0.000	0	34,180	Open	10.7	118
12/10/2024	13:45:00	7.6	0.000	0	34,180	Open	11.6	118
12/10/2024	14:00:00	7.6	0.000	0	34,180	Open	12.1	116
12/10/2024	14:15:00	7.8	0.805	0	34,190	Open	9.9	117
12/10/2024	14:30:00	7.7	0.000	0	34,192	Open	10.6	118
12/10/2024	14:45:00	7.7	0.000	0	34,192	Open	11.5	119
12/10/2024	15:00:00	7.6	0.000	0	34,192	Open	12.5	118
12/10/2024	15:15:00	7.7	0.276	28.4	34,192	Open	13.5	119
12/10/2024	15:30:00	7.8	0.786	0.4	34,204	Open	10.2	119
12/10/2024	15:45:00	7.8	0.786	12.4	34,216	Open	10.2	118
12/10/2024	16:00:00	7.8	0.828	0	34,228	Open	10.2	119
12/10/2024	16:15:00	7.8	0.000	0	34,236	Open	10.6	119
12/10/2024	16:30:00	7.7	0.000	0	34,236	Open	11.6	119
12/10/2024	16:45:00	7.7	0.000	0	34,236	Open	12.5	120


		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/10/2024	17:00:00	7.7	0.000	0	34,236	Open	13.3	119
12/10/2024	17:15:00	7.6	0.000	0	34,236	Open	14.1	119
12/10/2024	17:30:00	7.6	0.000	0	34,236	Open	14.8	119
12/10/2024	17:45:00	7.6	0.000	0	34,236	Open	15.5	120
12/10/2024	18:00:00	7.7	0.431	13.4	34,236	Open	16.6	119
12/10/2024	18:15:00	7.7	0.605	38	34,242	Open	10.5	119
12/10/2024	18:30:00	7.7	0.873	0	34,255	Open	10.3	119
12/10/2024	18:45:00	7.8	0.892	0	34,268	Open	10.2	119
12/10/2024	19:00:00	7.8	0.911	0	34,281	Open	10.2	119
12/10/2024	19:15:00	7.8	0.000	0	34,289	Open	10.4	119
12/10/2024	19:30:00	7.7	0.000	0	34,289	Open	11.4	119
12/10/2024	19:45:00	7.7	0.000	0	34,289	Open	12.4	119
12/10/2024	20:00:00	7.7	0.000	1.7	34,289	Open	13.3	119
12/10/2024	20:15:00	7.6	0.000	2.6	34,289	Open	14.1	119
12/10/2024	20:30:00	7.6	0.000	3.9	34,289	Open	14.4	118


		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/10/2024	20:45:00	7.6	0.000	5.7	34,289	Open	14.5	114
12/10/2024	21:00:00	7.6	0.000	7.3	34,289	Open	14.6	116
12/10/2024	21:15:00	7.7	0.877	416.4	34,292	Open	10.7	116
12/10/2024	21:30:00	7.8	0.892	0	34,305	Open	9.9	116
12/10/2024	21:45:00	7.7	0.881	0	34,318	Open	9.9	116
12/10/2024	22:00:00	7.8	0.877	0	34,331	Open	9.9	116
12/10/2024	22:15:00	7.7	0.000	0	34,339	Closed	10.3	117
12/10/2024	22:30:00	7.7	0.000	0	34,339	Closed	11.1	118
12/10/2024	22:45:00	7.7	0.000	0	34,339	Closed	11.9	118
12/10/2024	23:00:00	7.6	0.000	0	34,339	Closed	12.7	118
12/10/2024	23:15:00	7.6	0.000	0	34,339	Closed	13.4	119
12/10/2024	23:30:00	7.6	0.000	0	34,339	Closed	14.1	120
12/10/2024	23:45:00	7.6	0.000	0	34,339	Closed	14.6	118
12/11/2024	0:00:00	7.6	0.000	0	34,339	Closed	15.1	119
12/11/2024	0:15:00	7.6	0.000	20	34,339	Closed	15.5	242




		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
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<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>


Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/11/2024	0:30:00	7.8	0.877	0	34,344	Open	10.2	118
12/11/2024	0:45:00	7.8	0.903	0	34,357	Open	10.1	116
12/11/2024	1:00:00	7.8	0.873	0	34,370	Open	10	114
12/11/2024	1:15:00	7.8	0.881	0	34,384	Open	10	114
12/11/2024	1:30:00	7.8	0.000	0	34,392	Closed	10.2	114
12/11/2024	1:45:00	7.7	0.000	0	34,392	Closed	10.7	116
12/11/2024	2:00:00	7.8	0.847	0	34,397	Open	10	115
12/11/2024	2:15:00	7.8	0.858	0	34,410	Open	10	114
12/11/2024	2:30:00	7.7	0.000	0	34,413	Closed	10.4	116
12/11/2024	2:45:00	7.7	0.000	0	34,413	Closed	11.2	116
12/11/2024	3:00:00	7.7	0.000	0	34,413	Closed	11.9	116
12/11/2024	3:15:00	7.7	0.000	0	34,413	Closed	12.4	115
12/11/2024	3:30:00	7.6	0.000	0	34,413	Closed	12.6	115
12/11/2024	3:45:00	7.6	0.000	0	34,413	Closed	13.1	116
12/11/2024	4:00:00	7.6	0.000	0	34,413	Closed	13.7	118

		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>


Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/11/2024	4:15:00	7.6	0.000	0	34,413	Closed	14.2	119
12/11/2024	4:30:00	7.6	0.000	0	34,413	Closed	14.8	119
12/11/2024	4:45:00	7.5	0.000	0	34,413	Closed	15.2	242
12/11/2024	5:00:00	7.7	0.896	0	34,422	Open	10	114
12/11/2024	5:15:00	7.8	0.869	0	34,435	Open	9.9	114
12/11/2024	5:30:00	7.8	0.862	0	34,448	Open	10	116
12/11/2024	5:45:00	7.8	0.873	0	34,460	Open	10	114
12/11/2024	6:00:00	7.7	0.000	0	34,463	Closed	10.3	114
12/11/2024	6:15:00	7.7	0.000	0	34,463	Closed	10.7	113
12/11/2024	6:30:00	7.6	0.000	0	34,463	Closed	11	114
12/11/2024	6:45:00	7.6	0.000	0	34,463	Closed	11.4	115
12/11/2024	7:00:00	7.6	0.000	0	34,463	Closed	12	116
12/11/2024	7:15:00	7.6	0.000	0	34,463	Closed	12.6	117
12/11/2024	7:30:00	7.6	0.000	0	34,463	Closed	13	116
12/11/2024	7:45:00	7.6	0.000	0	34,463	Closed	13.5	117

		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>


Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/11/2024	8:00:00	7.7	0.866	0	34,468	Open	10.1	119
12/11/2024	8:15:00	7.8	0.873	0	34,481	Open	10.1	116
12/11/2024	8:30:00	7.7	0.438	0	34,491	Open	10.3	114
12/11/2024	8:45:00	7.8	0.832	0	34,498	Open	9.9	114
12/11/2024	9:00:00	7.8	0.862	0	34,511	Open	9.8	112
12/11/2024	9:15:00	7.8	0.877	0	34,524	Open	9.7	111
12/11/2024	9:30:00	7.8	0.000	0	34,534	Closed	9.9	114
12/11/2024	9:45:00	7.7	0.000	0	34,534	Closed	10.5	116
12/11/2024	10:00:00	7.7	0.000	0	34,534	Closed	11.2	116
12/11/2024	10:15:00	7.6	0.000	0	34,534	Closed	11.9	118
12/11/2024	10:30:00	7.6	0.000	0	34,534	Closed	12.7	118
12/11/2024	10:45:00	7.6	0.000	0	34,534	Closed	13.5	118
12/11/2024	11:00:00	7.6	0.000	0	34,534	Closed	14.2	119
12/11/2024	11:15:00	7.6	0.000	0	34,534	Closed	14.7	118
12/11/2024	11:30:00	7.6	0.000	0	34,534	Closed	15	245

		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
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<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>


Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/11/2024	11:45:00	7.7	0.881	0	34,545	Open	10.2	118
12/11/2024	12:00:00	7.8	0.851	0	34,558	Open	10.1	118
12/11/2024	12:15:00	7.8	0.862	0	34,571	Open	10.1	116
12/11/2024	12:30:00	7.8	0.824	0	34,584	Open	10.1	116
12/11/2024	12:45:00	7.7	0.000	0	34,584	Closed	10.8	117
12/11/2024	13:00:00	7.7	0.000	0	34,584	Closed	11.6	118
12/11/2024	13:15:00	7.6	0.000	0	34,584	Closed	12.3	117
12/11/2024	13:30:00	7.6	0.000	0	34,584	Closed	13.1	118
12/11/2024	13:45:00	7.6	0.000	0	34,584	Closed	13.8	118
12/11/2024	14:00:00	7.6	0.000	0	34,584	Closed	14.1	115
12/11/2024	14:15:00	7.6	0.000	0	34,584	Closed	14.3	114
12/11/2024	14:30:00	7.5	0.000	0	34,584	Closed	14.4	113
12/11/2024	14:45:00	7.7	0.858	0	34,596	Open	10.3	113
12/11/2024	15:00:00	7.7	0.881	0	34,609	Open	10.3	114
12/11/2024	15:15:00	7.7	0.881	0	34,622	Open	10.4	115

		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
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<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>


Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/11/2024	15:30:00	7.8	0.000	0	34,633	Closed	10.5	115
12/11/2024	15:45:00	7.7	0.877	0	34,638	Open	10.5	113
12/11/2024	16:00:00	7.7	0.000	0	34,642	Closed	10.7	113
12/11/2024	16:15:00	7.6	0.000	0	34,642	Closed	11.1	113
12/11/2024	16:30:00	7.6	0.000	0	34,642	Closed	11.4	114
12/11/2024	16:45:00	7.6	0.000	0	34,642	Closed	12.1	116
12/11/2024	17:00:00	7.6	0.000	0	34,642	Closed	12.9	118
12/11/2024	17:15:00	7.6	0.000	0	34,642	Closed	13.6	118
12/11/2024	17:30:00	7.6	0.000	0	34,642	Closed	14.3	119
12/11/2024	17:45:00	7.5	0.000	0	34,642	Closed	14.9	119
12/11/2024	18:00:00	7.5	0.000	0	34,642	Closed	15.5	118
12/11/2024	18:15:00	7.7	0.847	0	34,653	Open	10.8	119
12/11/2024	18:30:00	7.8	0.869	0	34,666	Open	10.7	118
12/11/2024	18:45:00	7.8	0.900	0	34,679	Open	10.7	119
12/11/2024	19:00:00	7.8	0.866	0	34,692	Open	10.7	119

		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
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<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/11/2024	19:15:00	7.7	0.000	0	34,692	Closed	11.5	118
12/11/2024	19:30:00	7.7	0.000	0	34,692	Closed	12.4	119
12/11/2024	19:45:00	7.6	0.000	0	34,692	Closed	13.4	119
12/11/2024	20:00:00	7.6	0.000	0	34,692	Closed	14.2	119
12/11/2024	20:15:00	7.6	0.000	0	34,692	Closed	14.9	119
12/11/2024	20:30:00	7.5	0.000	0	34,692	Closed	15.5	119
12/11/2024	20:45:00	7.5	0.000	0	34,692	Closed	16	243
12/11/2024	21:00:00	7.5	0.000	0	34,692	Closed	16.4	242
12/11/2024	21:15:00	7.7	0.858	0	34,695	Open	11.3	119
12/11/2024	21:30:00	7.7	0.858	0	34,708	Open	10.6	119
12/11/2024	21:45:00	7.8	0.858	0	34,721	Open	10.4	118
12/11/2024	22:00:00	7.8	0.877	0	34,734	Open	10.4	118
12/11/2024	22:15:00	7.7	0.000	0	34,743	Closed	10.7	119
12/11/2024	22:30:00	7.7	0.000	0	34,743	Closed	11.5	119
12/11/2024	22:45:00	7.6	0.000	0	34,743	Closed	12.5	119


		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/11/2024	23:00:00	7.6	0.000	0	34,743	Closed	13.1	116
12/11/2024	23:15:00	7.6	0.000	0	34,743	Closed	13.2	113
12/11/2024	23:30:00	7.6	0.000	0	34,743	Closed	13.2	112
12/11/2024	23:45:00	7.5	0.000	0	34,743	Closed	13.2	114
12/12/2024	0:00:00	7.5	0.000	0	34,743	Closed	13.5	114
12/12/2024	0:15:00	7.5	0.000	0	34,743	Closed	13.8	115
12/12/2024	0:30:00	7.7	0.892	0	34,754	Open	10.1	116
12/12/2024	0:45:00	7.7	0.888	0	34,767	Open	10.1	117
12/12/2024	1:00:00	7.8	0.869	0	34,780	Open	10.1	117
12/12/2024	1:15:00	7.8	0.881	0	34,793	Open	10.2	117
12/12/2024	1:30:00	7.7	0.000	0	34,794	Closed	10.7	116
12/12/2024	1:45:00	7.7	0.000	0	34,794	Closed	11.4	116
12/12/2024	2:00:00	7.6	0.000	0	34,794	Closed	12.2	118
12/12/2024	2:15:00	7.6	0.000	0	34,794	Closed	12.8	117
12/12/2024	2:30:00	7.6	0.000	0	34,794	Closed	13.3	118


		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/12/2024	2:45:00	7.6	0.000	0	34,794	Closed	14	118
12/12/2024	3:00:00	7.6	0.000	0	34,794	Closed	14.6	119
12/12/2024	3:15:00	7.6	0.000	0	34,794	Closed	15.1	118
12/12/2024	3:30:00	7.7	0.869	0	34,807	Open	10.1	116
12/12/2024	3:45:00	7.7	0.854	0	34,816	Open	10	116
12/12/2024	4:00:00	7.8	0.851	0	34,829	Open	9.9	116
12/12/2024	4:15:00	7.8	0.862	0	34,842	Open	9.9	117
12/12/2024	4:30:00	7.8	0.835	0	34,855	Open	9.9	118
12/12/2024	4:45:00	7.7	0.000	0	34,855	Closed	10.6	118
12/12/2024	5:00:00	7.7	0.000	0	34,855	Closed	11.6	118
12/12/2024	5:15:00	7.6	0.000	0	34,855	Closed	12.2	117
12/12/2024	5:30:00	7.6	0.000	0	34,855	Closed	12.8	116
12/12/2024	5:45:00	7.6	0.000	0	34,855	Closed	13.2	116
12/12/2024	6:00:00	7.6	0.000	0	34,855	Closed	13.9	118
12/12/2024	6:15:00	7.6	0.000	0	34,855	Closed	14.3	117




		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>


Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/12/2024	6:30:00	7.6	0.000	0	34,855	Closed	14.7	117
12/12/2024	6:45:00	7.7	0.835	0	34,857	Open	12	117
12/12/2024	7:00:00	7.7	0.881	0	34,870	Open	9.9	118
12/12/2024	7:15:00	7.8	0.881	0	34,883	Open	9.9	118
12/12/2024	7:30:00	7.8	0.885	0	34,896	Open	9.8	115
12/12/2024	7:45:00	7.7	0.000	0	34,905	Closed	10	117
12/12/2024	8:00:00	7.7	0.000	0	34,905	Closed	10.9	118
12/12/2024	8:15:00	7.7	0.000	0	34,905	Closed	11.7	116
12/12/2024	8:30:00	7.6	0.000	0	34,905	Closed	12.1	114
12/12/2024	8:45:00	7.6	0.000	0	34,905	Closed	12.7	116
12/12/2024	9:00:00	7.6	0.000	0	34,905	Closed	13.4	119
12/12/2024	9:15:00	7.6	0.000	0	34,905	Closed	14.1	119
12/12/2024	9:30:00	7.5	0.000	0	34,905	Closed	14.7	119
12/12/2024	9:45:00	7.7	0.847	0	34,908	Open	10.2	119
12/12/2024	10:00:00	7.7	0.843	0	34,921	Open	10	119

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<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>


Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/12/2024	10:15:00	7.7	0.457	0	34,932	Open	10.4	118
12/12/2024	10:30:00	7.8	0.869	0	34,940	Open	10.1	118
12/12/2024	10:45:00	7.7	0.000	0	34,947	Closed	10.4	119
12/12/2024	11:00:00	7.7	0.000	0	34,947	Closed	11.3	119
12/12/2024	11:15:00	7.6	0.000	0	34,947	Closed	12.3	119
12/12/2024	11:30:00	7.6	0.000	0	34,947	Closed	13.2	119
12/12/2024	11:45:00	7.6	0.000	0	34,947	Closed	13.8	117
12/12/2024	12:00:00	7.6	0.000	0	34,947	Closed	14.3	119
12/12/2024	12:15:00	7.6	0.000	14.1	34,947	Closed	14.9	119
12/12/2024	12:30:00	7.6	0.000	18	34,947	Closed	15.5	119
12/12/2024	12:45:00	7.7	0.885	14.1	34,947	Closed	10.6	119
12/12/2024	13:00:00	7.7	0.903	4.1	34,957	Open	10.1	115
12/12/2024	13:15:00	7.8	0.873	1.1	34,970	Open	10	113
12/12/2024	13:30:00	7.8	0.881	0.3	34,983	Open	9.9	113
12/12/2024	13:45:00	7.8	0.869	0	34,996	Open	9.9	113

		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
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<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>


Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/12/2024	14:00:00	7.7	0.000	0	35,001	Closed	10.2	113
12/12/2024	14:15:00	7.7	0.000	0	35,001	Closed	10.6	114
12/12/2024	14:30:00	7.6	0.000	0	35,001	Closed	11.3	116
12/12/2024	14:45:00	7.6	0.000	0	35,001	Closed	12.1	118
12/12/2024	15:00:00	7.6	0.000	0	35,001	Closed	12.6	116
12/12/2024	15:15:00	7.6	0.000	0	35,001	Closed	12.9	114
12/12/2024	15:30:00	7.6	0.000	0	35,001	Closed	13	113
12/12/2024	15:45:00	7.6	0.000	0	35,001	Closed	13.1	113
12/12/2024	16:00:00	7.7	0.881	0	35,005	Open	10.1	116
12/12/2024	16:15:00	7.7	0.843	0	35,018	Open	10.2	116
12/12/2024	16:30:00	7.8	0.900	0	35,032	Open	10.3	117
12/12/2024	16:45:00	7.7	0.877	0	35,041	Open	10.5	116
12/12/2024	17:00:00	7.8	0.888	0	35,054	Open	10.3	116
12/12/2024	17:15:00	7.7	0.000	0	35,061	Closed	10.5	116
12/12/2024	17:30:00	7.7	0.000	0	35,061	Closed	11.1	114

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<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>


Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/12/2024	17:45:00	7.6	0.000	0	35,061	Closed	11.4	115
12/12/2024	18:00:00	7.6	0.000	0	35,061	Closed	12.1	116
12/12/2024	18:15:00	7.6	0.000	0	35,061	Closed	12.9	118
12/12/2024	18:30:00	7.6	0.000	0	35,061	Closed	13.6	119
12/12/2024	18:45:00	7.6	0.000	0	35,061	Closed	14.2	118
12/12/2024	19:00:00	7.6	0.000	0	35,061	Closed	14.8	119
12/12/2024	19:15:00	7.7	0.866	0	35,071	Open	10.3	119
12/12/2024	19:30:00	7.7	0.873	0	35,084	Open	10.3	118
12/12/2024	19:45:00	7.8	0.869	0	35,097	Open	10.3	119
12/12/2024	20:00:00	7.8	0.866	0	35,110	Open	10.3	119
12/12/2024	20:15:00	7.7	0.000	0	35,112	Closed	10.9	118
12/12/2024	20:30:00	7.7	0.000	0	35,112	Closed	11.6	116
12/12/2024	20:45:00	7.6	0.000	0	35,112	Closed	12.4	117
12/12/2024	21:00:00	7.6	0.000	0	35,112	Closed	13.2	119
12/12/2024	21:15:00	7.6	0.000	0	35,112	Closed	13.7	116

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<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>


Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/12/2024	21:30:00	7.6	0.000	0	35,112	Closed	14.1	117
12/12/2024	21:45:00	7.6	0.000	0	35,112	Closed	14.5	117
12/12/2024	22:00:00	7.6	0.000	0	35,112	Open	14.8	117
12/12/2024	22:15:00	7.7	0.858	0	35,122	Open	10.3	118
12/12/2024	22:30:00	7.7	0.862	0	35,135	Open	10.3	118
12/12/2024	22:45:00	7.7	0.866	0	35,148	Open	10.3	118
12/12/2024	23:00:00	7.8	0.843	0	35,161	Open	10.3	119
12/12/2024	23:15:00	7.7	0.000	0	35,161	Closed	11	117
12/12/2024	23:30:00	7.7	0.000	0	35,161	Closed	11.8	118
12/12/2024	23:45:00	7.6	0.000	0	35,161	Closed	12.4	116
12/13/2024	0:00:00	7.6	0.000	0	35,161	Closed	13.1	118
12/13/2024	0:15:00	7.6	0.000	0	35,161	Closed	13.6	116
12/13/2024	0:30:00	7.6	0.000	0	35,161	Closed	13.9	116
12/13/2024	0:45:00	7.6	0.000	0	35,161	Closed	14.4	118
12/13/2024	1:00:00	7.6	0.000	0	35,161	Closed	15	119

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<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/13/2024	1:15:00	7.6	0.862	0	35,163	Open	11.6	118
12/13/2024	1:30:00	7.7	0.885	0	35,176	Open	10.3	116
12/13/2024	1:45:00	7.7	0.888	0	35,189	Open	10.2	117
12/13/2024	2:00:00	7.8	0.858	0	35,202	Open	10.1	114
12/13/2024	2:15:00	7.8	0.000	0	35,215	Closed	10	113
12/13/2024	2:30:00	7.7	0.000	14.5	35,215	Closed	10.5	114
12/13/2024	2:45:00	7.6	0.000	13.4	35,215	Closed	10.9	113
12/13/2024	3:00:00	7.6	0.000	13.3	35,215	Closed	11.2	112
12/13/2024	3:15:00	7.6	0.000	13.2	35,215	Closed	11.4	111
12/13/2024	3:30:00	7.6	0.000	13.2	35,215	Closed	11.6	114
12/13/2024	3:45:00	7.6	0.000	13.7	35,215	Closed	12.2	115
12/13/2024	4:00:00	7.6	0.000	15	35,215	Closed	12.5	115
12/13/2024	4:15:00	7.5	0.000	16.6	35,215	Closed	12.9	115
12/13/2024	4:30:00	7.7	0.835	0	35,220	Open	9.9	115
12/13/2024	4:45:00	7.7	0.873	0	35,233	Open	10.1	117


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<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/13/2024	5:00:00	7.7	0.873	0	35,246	Open	10.1	116
12/13/2024	5:15:00	7.8	0.881	0	35,259	Open	10.2	116
12/13/2024	5:30:00	7.7	0.000	0	35,267	Closed	10.4	117
12/13/2024	5:45:00	7.7	0.000	0	35,267	Closed	11.1	117
12/13/2024	6:00:00	7.6	0.000	0	35,267	Closed	11.8	116
12/13/2024	6:15:00	7.6	0.000	0	35,267	Closed	12.5	116
12/13/2024	6:30:00	7.6	0.000	0	35,267	Closed	13	116
12/13/2024	6:45:00	7.6	0.000	0	35,267	Closed	13.6	118
12/13/2024	7:00:00	7.6	0.000	0	35,267	Closed	14	116
12/13/2024	7:15:00	7.6	0.000	0	35,267	Closed	14.2	117
12/13/2024	7:30:00	7.6	0.000	0	35,268	Closed	11.4	114
12/13/2024	7:45:00	7.7	0.896	0	35,277	Open	10	115
12/13/2024	8:00:00	7.7	0.885	0	35,290	Open	10.1	117
12/13/2024	8:15:00	7.7	0.858	0	35,303	Open	10.1	116
12/13/2024	8:30:00	7.8	0.888	0	35,316	Open	10.1	116


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<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/13/2024	8:45:00	7.7	0.000	0	35,319	Closed	10.5	117
12/13/2024	9:00:00	7.7	0.000	0	35,319	Closed	11.3	118
12/13/2024	9:15:00	7.6	0.000	0	35,319	Closed	12.2	118
12/13/2024	9:30:00	7.6	0.000	0	35,319	Closed	13	119
12/13/2024	9:45:00	7.7	0.420	0	35,326	Open	10.4	119
12/13/2024	10:00:00	7.7	0.839	0	35,337	Open	10.3	118
12/13/2024	10:15:00	7.7	0.854	0	35,349	Open	10.3	119
12/13/2024	10:30:00	7.7	0.000	0	35,357	Closed	10.5	116
12/13/2024	10:45:00	7.7	0.000	0	35,357	Closed	10.8	114
12/13/2024	11:00:00	7.6	0.000	0	35,357	Closed	14.3	114
12/13/2024	11:15:00	7.6	0.000	4.7	35,357	Closed	14.6	116
12/13/2024	11:30:00	7.5	0.000	32.4	35,357	Closed	15	118
12/13/2024	11:45:00	7.5	0.000	56.7	35,357	Closed	15.5	118
12/13/2024	12:00:00	7.5	0.000	71.6	35,357	Closed	15.8	245
12/13/2024	12:15:00	7.4	0.000	68.2	35,357	Closed	16.1	243




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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)
12/13/2024	12:30:00	7.4	0.000	0	35,357	Closed	16.5	243
12/13/2024	12:45:00	7.4	0.000	0	35,357	Closed	17	243
12/13/2024	13:00:00	7.7	0.839	0	35,363	Open	10.1	119
12/13/2024	13:15:00	7.7	0.851	0	35,376	Open	10.3	119
12/13/2024	13:30:00	7.7	0.858	0	35,389	Open	10.2	118
12/13/2024	13:45:00	7.8	0.873	0	35,402	Open	10.2	118
12/13/2024	14:00:00	7.7	0.000	0	35,410	Closed	10.5	118
12/13/2024	14:15:00	7.6	0.000	0	35,410	Closed	11.5	119
12/13/2024	14:30:00	7.5	0.000	0	35,410	Closed	12.5	119
12/13/2024	14:45:00	7.5	0.000	0	35,410	Closed	13.4	119
12/13/2024	15:00:00	7.5	0.000	0	35,410	Closed	14.3	119
12/13/2024	15:15:00	7.5	0.000	0	35,410	Closed	14.9	119
12/13/2024	15:30:00	7.5	0.000	0	35,410	Closed	15.5	120
12/13/2024	15:45:00	7.4	0.000	0	35,410	Closed	15.9	244
12/13/2024	16:00:00	7.4	0.000	0	35,410	Closed	16	242

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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)
12/13/2024	16:15:00	7.7	0.843	0.3	35,422	Open	10.2	116
12/13/2024	16:30:00	7.7	0.858	0	35,434	Open	10.1	114
12/13/2024	16:45:00	7.7	0.450	0	35,446	Open	10.2	114
12/13/2024	17:00:00	7.7	0.000	0	35,456	Closed	10	114
12/13/2024	17:15:00	7.7	0.000	0	35,456	Closed	10.7	116
12/13/2024	17:30:00	7.6	0.000	0	35,456	Closed	11.5	117
12/13/2024	17:45:00	7.5	0.000	0	35,456	Closed	12.4	118
12/13/2024	18:00:00	7.5	0.000	0	35,456	Closed	13.2	119
12/13/2024	18:15:00	7.5	0.000	0	35,456	Closed	13.9	119
12/13/2024	18:30:00	7.5	0.000	0	35,456	Closed	14.6	119
12/13/2024	18:45:00	7.5	0.000	0	35,456	Closed	15.2	119
12/13/2024	19:00:00	7.5	0.000	0	35,456	Closed	15.7	243
12/13/2024	19:15:00	7.7	0.907	0	35,467	Open	10.4	119
12/13/2024	19:30:00	7.7	0.877	0	35,481	Open	10.3	119
12/13/2024	19:45:00	7.7	0.922	0	35,494	Open	10.3	119

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<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>


Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/13/2024	20:00:00	7.8	0.000	0	35,506	Closed	10.4	119
12/13/2024	20:15:00	7.7	0.000	0	35,506	Closed	11.2	117
12/13/2024	20:30:00	7.6	0.000	0	35,506	Closed	11.7	114
12/13/2024	20:45:00	7.5	0.000	0	35,506	Closed	12	113
12/13/2024	21:00:00	7.5	0.000	0	35,506	Closed	12.3	114
12/13/2024	21:15:00	7.5	0.000	0	35,506	Closed	12.7	114
12/13/2024	21:30:00	7.5	0.000	0	35,506	Closed	13	114
12/13/2024	21:45:00	7.5	0.000	0	35,506	Closed	13.1	113
12/13/2024	22:00:00	7.4	0.000	0	35,506	Closed	13.4	115
12/13/2024	22:15:00	7.7	0.869	0	35,515	Open	10	116
12/13/2024	22:30:00	7.7	0.896	0	35,528	Open	10.1	118
12/13/2024	22:45:00	7.7	0.922	0	35,542	Open	10.2	116
12/13/2024	23:00:00	7.8	0.926	0	35,556	Open	10.2	117
12/13/2024	23:15:00	7.7	0.000	0	35,557	Closed	10.8	117
12/13/2024	23:30:00	7.6	0.000	0	35,557	Closed	11.5	116

		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>


Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/13/2024	23:45:00	7.5	0.000	0	35,557	Closed	12.2	117
12/14/2024	0:00:00	7.5	0.000	0	35,557	Closed	12.7	115
12/14/2024	0:15:00	7.5	0.000	0	35,557	Closed	13.1	115
12/14/2024	0:30:00	7.5	0.000	0	35,557	Closed	13.2	113
12/14/2024	0:45:00	7.7	0.798	0	35,565	Open	9.8	112
12/14/2024	1:00:00	7.7	0.786	0	35,577	Open	9.8	114
12/14/2024	1:15:00	7.7	0.816	0	35,590	Open	9.8	113
12/14/2024	1:30:00	7.8	0.801	0	35,602	Open	9.8	114
12/14/2024	1:45:00	7.7	0.000	0	35,610	Closed	10.1	115
12/14/2024	2:00:00	7.6	0.000	0	35,610	Closed	10.7	114
12/14/2024	2:15:00	7.6	0.000	0	35,610	Closed	11.1	114
12/14/2024	2:30:00	7.5	0.000	0	35,610	Closed	11.6	114
12/14/2024	2:45:00	7.5	0.000	0	35,610	Closed	12	115
12/14/2024	3:00:00	7.5	0.000	0	35,610	Closed	12.5	116
12/14/2024	3:15:00	7.5	0.000	0	35,610	Closed	12.9	117

		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>


Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/14/2024	3:30:00	7.5	0.000	0	35,610	Closed	13.2	115
12/14/2024	3:45:00	7.5	0.000	0	35,610	Closed	13.4	115
12/14/2024	4:00:00	7.7	0.801	0	35,619	Open	9.9	116
12/14/2024	4:15:00	7.7	0.798	0	35,632	Open	10	117
12/14/2024	4:30:00	7.7	0.801	0	35,644	Open	10.1	116
12/14/2024	4:45:00	7.7	0.000	0	35,652	Closed	11.1	117
12/14/2024	5:00:00	7.6	0.000	0	35,652	Closed	11.6	119
12/14/2024	5:15:00	7.5	0.000	0	35,652	Closed	12.4	118
12/14/2024	5:30:00	7.5	0.000	0	35,652	Closed	13.2	118
12/14/2024	5:45:00	7.5	0.000	0	35,652	Closed	13.7	119
12/14/2024	6:00:00	7.5	0.000	0	35,652	Closed	14.3	118
12/14/2024	6:15:00	7.6	0.805	0	35,654	Open	11.1	116
12/14/2024	6:30:00	7.7	0.801	0	35,666	Open	9.9	115
12/14/2024	6:45:00	7.7	0.798	0	35,678	Open	9.8	114
12/14/2024	7:00:00	7.7	0.805	0	35,690	Open	9.9	117

		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/14/2024	7:15:00	7.7	0.000	0	35,695	Closed	10.2	116
12/14/2024	7:30:00	7.6	0.000	0	35,695	Closed	10.7	115
12/14/2024	7:45:00	7.5	0.000	0	35,695	Closed	11.5	116
12/14/2024	8:00:00	7.5	0.000	0	35,695	Closed	12.2	118
12/14/2024	8:15:00	7.5	0.000	0	35,695	Closed	13	118
12/14/2024	8:30:00	7.5	0.000	0	35,695	Closed	13.5	116
12/14/2024	8:45:00	7.5	0.801	0	35,695	Open	14.3	115
12/14/2024	9:00:00	7.6	0.786	0.1	35,707	Open	10	113
12/14/2024	9:15:00	7.6	0.786	0	35,715	Open	10.6	114
12/14/2024	9:30:00	7.7	0.854	0.4	35,722	Open	9.7	114
12/14/2024	9:45:00	7.7	0.877	0	35,735	Open	9.7	116
12/14/2024	10:00:00	7.7	0.858	0	35,748	Open	9.8	117
12/14/2024	10:15:00	7.7	0.000	0	35,749	Closed	10.4	116
12/14/2024	10:30:00	7.6	0.000	0	35,749	Closed	11.1	116
12/14/2024	10:45:00	7.5	0.000	0	35,749	Closed	11.8	118


		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/14/2024	11:00:00	7.5	0.000	0	35,749	Closed	12.6	118
12/14/2024	11:15:00	7.5	0.000	0	35,749	Closed	13.4	119
12/14/2024	11:30:00	7.5	0.000	0	35,749	Closed	14.1	118
12/14/2024	11:45:00	7.4	0.000	0	35,749	Closed	14.6	119
12/14/2024	12:00:00	7.4	0.000	0	35,749	Closed	15.2	120
12/14/2024	12:15:00	7.7	0.835	0	35,759	Open	10.1	119
12/14/2024	12:30:00	7.7	0.877	0	35,772	Open	10.1	119
12/14/2024	12:45:00	7.7	0.873	0	35,785	Open	10.1	118
12/14/2024	13:00:00	7.8	0.000	0	35,796	Closed	10.2	119
12/14/2024	13:15:00	7.7	0.000	0	35,796	Closed	11	119
12/14/2024	13:30:00	7.6	0.000	0	35,796	Closed	12	119
12/14/2024	13:45:00	7.5	0.000	0	35,796	Closed	12.9	119
12/14/2024	14:00:00	7.5	0.000	0	35,796	Closed	13.8	119
12/14/2024	14:15:00	7.4	0.000	0	35,796	Closed	14.6	119
12/14/2024	14:30:00	7.4	0.000	0	35,796	Closed	15.4	120


		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/14/2024	14:45:00	7.4	0.000	0	35,796	Closed	16	119
12/14/2024	15:00:00	7.7	0.847	0	35,800	Open	10.4	119
12/14/2024	15:15:00	7.7	0.858	0.4	35,813	Open	10.2	119
12/14/2024	15:30:00	7.7	0.858	1	35,826	Open	10.1	119
12/14/2024	15:45:00	7.7	0.854	0.9	35,839	Open	10.2	119
12/14/2024	16:00:00	7.7	0.000	0.8	35,846	Closed	10.5	119
12/14/2024	16:15:00	7.6	0.000	0.6	35,846	Closed	11.5	119
12/14/2024	16:30:00	7.5	0.000	0.6	35,846	Closed	12.5	119
12/14/2024	16:45:00	7.5	0.000	0.7	35,846	Closed	13.5	119
12/14/2024	17:00:00	7.5	0.000	0.6	35,846	Closed	14.3	119
12/14/2024	17:15:00	7.4	0.000	0.4	35,846	Closed	15	119
12/14/2024	17:30:00	7.4	0.000	0.3	35,846	Closed	15.8	121
12/14/2024	17:45:00	7.6	0.431	0.2	35,849	Open	10.7	119
12/14/2024	18:00:00	7.7	0.862	1.7	35,860	Open	10.2	119
12/14/2024	18:15:00	7.7	0.854	1.5	35,873	Open	10.2	119




		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>


Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/14/2024	18:30:00	7.7	0.854	1.7	35,886	Open	10.1	119
12/14/2024	18:45:00	7.7	0.851	1.6	35,899	Open	10.1	119
12/14/2024	19:00:00	7.7	0.000	1.2	35,900	Closed	10.9	119
12/14/2024	19:15:00	7.6	0.000	1.1	35,900	Closed	11.9	119
12/14/2024	19:30:00	7.5	0.000	1	35,900	Closed	13	119
12/14/2024	19:45:00	7.5	0.000	0.7	35,900	Closed	13.9	119
12/14/2024	20:00:00	7.4	0.000	0.8	35,900	Closed	14.8	119
12/14/2024	20:15:00	7.4	0.000	0.7	35,900	Closed	15.5	121
12/14/2024	20:30:00	7.4	0.000	1.3	35,900	Closed	15.9	117
12/14/2024	20:45:00	7.4	0.000	1.5	35,900	Closed	15.9	116
12/14/2024	21:00:00	7.7	0.892	1.4	35,907	Open	10	115
12/14/2024	21:15:00	7.7	0.892	1.1	35,921	Open	10	114
12/14/2024	21:30:00	7.7	0.000	0.9	35,923	Closed	10.4	114
12/14/2024	21:45:00	7.6	0.000	1.1	35,923	Closed	10.8	113
12/14/2024	22:00:00	7.5	0.000	1	35,923	Closed	11.3	114

		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>


Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/14/2024	22:15:00	7.5	0.000	0.7	35,923	Closed	11.7	115
12/14/2024	22:30:00	7.7	0.903	0.5	35,932	Open	10.1	117
12/14/2024	22:45:00	7.7	0.888	0.1	35,946	Open	10.2	117
12/14/2024	23:00:00	7.7	0.888	0	35,959	Open	10.3	116
12/14/2024	23:15:00	7.7	0.000	0	35,966	Closed	10.6	116
12/14/2024	23:30:00	7.6	0.000	0	35,966	Closed	11.4	117
12/14/2024	23:45:00	7.5	0.000	0	35,966	Closed	12.1	117
12/15/2024	0:00:00	7.5	0.000	0	35,966	Closed	13	118
12/15/2024	0:15:00	7.4	0.000	0	35,966	Closed	13.6	118
12/15/2024	0:30:00	7.4	0.000	0	35,966	Closed	14.2	117
12/15/2024	0:45:00	7.4	0.000	0	35,966	Closed	14.8	119
12/15/2024	1:00:00	7.4	0.000	0	35,966	Closed	15.3	119
12/15/2024	1:15:00	7.6	0.873	0	35,968	Open	11.2	118
12/15/2024	1:30:00	7.7	0.873	0	35,981	Open	10.5	119
12/15/2024	1:45:00	7.7	0.888	0	35,995	Open	10.5	118

		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>


Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/15/2024	2:00:00	7.7	0.903	0	36,008	Open	10.4	118
12/15/2024	2:15:00	7.7	0.000	0	36,019	Closed	10.6	118
12/15/2024	2:30:00	7.6	0.000	0	36,019	Closed	11.3	118
12/15/2024	2:45:00	7.5	0.000	0	36,019	Closed	12	117
12/15/2024	3:00:00	7.5	0.000	414.8	36,019	Closed	12.9	117
12/15/2024	3:15:00	7.5	0.000	414.4	36,019	Closed	13.6	119
12/15/2024	3:30:00	7.4	0.000	414.6	36,019	Closed	14.4	118
12/15/2024	3:45:00	7.4	0.000	414.4	36,019	Closed	14.9	119
12/15/2024	4:00:00	7.4	0.000	414.5	36,019	Closed	15.4	118
12/15/2024	4:15:00	7.7	0.858	8.8	36,025	Open	10.2	116
12/15/2024	4:30:00	7.7	0.877	5.3	36,038	Open	10.1	116
12/15/2024	4:45:00	7.7	0.858	3	36,051	Open	10.1	116
12/15/2024	5:00:00	7.7	0.854	0	36,064	Open	10.1	116
12/15/2024	5:15:00	7.7	0.000	0	36,065	Closed	10.8	118
12/15/2024	5:30:00	7.6	0.000	0	36,065	Closed	11.8	119

		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
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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)
12/15/2024	5:45:00	7.5	0.000	0	36,065	Closed	12.6	118
12/15/2024	6:00:00	7.5	0.000	0	36,065	Closed	13.3	118
12/15/2024	6:15:00	7.4	0.000	0	36,065	Closed	13.9	117
12/15/2024	6:30:00	7.4	0.000	0	36,065	Closed	14.6	119
12/15/2024	6:45:00	7.4	0.000	0	36,065	Closed	15.3	119
12/15/2024	7:00:00	7.6	0.854	0	36,066	Open	12.6	119
12/15/2024	7:15:00	7.7	0.881	0	36,079	Open	10.2	117
12/15/2024	7:30:00	7.7	0.862	0	36,092	Open	10	116
12/15/2024	7:45:00	7.7	0.866	0	36,105	Open	10.1	117
12/15/2024	8:00:00	7.7	0.000	0	36,115	Closed	10.3	118
12/15/2024	8:15:00	7.6	0.000	0	36,115	Closed	11.1	119
12/15/2024	8:30:00	7.5	0.000	0	36,115	Closed	12.1	119
12/15/2024	8:45:00	7.5	0.000	0	36,115	Closed	13.1	119
12/15/2024	9:00:00	7.4	0.000	414.1	36,115	Closed	14	119
12/15/2024	9:15:00	7.4	0.000	414.6	36,115	Closed	14.6	118

		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
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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)
12/15/2024	9:30:00	7.4	0.000	414.7	36,115	Closed	14.9	118
12/15/2024	9:45:00	7.4	0.000	414.2	36,115	Closed	15.4	119
12/15/2024	10:00:00	7.4	0.000	414	36,115	Closed	16	119
12/15/2024	10:15:00	7.6	0.416	8.6	36,119	Open	10.4	119
12/15/2024	10:30:00	7.7	0.820	4.7	36,126	Open	10.6	117
12/15/2024	10:45:00	7.7	0.881	0	36,139	Open	10.1	116
12/15/2024	11:00:00	7.7	0.892	0	36,152	Open	10.2	119
12/15/2024	11:15:00	7.7	0.843	0	36,166	Open	10.2	118
12/15/2024	11:30:00	7.7	0.000	0	36,168	Open	10.9	119
12/15/2024	11:45:00	7.6	0.000	0	36,168	Open	11.9	119
12/15/2024	12:00:00	7.5	0.000	0	36,168	Open	12.9	119
12/15/2024	12:15:00	7.5	0.000	0	36,168	Closed	13.9	119
12/15/2024	12:30:00	7.4	0.000	0	36,168	Closed	14.7	119
12/15/2024	12:45:00	7.4	0.000	0	36,168	Closed	15.5	119
12/15/2024	13:00:00	7.6	0.457	0	36,170	Open	11.8	121

		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/15/2024	13:15:00	7.6	0.537	0	36,177	Open	11	119
12/15/2024	13:30:00	7.7	0.862	0	36,189	Open	10.4	119
12/15/2024	13:45:00	7.7	0.873	0	36,202	Open	10.4	116
12/15/2024	14:00:00	7.6	0.000	0	36,205	Closed	10.8	117
12/15/2024	14:15:00	7.5	0.000	0	36,205	Closed	11.7	118
12/15/2024	14:30:00	7.5	0.000	0	36,205	Closed	12.7	119
12/15/2024	14:45:00	7.4	0.000	0	36,205	Closed	13.7	119
12/15/2024	15:00:00	7.4	0.000	0	36,205	Closed	14.5	119
12/15/2024	15:15:00	7.4	0.000	0	36,205	Closed	15.3	121
12/15/2024	15:30:00	7.4	0.000	0	36,205	Closed	16.1	121
12/15/2024	15:45:00	7.7	0.839	25.3	36,205	Closed	10.7	121
12/15/2024	16:00:00	7.7	0.877	13	36,216	Open	10.7	118
12/15/2024	16:15:00	7.7	0.877	8.8	36,229	Open	10.7	119
12/15/2024	16:30:00	7.7	0.877	5.6	36,242	Open	10.6	117
12/15/2024	16:45:00	7.7	0.847	3.2	36,255	Open	10.5	116


		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/15/2024	17:00:00	7.6	0.000	2.1	36,258	Open	10.9	117
12/15/2024	17:15:00	7.5	0.000	0	36,258	Open	11.8	119
12/15/2024	17:30:00	7.5	0.000	0	36,258	Open	12.7	119
12/15/2024	17:45:00	7.4	0.000	0	36,258	Open	13.6	119
12/15/2024	18:00:00	7.4	0.000	0	36,258	Open	14.2	118
12/15/2024	18:15:00	7.4	0.000	0	36,258	Open	14.4	116
12/15/2024	18:30:00	7.4	0.000	0	36,258	Open	14.7	117
12/15/2024	18:45:00	7.4	0.000	0	36,258	Open	15.2	118
12/15/2024	19:00:00	7.6	0.824	0	36,261	Open	10.9	119
12/15/2024	19:15:00	7.7	0.847	0	36,274	Open	10.5	119
12/15/2024	19:30:00	7.7	0.000	0	36,283	Open	10.7	119
12/15/2024	19:45:00	7.6	0.000	0	36,283	Open	11.5	119
12/15/2024	20:00:00	7.5	0.000	0	36,283	Open	12.5	119
12/15/2024	20:15:00	7.4	0.000	0	36,283	Open	13.3	119
12/15/2024	20:30:00	7.4	0.000	0	36,283	Open	13.8	117

		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>

Date	Time	Discharge pH	Flow Rate (m3)	Discharge NTU	Flow Total (m3)	Discharge Valve Status	Discharge Temperature (°C)	Discharge Conductivity (uS/cm)
12/15/2024	20:45:00	7.5	0.677	0	36,283	Open	14.8	116
12/15/2024	21:00:00	7.7	0.828	0	36,295	Open	10.1	113
12/15/2024	21:15:00	7.7	0.820	0	36,307	Open	10	112
12/15/2024	21:30:00	7.7	0.820	0	36,320	Open	10	114
12/15/2024	21:45:00	7.6	0.000	0	36,322	Closed	10.6	116
12/15/2024	22:00:00	7.5	0.000	0	36,322	Closed	11.2	116
12/15/2024	22:15:00	7.5	0.000	0	36,322	Open	12	118
12/15/2024	22:30:00	7.4	0.000	0	36,322	Open	12.7	118
12/15/2024	22:45:00	7.4	0.000	0	36,322	Closed	13.4	117
12/15/2024	23:00:00	7.4	0.000	0	36,322	Closed	13.8	117
12/15/2024	23:15:00	7.4	0.000	2.8	36,322	Closed	14.3	119
12/15/2024	23:30:00	7.7	0.820	7.7	36,330	Open	10.1	118
12/15/2024	23:45:00	7.7	0.820	0	36,340	Open	10.4	119

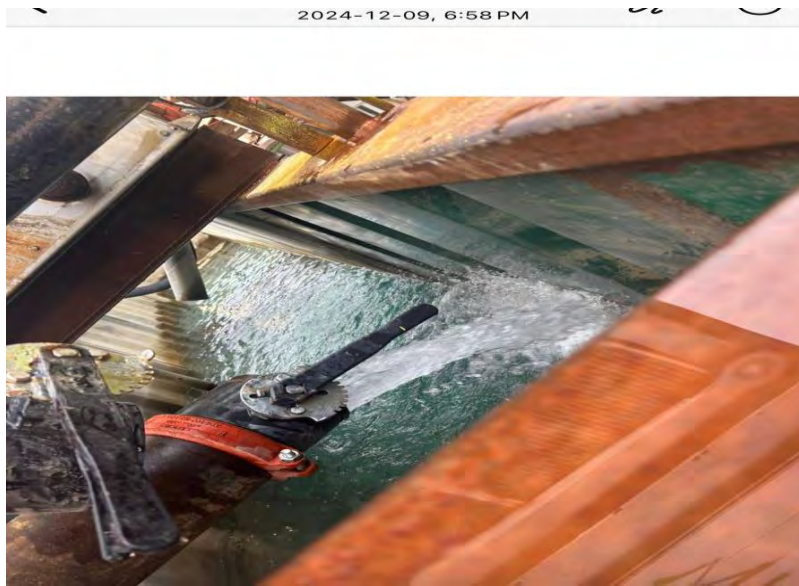


		<b>Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope</b>	
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> SD <b>Approved by:</b> BC2 <b>Date:</b> December 18 <sup>th</sup> 2024	

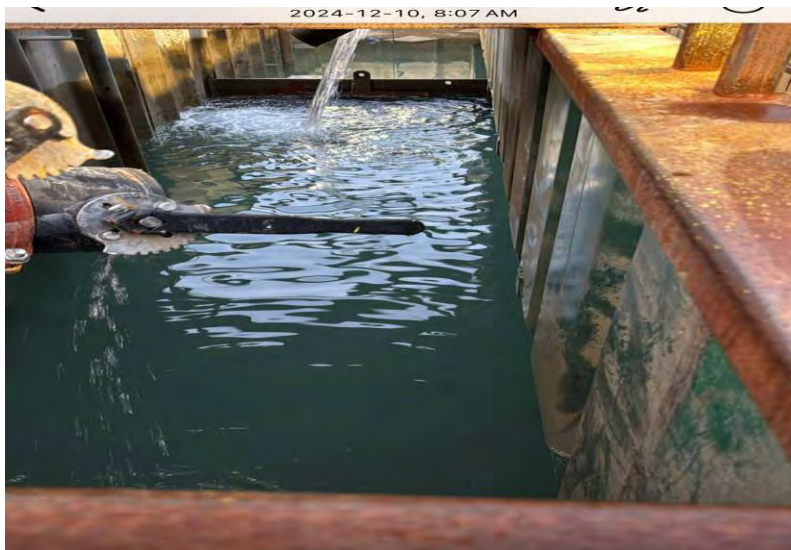
<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b>	<b>SD</b>
		<b>Approved by:</b>	<b>BC2</b>
		<b>Date:</b>	<b>December 18<sup>th</sup> 2024</b>

**Photos:**

**Photo 1: No visible sheen observed in the WTP water, December 9<sup>th</sup>**

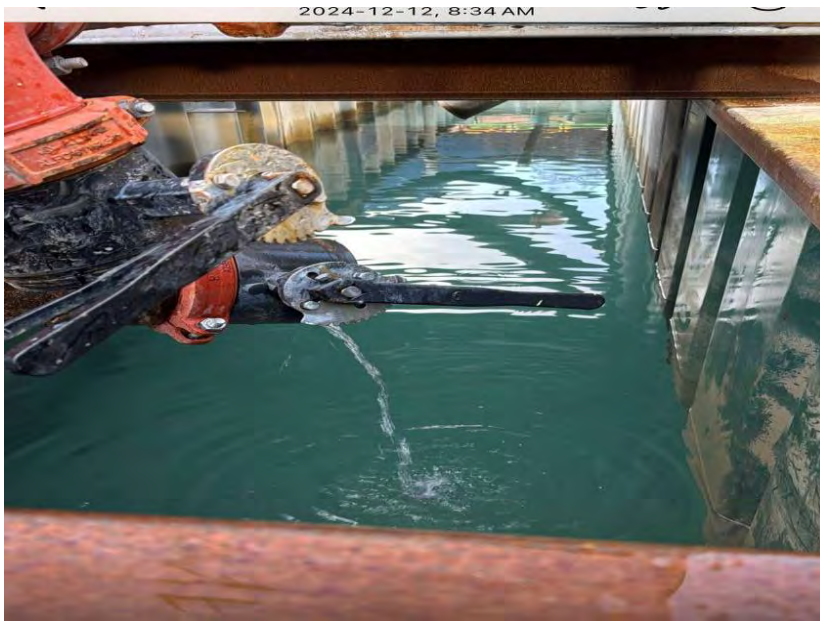


**Photo 2: No visible sheen observed in the WTP water, December 10<sup>th</sup>**



<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b>	<b>SD</b>
		<b>Approved by:</b>	<b>BC2</b>
		<b>Date:</b>	<b>December 18<sup>th</sup> 2024</b>

**Photo 3: No visible sheen observed in the WTP water, December 12<sup>th</sup>**



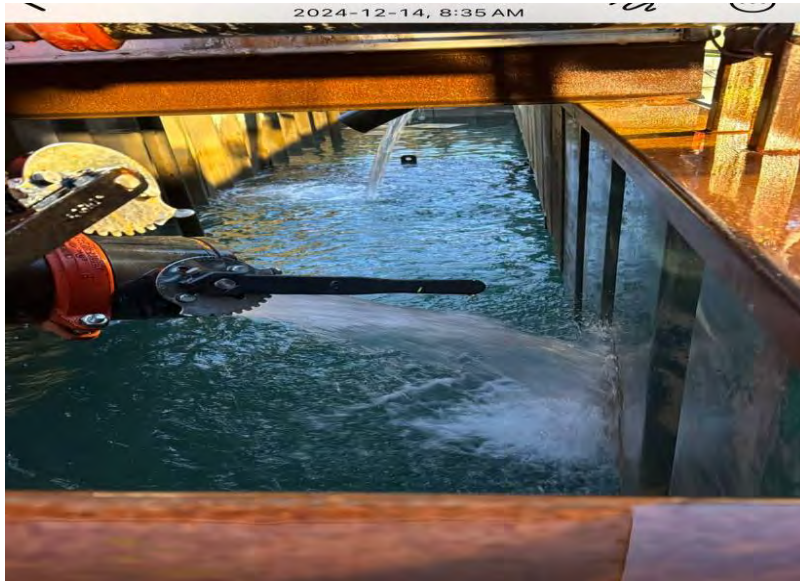
**Photo 4: No visible sheen observed in the WTP water, December 13<sup>th</sup>**





<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>

**Photo 5: No visible sheen observed in the WTP water, December 14<sup>th</sup>**




**Photo 6: No visible sheen observed in the WTP water, December 15<sup>th</sup>**






**Eagle Mountain- Woodfibre Gas Pipeline Project- Tunnel Scope**


<b>Title</b>	<b>WoodFibre Weekly Water Discharge Report</b>	<b>Revision:</b>	<b>0</b>
<b>Data Date Range</b>	<b>December 9<sup>th</sup> to December 15<sup>th</sup> , 2024</b>	<b>Prepared by:</b> <b>Approved by:</b> <b>Date:</b>	<b>SD</b> <b>BC2</b> <b>December 18<sup>th</sup> 2024</b>

 <b>Eagle Mountain - Woodfibre Gas Pipeline Project Waste Discharge Permit PE-110163 Report</b>	Reporting Week	Dec 9 <sup>th</sup> to Dec 15 <sup>th</sup> , 2024
	Report #	38
	Appendix D	D-1

## Appendix D: Woodfibre Site Receiving Environment Documentation

 <b>Eagle Mountain - Woodfibre Gas Pipeline Project Waste Discharge Permit PE-110163 Report</b>	Reporting Week	Dec 9 <sup>th</sup> to Dec 15 <sup>th</sup> , 2024
	Report #	38
	Appendix D	D-2

## Woodfibre Site Receiving Environment Sample Analysis

TRITON		Sample ID	Revised and signed off by:			Project Number P.L.D. #P.D.	ESD (B) (Upstream)	ESD (B) (Downstream)	Sample or value notes		BCWQFAL - Short Term	BCWQFAL - Long Term	BCWQMAL - Short Term	BCWQMAL - Long Term
Analyte	Units	FAI 47.1	FAI 47.2	FAI 47.3	MAI 47.4									
<b>In-Situ Parameters</b>														
pH (6d)	pH units	6.9-9.0	6.9-9.0	7.0-8.7	7.0-8.7		7.1	7.13						
Temperature (6d)	°C						6.6	7.2						
Conductivity (6d)	µS/cm						40	111						
Turbidity (6d)	NTU	Varies with background, see note Guideline = 8.2	Varies with background, see note Guideline = 4.8 5-week discrete sampling average = 1.22 (SD)	Varies with background, see note Guideline = 8.2	Varies with background, see note Guideline = 4.8 5-week discrete sampling average = 1.22 (SD)		0.18	0.10						
Dissolved Oxygen (6d)	mg/L	Varies with life stages, see note	Varies with life stages, see note	Varies with life stages, see note	Varies with life stages, see note		11.33	11.82						
<b>General Parameters</b>														
Dissolved as CaCO <sub>3</sub> (Total)	mg/L						7.08	25.5						
Total Dissolved Solids	mg/L						34	30						
Total Suspended Solids	mg/L	Varies with background, see note Guideline = 28	Varies with background, see note Guideline = 8.00 5-week discrete sampling average = 3.1 (SD)	Varies with background, see note Guideline = 28	Varies with background, see note Guideline = 8.00 5-week discrete sampling average = 3.1 (SD)		3.3	3.0						
Dissolved Organic Carbon (DOC)	mg/L						2.05	1.24						
Total Alkalinity (CaCO <sub>3</sub> )	mg/L		Categorical, see note				5.3	26.6						
Total Sulphide (as S)	mg/L						< 0.0015	< 0.0015						
Total Sulphide (as limited as H <sub>2</sub> S)	mg/L		0.002				< 0.0015	< 0.0015						
Total Sulphide (as H <sub>2</sub> S)	mg/L						< 0.0016	< 0.0016						
<b>Anions and Nutrients</b>														
Ammonia	mg/L ammonia-N	Varies with pH and temperature. See note. Guideline = 10.9	Varies with pH and temperature. See note. Guideline = 1.00	Varies with pH and temperature. See note. Guideline = 10.9	Varies with pH, temperature and salinity. See note. Guideline = 1.00		< 0.0020	0.0074						
Nitrate	mg/L						< 0.020	< 0.020						
Chloride	mg/L	600	150	> 100% of background	> 50% of background		0.87	0.82						
Fluoride	mg/L	Varies with hardness Guideline = 0.276	1.5				< 0.020	0.020						
Nitrite (as N)	mg/L	0.9	3		3.7		0.099	0.0029						
Nitrate (as N)	mg/L	Varies with chloride. Table 27B, see note. Guideline = 0.06	Varies with chloride. Table 27B, see note. Guideline = 0.02				< 0.0010	< 0.0010						
Total Nitrogen	mg/L						0.118	0.076						
Total Phosphorus	mg/L	0.003 to 0.015					0.0023	0.0020						
Sulfate (as SO <sub>4</sub> )	mg/L		Varies with hardness. See note. Guideline = 128				3.58	3.69						
<b>Trace Metals</b>														
Aluminum (As Total)	mg/L		Varies with pH, DOC, hardness Guideline = 0.076 5-week field average = 0.157 (AS), 0.148 (DS)				0.068	0.082						
Antimony (As Total)	mg/L	0.001	0.001				< 0.00010	< 0.00010						
Barium (Ba Total)	mg/L						0.0020	0.0020						
Bismuth (Bi Total)	mg/L						< 0.00010	< 0.00010						
Boron (B Total)	mg/L						0.00017	0.00017						
Calcium (Ca Total)	mg/L						0.00017	0.00017						
Cadmium (Cd Total)	mg/L						< 0.000010	< 0.000010						
Chromium (Cr Total)	mg/L						0.00017	0.00017						
Copper (Cu Total)	mg/L			0.003	5-week field average = 0.00124 (AS), 0.00092 (DS)		0.00077	< 0.000010						
Iron (Fe Total)	mg/L						0.047	0.021						
Lead (Pb Total)	mg/L			0.14	5-week field average = 0.0000010 (AS), 0.0000010 (DS)		< 0.000010	< 0.000010						
Lithium (Li Total)	mg/L						< 0.0010	0.001						
Magnesium (Mg Total)	mg/L						0.25	0.074						
Manganese (Mn Total)	mg/L	Varies with hardness Guideline = 0.82	Varies with hardness Guideline = 0.77				0.00183	0.00132						
Mercury (Hg Total)	mg/L		Varies with methyl mercury Guideline = 0.00010				< 0.0000010	< 0.0000010						
Molybdenum (Mo Total)	mg/L	86	7.6				0.00017	0.00017						
Nickel (Ni Total)	mg/L						0.0083	< 0.00010						
Phosphorus (P Total)	mg/L		0.003 to 0.015				< 0.0010	< 0.0010						
Potassium (K Total)	mg/L						0.225	0.444						
Rubidium (Rb Total)	mg/L						0.00012	0.00086						
Selenium (Se Total)	mg/L		0.002				< 0.000010	< 0.0000010						
Silicon (Si Total)	mg/L						3.78	4.87						
Silver (Ag Total)	mg/L	Varies with hardness, see note. Guideline = 0.00010	Varies with hardness, see note. Guideline = 0.000010	0.003	0.0015		< 0.000010	< 0.000010						
Sodium (Na Total)	mg/L						1.26	2.62						
Strontium (Sr Total)	mg/L						0.0117	0.0232						
Sulfur (S Total)	mg/L						0.44	1.68						
Tantalum (Ta Total)	mg/L		0.00010				< 0.000010	< 0.000010						
Thallium (Tl Total)	mg/L		5-week field average = 0.000010 (AS), 0.000010 (DS)				< 0.000010	< 0.000010						
Vanadium (V Total)	mg/L						< 0.000010	< 0.000010						
Zinc (Zn Total)	mg/L						0.00017	0.00017						
<b>Trace Organic Compounds</b>														
Acetaminophen (Acetaminophen)	mg/L						< 0.00010	< 0.00010						
Atrazine (Atrazine)	mg/L						< 0.00010	< 0.00010						
Chlorobenzene (Chlorobenzene)	mg/L						< 0.00010	< 0.00010						
Chloroform (Chloroform)	mg/L						< 0.00010	< 0.00010						
Diethylhexyl Sebacate (Diethylhexyl Sebacate)	mg/L						< 0.00010	< 0.00010						
Endrin (Endrin)	mg/L						< 0.00010	< 0.00010						
Endrin Sulfate (Endrin Sulfate)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						
Gamma-Hexachlorocyclopentadiene (Gamma-Hexachlorocyclopentadiene)	mg/L						< 0.00010	< 0.00010						





**Eagle Mountain - Woodfibre Gas Pipeline Project  
Waste Discharge Permit PE-110163 Report**

Reporting Week	Dec 9 <sup>th</sup> to Dec 15 <sup>th</sup> , 2024
Report #	38
Appendix D	D-3

## Woodfibre Site Receiving Environment Lab Documentation



**CERTIFICATE OF ANALYSIS**

<b>Work Order</b>	: <b>VA24D3203</b>		
Client	: Triton Environmental Consultants Ltd.	Laboratory	: ALS Environmental - Vancouver
Contact	:	Account Manager	
Address	:	Address	
Telephone	:	Telephone	
Project	: 11964	Date Samples Received	: 10-Dec-2024 17:30
PO	: 11964-Task20-Phase3C-4C	Date Analysis Commenced	: 10-Dec-2024
C-O-C number	: ----	Issue Date	: 16-Dec-2024 08:48
Sampler	: ----		
Site	: Water Analysis		
Quote number	: VA23-TRIT100-012		
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.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
		Metals, Burnaby, British Columbia
		Metals, 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).

<i>Unit</i>	<i>Description</i>
-	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.

## Qualifiers

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



**Analytical Results**

Sub-Matrix: Water (Matrix: Water)					Client sample ID	WLNG US1	WLNG DS1	----	----	----
Client sampling date / time					10-Dec-2024 13:07	10-Dec-2024 10:58	----	----	----	
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3203-001	VA24D3203-002	----	----	----	
					Result	Result	----	----	----	
<b>Field Tests</b>										
Conductivity, field	----	EF001/VA	0.10	µS/cm	40.000	111.00	----	----	----	
pH, field	----	EF001/VA	0.10	pH units	7.10	7.13	----	----	----	
Temperature, field	----	EF001/VA	0.10	°C	6.60	7.20	----	----	----	
Turbidity, field	----	EF001/VA	0.01	NTU	0.19	0.1	----	----	----	
<b>Physical Tests</b>										
Hardness (as CaCO3), dissolved	----	EC100/VA	0.60	mg/L	6.85	20.0	----	----	----	
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/VA	0.60	mg/L	7.08	26.8	----	----	----	
Solids, total dissolved [TDS]	----	E162/VA	10	mg/L	34	55	----	----	----	
Solids, total suspended [TSS]	----	E160/VA	3.0	mg/L	<3.0	<3.0	----	----	----	
Alkalinity, total (as CaCO3)	----	E290/VA	2.0	mg/L	5.3	28.6	----	----	----	
<b>Anions and Nutrients</b>										
Ammonia, total (as N)	7664-41-7	E298/VA	0.0050	mg/L	<0.0050	0.0074	----	----	----	
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	0.87	0.82	----	----	----	
Fluoride	16984-48-8	E235.F/VA	0.020	mg/L	<0.020	0.093	----	----	----	
Nitrate (as N)	14797-55-8	E235.NO3-L/VA	0.0050	mg/L	0.0590	0.0252	----	----	----	
Nitrite (as N)	14797-65-0	E235.NO2-L/VA	0.0010	mg/L	<0.0010	<0.0010	----	----	----	
Nitrogen, total	7727-37-9	E366/VA	0.030	mg/L	0.118	0.078	----	----	----	
Phosphorus, total	7723-14-0	E372-U/VA	0.0020	mg/L	0.0229	0.0092	----	----	----	
Sulfate (as SO4)	14808-79-8	E235.SO4/VA	0.30	mg/L	3.58	3.69	----	----	----	



### Analytical Results

Sub-Matrix: Water  
 (Matrix: Water)

					Client sample ID	WLNG US1	WLNG DS1	----	----	----
					Client sampling date / time	10-Dec-2024 13:07	10-Dec-2024 10:58	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3203-001	VA24D3203-002	----	----	----	
					Result	Result	----	----	----	
<b>Organic / Inorganic Carbon</b>										
Carbon, dissolved organic [DOC]	----	E358-L/VA	0.50	mg/L	2.05	1.54	----	----	----	
<b>Total Sulfides</b>										
Sulfide, total (as S)	18496-25-8	E395/VA	0.0015	mg/L	<0.0015	<0.0015	----	----	----	
Sulfide, un-ionized (as H2S), from total	7783-06-4	EC395/VA	0.0015	mg/L	<0.0015	<0.0015	----	----	----	
Sulfide, total (as H2S)	7783-06-4	E395/VA	0.0016	mg/L	<0.0016	<0.0016	----	----	----	
<b>Total Metals</b>										
Aluminum, total	7429-90-5	E420/VA	0.0030	mg/L	0.0950	0.0620	----	----	----	
Antimony, total	7440-36-0	E420/VA	0.00010	mg/L	<0.00010	<0.00010	----	----	----	
Arsenic, total	7440-38-2	E420/VA	0.00010	mg/L	0.00016	0.00080	----	----	----	
Barium, total	7440-39-3	E420/VA	0.00010	mg/L	0.00321	0.00366	----	----	----	
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	0.0000056	<0.0000100 <sup>DLM</sup>	----	----	----	
Calcium, total	7440-70-2	E420/VA	0.050	mg/L	2.29	9.77	----	----	----	
Cesium, total	7440-46-2	E420/VA	0.000010	mg/L	<0.000010	<0.000010	----	----	----	
Chromium, total	7440-47-3	E420/VA	0.00050	mg/L	<0.00050	<0.00050	----	----	----	
Cobalt, total	7440-48-4	E420/VA	0.00010	mg/L	<0.00010	<0.00010	----	----	----	
Copper, total	7440-50-8	E420/VA	0.00050	mg/L	0.00077	<0.00050	----	----	----	
Iron, total	7439-89-6	E420/VA	0.010	mg/L	0.047	0.025	----	----	----	
Lead, total	7439-92-1	E420/VA	0.000050	mg/L	<0.000050	<0.000050	----	----	----	



## Analytical Results

Sub-Matrix: Water  
 (Matrix: Water)

					Client sample ID	WLNG US1	WLNG DS1	----	----	----
					Client sampling date / time	10-Dec-2024 13:07	10-Dec-2024 10:58	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3203-001	VA24D3203-002	----	----	----	
					Result	Result	----	----	----	
<b>Total Metals</b>										
Lithium, total	7439-93-2	E420/VA	0.0010	mg/L	<0.0010	0.0010	----	----	----	
Magnesium, total	7439-95-4	E420/VA	0.0050	mg/L	0.330	0.574	----	----	----	
Manganese, total	7439-96-5	E420/VA	0.00010	mg/L	0.00183	0.00132	----	----	----	
Mercury, total	7439-97-6	E508/VA	0.0000050	mg/L	<0.0000050	<0.0000050	----	----	----	
Molybdenum, total	7439-98-7	E420/VA	0.000050	mg/L	0.000370	0.00772	----	----	----	
Nickel, total	7440-02-0	E420/VA	0.00050	mg/L	<0.00050	<0.00050	----	----	----	
Phosphorus, total	7723-14-0	E420/VA	0.050	mg/L	<0.050	<0.050	----	----	----	
Potassium, total	7440-09-7	E420/VA	0.050	mg/L	0.225	0.444	----	----	----	
Rubidium, total	7440-17-7	E420/VA	0.00020	mg/L	0.00032	0.00068	----	----	----	
Selenium, total	7782-49-2	E420/VA	0.000050	mg/L	<0.000050	<0.000050	----	----	----	
Silicon, total	7440-21-3	E420/VA	0.10	mg/L	3.76	4.67	----	----	----	
Silver, total	7440-22-4	E420/VA	0.000010	mg/L	<0.000010	<0.000010	----	----	----	
Sodium, total	7440-23-5	E420/VA	0.050	mg/L	1.35	2.02	----	----	----	
Strontium, total	7440-24-6	E420/VA	0.00020	mg/L	0.0117	0.0232	----	----	----	
Sulfur, total	7704-34-9	E420/VA	0.50	mg/L	0.94	1.06	----	----	----	
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	0.00103	0.00061	----	----	----	
Tungsten, total	7440-33-7	E420/VA	0.00010	mg/L	<0.00010	0.00011	----	----	----	



## Analytical Results

Sub-Matrix: Water  
 (Matrix: Water)

					Client sample ID	WLNG US1	WLNG DS1	----	----	----
					Client sampling date / time	10-Dec-2024 13:07	10-Dec-2024 10:58	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3203-001	VA24D3203-002	----	----	----	
					Result	Result	----	----	----	
<b>Total Metals</b>										
Uranium, total	7440-61-1	E420/VA	0.000010	mg/L	0.000107	0.00318	----	----	----	
Vanadium, total	7440-62-2	E420/VA	0.00050	mg/L	<0.00050	<0.00050	----	----	----	
Zinc, total	7440-66-6	E420/VA	0.0030	mg/L	<0.0030	0.0052	----	----	----	
Zirconium, total	7440-67-7	E420/VA	0.00020	mg/L	<0.00020	<0.00020	----	----	----	
<b>Dissolved Metals</b>										
Aluminum, dissolved	7429-90-5	E421/VA	0.0010	mg/L	0.0687	0.0545	----	----	----	
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	0.00011	0.00058	----	----	----	
Barium, dissolved	7440-39-3	E421/VA	0.00010	mg/L	0.00314	0.00322	----	----	----	
Beryllium, dissolved	7440-41-7	E421/VA	0.000100	mg/L	<0.000100	<0.000100	----	----	----	
Bismuth, dissolved	7440-69-9	E421/VA	0.000050	mg/L	<0.000050	<0.000050	----	----	----	
Boron, dissolved	7440-42-8	E421/VA	0.010	mg/L	<0.010	<0.010	----	----	----	
Cadmium, dissolved	7440-43-9	E421/VA	0.0000050	mg/L	<0.0000050	<0.0000050	----	----	----	
Calcium, dissolved	7440-70-2	E421/VA	0.050	mg/L	2.19	7.25	----	----	----	
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	0.00068	0.00040	----	----	----	
Iron, dissolved	7439-89-6	E421/VA	0.010	mg/L	0.024	0.016	----	----	----	
Lead, dissolved	7439-92-1	E421/VA	0.000050	mg/L	<0.000050	<0.000050	----	----	----	
Lithium, dissolved	7439-93-2	E421/VA	0.0010	mg/L	<0.0010	<0.0010	----	----	----	



## Analytical Results

Sub-Matrix: Water  
 (Matrix: Water)

					Client sample ID	WLNG US1	WLNG DS1	----	----	----
					Client sampling date / time	10-Dec-2024 13:07	10-Dec-2024 10:58	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3203-001	VA24D3203-002	----	----	----	
					Result	Result	----	----	----	
<b>Dissolved Metals</b>										
Magnesium, dissolved	7439-95-4	E421/VA	0.0050	mg/L	0.336	0.460	----	----	----	
Manganese, dissolved	7439-96-5	E421/VA	0.00010	mg/L	0.00115	0.00091	----	----	----	
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	0.000327	0.00550	----	----	----	
Nickel, dissolved	7440-02-0	E421/VA	0.00050	mg/L	<0.00050	<0.00050	----	----	----	
Phosphorus, dissolved	7723-14-0	E421/VA	0.050	mg/L	<0.050	<0.050	----	----	----	
Potassium, dissolved	7440-09-7	E421/VA	0.050	mg/L	0.224	0.338	----	----	----	
Rubidium, dissolved	7440-17-7	E421/VA	0.00020	mg/L	0.00027	0.00047	----	----	----	
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	3.50	4.16	----	----	----	
Silver, dissolved	7440-22-4	E421/VA	0.000010	mg/L	<0.000010	<0.000010	----	----	----	
Sodium, dissolved	7440-23-5	E421/VA	0.050	mg/L	1.36	1.72	----	----	----	
Strontium, dissolved	7440-24-6	E421/VA	0.00020	mg/L	0.0111	0.0183	----	----	----	
Sulfur, dissolved	7704-34-9	E421/VA	0.50	mg/L	1.02	0.98	----	----	----	
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	0.000093	0.00207	----	----	----	





### Analytical Results

Sub-Matrix: Water  
 (Matrix: Water)

					Client sample ID	WLNG US1	WLNG DS1	----	----	----
					Client sampling date / time	10-Dec-2024 13:07	10-Dec-2024 10:58	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	VA24D3203-001	VA24D3203-002	----	----	----	
					Result	Result	----	----	----	
<b>Dissolved Metals</b>										
Vanadium, dissolved	7440-62-2	E421/VA	0.00050	mg/L	<0.00050	<0.00050	----	----	----	
Zinc, dissolved	7440-66-6	E421/VA	0.0010	mg/L	0.0014	0.0045	----	----	----	
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	----	----	----	
<b>Speciated Metals</b>										
Chromium, hexavalent [Cr VI], total	18540-29-9	E532/VA	0.00050	mg/L	<0.00050	<0.00050	----	----	----	
Chromium, trivalent [Cr III], total	16065-83-1	EC535/VA	0.00050	mg/L	<0.00050	<0.00050	----	----	----	

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

## QUALITY CONTROL INTERPRETIVE REPORT

<p><b>Work Order</b> : VA24D3203</p> <p><b>Client</b> : Triton Environmental Consultants Ltd.</p> <p><b>Contact</b> : [REDACTED]</p> <p><b>Address</b> : [REDACTED]</p> <p><b>Telephone</b> : ----</p> <p><b>Project</b> : 11964</p> <p><b>PO</b> : 11964-Task20-Phase3C-4C</p> <p><b>C-O-C number</b> : ----</p> <p><b>Sampler</b> : ----</p> <p><b>Site</b> : Water Analysis</p> <p><b>Quote number</b> : VA23-TRIT100-012_V2</p> <p><b>No. of samples received</b> : 2</p> <p><b>No. of samples analysed</b> : 2</p>	<p><b>Page</b> : 1 of 14</p> <p><b>Laboratory</b> : ALS Environmental - Vancouver</p> <p><b>Account Manager</b> : [REDACTED]</p> <p><b>Address</b> : [REDACTED]</p> <p><b>Telephone</b> : [REDACTED]</p> <p><b>Date Samples Received</b> : 10-Dec-2024 17:30</p> <p><b>Issue Date</b> : 16-Dec-2024 08:47</p>
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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		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Anions and Nutrients : Ammonia by Fluorescence</b>										
Amber glass total (sulfuric acid) WLNG DS1	E298	10-Dec-2024	11-Dec-2024	28 days	1 days	✔	11-Dec-2024	28 days	1 days	✔
<b>Anions and Nutrients : Ammonia by Fluorescence</b>										
Amber glass total (sulfuric acid) WLNG US1	E298	10-Dec-2024	11-Dec-2024	28 days	1 days	✔	11-Dec-2024	28 days	1 days	✔
<b>Anions and Nutrients : Bromide in Water by IC (Low Level)</b>										
HDPE WLNG DS1	E235.Br-L	10-Dec-2024	11-Dec-2024	28 days	1 days	✔	11-Dec-2024	28 days	1 days	✔
<b>Anions and Nutrients : Bromide in Water by IC (Low Level)</b>										
HDPE WLNG US1	E235.Br-L	10-Dec-2024	11-Dec-2024	28 days	1 days	✔	11-Dec-2024	28 days	1 days	✔
<b>Anions and Nutrients : Chloride in Water by IC</b>										
HDPE WLNG DS1	E235.Cl	10-Dec-2024	11-Dec-2024	28 days	1 days	✔	11-Dec-2024	28 days	1 days	✔
<b>Anions and Nutrients : Chloride in Water by IC</b>										
HDPE WLNG US1	E235.Cl	10-Dec-2024	11-Dec-2024	28 days	1 days	✔	11-Dec-2024	28 days	1 days	✔
<b>Anions and Nutrients : Fluoride in Water by IC</b>										
HDPE WLNG DS1	E235.F	10-Dec-2024	11-Dec-2024	28 days	1 days	✔	11-Dec-2024	28 days	1 days	✔



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Anions and Nutrients : Fluoride in Water by IC</b>											
HDPE WLNG US1	E235.F	10-Dec-2024	11-Dec-2024	28 days	1 days	✔	11-Dec-2024	28 days	1 days	✔	
<b>Anions and Nutrients : Nitrate in Water by IC (Low Level)</b>											
HDPE WLNG DS1	E235.NO3-L	10-Dec-2024	11-Dec-2024	3 days	1 days	✔	11-Dec-2024	3 days	1 days	✔	
<b>Anions and Nutrients : Nitrate in Water by IC (Low Level)</b>											
HDPE WLNG US1	E235.NO3-L	10-Dec-2024	11-Dec-2024	3 days	1 days	✔	11-Dec-2024	3 days	1 days	✔	
<b>Anions and Nutrients : Nitrite in Water by IC (Low Level)</b>											
HDPE WLNG DS1	E235.NO2-L	10-Dec-2024	11-Dec-2024	3 days	1 days	✔	11-Dec-2024	3 days	1 days	✔	
<b>Anions and Nutrients : Nitrite in Water by IC (Low Level)</b>											
HDPE WLNG US1	E235.NO2-L	10-Dec-2024	11-Dec-2024	3 days	1 days	✔	11-Dec-2024	3 days	1 days	✔	
<b>Anions and Nutrients : Sulfate in Water by IC</b>											
HDPE WLNG DS1	E235.SO4	10-Dec-2024	11-Dec-2024	28 days	1 days	✔	11-Dec-2024	28 days	1 days	✔	
<b>Anions and Nutrients : Sulfate in Water by IC</b>											
HDPE WLNG US1	E235.SO4	10-Dec-2024	11-Dec-2024	28 days	1 days	✔	11-Dec-2024	28 days	1 days	✔	
<b>Anions and Nutrients : Total Nitrogen by Colourimetry</b>											
Amber glass total (sulfuric acid) WLNG DS1	E366	10-Dec-2024	11-Dec-2024	28 days	1 days	✔	12-Dec-2024	28 days	2 days	✔	
<b>Anions and Nutrients : Total Nitrogen by Colourimetry</b>											
Amber glass total (sulfuric acid) WLNG US1	E366	10-Dec-2024	11-Dec-2024	28 days	1 days	✔	12-Dec-2024	28 days	2 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
				Rec	Actual			Rec	Actual	
<b>Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)</b>										
Amber glass total (sulfuric acid) WLNG DS1	E372-U	10-Dec-2024	11-Dec-2024	28 days	1 days	✔	12-Dec-2024	28 days	2 days	✔
<b>Anions and Nutrients : Total Phosphorus by Colourimetry (0.002 mg/L)</b>										
Amber glass total (sulfuric acid) WLNG US1	E372-U	10-Dec-2024	11-Dec-2024	28 days	1 days	✔	12-Dec-2024	28 days	2 days	✔
<b>Dissolved Metals : Dissolved Mercury in Water by CVAAS</b>										
Glass vial dissolved (hydrochloric acid) WLNG DS1	E509	10-Dec-2024	14-Dec-2024	28 days	4 days	✔	14-Dec-2024	28 days	4 days	✔
<b>Dissolved Metals : Dissolved Mercury in Water by CVAAS</b>										
Glass vial dissolved (hydrochloric acid) WLNG US1	E509	10-Dec-2024	14-Dec-2024	28 days	4 days	✔	14-Dec-2024	28 days	4 days	✔
<b>Dissolved Metals : Dissolved Metals in Water by CRC ICPMS</b>										
HDPE dissolved (nitric acid) WLNG DS1	E421	10-Dec-2024	11-Dec-2024	180 days	1 days	✔	12-Dec-2024	180 days	2 days	✔
<b>Dissolved Metals : Dissolved Metals in Water by CRC ICPMS</b>										
HDPE dissolved (nitric acid) WLNG US1	E421	10-Dec-2024	11-Dec-2024	180 days	1 days	✔	12-Dec-2024	180 days	2 days	✔
<b>Field Tests : Field pH,EC,Salinity, TDS, Cl2,CIO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine</b>										
Glass vial dissolved (hydrochloric acid) WLNG DS1	EF001	10-Dec-2024	----	----	----		11-Dec-2024	----	1 days	
<b>Field Tests : Field pH,EC,Salinity, TDS, Cl2,CIO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine</b>										
Glass vial dissolved (hydrochloric acid) WLNG US1	EF001	10-Dec-2024	----	----	----		11-Dec-2024	----	1 days	
<b>Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)</b>										
Amber glass dissolved (sulfuric acid) WLNG DS1	E358-L	10-Dec-2024	11-Dec-2024	28 days	1 days	✔	11-Dec-2024	28 days	1 days	✔



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)</b>											
<b>Amber glass dissolved (sulfuric acid)</b> WLNG US1	E358-L	10-Dec-2024	11-Dec-2024	28 days	1 days	✔	11-Dec-2024	28 days	1 days	✔	
<b>Physical Tests : Alkalinity Species by Titration</b>											
<b>HDPE</b> WLNG DS1	E290	10-Dec-2024	11-Dec-2024	14 days	1 days	✔	11-Dec-2024	14 days	1 days	✔	
<b>Physical Tests : Alkalinity Species by Titration</b>											
<b>HDPE</b> WLNG US1	E290	10-Dec-2024	11-Dec-2024	14 days	1 days	✔	11-Dec-2024	14 days	1 days	✔	
<b>Physical Tests : TDS by Gravimetry</b>											
<b>HDPE</b> WLNG DS1	E162	10-Dec-2024	----	----	----		11-Dec-2024	7 days	1 days	✔	
<b>Physical Tests : TDS by Gravimetry</b>											
<b>HDPE</b> WLNG US1	E162	10-Dec-2024	----	----	----		11-Dec-2024	7 days	1 days	✔	
<b>Physical Tests : TSS by Gravimetry</b>											
<b>HDPE</b> WLNG DS1	E160	10-Dec-2024	----	----	----		11-Dec-2024	7 days	1 days	✔	
<b>Physical Tests : TSS by Gravimetry</b>											
<b>HDPE</b> WLNG US1	E160	10-Dec-2024	----	----	----		11-Dec-2024	7 days	1 days	✔	
<b>Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC</b>											
<b>Opaque HDPE - total (sodium hydroxide)</b> WLNG DS1	E532	10-Dec-2024	----	----	----		10-Dec-2024	28 days	0 days	✔	
<b>Speciated Metals : Total Hexavalent Chromium (Cr VI) by IC</b>											
<b>Opaque HDPE - total (sodium hydroxide)</b> WLNG US1	E532	10-Dec-2024	----	----	----		10-Dec-2024	28 days	0 days	✔	



Matrix: **Water** Evaluation: ✖ = Holding time exceedance ; ✔ = Within Holding Time

Analyte Group : Analytical Method Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis				
			Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval	
				Rec	Actual			Rec	Actual		
<b>Total Metals : Total Mercury in Water by CVAAS</b>											
Glass vial total (hydrochloric acid) WLNG US1	E508	10-Dec-2024	14-Dec-2024	28 days	3 days	✔	14-Dec-2024	28 days	3 days	✔	
<b>Total Metals : Total Mercury in Water by CVAAS</b>											
Glass vial total (hydrochloric acid) WLNG DS1	E508	10-Dec-2024	14-Dec-2024	28 days	4 days	✔	14-Dec-2024	28 days	4 days	✔	
<b>Total Metals : Total Metals in Water by CRC ICPMS</b>											
HDPE total (nitric acid) WLNG DS1	E420	10-Dec-2024	11-Dec-2024	180 days	1 days	✔	12-Dec-2024	180 days	2 days	✔	
<b>Total Metals : Total Metals in Water by CRC ICPMS</b>											
HDPE total (nitric acid) WLNG US1	E420	10-Dec-2024	11-Dec-2024	180 days	1 days	✔	12-Dec-2024	180 days	2 days	✔	
<b>Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)</b>											
HDPE total (zinc acetate+sodium hydroxide) WLNG DS1	E395	10-Dec-2024	----	----	----		11-Dec-2024	7 days	1 days	✔	
<b>Total Sulfides : Total Sulfide by Colourimetry (Automated Flow)</b>											
HDPE total (zinc acetate+sodium hydroxide) WLNG US1	E395	10-Dec-2024	----	----	----		11-Dec-2024	7 days	1 days	✔	

Legend & Qualifier Definitions

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





## Quality Control Parameter Frequency Compliance

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

Matrix: **Water** Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<b>Analytical Methods</b>							
<b>Laboratory Duplicates (DUP)</b>							
Alkalinity Species by Titration	E290	1804156	1	4	25.0	5.0	✔
Ammonia by Fluorescence	E298	1804612	1	7	14.2	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1804160	1	4	25.0	5.0	✔
Chloride in Water by IC	E235.Cl	1804159	1	5	20.0	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1809805	1	3	33.3	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1804103	2	6	33.3	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1804613	1	7	14.2	5.0	✔
Fluoride in Water by IC	E235.F	1804158	1	4	25.0	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1804161	1	4	25.0	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1804162	1	5	20.0	5.0	✔
Sulfate in Water by IC	E235.SO4	1804163	1	4	25.0	5.0	✔
TDS by Gravimetry	E162	1804949	1	20	5.0	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1804051	1	10	10.0	5.0	✔
Total Mercury in Water by CVAAS	E508	1809420	1	20	5.0	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1804106	1	7	14.2	5.0	✔
Total Nitrogen by Colourimetry	E366	1804610	1	6	16.6	5.0	✔
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1804611	1	6	16.6	5.0	✔
Total Sulfide by Colourimetry (Automated Flow)	E395	1804890	1	5	20.0	5.0	✔
TSS by Gravimetry	E160	1804914	1	20	5.0	5.0	✔
<b>Laboratory Control Samples (LCS)</b>							
Alkalinity Species by Titration	E290	1804156	1	4	25.0	5.0	✔
Ammonia by Fluorescence	E298	1804612	1	7	14.2	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1804160	1	4	25.0	5.0	✔
Chloride in Water by IC	E235.Cl	1804159	1	5	20.0	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1809805	1	3	33.3	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1804103	1	6	16.6	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1804613	1	7	14.2	5.0	✔
Fluoride in Water by IC	E235.F	1804158	1	4	25.0	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1804161	1	4	25.0	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1804162	1	5	20.0	5.0	✔
Sulfate in Water by IC	E235.SO4	1804163	1	4	25.0	5.0	✔
TDS by Gravimetry	E162	1804949	1	20	5.0	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1804051	1	10	10.0	5.0	✔
Total Mercury in Water by CVAAS	E508	1809420	1	20	5.0	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1804106	1	7	14.2	5.0	✔
Total Nitrogen by Colourimetry	E366	1804610	1	6	16.6	5.0	✔



Matrix: **Water**

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<b>Analytical Methods</b>							
<b>Laboratory Control Samples (LCS) - Continued</b>							
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1804611	1	6	16.6	5.0	✔
Total Sulfide by Colourimetry (Automated Flow)	E395	1804890	1	5	20.0	5.0	✔
TSS by Gravimetry	E160	1804914	1	20	5.0	5.0	✔
<b>Method Blanks (MB)</b>							
Alkalinity Species by Titration	E290	1804156	1	4	25.0	5.0	✔
Ammonia by Fluorescence	E298	1804612	1	7	14.2	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1804160	1	4	25.0	5.0	✔
Chloride in Water by IC	E235.Cl	1804159	1	5	20.0	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1809805	1	3	33.3	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1804103	1	6	16.6	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1804613	1	7	14.2	5.0	✔
Fluoride in Water by IC	E235.F	1804158	1	4	25.0	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1804161	1	4	25.0	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1804162	1	5	20.0	5.0	✔
Sulfate in Water by IC	E235.SO4	1804163	1	4	25.0	5.0	✔
TDS by Gravimetry	E162	1804949	1	20	5.0	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1804051	1	10	10.0	5.0	✔
Total Mercury in Water by CVAAS	E508	1809420	1	20	5.0	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1804106	1	7	14.2	5.0	✔
Total Nitrogen by Colourimetry	E366	1804610	1	6	16.6	5.0	✔
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1804611	1	6	16.6	5.0	✔
Total Sulfide by Colourimetry (Automated Flow)	E395	1804890	1	5	20.0	5.0	✔
TSS by Gravimetry	E160	1804914	1	20	5.0	5.0	✔
<b>Matrix Spikes (MS)</b>							
Ammonia by Fluorescence	E298	1804612	1	7	14.2	5.0	✔
Bromide in Water by IC (Low Level)	E235.Br-L	1804160	1	4	25.0	5.0	✔
Chloride in Water by IC	E235.Cl	1804159	1	5	20.0	5.0	✔
Dissolved Mercury in Water by CVAAS	E509	1809805	1	3	33.3	5.0	✔
Dissolved Metals in Water by CRC ICPMS	E421	1804103	1	6	16.6	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	1804613	1	7	14.2	5.0	✔
Fluoride in Water by IC	E235.F	1804158	1	4	25.0	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L	1804161	1	4	25.0	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L	1804162	1	5	20.0	5.0	✔
Sulfate in Water by IC	E235.SO4	1804163	1	4	25.0	5.0	✔
Total Hexavalent Chromium (Cr VI) by IC	E532	1804051	1	10	10.0	5.0	✔
Total Mercury in Water by CVAAS	E508	1809420	1	20	5.0	5.0	✔
Total Metals in Water by CRC ICPMS	E420	1804106	1	7	14.2	5.0	✔
Total Nitrogen by Colourimetry	E366	1804610	1	6	16.6	5.0	✔
Total Phosphorus by Colourimetry (0.002 mg/L)	E372-U	1804611	1	6	16.6	5.0	✔



Matrix: **Water** Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification.

Quality Control Sample Type	Method	QC Lot #	Count		Frequency (%)		
			QC	Regular	Actual	Expected	Evaluation
<i>Analytical Methods</i>							
<b>Matrix Spikes (MS) - Continued</b>							
Total Sulfide by Colourimetry (Automated Flow)	E395	1804890	1	5	20.0	5.0	✔



## Methodology References and Summaries

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

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
TSS by Gravimetry	E160 ALS Environmental - Vancouver	Water	APHA 2540 D (mod)	Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, following by drying of the filter at $104 \pm 1^\circ\text{C}$ , 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 $180 \pm 2^\circ\text{C}$ 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 CO <sub>2</sub> . 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 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 methylene blue colourimetric method. Results expressed "as H <sub>2</sub> S" if reported represent the maximum possible H <sub>2</sub> S concentration based on the total sulfide concentration in the sample. The H <sub>2</sub> S calculation converts Total Sulphide as (S <sub>2</sub> <sup>-</sup> ) and reports it as Total Sulphide as (H <sub>2</sub> S)
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 CaCO <sub>3</sub> ), dissolved" is calculated from the sum of dissolved Calcium and Magnesium concentrations, expressed in CaCO <sub>3</sub> 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 CaCO <sub>3</sub> ), from total Ca/Mg" is calculated from the sum of total Calcium and Magnesium concentrations, expressed in CaCO <sub>3</sub> 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, Cl <sub>2</sub> ,ClO <sub>2</sub> ,ORP,DO, Turbidity,T,T-P,o-PO <sub>4</sub> ,NH <sub>3</sub> ,Chloramine	EF001 ALS Environmental - Vancouver	Water	Field Measurement (Client Supplied)	Field pH,EC,Salinity, TDS, Cl <sub>2</sub> ,ClO <sub>2</sub> ,ORP,DO, Turbidity,T,T-P,o-PO <sub>4</sub> ,NH <sub>3</sub> 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.



<i>Preparation Methods</i>	<i>Method / Lab</i>	<i>Matrix</i>	<i>Method Reference</i>	<i>Method Descriptions</i>
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** : **VA24D3203**  
**Client** : Triton Environmental Consultants Ltd.  
**Contact** : [Redacted]  
**Address** : [Redacted]  
**Telephone** : ----  
**Project** : 11964  
**PO** : 11964-Task20-Phase3C-4C  
**C-O-C number** : ----  
**Sampler** : ----  
**Site** : Water Analysis  
**Quote number** : VA23-TRIT100-012\_V2  
**No. of samples received** : 2  
**No. of samples analysed** : 2

**Page** : 1 of 17  
**Laboratory** : ALS Environmental - Vancouver  
**Account Manager** : [Redacted]  
**Address** : [Redacted]  
**Telephone** : [Redacted]  
**Date Samples Received** : 10-Dec-2024 17:30  
**Date Analysis Commenced** : 10-Dec-2024  
**Issue Date** : 16-Dec-2024 08:47

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]	[Redacted]	Vancouver Metals, Burnaby, British Columbia
[Redacted]	[Redacted]	Vancouver Metals, Burnaby, British Columbia
[Redacted]	[Redacted]	Vancouver Metals, Burnaby, British Columbia
[Redacted]	[Redacted]	Vancouver Inorganics, Burnaby, British Columbia
[Redacted]	[Redacted]	Vancouver Metals, Burnaby, British Columbia
[Redacted]	[Redacted]	Vancouver Administration, Burnaby, British Columbia
[Redacted]	[Redacted]	Vancouver Inorganics, Burnaby, British Columbia



Page : 2 of 17  
Work Order : VA24D3203  
Client : Triton Environmental Consultants Ltd.  
Project : 11964



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## 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

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

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### 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: <b>Water</b>					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
<b>Physical Tests (QC Lot: 1804156)</b>											
VA24D3220-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	52.0	52.1	0.192%	20%	----
<b>Physical Tests (QC Lot: 1804914)</b>											
VA24D2998-001	Anonymous	Solids, total suspended [TSS]	----	E160	3.0	mg/L	5.5	7.5	2.0	Diff <2x LOR	----
<b>Physical Tests (QC Lot: 1804949)</b>											
VA24D2998-001	Anonymous	Solids, total dissolved [TDS]	----	E162	10	mg/L	22	18	3	Diff <2x LOR	----
<b>Anions and Nutrients (QC Lot: 1804158)</b>											
VA24D3203-001	WLNG US1	Fluoride	16984-48-8	E235.F	0.020	mg/L	<0.020	<0.020	0	Diff <2x LOR	----
<b>Anions and Nutrients (QC Lot: 1804159)</b>											
VA24D3203-001	WLNG US1	Chloride	16887-00-6	E235.Cl	0.50	mg/L	0.87	0.86	0.010	Diff <2x LOR	----
<b>Anions and Nutrients (QC Lot: 1804160)</b>											
VA24D3203-001	WLNG US1	Bromide	24959-67-9	E235.Br-L	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
<b>Anions and Nutrients (QC Lot: 1804161)</b>											
VA24D3203-001	WLNG US1	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0050	mg/L	0.0590	0.0591	0.137%	20%	----
<b>Anions and Nutrients (QC Lot: 1804162)</b>											
VA24D3203-001	WLNG US1	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
<b>Anions and Nutrients (QC Lot: 1804163)</b>											
VA24D3203-001	WLNG US1	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	3.58	3.54	0.975%	20%	----
<b>Anions and Nutrients (QC Lot: 1804610)</b>											
VA24D3203-001	WLNG US1	Nitrogen, total	7727-37-9	E366	0.030	mg/L	0.118	0.116	0.002	Diff <2x LOR	----
<b>Anions and Nutrients (QC Lot: 1804611)</b>											
VA24D3203-001	WLNG US1	Phosphorus, total	7723-14-0	E372-U	0.0020	mg/L	0.0229	0.0228	0.437%	20%	----
<b>Anions and Nutrients (QC Lot: 1804612)</b>											
VA24D3203-001	WLNG US1	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	<0.0050	<0.0050	0	Diff <2x LOR	----
<b>Organic / Inorganic Carbon (QC Lot: 1804613)</b>											
VA24D3203-001	WLNG US1	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	2.05	2.33	0.28	Diff <2x LOR	----
<b>Total Sulfides (QC Lot: 1804890)</b>											
VA24D3194-001	Anonymous	Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.0067	0.0073	0.0005	Diff <2x LOR	----
<b>Total Metals (QC Lot: 1804106)</b>											
VA24D3220-001	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.0499	0.0496	0.637%	20%	----
		Antimony, total	7440-36-0	E420	0.00010	mg/L	0.00884	0.00898	1.56%	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
<b>Total Metals (QC Lot: 1804106) - continued</b>											
VA24D3220-001	Anonymous	Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00372	0.00366	1.63%	20%	---
		Barium, total	7440-39-3	E420	0.00010	mg/L	0.0368	0.0378	2.62%	20%	---
		Beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	---
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	---
		Boron, total	7440-42-8	E420	0.010	mg/L	0.106	0.108	1.78%	20%	---
		Cadmium, total	7440-43-9	E420	0.0000050	mg/L	0.0000210	0.0000190	0.0000021	Diff <2x LOR	---
		Calcium, total	7440-70-2	E420	0.050	mg/L	26.8	26.7	0.371%	20%	---
		Cesium, total	7440-46-2	E420	0.000010	mg/L	0.00170	0.00172	0.942%	20%	---
		Chromium, total	7440-47-3	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	---
		Cobalt, total	7440-48-4	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	---
		Copper, total	7440-50-8	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	---
		Iron, total	7439-89-6	E420	0.010	mg/L	0.012	0.013	0.0008	Diff <2x LOR	---
		Lead, total	7439-92-1	E420	0.000050	mg/L	0.000182	0.000186	0.000004	Diff <2x LOR	---
		Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0542	0.0561	3.42%	20%	---
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	1.85	1.87	1.25%	20%	---
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.0588	0.0594	0.923%	20%	---
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.0104	0.0105	1.05%	20%	---
		Nickel, total	7440-02-0	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	---
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	---
		Potassium, total	7440-09-7	E420	0.050	mg/L	12.6	13.2	4.71%	20%	---
		Rubidium, total	7440-17-7	E420	0.000020	mg/L	0.0158	0.0156	0.809%	20%	---
		Selenium, total	7782-49-2	E420	0.000050	mg/L	0.000781	0.000866	10.3%	20%	---
		Silicon, total	7440-21-3	E420	0.10	mg/L	1.66	1.66	0.179%	20%	---
		Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	---
		Sodium, total	7440-23-5	E420	0.050	mg/L	28.2	28.5	0.842%	20%	---
		Strontium, total	7440-24-6	E420	0.000020	mg/L	0.474	0.480	1.42%	20%	---
		Sulfur, total	7704-34-9	E420	0.50	mg/L	24.1	24.4	1.44%	20%	---
		Tellurium, total	13494-80-9	E420	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	---
		Thallium, total	7440-28-0	E420	0.000010	mg/L	0.000044	0.000047	0.000003	Diff <2x LOR	---
		Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	---
		Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	---
		Titanium, total	7440-32-6	E420	0.000030	mg/L	<0.000030	0.000055	0.00025	Diff <2x LOR	---
		Tungsten, total	7440-33-7	E420	0.00010	mg/L	0.00106	0.00114	7.05%	20%	---
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.000432	0.000432	0.0194%	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
<b>Total Metals (QC Lot: 1804106) - continued</b>											
VA24D3220-001	Anonymous	Vanadium, total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, total	7440-66-6	E420	0.0030	mg/L	<0.0030	<0.0030	0	Diff <2x LOR	----
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
<b>Total Metals (QC Lot: 1809420)</b>											
VA24D3151-002	Anonymous	Mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
<b>Dissolved Metals (QC Lot: 1804103)</b>											
VA24D3220-001	Anonymous	Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000910	0.000764	17.5%	20%	----
VA24D3220-001	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0148	0.0146	1.21%	20%	----
		Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	0.00863	0.00855	1.02%	20%	----
		Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00342	0.00344	0.470%	20%	----
		Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0351	0.0369	5.00%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	----
		Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.010	mg/L	0.099	0.100	0.0008	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.0000180	0.0000164	0.0000016	Diff <2x LOR	----
		Calcium, dissolved	7440-70-2	E421	0.050	mg/L	25.4	26.3	3.66%	20%	----
		Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	0.00170	0.00168	1.16%	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	<0.00010	<0.00010	0	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	----
		Iron, dissolved	7439-89-6	E421	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	----
		Lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	----
		Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0533	0.0549	2.93%	20%	----
		Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	1.83	1.84	0.566%	20%	----
		Manganese, dissolved	7439-96-5	E421	0.00010	mg/L	0.0545	0.0553	1.47%	20%	----
		Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.0102	0.0101	1.07%	20%	----
		Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	0	Diff <2x LOR	----
		Potassium, dissolved	7440-09-7	E421	0.050	mg/L	12.6	12.7	1.24%	20%	----
		Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.0154	0.0158	2.15%	20%	----
		Silicon, dissolved	7440-21-3	E421	0.050	mg/L	1.45	1.43	1.69%	20%	----
		Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.050	mg/L	27.9	28.1	0.507%	20%	----
		Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.466	0.466	0.146%	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
<b>Dissolved Metals (QC Lot: 1804103) - continued</b>											
VA24D3220-001	Anonymous	Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	23.7	23.5	0.811%	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	0.000044	0.000043	0.000001	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	0.00104	0.00102	1.64%	20%	----
		Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.000414	0.000406	1.82%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	----
		Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	----
<b>Dissolved Metals (QC Lot: 1809805)</b>											
VA24D3201-007	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0000050	<0.0000050	0	Diff <2x LOR	----
<b>Speciated Metals (QC Lot: 1804051)</b>											
VA24D3147-003	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	----



## Method Blank (MB) Report

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

Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
<b>Physical Tests (QCLot: 1804156)</b>						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
<b>Physical Tests (QCLot: 1804914)</b>						
Solids, total suspended [TSS]	----	E160	3	mg/L	<3.0	----
<b>Physical Tests (QCLot: 1804949)</b>						
Solids, total dissolved [TDS]	----	E162	10	mg/L	<10	----
<b>Anions and Nutrients (QCLot: 1804158)</b>						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
<b>Anions and Nutrients (QCLot: 1804159)</b>						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
<b>Anions and Nutrients (QCLot: 1804160)</b>						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	----
<b>Anions and Nutrients (QCLot: 1804161)</b>						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
<b>Anions and Nutrients (QCLot: 1804162)</b>						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
<b>Anions and Nutrients (QCLot: 1804163)</b>						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
<b>Anions and Nutrients (QCLot: 1804610)</b>						
Nitrogen, total	7727-37-9	E366	0.03	mg/L	<0.030	----
<b>Anions and Nutrients (QCLot: 1804611)</b>						
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	<0.0020	----
<b>Anions and Nutrients (QCLot: 1804612)</b>						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
<b>Organic / Inorganic Carbon (QCLot: 1804613)</b>						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
<b>Total Sulfides (QCLot: 1804890)</b>						
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015	----
<b>Total Metals (QCLot: 1804106)</b>						
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
<b>Total Metals (QCLot: 1804106) - continued</b>						
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
<b>Total Metals (QCLot: 1809420)</b>						
Mercury, total	7439-97-6	E508	0.000005	mg/L	<0.0000050	----
<b>Dissolved Metals (QCLot: 1804103)</b>						
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**

<i>Analyte</i>	<i>CAS Number</i>	<i>Method</i>	<i>LOR</i>	<i>Unit</i>	<i>Result</i>	<i>Qualifier</i>
<b>Dissolved Metals (QCLot: 1804103) - continued</b>						
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	----
<b>Dissolved Metals (QCLot: 1809805)</b>						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
<b>Speciated Metals (QCLot: 1804051)</b>						
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
<b>Physical Tests (QCLot: 1804156)</b>									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	500 mg/L	106	85.0	115	----
<b>Physical Tests (QCLot: 1804914)</b>									
Solids, total suspended [TSS]	----	E160	3	mg/L	150 mg/L	87.5	85.0	115	----
<b>Physical Tests (QCLot: 1804949)</b>									
Solids, total dissolved [TDS]	----	E162	10	mg/L	1000 mg/L	96.6	85.0	115	----
<b>Anions and Nutrients (QCLot: 1804158)</b>									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	102	90.0	110	----
<b>Anions and Nutrients (QCLot: 1804159)</b>									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	102	90.0	110	----
<b>Anions and Nutrients (QCLot: 1804160)</b>									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	103	85.0	115	----
<b>Anions and Nutrients (QCLot: 1804161)</b>									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	97.5	90.0	110	----
<b>Anions and Nutrients (QCLot: 1804162)</b>									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	98.5	90.0	110	----
<b>Anions and Nutrients (QCLot: 1804163)</b>									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	102	90.0	110	----
<b>Anions and Nutrients (QCLot: 1804610)</b>									
Nitrogen, total	7727-37-9	E366	0.03	mg/L	0.5 mg/L	103	75.0	125	----
<b>Anions and Nutrients (QCLot: 1804611)</b>									
Phosphorus, total	7723-14-0	E372-U	0.002	mg/L	0.05 mg/L	86.5	80.0	120	----
<b>Anions and Nutrients (QCLot: 1804612)</b>									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	105	85.0	115	----
<b>Organic / Inorganic Carbon (QCLot: 1804613)</b>									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	98.1	80.0	120	----
<b>Total Sulfides (QCLot: 1804890)</b>									
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	0.08 mg/L	105	80.0	120	----
<b>Total Metals (QCLot: 1804106)</b>									



Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
<b>Total Metals (QCLot: 1804106) - continued</b>									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	93.0	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	102	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	100	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	99.7	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	97.9	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	96.0	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	96.6	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	99.7	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	102	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	95.7	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	97.1	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	97.4	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	101	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	103	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	99.4	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	96.4	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	96.5	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	106	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	96.9	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	94.4	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	102	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	93.7	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	103	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	99.2	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	96.1	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	104	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	92.7	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	111	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	93.7	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	97.5	80.0	120	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	94.1	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	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
<b>Total Metals (QCLot: 1804106) - continued</b>									
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	99.0	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	99.7	80.0	120	----
<b>Total Metals (QCLot: 1809420)</b>									
Mercury, total	7439-97-6	E508	0.000005	mg/L	0 mg/L	99.3	80.0	120	----
<b>Dissolved Metals (QCLot: 1804103)</b>									
Aluminum, dissolved	7429-90-5	E421	0.001	mg/L	2 mg/L	93.4	80.0	120	----
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	1 mg/L	96.6	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	1 mg/L	98.4	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.25 mg/L	96.0	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.1 mg/L	93.0	80.0	120	----
Bismuth, dissolved	7440-69-9	E421	0.00005	mg/L	1 mg/L	94.2	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	1 mg/L	93.7	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.1 mg/L	92.6	80.0	120	----
Calcium, dissolved	7440-70-2	E421	0.05	mg/L	50 mg/L	93.6	80.0	120	----
Cesium, dissolved	7440-46-2	E421	0.00001	mg/L	0.05 mg/L	99.4	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.25 mg/L	94.6	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.25 mg/L	93.4	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.25 mg/L	92.3	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	97.6	80.0	120	----
Lithium, dissolved	7439-93-2	E421	0.001	mg/L	0.25 mg/L	93.8	80.0	120	----
Magnesium, dissolved	7439-95-4	E421	0.005	mg/L	50 mg/L	94.7	80.0	120	----
Manganese, dissolved	7439-96-5	E421	0.0001	mg/L	0.25 mg/L	93.8	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	94.2	80.0	120	----
Phosphorus, dissolved	7723-14-0	E421	0.05	mg/L	10 mg/L	82.2	80.0	120	----
Potassium, dissolved	7440-09-7	E421	0.05	mg/L	50 mg/L	98.8	80.0	120	----
Rubidium, dissolved	7440-17-7	E421	0.0002	mg/L	0.1 mg/L	92.8	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	1 mg/L	98.2	80.0	120	----
Silicon, dissolved	7440-21-3	E421	0.05	mg/L	10 mg/L	97.7	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.1 mg/L	93.4	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	50 mg/L	97.1	80.0	120	----
Strontium, dissolved	7440-24-6	E421	0.0002	mg/L	0.25 mg/L	98.4	80.0	120	----
Sulfur, dissolved	7704-34-9	E421	0.5	mg/L	50 mg/L	94.4	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
<b>Dissolved Metals (QCLot: 1804103) - continued</b>									
Tellurium, dissolved	13494-80-9	E421	0.0002	mg/L	0.1 mg/L	108	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	1 mg/L	96.9	80.0	120	----
Thorium, dissolved	7440-29-1	E421	0.0001	mg/L	0.1 mg/L	91.6	80.0	120	----
Tin, dissolved	7440-31-5	E421	0.0001	mg/L	0.5 mg/L	93.2	80.0	120	----
Titanium, dissolved	7440-32-6	E421	0.0003	mg/L	0.25 mg/L	91.4	80.0	120	----
Tungsten, dissolved	7440-33-7	E421	0.0001	mg/L	0.1 mg/L	96.0	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.005 mg/L	96.0	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.5 mg/L	95.6	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.5 mg/L	90.8	80.0	120	----
Zirconium, dissolved	7440-67-7	E421	0.0002	mg/L	0.1 mg/L	95.3	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0 mg/L	99.8	80.0	120	----
<b>Speciated Metals (QCLot: 1804051)</b>									
Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.0005	mg/L	0.25 mg/L	100	80.0	120	----



### Matrix Spike (MS) Report

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

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Anions and Nutrients (QCLot: 1804158)</b>										
VA24D3203-002	WLNG DS1	Fluoride	16984-48-8	E235.F	1.06 mg/L	1 mg/L	106	75.0	125	----
<b>Anions and Nutrients (QCLot: 1804159)</b>										
VA24D3203-002	WLNG DS1	Chloride	16887-00-6	E235.Cl	105 mg/L	100 mg/L	105	75.0	125	----
<b>Anions and Nutrients (QCLot: 1804160)</b>										
VA24D3203-002	WLNG DS1	Bromide	24959-67-9	E235.Br-L	0.528 mg/L	0.5 mg/L	106	75.0	125	----
<b>Anions and Nutrients (QCLot: 1804161)</b>										
VA24D3203-002	WLNG DS1	Nitrate (as N)	14797-55-8	E235.NO3-L	2.50 mg/L	2.5 mg/L	99.9	75.0	125	----
<b>Anions and Nutrients (QCLot: 1804162)</b>										
VA24D3203-002	WLNG DS1	Nitrite (as N)	14797-65-0	E235.NO2-L	0.506 mg/L	0.5 mg/L	101	75.0	125	----
<b>Anions and Nutrients (QCLot: 1804163)</b>										
VA24D3203-002	WLNG DS1	Sulfate (as SO4)	14808-79-8	E235.SO4	103 mg/L	100 mg/L	103	75.0	125	----
<b>Anions and Nutrients (QCLot: 1804610)</b>										
VA24D3203-002	WLNG DS1	Nitrogen, total	7727-37-9	E366	0.409 mg/L	0.4 mg/L	102	70.0	130	----
<b>Anions and Nutrients (QCLot: 1804611)</b>										
VA24D3203-002	WLNG DS1	Phosphorus, total	7723-14-0	E372-U	0.0468 mg/L	0.05 mg/L	93.7	70.0	130	----
<b>Anions and Nutrients (QCLot: 1804612)</b>										
VA24D3203-002	WLNG DS1	Ammonia, total (as N)	7664-41-7	E298	0.101 mg/L	0.1 mg/L	101	75.0	125	----
<b>Organic / Inorganic Carbon (QCLot: 1804613)</b>										
VA24D3203-002	WLNG DS1	Carbon, dissolved organic [DOC]	----	E358-L	5.30 mg/L	5 mg/L	106	70.0	130	----
<b>Total Sulfides (QCLot: 1804890)</b>										
VA24D3203-001	WLNG US1	Sulfide, total (as S)	18496-25-8	E395	0.202 mg/L	0.2 mg/L	101	75.0	125	----
<b>Total Metals (QCLot: 1804106)</b>										
VA24D3220-002	Anonymous	Aluminum, total	7429-90-5	E420	0.179 mg/L	0.2 mg/L	89.4	70.0	130	----
		Antimony, total	7440-36-0	E420	0.0194 mg/L	0.02 mg/L	97.2	70.0	130	----
		Arsenic, total	7440-38-2	E420	0.0184 mg/L	0.02 mg/L	92.1	70.0	130	----
		Barium, total	7440-39-3	E420	ND mg/L	----	ND	70.0	130	----
		Beryllium, total	7440-41-7	E420	0.0398 mg/L	0.04 mg/L	99.5	70.0	130	----
		Bismuth, total	7440-69-9	E420	0.00959 mg/L	0.01 mg/L	95.9	70.0	130	----
		Boron, total	7440-42-8	E420	ND mg/L	----	ND	70.0	130	----
		Cadmium, total	7440-43-9	E420	0.00356 mg/L	0.004 mg/L	89.0	70.0	130	----
		Calcium, total	7440-70-2	E420	ND mg/L	----	ND	70.0	130	----
		Cesium, total	7440-46-2	E420	0.00984 mg/L	0.01 mg/L	98.4	70.0	130	----
		Chromium, total	7440-47-3	E420	0.0363 mg/L	0.04 mg/L	90.8	70.0	130	----



Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Total Metals (QCLot: 1804106) - continued</b>										
VA24D3220-002	Anonymous	Cobalt, total	7440-48-4	E420	0.0181 mg/L	0.02 mg/L	90.4	70.0	130	----
		Copper, total	7440-50-8	E420	0.0175 mg/L	0.02 mg/L	87.3	70.0	130	----
		Iron, total	7439-89-6	E420	1.83 mg/L	2 mg/L	91.4	70.0	130	----
		Lead, total	7439-92-1	E420	0.0192 mg/L	0.02 mg/L	95.9	70.0	130	----
		Lithium, total	7439-93-2	E420	0.0919 mg/L	0.1 mg/L	91.9	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	0.0202 mg/L	0.02 mg/L	101	70.0	130	----
		Nickel, total	7440-02-0	E420	0.0357 mg/L	0.04 mg/L	89.2	70.0	130	----
		Phosphorus, total	7723-14-0	E420	8.86 mg/L	10 mg/L	88.6	70.0	130	----
		Potassium, total	7440-09-7	E420	ND mg/L	----	ND	70.0	130	----
		Rubidium, total	7440-17-7	E420	0.0169 mg/L	0.02 mg/L	84.3	70.0	130	----
		Selenium, total	7782-49-2	E420	0.0387 mg/L	0.04 mg/L	96.7	70.0	130	----
		Silicon, total	7440-21-3	E420	9.53 mg/L	10 mg/L	95.3	70.0	130	----
		Silver, total	7440-22-4	E420	0.00394 mg/L	0.004 mg/L	98.6	70.0	130	----
		Sodium, total	7440-23-5	E420	ND mg/L	----	ND	70.0	130	----
		Strontium, total	7440-24-6	E420	ND mg/L	----	ND	70.0	130	----
		Sulfur, total	7704-34-9	E420	ND mg/L	----	ND	70.0	130	----
		Tellurium, total	13494-80-9	E420	0.0439 mg/L	0.04 mg/L	110	70.0	130	----
		Thallium, total	7440-28-0	E420	0.00379 mg/L	0.004 mg/L	94.7	70.0	130	----
		Thorium, total	7440-29-1	E420	0.0155 mg/L	0.02 mg/L	77.5	70.0	130	----
		Tin, total	7440-31-5	E420	0.0184 mg/L	0.02 mg/L	92.2	70.0	130	----
		Titanium, total	7440-32-6	E420	0.0352 mg/L	0.04 mg/L	87.9	70.0	130	----
		Tungsten, total	7440-33-7	E420	0.0194 mg/L	0.02 mg/L	96.9	70.0	130	----
		Uranium, total	7440-61-1	E420	0.00387 mg/L	0.004 mg/L	96.8	70.0	130	----
		Vanadium, total	7440-62-2	E420	0.0925 mg/L	0.1 mg/L	92.5	70.0	130	----
		Zinc, total	7440-66-6	E420	0.360 mg/L	0.4 mg/L	90.1	70.0	130	----
		Zirconium, total	7440-67-7	E420	0.0392 mg/L	0.04 mg/L	98.0	70.0	130	----
<b>Total Metals (QCLot: 1809420)</b>										
VA24D3151-003	Anonymous	Mercury, total	7439-97-6	E508	0.000104 mg/L	0 mg/L	104	70.0	130	----
<b>Dissolved Metals (QCLot: 1804103)</b>										
VA24D3220-002	Anonymous	Aluminum, dissolved	7429-90-5	E421	0.183 mg/L	0.2 mg/L	91.5	70.0	130	----
		Antimony, dissolved	7440-36-0	E421	0.0191 mg/L	0.02 mg/L	95.4	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.0193 mg/L	0.02 mg/L	96.4	70.0	130	----
		Barium, dissolved	7440-39-3	E421	ND mg/L	----	ND	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.0379 mg/L	0.04 mg/L	94.7	70.0	130	----
		Bismuth, dissolved	7440-69-9	E421	0.00855 mg/L	0.01 mg/L	85.5	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.088 mg/L	0.1 mg/L	87.9	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.00365 mg/L	0.004 mg/L	91.2	70.0	130	----
		Calcium, dissolved	7440-70-2	E421	ND mg/L	----	ND	70.0	130	----
		Cesium, dissolved	7440-46-2	E421	0.00974 mg/L	0.01 mg/L	97.4	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.0364 mg/L	0.04 mg/L	91.0	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.0182 mg/L	0.02 mg/L	91.2	70.0	130	----




Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
<b>Dissolved Metals (QCLot: 1804103) - continued</b>										
VA24D3220-002	Anonymous	Copper, dissolved	7440-50-8	E421	0.0176 mg/L	0.02 mg/L	88.2	70.0	130	----
		Iron, dissolved	7439-89-6	E421	1.86 mg/L	2 mg/L	93.3	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.0187 mg/L	0.02 mg/L	93.6	70.0	130	----
		Lithium, dissolved	7439-93-2	E421	0.0890 mg/L	0.1 mg/L	89.0	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	0.0200 mg/L	0.02 mg/L	100	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.0366 mg/L	0.04 mg/L	91.5	70.0	130	----
		Phosphorus, dissolved	7723-14-0	E421	8.98 mg/L	10 mg/L	89.8	70.0	130	----
		Potassium, dissolved	7440-09-7	E421	ND mg/L	----	ND	70.0	130	----
		Rubidium, dissolved	7440-17-7	E421	0.0182 mg/L	0.02 mg/L	91.1	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.0396 mg/L	0.04 mg/L	98.9	70.0	130	----
		Silicon, dissolved	7440-21-3	E421	9.30 mg/L	10 mg/L	93.0	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.00388 mg/L	0.004 mg/L	97.0	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	0.0441 mg/L	0.04 mg/L	110	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.00366 mg/L	0.004 mg/L	91.5	70.0	130	----
		Thorium, dissolved	7440-29-1	E421	0.0159 mg/L	0.02 mg/L	79.7	70.0	130	----
		Tin, dissolved	7440-31-5	E421	0.0186 mg/L	0.02 mg/L	92.9	70.0	130	----
		Titanium, dissolved	7440-32-6	E421	0.0366 mg/L	0.04 mg/L	91.6	70.0	130	----
		Tungsten, dissolved	7440-33-7	E421	0.0187 mg/L	0.02 mg/L	93.7	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	0.00374 mg/L	0.004 mg/L	93.5	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.0941 mg/L	0.1 mg/L	94.1	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.363 mg/L	0.4 mg/L	90.8	70.0	130	----
		Zirconium, dissolved	7440-67-7	E421	0.0383 mg/L	0.04 mg/L	95.8	70.0	130	----
<b>Dissolved Metals (QCLot: 1809805)</b>										
VA24D3203-001	WLNG US1	Mercury, dissolved	7439-97-6	E509	0.000103 mg/L	0 mg/L	103	70.0	130	----
<b>Speciated Metals (QCLot: 1804051)</b>										
VA24D3147-004	Anonymous	Chromium, hexavalent [Cr VI], total	18540-29-9	E532	0.252 mg/L	0.25 mg/L	101	70.0	130	----





 <b>Eagle Mountain - Woodfibre Gas Pipeline Project Waste Discharge Permit PE-110163 Report</b>	Reporting Week	Dec 9 <sup>th</sup> to Dec 15 <sup>th</sup> , 2024
	Report #	38
	Appendix D	D-4

## Woodfibre Site Receiving Environment Field Notes and Logs

<b>Project Component:</b>	Tunnel	<b>Site Name:</b>	Receiving Environment - Downstream of Discharge
<b>Inspection Date:</b>	12/10/2024	<b>Location:</b>	WLNG
<b>Triton QP:</b>	Farshad Shafiei	<b>Latitude/Longitude:</b>	49.66908                      -123.248256
<b>Temperature(c):</b>	Low -3                      High 7	<b>Permit:</b>	PE 110136
<b>Weather Conditions:</b>	Overcast	<b>Ground Conditions:</b>	Wet

**Observations**

**Time:** 10:53:20      **Flow Volume (visual):** moderate

**Notes:**

**Odour Detected?:** No      **Notes:**

**Unusual Colour?:** No      **Notes:**

**Unusual Observations?:** No      **Notes:**

**Sheen on Water?:** No      **Notes:**

**Samples Collected - Parameters**

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

**Logger Maintenance**

<b>Logger Maintenance Performed?</b>	Yes	<b>Photo of COC with Lab Signature?</b>	Yes
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**Describe Logger Maintenance**

Changed faulty Aquatroll logger with the new one. Set up new log. Relocated the sonde slightly US to a less turbulent pool of water. Vulink batteries replaced

**Photos**



**Photo:** 1  
**Location:** WLNG EAS DS1  
**Description:** Sampling location



**Photo:** 2  
**Location:** Relocated sonde  
**Description:** New location





2024-12-10-Shafiei-1595D

**Sign Off**

**Report Prepared By:** Farshad Shafiei

**Report Reviewed:** Yes

**Report Reviewer:**

**Professional(s) of Record:** N/A

**Name:**

**Designation:**

**Designation Number:**



# FortisBC Eagle Mountain-Woodfibre Gas Pipeline

## Water Discharge Authorization Water Quality Monitoring

2024-12-10-Shafiei-24DD0

<b>Project Component:</b>	Tunnel	<b>Site Name:</b>	Receiving Environment - Upstream of Discharge
<b>Inspection Date:</b>	12/10/2024	<b>Location:</b>	WLNG
<b>Triton QP:</b>	Farshad Shafiei	<b>Latitude/Longitude:</b>	49.669455      -123.25087
<b>Temperature(c):</b> Low -3                      High 7		<b>Permit:</b>	PE 110136
<b>Weather Conditions:</b>	Overcast	<b>Ground Conditions:</b>	Wet

### Observations

**Time:** 13:06:57      **Flow Volume (visual):** moderate

**Notes:**

**Odour Detected?:** No              **Notes:**

**Unusual Colour?:** No              **Notes:**

**Unusual Observations?:** No              **Notes:**

**Sheen on Water?:** No              **Notes:**

### Samples Collected - Parameters

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

### Logger Maintenance

<b>Logger Maintenance Performed?</b>	Yes	<b>Photo of COC with Lab Signature?</b>	Yes
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**Describe Logger Maintenance**

Cleaned sensors. Vulink batteries replaced

Photos



**Photo:** 1  
**Location:** WLNG EAS US1  
**Description:** WLNG EAS US1



**Photo:** 2  
**Location:** Coc  
**Description:**



**Sign Off**

**Report Prepared By:** Farshad shafiei

**Report Reviewed:** Yes

**Report Reviewer:**

**Professional(s) of Record:** N/A

**Name:**

**Designation:**

**Designation Number:**

Woodfibre Plant site East Creek (WC 309-R2)		EAS DS1					EAS US1 (Background)						
Date	Temperature (c)	Specific Conductivity (µS/cm)	Salinity PSU	pH	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Date	Temperature (c)	Specific Conductivity (µS/cm)	Salinity PSU	pH	Dissolved Oxygen (mg/L)	Turbidity (NTU)
12/09/2024 0:00	7.6	34.7	0.0	7.2	11.1	3.4	12/09/2024 0:00	7.3	18.9	0.0	7.1	11.0	0.0
12/09/2024 0:15	7.3	23.4	0.0	6.7	11.2	3.3	12/09/2024 0:15	7.3	18.8	0.0	7.0	11.0	0.0
12/09/2024 0:30	7.3	23.2	0.0	6.7	11.2	3.6	12/09/2024 0:30	7.3	18.8	0.0	7.0	11.0	0.0
12/09/2024 0:45	7.3	23.0	0.0	6.7	11.2	3.1	12/09/2024 0:45	7.3	18.9	0.0	7.1	11.0	0.0
12/09/2024 1:00	7.3	23.0	0.0	6.7	11.3	3.5	12/09/2024 1:00	7.2	18.8	0.0	7.0	11.0	0.1
12/09/2024 1:15	7.3	22.9	0.0	6.7	11.3	3.2	12/09/2024 1:15	7.2	18.8	0.0	7.0	11.0	0.0
12/09/2024 1:30	7.2	22.9	0.0	6.7	11.3	3.3	12/09/2024 1:30	7.2	18.8	0.0	7.0	11.0	0.0
12/09/2024 1:45	7.7	52.6	0.0	7.1	11.1	3.0	12/09/2024 1:45	7.2	18.7	0.0	7.0	11.0	0.0
12/09/2024 2:00	7.8	53.2	0.0	7.2	11.1	3.0	12/09/2024 2:00	7.2	18.7	0.0	7.0	11.1	0.1
12/09/2024 2:15	7.8	53.5	0.0	7.2	11.1	3.0	12/09/2024 2:15	7.2	18.7	0.0	7.0	11.1	0.0
12/09/2024 2:30	7.8	53.8	0.0	7.2	11.1	3.3	12/09/2024 2:30	7.2	18.6	0.0	7.0	11.1	0.0
12/09/2024 2:45	7.4	28.2	0.0	7.1	11.2	3.5	12/09/2024 2:45	7.1	18.6	0.0	7.0	11.1	0.2
12/09/2024 3:00	7.2	23.3	0.0	6.7	11.3	3.2	12/09/2024 3:00	7.2	18.6	0.0	7.0	11.1	0.2
12/09/2024 3:15	7.2	23.0	0.0	6.7	11.3	3.3	12/09/2024 3:15	7.1	18.6	0.0	7.0	11.1	0.1
12/09/2024 3:30	7.1	23.0	0.0	6.7	11.3	3.4	12/09/2024 3:30	7.1	18.5	0.0	7.0	11.1	0.0
12/09/2024 3:45	7.1	22.9	0.0	6.6	11.3	3.6	12/09/2024 3:45	7.1	18.5	0.0	7.0	11.1	0.3
12/09/2024 4:00	7.1	22.8	0.0	6.7	11.3	3.1	12/09/2024 4:00	7.1	18.4	0.0	7.0	11.1	0.0
12/09/2024 4:15	7.1	22.7	0.0	6.6	11.3	3.0	12/09/2024 4:15	7.1	18.5	0.0	7.0	11.1	0.0
12/09/2024 4:30	7.1	22.7	0.0	6.6	11.3	3.2	12/09/2024 4:30	7.0	18.5	0.0	7.0	11.1	0.0
12/09/2024 4:45	7.0	22.5	0.0	6.7	11.3	3.2	12/09/2024 4:45	7.0	18.3	0.0	7.0	11.1	0.1
12/09/2024 5:00	7.5	53.9	0.0	7.1	11.2	3.0	12/09/2024 5:00	7.0	18.4	0.0	7.0	11.1	0.1
12/09/2024 5:15	7.6	54.9	0.0	7.2	11.2	3.2	12/09/2024 5:15	7.0	18.4	0.0	7.0	11.1	0.0
12/09/2024 5:30	7.7	55.4	0.0	7.3	11.2	3.1	12/09/2024 5:30	7.0	18.3	0.0	7.0	11.1	0.2
12/09/2024 5:45	7.7	55.6	0.0	7.3	11.2	3.1	12/09/2024 5:45	7.0	18.3	0.0	7.0	11.1	0.0
12/09/2024 6:00	7.7	55.9	0.0	7.3	11.2	3.4	12/09/2024 6:00	7.0	18.3	0.0	7.0	11.1	0.0
12/09/2024 6:15	7.1	23.9	0.0	6.9	11.3	3.5	12/09/2024 6:15	6.9	18.3	0.0	7.0	11.1	0.0
12/09/2024 6:30	7.0	23.2	0.0	6.8	11.3	3.4	12/09/2024 6:30	6.9	18.2	0.0	7.0	11.1	0.1
12/09/2024 6:45	7.0	23.0	0.0	6.7	11.4	3.7	12/09/2024 6:45	6.9	18.2	0.0	7.0	11.1	0.0
12/09/2024 7:00	6.9	22.9	0.0	6.7	11.4	3.0	12/09/2024 7:00	6.9	18.2	0.0	7.0	11.1	0.0
12/09/2024 7:15	6.9	23.1	0.0	6.7	11.4	3.5	12/09/2024 7:15	6.9	18.2	0.0	7.0	11.1	0.0
12/09/2024 7:30	6.9	22.8	0.0	6.6	11.4	3.3	12/09/2024 7:30	6.9	18.2	0.0	7.0	11.1	0.0
12/09/2024 7:45	6.9	22.7	0.0	6.7	11.4	3.3	12/09/2024 7:45	6.9	18.2	0.0	7.0	11.1	0.0
12/09/2024 8:00	6.9	22.7	0.0	6.6	11.4	3.2	12/09/2024 8:00	6.9	18.2	0.0	7.0	11.1	0.0
12/09/2024 8:15	7.4	52.0	0.0	7.0	11.3	3.5	12/09/2024 8:15	6.9	18.1	0.0	7.0	11.1	0.0
12/09/2024 8:30	7.6	56.6	0.0	7.2	11.2	3.0	12/09/2024 8:30	6.9	18.1	0.0	7.0	11.1	0.0
12/09/2024 8:45	7.6	57.6	0.0	7.3	11.2	3.0	12/09/2024 8:45	6.9	18.1	0.0	7.0	11.1	0.0
12/09/2024 9:00	7.6	58.0	0.0	7.3	11.2	3.0	12/09/2024 9:00	6.9	18.0	0.0	7.0	11.1	0.0
12/09/2024 9:15	7.4	41.0	0.0	7.3	11.2	3.1	12/09/2024 9:15	6.9	18.0	0.0	7.0	11.2	0.0
12/09/2024 9:30	6.9	23.5	0.0	6.8	11.4	4.2	12/09/2024 9:30	6.9	18.0	0.0	7.0	11.1	0.0
12/09/2024 9:45	6.9	23.1	0.0	6.7	11.4	3.2	12/09/2024 9:45	6.9	18.0	0.0	7.0	11.2	0.0
12/09/2024 10:00	6.9	22.9	0.0	6.7	11.4	3.9	12/09/2024 10:00	6.9	17.9	0.0	7.0	11.2	0.0
12/09/2024 10:15	6.9	22.7	0.0	6.7	11.4	3.2	12/09/2024 10:15	6.9	17.9	0.0	7.0	11.2	0.3
12/09/2024 10:30	6.9	22.6	0.0	6.7	11.4	3.2	12/09/2024 10:30	6.9	17.9	0.0	7.0	11.2	0.0
12/09/2024 10:45	6.9	22.6	0.0	6.7	11.4	3.2	12/09/2024 10:45	6.9	17.9	0.0	7.0	11.2	0.0
12/09/2024 11:00	6.9	22.5	0.0	6.7	11.4	3.7	12/09/2024 11:00	6.9	17.9	0.0	7.0	11.2	0.0
12/09/2024 11:15	6.9	22.4	0.0	6.7	11.4	3.2	12/09/2024 11:15	6.9	17.8	0.0	7.0	11.2	0.0
12/09/2024 11:30	7.5	57.3	0.0	7.0	11.3	3.7	12/09/2024 11:30	6.9	17.8	0.0	7.0	11.2	0.0
12/09/2024 11:45	7.6	58.8	0.0	7.3	11.2	2.9	12/09/2024 11:45	6.9	17.8	0.0	7.0	11.2	0.0
12/09/2024 12:00	7.7	59.0	0.0	7.3	11.2	3.1	12/09/2024 12:00	6.9	17.8	0.0	7.0	11.2	0.0
12/09/2024 12:15	7.7	59.3	0.0	7.3	11.2	3.1	12/09/2024 12:15	7.0	17.7	0.0	7.0	11.2	0.0
12/09/2024 12:30	7.4	37.2	0.0	7.3	11.2	3.6	12/09/2024 12:30	7.0	17.7	0.0	7.0	11.2	0.0
12/09/2024 12:45	7.0	23.4	0.0	6.8	11.4	3.4	12/09/2024 12:45	7.0	17.7	0.0	7.0	11.2	0.0
12/09/2024 13:00	7.0	23.0	0.0	6.7	11.4	3.1	12/09/2024 13:00	7.0	17.6	0.0	7.0	11.2	0.0
12/09/2024 13:15	7.5	55.3	0.0	7.0	11.3	3.0	12/09/2024 13:15	7.0	17.6	0.0	7.1	11.2	0.0
12/09/2024 13:30	7.1	23.9	0.0	7.0	11.3	3.4	12/09/2024 13:30	7.1	17.6	0.0	7.1	11.2	0.0
12/09/2024 13:45	7.0	22.9	0.0	6.7	11.4	3.4	12/09/2024 13:45	7.1	17.6	0.0	7.0	11.2	0.0
12/09/2024 14:00	7.0	22.7	0.0	6.8	11.4	3.3	12/09/2024 14:00	7.1	17.5	0.0	7.0	11.2	0.0
12/09/2024 14:15	7.0	22.5	0.0	6.7	11.4	3.1	12/09/2024 14:15	7.1	17.4	0.0	7.0	11.2	0.0
12/09/2024 14:30	7.7	59.4	0.0	7.3	11.2	2.9	12/09/2024 14:30	7.1	17.5	0.0	7.0	11.2	0.0
12/09/2024 14:45	7.7	50.7	0.0	7.3	11.2	3.0	12/09/2024 14:45	7.1	17.5	0.0	7.0	11.2	0.0
12/09/2024 15:00	7.3	27.2	0.0	7.2	11.3	3.2	12/09/2024 15:00	7.0	17.4	0.0	7.0	11.1	0.0
12/09/2024 15:15	7.1	23.2	0.0	6.8	11.3	3.2	12/09/2024 15:15	7.0	17.4	0.0	7.0	11.2	0.0
12/09/2024 15:30	7.0	22.8	0.0	6.7	11.4	3.4	12/09/2024 15:30	7.0	17.4	0.0	7.0	11.1	0.0
12/09/2024 15:45	7.6	58.2	0.0	7.1	11.2	3.1	12/09/2024 15:45	7.0	17.4	0.0	7.0	11.1	0.3
12/09/2024 16:00	7.7	59.4	0.0	7.3	11.2	3.2	12/09/2024 16:00	7.0	17.3	0.0	7.0	11.1	0.0
12/09/2024 16:15	7.6	57.3	0.0	7.3	11.2	3.0	12/09/2024 16:15	6.9	17.2	0.0	7.0	11.2	0.0
12/09/2024 16:30	7.0	23.7	0.0	6.9	11.4	3.1	12/09/2024 16:30	6.9	17.3	0.0	7.0	11.2	0.0
12/09/2024 16:45	6.9	23.0	0.0	6.7	11.4	3.2	12/09/2024 16:45	6.9	17.1	0.0	7.0	11.2	0.0
12/09/2024 17:00	6.8	22.8	0.0	6.7	11.4	3.2	12/09/2024 17:00	6.9	17.1	0.0	7.0	11.2	0.0
12/09/2024 17:15	6.8	22.6	0.0	6.6	11.4	3.0	12/09/2024 17:15	6.8	17.2	0.0	7.0	11.2	0.0
12/09/2024 17:30	6.8	22.6	0.0	6.7	11.4	3.1	12/09/2024 17:30	6.8	17.1	0.0	7.0	11.2	0.0
12/09/2024 17:45	6.7	22.5	0.0	6.7	11.4	3.1	12/09/2024 17:45	6.8	17.2	0.0	7.0	11.2	0.0
12/09/2024 18:00	6.7	22.5	0.0	6.7	11.5	3.6	12/09/2024 18:00	6.8	17.2	0.0	7.0	11.2	0.1
12/09/2024 18:15	6.7	22.4	0.0	6.7	11.4	3.1	12/09/2024 18:15	6.7	17.2	0.0	7.0	11.2	0.0
12/09/2024 18:30	6.8	26.8	0.0	7.0	11.4	3.1	12/09/2024 18:30	6.7	17.1	0.0	7.0	11.2	0.0
12/09/2024 18:45	6.6	22.6	0.0	6.7	11.5	3.3	12/09/2024 18:45	6.7	17.2	0.0	7.0	11.2	0.0
12/09/2024 19:00	7.3	59.2	0.0	7.2	11.3	3.0	12/09/2024 19:00	6.6	17.2	0.0	7.0	11.2	0.0
12/09/2024 19:15	7.4	60.0	0.0	7.3	11.3	3.0	12/09/2024 19:15	6.6	17.1	0.0	7.0	11.2	0.0
12/09/2024 19:30	7.4	60.5	0.0	7.3	11.3	2.9	12/09/2024 19:30	6.5	17.1	0.0	7.0	11.3	0.0
12/09/2024 19:45	7.4	60.6	0.0	7.3	11.3	3.1	12/09/2024 19:45	6.5	17.1	0.0	7.0	11.3	0.0
12/09/2024 20:00	7.3	60.0	0.0	7.3	11.3	3.5	12/09/2024 20:00	6.5	17.0	0.0	7.0	11.3	0.0
12/09/2024 20:15	6.5	23.7	0.0	6.8	11.5	3.0	12/09/2024 20:15	6.5	17.1	0.0	7.0	11.3	0.2
12/09/2024 20:30	6.5	23.1	0.0	6.7	11.5	3.0	12/09/2024 20:30	6.4	17.1	0.0	7.0	11.3	0.0
12/09/2024 2													

12/09/2024 23:45	6.1	22.5	0.0	6.7	11.6	3.2	12/09/2024 23:45	6.1	16.4	0.0	7.0	11.4	0.0
12/10/2024 0:00	6.0	22.4	0.0	6.7	11.7	5.0	12/10/2024 0:00	6.0	16.4	0.0	7.0	11.4	0.0
12/10/2024 0:15	6.0	22.3	0.0	6.7	11.7	3.1	12/10/2024 0:15	6.0	16.5	0.0	7.0	11.4	0.0
12/10/2024 0:30	6.0	22.2	0.0	6.7	11.7	3.1	12/10/2024 0:30	6.0	16.5	0.0	6.9	11.4	0.0
12/10/2024 0:45	5.9	22.1	0.0	6.6	11.7	3.0	12/10/2024 0:45	6.0	16.4	0.0	7.0	11.4	0.0
12/10/2024 1:00	5.9	22.1	0.0	6.7	11.7	3.1	12/10/2024 1:00	6.0	16.3	0.0	7.0	11.4	0.0
12/10/2024 1:15	6.5	50.3	0.0	7.1	11.5	3.0	12/10/2024 1:15	6.0	16.3	0.0	7.0	11.4	0.0
12/10/2024 1:30	6.8	61.8	0.0	7.3	11.4	2.9	12/10/2024 1:30	5.9	16.2	0.0	7.0	11.4	0.0
12/10/2024 1:45	6.8	62.3	0.0	7.3	11.4	3.0	12/10/2024 1:45	5.9	16.2	0.0	7.0	11.4	0.0
12/10/2024 2:00	6.8	62.6	0.0	7.3	11.4	3.4	12/10/2024 2:00	5.9	16.1	0.0	7.0	11.4	0.5
12/10/2024 2:15	6.6	52.8	0.0	7.3	11.5	2.9	12/10/2024 2:15	5.9	16.1	0.0	7.0	11.4	0.0
12/10/2024 2:30	6.8	66.6	0.0	7.4	11.4	2.9	12/10/2024 2:30	5.9	16.1	0.0	7.0	11.4	0.0
12/10/2024 2:45	6.8	66.8	0.0	7.4	11.4	3.1	12/10/2024 2:45	5.8	16.0	0.0	7.0	11.5	0.0
12/10/2024 3:00	6.0	24.3	0.0	7.0	11.6	3.0	12/10/2024 3:00	5.8	16.0	0.0	7.0	11.5	0.0
12/10/2024 3:15	5.8	22.8	0.0	6.7	11.7	3.5	12/10/2024 3:15	5.8	15.9	0.0	7.0	11.4	0.4
12/10/2024 3:30	5.8	22.4	0.0	6.8	11.7	3.3	12/10/2024 3:30	5.8	15.8	0.0	7.0	11.5	0.0
12/10/2024 3:45	5.7	22.1	0.0	6.7	11.7	3.5	12/10/2024 3:45	5.8	15.8	0.0	7.0	11.5	0.0
12/10/2024 4:00	5.7	22.0	0.0	6.7	11.7	3.9	12/10/2024 4:00	5.8	15.7	0.0	7.0	11.4	0.0
12/10/2024 4:15	5.7	21.9	0.0	6.6	11.7	3.1	12/10/2024 4:15	5.8	15.7	0.0	7.0	11.5	0.0
12/10/2024 4:30	5.7	21.8	0.0	6.7	11.7	3.1	12/10/2024 4:30	5.8	15.6	0.0	7.0	11.5	0.0
12/10/2024 4:45	5.7	21.7	0.0	6.6	11.8	3.1	12/10/2024 4:45	5.8	15.6	0.0	7.0	11.5	0.0
12/10/2024 5:00	6.5	65.4	0.0	7.2	11.5	3.0	12/10/2024 5:00	5.8	15.5	0.0	7.0	11.5	0.0
12/10/2024 5:15	6.7	66.6	0.0	7.4	11.4	3.1	12/10/2024 5:15	5.8	15.6	0.0	7.0	11.5	0.0
12/10/2024 5:30	6.7	67.0	0.0	7.4	11.4	3.1	12/10/2024 5:30	5.7	15.6	0.0	6.9	11.5	0.0
12/10/2024 5:45	6.8	67.1	0.0	7.4	11.4	2.9	12/10/2024 5:45	5.7	15.6	0.0	7.0	11.5	0.0
12/10/2024 6:00	5.8	23.3	0.0	6.9	11.7	3.3	12/10/2024 6:00	5.7	15.6	0.0	7.0	11.5	0.0
12/10/2024 6:15	5.7	22.4	0.0	6.7	11.7	3.5	12/10/2024 6:15	5.7	15.5	0.0	7.0	11.5	0.0
12/10/2024 6:30	5.6	22.0	0.0	6.7	11.8	3.1	12/10/2024 6:30	5.7	15.5	0.0	7.0	11.5	0.0
12/10/2024 6:45	5.6	21.8	0.0	6.6	11.8	3.1	12/10/2024 6:45	5.7	15.5	0.0	7.0	11.5	0.0
12/10/2024 7:00	5.6	21.7	0.0	6.7	11.8	3.1	12/10/2024 7:00	5.6	15.5	0.0	7.0	11.5	0.0
12/10/2024 7:15	5.6	21.6	0.0	6.6	11.8	3.1	12/10/2024 7:15	5.6	15.4	0.0	7.0	11.5	0.0
12/10/2024 7:30	5.5	21.5	0.0	6.7	11.8	3.3	12/10/2024 7:30	5.6	15.3	0.0	7.0	11.5	0.0
12/10/2024 7:45	6.1	59.4	0.0	6.9	11.7	3.1	12/10/2024 7:45	5.6	15.3	0.0	7.0	11.5	0.1
12/10/2024 8:00	6.6	67.1	0.0	7.3	11.5	3.1	12/10/2024 8:00	5.6	15.3	0.0	7.0	11.5	0.0
12/10/2024 8:15	6.7	67.6	0.0	7.4	11.5	2.9	12/10/2024 8:15	5.6	15.3	0.0	7.0	11.5	0.0
12/10/2024 8:30	6.2	44.4	0.0	7.3	11.5	3.2	12/10/2024 8:30	5.6	15.3	0.0	7.0	11.5	0.0
12/10/2024 8:45	6.6	67.4	0.0	7.3	11.5	3.0	12/10/2024 8:45	5.6	15.2	0.0	7.0	11.5	0.0
12/10/2024 9:00	6.6	68.0	0.0	7.4	11.4	3.0	12/10/2024 9:00	5.6	15.3	0.0	7.0	11.5	0.0
12/10/2024 9:15	5.8	27.3	0.0	7.0	11.7	3.2	12/10/2024 9:15	5.6	15.2	0.0	7.0	11.5	0.0
12/10/2024 9:30	5.6	24.2	0.0	6.9	11.8	3.2	12/10/2024 9:30	5.6	15.2	0.0	7.0	11.5	0.0
12/10/2024 9:45	5.6	23.0	0.0	6.7	11.8	3.2	12/10/2024 9:45	5.6	15.2	0.0	7.0	11.5	0.0
12/10/2024 10:00	5.6	22.8	0.0	6.8	11.8	3.2	12/10/2024 10:00	5.6	15.2	0.0	7.0	11.5	0.0
12/10/2024 10:15	5.6	21.9	0.0	6.7	11.8	3.4	12/10/2024 10:15	5.7	15.2	0.0	7.0	11.5	0.0
12/10/2024 10:30	5.6	21.6	0.0	6.7	11.8	3.0	12/10/2024 10:30	5.7	15.2	0.0	7.0	11.5	0.0
12/10/2024 10:45	5.6	21.4	0.0	6.6	11.8	3.1	12/10/2024 10:45	5.7	15.2	0.0	7.0	11.5	1.4
12/10/2024 11:00	5.6	21.3	0.0	6.7	11.8	3.6	12/10/2024 11:00	5.7	15.2	0.0	7.0	11.5	0.0
12/10/2024 11:15	6.3	62.7	0.0	7.0	11.6	2.9	12/10/2024 11:15	5.8	15.2	0.0	7.0	11.5	0.0
12/10/2024 11:30	6.7	67.2	0.0	7.3	11.4	3.0	12/10/2024 11:30	5.8	15.2	0.0	7.0	11.5	0.0
12/10/2024 11:45	6.9	67.6	0.0	7.4	11.4	2.9	12/10/2024 11:45	5.9	15.3	0.0	7.0	11.5	0.0
12/10/2024 12:00	6.9	68.0	0.0	7.4	11.4	2.9	12/10/2024 12:00	5.9	15.6	0.0	7.0	11.5	0.0
12/10/2024 12:15	6.1	25.3	0.0	7.0	11.6	3.3	12/10/2024 12:15	5.9	15.9	0.0	7.0	11.5	0.0
12/10/2024 12:40	6.0	22.3	0.0	6.8	15.4	1.2	12/10/2024 12:30	5.9	16.1	0.0	7.0	11.5	0.0
12/10/2024 13:00	6.0	22.1	0.0	6.8	15.4	10.0	12/10/2024 12:45	5.9	16.1	0.0	7.0	11.4	0.0
12/10/2024 13:15	6.6	54.5	0.0	7.3	15.2	0.9	12/10/2024 13:00	6.0	16.1	0.0	7.0	11.4	0.0
12/10/2024 13:30	6.1	25.3	0.0	7.1	15.4	0.8	12/10/2024 13:15	6.0	16.2	0.0	7.0	11.4	0.0
12/10/2024 13:45	6.1	23.8	0.0	7.0	15.4	0.9	12/10/2024 13:30	6.1	16.1	0.0	7.0	11.4	0.0
12/10/2024 14:00	6.1	22.9	0.0	6.9	15.4	1.0	12/10/2024 13:45	6.1	16.1	0.0	7.0	11.4	0.0
12/10/2024 14:15	7.0	63.9	0.0	7.5	15.1	0.7	12/10/2024 14:00	6.1	16.2	0.0	7.0	11.4	1.1
12/10/2024 14:30	6.3	25.2	0.0	7.3	15.3	0.8	12/10/2024 14:15	6.1	16.5	0.0	7.0	11.4	0.0
12/10/2024 14:45	6.1	22.9	0.0	6.9	15.4	1.1	12/10/2024 14:30	6.1	16.8	0.0	7.0	11.4	0.0
12/10/2024 15:00	6.1	22.8	0.0	6.9	15.4	0.9	12/10/2024 14:33	6.1	16.7	0.0	7.0	11.4	0.0
12/10/2024 15:15	6.1	22.7	0.0	6.9	15.4	0.9	12/10/2024 14:45	6.1	16.8	0.0	7.1	11.4	0.0
12/10/2024 15:30	7.1	64.5	0.0	7.6	15.1	0.7	12/10/2024 15:15	6.1	17.0	0.0	7.0	11.4	0.0
12/10/2024 15:45	7.2	65.1	0.0	7.7	15.0	0.7	12/10/2024 15:30	6.1	17.0	0.0	7.0	11.4	0.0
12/10/2024 16:00	7.2	65.3	0.0	7.7	15.0	0.8	12/10/2024 15:45	6.2	16.9	0.0	7.1	11.4	0.1
12/10/2024 16:15	6.9	47.5	0.0	7.6	15.1	0.7	12/10/2024 16:00	6.1	16.8	0.0	7.0	11.3	0.0
12/10/2024 16:30	6.2	24.0	0.0	7.1	15.3	0.7	12/10/2024 16:15	6.2	16.6	0.0	7.0	11.3	0.0
12/10/2024 16:45	6.2	23.3	0.0	7.0	15.4	0.9	12/10/2024 16:30	6.2	16.5	0.0	7.0	11.3	0.0
12/10/2024 17:00	6.1	22.9	0.0	6.9	15.4	0.7	12/10/2024 16:45	6.2	16.4	0.0	7.0	11.3	0.0
12/10/2024 17:15	6.1	22.8	0.0	6.9	15.4	0.8	12/10/2024 17:00	6.2	16.3	0.0	7.0	11.3	0.0
12/10/2024 17:30	6.1	22.6	0.0	6.9	15.4	0.8	12/10/2024 17:15	6.1	16.2	0.0	7.0	11.3	0.0
12/10/2024 17:45	6.1	22.5	0.0	6.9	15.4	0.8	12/10/2024 17:30	6.1	16.1	0.0	7.0	11.3	0.0
12/10/2024 18:00	6.0	22.3	0.0	6.9	15.4	0.9	12/10/2024 17:45	6.1	16.0	0.0	7.0	11.3	0.0
12/10/2024 18:15	6.8	53.0	0.0	7.4	15.1	0.7	12/10/2024 18:00	6.1	15.9	0.0	7.0	11.3	0.0
12/10/2024 18:30	7.2	66.1	0.0	7.7	15.0	0.8	12/10/2024 18:15	6.1	15.9	0.0	7.0	11.3	0.0
12/10/2024 18:45	7.2	66.6	0.0	7.7	15.0	0.7	12/10/2024 18:30	6.1	15.8	0.0	7.0	11.3	0.0
12/10/2024 19:00	7.2	66.9	0.0	7.7	15.0	0.8	12/10/2024 18:45	6.1	15.7	0.0	7.0	11.3	0.0
12/10/2024 19:15	6.9	48.2	0.0	7.6	15.1	1.2	12/10/2024 19:00	6.1	15.6	0.0	7.0	11.3	0.0
12/10/2024 19:30	6.2	25.2	0.0	7.1	15.3	0.8	12/10/2024 19:15	6.1	15.6	0.0	7.0	11.3	0.0
12/10/2024 19:32	6.2	24.8	0.0	7.1	15.3	0.7	12/10/2024 19:30	6.1	15.5	0.0	7.0	11.3	0.0
12/10/2024 19:45	6.1	23.6	0.0	7.0	15.4	1.0	12/10/2024 19:45	6.1	15.5	0.0	7.0	11.3	0.0
12/10/2024 20:00	6.1	22.7	0.0	7.0	15.4	0.8	12/10/2024 20:00	6.1	15.4	0.0	6.9	11.3	0.0
12/10/2024 20:15	6.0	22.2	0.0	7.0	15.4	0.7	12/10/2024 20:15	6.1	15.4	0.0	7.0	11.3	0.0
12/10/2024 20:30	6.0	22.0	0.0	7.0	15.4	0.8	12/10/2024 20:30	6.1	15.3	0.0	7.0	11.3	0.0
12/10/2024 20:45	6.0	21.9	0.0	6.9	15.4	1.4	1						

12/11/2024 1:00	7.3	66.0	0.0	7.7	14.9	0.7	12/11/2024 1:00	6.2	14.9	0.0	7.0	11.2	0.0
12/11/2024 1:15	7.3	66.5	0.0	7.7	14.9	0.6	12/11/2024 1:15	6.2	14.9	0.0	7.0	11.3	0.0
12/11/2024 1:30	7.0	46.5	0.0	7.6	15.0	0.7	12/11/2024 1:30	6.2	14.8	0.0	7.0	11.3	0.0
12/11/2024 1:45	6.3	22.7	0.0	7.0	15.3	0.8	12/11/2024 1:45	6.2	14.8	0.0	7.0	11.2	0.0
12/11/2024 2:00	6.9	59.1	0.0	7.2	15.1	0.7	12/11/2024 2:00	6.2	14.8	0.0	7.0	11.3	0.0
12/11/2024 2:15	7.3	65.9	0.0	7.7	14.9	0.6	12/11/2024 2:15	6.2	14.8	0.0	7.0	11.2	0.0
12/11/2024 2:30	6.4	24.5	0.0	7.2	15.2	0.7	12/11/2024 2:30	6.2	14.7	0.0	7.0	11.2	0.0
12/11/2024 2:45	6.2	22.2	0.0	7.0	15.3	1.0	12/11/2024 2:45	6.2	14.8	0.0	7.0	11.2	0.0
12/11/2024 3:00	6.2	21.8	0.0	6.9	15.3	0.8	12/11/2024 3:00	6.2	14.8	0.0	7.0	11.2	0.2
12/11/2024 3:15	6.2	21.6	0.0	6.9	15.3	0.9	12/11/2024 3:15	6.2	14.7	0.0	7.0	11.2	0.0
12/11/2024 3:30	6.2	21.5	0.0	7.0	15.3	0.7	12/11/2024 3:30	6.2	14.7	0.0	7.0	11.2	0.0
12/11/2024 3:45	6.2	21.4	0.0	6.9	15.3	0.8	12/11/2024 3:45	6.2	14.7	0.0	7.0	11.2	0.3
12/11/2024 4:00	6.2	21.3	0.0	6.9	15.3	0.7	12/11/2024 4:00	6.2	14.7	0.0	7.0	11.3	0.0
12/11/2024 4:15	6.2	21.2	0.0	6.9	15.3	0.8	12/11/2024 4:15	6.2	14.7	0.0	7.0	11.2	0.0
12/11/2024 4:30	6.2	21.2	0.0	6.9	15.3	0.7	12/11/2024 4:30	6.2	14.7	0.0	7.0	11.2	0.0
12/11/2024 4:45	6.2	21.2	0.0	6.9	15.3	0.7	12/11/2024 4:45	6.2	14.6	0.0	7.0	11.2	0.0
12/11/2024 5:00	7.1	64.8	0.0	7.5	15.0	0.7	12/11/2024 5:00	6.2	14.6	0.0	7.0	11.2	0.0
12/11/2024 5:15	7.3	65.8	0.0	7.7	14.9	0.6	12/11/2024 5:15	6.2	14.6	0.0	7.0	11.2	0.0
12/11/2024 5:30	7.3	65.5	0.0	7.7	14.9	0.8	12/11/2024 5:30	6.2	14.6	0.0	7.0	11.2	0.0
12/11/2024 5:45	7.3	65.5	0.0	7.7	14.9	0.7	12/11/2024 5:45	6.2	14.6	0.0	7.0	11.2	0.0
12/11/2024 6:00	6.4	24.2	0.0	7.2	15.2	0.9	12/11/2024 6:00	6.2	14.6	0.0	7.0	11.2	0.0
12/11/2024 6:15	6.2	22.1	0.0	7.0	15.3	0.7	12/11/2024 6:15	6.2	14.6	0.0	7.0	11.2	0.0
12/11/2024 6:30	6.2	21.6	0.0	7.0	15.3	0.9	12/11/2024 6:30	6.2	14.6	0.0	7.0	11.2	0.0
12/11/2024 6:45	6.2	21.5	0.0	7.0	15.3	0.8	12/11/2024 6:45	6.2	14.6	0.0	7.0	11.2	0.0
12/11/2024 7:00	6.2	21.3	0.0	7.0	15.3	0.8	12/11/2024 7:00	6.2	14.5	0.0	7.0	11.2	0.0
12/11/2024 7:15	6.1	21.2	0.0	7.0	15.3	0.7	12/11/2024 7:15	6.2	14.5	0.0	7.0	11.2	0.0
12/11/2024 7:30	6.1	21.1	0.0	6.9	15.3	0.8	12/11/2024 7:30	6.2	14.5	0.0	7.0	11.2	0.0
12/11/2024 7:45	6.1	21.1	0.0	6.9	15.3	0.9	12/11/2024 7:45	6.2	14.5	0.0	7.0	11.2	0.0
12/11/2024 8:00	6.8	60.3	0.0	7.2	15.2	0.9	12/11/2024 8:00	6.2	14.5	0.0	7.0	11.2	0.0
12/11/2024 8:15	7.2	65.0	0.0	7.6	14.9	0.7	12/11/2024 8:15	6.2	14.4	0.0	7.0	11.3	0.0
12/11/2024 8:30	7.1	56.6	0.0	7.7	15.0	0.8	12/11/2024 8:30	6.2	14.5	0.0	7.0	11.2	0.0
12/11/2024 8:45	6.9	57.4	0.0	7.4	15.1	0.7	12/11/2024 8:45	6.1	14.4	0.0	7.0	11.2	0.0
12/11/2024 9:00	7.2	65.5	0.0	7.7	14.9	0.7	12/11/2024 9:00	6.1	14.5	0.0	7.0	11.2	0.0
12/11/2024 9:15	7.3	65.9	0.0	7.7	14.9	0.7	12/11/2024 9:15	6.1	14.4	0.0	7.0	11.2	0.0
12/11/2024 9:30	7.2	64.1	0.0	7.7	14.9	0.6	12/11/2024 9:30	6.1	14.4	0.0	7.0	11.2	0.0
12/11/2024 9:45	6.2	22.7	0.0	7.1	15.3	0.7	12/11/2024 9:45	6.1	14.4	0.0	7.0	11.3	0.0
12/11/2024 10:00	6.2	21.8	0.0	6.9	15.3	0.9	12/11/2024 10:00	6.2	14.3	0.0	7.0	11.2	0.0
12/11/2024 10:15	6.2	21.4	0.0	6.9	15.3	0.7	12/11/2024 10:15	6.2	14.3	0.0	7.0	11.3	0.0
12/11/2024 10:30	6.2	21.1	0.0	6.9	15.3	0.8	12/11/2024 10:30	6.2	14.3	0.0	7.0	11.2	0.0
12/11/2024 10:45	6.2	21.0	0.0	6.9	15.3	0.7	12/11/2024 10:45	6.2	14.3	0.0	7.0	11.2	0.0
12/11/2024 11:00	6.2	20.9	0.0	6.9	15.3	0.7	12/11/2024 11:00	6.3	14.3	0.0	7.0	11.2	0.0
12/11/2024 11:15	6.2	20.8	0.0	6.9	15.3	0.7	12/11/2024 11:15	6.3	14.4	0.0	7.0	11.2	0.0
12/11/2024 11:30	6.3	20.7	0.0	6.9	15.2	0.9	12/11/2024 11:30	6.4	14.3	0.0	7.1	11.2	0.0
12/11/2024 11:45	7.3	64.2	0.0	7.6	14.9	0.6	12/11/2024 11:45	6.4	14.2	0.0	7.1	11.2	0.0
12/11/2024 12:00	7.4	64.7	0.0	7.7	14.9	0.6	12/11/2024 12:00	6.4	14.2	0.0	7.1	11.2	0.0
12/11/2024 12:15	7.5	65.0	0.0	7.7	14.8	0.6	12/11/2024 12:15	6.4	14.3	0.0	7.0	11.2	0.0
12/11/2024 12:30	7.5	65.3	0.0	7.7	14.8	0.7	12/11/2024 12:30	6.4	14.3	0.0	7.1	11.2	0.0
12/11/2024 12:45	6.6	23.1	0.0	7.2	15.1	1.0	12/11/2024 12:45	6.5	14.3	0.0	7.0	11.2	0.0
12/11/2024 13:00	6.5	21.6	0.0	7.0	15.1	0.7	12/11/2024 13:00	6.5	14.2	0.0	7.0	11.2	0.0
12/11/2024 13:15	6.5	21.2	0.0	6.9	15.1	0.7	12/11/2024 13:15	6.5	14.2	0.0	7.0	11.1	0.0
12/11/2024 13:30	6.6	21.0	0.0	7.0	15.2	0.7	12/11/2024 13:30	6.6	14.3	0.0	7.1	11.1	0.2
12/11/2024 13:45	6.6	20.9	0.0	6.9	15.1	0.7	12/11/2024 13:45	6.6	14.3	0.0	7.1	11.1	0.0
12/11/2024 14:00	6.6	20.8	0.0	6.9	15.1	0.8	12/11/2024 14:00	6.7	14.2	0.0	7.0	11.1	0.0
12/11/2024 14:15	6.7	20.7	0.0	6.9	15.1	0.6	12/11/2024 14:15	6.7	14.2	0.0	7.1	11.1	0.0
12/11/2024 14:30	6.7	20.6	0.0	6.9	15.1	0.7	12/11/2024 14:30	6.8	14.2	0.0	7.0	11.1	0.0
12/11/2024 14:45	7.7	63.8	0.0	7.6	14.7	0.6	12/11/2024 14:45	6.8	14.2	0.0	7.1	11.1	0.0
12/11/2024 15:00	7.8	64.7	0.0	7.7	14.7	0.7	12/11/2024 15:00	6.8	14.2	0.0	7.0	11.0	0.0
12/11/2024 15:15	7.9	65.2	0.0	7.7	14.7	0.7	12/11/2024 15:15	6.8	14.2	0.0	7.0	11.1	0.0
12/11/2024 15:30	7.9	65.3	0.0	7.7	14.6	0.9	12/11/2024 15:30	6.8	14.2	0.0	7.0	11.0	0.0
12/11/2024 15:45	7.5	57.1	0.0	7.3	14.8	0.8	12/11/2024 15:45	6.8	14.2	0.0	7.0	11.0	0.0
12/11/2024 16:00	7.0	25.0	0.0	7.3	14.9	0.8	12/11/2024 16:00	6.8	14.2	0.0	7.0	11.0	0.0
12/11/2024 16:15	6.8	21.8	0.0	7.1	15.0	0.7	12/11/2024 16:15	6.8	14.1	0.0	7.0	11.0	0.0
12/11/2024 16:30	6.8	21.3	0.0	7.0	15.0	0.8	12/11/2024 16:30	6.8	14.1	0.0	7.0	11.0	0.0
12/11/2024 16:45	6.7	21.0	0.0	7.0	15.0	2.3	12/11/2024 16:45	6.8	14.1	0.0	7.1	11.0	0.0
12/11/2024 17:00	6.7	20.9	0.0	7.0	15.1	1.0	12/11/2024 17:00	6.7	14.1	0.0	7.0	11.0	2.4
12/11/2024 17:15	6.6	20.8	0.0	7.0	15.1	0.9	12/11/2024 17:15	6.7	14.1	0.0	7.0	11.0	0.0
12/11/2024 17:30	6.6	20.8	0.0	6.9	15.1	0.8	12/11/2024 17:30	6.7	14.1	0.0	7.0	11.0	0.0
12/11/2024 17:45	6.6	20.7	0.0	6.9	15.1	0.9	12/11/2024 17:45	6.7	14.1	0.0	7.0	11.0	0.0
12/11/2024 18:00	6.6	20.6	0.0	6.9	15.1	0.8	12/11/2024 18:00	6.6	14.1	0.0	7.0	11.0	0.0
12/11/2024 18:15	7.5	64.4	0.0	7.6	14.8	0.7	12/11/2024 18:15	6.6	14.1	0.0	7.0	11.0	0.0
12/11/2024 18:30	7.7	65.2	0.0	7.7	14.7	0.8	12/11/2024 18:30	6.5	14.1	0.0	7.0	11.1	0.0
12/11/2024 18:45	7.7	65.4	0.0	7.7	14.7	0.6	12/11/2024 18:45	6.5	14.0	0.0	7.0	11.1	0.0
12/11/2024 19:00	7.7	65.7	0.0	7.7	14.7	0.8	12/11/2024 19:00	6.5	14.0	0.0	7.0	11.1	0.0
12/11/2024 19:15	6.6	22.9	0.0	7.2	15.0	0.8	12/11/2024 19:15	6.4	14.1	0.0	7.0	11.1	0.0
12/11/2024 19:30	6.5	21.6	0.0	7.0	15.1	0.8	12/11/2024 19:30	6.4	14.1	0.0	7.0	11.1	0.0
12/11/2024 19:45	6.4	21.1	0.0	6.9	15.1	2.8	12/11/2024 19:45	6.4	14.0	0.0	7.0	11.1	0.0
12/11/2024 20:00	6.4	21.0	0.0	7.0	15.1	0.7	12/11/2024 20:00	6.4	14.0	0.0	7.0	11.1	0.0
12/11/2024 20:15	6.3	20.9	0.0	6.9	15.2	1.5	12/11/2024 20:15	6.3	14.1	0.0	7.0	11.1	0.0
12/11/2024 20:30	6.3	20.8	0.0	6.9	15.1	0.7	12/11/2024 20:30	6.3	14.1	0.0	7.0	11.1	0.0
12/11/2024 20:45	6.3	20.7	0.0	6.9	15.2	1.0	12/11/2024 20:45	6.3	14.1	0.0	7.0	11.1	0.0
12/11/2024 21:00	6.2	20.6	0.0	6.9	15.2	0.7	12/11/2024 21:00	6.3	14.1	0.0	7.0	11.1	0.0
12/11/2024 21:15	6.2	23.0	0.0	7.0	15.2	0.9	12/11/2024 21:15	6.3	14.1	0.0	7.0	11.1	0.0
12/11/2024 21:30	7.3	64.9	0.0	7.6	14.8	0.7	12/11/2024 21:30	6.2	14.1	0.0	7.0	11.1	0.0
12/11/2024 21:45	7.4	65.6	0.0	7.7	14.8	0.6	12/11/2024 21:45	6.2	14.1	0.0	7.0	11.1	0.0
12/11/2024 22:00	7.4	65.8	0.0	7.7	14.8	0.							

12/12/2024 2:15	5.8	20.9	0.0	6.9	15.3	0.7	12/12/2024 2:15	5.8	13.9	0.0	7.0	11.2	0.0
12/12/2024 2:30	5.8	20.8	0.0	6.9	15.3	0.7	12/12/2024 2:30	5.8	13.9	0.0	7.0	11.2	1.7
12/12/2024 2:45	5.8	20.7	0.0	6.9	15.3	0.6	12/12/2024 2:45	5.8	13.9	0.0	7.0	11.2	0.0
12/12/2024 3:00	5.7	20.5	0.0	6.9	15.3	0.7	12/12/2024 3:00	5.8	13.9	0.0	7.0	11.2	0.0
12/12/2024 3:15	5.7	20.5	0.0	6.9	15.3	0.7	12/12/2024 3:15	5.8	13.9	0.0	7.0	11.2	0.0
12/12/2024 3:30	6.8	65.2	0.0	7.6	14.9	0.5	12/12/2024 3:30	5.8	13.9	0.0	7.0	11.2	0.0
12/12/2024 3:45	6.8	63.2	0.0	7.6	15.0	0.9	12/12/2024 3:45	5.8	13.9	0.0	7.0	11.2	0.0
12/12/2024 4:00	7.0	66.0	0.0	7.7	14.9	0.6	12/12/2024 4:00	5.8	13.9	0.0	7.0	11.2	0.0
12/12/2024 4:15	7.0	66.3	0.0	7.7	14.9	0.7	12/12/2024 4:15	5.7	13.8	0.0	7.0	11.2	0.0
12/12/2024 4:30	7.0	66.5	0.0	7.7	14.9	0.7	12/12/2024 4:30	5.7	13.8	0.0	7.0	11.2	0.0
12/12/2024 4:45	5.9	23.2	0.0	7.2	15.3	0.9	12/12/2024 4:45	5.7	13.8	0.0	7.0	11.2	0.0
12/12/2024 5:00	5.8	21.6	0.0	7.0	15.3	0.7	12/12/2024 5:00	5.7	13.8	0.0	7.0	11.2	0.0
12/12/2024 5:15	5.7	21.1	0.0	6.9	15.3	0.7	12/12/2024 5:15	5.7	13.8	0.0	7.0	11.2	0.0
12/12/2024 5:30	5.7	20.9	0.0	6.9	15.3	0.9	12/12/2024 5:30	5.7	13.8	0.0	7.0	11.2	0.0
12/12/2024 5:45	5.7	20.7	0.0	7.0	15.3	0.8	12/12/2024 5:45	5.7	13.8	0.0	7.0	11.3	0.0
12/12/2024 6:00	5.7	20.6	0.0	6.9	15.3	0.9	12/12/2024 6:00	5.7	13.8	0.0	7.0	11.2	0.0
12/12/2024 6:15	5.6	20.5	0.0	6.9	15.3	0.6	12/12/2024 6:15	5.7	13.7	0.0	7.0	11.3	0.0
12/12/2024 6:30	5.6	20.4	0.0	6.9	15.3	0.8	12/12/2024 6:30	5.7	13.7	0.0	7.0	11.2	0.0
12/12/2024 6:45	5.6	20.3	0.0	6.9	15.4	0.7	12/12/2024 6:45	5.7	13.7	0.0	7.0	11.2	0.0
12/12/2024 7:00	6.7	65.6	0.0	7.6	14.9	0.8	12/12/2024 7:00	5.7	13.7	0.0	7.0	11.3	0.0
12/12/2024 7:15	6.9	66.4	0.0	7.7	14.9	0.6	12/12/2024 7:15	5.7	13.7	0.0	7.0	11.2	0.0
12/12/2024 7:30	6.9	66.6	0.0	7.7	14.9	0.6	12/12/2024 7:30	5.7	13.7	0.0	7.0	11.3	0.0
12/12/2024 7:45	6.8	54.7	0.0	7.7	14.9	0.6	12/12/2024 7:45	5.7	13.7	0.0	7.0	11.2	0.0
12/12/2024 8:00	5.8	22.1	0.0	7.0	15.3	0.6	12/12/2024 8:00	5.7	13.7	0.0	7.0	11.3	0.0
12/12/2024 8:15	5.7	21.2	0.0	7.0	15.3	0.7	12/12/2024 8:15	5.7	13.7	0.0	7.0	11.2	0.0
12/12/2024 8:30	5.7	20.9	0.0	7.0	15.3	0.8	12/12/2024 8:30	5.7	13.7	0.0	7.0	11.3	0.0
12/12/2024 8:45	5.7	20.6	0.0	7.0	15.4	0.6	12/12/2024 8:45	5.7	13.7	0.0	7.0	11.2	2.0
12/12/2024 9:00	5.7	20.5	0.0	6.9	15.4	0.8	12/12/2024 9:00	5.7	13.7	0.0	7.0	11.2	0.0
12/12/2024 9:15	5.6	20.4	0.0	6.9	15.4	0.6	12/12/2024 9:15	5.7	13.7	0.0	7.0	11.2	0.0
12/12/2024 9:30	5.6	20.4	0.0	6.9	15.4	1.8	12/12/2024 9:30	5.7	13.7	0.0	7.0	11.3	0.0
12/12/2024 9:45	5.8	45.2	0.0	7.0	15.4	0.6	12/12/2024 9:45	5.7	13.7	0.0	7.0	11.3	0.0
12/12/2024 10:00	6.9	66.1	0.0	7.7	14.9	0.5	12/12/2024 10:00	5.8	13.7	0.0	7.0	11.3	0.0
12/12/2024 10:15	6.8	59.4	0.0	7.7	14.9	0.6	12/12/2024 10:15	5.8	13.7	0.0	7.0	11.3	0.0
12/12/2024 10:30	6.7	62.0	0.0	7.5	15.0	0.9	12/12/2024 10:30	5.8	13.6	0.0	7.0	11.3	0.0
12/12/2024 10:45	6.5	39.4	0.0	7.6	15.0	0.8	12/12/2024 10:45	5.8	13.7	0.0	7.0	11.3	0.0
12/12/2024 11:00	5.8	21.9	0.0	7.0	15.3	0.8	12/12/2024 11:00	5.8	13.7	0.0	7.0	11.3	0.0
12/12/2024 11:15	5.8	20.9	0.0	7.0	15.3	0.8	12/12/2024 11:15	5.8	13.7	0.0	7.0	11.3	0.0
12/12/2024 11:30	5.8	20.6	0.0	7.0	15.3	0.6	12/12/2024 11:30	5.9	13.6	0.0	7.0	11.3	0.0
12/12/2024 11:45	5.8	20.5	0.0	7.0	15.3	0.6	12/12/2024 11:45	5.9	13.7	0.0	7.0	11.3	0.0
12/12/2024 12:00	5.8	20.3	0.0	6.9	15.3	1.3	12/12/2024 12:00	5.9	13.7	0.0	7.0	11.3	0.0
12/12/2024 12:15	5.9	20.3	0.0	6.9	15.3	0.7	12/12/2024 12:15	6.0	13.7	0.0	7.0	11.2	0.0
12/12/2024 12:30	5.9	20.2	0.0	7.0	15.3	0.7	12/12/2024 12:30	6.0	13.7	0.0	7.1	11.2	0.0
12/12/2024 12:45	6.0	20.1	0.0	6.9	15.3	0.9	12/12/2024 12:45	6.1	13.7	0.0	7.0	11.2	0.0
12/12/2024 13:00	7.1	65.4	0.0	7.5	14.9	0.6	12/12/2024 13:00	6.1	13.7	0.0	7.0	11.2	0.0
12/12/2024 13:15	7.2	66.9	0.0	7.7	14.8	0.6	12/12/2024 13:15	6.1	13.8	0.0	7.0	11.2	0.0
12/12/2024 13:30	7.3	67.4	0.0	7.8	14.8	1.2	12/12/2024 13:30	6.1	13.8	0.0	7.0	11.2	0.0
12/12/2024 13:45	7.3	67.5	0.0	7.8	14.8	0.6	12/12/2024 13:45	6.1	13.8	0.0	7.0	11.2	0.0
12/12/2024 14:00	6.5	28.6	0.0	7.4	15.0	0.7	12/12/2024 14:00	6.1	13.9	0.0	7.0	11.2	0.0
12/12/2024 14:15	6.2	21.8	0.0	7.1	15.2	0.9	12/12/2024 14:15	6.1	13.9	0.0	7.0	11.2	0.0
12/12/2024 14:30	6.2	21.1	0.0	7.0	15.2	0.7	12/12/2024 14:30	6.2	13.9	0.0	7.1	11.2	0.0
12/12/2024 14:45	6.2	20.9	0.0	6.9	15.2	0.6	12/12/2024 14:45	6.2	13.9	0.0	7.1	11.2	0.0
12/12/2024 15:00	6.1	20.8	0.0	6.9	15.2	0.8	12/12/2024 15:00	6.2	13.9	0.0	7.0	11.1	0.0
12/12/2024 15:15	6.2	20.7	0.0	7.0	15.2	0.7	12/12/2024 15:15	6.2	13.9	0.0	7.1	11.1	0.0
12/12/2024 15:30	6.1	20.5	0.0	7.0	15.2	1.0	12/12/2024 15:30	6.2	13.9	0.0	7.1	11.1	0.0
12/12/2024 15:45	6.2	20.5	0.0	6.9	15.2	0.9	12/12/2024 15:45	6.2	14.0	0.0	7.0	11.1	0.0
12/12/2024 16:00	6.6	52.9	0.0	7.1	15.1	1.7	12/12/2024 16:00	6.2	14.0	0.0	7.0	11.1	0.0
12/12/2024 16:15	7.4	67.1	0.0	7.7	14.7	0.6	12/12/2024 16:15	6.3	14.1	0.0	7.0	11.1	0.0
12/12/2024 16:30	7.4	67.5	0.0	7.7	14.7	0.6	12/12/2024 16:30	6.3	14.1	0.0	7.0	11.1	0.1
12/12/2024 16:45	7.2	58.5	0.0	7.7	14.8	0.6	12/12/2024 16:45	6.2	14.1	0.0	7.0	11.1	0.0
12/12/2024 17:00	7.5	68.3	0.0	7.8	14.7	0.5	12/12/2024 17:00	6.2	14.1	0.0	7.0	11.1	0.0
12/12/2024 17:15	6.9	39.6	0.0	7.6	14.9	0.7	12/12/2024 17:15	6.2	14.1	0.0	7.0	11.1	0.0
12/12/2024 17:30	6.3	22.5	0.0	7.1	15.1	1.6	12/12/2024 17:30	6.3	14.0	0.0	7.0	11.1	0.0
12/12/2024 17:45	6.2	21.7	0.0	7.0	15.2	0.6	12/12/2024 17:45	6.3	14.0	0.0	7.0	11.1	0.0
12/12/2024 18:00	6.2	21.3	0.0	7.0	15.2	0.7	12/12/2024 18:00	6.2	14.0	0.0	7.0	11.1	0.0
12/12/2024 18:15	6.2	21.1	0.0	7.0	15.2	0.7	12/12/2024 18:15	6.2	14.0	0.0	7.0	11.1	0.0
12/12/2024 18:30	6.2	20.9	0.0	7.0	15.2	0.8	12/12/2024 18:30	6.2	13.9	0.0	7.0	11.1	0.0
12/12/2024 18:45	6.1	20.7	0.0	7.0	15.2	0.6	12/12/2024 18:45	6.2	13.8	0.0	7.0	11.1	0.0
12/12/2024 19:00	6.1	20.7	0.0	6.9	15.2	0.9	12/12/2024 19:00	6.2	13.9	0.0	7.0	11.1	0.0
12/12/2024 19:15	7.2	66.9	0.0	7.6	14.8	0.6	12/12/2024 19:15	6.2	13.9	0.0	7.0	11.1	0.0
12/12/2024 19:30	7.3	67.8	0.0	7.7	14.7	0.6	12/12/2024 19:30	6.2	13.9	0.0	7.0	11.1	0.0
12/12/2024 19:45	7.4	68.3	0.0	7.7	14.8	0.6	12/12/2024 19:45	6.2	13.9	0.0	7.0	11.1	0.0
12/12/2024 20:00	7.4	68.7	0.0	7.7	14.7	0.6	12/12/2024 20:00	6.2	13.8	0.0	7.0	11.1	0.0
12/12/2024 20:15	6.4	24.4	0.0	7.2	15.1	1.2	12/12/2024 20:15	6.2	13.9	0.0	7.0	11.1	0.0
12/12/2024 20:30	6.2	21.9	0.0	7.0	15.1	0.6	12/12/2024 20:30	6.2	13.8	0.0	7.0	11.1	0.0
12/12/2024 20:45	6.2	21.3	0.0	6.9	15.2	0.6	12/12/2024 20:45	6.2	13.8	0.0	7.0	11.1	0.0
12/12/2024 21:00	6.1	21.0	0.0	7.0	15.2	0.6	12/12/2024 21:00	6.2	13.8	0.0	7.0	11.1	0.0
12/12/2024 21:15	6.1	20.8	0.0	7.0	15.2	1.3	12/12/2024 21:15	6.2	13.8	0.0	7.0	11.1	0.0
12/12/2024 21:30	6.1	20.7	0.0	7.0	15.2	0.9	12/12/2024 21:30	6.2	13.8	0.0	7.0	11.1	0.0
12/12/2024 21:45	6.1	20.6	0.0	6.9	15.2	0.7	12/12/2024 21:45	6.2	13.7	0.0	7.0	11.1	0.0
12/12/2024 22:00	6.1	20.6	0.0	6.9	15.2	1.0	12/12/2024 22:00	6.2	13.8	0.0	7.0	11.1	0.0
12/12/2024 22:15	7.1	67.1	0.0	7.6	14.8	0.6	12/12/2024 22:15	6.2	13.8	0.0	7.0	11.1	0.0
12/12/2024 22:30	7.3	68.2	0.0	7.7	14.8	0.6	12/12/2024 22:30	6.2	13.8	0.0	7.0	11.1	0.0
12/12/2024 22:45	7.4	68.3	0.0	7.7	14.7	0.6	12/12/2024 22:45	6.2	13.8	0.0	7.0	11.1	0.0
12/12/2024 23:00	7.4	68.7	0.0	7.8	14.7	1.2	12/12/2024 23:00	6.2	13.8	0.0	7.0	11.1	0.0
12/12/2024 23:15	6.3	23.5	0.0	7.3	1								

12/13/2024 3:30	6.0	20.7	0.0	6.9	15.2	0.8	12/13/2024 3:30	6.1	13.8	0.0	7.0	11.1	0.0
12/13/2024 3:45	6.0	20.6	0.0	6.9	15.2	0.6	12/13/2024 3:45	6.1	14.0	0.0	7.0	11.1	0.0
12/13/2024 4:00	6.0	20.6	0.0	6.9	15.2	0.8	12/13/2024 4:00	6.1	14.7	0.0	7.0	11.2	0.0
12/13/2024 4:15	6.0	20.7	0.0	6.9	15.2	0.7	12/13/2024 4:15	6.1	16.0	0.0	7.1	11.1	0.0
12/13/2024 4:30	6.6	61.6	0.0	7.2	15.1	0.8	12/13/2024 4:30	6.1	17.3	0.0	7.1	11.1	0.0
12/13/2024 4:45	7.2	68.5	0.0	7.7	14.8	0.6	12/13/2024 4:45	6.1	18.7	0.0	7.1	11.1	0.0
12/13/2024 5:00	7.3	69.7	0.0	7.7	14.8	4.0	12/13/2024 5:00	6.1	19.1	0.0	7.1	11.1	0.0
12/13/2024 5:15	7.3	70.6	0.0	7.7	14.8	0.7	12/13/2024 5:15	6.1	18.5	0.0	7.1	11.1	0.0
12/13/2024 5:30	7.0	51.1	0.0	7.7	14.8	0.7	12/13/2024 5:30	6.1	18.0	0.0	7.1	11.1	0.0
12/13/2024 5:45	6.2	26.3	0.0	7.0	15.2	0.8	12/13/2024 5:45	6.1	17.6	0.0	7.1	11.1	0.0
12/13/2024 6:00	6.1	24.9	0.0	7.0	15.2	0.7	12/13/2024 6:00	6.1	17.3	0.0	7.1	11.2	0.0
12/13/2024 6:15	6.0	24.3	0.0	7.0	15.2	0.7	12/13/2024 6:15	6.1	17.2	0.0	7.1	11.1	0.0
12/13/2024 6:30	6.0	23.8	0.0	6.9	15.2	0.7	12/13/2024 6:30	6.1	18.1	0.0	7.1	11.1	0.0
12/13/2024 6:45	6.0	23.7	0.0	6.9	15.2	0.7	12/13/2024 6:45	6.1	19.1	0.0	7.1	11.1	0.0
12/13/2024 7:00	6.0	24.2	0.0	6.9	15.2	0.6	12/13/2024 7:00	6.1	19.3	0.0	7.1	11.1	0.0
12/13/2024 7:15	6.0	24.8	0.0	7.0	15.2	0.7	12/13/2024 7:15	6.1	19.1	0.0	7.1	11.1	0.0
12/13/2024 7:30	6.0	25.6	0.0	7.0	15.2	0.7	12/13/2024 7:30	6.1	18.5	0.0	7.1	11.1	0.0
12/13/2024 7:45	7.0	69.0	0.0	7.6	14.8	0.7	12/13/2024 7:45	6.1	17.9	0.0	7.1	11.1	0.0
12/13/2024 8:00	7.3	70.6	0.0	7.7	14.8	0.6	12/13/2024 8:00	6.1	17.3	0.0	7.1	11.1	0.0
12/13/2024 8:15	7.3	70.7	0.0	7.7	14.7	0.5	12/13/2024 8:15	6.1	17.0	0.0	7.1	11.1	0.0
12/13/2024 8:30	7.3	70.6	0.0	7.8	14.7	0.6	12/13/2024 8:30	6.1	17.0	0.0	7.1	11.1	0.0
12/13/2024 8:45	6.4	28.7	0.0	7.3	15.1	0.7	12/13/2024 8:45	6.1	17.5	0.0	7.1	11.1	1.7
12/13/2024 9:00	6.1	24.7	0.0	7.1	15.2	0.7	12/13/2024 9:00	6.1	17.9	0.0	7.1	11.1	0.1
12/13/2024 9:15	6.1	24.3	0.0	7.0	15.2	0.6	12/13/2024 9:15	6.1	19.0	0.0	7.1	11.1	0.0
12/13/2024 9:30	6.0	24.4	0.0	7.0	15.2	0.8	12/13/2024 9:30	6.1	20.7	0.0	7.1	11.1	0.0
12/13/2024 9:45	7.0	67.9	0.0	7.5	14.9	0.6	12/13/2024 9:45	6.1	22.9	0.0	7.2	11.1	0.0
12/13/2024 10:00	7.2	69.2	0.0	7.7	14.8	0.8	12/13/2024 10:00	6.1	25.1	0.0	7.2	11.2	0.5
12/13/2024 10:15	7.2	70.8	0.0	7.7	14.8	0.8	12/13/2024 10:15	6.0	28.7	0.0	7.2	11.1	0.9
12/13/2024 10:30	6.7	45.9	0.0	7.6	14.9	0.9	12/13/2024 10:30	6.0	30.1	0.0	7.3	11.2	1.6
12/13/2024 10:45	6.1	33.7	0.0	7.1	15.2	1.1	12/13/2024 10:45	6.0	28.5	0.0	7.3	11.1	1.1
12/13/2024 11:00	6.0	34.0	0.0	7.1	15.2	1.9	12/13/2024 11:00	6.0	26.8	0.0	7.2	11.1	0.6
12/13/2024 11:15	6.0	32.7	0.0	7.0	15.2	1.5	12/13/2024 11:15	6.0	26.8	0.0	7.2	11.2	0.3
12/13/2024 11:30	6.0	31.6	0.0	7.0	15.2	1.6	12/13/2024 11:30	6.0	30.3	0.0	7.3	11.2	0.9
12/13/2024 11:45	6.0	31.8	0.0	7.0	15.2	1.7	12/13/2024 11:45	6.0	33.4	0.0	7.3	11.2	2.5
12/13/2024 12:00	6.0	34.5	0.0	7.0	15.2	2.1	12/13/2024 12:00	6.0	36.8	0.0	7.3	11.2	3.4
12/13/2024 12:15	6.0	37.2	0.0	7.1	15.3	2.9	12/13/2024 12:15	6.0	37.6	0.0	7.4	11.2	5.2
12/13/2024 12:30	5.9	39.4	0.0	7.1	15.3	3.6	12/13/2024 12:30	6.0	35.5	0.0	7.3	11.2	3.2
12/13/2024 12:45	5.9	39.6	0.0	7.1	15.2	3.5	12/13/2024 12:45	6.0	34.8	0.0	7.3	11.2	3.7
12/13/2024 13:00	6.8	72.1	0.0	7.5	15.0	2.7	12/13/2024 13:00	6.0	36.2	0.0	7.3	11.2	3.1
12/13/2024 13:15	7.0	73.2	0.0	7.7	14.8	2.4	12/13/2024 13:15	6.0	36.2	0.0	7.4	11.2	3.1
12/13/2024 13:30	7.1	73.8	0.0	7.7	14.8	2.3	12/13/2024 13:30	6.0	35.8	0.0	7.3	11.2	2.7
12/13/2024 13:45	7.1	74.1	0.0	7.7	14.8	2.0	12/13/2024 13:45	6.0	36.2	0.0	7.4	11.1	2.3
12/13/2024 14:00	6.7	54.0	0.0	7.6	14.9	2.7	12/13/2024 14:00	6.0	36.0	0.0	7.3	11.2	2.7
12/13/2024 14:15	6.1	40.3	0.0	7.2	15.2	3.2	12/13/2024 14:15	6.0	37.3	0.0	7.3	11.1	2.4
12/13/2024 14:30	6.0	40.1	0.0	7.1	15.2	3.9	12/13/2024 14:30	6.1	39.1	0.0	7.4	11.1	1.9
12/13/2024 14:45	6.0	41.1	0.0	7.1	15.2	3.2	12/13/2024 14:45	6.1	40.0	0.0	7.4	11.1	2.6
12/13/2024 15:00	6.0	42.1	0.0	7.2	15.2	2.3	12/13/2024 15:00	6.1	40.8	0.0	7.4	11.1	2.5
12/13/2024 15:15	6.0	42.9	0.0	7.2	15.2	2.8	12/13/2024 15:15	6.1	42.9	0.0	7.4	11.1	2.4
12/13/2024 15:30	6.0	44.0	0.0	7.2	15.2	2.3	12/13/2024 15:30	6.1	42.7	0.0	7.4	11.1	2.3
12/13/2024 15:45	6.0	45.0	0.0	7.1	15.2	2.8	12/13/2024 15:45	6.1	42.7	0.0	7.4	11.1	1.6
12/13/2024 16:00	6.0	45.1	0.0	7.2	15.2	2.7	12/13/2024 16:00	6.1	43.3	0.0	7.4	11.1	2.7
12/13/2024 16:15	6.9	75.6	0.0	7.6	14.9	2.1	12/13/2024 16:15	6.1	44.4	0.0	7.3	11.1	1.8
12/13/2024 16:30	7.1	76.4	0.0	7.7	14.8	1.2	12/13/2024 16:30	6.1	45.6	0.0	7.4	11.1	1.7
12/13/2024 16:45	7.0	72.5	0.0	7.7	14.8	1.0	12/13/2024 16:45	6.1	45.1	0.0	7.4	11.1	2.5
12/13/2024 17:00	7.1	77.3	0.0	7.7	14.8	1.3	12/13/2024 17:00	6.1	45.3	0.0	7.4	11.1	3.1
12/13/2024 17:15	6.2	48.1	0.0	7.2	15.1	1.9	12/13/2024 17:15	6.1	46.6	0.0	7.4	11.1	1.3
12/13/2024 17:30	6.1	48.2	0.0	7.2	15.2	2.0	12/13/2024 17:30	6.1	46.2	0.0	7.4	11.1	1.3
12/13/2024 17:45	6.1	48.7	0.0	7.2	15.2	3.0	12/13/2024 17:45	6.1	45.9	0.0	7.4	11.1	0.8
12/13/2024 18:00	6.0	48.1	0.0	7.2	15.2	2.0	12/13/2024 18:00	6.1	46.9	0.0	7.4	11.1	0.7
12/13/2024 18:15	6.0	48.6	0.0	7.2	15.2	1.3	12/13/2024 18:15	6.1	47.9	0.0	7.4	11.1	1.2
12/13/2024 18:30	6.0	49.1	0.0	7.2	15.2	1.5	12/13/2024 18:30	6.1	49.1	0.0	7.5	11.1	1.1
12/13/2024 18:45	6.0	50.2	0.0	7.2	15.2	2.9	12/13/2024 18:45	6.1	48.0	0.0	7.2	11.1	1.1
12/13/2024 19:00	6.0	50.2	0.0	7.2	15.2	1.8	12/13/2024 19:00	6.1	46.2	0.0	7.4	11.1	1.2
12/13/2024 19:15	6.9	76.9	0.0	7.6	14.9	1.7	12/13/2024 19:15	6.1	47.2	0.0	7.4	11.1	0.9
12/13/2024 19:30	7.1	76.7	0.0	7.7	14.8	1.9	12/13/2024 19:30	6.1	50.7	0.0	7.4	11.1	1.7
12/13/2024 19:45	7.1	77.4	0.0	7.7	14.8	1.6	12/13/2024 19:45	6.1	54.4	0.0	7.5	11.1	2.2
12/13/2024 20:00	7.1	79.0	0.0	7.7	14.8	1.7	12/13/2024 20:00	6.1	56.7	0.0	7.5	11.1	5.2
12/13/2024 20:15	6.1	56.7	0.0	7.3	15.1	4.2	12/13/2024 20:15	6.1	57.9	0.0	7.5	11.1	8.0
12/13/2024 20:30	6.1	58.8	0.0	7.3	15.2	4.9	12/13/2024 20:30	6.1	55.2	0.0	7.5	11.1	3.7
12/13/2024 20:45	6.1	57.6	0.0	7.3	15.2	7.4	12/13/2024 20:45	6.1	53.3	0.0	7.4	11.0	3.0
12/13/2024 21:00	6.1	55.5	0.0	7.3	15.2	3.0	12/13/2024 21:00	6.1	52.3	0.0	7.5	11.1	1.6
12/13/2024 21:15	6.1	53.9	0.0	7.3	15.2	3.6	12/13/2024 21:15	6.1	56.3	0.0	7.5	11.0	2.5
12/13/2024 21:30	6.1	55.5	0.0	7.3	15.2	3.7	12/13/2024 21:30	6.1	58.6	0.0	7.5	11.0	4.2
12/13/2024 21:45	6.1	58.6	0.0	7.3	15.2	4.4	12/13/2024 21:45	6.1	59.3	0.0	7.5	11.1	6.1
12/13/2024 22:00	6.0	59.6	0.0	7.3	15.2	6.9	12/13/2024 22:00	6.1	61.7	0.0	7.6	11.1	13.8
12/13/2024 22:15	6.7	80.3	0.0	7.6	15.0	5.1	12/13/2024 22:15	6.1	63.5	0.0	7.6	11.1	10.0
12/13/2024 22:30	6.8	80.9	0.0	7.6	14.9	6.5	12/13/2024 22:30	6.1	65.8	0.0	7.6	11.1	14.1
12/13/2024 22:45	6.8	81.9	0.0	7.7	14.9	8.7	12/13/2024 22:45	6.1	66.4	0.0	7.6	11.1	12.8
12/13/2024 23:00	6.8	82.2	0.0	7.6	14.9	8.9	12/13/2024 23:00	6.1	66.1	0.0	7.6	11.1	13.5
12/13/2024 23:15	6.1	66.7	0.0	7.4	15.2	12.7	12/13/2024 23:15	6.1	64.4	0.0	7.6	11.1	7.5
12/13/2024 23:30	6.0	65.4	0.0	7.4	15.2	8.5	12/13/2024 23:30	6.1	61.6	0.0	7.5	11.1	5.3
12/13/2024 23:45	6.0	63.4	0.0	7.4	15.2	8.6	12/13/2024 23:45	6.1	59.4	0.0	7.6	11.1	4.3
12/14/2024 0:00	6.0	61.3	0.0	7.3	15.2	4.1	12/14/2024 0:00	6.1	56.4	0.0	7.5	11.1	3.2
12/14/2024 0:15	6.0	59.0	0.0	7.3	15.2	4.8	12/14/2024 0:15	6.1	55.5	0.0	7.5	11.1	4.1
12/14/2024 0:30	6.0	57.5	0.0										

12/14/2024 4:45	6.6	44.6	0.0	7.4	14.9	1.9	12/14/2024 4:45	6.4	30.7	0.0	7.2	11.0	0.5
12/14/2024 5:00	6.3	34.2	0.0	7.1	15.1	2.2	12/14/2024 5:00	6.4	32.0	0.0	7.2	11.0	0.9
12/14/2024 5:15	6.3	34.9	0.0	7.1	15.1	1.6	12/14/2024 5:15	6.4	32.6	0.0	7.3	11.0	1.1
12/14/2024 5:30	6.3	35.5	0.0	7.1	15.1	1.6	12/14/2024 5:30	6.4	32.3	0.0	7.3	11.0	0.7
12/14/2024 5:45	6.3	35.2	0.0	7.1	15.1	2.2	12/14/2024 5:45	6.4	31.5	0.0	7.3	11.0	0.3
12/14/2024 6:00	6.3	34.6	0.0	7.1	15.1	1.7	12/14/2024 6:00	6.4	31.2	0.0	7.1	11.0	0.8
12/14/2024 6:15	6.3	34.2	0.0	7.1	15.1	1.8	12/14/2024 6:15	6.4	30.7	0.0	7.2	11.0	0.4
12/14/2024 6:30	6.8	51.4	0.0	7.4	14.9	1.1	12/14/2024 6:30	6.4	29.9	0.0	7.2	10.9	0.6
12/14/2024 6:45	6.8	51.3	0.0	7.4	14.9	2.1	12/14/2024 6:45	6.4	29.1	0.0	7.2	11.0	0.3
12/14/2024 7:00	6.8	51.0	0.0	7.4	14.8	1.3	12/14/2024 7:00	6.5	28.5	0.0	7.2	11.0	0.9
12/14/2024 7:15	6.4	32.6	0.0	7.1	15.0	3.4	12/14/2024 7:15	6.5	27.9	0.0	7.1	10.9	0.3
12/14/2024 7:30	6.4	31.6	0.0	7.1	15.0	1.8	12/14/2024 7:30	6.5	27.7	0.0	7.2	10.9	1.0
12/14/2024 7:45	6.4	31.3	0.0	7.1	15.0	1.3	12/14/2024 7:45	6.5	28.1	0.0	7.0	10.9	1.1
12/14/2024 8:00	6.4	31.3	0.0	7.0	15.0	1.5	12/14/2024 8:00	6.5	30.0	0.0	7.2	10.9	0.8
12/14/2024 8:15	6.4	32.5	0.0	7.0	15.1	2.0	12/14/2024 8:15	6.5	32.5	0.0	7.3	10.9	1.2
12/14/2024 8:30	6.4	34.4	0.0	7.1	15.1	2.4	12/14/2024 8:30	6.4	32.4	0.0	7.1	10.9	3.2
12/14/2024 8:45	6.4	34.7	0.0	7.1	15.1	2.5	12/14/2024 8:45	6.4	32.7	0.0	7.2	10.9	1.5
12/14/2024 9:00	6.8	51.8	0.0	7.4	14.9	2.4	12/14/2024 9:00	6.5	33.1	0.0	7.1	11.0	1.9
12/14/2024 9:15	6.8	51.7	0.0	7.4	14.8	2.0	12/14/2024 9:15	6.5	32.8	0.0	7.3	10.9	0.5
12/14/2024 9:30	6.7	48.8	0.0	7.2	14.9	1.7	12/14/2024 9:30	6.5	32.6	0.0	7.3	10.9	2.0
12/14/2024 9:45	6.9	52.5	0.0	7.5	14.8	1.6	12/14/2024 9:45	6.5	32.3	0.0	7.3	10.9	0.4
12/14/2024 10:00	6.9	52.5	0.0	7.5	14.8	1.3	12/14/2024 10:00	6.5	32.2	0.0	7.3	10.9	0.7
12/14/2024 10:15	6.5	34.8	0.0	7.1	15.0	1.5	12/14/2024 10:15	6.6	32.5	0.0	7.3	10.9	0.4
12/14/2024 10:30	6.5	34.9	0.0	7.1	15.0	2.5	12/14/2024 10:30	6.6	32.9	0.0	7.2	10.9	0.5
12/14/2024 10:45	6.5	35.0	0.0	7.1	15.0	1.5	12/14/2024 10:45	6.6	34.7	0.0	7.2	10.9	1.7
12/14/2024 11:00	6.5	36.2	0.0	7.1	15.0	4.5	12/14/2024 11:00	6.6	35.0	0.0	7.3	10.9	2.2
12/14/2024 11:15	6.5	36.6	0.0	7.1	15.0	2.4	12/14/2024 11:15	6.6	35.3	0.0	7.3	10.9	2.3
12/14/2024 11:30	6.5	36.8	0.0	7.1	14.9	3.8	12/14/2024 11:30	6.6	36.5	0.0	7.2	10.9	2.5
12/14/2024 11:45	6.5	37.9	0.0	7.1	15.0	3.6	12/14/2024 11:45	6.6	37.0	0.0	7.3	10.9	5.1
12/14/2024 12:00	6.5	38.4	0.0	7.1	15.0	5.5	12/14/2024 12:00	6.6	37.6	0.0	7.2	10.9	3.8
12/14/2024 12:15	6.9	53.1	0.0	7.4	14.8	4.3	12/14/2024 12:15	6.6	37.4	0.0	7.3	10.9	3.4
12/14/2024 12:30	7.0	52.6	0.0	7.5	14.8	4.3	12/14/2024 12:30	6.6	36.9	0.0	7.3	10.9	5.6
12/14/2024 12:45	7.0	51.7	0.0	7.4	14.8	4.7	12/14/2024 12:45	6.6	39.0	0.0	7.3	10.9	9.2
12/14/2024 13:00	7.0	52.4	0.0	7.5	14.8	7.4	12/14/2024 13:00	6.6	40.6	0.0	7.4	10.9	23.0
12/14/2024 13:15	6.6	41.0	0.0	7.2	15.0	20.6	12/14/2024 13:15	6.6	41.7	0.0	7.4	10.9	27.1
12/14/2024 13:30	6.7	42.7	0.0	7.1	15.0	30.4	12/14/2024 13:30	6.7	42.5	0.0	7.4	10.9	40.9
12/14/2024 13:45	6.7	42.7	0.0	7.2	14.9	24.0	12/14/2024 13:45	6.7	39.6	0.0	7.3	10.9	12.0
12/14/2024 14:00	6.7	39.7	0.0	7.1	15.0	13.7	12/14/2024 14:00	6.7	36.4	0.0	7.3	10.9	6.4
12/14/2024 14:15	6.8	37.0	0.0	7.1	15.0	8.1	12/14/2024 14:15	6.8	34.2	0.0	7.2	10.9	4.6
12/14/2024 14:30	6.8	35.4	0.0	7.1	15.0	6.4	12/14/2024 14:30	6.8	31.9	0.0	7.2	10.9	3.3
12/14/2024 14:45	6.8	33.7	0.0	7.1	14.9	4.6	12/14/2024 14:45	6.9	29.9	0.0	7.2	10.9	2.3
12/14/2024 15:00	7.1	43.0	0.0	7.3	14.8	4.8	12/14/2024 15:00	6.9	28.5	0.0	7.2	10.8	2.6
12/14/2024 15:15	7.2	42.4	0.0	7.3	14.7	4.6	12/14/2024 15:15	6.9	28.1	0.0	7.1	10.8	1.6
12/14/2024 15:30	7.2	42.1	0.0	7.3	14.7	6.4	12/14/2024 15:30	7.0	28.4	0.0	7.2	10.8	2.5
12/14/2024 15:45	7.2	42.1	0.0	7.3	14.7	3.8	12/14/2024 15:45	7.0	27.7	0.0	7.2	10.8	2.4
12/14/2024 16:00	7.0	30.5	0.0	7.1	14.8	5.0	12/14/2024 16:00	7.0	27.4	0.0	7.1	10.8	1.8
12/14/2024 16:15	7.0	29.9	0.0	7.1	14.9	4.9	12/14/2024 16:15	7.0	27.9	0.0	7.1	10.8	2.2
12/14/2024 16:30	7.0	30.2	0.0	7.0	14.9	4.4	12/14/2024 16:30	7.0	27.5	0.0	7.1	10.8	1.8
12/14/2024 16:45	7.1	29.9	0.0	7.0	14.9	3.6	12/14/2024 16:45	7.0	31.6	0.0	7.3	10.8	13.4
12/14/2024 17:00	7.0	34.7	0.0	7.0	14.8	31.7	12/14/2024 17:00	7.0	37.0	0.0	7.3	10.9	80.6
12/14/2024 17:15	7.0	38.3	0.0	7.1	14.8	60.1	12/14/2024 17:15	7.0	38.2	0.0	7.3	10.9	43.7
12/14/2024 17:30	7.0	38.6	0.0	7.1	14.8	36.0	12/14/2024 17:30	6.9	37.8	0.0	7.3	10.9	29.8
12/14/2024 17:45	7.1	43.9	0.0	7.2	14.7	26.7	12/14/2024 17:45	6.9	37.4	0.0	7.4	10.9	24.8
12/14/2024 18:00	7.2	45.9	0.0	7.2	14.7	29.1	12/14/2024 18:00	6.9	36.8	0.0	7.3	10.9	31.0
12/14/2024 18:15	7.1	44.7	0.0	7.2	14.7	32.1	12/14/2024 18:15	6.9	36.1	0.0	7.4	10.9	35.1
12/14/2024 18:30	7.1	43.8	0.0	7.2	14.8	34.4	12/14/2024 18:30	6.9	35.0	0.0	7.3	10.9	34.7
12/14/2024 18:45	7.1	42.0	0.0	7.2	14.8	28.3	12/14/2024 18:45	6.9	32.8	0.0	7.2	10.9	20.9
12/14/2024 19:00	7.0	33.4	0.0	7.0	14.8	20.3	12/14/2024 19:00	6.9	30.6	0.0	7.3	10.9	10.9
12/14/2024 19:15	7.0	31.3	0.0	7.0	14.8	12.5	12/14/2024 19:15	7.0	28.3	0.0	7.2	10.9	7.6
12/14/2024 19:30	7.0	29.6	0.0	7.0	14.8	12.1	12/14/2024 19:30	7.0	26.3	0.0	7.2	10.9	7.4
12/14/2024 19:45	7.0	28.1	0.0	6.9	14.8	7.2	12/14/2024 19:45	7.0	24.6	0.0	7.2	10.9	5.3
12/14/2024 20:00	7.1	26.7	0.0	6.9	14.8	8.9	12/14/2024 20:00	7.0	23.2	0.0	7.1	10.9	2.4
12/14/2024 20:15	7.1	25.7	0.0	6.9	14.8	8.5	12/14/2024 20:15	7.0	22.3	0.0	7.1	10.9	4.1
12/14/2024 20:30	7.1	25.0	0.0	6.9	14.9	5.4	12/14/2024 20:30	7.1	21.8	0.0	7.1	10.9	2.0
12/14/2024 20:45	7.1	24.7	0.0	6.8	14.9	7.1	12/14/2024 20:45	7.1	21.5	0.0	6.9	10.9	1.7
12/14/2024 21:00	7.3	33.0	0.0	7.1	14.8	6.0	12/14/2024 21:00	7.1	21.2	0.0	7.0	10.9	2.3
12/14/2024 21:15	7.3	33.6	0.0	7.2	14.8	5.7	12/14/2024 21:15	7.1	20.9	0.0	6.9	10.9	1.4
12/14/2024 21:30	7.1	24.0	0.0	6.9	14.8	7.2	12/14/2024 21:30	7.1	20.8	0.0	7.0	10.9	1.5
12/14/2024 21:45	7.1	23.8	0.0	6.9	14.8	5.5	12/14/2024 21:45	7.1	20.7	0.0	7.0	10.9	1.1
12/14/2024 22:00	7.1	23.7	0.0	6.9	14.8	3.5	12/14/2024 22:00	7.1	20.5	0.0	7.1	10.9	0.7
12/14/2024 22:15	7.1	23.8	0.0	6.9	14.8	2.9	12/14/2024 22:15	7.1	20.4	0.0	7.1	10.9	0.5
12/14/2024 22:30	7.3	34.2	0.0	7.2	14.8	3.1	12/14/2024 22:30	7.1	20.3	0.0	7.0	10.9	0.5
12/14/2024 22:45	7.4	34.6	0.0	7.2	14.8	4.2	12/14/2024 22:45	7.1	20.2	0.0	7.0	10.9	0.4
12/14/2024 23:00	7.4	35.0	0.0	7.2	14.8	2.8	12/14/2024 23:00	7.1	20.1	0.0	6.9	10.9	2.0
12/14/2024 23:15	7.1	23.7	0.0	7.0	14.9	3.5	12/14/2024 23:15	7.1	20.0	0.0	6.9	10.9	0.6
12/14/2024 23:30	7.1	23.6	0.0	7.0	15.0	3.5	12/14/2024 23:30	7.1	19.8	0.0	7.0	10.9	0.3
12/14/2024 23:45	7.1	23.6	0.0	6.9	15.0	4.8	12/14/2024 23:45	7.1	19.8	0.0	7.0	10.9	0.4
12/15/2024 0:00	7.1	23.3	0.0	6.9	15.1	2.2	12/15/2024 0:00	7.1	19.6	0.0	7.1	10.9	0.6
12/15/2024 0:15	7.1	23.2	0.0	6.9	15.1	1.8	12/15/2024 0:15	7.1	19.6	0.0	7.1	10.9	0.4
12/15/2024 0:30	7.1	23.2	0.0	6.9	15.1	2.5	12/15/2024 0:30	7.1	19.5	0.0	6.9	10.9	0.3
12/15/2024 0:45	7.1	23.1	0.0	6.9	15.1	1.1	12/15/2024 0:45	7.1	19.4	0.0	7.0	10.9	0.2
12/15/2024 1:00	7.1	22.9	0.0	7.0	15.1	1.2	12/15/2024 1:00	7.0	19.5	0.0	7.1	10.9	0.2
12/15/2024 1:15	7.1	28.7	0.0	6.9	15.1	1.6	12/15/2024 1:15	7.0	19.4	0.0	6.9	10.9	0.2
12/15/2024 1:30	7.4	37.2	0.0	7.3	14.9	1.8	12/15/2024 1:30	7.0	19.5	0.0	7.0	10.9	0.3
12/15/2024 1:45													

12/15/2024 6:00	6.8	27.5	0.0	7.0	15.1	2.2	12/15/2024 6:00	6.7	26.4	0.0	7.1	11.1	0.7
12/15/2024 6:15	6.8	27.6	0.0	7.1	15.2	1.6	12/15/2024 6:15	6.7	26.2	0.0	7.2	11.1	0.4
12/15/2024 6:30	6.8	27.4	0.0	7.1	15.2	1.0	12/15/2024 6:30	6.7	26.0	0.0	7.2	11.1	0.5
12/15/2024 6:45	6.8	27.2	0.0	7.1	15.2	2.1	12/15/2024 6:45	6.7	25.8	0.0	7.2	11.1	0.3
12/15/2024 7:00	6.8	27.0	0.0	7.1	15.2	1.1	12/15/2024 7:00	6.7	25.4	0.0	7.2	11.1	0.4
12/15/2024 7:15	7.2	44.1	0.0	7.4	15.0	1.1	12/15/2024 7:15	6.7	25.0	0.0	7.2	11.1	0.4
12/15/2024 7:30	7.2	44.2	0.0	7.4	15.0	1.1	12/15/2024 7:30	6.7	24.9	0.0	7.2	11.1	1.5
12/15/2024 7:45	7.2	44.5	0.0	7.5	15.1	1.9	12/15/2024 7:45	6.7	24.6	0.0	7.2	11.1	0.3
12/15/2024 8:00	7.2	40.9	0.0	7.5	15.0	0.8	12/15/2024 8:00	6.7	24.3	0.0	7.1	11.1	0.4
12/15/2024 8:15	6.8	26.5	0.0	7.1	15.2	0.8	12/15/2024 8:15	6.7	24.0	0.0	7.1	11.1	0.3
12/15/2024 8:30	6.8	26.2	0.0	7.1	15.2	0.9	12/15/2024 8:30	6.7	23.7	0.0	7.2	11.1	0.2
12/15/2024 8:45	6.8	25.9	0.0	7.1	15.2	2.0	12/15/2024 8:45	6.7	23.5	0.0	7.2	11.1	0.5
12/15/2024 9:00	6.8	25.7	0.0	7.1	15.2	0.8	12/15/2024 9:00	6.7	23.3	0.0	7.2	11.1	0.2
12/15/2024 9:15	6.8	25.7	0.0	7.1	15.2	0.8	12/15/2024 9:15	6.7	23.1	0.0	7.1	11.1	0.1
12/15/2024 9:30	6.8	25.6	0.0	7.1	15.2	0.8	12/15/2024 9:30	6.7	22.8	0.0	7.1	11.1	0.2
12/15/2024 9:45	6.8	25.3	0.0	7.0	15.2	1.6	12/15/2024 9:45	6.7	22.6	0.0	7.2	11.1	0.2
12/15/2024 10:00	6.8	25.1	0.0	7.0	15.2	1.1	12/15/2024 10:00	6.7	22.3	0.0	7.2	11.1	0.2
12/15/2024 10:15	7.0	38.8	0.0	7.2	15.2	4.1	12/15/2024 10:15	6.7	22.1	0.0	7.1	11.1	0.1
12/15/2024 10:30	6.9	26.7	0.0	7.3	15.2	0.9	12/15/2024 10:30	6.7	21.9	0.0	7.2	11.1	0.2
12/15/2024 10:45	7.2	45.4	0.0	7.4	15.0	0.8	12/15/2024 10:45	6.7	21.7	0.0	7.1	11.1	0.1
12/15/2024 11:00	7.3	45.8	0.0	7.5	15.0	0.9	12/15/2024 11:00	6.7	21.5	0.0	7.1	11.1	0.1
12/15/2024 11:15	7.3	46.1	0.0	7.5	15.0	0.7	12/15/2024 11:15	6.7	21.4	0.0	7.2	11.1	0.1
12/15/2024 11:30	6.9	25.9	0.0	7.2	15.2	0.9	12/15/2024 11:30	6.8	21.2	0.0	7.2	11.1	0.1
12/15/2024 11:45	7.0	25.1	0.0	7.1	15.2	0.8	12/15/2024 11:45	6.8	21.0	0.0	7.2	11.1	0.2
12/15/2024 12:00	7.0	24.7	0.0	7.1	15.1	0.9	12/15/2024 12:00	6.9	21.0	0.0	7.1	11.1	0.1
12/15/2024 12:15	7.0	24.5	0.0	7.0	15.2	1.1	12/15/2024 12:15	6.9	21.4	0.0	7.1	11.1	0.2
12/15/2024 12:30	7.0	24.5	0.0	7.0	15.1	0.9	12/15/2024 12:30	6.9	21.2	0.0	7.1	11.1	0.2
12/15/2024 12:45	7.0	24.6	0.0	7.1	15.1	0.8	12/15/2024 12:45	6.9	20.8	0.0	7.1	11.1	2.8
12/15/2024 13:00	7.0	24.2	0.0	7.1	15.1	2.2	12/15/2024 13:00	6.9	20.2	0.0	7.2	11.1	2.5
12/15/2024 13:15	7.4	39.8	0.0	7.4	15.0	1.7	12/15/2024 13:15	6.9	20.2	0.0	7.1	11.1	0.9
12/15/2024 13:30	7.5	46.1	0.0	7.5	15.0	1.2	12/15/2024 13:30	6.9	20.2	0.0	7.0	11.1	0.3
12/15/2024 13:45	7.6	46.5	0.0	7.5	14.9	0.7	12/15/2024 13:45	7.0	20.3	0.0	7.1	11.1	0.3
12/15/2024 14:00	7.1	24.4	0.0	7.2	15.1	1.0	12/15/2024 14:00	7.0	20.2	0.0	7.1	11.1	0.8
12/15/2024 14:15	7.1	23.9	0.0	7.1	15.1	1.0	12/15/2024 14:15	7.0	20.1	0.0	7.0	11.1	0.3
12/15/2024 14:30	7.1	23.9	0.0	7.1	15.1	1.0	12/15/2024 14:30	7.0	20.0	0.0	7.0	11.1	0.2
12/15/2024 14:45	7.1	23.8	0.0	7.1	15.1	1.0	12/15/2024 14:45	7.0	19.9	0.0	7.1	11.1	0.1
12/15/2024 15:00	7.1	23.7	0.0	7.0	15.1	1.1	12/15/2024 15:00	7.0	19.9	0.0	7.2	11.1	0.2
12/15/2024 15:15	7.1	23.7	0.0	7.0	15.1	0.8	12/15/2024 15:15	7.0	19.7	0.0	7.1	11.1	0.3
12/15/2024 15:30	7.1	23.6	0.0	7.1	15.1	0.9	12/15/2024 15:30	7.0	19.7	0.0	7.2	11.1	0.2
12/15/2024 15:45	7.1	23.6	0.0	7.1	15.1	0.8	12/15/2024 15:45	7.0	19.6	0.0	7.1	11.1	0.6
12/15/2024 16:00	7.5	47.4	0.0	7.4	14.9	0.7	12/15/2024 16:00	6.9	20.0	0.0	7.1	11.1	0.4
12/15/2024 16:15	7.5	48.3	0.0	7.5	14.9	0.8	12/15/2024 16:15	6.9	19.8	0.0	7.0	11.1	0.2
12/15/2024 16:30	7.5	48.5	0.0	7.6	14.9	1.0	12/15/2024 16:30	6.9	19.6	0.0	7.1	11.1	0.3
12/15/2024 16:45	7.5	48.6	0.0	7.6	14.9	0.9	12/15/2024 16:45	6.8	19.4	0.0	6.9	11.1	0.5
12/15/2024 17:00	7.0	25.4	0.0	7.2	15.1	1.3	12/15/2024 17:00	6.8	19.3	0.0	7.1	11.1	0.2
12/15/2024 17:15	6.9	24.3	0.0	7.1	15.2	1.5	12/15/2024 17:15	6.7	19.1	0.0	7.1	11.1	0.2
12/15/2024 17:30	6.8	23.8	0.0	7.1	15.2	2.4	12/15/2024 17:30	6.7	19.1	0.0	7.0	11.1	0.1
12/15/2024 17:45	6.8	23.6	0.0	7.0	15.2	1.1	12/15/2024 17:45	6.7	19.1	0.0	7.0	11.2	0.1
12/15/2024 18:00	6.7	23.4	0.0	7.0	15.2	1.0	12/15/2024 18:00	6.6	19.1	0.0	7.1	11.1	0.2
12/15/2024 18:15	6.7	23.3	0.0	7.0	15.2	1.0	12/15/2024 18:15	6.6	19.0	0.0	7.0	11.1	0.1
12/15/2024 18:30	6.7	23.4	0.0	7.0	15.2	3.1	12/15/2024 18:30	6.6	19.0	0.0	7.1	11.2	1.1
12/15/2024 18:45	6.7	23.8	0.0	7.0	15.2	0.9	12/15/2024 18:45	6.6	19.0	0.0	7.0	11.1	0.7
12/15/2024 19:00	7.0	45.0	0.0	7.1	15.2	0.7	12/15/2024 19:00	6.6	19.0	0.0	7.1	11.1	0.1
12/15/2024 19:15	7.3	49.3	0.0	7.5	15.0	0.9	12/15/2024 19:15	6.6	18.9	0.0	7.1	11.1	0.1
12/15/2024 19:30	7.1	38.1	0.0	7.5	15.1	0.7	12/15/2024 19:30	6.5	18.9	0.0	7.0	11.2	0.1
12/15/2024 19:45	6.6	23.8	0.0	7.1	15.2	0.9	12/15/2024 19:45	6.5	18.8	0.0	7.1	11.2	0.1
12/15/2024 20:00	6.6	23.4	0.0	7.0	15.2	0.9	12/15/2024 20:00	6.5	18.8	0.0	7.1	11.2	0.0
12/15/2024 20:15	6.6	23.3	0.0	7.0	15.3	0.8	12/15/2024 20:15	6.5	18.7	0.0	7.1	11.2	0.3
12/15/2024 20:30	6.5	23.9	0.0	7.1	15.3	1.0	12/15/2024 20:30	6.4	18.7	0.0	7.0	11.2	0.6
12/15/2024 20:45	6.5	24.7	0.0	7.1	15.3	0.8	12/15/2024 20:45	6.4	18.7	0.0	7.0	11.2	0.1
12/15/2024 21:00	7.1	49.3	0.0	7.5	15.1	0.9	12/15/2024 21:00	6.4	18.6	0.0	7.1	11.2	2.8
12/15/2024 21:15	7.1	50.2	0.0	7.6	15.0	1.3	12/15/2024 21:15	6.4	18.5	0.0	7.1	11.2	0.3
12/15/2024 21:30	7.1	50.5	0.0	7.6	15.1	0.7	12/15/2024 21:30	6.3	18.5	0.0	7.0	11.2	0.0
12/15/2024 21:45	6.5	23.9	0.0	7.2	15.2	0.8	12/15/2024 21:45	6.3	18.5	0.0	7.1	11.2	0.2
12/15/2024 22:00	6.4	23.3	0.0	7.0	15.3	0.8	12/15/2024 22:00	6.2	18.4	0.0	7.1	11.2	0.1
12/15/2024 22:15	6.4	24.2	0.0	7.0	15.3	0.9	12/15/2024 22:15	6.2	18.4	0.0	7.0	11.2	0.1
12/15/2024 22:30	6.3	23.7	0.0	7.0	15.3	1.1	12/15/2024 22:30	6.2	18.3	0.0	7.1	11.2	0.1
12/15/2024 22:45	6.3	23.0	0.0	7.0	15.4	0.8	12/15/2024 22:45	6.2	18.3	0.0	7.1	11.2	0.1
12/15/2024 23:00	6.3	23.0	0.0	7.0	15.3	0.9	12/15/2024 23:00	6.2	18.2	0.0	7.0	11.2	0.2
12/15/2024 23:15	6.2	22.9	0.0	7.0	15.3	0.9	12/15/2024 23:15	6.2	18.2	0.0	7.0	11.3	0.1
12/15/2024 23:30	6.8	50.5	0.0	7.4	15.2	0.7	12/15/2024 23:30	6.1	17.8	0.0	7.1	11.3	0.0
12/15/2024 23:45	6.8	44.2	0.0	7.6	15.1	0.6	12/15/2024 23:45	6.1	17.5	0.0	7.0	11.3	0.0